

ARTHROPODS OF FLORIDA

AND NEIGHBORING LAND AREAS

VOLUME 1



LEPIDOPTERA OF FLORIDA

C. P. KIMBALL

FLORIDA DEPARTMENT OF AGRICULTURE

DOYLE CONNER, COMMISSIONER

The
LEPIDOPTERA OF FLORIDA

AN ANNOTATED CHECKLIST

BY

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TABLE OF CONTENTS

Foreword	v		
Introduction	1		
Geography	1		
Topography	1		
Climate	1		
Vegetation	3		
Distributional areas	4		
Comparison with neighboring states	5		
Form of the list	5		
Determinations	6		
Descriptions	7		
Locality records	8		
Dates	10		
Collectors	10		
Abbreviations	18		
Collections	19		
Abbreviations	19		
Literature	23		
Division of Plant Industry records	24		
Food plants	24		
Quarantine interceptions	25		
Illustrations	25		
Summation	25		
Random observations	25		
Acknowledgments	26		
Abbreviations of bibliographical references	28		
Papilionoidea	31		
Papilionidae	31		
Pieridae	33		
Danaidae	37		
Satyridae	38		
Heliconiidae	39		
Nymphalidae	40		
Libytheidae	45		
Riodinidae	46		
Lycaenidae	46		
Theclinae	46		
Gerydinae	49		
Lycaeninae	49		
Plebeiinae	49		
Hesperioidea	50		
Hesperiidae	50		
Pyrginae	50		
Hesperiinae	53		
Megathymidae	58		
Sphingoidea	59		
Sphingidae	59		
Acherontiinae	59		
Ambulicinae	62		
		Sesiinae	63
		Philampelinae	65
		Choerocampinae	67
		Saturnioidea	68
		Saturniidae	68
		Citheroniidae	69
		Noctuoidea	70
		Amatidae	70
		Nolidae	72
		Arctiidae	73
		Lithosiinae	73
		Arctiinae	75
		Agaristidae	80
		Noctuidae	81
		Pantheinae	81
		Acronictinae	81
		Agrotinae	84
		Hadeninae	87
		Cucullinae	92
		Amphipyridae	94
		Heliothiinae	106
		Acontiinae	110
		Euteliinae	116
		Sarrothripinae	118
		Plusiinae	119
		Catocalinae	120
		Erebiinae	130
		Hypeninae	138
		Rivulinae	144
		Hermiinae	145
		Pericopidae	150
		Notodontidae	151
		Liparidae	157
		Bombycoidea	159
		Lasiocampidae	159
		Zanolidae	160
		Drepanoidea	160
		Thyatiridae	160
		Drepanidae	160
		Geometroidea	161
		Geometridae	161
		Oenochrominae	161
		Geometrinae (Hemitheinae)	161
		Sterrhinae	165
		Larentinae	171
		Ennominae	174
		Uranoidea	192
		Epiplemidae	192
		Lacosomidae	192

Zygaenoidea	193	Walshiidae	274
Limacodidae	193	Momphidae	275
Megalopygidae	196	Epermeniidae	276
Epipyropidae	197	Gelechiidae	276
Zygaenidae	197	Oecophoridae	283
Pyralidoidea	197	Blastobasidae	284
Thyrididae	197	Xylorictidae	285
Hyblacidae	198	Stenomidae	285
Pyralidae	198	Ethmiidae	286
Odontiinae	198	Yponomeutoidea	287
Glaphyriinae	199	Glyphipterygidae	287
Pyraustinae	200	Aegeriidae	288
Nymphulinae	220	Heliodinidae	290
Scopariinae	223	Hyponomeutidae	291
Pyralinae	224	Scythridae	292
Chrysauginae	225	Cycnodoidea	292
Schoenobiinae	227	Heliozelidae	292
Ancylomiinae	229	Elachistidae	293
Crambinae	230	Tineoidea	293
Galleriinae	235	Coleophoridae	293
Macrothecinae	236	Gracillariidae	293
Epipaschiinae	236	Opotegidae	295
Endotrichiinae	239	Lyonetidae	295
Phycitidae	239	Tischeriidae	296
Phycitinae	239	Psychidae	297
Anerastiinae	250	Acrolophidae	298
Pterophoridae	251	Tineidae	299
Alucitidae	254	Nepticuloidea	302
Tortricoidea	254	Nepticulidae	302
Olethreutidae	254	Incurvarioidea	302
Olethreutinae	254	Incurvariidae	302
Eucosminae	257	Prodoxidae	302
Laspeyresiinae	262	Adelidae	303
Tortricidae	264	Appendix	304
Sparganothinae	264	Quarantine interceptions	304
Archipinae	267	Map	306
Cnephasiinae	270	Gazetteer	307
Phalomiidae	270	Annotated Bibliography	310
Carposinidae	271	Plates I-XVI (pages unnumbered)	
Cossidae	271	Index of food plants	330
Gelechioidea	272	Index to common names	342
Cosmopterigidae	272	Index to genera, species and subspecies	344

Cover Illustration: Diurnal moth, *Composita fidelissima vagrans* Bates, painted by Marjorie Statham, American Museum of Natural History.

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FOREWORD

Lepidoptera of Florida is to be the first of an irregularly appearing series of publications relating to the insects and other arthropods of Florida and neighboring land areas—the southeastern United States, the Bahama Islands, and the West Indies—with emphasis on taxonomy, ecology, biology, and zoogeography. Emphasis in this series, to be published by the Division of Plant Industry, Florida Department of Agriculture,¹ will be placed on the Florida fauna.

Special acknowledgment is due the National Science Foundation for generous support in the publication of *Lepidoptera of Florida*.

The files and preserved specimens of The Florida State Collection of Arthropods provided a basis for many of the records in this publication. This collection is being developed by staff members of the Entomology Section, Division of Plant Industry, Florida Department of Agriculture, and several appointed associates of the state collection. Close support is provided by the Florida State Museum and its several Associates in Entomology.

Commitment to publish *Lepidoptera of Florida* originally was made in 1955 during the administration of Ed. L. Ayers, then Commissioner of the State Plant Board of Florida. It was reaffirmed by his successor, the late Dr. W. G. Cowperthwaite, and is being published under the administration of Division Director Hal L. Jones and Florida Commissioner of Agriculture Doyle Conner.

Written in an informal, pleasing style, this publication should constitute the primary reference on the butterflies, skippers, and moths of Florida for both amateurs and professionals, and it should provide a useful reference for those interested in Florida agriculture. Although any

work of this nature never can be complete, a great deal of effort by the author, with substantial aid from others, has gone into the preparation of this publication.

The author, Charles P. Kimball, was born in Rochester, New York, in 1897. He received his early education in the schools of New York, South Carolina, and Rhode Island. He received his A. B. degree from Harvard College in 1919 (1920), following service in Europe during World War I. After graduation from Harvard he worked as a bookkeeper for Union Trust Company, Rochester, New York, and in 1923 he received his M. S. degree at the University of Rochester. He worked as a Fellow in Biochemistry at the University of Rochester, School of Medicine for three years and moved to Nantucket, Massachusetts, in 1925, where he was active in civic affairs. In collaboration with Dr. Frank M. Jones, he compiled a list of the Lepidoptera of Nantucket and Martha's Vineyard Islands which was published in 1943. During World War II he was a Research Associate in Radiology at the University of Rochester School of Medicine and Dentistry. After the war he became more seriously interested in Lepidoptera, first collecting in Florida in 1946. He moved to Sarasota in 1951, although continuing to maintain summer residence in Barnstable, Massachusetts, and began compilation of the *Lepidoptera of Florida* in 1953. His interest in contributing to our knowledge of the Lepidoptera of Florida is continuing beyond the completion of the manuscript for this publication.

HOWARD V. WEEMS, JR.
Editor

Entomology Section
Division of Plant Industry
Florida Department of Agriculture
November 30, 1964

¹ Effective January 15, 1961, the State Plant Board of Florida became known as the Division of Plant Industry of the Florida Department of Agriculture.

INTRODUCTION

This is not a text book, nor is it an analysis. Rather it is a compilation of the distribution, depositories, and other pertinent information relating to the Lepidoptera of Florida as gathered together from many sources. Falling short of its goal as it does, as indeed must any similar list, such accomplishment as has been realized is due in very large measure to the enthusiastic and generous cooperation of many people. It is to their kindly spirit that I would dedicate this work.

Many problems have arisen. Some of these have been solved through the generous assistance of one or another authority whose aid will be acknowledged and recognized individually in due course. Other problems remain. These I have attempted to set forth in the hope that they will inspire the curious student to probe into them and to build on to what is hoped may be a solid and firm foundation. First, however, there are various aspects of the work as a whole which must be discussed in order that the main body of the text and the method of treatment may be reasonably clear, for without a knowledge of this groundwork, the text will not be completely comprehensible. Unfortunately, because of the dissimilar nature of the subjects, this introductory section cannot flow with a unity of idea and purpose, but must perforce jump from one topic to another. For this reason, and also in order to make readier reference to the various subjects, each subject has been segregated under its own heading.

GEOGRAPHY

Though it may seem gratuitous to stress the point that the list is limited to the present boundaries of the State of Florida, a word of explanation is needed, for in the past the northern boundary was frequently changing and ever shrinking southward, the original Florida of the Spaniards having embraced practically the entire southeastern United States.

The vagaries of this northern boundary are well described in *Florida, Land of Change* by Kathryn Trimmer Abbey (Hanna) (1941) and I am indebted to Mrs. Hanna personally for further elucidation of the mysteries.

Disregarding the few botanists who visited the region in the early days even though they may have picked up an odd specimen or so of Lepidoptera, only two collectors whose sites of operations concern us were in the region prior to 1866, when the boundary was fixed in its present position. These were John Abbot and Edward Doubleday.

So far as we know Abbot collected essentially in Screven County, Georgia, well north of the state line, and it is not believed that any of his material can be credited definitely to Florida. If he did obtain any specimens from here through other channels, we have no way of knowing which they were, whence they came, nor where they are. One of the confusing factors, presumably based on Abbot material, is the Hübner locality citations: "Aus Florida" and "Aus Georgien in Florida." However, as pointed out by Austin Clark (1950, p. 62), these all boil down to country north of the Altamaha River. The "Florida in Georgia" citations are a misquotation, as shown by Franclemont (1951, p. 6). Therefore, none of Abbot's records need be considered in connection with this list.

On the other hand Doubleday's collecting was primarily at St. Johns Bluff, on the south bank of the St. Johns River, between Jacksonville and the sea, well within the confines of the state. Of his collecting more will be said under the subject of collectors.

TOPOGRAPHY

The topography of the state is relatively uncomplicated. Nevertheless, though the elevations are slight, even these often may have great influence on the flora (West and Arnold, 1952, p. xiii) and consequently on the insect life. The east-west axis of the northern panhandle is long and narrow; yet in spite of the fact that there are different biological areas to be found in it, the latter must be disregarded as far as the present study is concerned because until very recently collecting there has been on a minimal basis.

On the other hand the north-south peninsula is most important. It covers roughly 425 miles in length, including the Keys, the whole thrusting down between the Atlantic Ocean on the east and the Gulf of Mexico on the west, with a maximum width of slightly more than 150 miles. The proximity of warm water, especially that of the Gulf Stream along the Keys and lower east coast, has a marked effect on the climate of this peninsula.

CLIMATE

Climate affects the insect fauna anywhere, and Florida is no exception, though here the overall influence, aside from that due to the Gulf Stream, is more limited because of the relatively more even temperature, the comparatively less drastic drought conditions, and generally less

excessive rainfall than that in some parts of the United States.

The temperature ranges from about 25° to 95° F in the northern half of the state, from 35° to 95° F in the southern half, and 40° to 90° F on the Keys of Monroe County, generally known simply as "the Keys." Naturally, there are exceptions to these figures, and lower temperatures may be encountered the length of the peninsula. However, these are seldom of sufficient duration to cause permanent injury to the flora; but when really low temperatures do occur and persist, there is unquestionably a pronounced change in the lepidopterous population. An illustration of this is the extremely severe winter of 1899, when the thermometer indicated two degrees below zero F in Tallahassee, the lowest temperature ever observed in Florida.

The state cannot be divided accurately into northern and southern halves because the proximity of the Atlantic Ocean on the one side and the Gulf of Mexico on the other holds the coastal temperatures a few degrees higher than those in the interior during cold snaps and lower during heat waves. Stated another way, the winter isotherms would dip more and more sharply in the center as they moved down the peninsula, and those of summer would rise less and less sharply as they moved up.

During the latter part of the Nineteenth Century when entomologists were making the first scientific collections of Lepidoptera in Florida, a number of species of butterflies were taken in the Indian River region which since 1899 have been seen only in the southern most tip of the peninsula or perhaps only on the Keys. It seems a reasonable deduction that the intense cold of that winter, which damaged irreparably an immense segment of the vegetation, caused the annihilation of certain tropical and semitropical flora in their northern range, and with them their dependent species of butterflies, thus confining the latter to the small section of the state where their food plants managed to survive. The same probably was true of many moths, but, because of limited data, little can be said about them.

The meaning of "Indian River" on labels is not always clear. Dr. W. T. M. Forbes told me that much of the Slosson and Dyar material labeled "Indian River" almost certainly was taken in the general vicinity of Palm Beach. Yet why would there be this apparent mislabeling of some when much of their material was clearly labeled "Palm Beach" and "Lake Worth"? The Indian River itself runs from the very southern edge of Volusia County; the length of Brevard, Indian River, and St. Lucie Counties; and more or less ends at the St. Lucie Inlet in Martin County.

Basing my theory on the known localities where most of the Nineteenth Century collectors, other than Slosson and Dyar, made their headquarters, and the fact that more than half of the river lies within Brevard County, I have arbitrarily assigned all Indian River records to that county. It is also possible that the small village of Indian River City in Brevard County just south of Titusville may have been intended.

Evidence exists that some of the species which suffered extinction in their northern ranges are, or have been, spreading northward again. For some it may be a first migration and an extension of range. Buchholz took *Composita fidelissima vagrans* Bates at Jupiter in 1946, the first record north of Miami in sixty years. *Phoebis statira floridensis* (Neumoegen) was practically unknown north of Miami except for a few scattered records between 1930 and 1953 when it became quite common in the Sarasota and Oneco areas. *Asbolis capucinus* (Lucas) was taken first near Miami in 1947; by 1955 it was common on Siesta Key and had reached St. Petersburg. Although it is too early to speak with finality as to the effect of the unusually cold winter of 1957-1958 on other species that have appeared in recent years north of their customary limits, *capucinus* at least has been present on Siesta Key during the four years succeeding that winter, and in March 1961 it was found near Oviedo in Seminole County.

Drought conditions occasionally occur but it is probable that crops and gardens suffer more severely from these than does the indigenous flora. Relatively few spots are very high above the water table, but whether they are or not, so much of the soil is of a sandy nature that the vegetation is largely adapted to scarcity of water. More serious trouble might arise from too much rainfall. The average varies from 50 to 70 inches per annum in different parts of the state, but there have been instances when the rainfall for a single month has reached 25 inches or more. The resultant flooding may be temporarily disastrous to the local Lepidoptera along with everything else.

An important, indirect effect of drought is the destruction wrought by fire. When dry, much of the land may be burned off by fire of spontaneous origin. Some fires are for the purpose of clearing farm and grazing land; others, unfortunately, are deliberately and maliciously set. Whatever the origin, the result is a great loss to all the fauna of the area. Clearing not only for agricultural purposes but also for real estate developments, much of the latter purely to catch the unwary dollar, has been done with the bulldozer and the dragline. Nothing more destructive to the native flora, and consequently the

fauna, has been invented yet. The worst and most inexcusable phase of this desecration is that the land is skinned of every last vestige of vegetation and most of it burned on the spot. Probably the greatest crime in this respect has been perpetrated on the Keys, where grow, or did grow, plants not found elsewhere in the United States. If this unmitigated despoliation goes on, most of the unique flora will vanish forever.

VEGETATION

On the subject of vegetation, and more on the climate, one cannot do better than refer to Harper (1914). Referring to northern Florida on page 184 he wrote: "Taking the area as a whole, the salient features of its climate, as compared with that of Georgia and Alabama, are the mild dry winters and hot summers. The copious summer rains, while they make droughts rare, seem to be largely responsible for the prevalence of sandy soils and evergreen trees in Florida, for the rain tends to leach out the clay, lime, potash, etc., and leave the sand, and evergreens seem to be especially characteristic of soils poor in clay and potash, as already noted." Harper then discussed at length the effects of fire, caused by lightning or man, and explained that "Long-leaf pine is injured less by fire than almost any other tree, so that the effect of repeated fires is to give this tree the advantage over all its associates.

"It is reasonably certain that if fire were kept out of a long-leaf pine forest long enough hardwood trees of various kinds would come in and choke out the pine. . . ." All of this would have its influence on the insect population.

Harper divided the northern part of the state into twenty geographical, or perhaps we should say "geobotanical," divisions, each having certain individual characteristics of soil, and hence of vegetation. Each of these divisions would have a few species of Lepidoptera not found in any other part of the state. In Harper's other papers (1921 and 1927) he carved the rest of the state into geobotanical areas in the same way and one of the important fields of research for some student to undertake is the correlation of rare and localized species with these areas.

Speaking more broadly, and especially with reference to the southern third of the state, Harper (1927, p. 138) wrote: "The native flora can be divided into northern, tropical, and endemic elements. Some of these here called northern range as far north as Canada, and others no farther than Georgia. They are mostly plants of sandy pine lands, swamps, and marshes. A considerable number . . . seem to reach their

southern limits in the neighborhood of the Peace River, perhaps mostly because that is practically the coolest part of South Florida, or else because the soil there is more like that in the northern parts of the State. A few others extend nearly or quite as far south in the lake region or central prairies.

"Such counties as Okeechobee, Glades, and Charlotte have comparatively few species of trees, being too far south for most northern species, and too cool for most of the tropical ones.

"The strictly tropical species are chiefly confined to the Miami limestone region and southward, and to very narrow strips along both coasts farther north; and nearly all of them extend farther north on the east coast than on the west

"The endemic element, comprising species peculiar to Florida, is chiefly confined to the lake region and the Miami pine lands. They are generally rarer than the more widely distributed species . . . Many of them are confined to single counties, principally Highlands and Dade. Some . . . range northward into Polk County or farther. . . ."

One should recall that Harper was here writing only of the southern part of the state, the endemic element in the northern and central sections having been discussed in his earlier papers (1914 and 1921).

Since virtually no collecting has been done in Okeechobee and Glades Counties there is no way of estimating the effect of the paucity of tree species on the lepidopterous fauna in those counties. On the other hand, Punta Gorda in Charlotte County has been the scene of intensive collecting, and it should be possible to make some estimate of the effect in that region. Although I have made no detailed analysis, I am positive that anyone reading through the list will readily agree that Punta Gorda stands very high in the number of species recorded. Whether or not they are tree feeding, or shrub or grass feeders, is another question, but the fauna is rich there. As far as the endemic element is concerned, Dade County boasts a number of lepidopterous species which have not been taken elsewhere. The records for Highlands County, primarily from the Archbold Biological Station, are plentiful from November through May, and in that period at least three undescribed species have turned up—a species of an unrecognized genus near *Gabara* Walker, a species of *Platytes* Guenée, and a *Macrothecca* Ragonot.

Again writing of the southern section of the state, Harper, (1927, p. 141) stated, "The weeds seem to be mostly of West Indian origin, but quite a number are supposed to be natives of the United States and there are a few from Europe,

Asia, and Africa." These could account for some of the exotic species of Lepidoptera which apparently have become established there. He wrote further, (pp. 188-191): "Practically all the plants listed [on the upper Keys] grow also in the tropics, and there are no very distinct endemic species on the upper Keys. . . . The vegetation [on the lower Keys] is more diversified than that of the upper Keys. . . . but there are several endemic species [of herbs] among them. . . ."

Whether the lepidopterous species that are unique to the Keys are endemic and are supported by the endemic flora, of which Harper states there is very little on the Upper Keys, would be impossible to say without rearing them. However, the fact remains that we do have species unique to the Keys, for example *Scopula insulensis* Rindge and an *Anicla* which Franclemont is describing. Both of these have been taken on the upper Keys but because so little collecting has been done on the lower Keys (below Bahia Honda), we are not in a position to say anything about the situation there.

Since there is a certain amount of West Indian vegetation on the Keys, it is difficult to say whether the exotic Lepidoptera of Cuban or Antillean origin may have become established, or whether they are nothing more than strays of an occasional or perhaps even frequent appearance. A West Indian species may effect a temporary foothold for a year or two, possibly longer, but the hypothesis would be difficult to prove. Why the colony should then cease if the theory is correct, is a problem on which I would not care to speculate, but will leave for someone else to puzzle out. *Eurema nise* (Cramer) may be a case in point. Though first taken in 1933, it was found common only in 1947, and so far as I am aware, there have been no records for it since then.

For exotic strays pure and simple, distances are not at all insurmountable, the closest of the Bahamas being less than fifty miles from mainland Florida. Cuba is less than one hundred miles from Key West, and the Yucatan Peninsula of Central America is only slightly over three hundred miles away, with Cuba as a convenient stepping stone, the water gap between these two being approximately one hundred and twenty-five miles. In addition, many of the West Indian islands are within very reasonable flight range, even under normal conditions, and during hurricane weather, insects are carried many hundreds of miles with no apparent injury.

Whether or not strays come from the north is more difficult to say. Undoubtedly there are some, but until we have a greater knowledge of the moths of the neighboring states both to the

north and the west, to say nothing of our own northern counties, it is unwise to hazard an opinion. Probably some of the unique records for moths, perhaps also butterflies, that are well south of their customarily recognized range are based on specimens that have been brought into the state in one or another stage of their life by carrier, be it on vegetable matter or otherwise.

Some of the butterflies may have come as strays, such as *Lycaena thoe* (Guérin), *L. phlaeas americana* Harris, and *Celastrina argiola pseudargiola* (Boisduval & Leconte). A recently discovered colony of the last near Jacksonville may indicate that a stray or carrier borne specimen has found suitable conditions for propagation. Or the species may be spreading its range southward, as an even more recent capture has been made at Florida Caverns State Park. There is also the very dubious record of *Speyeria diana* (Cramer), which if correct, would be accounted for by a stray. I had thought that the records for *S. cybele* (Fabricius) also were those of strays, but the taking of several fresh specimens in the Gainesville region in recent years, suggests that this species has become established, at least tenuously. Of course the presence of any of these may be explained on other grounds, such as introduction by carrier.

Returning to the question of adventitious species of an exotic nature, G. W. Dekle, of the Division of Plant Industry, has pointed out to me that many of the nurseries for exotic shrubs were started years ago when the plant quarantine inspection was either non-existent or not so thorough as it is today. Oneco is an illustration of this point, the first nursery for exotics having been established there in 1881 and many records for exotic moths having been made in the immediate neighborhood.

DISTRIBUTIONAL AREAS

West and Arnold (1952, p. xii) made eight distributional areas for the trees which fit more satisfactorily into our present scheme for locality records than the more explicit areas of Harper, for it would require more time than should be spared on geographic work to allocate the records into these latter, highly desirable as the results would be. Nor is it satisfactory to use the division into life zones, primarily because they are too inclusive, but also because authorities vary. However, those who wish to look more closely into this phase of the subject should consult Merriam (1894, p. 14) and Howell (1932, pp. 66-72). Howell also has an interesting chapter (pp. 59-65) on the physiographic regions based largely on Harper's papers which have been discussed earlier.

The West and Arnold divisions are: I. Western Florida, west of the Aucilla River; II. Northern Florida, east of the Aucilla River and north of the line from Cross City to Gainesville to Palatka; III. Central Florida, south of the last line and north of the curved line from Tampa to Avon Park to Melbourne; IV. Southern Florida, south of the last line, but excluding area V; the Ten Thousand Islands; VI. the Everglade Keys; VII. Cape Sable; and VIII. the Florida Keys. However, for practical purposes I have shifted the boundaries of areas II, III, and IV to coincide with county lines as will be seen on the map (Fig. 1 p. 306).

When these slight changes were discussed with West, he pointed out that the coastal species of area IV extend at least one county farther north on the east coast and three or four counties farther north on the west coast, though the inland range does not extend more than a mile from the shore. This factor should be borne in mind in the case of Lepidoptera characteristic of the coastal flora. Another point that West brought out was that the boundaries between areas II and III represent an even more ill-defined transition belt than the boundaries between the other zones.

COMPARISON WITH NEIGHBORING STATES

Fauna are frequently compared with those of adjacent areas. To make such a comparison for Florida would present several problems. To begin with, Florida is, geologically speaking, a newcomer among its neighbors. Long after the North American land mass to the north and Cuba to the south were covered with vegetation, Florida did not exist as a land entity. Eventually the Ocala region appeared as an island, and subsequently, but very gradually the peninsula took form and substance. Consequently all of the fauna is of comparatively recent introduction. Secondly, although there are butterfly lists for Georgia, Mississippi, and Louisiana, there are none for the moths of any of these states, nor any list whatsoever for Alabama. There are old lists for both Cuba and the Bahamas, but none that would be adequate for such a study except for a few families where recent, limited lists have been published. We need to work out the proportion of species of West Indian, Texan, Central American, especially Mexican, and even South American origin, as compared with those of northern origin and the few of endemic sources. Another approach would be to assess the species in three broader classifications—continental, Antillean, and endemic.

As information in some detail has become

available recently from Quincy and the Pensacola area, it has become evident that there is a fairly appreciable representation of northern species in these two localities, especially around Pensacola. It becomes more apparent as records accumulate that there is a definite and sharp increase in the number of what one may call distinctly northern species working west from Monticello to Quincy to Pensacola. Not only that, but Pensacola has produced several unrecognized noctuids, both large and small, and one apparently new notodontid. This area needs the attention of collectors of Lepidoptera.

FORM OF THE LIST

Some explanation is in order as to the manner in which the list is put together. For the most part it follows the order and arrangement of the McDunnough *Check List of the Lepidoptera of Canada and the United States* (1938, 1939), that being the most recent comprehensive list. There is some divergence where recent revisions warrant it; however, the guiding principle has been to keep the divergence to a minimum. For instance, insofar as I have had access to the nomenclature to be used by C. F. dos Passos in his forthcoming check list of the Rhopalocera, it has been followed with his permission. However, I have followed McDunnough's (1938, 1939), arrangement with the few exceptions where subsequent generic reassignments such as those of Evans (1951-1955) in the Hesperidae, warrant. On the other hand, I have not followed the extensive changes made by Forbes in his various volumes on the Lepidoptera of New York (1923-1960), nor in all cases have I followed his generic nomenclature, largely on Forbes' suggestion that I be guided by fact rather than opinion, priority of specific name being fact, classification being matter of opinion.

Species that are not in the McDunnough List have been interpolated as nearly as possible to the appropriate place. New species and undetermined species, provided the latter are definitely distinct from named species listed in the present publication also are placed under an interpolated number, as nearly as may be in the correct sequence, their status as currently conceived being explained in the text in some cases. However, because this is not a taxonomic work, as already explained, no real significance should be placed on these interpolations, although every attempt has been made to be sure that it is clear which insect is under discussion. Obviously, in the case of new or unplaced species, precision is not readily achievable.

When a record in the literature is definitely erroneous, or where there seems to be some

question of its validity, the McDunnough number and name are set in italics and the whole put in brackets. All presumably valid species names and their numbers are printed in bold-face. When the determination is probably correct but because the amount of material is insufficient for positive determination, or when the applicability of the name itself may be in question, the specific name and that of the author are bracketed. In other words, this last device will serve to call attention to the fact that the name used is presently on the list in a tentative status.

A good deal of thought has been given to the form in which the records should be organized and an effort has been made to strike a balance between fullness and compactness. Except for species of generally state-wide and common occurrence, each locality is given with all its record, the locality name being followed by the date or dates, with the initials of the depository collection or collections, or the literature reference. When the material is in more than one collection or reference, the appropriate data are set off by semicolons, except that when the dates are the same, commas only are used. In most cases the collector's name is omitted, except for the rarer species. When it is given, it is in parentheses.

In as much as the text for each species is relatively short, the location "loc. cit." or the use of a date for a citation already made within that text, is omitted. In other words the use of the word "Smith" by itself as the authority for the record, would refer back to the previous Smith citation in the text for that species or the original description thereof.

All published records, except those noted below and those for the common species, are included, whether or not they are correct. When an error has been proven or is strongly suspected, the check list number and name are enclosed in brackets, and the explanation of the error, or the reason for suspecting one, is made, or reference is made to the correct species if it is a matter of misidentification. Though it has been stated that all erroneous records from the literature are discussed, none appearing under my name in "A proposed revision of the check list of Florida Lepidoptera" (1953, pp. 103-107) are included, because as explained in that paper, the records were not to be accepted as definitive. The same is true for various records under my name in the "Season Summaries" (1951, p. 101), in which several typographical errors appeared. An unsigned, mimeographed list of moths was circulated by me in the spring of 1959. This was supposed to include all valid names as of that date. However, a few have

since been proved erroneous. Therefore, all of these "records" should be completely ignored in the future.

Certain published records are omitted because they merely duplicate or repeat older records. Nor is any useful purpose served by quoting all the references even for the rarer species, because many of them are of a general nature, giving no further data than "Fla." Where it is felt that some useful purpose may be served, they have been included. On the other hand, all specimens labeled "Fla." even with no additional data on the label, must be included as they are an essential part of the record.

All data gathered on the common species, literature references not quoted, all correspondence on the subject, in fact everything pertinent to the subject, have been filed with the Division of Plant Industry in Gainesville. These together with the Works Progress Administration file hereinafter discussed, which is in the University of Florida Agricultural Experiment Station in Gainesville, are accessible to anyone interested.

DETERMINATIONS

As much of the information has been received from other collectors, I cannot assume responsibility for all the determinations, though for many of them I must. Nor can I be responsible for any in the literature. Nevertheless, every effort has been made to assure accuracy. When any question has arisen in my mind concerning the correctness of a determination, I have asked the owner of the specimen to check it. Sometimes my guess has been right, sometimes wrong. In many cases the suspect specimens have been sent to me, and either I have made the determinations myself, or passed the specimens along to more competent hands. Many of my own specimens have been passed along for this purpose. When the authority for the determination is important, it is given, if known. Many determinations have been made especially for this undertaking which are not specifically indicated, as they were not of a critical nature. These are acknowledged in footnotes to the family and generic headings.

The statements that someone "said", "reported," or "wrote" are based primarily on letters received from the individuals quoted. Some of the information was related in conversation, and I must assume responsibility for any misquotation even though the majority of the text has been read by the individuals involved.

There may be some criticism concerning the application of the terms subspecies, form, and variety. The latter has been used sparingly and perhaps should have been abandoned entirely

in favor of "form." On the basis of our present limited knowledge of much of the Florida fauna, it is not always easy to judge whether we are dealing with a clear cut subspecies, or with one or more variable and intergrading forms. The status of many, consequently, must be considered as placed tentatively in one or other of these categories solely on the basis of that very limited knowledge.

The terms Rhopalocera and Heterocera are considered incorrect as scientific classifications but they are used as convenient alternatives, the former for the butterflies and skippers as a whole, the latter for the moths. In the same sense, the terms macrolepidoptera and microlepidoptera are unscientific but useful for covering certain groups of superfamilies.

DESCRIPTIONS

No attempt has been made to describe species, nor has much been given by way of taxonomic keys to aid in determinations, although in a few instances certain characters that may be helpful in separating closely related and easily confused species have been pointed out. However, in order that it may be possible for anyone using this list, especially the amateur, to refer to some source other than the original descriptions, many of which are in relatively inaccessible works or periodicals, a few text books and papers should be mentioned.

The citations to original descriptions will have some inconsistencies in the abbreviated forms in which they are given in the text as many of these citations were taken from secondary sources because the originals were not available to me. This will be true particularly in the case of Hübner and Fabricius citations. The result is that the same volume may be found abbreviated in more than one form, and it seemed advisable to leave them as they were found rather than to complicate matters further by making changes which might prove to be erroneous. For the same reason, some of the dates may be incorrect.

Klots' Guide (1951), Holland's *Butterfly Book* (1931), and Ehrlich and Ehrlich, *How to Know The Butterflies* (1961), cover the field of butterflies thoroughly. The moths are a different matter. There is no text book that provides descriptions, or keys for all the Florida moths, and all we can do is list the works that should prove to be helpful to the beginner and the less advanced student. To the more advanced student the texts will be familiar.

Holland's *Moth Book* (1903), though a useful general work with many illustrations, is too limited to serve as more than an initiation, and it is difficult to obtain. Klots has in preparation a

general work on moths, but because of the magnitude of the field, it cannot cover everything. However, it will give the average collector one more very valuable tool with which to work. The only other general work, *The Lepidoptera of New York and Neighboring States*, by Forbes (1923, 1948, 1954, and 1960), is an advanced work which covers all families, but naturally it does not include all Florida species by any means.

For various individual families and genera, the following will be of assistance in varying degree:

- Spingidae, Rothschild & Jordan, 1903
- Saturniidae, Packard, 1914
- Ceratocampidae, Packard, 1905
- Amatidae, Nolidae, Arctiidae, Agaristidae, and Phalaenidae (Noctuidae), Hampson, 1898-1920, (in large part)
- Notodontidae and Zanolidae, Packard, 1895
- Geometridae, Packard, 1876, (out of date)
- Macrolepidoptera and some microlepidoptera, Seitz, 1913-1931, (far from complete)
- Limacodidae, Dyar, 1891 (in part only)
- Pyralidae, Amsel, 1954 (on the microlepidoptera of Venezuela, includes a surprisingly large number of Pyralidae common to Florida, and although the figures of genitalia and the illustrations of the adults leave much to be desired, the paper is useful within these limitations)
- Nymphulinae, Lange, 1956
- Phycitinae, Heinrich, 1956
- Pterophoridae, Barnes & Lindsey, 1921
- Olethreutidae, Heinrich, 1923a, 1926
- Sparganothinae, Lambert and Powell (in preparation)
- Archipinae, Freeman, 1958
- Cosmopterigidae, Hodges, 1962b
- Walshiidae, Hodges, 1961a, 1961b, 1962a, 1962c, (with others in preparation)
- Momphidae, Hodges (in preparation)
- Oecophoridae, Clarke, 1941
- Blastobasidae, Dietz, 1910 (poor and out of date); Selander (in preparation)
- Stenomidae, Duckworth (in preparation)
- Aegeriidae, Beutenmueller, 1901; Engelhardt, 1946
- Elachistidae, Braun, 1948
- Lithocolletis*, Braun, 1908
- Bucculatrix*, Braun, 1963
- Psychidae, Davis (in preparation)
- Acrolophidae, Hasbrouck (in press)
- Tineidae, Dietz, 1905 (poor and out of date)
- Nepticulidae, Braun, 1917

Perhaps it should be noted that several revisions are just being started, or are far short of completion, namely: Crambinae, Klots; Tortri-

coidea, Obratzov; Phaloniidae, Clarke; Gelechiidae, Hodges; and Gracillariidae, Davis.

Many papers on the West Indian fauna are useful, especially those by Herrich-Schaeffer (1864-1871), Moeschler (1886, 1890, Forbes (1930, 1931, 1940), Schaus (1940), Busck (1933), and Walsingham (1891). The Universidad de Oriente, Santiago de Cuba, has been publishing some excellent papers on the Lepidoptera of Cuba which, if continued, will be most useful.

LOCALITY RECORDS

Except where the records are so numerous that it is fully apparent that the species under consideration is to be found throughout the state, all locality records are given. They are listed in a north to south order, working from west to east according to an arbitrary order of counties which have been grouped to fit into the West and Arnold areas of distribution previously discussed. The order admittedly is not happily set up, but whatever order is used, some inconsistency will result, and any improvement to be gained by changing to one that would be more logically correct, would not be worth the labor involved in revising the thousands of locality records. The order of counties together with the localities which are mentioned in each, will be found in the gazeteer. Intensive collecting has been carried on in few parts of the state, namely: Quincy, Monticello, the Gainesville region, Cassadaga, the Orlando region, Weeki-wachee Springs (during certain months only), the Tampa area, Bradenton, Oneco, Siesta Key, Vero Beach, Port Sewall, Punta Gorda, Archbold Biological Station, Palm Beach, and the area between Miami and Paradise Key. Very recently the Pensacola area has come into this category. The Keys have been combed for butterflies but until 1955 the moths were sadly neglected in this most fruitful region. During 1955 a wild cotton survey team under the leadership of J. N. Todd made extensive collections on several of the upper Keys, from which have come many important records and several new species. All the Keys, upper and lower, should be worked over with great thoroughness before the bulldozers denude them of all vegetation.

Collecting has amounted to practically nothing in many regions of the state. A glance at the gazeteer will show how few are the places which have been visited in western Florida, and in many of the counties in other sections. Worthwhile unexplored collecting territories can be found by studying Harper's geobotanical divisions and comparing them with the gazeteer.

Some of the place names have not been located even with the assistance of the State Department

of Agriculture and the State Librarian, Miss Dorothy Dodd, to whom I am indebted for spotting a number of obscure places, some only after much research. These unidentified localities appear at the end of the gazeteer, though listed first under the species involved.

There is some confusion surrounding the name Capron. Lucien Harris, Jr. has received material from an individual, Louis Capron, who lives in West Palm Beach, but in the older records the name appears to indicate a place. Schaus (1880, p. 178) called it both Capron and Fort Capron and located it on the Indian River, which as noted earlier covers a long stretch of territory.

Royal Palm State Park, Royal Palm Hammock, and Paradise Key are names that have been used for the same locality, a tropical hammock located in the Dade County part of Everglades National Park (Section 15 and 22, Township 58S, Range 37E), and many early records for what today constitutes Everglades National Park refer to this hammock. Another large hammock in Collier County, located along the Tamiami Trail south of Naples, was also known as Royal Palm State Park. It is listed officially now as Collier-Seminole Park, although it is shown on the most recent official road map of Florida as Royal Palm Hammock. Early records for Royal Palm State Park, Royal Palm Hammock, and Paradise Key have been placed arbitrarily under the last of these names, since Paradise Key is the preferred name for this hammock according to Dr. William B. Robertson, Park Biologist, Everglades National Park, and Dr. John H. Davis, noted plant ecologist at the University of Florida. Some collecting has been done in the Park at other localities in recent years, but since they have identifiable names, there can be no question of ambiguity with them.

All records for Lake Placid, Childs, and Hicoria have been placed under Archbold Biological Station, an affiliate with the American Museum of Natural History. Although located nearly ten miles south of Lake Placid, the Archbold Biological Station is the actual site of collection for many specimens bearing a Lake Placid label. Childs, a very small community, is located only a mile north of the Station, and according to information received recently Childs will not appear on future road maps. Hicoria, another small community, is located less than three miles south of the Station. Dr. L. J. Brass, American Museum of Natural History botanist permanently assigned to the Archbold Biological Station, has collected in this general area northward to Childs and southward to Hicoria.

The only locality name which appears under two county heads is Longboat Key which is

partly in Manatee County and partly in Sarasota County. Gasparilla Island is partly in Charlotte County and partly in Lee County, but I believe that all records from that island are from Boca Grande, in Lee County.

Any unusual records from Chokoloskee, other than those of McDunnough, and also some from Marco, should be viewed with a very jaundiced eye, as this was the "source" of a number of specimens representing subspecies that could have originated only in far distant climes, despite the fact that many strange strays may and do reach Florida. According to Blatchley (1932, p. 308), Mrs. C. G. McKinney, wife of the postmaster at Chokoloskee, collected butterflies, moths, and Orthoptera for northern dealers for a number of years. All her material unquestionably was valid, but what the northern insect dealers may have foisted on the trusting buyer is another matter.

The evaluation of strays and essentially exotic species is one of the most exasperating features of Florida lepidopterology. I have been told by various specialists that some of the "Chokoloskee" specimens were patently fakes because the subspecies palmed off was a sheer impossibility, the habitat being too far afield to permit flight hither, whereas an Antillean race might have been perfectly possible. Such a situation is most unfortunate because it means that we simply cannot be sure of any of the unique Chokoloskee or Marco records unless the name of a reliable collector is attached, yet many of the unusual specimens taken at Chokoloskee in addition to those taken by McDunnough, undoubtedly were authentic.

The difficulty of making a true appraisal of some of these exotics is well illustrated by an extract from a letter dated November 19, 1927, from Dr. H. G. Dyar to Dr. F. M. Jones in connection with material collected by Jones in Royal Palm State Park.

"Dr. Schaus is very incredulous about this piece of Mexican fauna occurring in the midst of the Florida everglades; but it cannot be doubted. Where is Chokoloskee, Florida? A good many years ago Dr. Barnes purchased a lot of material so labeled, which was composed of mainland Mexican forms, though not the same species you sent, still of the same fauna. Only the other day I had before me two specimens of undoubted *Sibine extensa* Schaus labeled 'Chokoloskee, Fla.' To be sure we laughed Dr. Barnes out of court at the time for being so easily taken in by false labels; but now it looks as though the laugh was the other way." When McDunnough collected at Chokoloskee, he found none of the spectacular species which were supposed to be there, and the more one studies the situation, the

more one is inclined to believe that Dyar's first laugh was the best.

Besides these "Chokoloskee" records there are a number from Stemper in various collections that are surprising, to put it mildly, and here too the collector's name is invariably missing. Several reliable collectors were active around Stemper and Lutz at about the same time—namely, Bromley, Krautwurm, and Friday, and probably Engel; but it is not of their material that any question arises. The most dubiously labeled specimens either are in the Cleveland Museum of Natural History or have been transferred in recent years to the Carnegie Museum. Both E. C. Welling, who kindly listed the material in the first instance, and H. K. Clench, who has examined the part now in the Carnegie, concur in suspicion of certain species records.

Nonetheless it would be very short sighted to deny the possibility of a species of West Indian origin wandering a few hundred miles up the peninsula, for exotics are apt to turn up in strange places at approximately the same time because of severe disturbances or freak conditions of the atmosphere. Frequently, distinctly southern species are taken in New England in September and October.

The more I have seen of the interceptions made by the customs and quarantine services, the more plausible I feel are some of the records which have been frowned upon as figments of the imagination or palpable errors. Let us consider an illustration or two. In 1945 Klots captured a specimen of the South American *Thebrone tricolora* (Sulzer) at the airport in Miami. There is no question about the validity of this record, nor is there any doubt of its having arrived by plane and having escaped the vigilance of the quarantine inspection. It is merely a matter of fortunate coincidence that a collector of repute happened to be there and was able to seize the opportunity. In 1953 a species of the closely allied genus *Pericopsis* was intercepted at Miami, but had it got by inspection and had another alert collector been on hand, we would have had one more "impossible" record. In April and May of 1956, no less than four striking exotics were similarly intercepted. How many escape detection and are not taken, it would be idle to speculate; but we do know that there must be some. All of which makes one wonder whether the commonly accepted belief that *Ithomia phoeno* (Geyer) and *Greta diaphana* (Drury) were erroneously recorded, is itself an error, and whether perhaps they were actually taken much in the same way as Klots took *T. tricolora*, but by obscure collectors. Because they lacked his prestige, disbelief and time have gradually relegated them and their prizes to oblivion. In

the case of *Diaethria clymena* (Cramer), we do have documentation in the literature of a specimen taken in 1836; the details appear in the text under that species.

Whether my estimate on the validity of certain exotics is accurate or not would be hard to say. I feel that unless there is strong evidence on the point of who did the collecting, most of them should be excluded, awaiting duplication or confirmation. I have, therefore, taken the position that it is my duty to chronicle what has come to my attention, make such comment as to me seems appropriate, and leave the ultimate judgment to the reader, or to more evidence.

DATES

Although exact dates should be a part of the label on every specimen, it would serve no useful end to go into such detail here except in the case of strays or rare species. In general, all we want to know is the approximate time or times during the year when a species is flying in order to try to determine the number of broods, or when to look for it. Actually, dates in Florida have less meaning than in climates where seasonal change is greater. So many insects are taken in every month of the year that it becomes difficult to guess accurately the number of broods; in many instances it seems to indicate a continuous breeding.

The dates are given in the order of the months, as that method seems to me more important than the chronological order of the years. The apparent discrepancy of a more recent year being listed before an earlier one occurs only a few times, but this is the explanation for it.

The records reveal that most of the collecting has been done in the first half of the year, too much, in fact, in the winter months only, and I feel that until we have more complete information covering the whole year we cannot make categorical statements concerning the number of broods for most species. This preponderance of records for the winter months is easily explained by the fact that this is the time of year when Florida is popular with the visiting collectors, and only recently with the advent of more year-round collectors and the broadening work of the Division of Plant Industry has the summer fauna begun to take its place in the scheme of things.

George D. Morgan, who collected in the Tampa region for many years, very generously supplied me with notes he had made on the butterflies of that region, and for the vast majority the story is the same, "common in every month from March to December." This, of course, is not always true for every year, nor on the other hand would it be accurate to say that there are never years in which they might be common in

January and February. Constant observation and meticulous notes will be needed before we can state authoritatively how many broods this or that species may have. It is indeed the exception when a single or double brood is clearly indicated.

The question of broods is further complicated by the occasional prolonged periods of cooler or actually cold weather from November through March. This period, though longer, might be likened to the spring in the north, and every collector there knows how variable is the date of first appearance of the very early species, in spite of the hypothesis that appearance is due to the intensity of the infra-red light from the sun having reached the critical point.

The statement that the records cover every month does not necessarily mean that the insect is flying continuously, especially in the northern part of the state, though it may be true literally for the southern tip of the peninsula. Nevertheless, because occasional winters are unusually mild throughout or because there may be prolonged warm spells at any time during the winter, many insects will be present every month, even well up the peninsula, though this may not happen often in any given year.

In an attempt to learn more about the flight periods and the peaks of abundance, a record was kept of all species taken during the year from April 1, 1955 to April 1, 1956 at the University of Florida Gulf Coast Experiment Station at Bradenton, and a detailed record of the number of specimens of each species taken at the University of Florida Sub-Tropical Experiment Station at Homestead was compiled for the year April 1, 1958 to April 1, 1959. Parallel data is being compiled for the University of Florida North Florida Experiment Station at Quincy; the collecting there started in June 1960 and has continued into 1963. Odd as it may appear, many of the species usually thought of as being common and present most of the year, were not taken at all, or were taken in such negligible numbers that the figures have no meaning. In the few instances where some significance is observable, the records for one or more of the three localities are added to the text in connection with the species which are otherwise dismissed as being of state-wide occurrence and taken in every month. If these appear to be inconsistent at times with the general statement, it must be recalled that only a specific year is under consideration.

COLLECTORS

The history of collecting in Florida goes back a long way. Bryant Mather kindly called my attention to a passage by Bartram (1791, pp.

xxv-xxix) and although the latter was not a lepidopterist, the passage is worth quoting at length for he depicted three butterflies, one of which is readily recognizable as *Heliconius charitonius* Linnaeus, but the other two are not identifiable. Because Bartram was too skilled an observer to have been very wide of the mark, and his details are precise rather than general, one wonders what he actually saw. In the case of the first of his mysteries it sounds as though he might have observed several different species of swallowtail butterflies and made a composite description. The second suggests *Ascia monuste* (Linnaeus) but some extra and highly colorful markings rule it out. "When travelling on the East coast of the isthmus of Florida, ascending the South Musquito river, in a canoe . . . I resolved to make a little botanical excursion alone; crossing over a narrow isthmus of sand hills which separated the river from the ocean, I passed over a pretty high hill . . . I continued along the beech [sic], a quarter of a mile, and came to a forest of the *Agave vivipara* . . . (which) occupied a space of ground of several acres . . . I proceeded towards the shrubberies on the banks of the river, and though it was now late in December (1774) the aromatic groves appeared in full bloom. The broad leaved sweet Myrtus, *Erythrina corralodendrum*, *Cactus cochenillifer*, *Cacalia suffruticosa*, and particularly, *Rhizophora conjugata*, which stood close to, and in the salt water of the river, were in full bloom, with beautiful white sweet scented flowers, which attracted to them, two or three species of very beautiful butterflies, one of which was black, the upper pair of its wings very long and narrow, marked with transverse stripes of pale yellow, with some spots of a crimson colour near the body. Another species remarkable for splendor, was of a larger size, the wings were undulated and obtusely crenated round their ends, the nether pair terminating near the body, with a long narrow forked tail; the ground light yellow, striped oblique-transversely, with stripes of pale celestial blue, the ends of them adorned with little eyes encircled with the finest blue and crimson, which represented a very brilliant rosary.¹ But those which were most numerous were white as snow, their wings large, their ends lightly crenated and ciliated, forming a fringed border, faintly marked with little black crescents, their points downward, with a cluster of little brilliant orbs of blue and crimson, on the nether wings near the body . . ."

¹ Lucien Harris, Jr. says he has seen large females of *Papilio glaucus* Linnaeus with the transverse lines blue, and believes this is what Bartram saw.

The next collector and the first of importance was Edward Doubleday who was in the field from December 1837 to June 1838, mostly at St. Johns Bluff, as already mentioned, but possibly also at St. Augustine and Jacksonville. As his material is in the British Museum, the only records available to me were those taken from the literature, in this case Packard (1876, and perhaps his other works) and Grossbeck (1917). I am assuming that all the Grossbeck references were based on Walker (1854-1866) or some other source of information, and am assuming further that Grossbeck extracted all the records from Walker and that it was unnecessary for me to check Walker. All the Grossbeck records for Doubleday have been credited to the British Museum as depository. Packard's references have been left as given by him.

Actually there was a third collector earlier than Doubleday—a Dr. Leitner, 1836—but as he is known for only a single specimen, *Diaethria clymena* (Cramer), q.v., he hardly need be taken into consideration.

Perhaps mention should be made of John James Audubon who was in Florida from 1832 to 1834 during which time he made many paintings of birds. Scattered through his bird studies there appear numerous illustrations of insects, mostly Lepidoptera. A collection of these bird illustrations which included insects was published by Alice Ford (1952) but according to the comments in the text (p. 13), all the insect specimens used as models were supplied to Audubon by a correspondent in New Orleans. However, it is not beyond the range of possibility, or probability, that he may have included some insects in sketches made during his long stay at Key West, where many beautiful specimens must have come within his observations. If so, they would represent the earliest illustrations of Florida Lepidoptera, unless some appeared in Catesby (1731-1748), a rare work which I have not seen.

A. W. Chapman collected at Apalachicola in the late 1860's. Where his material is deposited, if extant, I do not know.

Charles J. Maynard made many trips to Florida from 1868 to 1901 in the course of which he visited many parts of the state. His primary interest was in ornithology, but he did collect some Lepidoptera, records for which appear in his Manual (1891) and which were repeated by Grossbeck (1917). Maynard's material is in the Museum of Comparative Zoology, Cambridge, Massachusetts.

Regular collecting began about 1875 when Roland Thaxter first visited and collected at Apalachicola. He made visits to other parts of Florida, including Miami, as late as 1897. His ma-

terial is also in the Museum of Comparative Zoology.

Albert Koebele likewise collected at Apalachicola, in 1882, and covered several other localities either then or later. His material is scattered in a number of institutions, but where the bulk of his Florida specimens are to be found is a mystery. Probably they, too, are scattered.

In the same year, 1882, Dr. Wittfeld was collecting in the Indian River region, probably around Georgiana, and possibly before that time, as *Strymon wittfeldi* was named for him by W. H. Edwards, the description appearing early in 1883. Some of Wittfeld's specimens went to Henry Edwards.

W. W. Hill collected at Rockledge in 1884. His material is in the New York State Museum at Albany, and the entire Hill collection was listed in the 23rd Report of the State Entomologist (1908, pp. 61-117). Unfortunately, the determinations leave much to be desired according to those who have had occasion to work with the collection, and consequently need to be verified, as will be noted in the text under certain species.

H. K. Morrison collected in some parts of south Florida in 1884 and at Key West in 1885.

In 1888 E. A. Schwarz published on the insect fauna of tropical Florida; however, references to Lepidoptera are few and are chiefly in the report of the discussion which immediately followed the paper. Nonetheless, he must have collected many specimens as several authors mention material of Schwarz and of Schwarz and Barber. Specimens collected by Schwarz and Bela Hubbard were noted by Grote (1875c), which would place Schwarz as one of the earlier collectors. Grote also mentioned in this paper specimens received from George Dimmock, but of the latter there is no other record.

William Beutenmueller and Charles Palm were in Florida the same year (1887) as Schwarz. A few species were named for Palm—a point it is well to bear in mind as it is easy to assume without thinking that *palmi* has something to do with a palm tree, whereas there may be no connection whatsoever.

In 1890, and again in 1900, Dr. H. G. Dyar collected assiduously in the Palm Beach-Lake Worth area, though the inference is clear from a close reading of his papers relating to the material collected there that all the collecting was done actually at Palm Beach. Accordingly, I have credited the records to Palm Beach, though Grossbeck (1917) listed them all under Lake Worth. The results of these two visits, including a number of life histories, were published by Dyar in several papers during 1901 and a few subsequently. Until recently this was almost the

only source of information regarding microlepidoptera in Florida, especially for their life histories.

Mrs. Annie T. Slosson collected at several places over a number of years, principally at Fernandina, Ormond, Charlotte Harbor, and Biscayne Bay, i.e., the Miami region. Some of her Lake Worth records were included in Dyar's paper (1901a). Unfortunately the papers which she herself published in several early volumes of the *Entomological News* and of the *Journal of the New York Entomological Society* do not give satisfactory records, nor do her labels supply any data beyond locality, sometimes not even that. Although most of her material is in the American Museum of Natural History, some of it is scattered and cannot be located now, including, unfortunately, several specimens representing species whose presence in Florida needs confirmation. Perhaps she did what some of us have thoughtlessly done, discarded things that seemed common and worthless; common in the north, but extremely rare in Florida.

Just before and after 1900, Dr. D. M. Castle and Phillip Laurent collected in two or three localities and recorded their captures in the literature (1896, 1897, and 1903). Laurent's material is in the collection of the Academy of Natural Sciences, Philadelphia.

Between 1911 and 1914, four expeditions to Florida were made under the auspices of the American Museum of Natural History. The results of these expeditions were published in 1917. The primary author of the paper was Dr. John A. Grossbeck, but owing to his untimely death in 1914, the final editing was done by Frank E. Watson. This has been the standard list of the Lepidoptera of Florida, and is, of course, one of the main sources in the literature on which I have drawn. Some of the records are a little hard to interpret, but it is quite probable that had Grossbeck lived to finish the work, there would have been adequate explanation of the form in which they are written. For example, it is difficult to decide whether "Charlotte Harbor, Punta Gorda," means that specimens were taken in both places or whether he is simply aiding the reader to locate the lesser known place by that which is better known. I believe this was definitely his motive in writing "South Bay, Lake Okeechobee," and have accordingly dropped the second name. It is also difficult to figure out whether "Punta Gorda, February, Lake Worth (Sloss.)," means that Slosson took the moth at both places or only at the latter. I have assumed only at the latter, or, being in doubt, have not credited her for the former, but have cited Grossbeck as the authority, even though she did collect in the Punta Gorda

vicinity. Certain other assumptions have been made, such as that all specimens on which Doubleday records are based, are in the British Museum, as already mentioned; also, that the specimens for all the Davis records are in the Staten Island Museum except a few known to be in the American Museum of Natural History. All the records that coincide with the dates of the 1914 expedition have been credited in this list to the American Museum of Natural History as depository.

The first expedition, that of 1911, consisted of Grossbeck and William T. Davis, the second, 1912, of Grossbeck, Davis, and Joseph Mattes, who were joined later by Dr. J. H. McDunnough. The latter related to me an incident that other collectors may appreciate. "When the other members of the expedition left for Everglades, Mattes remained in Fort Myers, where he was made the butt for a gang of rude boys who followed him along from one electric light to another and annoyed him excessively by their remarks." Mattes is probably not the only one who has undergone such trials, but it should be recalled that Fort Myers was originally a "cow town" and apparently the rugged life of its early days still persisted into 1912. This was the expedition instigated by Barnes to look into the authenticity of the peculiar Chokoloskee records, which, needless to say, were not verified. The third expedition in 1913, was made independently by Davis. A fourth, in 1914, was carried out by Frank E. Watson and A. J. Mutchler, the objective in this case being a month's collecting across the little explored northern strip from Jacksonville to Pensacola, with a side trip down to Gainesville.

McDunnough informed me that all the material from the Barnes collection from which new specific names were proposed in the Barnes and McDunnough Contributions, Vol. II, No. 4 and Vol. III, No. 4 is in the United States National Museum. Part of the material, Grossbeck's misidentified species as recorded in the above Vol. III, should be in the American Museum of Natural History, possibly still under the wrong name; the balance of the material, formerly in the Barnes Collection, should now be in the United States National Museum.

In addition to the collectors named above and in the earlier part of this section, there are several whose names appear in the Grossbeck list. Of course it is quite possible that in some instances the parenthetical names may refer to collections of that day, rather than collectors, but if so, there is no way of distinguishing that fine point at this time. Four of the names appear with relative frequency, Charles E. Sleight, G. C. Fisher, Johnson, and Palmer. About all

that can be said of Sleight is that Forbes remembered him and thought he had been a member of the Brooklyn Entomological Society, and probably the New York Society as well. If his material was left to the Brooklyn Museum, it might be in the United States National Museum where the collection eventually wound up, or it may be anywhere, as apparently there was some prior distribution, or in plainer language, helping one's self. George Clyde Fisher, an ornithologist attached to the American Museum of Natural History, made a visit to Lake Wimico near Apalachicola in December 1909, according to Howell (1932, p. 31), but in Howell's bibliography (p. 503), the titles of Fisher's papers show that he was in Florida at Quincy in 1907, at Apalachicola in 1908, at DeFuniak Springs in 1909 and 1910, and at Tallahassee in 1916. Grossbeck (1917) gave many records for Lepidoptera collected by Fisher at DeFuniak Springs, but at no other locality. A check for two or three of these showed that this material is in the American Museum collection.

The Johnson referred to by Grossbeck almost surely is Dr. Charles Williston Johnson, for in Part I of the "Insects of Florida", of which Johnson was the author, he stated that many of his records for the Diptera (the subject of Part I) were the result of his residence in St. Augustine from 1880 to 1888, and the Johnson records cited by Grossbeck were all from St. Augustine during that period. Where the material is I have not been able to discover, but from some of the statements made by Grossbeck it seems that Johnson may have kept notes of his observations, and perhaps did not actually collect.

Palmer possibly refers to William Palmer who was associated with the Smithsonian Institution, but this a guess based purely on the fact that he wrote a few papers on Florida birds.

Of the names appearing in Grossbeck with less frequency than the four above, some can be identified from the bibliography in this publication; of the remainder, relatively little information has been found: A. N. Caudell was with the Bureau of Entomology of the United States Department of Agriculture; Dickenson, also spelled Dickerson, I suspect was W. S. Dickerson of Miami, who sent his season's catch for several years to W. C. Wood, of Mahopac, New York (Wood, 1939, p. 131). Where Wood's collection is, I do not know. Jacob Doll was the well known collector from Brooklyn, but there is no evidence that he visited Florida; the French named may have been G. H. French, author of *The Butterflies of the Eastern United States*; John L. Healy of Chicago made at least one visit to Florida, probably about 1922; Alex K. Wyatt has informed me that Healy's material was in the

Chicago Natural History Museum collection but was destroyed by pests; Prof. J. W. P. Jenks of Providence, Rhode Island, an ornithologist, collected a few specimens of Lepidoptera in 1887; R. Ludwig collected around Stemper, but when, is uncertain; Frank Merrick of New Brighton, Pennsylvania, made one or more trips to Florida, being in Dade City at least in 1912, according to Wyatt, and gave his material to Barnes; Grossbeck named A. L. Quaintance of the United States Department of Agriculture, but there is no evidence of his having visited Florida, unless the fact were to emerge from some of Quaintance's papers; it is believed that F. Rauterburg was a dealer, perhaps one of those who obtained material from Mrs. McKinney, of Chokoloskee; E. R. Sasscer was with the United States Department of Agriculture and was with the Division of Plant Industry for a few months in 1954, but must have collected in Florida prior to 1917; Otto Seifert collected in Florida in March 1901, (see *Ent. News* 15:47), lived in the New York area, probably Brooklyn, and his collection may have gone to Buchholz or the Brooklyn Museum; the Snow mentioned probably is Prof. Francis H. Snow of the University of Kansas; Henry Thurston, an ornithologist from New York, collected a few specimens at Seven Oak; Wickham may have been the coleopterist from Philadelphia; and Williams may have been Roswell C. Williams, the specialist in Hesperidae. Finally, there are those who are no more than names. Perhaps someone will be able to rescue them from complete oblivion: Babbitt; Brown, who collected at Hastings; Dorner; Hegen and Henderson; Mr. & Mrs. Hunt; Linden; Neal; Norton; Pollard (Query: Could this be the curator of the Staten Island Museum, C. L. Pollard?); Priddy (is this an error for Friday?); Turner. I believe Linden was one of the early collectors, but the only information I have is in Grote & Robinson (1868, p. 25) in their description of *Dyops futilis*, now in the genus *Litoprosopus*, where the habitat is given as "Florida (Linden)." This is the form in which the collector is generally indicated in this paper. However, there is a town of Linden in Sumter County and the possibility that it was to this the reference was intended, cannot be ruled out entirely.

W. H. Safford made a report (1917) on the natural history of Paradise Key and the nearby Everglades, with illustrations of some Lepidoptera as well as text references to them.

In 1920, H. L. Dozier published a brief list of insects of the Gainesville region taken during the years 1916-1917.

From 1921 to 1942 the late Dr. Frank M. Jones made a number of visits to Florida to collect specimens, covering a wide range of localities

from DeFuniak Springs to Paradise Key. In connection with a survey of the natural history of the Key projected by the Women's Garden Club of Florida, at that time the owners of the Key, he made a complete report of his captures on the Key. The general editor of the project was W. S. Blatchley, but apparently the only section of the survey that actually reached the report stage was that on Lepidoptera by Jones. A copy of this Jones very generously turned over to me together with all his correspondence with the various specialists in Washington who had made many of the determinations for him, as well as his records for other Florida localities. The material itself, including a very small amount taken by Blatchley, is partly in the United States National Museum, partly in the Academy of Natural Sciences of Philadelphia, partly in the Peabody Museum of Natural History, New Haven, Connecticut, and partly in my collection.

A small collection was made in the summer of 1936 on the Dry Tortugas by Prof. H. H. Plough, which is now in the Cornell University collection, and which was listed by Forbes (1941). The late W. M. Davidson and Dr. G. W. Rawson made brief visits to these remote Keys in the early summers of 1959 and 1960, primarily for bird banding and observation, but collected some Lepidoptera there which are in their collections. A paper prepared by them which will summarize their captures is scheduled to appear in the *Journal of the Lepidopterists' Society*. Recently entomologists of the Division of Plant Industry inaugurated a series of visits to these Keys for the purpose of a systematic study of the terrestrial arthropods. Their findings are to be published by the Florida Department of Agriculture.

Otto Buchholz made a collecting trip to Florida in 1946, the results of which added to material obtained by him from several other sources, made his one of the most important Florida collections. Since his death, his collection has been acquired by the American Museum of Natural History, but no attempt has been made to change all the depository records in this publication.

Dr. J. G. Franclemont has made several short, but intensive collecting visits to Oneco in recent years, with briefer stays in a few other localities.

Roger W. Pease has made a couple of lengthy stays at the Archbold Biological Station for collecting, and was joined for a shorter period by Dr. Charles L. Remington, their material being deposited partly in the Yale University collection, partly in the Station collection, after being thoughtfully submitted to me for study and records.

From November 1 to May 1, in the winters of 1958-1959, 1959-1960, and 1961-1962, Prof. S. W. Frost also ran a light trap at the Archbold Biological Station. He, too, generously submitted all his material for my inspection, and it is in the collection of the Pennsylvania State University, except for a few specimens which I was permitted to retain through Prof. Frost's kindness and some specimens which have not been determined and which are on loan to me.

Alex K. Wyatt spent the winter of 1959-1960 in St. Petersburg, but because of the prolonged cold, did not collect much at that time. However, a briefer, earlier visit, together with the valuable material collected by Henry Ramstedt over several winters at Punta Gorda, gave Wyatt one of the finest of Florida collections. This, together with his other material, he has turned over recently to the Chicago Natural History Museum, but the depository records are still credited to Wyatt in the text. Ramstedt also collected very briefly on Egmont Key over fifty years ago and is probably the only person who has collected there. Some of his Punta Gorda records are unique, and he is unquestionably one of the most important collectors to date.

Other collectors have visited Florida for brief periods, some limiting their activities to one place, others doing a day or so here and there. All have contributed to the sum of our knowledge of the fauna, either on their own account through brief notes in the literature, or through the current holders of their material, individual or institutional. The names of some will appear also under the heading "B" of the section on depositories or in connection with various institutions under "C" in the same section, but they are enumerated here as collectors in the field. Henry Engel and Bernard Krautwurm both collected at Stemper, and probably at Lutz, their material ending up mostly in the Carnegie Museum, but also in the hands of a few individuals. Additional Florida material collected by John Bauer, E. P. Mellon II, C. W. Stafford, Dr. Walter Sweadner, and Mrs. Mary Wible, is in the Carnegie Museum collection. Dr. J. C. Bradley, Fred Marloff, and F. W. Friday are others who collected at Stemper and perhaps Lutz. Friday's collection is in the Los Angeles County Museum. C. O. McBride, Dr. J. G. Needham, ? Henri, ? Hoffman, and Dr. J. S. Rogers collected at various places, with the material going to the Cornell University collection. Material that went essentially to the Museum of Zoology, University of Michigan, was collected in a number of localities from Monticello to Miami by D. M. Bates, H. E. Bratley, Dr. I. J. Cantrall, H. Friauf, Dr. F. M. Gaige, Dr. T. H. Hubbell, and F. W. Walker. The American Mu-

seum of Natural History has been enriched by collections made around Tampa by E. L. Bell, at Florida City by Mrs. C. F. dos Passos, at Winter Park and Archbold Biological Station by Dr. A. B. Klots, at Port Sewall and Big Pine Key by L. J. Sanford, and from various localities by F. E. Church. Richard Archbold and Dr. L. J. Brass have collected in the neighborhood of the Archbold Biological Station, and their material is at the Station. Prof. R. H. Beamer and a group of his students made a collecting trip for the University of Kansas. G. B. Fairchild deposited in the Museum of Comparative Zoology some Florida specimens which he had taken. R. T. Bird of Rye, New York, made a brief collecting trip to Paradise Key about 1930. F. G. Blaicher collected specimens for Buchholz at Bonita Springs. William Reiff and Samuel E. Cassino spent a short time at Rockledge and wrote of their captures (1917). Cassino described several geometrids from St. Petersburg, but there is no evidence that he went there. The late Prof. P. W. Fattig, a prolific insect collector, who served as curator of the Emory University Museum for many years, was a Professor of Agriculture at the University of Florida from 1918 to 1921, during which time he made all or most of his Florida collections. Collecting trips of longer or shorter duration have been made by J. W. Cadbury and Mrs. Margaret M. Cary; M. O. Glenn; Dr. R. W. Hodges; H. W. Howe; G. W. Kamp; E. V. Komarek of Grady County, Georgia; R. R. McElvare; Lt. Col. S. S. Nicolay; Kilian Roever; Dr. T. E. Snyder; P. C. Truman; G. S. Walley of Ottawa, Ontario; and J. P. Knudsen made a collection while residing briefly at Tallahassee. Janice Magill established the most southerly record for *Actias luna* L. while a high school student in Clewiston.

There were others about whom little information is available, even whether they were visitors or residents: Applegate and Smith; Beatty at Milton in 1958; B. L. Boyden; Bramley (perhaps in error for the late Dr. Stanley W. Bromley of Stanford, Connecticut); H. J. Erb; P. G. Hawes; Heness at LaBelle; Krueger; J. H. McMillan at Gainesville; Dr. Levi W. Mengel of Reading, Pennsylvania; G. F. Mozzette at Miami in 1920; Murrell, in 1938; Niedsgar; Norris; Carolyn Ponsonby; Samuel N. Rhoads of Philadelphia; William Sawyer; Mrs. L. Walsh; White; Wood; and R. H. Young in 1917.

A fascinating study which would consume much patient labor would be to try to find out where people like Strecker, Henry Edwards, Hulst, and Smith got the Florida specimens from which they described so many species. Some of the sources are mentioned in the descriptions, but for many of them the source is not indicated.

Were there other early collectors about whom we know nothing at all?

The resident collectors, permanent and seasonal, have provided the greatest amount of information, some of it indirectly through the disposition of their material to others, although their impact on that information scarcely began to take effect until forty years ago.

In the forefront of these in contribution, though not in point of seniority, stands Mrs. Leslie E. Forsyth, whose records for macrolepidoptera, and to a small degree for microlepidoptera, are unmatched by anyone in Florida. Her material is held by many collectors, for with her it was largely a commercial venture, but nonetheless, she was the sole source of many a choice item. Buchholz thoughtfully pulled from his files and turned over to me some old sales lists received from Mrs. Forsyth, and these lists are my authority for one or two species which appear on them. Even though Mrs. Forsyth did not indicate that they were currently available, it is hard for me to believe that the names would have been on the lists had she not at one time or another taken specimens. The lists were headed: "Noctuidae" (etc.) "from So. Fla.," suggesting that although her home was in Florida City, she probably collected in other, nearby places.

The earliest resident collectors probably were Johnson and Wittfeld, both already mentioned. They were followed by T. L. Mead who lived at Orlando or Ormond at one time and did some collecting for his father-in-law, William H. Edwards, and some perhaps for himself; if he had his own collection, the answer will be forthcoming when someone goes over the Carnegie Museum collection for Florida records. Edwards may have done a little collecting on his own, as F. Martin Brown has written me that Edwards visited his semi-invalid wife and their son in St. Augustine in the late 1860's. Brown reported further that there is reference in Edwards' letters to S. F. Baird with regard to specimens collected for him by the son.

Next in importance to Mrs. Forsyth comes Henry Ramstedt who has been mentioned in connection with A. K. Wyatt.

To Major Dean Berry goes credit for many contributions to the knowledge of the butterflies, *Catocala*, and other large moths of the Orlando and Titusville regions. Much of his material was distributed to various collections. Unfortunately after his death Mrs. Berry, due to ill health, was not able to give proper care to the remainder, and much data has been lost to mold and pests. Berry will be remembered especially for the discovery of the hesperiid which bears his name.

George D. Morgan, already mentioned, col-

lected industriously in and around Tampa and published privately (1933) a list of the butterflies of the area, a copy of which Lucien Harris, Jr. kindly made and gave to me. Morgan is responsible for many notes and comments on the relative abundance and season of numerous species. What little remains of his collection is in the Biology Department of the University of Tampa. Prof. Clyde T. Reed, of that department has picked up one or two good specimens. Also collecting at Tampa was U. C. Zeluff, although his activities in the field were essentially commercial and have been discontinued.

Dr. H. T. Fernald moved to Orlando in 1928 and then to Winter Park in 1930, where he lived until his death in 1952. Most of his collecting was done in his early years there. A large part of his collection is in The Florida State Collection of Arthropods, although he sent many specimens to the United States National Museum where they were made types of species described by the workers there.

Mrs. Florence M. Grimshawe has been an active collector of butterflies in Miami and the upper Keys for some years, but because of other activities has been able to supply only a small portion of the large amount of data she possesses.

J. F. Malloch, formerly with the United States Department of Agriculture, collected much material at Vero Beach which he has deposited in the United States National Museum, but very little of it has been worked up.

J. F. May ran a light trap at Weekiwachee Springs on several occasions, an operation which Mrs. May has continued at times. Since they were interested primarily in the larger and more spectacular species to add to their fascinating exhibit at the Springs, they most generously saved the balance of the catches and turned them over to me. During his life, May did not have an opportunity to work up his own material in a scientific way, nor has Mrs. May, although I have seen and recorded some of it.

S. V. Fuller, who holds a staff appointment with the Division of Plant Industry, has one of the finest collections of Florida material, taken mostly at or near his home in Cassadaga, but also from other parts of the state including the upper Keys.

H. L. King of Sarasota has collected butterflies in many parts of the state and has contributed a number of pertinent observations based on his wide experience in the field; during one summer he took many moths which he kindly turned over to me and which form a part of my records, without, I fear, always giving due recognition to him.

In the text much more material is credited to my personal collection than is actually there, for

many hundreds of specimens have been distributed to various individuals and museums, and, although no record was kept of where they went, a record was kept of what was caught. In asking others to list their Florida material it seemed pointless to have them spend their time duplicating records I already had. Consequently, they were told to ignore them. Also, many common species, or what I thought were common species, were discarded before there was any thought of compiling a list—a pity, because what since have turned out to be rare insects in Florida, though common in the north, were tossed aside. In going over Buchholz's collection with him, I discovered that he had done the same thing. However, a related point should be mentioned. The more one studies the moths of Florida, the less sure one becomes. What appears to be a familiar species of the north turns out to be something quite different, sometimes undescribed; what appears to be something quite different turns out to be nothing more than a Florida subspecies, of a common species, perhaps heretofore unrecognized. Species which seem to be readily determinable turn out to have been masquerading under assumed names for years, the name not applicable and the species often standing without a name.

Another reason for letting many of these specimens remain credited to my collection is that it pins the responsibility for the determination on my shoulders.

Small collections have been made by Leroy N. Kilman of St. Petersburg, J. Harold Matteson of Miami, J. M. Plomley of West Hollywood, and W. T. Thomas of Daytona Beach. W. J. Platt, III, a student at the University of Florida, has been collecting for some years and has contributed some interesting records.

H. E. Woodcock, formerly of Chicago, moved to Jacksonville recently and is getting material for the Canadian National Collection, to which he had previously donated most of his own collection, the latter containing many specimens from Florida, partly from his collecting around Lake Geneva and Keystone Heights in earlier years. A part of his collection and literature was donated to the Division of Plant Industry. Another recent settler in Jacksonville is C. F. Zeiger, who is working on the butterflies, especially *Asterocampa* and Lycaenidae. Still another who has taken up collecting recently is Dr. I. J. Abramson of Miami Beach. He is planning to make a thorough study of the butterflies of Everglades National Park with special reference to their habitats and seasonal abundance, and to publish on the same.

Miss Paula Dillman of Oneco ran a light trap for me during two summers which resulted in

some very important contributions, especially in the microlepidoptera. Not only are many of these undetermined, but many more are still unspread.

From April 1955 through April 1956 the trap was operated at the University of Florida Gulf Coast Experiment Station, Bradenton, under the supervision of Dr. E. G. Kelsheimer, assisted by Frank Secor. So far as I am aware, the microlepidoptera collections thus made by Dillman at Oneco, by Kelsheimer and Secor at Bradenton, and by the author at Siesta Key, all within a radius of twenty miles, represent the only intensive year round collecting in this field that has been undertaken in Florida. The one drawback is that there is so much material that it has been impossible to prepare even a fraction of it, and because there are so many unrecognized and undescribed species present, the vast majority of what has been mounted is undetermined beyond the Pterophoridae. However, in 1961, Mrs. Shirley M. Hills began collecting microlepidoptera with great enthusiasm near Pensacola, and as she is an excellent preparator of even the smallest specimens, her collection promises to be one of the finest in this field in Florida. But again it may be years before many of her specimens will be identified to species, or described.

From April 1958 to November 1959, Dr. D. O. Wolfenbarger operated the trap at the University of Florida Sub-Tropical Experiment Station near Homestead. Here, too, complete identification of the microlepidoptera must wait until someone undertakes a thorough study of most of the families involved. The collections were made on a weekly basis only, but the great difficulty encountered in trap collecting in this locality is the presence from time to time of hordes of small, greasy beetles that make a horrible mess of all the Lepidoptera, almost totally so of the microlepidoptera. Sometimes less than one per cent of the entire catch is recognizable.

William B. Tappan started operating the trap at the University of Florida North Florida Experiment Station at Quincy in June 1960, with the operation continuing into 1963. Curiously enough the same greasy beetle problem has arisen in Quincy, although it was negligible at both Bradenton and Oneco.

For the benefit of future investigators, it might be well to summarize the type of results from these operations. From Homestead come many unusual and presumably Antillean species; from Bradenton and Oneco, a wealth of microlepidoptera; and from Quincy, northern species that were not known in Florida, in fact, some of them were not known south of North Carolina heretofore.

Among the most important recent collections are those made by Commodore V. F. Grant, and William Patterson of Warrington, W. J. Warren, Jr., of Myrtle Grove, and Mrs. Hills who lives about twelve miles northeast of Pensacola. Not only have they gathered a surprisingly large number of species, but they are providing us with the first real knowledge of the fauna of the western tip of Florida. Mrs. Hills in particular has been most generous in supplying duplicate material which has been distributed to various collections, primarily those of the American Museum of Natural History, the Canadian National Collection, the Florida State Collection of Arthropods, the United States National Museum, and the author, although none of them has been indicated as the depository of the individual species because of the complicated bookkeeping involved.

Harry O. Hilton of Fort Walton Beach is another recent addition to resident collectors. Although he has been collecting for some two years, knowledge of the fact was received too late to incorporate many of his records. In addition to collecting, Hilton has made many color slides of Lepidoptera, not only of adults, but of the earlier stages as well. It is to be hoped that some general use of these excellent photographs may be made in time. In May 1963, Hilton started operating a light trap and this, coupled with his other collecting, will give us one more valuable locality link in the western part of the state.

There are other collectors whose work has produced a tremendously important yield, the importance of which is constantly increasing and becoming the dominant factor—the professional entomologists, connected with the University of Florida Experiment Stations and the main campus at Gainesville, the Division of Plant Industry of the Florida Department of Agriculture, the University of Miami, and the other universities, colleges, and institutions. A few of these have been named, but it is well to identify them, in order that as few names as possible remain devoid of all identity. Their connection with the Division of Plant Industry (DPI), or the United States Department of Agriculture (USDA), is indicated by the abbreviations.

Adkins, T. R., DPI, Ocala
 Ayers, C. I., DPI, Gainesville
 Baker, G. H., DPI, Vero Beach
 Baranowski, Dr. R. M., U. of Fla. Sub-Tropical
 Exp. Sta., Homestead
 Beers, W. L., Jr., Buckeye Cellulose Co., Foley
 Betts, H. M., DPI, Macclenny
 Bottimer, L. J., USDA, Kerrville, Texas
 Brown, A. C., DPI, Gainesville

Dekle, G. W., DPI, Gainesville
 Denmark, H. A., DPI, Gainesville
 Desin, G. W., USDA, Sanford
 Dickinson, C. L., DPI, DeFuniak Springs
 Dowling, C. F., Jr., DPI, Miami
 Foster, R. E., DPI, Gainesville
 Frierson, P. E., DPI, Gainesville
 Genung, W. G., U. of Fla. Everglades Exp.
 Sta., Belle Glade
 Henderson, W. P., DPI, Groveland
 Hetrick, Dr. L. A., U. of Fla., College of Agri-
 culture, Gainesville
 Hill, L. B., DPI, Largo
 King, Dr. J. R., U. of Fla. Indian River Field
 Sta., Fort Pierce
 Knight, R. A., DPI, Gainesville
 Link, O. D., (Deceased) DPI, Gainesville
 Merkel, E. P., Southeastern Forest Experiment
 Station, U. S. Forest Service, Olustee
 Miller, R. H., U. of Fla. Pecan Investigations
 Lab., Monticello
 Morse, Dr. R. A., Cornell Univ. (formerly with
 DPI, Gainesville)
 Nakahara, Steve, Plant Quarantine Div.,
 USDA, Seattle, Wash. (formely stationed at
 Miami Springs)
 Perry, J. W., DPI, Gainesville
 Peterson, Dr. Alvah, Columbus, Ohio (former-
 ly with DPI, Gainesville)
 Phillips, A. M., U. of Fla. Pecan Investigations
 Lab., Monticello
 Poucher, Charles, DPI, Winter Haven
 Roof, L. R., USDA, Brooksville
 Snell, R. R., DPI, Homeland
 Stegmaier, C. E., Jr., USDA, Miami
 Tissot, Dr. A. N., U. of Fla. Agr. Exp. Sta.,
 Gainesville
 Vild, R. E., USDA, Winter Haven
 Wade, G. F., Sr., DPI, Bushnell
 Wagner, W. E., Vero Beach Labs. Inc., Vero
 Beach
 Weems, Dr. H. V., Jr., DPI, Gainesville
 Whitton, Gil, Asst. Co. Agt., Clearwater
 Wilson, Dr. J. W., U. of Fla. Central Fla. Exp.
 Sta., Sanford
 Woodley, J. R., USDA, Orlando
 Yax, C. L., USDA, Palmetto
 Yothers, W. W., USDA, Orlando

Special mention should be made of the contributions made by Prof. J. R. Watson of the University of Florida Agricultural Experiment Station in Gainesville to whose assiduous efforts and enthusiasm a large part of the Station collection is due. In addition Prof. Watson made many notes of his observations. These notes, now owned by his daughter, Miss Wilma Watson of Sarasota, unfortunately were inaccessible.

If and when they become available, they should prove of great value.

In January 1955 there was inaugurated by the State Plant Board of Florida (DPI) a series of light traps to be operated for the purpose of spotting the advent of species of economic importance. These traps are located from Quincy to Homestead, and although all the material taken has not been of cabinet quality due to the difficulty of working out an efficient trap, the determinations resulting from the catches have been of inestimable value in the knowledge of geographic and seasonal distribution, and relative abundance of many species besides those of purely economic interest. If these traps are maintained and the catches fully analyzed, the results will provide an abundance of information in the future.

Dr. L. A. Hetrick has operated a trap, primarily to provide specimens for his students, but in the process has picked up a number of important species, all of which he has been kind enough to submit for examination. I am also indebted to him for the gift of several rare specimens.

COLLECTIONS

There must be authority for every record. This authority comes from three sources—a specimen in a collection, from a statement in the literature, or occasionally on the word of a reliable collector. The literature will be discussed anon; at the moment we will confine ourselves to the collections.

The lists and data of material in private hands have been supplied by the owners of those collections, and without their generous and enthusiastic cooperation, amateur and professional, this list could not have been prepared. To all of them I want to extend my warmest thanks and appreciation for all they have done to help, and to give them credit for supplying the major part of the data, much of which does not appear, because with the accumulation of it, the need for detail vanished, and many species could be relegated to the classification "generally distributed."

Since one of the objects of this undertaking has been to catalogue the present depositories of specimens, and also to give credit where credit is due, the collections have been divided into four sections:

A. those which contain only the generally distributed species, specific records for none of which are mentioned in the body of the text.

B. those in private hands, of which at least some specimens are mentioned in the text.

C. institutional collections.

D. collections, private and institutional,

whence for various reasons, it has not been possible to get a list of material. In the case of individuals it has been a question of lack of time, not unwillingness; in the case of museums, no staff member could take the time, an understandable situation, nor could I take the time myself. Since someone may wish to study some special field of Florida Lepidoptera, this last group should not be forgotten.

Section A

A. C. Allyn, Jr., Evanston, Ill.; R. A. Anderson, Pittsburgh, Pa.; F. S. Badger, Kokomo, Ind.; J. H. Baker, Baker, Ore.; G. H. Berg, New Orleans, La.; Dr. J. A. Bishop, Jeffersonton, Ky.; P. Buxbaum, New York, N. Y.; H. K. Clench, Pittsburgh, Pa.; P. J. Conway, Aledo, Ill.; J. L. Creelman, San Diego, Calif.; Dr. J. C. Downey, Carbondale, Ill.; J. A. Ebner, Butler, Wisc.; J. H. Fales, Silver Springs, Md.; O. S. Flint, Jr., Amherst, Mass.; Mrs. E. Henriksen, Sunnyside, Wash.; S. A. Hessel, Washington, Conn.; Mrs. A. L. Hopf, New York, N. Y.; Mrs. V. P. Hynes, Battle Creek, Mich.; James R. Jamison, Jr., Canton, N. C.; the late L. N. Kilman, St. Petersburg, Fla.; R. L. Langston, Berkeley, Calif.; C. G. Laspe, Camarillo, Calif.; C. D. McNeil, Berkeley, Calif.; J. A. Malcolm, Jr., Philadelphia, Pa.; Bryant Mather, Jackson, Miss.; D. T. McCabe, Wellesley Hills, Mass.; W. Paxton, Latrobe, Pa.; W. L. Phillips, Salt Lake City, Utah; L. A. Pollard, Hialeah, Fla.; Dr. W. J. Reinthal, Knoxville, Tenn.; the Rev. J. Rupprecht, Latrobe, Pa.; F. P. Sala, Burbank, Calif.; G. A. Samuelson, Concord, Calif.; C. D. Schryver, Denver, Colo.; A. H. Scott, Pittsfield, Mass.; J. D. Smith, St. Petersburg, Fla.; C. W. Stafford, Pittsburgh, Pa.; P. D. Syme, Toronto, Ont.; F. T. Thorne, El Cajon, Calif.; B. H. Weber, Burbank, Calif.; G. R. Wren, Gary, Ind.; and M. Zappalorti, Staten Island, N. Y.

Section B

OA	Otto Ackermann, Irwin, Pa.
FRA	F. R. Arnold, Chippewa Falls, Wisc.
DLB	D. L. Bauer, Bremerton, Wash.
WRB	W. R. Bauer, Petaluma, Calif.
HB	the late Henry Bird, Rye, N. Y. His collection is now in the American Museum of Natural History.
AB	André Blanchard, Houston, Texas
AFB	Dr. A. F. Braun, Cincinnati, Ohio
AEB	Dr. A. E. Brower, Augusta, Maine
FMB	F. M. Brown, Colorado Springs, Colo.
OB	the late Otto Buchholz, Roselle Park, N. J. His collection is now in the American Museum of Natural History.
JWC	J. W. Cadbury, Browns Mills, N. J.

- Only a very few specimens of his large collection of Florida material which includes the remainder of the Forsyth collection, have been listed.
- JLC J. L. Campbell, Isle of Canna, Scotland
 MMC Mrs. M. M. Cary, Philadelphia, Pa.
 RCC the late R. C. Casselberry, Scarsdale, N. Y.
- WCC Dr. W. C. Cook, Walla Walla, Wash.
 WMD the late W. M. Davidson, Orlando, Fla.
 dosP C. F. dos Passos, Mendham, N. J.
 HJE H. J. Epstein, Alexandria, Va. Hesperiid material not catalogued.
- RJF R. J. Ford, South Gate, Calif.
 JGF Dr. J. G. Franclemont, Ithaca, N. Y.
 HAF H. A. Freeman, Garland, Texas
 EAF E. A. Froemel, Columbus, Neb.
 SVF S. V. Fuller, Cassadaga, Fla.
 MOG M. O. Glenn, Henry, Ill. A great deal of micro material has not yet been determined.
- VFG Commodore V. F. Grant, Warrington, Fla. Some material is credited to Grant which has been donated by him to various schools in Warrington and Pensacola. All of this has been examined by the author.
- LWG L. W. Griewisch, Green Bay, Wisc.
 FMG Mrs. F. M. Grimshawe, Miami, Fla. Many of her records are not available.
- LH Lucien Harris, Jr., Avondale Estates, Ga.
- BH Bernard Heinemann, New York, N. Y. Some hesperiid material has not been processed.
- HOH H. O. Hilton, Shalimar, Fla.
 SMH Mrs. Shirley M. Hills, Escambia Co., Fla. The location of Mrs. Hills' home and site of most of her collecting is about 12 miles northeast of Pensacola on the US highway 98.
- RWH Dr. R. W. Hodges, Washington, D. C.
 WHH W. H. Howe, Ottawa, Kans.
 LHH L. H. Hulbirt, Whittier, Calif.
 FMJ the late Dr. F. M. Jones, Wilmington, Del. His collection is now in several institutions as noted earlier.
- GWK G. W. Kamp, Dedham, Mass.
 CPK C. P. Kimball, Sarasota, Fla. Many Phycitidae and species in families from Olethreutidae to the end of the list have not been determined.
- HLK H. L. King, Sarasota, Fla.
 CWK C. W. Kirkwood, Summerland, Calif.
 DHK D. H. Kistner, Chicago, Ill.
 ABK Dr. A. B. Klots, Pelham, N. Y.
 JPK J. P. Knudsen, Raleigh, N. C.
 JFM the late J. F. May, Colorado Springs, Colo. Most of his material has not been processed.
- RRM R. R. McElvare, Southern Pines, N. C.
 CGM C. G. Merker, Pittsburgh, Pa.
 JRM Prof. J. R. Merritt, Louisville, Ky.
 BLM B. L. Munroe, Jr., Baton Rouge, La.
 SSN Lt. Col. S. S. Nicolay, Cherrypoint, N. C.
- WP William Patterson, Warrington, Fla.
 LSP L. S. Phillips, Chicago, Ill.
 BHP B. H. Pickell, Overland, Mo.
 WJP W. J. Platt, III, Gainesville, Fla.
 JMP J. M. Plomley, West Hollywood, Fla.
 JAP J. A. Powell, Berkeley, Calif.
 GWR Dr. G. W. Rawson, New Smyrna Beach, Fla. Rawson has collected a lot of unrecorded material which he has turned over to the U. S. National Museum.
- WAR W. A. Rees, Los Angeles, Calif.
 PSR P. S. Remington, St. Louis, Mo.
 KR Kilian Roever, Tucson, Ariz.
 LRR L. R. Rupert, Sardinia, N. Y.
 VGS V. G. Sasko, Chicago, Ill.
 WES W. E. Sieker, Madison, Wis.
 HFS Dr. H. F. Strohecker, Coral Gables, Fla.
 JCS J. C. Symmes, Atlanta, Ga.
 JWT Dr. J. W. Tilden, San Jose, Calif.
 EGV Dr. E. G. Voss, Ann Arbor, Mich.
 WJW W. J. Warren, Jr., Myrtle Grove, Fla.
 JRW the late Prof. J. R. Watson, Gainesville, Fla. The references are to his notes and material in the University of Florida Agricultural Experiment Station.
- HEW H. E. Woodcock, Jacksonville, Fla. Most of his material is in the Canadian National Collection.
- AKW A. K. Wyatt, Chicago, Ill. Wyatt's collection has been turned over to the Chicago Natural History Museum.
- CFZ C. F. Zeiger, Jacksonville, Fla.
 JBZ Dr. J. B. Ziegler, Summit, N. J.
 SEZ S. E. Ziemer, Kewaunee, Wisc.

Section C

- ANSP Academy of Natural Sciences of Philadelphia, Pa. Material taken by Cadbury, Forsyth, Jones, and others, much of it unmounted. Only a very few records are included here. It is one of the important depositories that has not been studied.
- AMNH American Museum of Natural History, New York, N. Y. The material is from many sources: Slosson, the Rev. G. D. Hulst, Sanford, Klots, Mrs. dos Passos, J. L. Sperry, J. B. Smith, and more recently, that of Buchholz. As previously noted, the latter is still listed in the

- text under "OB." The older records in the Museum collection were listed by Grossbeck; the more recent acquisitions, other than those from Buchholz, were examined by the author with valuable assistance from Dr. F. H. Rindge.
- ABS** Archbold Biological Station, a privately owned biological station affiliated with the American Museum of Natural History south of Lake Placid and near Childs, Fla. A small collection, being built up by the visiting entomologists. Some of the specimens credited to PSU and YU are here.
- BM** British Museum, South Kensington, England. A few records in the Hesperidiidae were supplied through the courtesy of the late Brigadier W. H. Evans, but except for the Doubleday records, all of which have been taken from the literature, that is the extent of the information from this source.
- CAS** California Academy of Sciences, San Francisco, Calif. Contains some Florida material, but only two or three records have been obtained.
- CNC** Canadian National Collection, Ottawa, Ont. A list of the noctuids was supplied through the kindness of Dr. D. F. Hardwick, and a partial list of the microlepidoptera through the kindness of Dr. E. G. Munroe and the late Dr. R. Lambert. However, there is still a lot of material, especially from Berry and the more recent additions from Woodcock, that should be examined. The earlier Woodcock collection which has recently been placed here, stands in the present list under the symbol "HEW." Some material was collected on a visit to Florida in 1952 by McGillis, Peck, J. R. Vockeroth, and G. S. Walley, all connected with the Canadian Department of Agriculture. Munroe also has done some collecting at various times.
- CM** Carnegie Museum, Pittsburgh, Pa. A very few records have been extracted. H. K. Clench most considerably sent a list of the Limacodidae and Cossidae, and has reported broadly on the balance of the material as follows: 1) Stemper and Lutz specimens collected by Krautwurm, very extensive. 2) A small but diverse and choice lot from the Titusville area, from Engel. 3) Many undetermined microlepidoptera taken by Sweadner in southern Florida. 4) Bauer material from St. Johns and Flagler Counties. 5) Collection of small moths from Lochloosa, taken by Mrs. Wible. 6) The Edwards collection which contains material taken by T. L. Mead, probably in Orange and Seminole Counties. 7) Also material from Matheson, Mellon, and Stafford. There is obviously valuable information that should be obtained from this source.
- CNHM** Chicago Natural History Museum, Chicago, Ill. Contains the Strecker collection, from which Wyatt with characteristic kindness supplied certain records. Wyatt's personal collection has been transferred lately to the Museum, but the specimens are still listed under "AKW."
- CMNH** Cleveland Museum of Natural History, Cleveland, Ohio. A list was prepared by E. C. Welling. Under the subject of locality records, mention has been made of some of this material, a part of which has been transferred to the Carnegie Museum.
- CU** Cornell University Agricultural College, Ithaca, N. Y. The material came from a number of collections: Pasch, Engel, Rogers, Hoffman, McBride, Needham, and a few minor sources. The listing was made by Forbes, as mentioned earlier.
- DPI** Division of Plant Industry, Florida Department of Agriculture. This collection now is known as The Florida State Collection of Arthropods. This title was established on September 25, 1961 for the collection being developed by the Entomology Section, Division of Plant Industry, Florida Department of Agriculture, Gainesville, and its associates. This collection consists primarily of what was the State Plant Board collection, with subsequent additions. This collection includes an older collection made by the late Dr. H. T. Fernald, mostly from Orange County, and a more recent and increasingly important one by members of the staff of the Division of Plant Industry and several officially appointed collaborators. In addition, the entire arthropod portion of The University of Florida Collections has been placed on indefinite loan to the Division of Plant Industry for continued development in conjunction with the Division's collection. Staff entomologists of the Division of Plant Industry and several Associates in Insects of the Florida State Museum are

- collaborating in this undertaking. Effective January 15, 1961 the State Plant Board of Florida became the Division of Plant Industry of the Florida Department of Agriculture. The symbol "DPI" is used for specimens in these collections, and also is used indiscriminately for the records in the Division of Plant Industry files and, therefore, may not always represent actual specimens.
- EES University of Florida Everglades Experiment Station, Belle Glade, Fla. A small collection of local species.
- ENP Everglades National Park, southwest of Florida City, Fla. A small collection from various sources to which additions are being made by Dr. F. C. Craighead, mostly from reared microlepidoptera material.
- EU Emory University, Atlanta, Ga. Collections made by Lucien Harris, Jr. and the late Prof. P. W. Fattig. The material was examined and listed by Harris and the author. The Fattig collection was donated to the University of Georgia by Emory University in 1962.
- GSDA Georgia State Department of Agriculture, Atlanta, Ga. In the State Museum in the State Capitol are or were, four specimens of special interest from the collection of W. M. Mills, and obviously acquired from a dealer, the specimens all labeled "Chokoloskeel" These specimens were examined by Harris and the author.
- GCES University of Florida Gulf Coast Experiment Station, Bradenton, Fla. Collection made by Kelsheimer and examined by the author.
- LACM Los Angeles County Museum, Los Angeles, Calif. Rhopalocera listed by Martin and Truxal (1955). The collection also contains some moths, a part of which was collected by Friday.
- MCZ Museum of Comparative Zoology, Cambridge, Mass. The records have been extracted in part only, most of them by Forbes. Thaxter's material is here. There is also a collection of some 500 microlepidoptera, collected in 1942 at Sebring by C. T. Parsons, which came to my attention too late to be examined.
- NFES University of Florida North Florida Experiment Station, Quincy, Fla. A small lot collected by W. B. Tappan.
- NSMS Nova Scotia Museum of Science, Halifax, N. S. A collection made by Dr. D. C. Ferguson in March 1962. Only the most important records are included here.
- NYSM New York State Museum, Albany, N. Y. All from the W. W. Hill collection mentioned on an earlier page.
- PSU Pennsylvania State University, University Park, Pa. Collection made by Prof. S. W. Frost at the Archbold Biological Station, and examined by the author.
- SPJC St. Petersburg Junior College, St. Petersburg, Fla. Collection made by H. E. Willford and examined by the author.
- SDM San Diego Natural History Museum, San Diego, Calif. A list of the butterflies supplied through the kindness of C. F. Harbison, but he was unable to take the time to list the moths.
- SIM Staten Island Museum, Staten Island, N. Y. Material collected by the late W. T. Davis. All records have been taken from Grossbeck (1917).
- STES University of Florida Sub-Tropical Experiment Station, Homestead, Fla. Consists mostly of material collected by Dr. D. O. Wolfenbarger for the author and most of it actually credited to the author's collection, but there are other specimens collected by the staff.
- TU Tulane University, New Orleans, La. List supplied through the courtesy of Dr. E. N. Lambremont.
- USNM United States National Museum, Washington, D. C. The records from this are mostly from the literature. A few have been supplied by members of the staff in connection with determinations made for me, and I have extracted a few. Unfortunately, the time was not available to utilize this vast source of information, a circumstance which results in a serious weakness in this publication.
- UFA University of Florida College of Agriculture, Gainesville, Fla. Collection made by Dr. L. A. Hetrick and examined by the author.
- UFES University of Florida Agricultural Experiment Station, Gainesville, Fla. An important collection made by various members of the staff which was recorded by Jed Driggers and the author. The older records were included in the Grossbeck List (1917).
- UK University of Kansas, Lawrence, Kans. Collection made by the late Dr. R. H. Beamer and his students, and listed by them.

- UM** University of Michigan, Museum of Zoology, Ann Arbor, Mich. Collections made by D. M. Bates, H. E. Bratley, Dr. I. J. Cantrall, H. Friauf, F. M. Gaige, Dr. T. H. Hubbell, and F. W. Walker. The long list was made by Dr. Cantrall, a task for which I am most grateful. A list of the microlepidoptera had been prepared previously by Ralph Beebe. Dr. Hubbell very kindly sent a large number of specimens for examination, about the determination of which there was some question and many of these still have not been determined.
- UT** University of Tampa, Biology Department, Tampa, Fla. A collection made by G. D. Morgan, perhaps only a representative lot as it is not very large and he was an avid collector. Examined by the author with assistance from Harris. One very important item is a specimen of *Thysania agrippina* Cramer, taken by Prof. C. T. Reed.
- YU** Peabody Museum of Natural History, Yale University, New Haven, Conn. Part of the Florida material of Dr. F. M. Jones, who furnished a list of his entire collection. However, none of the Jones specimens will appear under "YU" since the list was made before they were donated to the Museum, and it is now impossible to separate them from Jones' other material which has been distributed several ways. There is also material from additional sources, primarily Dr. C. L. Remington and R. W. Pease, both of whom collected at the Archbold Biological Station. Most of their material was generously submitted to the author for determination.
- Santa Barbara Museum of Natural History, Santa Barbara, Calif.; D. B. Stallings, Caldwell, Kansas; G. L. Stein, Marietta, Ga.; Dr. E. S. Thomas, Columbus, Ohio; Tring Museum, Tring, England; J. Unseld, Gravel Switch, Ky.; LeRoy Wilcox, Speonk, L. I., N. Y.; K. H. Wilson, Lawrence, Kansas.

If the present list is seen by any of the above and they have information or data to add, any such belated items would be greatly appreciated and should be passed along to the Division of Plant Industry. It is hoped that eventually one or more supplements will be published.

Other collections of Florida Lepidoptera surely exist, but all depositories of such which have come to my attention are summarized above. I should appreciate being informed of any omissions.

LITERATURE

Much of the information for the list has been derived from the literature, Crossbeck (1917) being the primary source, but since many of his records are undocumented every effort was made to trace them back to their sources. Where this has been possible, citation to Crossbeck has been dropped in favor of the original. When his source could not be found or was uncertain, the citation is to his list. Because there is a host of such citations, I have departed from the normal practice of documentation in the interest of brevity in this one case, and have abbreviated "Crossbeck, 1917, p. xyz" to "Grsb., xyz." Nonetheless, when reference is a part of the commentary, the fuller form is used. Annotations as to the relevancy to Florida have been added in the bibliography for some references, but no attempt was made to do this for all publications listed.

Because no check list can be considered final, it should be the duty of every compiler or reviser to state clearly what literature has been covered, especially through what date in order to save later revisers the necessity of plodding through it once more.

About 1941 the Works Progress Administration had some women extracting information on Florida insects from the literature. Because many of these references were incorrect, either through carelessness or inept interpretation, it was necessary to check everything quoted from that source, but it has been assumed, perhaps rather naively, that they did make a record for every reference to Florida Lepidoptera in the literature which they covered. Consequently I have gone through the following periodicals only from the date of the last W.P.A. entry up to the end of 1961: *Annals of the Entomological Society of America*, *Bulletin of the Brooklyn Entomological Society*, *Canadian Entomologist*, *Entomologica*

Section D

Dr. I. J. Abramson, Miami Beach, Fla.; J. W. Adams, Philadelphia, Pa.; Amherst College, Amherst, Mass.; C. W. Baker, Waynesburg, Ohio; N. W. Baker, Santa Barbara, Calif.; A. J. Carpenter, Boston, Mass.; Dr. R. L. Chermock, University, Ala.; B. W. Dixon, Pittsburgh, Pa.; A. C. Frederick, Albany, N. Y.; N. W. Gilham, Cambridge, Mass.; R. J. Jae, Denver, Colo.; David Jamieson, Miami, Fla.; Prof. R. W. Macy, Portland, Ore.; N. L. Marston, Hartman, Colo.; L. M. Martin, Los Angeles, Calif.; Dr. E. P. Meiners, St. Louis, Mo.; P. A. Opler, Pleasant Hill, Calif.; D. J. Pirone, Mt. Vernon, N. Y.; C. S. Quelch, Transcona, Man.; R. H. Reid, Los Angeles, Calif.; Rollins College, Winter Park, Fla.;

Americana, *Entomological News*, *Florida Entomologist*, *Insect Pest Survey Bulletin* (and its successors: *Cooperative Economic Insect Report and Cooperative Insect Pest Survey*), *Journal of the Lepidopterists' Society*, *Journal of the New York Entomological Society*, *Lepidopterists' News*, *Proceedings of the Entomological Society of Washington*, *Psyche*, and *the Transactions of the American Entomological Society*. As very little relating to Florida Lepidoptera has appeared in these during the past fifteen years or so, outside of the *Insect Pest Survey Bulletin*, it seems reasonable to assume that little, if anything, has been missed by not checking through all the other periodicals that touch in any way on Entomology, although an occasional paper has come to notice. All separate American works, and European, which might be presumed to bear on any phase of the subject, have been explored with the exception of Walker (1854-1866) which was apparently covered by Grossbeck; Seitz, Vol. 5, in part; Romanoff, Vol. 8; the *Lepidoptorum Catalogus*; Oberthür (1876-1902 and 1904-1924); Strand, whose contribution seems to have been limited to giving names to Hampson's forms and aberrations; and the *Genera Insectorum*.

The necessity for checking the references in the Works Progress Administration file has been mentioned. It is impossible to trust them, and everything of the least importance must be verified. For example, "Florida" in several cases turned out to be in Costa Rica. The trouble into which one might run from blindly following such misleading guide posts is readily apparent.

DIVISION OF PLANT INDUSTRY RECORDS

The Division of Plant Industry has an immense and constantly increasing file of determinations made either by the staff or at the United States National Museum, or, in connection with their current light trap project, by the author or one of the specialists. This file has provided a quantity of records, all listed under the depository symbol "DPI," though the actual specimens in most cases have been discarded. Many of the records are unique, many supply important food plant observations, and many contribute significantly to the distributional pattern. A reference collection of Florida Lepidoptera is being developed by the Division of Plant Industry, and in a few years this should be a great aid to collectors in determining Florida material, a task which at the present time is such a difficult one. This reference collection should stimulate and encourage collectors to persist in a pursuit that is both delightful and rewarding.

FOOD PLANTS

Though food plant records are the most important factor from the economic aspect, modern thinking limits these to the actual records within the scope of the subject matter. In other words, in a state faunal list such as this, only those food plants which have been observed as hosts within the state should be noted. Nevertheless, since a knowledge of acceptable food plants is essential, these have been included, but only definite Florida records are documented. These are listed last, set off by semicolons, if food plants recorded elsewhere are part of the immediate text. Any undocumented host is not a specific Florida record, though it is more than probable that the larva in question will feed on the plant, if the latter is found within the state.

My own observations on this phase of the subject being practically nil, I have relied almost exclusively on the Division of Plant Industry's findings, and have quoted, though without specific acknowledgment, from Klots, Forbes, and Heinrich exclusively for the general records, believing that they have excluded those of a dubious nature. Of course very few of those they list are specifically for Florida. Many records have been supplied by Fuller and various other individuals as indicated in the text.

Erdman West, Botanist and Mycologist at the University of Florida, has checked the plant names used in this publication, and currently recognized plant names have been substituted for names in the literature considered to be synonyms. Such synonyms have been placed in brackets following the currently accepted plant names.

I have been informed that some of the older "DPI" records are unreliable because the determination of the plant often was made in the field by the investigator and was not subject to critical review, as is the present practice. It should be borne in mind that some records may mean that only the pupa was found on a given food plant. Where this is so stated in the original reference, that information is repeated here, but at times it is uncertain which stage of the insect's life history may have been found, and even if it did happen to be the larva which was found, the result still may be confusing, as some larvae wander to a different environment for pupation. Some of the records may appear suspicious; I have quoted these as reported, but cannot vouch for their validity.

The subject of food plants is a fertile field for investigation in Florida where the vegetation is a mixture of the native and the exotic.

QUARANTINE INTERCEPTIONS

As an appendix there are records of interceptions made by the customs and quarantine services. The specimens involved are not, naturally, a part of the Florida fauna, the origin in each instance being clearly stated, but they are indicative of species that might someday slip by the inspection and become established. As a matter of fact we do have instances where the first actual record has been such an interception and subsequently the species was taken at a distance from the port. Of course this is not proof that the insect had not been here all along, but it does afford a fair inference that some carrier may have been the agent of introduction.

ILLUSTRATIONS

The choice of specimens for the colored plates was based on three considerations. First, many species were selected which had never been illustrated. Second, certain closely related species were picked to help make determinations in these complexes easier. Third, some were chosen for their beauty. Additional illustrations, particularly of butterflies and skippers, are to be included at such time as a supplement may be issued.

The selection for the black and white photographs was done at a time when I was in Florida and my collection was stored in Massachusetts. Fortunately, local collectors and institutions were able to help, and I want to express my thanks for this generous assistance, especially to S. V. Fuller, Commodore V. F. Grant, Mrs. Shirley M. Hills, and the Florida State Collection of Arthropods. I am indebted to the United States National Museum, the American Museum of Natural History, and the Canadian National Collection for many of the specimens used. One or more specimens were borrowed from H. L. King, Dr. C. T. Reed, W. E. Sieker, C. F. Zeiger, the Everglades National Park, the University of Florida Everglades Experiment Station, the University of Florida Sub-Tropical Experiment Station, the University of Florida Agricultural Experiment Station in Gainesville, and the University of Florida College of Agriculture, to all of whom I am once more beholden for many and continued kindnesses. In an effort to avoid error, the names of all specimens illustrated have been checked by the various specialists who have assisted throughout the preparation of this work. For this, too, I thank them.

SUMMATION

In a list like this authors frequently include a table showing the number of species in each

family. Sometimes they have been known to pad the numbers by including species and "varieties," enumerating the latter as though they were valid species. When it is possible to prepare such a table accurately, it is in order. In Florida the question arises, what should one include? An accidental stray certainly is a valid record, but it hardly represents a unit in the local fauna. Then, too, it is often difficult to decide what is a stray and what is a rare but established species. Next are all the "reported" species. Some of these may be authentic; some are patently dubious. How many of these are strays? Let us take as an example the family Papilionidae. There are thirteen names on the list. One is an error. One, if not more, is questionable, and if they have been taken, undoubtedly they are strays. What, then, are we to enumerate? Nine? Somewhere between nine and twelve? Twelve? This may be an extreme case, but similar problems arise in other families. There are many instances where further study is needed to decide whether we have a complex involving two or three species, or, on the other hand, whether two apparent valid species are actually forms of a single species. Present information is too incomplete to permit any summation. Even for the macrolepidoptera it would be misleading, and for the microlepidoptera it would be woefully incomplete because there are so many species that are undetermined, many of them unnamed.

RANDOM OBSERVATIONS

Night insect activity, in the Sarasota region at least, is greatly reduced when the temperature falls below 60°F; at 55°F it practically ceases. Yet on sunny days butterflies are seen often when the temperature in the shade is down in the 40's.

Studies by Frost at the Archbold Biological Station, published in the *Florida Entomologist* (1962, 1963), agree generally with these crude observations, but Frost's figures are based on carefully documented recordings. The moth collections in his light traps were greatly reduced when the temperature fell below 60°F; at 50°F they almost ceased. This was not entirely true for other insects such as the midges, which often were still taken in the traps with temperature as low as 45°F. Frost's papers include total catches for each night from November 1 to April 1 with totals for certain groups and some common species, including a few Lepidoptera. Precipitation, temperature, and light intensity are detailed.

The taking of butterflies and diurnal moths in light traps may be characteristic of warm climates, but I have never seen it mentioned. Per-

haps it has something to do with the ultraviolet lights used, but the catches seem much more frequent than in the north with the same or similar light, furthermore, the insects are seen often fluttering or resting near ordinary outside lights or on store windows.

One feature of insect life in Florida is most intriguing. During the daylight hours one may drive through the cattle country, prairies, or other parts of sparse vegetation and see scarcely a butterfly, but as soon as the dark descends, multitudes of moths, many of large size, make constantly shifting kaleidoscopes of the beams from the car lights. It makes one realize that in Florida even the most unlikely looking place may produce a fruitful harvest.

The sporadic abundance of species seems to be more noticeable here than in the north. Perhaps it is because during the winter months the total number of species under observation is relatively small and their presence or absence is more readily apparent, whereas in the warm months, whether north or south, the array of species is so great that only by chance would an absence be noted, though the presence in numbers of some unusual species, or an unusual abundance of a common species would force itself on our attention.

The question often is asked as to which flowers are the most attractive to the butterflies, and also to the moths. Each collector probably has his own favorite, but certain blossoms are generally recognized as especially favored. Some are seasonal and of a short flowering period. These include wild plum, poinsettia, Chinaberry, azalea, and to my mind, the most attractant of all, *Cestrum diurnum*, but unfortunately the blossoms of this last only three or four days, and appear only three or four times a year. *Lantana camara* and *Senecio confusus* (Mexican flamevine), both have a fairly long florescence, and the two best of the continuous bloomers are *Bidens pilosa* (Spanish needle) and *Vinca rosea* (periwinkle). Cary has found the collecting of sphingids over petunias at twilight very profitable. Weems has supplied these additional comments on attractant blossoms: "In general, the Compositae and Leguminosae include most of the species of plants the bloom of which is frequented by diurnal Lepidoptera. Most leguminous plants are attractive to many Lepidoptera, and some are the preferred hosts . . . such plants as the casias, partridge peas, and the clovers, especially white sweet clover. Other good hosts that come to mind are ironweed (*Vernonia*) and *Baccharis*. Ironweed bloom in the fall is almost invariably frequented by papilionids and nymphalids, as is thistle bloom in the spring. Sassafras, cherry laurel, hawthorne and some of the

mint family attract many butterflies, especially the hairstreaks. On the Florida Keys, bay cedar is an extremely good host for sphingids and hairstreaks, and poisonwood (*Metopium toxiferum*) attracts many lycaenids, nymphalids, and sulfurs; *Flaveria linearis*, the sporadically blooming weed resembling goldenrod which is found along roadsides and in fields on the Keys, attracts many kinds of diurnal Lepidoptera. In the sandy scrub oak country, dogtongue (*Eriogonum*) is a preferred host. In short, one must learn partly from experience which are the preferred hosts for a particular area and a particular season for particular species or groups of species."

Notations appear in the text to the effect that a certain subspecies or form is probably the only one to be found in Florida. These were written before the opportunity arose to study the fauna from the western part of the state, and as a result of this study, limited as it may be, I am now inclined to believe that in many cases two forms overlap in the northern, and particularly western counties. The reader, consequently, should be wary of any dogmatic statement in the text about only one form being present. It is another case of not having sufficient material available on which to base a positive statement.

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In addition to my indebtedness to all those members of the Lepidopterists' Society who have so generously aided in this undertaking with their personal lists, I am beholden to a number of individuals for assistance of a more specific nature.

Indebtedness has been expressed to some, but I do not feel that it will be redundant to once more extend my grateful thanks to them along with those who have not been so singled out.

At one time Forbes planned to revise the Grossbeck list, somewhat along the lines of the present undertaking, but got only as far as setting up work sheets for the species in Grossbeck and the additions from the Cornell collection. These sheets were turned over to me with characteristic generosity, thus saving me much preliminary drudgery. My indebtedness to Dr. Forbes is greater than this, for not only has he assisted me with many determinations, but he has read the entire manuscript and made many valuable suggestions based on his wide knowledge and experience, giving helpful guidance from beginning to end.

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ABBREVIATIONS OF BIBLIOGRAPHICAL REFERENCES

- For additional information see bibliography.
- Abhandl. Senck. Naturf.—Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft
- Amer. Ent.—American Entomologist
- Amer. J. Sci.—American Journal of Science and Arts
- Amer. Mus. Nov.—American Museum Novitates
- Amer. Nat.—American Naturalist
- Ann. Carnegie Mus.—Annals of the Carnegie Museum
- Ann. Ent. Soc. Amer.—Annals of the Entomological Society of America
- Ann. Lyceum Nat. Hist. N. Y.—Annals of the Lyceum of Natural History of New York
- Ann. Mag. Nat. Hist.—Annals and Magazine of Natural History
- Ann. N. Y. Acad. Sci.—Annals of the New York Academy of Science
- Ann. Soc. Ent. Belge—Annales de la Société Entomologique Belge
- Ann. Soc. Ent. France—Annales de la Société Entomologique de France
- *Biol. Cent. Amer. Het.—Biologia Centrali-Americana. Druce, also Walsingham
- Bol. Ent. Venezolana—Boletín de entomología venezolana
- *Brit. Ent.—British Entomology. Curtis
- Bull. Amer. Mus. Nat. Hist.—Bulletin of the American Museum of Natural History
- Bull. Brooklyn Ent. Soc.—Bulletin of the Brooklyn Entomological Society
- Bull. Brooklyn Inst. Arts Sci.—Bulletin of the Brooklyn Institute of Arts and Sciences
- Bull. Buffalo Soc. Nat. Sci.—Bulletin of the Buffalo Society of Natural Science.
- Bull. Calif. Acad. Sci.—Bulletin of the California Academy of Sciences
- Bull. N. Y. State Mus.—Bulletin of the New York State Museum
- Bull. Soc. Ent. France—Bulletin de la Société Entomologique de France
- Bull. Southern Calif. Acad. Sci.—Bulletin of the Southern California Academy of Sciences
- Bull. U. S. Ent. Comm.—Bulletin of the U. S. Entomological Commission
- Bull. U. S. Geol. Geograph. Surv. Territ.—Bulletin of the U. S. Geological and Geographical Survey of the Territories
- *Cat. Anim. Mass.—Catalogue of the animals and plants of Massachusetts. Harris, T. W.
- *Cat. Lep. Phal. Br. Mus.—Catalogue of the Lepidoptera Phalaenidae in the British Museum. Hampson
- Can. Ent.—Canadian Entomologist
- Can. J.—Canadian Journal
- Can. Nat. Geol.—Canadian Naturalist and Geologist
- *Cent. Ins. Rar.—Centuria insectorum rariorum. Johanssen
- *Cent. Lép. Cuba—Centurie de lépidoptères de l'isle de Cuba. Poey
- *Chil. et Cramb.—Chilonidarum et Crambidarum genera et species. Zeller
- Cincinnati Quart. J. Sci.—Cincinnati Quarterly Journal of Science
- *Contrib.—Contributions to the natural history of the Lepidoptera of North America. Barnes, et ali.
- Coop. Ins. Pest Surv.—Cooperative Insect Pest Survey
- Coop. Econ. Ins. Rept.—Cooperative Economic Insect Report
- Corresp. Blatt. Regensb.—Correspondenz-Blatt des zoologisch-mineralogischen Vereins in Regensburg
- *Desc. New genera & spec.—Descriptions of new genera and species . . . (Noctuidae) in the British Museum. Hampson
- *Enc. Méth.—Encyclopédie Méthodique. Godart, also Latreille and Olivier
- Ent. Amer.—Entomologica Americana
- *Ent. Contr.—Entomological contributions. Lintner
- *Ent. Corresp.—Entomological Correspondence. Harris, T. W.
- Ent. Mitteil.—Entomologische Mitteilungen
- Ent. Monthly Mag.—Entomologist's Monthly Magazine
- Ent. News—Entomologists' News
- *Ent. Syst.—Entomologica systematica. Fabricius
- *Ent. Syst. Suppl.—Supplementum entomologiae systematicae. Fabricius
- *Exot. Micro.—Exotic microlepidoptera. Meyrick
- *Faun. Bor. Amer.—Fauna boreali-Americana . . . Kirby
- *Faun. Suec.—Fauna suecica sistens animalia Sueciae regni. Linnaeus
- Fla. Agr. Exp. Sta. Bull.—University of Florida Agricultural Experiment Station Bulletin
- Fla. Buggist—Florida Buggist
- Fla. Ent.—Florida Entomologist
- Fla. Geol. Surv.—Annual report of the Florida Geological Survey
- *Gen. Diur. Lep.—The genera of diurnal Lepidoptera. Doubleday
- *Gen. Ins.—Genera insectorum. Wytzman

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- Germ. Mag.—Germar & Zincken, Magazin der Entomologie
- *Gesch. Ins.—Abgekurtzte Geschichte der Insecten nach dem Linnäischen System. Sulzer
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- *Hist. Nat. Ins.—Histoire naturelle des insectes Orthoptères, . . . Lépidoptères, et Diptères. Blanchard
- Hor. Soc. Ent. Ross.—Horae Societatis entomologicae Rossicae
- *Icon. Règne Anim. Ins.—Iconographie du règne animal de G. Cuvier . . . Insectes. Guérin-Ménéville
- *Ill. Brit. Ent.—Illustrations of British entomology . . . Stephens
- *Ill. Diur. Lep.—Illustrations of Diurnal Lepidoptera. Hewitson.
- *Ill. Exot. Ent.—Illustrations of the natural history of Exotic entomology. Drury
- *Ill. Lep. Het. Br. Mus.—Illustrations of typical specimens of Lepidoptera Heterocera . . . British Museum. Walshingham
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- Ins. Pest Surv. Bull.—Insect Pest Survey Bulletin
- Ins. Insc. Mens.—Insecutor Inscitiae Menstruum
- Ins. Life—Insect Life
- Isis—Isis-Encyclopädische Zeitschrift
- J. Acad. Nat. Sci. Phila.—Journal of the Academy of Natural Sciences of Philadelphia
- J. Agr. Res.—Journal of Agricultural Research
- J. Cincinnati Soc. Nat. Hist.—Journal of the Cincinnati Society of Natural History
- J. Dept. Agr. Puerto Rico—Puerto Rico University Journal of Agriculture
- J. Econ. Ent.—Journal of Economic Entomology
- J. Lep. Soc.—Journal of the Lepidopterists' Society
- J. N. Y. Ent. Soc.—Journal of the New York Entomological Society
- J. Wash. Acad. Sci.—Journal of the Washington Academy of Science
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(* Denotes separate works.)

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 U. S. Natl. Mus. Bull.—United States National Museum Bulletin
 Verh. zool.-botan. Ges. Wien—Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien
 *Verz. bek. Schmett.—Verzeichniss bekannter Schmetterlinge. Hübner
 Vet. Acad. Handl.—Vetenskabs Academie Handlinger
 Wasmann J. Biol.—Wasmann Journal of Biology
 Wien. ent. Monat.—Wiener entomologische Monatsschrift
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(* Denotes separate works.)

THE LEPIDOPTERA OF FLORIDA

SUPERFAMILY *PAPILIONOIDEA*

The manuscript for the section on the butterflies has been read by Prof. A. B. Klots, Messrs. C. F. dos Passos, S. V. Fuller, L. Harris, Jr., and H. L. King, to each of whom I am indebted for helpful criticism, suggestions, and pertinent comments, based on their broad knowledge and experience of the fauna of the area.

Family *PAPILIONIDAE* BATTUS Scopoli

1 B. PHILENOR (Linnaeus)

Pipevine swallowtail. Pl. 1, Fig. 5, ♂.
Mant. Plant., p. 535. 1771.

Philenor is generally present throughout the state, though there are few records from the extreme southern portion, and I have found none from Monroe County. King says it is common inland but a straggler along the coastal areas. Morgan termed it abundant in the Tampa region from March to November. He also listed the form *acauda* Oberthur, but Forbes doubts its presence, and believes that Morgan based his record on specimens similar to an undersized one with greatly reduced tails taken in Marion County, May 1956, which is in The Florida State Collection of Arthropods. This is comparable to the early northern spring brood, though it is not hirsute like the subspecies *hirsuta* Skinner. As several more of these runts were taken in October 1956, it looks as if further study were needed. The usual food plants are *Aristolochia* spp., but the larva also feeds on *Asarum*.

[2 B. *devilliers* (Godart)]

Devilliers' swallowtail.

Mém. Soc. Linn. Paris 2: Pl. 1, Figs. 3, 4. 1822. The records for this species are all dubious, though admittedly it might stray from Cuba. III. Lutz: Aug. 2, 1925 dosP. The latter commented, "the locality may be false." V. Chokoloskee: Oct. 1900, formerly in the W. L. Mills collection at the Georgia State Capitol, Atlanta, the data supplied by L. Harris, Jr. However, when Harris and the writer visited the Capitol in November 1954, the specimen was no longer there. What delightful irony that some light fingered collector should lift a spurious jewel! Holland (1931, p. 313) said: "The Academy of Natural Sciences in Philadelphia has a couple of specimens which were captured in southern Flor-

ida." Edwards (1877, p. 9) noted: "occasional in Florida." In the "Synoptic table of the genus *Papilio* Linn." (Anon., 1878b, p. 37), the range in the United States is given as Florida. None of these references are satisfactory.

3 B. POLYDAMAS LUCAYUS (Rothschild & Jordan)

Polydamas swallowtail. Pl. I, Fig. 4, ♀.
Nov. Zool. 13:521. 1906.

This subspecies is relatively common, though perhaps somewhat local. The northern limits appear to be: III. Tampa and Daytona Beach, though there is one record for II. Gainesville: Sept. 25, 1957, WJP. Harris found it common at Daytona Beach in November 1919. Fuller reports it plentiful at DeLand and Cassadaga April-October, and Davidson said it was commoner than *Papilio troilus* at Orlando. Morgan listed it as common at Tampa from May to November, and occasional in the winter. Records from other localities are in agreement with these dates. It comes readily to a number of blossoms. Food: *Aristolochia*, Bates (1923b, p. 42); *Passiflora*, SVF.

PAPILIO Linnaeus

4 P. POLYXENES ASTERIUS Stoll

Black swallowtail.

Pap. Exot. 4; Pl. 385, Figs. C, D. 1782.

Here is one of many instances where the nomenclature may be confusing to the average collector. At various times this species has been known as *asterius*, as *polyxenes*, and as *ajax*, the last name having been used for what is now known as *Graphium marcellus* (Cramer). The species is common throughout, with captures in all months, but mostly from March to May. Several forms have been reported: Typical *polyxenes*, FMJ, JPK; *calverleyi* Grote, "Synoptic table of the genus *Papilio* Linn." (Anon., 1878a, p. 22); *curvifascia* Skinner, CGM, CU; *ampliata* Ménériés, UK; *americus* Kollar., Morgan (1933); type of ab. *forsythea*, reared from eggs obtained from Mrs. Forsythe, Wood (1937, p. 273); *forsythea* Wood, May, LACM. Knudsen has a specimen taken at Tallahassee, July 24, 1950, which he said "is distinctive in a series of *asterius*. It has the yellow sub-marginal band very distinct, and the color of the band is more ochreous than in any *asterius* I have ever seen. It is not an absolutely fresh specimen, but is also not badly flown." He added that the genitalia do not agree with *asterius* from Atlanta, Georgia. Food: Umbeliferae; celery, Watson (1931, p. 49); dill, Wood (1937); *Oxyptolis filiformis*, FMJ.

[11 *P. thoas autocles* Rothschild & Jordan]

Thoas swallowtail.

Nov. Zool. 13: 557. 1906.

Castle & Laurent (1896, p. 302, and 1897, p. 9) and Laurent (1903a, p. 296) recorded this from several places. However, as they speak of it as common and did not list *P. cresphontes*, obviously, they simply misdetermined the species.

12. *P. CRESPHONTES* Cramer

Giant swallowtail.

Pap. Exot. 2: 106-107. 1777.

Cresphontes is common all over the state, during most of the year, though it is infrequent during January and February. King reported it variable in size and markings, with some Florida specimens that could easily be called *pennsylvanicus* Chermock & Chermock. A melanic form which bears the dubiously valuable name *melaneura* Hoffman, has been taken: VIII. Stock Island: Sept. 5, 1961, (Weems), det. Marks, DPI. The larva, the well known "orange dog," is often a pest on citrus. Other food plants: *Zanthoxylum*, *Ptelea*, *Dictamnus*; *Casimiroa edulis*, DPI.

12.1 *P. ANDRAEMON BONHOTEI* Sharpe

Proc. Zool. Soc. London, p. 201. 1900.

The following records are all unquestionably of strays. IV. Miami: Holland (1902, p. 489); two, shortly after a hurricane, (Matheson), Chermock letter (Oct. 11, 1945) to Forbes; two May 3, 1940, (Wm. Sawyer), Clarke (1940a, p. 156). VIII. Long Key: Oct. 8, 1955, (Applegate & Smith), AMNH. Klots says this one is too perfect to have strayed as an adult, and is absolutely authentic. Key West: Chermock (letter above).

14 *P. ARISTODEMUS PONCEANUS* Schaus

Schaus' swallowtail. Pl. 1, Fig. 3, ♂.

Ent. News 22:438. 1911.

IV. Schaus described the subspecies from Miami, but his specimen was taken before the freeze of 1899. R. J. Ford has a specimen labeled Miami, but is doubtful of its validity. Bates (1934, p. 167) reported that G. B. Fairchild took one at Coconut Grove, May 31, 1924. V. Chokoloskee: Nov. 1907, GSDA. Since this is typical *aristodemus*, not *ponceanus*, it is, like many a Chokoloskee specimen, suspect. VIII. The majority of records come from Key Largo and Lower Matecumbe, and were largely summarized by Henderson (1945a, pp. 29-32; 1945b, pp. 187-188; and 1946, pp. 100-101) though there are a number of records which have escaped him, and which I have made no attempt to include. The

dates are mostly in May, but extend back into late April and on to late June. Whatever its status may have been at one time, and according to report it was locally abundant, it is now very rare and should be allowed to multiply. Nor should it be purchased, because that would encourage dealers to collect it. The food plant is *Amyris elmifera*, and the life history was described in detail by Grimshawe (1940, pp. 567, 611).

15 *P. GLAUCUS* Linnaeus

Tiger swallowtail. Pl. 1, Fig. 1, *australis* Maynard, ♂; Fig. 2, ♀.

Mus. Ulr., p. 190. 1764.

Found all over the state from March to November, with an occasional specimen in other months. The proportion and distribution of the typical form and *australis* Maynard should provide some inquiring mind with a nice problem. Fuller comments that the dark females are scarce but large in the Cassadaga region. King finds that the farther south one goes, the larger the specimens, with *australis* coming in September in great abundance to flowers, especially wild lilies in open places which earlier in the year were marshes. The dimorphic female is on the wane at that time. He finds that *glaucus* seems to prefer lanes inland from bays and open salt water. Food: foliage of a wide variety of trees, including wild cherry; once on *Catalpa* (SVF).

20 *P. TROILUS* Linnaeus

Spice-bush swallowtail.

Mus. Ulr., p. 187. 1764.

Troilus is common throughout the state from March to November, and occasionally in January and February. *Ilioneus* Abbot & Smith is generally considered a subspecies, but Remington has raised a question on this point, which, along with the distribution of the two forms or species, is another problem to be worked out. King finds *ilioneus* present and dominant from southeastern Georgia, west to Alabama, and south to the Keys. Food: sassafras, spicebush, sweetbay, prickly ash, redbud, DPI; camphor (Bates, 1923b, p. 42).

21 *P. PALAMEDES* Drury

Palamedes swallowtail.

Ill. Exot. Ent. 1:19. 1773.

Palamedes is abundant throughout the state from March to December. Food: *Persea*, sassafras, *Magnolia virginiana* [*glauca*], J. & H. Comstock (1902, p. 75); camphor, UFES.

GRAPHIUM Scopoli

22 G. MARCELLUS (Cramer)

Zebra swallowtail.

Pap. Exot. 2; Pl. 8, Figs. F, G. 1779.

This has been known as *Papilio ajax* Linnaeus, a name which, as has been noted, has also been used for *P. asterius*. This species is abundant throughout the state from March to December. Morgan wrote in his notes: "Of the three subspecies described as differing slightly in size, hairiness, color, pattern, and length of tails, and supposed to be restricted to certain seasons or regions, all may be matched by Hillsborough County specimens throughout the year. While it is convenient to follow the line of least resistance and call all our Florida specimens *floridensis* (Holland), it is perhaps more accurate to separate them by color pattern into three series corresponding to *marcellus*, *telaemonides* (Felder), and *floridensis*. The rest will be found to vary in all sorts of ways between these." Fuller, on the other hand, states that around Cassadaga the species occurs in the three forms in their usually recognized sequence, *marcellus*, February, *walshi* (Edwards), March, and *lecontei* (Rothschild & Jordan), June and July. King has seen only *telaemonides* and *lecontei*, and has seen only one specimen in the Keys, at Key Largo. These observations by various collectors are quoted for what they are worth, since the whole subject of subspeciation in *marcellus* needs to be worked out. The larva feeds on *Asimina triloba*, and wherever this grows the adult is readily found in season.

[23 G. celadon (Lucas)]

Rev. Zool., p. 130. 1852.

This is certainly not an indigenous species. Strays from Cuba will account for the valid records, if any. Grossbeck (1917, p. 8) cast doubt on Skinner's record for southern Florida, a record which I have been unable to locate. The "Synoptic table of the genus *Papilio* Linn." (Anon., 1878b, p. 37) lists it in Florida under the synonym *sinon* (Fabricius). Edwards (1877, p. 9) listed *sinon* as "occasional." Perhaps all these "records" can be traced back to Boisduval & Leconte (1829, p. 13) where the habitat was given as "la Floride, la Jamaïque et l'île de Cuba." Florida: ex Doll collection, CGM; April, LACM. V. Chokoloskee: Feb., dosP. Dos Passos noted that the locality may be false; Nov., GSDA, for which the locality also may be false. VIII. Key West: "Immediately after a hurricane," Chermock (letter cited under 12,1).

Family PIERIDAE

COLIAS Fabricius

41 C. EURYTHEME Boisduval

Orange sulphur. Pl. I, Fig. 10, ♂; Fig. 11, ♀; Fig. 12, form ♀ *alba* Stkr. Klots believes that Figs. 10 and 11 represent hybrids with *philodice* Godt.

Ann. Soc. Ent. France, p. 286. 1852.

I. Pensacola: VFG; June, SSN. Tallahassee: several *eriphyle* Edwards, April 7, 1950, JPK; May, 1954, LH. North of Tallahassee: in considerable numbers, May 1954, LH and HLK. Monticello: April 1933, UM; May 1954, common, LH and HLK. II. Gainesville: in black light trap, June 6, 1956, DPI. Platt took it here first in 1958 and has found it increasingly plentiful since then. Jacksonville: fifteen Feb. 7 and 14, 1959, CFZ. III. Daytona Beach: April 3, 1956, (W. T. Thomas), SVF. Oviedo: three June 16, 1957, WMD. Merritt Island: June 15, 1953, JRM. Tampa: *eriphyle*, (Henri), CU. IV. "Rare in lower parts of Florida." Holland (1931, p. 297). Sarasota: April 24, 1960, HLK. Fruitville: five June 1961, HLK. King believes it is increasing in numbers in the Sarasota area. VIII. Key Largo: July 9, 1935, UM. Dry Tortugas: two July 1960, WMD, GWR. Food: chiefly alfalfa, also white clover, other clovers, *Astragalus*, *Lupinus*.

42 C. PHILODICE Godart

Clouded sulphur, common sulphur.

Enc. Méth. 9:100. 1819.

I. Western Florida: (Morrison), Scudder (1889, p. 1111). Pensacola: VFG. II. Gainesville: seen but not taken, WJP. III. Lakeland: March 28, AMNH. Food: white clover, other clovers, vetch, lupine, alfalfa and other Leguminosae.

ZERENE Hübner

54 Z. EURYDICE (Boisduval)

Western dog face.

Ann. Soc. Ent. France, 3:32. 1855.

A specimen of this species was taken in Port Tampa by U. C. Zeluff, according to Morgan, who commented that it was evidently imported by rail or on shipboard. Since Zeluff was in the Customs service, the latter seems more likely. In any event, it was an accidental visitor.

55 Z. CESONIA (Stoll)

Dog face. Pl. I, Fig. 20, ♂; Fig. 21, form *rosa* McNeil, ♀, underside; Fig. 22, an albino, ♀. Pap. Exot. Suppl.; Pl. 41. 1790.

Cesonia is common over most of the state during most of the year. Morgan (1933) listed *rosa* McNeill as present in late fall and winter, and Fuller has taken a white form occasionally in August. King has never seen it south of Homestead. Food: *Amorpha fruticosa* and *Trifolium*.

ANTEOS Hübner

55.1 A. MAERULA LACORDAIREI (Boisduval)

Maerula.

Lép. Amér. Sept. 3. 1836.

The few records are for strays. IV. Port Sewall: (Carolyn Ponsonby), Sanford (1945, p. 136) Miami: July 8, 1935, (Young), MCZ; (Grimshawe), Young (1938, p. 115).

PHOEBIS Hübner

57 P. SENNAE EUBULE (Linnaeus)

Cloudless sulphur.

Syst. Nat., p. 743. 1766.

The cloudless sulphur is abundant throughout the state the year around. As Klots (1951, p. 191) said, "The subspecific classification is extremely complex and largely statistical," there is no need to enter into the subject here. Food: clover, preferably *Cassia*, as noted by a number of observers in Florida. The larvae vary considerably in color. Klots and the writer have done some work on the early stages of the genus and hope to publish on them later.

58 P. PHILEA (Linnaeus)

Orange-barred sulphur. Pl. I, Fig. 13, ♂; Fig. 14, ♀; Fig. 15, form *albarithe* Brown, ♀. Syst. Nat., p. 764. 1776.

Philea is common in the southern half of the state all year. There are a few records as far north as Jacksonville, with one at Warrington in June 1960, and perhaps it is spreading north as Fuller reports that there were none in the Cassadaga region in 1950, but that by 1955 it was common. Weems also reared it in Gainesville in 1955. Unlike *eubule*, it is not a wanderer, though Harris has taken it at Montezuma, Ga., and Jones took a specimen on Marthas Vineyard, Mass. The form *obsoleta* Niepelt is not common and seems to be present only in the summer. Fuller says the males are the same in any brood, but females emerging from September to November are all very brightly colored, while spring females are pearly white with just a tinge of yellow. Food: *Cassia*; *C. bicapsularis*, SVF.

[59 *P. argante* (Fabricius)]

Syst. Ent., p. 470. 1775.

III. St. Petersburg: a pair, April 4, 1924, dosP, from the Sternitsky collection. Dos Passos does not vouch for the validity of the localities of this, nor the Chokoloskee specimen below. Lakeland: two Sept. 8-10, 1912, UM. These two are labeled as having been acquired with a collection purchased from Ramstedt about 1917. However, as Ramstedt was not in Florida between 1904, when he collected at Egmont Key, and 1930, when he first went to Punta Gorda, and as he did not remember obtaining any Florida specimens from any source except his own collecting, there must be some error in labeling. It is possible, of course, that these were taken at Lakeland, but unless we can find out more about their source, the record must remain questionable. V. Chokoloskee: one male, dosP. Edwards (1881b, p. 9) said, "*Argante* Fabr. is not a North American species (Edward's italics), but the species found within the United States and taken for *argante* is *agarithe* Bdv." In view of Edward's emphatic statement, it is difficult to understand why the rumor of the presence of this species still persists, except in Texas.

60 P. AGARITHE MAXIMA (Neumoegen)

Large orange sulphur. Pl. I, Fig. 27, ♂; Fig. 28 ♀.

Can. Ent. 23:122. 1891.

Maxima is a common species from March to December, south of the line from Tampa to Port Sewall, including the Dry Tortugas, the only records north of this being pre-freeze specimens, namely, III. Indian River: Neumoegen (1891), and Upper Indian River: AMNH. The record in the "Season Summary for 1959," News of the Lepidopterists' Society, Number 3, p. 11, which infers a Jacksonville capture, is misleading. Zeiger has informed me that the specimen was taken in West Palm Beach. Food: *Cassia*, (Lennox), ABK, NSMS; *Pithecellobium guadalupense*, Dyar (1900a, p. 618); *P. dulce*, CPK. The larvae are reddish in all stages, and feed only on the tender young leaves, at least so far as the last plant is concerned. I have found the rearing of these very difficult and have succeeded in getting only one through to the adult stage. When about one-fourth grown they stop eating in captivity and simply die. This needs further study, for even under natural conditions they mysteriously disappear at about the same stage of development. This curiosity was first called to my attention by George Dillman; since that time I have frequently observed the same thing. *P. dulce* may be acceptable only in the early instars or else

only the tender new growth is acceptable. My supply of the latter was very limited. Perhaps either the new or old leaves of *P. guadalupense* are acceptable. The records on *Cassia* may refer to only one acceptable host species. Certainly the larvae will not eat *Cassia bicapsularis* in the Bradenton-Sarasota area, nor have Dillman or I ever seen the females ovipositing on the latter.

62 P. STATIRA FLORIDENSIS (Neumoegen)
Statira.

Can. Ent. 23:122. 1891.

This is a relatively uncommon species which definitely seems to be working its way northward. Most of the records are from Miami, Homestead, and Key Largo. King has found it from Pompano to Miami, but never south of the latter, and considered it primarily coastal. Morgan took two in Tampa in the 1930's. Heineman took one at Jupiter, 1932. Roever took it on Merritt Island, August 1951. One specimen turned up on Siesta Key, January 1952, a few in December 1953; but in November 1954, the writer found several dozen at the blossoms of *Hamelia patens* in Oneco. J. D. Smith also took it in St. Petersburg in the fall of 1954, and observed females ovipositing on some shrub which was not *Cassia*. Kamp found it in Bradenton, August 1955. King reported that the food plant was either *Dalbergia ecastophyllum*, det. West, or something very similar, and that it is double brooded. Davidson reported females ovipositing on *Calliandra*, November 1957. The dates, from June to September and from November to February, confirm this.

KRICOGONIA Reakirt

63 K. LYSIDE Godart

Lyside.

Enc. Méth. 9:98. 1819.

Lyside is apparently native but very rare. III. Indian River: Edwards (1884, p. 262). IV. Fort Lauderdale: July, Aug., 1935, (Grimshawe), Klots (1951, p. 194). Hollywood: July 8, 1938, (Strohecker), LH. Miami: About a dozen at flowers of black mangrove, June 13-17, 1937, Young (1938, p. 115); MCZ. Matheson Hammock: May, HLK. VIII. Key Largo: June 24, 1953, JRM; a number at *Bidens* blossoms, June 15, HLK. Lower Matecumbe: July, Aug., 1935, (Grimshawe), Klots.

EUREMA Hübner

64 E. DAIRA (Godart)

Barred sulphur. Pl. I, Fig. 23, ♀; Fig. 24, form

jucunda (Bdv. & Lec.) ♂; Fig. 25, ♀, underside; Fig. 26, form *jucunda* ♂, underside. Enc. Méth. 9:137. 1819.

Daira is an abundant, variable species, sometimes rather local and found nearly all the year. The summer form is *jucunda* (Boisduval & Leconte), with the intermediate *delioides* Haskin occurring in spring and fall. See Haskin's paper (1933b, p. 120). Down in the Keys confusing forms are occasionally taken. Edwards (1877, p. 60) recorded *elathea* (Cramer). In March 1954, Harris took two males of "a rather pallid form that occurs in south Florida representing perhaps some Antillean influence," according to Klots, and one female which the latter determined as *ebriola* (Poey), the first authentic record for the United States, though he found certain differences from the typical Cuban specimens. J. & H. Comstock (1902, p. 76) listed *elathea* from Avon Park. For *palmira* (Poey) there are several records: I. Santa Rosa County: adult taken on peanuts, July 26, 1961, (R. W. Albritton), CPK. It is possible that this is a chemical changeling as it was received in alcohol in which case it would be nothing more than *jucunda*. It is in poor condition, but there is no trace of yellow present. Morgan listed "*jucunda* 'albina' (*elathea*)" from Tampa, but there is no specimen of this in collection TU. IV. Useppa: April 1913, "acquired from a dealer, differing slightly from Cuban specimens in having less orange below marginal band of forewing," BH. Coconut Grove: five, one on *Bidens*, July 1945, HLK. Homestead: Aug. 1951, KR. Miami area and the Keys: July 1933, (Forsyth), Klots (1951, p. 196); Aug. 1908, Wood (1939, p. 131). VIII. Tom Harbor: a pair, July 1936, (Chermock?), DLB. The life history was given by Haskin (1933c, p. 153). Food: *Aeschynomene viscidula*, *Stylosanthes biflora*, and probably other related Fabaceae.

66 E. MESSALINA BLAKEI (Maynard)

Man. N. Amer. Butt., p. 216. 1891.

Bates (1934, p. 166) said: "*E. messalina blakei* is a Bahaman race. The only Florida specimen seen is the type labeled Sanford, Fla., Oct. 1, 1887, described in 1891 by Maynard." Forbes noted that the spelling on the label is "Sandford" and the date "Oct. 16." In view of the effects of the freeze of 1899, together with the possibility of a stray from the Bahamas, there is no reason for not considering this a valid record, although there is also no reason to think that the insect is present now. As for the Chokoloskee records, four of which were mentioned by Grossbeck (1917, p. 12) and two of which are in dos

Passos' hands, there is every reason to be suspicious, as the latter readily agrees.

67 **E. NICIPPE** (Cramer)

Sleepy orange. Pl. 1, Fig. 8, ♀, underside; Fig. 9, ♀; Fig. 18, form *flava* (Stkr.) ♀, underside; Fig. 19, form *flava*, ♀.
Pap. Exot. 3:210. 1782.

There is great variation in the abundance of this species, as well as in its coloration both above and beneath, though most specimens are not so bright an orange as those taken farther north. It may be found in any month but is most common in July. Howe found it "incredibly numerous" in Leon County in August 1958. The form *flava* (Strecker) is rare, the following being the only records. III. Daytona Beach, HLK. DeLeon Springs: Feb., SVF. DeLand: Feb., SVF. Cassadaga: May, Dec., SVF. Lake Helen: Feb., SVF. Tampa: June, (Morgan), UT. VI. Florida City: May, CGM. VIII. Dry Tortugas: July, WMD. Food: clover and other Fabaceae; *Cassia*, CPK.

68 **E. BOISDUVALIANA** (Felder)

Boisduval's sulphur.

Reise Nov. 2:200. 1865.

Paradise Key: Two males, one female, May 25-June 4, OB.

72 **E. LISA** (Boisduval & Leconte)

Little sulphur.

Lép. Amér. Sept. p. 53; Pl. 19, Figs. 4, 5. 1829.

Lisa is abundant throughout the state, including the Dry Tortugas, especially from March to December, but flying almost every sunny day. The form *alba* (Strecker) is not rare. The form *clappii* (Maynard) with the black on the forewing much reduced, was taken at Lakeland, May, FMJ. A specimen which Klots believes may be form *euterpe* Ménétriés, was taken on Key Biscayne, July, CPK. It is orange rather than the usual yellow. Food: *Cassia*, *Trifolium*, *Amphicarpa*.

73.1 **E. DINA HELIOS M.** Bates

Occasional Papers Boston Soc. Nat. Hist. 8:133. 1934.

IV. Fairchild Gardens, Matheson Hammock: Aug. 23, 1962, (Plomley), det. Klots, AMNH. A Bahaman subspecies which may be an accidental introduction or stray. Collectors should be on the watch for it.

74 **E. NISE** (Cramer)

Pap. Exot. 1; Pl. 20, Figs. K, L. 1775.

There has been confusion over this species, it

having been reported as both *perimede* (Pritt-witz) and *neda* (Godart). Dos Passos states that what we have is probably the subspecies *nelphe* (Felder). Klots (1951, p. 198) recorded: "first found in Florida by Mrs. Margaret Forsyth in 1933, *neda* was common both in Royal Palm State Park [Paradise Key] and on Key Largo in 1947 (July 12-15), absent in 1948. . . . Possibly the Florida population results from a recent introduction. In Florida it flies in the bushy and scrubby margins of woods and flees when alarmed; it definitely does not fly out in the open as does the similar *lisa*." Because of the close resemblance to *lisa* and its retiring nature, it may be overlooked. The only other records are: VI. Paradise Key: many in May and June, OB. VIII. Key Largo: Aug. 1, 1947, CGM. Food: *Mimosa pudica*.

NATHALIS Boisduval

75 **N. IOLE** Boisduval

Dainty sulphur.

Spec. Gén. 1:589. 1836.

Iole is abundant practically the year around all over the state, including the Dry Tortugas. In view of this it is surprising that Grossbeck had but a single record for it, unless it has suddenly and rapidly multiplied in the past forty years. Forbes wrote that a Coconut Grove, 1924 specimen in the Museum of Comparative Zoology looks suspicious but that the collection contains a series dated 1933-1934. Perhaps the species began to establish itself during the late 1920's. It might be of interest to assemble all records prior to 1930. Food: *Dyssodia*, *Tagetes*, *Stellaria media*, *Helenium*, *Bidens pilosa*.

APPIAS Hübner

78 **A. DRUSILLA NEUMOGENII** (Skinner)

Florida white.

Ent. News 5:110. 1894.

The Florida white is found almost exclusively in Dade and Monroe Counties, the dates including every month except November. It is, nevertheless, apparently rare, although Howe found it "quite common" in extreme south Florida, August 1958. There are a few, mostly older records from more northerly localities. II. Gainesville: late fall, WJP. This is a modern record. III. Indian River: SDM. Dunedin: Feb., 1921, Blatchley (1931, p. 243). IV. Sarasota: Feb. 14, 1911, Blatchley (1932, p. 66). I suspect both of Blatchley's records of being misdeterminations for *Ascia monuste phileta* (Fabricius), for he spoke of the specimens as being "only faintly tinged above with black," comparing them with

Pieris rapae. Fort Lauderdale: March, April, CU. Food: *Capparis*; *Drypetes lateriflora*, Chermock & Chermock (1947, p. 142). These authors also give the life history.

PIERIS Schrank

82 P. PROTODICE Boisduval & Leconte

Checkered white.

Lép. Amér. Sept., p. 45. 1829.

At present this species seems to be very rare in Florida. Florida: (Chapman), Grsb. 9. Grossbeck also quotes "Abbott." However, the only localities in the original description by Boisduval & Leconte are New York and Connecticut. The plate, No. 17, was engraved under the direction of Dumenil from a painting by "Abbott," whose name is correctly spelled in the introduction to Boisduval & Leconte's work under mention of Smith & Abbot. Perhaps Grossbeck had this plate in mind when listing "Abbott" as authority for *protodice* in Florida, at least there appears to be no other explanation for it. I. Pensacola: relatively common, VFG; one Oct. 10, 1914, AMNH. Fisherville: one Oct. 11, 1914, AMNH. Tallahassee: two May 1954, LH. Monticello: two Oct. 5, 1914, AMNH. II. Orange Park: July 1960, WJP. III. Enterprise: April 1896, Castle & Laurent (1896, p. 303). Orlando: July, WMD. Tampa: "common," Feb.-Dec., Morgan notes; UT. Lakeland: May, DPI. IV. Sarasota: July 10, 1950, HLK. Fruitville: three June 10, 1961, HLK. Fort Lauderdale: April 1, 1922, UM. VI. Paradise Key: Jan.-April, rare, in weedy, burnt over areas, FMJ. Food: cabbage, cauliflower, probably all of the Cruciferae; Fla. Agr. Exp. Sta. Bull. 59: 436, and Watson (1931, p. 39).

86 P. RAPAE (Linnaeus)

European cabbage butterfly.

Syst. Nat., p. 468. 1758.

Though recorded from most of the state, even Key West, this species is by no means common in Florida, with the exception of the northern and western counties, where it does a good deal of injury to late cabbage and collards, but not to winter grown cabbage because it is not active at that season. Though Morgan, in his Notes, called it abundant at Tampa throughout the year, other records are primarily from March to May, with a few from October to December, and one in July at Miami, LSP. Fuller reported seeing thousands in a collard patch at Florida City in May 1954. Outbreaks on cabbage and collards are recorded in the Insect Pest Surv. Bull. 12: 107; 14: 85; 16: 15.

ASCIA Scopoli

88 A. MONUSTE PHILETA (Fabricius)

Mustard white.

Syst. Ent., p. 471. 1775.

Phileta is found throughout the state, including the Dry Tortugas, all through the year in the southern portion and during warm weather elsewhere. At times it is present in great abundance, especially along the coasts. There is an exhaustive paper on the habits, life history, and migrations by Nielsen & Nielsen (1950). "This is by far the most common and troublesome caterpillar on cabbage and collards grown during the late spring and summer in the southern part of the state," according to Watson (1931, p. 39). Other foods: *Lepidium*, *Cakile maritima*, *Cleome rufidosperma* [ciliata], *Batis maritima*, nasturtium, all recorded by Nielsen & Nielsen; to this I can add *Calendula*. Pease is preparing a paper on the effect of the length of daylight on the color forms of this and *Eurema दौर* (Godart).

Family DANAIIDAE

DANAUS Kluk

89 D. PLEXIPPUS (Linnaeus)

Monarch, or milkweed butterfly.

Syst. Nat., p. 471. 1758.

Plexippus is all over the state, occasionally abundant, but generally far from common, probably every month, but with most of the records in early spring or late fall. Subspecies *megalippe* (Hübner). Key West: Dec. 18, 1936, det. Austin Clark, LH. Klots took a specimen close to *megalippe*, Key Largo, July 16, 1947. Thaxter (1880, p. 75), reported an overwintering swarm near Apalachicola 1875-76, with the trees festooned in an area of about an acre. In January 1956, Urquhart & Harris found a large overwintering population also in the vicinity of Apalachicola. According to Harris, this locality had been used for many years and may even be that recorded by Thaxter. Unfortunately by 1958 it was being engulfed by real estate developers. Urquhart wrote of similar populations near Sarasota, Cedar Key, Lighthouse Point, East Point, St. Joseph's Bay, and a peninsula near Springfield. Harris wrote of a colony at Alligator Point, Wakulla County, and of finding many detached wings directly beneath bird perches in myrtle bushes. Bromley (1928, p. 96) recorded a flight in numbers in January, in the Everglades. King tells of seeing an assemblage of thousands hanging from a punk tree near Lejeune Road and West Flagler Street, in Miami. Two were seen by Rawson and Davidson on Garden Key, Dry Tor-

tugas, 1960. Though the usual food plant is *Asclepias* or *Apocynum*, the Division of Plant Industry has recorded the larvae on citrus and sweet potato.

90 D. GILLIPPUS BERENICE (Cramer)

Queen.

Pap. Exot. 3; Pl. 205, Fig. E. 1782.

The queen is much more abundant than *plexippus*, and found the year around. *Strigosa* Bates has been taken at Miami, (Harris), EU; Hebard (1904, p. 40), and there are specimens which have a suggestion of gray on the veins, but King states that these intermediates with grayish bordered veins are not uncommon in the Everglades, though the ground color never tends to the pale brown of typical *strigosa* of the Southwest. The white markings on the upper side of the primaries vary to a considerable degree, as does the size. Food: *Asclepias*, *Nerium*, *Gonolobus*, *Sarcostemma*, *Stapelia*.

91 D. ERESIMUS TETHYS Forbes

J. N. Y. Ent. Soc. 51: 301. 1943.

VI. Near Paradise Key: (Chermock), Klots (1951, p. 79). VIII. Lower Matecumbe: Feb. 8, 1932, (F. E. Church), AMNH. Both are undoubtedly strays from the West Indies.

91, 2 D. JAMAICENSIS Bates

Ent. Monthly Mag. 1: 32. 1864.

Florida: (Thaxter), USNM. This will also be a stray, unless, as Forbes commented, it is a case of mislabeling since Thaxter collected in Jamaica as well as Florida.

LYCORELLA Hemming

92 L. CERES DEMETER (Felder)

Reise Nov. 2: 352. 1867.

The two following records presumably result from strays. IV. Miami: Jan. 19, 1899, as form *atergatis* (Doubleday), (S. N. Rhoades), Skinner (1899, p. 112); April 21, 1941. This specimen in Mrs. Grimshawe's collection "emerged from pupa found in Miami (B.M.G.)," according to Klots (1951, p. 276).

Family SATYRIDAE

LETHE Hübner

96 L. PORTLANDIA (Fabricius)

Pearly eye.

Spec. Ins. 2: 82. 1781.

Florida: Feb., May, Aug., Oct., (Chapman), Grsb. 18. I. Wakulla Springs: April, MCZ. Tallahassee: Aug. 24-Sept. 2, 1950, JPK. Monticello: Oct.

4, 7, 1914, AMNH. II. Gainesville: March, April, Sept.-Nov., UM, AMNH; USNM. III. 10 miles north of Ocala: Oct. 26, 1941, JRW. Rock Springs: March 23-May 3, AMNH; April, JWT. Apopka: Sept., WMD. Orlando: March 27-May 3, OB. Food: grasses, *Arundinaria gigantea*.

97 L. CREOLA (Skinner)

Creole pearly eye.

Ent. News 8: 236. 1897.

Florida: May, Skinner (1926, p. 42). II. Alachua Co.: April 14-29, Sept. 30, in dense hammocks, Dozier (1920, p. 375). Gainesville: UFES. III. Port Orange: April 2, PSR. Food: *Arundinaria tecta*.

106 L. EURYDICE APPALACHIA

R. L. Chermock

Eyed brown.

Ent. News 58: 33. 1947.

I. Northern Florida: Klots (1951, p. 68). Monticello: common, Oct. 6-8, JRW. Food: grasses.

EUPTYCHIA Hübner

98 E. GEMMA (Hübner)

Gemmed satyr.

Pl. I, Fig. 7, ♀, underside.

Zutr. exot. Schmett. 1; Fig. 4. 1818.

I. Torreya State Park: April 12, 1960, DPI. Tallahassee: Sept. 17, 1950, JPK. II. Gainesville: (Watson), UFES. Jacksonville: two Feb. 29, 1960, two May 31, 1959, CFZ. III. Ormond: March 22, 1899, Blatchley (1902, p. 230). Port Orange: June 28-30, 1948, (King), CPK. Frostproof: Feb. 18, BH. Food: grasses.

100 E. AREOLATA (Abbot & Smith)

Georgia satyr.

Pl. I, Fig. 16, ♂; Fig. 17, ♀, underside.

Lep. Ins. Ga. 1; Pl. 13. 1797.

There are a number of records from all over the state with the exception of the Keys whence there is only one, Big Pine Key: HLK. It is present practically every month. However, it is probably local in habit. Morgan noted that it was found "in damp, grassy or weedy places." Food: grasses.

102 E. HERMES SOSYBIA (Fabricius)

Carolina satyr.

Ent. Syst. 3: 219. 1793.

This species is found all over the state and is abundant throughout the year. Food: grasses.

103 E. CYMELA VIOLA (Maynard)

Little wood satyr.

Pl. I, Fig. 29, ♂; Fig. 30, ♀, underside.
Man. N. Amer. Butt., p. 109. 1891.

Florida: June, LACM. I. Apalachicola: March-May, (Chapman), Grsb. 19. II. Gainesville: March, UM. Fernandina Beach: April, CFZ. Jacksonville: April, MCZ; May, CFZ. Ortega: Sept., Grsb. 19. Orange Park: April, CFZ. St. Augustine: March 28, OB; April, May, common, (Johnson), Grsb. 19. III. Gulf Hammock: April, Castle & Laurent (1897, p. 9). DeLand: HLK. Ormond: common, March 20, 1899, Blatchley (1902, p. 230). Juniper Springs: April 12, 1955, SVF. Enterprise: type, spring 1888, Maynard; April, Castle & Laurent (1896, p. 302). Altamonte Springs: March, MCZ. Ocoee: March, SDM; April, Brown (1950, p. 7). Orlando: March, OB; April, OA. La Grange: Sept., Grsb. 19. King reported that it was very common in early March in the Daytona Beach-St. Augustine region, especially near salt bays and brackish streams. Food: grasses.

CERCYONIS Scudder**116 C. PEGALA** (Fabricius)

The wood nymph.

Pl. I, Fig. 31, ♀; Fig. 32, ♀, underside.
Ent. Syst., p. 494. 1793.

Florida: June, July, LACM. I. Pensacola: VFG. July, SSN. Apalachicola: (Chapman), Grsb. 18. Tallahassee: July, JAP. II. Okeefenokee Swamp: July, (Beamer), UK. Lake City: Aug., UK. Alachua Co.: July, UFES. Gainesville: UFES; July, UM. Jacksonville: July-Oct., (Ashmead), Grsb. 18; Sept., SIM. Orange Park: July, CFZ. St. Augustine: common in summer, (Johnson), Grsb. 18. III. Oviedo: (Mead), Grsb. 18. Daytona Beach: common, July, SVF. Cassadaga: July, SVF. Fuller reports that the eye spots on the primaries are very variable and often missing. Tampa: July, LHH.

Family **HELICONIIDAE****ITHOMIA** Doubleday[*I. phoeno* (Geyer)]

Zutr. exot. Schmett. Figs. 987, 988. 1837.

Grote (1875b, p. 246) said: "Placed here (Florida) on the authority of Geyer," but this must have been an error on Geyer's part. There is no authentic record.

GRETA Hemming[*G. diaphana* (Drury)]

Ill. Exot. Ent. 2; Pl. 7, Fig. 3. 1773.

Florida: Edwards (1872, p. 10). Grote (1875b, p. 246) had this to say: "I cannot find any authority for the occurrence of this butterfly within our limits, excepting Edwards' Synopsis, and Mr. Edwards does not recollect upon what grounds he placed it there." Here, then, is another error.

HELICONIUS Kluk**155 H. CHARITONIUS TUCKERI**

Comstock & Brown

Zebra.

Amer. Mus. Nov. 1467: 15. 1950.

The zebra is general and common though perhaps not so abundant in the northern counties, but present at all times except during the coldest weather. There is an interesting description of the habits of *charitonius* by W. H. Edwards (1881e, pp. 209-215). Food: various *Passiflora*.

DRYAS Hübner**156 D. JULIA CILLENE** (Cramer)**Julia.**

Pap. Exot. 3; Pl. 215, Figs. D, E. 1782.

This species is common from Miami down through the Keys, principally in summer, but the records include all months. King says that it is most common on Key Largo, but he has not seen it in the Everglades or below Marathon. Dyar took it at Palm Beach (1901a, p. 447). Plomley reported two in Broward County, July 1961. A specimen labeled "Arlington, May," LHH, would seem to be in error, as Arlington is close to Jacksonville. There has been much disagreement and debate over the form or forms found here, but I am content to follow Klots and leave the problem to others. The life history is given by Schneider (1933, p. 2). Food: *Passiflora*.

DRYADULA Michener[157 *D. phaetusa* (Linnaeus)]

Syst. Nat. 1: 486. 1758.

The records for this species do not appear sound, although they may be perfectly valid. The fact that a total of fourteen specimens were collected at two different localities on two different dates, but that no other collector has ever seen the insect, indicates the need for more substantiation. IV. Miami: Feb. 21, 1932 (Grimshawe), LACM. VIII. Key Largo: Feb. 10, 1932, (Grimshawe), LACM. This data was supplied by Martin; Martin & Truxal (1955, p. 11) list simply, Florida: Jan.-May.

AGRAULIS Boisduval & Leconte

158 A. VANILLAE NIGRIOR Michener
Gulf fritillary.

Amer. Mus. Nov. 1215: 7. 1942.

The Gulf fritillary is abundant everywhere the entire year. The form *comstocki* Gundlach was taken on Key Largo, March 30, 1932, det. Schaus, Forsyth (1933, p. 2). Food: *Passiflora*. I have also found the larvae on grasses, and a chrysalis on *Agave*, fifty feet from the nearest *Passiflora*, which indicates how far a larva will travel to select a spot for pupation.

Family NYMPHALIDAE

EUPTOIETA Doubleday

159 E. CLAUDIA (Cramer)

Variegated fritillary.

Pap. Exot. i; Pl. 69, Fig. E. 1779.

Claudia is found throughout the state, though according to King it is not common on Key Largo, and probably does not occur much below that point; at least there are no records from anywhere southwest of it. It is present March-Dec., but mostly in the late summer and autumn. The ab. *albaclaudia* was described from Miami, Field (1936, p. 23). Food: *Passiflora*, *Podophyllum*, *Sedum*, *Desmodium* [*Meibomia*], *Portulaca*, *Menispermum*, violet and pansy.

[160 *E. hegesia* (Cramer)]

Mexican fritillary.

Pap. Exot. 3; Pl. 209, Fig. E. 1782.

Florida: four, MCZ. Forbes commented that these are definitely "Antillean," not Mexican, but that he is very suspicious of them and believes that Thaxter took them in Jamaica. V. Chokoloskee: Dec. 1902, GSDA. While the species does occur in Cuba, we need something more substantial than a Chokoloskee specimen and four others that are equally doubtful before accepting the record.

SPEYERIA Scudder

[162 *S. diana* (Cramer)]

Diana.

Pap. Exot.; Pl. 98, Fig. D. 1779.

Diana was reported from Florida (Grossbeck, 1917, p. 14) on the authority of Skinner. H. J. Grant, Assistant Curator of the Academy of Natural Sciences, Philadelphia, informs me that there is no Florida specimen of *diana* in the Skinner collection. The nearest record known is that of L. Harris, Jr., at Atlanta, Ga., nearly three hundred miles north of the Florida border.

Mather reports two other southern records: northern Mississippi and Tallulah, La. There would appear to be no reason for retaining this species on the Florida list.

166 S. CYBELE (Fabricius)

Great spangled fritillary.

Syst. Ent., p. 516. 1775.

Grant informed me that in this instance there is a specimen in the Academy of Natural Sciences collection labeled "Florida, SM. No. 18, det. Skinner, collected Skinner." There are two Gainesville records: Grsb. 14, and one in Watson's hand, "June 11, 1941." Though neither of these last two is to be found in the University of Florida Experiment Station collection today, there is every reason to believe that they are valid records. I had assumed that all three were strays, but a fourth specimen was taken at Gainesville by Denmark in a black light trap, June 6, 1956, and is in too fresh a condition to have strayed from any great distance. It is in the Florida State Collection of Arthropods. There is one other record: Dec. 10, 1921, UM. The label also bears the word "cherry," but the significance is anyone's guess. Food: violets.

PHYCIODES Hübner

264 P. GORGONE (Hübner)

Gorgone crescent.

Samml. exot. Schmett.; Pl. 41. 1824.

Here we have another case where collectors will be confused with the changes in nomenclature. *Ismeria* (Boisduval & Leconte) instead of being a synonym of *gorgone* has recently been restored to specific status but *phaon* (Edwards) has been sunk as a synonym of *gorgone*. The latter is common during most of the year all over the state, including the Dry Tortugas, the winter form *hiemalis* Edwards occurring into the late spring. Plomley has taken in Broward County, an aberration in which the black margin of the hind wing is solid and covers the outer third of the wing. Food: in California, *Lippia lanceolata* and *L. nodiflora*. King suspects that here it may feed on *Bidens*.

265 P. THAROS (Drury)

Pearl crescent.

Ill. Exot. Ent. 1: 43. 1770.

This species is equally common and flying with *gorgone* through the year. It also has a winter form, *marcia* (Edwards), but is perhaps even more variable than *gorgone* and plagued with more intermediates. Food: asters, *Verbesina helianthoides*.

ERESIA Boisduval

273 E. FRISIA (Poey)

Cuban crescent.

Cent. Lép. Cuba, p. 9. 1832.

Fairly common during most of the year in Dade and Monroe Counties, but there are very few records further north. II. Gainesville: (Watson), UFES. III. La Grange: Sept. 9, (Sleight), Grsb. 14; (Davis), SIM. IV. South Bay: May 1, 2, (Davis), AMNH, SIM. V. Everglades: Dec., WMD. The life history was described by Chermock & Chermock (1947, p. 142).

[275 *E. leucodesma* Felder]

Wien. ent. Monat. 5:103. 1861.

Holland (1931, p. 141) wrote that Edwards (1864, p. 502) in describing *Anthanassa cincta*, which dos Passos tells me is a synonym of this, attributed it to Texas and Florida. However, there was no specimen labeled *cincta* in the Edwards collection, nor in any other, so far as he could discover. He thought that Edwards was probably deceived as to the origin of the Florida specimen.

TRITANASSA Forbes

274 T. TEXANA SEMINOLE (Skinner)

Seminole crescent.

Pl. I, Fig. 6, ♀.

Ent. News 22: 412. 1911.

I. Five miles south of Clarksville: Aug. 26, 1952, BLM. Tallahassee: one March 17, 1951, JPK; two May 1954, LH. These were all in fresh condition. III. Levy Co.: May 7, 1955, (Weems), DPL, in fresh condition. La Grange: Sept. 9, 10, (Sleight), Grsb. 15; (Davis), SIM. There are also three "Florida" references in the older literature. Grote (1875b, p. 268); "Synopsis of butterflies" (Anon., 1883, p. 26); Edwards (1877, p. 27).

MESTRA Hübner

[283 *M. cana floridana* (Strecker)]

Lep. Rhop. and Het. Suppl. 3: 24. 1900.

Wyatt kindly checked the Strecker collection for me and reported that there is in it a specimen labeled "original type, Florida, from L. W. Mengel." There is also one labeled "Fla." in the Cornell University collection. However, there is something very curious about this form *floridana*. Fox (1942, p. 14) gives a very interesting account of the history of the type specimens. Apparently these specimens, presumably including the one on which the form was erected, all came from Cedar Key, not the Everglades as Strecker claimed. Forbes reports one in the Weeks collection, MCZ, labeled "Crystal River,"

which is not far from Cedar Key. It is also labeled "*florodora* Stkr." Since these specimens were taken before the freeze of 1899, there would appear to be two possible explanations. The first, and most tenable, is that they were not taken in Florida in the first place. Second, and less likely, is the possibility that they may have represented an isolated colony along the relatively inaccessible northern third of the west coast of the peninsula, where they could have been wiped out by the freeze. It is remotely possible that they may still survive in this largely unexplored region. However, against the case for the species ever having been in Florida, is the fact that *cana* with its form *floridana* is found only in Trinidad and Venezuela whereas even the southern Antilles have a different subspecies, *corviana* Butler, and no form of the species is known north of St. Lucia and Dominica. The record looks more than dubious.

HYPOLIMNAS Hübner

284 H. MISIPPUS (Linnaeus)

Mus. Ulr., p. 264. 1764.

This species is without doubt a stray of very infrequent appearance in Florida. For illuminating comment on *misippus* the reader is referred to a paragraph under *Lois lorina* (Druce) in Barnes & Benjamin (1926, p. 20). III. Oak Hill: Sept. 1916, (Mrs. L. Walsh), AMNH. Banana River: Dec. 1, 1895, Cory (1896, p. 140). Indian River: Nov., (Wittfeld), Edwards (1888, p. 128). IV. Miami: in a grove, April 1934, (Young), MCZ; larva on parsley, Klots (1951, p. 278). Klots believes this may have been reported to him erroneously, instead of purslane, as Romm (1937, p. 53) listed the larva as feeding on the latter plant. In the copy of the earlier *Lepidopterists' News* 1(1):2, which I have examined, in the paper by James S. Haeger which is the apparent source of the parsley report, the words "parsley (*Petroselinum petroselinum*)" are crossed out and written above is the word "pulsey." The paper describes the larva from which Haeger reared an adult, the latter emerging in late April or early May. V. Chokoloskee: June 11, 1902, June 4, 1904, CMNH. The validity of the last two is open to question. VII. Everglades National Park: Nov. 10, 1960, (H. B. Muller), ENP.

POLYGONIA Hübner

285 P. INTERROGATIONIS (Fabricius)

Question mark.

Ent. Syst. Suppl., p. 424. 1798.

I. Warrington: Feb. 1961, Feb. 24, 1962, Pens. Ent. Soc. Bull. 4. Pensacola: Jan., SMH; Sept.,

SSN. Tallahassee: July 1951, JAP. II. East Florida: Jan., Dec., (Doubleday), BM. Gainesville: March-May, Aug.-Oct., WJP, UM; Sept. 30, UFES; April, May, Aug., WJP. Jacksonville: Feb. 22, 1959, CFZ. St. Augustine: very rare during autumn, (Johnson), Grsb. 15. III. Daytona Beach: Oct. 20, 1955, SVF. Tampa: April-Nov. "local, in the larger hammocks and bay-heads. This butterfly and the large noctuid moth *Erebus odora* may be easily mistaken in dense jungles for the Mourning Cloak which is rumored to have been seen near Hannah's Whirl," Morgan (Notes). IV. Palmetto: form *umbrosa* Lintner, May 10, 1956, HLK. Fort Myers: Walker (1918, p. 78). Fort Lauderdale: Aug. 3, 1924, UM. Food: *Ulmus*, *Celtis*, *Urtica*, *Tilia*, *Humulus*, *Boehmeria*.

NYMPHALIS Kluck

298 N. ANTIOPA (Linnaeus)

Mourning cloak.

Syst. Nat., p. 476. 1758.

I. Northern Florida: (Chapman), Grsb. 15. Escambia Co.: Feb., SMH. Warrington: Feb., Pens. Ent. Soc. Bull. 4. II. Gainesville: Feb. 25, Walker (1918, pp. 6, 59); larvae abundant on *Rumex acetosella*, Mar. 23, Ins. Pest Surv. Bull. 18: 56. Hogtown Creek: Feb. 17, Bratley (1931, p. 7). IV. Oneco: (Dillman). Siesta Key: CPK. Food: elm, willow, poplar, hackberry, rose.

VANESSA Fabricius

299 V. ATALANTA (Linnaeus)

Red admiral.

Syst. Nat., p. 478. 1758.

The red admiral is common throughout, even to Key West and on the Dry Tortugas, appearing in every month. Harris saw thousands of freshly emerged specimens along a two mile stretch of road near South Bay, May 13, 1953, not migrating but hovering over flowers. Fuller saw similar swarms over *Cephalanthus* at Florida City, May 1954, and April 1955. Food: *Urtica*, *Humulus*, *Boehmeria*, *Parietaria*.

300 V. VIRGINIENSIS (Drury)

American painted lady.

Ill. Exot. Ent. 1; Fig. 5. 1770.

Virginensis is not common but probably found all over the state, though there are no records south of Fort Myers, except the Dry Tortugas, WMD. Morgan called it abundant the year around at Tampa. Most records are for the spring and late fall, but they do cover the year. Food: everlasting and other composites.

301 V. CARDUI (Linnaeus)

Painted lady.

Syst. Nat., p. 475. 1758.

I. Escambia Co.: very common in 1960, rare in 1961, VFG. II. St. Augustine: rare during winter and spring, (Johnson), Grsb. 15. III. Deland: April, May 1954, SVF. Cassadaga: April, May 1954, SVF. Orlando: April, WMD. Dunedin: April, Blatchley (1931, p. 230). Tampa: common Feb.-Dec., Morgan (1933). IV. Bradenton: Feb., WMD. Sarasota: few Jan. 29, 1911, common Feb. 14, 1911, Blatchley (1932, pp. 39, 65). Siesta Key: Nov., CPK. VI. Paradise Key: irregularly present Dec.-March, Blatchley ms. VIII. Key West: May 8-10, 1916, Williams (1926, p. 197). Food: Compositae.

PRECIS Hübner

303 P. ORITHYA EVARETE (Cramer)

Buckeye.

Pap. Exot. 3: 18; Pl. 203, Figs. C, D. 1779.

This species has been bandied about so in the past few years as regards name, that it would not be surprising were its oldest friends to fail to recognize it. We have all known it as *Junonia coenia* (Hübner). Under how many and what aliases it has paraded recently I leave to the historian of curiosities. The subspecies *evarete* is general and common throughout the state, probably in every month, except that in the Keys, including the Dry Tortugas, it may be entirely replaced by the subspecies *zonalis* (Felder), which ranges north as far as Fort Myers on the west coast and Orange County on the east. The dates for *zonalis* also cover most of the year, but how much the two subspecies overlap geographically I cannot say; it is another problem for research. There is one record for the form *rosa* Whittaker & Stallings from Titusville, Oct. 17, 1945, (Berry), LACM; one from Longboat Key, Jan. 3, 1956, (Remington), YU; and King reports that it is occasionally taken in the Port Orange region in the fall months. Food: *Plantago*, *Linaria*, *Antirrhinum*, *Ludwigia*, *Sedum*; *Gerardia*, DPI. The larva of *zonalis* feeds on *Lippia* in Cuba.

ANARTIA Hübner

305 A. JATROPHAE GUANTANAMO Munroe

White peacock.

Amer. Mus. Nov. 1179: 2. 1942.

Common in the southern half of the state except in cold weather. King believes it is essen-

tially a coastal species, and inasmuch as he has taken it at Savannah, Ga., it is probably found along the entire Florida east coast. Along the west coast so little collecting has been done north of Tampa that Tampa must remain its northern limit according to our present information. Platt has seen it at Gainesville in the late fall. Davidson said it was not common in the Orlando area, but reported finding a good colony around a wet spot northeast of Oviedo, thus confirming Morgan's observation in calling it locally common about swampy places. Food: *Jatropha manihot* in Brazil, *Lippia* in Cuba, *Bacopa* in Puerto Rico. The larva has been reported recently on *Bacopa* sp. at Coral Gables, Coop. Ins. Pest Surv. 5: 146.

[306 *A. fatima* (Fabricius)]

Fatima.

Ent. Syst. 3(1):81. 1793.

III. Stemper: May 14, 1920, CMNH. We need to know more about this before accepting it.

METAMORPHA Hübner

307 *M. STELENES* (Linnaeus)

The malachite.

Syst. Nat., p. 465. 1758.

It is difficult to say whether this species is actually established in the Keys, and perhaps lower Dade County, or whether it is only a relatively frequent visitor. III. Stemper: Oct. 10, 1918, CMNH. The record seems doubtful, but in view of the next one not impossible. IV. Sarasota: "seen March 23, 1946." The notation is in Watson's hand on page 195 of the Experiment Station's copy of Holland, and can hardly be questioned. Miami: end of Dec. 1897, Schaus (1898a, p. 96); as form *lavinia*, (Fabricius), Kaye (1925, p. 475); Sept. 18, 1949, FMG. VI. Perrine: Nov. 23, 1947, HFS. Strohecker has seen at least two others in the Matheson Hammock region. VII. Everglades National Park: Jan. 20, 1960, (V. C. Gilbert), ENP. VIII. Key Largo: Jan. 1950, HLK. Key West: 1935-1936, (Kea), UFES; Dec. 18, 1936, (L. Harris, III), LH. Food: *Blechnum*; *Acanthaceae*, Bates (1923b, p. 43).

EUNICA Hübner

309 *E. MONIMA* (Stoll)

Dingy purple wing.

Pap. Exot. 4; Pl. 387, Fig. F. 1782.

The status of *monima* in Florida is uncertain, but whether a stray or established, it is very rare, and found only in dark, shaded, heavy hardwood hammocks. Florida: Aug., LACM.

IV. Palm Beach: Dyar (1901a, p. 448). Biscayne Bay: (Slosson), Grsb. 17. Miami: May, June, Aug., Klots (1951, p. 111); June 10, JMP; two July 8-28, 1943, dosP. Matheson Hammock: Aug. 1951, KR. VIII. Key Largo: HLK; May, July, Klots; Aug. 20, 1928, (Forsyth), LACM. Key West: CGM. In Mexico the larva feeds on *Zanthoxylum pentamon*.

310 *E. TATILA TATILISTA* Kaye

Florida purple wing.

Pl. I, Fig. 33, ♀.

Trans. Ent. Soc. London, p. 472. 1925.

IV. Lake Worth: Schaus, (1894, p. 17). Fort Myers: "*Eunica* sp.," Walker, (1918, p. 78) is surely this species. Relatively common in Dade and Monroe Counties, especially in dense hammocks along the coast, with records for every month except June, but none of them sufficiently clustered to say what the proper season might be.

DIAETHRIA Billberg

314 *D. CLYMENA* (Cramer)

Pap. Exot. 1; Pl. 24, Fig. E. 1775.

Some of the records for this species are undoubtedly questionable, but there is no question about its being a very rare stray, or accidental visitor. III. Stemper: March 30, 1918, CM. Clench reports that this is a different race from the two "Key West" specimens in the Carnegie Museum collection, and he believes that all three are undoubtedly fakes. IV. In Doubleday & Hewitson (1849, p. 238) appears this statement: "The only evidence I have obtained of the occurrence of any species so far north as East Florida is a drawing shown to me by Dr. Bachman of Charleston, S. C., of a species, which, as far as can be determined without comparison of specimens, is *Callicore clymene*. This drawing was made by Dr. Leitner from a specimen which he took during his journey to the southern parts of East Florida, in 1836." Fort Lauderdale: obtained from a very old collection, CGM. VI. Paradise Key: Feb. 26, 1944, (P. G. Hawes), Klots (1951, p. 279). VIII. Key West: July 1895, July 1897, CM. Bates (1923b, p. 43) gave the food plant in Brazil as *Trema micrantha* and noted that *T. micrantha* [*floridana*] grows in southern Florida, to which it might be added that West & Arnold (1952, p. 158) also listed *T. lamarckiana*.

MARPESIA Hübner

317 *M. CORESIA* (Godart)

Waiter.

Enc. Méth. 9: 359. [1824].

III. Indian River: (Wittfeld). The reference from the literature for this as given in my notes is incorrect, and for the present, therefore, must remain undocumented. Stemper: June 4, 1920, CMNH. There are a number of strange records, like this, from the Cleveland Museum and it would be a great help in evaluating their authenticity, if we knew who was the collector. The records for this species, if valid, represent strays.

318 M. *CHIRON* (Fabricius)

Many-banded dagger wing.

Syst. Ent., p. 452. 1794.

IV. Miami: (Dickenson), Laurent (1903a, p. 297); June, July, Klots (1951, p. 280). These, likewise, are probably strays.

319 M. *PETREUS* (Cramer)

Ruddy dagger wing.

Pap. Exot. 1; Pl. 87, Figs. D, E. 1779.

If the Florida subspecies differs from typical *petreus*, there is no name available, as *thetys* (Fabricius) and also *peleus* (Sulzer) are both preoccupied. I. Apalachicola: larva on *Anacardium occidentale*, (Chapman), Grote (1875b, p. 256). II. Gainesville: seen in the late fall, WJP. III. Coronado Beach: larva on fig, Robertson-Miller (1934, p. 29). Daytona Beach: HLK. Indian River: (Wittfeld), Grsb. 17. Egmont Key: April, UM. IV. Oneco: P. Dillman. Avon Park: May, J. & H. Comstock (1902, p. 77) Archbold Biological Station: Dec. 16, 1959, (Frost), PSU. Sarasota: from pupa, Sept. 15, 1956, HLK. Siesta Key: four April, May 1956; four Jan., Feb. 1957, CPK. Is this another case of the range being extended northward? Englewood: CU. Punta Gorda: April, FMJ. Palm Beach: HLK. From Fort Lauderdale south the species is common May-July, with occasional appearances before and after these months. King reports that it is attracted greatly to giant milkweed. Food: *Ficus carica*, Bates (1923b, p. 43); *F. brevifolia*, Strohecker (1938, p. 294). The latter reference includes a description of the early stages.

320 M. *PELLENIS* Godart

Enc. Méth. 9: 359. [1824].

This has been reported under the synonym *eleuche* Hübner. I. Apalachicola: 1869 or earlier, (Chapman?), Edwards (1869, p. 311). III. Central Florida: ex Doll collection, MCZ. Forbes is suspicious of this one. IV. Biscayne Bay: (Slosson), Grsb. 17. Miami: Dec. 1897, Schaus (1898a, p. 96); between Jan. 28 and Feb. 8, Hebard (1903, p. 253), but Hebard (1904, p. 40) says the determination was in error and that they were all *petreus*; Jan., Slosson (1899, p. 96).

LIMENITIS Fabricius

322 L. *ASTYANAX* (Fabricius)

Red-spotted purple.

Syst. Ent., p. 447. 1794.

There is a difference of opinion as to whether this is a valid species or merely a subspecies of *L. arthemis* (Drury). I. Warrington: VFG. Leon Co.: two Aug., 1958, WHH. Tallahassee: July 9-24, 1950, JPK; July 1951, JAP. Monticello: Sept. 3, 1934, UM; Oct. 4, 1914, AMNH. II. Gainesville: May 4, 1941, (JRW); June, Aug., WJP; Sept. 27, 1914, AMNH. Newman's Lake: Oct., CFZ. Zeiger reported seeing an *astyanax* and *archippus* in copulo. III. Levy Co.: form *ursula* (Fabricius), 1917, Laurent (1918, p. 39). DeLand: May, SVF. Lake Thonotosassa: March 21, Bell (1923, p. 26). Tampa: one Aug., Morgan (1933). IV. Tamiami Trail: March 24, 1931, BH. Dade Co.: HFS. Food: poplar, wild cherry.

325 L. *ARCHIPPUS* (Cramer)

Viceroy.

Pap. Exot. 1; Pl. 16, Fig. A. 1779.

The species is abundant all through the state except during cold weather. The vast majority of specimens are in the form *floridensis* Strecker. Some may be typical *archippus*, but it is probable that those reported as such may be the intermediate *watsoni* (dos Passos), which I have seen as far south as Bradenton. King believes the clinal area is essentially in northern Florida. Ab. *halli* (Cook & Watson) taken at Miami, July 8, 1920, (Grimshawe), LACM. Food: willow, poplar, and a number of other trees.

ASTEROCAMPA Roerber

There is a paper by Davidson, 1958, on the habits of the two species of *Asterocampa* in Florida which is too long to quote here, but to which the interested reader should refer. Zeiger wrote of finding hundreds of both species of *Asterocampa* revelling on rotten persimmons lying on the ground at Newman's Lake in Alachua County in October 1962. He described it as a true "bonanza."

327 A. *CELTIS* (Boisduval & Leconte)

Hackberry butterfly.

Lép. Amér. Sept., p. 210. 1833.

All of the records probably belong to the subspecies *alicia* (Edwards), except one from Century, July 17, 1937, FRA. Century is close to the Georgia border. Florida: MCZ, April-June, LACM. I. Warrington: VFG. Tallahassee:

Aug., Sept., JPK. II. Gainesville: May, LH; June, Aug., Sept., Nov., JRW. St. Augustine: rare, June, (Johnson), Grsb. 18. III. Daytona: Aug., LH. Port Orange: common, HLK; July, OB. Cassadaga: common, two broods, March, Sept., SVF. Fuller adds that in Oct. 1955, near Daytona Beach, he saw many hundreds of *alicia* at the oozing sap of an old hackberry tree, together with a few *A. clyton flora*, *V. atalanta*, and *P. interrogationis*. Ocoee: March-May, Sept., FRA, OB, EAF, LHH, CGM, PSR, SDM, JWT. Orlando: April, OB; Aug., DLB. Tampa: May, Morgan (1933). IV. Lake Josephine: J. & H. Comstock (1902, p. 77). Sarasota: July, HLK. Fort Myers: Walker (1918, p. 78). Matheson Hammock: July, HLK. V. Chokoloskee: USNM. Food: *Celtis*.

329 **A. CLYTON** (Boisduval & Leconte)

Tawny emperor.

Lép. Amér. Sept., p. 208; Pl. 56. [1834].

One typical *clyton*, Tampa: (Henri), CU; one form *proserpina* (Scudder), Florida: MCZ, both det. Forbes. All other records are for the subspecies *flora* (Edwards). Florida: April, May, LACM. I. Warrington: VFG. St. Marks: June CMNH. II. Palatka: July, Edwards (1881c, p. 83). St. Augustine: rare, June, July, (Johnson), Grsb. 18. III. Port Orange: June, July, CGM; July, WHH, CPK. Cassadaga: not common, two broods, March, Sept., SVF. Okahumpka: April, MCZ. Ocoee: March-May, FRA, EAF, PSR, SDM, JWT; Nov., SDM. Orlando: April, FRA. Indian River: Edwards. Tampa: March-Nov., Morgan (1933). IV. Bradenton: GCES. Lake Josephine: May, AKW. Dade Co.: July, DPI. Biscayne Bay: typical *clyton*, (Slosson), Grsb. 18. Is this last determination correct? Food: *Celtis*.

HISTORIS Hübner

Both species listed are possible as strays, but the records need further confirmation.

331 **H. ODIUS** (Fabricius)

Syst. Ent., p. 457. 1794.

Florida: as *orion* (Fabricius), "occasional," Edwards (1877, p. 62); in the "Synopsis of Butterflies" (Anon., 1883, p. 116) the habitat is given as "Fla.(?)" (Note: these synopses were usually checked by Edwards.); Kaye, (1925, p. 470). This last may merely refer to the older references; Ziemer has one dated June 24, 1940, but does not know the name of the collector nor whence came the specimen originally. Forbes reported a specimen of the mainland race in the Museum of Comparative Zoology but he believed the

label "Fla." to be false. Klots (1951, p. 280) spoke of one authentic record.

332 **H. ACHERONTA** (Fabricius)

Syst. Ent. p. 501. 1794.

Florida: one female, obtained from a very old collection, CGM. Holland (1931, p. 171) reported that it had been taken in southern Florida.

ANAEA Hübner

333 **A. ANDRIA** Scudder

Goatweed butterfly.

Bull. Buffalo Soc. Nat. Sci. 2: 248. 1875.

I. Escambia Co.: Sept. 1 and 8, 1962, SMH. Pensacola: VFG; Aug., SSN. Monticello: Sept. 4, 1932, UM. II. Gainesville: April 2, 1960, WJP. Jacksonville: Aug. 14, 1959, CFZ. III. Ocala: June 2, 1955, WJP. Food: crotons.

334 **A. AIDEA FLORIDALIS** Johnson & Comstock

Florida leafwing.

J. N. Y. Ent. Soc. 49: 307. 1941.

II. Gainesville: JRW; Feb. 25, 1962, April 15, 1959, July 5, 1955, WJP. Platt's records for the two species of *Anaea* suggest that their range overlaps in the Gainesville-Ocala area. The implied Jacksonville record in the "Season Summary for 1959," News of the Lepidopterists' Society, Number 3, p. 11, is an error. Zeiger informs me that it was a misdetermination for *Andria* above. IV. West Palm Beach: HLK. Boynton Beach: Feb., March, CPK. Dade Co.: common, the records covering every month. VIII. Big Pine Key: April, OA. Food: *Croton linearis*, Klots (1951, p. 188). For description of the early stages, see Matteson (1930, pp. 7-9).

Family **LIBYTHEIDAE**

LIBYTHEANA Michener

336 **L. BACHMANII** (Kirtland)

Snout butterfly.

The Family Visitor 5: 189. 1851.

Florida: MCZ. I. Warrington: one, VFG. Apalachicola: (Chapman), Grsb. 21. Liberty Co.: April, (Hubbell), UM. II. Alachua Co.: Sept., UFES. Gainesville: April, UFES; May, UM; Aug., WJP. III. Daytona: April, May, Sept., SVF. Oviedo: Davidson reported a good flight in a hackberry area, March 1957. Belleair: (Slosson), Grsb. 21. IV. Oneco: Jan., (Dillman), CPK. Palm Beach: Dyar (1901a, p. 448). South Miami: HLK. Food: *Celtis*.

Family RIODINIDAE

LEPHELISCA Barnes & Lindsey

345 L. VIRGINIENSIS (Guérin-Ménéville)

Little metalmark.

Icon. Règne Anim., p. 489; Pl. 81. 1844.

The little metalmark is general but very local in grassy places. Not rare where found, mostly in April and May and again from August to October, but appearing occasionally in other months.

Family LYCAENIDAE

Subfamily THECLINAE

EUMAEUS Hübner

354 E. ATALA FLORIDA Roebler

Atala.

Pl. I, Fig. 34, ♀.

Ent. Mitteil. 15: 373. 1926.

It had been feared that this once common and beautiful butterfly was extinct, but two recent records testify to its having survived the ravages of collectors and real estate developers, or perhaps having re-established itself. Curiously, the recent records, August 20 and September 5, 1958, (G. & B. Klopfer), and March 22, 1959, (C. J. Dempfer), were both from Broward County, whereas all the earlier ones were limited to Dade and Monroe Counties. Dempfer reported his colony was flourishing as of March 15, 1960. As records exist for every month except October, this species probably flew all year. Harris said that it was abundant thirty years ago at what is now 7th Ave., N.W. and about 152nd St. in Miami. The last record prior to the two given above is from a Works Progress Administration file card in the University of Florida Agricultural Experiment Station, Gainesville, which reads: "Miami, April, 1940, June Hawthorne," but the source of the data is not given. In view of some of the W.P.A. cards, "June Hawthorne" may be a tree or a person. Food: *Zamia integrifolia*. For more detailed information, the reader should refer to Klots (1951, pp. 132-133). The life history was described by Schwarz (1888) and Rawson has written one in 1962, telling of the attempts that are being made to establish a colony at the Visitors' Center of the Everglades National Park, where, of course, it will be well protected.

ATLIDES Hübner

356 A. HALESUS (Cramer)

Great purple hairstreak.

Pl. I, Fig. 35, ♂; Fig. 39, ♀; Fig. 40, ♀, underside.

Pap. Exot., 2; Pl. 98, Fig. 3. 1779.

Probably to be found wherever its food plant, mistletoe, grows. While the records include every month, April, May, September, October, appear to be the more abundant seasons. The adults frequent flowers, the favorites being *Bidens* and star jasmine, Klots (1951, p. 133); saw palmetto, Haskin (1933a, p. 72); wild plum, Watson (1919a, p. 114); poinsettia, SVF. The life history was described by Haskin.

STRYMON Hübner

[357 S. endymion (Fabricius)]

Syst. Ent., p. 519. 1794.

The only reference for this in Florida is under the synonym *hugon* (Godart), Dyar (1902, p. 36). Until it is possible to trace his authority, it would seem advisable to omit the species. Holland (1931, p. 242) said that it might occur in the Florida Keys. However, Comstock & Huntington (1943, p. 54) expressed the belief the name had been introduced erroneously in North American lists by Herrich-Schaeffer.

361 S. MARTIALIS (Herrich-Schaeffer)

Martial hairstreak.

Pl. I, Fig. 45, ♂.

Corresp. Blatt. Regensb. 18: 164. 1864.

IV. Longboat Key: Feb., HLK. Fort Pierce: March, BH. Siesta Key: Nov.-Jan., CPK. Bokeelia: April, FMJ. Useppa Island: CGM. V. Everglades: Aug., HAF. IV, VI, VIII. Dade and Monroe Counties: including the Dry Tortugas, common, March-Aug., Oct., Dec., FMB, OB, SPJC, WMD, CMNH, EAF, HAF, SVF, LH, LHH, FMJ, CGM, BHP, CAS, SDM, JWT, BJZ. Fuller found it very local near Florida City in April 1955, twenty-six being taken in one spot, but no others were seen elsewhere. Food: *Trema micrantha [floridana]*, Klots (1951, p. 138), Slosson (1901a, p. 203).

362 S. ACIS BARTRAMI (Comstock & Huntington)

Bartram's hairstreak.

Ann. N. Y. Acad. Sci. 45: 65. 1943.

Dade and Monroe Counties only, except for four specimens from Lake Worth, Palm Beach, and Jupiter, see Comstock & Huntington; common but very local, the dates covering Feb.-May, July, Aug. and Oct.-Dec. Klots (1951, p. 139) gave the food as "wild croton (?)."

365 S. CECROPS (Fabricius)

Red-banded hairstreak.

Ent. Syst. 3(1): 270. 1793.

Cecrops is common throughout the state, recorded in every month but July. There is some variation in the width and color of the transverse band of the hind wing beneath, but no specimen that could be called *beon* (Cramer) has turned up. Food: croton.

365, 1 S. MAESITES Herrich-Schaeffer

Maesites hairstreak.

Pl. I, Fig. 41, ♂; Fig. 42, ♀.

Corresp. Blatt. Regensb. 18: 165. 1864.

Maesites is very rare, but the reader should refer to Young's paper (1937) for notes on the habitat of the species. IV. North Miami Beach: June, FMG. Miami: between Jan. 28 and Feb. 8, Hebard (1903, p. 253); Feb., July, OB; April, FMG, PSR, HAF, dosP, FMG; Dec., Schaus (1898a, p. 96). Brickell Hammock: June, July, BHP. Buchholz had one specimen—Florida: (Slosson), which is form *telea* (Hewitson).

366 S. COLUMELLA MODESTA (Maynard)

Columella hairstreak.

Amer. Nat., 7: 178. 1873.

This is a common species in the southern part of the state including the Dry Tortugas, the northern limits being Tampa and Delray Beach. This is a curious reversal of the usual situation of the east coast records extending farther north than those for the west coast. Perhaps when the food plant is discovered, the anomaly may be explained. It has been taken in every month but October.

366, 1 S. CYBIRA Hewitson

Ill. Diur. Lep. 158; Pl. 62, Fig. 427. 1874.

Comstock & Huntington (1943, p. 81) made this a subspecies of *columella* above. They placed here the series taken in the Dry Tortugas in June which were reported by Forbes (1941, p. 147) as *columella modesta*. The only other record is a single specimen from the Dry Tortugas: March 20, 1927, OB. Buchholz did not recall the source of this.

372 S. M-ALBUM (Boisduval & Leconte)

White M hairstreak.

Pl. I, Fig. 37, ♂; Fig. 38, ♀.

Lép. Amér. Sept., p. 86; Pl. 26. 1833.

M-album is common all over the state, with most records from March to May, but also scattered ones from June-October and December. Food: oak. Zeluff found the adults abundant around rubber trees at Fort Pierce in summer, and Fuller reports it abundant at poinsettia in April.

373 S. MELINUS Hübner

Gray hairstreak.

Zutr. exot. Schmett.; Fig. 121. 1818.

Melinus is common everywhere in the state March-August, and again in October, with occasional records for other months. The larva feeds on a number of plants, preferably hops and beans; okra, cotton, loquat, Watson (1931, p. 73); blossoms of scrub palmetto, FMJ; hibiscus, DPI; *Lupinus diffusus*, CPK; *Echites*, (Craighead), ENP.

374 S. FAVONIUS (Abbot & Smith)

Southern hairstreak.

Lep. Ins. Ga. 1: 27. 1797.

Though this species is common in Georgia, and from Alachua County south, there is only one record from the northern or western parts of the state—Tallahassee: May 1954, HLK. The species is distinctly limited to one brood, flying only from the middle of March to early May, though there are specimens dated June and July, LACM. Fuller reports it common but quite local about DeLand at *Bidens* blossoms. Food: *Quercus* spp.

375 S. ONTARIO (Edwards)

Northern hairstreak.

Trans. Amer. Ent. Soc. 2: 209. 1868.

H. A. Freeman is describing the Florida race as a new subspecies from material taken in Grady County, Georgia, by E. V. Komarek, now in the collection of Lucien Harris, Jr. I. Escambia Co.: May 15, 1961, May 15, 1962, SMH. Warrington: June 15, 1960, VFG. Pensacola: April, SSN. Tallahassee: May 6, 1951, det. Klots, JPK. The last was taken by Knudsen at light at 11 P. M.

[380 *S. titus mopsus* Hübner]

Coral hairstreak.

Zutr. exot. Schmett.; Figs. 135, 136. 1818.

The record, Florida: (Hübner), Grsb. 25, is probably attributable to one of those mixed "Florida in Georgia" and "Georgia in Florida" records, all of which seem to boil down to Abbot's collecting in Screven County, Georgia. Probably Holland (1931, p. 250) has also attributed it to Florida for the same reason. Harris has not taken it south of Macon, Georgia. Food: wild cherry, plum.

385 S. EDWARDSII (Grote & Robinson)

Edwards' hairstreak.

Trans. Amer. Ent. Soc. 1: 172. 1867.

The following are in the American Museum of

Natural History, were collected by Palm, and the data supplied by dos Passos: one male, one female, each with "324 Fla Ac 5409" on label; the third, a female, is labeled "Kissimmee." Food: oak, especially *Quercus ilicifolia*.

386 S. CALANUS (Hübner)

Florida hairstreak.

Samml. exot. Schmett., 1. 1824.

Florida: April, May, LACM. I. Escambia Co.: May, SMH. St. Marks: May, HLK. Tallahassee: May, HLK. II. Alachua Co.: April, DPI. Gainesville: *wittfeldi*, two on chinquapin blossom April, JCS. Island Grove: May, Comstock (1913, p. 261). Jacksonville: May, Skinner (1907, p. 48); CFZ. III. Cassadaga: April, SVF. Lake George: Skinner. Apopka: Feb., HAF; April, OB; May, JWT. Rock Springs: April, FRA, LHH, SDM, SSN; May, HLK, SSN, HEW. Ocoee: April, OB, LHH, SDM, JWT. Orlando: June, Berry. Georgiana: June, ANSP. Indian River: type of *wittfeldi*, Edwards (1883, p. 136). St. Petersburg: CGM. Tampa: Morgan (1933). Lakeland: May, SIM. Grossbeck (1917, p. 24) noted that the Lakeland specimens "differ from the typical by their smaller size and by the presence of a clearly marked inner white line to the transverse row of spots beneath." Berry (1914, p. 13) described a new form found at Ocoee in the Spring, but gave it no name. Food: *Quercus*, Comstock.

387 S. [FALACER Godart]

Banded hairstreak.

Enc. Méth. 9: 633. [1824].

The status of the relationship of this to *calanus* is uncertain; the only possible record, that from Tallahassee, has been included under *calanus* on Klots' advice.

389 S. LIPAROPS (Leconte)

Striped hairstreak.

Lép. Amér. Sept., p. 99; Pl. 31. 1833.

I. Escambia Co.: May 6, 1961, SMH. Tallahassee: one female, May 20, 1954, HLK. Taken on the University campus. King says it is impossible to say whether this is typical *liparops* or the form *strigosa* Harris.

389, 1 S. KINGI Klots & Clench

King's hairstreak.

Amer. Mus. Nov. 1600: 2. 1952.

I. Escambia Co.: June 3, 1962, SMH. Tallahassee: two females, June 3, 1951, det. Klots, JPK.

MITOURA Scudder

[398 *M. nelsoni* Boisduval]

Ann. Soc. Ent. Belge 12: 43. 1869.

Through a mixup in check-list numbers or other clerical error, a record for this was published (Coop. Ins. Pest Surv. 3(23):4). Denmark assures me that this is completely erroneous.

401 M. GRYNEUS SWEADNERI

F. H. Chermock

Olive hairstreak.

Can. Ent. 76: 216. 1944.

This subspecies is evidently very local, and usually very rare. North Florida: Scudder (1876, p. 109). II. Jacksonville; two June, (Chermock), HAF. St. Augustine: seventy-five June, (Sweadner), types and paratypes, Chermock. Two miles south of St. Augustine: on red cedar in sand dunes, GWR. III. Guntown: April, BJZ. Citrus Co.: reported abundant on cedar near the coast below Crystal River, March, HLK. Lake Helen: occasional, end of March, around juniper, SVF. Port Orange: June, HLK. Food: red cedar, at least for typical *gryneus*.

INCISALIA Scudder

[403 *I. augustinus* (Westwood)]

Brown elfin.

Gen. Diur. Lep., p. 468. 1850-1852.

Recorded by Morgan (1933), but he wrote that this was an error and that the records correctly belong under the next species.

407 I. HENRICI MARGARETAE dos Passos Henry's elfin.

Amer. Mus. Nov. 1230: 4. 1943.

I. Escambia Co.: March 1961, SMH. III. Eight miles east of DeLand: types, two males, March 3, 1932, (Heineman), AMNH. Tampa: scarce and very local, usually around *Vaccinium*, March-Nov., Morgan (1933). Auburndale: one female, March 26-April 2, 1926, (Haskins), AMNH. Food: *Vaccinium pallidum* [*vacillans*] and *Prunus*.

413 I. NIPHON (Hübner)

Pine elfin.

Zutr. exot. Schmett.; Fig. 203. 1823.

I. Pensacola: March, SSN. Klots (1951, p. 149) quoted Florida as the type locality, though he has told me this may be part of the "Florida in Georgia" mix-up. Food: pine of several species, Packard (1890a, p. 767).

Subfamily GERYDINAE

FENISECA Grote

419 *F. TARQUINIUS* (Fabricius)

Harvester.

Pl. I, Fig. 36, ♀.

Ent. Syst. 3: 319. 1793.

II. Gainesville: ten Sept., UFES; larva on woolly aphids, Dec., (Hetrick), UFA. Catocala Glen: rare, May, July, Dozier (1920, p. 375). Fairbanks: Sept., UFES. Fernandina: Scudder (1889, p. 1016). III. Ocoee: Feb., March, FMB, HLK; March, April, JWT; March, EAF.

Subfamily LYCAENINAE

LYCAENA Fabricius

424 *L. THOE* (Guérin-Ménéville)

Bronze copper.

Icon. Règne Anim. Ins.; Pl. 81, Fig. 4. 1844.

II. Gainesville: June 26, 1922, (Walker), UM. This is unquestionably a stray from the North. Food: curly dock.

435 *L. PHLAEAS AMERICANA* Harris

American copper.

Treatise Ins. Inj. Veg., p. 273; Fig. 104. 1862.

The ab. *fasciata* was described from Florida by Strecker (1878, p. 101) but there is no other Florida record. Food: *Rumex*.

Subfamily PLEBEIINAE

LEPTOTES Scudder

438 *L. CASSIUS THEONUS* (Lucas)

Cassius blue. Pl. I, Fig. 43, ♂; Fig. 44, ♀. Hist. Cuba 7: 611. 1856.

I. Escambia Co.: July 10, 1961, VFG. Abundant from Orlando and Tampa south, practically whenever the sun shines. Food: *Galactia volubilis [pilosa]*, Haskin (1933c, p. 154); *Plumbago*, SVF. Morgan noted that it was "sometimes swarming around poison ivy as though that were the food plant."

[439 *L. marinus* Reakirt]

Marine blue.

Proc. Acad. Nat. Sci. Phila., p. 87. 1868.

IV. Fort Myers: Walker (1918, p. 78). This is unquestionably an error for *theonus*.

BREPHIDIUM Scudder

441 *B. PSEUDOFEA* (Morrison)

Eastern pigmy blue.

Bull. Buffalo Soc. Nat. Sci. 1: 186. 1874.

This species is very closely limited to the southern coastal regions from New Smyrna on the east to Cedar Key on the west. King reports that its presence is very spasmodic. He has gone for years without seeing it, and then it will suddenly be plentiful, often on the palmetto blossoms in June. The majority of records are from March to July; in the extreme south they cover all months except August and November. Rawson (1961) has described the early stages, rearing it from *Salicornia bigelovi*. He believes it also feeds on *Batis maritima*.

CYCLARGUS Nabokov

442 *C. THOMASI BETHUNE-BAKERI*
(Comstock & Huntington)

Miami blue. Pl. I, Fig. 46, ♀; Fig. 47, ♂. Ann. N. Y. Acad. Sci. 45: 97. 1943.

The Miami blue was previously known as *catalina* (Fabricius). It is not rare in the area from Gainesville and Tampa south, and is common in Dade and Monroe Counties. It has been taken in the Dry Tortugas. The records include all months. Food: *Pithecellobium* and *Caesalpinia [Guilandina]*.

HEMIARGUS Hübner

443 *H. CERAUNUS ANTIBUBASTUS*
Hübner

Ceraunus blue.

Zutr. exot. Schmett.; Figs. 99, 100. 1818.

An abundant species found all through the peninsula, the Dry Tortugas, and as far west as Wakkulla, the dates covering every month. Buchholz' collection had one specimen, Bonita Springs: Nov. 29, 1934, (Blaicher)— which has much larger and more prominent markings on the hind wings than usual. Haskin (1933c, p. 155) discussed the life history. Food: *Cassia [Chamaechrista]*, *Phaseolus*, *Abrus*.

ECHINARGUS Nabokov

[446 *E. isolus* (Reakirt)]

Reakirt's blue.

Proc. Acad. Nat. Sci. Phila., p. 332. 1866.

V. Chokoloskee: May 10, 1919, CMNH. This is either a misdetermination or a false locality label.

EVERES Hübner

447 *E. COMYNTAS* Godart

Eastern tailed blue.

Enc. Méth. 9: 660. [1824].

I. Pensacola: Feb., March, SSN, Sept., VFG. Florida Caverns State Park: three April 14, 1960, DPI. Apalachicola: (Chapman), Scudder (1889, p. 911). Tallahassee: three March 8, 1951, JPK; "common," (Harris). II. Jacksonville: Sept. 26, 1959, CFZ. IV. Siesta Key: May 24, 1946, CPK. This specimen was discarded, as the rarity of the species in southern Florida was not realized at the time. To the best of my memory, the determination was checked by Forbes. Miami: two March 23, 1945, CGM.

PHILOTES Scudder

[471 *P. sonorensis* (Felder)]
Reise Nov. 2: 281. 1865.

IV. Miami: one female, March 3, 1907, CM. This one came from the Cleveland Museum. Whatever its origin prior to that, there is grave doubt that it ever saw Florida, even as a stray.

CELASTRINA Tutt

475 *C. ARGIOLA PSEUDARGIOLA*
(Boisduval & Leconte)

Spring azure.

Pl. I, Fig. 48, ♂; Fig. 49, ♀.

Lép. Amér. Sept., p. 118; Pl. 36. [1833].

I. Florida Caverns State Park: April 14, 1962, (Weems), DPI. II. Jacksonville: seen but not captured, March 24, two taken, April 2, 1961, CFZ. South of Jacksonville: three March 18, 1961, CFZ. Gold Head Branch State Park: five April 2, 1961, CFZ. Zeiger reported that all of these were apparently form *neglecta* (Edwards). III. Lakeland: one male, May 9, 1945, (Needham), CU. Holland (1888, p. 202) said that in the Edwards collection there were specimens of this species from "Alaska to southern Florida."

SUPERFAMILY HESPERIOIDEA

Family HESPERIIDAE

Subfamily PYRGINAE

PHOCIDES Hübner

477 *P. PIGMALION OKEECHOBEE*
Worthington

Mangrove skipper.

Pl. II, Fig. 1, ♀; Fig. 2, ♂, underside.

Papilio 1: 133. 1881.

Commonly known as *batabano* (Lucas), this is a common species along the coast from Port

Sewall to Tampa from November to May. In the southern part of its range it also flies from June to August. There is one Tampa record for August, UT. Food: *Rhizophora mangle*. Early stages described by Strohecker (1938, p. 295).

POLYGONUS Hübner

481 *P. LEO* (Gmelin)

Hammock skipper.

Syst. Nat. 13th Ed. 1: Pt. 5, p. 2363, No. 836. 1790.

Leo was previously referred to as *lividus savigny* (Latreille). IV. Boca Grande: FMJ. Palmetto Island: ex pupa, Dec., CPK. Dade and Monroe Counties: common, with records including all months. Food: *Piscidia piscipula*; *Pongamia pinnata*, DPI; Jamaica dogwood, (Stegmaier), DPI.

481,1 *P. MANUELI* Bell & Comstock

Manuel's skipper.

Amer. Mus. Nov. 1379: 4. 1948.

Florida: 1910, (Franck), BM. IV. Miami: Feb., July, Oct., dosP. VI. Paradise Key: paratype, Feb. 25, 1948, (Wood), Bell & Comstock; July, dosP. VIII. Key Largo and Bonefish Key: March, April, July, Nov., dosP.

PROTEIDES Hübner

482 *P. MERCURIUS SANANTONIO* (Lucas)
Hist. Cuba 7: 626. 1857.

II. A single stray of this Cuban species was taken at Gainesville, May 24, 1920, (Fattig), det. Klots, AMNH.

EPARGYREUS Hübner

483 *E. ZESTOS* Geyer

Zestos skipper.

Zutr. exot. Schmett. 4; Pl. 106, Figs. 615, 616. 1832.

Florida: BM. III. Sanford: (Skinner), Grsb. 27. IV. Miami: Jan. 28-Feb. 8, Hebard (1903, p. 253); April, (King), LH; June, LH; June, July, Aug., dosP; July, JWT; Aug., (Strohecker), LH; Skinner (1899, p. 112). Biscayne Bay: (Slosson), Grsb. 27. V. Marco: types of *oberon* Worthington (1881, p. 132). May, (Worthington), BM. VI. Florida City: July, OB. Paradise Key: March, OB; March, April, FMJ; April, HAF. Southwest of Paradise Key: Sept., HAF. VIII. Key Largo: March-May, OB; common, May 1954, SVF; June, JRM, JWT; Aug., LWG; Aug., Sept., LHH. Upper Matecumbe: June, MCZ. Key West: (Skinner), Grsb. 27.

484 **E. CLARUS** (Cramer)

Silver-spotted skipper.

Pap. Exot. 1; Pl. 41, Figs. E, F. 1776.

Clarus is commonly known as *E. tityrus* (Fabricius), and is common throughout but with no record for January. Larva on various Leguminosae, locust, and wisteria.

GONIURUS Hübner486 **G. PROTEUS** (Linnaeus)

Long-tailed skipper.

Pl. II, Fig. 5, ♂.

Syst. Nat., p. 484. 1758.

Proteus is abundant throughout whenever the sun shines, though not as common in late spring and early summer. The larvae are a pest on beans, Watson (1931, p. 28). Also recorded on turnips and cabbage (Fla. Agr. Exp. Sta. Bull. 45: 55) and on wild plum and catnip, Fla. Bug-gist 2: 114.

[487 **G. dorantes** (Stoll)]

Dorantes skipper.

Pap. Exot. Suppl.; Pl. 39, Fig. 6. 1791.

This is another suspicious record from the Cleveland Museum. It bears two labels—Miami: Oct. 11, 1916, and Tampa: June, 1908. Both labels are open to question, though there is the possibility of a stray from Cuba, in which case it should be the subspecies *santiago* (Lucas).

ACHALARUS Scudder496 **A. LYCIADES** (Hübner)

Hoary edge.

Zutr. exot. Schmett.; Figs. 621, 622. 1832.

Florida: two males, one female, (Strecker?), BM; three, MCZ. I. Monticello: one old specimen, Oct. 5, Grsb. 27. II. Gainesville: one old specimen, Sept. 27, Grsb. 27. III. Central Florida: three, 1884, (Morrison), MCZ. Food: *Desmodium*.

AUTOCHTON Hübner500 **A. CELLUS** (Boisduval & Leconte)

Golden-banded skipper.

Lép. Amér. Sept.; Pl. 73. [1834].

Florida: four, BM; (Thaxter), MCZ. I. Torreya State Park: Aug. 28, 1958, (Weems), DPI. Tallahassee: Feb. 23, 1949, HEW; April 17, (Maynard), Skinner (1911, p. 189). II. Gainesville: April 14 and 18, 1963, (Weems), DPI. IV. Biscayne Bay: (Slosson), Grsb. 27. Food: *Amphicarpa*.

THORYBES Scudder

Because of the close similarity of the three species, it is more than probable that the records are confused.

503 **T. BATHYLLUS** (Abbot & Smith)

Southern cloudy wing.

Lep. Ins. Ga.; Pl. 22. 1797.

Florida: Aug., LACM. I. Pensacola: Feb., March, June, Aug., SSN. DeFuniak Springs: Oct. 17, AMNH. Lake Stanley: Oct., AMNH. Alford: July, UK. Marianna: July, TU. Monticello: Oct., AMNH. II. Lake Geneva: March, HEW. III. Fort Reed: April, CU. Longwood: March, LWG. Winter Park: Sept., EGV. Orlando: July, Sept., WMD; Sept., Oct., JWT. La Grange: Sept., SIM. Merritt Island: Sept., Oct., JWT. Tampa: March, Bell (1920, p. 237); Sept., Oct., JWT. IV. Biscayne Bay: (Slosson), Grsb. 28. Miami: Laurent (1903a, p. 297); Sept., SIM. Food: various Fabaceae.

504 **T. CONFUSIS** Bell

Confused cloudy wing.

Trans. Amer. Ent. Soc. 48: 205. 1922.

Florida: Aug., LACM. I. Millview: July, VFG. Pensacola: March, April, SSN. Alford: July, UK. III. Rock Springs: March, JWT. Orlando: July, WMD. Merritt Island: April, JWT; June, JRM; Aug., HAF. Tampa: CU; types, "abundant," March, AMNH; common, March-Dec., Morgan (1933); June, Aug., Oct., LHH. VI. Florida City: Sept., det. with "?," HEW. Homestead: March, LWG.

505 **T. PYLADES** (Scudder)

Northern cloudy wing.

Proc. Boston Soc. Nat. Hist. 13: 207. 1870.

I. Pensacola: Aug., SSN. Apalachicola: (Chapman), Grsb. 27. II. Okefenokee Swamp: July, UK. Gainesville: March, SIM, JRW; May, DPI. Island Grove: April, AMNH. St. Augustine: (Palmer), Grsb. 27. III. Cedar Key: July, UK. Enterprise: April, Castle & Laurent (1896, p. 302). Ormond: common in March and April, Blatchley (1902, p. 232). Rock Springs: March, JWT. Orlando: March, July, WMD. La Grange: Sept., SIM. Indian River: (Palmer), Grsb. 27. Tampa: March, Bell (1920, p. 237); fairly common, March-Dec., Morgan (1933). Winter Haven: April, SIM, JRW. IV. Oneco: March, CPK. Sarasota Co.: March, CPK. Siesta Key: Feb., March, CPK. Punta Gorda: March, AKW. Fort Myers: March, SIM. South Bay: May, AMNH. Miami: Sept., SIM, JRW. Food: probably many Fabaceae.

PYRGUS Hübner

519 P. OILEUS (Linnaeus)

Tropical checkered skipper.

Syst. Nat. 1(2): 795. 1767.

Oileus is more familiarly known under the synonym *syrichtus* (Fabricius). It is common from Tampa and Gainesville south, principally as *montivagus* Reakirt. Fuller reports it scarce at DeLand, which would suggest that that is about its northern limit. However, two recent specimens from Escambia County, taken by Hills, extend the range. It flies all year. Food: Malvaceae.

521 P. COMMUNIS (Grote)

Checkered skipper.

Can. Ent. 4: 69. 1872.

Florida: BM. I. Escambia Co.: July, VFG. Pensacola: March, Oct., SSN; Oct., AMNH. Crestview: Oct., AMNH. DeFuniak Springs: Oct., AMNH. Tallahassee: JPK. Monticello: Oct., AMNH. II. Gainesville: Sept., Oct., AMNH. Jacksonville: FMJ; Sept., AMNH. III. Orlando: July, CU. La Grange: Sept., Grsb. 28. Lakeland: Nov., SIM. IV. Punta Gorda: April, FMJ. VI. Paradise Key: Aug., Matteson letter to FMJ. VIII. Key West: Sept., SIM. Food: Malvaceae.

STAPHYLUS Godman & Salvin

534 S. MAZANS HAYHURSTII (Edwards)

Southern sooty wing.

Trans. Amer. Ent. Soc. 3: 22. 1870.

The records follow the coast quite closely from St. Augustine on the east around to Sanibel Island on the west, but with only a few records from the Keys. The only inland records are: II. East Gainesville: Sept., AMNH. Gainesville: Sept., AMNH. Island Grove: July, SDM. III. Ocala: Feb., YU. DeLeon Springs: March, SVF. Ocoee: March, Aug., Sept., JWT. Eggs were found on pigweed, July 25, Scudder (1899, p. 1857). VI. Paradise Key: Aug., (Matteson) Jones' ms.

EPHYRIADES Hübner

539 E. BRUNNEA FLORIDENSIS Bell & Comstock

Florida dusky wing.

Amer. Mus. Nov. 1379: 17. 1948.

Outside the Keys this species has been taken only in the Florida City area and once at Miami: Feb. 28, 1929, (Kruger), AKW. The dates cover all months except November. It is not rare. A recent paper (Tamburo & Butcher, 1955) de-

scribes the life history and gives the food plant as *Malpighia glabra*. Baranowski has reared it from a leaf-tier on *Byrsonima*.

ERYNNIS Schrank

[541 E. icelus (Scudder & Burgess)]

Dreamy dusky wing.

Proc. Boston Soc. Nat. Hist. 13: 287. 1870.

I am very much in doubt as to whether this species is really native to Florida, in spite of certain apparently valid records. Lindsey, Bell and Williams (1931, p. 60) did not consider the range to extend below North Carolina, in which they are followed by Klots (1951, p. 222). Harris has taken it in Georgia, but not south of Atlanta. Florida: one male, det. Evans, BM. The late Brigadier Evans informed me that there was nothing to indicate the source of this specimen; Scudder (1889, p. 1507) on the authority of Edwards. I. Millview: March 26, 1961, det. Forbes as "apparently this," VFG. III. Ormond: March, April 1899, det. Skinner, Blatchley (1902, p. 231).

542 E. BRIZO SOMNUS (Lintner)

Sleepy dusky wing.

Papilio 1: 73. 1881.

Somnus is relatively common throughout the state February-April. Evans listed one specimen, of thirteen in the British Museum, as typical *brizo* (Boisduval & Leconte). Food: *Quercus ilicifolia*.

[546 E. persius (Scudder)]

Persius' dusky wing.

Proc. Essex Inst. 3: 170. 1862.

III. Dunedin: April. IV. Osprey: March. Both are attributed to Blatchley by Skinner and Williams (1924b, p. 197), though I do not find any reference to them in Blatchley's books. In any event they undoubtedly belong under the next species.

547,1 E. BAPTISIAE (Forbes)

Wild indigo dusky wing.

Psyche 43: 111. 1936.

Evans (1953, p. 208) makes this a subspecies of *lucilius* (Scudder & Burgess). It was described from Florida among other localities by Forbes, but this and sixteen specimens in the British Museum constitute the entire local record, unless we include the *persius* records above. The food plant, *Baptisia tinctoria*, is not found in Florida, though other species of the genus are present.

550 E. MARTIALIS (Scudder)

Mottled dusky wing.

Trans. Chicago Acad. Nat. Sci. 1: 355. 1869.
Florida: Skinner (1941a, p. 208). I. Escambia Co.: July 1 and Aug. 15, 1962, SMH. A specimen taken by Grant at Warrington is probably this, but it is not fresh enough to be sure.

551 E. JUVENALIS (Fabricius)

Juvenal's dusky wing.
Ent. Syst. 3: 339. 1793.

This is a common species all over the state January-May, but mostly in March. Food: oak and hazelnut.

554 E. HORATIUS (Scudder & Burgess)

Horace's dusky wing.
Proc. Boston Soc. Nat. Hist. 13: 301. 1870.

Horatius is abundant throughout the state except in cold weather. The food plants have been given as wisteria and oak, but Klots (1951, p. 223) thought these might not be correct.

555 E. ZARUCCO (Lucas)

Zarucco dusky wing.
Hist. Cuba 7: 641. 1857.

Zarucco is likewise general and abundant. It is apparently absent from the Keys, though Skinner (1914a, p. 213) credited it to Key West. The records include all months. Food: *Baptisia*, and in Cuba, *Sesbania grandiflora*.

560 E. FUNERALIS (Scudder & Burgess)

Funereal dusky wing.
Proc. Boston Soc. Nat. Hist. 13: 293. 1870.

According to Evans (1953, p. 209) this is a subspecies of *zarucco*. Quite possibly these records belong there. I. Bayou Chico: three males, Oct. 12, 1914, AMNH. Big Bayou: one male, Oct. 14, 1914, AMNH. All taken by F. E. Watson. Food: *Medicago sativa* and *M. hispida*.

Subfamily **HESPERIINAE**

ANCYLOXYPHA Felder

567 A. NUMITOR (Fabricius)

Least skipper.
Ent. Syst. 3: 324. 1793.

Numitor is probably common throughout the state but is overlooked because of its small size. The records cover February-July and September-December. Food: grasses.

COPAEODES Edwards

574 C. MINIMA (Edwards)

Southern skipperling.
Trans. Amer. Ent. Soc. 3: 196. 1871.
This was not listed by Grossbeck but is com-

mon everywhere except in the Keys from which there are no records. Morgan (1933) noted it as abundant everywhere around Tampa, March-December. Elsewhere in the state dates cover the year.

HESPERIA Fabricius

[579 *H. uncas* Edwards]

Uncas' skipper.
Proc. Ent. Soc. Phila. 2: 19. 1863.

Florida: (W. W. Hill), NYSM. Since this is a western species, there must be a misdetermination.

581 H. METEA Scudder

Cobweb skipper.
Proc. Essex Inst. 3: 177. 1862.

Florida: Skinner & Williams (1924b, p. 183); May 17, LACM. III. Orlando: April 20, 1940, HAF. Food: grasses.

[591 *H. leonardus* Harris]

Leonardus skipper.
Treatise Ins. Inj. Veg., p. 314. 1862.

The present status of this species is uncertain. There are two old records: II. Northeastern Florida: March, April, Scudder (1889, p. 1673). III. Indian River: Edwards (1884, p. 311). However, Skinner and Williams (1924b, p. 181) made North Carolina the southern limit of its range, though Klots (1951, p. 238) said, "s. to Florida." Klots has seen no recent material and based the range on the authority of Scudder and Edwards. Harris (1950, p. 21) reported no captures in Georgia, and Mather (1958, p. 102) said there were no records for Mississippi, but did quote one record each for Louisiana and Alabama. If present, it would be in the form *stallingsi* H. A. Freeman.

595 H. ATTALUS SEMINOLE (Scudder)

Dotted skipper.
Rept. Peabody Acad. Sci. for 1871, p. 76. 1872.

This is a variable species, often very difficult to determine. It is found in pine flats, according to Nicolay. Florida: Feb.-May, LACM. I. Escambia Co.: April, SMH. Pensacola: Feb.-April, Aug., SSN; Oct., AMNH. Crestview: Oct., AMNH. Lake Stanley: common, Oct., AMNH. DeFuniak Springs: Oct., AMNH. III. Dunellon: July, UK. Orlando: April, JWT; Oct., WMD, HAF. Lockhart: April, HAF. Tarpon Springs: Jan., Skinner and Williams (1924b, p. 179); Feb., JLC. Gulfport: March, UM. Tampa: March, Bell (1923, p. 27); "formerly common in woods along Hillsborough River, now scarce or absent

around Tampa," Morgan (Notes). Lakeland: May, FMJ; May, Nov., Grsb. 32. IV. Fort Pierce: March, CPK. Sarasota: April, HLK. Punta Gorda: April, AKW. Pine Island: March, CPK. Fort Myers: March, Grsb. 32. Allen River to Deep Lake: April, SIM. Miami: Laurent (1903a, p. 297). Biscayne Bay: (Slosson), Grsb. 32. South Florida: common, Dyar (1905a, p. 130).

596 **H. MESKEI** (Edwards)

Meske's skipper.

Can. Ent. 9: 58. 1877.

III. Orlando: Sept., Oct., JWT; Oct., OB, HAF, LHH, LACM, PSR. Indian River: type of *straton*, Edwards (1881d, p. 78); AMNH; Brooklyn Museum, Grsb. 32. Titusville: Sept., LWG; Oct., LHH, JWT. Merritt Island: May, Sept., dosP; Oct., HAF. IV. Avon Park: May, LACM. Sarasota: Sept., Bates. Fort Lauderdale: June, MCZ. VIII. Big Pine Key: Dec., JCS.

[598 *H. sassacus* Harris]

Indian skipper.

Treatise Ins. Inj. Veg., p. 315. 1862.

Florida: Klots (1951, p. 238). II. Jacksonville: (Slosson), Grsb. 32. Since dos Passos has not seen this south of Virginia and Tennessee, and it is very rare in Tennessee, the Florida record needs to be duplicated. Food: grasses.

HYLEPHILA Billberg

601 **H. PHYLEUS** (Drury)

Fiery skipper.

Ill. Exot. Ent. 1; Pl. 13, Fig. 4. 1770.

Phyleus is abundant and state-wide, including the Dry Tortugas, primarily in spring and fall, but it has been taken in every month. Food: grasses.

ATALOPEDES Scudder

602 **A. CAMPESTRIS** (Boisduval)

Sachem.

Ann. Soc. Ent. France Ser. 2, 10: 316. 1852.

This is a common species, probably found throughout the state, but because of its commonness I did not ask for data and ended up with records only along the west coast from Fort Myers to Cedar Key, and very few others. Fuller says it is abundant around Cassadaga. Food: Bermuda grass.

POLITES Scudder

611 **P. THEMISTOCLES** (Latreille)

Tawny-edged skipper.

Enc. Méth. 9: 769. [1824].

Themistocles is relatively common throughout the state, though there are no records from the Keys. It is on the wing practically all the year. Food: grasses.

612 **P. BARACOA** (Lucas)

Baracoa skipper.

Hist. Cuba 7: 650. 1857.

This species is common and generally distributed March-November, with one January record. III. Dade City: Bell (1923, p. 27). Food: grasses.

[614 *P. peckius* (Kirby)]

Peck's skipper.

Faun. Bor.-Amer. 4: 300. 1837.

Field (1938, p. 252) wrote: "south to Florida." However, Field told me that his statement was one of those unfortunate ambiguities which may be interpreted as meaning either "up to the Florida border," or "including Florida." There are no Florida specimens in the U. S. National Museum, nor have any Florida records turned up. Food: grasses.

619 **P. BRETTUS** (Boisduval & Leconte)

620 **P. VIBEX** (Geyer)

Whirlabout.

Lép. Amér. Sept.; Pl. 75. [1834]; Zutr. exot. Schmett. 4: 22. 1832.

These two have been considered separate species, but I am following Klots (1951, p. 247) who lumped them together under *vibex* on the authority of specialists. It would be hopeless to try to separate the records, which cover the state and include every month. Food: grasses.

WALLENGRENIA Berg

621 **W. OTHO** (Abbot & Smith)

Broken dash.

Lep. Ins. Ga. 1: 31. 1797.

The species is common and is found state-wide, probably all the year. There is an overlapping of typical *otho* with the form *egeremet* (Scudder), but I have made no attempt to locate that zone. Forbes thinks it is very wide.

POANES Scudder

622 **P. VIATOR** (Edwards)

Broad-winged skipper.

Proc. Ent. Soc. Phila.; 4: 202. 1865.

Florida: Scudder (1889, p. 1604); (23rd NY. Rpt., 1908, p. 78). II. Gainesville: April 3 and 10, 1946, JGS. Duval Co.: Aug. 11, 1962, HLK. This last was reported in the "News of the Lepidopterists' Society" No. 4, June 1963, p. 11, as

having been taken by Symmes, "13 August, Trout River." It was taken by King Aug. 11, on U. S. highway 17 north of Jacksonville near the Trout River Bridge. III. Central Florida: (Morrison), Skinner and Williams (1924a, p. 57).

625 P. ZABULON (Boisduval & Leconte)

Zabulon skipper.

Lép. Amér. Sept.; Pl. 76, Fig. 6. [1834].

I. Florida Caverns State Park: April 14, 1960, (Denmark), DPI. III. Ormond: March 1899, Blatchley (1902, p. 231). As Blatchley reported taking several specimens, and as no one else has taken it in Florida since then until 1960, it would appear as though there might be some error in determination, especially in view of the fact that collecting in the general neighborhood of Ormond has been thorough.

628 P. AARONI HOWARDI (Skinner)

Aaron's skipper.

Can. Ent. 28: 187. 1896.

III. Orlando: Aug., Oct., LHH; Sept., Oct., OB, HAF; Oct., PSR, JWT. Titusville: April, JWT; Oct. GWR. Merritt Island: Sept., LWG. All the foregoing were probably taken by Berry. Georgiana: type, Skinner. VI. Paradise Key: March 20-April 9, 1933, on *Pontederia* flowers at edge of glade, FMJ.

629 P. YEHL (Skinner)

Yehl skipper.

Ent. News 4: 212. 1893.

I. Tallahassee: May 22, 1954, (E. V. Komarck), LH. Although described from Florida, this species seems to be very rare here, the principal habitat being somewhat more northerly.

[630 *P. radians* (Lucas)]

Hist. Cuba 7: 650. 1857.

Skinner (1920, p. 186) wrote: "I described the species as *streckeri* in Entomological News 4, p. 211, the specimen having been said to be from Florida." Skinner (1917a, p. 82) also cast doubt on the origin of his type of *streckeri*. Unless there is some other, and more valid record, the name should not be retained on the Florida list.

631 P. HAITENSIS (Skinner)

Ent. News 4: 211. 1893.

Haitensis is of rare occurrence, presumably only as a stray. III. Guntown: types, one male, one female, April 3-6, 1901, (Laurent), Skinner.

PROBLEMA Skinner & Williams

632 P. BYSSUS (Edwards)

Byssus skipper.

Can. Ent. 12: 224. 1880.

Capron: MCZ. I. Tallahassee: June, JPK. III. Indian River: May, Edwards (1884, p. 315). Merritt Island: April, LWG; April, Aug., Sept., OB; April, Sept., Oct., HAF; Sept., GWR, PSR; Aug.-Oct., JWT. Titusville: April, LWG; April, Sept., LHH. IV. Sarasota: Sept., Bates. Punta Gorda: April, FMJ. Fort Lauderdale: Aug., MCZ. Biscayne Bay: Oct., Skinner (1921, p. 277). Miami: AKW, MCZ. VI. Paradise Key: March, April, FMJ, CPK.

ATRYTONE Scudder

634 A. AROGOS (Boisduval & Leconte)

Arogos skipper.

Lép. Amér. Sept.; Pl. 76, Fig. 3. [1834].

Florida: Dyar (1905a, p. 140). III. Orlando: AKW; March, LWG, NSMS; April, Nov., WMD; June, Sept., JWT; Sept., OB, HAF, LH, PSR. La Grange: Sept., SIM. Tampa: April-Oct., "especially numerous in summer when *Lachnanthes* [*Gyrotheca*] is in bloom," Morgan (Notes), not common, March, Bell (1923, p. 27). IV. Port Sewall: April, OB. Sarasota: a small, dark, almost melanic pair, Sept. 1961, HLK. Miami: April, OB; July, Skinner & Williams (1924a, p. 64); Aug., AMNH; Sept. MCZ.

635 A. LOGAN (Edwards)

Delaware skipper.

Proc. Ent. Soc. Phila. 2: 18; Pl. 1, Fig. 5. 1863.

This species is never common, but is found everywhere except on the Keys, February-October. Food: grasses.

EUPHYES Scudder

636 E. ARPA (Boisduval & Leconte)

Arpa skipper.

Lép. Amér. Sept.; Pl. 63. [1834].

The records are confined almost exclusively to the peninsula where it is not rare, March-November. The other records are: I. Apalachicola: Sept., 1869, ex Scudder collection, MCZ; larva on *Serenoa*, Edwards (1879, p. 191). VIII. Big Pine Key: March, LH; Dec., JCS.

637 E. PALATKA (Edwards)

Palatka skipper.

Pl. II, Fig. 3, ♂; Fig. 7, ♀.

Trans. Amer. Ent. Soc. 1: 287. 1867.

Palatka is more common than the other species of the genus, and is found over the entire state. While collection dates include all months except May and December, there seem to be two fairly well defined broods in spring and fall. Klots thinks one very dark specimen (VIII. Sugarloaf Key: Nov., CPK.) may represent a subspecies.

More material is needed from the lower Keys in order to prove it, but as Symmes has a series from Big Pine Key which are all definitely typical, it may have been merely a slight aberration. Food: *Cladium jamaicensis* [*Mariscus jamaicensis*].

638 E. DION ALABAMAE (Lindsey)

Dion skipper.

Ent. News 34: 210. 1923.

I. Pensacola: May, SSN.

641, 1 E. BERRYI (Bell)

Berry's skipper.

Ent. News 52: 165. 1941.

I. Pensacola: May, SSN. Monticello: type, March, Bell (1941). III. Orlando: Sept., Oct., (Berry), FRA, OB, LWG, HAF, LHH, LACM, GWR, PSR, JWT, EGV. Merritt Island: March, OB; Sept., Bell. IV. Deep Lake: March 1961, LH, HLK, SSN, JCS. Monroe Station: Sept., HLK. Miami: Bell. According to Nicolay and Symmes, *berryi* is taken primarily in swamps, especially on pickerel-weed.

642 E. VESTRIS (Boisduval)

Dun skipper.

Ann. Soc. Ent. France Ser. 2, 10: 317. 1852.

I. Escambia Co.: July 9, 1961, SMH. Bayou Chico: Oct. 14, 1914, AMNH. II. Gainesville: Oct. 1, 1914, AMNH. St. Augustine: Dec. 21, 1949, CGM. III. Indian River: Edwards (1884, p. 313). Merritt Island: Sept., JWT. Tampa: Morgan (1933). IV. Arcadia: July 4, 1953, (King), CPK. Palm Beach: Dyar (1901a, p. 449).

ATRYTONOPSIS Godman

643 A. LOAMMI (Whitney)

Loammi skipper.

Can. Ent. 8: 76. 1876.

I. Escambia Co.: July, VFG. Apalachicola: MCZ. II. Jacksonville: type, March, Whitney III. Orange Co.: Edwards (1881a, p. 5). Orlando: April, LG; April, May, Oct., Nov., WMD; April, July, Oct., HAF; Aug., Sept., LHH; Sept., GWR, PSR, SDM, JWT. Merritt Island: April, GWR. Tarpon Springs: Skinner & Williams (1924a, p. 68). Tampa: March, Edwards (1884, p. 313); March-Oct., Morgan (1933). IV. Sarasota: April, CPK. Englewood: March, CPK. Punta Gorda: FMJ; April, AKW. Fort Myers: March, SIM. Miami: Jan., Skinner & Williams (1924a); Feb., April, Laurent (1903a, p. 297); March, CPK, FMJ. Biscayne Bay: Skinner & Williams (1924a). VI. Florida City: April, June, Sept., Oct., OB. Paradise Key: March, FMJ.

OLIGORIA Scudder

652 O. MACULATA (Edwards)

Twin spot skipper.

Proc. Ent. Soc. Phila. 4: 201. 1865.

This species is quite common all over the state, especially in the spring. Food: presumably grass.

LEREMA Scudder

653 L. ACCIUS (Abbot & Smith)

Clouded skipper.

Lep. Ins. Ga.; Pl. 23. 1797.

Accius is common throughout the state, in every month in the southern part of the state, probably with spring and fall broods in the northern part. Food: grasses.

AMBLYSIRTES Scudder

659 A. [celia Skinner]

Celia's roadside skipper.

Ent. News 6: 113. 1895.

Florida: (Skinner), Grsb. 33. Since I have not been able to trace Grossbeck's reference to Skinner, and since the species is not usually found east of Texas, I believe this must be an error. H. A. Freeman believes the record may belong to *A. belli* Freeman, which has been found in several areas in Georgia. A specimen, I. Escambia Co.: March 1961, SMH, is placed here tentatively by Klots.

660 A. VIALIS (Edwards)

Roadside skipper.

Proc. Acad. Nat. Sci. Phila., p. 58. 1862.

I. Apalachicola: (Chapman), Scudder (1889, p. 1582). II. Gainesville: March 20, 1913, (Davis), Watson's record in the University of Florida Agricultural Experiment Station copy of Holland (p. 340). III. Cassadaga: March, SVF. Tampa: common, March, Bell (1923, p. 27). Since Morgan never took it, and in view of the paucity of records elsewhere in the state, this observation by Bell is astounding. Food: grasses.

663 A. ALTERNATA (Grote & Robinson)

Least Florida skipper.

Trans. Amer. Ent. Soc. 1: 3. 1867.

Florida: Feb., March, Skinner & Williams (1923, p. 139); as *meridionalis* Dyar, Grsb. 33. I. Pensacola: Feb.-April, SSN. III. Central Florida: Lindsey, Bell and Williams (1931, p. 129). Orlando: March, HAF. Tampa: scarce, in fields and along roadsides, March-Nov., Morgan (Notes). VII. Everglades National Park: July 8, 1958, LSP.

666 A. AESCULAPIUS (Fabricius)**Textor skipper.**

Ent. Syst. 3(1): 347. 1793.

Aesculapius is generally known as *textor* (Hübner). I. Apalachicola: type of *wakulla*, Edwards (1869, p. 311). II. Gainesville: two Jan. 31, 1959, DPI; Sept. 27, 1914, AMNH. III. Central Florida: (Morrison), Skinner & Williams (1923, p. 141). Orange Co.: dosP; April, JWT. Rock Springs: March, LWG; March, April, HAF, dosP; April, WMD.

NASTRA Evans**671 N. L'HERMINIERI** (Latreille)**Swarthy skipper.**

Enc. Méth. 9: 777. [1824].

L'herminieri is common March-June and August-October, but as there are no records south of the line Naples-Archbold Biological Station-Titusville, it appears to avoid the subtropical regions of the state.

672 N. NEAMATHLA (Skinner & Williams)**Neamathla skipper.**

Trans. Amer. Ent. Soc. 49: 145. 1923.

II. Gainesville: Aug., WJP. Jacksonville: Sept., (King), CPK. III. Central Florida: 1884, types, (Morrison), Skinner & Williams (1923). Chululota: March, HAF. Orlando: Sept., (Berry), LWG; Oct., HAF. Tampa: Feb., OB; Feb., May, Aug., JWT; May, June, Aug.-Oct., LHH; Aug., Morgan (1933). IV. Sarasota: May, (King), CPK. La Belle: July, (Beamer), UK. Miami: May, June, Aug.-Oct., LHH. VI. Florida City: Feb.-May, OB.

LERODEA Scudder**674 L. EUFALA** (Edwards)**Eufala skipper.**

Trans. Amer. Ent. Soc. 2: 311. 1869.

The records for *eufala* cover the state except for the Keys, Jan.-May, July, Sept.-Dec. Food: grasses.

CYMAENES Scudder**675 C. TRIPUNCTUS** (Herrich-Schaeffer)**Three spotted skipper.**

Corresp. Blatt. Regensb. 19: 53. 1865.

IV. Lake Worth: March, BH. Miami: Feb., April, June, Oct., OB; July, JAP; Sept., HAF. Brickell Hammock: Aug., HAF. VI. Florida City: Feb., April, June, Oct., OB; March, HAF; July, LSP. VIII. Long Key: Aug., KR. Key West: July, JRM. Food: in Cuba, sugar cane.

THESPEIUS Godman[676 *T. macareus* (Herrich-Schaeffer)]

Corresp. Blatt. Regensb. 23: 192. 1869.

V. Marco Island: "I have seen lately in the collection of Mr. George Franck the following species of Hesperidae caught within the limits of the United States and heretofore unrecorded: *Thespeius macareus*, *Panoquina nero*," (Skinner, 1902, p. 183). This is a record that should be viewed with suspicion.

CALPODES Hübner**677. C. ETHLIUS** (Stoll)**Brazilian skipper.** Pl. II, Fig. 6, ♂.

Pap. Exot. 4; Pl. 382, Fig. A. 1782.

Ethlius is often abundant where its favorite food, canna, grows. It flies principally in the heat of the day. While the records cover all months, it is probably commonest in the summer. The larvae have also been reported on celery, Bare (1935, p. 804) and *Phyllanthus*, DPI.

PANOQUINA Hemming**678 P. [sylvicola** (Herrich-Schaeffer)]**Sylvicola skipper.**

Corresp. Blatt. Regensb. 19: 55. 1865.

V. Marco Island: See the quotation from Skinner under 676 above where *nero* is used as a synonym for *sylvicola*. VIII. Key Largo: July 19, 1939, (Beamer), UK. Bell, as quoted by Klots (1951, p. 270), believed that these records might be referable to *hecebolus* (Scudder) below.

678, 1 P. [hecebolus (Scudder)]**Hecebolus skipper.**

Rept. Peabody Acad. 4: 81. 1872.

I find no actual record of this in Florida, but if Bell's theory that *sylvicola* has been misdetermined, is correct, the Key Largo record for that would belong here. What one would do with the Marco record is anyone's guess.

680 P. PANOQUIN (Scudder)**Salt-marsh skipper.**

Proc. Essex Inst. 3: 178. 1862.

Panoquin is relatively common and limited to the coastal strip, though there are three specimens from Winter Park (April, SDM) and one from Lakeland (May, AMNH). The dates run February-December, but a spring and fall brood seem to be indicated, with possibly a small one in summer.

681 P. PANOQUINOIDES (Skinner)**Obscure skipper.**

Ent. News 2: 175. 1891.

This species not common. I. Apalachicola: Feb., MCZ. II. Rock Point: May, Aug., Oct., GWR. III. Titusville: May, Sept., JWT, LHH; Sept., WMD, HAF; Oct., PSR, AKW. Merritt Island: March, Sept., JWT; April, Sept., Oct., OB; Sept., HAF, LWG. Tampa: scarce March-Dec., Morgan (1933). IV. Siesta Key: March, CPK. Punta Gorda: April, CPK; Nov., AMNH. Boca Grande: April, CPK. Miami: Feb., March, Skinner & Williams (1923, p. 148); Feb., May, Sept., Oct., LHH. V. Marco Island: April, SIM. VIII. Big Pine Key: April, OA. Key West: June, JRM; Sept., SIM. Dry Tortugas: summer, Forbes (1941, p. 147); July, WMD.

683 P. OCOLA (Edwards)**Ocola skipper.**

Proc. Ent. Soc. Phila. 2: 20. 1863.

Ocola is wide spread in Florida and not rare, but there are no records from the Keys. It flies in all months of the year.

ASBOLIS Mabille**683, 1 A. CAPUCINUS** (Lucas)

Monk. Pl. II, Fig. 4, ♂; Fig. 8, ♀.

Hist. Cuba 7: 625. 1857.

Capucinus is a recent introduction, first taken in Miami, Sept. 1947, by Grimshawe; it has spread north to Hobe Sound on the east coast and Pinellas County on the west. Platt took it at Lake Helen in 1953. Davidson took a pair May 10, 1961, three miles northwest of Oviedo, and Rawson took one in New Smyrna Beach on July 2, 1961, and again on April 10, 1962. At Siesta Key there are two broods at least, March-April and November-December; but, as it has been taken in Pinellas County in August, (BLM), there may be a third in that area. Farther south it has been taken in every month. I have taken it at light. Franclemont found the larva on a species of *Sabal* at Oneco in March. The determination of this species has baffled a number of collectors, perhaps because it has so few outstanding characteristics. Yet Klot's description (1951, p. 271) should leave no one in doubt. Food: *Cocos nucifera*, *Phoenix* and *Paurotis* palms, DPI.

Family MEGATHYMIDAE

So much has been discovered recently, and is

still being discovered, about this elusive family of highly localized species that the records may be in hopeless confusion. I give them as received. Such order as may have been achieved for the Florida species is due to the kindness of Mr. H. A. Freeman, who has revised this section, as well as reviewing the entire Hesperidae text.

MEGATHYMUS Scudder**684 M. YUCCAE BUCHHOLZI** Freeman**Florida yucca skipper.** Pl. II, Fig. 9, ♀.

Field and Laboratory 20: 31. 1952.

Florida: NYSM. I. Crestview: frass-tubes and tunnels in *Yucca smalliana* [*filamentosa*], May, no adults reared, FMJ. Apalachicola: March 1876, (Thaxter), MCZ. Freeman noted that this might be another species. III. Marineland: pupal cases and adults, March, LH, JCS. Enterprise: May, Castle (1916, p. 380). Orlando: March, LG. Indian River: April 1880, MCZ. Melbourne; LACM; March, Castle. Georgia: March, Skinner & Williams (1924b, p. 206). Lisbon: May, DPI. Tarpon Springs: at light, Feb., JLC. St. Petersburg: April, CMNH. Gulfport: (Ludwig), Grsb. 35. Lutz: March, LACM. IV. Avon Park: J. & H. Comstock (1902, p. 77); March, LACM. Port Sewall: March, HAF. Jupiter: Feb., BH; March, April, OB, LH; larvae reared on *Yucca gloriosa*, (Buchholz), HAF; April, AKW; May, LH. Sarasota: March, HAF. Venice: April, Skinner & Williams (1924b). Palm Beach: Dyar (1901a, p. 449); DPI. Boynton Beach: Larva on Spanish bayonet, Aug., DPI.

686 M. COFAQUI (Strecker)**Cofaqui skipper.**

Proc. Acad. Nat. Sci. Phila., p. 148. 1876.

II. St. Augustine: Skinner (1911, p. 204). III. Georgia: Aug., Skinner & Williams (1924b, p. 207). St. Petersburg: LACM; on *Yucca aloifolia*, Bonniwell (1916, p. 372). Lutz: March, LACM. Lake Thonotosassa: March, Skinner & Williams. Tampa: March, Bell (1923, pp. 25 and 27); Sept., Morgan (1933). Port Tampa: Morgan (1933). IV. Bradenton: April, OB. Longboat Key: March, HLK; March, Nov., LH. Sarasota: March, LACM. Siesta Key: March, Oct., Nov., CPK; Nov., LH. Venice: March, April, LACM; April, Skinner (1917b, p. 480), OB. Boca Grande: SIM. A great deal has been done on the life history of the species by Harris, King, and Knudsen, some of which has been published (Harris, 1955, and H. A. Freeman, 1955).

SUPERFAMILY SPHINGOIDEA

Family SPHINGIDAE

I am greatly indebted to Mrs. Margaret M. Cary for various comments and for many of the food plant records, which, except for those documented for Florida, are taken from her "Distribution of Sphingidae in the Antillean-Caribbean Region" (1951). She also notes that in Florida she has had the greatest success in collecting Sphingidae over petunias in the early dusk, and to a lesser extent at the blossoms of night blooming jessamine and phlox. The punk tree, *Melaleuca leucadendra*, periwinkle, *Vinca rosea*, and azalea might be added to the latter.

Because Sphingidae are so wont to stray and are popular with collectors, many of whom may have bought specimens from unscrupulous dealers, it is almost impossible to assess satisfactorily most of the records for the rarer species. Many are valid but far too many are either doubtful or very probably out and out frauds.

Subfamily ACHERONTIINAE

HERSE Oken

693 H. CINGULATA (Fabricius)

Sweetpotato worm. Pl. VII, Fig. 1, ♂, Fig. 2, ♀. Syst. Ent., p. 545. 1775.

Cingulata is state wide and relatively common. It has been recorded for all months except February, although it is probably present all year. Var. *decolorata* (Henry Edwards), described from Indian River (1882a, p. 11), which lacks the pink of the hind wing, also occurs, together with intermediates. Food: sweet potato, Coop. Econ. Ins. Rept. 4:407; morning-glory and moonflower vine, (Cary).

COCYTIUS Hübner

694 C. ANTAEUS MEDOR (Cramer)

Giant sphinx. Pl. VII, Fig. 10, ♀. Pap. Exot. 4, T. 394; Fig. A. 1782.

III. Cassadaga: May, SVF. Stemper: Oct., CMNH. Tampa: DPI; June, CMNH. IV. Archbold Biological Station: April, (Pease), ABS. Punta Gorda: May, AKW. Fort Myers: USNM. Lehigh Acres: Nov., CPK. Belle Glade: Aug., WHH. Palm Beach: Dyar (1901a, p. 451). Lake Worth: Larva on *Annona glabra* [*laurifolia*], Dyar. Fort Lauderdale: Aug. 1925, UM. Dade Co.: Feb., HFS. Miami: Jan., WES; June, CMNH, PSR. Coral Gables: Oct., WES. Biscayne Bay: (Slosson), Grsb. 37. VI. Paradise

Key: at flowers of moonflower vine, March, FMJ. VIII. Tavernier: Oct., CPK. Key West: Grote (1875a, p. 224); RCC; larva on Annonaceae, Feb. 27, 1929, DPI. Food: custard apple. The larva was described by Dyar (1901b, p. 256), also by Matteson (1933, pp. 3-5).

[695 *C. duponchel* (Poey)]

Cent. Lep. Cuba; Fig. 4. 1832.

Florida: Grote (1886, p. 134) determined this with "?". Smith (1888, p. 154) speaking of *antaeus medor*, said only: "there is a closely allied, but smaller species in Cuba, differing from the present by a decided mossy green powdering. It is a Poey's *A. duponchel*." The record would hardly seem valid. Food: Annonaceae.

PHLEGETHONTIUS Hübner

696 P. SEXTA (Johanssen)

Tobacco hornworm. Pl. VII, Fig. 4, ♂. Cent. Ins. Rar. 27, No. 81. 1763.

This species is found throughout the state, probably all year. Larvae have been found on tomatoes, potatoes, and tobacco, DPI.

697 P. QUINQUEMACULATA (Haworth)

Tomato hornworm. Pl. VII, Fig. 3, ♀. Lep. Brit., p. 59. 1803.

Quinquemaculata probably occurs throughout the state but is not nearly as common as *sexta*: Feb., April, May, July-Sept. Food: tobacco and tomato, DPI.

698 P. RUSTICA (Fabricius)

Six-spotted sphinx, or rustic sphinx. Pl. VII, Fig. 5, ♀. Syst. Ent., p. 340. 1775.

I. West Pensacola: Sept., VFG. Warrington: WP; rare, summer, VFG. Myrtle Grove: July, WJW. Quincy: May, CPK. Monticello: July, UM. II. Gainesville: May, WJP, UFES; June, DPI. Jacksonville: May, CPK. III. Cassadaga: June, SVF. Oviedo: reared on *Callicarpa americana*, Skinner (1922, p. 280). Orlando: May, CPK; July, FRA, WRB; Aug., WES. Brooksville: June, AKW. Tampa: Sept., WRB. IV. Bradenton: GCES. Archbold Biological Station: Nov., PSU. Belle Glade: DPI. Boynton Beach: Feb., DPI. Fort Lauderdale: Aug., UM. Dade Co.: Feb., July, Oct., HFS. Miami Beach: May, WES. Miami: Sept., CGM. VI. Florida City: May, OB. Food: *Bignonia*.

699 P. BRONTES CUBENSIS (Grote)

Proc. Ent. Soc. Phila. 5:189. 1865.

III. Indian River: AMNH. Brooksville: June

1955, AKW. Stemper: Aug. 2, Sept. 2-14, CMNH. IV. Siesta Key: April 14, 1953, May 22, 1956, May 8, June 7, 1957, OB, CPK. Fort Lauderdale: July 7, 1921, Aug. 24, 1924, UM. Miami: Rothschild & Jordan (1903, p. 90). South Florida: Barnes & McDunnough (1910, p. 192). V. Chokoloskee: USNM. Everglades: over petunias at dusk, April, May 1946, JWC, MMC.

[701 *P. florestan* (Stoll)]

Pap. Exot. Suppl. 4: 216; Pl. 394, Fig. B. 1796.

The presence of this species in Florida needs verification. Cary wrote that its occurrence here is doubtful, though remotely possible as a stray from Mexico, and that specimens so determined probably refer to *Chlaenogramma jasminearum* (Guérin-Ménéville). VIII. Key West: Sept. 3, 1932, CMNH; Aug. 1, 1942, Aug. 2, 1947, CGM. Merker wrote that the last two were received by him as *florestan*, but that they are "quite like *jasminearum*."

CHLAENOGRAMMA Smith

702 *C. JASMINEARUM* (Guérin-Ménéville)

Ash sphinx.

Icon. Règne. Ins., p. 494. 1844.

I. Warrington: occasional, summer, VFG. Myrtle Grove: Aug., WJW. II. Gainesville: taken at street light, Jan. 17, 1959, WJP. If the specimens recorded under *P. florestan* are not that and if they are all actually from Key West, then they belong here, but note that West & Arnold (1952, pp. 185, 186) give Gainesville and Lake Okeechobee as the southern limit for the two species of native ash. Food: ash.

DOLBA Walker

703 *D. HYLAEUS* (Drury)

Papaw sphinx. Pl. III, Fig. 1, ♀.

Ill. Exot. Ent. 2: 45. 1773.

Probably found here only in the form *floridensis* Clark, (1919, p. 105). I. Escambia Co.: March, July, SMH. Warrington: occasional, early summer, VFG. Wakulla Springs: May, LH. Monticello: Sept., UM. II. Jacksonville: Grsb. 38. St. Augustine: (Johnson), Grsb. 38. III. Daytona: April, LH. Enterprise: Grsb. 38. Cassadaga: May, SVF. Orlando: May, July, Sept., WRB; July, LHH. Indian River: Grsb. 38. Rockledge: Grsb. 38. Lutz: April, May, CMNH. IV. Parrish: type of *floridensis*, Clark (1919). Oneco: June, CPK. Archbold Biological Station: Feb., March, Nov., PSU. Siesta Key: Nov., CPK. Palm Beach: Dyar (1901a, p. 451). Fort Lauderdale: Aug., UM. V. Everglades: over petunias,

April, MCC. VI. Florida City: at night-blooming jessamine and petunia blossoms, MCC; March, April, June, Sept., OB. Paradise Key: at flowers of mimosa, (Jones), FMJ, CPK. Food: black alder and *Asimina*.

CERATOMIA Harris

706 *C. AMYNTOR* (Hübner)

Four-horned sphinx. Pl. VII, Fig. 13, ♂.

Zutr. Exot. Schmett. 3; Pl. 39. 1824.

II. Gainesville: two April 26-29, 1924, from pupae, UFES. III. Brooksville: June 1955, AKW. Food: elm.

707 *C. UNDULOSA* (Walker)

Waved sphinx. Pl. VII, Fig. 12, ♂.

List Lep. Ins. Br. Mus. 8: 231. 1856.

I. Warrington: common, VFG. Quincy: May, CPK. II. Alachua Co.: March 22, 1923, UFES. Jacksonville: Aug., WHH. III. Brooksville: June 1955, AKW. IV. Bradenton: (Kelsheimer), GCES. Archbold Biological Station: April 1945, (Needham), CU. Siesta Key: May 3, 1956, CPK. Pahokee: April 19, (Fattig), LH. South Bay: May 1, (Davis), SIM. Food: ash, privet.

708 *C. CATALPAE* (Boisduval)

Catalpa sphinx. Pl. VII, Fig. 11, ♀.

Spec. Gén. Hét. 1: 103. 1875.

Florida: NYSM. I. Warrington: very common, all summer, VFG, WP. De Funiak Springs: (Fisher), Grsb. 38. Quincy: July-Oct., CPK; larva on *Catalpa* (Ins. Pest Surv. Bull. 1: 131). Havana: June, DPI. Tallahassee: Grsb. 38. Lamont: Sept., DPI. Monticello: April, DPI; Aug.-Oct., UM. II. Gainesville: May, UFES; Sept., UFA. IV. Archbold Biological Station: Sept., DPI. VI. Florida City: July, OB.

ISOPARCE Rothschild & Jordan

709 *I. CUPRESSI* (Boisduval)

Pl. VIII, Fig. 1, ♀.

Spec. Gén. Hét. 1: 102. 1875.

The larvae reportedly make cocoons four or five feet above the water level on trunks of cypress trees. The life history was described by Bates (1928, p. 20). I. Warrington: WP. Monticello: March, UFES; March, Sept., Oct., UM. II. Gainesville: Bates. Waldo: Bates. III. Enterprise: May, Palm (1893, p. 20). Cassadaga: Oct., SVF. Crystal River: Aug., WHH. Orlando: Bates. Kissimmee: May, Edwards (1887a, p. 146). IV. Immokalee: larvae, FMJ. Fort Lauderdale: Bates. Miami: July, OB, Sept., FMG, USNM.

PARATREA Grote

711 *P. PLEBEIA* (Fabricius)

Plebeian sphinx. Pl. VIII, Fig. 5, ♂.
Gen. Ins., p. 27. 1777.

I. Escambia Co.: May, Aug., SMH. Warrington: rare, summer, VFG. Quincy: July-Sept., CPK. Monticello: March, June, DPI. II. Lake Butler: Dec., UFES. Gainesville: April, Aug., DPI. Jacksonville: Grsb. 38. Enterprise: (Slosson), Grsb. 38. Cassadaga: common, May, SVF. Sanford: June, Grsb. 38; Dec., DPI. Orlando: March, WMD, LH, CPK; July, WES; Aug., Sept., WRB. IV. Bradenton: March, CPK. Oneco: March, JGF. Archbold Biological Station: Sept., YU; Nov., PSU. Siesta Key: April, CPK. Fort Meyers: April, AMNH. Food: *Tecoma*, and reported on lilac, *Bignonia*, and *Passiflora*.

SPHINX Linnaeus

719 *S. CHERSIS* (Hübner)

Great ash sphinx.
Samml. exot. Schmett. 2; Pl. 167. 1824.

II. Macclenny: larva on evergreen ash, Sept. 27, 1927, (Betts), DPI. III. Tampa: imago, (Kilman), WES. Bartow: larva on gardenia, Sept. 8, 1949, (Poucher), DPI. Cary comments that this is a most surprising food plant. It is also reported on *Ligustrum*, DPI. Usual food: ash, lilac.

[721 *S. mordecai* McDunnough]

Can. Ent. 55: 148. 1923.

This is an example of another mixup in checklist numbers or some other clerical error, which resulted in a record appearing in the Coop. Ins. Pest Surv. 3(27): 6. It is quite incorrect.

728 *S. GORDIUS* Cramer

Apple sphinx.
Pap. Exot. 3; Pl. 247, Fig. B. 1780.

II. Welaka: April 8, 1962, (Ferguson), NSMS. IV. Archbold Biological Station: Feb. 23 and March 26, 1963, March 20, 1962, April 4, 1959, (Frost), PSU.

[730 *S. drupiferarum* Abbot & Smith]

Wild cherry sphinx.
Lep. Ins. Ga. 1; Pl. 71. 1797.

Packard (1890a, p. 609) wrote, "occurring from Florida to Canada." The occurrence in Florida seems questionable. Food: *Prunus*, and occasionally *Celtis*.

LAPARA Walker

The records for this genus are probably mixed as all three species are quite similar in appearance.

734 *L. HALICARNIAE* (Strecker)

Pl. VIII, Fig. 4, ♂.
Bull. Brook. Ent. Soc. 3: 35. 1880.

Some of these determinations are tentative. Florida: type, Strecker, (Wyatt wrote that this came from Hulst and that the label, with no date or collector's name, is possibly Hulst's handwriting); det. B. P. Clark, MCZ. Fort Schuyler: B. P. Clark (1919, p. 102). I. Escambia Co.: May, SMH. West Pensacola: April, VFG. Tallahassee: March, JPK. II. Gainesville: July, CU. Jacksonville: Aug., WHH. III. Enterprise: April, (Castle), Laurent (1903c, p. 133). St. Petersburg: June, OB. IV. Archbold Biological Station: March, CU, PSU. Charlotte Harbor: Clark. Fort Myers: Feb., CU. Dade Co.: March, May, HFS. Miami: April, WES. Coral Gables: Jan., WES. VI. Homestead: May, CPK. Florida City: Jan., May, OB. Food: pine.

735 *L. CONIFERARUM* (Abbot & Smith)

Pine sphinx. Pl. VIII, Fig. 2, ♂; Fig. 3, ♀.
Lep. Ins. Ga. 1: 83. 1797.

Florida: det. Clark, MCZ. I. Escambia Co.: March, SMH. Big Bayou: larva on *Pinus virginiana* (?), Oct., Grsb. 38. Warrington: rare, summer, VFG. Tallahassee: Aug., JPK. Monticello: March, DPI. II. Alachua Co.: May, DPI. Gainesville: Feb., CPK.; on *Pinus taeda*, April, UM; June, July, Sept., UFES; Aug., DPI. Calahan: Aug., GWK. Jacksonville: Grsb. 38. III. Enterprise. (Slosson), Grsb. 38. Cassadaga: common, May, SVF. Sanford: June, Rothchild & Jordan (1903, p. 151). Orlando: Sept., WES. Weekiwachee Springs: March, AEB; May, CPK. Tampa: Aug., GWK. IV. Archbold Biological Station: Sept., YU; Nov.-Jan., PSU. Punta Gorda: abundant, Feb., Slosson (1890b, p. 82). Lake Worth: Slosson (1894b, p. 107). Fort Lauderdale: Feb., UM.

[736 *L. bombycoides* Walker]

List. Lep. Ins. Br. Mus. 8: 232. 1856.

Currently this species is believed to be too northern in its range to reach Florida. Certainly there is no clear-cut record of it here; in fact the only one is "Florida" (Rothschild & Jordan, 1903, p. 152), unless we accept Seitz (1913, p. 860) which is probably nothing more than a quotation from Rothschild & Jordan.

Subfamily AMBULICINAE

PROTAMBULYX Rothschild & Jordan

737 *P. STRIGILIS* (Linnaeus)

Mant. Plant., p. 538. 1771.

The validity of most of the following records is questioned. Cary believes that the one from Palm Beach is valid, and it probably is that of a wind blown stray. She has also seen a record from Chokoloskee dated in the early 1940's, a relatively safe date, but she cannot place the record. It is her belief that the species, if ever present and established, may have been replaced by *carteri*. However, a specimen has been taken recently by Howe, which is very fresh and may indicate a new colony. On the basis of a very detailed sketch and description, Cary has determined it as typical *strigilis*. III. St. Petersburg: Aug. 30, 1919, CMNH. The source of this, like so many of the Cleveland Museum specimens, is not known. IV. Palm Beach: form *rubripennis* (Butler), "cannot vouch for the correctness of the locality label," Barnes & McDunnough (1910, p. 197). Miami: Feb. 2, Skinner (1914b, p. 477), but the note added that this was the form called *carteri*, which would place it below. The date, which was not given in this original reference, was supplied by Grossbeck (1917, p. 38). VIII. Plantation Key: Aug. 13, 1958, WHH. Food: Anacardiaceae.

738 *P. CARTERI* Rothschild & Jordan

Pl. II, Fig. 14, ♂; Fig. 15, ♀.

Nov. Zool. 9, Suppl. 180; Pl. 66, Fig. 3; Pl. 67, Fig. 12. 1903.

The hind wing varies from brick red to dusky yellow, and there is also some variation in the forewing. It has been taken over night-blooming jessamine in April by Cary and Cadbury. IV & VI. Dade Co.: many records, taken in every month, OB, JWC, MMC, CMNH, LH, DPI, CPK, ENP, HFS, WES. VIII. Key Largo: Dec., including a variety (?) with greenish forewings and purplish hind wings, (Munroe), CNC. Tavernier: Aug., Nov., DPI, CPK.

SMERINTHUS Latreille

739 *S. JAMAICENSIS GEMINATUS* (Say)

Twin spotted sphinx. Pl. III, Fig. 8, ♂. Amer. Ent. 1: 25; Pl. 12. 1824.

I. Warrington: rare, summer, VFG, WP. Quincy: June 29, two Aug. 9, 1960, (Tappan), CPK. Tallahassee: March 29, 1950, JPK. Monticello: June 16, 1955, DPI. III. Cassadaga: June 15, SVF. Food: wild cherry.

PAONIAS Hübner

741 *P. EXCAECATUS* (Abbot & Smith)

Blind-eyed sphinx. Pl. VII, Fig. 8, ♂; Fig. 9, ♀. Lep. Ins. Ga. 1: 49. 1797.

I. Escambia Co.: March, SMH. Warrington: rare, summer, VFG. Quincy: March, June-Sept., CPK. Tallahassee: April 11, 1951, JPK. Monticello: March, DPI. II. Gainesville: March 31, 1955, (Perry), CPK; Sept. 20, 1956 (Denmark), DPI. Jacksonville: Aug. 17, 1958, WHH. III. Tampa: two, (Kilman), LH. IV. Bradenton: March 5, 1955, (Kelsheimer), CPK. Oneco: March 1955, JGF. Belle Glade: Oct. 25, 1955, EES. Archbold Biological Station: Sept. 15, 1960, (Pease), YU. Food: wild cherry.

742 *P. MYOPS* (Abbot & Smith)

Small-eyed sphinx. Pl. VIII, Fig. 11, ♂. Lep. Ins. Ga. 1: 51. 1797.

Forewings much lighter in color than those of northern specimens. I. Warrington: one March, rare, summer, VFG, WP. Quincy: frequent, March, June-Sept., CPK. Monticello: March, DPI; April, June, Sept., CPK. II. Alachua Co.: Sept., DPI. Jacksonville: Aug. 17, 1958, WHH. III. Cassadaga: two Sept. 4-15, SVF. Haines City: July 13, 1917, (R. H. Young), DPI. Food: Rosaceae; willow, SVF.

743 *P. ASTYLUS* (Drury)

Huckleberry sphinx. Pl. II, Fig. 19, ♂. Ill. Exot. Ent. 2: 45. 1773.

I. Quincy: July 29, 1960, (Tappan), CPK. Monticello: March 23, Sept. 13, 1955, (Phillips), DPI; July 22, 1932, UM. II. Gainesville: April, 1960, UFA. Food: blueberry, huckleberry.

CRESSONIA Grote & Robinson

744 *C. JUGLANDIS* (Abbot & Smith)

Walnut sphinx. Pl. VII, Fig. 6, ♂; Fig. 7, ♀. Lep. Ins. Ga. 1: 57. 1797.

These are typical *juglandis*, the northern subspecies being *robinsonii* Butler. I. Escambia Co.: April, SMH. Warrington: occasional, summer, VFG. Quincy: March, April, Aug., CPK. Tallahassee: April-June, JPK. Monticello: April, CPK. II. Gainesville: March-May, Sept., UM, April, UFA; Sept., Grsb. 39; WJP. Green Cove Springs: (Slosson), Grsb. 39. Putnam Co.: April 1, DPI. III. Sanford: Rothschild & Jordan, (1903, p. 346). Altamonte Springs: DPI. Rockledge: type of *hyperbola* Slosson (1890, p. 59); Reiff & Cassino (1917, p. 76). IV. Bradenton: March, DPI. Oneco: April, JGF; Oct., CPK. Archbold Biological Station: Feb., March, YU.

Punta Gorda: March, CPK; March, AKW. Food: walnut, hickory.

PACHYSPHINX Rothschild & Jordan

745 P. MODESTA (Harris)

Amer. J. Sci. 36: 292. 1839.

I. Warrington: two, which are the pale western form, WP; rare, summer, VFG. Quincy: May 2 and July 8, 1962, July 17, 1960, (Tappan), CPK.

Subfamily SESIINAE

PSEUDOSPHINX Burmeister

746 P. TETRIO (Linnaeus)

Giant gray sphinx. Pl. VII, Fig. 15, ♂. Mant. Plant., p. 538. 1771.

Although recorded in Florida primarily from extreme southern localities, a stray has been taken in Connecticut (Britten, 1934, p. 43). IV. Archbold Biological Station: March, PSU. Sarasota: larvae on *Plumeria* sp., Aug. 28, 1960, Coop. Ins. Pest Surv. 7: 87. Canal Point: reared from frangipani, Nov., EES. V. Everglades: one, over petunias, April, MCC. IV, VI. Dade Co., VIII. Monroe Co.: not rare, March, June, July, Sept., Nov., OB, SVF, CMNH, LH, DPI, CPK, CGM, HFS, UFES. Food: *Plumeria rubra*, DPI.

ERINNYIS Hübner

747 E. ALOPE (Drury)

Pl. II, Fig. 16, ♀.

III. Exot. Ent. 1; Pl. 27, Fig. 1. 1773.

Alope is common throughout the southern portion of the state, including the Dry Tortugas, the northern Florida records being: III. Leesburg and Orlando (despite the fact that strays have been taken as far north as Massachusetts, CPK). Indian River: type of *edwardsii* Butler (1881, p. 105). There are no records for July or September but it is probably on the wing all year. Food: *Jatropha*, Ins. Pest Surv. Bull. 14: 14; papaya, DPI; *Allamanda*, Cary (1951, p. 102).

748 E. LASSAUXII MERIANAE Grote

Proc. Ent. Soc. Phila. 5: 75. 1865.

This species is present only as a stray from Cuba. Florida: (Slosson), Grsb. 39; Barnes & McDunnough (1910, p. 199). IV. Myakka: two Sept. 4-6, 1918, CMNH. It would be interesting to learn the origin of these two. Food: *Morenia*.

749 E. ELLO (Linnaeus)

Ello sphinx. Pl. II, Fig. 17, ♀.

Syst. Nat., p. 139. 1758.

Ello is probably the commonest sphingid throughout the peninsula. It has also been taken on the Dry Tortugas. Food: *Yucca*; papaya, DPI; poinsettia, SVF, CPK; *Euphorbia heterophylla*, Holland (1886, p. 103); *E. buxifolia*, det. West, CPK; *Cnidioscolus*, Cary (1951, p. 103).

750 E. CENOTRUS (Stoll)

Pap. Exot. 4; Pl. 301, Fig. C. 1780.

Cenotrus is rare, and possibly is present only as a stray. Florida: (Slosson), Grsb. 39; Schaus (1898b, p. 136); Rothschild & Jordan (1903, p. 368). IV. Miami: July 25, 1916, July 20, 1918, CMNH. Smith (1888, p. 160) speaking of *Dilophontia melancholica* (Grote), said: "Fla.? This species is very confusedly marked and difficult to describe except by comparison with its allies *E. merianae* and *E. cenotrus*," but he makes no mention of Florida in connection with either of these last two. Rothschild & Jordan stated that Grote's "*melancholica*" was true *cenotrus*, while his "*cenotrus*" was *crameri* (Schaus). Food: oleanders.

751 E. CRAMERI (Schaus)

Ent. News 9: 136. 1898.

Florida: OB. IV. South Florida: CGM; Schaus. Punta Gorda: WES. Palm Beach: July 22, 1942, DHK. Miami: July 7, 1939, DHK; Aug. 3, 1918, CMNH. Brickell Hammock: MCZ. VI. Homestead: WES. VIII. Key West: OB. Food: papaya, *Allamanda*.

752 E. OBSCURA (Fabricius)

Pl. II, Fig. 18, ♂.

Syst. Ent., p. 538. 1775.

One specimen has been recorded from I. Myrtle Grove: Aug., WJW. There are occasional records from Jacksonville south, but it is common in Dade and Monroe Counties where it flies all year. Also taken in the Dry Tortugas. According to Cary the favorite food in Florida is *Gonolobus* and in Jamaica it feeds on papaya. Larva on *Sarcostemma clausum* [*Philibertia viminalis*] and *Cynanchum* [*Vincetoxicum*] *palustre*, Dyar (1901a, p. 450).

753 E. DOMINGONIS (Butler)

Proc. Zool. Soc. London, p. 697. 1875.

Domingonis is rare, possibly only a stray. IV. Miami: June 10, 1908, CMNH; July 10, 1927, (Strohecker), LH. V. Everglades: two April, over petunias, MMC. VI. Florida City: over "four o'clock," May 2, 1955, SVF; July 16, 1933, CMNH; Aug. 7, 1937, (Forsyth), HEW.

PHRYXUS Hübner

755 *P. CAICUS* (Cramer)

Pl. II, Fig. 10, ♀.

Pap. Exot. 2; Pl. 125, Fig. F. 1779.

III. Indian River: OB; Neumoegen (1891b, p. 123). IV. Fort Lauderdale: five Aug., Sept., UM; Sept. 3, 1932, MCZ. Biscayne Bay: (Slosson), Grsb. 40. Miami: Jan., Feb., Hebard (1903, p. 253); May, Laurent (1903b, p. 305); May 15, 1920, FMG; July, PSR; July, Aug., OB; Aug., LHH; Sept., LH. V. Chokoloskee: USNM. Everglades: nineteen over petunias, MMC, JWC; Jan., WES. Paradise Key: March, FMJ. VII. Flamingo: Jan. 1960, (Christensen), ENP.

PACHYLIA Walker

756 *P. FICUS* (Linnaeus)

Fig sphinx. Pl. VII, Fig. 14, ♀.

Syst. Nat., p. 491. 1758.

III. Indian River: CU. IV. Bradenton: Feb., CPK. Palm Beach: Dyar (1901a, p. 451). Fort Lauderdale: May, July, Aug., UM. Miami: Jan., Slosson (1899, p. 96); Jan., Feb., Hebard (1903, p. 253); April, WRB, CPK; Aug., CGM; Sept., CMNH; Oct., Nov., RCC; "almost any month," FHS. Coral Gables: Jan., LH. V. Everglades: "always the first moth to come at dusk over petunias, followed closely by *lugubris*," April, MCC. VI. Florida City: Jan., HFS; Aug., Nov., OB; Nov., FRA. Everglades National Park: Dec., CNC. Paradise Key: March, CPK. VIII. Tavernier: Oct., DPI. Key West: Grote (1875a, p. 226). Food: *Ficus*, occasionally *Cecropia*.

757 *P. RESUMENS* Walker

List Lep. Ins. Br. Mus. 8: 190. 1856.

Florida: Rothschild & Jordan (1903, p. 378); Seitz (1913, p. 869), probably quoting from Rothschild & Jordan. III. Tampa: Oct. 30, 1921, CMNH. We really need more proof for the presence of this species in Florida, even as a stray. Food: *Echites umbellata* [*echites*].

MADORYX Boisduval

758 *M. PSEUDOTHYREUS* (Grote)

Pl. III, Fig. 18, ♂.

Proc. Ent. Soc. Phila. 5: 46. 1866.

III. Lakeland: March, AKW. IV. Siesta Key: Jan. 29, 1957, CPK. Punta Gorda: Slosson (1890c, p. 102). Fort Myers: (Mattes), Grsb. 40. Biscayne Bay: (Slosson), Grsb. 40. Miami: April, MCC; May, OB, CMNH. Coral Gables: Oct., WES. V. Everglades: March, abundant, "of 42 specimens taken, 40 were taken over petunias

and only two at light," MMC. Chokoloskee: Nov., Rothschild & Jordan (1903, p. 386); Barnes & McDunnough (1910, p. 199). VI. Florida City: April, Cary (1940, p. 165). Paradise Key: March, CMNH. VII. Flamingo: Feb., DPI; May, ENP. VIII. Key Largo: March, OB; Aug., WHH; Dec., CNC. Tavernier: Oct., Nov., DPI. Windley Key: Dec.-April, Oct., CPK. Upper Matecumbe: Aug., WHH. Craig: March, July, Aug., CPK.

CALLIOMMA Walker

759 *C. PARCE* (Fabricius)

Syst. Ent., p. 543. 1775.

Florida: four, OB; Barnes & McDunnough (1910, p. 199). IV. Myakka: OB. Biscayne Bay: (Holland), Grsb. 40. Miami: April 4, 1915, CMNH; Aug. 12, 1943, DHK.

ENYO Hübner

760 *E. LUGUBRIS* (Linnaeus)

Mourning sphinx. Pl. III, Fig. 2, ♀.

Mant. Plant., p. 537. 1771.

Lugubris is probably common throughout the state, all the year, in the southern half of the state at least. Food: *Ampelopsis*, *Cissus*; grape, rose, DPI.

[761 *E. ocyptete* (Linnaeus)]

Syst. Nat., p. 489. 1758.

III. Stemper: May 23, CMNH. Until more can be learned about the source of this specimen, its acceptance as a valid record should be held in abeyance. Barnes & McDunnough (1910, p. 199) mentioned a female in the Barnes collection labeled Florida, but "refrain from adding this species to the list until more authentic data can be secured." Grote (1886, p. 131) said: "Fla. northward," which must be an error.

CAUTETHIA Grote

762 *C. GROTEI* (Henry Edwards)

Pl. III, Fig. 6, ♀.

Papilio 2: 10. 1882.

At times *grotei* is abundant in the twilight at blossoms, and it also comes freely to light. All year. It is subject to wide variation. Siesta Key and Indian River are the most northerly Florida records. It is common, especially in Dade and Monroe Counties. VI. Homestead: Feb., April-Nov., with peak abundance in May gradually falling off. Food: *Chiococca alba* [*racemosa*], Dyar (1901b, p. 255).

PERIGONIA Herrich-Schaeffer

763 **P. LUSCA BAHAMENSIS** Clark
Proc. N. E. Zool. Club 6: 108. 1919.

Florida: as *interrupta* Walker, (Rothschild & Jordan, 1903, p. 428). IV. Miami: June 6, 1920, FMG. VI. Homestead: form *bahamensis*, Dec. 31, 1954, Oct. 14, 1958 (Wolfenbarger), det. Forbes as probably form *interrupta*, CPK. Florida City: Nov. 1, 1933, CMNH. Paradise Key: Safford (1919, p. 399); at flowers, from Jan.-April, (Jones), FMJ, CPK; Feb. 1919, Dyar, (1921b, p. 138); a few at wild verbena blossoms Feb. 24-28, 1920, Wood (1921, p. 208); March 25, 1930, (Bramley), CMNH; Nov. 10, OB.

AELLOPUS Hübner

The three species in this genus are very apt to be confused.

764 **A. TANTALUS ZONATA** (Drury)

Pl. VIII, Fig. 12, ♂.

Ill. Exot. Ent., p. 57; Pl. 26, Fig. 5. 1776.

Florida: Aug., Oct., Rothschild & Jordan (1903, p. 435). II. St. Augustine: (Johnson), Grsb. 41. III. Indian River: March, Aug., OB. Stemper: Sept., CMNH. IV. Port Sewall: common Nov.-March, AMNH. Siesta Key: March, Nov., CPK. Palm Beach: Dyar (1901a, p. 451). Deep Lake: April, AMNH. Biscayne Bay: (Slosson), Grsb. 41. Miami: May, CPK; July, OB. V. Everglades: April, (Davis), SIM. VI. Florida City: Jan., OB; July, CMNH; Dec., STES. Paradise Key: Feb., Wood (1921, p. 208); in daytime flight Feb., FMJ. VII. Flamingo: Dec., CNC. VIII. Key West: ab. *ixton* (Linnaeus), June, CMNH; Sept., SIM.

765 **A. TITAN** (Cramer)

Pap. Exot. 2: 73. 1779.

Florida: CU. III. Indian River: four June, July, OB. IV. Miami: two July 31, 1933, (Grimshawe), PSR; three July 9-26, OB. VI. Homestead: June 6, 1932, CMNH. Food: Rubiaceae.

766 **A. FADUS** (Cramer)

Pap. Exot. 1: 95. 1775.

Florida: OB; Barnes & McDunnough (1910, p. 200); Smith (1888, p. 119). VI. Florida City: Nov. 3, 1933, CMNH. Food: *Genipa clausiae-folia* [americana].

HEMARIS Dalman

767 **H. THYSBE** (Fabricius)

Hummingbird moth. Pl. VIII, Fig. 13, ♂.
Syst. Ent., p. 548. 1775.

Thysbe is not common, but present in several forms. I agree with Grossbeck's statement (1917, p. 41) that *floridensis* (Grote & Robinson) and *fuscicaudis* (Walker) are not synonymous, that it is "larger than *thysbe* and *cimbiciformis*" and has "the dark chestnut abdomen" of *fuscicaudis*. These are probably seasonal forms of two races, either summer and winter or wet and dry, but I do not have sufficient information to suggest the seasonal or geographic limitations, both of which might easily overlap. I. Warrington: fairly common, Aug., VFG. II. Gainesville: several, including *fuscicaudis*, UFES; larva on *Abelia*, DPI. Hastings: both typical and *cimbiciformis* (Stephens), June, Rothschild & Jordan (1903, p. 445). III. Sanford: *fuscicaudis*, June, Rothschild & Jordan. Melonville: *floridensis*, Rothschild & Jordan. Orlando: March, Oct., WMD. Port Orange: *fuscicaudis*, May, CPK. Tampa: Oct., UT. Bartow: FMJ. IV. Bradenton: GCES. Oneco: *floridensis*, March, CPK. Arcadia: *fuscicaudis*, July, CPK. Punta Gorda: *floridensis*, April, WRB; *fuscicaudis*, April, May, AKW. Food: *Viburnum*, snow-berry.

768 **H. GRACILIS** Grote & Robinson

Proc. Ent. Soc. Phila. 5: 174. 1865.

IV. Archbold Biological Station: March 26, 1962, (Ferguson), NSMS. Ferguson writes that so far as he knows, this is the first record south of the Philadelphia region.

770 **H. DIFFINIS** (Boisduval)

Bumble bee moth. Pl. VIII, Fig. 9, ♂.

Spec. Gén. Hét. 1; Pl. 15, Fig. 2. 1836.

I. Warrington: rare, summer, VFG. Tallahassee: AMNH. Food: *Lonicera*, *Symphoricarpos*, *Apocynum*, *Triosteum*.

Subfamily PHILAMPELINAЕ

PHOLUS Hübner

772 **P. SATELLITIA** (Drury)

Satellite sphinx. Pl. II, Fig. 20, *pandorus*

(Hübner) ♂.

Ill. Exot. Ent.; Pl. 29, Figs. 1, 2. 1770.

Satellititia is normally found in Florida as race *pandorus* (Hübner). Cary doubts the earlier records for race *posticatus* Grote, unless as a wind-blown stray from Cuba. The only positive record is the one determined by her, from Miami. Several specimens exhibit unusual coloring, even an extreme, bright orange. There is every reason to believe that these are chemical changelings due to the use of ethyl acetate as a killing agent. Florida: Rothschild & Jor-

dan (1903, p. 483). I. Warrington: fairly common, VFG. De Funiak Springs: as *posticatus*, (Fisher), Grsb. 41. Quincy: MCC, NFES; two May 3, 1961, CPK; July 27, 1959, WJP; one *pandorus*, one form *intermedia* Clark, both July 8, 1962, (Tappan), CPK. Monticello: July 26, 1932, UM. II. Gainesville: UFES; UFA; Jan. 26, 1952, Aug. 15, 1947, DPI; four July, Aug., WJP. St. Augustine: (Johnson), Grsb. 41. III. Sanford: three April 24-27, 1955, (Wilson), CPK. Orlando: July 8, 1940, WRB. Tampa: Sept. 9, 1940, DPI. Miami: *posticatus*, Aug. 1936, det. Cary, OB. Food: *Vitis*, *Ampelopsis*, *Cissus*.

773 P. ACHEMON (Drury)

Achemon sphinx. Pl. II, Fig. 21, ♀.
Ill. Exot. Ent. 2: 51. 1773.

II. Lake City: UFES. III. Cassadaga: April, SVF. Leesburg: larva on *Jatropha* and *Carica*, July 5, 1934, UFES file card. Tampa: (Reed), UT. IV. Bradenton: March 30, 1955, CPK. Oneco: May 24, 1953, (Dillman), CPK. Archbold Biological Station: March, JGF. Food: grape, *Ampelopsis*.

775 P. VITIS (Linnaeus); P. HORNBECKIANA (Harris)

Vine sphinx. Pl. II, Fig. 12, ♀.
Syst. Nat., p. 491. 1758; Sill. J. Sci., Art. 36: 299. 1839.

There is disagreement as to the name that is applicable to this insect. The crux of the matter rests on the interpretation of the illustrations in Madame Merian's "Insects of the Suriname," which vary in different editions. Florida: CU; Henry Edwards (1887b, p. 165); Smith, (1888, pp. 141, 143). II. St. Augustine: (Johnson), Grsb. 42. III. Gulf Hammock: Castle & Laurent (1897, p. 9). Stemper: Aug. 3, 1915, CMNH. IV. Biscayne Bay: (Slosson), Grsb. 42. V. Chokoloskee: USNM. VI. Florida City: six May 11-26, OB; Aug. 9, Oct. 9, 1938, (Forsyth), WES; Nov. 15, 1933, CMNH. VII. Flamingo: April, DPI. VIII. Tavernier: Sept., Oct., CPK. Food: *Vitis*, *Cissus*.

776 P. FASCIATUS (Sulzer)

Pl. II, Fig. 3, ♂.
Gesch. Ins., p. 151. 1776.

Fasciatus is unquestionably commoner and more widespread than the records indicate. Florida: CU. I. Warrington: occasional to common, summer, VFG. Quincy: April, July-Oct., CPK. Monticello: March, autumn, UM. II. Gainesville: May, Oct., UM; Sept., UFES. Jacksonville: Aug., WHH. III. Cassadaga: common, reared on grape and *ampelopsis*, May, SVF. Sanford: April, DPI. Orlando: June-Aug., Oct.,

WRB; Aug., WMD, PSR. La Grange: larvae, Sept., (Davis), Grsb. 42. Mango: Sept., DPI. Lutz: June, CMNH. Tampa: April, LHH. IV. Bradenton: GCES; April, CPK; Oct., DPI. Oneco: Oct., CPK. Archbold Biological Station: April, Sept., YU. Siesta Key: Feb., April, CPK; Nov., YU. Fort Myers: Sept., DPI. Fort Lauderdale: June-Aug., UM. Miami: 1925, LH; April, WES; Oct., Dec., CGM. Dade Co.: HFS. V. Everglades: four over petunias, April, MCC. VI. Goulds: Aug., WHH. Florida City: Jan., FRA; May, CPK; Sept., AKW; Nov., CMNH. VIII. Tavernier: Oct., DPI. Craig: Oct., DPI. Food: Onagraceae, especially *Jussiaea angustifolia*.

777 P. LABRUSCAE (Linnaeus)

Gaudy sphinx. Pl. III, Fig. 11, ♂.
Syst. Nat., p. 491. 1758.

Florida: Smith (1888, p. 137). II. Gainesville: larva found under rubber tree, Dec. 5, 1935, pupated Dec. 10, and emerged Dec. 19, UFES; no date, UFES. High Springs: larva on *Cissus incisa*, DPI. IV. Punta Gorda: (Slosson), Grsb. 42. Lehigh Acres: Nov., CPK. South Bay: April, SIM. Belle Glade: Sept., DPI. Fort Lauderdale: Aug., Sept., UM. Miami: Jan., Slosson (1899, p. 96); Nov., RCC; Dec., CGM. Coral Gables: July, WES. Dade Co.: UFES; Jan., Nov., CPK. Coconut Grove: Dec., MCZ. V. Chokoloskee: MCZ. VI. Florida City: Jan., OB; Jan., Feb., Nov., HFS; April, Sept., Oct., CMNH. Homestead: Feb., DPI. Paradise Key: Dec., CNC. VIII. Key Largo: Dec., CNC. Food: *Eupatorium odoratum*, *Vitis*, *Ampelopsis*.

AMPELOECA Rothschild & Jordan

778 A. VERSICOLOR (Harris)

Hydrangea sphinx. Pl. II, Fig. 11, ♂.
Amer. J. Sci. 36: 303. 1839.

I. Warrington: rare, summer, WP. III. Sanford: June 6, 1962, (Desin), DPI. IV. Archbold Biological Station: March 6, 1959 (Frost), PSU. Moore Haven: on a screen door, March 31, 1941, JWC. Miami: at blossoms, March, Slosson (1901, p. 238). VI. Paradise Key: at bait, late Feb., FMJ. Food: *Hydrangea arborescens*, *Cephalanthus*, *Decodon*.

779 A. MYRON (Cramer)

Virginia-creeper sphinx. Pl. III, Fig. 3,
a Florida form, ♂.
Pap. Exot. 3: 91. 1779.

The form commonly found in Florida has pale fawn, uniformly colored forewings with the maculation reduced. This form appears to be characteristic of the southern two-thirds of the state.

In the northern third an occasional specimen turns up with darker brown forewings, the postmedian area lighter, somewhat reddish, and the subterminal area much darker and strongly contrasting. Presumably one of these is the subspecies *cnotus* (Hübner), but no one seems to be sure just what that is. The pale form may be *texana* Clark, but that is supposedly limited to southwestern Texas. Wyatt took several specimens at the Archbold Biological Station with the primaries uniformly green. He believes these to be *cnotus*. The only conclusion that one can reach is that the species as found in Florida needs study to establish the status of the forms or races present. A common species all over the state, probably in every month. Food: grape, *Ampelopsis*.

DARAPSA Walker

780 D. PHOLUS (Cramer)

Azalea sphinx. Pl. III, Fig. 4, ♂.
Pap. Exot. 1: 137; Pl. 87, Fig. B. 1776.

I. Warrington: occasional, summer, VFG, WP. Quincy: June, Sept., CPK. Monticello: April, DPI; June, UM. II. Gainesville: March, July, UM. III. Cassadaga: occasional, May, SVF. Orlando: May, LHH; Oct., WMD. Food: azalea, *Viburnum*.

SPHECODINA Blanchard

781 S. ABBOTTII Swainson

Abbot's sphinx.
Zool. III. 3; Pl. 60. 1821.

I. Quincy: July 7, 1961, (Tappan), DPI. This is a little abnormal in that the black of the secondaries is more extended than usual.

DEIDAMIA Clemens

782 D. INSCRIPTUM (Harris)

Pl. III, Fig. 5, ♀.
Amer. J. Sci. 36: 306. 1839.

I. Escambia Co.: one Feb., March 1, 1961, SMH. Quincy: March 31, 1963, (Tappan), CPK. Monticello: two April 4, 1961 (Phillips), CPK.

AMPHION Hübner

785 A. NESSUS (Cramer)

Nessus sphinx. Pl. VIII, Fig. 6, ♂.
Pap. Exot. 2; Pl. 107, Fig. D. 1777.

Nessus is probably general throughout and on the wing February-September. The form *floridensis*, described from Parrish, Clark (1920, p. 73), is supposed to be the summer form, but it

or intermediates are present in the spring as well. It is characterized by the more solidly dark hind wing. Food: grape and pepper, Sept., UFES; citrus. Dec., DPI.

PROSERPINUS Hübner

786 P. GAURAE (Abbot & Smith)

Pl. VIII, Fig. 8, ♂.
Lep. Ins. Ga. 1: 61; Pl. 31. 1797.

I. Escambia Co.: Aug. 3, 1955 (Mead), det. Cary, DPI. Warrington: one, VFG. Pensacola: on flowers of *Amsonia ciliata*, April 14, Slosson (1893, p. 148). Food: *Gaura*, and in Missouri it was reported on *Oenothera biennis* by O'Byrne (1935, p. 160).

Subfamily CHOEROCAMPINAE

XYLOPHANES Hübner

794 X. PLUTO (Fabricius)

Pl. III, Fig. 7, ♂.
Gen. Ins., p. 274. 1777.

I. Monticello: MCZ. III. Brooksville: June 1955, AKW. IV. Bradenton: Feb., April, DPI, GCES. Punta Gorda: March, Slosson (1894b, p. 107). Charlotte Harbor: (Slosson), Grsb. 43. The last is probably the same as the previous record. Fort Lauderdale: June, Aug., Oct., Nov., UM. V. Everglades: over petunias, April, MCC. Chokoloskee: USNM. IV, VI. Dade Co. and VIII. Monroe Co.: common, probably all year. Homestead: April-July. Paradise Key: at wild verberna, Feb., Wood (1921, p. 208). Food: probably *Chiococca alba* or *C. pinetorum*, Cary (1951, p. 104).

795 X. PORCUS (Hübner)

Zutr. exot. Schmett. 2 T. 162. 1818-1825.

Cary states that there is no authenticated record for the race *continentalis* Rothschild & Jordan in the United States, and that the only three more or less authentic records for *porcus* are those of Dyar, Slosson, and Laurent. Florida: (Thaxter), MCZ. IV. South Florida: (Dyar), USNM. Punta Gorda: Feb., (Slosson), Grsb. 43. The last specimen is not in the AMNH at present. Miami: one April or May, Laurent (1903b, p. 305). VI. Paradise Key: Aug. 31, 1925, UM.

[795, 1 *X. chiron nechus* (Cramer)]

Pap. Exot. 2; Pl. 177, Fig. B. 1779.

Florida: Rothschild & Jordan (1903, p. 699). It would be interesting to find out who supposedly collected this specimen. Until there is something more substantial, the record should be viewed with suspicion.

797 **X. TERSA** (Linnaeus)

Tersa sphinx. Pl. III, Fig. 10, ♀.
Mant. Plant. 2: 538. 1771.

Tersa is generally common, February-November.
Food: *Spermacoce*, Rubiaceae.

CELERIO Oken

799 **C. LINEATA** (Fabricius)

White-lined sphinx. Pl. III, Fig. 9, ♀.
Syst. Ent., p. 541. 1775.

I. Warrington: common, summer, early fall, VFG, WP. Quincy: April-July, DPI. Tallahassee: July, JPK. Monticello: March, June, Aug., DPI; April, UM. II. Gainesville: April, DPI; April, May, Oct., UM; Aug., UFA. III. Cassadaga: common, Sept., SVF. Crystal River: Aug., WHH. Sanford: April, DPI. Orlando: Oct., WMD. IV. Bradenton: GCES. Siesta Key: May, CPK. Fort Lauderdale: March, UM. VIII. Craig: Aug., DPI. Key West: UFES; March, DPI. Food: Onagraceae; tomatoes, Agr. Exp. Sta. Bull. 112: 36; beets, purslane, *ibid.*, 232: 34.

SUPERFAMILY SATURNIOIDEA

Family SATURNIIDAE

PLATYSAMIA Grote

804 **P. CECROPIA** (Linnaeus)

Cecropia moth. Pl. III, Fig. 12, ♂.
Syst. Nat. 1: 447. 1758.

This moth is apparently rare in Florida and limited to the northern border region. I. Escambia Co.: March, SMH. Ensley: larva on plum, March, DPI. Warrington: one ex cocoon, VFG. Pensacola: larva on pecan, Oct., DPI; on hickory, adult emerging July 1960, WJP. Mulat: Nov., DPI. Freeport: Packard (1914, p. 213). De Funiak Springs: (Fisher), Grsb. 43. Quincy: March, CPK. II. Macclenny: April, DPI. Gainesville: May 10, 1958, WJP.

CALLOSAMIA Packard

809 **C. PROMETHEA** (Drury)

Promethea moth. Pl. II, Fig. 23, ♂.
Ill. Exot. Ent. 2; Pl. 11, Fig. 1. 1773.

Florida: Packard (1914, p. 228). I. Florida Caverns State Park: two April 14, 1960, (Denmark), DPI. Tallahassee: Aug. 1, 1950, JPK. Monticello: a series, (Fairchild), MCZ. III. Cassadaga: July, SVF. Food: many kinds of trees.

810 **C. ANGULIFERA** (Walker)

Tulip tree silk worm. Pl. II, Fig. 24, ♀.
List Lep. Ins. Br. Mus. 5: 1224. 1855.

I. Warrington: WP. Quincy: April 26 and May 1, 1962, (Tappan), CPK. Tallahassee: two March 6, 1951, JPK. II. Jacksonville: Aug. 17, 1958, WHH. Food: tulip tree.

810,1 **C. CAROLINA** Jones

Pl. II, Fig. 25, ♂; Fig. 26, ♀.
Ent. News 19: 231. 1908.

There is some question as to the exact status of this insect. Although described originally as a "variety of *angulifera* (Walker)," the constant differences from that species as shown especially by the cocoons and adults, the underside of the latter being quite distinct, make it fairly evident that it is not a form of *angulifera*. That it may possibly be a subspecies of the Central American *C. securifera* Maassen is Forbes' thought, but it will require a thorough study to work out the relationships. I. Escambia Co.: Sept. 8, 1962, SMH. Warrington: two May 1, 1962, VFG. Quincy: Feb. 27, 1962, July 19 and Sept. 13, 1960, (Tappan), CPK. Monticello: Sept. 4, 1923, UM. II. Gainesville: Sept., (Hetrick), CPK. III. Winter Park: Packard (1914; Pl. 14, Fig. 5), as a "variety of *angulifera*." Tampa: (Reed), UT. IV. Oneco: two March 22-25, 1954, JGF. Archbold Biological Station: sixty or more, reared from cocoons, March, April, 1958 (Pease), YU. Fruitville: male in daylight flight, March 4, 1952, CPK. Food: *Magnolia virginiana* [*glauca*].

ACTIAS Leach

811 **A. LUNA** (Linnaeus)

Luna moth. Pl. II, Fig. 22, form *mariae* Benj., ♂, a dwarf.
Syst. Nat., p. 496. 1758.

Probably most Florida specimens are of the subspecies *dictynna* (Walker), or the spring form thereof, *mariae* (Benjamin), with the possible exception of some from the northern counties where there may be an overlapping of the subspecies. Nevertheless, it should be borne in mind that in describing *mariae*, Benjamin (1922, p. 192) noted that the exact status of *dictynna* was questionable and that it was quite possible it might prove to be a valid species. I. Escambia Co.: March, SMH. Warrington: fairly common, late summer and fall, VFG. De Funiak Springs: (Fisher), Grsb. 43. Wewahitchka: DPI. Quincy: March, June-Sept., CPK. Tallahassee: AMNH; March, Aug., JPK. Monticello: Feb., form *rubromarginata* (Davis), (Fairchild), MCZ; May, MCZ; June, CPK; larva on pecan, July,

University of Florida Pecan Lab. file card. II. Madison: Packard (1914, p. 196). Lake City: Feb., UFES. Gainesville: Feb., Aug., Oct., UFES; March, April, June, UM; April, July, Oct., UFA; the July and Oct. specimens are larger and paler than the April ones. Devil's Mill Hopper: Sept., AMNH. Hogtown Creek: in numbers at light, April, Dozier (1920, p. 376). Jacksonville: Oct., RLL. III. Cassadaga: April, SVF. Brooksville: March, DPI. Astor Park: Packard. Orlando: June, WRB. St. Petersburg: type of *mariae*, Benjamin. Kissimmee: Packard. IV. Bradenton: Feb., DPI. Clewiston: (Janice McGill), UFA. Food: walnut, birch, beech.

TELEA Hübner

812 T. POLYPHEMUS (Cramer)

Polyphemus moth. Pl. X, Fig. 11, ♂. Pap. Exot. 1; Pl. 5, Figs. A, B. 1775.

Polyphemus is probably found throughout the state, though the records from southern counties are few, with none from Monroe. Mostly in February, but straggling on into July, and again October-December. IV. Bradenton: Feb.-April, Oct. Food: live oak, FMJ; maple, SVF.

AUTOMERIS Hübner

818 A. IO LILITH (Strecker)

Io moth. Pl. III, Fig. 19, ♂; Fig. 20, ♀. Lep. Rhop. Het., p. 139; Pl. 15, Fig. 17. 1878.

Common and state-wide, Feb.-Dec. In the northern part of the state it occurs mostly as typical *io* (Fabricius), though both appear concurrently at Quincy. I. Quincy: April, July, Aug. IV. Bradenton: Feb., March, April, Sept., Oct. Food: avocado, bean, rose, redbud, corn, azalea, saw palmetto, lychee, wild cotton, *Hibiscus tiliaceus [elatus]*, *Rhapis* sp., ornamentals, all DPI; *Turnera ulmifolia*, Coop. Ins. Pest Surv. 6: 35; *Tabebuia argentea*, *ibid.* 7: 10; larvae on *Galactia* sp., Sept., and eggs and larvae on *Amorpha fruticosa*, Nov., (Pease), YU.

HEMILEUCA Walker

830 H. MAIA (Drury)

Buck moth. Pl. X, Fig. 2, ♂. Ill. Exot. Ent. 2; Pl. 24, Fig. 3. 1773.

In Florida *maia* is smaller and darker than northern specimens with the white bands greatly reduced, sometimes to spots; in this respect they approach or may even be ab. *lintneri* Cockerell. II. Archer: April 11, 1932, (Tissot), UFES. Gold Head Branch State Park: Dec. 1955, UM. St. Augustine: (Johnson), Grsb. 44. III. Daytona Beach:

Dec. 31, 1936, LH. Cassadaga: larva on oak, adult emerged Jan. 9, 1952, SVF. IV. Vero Beach: Oct. 15, 1935, (Baker), DPI. Palm Beach: Dec. 1898, (Thaxter), MCZ.

Family CITHERONIIDAE

ANISOTA Hübner

842 A. STIGMA (Fabricius)

Spiny oakworm. Pl. III, Fig. 21, ♂; Fig. 22, ♀. Syst. Ent., p. 563. 1775.

Florida: defoliating oaks and attacking maize and melons. Watson [192-]. I. Warrington: occasional, summer, VFG, WP. Quincy: July, Aug., CPK. II. Madison Co.: Aug., UM. Hogtown Creek: Aug., UFES. III. McIntosh: June, DPI. La Coochee: June, DPI. Cassadaga: fairly common, July, Aug., SVF. Orlando: Aug., WRB. IV. South Florida: Forsyth sale list West Palm Beach: larvae, Jan., (Dyar), Grsb. 44.

844 A. SENATORIA (Abbot & Smith)

Orange-striped oakworm.

Lep. Ins. Ga., p. 113; Pl. 57. 1797.

Neal, (Fla. Agr. Exp. Sta. Bull. 9: 9) said, "State-wide, 1890, defoliating shade trees, etc." This seems amazing in view of the apparent rarity since that time. I. Monticello: Aug. 1930, (Walker), MCZ. II. Gainesville: June, UM. III. Marion Co.: July-Sept., UM. Volusia Co.: July, UM. Cassadaga: fairly common, July, Aug., SVF. Brooksville: larva on okra, Sept. 20, 1935, (Williams), Works Progress Administration file card. Hillsborough Co.: Aug., UM.

845 A. CONSULARIS Dyar

Pl. III, Fig. 23, ♂; Figs. 24, 25, ♀. J. N. Y. Ent. Soc. 4: 166. 1896.

My understanding of *consularis* Dyar has been in error and certain of the records hereunder belong to *virginiensis* (Drury). It is presently impossible to sort out the errors. However, individuals and institutions may be able to rectify these by reference to the illustrations. *Consularis* is characterized by the total absence of, or at most very faint transverse lines. I. Escambia Co.: July, SMH. Quincy: Aug., Sept., CPK. Tallahassee: July, JPK. Monticello: (Fairchild), MCZ. II. Alachua Co.: July, DPI. Gainesville: July, Aug., UFES; Aug., CPK; Sept., DPI; Oct., det. Franclemont, CPK, the last a very dark specimen. III. Orlando: Aug., JGF. IV. Bradenton: GCES. Oneco: Oct., CPK. Stuart: larva on live oak, Oct., UM. West Palm Beach: larva on live oak, type, Jan., Dyar. Miami: AMNH.

846 **A. VIRGINIENSIS** (Drury)

Pl. III, Fig. 27, ♂; Figs. 26, 28, ♀.
Ill. Exot. Ent. 2; Pl. 13, Fig. 2. 1773.

I. Escambia Co.: May, SMH. Warrington: occasional, summer, VFG, WP. Tallahassee: Aug., JPK. III. Cassadaga: July, Aug., SVF. Orlando: Aug., CPK, PSR. IV. Sarasota: June, CPK. Punta Gorda: April, AKW. Food: oak.

848 **A. RUBICUNDA** (Fabricius)

Green-striped mapleworm. Pl. III, Fig. 29, ♂; Fig. 30, ♀.
Ent. Syst. iii (1): 429, No. 69. 1793.

In view of its present commonness where found, it is surprising that there were no records when Grossbeck prepared his list. I. Escambia Co.: April, SMH. Warrington: April, occasional, summer, VFG. Quincy: April, Aug., CPK. Tallahassee: March, Aug., JPK. Monticello: June, Sept., DPI. II. Glen St. Mary: April, DPI. Gainesville: May, June, UFA, UFES; Aug., DPI. Lake Alice: larvae very abundant on swamp maple, Oct. 1, Dozier (1920, p. 376). III. Marion Co.: Feb., DPI. Crystal River: Feb., CPK. Cassadaga: occasional, July, Aug., SVF. Weekiwachee Springs: June, CPK. Sanford: Feb., DPI. Hillsborough Co.: Aug., UM. St. Petersburg: March, AKW. IV. Bradenton: Feb., DPI. Myakka City: Feb., CU. Oneco: May, CPK. Archbold Biological Station: Jan., PSU; Feb., May, YU; June, AKW. Okeechobee: Jan., CPK. Indian River Co.: Oct., UM. Siesta Key: Feb., May, CPK. Dade Co.: June, HFS. Ochopee: April, DPI, CPK. From the last locality the yellow median area on both wings is greatly reduced, and in some specimens it is strongly suffused with pink.

CITHERONIA Hübner856 **C. REGALIS** (Fabricius)

Royal walnut moth. Pl. III, Fig. 14, ♂; Fig. 15, ♀.
Ent. Syst. iii (1): 436, No. 93. 1793.

I. Escambia Co.: July, SMH. Warrington: rare, summer, VFG. Milton: Aug., DPI. De Funiak Springs: (Fisher), Grsb. 44. Clarksville: June, DPI. Tallahassee: Aug., DPI. Monticello: June, CPK; larva on pecan, Sept., DPI. II. Bradford Co.: larva on sea-island cotton, Packard (1905, p. 135). Starke: larva on cotton, Powell, (1891, p. 160); Sept., larva on pecan, DPI. Gainesville: July, UFA. Jacksonville: Sept., DPI. Dinsmore: Aug., DPI. Crescent City: (Hubbard), MCZ. III. Volco: larva on black gum, July, DPI. Brooksville: June, AKW. Bartow: May,

DPI. Socrum: larva on pecan, July, DPI. IV. Oneco: pupa, Nov., emerged May, CPK.

858 **C. SEPULCHRALIS** Grote & Robinson
Pine devil moth. Pl. X, Fig. 4, ♂; Fig. 12, ♀.
Proc. Ent. Soc. Phila. 4: 222. 1865.

I. Warrington: rare, summer, VFG, WP. Monticello: April, Aug., UM. II. Gainesville: June, UFA; July, DPI. Jacksonville: (Slosson), Grsb. 45; Aug., WHH. III. Cassadaga: July, SVF. Brooksville: June, AKW. Weekiwachee Springs: May, Mrs. J. F. May. Fort Meade: April, CU. IV. Archbold Biological Station: April, Aug., Sept., YU. Fort Myers: (Mattes), Grsb. 45. North Miami: HFS. Kendall: Oct., DPI. VI. Florida City: March, July, OB; July, CMNH. Food: white and pitch pine; Caribbean pine, Forsyth (1933, p. 1).

EACLES Hübner860 **E. IMPERIALIS** (Drury)

Imperial moth. Pl. III, Fig. 16, form *didyma* (Beauv.), ♂; Fig. 17, ♀.
Ill. Exot. Ent. 1: 17 (App. ii); Pl. 9, Figs. 1, 2. 1770.

The imperial moth probably occurs mostly in the form *didyma* (Beauvois). I have seen one typical *imperialis*, I. Quincy: July. The records cover the state except for the Keys, with the dates running from late August to early November, with a few from April through July. Food: many kinds of trees.

SUPERFAMILY
NOCTUOIDEA

In addition to making many determinations, Dr. John G. Franclemont has untangled numerous knotty problems, read the manuscript, brought the nomenclature up to date, and made valuable suggestions in connection with the entire Noctuoidea, for which I am deeply indebted.

Family **AMATIDAE****COSMOSOMA** Hübner861 **C. MYRODORA** Dyar

Pl. III, Fig. 43, ♀.
J. N. Y. Ent. Soc. 15: 226. 1907.

Myrodora is not infrequent from Callahan and Gainesville south to Long Pine Key. It has been taken in every month. Food: *Mikania scandens*, Dyar (1896d, p. 414).

SYNTOMEIDA Harris

863 S. IPOMOEAE Harris

Pl. VIII, Fig. 15, ♂.
Amer. J. Sci. 36: 316. 1839.

Ipomoeae occurs rather infrequently from Escambia County to Long Pine Key, with records for every month except November and December. VI. Homestead: Feb., July, Sept., Oct., with a small peak in May. In some specimens the white spots are much reduced, sometimes there being but a single small spot on each wing. Food: thistle, grapefruit, and bloom of morning glory, DPI.

864 S. EPILAIS JUCUNDISSIMA Dyar

Oleander caterpillar. Pl. VIII, Fig. 16, ♀.
J. Y. N. Ent. Soc. 15: 227. 1907.

The subspecies is common through the peninsula and Keys, including the Dry Tortugas, but the only record from the western counties is Warrington, where it is reported to be rare. On the wing in every month. Larva are often a pest on oleander, as frequently reported in the Ins. Pest Surv. Bull. and Dyar (1890b, p. 360, and 1896a, p. 72). It has been reported on *Echites umbellata*.

PSEUDOCHARIS Drury

866 P. MINIMA (Grote)

Pl. VIII, Fig. 10, ♂.
Proc. Ent. Soc. Phila. 6: 298. 1867.

IV. Fort Lauderdale: June 16, 1933, (Bates), MCZ. Dade Co., and VIII. Monroe Co.: not common, but taken in every month, AMNH, DPI, FMJ, CPK, HFS, EU, AKW, HEW. Food: *Crossopetalum floridanum* [*Myginda ilicifolia*].

DIDASYS Grote

867 D. BELAE (Grote)

Pl. III, Fig. 13, ♀.
Can. Ent. 7: 145. 1875.

Type locality, Cedar Key. Usually uncommon but found throughout the state, probably more commonly around marshy areas. There are no records south of Coconut Grove and Flamingo. It has been taken in every month except March, Sept., Dec.

EUCEREON Hübner

869 E. CAROLINA (Henry Edwards)

Pl. VIII, Fig. 14, ♂.
Ent. Amer. 2: 166. 1886.

There is a lengthy taxonomic note by McDun-

nough quoted by Grossbeck (1917, p. 46). III. Sanford: several April-June, 1957, (Wilson), DPI. Indian River: AMNH. IV. Port Sewall: Jan. 21, March 28, (Sanford), AMNH. Oneco: June 6, 1954, (Dillman), CPK. Fort Myers: April 25, (McDunnough), AMNH. Belle Glade: Jan., EES. Palm Beach: Dyar (1901a, p. 452); (Fairchild), MCZ. Ochopee: May, DPI, CPK. Coconut Grove: (Fairchild), MCZ. VI. Homestead: June-Aug., (Wolfenbarger), CPK. Florida City: March, JGF; April 26, June 16-21, OB. Paradise Key: Feb., March, FMJ. Food: *Sarcostemma clausum* [*Philibertia viminalis*] and *Cynanchum palustre* [*Vincetoxicum palustre*] Dyar (1901b, p. 262).

LYMIRE Walker

870 L. EDWARDSII (Grote)

Pl. III, Fig. 31, ♂.
Papilio 1: 4. 1881.

I. Monticello: reared, (Fairchild), MCZ. III. Orlando: Feb., Oct., WRB. Indian River: (Thaxter), MCZ. It is abundant from St. Petersburg and Vero Beach south and may be found flying in all parts of the year. Food: *Ficus* spp., DPI, Dyar (1890b, p. 361), Bratley (1929, p. 44) and (Cary), MCZ; *Nectandra coricea*, DPI.

CISSEPS Franclemont

871 C. FULVICOLLIS (Hübner)

Pl. VIII, Fig. 7, ♀.
Samml. exot. Schmett. 1: 164. 1827.

Fulvicollis is found all over Florida, but it is not nearly so common as it is in the northern states. The records cover from January through November. I have seen only a few examples that might be called form *pallens* (Henry Edwards), the form with the yellow collar. These were all taken in November 1959, at Siesta Key, and the color appeared not to be due to fading, for at the same time, a few fresh specimens were taken, and in every instance, the collar of these was bright red.

DAHANA Grote

885 D. ATRIPENNIS Grote

Can. Ent. 7: 175. 1875.

Type locality, Enterprise. *Atripennis* is fairly common in areas III and IV, with a few records in I: Escambia Co., Quincy, and Monticello, and II: Gainesville, Green Cove Springs, and Putnam Co. Found every month. The moth often comes to blossoms at dusk. Food: Spanish moss, Bonniwell (1918, p. 58); Jan., Hillsborough Co.: fruitfly trap.

Family NOLIDAE

CELAMA Walker

888 C. [CILICOIDES (Grote)]

Bull. Buffalo Soc. Nat. Sci. 1: 175. 1873.

I. Escambia Co.: May 2, June 12 and 26, 1961, SMH. This is small and not strictly typical of *cilicoides* but is certainly very close to it, if it is not. More material is needed.

889 C. SORGHIELLA (Riley)

Pl. IX, Fig. 14, ♂.

Rept. Dept. Agr., p. 188. 1882.

I. Escambia Co.: April, SMH. Quincy: July, Aug., CPK. II. Gainesville: May, DPI; June, CU; Aug., UFES. Hastings: Aug., AMNH; Aug., Sept., UFES. III. Weekiwachee Springs: June, CPK. IV. Bradenton: March, DPI; June, July, CPK. Oneco: May, June, CPK. Archbold Biological Station: March, PSU; June, AKW; Dec., CU. Siesta Key: April, May, CPK, LRR. Fort Myers: AMNH. V. Everglades: April, AMNH. VI. Homestead: Feb.-Nov., CPK. Florida City: April-June, OB. Paradise Key: March, CU. Food: *Sorghum vulgare*.

890 C. TRIQUETRANA (Fitch)

1st & 2nd Rept. Insects N. Y., p. 244. 1856.

I. Escambia Co.: Feb., SMH. Warrington: VFG. Florida Caverns State Park: April 13, 1960, (Denmark), DPI. III. Cassadaga: April 28, 1962, SVF.

892 C. OVILLA (Grote)

Can. Ent. 7: 221. 1875.

I. Pensacola: March 16, 1961, VFG. II. Old Town: April, AKW. Food: oak.

NOLA Leach

[894 *N. apera* Druce]

Biol. Cent. Amer. Het. 2: 404. 1897.

Dyar (1901a, p. 465, and also 1902, p. 351), reported this from Palm Beach, but later decided it was a new species to which he gave the name, *lagunculariae*, q.v.

895 N. LAGUNCULARIAE Dyar

Proc. Ent. Soc. Wash. 4: 465. 1901.

III. Volusia Co.: Aug., DPI. IV. Bradenton: May, Nov., CPK. Oneco: March, JGF. Longboat Key: Dec., CPK. Port Sewall: Dec., AMNH. Stuart: July, AMNH. Siesta Key: Jan., Feb., May, Nov., CPK. Fort Myers: April, Grsb. 47. Palm Beach: type, and larvae on *Laguncularia racemosa*, Dyar (1901a, p. 465). V. Ever-

glades: April, type of *obliquata* Barnes & McDunnough (1913c, p. 116). Marco: April, AMNH. VI. Florida City: March, AKW. Paradise Key: Dec., AMNH. VII. Flamingo: Feb., DPI.

NIGETIA Walker

Franclemont (Forbes, 1960, p. 55) places the genus in Acontiinae, following *Eublemma* Hübner.

896 N. FORMOSALIS Walker

Pl. IX, Fig. 3, ♂.

List Lep. Ins. Br. Mus. 34: 1506. 1865.

I. Escambia Co.: May, July, SMH. II. Gainesville: June, UFES. III. Anthony: July, DPI. DeLand: March, AKW. Cassadaga: April, July, Sept., Oct., SVF. Orange Co.: Feb., March, DPI. Winter Park: April, DPI; May, AMNH. Tarpon Springs: Feb., JLC. IV. Oneco: March, JGF; May, June, Oct., CPK. Archbold Biological Station: Dec.-March, YU; Feb., Nov., Dec., PSU. Siesta Key: one April, CPK. Punta Gorda: Feb., WRB; March, April, AKW. South Bay: April, Grsb. 47. V. Everglades: April, AMNH.

MEGANOLA Dyar

Franclemont (Forbes, 1960, p. 53) separates *minuscula* and *phylla* and discusses a third species. I believe all are present in Florida but can be sure only of *minuscula* as determined by Franclemont. Earlier determinations should be reviewed. They are given as received at the time or as made by myself prior to Franclemont's separation.

897 M. MINUSCULA (Zeller)

Verh. zool.-botan. Ges. Wien 22: 455. 1872.

All det. Franclemont. I. Warrington: April, VFG. West Pensacola: July, Sept., VFG. II. Gainesville: Feb., CPK. III. Cassadaga: Aug., SVF. Weekiwachee Springs: May, Aug., CPK. IV. Siesta Key: Jan., Feb., CPK.

[897, 1 *M. phylla* Dyar]

J. N. Y. Ent. Soc. 6: 43. 1898.

All specimens reported as this were believed to be the new species below and so recorded. However, they are more likely to be *phylla*, as Franclemont recorded the latter from Alabama. It is interesting to note that Crossbeck (1917, p. 47) raised the question of a possible new species.

[897, 2 *M. sp.*]

As mentioned above all these determinations should be reviewed, and it is possible that none of them actually belong here. I. Escambia Co.:

Aug., SMH. II. Old Town: March, CPK. Gainesville: April, DPI. III. Central Florida: Feb., May, WMD. Cassadaga: Feb., March, June-Aug., Oct., SVF. Weekiwachee Springs: March-June, CPK. Winter Park: June, DPI. Orlando: OB. Tarpon Springs: Feb., JLC. St. Petersburg: Feb., AMNH. Lakeland: May, AMNH. IV. Bradenton: March, CPK. Archbold Biological Station: Feb., PSU, YU; July, AMNH. Port Sewall: Feb., AMNH. Siesta Key: Feb., May, Dec., CPK. Punta Gorda: March, AKW. Bonita Springs: OB. VI. Paradise Key: Feb.-April, FMJ.

Family ARCTIIDAE

Subfamily LITHOSIINAE

CRAMBIDIA Packard

906 C. [PALLIDA Packard]

Proc. Ent. Soc. Phila. 3: 99. 1864.

Franclemont is of the opinion that none of the following records belong under this name. Furthermore, he also believes that there are perhaps three species hiding under the name *pallida*, and that at least one of them occurs in Florida. Grossbeck (1917, p. 47) noted that the specimens he had seen were smaller than northern ones. I. Quincy: Oct., CPK. II. Lake Geneva: March, HEW. III. Cassadaga: Feb., Dec., SVF. Winter Park: May, AMNH. IV. Archbold Biological Station: April, PSU; July, Nov., AMNH. Port Sewall: March, Dec., AMNH. Miami: Nov., DPI. V. Marco: April, AMNH. Everglades: April, AMNH.

906, 1 C. SP.

This is very similar to *pallida*, but smaller. Some at least of the records for that species belong here, and possibly the one for *uniformis* below. I. Myrtle Grove: June, WJW. III. Cassadaga: Sept., Nov., SVF. Weekiwachee Springs: April, May, (May), CPK. IV. Siesta Key: Nov., det. Field, CPK. Two specimens, Archbold Biological Station: Jan., (Remington), YU; Feb., (Frost), PSU, are also placed here tentatively.

907 C. LITHOSIODES Dyar

Pl. IX, Fig. 1, ♂; Fig. 2, ♀.
J. N. Y. Ent. Soc. 6: 33. 1898.

I. Escambia Co.: May, SMH. II. Alachua Co.: June, DPI. Gainesville: April, DPI. III. Levy Co.: Sept., DPI, CPK. DeLand: March, AKW. Cassadaga: Feb., March, Nov., SVF. Weekiwachee Springs: Feb.-April, June, CPK. IV. Bradenton: March, DPI; April, Sept.-Nov., CPK. Oneco: March, April, JGF; April, AKW; April,

May, Oct., CPK. Archbold Biological Station: Jan.-April, YU; June, AKW; July, AMNH; Dec., GWK, PSU. V. Everglades: AMNH. Marco: AMNH. VI. Homestead: Jan., Feb., DPI; Jan., April, May, July, Sept., CPK.

908 C. UNIFORMIS Dyar

J. N. Y. Ent. Soc. 6: 33. 1898.

IV. Fort Myers: (McDunnough), AMNH. I do not find this in the collection.

912 C. PURA Barnes & McDunnough

Contrib. 2: 101. 1913.

I. Escambia Co.: April 5, two Sept. 3, 1961, SMH. II. Old Town: March 2, 1951, CPK. III. Cassadaga: rare, March-July, Sept., SVF.

916, 1 C.? SP.

There is a species resembling *lithosioides* but smaller, of which Field has examined the genitalia (the Sarasota specimen only), and after comparison with those of the genus on file at the U. S. National Museum, he states that this is not only unlike any species of the genus, but also exhibits characteristics differing sufficiently to make him question its being placed in the genus. It is probably not uncommon but may have been passed over as a small *pallida*, which it also resembles, but at the same time it is distinct from 906, 1 above. The following records seem safe. III. Cassadaga: May, July, SVF. Weekiwachee Springs: Aug., (May), CPK. IV. Oneco: March 20-31, JGF. Sarasota: March 27, 1955, CPK.

PAGARA Walker

918 P. SIMPLEX Walker

Pl. IX, Fig. 4, ♂.

List Lep. Ins. Br. Mus. 7: 1679. 1856.

Simplex is never common. I. Escambia Co.: March, SMH. West Pensacola: May, VFG. Monticello: March, CPK. II. Glen St. Mary: Feb., DPI. Gainesville: Feb., Dec., DPI. III. Cassadaga: April, June, Oct., SVF. Wacasassa: April, JGF. DeLand: March, AKW. St. Petersburg: CMNH; Dec., AKW. IV. Oneco: March, April, JGF. Archbold Biological Station: June, AKW; Feb., Dec., YU; Nov.-Jan., PSU. Charlotte Harbor: (Slosson), Grsb. 47. Bonita Springs: Feb., April, Dec., OB. Miami: Feb., CPK; Oct., WRB. South Miami: Oct., NSMS. V. Everglades: April, AMNH. Homestead: Feb., March, Dec., DPI; Feb.-Sept., CPK. Florida City: Jan., April, June, Sept., Oct., OB; June, July, HEW; July, WRB; "5.3", CNC. VIII. Tavernier: Sept., DPI. Stock Island: April, DPI.

NEOPLYNES Hampson

920 N. EUDORA (Dyar)

Pl. IX, Fig. 16, ♀.

Ent. News 5: 198. 1894.

III. DeLand: March, AKW. St. Petersburg: May, OB. IV. Oneco: March, JGF. Archbold Biological Station: Feb., PSU. Siesta Key: March, CPK. Fort Myers: April, AMNH. Bonita Springs: March, OB. Miami: June, CNC. VI. Homestead: June, July, CPK. Florida City: Dec., CNC. VIII. Big Pine Key: April, AMNH. Key West: March, DPI.

AFRIDA Moeschler

931 A. YDATODES Dyar

Pl. IX, Fig. 15, ♂.

Ins. Insc. Mens. 1: 31. 1913.

Undoubtedly overlooked because of its small size and superficial resemblance to an olethreutid. I believe there may be one, or possibly two additional species involved, as there is considerable, uniform, variation in the transverse lines. I. Escambia Co.: Sept., SMH. II. Gainesville: Feb., April, Sept., DPI, CPK. III. Cassadaga: Feb., April, June, Sept., Nov., SVF. Winter Park: May, AMNH. IV. Bradenton: May, DPI. Oneco: March, JGF; May, CPK. Fort Pierce: March, OB. Port Sewall: Dec., AMNH. Archbold Biological Station: Jan., Feb., Nov., PSU; Dec., YU. Siesta Key: Sept.-March, May, June, OB, CPK. Fort Myers: April, Grsb. 47. V. Everglades: April, type of *Aresia parva* Barnes & McDunnough (1913d, p. 167). VI. Homestead: Feb.-Sept., Nov., CPK. VIII. Loggerhead Key, Dry Tortugas: June, DPI.

CISTHENE Walker

Inasmuch as Knowlton, in Forbes (1960, pp. 46-48) has made quite a revision of the genus, the names as applied heretofore are no longer tenable and all determinations should be reviewed. Since this is impossible at the present writing, I have tried to give an approximation of the records as I believe they should read.

934 C. TENUIFASCIA Harvey

Pl. IX, Fig. 5, ♂.

Bull. Buffalo Soc. Nat. Sci. 3: 4. 1875.

Some of these records unquestionably belong to *kentuckiensis* below, but it is presently impossible to assign them. Florida: six, AMNH. I. Escambia Co.: July, SMH. Quincy: Oct., CPK. Monticello: March, DPI; April, May, CU. II. Alachua Co.: Sept., CPK. Gainesville: Oct., UFES, CPK; Nov., DPI. Fernandina: three April, HEW; five April, Sept., OB.

947 C. PLUMBEEA Stretch

Pl. IX, Fig. 8, ♂.

Ent. Amer. 1: 102. 1885.

These records had been determined previously as *unifascia* Grote & Robinson or *injecta* (Dyar). Florida: co-type of *unifascia*, Grote & Robinson (1868, p. 175). I. Warrington: April, VFG. Monticello: April, May, CU; Sept., CPK; Oct., OB, DPI. II. Gainesville: Feb., CPK; March, April, UM; Sept., DPI; Oct., UFES.

942 C. STRIATA Ottolengui

Pl. IX, Fig. 6, ♂.

Can. Ent. 30: 101. 1898.

Some variation occurs, a few specimens lacking all but a suggestion of the striate rays. II. Alachua Co.: May, DPI. Gainesville: April, DPI. Lake Geneva: March, HEW. III. DeLand: March, AKW. Enterprise: Grsb. 48. Cassadaga: April, SVF. Weekiwachee Springs: Feb.-April, Aug., CPK. Orange Co.: April, Dec., DPI. Winter Park: April, DPI; May, AMNH. Orlando: March, OB; April, CNC. IV. Bradenton: Feb., March, Aug.-Nov., DPI. Oneco: March, April, JGF; May-July, CPK. Archbold Biological Station: March, Dec., YU; April, Nov., PSU. Port Sewall: Feb., AMNH. Siesta Key: not rare, Dec.-June, CPK. Punta Gorda: March, April, Dec., AKW. Bonita Springs: Jan., OB. Miami: type, Ottolengui. VIII. Tavernier: Oct., DPI.

945 C. PACKARDII Grote

Proc. Ent. Soc. Phila. 2: 31; Pl. 2, Fig. 5. 1863.

As I interpret Knowlton, a few of the larger specimens that may have passed for *bellicula*, would belong here. I am also assuming that he makes *bellicula* a synonym of *subjecta* and have so treated it. I. Escambia Co.: April, SMH. This is the larger "form." Just where this "form" stops and the smaller "*bellicula*" begins, I am not sure because of the earlier misapprehension as to synonymy, but they probably overlap in the middle of the state, with *bellicula* found as the only form in the southern part.

943 C. SUBJECTA Walker

List Lep. Ins. Br. Mus. 2: 534. 1854.

If I am correct that *bellicula* is a synonym of this, *subjecta* is common all year through the southern half of the state.

944 C. BELLICULA Dyar

Pl. IX, Fig. 7, ♂.

Ins. Insc. Mens. 9: 138. 1921.

See statement under 945 and 943 above.

936 **C. KENTUCKIENSIS** (Dyar)
Proc. Ent. Soc. Wash. 6: 198. 1904.

Some of the records standing under *tenuifascia* above belong here, but which?

CLEMENSIA Packard

952 **C. [ALBATA** Packard]

Pl. IV, Fig. 9, ♂.

Proc. Ent. Soc. Phila. 3: 110. 1864.

According to Franclemont the specimens represent either a local race or a new species. Certainly they differ widely from typical northern specimens. I. Escambia Co.: Feb., SMH. Quincy: Oct., CPK. Monticello: March, CU. III. Cassadaga: April, Oct., Dec., SVF. Lakeland: May, Grsb. 48. IV. Oneco: March, JGF; May, CPK. Archbold Biological Station: Feb., Punta Gorda: Jan., Feb., AKW. La Belle: March, JGF; April, AMNH. Food: lichens.

PALPIDIA Dyar

953 **P. PALLIDIOR** Dyar

Pl. III, Fig. 32, ♂.

J. N. Y. Ent. Soc. 6: 34. 1898.

III. Cassadaga: Nov., SVF. Weekiwachee Springs: May, CPK. Tarpon Springs: Feb., JLC. Egmont Key: April, UM. IV. Oneco: March, April, JGF. Port Sewall: Jan.-March, Nov., AMNH. Siesta Key: not rare, Oct.-June, CPK. Venice: May, CU. Punta Gorda: March-May, AKW. Fort Myers: March, AMNH; April, SIM. Bonita Springs: OB. Biscayne Bay: (Slosson), Grsb. 48. Matheson Hammock: Jan., Feb., AMNH. Miami: April, OB. Coconut Grove: type, Dyar. VI. Homestead: April-June, Aug., Oct., CPK. Florida City: March, June, Oct., OB. Food: rachis of coconut palm.

HYPOPREPPIA Hübner

958 **H. MINIATA** (Kirby)

Pl. IX, Fig. 10, ♂; Fig. 11, ♀.

Faun. Bor. Amer. 4: 305. 1837.

I. Warrington: common in July; occasional, late summer, VFG. II. Gainesville: Aug., DPI. IV. Allen River to Deep Lake: April 14, AMNH. VI. Homestead: two Aug., CPK. Florida City: three May 23-June 4, OB. Everglades National Park: Dec., CNC. Paradise Key: Jan., FMJ. Food: lichens.

959 **H. FUCOSA** Hübner

Pl. IX, Fig. 12, ♂; Fig. 13, ♀.

Zutr. exot. Schmett. 3; Pl. 21, Fig. 471. 1825.

There is only one record for typical *fucosa* in

Florida—I. Tallahassee: May, JPK. From the middle of the peninsula south, there is a relatively common insect which looks like *fucosa* but which is orange on the forewing where *fucosa* is pink. One specimen from Weekiwachee Springs: (May), CPK, exactly matches a specimen of *f. subornata* Neumoegen & Dyar from San Antonio, Texas. In the Florida City area, the orange is replaced by orange yellow or even yellow. Franclemont is of the opinion that we have either two undescribed races of *fucosa*, or as a remote possibility two undescribed species or a combination of the two. Whatever they may be, they are present most of the time. IV. Bradenton: March, Nov. VI. Homestead: Jan., Feb., April-Nov., with peaks in May, July, and a higher one in Sept. Food: lichens, mosses.

Subfamily **ARCTIINAE**

EUPSEUDOSOMA Grote

968 **E. INVOLUTUM FLORIDUM** Grote

Pl. III, Fig. 33, ♀.

Can. Ent. 14: 187. 1882.

There are no records north of Tarpon Springs and Cassadaga for this species which is relatively common in its southern range, probably flying most of the year except in the cold weather. IV. Bradenton: March, April, Aug.-Dec. VI. Homestead: Feb., March, May-Nov., with peak in July, tapering off through Sept. Food: *Psidium guajava* var. *pyriferum*, *Eugenia myrtoidea* [*buxifolia*], Dyar (1901b, p. 258).

CALIDOTA Dyar

969 **C. STRIGOSA** (Walker)

Pl. III, Fig. 34, ♂.

List Lep. Ins. Br. Mus. 3: 736. 1855.

IV. Palm Beach: larva on *Guettarda elliptica*, Dyar (1901b, p. 268). Dade Co.: common. VIII. Monroe Co.: common. All year.

HALISIDOTA Hübner

[977 *H. caryae* (Harris)]

Ins. Mass., p. 258. 1841.

This was recorded from Miami, Coop. Ins. Pest Surv. 4: 153, but Denmark says it was in error for *H. tessellaris* Abbot & Smith. I suspect it was more apt to have been *H. cinctipes*, but in any event, it was not *caryae*.

[981, 1 *H. interlineata* Walker]

List Lep. Ins. Brit. Mus. 3: 739. 1855.

This was reported from Florida by Neumoegen

& Dyar (1893, p. 168). However, I am of the opinion that this was an error of determination and should be referred to *cinctipes* below.

982 **H. CINCTIPES** Grote
Proc. Ent. Soc. Phila. 5: 242. 1865.

There is a great deal of confusion between this and *tessellaris*. Both are present, but they are very similar in appearance, especially in the northern range of *cinctipes* which apparently overlaps the southern range of *tessellaris*, and where a subspecies or form of the latter not unlike the aberration *tesselaroides* Strand, is present almost exclusively. Hampson bases the separation on the presence of black streaks in the orange-filled basal patches of the forewing in *cinctipes* and the absence of both the streaks and the orange filling in *tessellaris*. In *cinctipes* the lower part of the frons is black, but in *tessellaris* it is ochreous throughout. From Miami down through the Keys, typical *cinctipes* with the aberrations *ata* Strand and *meta* Strand, and probably other variations, are to be found. It is fairly common from September to June in this region. VI. Homestead: Feb.-May, Sept., Oct., peaks in Feb. and Oct. The northern limit would appear to be Gainesville-Cassadaga, though I suspect that all records north of Oneco, where Franclemont has taken it, need to be re-examined with great care. Food: *Coccoloba diversifolia* [*floridana*], and *C. uvifera*, Dyar (1901a, p. 452); hibiscus, Smith (1890g, p. 206); *Trema micrantha*, Slosson (1901a, p. 202).

984 **H. TESSELLARIS** (Abbot & Smith)
Pl. IX, Fig. 17, ♂.
Lep. Ins. Ga. 2: 149. 1797.

As with *cinctipes* above, several color forms are present, something close to *tesselaroides* Strand being relatively common, and the prime cause of confusion with *cinctipes*. Because of the presence of *Platanus occidentalis* in Florida, one should expect *H. harrisii* Walsh, which can be distinguished only in the larval stage. I. Warrington: occasional, summer, VFG. Quincy: Feb.-Sept., CPK. Tallahassee: March, Sept., JPK. Monticello: June, Aug., Sept., DPI. II. Gainesville: Jan., March, DPI; Aug., Sept., UFES. III. Weekiwachee Springs: May, CPK. Brooksville: June, AKW. Sanford: Feb., DPI. Winter Park: March, June, Aug., DPI. St. Petersburg: Feb., AKW. IV. Bradenton: Jan.-March, CPK. Oneco: March, JGF; May, June, Aug., Oct., CPK. Archbold Biological Station: Feb., Sept., YU; Nov., PSU. Siesta Key: Jan., Feb., June, CPK. Food: willow, maple, beech, sycamore.

987 **H. LONGA** (Grote)

Pl. IX, Fig. 18, ♂.
Can. Ent. 12: 213. 1880.

The records cover the state, and all months except July. Food: "Wide-bladed marsh grass," Bonniwell (1918, p. 59).

CYCНИЯ Hübner

990 **C. INSULATA** (Walker)

Pl. IX, Fig. 24, ♀.
List Lep. Ins. Br. Mus. 3: 734. 1855.

III. Williston: Feb., AKW. Orange Co.: Feb., DPI; Oct., WMD. Winter Park: April, DPI. IV. Bradenton: Feb., CPK, Oct., DPI. Oneco: March, JGF. Port Sewall: Dec., AMNH. Stuart: May, UM. Archbold Biological Station: March, PSU; June, AKW; Dec., YU. Sarasota: March, April, Nov., CPK. Punta Gorda: March, AKW. Bonita Springs: OB. Delray Beach: April, GWK; Nov., CPK. Pahokee: Jan., DPI. Fort Lauderdale: MCZ; Feb., April, June-Aug., Oct.-Dec., UM. Dade Co.: common. VII. Flamingo: Feb., April, DPI. VIII. Monroe Co.: common all year. Food: *Ageratum*, DPI.

992 **C. INOPINATUS** (Henry Edwards)

Papilio 2: 13. 1882.

Specimens which have been reported under the name *C. tenera* Hübner and *Pygarctia eglensis* (Clemens) all belong under *C. inopinatus nivalis* Stretch, with the color on the tegulae and costa, pale orange rather than buff yellow, this color being limited to the basal third of the costa and not extending the full length as it does in typical *inopinatus*. The ground color of the wing is whitish not testaceous as in typical *inopinatus*. All the records except for the type from Indian River belong under the form name. Florida: five, (Slosson), AMNH. I. Warrington: WP. II. Keystone Heights: March 7, 1953, HEW. Hastings: three, AMNH. III. Orlando: May 7, Oct. 6, CNC. Weekiwachee Springs: May, CPK. Indian River: type, Edwards. Oldsmar: Sept. 3, 1944, WRB. St. Petersburg: three, (Pasch), CU. Lakeland: May 5, AMNH. IV. Oneco: June 8, 1953, (Dillman), CPK. Archbold Biological Station: Jan., Feb., (Remington), YU. Siesta Key: June, CPK. Charlotte Harbor: (Slosson), AMNH. Fort Myers: April 22, (Davis), SIM. Miami: June 10, (Forsyth), JGF. VI. Florida City: March 4, April 6, May 20, JGF. Food: milkweed, *Cissus*, and low pea.

EUCHAETIAS Lyman

[994 **E. albicosta** (Walker)]
List Lep. Ins. Br. Mus. 3: 630. 1855.

Denmark says that the record for this, Coop. Ins. Pest Surv. 3(14): 4, was due to a mixup in check-list numbers. He does not know to what the record actually referred.

1001 E. EGLE (Drury)

Ill. Exot. Ent. 2; Pl. 20, Fig. 3. 1773.

Florida: (Slosson), Grsb. 51. IV. Palmetto: March 6, 1951, DPI. Bradenton: Feb. 1955, (Kelsheimer), det. Field, CPK. The last specimen is darker than northern specimens, especially the hind wings. Food: *Asclepias*.

PYGARTIA Grote

1007 P. ABDOMINALIS Grote

Can. Ent. 3: 124. 1871.

Florida: (Grote), Neumoegen & Dyar (1893, p. 165). I. De Funiak Springs: FMJ. Tallahassee: May, JPK. III. Cassadaga: Aug., SVF. Orange Co.: May, DPI. Winter Park: May, Sept., AMNH. IV. Archbold Biological Station: Feb., PSU. Fort Myers: Davis (1913, p. 59). Palm Beach: Dyar (1901a, p. 452). Miami: FMJ; EU; Feb., WRB.

1008 P. GROSSBECKI Davis

Pl. IX, Fig. 25, ♂.

Bull. Brooklyn Ent. Soc. 8: 60. 1913.

I. Escambia Co.: May, SMH. West Pensacola: April, VFG. Myrtle Grove: Aug., WJW. II. Gainesville: July, DPI. Fernandina: April, OB. III. Weekiwachee Springs: April, CPK. Fort Meade: OB; May, AKW. IV. Bradenton: March, CPK. Archbold Biological Station: March, YU. Fort Myers: type, April, Davis. Bonita Springs: March, OB. Lake Worth: Grsb. 51. Palm Beach: (Slosson), Grsb. 51. Biscayne Bay: (Slosson), Grsb. 51. Miami: March, OB. VI. Florida City: May, OB.

[1009 *P. eglensis* (Clemens)]

Proc. Acad. Nat. Sci. Phila. 12: 533. 1860.

See discussion under 992 *Cynia inopinatus*.

1010 P. VIVIDA (Grote)

Papilio 2: 131. 1882.

Florida: Brooklyn Museum, Grsb. 51.

HOLOMELINA Herrich-Schaeffer

1016 H. LAETA (Guérin-Ménéville)

Pl. IX, Fig. 26, ♀.

Icon. Règne Anim. Ins.; Pl. 88, Fig. 6. 1829.

I. Escambia Co.: May, SMH. Myrtle Grove: Aug., WJW. Monticello: March, DPI. II.

Gainesville: Feb., March, Sept., DPI; June, UFES. III. Central Florida: Oct., WMD. Cassadaga: April, May, July-Sept., SVF. Weekiwachee Springs: April-June, CPK. Orlando: March, April, May, CNC; May, WRB. Rockledge: NYSM. Tampa: Hampson (1901, p. 190). IV. Bradenton: Feb., March, CPK. Oneco: March, JGF; May, CPK. Archbold Biological Station: Jan., PSU; Feb., Aug., YU; June, AKW; July, AMNH. Siesta Key: Feb., May, Nov., Dec., CPK. Charlotte Harbor: (Slosson), Grsb. 49. Fort Myers: March, April, AMNH. Bonita Springs: March, OB. The Bradenton specimens show an intergrading towards *treatii* (Grote), and in one specimen from Oneco (JGF) the red of the hind wing is replaced by yellow. Food: dandelion, plantain.

1019 H. AURANTIACA (Hübner)

Pl. III, Fig. 42, ♂.

Zutr. exot. Schmett. 3, p. 9; Pl. 206, Fig. 411. 1825.

While the usual form of this species as commonly found all over the state and all year, is *rubicundaria* (Hübner), or perhaps more exactly, *diminutiva* (Graef), a number of the other forms do turn up, and it occasionally comes close to *H. ferruginosa immaculata* (Reakirt) in color. I. Quincy: June-Oct. IV. Bradenton: Feb.-May, July-Sept. VI. Homestead: Feb.-Nov., tremendous peak in May, falling off through July. Food: *Plantago* and grasses.

1022 H. OPELLA (Grote)

Proc. Ent. Soc. Phila. 1: 345. 1863.

Forbes (1960, p. 23) noted that Florida specimens with solid ochre forewing and solid vermilion hindwing and underside are determinable only by genitalia. I. Escambia Co.: common May, form *nigricans* (Reakirt), Sept. 6, SMH. III. Rockledge: NYSM. Lakeland: *nigricans*, May, AKW. IV. Oneco: March, April, JGF.

1023 H. [FERRUGINOSA IMMACULATA
(Reakirt)]

Proc. Ent. Soc. Phila. 2: 372. 1864.

As these may all be merely a form of *aurantiaca*, the record should not be considered definite. III. Orlando: Feb., March, USNM, as reported by Marshall & Musgrave (1937, p. 103). IV. Oneco: three March, JGF, det. with "?."

APANTESIS Walker

1033 A. VIRGO (Linnaeus)

Syst. Nat., p. 501. 1758.

Florida: Forbes (1960, p. 32). II. Gainesville:

Jan. 2, 1918, (Foster), det. with "P" F. F. Bibbey, DPI file; Sept. 1962, (R. A. Stuebe), DPI.

1034 A. INTERMEDIA (Stretch)

Zyg. & Bomb. N. Amer. 1: 216. 1873.

I. Escambia Co.: April 1, 1962, SMH. It is possible that the record under 1033 above might belong here.

1037 A. DORIS (Boisduval)

Pl. IX, Figs. 19, 20, ♂.

Ann. Soc. Ent. Belge 12: 77. 1869.

All but two of the records are of the form *nerea* (Boisduval). I. Pensacola: AMNH. Quincy: form *minea* (Slosson), March, MCZ; Sept., CPK. Tallahassee: May, JPK. II. Suwanee Springs: April, Slosson (1893, p. 150). Gainesville: typical *doris*, Feb., CPK; *nerea*, Jan., April, May, Oct., UM; April, EU; May, UFES; July, UFA; Sept., DPI. III. Ormond: Grsb. 50. Cassadaga: April, SVF. Winter Park: (Slosson), Grsb. 50. Orlando: April, July, Oct., CPK. Tampa: UT; April, CU. IV. Southern Florida: Aug., CPK. Archbold Biological Station: Nov., AMNH, YU. Food: lettuce, dandelion.

1038 A. ARGE (Drury)

Pl. IX, Fig. 21, ♂.

Ill. Exot. Ent. 1: 35. 1770.

I. Warrington: occasional, May-Sept., VFG, WP. Brent: March, VFG. Near De Funiak Springs: (Fisher), Grsb. 50. Quincy: Oct. 8, 1956, (Tappan), DPI. II. Jacksonville: Oct. 6, 1946, (J. L. Langston), RLL. Interlachen: May 21, 1939, (Brown), DPI. IV. Archbold Biological Station: Nov., PSU. Food: *Plantago*, *Chenopodium*.

1054 A. PHYLLIRA (Drury)

Pl. III, Fig. 35, ♂.

Ill. Exot. Ent. 1: 15. 1770.

I. Warrington: occasional, April-Sept., VFG. Near De Funiak Springs: (Fisher), Grsb. 50. Quincy: July, Sept., Oct., CPK; larva on tobacco, March (Ins. Pest Surv. Bull. 5: 35). Tallahassee: March, JPK. Monticello: Jan., March, Aug., DPI; March, June, Aug., CPK, larva on chinquapin, Feb., May, DPI; larva on corn and truck crops, UFES. II. Live Oak: April, UFES. Gainesville: Feb., CPK; May, EU; Aug., Sept., Dec., DPI. Newberry: larva on watermelon, spring, UFES. III. Orange Co.: Oct., DPI. Tampa: March, UT. IV. Lake Worth: Dyar (1901a, p. 452). Food: tobacco, Ins. Pest Surv. Bull. 10: 658.

1057 A. PLACENTIA (Abbot & Smith)

Pl. III, Fig. 36, ♂; Fig. 37, ♀.

Lep. Ins. Ga. 2: 65. 1797.

The female is an unusually beautiful moth; the male looks like a large *figurata* (Drury), the wing spread ranging from 1½" to 2", but both sexes are quite rare. I. Warrington: occasional, May-Sept., VFG. Quincy: May, DPI. Tallahassee: April, May, JPK. Monticello: Sept., DPI. II. Gainesville: April, UFA; April, Sept., UM. III. Cassadaga: March-June, SVF. Weekiwachee Springs: April, May, J. F. May. Indian River: type of *flammea*, (Wittfeld), Neumoegen (1881, p. 9). This last is mentioned by Ottolengui (1895, p. 288). Smith's reference (1890d, p. 32) probably refers to the same specimen. IV. Archbold Biological Station: Jan.-April, YU; Feb., April, Nov., Dec., PSU, CU. Miami: June, UM; Nov., PSU. Coral Gables: May, HFS.

1058 A. NAIS (Drury)

Pl. IX, Fig. 22, ♂.

Ill. Exot. Ent. 1; Pl. 7, Fig. 3. 1770.

It is almost impossible to sift out the records for the *nais* complex in Florida. Franclemont believes that there actually exist only two species, *nais* and *phalerata*, basing his belief on extensive rearing. *Nais* is undoubtedly to be found throughout the state and probably at any time except in the colder weather. The larva is a general feeder.

[1059 *A. vittata* (Fabricius)]

Mant. Ins. 2: 127. 1787.

Vittata was described from a female of the "*radians*" pattern, which occurs commonly in both species, i. e., *phalerata* and *nais*. Records that have appeared under the name *vittata*, may belong, therefore, under either one.

[1060 *A. radians* Walker]

List Lep. Ins. Br. Mus. 3: 362. 1855.

The comment under *vittata* above applies here equally.

1061 A. PHALERATA (Harris)

Pl. IX, Fig. 23, ♀.

Cat. Anim. Mass., 73. 1837.

This species, too, is probably found everywhere in the state during the first half of the year, the only sure records after June being in October. There has been taken an aberration which is almost devoid of maculation, II. Alachua Co.: Nov. 18, 1954, (Perry), DPI.

DIACRISIA Hübner

1065 D. VIRGINICA (Fabricius)

Pl. IX, Fig. 27, ♀.

Ent. Syst. Suppl., p. 437. 1798.

Virginica is relatively common and taken in every month, undoubtedly all over the state. The aberration *fumosa* (Strecker) taken at Gainesville, September 5, 1958, (Perry), DPI. A general feeder on low herbage; watermelon, Coop. Econ. Ins. Rept. 3: 395.

ISIA Walker

1069 I. ISABELLA (Abbot & Smith)
Banded woollybear. Pl. III, Fig. 38, ♂.
Lep. Ins. Ga. 2: 131. 1797.

Like *D. virginica*, this is not rare, but neither of them are so common as they are in the northern states. The dates range from December through October. Jones found the larvae in Paradise Key with the hairs all black, not brown and black as they are familiarly seen.

ESTIGMENE Hübner

1070 E. ACRAEA (Drury)
Salt marsh caterpillar. Pl. III, Figs. 39 and 40, ♂; Fig. 41, ♀.
Ill. Exot. Ent. 1; Pl. 3, Fig. 2. 1770.

Quite common throughout, and taken October-May. Most specimens show varying degrees of darkening but Field does not believe they can be referred to form *dubia* (Walker) which was described from Hudson Bay. The larva, a general feeder on low plants, has been reported specifically in Florida on: watermelon, weeds, and corn, Ins. Pest Surv. Bull. 3: 64 and 12: 84; tobacco, USDA Proc. 19th Amer. Econ. Ent. Bull. 67: 109; *Cucurbita okeechobeensis* [*Pepo okeechobeensis*], Coop. Econ. Ins. Rept. 3: 119; ramie and native vegetation, *ibid.* 3: 469; black-eyed peas, *ibid.* 4: 331.

1072 E. PRIMA (Slosson)
Ent. Amer. 5: 40. 1889.

This is a rather remarkable find, as the species is distinctly northern, in fact, Forbes (1960, p. 27) said: "Almost limited to the Canadian zone." Ferguson commented: "—quite unmistakable. They are much like our northern ones but less heavily spotted. *E. congrua* was also flying at Welaka at the same time." I. Quincy: April 3, 1962, (Tappan), CPK. II. Welaka: three March 19, 1962, (Ferguson), NSMS. Franclemont has examined the specimens and has found slight differences which may eventually prove this to be a distinct species, but more material is needed to be certain.

1073 E. CONGRUA (Walker)
Pl. IX, Fig. 28, ♀.
List Lep. Ins. Br. Mus. 3: 669. 1856.

Although Dozier (1920, p. 376) called it abundant at Gainesville, other records are few. I. Warrington: VFG. Quincy: Aug., CPK. II. Olustee: March, DPI. Gainesville: UFES; March, UFA; April, DPI. Keystone Heights: March, HEW. IV. Bradenton: Feb., Oct., DPI. Archbold Biological Station: Dec., YU. Siesta Key: March, CPK. Food: various species of low plants.

HYPHANTRIA Harris

There has been great debate over the question of whether *textor* and *cunea* are separate species, but Franclemont has recently proved on the basis of genitalia that such is the case.

1074 H. TEXTOR Harris
Pl. IX, Fig. 29, ♂.
Rept. Ins. Mass. p. 255. 1841.

There are only a very few positive records for this species, but because of the impossibility of making the separation on superficial characters, many records for *cunea* may, probably do, belong here. II. Fernandina: Aug., NSMS. IV. Punta Gorda: March, CPK, AKW. VI. Florida City: May, NSMS.

1075 H. CUNEA (Drury)
Fall webworm. Pl. IX, Fig. 30, ♀.
Ill. Exot. Ent. 1; Pl. 18, Fig. 4. 1770.

The records, which have been consistently assigned to this species, show it to be state-wide in occurrence and present most of the year. It is found not only in the immaculate form, but with spots in every degree of profusion, and with the ground color suffused with brown. Food: pecan, Ins. Pest Surv. Bull. 3: 286; sweet gum, Packard (1890a, p. 657); cypress, DPI.

EUERYTHRA Harvey

1078 E. PHASMA Harvey
Pl. III, Fig. 44, ♂.
Can. Ent. 8: 5. 1876.

Phasma is a beautiful but rare insect. I. Escambia Co.: Feb., March, SMH. Warrington: rare, summer, VFG. Quincy: Feb., Aug. (Tappan), CPK. Tallahassee: March, June, July, JPK. Monticello: March, DPI. II. Alachua Co.: March, UFES; Aug., DPI. Waldo: June, (King), CPK. Gainesville: Feb., CPK; April, UM. III. Ormond: Grsb. 49. New Smyrna: March, JGF. Markham: March, DPI. Rockledge: (Slosson), Grsb. 49.

ARACHNIS Geyer

1082 A. PICTA Packard
Proc. Ent. Soc. Phila. 3: 126. 1864.

IV. Palm Beach: Feb. 2, 1890, Dyar, USNM. It seems odd that Dyar did not mention this specimen in his paper (1901a) on the collections made in the Lake Worth-Palm Beach area. Perhaps he simply forgot it, or perhaps he considered it an accidental stray and not properly a part of the local fauna. Because the species is western, and too large and striking to be overlooked by subsequent collectors, the conclusion is obvious that this was an accidental introduction, whether by carrier or on imported plantings.

ECPANTHERIA Hübner

1085 E. SCRIBONIA (Stoll)

Pl. X, Fig. 3, ♀.

Pap. Exot. Suppl., p. 177; Pl. 41, Fig. 3. 1787.

Scribonia is found commonly throughout the state, probably in every month. The male form *denudata* Slosson, which looks as though the scales on the apical fifth had been rubbed off, appears to be the most common and variation in the spots is considerable. IV. Siesta Key: 1 inch larva found on *Plumbago* May 25, taken north and fed on *Lonicera tatarica* from June 7 to July 15 when pupation occurred. Imago Aug. 1, CPK. Food: *Euphorbia heterophylla* [*cyathophora*], *Ricinus communis*, *Helianthus*, *Plantago*, *Salix*, and various other plants; magnolia, Dozier (1920, p. 376); tangerine, bougainvillea, *Pyrostegia ignea* [*venusta*], rough lemon, banana, orange, DPI.

SEIRARCTIA Packard

1091 S. ECHO (Abbot & Smith)

Pl. X, Fig. 1, ♂.

Lep. Ins. Ga. 2: 135. 1797.

Since *echo* occurs in Georgia, it is probably found throughout the state, but there are no records north of Old Town and Daytona, except one for Warrington. Fuller found it moderately plentiful at Cassadaga, March 1956. It is certainly much more common in the southern part of the state, and is on the wing from February through December. VI. Homestead: Feb.-Oct., a high peak in May. Food: *Sabal palmetto*, Packard (1890b, p. 351); lupine, Forbes; *Zamia integrifolia*, Bonniwell (1918, p. 59); *Z. umbrosa* [*pumila*], DPI; croton, *Quercus laevis*, DPI; oak, persimmon, Smith (1890e, p. 102); "tecumseh," Wyatt.

UTETHEISA Hübner

1099 U. BELLA (Linnaeus)

Bella moth. Pl. III, Fig. 45, ♀.

Syst. Nat., p. 534. 1758.

Forbes (1960, p. 37) made this a form of *ornatrix* below. It is found all over the state the year round in all its forms and varieties. The long series in the collections of Buchholz, Franclemont, and Yale show these in all their multiplicity and beauty. I. Quincy: May-Nov. IV. Bradenton: Feb.-April, Nov., Dec. VI. Homestead: Feb.-May, Oct., peak in May. Food: *Crotalaria* and *Lespedeza*; native lupines, USDA, "The more important insect records for the winter and spring to March 31, 1945," p. 5.

1100 U. ORNATRIX (Linnaeus)

Syst. Nat., p. 511. 1758.

There are relatively few records for typical *ornatrix*. III. Orlando: Dec., WMD. Mims: Feb., DPI. IV. Gillette: Jan., DPI. Bradenton: Jan., one typical, one form *stretchii* (Butler), CPK; Feb., March, DPI. Archbold Biological Station: Jan., YU. Sarasota: May, CPK. Lake Worth: (Slosson), Grsb. 51. Rockdale: Jan., DPI. Kendall: Oct., DPI. VI. Homestead: July, CPK. Paradise Key: Jan., March, rare, FMJ. VIII. Key West: AKW.

HAPLOA Hübner

1101 H. CLYMENE (Brown)

Ill. Zool., p. 96. 1776.

Lyman (1887, p. 189), referring to *interrupto-marginata* (Beauvois), said: "Habitat: Can. to Fla." I. Escambia Co.: Aug., SMH. Warrington: occasional, summer, VFG, WP. Tallahassee: July 25, 1913, UM.

1102 H. COLONA (Hübner)

Samml. eur. Schmett. 2: 135. 1804.

Florida: (Thaxter), MCZ. I. Escambia Co.: form *carolina* Harris, May 1962, SMH. Apalachicola: (Chapman), Stretch (1872-1873, p. 173). II. Trenton: April 19, 1925, UM. Gainesville: June 10, 1924, UM; form *fulvicosta* Clemens, June 20, 1957, (Denmark), DPI.

Family AGARISTIDAE

ALYPIA Hübner

[1112 A. octomaculata (Fabricius)]

Eight-spotted forester.

Syst. Ent., p. 830. 1775.

This was reported by Grossbeck (1917, p. 52) as being in the Grote collection from Florida, but I feel it needs duplication before it should be accepted as valid, since all the other records are definitely *wittfeldti*. Food: *Vitis*, *Ampelopsis*.

1114 A. WITTFELDI Henry Edwards

Pl. IX, Figs. 31, 32, ♀.
Papilio 3: 34. 1883.

An occasional dayflyer recorded mostly from south of Gainesville-St. Augustine, but as it has been taken in Escambia County: March, VFG, and Santa Rosa County: March, SMH, it is probably found throughout the state. Except for a pair taken at III. Clearwater: Aug., (Fattig), LH, the flight seems to be limited to January-April. Food: Japanese persimmon, DPI.

Family NOCTUIDAE

Subfamily PANTHEINAE

COLOCASIA Ochseneheimer

[1123 *C. propinquinella* (Grote)]

Trans. Amer. Ent. Soc. 4: 293. 1873.

Grote (1874, p. 6) said: "Mass. to Fla." This is probably another case of ambiguity. Smith (1893, p. 32) made no reference to Florida, and Forbes (1954, p. 291) found no records south of Tennessee. The probability is that Grote mixed the two species of the genus, and if there is any *Colocasia* in Florida, it would be *flavicornis* (Smith), which Franclemont has taken in Alabama. Food: birch, walnut, maple, beech.

PANTHEA Hübner

1130 P. [FURCILLA (Packard)]

Proc. Ent. Soc. Phila. 3: 374. 1864.

Most of the known Florida specimens are very dark and Franclemont is fairly certain that they represent a new species. If that is the case, he will describe it. I. Escambia Co.: Feb., SMH. West Pensacola: July, VFG. Quincy: Oct.-Jan., CPK. Monticello: Feb., DPI. II. Alachua Co.: Jan., DPI. Gainesville: Feb., March, Dec., (Perry, Morse), CPK; March, (Hetrick), UFA. III. Cassadaga: Sept., SVF. St. Petersburg: Dec., AKW. IV. Archbold Biological Station: Jan., March, PSU; Dec., (Pease), YU. Food: larch, pine, *Tilia*.

CHARADRA Walker

1135 C. DERIDENS (Guenée);

1136 C. CIRCULIFERA (Walker)

Pl. IX, Fig. 33, ♀.

Spec. Gén. 5: 35. 1852; List Lep. Ins. Br. Mus. 32: 446. 1865.

Franclemont is of the opinion that the latter is nothing more than a Florida race of the former. Certainly they intergrade, and it is often impos-

sible to say which one has. Consequently, if there is specific difference, the records cannot be separated at present. These run from Escambia County to Florida City, but with none for the Keys. The dates cover September-April, with an occasional specimen taken May, June.

LICHNOPTERA Herrich-Schaeffer

1139 L. ILLUDENS (Walker)

List Lep. Ins. Br. Mus. 9: 37. 1856.

Specimens in the United States National Museum collection look suspiciously like dealer material, and to my mind very much open to question. What Dyar's record was based on I do not know. Florida: Dvar (1902, p. 99); Seitz (1923, p. 28), which is probably based on Dyar's record. V. Marco: eight, USNM. Cypress Swamp: one June, USNM.

RAPHIA Hübner

1140 R. ABRUPTA Grote

Proc. Ent. Soc. Phila. 2: 336. 1863.

I. Quincy: July 29, 1960, (Tappan), CPK. II. Old Town: March 2, 1951, det. Franclemont, CPK.

1140, 1 R. SP.

This is an unrecognized species, of which Franclemont has a specimen from Georgia. I. Quincy: June 28, 1960, (Tappan), CPK. IV. Palmetto: April 6, 1959, GWK. Bradenton: April 10, 1955, (Kelsheimer), det. Franclemont, CPK. Archbold Biological Station: Feb., YU. Siesta Key: April 29, 1956, CPK.

Subfamily ACRONICTINAE

ACRONICTA Ochseneheimer

1148 A. AMERICANA Harris

American dagger moth.

Rept. Ins. Mass., p. 317. 1841.

III. Cassadaga: May 10, 1956, SVF. IV. Bradenton: Feb. 1955, (Kelsheimer), CPK. Siesta Key: Feb. 22, 1952, (Kimball), CU. Food: maple and other trees.

1151 A. DACTYLINA Grote

Proc. Boston Soc. Nat. Hist. 16: 239. 1874.

IV. Archbold Biological Station: Feb. 10, 1959, (Frost), PSU. The specimen is too rubbed for determination on maculation. Franclemont called it either *dactylina* or *hastulifera* (A. & S.), but has agreed that the only logical conclusion

is that it is the former, since the only recorded food plant for *hastulifera* is *Alnus*. West has informed us that the alder that occurs in Florida, *Alnus serrulata*, has not been recorded south of Alachua and Putnam Counties, whereas willow, one of the food plants for *dactylina*, is found in the Archbold Biological Station region. Franclemont called attention to the fact that the larvae of the two species are quite distinct.

1153 A. LEPUSCULINA Guenée

Cottonwood dagger moth.

Spec. Gén. 5: 46. 1852.

Florida: one, presumably in Sept., Smith & Dyar (1898, p. 63). Food: poplar.

1159 A. TRITONA (Hübner)

Pl. IX, Fig. 38, ♂.

Zutr. exot. Schmett; Pl. 21, Figs. 107, 108. 1818.

I. Escambia Co.: April, SMH. Warrington: WP. Myrtle Grove: June, WJW. Quincy: Sept., CPK. II. Gainesville: Nov., DPI. III. Cassadaga: May, SVF. Weekiwachee Springs: March, AEB. Lutz: April, CWK. Stemper: July, CWK; Aug., Sept., CNC. St. Petersburg: Feb., AKW. IV. Oneco: March, April, JGF. Archbold Biological Station: May, YU; Nov., Dec., PSU. Siesta Key: Nov., CPK. Punta Gorda: abundant, Jan.-May, CPK, AKW. Food: *Vaccinium*, azalea, deerberry.

1167 A. CONNECTA Grote

Pl. IX, Fig. 37, ♂.

Bull. Buffalo Soc. Nat. Sci. 1: 79. 1873.

I. Quincy: Sept., Oct., CPK. II. Alachua Co.: April, DPI. Gainesville: Feb., CPK; Sept., DPI. IV. Oneco: March, April, JGF. Archbold Biological Station: Jan., PSU. Siesta Key: April, CPK. Punta Gorda: Jan., Aug., CGM; March-May, AKW. VI. Homestead: May, June, CPK. Paradise Key: occasional, March, April, det. Dyar as "not typical," FMJ. One of the Paradise Key specimens is in collection of USNM and is discussed by Todd (1959, p. 278). Todd reported subsequently that some Florida specimens are atypical in that they are lighter, and the dark shade in the median area is discontinuous. Food: willow.

1172 A. VINNULA (Grote)

Pl. IX, Fig. 35, ♂.

Proc. Ent. Soc. Phila. 2: 436. 1864.

Florida specimens are very pale, whitish. II. Gainesville: Feb. 21, 1955, (Morse), CPK. III. Cassadaga: Dec. 3, 1962, SVF. IV. Bradenton: four Oct. 7-16, 1955, (Kelsheimer), CPK. Siesta Key: March 3, 1961, CPK.

1174 A. LAETIFICA Smith

Ent. News 8: 150. 1897.

Forbes (1954, p. 240) said: "The locality of Florida in the original description has been challenged by Dod (1913, p. 252), and I have seen no material from there." However, it is only the male type from Florida which Dod questioned, stating that it is *interrupta* Guenée. A Florida female in the Rutgers College collection, now presumably in the American Museum of Natural History, he did not question. There are five recent records, none of them seen by Forbes: I. Escambia Co.: March 1961, SMH. II. Gainesville: April 1958, (Hetrick), det. Todd, CPK. III. Cassadaga: Oct. 20, 1954, det. Todd, SVF. Brooksville: June 20, 1955, AKW. VI. Homestead: Sept. 19, 1958, (Wolfenbarger), det. Todd, CPK. All of these are more lightly marked than northern specimens.

[1175 *A. furcifera* Guenée]

Spec. Gén. 5: 44. 1852.

Furcifera was recorded from Florida by Smith & Dyar (1898, p. 85), but as Forbes has seen none from south of Tennessee, we need something more definite to validate the record. It probably belongs under the next species, the two having been frequently confused and by some treated as synonyms.

1176 A. HASTA Guenée

Pl. IX, Fig. 34, ♂.

Spec. Gén. 5: 45. 1852.

I. Quincy: not uncommon, March, April, July, Aug., (Tappan), CPK. II. Gainesville: April 1958, (Hetrick), det. Franclemont; May 1958, CPK.

[1177 *A. thoracica* (Grote)]

N. Amer. Ent. 1: 94. 1880.

Draudt (in Seitz, 1923, p. 24) credits this species to Florida, but as the species is found primarily in the higher parts of Arizona, he would appear to be in error.

1181 A. MORULA Grote & Robinson

Ochre dagger.

Trans. Amer. Ent. Soc. 2: 196. 1868.

I. Escambia Co.: July, VFG. Quincy: Aug. 23, 1960, (Tappan), CPK. II. (?) Dozier (1920, p. 377) reported finding a cocoon between loose bark of a pine stump in a hammock, presumably near Gainesville, from which issued, Feb. 26, an adult that he determined as *morula* with "P." Forbes (1954, p. 239), gave the southern limit as D. C. Food: elm, apple, linden.

- 1182 A. INTERRUPTA** Guenée
Gray dagger.
Spec. Gén. 5: 46. 1852.
Dod (1913, p. 252) said that the male type of *laetifica* from Florida was a "well-marked" *interrupta*. Food: elm, apple, plum.
- 1183 A. LOBELIAE** Guenée
Spec. Gén. 5: 44. 1852.
Florida: (Doubleday), Smith & Dyar (1898, p. 82). I. Escambia Co.: March, SMH. Warrington: Jan., VFG. Quincy: Sept. 13, 1960, (Tappan), CPK. II. Gainesville: April 15, 1925, UM. Food: oak.
- 1184 A. PRUNI** Harris
Ent. Corresp., p. 313. 1869.
Forbes (1954, p. 241) makes this a form of *clarescens* Guenée, q. v. I. Escambia Co.: March 1961, SMH. Myrtle Grove: Aug. 30, 1962, WJW. Quincy: June 27, 1961, Sept. 24, 1962, CPK. Monticello: June, UM; Sept. 13, 1955, (Phillips), DPI. II. Gainesville: Feb. 17, 1955, (Morse), CPK. IV. Punta Gorda: Feb., AKW.
- 1188 A. MODICA** Walker
List Lep. Ins. Br. Mus. 9: 56. 1856.
I. Florida Caverns State Park: April 13, 1960, (Denmark), DPI. Quincy: March 27, 1961, (Tappan), CPK.
- 1190 A. CLARESCENS** Guenée
Spec. Gén. 5: 54. 1852.
IV. South Bay: May 1, Grsb. 53. V. Marco: April 21, AMNH. Food: apple family.
- 1193 A. HAMAMELIS** Guenée
Spec. Gén. 5: 52. 1852.
III. Lakeland: June 24, AMNH. Food: witch hazel.
- 1194 A. INCRETA** Morrison
Proc. Boston Soc. Nat. Hist. 17: 131. 1874.
I. Quincy: two June 15, 1963, (Tappan), det. Forbes, CPK.
- 1195 A. RETARDATA** (Walker)
Pl. IX, Fig. 36, ♂.
Can. Nat. Geol. 6: 38. 1861.
I. Escambia Co.: Aug., Sept., SMH. Warrington: VFG. Quincy: July, CPK. II. Gainesville: March, (Hetrick), det. Todd, UFA. III. Cassadaga: March, Sept., SVF. Not typical. IV. Punta Gorda: Feb., AKW. VI. Homestead: May, (Wolfenbarger), CPK. Food: maple.
- 1197 A. SUBOCHREA** Grote
Bull. Buffalo Soc. Nat. Sci. 2: 153. 1874.
I. Escambia Co.: July 4, 1961, det. Franclemont, SMH.
- 1198 A. AFFLICTA** Grote
Pl. IX, Fig. 39, ♂.
Proc. Ent. Soc. Phila. 2: 438. 1864.
Florida: (Doubleday), BM. I. Warrington: VFG. Quincy: May, Sept., CPK. II. Gainesville: Feb. 22, 1955, (Morse), CPK. III. Cassadaga: March, SVF. Sanford: Oct., DPI. St. Petersburg: March, including one form *schmalzriedi* Lemmer, AKW. IV. Archbold Biological Station: Dec.-Feb., (Frost), PSU. Punta Gorda: March, AKW. Food: oak.
- 1199 A. BRUMOSA** Guenée
Spec. Gén. 5: 52. 1852.
Some specimens are in the form *persuasa* Harvey, and according to Forbes (1954, p. 244) *liturata* Smith. I. West Pensacola: April, VFG. Quincy: Oct., CPK. Monticello: Sept., DPI. II. Alachua Co.: July, DPI. Gainesville: Feb., DPI; March, CPK. Archer: March, Smith & Dyar, (1898, p. 130). III. Cassadaga: March, Aug., SVF. Weekiwachee Springs: March, June, CPK. Lutz: March, HEW. Stemper: Aug., CNC. IV. Oneco: March, JGF. Archbold Biological Station: Feb., March, Nov., PSU; March, YU. Siesta Key: March, CPK. Punta Gorda: Feb., March, CGM; March, AEB, AKW; March, April, CPK.
- 1201 A. IMPLETA** Walker
Pl. IX, Fig. 40, ♀.
List Lep. Ins. Br. Mus. 9: 57. 1856.
I. Escambia Co.: July, VFG. Quincy: July, CPK. Monticello: March, WAR; Sept., DPI. II. Gainesville: Feb., CPK. III. Cassadaga: March, Aug., SVF. Sanford: March, CPK. Brooksville: June, AKW. IV. Archbold Biological Station: Feb., YU. Punta Gorda: March, CPK, AKW. Food: cherry, hickory, Dozier (1920, p. 376).
- [1204 *A. impressa* Walker]
List Lep. Ins. Br. Mus. 11: 61. 1856.
Smith (1893, p. 41) said: "Canada to Florida," whereas Forbes (1954, p. 248) said: "south at least to central New York," which is a long way from Florida. Food: willow.
- 1207 A. LONGA** Guenée
Pl. IX, Fig. 41, ♂.
Spec. Gén. 5: 54. 1852.

I. West Pensacola: April, July, Aug., VFG. Quincy: March, July, Sept., CPK. III. Brooksville: June, AKW. Stemper: Sept., CNC. IV. Bradenton: Nov., CPK. Oneco: March, JGF. Archbold Biological Station: Feb., Nov., PSU; Sept., YU. Vero Beach: April, CPK. Punta Gorda: March, AKW; March, April, CPK. Miami: March, OB. Matheson Hammock: June, CPK. VI. Homestead: July, Sept., CPK. Florida City: May, July, OB. Food: birch, alder, cherry, blackberry.

1209 A. LITHOSPILA Grote

Streaked dagger.

Proc. Boston Soc. Nat. Hist. 16: 240. 1874.

Florida: Smith & Dyar (1898, p. 98). Food: hickory, oak, chestnut.

1214 A. ARIOCH Strecker

Pl. XI, Fig. 1, ♀.

Lep. Rhop. Het. Suppl. 1: 5. 1898.

As this is considered by Franclemont to be merely a larger, more yellowish southern race of *oblinita* (Abbot & Smith), it is probable that the records for the two are mixed, and also that both are present, whatever their status. Wyatt believes the two are distinct. The only certain records for *arioch* are: I. Escambia Co.: Sept., SMH. Pensacola: Feb., VFG. Quincy: Feb., Oct., CPK. II. Jacksonville: USNM. Gainesville: Sept., DPI. III. Cassadaga: March, det. Todd, SVF. Orlando: May, OB. St. Petersburg: USNM. IV. Bradenton: Nov., CPK. Archbold Biological Station: Jan., YU; Feb., April, PSU. Siesta Key: March, Nov., CPK. Miami: March, OB. VI. Florida City: March, OB.

1215 A. OBLINITA (Abbot & Smith)

Smearred dagger. Pl. XI, Fig. 2, ♂; Fig. 3, ♀. Lep. Ins. Ga. 2: 187; Pl. 94. 1797.

Some of these records may belong under *arioch*. II. Alachua Co.: Feb., DPI. Gainesville: Feb., DPI. III. Cassadaga: Nov., SVF. Weekiwachee Springs: March, April, CPK. Orlando: Feb., Oct., WMD. IV. Bradenton: Feb., April, DPI. Oneco: June, CPK. Port Sewall: Jan.-March, AMNH. Archbold Biological Station: Jan., YU; Jan.-March, PSU. Sarasota: Feb., CPK. Siesta Key: March, CPK. Punta Gorda: March, April, AKW. Dade Co.: Aug., HFS. Miami: Jan., WRB. VI. Homestead: Sept., CPK. Florida City: March, OB. Paradise Key: Jan.-April, FMJ. Larva a general feeder on low shrubs and herbs.

1216 A. LANCEOLARIA (Grote)

Pl. XI, Fig. 4, ♂.

Proc. Acad. Nat. Sci. Phila., p. 418. 1875.

III. Cassadaga: March, April, SVF. IV. Archbold Biological Station: Feb., March, YU; ten March 4-8, 1959, (Frost), PSU. Port Sewall: Feb., AMNH. Food: low bushes, willow, poplar, wild cherry, blueberry, sweet fern.

SIMYRA Ochsenheimer

1222 S. HENRICI (Grote)

Pl. XI, Fig. 5, ♂.

Bull. Buffalo Soc. Nat. Sci. 1: 10. 1873.

Some Florida specimens are nearly an even pale reddish brown, others a very pale, very slightly rosy beige. I. Warrington: VFG, WP. III. Yankeetown: March, Cole (1931, p. 9). Orlando: Feb., WMD. IV. Bradenton: Feb.-April, Dec., CPK. Archbold Biological Station: Nov., PSU. Fort Pierce: June, DPI. Port Sewall: Jan., March, AMNH. Siesta Key: Feb., Nov., CPK. New Port Comfort: Jan., CPK. Miami: Aug., AMNH. Hialeah: reared from *Typha*, Feb., DPI. Biscayne Bay: (Slosson), Grsb. 54. V. Everglades: Feb., larva on *Typha latifolia*, Cole. Food: low plants.

HARRISIMEMNA Grote

1223 H. TRISIGNATA (Walker)

Harris' three-spot. Pl. XI, Fig. 25, ♂.

List Lep. Ins. Br. Mus. 9: 29. 1856.

Florida: (Slosson), Grsb. 54. I. Warrington: two, summer, VFG, WP. III. Cassadaga: Oct., SVF. IV. Archbold Biological Station: Feb. 1955, (Remington), YU; March 27, 1959, JGF. Siesta Key: March 29, 1952, CPK. Food: lilac, *Ilex*, *Dirca*, *Liquidambar*; *Ligustrum* sp., DPI.

Subfamily AGROTINAE

EUXOA Hübner

[1310 *E. messoria* (Harris)]

Dark-sided cutworm.

Rept. Ins. Mass., p. 324. 1841.

Florida: (Slosson), Grsb. 58. I feel that this must be an error, as Forbes (1954, p. 39) has seen none from below southern New Jersey.

[1341 *E. tessellata* (Harris)]

Rept. Ins. Mass., p. 324. 1841.

Florida: (Slosson), Grsb. 58. This looks like another error, though in this case Forbes has seen material from Virginia.

EUCOPTOCNEMIS Grote

1410 E. FIMBRIARIS (Guenée)

Pl. XI, Fig. 6, ♂.

Spec. Gén. 5: 172. 1852.

I. Warrington: VFG. West Pensacola: Nov., VFG. Myrtle Grove: Oct., WJW. Quincy: Nov., CPK. Monticello: Nov., DPI, CPK. II. Alachua Co.: Oct., DPI. Gainesville: April, UFA, including form *sordida* Grote, Sept.-Nov., DPI, CPK.

1411 E. TRIPARS (Walker)

List Lep. Ins. Br. Mus. 9: 78. 1856.

There is some question as to whether this is actually distinct from *fmbriaris*, and the type should be examined and compared. Florida: Forbes (1954, p. 31). I. Escambia Co.: Oct. 27, 1961, SMH. II. Gainesville: Nov. 14, 1925, UM.

1412 E. DAPSILIS (Grote)

Pl. XI, Fig. 7, ♂; Fig. 8, ♀.
Bull. U. S. Geol. Geograph. Surv. Territ.
6: 582. 1883.

Dapsilis is a dull, pale gray species with a variable amount of black spots on the primaries. I. Escambia Co.: Oct. 19, 1961, SMH. West Pensacola: Oct., VFG. Pensacola: Nov., CU. II. Newberry: Nov., SIM. III. Cassadaga: Nov., Dec., SVF., CPK. St. Petersburg: CU; Oct., OB, CNC. IV. Archbold Biological Station: Nov., CU, YU; seventeen Nov. 1958; five Nov. 1959, PSU. Port Sewall: Dec., OB. Bonita Springs: OB.

AGROTIS Ochseneimer

1416, 1 A. SP.

I. Escambia Co.: March 10, 1962, SMH. Franclemont places this very close to *vetusta* Walker and believes that it may be a dark, southern form of the latter. He has another specimen from Mississippi, but as both are females, more exact determination is not possible.

1422 A. GLADIARIA Morrison

Clay-backed cutworm. Pl. XI, Fig. 9, ♂.
Proc. Boston Soc. Nat. Hist. 17: 162. 1874.

I. Quincy: Crumb (1929, p. 68). Food: grasses and many other plants.

1425 A. VENERABILIS Walker

List Lep. Ins. Br. Mus. 10: 328. 1856.

Venerabilis was first recorded in the state in 1955 and is becoming increasingly more numerous. I. Escambia Co.: Nov., SMH. Quincy: Nov., Dec., DPI. Monticello: Nov., DPI. II. Gainesville: Sept., Nov., Dec. 1955, DPI, JGF. Food: white clover.

[1432 *A. volubilis* Harvey]

Bull. Buffalo Soc. Nat. Sci. 2: 118. 1874.

An error in my determination was responsible

for a record of this being published in Coop. Ins. Pest Surv. 3(5): 6. The record is included under *venerabilis* above, where it properly belongs.

1434 A. MALEFIDA Guenée

Pale-sided cutworm. Pl. XI, Fig. 16, ♀.
Spec. Gén. 5: 267. 1852.

Malefida is found throughout the entire state, including the Dry Tortugas, January-October, and is spasmodically common. Larva a general feeder; sugar cane, Ingram & Jaynes (1938, pp. 89-98).

1435 A. YPSILON Rottenberg

Greasy cutworm. Pl. XI, Fig. 18, ♀.
Naturforscher, Noct., xli; p. 141. 1776.

Ypsilon is not such a pest as it is in the North, but is relatively common all year. I. Quincy: Aug.-May, a large peak in mid-Sept. IV. Bradenton: Jan., Feb. VI. Homestead: Jan., April-Oct., with one peak in May. Larva a general feeder; sugar cane, Ingram & Jaynes (1938, pp. 89-98); celery, UFES; cabbage, Coop. Econ. Ins. Rept. 4: 217.

1435, 1 A. SP.

This was determined by Franclemont as a distinct, undescribed species close to but smaller and darker than *ypsilon*. He will describe it. III. St. Petersburg: five, March, April, 1960, AKW. IV. Archbold Biological Station: Jan. 5, 1960, Nov. 1958, (Frost), PSU; April 19, 1958, (Pease), YU. Miami: May 28, 1938, (Forsyth), OB. Miami Beach: three April 15-19, JGF. VI. Homestead: Jan., March, May, July-Oct., (Wolfenbarger), CPK. Florida City: June 5, 1947, OB; June 11, JGF.

1450 A. SUBTERRANEA (Fabricius)

Granulate cutworm. Pl. XI, Fig. 17, ♂.
Ent. Syst. 3(2): 70. 1794.

Subterranea is more familiarly known under the name *Feltia annexa* (Treitschke); it is of statewide occurrence and is probably on the wing throughout the year. I. Quincy: all year, peaks in July and Sept. IV. Bradenton: Oct.-Aug. VI. Homestead: Jan.-Oct., peak in May, falling off through July and rising again through Oct. It is certainly one of the most abundant Florida noctuids. It is a general feeder.

FELTIA Walker

1442 F. DUCENS Walker

Dingy cutworm. Pl. XI, Fig. 26, ♀.
List Lep. Ins. Br. Mus. 9: 203. 1856.

I. Quincy: seven Sept. 27-Oct. 26, 1960, (Tappan), DPI, CPK. The one female is slightly aberrant in that the hind wing is heavily infuscated only as a broad border on the outer margin.

1446 F. HERILIS Grote

Bull. Buffalo Soc. Nat. Sci. 1: 99. 1873.

I. Escambia Co.: Oct. 25, 1961, SMH.

1450, 1 F. REPLETA Walker

List Lep. Ins. Br. Mus. 11: 736. 1857.

Repleta looks much like a large *subterranea*, and may have been overlooked by many collectors. IV. Biscayne Bay: (Slosson), McDunnough (1949a, p. 12). VI. Homestead: Jan. 28, 1955, (Wolfenbarger), det. Franclemont, CPK.

1451 F. GENICULATA (Grote & Robinson)

Pl. XI, Fig. 10, ♀.

Trans. Amer. Ent. Soc. 1: 349. 1868.

Forbes (1954, p. 47) said: "a large pale race in Florida." Specimens of *geniculata* from Cassadaga are more strongly marked than New England specimens. I. Escambia Co.: Oct. 16, 1961, SMH. West Pensacola: Sept. 30, Oct. 13, 1961, VFG. II. Goldhead Branch State Park: Oct. 14, 1961, AB. III. Cassadaga: relatively common Oct., Nov., SVF. Sanford: Oct. 1, 1925, WRB; Oct. 19, 1960, DPI. Titusville: (Engel), JGF. IV. Archbold Biological Station: seven Nov., (Frost), PSU; one of these is very pale.

CHOEPHORA Grote

1474 C. FUNGORUM Grote & Robinson

Trans. Amer. Ent. Soc. 2: 220. 1868.

I. Quincy: Nov. 16, 1960, two Nov. 14, 1961, five Nov. 3-Dec. 4, 1962 (Tappan), CPK. Larva a cutworm.

EUROIS Hübner

1475 E. OCCULTA (Linnaeus)

Great brocade.

Syst. Nat. 1: 514. 1757.

Here is a very surprising record, the species being distinctly northern. It makes one wonder about the propriety of questioning some of the records for other northern species. III. Cassadaga: July 4, 1952, det. Todd, SVF.

ANICLA Grote

1481 A. INFECTA (Ochsenheimer)

Pl. XI, Fig. 19, ♀.

Schmett. Eur. 4: 67. 1816.

Infecta is one of the commonest noctuids in the state, probably all year. I. Quincy: Feb.-Dec., with small peak in Sept. IV. Bradenton: Dec.-June, Oct. VI. Homestead: Feb.-Nov., peaks in May, Sept., and Oct. Food: grasses; *Cenchrus tribuloides*, Dyar (1894a, pp. 18-20); beets, tobacco, plantain, purslane, Crumb (1929, p. 103); lawns, Coop. Econ. Ins. Rept. 4: 301.

1481, 1 A. SP.

This is a new species which is being described by Franclemont. VII. Flamingo: May 8, 1963, (Kimball), ENP. VIII. Tavernier, Windley Key, and Craig: July-Nov. 1955, (J. N. Todd), JGF, CPK. Big Pine Key: May 12, 1961, (Mead), DPI.

EUAGROTIS McDunnough

1482 E. LUBRICANS (Guenée)

Pl. XI, Fig. 12, ♀.

Spec. Gén. 5: 323. 1852.

I. Warrington: May, VFG. Marianna: Dec., DPI. Quincy: March, CPK. II. East Florida: (Doubleday), Smith (1891b, p. 272). Alachua Co.: April, DPI. Gainesville: Feb., CPK. Hastings: type of *spretta* Smith, AMNH. III. Winter Park: March, DPI. Orlando: April, WMD. St. Petersburg: March, CU. IV. Oneco: March, April, JGF. Archbold Biological Station: Jan., YU; Feb., PSU; April, CU. Port Sewall: Jan-March, AMNH. Siesta Key: Jan., Feb., CPK. Charlotte Harbor: (Slosson), Grsb. 58. Bonita Springs: March, OB. VI. Homestead: April, May, CPK. Florida City: Jan., OB.

1483 E. [ILLAPSA (Walker)]

Pl. XI, Fig. 11, ♂; Fig. 13, ♀.

List Lep. Ins. Br. Mus. 11: 744. 1857.

Franclemont thinks this may be a species distinct from northern *illapsa*, or a subspecies thereof. I. Escambia Co.: Feb., SMH. West Pensacola: March, VFG. III. Egmont Key: April 30, 1904, UM. IV. Oneco: March, JGF. Archbold Biological Station: Jan., PSU; Jan., Feb., YU. Siesta Key: March 1, 1952, CPK. Punta Gorda: Feb., March, AKW. VI. Homestead: May, CPK.

1488 E. DIGNA (Morrison)

Proc. Boston Soc. Nat. Hist. 18: 115. 1875.

IV. Charlotte Harbor: (Slosson), Grsb. 58.

PERIDROMA Hübner

1496 P. MARGARITOSA (Haworth)

Variegated cutworm. Pl. XI, Fig. 20, ♀.
Lep. Brit. p. 218. 1809.

Although *margaritosa* has been recorded from

almost every part of the state, including the Dry Tortugas, it does not seem to be especially common, as it is in the North. The dates include October-August. The form *saucia* (Hübner) is infrequent. Larva a general feeder; tomatoes, Watson (1914, pp. 57-78); *Nicotiana tabacum*, Coop. Ins. Pest Surv. 8: 28.

GRAPHIPHORA Ochseneheimer

1511 G. C-NIGRUM (Linnaeus)

Syst. Nat. 10: 516. 1758.

I. Myrtle Grove: May 11, 1963, WJW. Quincy: Oct. 30, 1961, (Tappan), CPK. II. Gainesville: May 13, 1958, (Denmark), det. Franclemont, DPI. Larva a cutworm.

ANOMOGYNA Staudinger

1561 A. ELIMATA Guenée

Pl. XI, Fig. 21, ♂.
Spec. Gén. 5: 333. 1852.

I. Quincy: Nov. 15, 1960, (Tappan), det. Franclemont, CPK. Food: young pine, spruce, and tamarack trees.

1562 A. JANUALIS (Grote)

Bull. U. S. Geol. Geograph. Surv. Territ. 4: 169. 1878.

I. Escambia Co.: Nov. 2, 1961, SMH. Quincy: Oct. 30, Nov. 14, 1961, Nov. 15, 1960, (Tappan), CPK. II. Alachua Co.: Nov. 18, 1959, (Perry), det. Franclemont, DPI. III. Cassadaga: Nov. 20, 1962, SVF. Food: *Vaccinium*.

ABAGROTIS Smith

1601 A. ALTERNATA (Grote)

Proc. Ent. Soc. Phila. 3: 526. 1864.

III. Juniper Springs: July 28, 1938, (Hubbell & Friauf), UM.

Subfamily HADENINAE

TRICHOCLEA Grote

1647 T. FLORIDA (Smith)

Pl. XI, Fig. 22, ♀.
Proc. U. S. Natl. Mus. 22: 465. 1900.

III. Cassadaga: March, SVF. IV. Biscayne Bay: type, (Slosson), Smith. VI. Florida City: March 30, Oct. 7, OB. VII. Flamingo: April, DPI, CPK. VIII. Key Largo: March, SVF; Oct., CPK. Tavernier: Aug.-Dec., CPK. Windley Key: March, CPK. Big Pine Key: Feb., AMNH.

1657 T. VINDEMIALIS (Guenée)

Pl. XI, Fig. 23, ♀.
Spec. Gén. 5: 344. 1852.

There has been some confusion between this species and *vindemialis* Grote which is a synonym of *Sideridis maryx* (Guenée). The latter is not found in Florida, and I have transferred all records for it to this species. I. Escambia Co.: May, SMH. West Pensacola: April, VFG. II. East Florida: (Doubleday), Smith (1891b, p. 230). III. DeLand: March, OB, AKW. Cassadaga: March, SVF. Weekiwachee Springs: March, CPK. Elfers: April, JGF. Stemper: Feb., AKW; April, Dec., OB. Lutz: March, USNM, HEW. IV. Rye: USNM. Archbold Biological Station: Feb., YU, March, JGF. Punta Gorda: Feb., March, AKW. Sanibel Island: March, OB. Bonita Springs: March, OB. VIII. Tavernier: Nov., CPK.

POLIA Ochseneheimer

1671 P. DISTINCTA (Hübner)

Samml. exot. Schmett. 1; Pl. 194. 1810.

I. Warrington: VFG. West Pensacola: March 29, 1962; April 9, 1961, VFG. Food: maple and the leaves of many trees.

1683 P. LEGITIMA (Grote)

Striped garden caterpillar. Pl. XI, Fig. 24, ♂.
Proc. Ent. Soc. Phila. 3: 82; Pl. 2, Fig. 4. 1864.

I. Escambia Co.: Sept. 24, 1961, SMH. II. Gainesville: Oct. 10, 1961, (Denmark), DPI; larva on *Cassia fistula*, Nov. 6, 1955, (Weems), det. Capps, Coop. Ins. Pest Surv. 6: 14. Feeds on exposed, low plants.

1710 P. GOODELLI Grote

Can. Ent. 7: 223. 1875.

I. Florida Caverns State Park: April 14, 1960, (Denmark), det. Todd, DPI.

1712 P. MEDITATA (Grote)

Bull. Buffalo Soc. Nat. Sci. 1: 104. 1873.

I. Myrtle Grove: Sept. 26, 1961, WJW.

LACINIPOLIA McDunnough

[1714 L. lustralis (Grote)]

Can. Ent. 7: 223. 1875.

This was reported from Biscayne Bay: (Slosson), Grsb. 59, but Franclemont believes it must have been an error for *L. parvula* below.

1743 L. ERECTA (Walker)

Pl. XI, Fig. 14, ♂.
List Lep. Ins. Br. Mus. 10: 264. 1856.

Florida: March, April, (Doubleday), Smith (1893, p. 127). I. Escambia Co.: March, SMH. Warrington: VFG. Quincy: March, April, Oct.-Dec., CPK; Dec., DPI. Monticello: Feb., March, (Phillips), CPK. II. Gainesville: Feb., March, UM. Fernandina: April 25, 1941, OB, WRB. Jacksonville: AMNH. III. Central Florida: March 1957, WMD.

[1745 *L. olivacea* (Morrison)]

Proc. Boston Soc. Nat. Hist. 17: 143. 1874.

IV. Myakka: Smith (1891b, p. 231). Smith gave the range as "Eastern U.S. to Florida." Draudt (in Seitz, 1923, p. 108) also listed Florida, but was probably copying Smith. Forbes (1954, p. 91) placed the southern limit of range in North Carolina. The record needs confirmation. What Smith saw might have been a specimen of *L. explicata* McDunnough below.

1747 *L. PARVULA* (Herrich-Schaeffer)

Pl. XI, Fig. 15, ♂.

Corresp. Blatt. Regensb. 22: 118. 1868.

III. St. Petersburg: Jan., AKW. IV. Bradenton: GCES; Sept., Dec., CPK. Oneco: April, June, JGF. Port Sewall: Feb., Dec., AMNH. Siesta Key: Nov.-June, CPK. Miami: April, AKW. VI. Homestead: May-July, Sept., CPK. Florida City: May, June, OB, WRB, JGF, AMNH; June, July, AKW; July, OB. Food: *Cestrum diurnum*, CPK.

1748 *L. LAUDABILIS* (Guenée)

Pl. IV, Fig. 1, ♂.

Spec. Gén. 6: 30. 1852.

Laudabilis is generally present throughout the state as the records include Escambia County to Florida City, January-June, August, October, and November. It is quite variable, being found as typical *laudabilis*, as well as *rufiorrorata* (Strand), *mediosuffusa* (Strand), and in various other, fortunately unnamed, color forms.

1750 *L. EXPLICATA* McDunnough

Can. Ent. 69: 181. 1937.

I. Monticello: March 24, 1955, (Phillips), det. Franclemont, CPK. Inasmuch as the determination of this specimen was made by genitalic dissection, it is conclusive. However, there are several other specimens listed below which had been determined previously on superficial characters as *L. implicata* McDunnough. These will have to be re-examined critically to be certain which species they are, but in order not to introduce another name in view of the uncertainty, I am putting them here on a tentative

basis. Furthermore, *implicata* was figured by Holland (1903, Pl. 24, Fig. 1) under the name *laudabilis*, and it is possible that some of the records for that species actually belong under one or other of the McDunnough species. I. Quincy: Oct. 15, 1956, Coop. Ins. Pest Surv. 3(42): 5. Tallahassee: MCZ. II. Gainesville: April, DPI. IV. Rye: MCZ.

SIDERIDIS Hübner

[1802 *S. maryx* (Guenée)]

Spec. Gén. 5: 344. 1852.

Smith (1893b, p. 120) stated that Grote's reference of *vindemialis* Guenée to this species is incorrect, a point which has been mentioned under that species. As I have not located Grote's reference, I do not know whether it has a Florida citation, but the point should be stressed in order to emphasize the fact that records for *vindemialis* (Guenée) do not belong to *S. maryx*, nor do those for *vindemialis* (Grote), a synonym for *maryx*, belong in Florida.

ANEPIA Hampson

1804 *A. CAPSULARIS* (Guenée)

Pl. XI, Fig. 27, ♀.

Spec. Gén. 6: 22. 1852.

I. Quincy: March-May, CPK. Monticello: March, (Phillips), DPI, CPK. II. Gainesville: April, CPK. Fernandina: April, OB. St. Johns Bluff: (Doubleday), BM. VI. Florida City: April, OB.

TRICHOLITA Grote

1821 *T. SIGNATA SEMITROPICAE*

(Barnes & Benjamin)

Pl. XII, Fig. 1, ♀.

Can. Ent. 59: 5. 1927.

The few specimens taken have all been of this form. I. Warrington: summer, WP. Quincy: Oct. 12, 1960, (Tappan), CPK. III. St. Petersburg: types, one male, two females, Oct. 15-20, 1914, (Ludwig), Barnes & Benjamin. IV. Bradenton: two Nov. 12-17, 1955, (Kelsheimer), CPK. Siesta Key: seven mid-Nov., CPK.

1827 *T. LUTINA* (Smith)

Pl. XII, Fig. 2, ♂.

Proc. U. S. Natl. Mus. 25: 176. 1902.

Florida: type of *velutina*, Smith (1900a, p. 480). IV. Biscayne Bay: type, (Slosson), AMNH. Coral Gables: April 22, 1946, (R. L. Chermock), JGF. VI. Homestead: Feb., (Wolfenbarger), CPK. Florida City: June 8-10, OB; June 1934, JGF.

ULOLONCHE Smith

1831 U. CULEA (Guenée)

Spec. Gén. 5: 404. 1852.

Florida: (Slosson), Grote (1874, p. 24). I. Escambia Co.: March, SMH. Quincy: March, (Tappan), CPK. Monticello: Feb., (Phillips), CPK. II. Gainesville: Feb., (Morse), DPI.

ORTHODES Guenée

1855 O. OVIDUCA (Guenée)

Pl. XII, Fig. 3, ♂.

Spec. Gén. 5: 357. 1852.

These specimens are much grayer than northern examples. I. Escambia Co.: March, SMH. Monticello: Feb. 26, 1956, (Phillips), CPK. II. Gainesville: three March 9-11, 1955, (Morse), Feb. 6, 1957, (Denmark), DPI. Jacksonville: April 1955, HEW. III. Marion Co.: March 3, 1960, DPI. Cassadaga: Feb. 8, 1956, Sept. 12 and 15, 1962, SVF.

1871 O. CREMULATA (Butler)

Pl. XII, Fig. 4, ♂.

Ann. Mag. Nat. Hist. (6) 6: 97. 1890.

The spring specimens are larger than the average. I. Brent: March, VFG. Quincy: Feb.-Oct., CPK. Monticello: Feb., Aug.-Oct., Dec., DPI, CPK. IV. Oneco: March, JGF. Archbold Biological Station: March 1959, (Frost), PSU.

MORRISONIA Grote

1901 M. MUCENS (Hübner)

Pl. XII, Fig. 5, form *sectilis*, ♀.

Verz. bek. Schmett., p. 243. 1816.

Mucens is fairly common down the peninsula as far as Punta Gorda-Port Sewall, flying January-March, with one record each for July and August. Besides typical *mucens*, *sectilis* (Guenée), *sectilana* Strand, and various intermediate forms occur. *Rileyana* was described from Florida, Smith (1890b, p. 212).

1904 M. CONFUSA (Hübner)

Pl. XII, Fig. 6, ♀.

Verz. bek. Schmett., p. 243. 1816.

I. Tallahassee: March, JPK. Monticello: March, DPI. II. Gainesville: March, DPI. III. Waccasassa River: March, JGF. Cassadaga: Jan., Feb., SVF. IV. Archbold Biological Station: Jan., YU. Sarasota: Feb., CU. Punta Gorda: Feb., March, CPK., AKW. Food: many kinds of trees, *Vaccinium*.

1904, 1 M. SP.

A new species which is being described by Franclemont. I. Escambia Co.: four April 9, 1961, one May 6, 1962, SMH.

XYLOMYCES Guenée

1917 X. ALTERNANS (Walker)

Pl. XII, Fig. 7, ♂.

List Lep. Ins. Br. Mus. 10: 360. 1856.

I. Escambia Co.: Feb. 1961, SMH. The median and subterminal areas are distinctly green. Monticello: two Feb. 21, 1955, (Phillips), CPK. III. Cassadaga: March 2, 1955, SVF. Food: *Lonicera*.

ORTHOZIA Ochsenheimer

1941 O. ALURINA Smith

J. N. Y. Ent. Soc. 10: 47. 1902.

I. West Pensacola: Feb. 23, 1962, VFG. Quincy: four Feb. 14-20, 1961, (Tappan), det. Franclemont, CPK. Food: choke cherry.

1943 O. HIBISCI (Guenée)

Green fruitworm.

Spec. Gén. 5: 352. 1852.

I. Monticello: Feb. 16, 1955, (Phillips), det. Franclemont, CPK. Larva a general feeder.

CERAMICA Guenée

[1951 *C. picta* (Harris)]

Rept. Ins. Mass., p. 329. 1841.

Felt (1898, p. 204) said: "reported from most of the eastern states from Mass. to Fla." S. A. Forbes (1900, p. 153) said: "distributed from Canada to Florida." However, W. T. M. Forbes (1954, p. 106) had seen no material from south of Virginia. This is another case where confirmation is needed before accepting such a very indefinite record.

XANTHOPASTIS Hübner

1954 X. [TIMAIS (Cramer)]

Spanish moth.

Pap. Exot. 3:148; Pl. 275, Fig. B. 1782.

Though Dyar (1913d, p. 50) provided a key for the separation of the larvae in this complex and assigned specific names to each, it will need much further larval study in order to be sure which species are found in Florida, or indeed to be sure which are valid species and which are mere forms. At present we can report two from Florida, *regatrix* (Grote), below, and a single specimen of the *timais* complex, from St. Peters-

burg in the Pasch collection now at Cornell. In the latter the colors are dull, not bright as in *regnatrix*, and this is a characteristic feature, not the effect of fading. The black area along the lower side of the outer half of the cell is a solid triangle in *regnatrix*, but broken up and spurred in the Pasch specimen, which is characteristic of Antillean and South American species. In addition to *timais*, names given to the latter include *amaryllidis* Sepp and *antillium* Dyar. The food plant of at least one of the three is *Ficus*.

1954, I X. REGNATRIX (Grote)

Pl. IV, Fig. 2, ♂.

Proc. Ent. Soc. Phila. 2: 339. 1863.

This was described from a Pennsylvania specimen, is apparently a valid species, and is the one commonly found in Florida November-May and in September. The larvae were abundant at Cape Romano, November and December 1955, on *Hymenocallis keyensis*. Many of them were reared by Denmark and Weems, the adults emerging during January, DPI. Denmark found larvae on *H. keyensis* on Loggerhead Key, May 1961, and took larvae and adults in January 1962. Phillips likewise reared it at Monticello on *Amaryllis* sp., in September. Hetrick has reported larvae on *Amaryllis* in mid-April at Biven's Arm Lake, with larvae entering partially decayed wood of live oak, with some excavating pupal cells in the corky bark of living live oak on the lake margin at levels four to five feet above ground. Other food plant records, all of which are presumably for this species are: *Hymenocallis rotatum* [*Pancreatium rotatum*], Slosson (1894b, p. 107); Chinese lily, Ins. Pest Surv. Bull. 7: 81; *Narcissus*, *Hymenocallis*, *ibid.* 22: 57.

FARONTA Smith

1960 F. QUADRANNULATA (Morrison)

Proc. Acad. Nat. Sci. Phila. p. 430. 1875.

III. Stemper: Aug. 12-Oct. 2, (Engel), CNC.

1961 F. RUBRIPENNIS (Grote & Robinson)

Trans. Amer. Ent. Soc. 3: 179. 1870.

I. Escambia Co.: two Sept. 13, 1961, SMH. Warrington: two, VFG, WP. Myrtle Grove: Sept. 12, 1961, WJW. III. St. Petersburg: CU; Sept., OB; Sept., Oct., AEB. VI. Florida City: Aug., OB.

LEUCANIA Ochsenheimer

1966 L. EXTINCTA Guenée

Pl. XII, Fig. 8, ♀.

Spec. Gén. 5: 79. 1852.

Extincta is relatively common the length of the peninsula and is also found in the western counties where the form *flabilis* (Grote) has been taken, but there are no records from the Keys. Every month except December. There is one other record for *flabilis*, III. Egmont Key: April 20, 1904 (Ramstedt), det. Dyar, UM.

1970 L. LINITA Guenée

Spec. Gén. 5: 81. 1852.

II. Fernandina: April, AEB, OB. St. Johns Bluff: (Doubleday), BM. III. New Smyrna: Feb., AEB. IV. South Bay: April, AMNH.

[——— *L. ebriosa* Guenée]

Spec. Gén. 5: 74. 1852.

This was reported by Smith (1893, p. 190) as: "Am. Sept., a curious species to be an American insect—If from America at all, it is probably from Florida, of Doubleday material." Hampson (1905, p. 479) said: "Tasmania (not U. S. A.)." The Florida, in fact the North American record, is of course an error.

1972 L. PILIPALPIS (Grote)

Pl. XII, Fig. 9, ♂.

Proc. Boston Soc. Nat. Hist. 18: 415. 1875.

I. West Pensacola: Feb., VFG. Apalachicola: type, MCZ. III. Cassadaga: Feb., SVF. Stemper: June, July, CNC; July, Aug., OB. Lutz: Jan., OB; March, AEB. IV. Bradenton: Feb., CPK. Oneco: April, JGF. Archbold Biological Station: Jan., March, PSU. Port Sewall: Jan., AMNH. Siesta Key: occasional, Nov.-May, CPK. Punta Gorda: Jan., Feb., AKW; Feb., AEB, OB. Palm Beach: MCZ. VI. Florida City: Feb., April, Aug., OB. Larva on grasses—reared at Ithaca, N. Y. from Florida material, by Franclemont on *Dactylis glomerata*.

1977 L. COMMOIDES Guenée

Spec. Gén. 5: 86. 1852.

Florida: March, Smith (1902, p. 197).

[1978 *L. phragmatidicola* Guenée]

Spec. Gén. 5: 89. 1852.

Franclemont believes that the several records given by Grossbeck (1917, p. 60) refer to one of the undescribed species below.

1979 L. SCIRPICOLA Guenée

Pl. XII, Fig. 10, ♀.

Spec. Gén. 5: 84. 1852.

I. Escambia Co.: Feb., SMH. Quincy: Feb.-June, Aug.-Nov., CPK. Monticello: June, DPI. II. Alachua Co.: reared from St. Augustine grass roots, May, DPI. Gainesville: Feb., CPK. III.

Weekiwachee Springs: March, AEB, CPK. Drew Field, Tampa: April, WRB. IV. Bradenton: Feb., April, July, DPI. Archbold Biological Station: Dec.-Feb., PSU; Jan., Feb., YU; June, AKW. Siesta Key: occasional, Jan.-May, CPK. Punta Gorda: Jan., AKW; March, OB. Fort Myers: as *calpota* Smith, Grsb. 60. Bonita Springs: March, OB. V. Chokoloskee: type of *pendens* Smith, AMNH. VI. Homestead: Jan., DPI; May, July, CPK. VIII. Key Largo: Nov., DPI.

1980, 1 L. SP.

This is a new species being described by Franclemont, close to but definitely not *incognita* Barnes & McDunnough. It is apparently relatively common in the Homestead-Florida City area all year, OB, WRB, CPK, AKW. There is one record from Clewiston: April, JGF.

[1981 L. PENDENS Smith]

Can. Ent. 37: 66. 1905.

McDunnough (1943, p. 56) made this, which was reported by Grossbeck (1917, p. 60) a synonym of *scirpicola*, q. v.

[1982 L. multilinea Walker]

List Lep. Ins. Br. Mus. 9: 97. 1856.

Reported from Palm Beach and Miami: Grsb. 60, but Franclemont believes that these belong under *solita* which follows, to *juncicola*, or to *adjuta* below.

1982, 1 L. SOLITA Walker

The determination made by Franclemont, has been verified by Fletcher on comparison of the genitalia with that of the type at the British Museum. III. Tampa: April 5, 1959, GWK. IV. Siesta Key: seventeen Dec.-May, JGF, CPK. VII. Flamingo: Feb., DPI. VIII. Dry Tortugas: July 13, 1960, WMD.

1989 L. JUNCICOLA Guenée

Pl. XII, Fig. 11, ♂.

Spec. Gén. 5: 83. 1852.

The commonest species of the genus in Florida, and being variable, is troublesome to determine; there is also confusion with the next species which superficially is difficult to separate, but quite distinct in both male and female genitalia, according to Franclemont. It is found through the peninsula and Keys all year, but there are no records for the western counties.

1989, 1 L. ADJUTA (Grote)

Bull. Buffalo Soc. Nat. Sci. 2: 158. 1874.

Franclemont has specimens from Oneco, and wrote that there are also specimens in CU and USNM. He thought that it was probably to be

found in the southern two-thirds of the state, but until all the material now placed under *juncicola* can be reviewed, the localities, dates, and depositories must remain uncatalogued.

1991 L. LATIUSCULA Herrich-Schaeffer

Pl. XII, Fig. 12, ♀.

Corresp. Blatt. Regensb. 22: 148. 1868.

The records for *latiuscula* are scattered but cover the state, and every month. Food: sugarcane, Ingram & Jaynes, 1938, Coop. Econ. Ins. Rept. 4: 214.

1991, 1 L. SP.

This species is close to *latiuscula*, with which it is easily confused, and is being described by Franclemont. I. Quincy: July, CPK. IV. Bradenton: Feb., March, (Kelsheimer), CPK. Belle Glade: Feb., (Genung), CPK. VI. Homestead: March, May, (Wolfenbarger), CPK.

1991, 2 L. SP.

This species is also near *latiuscula*, but not so readily confused with it. Possibly it is *inconspicua* Herrich-Schaeffer, but it will need further study to decide the point. If new, Franclemont will describe it. VI. Homestead: Feb., April, Oct., Nov., (Wolfenbarger), CPK. VII. Flamingo: Feb., DPI.

PSEUDALETIA Franclemont

1994 P. UNIPUNCTA (Haworth)

The armyworm. Pl. XII, Fig. 13, ♂.

Lep. Brit., p. 174. 1809.

Though Grossbeck was unable to find any record for this in Florida, it now seems to be quite common all over the state, but never a serious pest, with the exception of Quincy, where there is a record of 796 specimens, September 13, 1960. It has been taken in every month except November. Food: grasses, cereals; milletgrass Coop. Econ. Ins. Rept. 4: 598, 625.

ALETIA Hübner

[1995 A. oxygala luteopallens (Smith)]

Proc. U. S. Natl. Mus. 25: 180. 1902.

There is something mysterious about the Florida record of this species. Among Smith's types for the species was a co-type female, Archer: March 1882, AMNH. The species is definitely northern in its range, and Franclemont does not think it occurs in Florida. However, the Archer specimen has the clear, uniform collar characteristic of *luteopallens*, with no suggestion of the violaceous collar of *juncicola*. Perhaps it is a case of mislabeling.

Subfamily CUCULLIINAE

Rancora Smith[2016 *R. albicinerea* Smith]

Can. Ent. 35: 137. 1903.

Due to confusion of check-list number or other clerical error, a record of this was published Coop. Ins. Pest Surv. 3: 4. Like several other errors, it is untraceable according to Denmark.

CUCULLIA Schrank

2036 *C. ALFARATA* Strecker

Pl. XII, Fig. 14, ♂.

Lep. Rhop. Het. Suppl. 1: 9. 1898.

I. Monticello: Sept. 13, 1955, (Phillips), CPK. II. Gainesville: Aug. 30, 1955, (Morse), det. Franclemont, CPK. St. Augustine: type, CNHM. Wyatt says no date or collector's name is given on the label of the type. Food: aster.

COPANARTA Grote

[2059 *C. aurea* (Grote)]

Bull. U. S. Geol. Geograph. Surv. Territ. 5: 205. 1879.

The occurrence of this in Florida seems very questionable and needs confirmation before it should be accepted as valid. There is no Florida specimen in the American Museum of Natural History collection, though there may be one elsewhere. Florida: (Slosson), Grsb. 57.

LEPIPOLYS Guenée

2063 *L. PERSCRIPTA* Guenée

Pl. XII, Fig. 15, ♂.

Spec. Gén. 6: 174. 1852.

I. Escambia Co.: March, SMH. Quincy: March, April, CPK. II. Gainesville: Feb., Dec., DPI. Island Grove: April, OB; larva on *Linaria canadensis*, Dyar (1903a, p. 292). St. Johns Bluff: (Doubleday), BM. III. DeLand: March, AKW. Sanford: March, DPI. Elfers: April, JGF. Bartow: larva, det. Capps, on citrus, DPI. IV. Bradenton: Feb., March, CPK. Archbold Biological Station: April, YU; Dec., PSU. Fort Pierce: larva, det. Capps, on *Antirrhinum* sp., DPI. Port Sewall: Jan., March, AMNH. Englewood: March, CU. VI. Florida City: April, OB.

ONCOCNEMIS Lederer

2093 *O. SAUNDERSIANA* Grote

Can. Ent. 8: 29. 1876.

I. Escambia Co.: Oct. 18, 1962, det. Forbes, SMH.

HOMOHADENA Grote

2153 *H. INFIXA* (Walker)

List Lep. Ins. Br. Mus. 9: 178. 1856.

Florida: type, (Doubleday), BM. I. Escambia Co.: June 2, 1962, SMH.

FERALIA Grote

2185 *F. MAJOR* Smith

Pl. XII, Fig. 16, ♂.

Ent. Amer. 6: 26. 1890.

I. Escambia Co.: three Feb., Dec. 8, 1961, SMH. Warrington: two, VFG, WP. Quincy: Feb. 1, 1961, (Tappan), det. Franclemont, CPK.

PSAPHIDA Walker

2190 *P. RESUMENS* Walker

Pl. XII, Fig. 17, ♂.

List Lep. Ins. Br. Mus. 32: 448. 1865.

Resumens is found mostly in the form *viridescens* (Walker), but some specimens lack the characteristic green of this, even when fresh. Florida: (Doubleday), Smith (1892, p. 56). I. Escambia Co.: Feb., SMH. Brent: March, VFG. Monticello: Feb., March, DPI, CPK. II. Gainesville: Jan., Feb., DPI. III. Winter Park: March, DPI. Orlando: Feb., WMD; March, CNC. St. Petersburg: Jan., Feb., AKW. IV. Bradenton: Feb., DPI, CPK. Siesta Key: Jan., Feb., CPK. Punta Gorda: March, AKW. Belle Glade: Feb., DPI. Food: maple, oak.

EUTOLYPE Grote

2196 *E. ROLANDI* Grote

Pl. XII, Fig. 18, ♂.

Proc. Acad. Nat. Sci. Phila. 26: 198. 1874.

I. Escambia Co.: March, SMH. Quincy: Feb., DPI. Monticello: Feb., DPI, CPK. II. Alachua Co.: Jan., DPI. Gainesville: Jan., Nov., DPI; Feb., March, CPK. III. Williston: Feb., AKW. Cassadaga: Feb., SVF. Winter Park: Feb., DPI. Orlando: Feb., WMD. St. Petersburg: Jan., Feb., AKW.

COIPANOLIS Grote

2198 *C. STYRACIS* GuenéePl. IV, Fig. 3, form *stigma* (Slosson), ♀.

Spec. Gén. 5: 357. 1852.

Florida: type of form *stigma*, (Slosson), Smith (1890c, p. 220); form *cubilis* Smith ex Edwards coll. OB. I. Escambia Co.: Feb., SMH. III. Cassadaga: Feb. 28, 1955, Feb. 29, 1956, March 12, 1961, SVF. Tarpon Springs: Feb. 1949, det.

Rindge, JLC. IV. Archbold Biological Station: Feb. 6, 1962, (Frost), PSU.

LEMMERIA Barnes & Benjamin

2214 **L. DIGITALIS** (Grote)

Bull. U. S. Geol. Geograph. Surv. Territ. 6: 584. 1882.

III. Cassadaga: Sept. 4, 1951, SVF.

LITHOPHANE Hübner

2258, 1 **L. SP.**

Franclemont has found that this is a new species and is describing it. I. Escambia Co.: March 1961, SMH. Monticello: Jan. 14, 1958, (Phillips), CPK. II. Gainesville: Dec. 27, 1961, (Perry), JGF. III. Lutz: Jan. 1, March 5 and 23, 1916, (Friday), LACM.

CHAETAGLAEA Franclemont

2289 **C. SERICEA** (Morrison)

Proc. Boston Soc. Nat. Hist. 17: 151. 1874.

I. Escambia Co.: Feb., 1961, SMH. II. Gainesville: May 4, 1956, (Denmark), det. Franclemont, DPI. Also reported from Florida: (Slosson), Grsb. 61, but I suspect that this may be an error in determination for one of the many varieties of *tremula*. I have examined the American Museum of Natural History collection in this and the next genus and find only one Florida specimen in this group taken by Slosson. Though the maculation on the forewings of this is practically obsolete, I would certainly determine it as *tremula* rather than *sericea* or *Epiglaea apiata*, below.

2290 **C. TREMULA** (Harvey)

Pl. XII, Fig. 19, ♀; Fig. 20, aberrant ♂.
Bull. Buffalo Soc. Nat. Sci. 2: 276. 1874.

It is odd that the records are so limited as it is so abundant at Titusville, Siesta Key, and Punta Gorda. It exhibits a bewildering range of variation. I. Escambia Co.: Jan., Feb., Nov., SMH. Warrington: VFG. II. Alachua Co.: Jan., DPI. Gainesville: Feb., March, DPI. III. Cassadaga: Jan., Feb., SVF. Weekiwachee Springs: April, CPK. Titusville: Jan., Feb., JGF; Nov.-Feb., CNC. IV. Bradenton: Feb., CPK. Archbold Biological Station: Jan., Feb., YU; Dec., PSU. Siesta Key: Jan., Feb., CPK. Punta Gorda: Jan-March, CPK, AKW.

EPIGLAEA Grote

[2294 *E. apiata* (Grote)]

Rept. Peabody Acad. Sci. 6: 30. 1874.

Florida: (Slosson), Grsb. 61. This looks like another misdetermination for *C. tremula*, as it is primarily a cranberry feeder, though reported from blueberry. Forbes (1954, p. 153) limits the southern range to Washington, D. C. See also the note on *C. sericea* above.

METAXAGLAEA Franclemont

2297 **M. [VIATICA]** (Grote)

Pl. XII, Fig. 21, ♀.

Rept. Peabody Acad. Sci. 6: 29. 1874.

Franclemont thinks that Florida specimens quite probably represent a new species. I. Escambia Co.: Feb. 1, 1962, Nov. 11, 1961, SMH. Quincy: Jan. 23, 1962, Dec. 8, 1960, (Tappan), CPK. Monticello: Dec. 17, 1955, (Phillips), det. Franclemont, DPI. IV. Archbold Biological Station: Dec. 28, 1958, (Frost), det. Franclemont, PSU. Punta Gorda: Jan., Feb., AKW.

PYREFERRA Franclemont

2299 **P. HESPERIDAGO** (Guenée)

Spec. Gén. 7: 393. 1852.

I. Escambia Co.: Feb., SMH. Warrington: Feb. 15, 1961, VFG. Food: *Hamamelis*.

2302 **P. CEROMATICA** (Grote)

Bull. Buffalo Soc. Nat. Sci. 2: 70. 1874.

I. Escambia Co.: Jan. 30, 1962, SMH.

XYSTOPEPLUS Franclemont

2308 **X. RUFAGO** (Hübner)

Pl. XII, Fig. 22, ♂.

Zutr. exot. Schmett. 1; Pl. 15, Figs. 61, 62. 1818.

I. Escambia Co.: Feb., March, SMH. Quincy: Feb., CPK. Monticello: Jan., Feb., DPI, CPK. II. Alachua Co.: Jan., DPI. Gainesville: Feb., March, DPI, CPK. Lake Geneva: March, HEW. III. Cassadaga: Feb., SVF. Orlando: Jan., WMD. IV. Rye: MCZ. Siesta Key: Feb., CPK. Food: presumably oak and reported on willow.

SUNIRA Franclemont

2312 **S. BICOLORAGO** (Guenée)

Spec. Gén. 5: 397. 1852.

All are the form *ferrugineoides* (Guenée). I. Escambia Co.: Nov. 11, 1961, SMH. Quincy: six Nov. 19-Dec. 1, 1962, (Tappan), CPK.

EUCIRRHOEDIA Grote

2321 **E. PAMPINA** (Guenée)

Spec. Gén. 5: 402. 1852.

Florida: Forbes (1954, p. 156). Food: choke-cherry, black cherry.

Subfamily AMPHIPYRINAE

OLIGIA Hübner

2426 O. FRACTILINEA (Grote)

Lined stalk borer.

Can. Ent. 6: 15. 1874.

III. Stemper: AEB. Lutz: Feb. 21, 1916 (Friday), HEW. IV. Oneco: June 13, 1954, (Dillman), CPK. VI. Florida City: June 14, 1935, AEB. The Lutz and Oneco specimens are a red brown form or subspecies close to *una* (Strecker), according to Franclemont. Food: coarse grasses, timothy, corn.

ARCHANARA Walker

2439 A. OBLONGA (Grote)

Papilio 2: 96. 1882.

II. Gainesville: Nov., DPI. Fernandina: April, HEW. Jacksonville: Sept., SIM. III. Weekiwachee Springs: April, CPK. Indian River: Smith (1893, p. 182). IV. Oneco: April, JGF. Siesta Key: Dec., CPK. Fort Lauderdale: April, UM. South Miami: Aug., HEW. VI. Florida City: April, SVF; April, May, JGF. Food: cattail.

[2440 *A. subflava* (Grote)]

Papilio 2: 95. 1882.

Larvae reported tying leaves of *Typha latifolia*, with 100% infestation near Everglades, Feb. 28, 1930, Cole (1931, p. 10). I suspect some error in the determination of the larvae as the species is not supposed to range south of New Jersey, nor is it supposed to feed on cattail.

HYPOCOENA Hampson

[2452, 1 *H.*] SP.

I. Escambia Co.: May 25, 1962, det. Todd as this genus with a "?, " SMH.

PAPAPEMA Smith

2480 P. STENOSCELIS (Dyar)

J. N. Y. Ent. Soc. 15: 52. 1907.

II. Fernandina: Aug. 28, OB. Food: *Woodwardia*.

2482 P. SPECIOSISSIMA (Grote & Robinson)

Trans. Amer. Ent. Soc. 1: 342. 1868.

II. Alachua Co.: Oct. 23, 1956, (Denmark), DPI. Gainesville: July 7, 1938, (Merrill), DPI. III.

Cassadaga: Feb. 2, 1955, SVF. VI. Homestead: DPI, (this is probably the aberration *regalis* Wyatt & Beer, but is a little too rubbed to be sure); Jan. 30, (Jones), HB. Paradise Key: May 4, 1947, (R. T. Bird), HB. VIII. Key Largo: March 27, 1957, SVF. Food: *Osmunda*.

2499 P. POLYMNIAE Bird

Can. Ent. 49: 121. 1917.

IV. Siesta Key: Dec. 5, 1952, Dec. 15, 1955, det. Buchholz, CPK. Food: *Aralia*.

EUPLEXIA Stephens

2533 E. BENESIMILIS McDunnough

Can. Ent. 54: 238. 1922.

IV. Archbold Biological Station: Sept. 16, 1960, (Pease), det. Franclemont, ABS.

CALLOPISTRIA Hübner

2538 C. FLORIDENSIS (Guenée)

Florida fern caterpillar. Pl. XII, Fig. 23, ♀. Spec. Gén. 6: 292. 1852.

Floridensis occurs all over the state, and is on the wing all year. Food: ferns, DPI.

HAPLOLOPHUS Butler

2539 H. MOLLISSIMA (Guenée)

Pl. XII, Fig. 24, ♀.

Spec. Gén. 6: 294. 1852.

Florida: (Maynard, Slosson), Morrison (1875, p. 65). I. Warrington: June, VFG. II. Gainesville: April 15, 1925, UM. III. Weekiwachee Springs: April, CPK. Orlando: March, DPI. IV. Archbold Biological Station: Feb., March, PSU. Punta Gorda: March, AKW. Food: fern.

EUHERRICHIA Grote

2540 E. MONETIFERA (Guenée)

Pl. IV, Fig. 4, ♀.

Spec. Gén. 6: 295. 1852.

This occurs as typical *monetifera* and *cordata* (Ljung), with intergrades, the hind wing varying in shades of red. I. Escambia Co.: May, SMH. Myrtle Grove: June, WJW. II. Gainesville: April, UFA. III. Cassadaga: March, SVF. Weekiwachee Springs: May, CPK. Pinecastle: June, AMNH. Lutz: March, CWK; March-May, HEW. Stemper: June-Sept., CNC. St. Petersburg: March, AKW. Lakeland: May, AMNH. IV. Oneco: March, JGF. Archbold Biological Station: Feb., PSU; March, April, YU. Siesta Key: April, CPK. Punta Gorda: March, CPK, AKW. Food: fern.

2542 E. GRANITOSA (Guenée)

Pl. IV, Fig. 5, ♀.
Spec. Gén. 6: 295. 1852.

These are all probably the southern subspecies *argentina* (Walker), with the chocolate brown hind wing. I. Escambia Co.: May, SMH. Myrtle Grove: June, WJW. Apalachicola: (Chapman), Grote (1876, p. 415). II. Fernandina: Aug., OB. III. Cassadaga: July, Aug., SVF. Weekiwachee Springs: April, CPK. Stemper: AEB; Aug., CNC; Sept., Nov., AKW. Lutz: AEB. St. Petersburg: March, AKW. Lakeland: May, AMNH. IV. Oneco: March, JGF. Archbold Biological Station: March, PSU; April, YU; June, AKW; July, AMNH. Port Sewall: March, AMNH. Siesta Key: March, CPK. Hillsboro: Aug., AEB.

FAGITANA Walker**2543 F. LITTERA** (Guenée)

Pl. XII, Fig. 25, ♂.
Spec. Gén. 5: 71. 1852.

Florida: (Slosson), AMNH; (Doubleday), BM; (Maynard), Morrison (1875, p. 65). I. Myrtle Grove: May 26, 1963, WJW. IV. Oneco: March 20, 1957, JGF. This does not match typical northern specimens in coloration. Archbold Biological Station: March 17, 1961, (Frost), PSU; March 27, 1959, JGF; May 17, 1958, (Pease), YU. Food: marsh fern.

PHUPHENA Walker**2544 P. U-ALBUM** (Guenée)

Pl. IV, Fig. 6, ♀.
Spec. Gén. 5: 345. 1852.

Where it occurs in Florida, it seems to be relatively common. I. Warrington: May, VFG. Quincy: Sept., CPK. Monticello: Feb., March, DPI. II. Gainesville: Feb.-April, CPK; Oct., DPI. III. Central Florida: Aug., WMD. Cassadaga: Feb., July, Nov., SVF. Weekiwachee Springs: March-June, AEB, CPK. Lutz: March, OB. Stemper: June, July, CNC. IV. Bradenton: Feb.-April, July, CPK. Oneco: March, April, JGF; May, CPK. Archbold Biological Station: Dec.-Feb., April, YU; March, Nov., Dec., PSU; June, AKW; Dec., CU. Port Sewall: Dec.-Feb., AMNH. Charlotte Harbor: (Slosson), Grsb. 61. Punta Gorda: Feb., AKW. VI. Homestead: July, Sept., CPK. Paradise Key: March, FMJ. VIII. Key West: Smith (1899a, p. 15).

2544, 1 P. TURA (Druce)

Biol. Cent. Amer. Het. 1: 291. 1881.

There is some question as to whether this and

obliqua (Smith) are distinct species. Franclemont has been unable to find any differences between the two. If that is correct, then all records for *obliqua* belong here. The "complex" is fairly common south of the line Stemper-Port Sewall, with the records covering every month except November.

2545 P. OBLIQUA (Smith)

Pl. XII, Fig. 26, ♂.
J. N. Y. Ent. Soc. 8: 174. 1900.

As noted under *tura* above, this is probably no more than a synonym of that species, and is so treated here. For records refer to *tura*.

PHOSPILA Hübner**2548 P. TURBULENTA** Hübner

Pl. XII, Fig. 27, ♂.
Zutr. exot. Schmett; Pl. 15, Figs. 67, 68. 1820.

I. Escambia Co.: March, SMH. Quincy: March, CPK. Monticello: Feb., CPK; March, CU. II. Gainesville: Feb., DPI. III. Cassadaga: Feb.-April, Sept., Oct., SVF. Weekiwachee Springs: March, AEB. IV. Bradenton: March, CPK. Archbold Biological Station: April, Dec., YU. Siesta Key: Jan., Feb., CPK. VI. Homestead: May, CPK. Food: smilax.

2549 P. MISELIOIDES (Guenée)

Pl. XII, Fig. 28, ♀.
Spec. Gén. 6: 89. 1852.

Forms *miscella* Smith and *macerata* Smith occasionally occur. I. Escambia Co.: March, SMH. West Pensacola: July, VFG. Warrington: summer, WP. Quincy: June-Sept., CPK. Monticello: March, DPI; Oct., UFES. II. Gainesville: April, DPI. St. Johns Bluff: (Doubleday), BM. Jacksonville: March, HEW. III. Cassadaga: June, SVF. Orlando: March, CNC; April, DPI. Stemper: June-Aug., CNC. St. Petersburg: April, AKW. IV. Oneco: June, CPK. Archbold Biological Station: April, YU. Siesta Key: Feb., March, May, June, CPK. Punta Gorda: Jan.-April, CPK; Jan., March, Dec., AKW. Dade Co.: Aug., HFS. VI. Homestead: Nov., CPK. Florida City: May, June, HEW. Food: smilax; oak, in hammocks, Dozier (1920, p. 377).

SPEOCROPIA Hampson**2550, 1 S. TRICHROMA** (Herrich-Schaeffer)

Corresp. Blatt. Regensb. 22: 116. 1868.

VIII. Tavernier: five Oct. 21-24, 1955, (J. N. Todd), det. Franclemont, JGF, CPK.

CHYTONIX Grote

2554 *C. PALLIATRICULA IASPIS* (Guenée)
Pl. XII, Fig. 29, normal ♀; Fig. 30, form *iaspis*,
♂.
Spec. Gén. 5: 26. 1852.

I. Escambia Co.: April 9, July 10, 1961, SMH.
Monticello: April 19, 1961, (Phillips), CPK. III.
Cassadaga: four Oct., Nov., 1953, SVF.

2555 *C. SENSILIS* Grote

Pl. XII, Fig. 31, ♀.
Papilio 1: 49. 1881.

The fall specimens from Cassadaga, all females, are very beautifully marked and probably represent a Florida subspecies. I. West Pensacola: Oct. 21, 1961, VFG. III. Cassadaga: two April, Aug. 1953, Oct. 10, 1962, Oct. 31, 1953, Nov. 3, 1954, det. Franclemont, SVF.

CERMA Hübner

2559 *C. CORA* Hübner

Zutr. exot. Schmett. 1: 14; Figs. 59, 60. 1818.
I. Escambia Co.: two April, 1961, SMH. Food:
pin cherry.

[2569, 1 *C.*] SP.

I. Escambia Co.: Oct. 7, 1961, det. Todd as a new species in either *Cerma* or *Paramiana* Barnes & McDunnough, SMH.

CYATHISSA Grote

2571 *C. PERCARA* (Morrison)

Pl. IV, Fig. 7, ♂.
Proc. Boston Soc. Nat. Hist. 17: 213. 1874.

Florida: (Slosson), Grsb. 54. I. Escambia Co.: April, May, Aug., SMH. Quincy: three, form *ochracea* Smith, Aug. 9-23, 1960, (Tappan), CPK. Tallahassee: April 10, Grote (1876, p. 415). II. Old Town: April 7, 1954, AKW. Gainesville: March 30, 1924, UM.

POLYGRAMMATE Hübner

2574 *P. HEBRAEICUM* Hübner

Pl. XII, Fig. 32, ♂.
Zutr. exot. Schmett. 1: 10; Figs. 25, 26. 1818.

I. Escambia Co.: March, SMH. Warrington: occasional, summer, VFG. Quincy: March, May, July-Sept., CPK. Monticello: June, Sept., DPI. II. Alachua Co.: May, June, Sept., DPI. Gainesville: April, UFA, UFES. III. Cassadaga: March, April, SVF. Weekiwachee Springs: March, AEB; March-May, Aug., CPK. Orange

Co.: April, Sept., DPI. Lutz: April, HEW. Stemper: July-Sept., CNC. IV. Oneco: March, April, JGF; June, CPK. Archbold Biological Station: Feb., PSU; June, AKW; Aug., YU. Belle Glade: Aug., DPI. VII. Flamingo: April, DPI. Food: *Nyssa sylvatica*.

LEUCONYCTA Hampson

2576 *L. DIPHTEROIDES* (Guenée)

Pl. XII, Fig. 33, ♂.
Spec. Gén. 5: 34. 1852.

The specimens are in the form *obliterata* (Grote). I. West Pensacola: May 23, 1961, VFG. Ensley: April 4, 1961, VFG. Monticello: April 4, 1961, (Phillips), CPK. III. Cassadaga: Feb. 21, 1949, SVF. Food: *Solidago*.

AGRIOPODES Hampson

2578 *A. FALLAX* (Herrich-Schaeffer)

Pl. XII, Fig. 34, ♀.
Samml. aussereur. Schmett., p. 80; Fig. 211.
1853.

I. Escambia Co.: May, SMH. Warrington: VFG. II. Alachua Co.: March, Oct., DPI. III. Hillsborough Co.: Aug., UM. IV. Oneco: March, JGF. Archbold Biological Station: Nov., PSU. Punta Gorda: Feb., March, OB; Feb.-April, CPK, AKW. Food: *Viburnum*.

2582 *A. TERATOPHORA* (Herrich-Schaeffer)

Samml. aussereur. Schmett., p. 80, Fig. 213.
1853.

Florida: (Doubleday), BM. Food: *Monarda*, *Mentha*.

AMPHIPYRA Ochsenheimer

[2535 *A. tragopoginis* (Linnaeus)]

Faun. Suec., p. 316. 1761.

IV. Lake Worth: (Slosson), Dyar (1901a, p. 456). As Dyar did not see the specimen, and as Forbes (1954, p. 265) gave the southern limit of range as Pennsylvania, this needs confirmation. There is no Florida specimen in the American Museum of Natural History, though there are two Slosson specimens from New Hampshire. Food: hawthorn, plantain, columbine.

DIPTERYGIA Stephens

2587 *D. SCABRIUSCULA* (Linnaeus)

Pl. XII, Fig. 35, ♀.
Syst. Nat. 1: 516. 1758.

III. Egmont Key: "6.1." (Ramstedt), CNC. Food: *Rumex*, *Polygonum*.

2588 D. PATINA (Harvey)

Pl. XII, Fig. 36, ♂.
Bull. Buffalo Soc. Nat. Sci. 3: 7. 1875.

Florida: Slosson, Grsb. 56, which is probably the same specimen mentioned by Dyar, (1908a, p. 32). I. Escambia Co.: July, SMH. Quincy: Feb., June-Nov., CPK. Monticello: Feb., March, Sept., CPK. II. Gainesville: Nov., DPI. III. Cassadaga: April, Oct., SVF. Stemper: Sept., CNC. Egmont Key: May, CNC. IV. Bradenton: March, Oct., CPK. Archbold Biological Station: Feb., PSU; Sept., YU. Port Sewall: Feb., AMNH. Siesta Key: Jan.-March, CPK. VI. Homestead: Jan., Dec., DPI; May, Sept., Oct., CPK. Florida City: May-Aug., OB. Paradise Key: March, FMJ; June, HFS. It is possible that some of the records under VI belong to the undescribed species below, but *patina* is certainly found at Homestead and is the commoner of the two. Forbes (1954, p. 222) says Needham found the larva feeding on *Polygala cumilicola* [*Asemeia cumilicola*].

2588, 1 D. SP.

Very close to *patina* but distinct. Franclemont is describing it. VI. Homestead: Sept. 25, 1958, (Wolfenbarger), CPK. Florida City: May 8, 1937, June 17, 1938, (Forsyth), AMNH; June 1, Aug. 12, 1937 (Forsyth), JGF.

NEDRA Clarke**2589 N. RAMOSULA** (Guenée)

Pl. XII, Fig. 37, ♀.
Spec. Gén. 6: 114. 1852.

I. Escambia Co.: Feb., SMH. Warrington: April, VFG. Quincy: three Feb., one each June, July, Sept., (Tappan), CPK. Monticello: two Feb., March, (Phillips), DPI, CPK. II. Gainesville: March 15, 1925, (Bates), Clarke (1940b, p. 43); four March, UM. III. DeLand: March, AKW.

ANDROPOLIA Grote

[2596 *A. contacta* (Walker)]

List Lep. Ins. Br. Mus. 9: 58. 1856.

Reported from Florida: (Slosson), Grsb. 55 as form *pulverulenta* (Smith), but since this is essentially a western species with the eastern records only from the Adirondacks and White Mountains, the record should be duplicated before being validated. There is no Florida specimen, in fact no Slosson specimen in the American Museum of Natural History.

PERIGEA Guenée**2610 P. XANTHIOIDES** Guenée

Pied groundling. Pl. XIII, Fig. 4, ♀.
Spec. Gén. 5: 227. 1852.

Florida: July, CNC. I. Escambia Co.: May, SMH. Warrington: WP. Myrtle Grove: Aug., WJW. Monticello: June, CPK. II. Gainesville: May, CPK. III. Stemper: April, CMNH. Egmont Key: April, UM. IV. Charlotte Harbor: (Slosson), Grsb. 55. Punta Gorda: Jan.-March, AKW. Loxahatchee: Oct., UM. Fort Lauderdale: March-May, July, Dec., UM. VI. Florida City: May, OB. VIII. Tavernier: Oct., CPK. Food: *Vernonia*, *Eupatorium purpureum*.

CONDICA Walker**2611 C. CUPENTIA** (Cramer)

Pl. XIII, Fig. 1, ♂.
Pap. Exot. 3: 103; Pl. 252, Fig. E. 1782.

Two species have been confused under the name *cupentia*. The only sure records for this species, which is more or less uniformly dark, follow, but it is probable there are many more mixed with those for the next species. I. Quincy: one each, Oct., Nov., CPK. II. Gainesville: Feb., Dec., DPI. Callahan: Aug., GWK. III. Cassadaga: Oct., SVF. Sanford: Feb., CPK. Weeki-wachee Springs: Aug., CPK. Lutz: Nov., HEW. IV. Bradenton: Sept., CPK. Oneco: April, JGF; June-Aug., CPK. Archbold Biological Station: Jan., PSU. Siesta Key: Feb., Nov., CPK. Sanibel Island: March, OB. VI. Homestead: Dec.-Feb., CPK. VIII. Tavernier: Oct., DPI.

2611, 1 C. SP.

Pl. XIII, Fig. 2, ♂.

Franclemont thinks the name *confederata* (Grote) applies to this species which is more contrasting in color and is relatively common, both in Florida and northward. Inasmuch as there are good records from Pensacola to Homestead, it is probably found throughout the state, flying nearly the whole year. Food: *Bidens*.

PLATYSENTA Grote

There has been a lot of confusion in this genus as far as Florida is concerned and it is a long way from being straightened out.

2613 P. VIDENS (Guenée)

Pl. XIII, Fig. 3, ♀.
Spec. Gén. 5: 78. 1852.

Fairly common through the peninsula and western counties. Most specimens could be referred

to the form *albipuncta* Smith. Taken January-November. Food: *Solidago*.

2617 P. APAMEOIDES (Guenée)

Pl. XIII, Fig. 5, ♂.

Spec. Gén. 5: 229. 1852.

Apameoides is a very common and variable species, the color ranging from brick red, *icole* (Grote), to the typical coppery bronze, to greenish bronze, all with or without the white in the reniform. It is found all over the state the year round. I. Quincy: May-Dec., no peak. IV. Bradenton: Dec.-Oct. VI. Homestead: Feb.-Nov., abundant April-June and again Aug.-Oct.

[2619, 1 *P. punctifera* (Walker)]

List Lep. Ins. Br. Mus. 10: 263. 1856.

Recorded from Florida: Dyar (1902, p. 111), but Hampson (1908, p. 341) said, "The locality U. S. A. is a mistake." However, as he does record it from the Bahamas, it should be looked for.

2619, 2 P. HYPOCRITICA (Dyar)

J. N. Y. Ent. Soc. 15: 109. 1907.

V. Marco: AMNH. This may be one of those suspect Chokoloskee specimens, or it may refer to *selenosa* (Guenée) below. It was described from Bolivia and Mexico.

[2619, 3 *P. selenosa* (Guenée)]

Spec. Gén. 5: 228. 1852.

Reported from: IV. Lake Worth: (Slosson), Grsb. 55, but inasmuch as Grossbeck called *vecors* (Guenée) a synonym of this, the record may belong under the latter, or in Franclemont's opinion possibly to *albigera* (Guenée). In *selenosa*, the white discal spot is large; in *vecors* it is almost obsolete.

2620 P. VECORS (Guenée)

Pl. XIII, Fig. 6, ♂.

Spec. Gén. 5: 230. 1852.

Florida: July, CNC. I. Escambia Co.: Feb., SMH. Myrtle Grove: Oct., WJW. Quincy: March, CPK. III. Central Florida: Aug., WMD. Cassadaga: July, SVF. IV. Oneco: July, Oct., CPK. Siesta Key: Jan., May, CPK. Punta Gorda: Feb., AKW. VI. Homestead: March, Nov., CPK. Food: lettuce.

2622 P. CONCISA (Walker)

Pl. XIII, Fig. 7, ♂.

List Lep. Ins. Br. Mus. 9: 191. 1856.

This is not uncommon south of Bradenton-Vero

Beach. Taken every month. Food: *Bidens pilosa*, DPI.

2623 P. SUTOR (Guenée)

Pl. IV, Fig. 8, ♀.

Spec. Gén. 5: 231. 1852.

Probably found all over the state all year. I. Quincy: May-Dec., small peak in Sept. IV. Bradenton: Feb., June-Nov. VI. Homestead: Feb., April-Nov., peak in May and July-Oct. Food: celery, J. Econ. Ent. 23: 644; *Wedelia*, *Tagetes* sp., DPI.

2623, 1 P. CERVINA (Smith)

Pl. IV, Fig. 9, ♂.

Proc. U. S. Natl. Mus. 22: 475. 1900.

Franclemont found this to be a good species. It is slightly larger and redder than *sutor*; the male has a white hind wing with infusate margin. Some of the records may be confused with the commoner *sutor*, but only one valid record has come to light from north of St. Petersburg, none from the east coast. Florida: type, Smith. I. Quincy: Feb., det. Franclemont, CPK. III. St. Petersburg: April, AKW. IV. Bradenton: April, July, CPK. Oneco: March, April, JGF; Aug., CPK. Siesta Key: occasional, Nov.-April, CPK. VI. Homestead: Feb., March-Sept., CPK. Florida City: April, June, AKW; March-Aug., OB; July, HEW. Paradise Key: Jan.-April, FMJ.

2625 P. ALBIGERA (Guenée)

Pl. XIII, Fig. 8, ♀.

Spec. Gén. 5: 228. 1852.

IV. Ochopee: April, CPK. VI. Homestead: April, CPK. Florida City: JGF. VIII. Key Largo: Jan., SVF; March, OB; May, (Weems), DPI. Tavernier: four Aug.-Oct., det. Franclemont, DPI, CPK. Plantation Key: Nov., DPI.

2625, 1 P. SP.

IV. Biscayne Bay: (Slosson), det. Smith as "Not of our fauna," AMNH. The specimen looks to me very much like *albigera* above.

NEPERIGEA McDunnough

2635 N. TAPETA (Smith)

Pl. XIII, Fig. 15, ♂.

Proc. U. S. Natl. Mus. 22: 467. 1900.

I. Myrtle Grove: May, WJW. III. Cassadaga: May, SVF. Weekiwachee Springs: May, CPK. IV. Oneco: March, JGF; May, CPK. Siesta Key: Nov., CPK. Punta Gorda: March, OB. Coconut Grove: type, Smith. VI. Florida City: May, OB.

ELAPHRIA Hübner

2642 E. FUSCIMACULA (Grote)

Pl. XIII, Fig. 9, ♂.
Bull. U. S. Geol. Geograph. Surv. Territ. 6: 262.
1881.

I. Warrington: WP. Quincy: not rare, Aug.-Nov. Not uncommon from Stemper-Rockledge south, in all months, but no records between Quincy and Stemper.

2643 E. NUCICOLORA (Guenée)

Pl. XIII, Fig. 10, ♂.
Spec. Gén. 5: 241. 1852.

Nucicolora is perhaps more common than the last species and ranges slightly farther north, to Weekiwachee Springs and Hastings, but again there is a gap until we get back to Quincy where it is frequent, March, June, August-December. There is one September record from Myrtle Grove, WJW. The paler form *clara* (Harvey) also occurs. This species is present throughout the year. IV. Bradenton: Jan., April-July, Sept., Oct., Dec. VI. Homestead: March, May-Nov., peak in Oct. Food: sugarcane, Ingram & Jaynes, 1938.

2644 E. AGROTINA (Guenée)

Pl. XIII, Fig. 11, ♂.
Spec. Gén. 5: 221. 1852.

Agrotina is probably quite common in Dade and Monroe Counties, but some of the records may be mixed among those for *chalcedonia* with which it might be confused. The records include all months except November. It has been taken on the Dry Tortugas. Outside of these two counties, there are only two locality records: IV. Bradenton: April, Dec., CPK. Archbold Biological Station: Dec., PSU. VI. Homestead: April-Oct., very abundant May-July 1958, scarce throughout 1959.

2645 E. VERSICOLOR (Grote)

Pl. XIII, Fig. 12, ♂.
Proc. Acad. Nat. Sci. Phila., p. 204. 1874.

I. Escambia Co.: March, SMH. Warrington: WP. III. Cassadaga: May, SVF. Weekiwachee Springs: May, Aug., CPK. St. Petersburg: April, AKW. IV. Oneco: June, CPK. Archbold Biological Station: Jan., Feb., PSU; Feb., YU; June, AKW. Punta Gorda: Jan., CGM, AKW; Dec., AKW. Food: pine, spruce, fir.

2646 E. CHALCEDONIA (Hübner)

Pl. XIII, Fig. 13, ♂.
Samml. eur. Schmett.; Fig. 404. 1808.

Chalcedonia is common all over the state the entire year. I. Quincy: June-Nov., but not common. IV. Bradenton: Jan., March, April, Aug., Sept. VI. Homestead: April-June, Aug.-Oct., peaks in May, June, and Oct.

2647 E. FESTIVOIDES (Guenée)

Pl. XIII, Fig. 14, ♀.
Spec. Gén. 5: 220. 1852.

The form *varia* (Walker) and the ab. *albovariegata* (Strand), along with intergrades, are also present. I. Escambia Co.: March, SMH. Quincy: March, April, Oct., Nov., CPK. II. Old Town: March, CPK. Lake Geneva: March, HEW. III. Cassadaga: March, SVF. Weekiwachee Springs: March, Aug., CPK. Stemper: June, July, HEW. IV. Archbold Biological Station: Jan., March, Nov., PSU. Vero Beach: April, DPI. Punta Gorda: Feb., March, CPK, AKW. VI. Homestead: Jan., DPI; May-Oct., CPK. Florida City: June, HEW.

2647, 1 E. GEORGEI Moore & Rawson

Occasional Papers Museum Zool. Univ. Mich.
No. 395. 1939.

This is another surprising record, the species being distinctly northern. I. Escambia Co.: March 25, 1962, SMH. II. Boulogne: April 1, 1936, JGF.

2648 E. EXESA (Guenée)

Pl. XIII, Fig. 16, ♂.
Spec. Gén. 5: 222. 1852.

Florida: (Doubleday), BM. I. Escambia Co.: March, SMH. Myrtle Grove: Sept., WJW. Apalachicola: (Thaxter), MCZ. Quincy: Sept., CPK. II. Gainesville: April, DPI. III. Central Florida: March, WMD. Enterprise: Hampson (1909, p. 484). Weekiwachee Springs: April-June, CPK. Stemper: June, CNC; June, Sept., OB; July, AKW; Aug., Sept., AEB. Egmont Key: May, AKW. IV. Rye: CNC. Oneco: March, April, JGF; Aug., CPK. Archbold Biological Station: Jan., PSU. Siesta Key: rare, Dec.-March, May, June, CPK. Punta Gorda: Feb., March, CPK; Dec.-March, AKW. Bonita Springs: March, OB. South Bay: April, SIM. VI. Homestead: May, Aug., CPK. Florida City: June-Sept., OB. Paradise Key: Jan., March, FMJ.

2650 E. GRATA Hübner

Pl. XIII, Fig. 17, ♂.
Zutr. exot. Schmett.; Pl. 16, Figs. 71, 72. 1827.

I. Escambia Co.: Feb., March, SMH. Quincy: March, July, Oct., CPK. Monticello: March, CPK. III. St. Petersburg: CU. Food: violets.

ANORTHODES Smith

2651 A. TARDA (Guenée)

Pl. XIII, Fig. 18, ♂.
Spec. Gén. 5: 243. 1852.

I. Escambia Co.: April 2, 1961, SMH. II. Archer: May 24, Smith (1891a, p. 115). Gainesville: two Sept. 7, 1956, (Denmark), det. Todd, DPI.

GONODES Hampson

2665 G. LIQUIDA (Moeschler)

Pl. XIII, Fig. 19, ♂.
Abhandl. Senck. Naturf. 14: 48. 1886.

III. Weekiwachee Springs: Aug., CPK. Winter Park: Oct., DPI. Titusville: Jan., AKW. Elfers: April, JGF. Stemper: Feb., CNC; May, OB; Sept., Dyar (1912a, p. 105). IV. Oneco: March, April, JGF. Archbold Biological Station: Jan., PSU; April, YU. Port Sewall: Jan., Feb., AMNH. Sarasota: March, June, CPK. Siesta Key: Jan., March, Nov., CPK. Punta Gorda: Feb., March, AKW. VI. Florida City: June-Sept., OB Paradise Key: Jan., FMJ.

GALGULA Guenée

2666 G. PARTITA Guenée

Pl. IV, Fig. 10, ♂; Fig. 11, ♀.
Spec. Gén. 6: 239. 1852.

Partita is common throughout the state, showing the full range of color variation from the light, liver colored males to the dark red, almost black, females. It is present every month. I. Quincy: Feb.-Dec. IV. Bradenton: Jan.-May, Aug.-Oct. VI. Homestead: Jan.-Nov., always common, but with high peak in May.

MICRATHETIS Hampson

2667 M. TRIPLEX (Walker)

Pl. XIII, Fig. 20, ♂.
List Lep. Ins. Br. Mus. 11: 721. 1857.

Listed by Grossbeck (1917, p. 54), as *Caradrina spilomela* (Walker). Outside of Dade and Monroe Counties (including the Dry Tortugas), in both of which it is common and taken in every month, the only records are: IV. Port Sewall: Jan., Feb., (Sanford), AMNH. Siesta Key: rare, May, June, Nov., CPK. It is quite variable and all the named forms, plus intergrades, occur.

BALSA Walker

2669 B. MALANA (Fitch)

1st & 2nd Rept. Insects N. Y., p. 244; Pl. 3, Fig. 5. 1856.

I. Quincy: June 30, 1958, April 2, 1959, (Tappan), DPI. Food: apple.

2671 B. LABECULA (Grote)

Can. Ent. 12: 217. 1880.

I. Escambia Co.: April 6, 1962, SMH.

PRODENIA Guenée

2677 P. DOLICHOS (Fabricius)

Ent. Syst. 3(2): 95. 1794.

Dolichos is quite common, probably throughout the state, certainly throughout the year. A general feeder; strawberry plants, Coop. Econ. Ins. Rept. 4: 100; sweet potatoes, Ins. Pest Surv. Bull. 5: 193.

2677, 1 P. PULCHELLA (Herrich-Schaeffer)

Corresp. Blatt. Regensb. 22: 116. 1868.

Pulchella is possibly overlooked because of its similarity to *dolichos*. IV. Siesta Key: Jan. 28, 1952, det. Franclemont, Dec. 10, 1952, CPK; two Dec. 26-29, 1957, JGF.

2678 P. ORNITHOGALLI Guenée

Yellow-striped armyworm, cotton cutworm.

Pl. IV, Fig. 18, ♀.
Spec. Gén. 5: 163. 1852.

Ornithogalli is common throughout, probably the year round. The females of this and *latifascia* Walker are easily confused. Food: many kinds of wild plants, Crumb (1927, p. 51); tobacco seeds, (Coop. Ins. Pest Surv. Bull. 14: 176); castor beans, Watson (1919c); cotton bolls, Bull. 27, New Series, U. S. Dept. Agr. Div. Ent., "Insects injurious to violets," etc., p. 64 (1901); sweet potatoes, Fla. Agr. Expt. Sta. Bull. 322: 93; beets *ibid.*, p. 34; corn *ibid.*, p. 59.

2680 P. LATIFASCIA Walker

Pl. IV, Fig. 17, ♀; Fig. 19, ♂.
List Lep. Ins. Br. Mus. 9: 195. 1856.

Although not recorded in Florida until 1922, Mason (1922, p. 43), it is now common from Pensacola to the Dry Tortugas, and is on the wing all year. I. Quincy: Feb., Aug.-Dec., not common. IV. Bradenton: Jan., March, Dec. VI. Homestead: March-Nov., high peak in May, smaller one in Oct. Food: citrus; grapefruit, Mason; *Plumbago capensis*, CPK.

2681 P. ERIDANIA (Cramer)

Southern armyworm. Pl. IV, Fig. 15, ♂.
Pap. Exot. 4: 133; Pl. 358, Figs. E, F. 1782.

Common from Escambia County south, especially in the Bradenton area, probably all year. I. Quincy: July-Dec., infrequent. IV. Bradenton:

Jan., Feb., April, May, Aug.-Nov. VI. Homestead: Feb.-Nov., small peak in May building up to a mammoth one in September. It is very variable and occurs in several forms. Food: celery, Stoner & Wisecup (1930, p. 644); sweet potatoes, Coop. Econ. Ins. Rept. 4: 515, 793; tomatoes, *ibid.*, p. 969; grass, Watson (1931, p. 48); corn, *ibid.*, p. 59; castor bean, Watson (1919c).

2681, 1 P. SUNIA (Guenée)

Pl. IV, Fig. 16, ♂.

Spec. Gén. 5: 149. 1852.

Sunia is apparently a fairly recent introduction, or at least not recognized until recently. IV. Bradenton: Feb.-April, AEB, DPI. Oneco: May, June, Nov., CPK. Archbold Biological Station: June, AKW; Oct., YU; Nov., PSU. Sarasota: July, CPK. Siesta Key: Feb., April, Nov., Dec., CPK, CU. Dade Co.: reared from *Amaranthus* sp., June (Nakahara), DPI. VI. Homestead: Feb., DPI; March-Nov., CPK. Florida City: April, May, Nov., OB, JGF. VIII. Tavernier: Sept., Oct., DPI. Craig: Sept., DPI.

LAPHYGMA Guenée

2682 L. FRUGIPERDA (Abbot & Smith)

Fall armyworm. Pl. XIII, Fig. 21, ♂; Fig. 22, ♀. Lep. Ins. Ga. 2: 191; Pl. 96. 1797.

Frugiperda is common throughout and probably through the year. I. Quincy: Feb., April-Dec., peak in Sept. IV. Bradenton: Feb., April, June-Nov. VI. Homestead: May-Nov., common July-Oct., the peak in Sept. The larvae are most destructive during July and August according to Watson (1931, p. 55). Food: beans, *ibid.*, p. 26; onions, *ibid.*, p. 76; sweet potatoes, *ibid.*, p. 94; sugarcane, Ingram & Jaynes (1938); pasture grass, Coop. Econ. Ins. Rept. 2: 305; crabgrass, *ibid.* 3: 583; cotton, *ibid.*, p. 635; corn, *ibid.* 4: 7; *Zoysia* sp., DPI; *Acalypha* sp., Ins. Pest Surv. Bull. 9: 4. In Georgia it has been reported on peanuts.

SPODOPTERA Guenée

2683 S. EXIGUA (Hübner)

Asparagus fern caterpillar. Pl. IV, Fig. 14, ♀. Samml. eur. Schmett. Noct. Fig. 362. 1808.

I. Escambia Co.: June, SMH. Quincy: June-Oct., CPK. Monticello: March, CPK; Aug., DPI. II. Gainesville: March, May, Oct., DPI; Sept., UFES. III. Weekiwachee Springs: June, Aug., CPK. Pierson: June. Leesburg, Yalaha, Groveland, and Fern Park: Wilson (1932, p. 33). Casselberry: Oct., RRM. Altamonte Springs: Wilson. Auburndale: larva on asparagus plumes,

Wilson. Tampa: Nov., AEB. IV. Bradenton: March-May, July-Dec., CPK. Siesta Key: Nov., CPK. Punta Gorda: larva on chrysanthemum, Aug., DPI. VI. Homestead: Feb., April-Sept., Nov., CPK. VIII. Loggerhead Key, Dry Tortugas: June, DPI.

MAGUSA Walker

2684 M. ORBIFERA (Walker)

Pl. XIII, Fig. 23, ♂.

List Lep. Ins. Br. Mus. 11: 761. 1857.

The forms of this species overlap so much that I would not attempt to say which ones are found in Florida—probably all, with perhaps a few that are not named. I. Quincy: one Sept., CPK. IV. Vero Beach: April, CPK. Port Sewall: Jan., AMNH. Siesta Key: Jan., Feb., CNC, CPK. Palm Beach: Dyar (1901a, p. 453). Biscayne Bay: (Slosson), Grsb. 57. South Miami: May, OB. VI. Homestead: July-Oct., CPK. VIII. Tavernier: July-Oct., DPI, including over 1000 specimens taken in one night in late August. Craig: Jan.-March, DPI. Windley Key: Jan., July, Aug., CPK. Key West: July, DPI. Food: *Karwinskia*; *Krugiodendron ferrea* [*Condalia ferrea*], Dyar.

COSMIA Ochseneheimer

2687 C. CALAMI (Harvey)

Can. Ent. 8: 54. 1876.

I. Escambia Co.: May 10, 1961, det. Franclemont, SMH.

ATETHMIA Hübner

2688 A. SUBUSTA Hübner

Pl. XIII, Fig. 24, ♀.

Samml. exot. Schmett. 2: 8; Figs. 205, 206. 1818.

Subusta is fairly common through the entire state, flying all year. I. Quincy: three only, Sept.-Nov., CPK. IV. Bradenton: July-April. VI. Homestead: Feb.-Nov., peak, May-July, tapering off slowly. Besides the typical form, it occurs as the dark *inusta* Guenée and *incidens* (Walker) which has a single large reniform dot instead of two small dots.

2689 A. RECTIFASCIA (Grote)

Proc. Boston Soc. Nat. Hist. 16: 242. 1874.

There is some question about the determination of this species. It does not look quite like typical specimens, and Franclemont thinks it may possibly be a distinct species. II. Gainesville: Jan. 5, 1922, UM; Oct. 5, 1938, UFES. III. Casadaga: Oct. 22, 1962, SVF. IV. Bradenton:

Nov. 1955, (Kelsheimer), CPK. Food: *Hibiscus*, *Malvaviscus*.

[2690, 1 A.] SP.

I. Escambia Co.: Aug. 21, 1961, det. Todd as a new species in either this genus or *Elydna* Walker, SMH; Sept. 16, 1962, (Hills), CPK.

AMOLITA Grote

2694 A. FESSA Grote

Bull. Buffalo Soc. Nat. Sci. 2: 158. 1874.

Forbes (1954, p. 270) thought Florida specimens might represent a separate species on the basis of several small structural differences, though Franclemont has found no differences in the genitalia. I. Myrtle Grove: April, WJW. Quincy: Sept., Oct., CPK. II. Gainesville: UFES; July, CU. Starke: June, AKW. Jacksonville: April, HEW. Lake Geneva: March, HEW. Hastings: April, CNC. III. Cassadaga: April, SVF. Brooksville: June, AKW. Orlando: March, May, CNC. St. Petersburg: Dec., AKW. IV. Bradenton: Feb., April, July, Aug., CPK. Oneco: March, April, JGF; April-July, CPK. Myakka City: Feb., CU. Lake Placid: Nov., CPK. Archbold Biological Station: Jan., Feb., YU; March, Dec., CU; June, AKW; Nov.-Jan., PSU. Sarasota: Feb., CU. Punta Gorda: March, April, RCC; May, Dec., AKW. Fort Myers: April, AMNH. La Belle: April, AMNH. Palm Beach: Dyar (1901a, p. 455). V. Everglades: AMNH. VI. Homestead: July, Oct., Nov., CPK. Florida City: May, HEW. Paradise Key: July, CU. Food: grass, JGF.

2695 A. OBLIQUA Smith

Pl. IV, Fig. 20, ♂; Fig. 21, ♀.

Trans. Amer. Ent. Soc. 29: 222. 1903.

Obliqua is very close to *fessa* but with the post median line continuously parallel with the subterminal line instead of diverging from it at the lower third as in *fessa*. I. Escambia Co.: March, SMH. Marianna: April, AKW. II. Gainesville: Feb., March, Oct., DPI; June, UFA. Hastings: types, April, Sept., Oct., AMNH. III. Enterprise: (Kearfott), Grsb. 66. DeLand: March, AKW. Cassadaga: Feb., Oct., Nov., SVF. Weekiwachee Springs: Feb., May, Aug., CPK. Orange Co.: March, DPI. Orlando: May, CNC. Stemper: Aug., Sept., CNC. Lakeland: Grsb. 66. IV. Bradenton: Feb.-April, July-Sept., CPK. Oneco: March, April, JGF; April-June, Oct., CPK. Archbold Biological Station: Nov.-Jan., PSU; Jan., Feb., YU; July, Nov., AMNH. Port Sewall: Feb., AMNH. Siesta Key: Nov.-Feb., April, May, CPK. Punta Gorda: March, May, Dec., AKW. Fort Myers: AMNH. VI. Home-

stead: Feb., DPI; March-May, Aug., Oct., Nov., CPK. Food: grass, JGF.

2695, 1 A. SENTALIS (Kaye)

Trans. Ent. Soc. London, p. 129. 1901.

There is a difference of opinion as to whether this and *obliqua* are synonymous, Hampson (1901a, p. 309) maintaining that they are, Draudt that they are not. The latter (in Seitz, 1923, p. 320) said that *sentalis* is only half the size of *obliqua* and that there is a slight difference in the maculation. Whatever the merits for or against the separation, there is one Florida specimen which fits this description for *sentalis*, to wit: III. St. Petersburg: March 13, 1914, AMNH. It should be noted that Grossbeck (1917, p. 66) listed several records for *sentalis* but none for *obliqua*. I am loath to believe that they were anything but *obliqua* and have included them in the records for that species. I also assume that Hampson's records refer to *obliqua*.

2696 A. ROSEOLA Smith

Pl. IV, Fig. 22, ♂; Fig. 23, ♀.

Trans. Amer. Ent. Soc. 29: 223. 1903.

Typical Florida specimens of *roseola* differ slightly in appearance from northern ones, but again Franclemont has found no difference in the genitalia. I. Escambia Co.: April, SMH. Warrington: VFG. Quincy: Sept., CPK. II. Hastings: types, March, Oct., AMNH. III. Cassadaga: April, July, SVF. Weekiwachee Springs: May, CPK. IV. Bradenton: March, CPK. Oneco: March, April, JGF; April-June, CPK. Archbold Biological Station: Jan., YU; Jan., Feb., PSU. Siesta Key: Jan., Feb., May, CPK. Fort Myers: AMNH. VI. Homestead: Feb.-Nov., CPK.

CILLA Grote

2699 [C.] DISTEMA Grote

N. Amer. Ent. 1: 99. 1880.

Richards (1942, p. 8) transferred this to the genus *Gabara*, q.v.

SENTA Stephens

2700 S. ENERVATA (Guenée)

Spec. Gén. 5: 105. 1852.

Florida: five, (Doubleday), BM.

ARZAMA Walker

A difficult genus, the species all being very similar in appearance.

2703 A. OBLIQUA (Walker)

Pl. IV, Fig. 13, ♂.

List Lep. Ins. Br. Mus. 32: 428. 1865.

I. West Pensacola: Aug., VFG. II. Gainesville: April, UFA; Oct., DPI. III. Cassadaga: Jan., March, April, SVF. Weekiwachee Springs: May, CPK. Sanford: Feb., March, DPI. Fort Meade: Barnes & McDunnough (1917a, p. 217). IV. Oneco: March, JGF. Archbold Biological Station: Nov., PSU. Vero Beach: April, DPI. Miami: Barnes & McDunnough. VI. Homestead: Feb., CPK. Paradise Key: larvae in cattails, emerging in March, FMJ. VII. Flamingo: Feb., DPI. The Fort Myers and Chokoloskee records, Grsb. 60, were in error, cf. Barnes & McDunnough.

2704 A. [BREHMEI Barnes & McDunnough] Pl. IV, Fig. 24, ♀; Fig. 25, ♂. Contrib. 3: 166. 1916.

IV. Oneco: two March, JGF. Archbold Biological Station: Feb. 27, 1955, (Remington), YU. All determined as "probably this." Food: *Typha angustifolia*.

2705 A. DENSA Walker

Pl. IV, Fig. 12, ♂.
List Lep. Ins. Br. Mus. 32: 645. 1865.

I. West Pensacola: June, VFG. II. Gainesville: Feb., CPK. III. DeLand: March, AKW. Cassadaga: Aug., SVF. Mellonville: Walker. Orange Co.: April, May, DPI. IV. Bradenton: March, CPK. Oneco: March, April, JGF. Archbold Biological Station: June, AKW. Port Sewall: Jan., March, AMNH. Siesta Key: Jan., CPK. Punta Gorda: May, AKW. Palmdale: Aug., CU. South Miami: April, OB. VI. Florida City: April, HEW; March-May, Aug., Sept., OB. Food: pickerel weed.

2707 A. ANOA (Dyar)
Ins. Insc. Mens. 1: 19. 1913.

II. Fernandina: three April 21-24, OB. III. Cassadaga: March 7, 1961, SVF. IV. Bradenton: March 5, 1955, (Kelsheimer), det. Franclemont, CPK. Archbold Biological Station: Jan., March, Sept., Dec., YU; Jan., Feb., April, PSU. Miami: type, 1901, (Hegen & Hendricksen), USNM. VI. Florida City: JGF; April 1, OB.

BELLURA Walker

2708 B. GORTYNOIDES Walker;

2709 B. MELANOPIGA (Grote)
Pl. IV, Fig. 28, ♂.
List Lep. Ins. Br. Mus. 32: 645. 1865; Trans. Amer. Ent. Soc. 4: 294. 1873.

Franclemont believes that these two are merely forms of the same species. The Mellonville record quoted by Grossbeck (1917, p. 60) referred to *A. densa*, q.v., Hampson (1910a, p. 261) mak-

ing the latter a synonym of *gortynoides*. II. Gainesville: Feb., July, Sept., Oct., DPI, CPK; March, Oct., UFA. III. Cassadaga: March, SVF. Lake Beresford: Comstock (1881, p. 148). Sanford: Feb., March, CPK. Orlando: June, CNC. Tampa: Aug., GWK. IV. Oneco: March, JGF. Archbold Biological Station: Jan., Feb., PSU; April, YU. Palm Beach Co.: larva in stem of *Nymphaea*, adult emerging March 4, HFS. VI. Florida City: April, CNC; May, OB; Sept., Nov., AEB. Paradise Key: March, FMJ. Food: bonnet lily, Skinner (1903, p. 210).

PHRAGMATIPHILA Hampson

2710, 1 P. INTERROGANS (Walker)
List Lep. Ins. Br. Mus. 9: 114. 1856.

The habitat of the type is unknown. Franclemont has one specimen from Alabama. The determination was made by him on comparison with a photograph of the type. I. Escambia Co.: April 6, 1962, SMH.

ACHATODES Guenée

2711 A. ZEAE Harris
Elder shoot borer. Pl. XIII, Fig. 25, ♂.
Rept. Ins. Mass., p. 319. 1841.

I. Escambia Co.: May, SMH. Quincy: June, CPK. II. Gainesville: May, DPI. Jacksonville: April, HEW. III. Oviedo: April, DPI. Tildenville: March, DPI. IV. Bradenton: April, CPK. Oneco: April, JGF; May, CPK. Fort Myers: AMNH. Miami: Feb., DPI. VI. Florida City: April, May, JGF. Food: boring in elder shoots, occasionally in corn.

RHODOECIA Hampson

2716 R. AURANTIAGO (Guenée)
Pl. XIII, Fig. 29, ♂.
Spec. Gén. 5: 394. 1852.

Florida: Aug., Smith (1893, p. 219). I. Escambia Co.: Sept., Oct., SMH. Quincy: Oct., (Tappan), CPK. II. Gainesville: Oct., UM. East Gainesville: Sept. 29, AMNH. III. Weekiwachee Springs: Aug., (May), CPK. St. Petersburg: (Ludwig), CU. Lakeland: Oct. 31, AKW. Food: seed pods of *Dasistoma macrophylla* [*Afzelia macrophylla*] and *Gerardia*.

DERRIMA Walker

2719 D. STELLATA Walker
Pl. XIII, Fig. 26, ♂.
List Lep. Ins. Br. Mus. 12: 770. 1857.

Florida specimens are typical *stellata*. I. Escambia Co.: May, SMH. Warrington: May, VFG.

Myrtle Grove: Aug., WJW. II. Gainesville: April, DPI. III. Cassadaga: July, SVF. Weekiwachee Springs: March-May, CPK. Elfers: March, JGF. IV. Archbold Biological Station: March, PSU; April, YU. Port Sewall: Feb., AMNH. Belle Glade: March, CPK.

CATABENA Walker

2740 C. VITRINA (Walker)

List Lep. Ins. Br. Mus. 11: 718. 1857.

Todd has found two species, this and *divisa* below. It is presently impossible to sort the records as some of the material has been discarded. IV. Siesta Key: March 22, 1953, det. Franclemont, May 15, 1957; May 8, 1959; May 5, 1960; CPK. VIII. Key Largo: twelve May, DPI; Sept.-Dec., DPI, CPK. Windley Key: one Dec.-Feb., CPK.

2740, 1 C. DIVISA (Herrich-Schaeffer)

Corresp. Blatt. Regensb. 22: 147. 1868.

See comment under *vitrina* above.

2741 C. ESULA (Druce)

Biol. Cent. Amer. Het. 1: 297. 1881.

I. Quincy: one April, two Oct., CPK. Myrtle Grove: May 18, 1963, WJW. III. St. Petersburg: Jan., April, USNM. IV. Sarasota: May 4, 1951, (King), CPK. Siesta Key: four Jan. 22-Feb. 28, 1952, det. Forbes, two March 31, 1957, CPK. VI. Florida City: two March, JGF.

[2741, 1 C.] SP.

Franclemont has not had an opportunity to verify the genus, but believes it may not belong here. III. Lutz: four March 2-April 5, 1916, (Friday), LACM.

OXYCNEMIS Grote

2752 O. GRACILLIMA (Grote)

Can. Ent. 13: 231. 1881.

An essentially western species, perhaps an accidental visitor. IV. Loxahatchee: one Oct 28-29, 1934, (Hubbell), det. Forbes, UM.

OGDOCONTA Butler

2773 O. CINEREOLA (Guenée)

Pl. XIII, Fig. 27, ♀.

Spec. Gén. 6: 316. 1852.

I. Escambia Co.: April, SMH. West Pensacola: May, VFG. Quincy: March, May-Oct., CPK. Monticello: June, Aug., Sept., DPI. II. Gainesville: March, July, DPI; June, CU. III. Cassadaga: April, SVF. Orange Lake: larva on ragweed, July, DPI. Sanford: March, DPI. Or-

lando: April, WMD. Lakeland: May, AMNH. IV. Bradenton: Feb., March, DPI; May-Oct., CPK. Oneco: March, April, JGF; May-Aug., CPK. Archbold Biological Station: Feb., PSU; June, YU. Siesta Key: April, CPK. VI. Homestead: Feb., April-Sept., CPK. Florida City: July, HEW. Food: artichoke, sunflower, beans.

2777 O. TACNA (Barnes)

Can. Ent. 36: 167. 1904.

While this is distinguished from *cinereola* primarily by being dark grayish brown rather than reddish brown and by lacking the pink subterminal space of the latter, the lines are sufficiently distinct so that it should not be easily confused with that species, even though specimens of the latter in Florida are often darker than northern examples. Florida: July 14, CNC. III. Cassadaga: Aug. 4, 1962, SVF.

STIBADIUM Grote

2779 S. SPUMOSUM Grote

Bull. Buffalo Soc. Nat. Sci. 2: 74. 1874.

I. Quincy: May 3 and 26, 1961, May 13, 1963, (Tappan), CPK.

PLAGIOMIMICUS Grote

2789 P. PITYOCHROMUS Grote

Bull. Buffalo Soc. Nat. Sci. 1: 182. 1873.

III. Cassadaga: Sept. 3, 1949, SVF. Food: *Ambrosia trifida*.

POLENTA Morrison

2793, 1 P. RICHII Grote

Can. Ent. 18: 99. 1886.

Whether this is synonymous with *P. tepperi* Morrison as it is listed by McDunnough (1938, p. 100), I am not sure. Certainly in the West there are two species with similar but uniformly distinct maculation. Be that as it may, Grote listed Florida among other localities in the original description of *richii*.

STIRIA Grote

2803 S. RUGIFRONS Grote

Bull. Buffalo Soc. Nat. Sci. 2: 73. 1874.

I. Escambia Co.: Oct. 1, 1962, SMH. West Pensacola: Oct. 10, 1961, VFG.

BASILODES Guenée

2810 B. PEPITA Guenée

Spec. Gén. 6: 358. 1852.

Florida: (Snow), Grsb. 63. III. Cassadaga: Oct. 29, 1959, SVF. Food: *Verbesina*.

CIRRHOPIANUS Grote

2813 C. TRIANGULIFER Grote
Can. Ent. 4: 187. 1872.

I. Quincy: Oct. 1, 1956, (Tappan), DPI. Monticello: Oct. 2, 1956, (Phillips), DPI.

STIRIODES Hampson

2832 S. OBTUSA (Herrich-Schaeffer)
Pl. XIII, Fig. 28, ♂.

Samml. aussereur. Schmett, p. 68; Fig. 210. 1853.

I. Escambia Co.: April, SMH. Quincy: May, July, Aug., CPK. Monticello: June, Oct., CPK. II. Alachua Co.: Aug., DPI. Gainesville: June, DPI; June, July, CU. III. Cassadaga: April-June, SVF. Sanford: April, DPI. New Smyrna: (Slosson), Grsb. 69. Weekiwachee Springs: April, May, CPK. IV. Bradenton: May, AEB, CPK. Oneco: March, JGF; April-June, CPK. Archbold Biological Station: March, PSU; June, AKW. Siesta Key: March, April, CPK. Fort Myers: AMNH. LaBelle: April, SIM. Biscayne Bay: (Slosson), Grsb. 69. VI. Florida City: May, June, OB. Paradise Key: March, FMJ.

2835, 1 [S.] SP.

Unlike anything in the USNM collection. It probably does not belong in this genus, though superficially it looks like *obtusa* above. I. Escambia Co.: Sept. 4, 1962, SMH.

PSEUDACONTIA Smith

2854 P. LOUISA Smith
Ann. N. Y. Acad. Sci. 18: 120. 1908.

I. Warrington: May 5, 1961, det. Forbes, VFG.

EUTHISANOTIA Hübner

Much confusion has arisen over these two species because the illustrations of them in Holland (1903; Pl. 17, Figs. 23, 24) are reversed.

2858 E. GRATA (Fabricius)
Beautiful wood nymph. Pl. XIII, Fig. 30, ♂.
Ent. Syst. iii, p. 457. 1793.

I. Warrington: WP. II. Gainesville: UFA. III. Oviedo: Oct., DPI. St. Petersburg: 1932, DPI. Lutz: March, HEW. Lakeland: Nov., DPI. IV. Bradenton: GCES; Oct., Dec., CPK. Archbold Biological Station: Jan., March, Sept., YU; Nov., PSU. Siesta Key: March, Nov., CPK. Fort

Myers: DPI. Miami: DPI; June, HEW. VI. Goulds: Jan., DPI. Naranja: DPI. Homestead: DPI; Sept., CPK. Florida City: April, YU.

2860 E. UNIO Hübner

Pearly wood nymph. Pl. XIII, Fig. 31, ♂.
Zutr. exot. Schmett. 3: 12; Figs. 839, 840. 1825.

Unio is fairly common throughout the peninsula and western counties, but there are no records from the Keys. It flies all year. I. Quincy: April, July, Aug. IV. Bradenton: May, Sept., Nov. VI. Homestead: May, June, Oct., plentiful in May only. Food: *Epilobium*, *Oenothera*, *Lythrum*.

CAULARIS Walker

2860, 1 C. LUNATA Hampson
Ann. Mag. Nat. Hist. (7) 14: 169. 1904.

VIII. Stock Island: a short series, June 20, 1962, (Buchanan), DPI, CPK. Forbes determines this as an unrecognized race of *lunata* which was described from the Bahamas.

PSYCHOMORPHA Harris

2864 P. EPIMENIS (Drury)

Pl. XIII, Fig. 32, ♂.
Ill. Exot. Ent. 3: 40; Pl. 29, Fig. 2. 1780.

I. Monticello: det. Franclemont, CU. As the specimen for the Charlotte Harbor record (Slosson), Grsb. 63, is not in the American Museum of Natural History collection, I do not know which species or form this represented, though presumably it would have been *epimenis* since Grossbeck listed both. Food: grape.

2865 P. EURYRHODA Hampson
Cat. Lep. Phal. Br. Mus. 9: 425. 1910.

Franclemont believes this is merely a form or race of *epimenis*. Superficially, the only difference is that in *euryrhoda* the red area of the hind wing is more extensive. Florida: (Doubleday), BM. II. Gainesville: Feb. 2, 1938, (Murrell), DPI; Feb., (Fattig, Watson), UFES; Feb., April, (Harris), EU. III. Marion Co.: Feb. 6, 1957, (Weems), DPI. IV. Punta Gorda: March, April, AKW.

ACHERDOA Walker

2866 A. FERRARIA Walker
Pl. IV, Fig. 27, ♂.
List Lep. Ins. Br. Mus. 32: 451. 1865.

Florida: type, (Doubleday), BM. I. Escambia Co.: May, Aug., SMH. West Pensacola: July, VFG. Liberty Co.: March, UM. II. Gainesville: Feb., July, Nov., DPI; April, UFA. We-

laka: July, UFA. III. Central Florida: type of *Varina ornata*, Neumoegen, (1884, p. 94). Cassadaga: April, Sept., SVF. Brooksville: June, AKW. Weekiwachee Springs: April, May, CPK. St. Petersburg: OB, CU. IV. Oneco: April, JGF; May, CPK. Archbold Biological Station: Feb.-May, Nov., YU; June, AKW; Dec.-Feb., PSU; Port Sewall: Feb., March, AMNH. Siesta Key: March, CPK. Charlotte Harbor: Grsb. 63. Punta Gorda: *ornata*, March, Slosson (1890a, p. 136); Jan., May, AKW. Fort Myers: (Mattes), Grsb., 63; AMNH. Bonita Springs: Jan., OB. La Belle: April, AMNH. Biscayne Bay: (Slosson), Grsb. 63. Miami: May, WRB. VI. Homestead: May, July, Oct., CPK. Florida City: March, HEW; March, April, WRB; Nov., AMNH; March-June, Nov., Dec., OB.

MEROPLEON Dyar

2867 M. COSMION Dyar

Pl. XIV, Fig. 1, ♀.
Ins. Insc. Mens. 12: 21. 1924.

I. Quincy: Nov. 17, 1962, (Tappan), CPK. II. Alachua Co.: Nov. 14, 1956, (Denmark), CPK. Gainesville: Dec. 16, 1955, (Denmark), DPL. III. Cassadaga: Jan., Dec., SVF. IV. Bradenton: Jan. 21, 1955, det. Franclemont, five Jan. 1956, CPK. Archbold Biological Station: Dec. 1957, YU; Jan. 1962, Dec. 1959, PSU. Siesta Key: Dec. 24, 1951, Jan. 1, 1952, det. Forbes, CPK. Food: *Phalaris*, occasionally boring in sugarcane in Louisiana.

Subfamily HELIOTHINAE

Mr. Rowland R. McElvare has kindly examined the records in this subfamily and supplied various notes and comments. I am also indebted to him for many determinations.

HELIOPHANA Grote

2895 H. BINA (Guenée)

Spec. Gén. 6: 186. 1852.

Bina is closely allied to *Schinia meskeana* and *S. rufimedia*. Further study may indicate that all three are one variable species, or geographical race. I. Escambia Co.: Sept., det. McElvare, SMH. III. Cassadaga: April 20, 1950, (Fuller), CPK; Oct. 15, 1953, two Oct. 2, 1961, Nov. 2 and 15, 1955, all det. McElvare, SVF. Orlando: Oct. 13, 1930, (Fernald), det. McElvare, DPI. IV. Oneco: April 1953, JGF.

2897 H. MITIS (Grote)

Pl. IV, Fig. 41, ♀.
Bull. Buffalo Soc. Nat. Sci. 1: 116. 1873.
II. Alachua Co.: June, DPI. Gainesville: March,

UFES; May, DPI, CPK. Waldo: March, OB, CU; April, RRM. Orange Park: April, (King), CPK. III. Ocala: April, RRM. Cassadaga: abundant, late March to early May, on false sunflower bloom, SVF. Orange Co.: March, DPI. Orlando: March, OB; April, USNM. 10 miles east of Orlando: seven on flowers of *Pyrrhopyrus carolinianus*, WMD, CPK.

MELICLEPTRIA Hübner

2902 M. SCISSA (Grote)

Proc. Boston Soc. Nat. Hist. 18: 415. 1876.
I. Apalachicola: type, Grote.

MELAPORPHYRIA Grote

2916 M. IMMORTUA Grote

Pl. XIII, Fig. 33, ♀.
Bull. Buffalo Soc. Nat. Sci. 2: 75, 220. 1874.
III. Orlando: June 14-16, 1927, at light, (McBride), CU.

EUPANYCHIS Grote

2925 E. SPINOSAE (Guenée)

Pl. XIII, Fig. 34, ♀.
Spec. Gén. 6: 182. 1852.
IV. Archbold Biological Station: Nov. 8, 1958, (Frost), det. McElvare, PSU.

2926 E. SCISSOIDES Benjamin

Pl. IV, Fig. 44, ♀.
Bull. Southern Calif. Acad. Sci. 34(3): 196. 1935.
I. Escambia Co.: Oct. 19, 1961, SMH. Warrington: two, VFG, WP. West Pensacola: Oct., CPK. Myrtle Grove: Oct., WJW. III. Cassadaga: Oct., Nov., SVF. Winter Park: one Sept. 1946, (Klots), AMNH. Orlando: two Sept. 1950, Oct. 1953, WMD. Titusville: two Oct., JGF. St. Petersburg: types, two Oct., USNM.

HELIOTHIS Ochsenheimer

2927 H. LUPATA Grote

Pl. IV, Fig. 43, ♀.
Can. Ent. 7: 224. 1875.
I. Monticello: March 27, 1955, (Phillips), CPK. III. Cassadaga: several, Sept., Oct., SVF, CPK. All det. Franclemont.

2928 H. TURBATA (Walker)

List Lep. Ins. Br. Mus. 14: 1472. 1858.
Apparently a lost species. Dyar (1902, p. 235) listed it as a *Poaphila*. Forbes wrote that Grote thought it a *Perigea* and that Hampson omitted it altogether. It was described from East Flor-

ida, being one of Doubleday's specimens. McDunnough (1938, p. 104) made *albidentina* (Walker) a synonym. This was a female, also a Doubleday specimen described from East Florida. What is needed is more material to straighten out the situation, to find out whether there are two species, two forms, or sexual dimorphism.

2929 H. PARADOXA (Grote)

Pl. XIII, Fig. 35, ♀.

Proc. Ent. Soc. Phila. 4: 329. 1865.

I. Escambia Co.: Sept., SMH. II. Jacksonville: (Slosson), Smith (1882, p. 220). III. Cassadaga: including form *hyperfusca* Strand, Feb., April, May, SVF. Weekiwachee Springs: *hyperfusca*, March, det. McElvare, CPK. Stemper: Sept., AKW. Lutz: Sept., Oct., HEW; Oct., CNC. IV. Siesta Key: *hyperfusca*, March 2, 1952, det. McElvare, CPK. Coconut Grove: *hyperfusca*, USNM.

2932 H. ZEA (Boddie)

Bollworm, corn earworm, tomato fruitworm.

Pl. XIII, Fig. 36, ♀.

Southern Cultivator 8: 132. 1850.

Zea is more familiarly, but incorrectly, known as *armigera* Hübner or *obsoleta* (Fabricius), the former name being applicable to an Old World species as pointed out by Common (1953, p. 321); the latter name is a primary homonym of *Bombyx obsoleta* Fabricius (1775, p. 579), an Australian lymantriid. For the application of the name presently used see Todd (1955, pp. 600, 602-603). *Zea* is common throughout, probably the year round. Food: many kinds of plants; cotton, corn, tomatoes, beggarweed, Watson (1938, p. 50); beans, *ibid.*, p. 31; okra, *ibid.*, p. 73; roselle, *ibid.*, p. 83; peas, *ibid.*, p. 79; peppers, *ibid.*, p. 80; snap beans Coop. Econ. Ins. Rept. 2: 321; sorghum, *ibid.*, 3: 605; gladiolus stems, Coop. Ins. Pest Surv. 21: 29; citrus, hibiscus, DPI.

2933 H. VIRESCENS (Fabricius)

Tobacco budworm. Pl. XIII, Fig. 37, ♂.

Spec. Ins. 2: 217. 1781.

Virescens occurs throughout the state, probably all the year. Food: *Rhexia* (?), *Solanum*, *Physalis*; tobacco (Coop. Econ. Ins. Rept. 3: 351). The larvae infesting roses in the Boynton Beach area, May 1963, (Wolfenbarger), STES.

2933, 1 H. SUBFLEXA (Guenée)

Pl. XIII, Fig. 38, ♂.

Spec. Gén. 2: 175. 1852.

Distinguished from *virescens* by the pure white hind wings. Some of the records for the latter

undoubtedly belong here. I. Escambia Co.: June, SMH. Quincy: Sept., Oct., CPK. Quincy is one locality where *subflexa* is relatively common, but not nearly so common as *virescens*. II. Alachua Co.: April, CPK. Gainesville: April, CNC; June, Aug., DPI. III. Sanford: Dec., DPI. Stemper: July, HEW. Tampa: Oct., WRB. IV. Archbold Biological Station: May, YU; July, ABS. Siesta Key: June, CPK. The larvae infesting roses in the Boynton Beach area, May 1963, (Wolfenbarger), STES. Fort Lauderdale: July, UM. VIII. Craig: Oct., CPK. Food: *Rhexia* (?), *Solanum nigrum*, *Physalis*.

DASYPOUDAEA Smith

2938 D. LUCENS (Morrison)

Proc. Acad. Nat. Sci. Phila., p. 69. 1875.

III. St. Petersburg: ab. *luxuriosa* (Grote), May, USNM. Tampa: April 17-22, 1950, DPI.

RHODOPHORA Guenée

2940 R. GAURAE (Abbot & Smith)

Clouded crimson. Pl. IV, Fig. 45, ♀.

Lep. Ins. Ga. 2: 197; Pl. 99. 1797.

I. Escambia Co.: Sept., SMH. Myrtle Grove: Oct., WJW. Monticello: June, Sept., CPK. II. Alachua Co.: May, Sept., DPI. Gainesville: June, CPK. Fernandina: Aug., CNC; Aug., Sept., HEW; Sept., JGF. III. Cassadaga: June, SVF. Orlando: May, WMD. Elfers: April, CNC. Crystal Beach: May, CNC. St. Petersburg: June, OB. Temple Terrace: July, WRB. IV. Sarasota: May, July, CPK. Myakka State Park: June, CPK. Siesta Key: April, CPK. Lee Co.: March, RRM. La Belle: April, AMNH. Coral Gables: June, DPI. Coconut Grove: March, USNM; MCZ. VI. Homestead: July, Aug., CPK. Florida City: May, JGF; May, July, HEW. Food: *Gaura biennis*.

2941 R. FLORIDA Guenée

Spec. Gén. 6: 171. 1852.

I. Escambia Co.: Sept. 6, 1961, SMH.

RHODODIPSA Grote

2948, 1 R. FULLERI McElvare

Pl. IV, Fig. 46, ♂.

Bull. Brooklyn Ent. Soc. 55: 6. 1961.

III. Cassadaga: Sept. 10, 1955, Oct. 4 and 6, 1961, SVF; Oct. 28, 1954, (Fuller), CPK. St. Petersburg: two, USNM. IV. Two miles east of Lake Placid: four at blossoms of *Actinospermum angustifolium*, Nov. 3 and 4, 1960, RRM.

Archbold Biological Station: six at blossoms of *A. angustifolium*, Oct. 3-30, 1960, one at light, (Pease), YU; one Nov. 1958, one Nov. 4, 1959, at light, (Frost), PSU; eleven Oct. 13-15, 1961, RRM.

PIPPONA Grote

2954 P. CAROLINENSIS (Barnes & McDunough)

Pl. IV, Fig. 42, ♀.

J. N. Y. Ent. Soc. 19: 152. 1911.

II. Gainesville: Sept. 3, 1956, (Denmark), det. McElvare, DPI. III. St. Petersburg: one female, (Pasch), CU; two, USNM.

SCHINIA Hübner

2963 S. GRACILENTA Hübner

Zutr. exot. Schmett. 1: 8, Figs. 5, 6. 1818.

I. West Pensacola: Oct. 10, 1961, det. McElvare, VFG.

2965 S. IMPERSPICUA (Strecker)

Pl. XIII, Fig. 39, ♀.

Lep. Rhop. Het., p. 122. 1876.

I. Escambia Co.: Sept. 27 and 28, 1961, det. McElvare, SMH, USNM. Quincy: two Sept. 21, 1960, (Tappan), CPK.

2966 S. TRIFASCIA Hübner

Pl. XIII, Fig. 40, ♀.

Zutr. exot. Schmett. 1, p. 11; Figs. 33, 34. 1818.

I. Escambia Co.: Sept., SMH. Warrington: April, VFG. Quincy: Sept., Oct., CPK. Lanark Beach: Sept., RRM. Carrabelle: on *Liatris* bloom, Sept., RRM. Wakulla Springs: Oct., RRM. Monticello: Oct., DPI. II. Gainesville: UFES; Oct., RRM. Hastings: Sept., Oct., AMNH. III. Cassadaga: Sept.-Nov., SVF. Altamonte Springs: USNM. Sanford: Oct., DPI. Winter Park: June, Oct., DPI; Sept., AMNH. St. Petersburg: CU; Sept., USNM. Stemper: USNM; Oct., CNC, AKW. Lutz: Oct., HEW. Tampa: Oct., WRB. IV. Bradenton: Nov., Dec., CPK. Archbold Biological Station: Nov., PSU. Sarasota: Oct., CNC. Siesta Key: Feb., CPK. VII. Modello: Feb., CNC. Homestead: Aug., Oct., CPK. Food: *Eupatorium*.

2977 S. ESPEA Smith

Ann. N. Y. Acad. Sci. 18: 119. 1908.

V. Marco: type, Sept., AMNH. The type locality was given erroneously in both the original description and by Grossbeck (1917, p. 62) as "Mico." The type is apparently the only specimen known.

2990 S. NUNDINA (Drury)

Pl. XIII, Fig. 41, ♀.

Ill. Exot. Ent. 1: 35; Pl. 18, Fig. 5. 1770.

I. Escambia Co.: Sept., Oct., SMH. Warrington: Aug., Sept., VFG. Myrtle Grove: Feb. 2, 1961, a most unusual date for any *Schinia*, Sept., VFG; Oct., WJW. Quincy: Sept., CPK. Lanark Beach: Sept., RRM. Monticello: Oct., DPI. II. Gainesville: UFES. Fernandina: Aug., WCC, RRM. III. Cassadaga: relatively common, Sept.-Nov., SVF. Sanford: Oct., DPI. Winter Park: Oct., DPI. St. Petersburg: Oct., USNM. Tampa: Sept., Oct., WRB. Food: *Solidago*.

2991 S. AREFACTA (Henry Edwards)

Pl. IV, Fig. 5, ♂.

Papilio 4: 123. 1884.

Florida: type, Henry Edwards. The specimen was in the Neumoegen collection, Ottolengui (1897, p. 240). III. Cassadaga: Oct. 1955, Oct. 4 and 15, 1961, SVF; Sept. 19, 1958, (Fuller), all det. McElvare, CPK. Winter Park: Oct. 7, 1941, (Fernald), det. McElvare, DPI.

3003 S. GLORIOSA (Strecker)

Pl. IV, Fig. 47, ♂.

Lep. Rhop. Het., p. 132. 1876.

I. Escambia Co.: Sept. 21, 1962, SMH. III. Cassadaga: Sept., Oct., det. McElvare, SVF. Sanford: Oct., CPK. IV. Archbold Biological Station: Sept., Oct., YU. Food: *Liatris*.

3004 S. SANGUINEA (Geyer)

Zutr. exot. Schmett. 4: 9; Figs. 613, 614. 1832.

This has been taken a number of times between Jacksonville and Miami, Sept.-Nov., OB, WRB, CNC, AMNH, CMNH, CPK, CWK, CM, RRM, USNM, CU, AKW, HEW. The type of *carmosina* Neumoegen, from Central Florida, was in the Neumoegen collection, Ottolengui (1897, p. 240). It was described by Neumoegen (1883, p. 142).

3005 S. SATURATA (Grote)

Pl. XIII, Fig. 42, ♀.

Bull. Buffalo Soc. Nat. Sci. 2: 74. 1874.

Saturata is probably the commonest *Schinia* in Florida despite the paucity of records which only cover from Escambia County and Fernandina to Lee County, July-November. It is a variable species.

3006 S. THOREAUI (Grote & Robinson)

Trans. Amer. Ent. Soc. 3: 181. 1870.

I. Warrington: April 19, 1961, det. McElvare, VFG. III. Orlando: Aug., det. Franclemont, WMD.

3007 S. MARGINATA (Haworth)

Pl. XIII, Fig. 43, ♀.
Lep. Brit., p. 374. 1810.

I. Escambia Co.: July, SMH. Warrington: summer, WP. Quincy: Aug., Sept., CPK. Monticello: Aug., DPI; Sept., CPK. The latter, which I no longer have, was recorded as, "The pale, brownish form." Quite possibly it was *gracilentata*. II. Gainesville: June, Aug., DPI; Sept., UFES. Fernandina: Sept., RRM. III. Cassadaga: Sept., Oct., SVF. Orange Co.: Aug., Sept., DPI. Winter Park: Oct., DPI. St. Petersburg: Aug., CU. Tampa: Sept., WRB. IV. Bradenton: Sept., CPK. Oneco: Aug., CPK. Sarasota: Sept., CPK. Food: *Ambrosia*.

3009 S. NUBILA (Strecker)

Lep. Rhop. Het., p. 122. 1876.

I. Escambia Co.: Sept., SMH. Quincy: Sept., CPK. Lanark Beach: Sept., RRM. II. Alachua Co.: Sept. 21, 1954, det. McElvare, DPI. Gainesville: Aug., Sept., UFES; Oct., RRM. Fernandina: Aug., AKW; Aug., Sept., OB. III. Cassadaga: Sept., Oct., SVF. Winter Park: Sept., DPI. Orlando: Sept., WMD. Tampa: Oct., WRB. IV. Bradenton: Sept., DPI. Archbold Biological Station: Sept., YU. Food: *Solidago*.

3014 S. JAGUARINA (Guenée)

Spec. Gén. 6: 184. 1852.

III. Cassadaga: June, SVF. St. Petersburg: USNM. Fort Meade: USNM.

3016 S. LYNX (Guenée)

Spec. Gén. 6: 185. 1852.

I. Escambia Co.: Sept., SMH. Warrington: Aug., VFG. Myrtle Grove: Aug., Oct., WJW. II. Alachua Co.: Sept., DPI. Gainesville: USNM; April, UFA; Sept., RRM. III. Cassadaga: Sept., Oct., SVF. Eustis: Oct., CNC. Altamonte Springs: USNM. Sanford: Oct., DPI. Winter Park: Sept., AMNH; Aug., Sept., DPI. Orlando: Oct., WMD. St. Petersburg: Sept., USNM. Fort Meade: USNM. IV. Archbold Biological Station: Sept., YU; Oct., AMNH; Nov., PSU. South Miami: Oct., RRM. Coral Gables: Oct., HFS. Food: *Erigeron*.

3017 S. OBSCURATA Strecker

Lep. Rhop. Het. Suppl. 1: 10. 1898.

Florida: June, USNM. I. Escambia Co.: May 15, 1961, det. McElvare, Sept. 19, 1962, SMH. Quincy: May 23, 1962, (Tappan), CPK. II. Gainesville: May 1, 1962, CPK. Food: *Erigeron philadelphicus*.

3018 S. ARCIGERA (Guenée)

Pl. XIII, Fig. 44, ♂.
Spec. Gén. 6: 184. 1852.

I. Warrington: summer, WP; Oct., VFG. Myrtle Grove: Oct., WJW. Ensley: Oct., AB. Quincy: four Sept., Oct., CPK. III. Cassadaga: rare, Sept., Oct., SVF. St. Petersburg: Sept., USNM. Food: aster.

3020 S. PARMELIANA (Henry Edwards)

Papilio 2: 14. 1882.

I. Escambia Co.: Oct. 17, 1961, SMH. Ensley: Oct. 11, 1961, det. McElvare, AB.

3024 S. LABE Strecker

Lep. Rhop. Het. Suppl. 1: 10. 1898.

III. Cassadaga: Sept. 16, 1962, det. McElvare, SVF.

3030 S. SEPTENTRIONALIS (Walker)

Pl. XIII, Fig. 45, ♂.
List Lep. Ins. Br. Mus. 15: 1744. 1858.

This has usually been known as *S. brevis* (Grote). The synonymy was pointed out by Banks (1952, p. 28). Florida: USNM. I. Escambia Co.: Oct. 19, 1961, SMH. III. Winter Park: Sept. 1, 1942, (Fernald), DPI. Food: *Aster novaeangliae*.

3031 S. SORDIDA Smith

Pl. XIII, Fig. 46, ♂.
Trans. Amer. Ent. Soc. 10: 230. 1883.

All determined by McElvare. I. Escambia Co.: Sept., SMH. Myrtle Grove: Sept., WJW. Fort Walton: Sept., RRM. Quincy: Sept. 7 and 28, 1961, (Tappan), CPK. Lanark Beach: Sept. 29, 1955, RRM. II. Alachua Co.: Sept. 21, 1954, Sept. 5, 1961, (Denmark), DPI. Gainesville: Sept. 27, 1928, (Bratley), UFES; Oct. 2, 1955, RRM. III. Cassadaga: Sept., Oct., SVF. IV. Archbold Biological Station: Sept. 13, 1960, (Pease), YU.

3032 S. PETULANS (Henry Edwards)

Papilio 4: 123. 1884.

Florida: type specimen in Neumoegen collection, Ottlengui (1897, p. 241). II. Alachua Co.: Sept. 21, 1953, det. McElvare, DPI. III. Cassadaga: Sept., SVF. Winter Park: Oct., DPI. St. Petersburg: Sept., OB, USNM. Fort Meade: USNM.

3033 S. AR Strecker

Lep. Rhop. Het. Suppl. 1: 10. 1898.

I. Escambia Co.: Sept. 14, 1961, SMH. Myrtle Grove: Sept. 13, 1962, WJW. Quincy: Sept. 21, 1960, (Tappan), CPK. II. Alachua Co.: two

Sept. 13, 1956, (Denmark), det. McElvare, DPI, CPK. Gainesville: Sept., USNM.

3035 S. MESKEANA (Grote)

Pl. IV, Fig. 50, ♀.
Can. Ent. 7: 224. 1875.

See note under *Heliophana bina* (Guenée). Florida: Smith (1882, p. 235). III. St. Petersburg: two, (Pasch), CU.

3036 S. RUFIMEDIA (Grote)

Bull. Brooklyn Ent. Soc. 3: 31. 1880.

See note under *Heliophana bina*. Florida: (Watson), UFES. II. Jacksonville: Oct., RRM. III. DeLand: March 15, AKW. Cassadaga: Oct. 14, three Oct. 1-9, 1961, SVF. Orlando: RRM; March 27, OB; April, CNC. Tampa: Oct., WRB, RRM.

3037 S. SIREN (Strecker)

Pl. IV, Fig. 48, ♂.
Lep. Rhop. Het., p. 122. 1876.

I. Warrington: WP. Quincy: Sept. 10 and 24, 1962, Oct. 12, 1960, (Tappan), CPK. Lanark Beach: Sept. 29, 1955, RRM. II. Alachua Co.: Sept. 21, 1954, Sept. 13, 1956, DPI. Gainesville: Oct. 9, 1938, (Bratley), UFES; Oct. 2, 1955, RRM. III. Cassadaga: Sept., Oct., SVF. Wildwood: Sept., RRM. Winter Park: four Sept., (Fernald), DPI. All det. McElvare.

3038 S. TUBERCULUM (Hübner)

Pl. IV, Fig. 49, ♂.
Zutr. exot. Schmett. 3: 29; Figs. 517, 518. 1827.

I. Escambia Co.: Sept., SMH. Warrington: Oct., VFG. Myrtle Grove: Sept., WJW. Fort Walton: RRM. Quincy: Sept., CPK. Lanark Beach: Sept., RRM. II. Alachua Co.: Oct., UFES. III. Cassadaga: Oct., SVF. Daytona Beach: Sept., DPI. Sanford: Oct., DPI. Winter Park: Aug.-Oct., DPI; Sept., AMNH. Orlando: Oct., CNC. St. Petersburg: USNM; May, CU. IV. Archbold Biological Station: Oct., YU; Nov., PSU. Sarasota: Oct., CPK. Siesta Key: Oct., CPK. South Miami: Sept., RRM.

3038,1 S. SP.

I. Escambia Co.: Sept. 23, 1962, det. McElvare as "near *tuberculum*. It does not appear to be any of the described heliothids," SMH.

3039 S. ROSEITINCTA (Harvey)

Bull. Buffalo Soc. Nat. Sci. 2: 278. 1875.

III. Cassadaga: Oct. 7, 1961, det. McElvare, SVF.

Subfamily ACONTIINAE

EUBLEMMA Hübner

3061 E. MINIMA (Guenée)

Pl. XIV, Fig. 2, ♀.
Spec. Gén. 6: 246. 1852.

This occurs in several forms, which probably include *carmelita* (Morrison) and *pallida* (Schaus). I. Escambia Co.: one Feb., SMH. Quincy: two June, Oct., CPK. It is common from Gainesville-Hastings south, and has been taken in every month. Food: flower heads of *Gnaphalium obtusifolium* [*G. polycephalum*], and *Anaphalis*; *Pterocaulon undulatum*, JGF, flower heads of *Pulchea odorata*, (Stegmaier), DPI.

3062 E. CINNAMOMEA (Herrich-Schaeffer)

Pl. XIV, Fig. 5, ♀.
Corresp. Blatt. Regensb. 22: 155. 1868.

This and the next species, *obliqualis* (Fabricius), are very much alike. Grossbeck (1917, p. 68) quoting McDunnough, says, "Close to *obliqualis* but with the median line much less oblique." Some of the records for the latter may belong here. III. Cassadaga: Sept. SVF. IV. Archbold Biological Station: Jan., Dec., YU. Siesta Key: Dec., CPK. V. Everglades: (McDunnough), USNM. VI. Florida City: Jan., March-May, July, Oct., OB; April, AMNH; May, AKW. VIII. Tavernier: Oct., CPK. Plantation Key: Nov., CPK.

3063 E. OBLIQUALIS (Fabricius)

Pl. XIV, Fig. 6, ♀.
Ent. Syst. 3: 2, p. 224. 1794.

I. Escambia Co.: one Sept., SMH. Quincy: two Oct., fourteen Nov., CPK. *Obliqualis* is quite common from Weekiwachee Springs and Orange County south, and has been recorded from the Dry Tortugas. It is variable, including at least the forms *patula* Morrison and *brunneochracea* Strand. It flies September-June.

PROROBLEMMA Hampson

3064 P. TESTA Barnes & McDunnough

Contrib. 2: 168. 1913.

Because this and the next five species in the list are all very small, especially the next five, they are undoubtedly overlooked by most collectors who mistake them for microlepidoptera. III. DeLand: March, AKW. Cassadaga: Feb., Sept., SVF. IV. Oneco: March, April, JGF; Aug., Oct., CPK. Punta Gorda: March, April, Dec., AKW; Dec., OB. V. Everglades: type, April, Barnes & McDunnough. VI. Paradise Key: March, CU. VIII. Tavernier: Sept., CPK.

ACIDALIODES Hampson

3065 A. EOIDES Barnes & McDunnough

Pl. XIV, Fig. 3, ♀.
Contrib. 2: 166. 1913.

This species has a buff ground color; that of *Sigela penumbrata* Hulst is dark grayish, and that of *S. basipunctaria* Walker is pinkish. III. Cassadaga: June, SVF. Stemper: Barnes & McDunnough (1914b, p. 28). IV. Bradenton: March, April, July, Oct., Nov., CPK. Oneco: March, April, JGF; May, CPK. Siesta Key: not rare, Nov.-May, CPK; Nov., Dec., CNC. Punta Gorda: April, AKW. V. Everglades: type, Barnes & McDunnough. VI. Homestead: March, CPK.

ARAEOPTERA Hampson

3066, 1 A. SP.

The specimens have been determined by Todd as agreeing with Hampson's section I of the genus, which contains but a single species, from Jamaica. Since all other species of the genus treated by Hampson are Asiatic, it is possible that our species and that from Jamaica belong to a separate genus, distinct from *Araeoptera*. IV. Vero Beach: Oct., (Malloch), USNM. Oneco: May 28, 1954, (Dillman), CPK.

3066, 2 A. VILHELMINA Dyar

Proc. U. S. Natl. Mus. 51: 18. 1916.

All det. Todd. IV. Archbold Biological Station: Jan. 27, 1961, (Frost), PSU. Punta Gorda: March, April, (Ramstedt), USNM. VI. Paradise Key: Jan. 27, 1930, (Jones). USNM.

SIGELA Hulst

3067 S. PENUMBRATA Hulst

Trans. Amer. Ent. Soc. 23: 303. 1896.

II. Archer: type, March, April, 1882, (Koebele), Hulst. III. Cassadaga: Nov., SVF. IV. Oneco: March, JGF; May, (Dillman), CPK. Siesta Key: Jan., March, CPK. VI. Homestead: Feb., May, Sept.-Nov., CPK.

3068 S. BASIPUNCTARIA (Walker)

List Lep. Ins. Br. Mus. 23: 785. 1861.

There is a possibility that two species are involved. I. Escambia Co.: March, SMH. II. East Florida: (Doubleday), BM. III. Volusia Co.: Aug., DPI. Cassadaga: Nov., SVF. La Grange: Sept., (Davis), SIM. Egmont Key: April, Grsb. 69. IV. Bradenton: April, July-Sept., CPK. Oneco: March, April, JGF; May, Aug.-Oct., CPK. Siesta Key: March, June, Nov., CPK. Palm Beach: AMNH. V. Everglades: April, (Davis),

SIM. VI. Homestead: Feb., May, Sept., Oct., CPK.

[3068, 1 S.] SP.

I. Escambia Co.: two July 14, 1961, det. Todd as probably a new species in this genus or one close to it, SMH.

PHOBOLOSIA Dyar

3070 P. ANFRACTA (Henry Edwards)

Papilio 1: 12. 1881.

Anfracta is a western species, which may not be an established part of our fauna. IV. Fort Lauderdale: March 27, 1928, (Bates), det. Forbes, UM.

3071 P. BRIMLEYANA Dyar

Pl. XIV, Fig. 4, ♂.

Ins. Insc. Mens. 2: 10. 1914.

I. Escambia Co.: May, SMH. Myrtle Grove: April, WJW. II. Gainesville: July 8, 1927, (Rogers), CU. III. Cassadaga: June, Sept., SVF. St. Petersburg: Feb., March, July, Oct., Dec., USNM. IV. Archbold Biological Station: Nov.-March, CPK, PSU. Siesta Key: April 23, 1960, CPK.

3071, 1 P. SP.

This species is similar to *brimleyana* but considerably smaller. Buchholz had taken it in Screven County, Georgia. It is being described by Franclemont. III. Cassadaga: Dec. 4, 1955, SVF. IV. Oneco: March 27, 1954, JGF; three May, June, (Dillman), CPK.

ORUZA Walker

3074 O. ALBOCOSTALIATA (Packard)

Pl. XIV, Fig. 8, ♀.

Mono. Geom. Moths, p. 336. 1876.

Florida: (Slosson), Grsb. 67. I. Escambia Co.: April 18, 1961, SMH. II. Gainesville: June 1, 1963, (Esser), DPI. III. Juniper Springs: Sept. 1, 1938, UM. DeLand: March 27, AKW. Cassadaga: April 23, 1962, July 19, 1953, Oct. 5, 1962, SVF. IV. Oneco: March, JGF; May 5, 1953, (Dillman), CPK. Archbold Biological Station: Feb. 21, 1962, March 26, 1961, (Frost), PSU. Parker's Island: June 13, 1955, AKW.

COBUBATHA Walker

3078, 1 C. OLIVACEA Grossbeck

Bull. Amer. Mus. Nat. Hist. 37: 69. 1917.

III. Weekiwachee Springs: one female Feb. 24, 1955, (J. F. May), det. Todd, CPK. V. Marco:

type, April 17, AMNH. VI. Homestead: May 8, 1959, (Wolfenbarger), CPK. VIII. Windley Key: one male April 30-May 4, 1955, (J. N. Todd), det. E. L. Todd by genitalic dissection (slide No. 513 ELT), USNM, compared with drawing of genitalia of the type in AMNH supplied by Rindge.

3078, 2 C. SP.

III. St. Petersburg: USNM. Todd thinks this is possibly *metaspilaris*, (Walker), but as the abdomen is missing no definitive determination can be made. VIII. Tavernier: Nov. 29, 1955, (J. N. Todd), det. E. L. Todd as near *metaspilaris*, CPK.

3079 C. FLAVOFASCIATA (Grote)

Can. Ent. 9: 70. 1877.

I. Escambia Co.: Aug. 18, 1961, SMH. Myrtle Grove: July 17, 1962, WJW.

3079, 1 C. NUMA (Druce)

Biol. Cent. Amer. Het. 1: 312. 1881.

IV. South Bay: May 1, AMNH; May 2, (Davis), SIM. VIII. Tavernier: Sept.-Nov., DPI, CPK. Islamorada: April 24, 1953, CPK.

3084 C. QUADRIFERA (Zeller)

Verh. zool.-bot. Ges. Wien 24: 425. 1874.

There is a complex of species involved, and there may be more than one in Florida. Todd is making a study of the genus which should eventually clear up the situation. I. Escambia Co.: July 3 and 24, 1961, SMH. III. Volusia Co.: Aug. 2, 1956, (Denmark), DPI. Enterprise: (Slosson), Grsb. 69. DeLand: April, AKW. Cassadaga: Apr., June, Aug., SVF. Weekiwachee Springs: May 1955, (May), CPK. IV. Bradenton: Aug., CPK. Oneco: May 19, 1953, (Dillman), det. Franclemont, CPK. Archbold Biological Station: March, PSU. Fort Lauderdale: July 19, 1933, (Bates), UM. VI. Homestead: April, May, CPK.

OZARBA Walker

3086 O. AERIA Grote

Papilio 1: 11. 1888.

I. Escambia Co.: two July 14, three Aug. 8-14, Oct. 10, 1961, SMH.

3087 O. NEBULA Barnes & McDunnough

Pl. XIV, Fig. 7, ♀.

Contrib. 4: 111; Pl. 18, Fig. 5. 1918.

I. Escambia Co.: Nov., SMH. III. Cassadaga: Sept., Nov., SVF. Weekiwachee Springs: March, May, CPK. IV. Bradenton: March-Nov., CPK. Oneco: May, CPK. Archbold Biological Sta-

tion: Jan., April, Nov., PSU; Jan., Dec., YU; June, AKW; Dec., AMNH. Siesta Key: Jan., May, CPK. Palmdale: Aug., CU. V. Chokoloskee: type, USNM. VI. Homestead: March, May-Nov., CPK. Florida City: April, May, OB. Paradise Key: Jan., FMJ.

CRYPHIA Hübner

3098 C. NANA Hübner

Pl. XIV, Fig. 9, ♀.

Zutr. exot. Schmett. 1, 14; Figs. 53, 54. 1827.

Two species have been confused under this name in collections. This is the smaller and apparently the commoner, occurring throughout the northern two-thirds of the state. The only certain records are those from Oneco, Siesta Key, and Weekiwachee Springs: the other records will belong here for the most part, but they should all be reviewed in the light of the current understanding of the genus. I. Escambia Co.: April, SMH. DeFuniak Springs: March, DPI. III. Enterprise: Hampson (1910b, p. 559). DeLand: March, AKW. Cassadaga: April, May, SVF. Weekiwachee Springs: common, March, April, Aug., CPK. Orange Co.: Aug., DPI. Winter Park: May, AMNH. Orlando: March, OB. Tampa: Hampson. IV. Oneco: March, April, JGF; April-July, Oct., CPK. Archbold Biological Station: March, PSU. Siesta Key: May, CPK. Punta Gorda: April, OB, AMNH; April-June, AKW.

3098, 1 C. SP.

Slightly larger than *nana*, and apparently occurring with it. The following records are sure but as noted above some of those given under *nana* may easily belong here. I. Myrtle Grove: Aug., WJW. III. Weekiwachee Springs: April-June, Aug., CPK. IV. Oneco: March, JGF. Archbold Biological Station: May, CU; March, JGF, PSU, YU.

3099 C. PERVERTENS Barnes &

McDunnough

Contrib. 4: 113. 1918.

I. Escambia Co.: Aug. 8, 1961, det. Franclemont, SMH.

PROTOCRYPHIA Barnes & McDunnough

3101 P. FLAVIGUTTATA (Grote)

Can. Ent. 14: 187. 1882.

I. Escambia Co.: Aug., SMH. II. Gainesville: Sept., DPI. III. DeLand: March, AKW. Orlando: April, CNC. IV. Bradenton: Oct., CPK. Oneco: March, April, JGF; Oct., CPK. Highlands Hammock State Park: Feb., YU. Fort Lauderdale: June, UM.

EXYRA Grote

3107 E. FAX (Grote)

Trans. Amer. Ent. Soc. 4: 295. 1873.

Jones said that this is merely the dark, southern female form of *rolandiana* Grote, to which this record properly should be transferred. Florida: larvae in *Sarracenia flava*, (Glover), Grote.

3108 E. RIDINGSI (Riley)

Trans. St. Louis Acad. Sci. 3: 240. 1874.

I. DeFuniak Springs: April 30, 1919, FMJ; June 1894, larva in *Sarracenia*, Hubbard (1896b, p. 314).

3109 E. SEMICROCEA (Guenée)

Pl. XIV, Fig. 10, ♂.
Spec. Gén. 6: 241. 1852.

Jones stated that this is found in Florida in the three forms, typical *semicrocea*, *hubbardiana* Dyar, and *immaculata* Benjamin, also that its food plant is *Sarracenia minor*. The species should be found wherever this occurs, which means about halfway down the peninsula. Actual records are few. I. Warrington: *hubbardiana*, May 11, 1962, VFG. Myrtle Grove: April 3, 1963, WJW. DeFuniak Springs: Hubbard (1896b, p. 314); April, FMJ. II. Trenton: May, UFES. III. Cassadaga: July, Aug., SVF. Orlando: April, DPI. IV. Highland Hammock State Park: Feb., YU.

XANTHOPTERA Guenée

3113 X. NIGROFIMBRIA Guenée

Spec. Gén. 6: 241. 1852.

Nigrofimbria is common from Escambia County to Paradise Key and probably in all parts of the state, March-November. Food: *Digitaria ischaemum* [*Syntherisma impomoea*].

3113, 1 X. SP.

This is apparently a new species, close to *aurifera* Walker. Because it can be confused easily with *nigrofimbria*, many records may be lost amongst those for the latter. The only sure ones are: IV. Bradenton: May, June, CPK. Oneco: April, JGF; May-Aug., CPK. Sarasota: May, (King), CPK. Siesta Key: May, CPK.

CYDOSIA Westwood

3114 C. NOBILITELLA (Cramer)

Pl. IV, Fig. 28, ♂.
Pap. Exot. 3: 128. 1782.

In this species the reniform is divided vertically only, and the hind wings of the male are white.

VIII. Key Largo: ten March 15, 1946, OB; June, Oct. 18, 1955, (Weems), DPI; July 15, 1956, GWK. Islamorada: two Nov. 27, 1955, (Denmark), DPI. Tavernier: Aug., Sept., (J. N. Todd), CPK; two Nov. 27, 1955, (Denmark), DPI. Craig: Aug., (J. N. Todd), CPK. Key Vaca: March 26, 1957, SVF. Big Pine Key: one April 1-5, 1951, (Sanford), AMNH.

3114, 1 C. PHAEDRA Druce

Biol. Cent. Amer. Het. 2: 402. 1897.

In addition to vertical division, the outer half of the reniform is divided horizontally, and the hind wings of the male are black. VIII. Key West: USNM.

[3115 C. aurivitta Grote & Robinson]

Trans. Amer. Ent. Soc. 2: 186. 1868.

IV. Miami: Aug. 5, 1912, CMNH. Welling reports that the specimen is labeled *imitella* Stretch, but that it looks more like *aurivitta*. However, Franclemont thinks the locality is decidedly open to question. Since the collector is unknown, the record should not be considered conclusive.

[3116 C. majuscula (Henry Edwards)]

Papilio 1: 80. 1881.

This species has been reported erroneously probably more often than any other from Florida. All the records which have been found have proven to be the yponomeutid *Urodus parvula* (Henry Edwards), q.v., from which it is separated by the bluish rather than black forewings and the less translucent hind wings. In the female the tip of the abdomen of *majuscula* is orange, in *parvula*, black. It is very doubtful that the species occurs in Florida.

LITHACODIA Hübner

3117 L. BELLICULA Hübner

Pl. XIV, Fig. 11, ♀.
Zutr. exot. Schmett. 18; Figs. 85, 86. 1818.

Florida: (Slosson), Grsb. 67. IV. Port Sewall: three Feb. 19-March 16, (Sanford), AMNH. Archbold Biological Station: Feb. 3, March 2, 1962, (Frost), PSU.

3118 L. MUSCOSULA (Guenée)

Spec. Gén. 6: 230. 1852.

I. Escambia Co.: April 23, July 5, 1961, SMH.

3123 L. MUSTA (Grote & Robinson)

Trans. Amer. Ent. Soc. 1: 358. 1868.

I. Escambia Co.: May 24, 1961, SMH.

3124 L. CARNEOLA (Guenée)

Spec. Gén. 6: 228. 1852.

Forbes (1954, p. 277), wrote: "The Guenée specimens labelled 'Florida' doubtless came from what is now southern Georgia." He said that he based his conclusion on the assumption that they were from Abbot. I. Escambia Co.: Aug. 18, 1961, SMH. Quincy: Aug. 23, 1960, (Tappan), CPK.

3125 L. INDETERMINATA Barnes & McDunnough

Contrib. 4: 114. 1918.

I. Escambia Co.: July 14, 1961, SMH. Myrtle Grove: Aug. 27, 1961, WJW.

3125, 1 L. SP.

I. Escambia Co.: May 13, July 5, 1961, det. Todd as probably a new species, SMH. Hills saw others.

NEOERASTRIA McDunnough**3126 N. APICOSA** (Haworth)Pl. XIV, Fig. 12, ♂.
Lep. Brit., p. 261. 1809.

Apicosa is relatively common through the peninsula, but there are no records from west of Quincy nor the Keys. It has been taken in every month except December. I. Quincy: June-Oct., but never common. IV. Bradenton: March-Aug., Oct. VI. Homestead: April-Oct., small peak in Aug. Food: *Polygonum*.

3127 N. CADUCA (Grote)Pl. XIV, Fig. 13, ♂.
Can. Ent. 8: 207. 1876.

Found here as both typical *caduca* and the redder form *retis* (Grote). II. Glen St. Mary: Feb., DPI. Gainesville: Feb., April, CPK. III. Cassadaga: April, June, SVF. Sanford: Feb., CPK. Weekiwachee Springs: May, CPK. IV. Bradenton: July, Sept., Oct., CPK. Oneco: March, April, JGF; May, CPK. Archbold Biological Station: Jan., PSU; April, YU. Siesta Key: Feb., CPK. Punta Gorda: Feb., CPK.; March, AKW. Tamiami Trail: March, WMD. VI. Homestead: June-Sept., CPK. Food: *Nuphar*.

CHAMYRIS Guenée**3131 C. CERINTHA** (Treitschke)Pl. XIV, Fig. 14, ♀.
Schmett. Eur. 5, 3, p. 240. 1825.

Most Florida specimens are the aberration *obscura* Dyar, or close to it, though in Warrington

typical *cerintha* occurs. Florida: Hampson (1910b, p. 481). I. Escambia Co.: May, June, SMH. Warrington: occasional, summer, VFG. Quincy: July 13 and 29, 1960, (Tappan), CPK. Monticello: June 16 and Sept. 13, 1955, (Phillips), CPK; April 22, 1958, DPI. II. Gainesville: April 29, 1959, DPI; July, UFES. Food: Rosaceae.

DIASTEMA Guenée**3134 D. TIGRIS** GuenéePl. V, Fig. 10, ♀.
Spec. Gén. 6: 317. 1852.

I. West Pensacola: July, VFG. Quincy: Sept., Oct., CPK. Monticello: June, Sept., DPI. II. Gainesville: April, DPI. III. Cassadaga: Jan., April-June, SVF. Sanford: Oct., DPI. Orange Co.: July, Oct., DPI. Winter Park: Sept., AMNH. Indian River: AMNH. IV. Oneco: April, JGF; May, CPK. Sarasota: May, June, CNC. Siesta Key: Jan., Feb., CPK. Miami: Aug., Oct., CNC. VI. Homestead: March, May-Oct., CPK. Florida City: April, Oct., HEW; July, AMNH.

AMYNA Guenée**3135 A. BULLULA** (Grote)Pl. XIV., Fig. 15, ♂.
Trans. Amer. Ent. Soc. 4: 299. 1873.

Records for *bullula* may have been missed because of its close resemblance in the female to *octo* below. The secondary of *bullula* has a distinct median line, whereas the secondary of *octo* is unmarked. Male *bullula* has a prominent fovea. In both species the reniform may be either white or concolorous. I. Escambia Co.: Nov. 29, 1962, SMH. Quincy: Nov. 17, 1961, (Tappan), CPK. III. Central Florida: Nov. 1957, WMD. Winter Park: Oct. 12, 1942, (Fernald), DPI. IV. Loxahatchee: Oct. 29-30, 1934, UM. South Miami: typical, Oct. 28, OB. VI. Florida City: form *concolorata* Barnes & Benjamin, Oct. 29, OB.

3136 A. OCTO (Guenée)Pl. XIV, Fig. 16, ♀.
Spec. Gén. 5: 233. 1852.

Quite common from Escambia County to the Keys. I. Quincy: Aug., Nov. IV. Bradenton: June-Aug., Oct.-Dec. VI. Homestead: May-Oct., Dec. Other records include Jan.-March. Food: *Chenopodium*.

HELIOCONTIA Hampson**3141 H. APICELLA** (Grote)Pl. IV, Fig. 29, ♂; Fig. 35, ♀.
Trans. Amer. Ent. Soc. 4: 21. 1872.

I. Escambia Co.: June, SMH. West Pensacola: July, VFG. Myrtle Grove: June, July, WJW. Quincy: Aug., CPK. Tallahassee: (Koebele), AMNH. Monticello: three April 13-15, 1919, CU. II. Greenville: Sept. 2, 1932, UM. Alachua Co.: Sept., DPI. Gainesville: April 29, 1960; Sept. 3, 1956, DPI. IV. Bradenton: Oct. 14, 1955, CPK. Archbold Biological Station: two July 15-31, (Klots), AMNH. VI. Homestead: Feb.-Nov., CPK. Food: "yellow brown-weed."

3142 H. MARGANA (Fabricius)

Pl. IV, Fig. 30, ♂; Fig. 36, ♀.
Ent. Syst. 3, 2, p. 257. 1794.

I. Escambia Co.: Sept. 4, 1962, SMH. Quincy: seven Sept. 9-Oct. 26, 1960, (Tappan), CPK. IV. Oneco: two Oct. 3-15, (Dillman), CPK. Sarasota: Nov. 26, 1952, det. Franclemont, CPK.

3142, 1 H. PERSTRUCTANA (Walker)

Pl. IV, Fig. 31, ♂; Fig. 37, ♀.
List Lep. Ins. Br. Mus. 33: 774. 1865.

II. Gainesville: two Oct. 10-17, 1956. III. Orlando: Oct. 18, 1961, (Woodley), DPI. IV. Bradenton: Nov. 1955, (Kelsheimer), CPK. Longboat Key: March 28, 1959, CPK. VI. Homestead: June 25, 1956, (Wolfenbarger), det. E. L. Todd, CPK. VIII. Tavernier: one male, one female Sept. 19-Oct. 17, 1956, (J. N. Todd), CPK. Loggerhead Key, Dry Tortugas: June 5, 1962, (Mead and Weems), DPI.

SPRAGUEIA Grote

3144 S. GUTTATA Grote

Pl. IV, Fig. 32, ♂.
Can. Ent. 7: 225. 1875.

I. West Pensacola: May 14, 1961, VFG. Quincy: July 7, 1961, (Tappan), DPI.

3147 S. ONAGRUS (Guenée)

Pl. IV, Fig. 33, ♀.
Spec. Gén. 6: 205. 1852.

As *onagrus* is quite common from Pensacola to Florida City, it is doubtless to be found throughout the state. It flies March-November. Food: chinquapin, Dozier (1920, p. 377), field corn, (Tissot), UFES acc. No. 9331.

3148 S. LEO (Guenée)

Pl. IV, Fig. 39, ♀.
Spec. Gén. 6: 205. 1852.

Because Holland's figure (1903; Pl. 29, Fig. 27), which is actually of *leo*, is labeled *onagrus*, some of the *onagrus* records may belong here. Florida: Hampson (1910b, p. 672). I. Myrtle Grove:

June 30, 1962, WJW. Quincy: June, (Tappan), CPK. Monticello: Sept. 13, 1955, (Phillips), CPK. Food: *Convolvulus*.

3149 S. DAMA (Guenée)

Pl. IV, Fig. 34, ♂; Fig. 40, ♀.
Spec. Gén. 6: 205. 1852.

I. Escambia Co.: June, SMH. Myrtle Grove: Aug., WJW. Quincy: June-Oct., CPK. Monticello: Sept., DPI; Oct., WRB, AMNH. II. Gainesville: June, DPI; July, UFES, CU; Sept., WRB; Sept. Oct., AMNH. Hastings: AMNH. III. Stemper: Sept., AEB; Sept., Oct. CNC. IV. Archbold Biological Station: Sept., AMNH. VI. Homestead: June-Aug., CPK.

3150 S. JAGUARALIS Hampson

Cat. Lep. Phal. Br. Mus. 10: 673. 1910.

I. Escambia Co.: Sept. 14, 1961, det. Franclemont, SMH. Myrtle Grove: July 9, 1962, WJW. Quincy: four Sept. 28-Oct. 5, CPK.

PONOMETIA Herrich-Schaeffer

3158 P. COSTALIS (Walker)

List Lep. Ins. Br. Mus. 12: 787. 1857.

I. Myrtle Grove: July 21, 1962, WJW.

3159 P. INDUBITANS (Walker)

List Lep. Ins. Br. Mus. 11: 712. 1857.

I. Escambia Co.: Sept. 9, 1962, SMH.

FRUVA Grote

3161 F. FASCIATELLA (Grote)

Pl. IV, Fig. 38, ♂.
Can. Ent. 7: 225. 1875.

I. Myrtle Grove: July 25, 1962, WJW. III. Casadaga: March 26, Sept. 26, 1962, SVF. Weekiwachee Springs: April, (May), CPK. IV. Bradenton: April-Aug., CPK. Oneco: two May, June, (Dillman), det. Franclemont, CPK. Archbold Biological Station: two July 15-31, 1948, (Klots), AMNH. April, YU; June, AKW. V. Everglades: (McDunnough), AMNH. VI. Homestead: Feb., (Wolfenbarger), CPK.

TARACHIDIA Hampson

3167 T. PARVULA (Walker)

List Lep. Ins. Br. Mus. 33: 779. 1865.

I. Escambia Co.: April, SMH. Myrtle Grove: April, WJW. III. DeLand: March, AKW. Weekiwachee Springs: March, CPK. IV. Bradenton: March, CPK. Oneco: one April, JGF. Archbold Biological Station: March, YU. Sara-

sota: May 20, 1951, (King), CPK. Siesta Key: May 12, 1946, CPK. Fort Myers: (McDunnough), AMNH.

3172 T. ERASTRIOIDES (Guenée)
Spec. Gén. 6: 218. 1852.

Florida: Forbes (1954, p. 281). I. Myrtle Grove: June 15, 1962, WJW. Food: *Ambrosia*.

3176 T. CANDEFACIA (Hübner)

Pl. XIV, Fig. 17, ♀.

Zutr. exot. Schmett. 3: 39; Figs. 587, 588. 1827.

Candefacta is common, probably all over the state, and present from January to November. I. Quincy: May-Aug., uncommon. IV. Bradenton: Feb., April, June, Aug., Sept. VI. Homestead: April-Aug., Oct., Nov., peak in May falling off in June. Also taken on the Dry Tortugas. The gray form *debilis* (Walker) is equally common. Food: *Ambrosia artemisifolia* [*elatior*].

3180 T. TENUESCENS (Smith)

J. N. Y. Ent. Soc. 10: 53. 1902.

II. St. Johns Co.: Sept., DPI, CPK. III. Flagler Beach: May, AMNH. IV. Port Sewall: Jan., AMNH. Lake Worth: type, AMNH. Miami: Nov., AMNH.

3185 T. SEMIFLAVA (Guenée)

Pl. XIV, Fig. 18, ♀.

Spec. Gén. 6: 241. 1852.

I. Escambia Co.: April, SMH. II. Levy Co.: Sept., DPI. Gainesville: Jan., April, June, DPI, CU; July, CPK, UFES, CU. Fernandina: Sept., OB. III. Cassadaga: May-Sept., SVF. Weeki-wachee Springs: March-June, Aug., AEB, CPK. Orange Co.: Feb., May, DPI. Largo: Aug., GWK. Lutz: Jan., March, HEW. Lakeland: May, WRB, AMNH. IV. Archbold Biological Station: Feb.-April, Aug., YU. VI. Florida City: April, Aug., Sept., JGF.

ACONTIA Ochseneheimer

3197 A. TETRAGONA Walker

List Lep. Ins. Br. Mus. 12: 786. 1857.

IV. Biscayne Bay: (Slosson), Grsb. 70. VI. Homestead: May, CPK. VIII. Key Largo: April, SVF; May, DPI. Tavernier: June, Aug., Sept., CPK. Big Pine Key: five April 4-9, (Sanford), AMNH.

3203 A. APRICA (Hübner)

Pl. XIV, Fig. 19, ♂.

Samml. eur. Schmett. Noct.; Fig. 371. 1802.

Florida: (Slosson), Grsb. 70; CU. I. Warring-

ton: occasional, VFG, WP. Quincy: May-Sept., CPK. Monticello: March, April, June, CPK. II. Gainesville: March, UM; April, CPK; June, DPI; July, UFES. III. Cassadaga: May, June, SVF. IV. Coral Gables: June, DPI. VII. Flamingo: form *ceyvestensis* Dyar, May 7, 1963, ENP. VIII. Tavernier: *ceyvestensis*, Sept., CPK. Windley Key: Sept. 19-23, 1955, (J. N. Todd), CPK. Key West: type of *ceyvestensis*, five, Dyar (1904b, p. 63). Loggerhead Key, Dry Tortugas: *ceyvestensis*, June 5, 1962, (Mead and Weems), CPK.

3210 A. TERMINIMACULA (Grote)

Pl. XIV, Fig. 20, ♂.

Bull. Buffalo Soc. Nat. Sci. 1: 153. 1873.

Terminimacula is probably general but not common. The records are mostly from the southern part of the state and include February through September.

3213 A. DELECTA Walker

List Lep. Ins. Br. Mus. 12: 799. 1857.

Florida: Smith (1893, p. 301).

Subfamily EUTELIINAE

EUTELIA Hübner

3220 E. PULCHERRIMA (Grote)

Pl. XIV, Fig. 21, ♂.

Proc. Ent. Soc. Phila. 4: 326. 1865.

A rare moth. Florida: (Slosson), Grsb. 65. I. Escambia Co.: April 2, May 17, 1961, SMH. Pensacola: one early summer 1959, three April 20-25, 1963, VFG. Warrington: April 28, 1961, VFG. The food is thought to be *Toxicodendron vernix* [*Rhus vernix*].

3221, 1 E. PYRASTIS Hampson

Ann. Mag. Nat. Hist. Ser. 7, 16: 374. 1905.

Although *pyrastis* was described from the Bahamas, there is a distinct possibility that it is the same as *furcata* (Walker) from San Domingo, redescribed as *distracta* (Walker) from Haiti, and again as *nattereri* (Druce) from Mexico. Genitalic studies are needed. Florida: USNM. III. Stemper: May 14, USNM. IV. Miami: (Schaus), Hampson, USNM. VI. Homestead: April 15, 1958, (Baranowski), CPK. VIII. Key Largo: May 2, 1957, (Weems), DPI. Stock Island: four May 12, 1962, (Buchanan), DPI, CPK.

MARATHYSSA Walker

3222 M. BASALIS Walker

Pl. XIV, Fig. 22, ♂.

List Lep. Ins. Br. Mus. 34: 1034. 1865.

I. Escambia Co.: March, SMH. II. Gainesville: Feb., DPI. III. Weekiwachee Springs: April, Aug., CPK. IV. Archbold Biological Station: Feb., Sept., YU. Siesta Key: occasionally fairly common, Jan., Feb., April, CPK. Punta Gorda: March, AKW. VI. Homestead: July, CPK. Food: *Rhus*.

3223 M. INFICITA (Walker)

Pl. XIV, Fig. 23, ♂.
List Lep. Ins. Br. Mus. 33: 818. 1865.

I. West Pensacola: May, June, VFG. Quincy: May, June, CPK. II. Alachua Co.: June, DPI. Gainesville: May, UM; Sept., DPI. Fernandina: April, Aug., HEW. III. Cassadaga: April, June-Aug., Oct., SVF. Weekiwachee Springs: April, May, CPK; Aug., AEB. Orlando: June, DPI. Tampa: Sept., Oct., WRB. IV. Oneco: June, CPK. Archbold Biological Station: March, April, YU; June, AKW; Aug., Oct., AMNH. Vero Beach: April, DPI. Siesta Key: March, May, CPK. Punta Gorda: May, AKW. Fort Myers: April, AMNH. La Belle: April, AMNH. Fort Lauderdale: April, UM. VI. Homestead: April-Aug., CPK. Florida City: March-May, AMNH; May, June, HEW. Food: *Rhus typhina*.

PAECTES Hübner

Florida records for this genus have been in a state of great confusion, due primarily to the similarity of most of the species and to the fact that some are subject to a certain degree of variation. Thanks to the efforts of Dr. Franclemont, I believe we have arrived at a fair understanding of those species which are present and of those which have been erroneously credited to the state.

3225 P. OCULATRIX (Guenée)

Pl. XIV, Fig. 24, ♂.
Spec. Gén. 6: 313. 1852.

I. Escambia Co.: April, SMH. II. Fernandina: April, OB. III. Weekiwachee Springs: May, Aug., AEB, CPK. IV. Bradenton: Aug., CPK. Siesta Key: Jan., May, CPK. Punta Gorda: Jan.-April, AKW. VI. Florida City: March, May-Aug., OB; May, AMNH. Paradise Key: March, April, FMJ. Food: poison ivy.

3227 P. BURSERAE (Dyar)

Pl. XIV, Fig. 25, ♂.
Proc. Ent. Soc. Wash. 4: 455. 1901.

Hampson (1912, p. 140) made this a synonym of *lunodes* (Guenée), but Franclemont says it is distinct. I. Escambia Co.: June, VFG. IV.

Oneco: May, CPK. Port Sewall: Jan., AMNH. Siesta Key: Nov.-April, CPK. Palm Beach: type, larva on *Bursera simaruba* [*gummifera*], Dyar. VI. Florida City: April, June-Oct., OB; June, AMNH; July, Sept., AKW. Paradise Key: Jan., March, FMJ. VIII. Tavernier: Aug., DPI.

[3227, 1 *P. devincta* (Walker)]

List Lep. Ins. Br. Mus. 15: 1781. 1858.

This was listed by Grossbeck (1917, p. 65), but Franclemont says the record belongs under *nubifera* Hampson, q. v.

3228 P. PYGMAEA Hübner

Zutr. exot. Schmett. 21; Figs. 109, 110. 1827.

Franclemont makes *flabella* of authors, not Grote, a synonym of this. This fact is mentioned because some of the records were submitted under the latter name. I. Escambia Co.: April, SMH. Quincy: May, CPK. III. DeLand: March, AKW. IV. Siesta Key: Feb., CPK. Lake Worth: Grsb. 65. Biscayne Bay: (Slosson), Grsb. 65. South Florida: Forsyth sale list. Food: *Liquidambar*.

3230 P. ABROSTOLOIDES (Guenée)

Pl. XIV, Fig. 26, ♂.
Spec. Gén. 6: 311. 1852.

One of the commoner and more variable species of the genus. I. Escambia Co.: March, SMH. Warrington: WP. West Pensacola: July, VFG. Quincy: Aug., Sept., CPK. Monticello: March, CU. II. Alachua Co.: May, Dec., DPI. Gainesville: UFES; Feb., April, May, DPI. Fernandina: April, OB. St. Johns Bluff: (Doubleday), BM. III. Cassadaga: April, July, Sept., SVF. Weekiwachee Springs: May, CPK. Lutz: March, HEW; Sept., AEB. Stemper: Aug., Sept., CNC. IV. Oneco: Aug., CPK. Archbold Biological Station: Sept., YU. Siesta Key: Feb., March, Dec., CPK. VI. Homestead: July, CPK. Food: *Liquidambar*.

[3231, 1 *P. lunodes* (Guenée)]

Spec. Gén. 6: 310. 1852.

Lunodes was reported by Grossbeck (1917, p. 65) but since the larva was on *Bursera simaruba* [*gummifera*], the record presumably belongs to *P. burserae*, whither it has been transferred.

3232 P. ACUTANGULA Hampson

Cat. Lep. Phal. Br. Mus. 11: 126. 1912.

VI. Homestead: June 25, 1959, (Wolfenbarger), CPK. Florida City: ten April 27-Aug. 14, OB; May, AKW; three June, Sept., Nov., JGF; July, AEB.

3232, 1 P. ARCIGERA (Guenée)

Spec. Gén. 6: 312. 1852.

III. Central Florida: June, July, WMD. IV. Archbold Biological Station: Jan., PSU. Siesta Key: Jan.-April, JGF, CPK. Matheson Hammock: April, JGF. VI. Florida City: June-Aug., OB.

3232, 2 P. OBROTUNDA (Guenée)

Spec. Gén. 6: 312. 1852.

IV. Siesta Key: May 18, 1960, CPK. Palm Beach: Dec. 1898, (Thaxter), AEB. Coconut Grove: Nov. 1897, (Thaxter), AEB. Both det. E. L. Todd. VI. Florida City: CU; April, June, OB. VIII. Key Largo: Nov. 26, 1955, (J. N. Todd), CPK. Tavernier: Aug. 16, Sept. 23, 1955, (J. N. Todd), CPK.

3233 P. [NUBIFERA Hampson]

Pl. XIV, Fig. 27, ♂.

Cat. Lep. Phal. Br. Mus. 11: 131. 1912.

There is a very good possibility that this name does not apply and that what we have in Florida is unnamed. II. Gainesville: March, CPK; Aug., DPI. III. Cassadaga: Sept., Dec., SVF. Winter Park: July, AMNH. Orlando: April, AEB. Oldsmar: Aug., WRB. Stemper: Aug., OB; Aug., Sept., AEB, AKW; Sept., as *devincta* (Walker), (Marloff), Grsb. 65. Tampa: June, OB. St. Petersburg: March, AKW. IV. Bradenton: Oct., CPK. Oneco: JGF. Lake Placid: Nov., CPK. Archbold Biological Station: March, PSU; April, YU. Siesta Key: April, May, CPK. Punta Gorda: Dec., AKW. Miami: Oct., OB. VI. Florida City: June, July, OB. VIII. Tavernier: Oct., CPK.

Subfamily SARROTHRIPINAE

CHARACOMA Walker**3234 C. PROTEELLA** (Walsh)

in Dyar, J. N. Y. Ent. Soc. 6: 40. 1898.

Proteella is probably more common than the infrequent records would indicate for because of its small size it might be overlooked easily. It occurs as typical *proteella*, as *nigrimacula* Warren, *nigrinotata* Warren, and probably in other forms. I. Escambia Co.: June, SMH. Quincy: July, Sept., CPK. III. Weekiwachee Springs: March, June, (May), CPK. IV. Bradenton: March, (Kelsheimer), CPK. Sarasota: July, (King), CPK. Siesta Key: March, CPK. VI. Homestead: Feb., April-Nov., CPK. Paradise Key: FMJ. VIII. Tavernier: Sept., DPI. Craig: May-Sept., DPI, CPK. Key West: May, July, DPI. Dry Tortugas: May, June, DPI.

COMACHARA Franclemont**3234, 1 C. CADBURYI** Franclemont

Ent. News 50: 216. 1939.

I. Escambia Co.: Feb., April, SMH. Myrtle Grove: April 4, 1963, WJW. II. Boulogne: two April 1, 1936, JGF.

SARROTHRIPUS Curtis**3235 S. FRIGIDANA** (Walker)

Pl. XIV, Fig. 28, ♀.

List Lep. Ins. Br. Mus. 28: 323. 1863.

I. Escambia Co.: Jan., Feb., SMH. Quincy: March 24 and 27, 1961, (Tappan), CPK.

CASANDRIA Walker**3236 C. ABSEUZALIS** (Walker)

Pl. XIV, Fig. 29, ♀.

List Lep. Ins. Br. Mus. 19: 1022. 1859.

Abseuzalis is relatively common from Tampa on the west and Indian River on the east, south through the Keys. The records cover the year. VI. Homestead: Feb.-Nov., peak in July.

3237 C. FILIFERA (Walker)

Pl. XIV, Fig. 30, ♂.

List Lep. Ins. Br. Mus. 11: 719. 1857.

Filifera is much rarer than the previous species, though common in the Keys. II. Jacksonville: Morrison (1875, p. 65). IV. Siesta Key: Jan., May, Nov., CPK. Lee Co.: April, OB. Miami: May, WRB. VI. Homestead: May-July, CPK. Florida City: March, JGF; May, Oct., Dec., OB. VII. Flamingo: Feb., April, DPI. VIII. Key Largo: March, HFS; Aug., Nov., DPI. Tavernier: July-Sept., DPI; Oct.-Dec., CPK. Craig: June, July, DPI, CPK. Big Pine Key: six Feb., AMNH. Dry Tortugas: July, WMD.

BAILEYA Grote**3238 B. DOUBLEDAYI** (Guenée)

Spec. Gén. 5: 15. 1852.

I. Escambia Co.: one March, April 9, July 4, 1961, SMH.

3239 B. OPHTHALMICA (Guenée)

Spec. Gén. 5: 15. 1852.

I. Escambia Co.: one March, April 9, 1961, SMH.

3240 B. AUSTRALIS (Grote)

Can. Ent. 13: 152. 1881.

Florida: Holland (1903, p. 162). I. West Pensacola: July 6, 1961, VFG.

3242 **B. LEVITANS** (Smith)
J. N. Y. Ent. Soc. 14: 9. 1906.

I. Escambia Co.: July 1, 1962, SMH. Myrtle Grove: May 22, 1963, WJW. Quincy: May 3, 1962, (Tappan), CPK. This last is a poor specimen which Franclemont determines as probably *levitans*.

Subfamily PLUSIINAE

ANAGRAPHA McDunnough

3252 **A. FALCIFERA** (Kirby)
Celery looper. Pl. XIV, Fig. 32, ♂.
Faun. Bor. Amer. 4: 308. 1837.

The distribution of this is probably general, but it is certainly common in the celery sections where it does much damage. Reports of its activities are in: U. S. Dept. Agr. Tech. Bull. 463: 40; Fla. Agr. Exp. Sta. Bull. 151: 155; 232: 50; and 250: 17. It also feeds on low plants.

AUTOPLUSIA McDunnough

3267 **A. EGENA** (Guenée)
Bean leaf skeletonizer. Pl. XIV, Fig. 33, ♂.
Spec. Gén. 6: 328. 1852.

I. Warrington: May, VFG. Quincy: Nov., CPK. III. Cassadaga: July, SVF. Orlando: June, CNC; July, WRB. Indian River: Grote (1883a, p. 26). IV. Bradenton: March, Sept., Oct., CPK. Oneco: June, CPK. Vero Beach: Dec., WRB. Port Sewall: March, AMNH. Siesta Key: Feb., CPK. Belle Glade: Genung has kindly supplied data on the occurrence of the larvae at Belle Glade. May and June 1957: serious infestation on snap beans during May. 1958: late April to mid-June, serious infestation on snap beans during May, with a single larva on soy beans in July. 1959: late April to early June, again with a serious infestation on snap beans during May. Miami: Jan., WRB. VI. Homestead: March, May, CPK. Florida City: April, SVF; May, JGF, AKW, HEW; "5. 11", CNC.

3267, 1 [A.] **ILLUSTRATA** (Guenée)
Pl. XIV, Fig. 34, ♂.
Spec. Gén. 6: 328. 1852.

The placement of *illustrata* in this genus is purely tentative and is in no way established. I interpolate it here simply because it has always been listed next to *egena*. This species, though still rare, is apparently established. III. Cassadaga: one March, Nov. 8, 1962, SVF. St. Petersburg: Nov., AKW. IV. Bradenton: one each month, March, Aug., Sept., Oct., Nov., (Kelsheimer), CPK. Oneco: four May, June, Aug., Oct., (Dillman), JGF, CPK. Vero Beach: one April,

(Wagner), CPK. Siesta Key: rare, Jan.-April, Nov., CPK. Casey Key: Jan. 30, 1963, (Yax), DPI. VI. Homestead: March, Oct., (Wolfenbarger), CPK.

TRICHOPLUSIA McDunnough

3269 **T. NI BRASSICAE** (Riley)
Cabbage looper. Pl. XIV, Fig. 37, ♂.
Rept. Ins. Mo. 2: 110. 1870.

Throughout the state, including the Dry Tortugas, probably all year. I. Quincy: Feb., May-July, Sept., Nov., with peak at end of July. IV. Bradenton: Jan., Aug., Oct. VI. Homestead: March-Oct., common in May only. Food: low plants, but especially the cabbage family to which it is often injurious. In the latter connection, see the following: Fla. Agr. Exp. Sta. Bull.: 134: 62; 151: 136, 176; and 232: 37. Other food plant records: collards, Coop. Econ. Ins. Rept. 4: 83; tobacco, *ibid.* 3: 397; Bibb lettuce, CPK; *Spathyphyllum*, DPI.

3276 **T. ABROTA** (Druce)
Biol. Cent. Amer. Het. 1: 333. 1881.

Probably a stray. Florida: Ottolengui (1902, p. 67). The specimen is in AMNH collection.

3277 **T. OXYGRAMMA** (Geyer)
Pl. XIV, Fig. 38, ♂.
Zutr. exot. Schmett. 4; Figs. 769, 770. 1832.

I. Escambia Co.: July, SMH. Lake Stanley: Oct., AMNH. Warrington: one, summer, VFG. Quincy: July-Oct., CPK. Monticello: Aug., DPI. II. North Florida: SVF, AMNH. Palatka: Sept., DPI. III. Cassadaga: Aug., Nov., SVF. Weekiwachee Springs: April, CPK. Orange Co.: Aug., Nov., WMD. Some of Davidson's specimens are distinctly brownish. Orlando: June, CNC; July, WRB. IV. Oneco: May, June, CPK. Siesta Key: June, CPK. VI. Homestead: June-Nov., CPK. Florida City: May, Aug., Nov., OB; May, Nov., Dec., JGF; July, WRB. Food: aster, *Solidago*.

ARGYROGRAMMA Hübner

3268 **A. VERRUCA** (Fabricius)
Pl. XIV, Fig. 35, ♀.
Ent. Syst. 3, 2, p. 81. 1794.

Verruca is probably state-wide, the records running from Escambia County to Florida City. It has been taken in every month. I. Quincy: July-Oct., no peak. IV. Bradenton: Aug., Sept. VI. Homestead: Feb., July-Oct., peak Sept., Oct. Dozier (1920, p. 377) found it abundant at catnip blooms. Food: *Sagittaria*; field corn, UFES acc. No. 9331; *Calendula*, CPK.

3270 A. BASIGERA (Walker)

Pl. XIV, Fig. 31, ♂.
List Lep. Ins. Br. Mus. 33: 836. 1865.

This likewise is probably found throughout the state, down to Florida City and is taken in every month but December.

PSEUDOPLUSIA McDunnough**3280 P. INCLUDENS** (Walker)

Pl. XIV, Fig. 39, ♀.
List Lep. Ins. Br. Mus. 12: 914. 1857.

Includens is better known as *oo* (Cramer). Like the last two, this is doubtless general. The form *oonana* (Strand) also occurs. The dates include January through November. Food: low plants; Irish potato foliage, DPI.

RACIPLUSIA Hampson**3289 R. OU** (Guenée)

Pl. XIV, Fig. 40, ♂.
Spec. Gén. 6: 348. 1852.

Ou is taken also as forms *pedalis* (Grote) and *ouana* (Strand). In this case the records do cover the state and every month. Food: field corn, UFES acc. No. 9331; and weed, UFES, acc. No. 10769, *Cestrum diurnum* leaves, (Nakahara), DPI.

AUTOGRAPHIA Hübner**3279 A. BILOBA** (Stephens)

Pl. XIV, Fig. 36, ♀.
Ill. Brit. Ent. 3: 104. 1832.

I. Escambia Co.: March, SMH. Warrington: common, May-Nov., VFG. Quincy: April, Dec., CPK. Tallahassee: March, JPK. Monticello: March, DPI. II. Alachua Co.: March, DPI. Gainesville: Feb., Sept., Dec., DPI. Hogtown Creek: UFES. Fernandina: April, HEW. III. Sanford: March, April, DPI. Brooksville: June, AKW. IV. Bradenton: Jan., Feb., CPK. Archbold Biological Station: April, YU. Siesta Key: Feb., CPK. Matheson Hammock: June, DPI. VI. Homestead: May, CPK. Florida City: HEW; May, OB. Food: garden crops.

[3290 *A. pasiphaeia* (Grote)]

Bull. Buffalo Soc. Nat. Sci. 1: 146. 1873.

The record is unquestionably an error, possibly for *egena*, *abrota*, or *illustrata*. The specimen should be re-determined. III. Rockledge: (Hill), NYSM.

PLUSIA Ochsenheimer

[3295 *P. aereoides* Grote]

Proc. Ent. Soc. Phila. 3: 84. 1864.

In the original description cited above, Grote says: "I believe to cite here M. Guenée's 'A', which that entomologist refers to as a variety of *P. aerea* on account of an intermediate individual which he has seen from Florida." Inasmuch as Forbes (1954, p. 307) stated that he had not seen *aereoides* from the southeast, the species cannot be accepted in the Florida list merely on the basis of Grote's guess. Since *aerea* does have a pale form, even paler than *aereoides*, a much more likely guess would seem to place Guenée's "A" with that species.

3296 P. AEREA (Hübner)

Samml. eur. Schmett. Noct.; Fig. 271. 1802.

Florida: Grote (1863, p. 83). To which we should perhaps add Guenée's "A" mentioned above. I. West Pensacola: July 15, 1961, VFG. Quincy: June 16, 1963, Sept. 21, 1960, (Tappan), AMNH, CPK.

3297 P. BALLUCA Geyer

Zutr. exot. Schmett.; Fig. 681. 1835.

I. Old Camp Torrey: May 30, 1924, (Hubbell), UM. Because this is so far from its known range, the southern limit of which Forbes (1954, p. 308) gave as Long Island, I asked Dr. Hubbell to verify the determination and received his reply that there was no doubt of its being correct. He added the information that the food plants listed by Forbes, aspen and hops, were not present in the general locality of capture.

MOURALIA Walker**3310 M. TINCTOIDES** (Guenée)

Pl. XIV, Fig. 41, ♀.
Spec. Gén. 6: 323. 1852.

A rare insect. I. Escambia Co.: July, SMH. West Pensacola: June, VFG. Warrington: VFG. Myrtle Grove: Aug., WJW. Quincy: Dec., CPK. II. Gainesville: Feb., UFES. III. Cassadaga: May, SVF. St. Petersburg: March, AKW. IV. Oneco: June, (Dillman), CPK. Miami: Jan., WRB. VI. Homestead: Aug., CPK. Florida City: two May, OB; June, (Forsyth), Richards (1937, p. 218).

Subfamily CATOCALINAE**CATOCALA Schrank**

I am indebted to Dr. A. E. Brower for looking over the subject matter on this genus, and for

supplying a good deal of data as well as comments. Among the latter, he observes that food plant records for *Catocala* are to be looked upon with caution. Fuller points out that the food plant of the oak feeders will invariably be a deciduous oak, with the exception of *micronympha*, and he questions even this, though Koebele's record seems positive.

3311 C. INNUBENS Guenée

Pl. X, Fig. 5, ♂.
Spec. Gén. 7: 98. 1852.

III. St. Petersburg: USNM. Lakeland: Sept. 15, 1941, AKW. Food: *Gleditsia*, probably other legumes.

3312 C. PIATRIX Grote

Proc. Ent. Soc. Phila. 3: 88. 1864.

Gossard (1905, p. 296) called it locally common. Actual records, however, are few. I. Escambia Co.: June, Aug., SMH. Dead Lake: Aug. 20-29, Brower letter of Oct. 7, 1954. Warrington: occasional, summer, VFG, WP. Quincy: Aug. 23, 1962, Sept. 21, 1960, (Tappan), CPK. Tallahassee: July 22, 1951, JPK. Monticello: MCZ; larva on pecan, May 16, adult emerged June 19, 1913, USNM. II. Gainesville: July 23, 1923, UM. Food: hickory, walnut, persimmon; pecan, Gossard.

3313 C. CONSORS (Abbot & Smith)

Pl. X, Fig. 10, ♂.
Lep. Ins. Ga. 2: 177; Pl. 89. 1797.

I. Escambia Co.: June, SMH. II. Gainesville: May 25, UFES. III. Ocoee: May 16, FRA; May 22-31, CNC; May 27, PSR. III. Gulf Hammock: May, June, Brower letter of Oct. 7, 1954. St. Petersburg: Brower. Tampa: Brower. IV. Rye: Brower. Parish: Brower. Palmetto: Brower. Archbold Biological Station: May, (Pease), ABS. Food: hickory, also reported on *Baptisia* and *Myrica*.

3314 C. EPIONE (Drury)

Pl. X, Fig. 13, ♀.
Ill. Exot. Ent. 1: 47; Pl. 32, Fig. 2. 1773.

I. Escambia Co.: June, SMH. Wakulla Springs: May 20, CNC. Quincy: four May, June, (Tappan), CPK. Tallahassee: June 3-22, JPK. II. Gainesville: May, UFES. River: June 21, UFES. Catocala Glen: May 30, Dozier (1920, p. 377). III. Gulf Hammock: May 28, 29, Brower letter of Oct. 7, 1954. Rye: April 18, Brower. Food: hickory, oak.

3315 C. MULIERCULA Guenée

Pl. X, Fig. 9, ♂.
Spec. Gén. 7: 97. 1852.

Muliercula is quite common April-July, but mostly in May. It has been taken only three times below the Oneco-Lakeland-Georgiana line, namely: IV. Archbold Biological Station: May 24, 1960, ABS. Fort Lauderdale: May 1922; May 24, 1925, UM. Food: *Myrica*.

[3318 *C. badia* Grote & Robinson]

Proc. Ent. Soc. Phila. 6: 22. 1866.

Forbes (1954, p. 322) mentioned a specimen labeled Stemper, but added that it was "probably mislabelled." This is presumably the specimen in the Canadian National Collection. Food: *Myrica*.

3327 C. SAPPHO Strecker

Lep. Rhop. Het., p. 95. 1874.

Sappho is common, both the typical form and the form *cleis* Cassino, through the central part of the state but apparently is scarce north of Gainesville and south of Rye, there being only one record for Tallahassee and one for Miami. The dates cover April-July, but are mostly in May and June. There is one for January, but I suspect it refers to the larvae. Food: pecan; hickory, Watson (1919b, p. 10).

3328 C. AGRIPPINA Strecker

Pl. X, Fig. 15, ♂.
Lep. Rhop. Het., p. 95. 1874.

The form *subviridis* Harvey has been reported also but there is some question as to just what *subviridis* really is. I. Escambia Co.: June, SMH. Warrington: rare, summer, VFG. Quincy: June, Aug., CPK. Tallahassee: June, JPK. Monticello: autumn, UM. II. Gainesville: June, Sept., Oct., Watson (1919b, p. 10); Aug., CPK. III. St. Petersburg: June, Brower letter of Oct. 7, 1954. IV. Parish: April-June, Brower. Rye: May, Brower. Wauchula: June, Watson. DeSoto Co.: June, Brower. Food: bitter pecan.

3330 C. ULALUME Strecker

Lep. Rhop. Het., p. 132. 1874.

Brower letter of Oct. 7, 1954, listed two Florida records in the Paine collection. Of one, that from "So. Fla.," he remarks that it sounds questionable. However, he believes the presence of the species in northern Florida is perfectly reasonable. Food: hickory.

3332 C. INSOLABILIS Guenée

Spec. Gén. 7: 94. 1852.

Forbes (1954, p. 325). Brower strongly doubts the presence of *insolabilis* in Florida, or anywhere south of the Fall Line. Forbes' record was based on a specimen formerly in the Rutgers

collection, now in the American Museum of Natural History. The specimen bears a large handwritten label which reads, in addition to the species name, "12.6.1880 Florida." There is always the very remote possibility that this actually meant Florida, N. Y., a small town in the lower Catskills. However, its presence is now established. I. West Pensacola: July 10, Aug. 10, 1962, VFG. Food: hickory.

3333 C. VIDUA (Abbot & Smith)

Pl. X, Fig. 16, ♂.
Lep. Ins. Ga. 2: 181; Pl. 91. 1797.

Florida: Grsb. 73. I. Warrington: rare, summer, VFG. Quincy: Sept., CPK. Monticello: reared from pecan, June, UM. II. Starke: five May 14, 1951, (White), UFES. Gainesville: larva on pecan, det. with "P", (McMillan), DPI. Food: walnut, hickory, pecan, and reported on oak.

3334 C. MAESTOSA Hulst

Pl. X, Fig. 16, ♀.
Bull. Brooklyn Ent. Soc. 7: 53. 1884.

I. Dead Lake: Brower letter of Oct. 7, 1954. West Pensacola: Oct., VFG. Warrington: occasional, VFG. Quincy: June, Sept., Nov., CPK. Tallahassee: June 8, JPK. II. Gainesville: July, Aug., DPI; Oct., UFA. Fort George: July 10, Brower. III. Orange Co.: Brower. IV. DeSoto Co.: Brower. Food: pecan, Gossard (1905, p. 297).

3335 C. LACHRYMOSA Guenée

Spec. Gén. 7: 93. 1852.

All records except Quincy are for June. I. Quincy: Sept. 21, 1960, CPK. III. Gulf Hammock: Brower letter of Oct. 7, 1954. Inverness: form *evelina* French, WRB. Brooksville: AKW; WRB; *evelina*, WRB; form *zelica* French, WRB. New Port Richey: WRB. Bayonet Point: form *paulina* Henry Edwards, WRB. Orlando: Brower; AKW. IV. Myakka: Brower. Food: hickory.

[3339 *C. neogama* (Abbot & Smith)]

Pl. X, Fig. 14, ♀.
Lep. Ins. Ga. 2: 175. 1797.

Neogama has not been recorded from Florida. It was illustrated here by mistake.

3342 C. ILIA (Cramer)

Pl. X, Fig. 19, ♂; Fig. 20, ♀.
Pap. Exot. 1: 53; Pl. 33, Figs. B, C. 1775.

Ilia is found sparingly in various forms from Warrington to La Belle, from March 31-July 7. Food: oak.

3369, 1 C. SP.

This is an unrecognized species, near *junctura* Walker and *texanae* French. More material is needed. III. Cassadaga: May 12, 1950, SVF.

3372 C. CARA Guenée

Pl. X, Fig. 21, ♂.
Spec. Gén. 7: 87. 1852.

Cara generally occurs as form *carissima* Hulst described from Florida, the types being in the American Museum of Natural History. I. Quincy: Oct., CPK. Tallahassee: June, JPK. II. Gainesville: Watson (1919b, p. 11); typical *cara*, Sept., (Hetrick), UFA. Hogarth Landing: June, July, Brower letter of Oct. 7, 1954. III. Tampa: Brower. IV. Parish: June, Brower. Oneco: June, (Dillman), CPK. Food: willow.

3374 C. AMATRIX (Hübner)

Samml. eur. Schmett.; Fig. 487. 1818.

Florida: Forbes (1954, p. 331). I. Quincy: July 19, 1960, (Tappan), DPI. Food: poplar.

3375 C. DELILAH Strecker

Lep. Rhop. Het., p. 96. 1874.

Florida: CM. Brower letter of Oct. 7, 1954. Food: oak.

3380 C. ABBREVIATELLA Grote

Trans. Amer. Ent. Soc. 4: 14. 1872.

III. Cassadaga: three at bait, May 1959, SVF.

3383 C. AMESTRIS Strecker

Lep. Rhop. Het., p. 96. 1874.

III. Ocoee: May 6, 1938, May 10, 1939, (Berry), CPK; June 22, 1938, Brower letter of Oct. 7, 1954. Kissimmee: MCZ. Food: locust, *Amorpha*.

3384 C. MESSALINA Guenée

Spec. Gén. 7: 107. 1852.

I. Pensacola: May 15, AEB.

3386 C. GRACILIS Edwards

Pl. XIV, Fig. 42, ♀.
Proc. Ent. Soc. Phila. 2: 511. 1864.

Florida: two, AMNH; a third without data, Brower letter of Oct. 7, 1954. I. Escambia Co.: May 26, 1961, SMH. Food: *Vaccinium*.

3387 C. ANDROMEDAE (Guenée)

Pl. XIV, Fig. 43, form *tristis*, ♀.
Spec. Gén. 7: 36. 1852.

I. Escambia Co.: May, SMH. III. St. Petersburg: Brower letter of Oct. 7, 1954. IV. Rye: April 18-23, Brower. Food: *Vaccinium*, *Andromeda*.

3389 C. COCCINATA Grote

Pl. X, Fig. 22, ♂.
Trans. Amer. Ent. Soc. 4: 6. 1872.

Florida: type of *sinuosa*, (Koebele), Grote (1879a, p. 77). II. Alachua Co.: May 13, 1958, (Denmark), DPI. Gainesville: May, Brower letter of Oct. 7, 1954. St. Johns River: AMNH. III. Lakeland: *sinuosa*, May, AMNH. Food: *Quercus ilicifolia*.

3395 C. ULTRONIA (Hübner)

Pl. X, Fig. 7, ♂; Fig. 8, ♀; Pl. XV, Fig. 1, form *celia*, ♀.
Zutr. exot. Schmett. 26; Figs. 347, 348. 1823.

Though this is found in Florida primarily in the form *celia* Henry Edwards, Knudsen reports having taken it as typical *ultronia* and in several other forms at Tallahassee. It is not uncommon from Escambia County as far south as Punta Gorda, and has been taken March-June, and in October. Food: cherry; plum, UFES acc. No. 8148; wild cherry, Koebele (1878, p. 44).

3396 C. CRATAEGI Saunders

Pl. XV, Fig. 2, ♂.
Can. Ent. 8: 72. 1876.

Florida: AMNH, USNM. Food: *Crataegus*.

3397 C. MIRA Grote

Pl. XV, Fig. 3, ♂.
Can. Ent. 8: 230. 1876.

Florida: Smith (1893, p. 335). I. Quincy: May 22 and 29, 1963, (Tappan), det. Brower, CPK. II. Gainesville: April 19, (Bates), UM; April 19, May 10, Brower letter of Oct. 7, 1954. Food: *Crataegus*.

3398 C. GRYNEA (Cramer)

Pap. Exot. iii, p. 29; Pl. 208, Fig. H. 1782.

I. Quincy: four May 12-23, 1963, (Tappan), CPK. These are not dull green like northern specimens, but the lines and underside match. Forbes thinks they may represent a local race.

3399 C. PRAECLARA Grote & Robinson

Proc. Ent. Soc. Phila. 6: 25. 1866.

South Florida: one male, June, AMNH. Brower writes: "Since this is the only record I have on the Atlantic Coast Plain south of Lakehurst, N. J., it may be incorrect." It needs confirmation. Confirmation for south Florida is still needed, but there are several valid records for north Florida. I. Escambia Co.: May 13-27, 1961, SMH, USNM. Food: thorn.

3403 C. ALABAMAE Grote

Proc. Acad. Nat. Sci. Phila. 26: 427. 1875.

Florida: AMNH. I. Escambia Co.: May 13, 1961, SMH. Tallahassee: May 15, 1951, JPK. II. Gainesville: May 8-12, 1927, (Bates), UM.

3406 C. CLINTONI Grote

Pl. X, Fig. 18, ♀.
Proc. Ent. Soc. Phila. 3: 89. 1864.

Florida: AMNH. I. Escambia Co.: May 6, 1962, SMH. Tallahassee: July 22, Brower letter of Oct. 7, 1954. II. Gainesville: April 5, 1925, (Bates), UM; May 6, 1960, DPI; May 22, Brower. Island Grove: May 22, Brower. III. Ocoee: May 3, 1937, (Berry), FRA. Orlando: May 6, Brower. Food: apple, wild plum.

3407 C. SIMILIS Edwards

Pl. XV, Fig. 4, ♂.
Proc. Ent. Soc. Phila. 2: 511. 1864.

Similis is found also as form *aholah* Strecker and possibly as *isabella* Henry Edwards. I. Escambia Co.: May, SMH. Warrington: occasional, VFG. Quincy: May, CPK. Tallahassee: May, JPK. II. Gainesville: April, UFA, UFES; May, UM. Island Grove: May, Brower letter of Oct. 7, 1954. Hogarth Landing: June, Brower. III. Orlando: April, May, PSR. Georgiana: NYSM. Lakeland: May, Brower. IV. Rye: April, Brower. Port Sewall: March, Brower. Food: oak; pecan, UFES.

3408 C. MINUTA Edwards

Proc. Ent. Soc. Phila. 2: 512. 1864.

I. Warrington: form *mellitula* Hulst, June 3, 1963, VFG. Myrtle Grove: form *parvula* Edwards, May 27, 1963, det. Forbes, WJW.

3409 C. GRISATRA Brower

Bull. Brooklyn Ent. Soc. 31: 96. 1936.

Florida: female paratype in Strecker collection, CNHM.

3410 C. MICRONYMPHA Guenée

Pl. X, Fig. 6, form *hero*, ♀; Pl. XV, Fig. 5, ♂; Fig. 6, form *gisela*, ♀.
Spec. Gén. 7: 102. 1852.

Micronympha is quite common and present in many of its forms and intermediates. Recorded from Pensacola to Punta Gorda, April-June. Food: oak; live oak, Koebele (1879, p. 44).

3411 C. CONNUBIALIS Guenée

Pl. XV, Fig. 7, form *cordelia*, ♂.
Spec. Gén. 7: 105. 1852.

Florida: type of *cordelia* Henry Edwards (1880,

p. 59). I. Tallahassee: AMNH. II. Gainesville: May 6, 1922, UM. III. Weekiwachee Springs: May 1955, (May), CPK. St. Petersburg: April 20, Brower letter of Oct. 7, 1954. Bartow: (Stone), FMJ. Fort Meade: Brower. IV. Rye: Brower. Parish: April 19, Brower. Food: oak.

3412 C. AMICA (Hübner)

Pl. XV, Fig. 8, ♂.

Zutr. exot. Schmett. 14; Figs. 57, 58. 1818.

Amica occurs in several forms, including *curvifascia*, which was described from Florida, Brower (1936, p. 97). It is abundant from Escambia County to South Bay and La Belle, April-July. Food: burr oak.

3413 C. JAIR Strecker

Ent. News 8: 116. 1897.

Jair was described from the Indian River region where it was common in 1896 (Strecker). Otherwise it is far from common. III. Cassadaga: May, June, SVF. Enterprise: AMNH. Ocoee: Brower letter of Oct. 7, 1954. St. Petersburg: Brower. IV. Port Sewall: (Sanford), AMNH.

EUPARTHENOS Grote

3414 E. NUBILIS Hübner

Samml. exot. Schmett., ii: 428; Fig. 3. 1816.

I. Warrington: WP. Food: *Robinia*.

ALLOTRIA Hübner

3415 A. ELONYMPHA (Hübner)

Pl. XV, Fig. 9, ♀.

Zutr. exot. Schmett. 1; Fig. 29. 1818.

I. Escambia Co.: Sept., SMH. Warrington: April, occasional, summer, VFG. De Funiak Springs: FMJ. Quincy: June, July, CPK. Tallahassee: June, Aug., JPK. Monticello: July, Aug., UM. II. Greenville: Sept., UM. Gainesville: March, May, UM; June, DPI. III. Stemp-er: Aug., CNC. IV. Oneco: June, (Dillman), CPK. Food: *Nyssa sylvatica*.

OPHIDERES Boisduval

3416 O. MATERNA (Linnaeus)

Pl. X, Fig. 23, ♀.

Syst. Nat. 2: 840. 1767.

Materna is a stray from the tropics. Florida: (Slosson), Grsb. 77. I. Escambia Co.: seen but not taken, March 29, 1963, SMH. IV. Belle Glade: April 30, 1956, (Seiler), DPI.

PARALLELIA Hübner

3420 P. SIMILIS (Guenée)

Pl. XV, Fig. 11, form *apicalis*, ♀.

Spec. Gén. 7: 267. 1852.

I. Escambia Co.: form *apicalis* (Guenée), June 19, 1962, SMH. III. Cassadaga: *apicalis*, March 1, 1955, det. Todd, SVF. Weekiwachee Springs: *apicalis*, May 20, 1960, (Mrs. May), CPK. Stem- per: July 2, Aug. 20, CNC; Aug. 3, USNM.

3421 P. SMITHI (Guenée)

Pl. XV, Fig. 10, ♀.

Spec. Gén. 7: 266. 1852.

I. Escambia Co.: March, Aug., SMH. Quincy: June 12, 1956, (Tappan), DPI. IV. Punta Gorda: relatively common, Dec.-April, (Ramstedt), AEB, OB, CPK, CGM, AKW.

3422 P. BISTRIARIS Hübner

Zutr. exot. Schmett. 1: 15; Figs. 63, 64. 1818.

I. Warrington: common, all summer, VFG, WP. II. Gainesville: June, UM. III. Cassadaga: June, SVF. Lakeland: (McDunnough), AMNH. IV. Bradenton: Feb., CPK. Oneco: April, JGF; June, (Dillman), CPK. Food: maple.

EUCLIDINA McDunnough

3426 E. CUSPIDEA (Hübner)

Zutr. exot. Schmett. 1: 16; Figs. 67, 70. 1818.

It is strange that the only specimen of this essentially northern species should have been taken at the southern end of the state. VI. Florida City: April 22, 1941, (Forsyth), OB. Food: clover, grass.

CAENURGINA McDunnough

3431 C. ERECHTEA (Cramer)

Pap. Exot. 3: 149; Pl. 275, Fig. E. 1782.

II. Gainesville: UFES. III. Egmont Key: April 10, 1904, (Ramstedt?), UM. IV. Miami Beach: larva on Para grass, det. tentative, Nov. 1, 1927, DPI.

CAENURGINA Walker

3432 C. CHLOROPHA (Hübner)

Pl. V, Fig. 1, ♂.

Zutr. exot. Schmett. 1: 16. 1818.

Chloropha is more familiarly known as *convalescens* (Guenée). It is common throughout, including the Dry Tortugas, probably all year. I. Quincy: Feb., March, May, July-Oct., no peak. IV. Bradenton: Feb., April, May, July, Aug., Oct., Dec. VI. Homestead: March-Nov., one peak in May.

MOCIS Hübner

Because of the close similarity of the species in this genus, many of the records may be mixed. Except for the commonest, *latipes* and the rarest, *texana*, it is impossible to make determinations without comparison with named series, and it is more than likely that records for *marcida* and *disseverans* are mixed with those for *latipes*. All are variable.

3434 M. MARCIDA (Guenée)

Pl. V, Fig. 2, ♂.
Spec. Gén. 7: 317. 1852.

Marcida is probably common in the southern part of the state and probably on the wing every month. I. Escambia Co.: Feb., SMH. Quincy: March, May, Aug.-Oct., CPK.

3435 M. TEXANA (Morrison)

Pl. V, Fig. 3, ♂.
Proc. Boston Soc. Nat. Hist. 17: 219. 1874.

I. Escambia Co.: March, SMH. Quincy: Jan., DPI; May, July-Oct., Dec., CPK. Apalachicola: JGF. Monticello: March 7, 1957, (Denmark), det. Franclemont, DPI. Tallahassee: JGF. II. Alachua Co.: March 1959, DPI. III. Brooksville: June 20, 1955, AKW. Food: *Digitaria* [*Syntherisma*].

3436 M. DISSEVERANS (Walker)

Pl. V, Fig. 4, ♂.
List Lep. Ins. Br. Mus. 14: 1495. 1858.

I. Quincy: Sept. 9, 1960, (Tappan), CPK. *Disseverans* is probably common through the southern half of the state the year round, the records on hand covering only from Cassadaga to Florida City. Food: Gramineae, including sugarcane.

3438 M. LATIPES (Guenée)

Pl. V, Fig. 5, ♂.
Spec. Gén. 7: 314. 1852.

Latipes is abundant everywhere throughout the year. I. Quincy: July-Dec., peak in Oct. IV. Bradenton: Aug.-April. VI. Homestead: Jan., March-Nov., a small peak in May, another in July, rising through Oct., and then dropping abruptly. Much confusion has arisen because the species at one time went under the name *Remigia repanda* (Fabricius). In addition to the many color varieties, the aberration *indentata* (Haworth) is taken on occasion. Food: grass, rice, corn, broad beans, turnips; "very important on grasses during the fall," Coop. Econ. Ins. Rept. 4: 967.

PTICHODIS Hübner

3439 P. VINCULUM (Guenée)

Pl. XV, Fig. 13, ♀.
Spec. Gén. 7: 304. 1852.

Vinculum is relatively common, the other species of the genus being quite rare. It is found throughout the state in every month.

3440 P. LIMA (Guenée); 3441 P. HERBARUM (Guenée)

Pl. XV, Fig. 12, ♂.
Spec. Gén. 7: 305. 1852; Spec. Gén. 7: 303. 1852.

There is no difference of opinion at the present time as to the two names both applying to the same species, but there is one point of view which favors *lima* being a race of *herbarum*, whereas the other maintains it is merely a difference of sex. I. Escambia Co.: March, SMH. Warrington: occasional, summer, VFG. Florida Caverns State Park: April 14, 1960, (Denmark), DPI. Quincy: June, Sept., CPK. II. Gainesville: two Feb. 19-22, 1955, (Perry), CPK; March 9, 1927, (Bates), det. Franclemont, UFES; March 1955, (Hetrick), CPK. Fernandina: Sept. 3, OB. III. Weekiwachee Springs: May, CPK. Cassia: type of *bifasciata*, common, J. E. Bates (1886, p. 94). IV. Bradenton: Dec. 21, 1955, CPK. Food: *Lespedeza*.

3442 P. BISTRIGATA Hübner

Zutr. exot. Schmett. 1: 21; Figs. 111, 112. 1818.

I. Escambia Co.: four July 3-Aug. 31, 1961, SMH. Warrington: WP. Quincy: May 11, 1963, (Tappan), CPK. III. Weekiwachee Springs: two April, May 1955, (May), CPK. IV. Charlotte Harbor: (Slosson), Grsb. 76.

3444 P. FLAVISTRARIA (Hübner)

Zutr. exot. Schmett. 3: 35; Figs. 555, 556. 1825.

I. Escambia Co.: one March, Aug. 8, 1961, SMH. Apalachicola: type of *glans*, (Thaxter), Grote (1876, p. 415). Lake Miccosukee: Oct. 8, AMNH.

3446 P. BUCETUM (Grote)

Trans. Kansas Acad. Sci. 8: 50. 1883.

V. Chokoloskee: type of *campanilis*, (Frank), Smith (1905, p. 68), AMNH.

CELIPTERA Guenée

3447 C. FRUSTULUM Guenée

Pl. XV, Fig. 15, ♂.
Spec. Gén. 7: 308. 1852.

I. Escambia Co.: Aug., SMH. Quincy: five June, Sept., Oct., CPK. II. Gainesville: July 2, 1924,

(Walker), UM. III. Fellowship: July 29, 1960, (Adkins), DPI. IV. Archbold Biological Station: March, YU.

ARGYROSTROTIS Hübner

The determinations in this genus are very difficult.

3449 A. PACALIS (Walker)

Pl. XV, Fig. 14, ♀.

List Lep. Ins. Br. Mus. 14: 1475. 1858.

Florida: type of *irrorata* (Grote), (1879b, p. 36). I. Liberty Co.: March, UM. II. Lake Geneva: March, det. Franclemont, HEW. III. Wacassasa River: March, JGF. Cassadaga: Feb., det. Franclemont, March, SVF. Weekiwachee Springs: April, CPK. IV. Oneco: March, JGF. Archbold Biological Station: Feb., ABS; March, PSU, YU. Port Sewall: Feb., OB. Siesta Key: March, CPK. Biscayne Bay: OB; (Slosson), Grsb. 76.

3451 A. HERBICOLA (Guenée)

Spec. Gén. 7: 301. 1852.

Florida: (Slosson), Grsb. 76. I. Quincy: May 21, 1963, det. Forbes, CPK.

3452 A. SYLVARUM (Guenée)

Spec. Gén. 7: 300. 1852.

I. Escambia Co.: March, SMH. Myrtle Grove: June 27, 1962, WJW. Millview: March 26, 1961, VFG. Quincy: two May 26, 1962, (Tappan), CPK. II. Jacksonville: (Slosson), Grsb. 76. Keystone Heights: March 1953, det. Franclemont, HEW. III. Cassadaga: May 20, 1961, SVF.

3453 A. ERASA (Guenée)

Spec. Gén. 7: 301. 1852.

I. Escambia Co.: Aug. 23, 1961, SMH. Millview: March, April, VFG. Myrtle Grove: June 25, 1962, WJW. Monticello: Feb. 23, 1956, (Phillips), CPK. II. Keystone Heights: March 7, 1953, det. Franclemont, HEW. III. Shepard Lake: Aug., DPI. IV. Biscayne Bay: (Slosson), Grsb. 76.

3454 A. CONTEMPTA (Guenée)

Spec. Gén. 7: 302. 1852.

Florida: Smith (1893, p. 358). VI. Florida City: Aug. 25, OB.

3455 A. DELETA (Guenée)

Spec. Gén. 7: 300. 1852.

I. Escambia Co.: May, SMH. Millview: March, April, VFG. Myrtle Grove: June, WJW. III.

Tarpon Springs: April 14, 1904, (Ramstedt?), det. Dyar, UM. IV. Charlotte Harbor: (Slosson), Grsb. 76. Fort Myers: March 30, 31, April 1, 2, 24, Grsb. 76. La Belle: April 27, Grsb. 76. South Bay: May 2, Grsb. 76. V. Marco: April 20, (Davis), SIM; AMNH.

3456 A. OBSOLETA (Grote)

Check List, p. 42. 1876.

Franclemont says that this is a form of *quadrifilaris* (Hübner), q.v. Between this form, which shows no transverse lines, and typical *quadrifilaris*, with the two distinct lines, there are intermediates with very faint lines.

3457 A. QUADRIFILARIS (Hübner)

Pl. XV, Fig. 16, ♂.

Zutr. exot. Schmett. 3: 37; Figs. 569, 570. 1825.

This has been taken from Escambia County and Fernandina to Florida City. It is more common from Hillsborough County south, and more common on the west coast than on the east. The form *obsoleta* occurs in about equal numbers with typical *quadrifilaris*, and in the same range, though the northern records for *obsoleta* are Gainesville and Cassadaga. *Quadrifilaris* has been taken March-September; *obsoleta*, January-May, July, August, October. Food: *Gossypium*.

3458 A. ANILIS (Drury)

Pl. XV, Fig. 17, ♂.

Ill. Exot. Ent. 2: 21; Pl. 12, Fig. 3. 1773.

I. Escambia Co.: March, June, SMH. Quincy: Aug., Sept., CPK. Monticello: Feb., April, Aug., DPI. II. Gainesville: April, UFA, DPI; Sept., DPI; Oct., AMNH. III. Cassadaga: Aug., SVF. Longwood: March, OB. Winter Park: March, AMNH. Orlando: June, CNC, AMNH. Food: reported on *Sabatia*.

DORYODES Guenée

There is disagreement as to the number of species involved in this genus. The distinguishing characteristics for the separation of *bistrialis* and *spadaria* are given by McDunnough (1918, pp. 117, 118). I have made no attempt to check on the determinations, having merely accepted the information as received.

3460 D. BISTRIALIS (Geyer)

Pl. XV, Fig. 19, ♂; Fig. 20, ♀.

Zutr. exot. Schmett. 4: 38; Figs. 775, 776. 1832.

The records as submitted suggest that this is relatively common south of the Wacassasa River-Keystone Heights line, and taken in every

month. There is also a specimen: I. Escambia Co.: March, SMH—so perhaps it is common to the north as well. The food is given as *Spartina patens* [juncea].

3461 D. SPADARIA Guenée

Pl. XV, Fig. 18, ♀.

Spec. Gén. 10: 234. 1857.

The records for this cover from Fernandina to Florida City, though there are not so many of them as for *bistrialis*. There are no records for October or December.

CUTINA Walker

Because Franclemont has found several new species in this genus, the records given under *albopunctella* and *distincta* may be misplaced in some instances.

3463 C. ALBOPUNCTELLA Walker

Pl. XV, Fig. 21, ♂.

List Lep. Ins. Br. Mus. 35: 1735. 1866.

Florida: type, (Doubleday), BM; female type of *strigularia* (Smith), AMNH. I. Monticello: April, CU. II. Gainesville: Aug., DPI. III. Elfers: April, JFG. Cassadaga: April, May, det. Franclemont, SVF. Weekiwachee Springs: May, June, CPK. Lake Co.: Sept., DPI. Leesburg: Sept., DPI. Winter Park: April, DPI. Orlando: March, det. Franclemont, WMD; May, JGF. Oldsmar: July, WRB. St. Petersburg: OB, USNM. Stemp: USNM, April, CWK, JGF. Lutz: Feb., CWK; April, OB. Tampa: Oct., WRB. IV. Archbold Biological Station: June, AKW. Punta Gorda: June, OB. Fort Myers: USNM.

3463, 1 C. SP.

Franclemont is describing this new species. I. Escambia Co.: May 24, Aug. 7 and 10, 1961, SMH. Monticello: April 5, 1917, (Hoffman), CU.

3464 C. DISTINCTA (Grote)

Pl. XV, Fig. 22, ♂.

Papilio 2: 184. 1882.

I. Escambia Co.: Aug., SMH. II. Old Town: March, det. Forbes, CPK. Hastings: (Marloff), Barnes & Benjamin (1925, p. 198). III. Cassadaga: April, det. Todd, Sept., SVF. Stemp: April, JGF; type of *inquieticolor*, two Sept., Oct. 1911, Dyar (1922, p. 169). IV. Bradenton: March, CPK. Punta Gorda: March, JGF; March-May, det. Franclemont, AKW.

3464, 1 C. SP.

This is near *distincta* and is being described by Franclemont. III. Elfers: April 4-5, 1937, JGF.

IV. Punta Gorda: March, June, (Ramstedt), JGF; eleven March 1-June 4, (Ramstedt), AKW.

3464, 2 C. SP.

This is also being described by Franclemont. II. Old Town: March 2, 1951, CPK. IV. Punta Gorda: March, May, (Ramstedt), JGF, AKW.

FOCILLIDIA Hampson

3465, 1 F. SP.

This appears on Mrs. Forsyth's sale list for "southern Florida," under the name *texana* Hampson, but Franclemont says that it is definitely not that species. He is of the opinion that the following are probably *F. grenadensis* Hampson, but more material will be needed to verify the belief. There is also a possibility that they might be *F. bipunctata* Walker. VIII. Tavernier: five Aug. 18-Oct. 21, 1955, (J. N. Todd), JGF, CPK.

SAFIA Guenée

3466 S. AMELLA (Guenée)

Pl. XV, Fig. 23, ♀.

Spec. Gén. 7: 25. 1852.

Amella is common throughout the state. Although there are no records for July, September and October, it is probably present all the year. The form *blatchleyi* Haimbach (1928, p. 231), described from Paradise Key, is occasionally taken.

ZALE Hübner

A very difficult genus, many of the determinations being incorrect without doubt.

3468 Z. EXHAUSTA (Guenée)

Pl. XV, Fig. 24, ♂.

Spec. Gén. 7: 14. 1852.

Florida: July, CNC. I. Warrington: VFG. IV. Siesta Key: Jan., May, CPK. V. Chokoloskee: July, Smith (1908, p. 221). VI. Homestead: Sept., CPK. Florida City: May, July, Nov., OB. Paradise Key: FMJ; April, Haimbach (1928, p. 216).

3469 Z. [VIRIDANS (Guenée)]

Spec. Gén. 7: 13. 1852.

According to Franclemont this name does not apply and the species is undescribed. IV. Bradenton: Feb., CPK. Lake Placid: Nov., CPK. Miami: Smith (1908, p. 224). V. Marco: Smith. VI. Homestead: May, CPK. Florida City: April-July, OB. Paradise Key: March, April, Haimbach (1928, p. 217). VIII. Tavernier: Aug., det. Franclemont, CPK.

3470 Z. FICTILIS (Guenée)

Pl. XVI, Fig. 1, ♂.
Spec. Gén. 7: 10. 1852.

I. Quincy: Oct., Nov., CPK. II. Gainesville: Oct.-Dec., DPI. III. Lake Helen: Oct., DPI. Orange Co.: Nov., DPI. Titusville: Jan., WRB, AKW; Dec., OB. St. Petersburg: Dec., AKW. Tampa: Sept., Oct., WRB. Egmont Key: April, CNC. IV. Oneco: June, Oct., CPK. Archbold Biological Station: Sept., ABS; Nov., YU. Siesta Key: Jan., Dec., CPK. Punta Gorda: March, Dec., AKW. V. Marco: July, Smith (1908, p. 222). VI. Homestead: July, Oct., CPK. Florida City: May, Aug., Oct.-Dec., OB. Paradise Key: FMJ.

[3473 *Z. sexplagiata* (Walker)]

List Lep. Ins. Br. Mus. 13: 1064. 1857.

This is not found in the United States according to Franclemont. The Miami record, Grsb. 79, belongs under *smithi* Haimbach, q.v.

3474 Z. LUNATA (Drury)

Pl. XVI, Fig. 2, ♀.
Ill. Exot. Ent. 1: 40; Pl. 20, Fig. 3. 1770.

Lunata is quite common, probably all through the state. It flies all year. A general feeder on trees and shrubs.

3475 Z. SMITHI Haimbach

Trans. Amer. Ent. Soc. 54: 221. 1928.

Except for Schaus' Miami specimen listed Grsb. 79 under *sexplagiata*, this has been taken only in Paradise Key, where Jones found it common, having captured 23 specimens during January and February. Most of these were poor and discarded, in the belief that they were *lunata*, which *smithi* resembles. Jones' specimens are in the following collections: OB, JGF, FMJ, CPK, USNM. Haimbach's types were taken by Blatchley in mid-April in Paradise Key.

3477 Z. DECLARANS (Walker)

Pl. XVI, Fig. 3, ♂; Fig. 4, ♀.
List Lep. Ins. Br. Mus. 13: 1057. 1857.

Declarans is a very variable species. I. Escambia Co.: March, April, SMH. East Florida: (Doubleday), BM. III. Cassadaga: Feb.-April, SVF. Weekiwachee Springs: March, April, AEB, CPK. Orlando: March, CNC. Dunedin: March, Haimbach (1928, p. 223). St. Petersburg: March, CNC. IV. Bradenton: April, CPK. Oneco: March, April, JGF; May, June, CPK. Archbold Biological Station: Feb., YU; Feb., March, PSU. Sarasota: May-July, CPK. Siesta Key: Feb., March, May, CPK. Osprey: Haimbach. Punta Gorda: abundant, Jan.-March, AEB, OB, JGF, CPK, CGM, AKW. Bonita Springs: OB.

3478 Z. GALBANATA (Morrison)

Pl. XVI, Fig. 12, ♀.
Proc. Acad. Nat. Sci. Phila., p. 435. 1875.

I. Escambia Co.: March, VFG.

[3479 *Z. edusina* (Harvey)]

Bull. Buffalo Soc. Nat. Sci. 3: 14. 1875.

IV. Punta Gorda: Feb., Slosson (1890c, p. 101). There is a Slosson specimen in the American Museum of Natural History now placed under *lunifera* (Hübner) which quite possibly might have been the one recorded here. The probability becomes greater in view of the fact there is no Slosson record in Grossbeck (1917) for either *lunifera* or *cingulifera* (Walker), which Franclemont (1950, p. 153) made synonymous. I believe *edusina* has no place in the Florida list.

3480 Z. AERUGINOSA (Guenée)

Pl. XVI, Fig. 5, ♂.
Spec. Gén. 7: 17. 1852.

I. Escambia Co.: Feb., Aug., SMH. Monticello: Feb., DPI. III. Cassadaga: March, May, SVF. Weekiwachee Springs: May, CPK. IV. Archbold Biological Station: July, ABS. Siesta Key: May, CPK. Punta Gorda: Feb., March, May, AKW. Food: live and white oak.

3481 Z. UNDULARIS (Drury)

Pl. XVI, Fig. 6, ♂.
Ill. Exot. Ent. 1: 19; Pl. 9, Fig. 4. 1770.

Florida: (Slosson), Grsb. 78. I. Escambia Co.: March 4, 1961, VFG. III. Weekiwachee Springs: May 1955, (May), CPK. Food: black and honey locust.

3482 Z. CORACIAS (Guenée)

Pl. XVI, Fig. 7, aberrant ♂.
Spec. Gén. 7: 19. 1852.

There is a possibility that another, very closely related species is involved as some specimens differ slightly but uniformly in appearance. *Coracias* is fairly common and probably found throughout the state. It flies February-September and in December.

3484 Z. MINEREA (Guenée)

Spec. Gén. 7: 15. 1852.

Florida: Smith (1908, p. 239). I. Escambia Co.: March, VFG. Warrington: WP. Myrtle Grove: Aug. 4, 1962, WJW. Quincy: July 22 and 29, 1960, (Tappan), det. Franclemont, CPK. II. Gainesville: April 18, 1948, (Weems), det. Franclemont, DPI. Food: birch and other trees.

3485 Z. LUNIFERA Hübner

Pl. XVI, Fig. 8, ♀.

Zutr. exot. Schmett. p. 19; Figs. 97, 98. 1818.

See note under *edusina* above and *cingulifera* below. I. Escambia Co.: Feb., March, SMH.**3487 Z. OBLIQUA** Guenée

Pl. XVI, Fig. 9, ♀.

Spec. Gén. 7: 16. 1852.

McDunnough (1943b, p. 147) said: "Smith records N. Y. to Fla. and probably throughout the Atlantic Coast region to Canada and westward to the Mississippi; but this needs checking; the Missouri record is referable to *confusa* McDunnough. I have only seen the species from the Lakehurst, N. J. region and from Mountain Lake, Va." Nevertheless, a specimen taken at Gainesville, April 8, 1947, by Weems, and now in the Florida State Collection of Arthropods, has been determined as *obliqua* by Franclemont, who has also taken the species in southwestern Alabama. Food: pine.

3487, 1 Z. CONFUSA McDunnough

Can. Ent. 72: 201. 1940.

III. Cassadaga: May 15, 1954, det. Franclemont, SVF.

3488 Z. SQUAMULARIS (Drury)

Ill. Exot. Ent. 1: 18; Pl. 9, Fig. 3. 1770.

I. Warrington: Feb. 22, 1961, det. Forbes, May 25, 1962, VFG. III. Cassadaga: Feb. 7, 1961, SVF. Weekiwachee Springs: two June 15, 1960, (Mrs. May), det. Franclemont, CPK.

[3489 *Z. benesignata* (Harvey)]

Bull. Buffalo Soc. Nat. Sci. 3: 14. 1875.

The two records given by Grossbeck (1917, p. 78): III. Indian River: Smith, (1908, p. 256) and IV. Punta Gorda: Slosson (1890c, p. 101) are obviously incorrect on the basis of what McDunnough said (1934b, p. 150) namely: "*Benesignata* proves to be merely a form of *duplicata* with heavier and more decided maculation." He gives the range of the two as northern. What, therefore, these two specimens actually represent, must remain a mystery until they can be located and re-determined.

[3490 *Z. duplicata* (Bethune)]

Can. J. 10: 257. 1856.

Haimbach (1928, p. 229) wrote: "One specimen. From Mrs. A. T. Slosson, from Florida or N. H. in Dr. Skinner's handwriting." In view of the doubt as to the locality and in view of what

McDunnough said above of the range, this species can hardly be accepted as of our fauna.

3491 HELATA (Smith)

Pl. XVI, Fig. 10, ♀.

Proc. U. S. Natl. Mus. 35: 252. 1908.

I. Escambia Co.: March, 1961, SMH. Quincy: April 24, 1962 (Tappan), det. Franclemont, CPK.

3491, 1 Z. BUCHHOLZI McDunnough

Can. Ent. 75: 154. 1943.

Florida: Forbes (1954, p. 354). I. West Pensacola: March, VFG. II. Gainesville: March 24, 1960, det. Franclemont, CPK.

3493 Z. METATA (Smith)

Pl. XVI, Fig. 11, ♀.

Proc. U. S. Natl. Mus. 35: 248. 1908.

I. Escambia Co.: March, SMH. Warrington: WP. Liberty Co.: March, UM. Monticello: April, CPK. III. Cassadaga: Jan., March, det. Buchholz, SVF. Weekiwachee Springs: March, May, det. Buchholz, June, CPK. IV. Archbold Biological Station: Feb., May, YU; Sept., Oct., Dec.-March, PSU. Port Sewall: Jan.-March, OB; Jan.-April, AMNH. Punta Gorda: Jan., Feb., April, det. Buchholz, CPK; Feb.-April, AKW. V. Marco: Sept., type male, AMNH.

3494 Z. CUREMA (Smith)

Proc. U. S. Natl. Mus. 35: 250. 1908.

I. Escambia Co.: March, May 21, 1961, SMH. III. Seven Oaks: Sept., Smith. IV. Palm Beach: March, Smith.

[3499 *Z. cingulifera* (Walker)]

List Lep. Ins. Br. Mus. 13: 1056. 1857.

As already noted, this was made a synonym of *lunifera*, q.v., by Franclemont (1950, p. 153). However, Forbes (1954, p. 355) retains the name to obviate confusion, and gives the range "to Florida." I suspect this was based on the only Florida record under this name, which was given in Smith (1908, p. 262).

3500 Z. CALYCANTHATA (Abbot & Smith)

Lep. Ins. Ga. 2: 207; Pl. 104. 1797.

II. Gainesville: Feb. 1956, (Hetrick), CPK. III. Indian River: AMNH. Forbes (1954, p. 355) said that the larva was figured by Abbot on *Calycanthus* (probably in error). It has been reared from larvae on oak.

3501 Z. HORRIDA Hübner

Pl. XVI, Figs. 13, 14, ♀.

Zutr. exot. Schmett. 1, 11; Figs. 31, 32. 1818.

Most Florida specimens are typical *horrida*,

which is quite brownish, not black like the majority of northern specimens. I. Escambia Co.: March, SMH. Warrington: WP. Quincy: Aug., CPK. II. Gainesville: Feb., DPI; May, OB. East Gainesville: Sept., AMNH. III. Orlando: April, OB. St. Petersburg: OB. IV. Oneco: April, JGF; June, CPK. Archbold Biological Station: Jan., YU. Siesta Key: Feb., CPK. Punta Gorda: Jan., March-May, AKW; March, May, OB; April, CPK.

Subfamily EREBIDAE

COXINA Guenée

3502 C. CINCTIPALPIS (Smith)

Pl. XVI, Fig. 15, ♂.
Proc. U. S. Natl. Mus. 22: 103. 1900.

IV. Port Sewall: Jan., Feb., April, AMNH. Siesta Key: Feb., CPK. Miami Beach: Feb., JGF. Miami: May, WRB, JGF. Coral Gables: Oct., JGF; Dec., HFS. Coconut Grove: type, (Schwarz), USNM. V. Chokoloskee: USNM. VI. Homestead: April-Nov., CPK. Florida City: June, JGF. Paradise Key: Jan., March, FMJ; April, JGF. VIII. Tavernier: Oct., Nov., CPK. Key Largo: May, DPI.

ZALEOPS Hampson

[3503 Z. umbrina (Grote)]
Can. Ent. 15: 3. 1883.

This name appeared on Mrs. Forsyth's sale list, but Franclemont informs me that specimens received from her under this name were *Zale coracias*, and that he doubts the presence of the species in Florida. It is entered here in case others have been misled by the initial misdetermination.

MATICRAMMA Grote

3506 M. PULVERILINEA Grote
Trans. Amer. Ent. Soc. 4: 22. 1872.
II. Gainesville: July 6, 1942, UFES.

HETERANASSA Smith

3510 H. MIMA (Harvey)
Can. Ent. 8: 155. 1876.
Florida: AMNH.

COENIPETA Hübner

3513 C. BIBITRIX (Hübner)
Pl. XVI, Fig. 16, ♀.
Zutr. exot. Schmett. 2; Pl. 26, Figs. 343, 344.
1825.

II. Alachua Co.: Oct. 9, 1961, CPK. III. Central Florida: Sept. 1959, WMD. IV. Port Sewall: three Jan. 3-7, 1951, (Sanford), AMNH. Miami: three June, July, OB. VI. Homestead: one each, April, Sept., Oct., (Wolfenbarger), CPK. Florida City: eight July, Sept., Oct., Dec., OB.

SELENIS Guenée

3514 S. MONOTROPA Grote

Pl. XVI, Fig. 17, ♀.
Can. Ent. 8: 207. 1876.

Monotropia is quite common and state-wide, though relatively rare in the northern counties. It has been taken in every month except May and August. Food: *Triadica sebifer*, *Cassia*, Para grass, *Poinciana*, wild locust, all DPI; senna, Chinese tallow, coffeeweed, all Coop. Econ. Ins. Rept. 4: 876; *Sesbania*, *ibid.*, p. 892; *Daubentonia punicea*, Coop. Ins. Pest Surv. 5: 136; *Pithecellobium dulce*, CPK.

KAKOPODA Smith

3516 K. CINCTA Smith

Pl. V, Fig. 9, ♂.
J. N. Y. Ent. Soc. 8: 176. 1900.

IV. Port Sewall: March, AMNH. Dade Co.: Aug., HFS. Miami: June, July, JGF; July, HEW. Biscayne Bay: type, (Slosson), AMNH. V. Everglades: (McDunnough), AMNH. Chokoloskee: OB, CNC, USNM. VI. Florida City: June, July, JGF; May-July, OB. Paradise Key: FMJ. VIII. Tavernier: Aug., CPK. Big Pine Key: Sept., OB.

YRIAS Guenée

[3520 Y. repentis Grote]
Can. Ent. 14: 236. 1882.

Repentis was erroneously reported from I. Warrington: Jan. 1961, Pensacola Ent. Soc. Bull. 3. It is something quite different and is recorded elsewhere, in its proper place.

TYRISSA Walker

3522 T. MULTILINEA Barnes & McDunnough
Pl. XVI, Fig. 18, ♀.
Contrib. 2: 168. 1913.

IV. Oneco: one March, JGF. Port Sewall: one Jan. 25-29, 1950, (Sanford), AMNH. Captiva: one March, CPK. V. Everglades: type, three, (McDunnough), BM, USNM. VI. Homestead: occasional, April-Oct., CPK. Florida City: one May 1936, JGF; one Dec. 12, OB. VIII. Tavernier: not uncommon, Aug.-Dec., DPI, CPK. Windley Key: two Dec.-April, (J. N. Todd), CPK.

HEMEROBLEMMA Hübner

3523 H. OPIGENA (Drury)

Pl. X, Fig. 24, ♂.

Ill. Exot. Ent. 2: 39. Pl. 22, Fig. 4, App. ii. 1773.

Franclemont finds that *Peosina pandrosa* (Cramer) is a synonym of this. Florida: Feb., AMNH. II. Gainesville: Sept., UFES. IV. Miami: EU; Dyar (1911b, p. 20); Sept. 1922, UM. Coral Gables: Oct. 20, 1961, AB. VI. Florida City: March, Aug., CNC; April, Sept., AKW; May-Sept., OB; July, WRB, HEW. Paradise Key: March, April, FMJ. Dade Co.: May, June, HFS; Aug., CPK.

LATEBRARIA Guenée

3524 L. AMPHIPYROIDES Guenée

Pl. X, Fig. 25, ♂.

Spec. Gén. 7: 159. 1852.

Florida: AMNH. Probably a stray.

EREBUS Latreille

3525 E. ODORATA (Linnaeus)

Black witch. Pl. X, Fig. 26, ♂.

Syst. Nat., p. 505. 1758.

Odorata is probably commoner than the records indicate, and probably established in the southern part of the state, where, according to Strohecker, it is present a large part of the year. I. Warrington: five late summer, VFG. II. Gainesville: June, Sept., UFES; July, UFA; "appears to be rare in this area," Nov., Coop. Econ. Ins. Rept. 4: 973. III. Tampa: UT. Egmont Key: Aug., UM. IV. Longboat Key: Jan., CPK. Port Sewall: Nov., AMNH. Sarasota: Dec., CPK. Siesta Key: Jan., CPK. Belle Glade: Sept., DPI. South Bay: April, AMNH. Fort Lauderdale: Aug., UM. Miami: May, June, FMG, LH; June, WAR; July, Oct., LHH. Coral Gables: not rare, April, May, Dec., HFS; Aug., WHH. VI. Homestead: Feb., CPK; Dec., DPI. Florida City: Oct., AMNH. Everglades National Park: Nov., CNC. Paradise Key: Feb., April, FMJ. VIII. Dry Tortugas: July, WMD. Food: *Cassia fistula*, *Pithecellobium*, Saman. The life history is reprinted from *Contribucion a la entomologia Cubana* by Gundlach in the earlier *Lep. News* 1: 3.

THYSANIA Dalmen

3526 T. ZENOBIA (Cramer)

Pap. Exot. 2: 27; Pl. 115, Figs. A, B. 1779.

This, too, is probably of more frequent occur-

rence than the sparse records show. Florida: Smith (1893, p. 367). III. Egmont Key: Aug. 26, 1904, (Ramstedt?), UM. V. Chokoloskee: two July, AMNH.

3526, 1 T. AGRIPPINA (Cramer)

Pap. Exot.; Pl. 87, Fig. A, and Pl. 188, Fig. A. 1775, 1782.

There is a fine specimen of this in the University of Tampa collection, taken in Tampa by Prof. C. T. Reed, of the Biology Department. Unfortunately the body has been eaten by *Dermetes*. It is, of course, a stray.

BENDIS Hübner

3527 B. DETRAHENS (Walker)

Pl. XVI, Fig. 19, ♀.

List Lep. Ins. Br. Mus. 14: 1834. 1858.

Florida: (Slosson), Grsb. 77; March, Smith (1893, p. 364). I. Escambia Co.: Feb., SMH. Warrington: fairly common, and diurnal, summer, VFG. Quincy: March, DPI; May, July-Sept., CPK. Monticello: June, July, Sept., DPI. II. Alachua Co.: May, June, DPI; July, Gainesville: March, April, UFES; May, DPI. Fernandina: Aug., Sept., OB. East Florida: Butler (1896, p. 256). III. DeLand: March, AKW. Cassadaga: April, July, SVF. Weekiwachee Springs: March, CPK. Lutz: May, HEW.

3529 B. HINNA (Geyer)

Pl. XVI, Fig. 20, ♂.

Zutr. exot. Schmett. 5: 41; Figs. 971, 972. 1837.

Hinna is a relatively common and widespread species, though there are no records from the Keys. It has been taken every month.

3531 B. FORMULARIS (Geyer)

Zutr. exot. Schmett. 5: 26. 1837.

This seems to replace *detrahens* in the southern part of the state. IV. Port Sewall: Dec.-March, AMNH. Miami: July, AMNH. V. Marco: AMNH. VI. Homestead: Aug., WRB. Florida City: April, Sept.-Nov., CNC; May-Sept., Nov., OB; May-July, Sept., Oct., Dec., JGF; July-Sept., AMNH; July, Sept., Nov., Dec., HEW; Aug., Sept., AKW; Oct., WRB.

EPIDROMIA Guenée

3532 E. DELINQUENS (Walker)

Pl. XVI, Fig. 21, ♀.

List Lep. Ins. Br. Mus. 14: 1423. 1858.

Delinquens is undoubtedly found in all parts of the state, though the records run only from

Gainesville to Windley Key. It is quite variable, and some specimens have been determined as *suffusa* (Walker), which, however, Franclemont thinks represents only a synonym of *delinquens*. If it is a valid species, the records will need to be re-examined in order to separate them. *Delinquens* is relatively common, and flies all year.

MASSALA Walker

3533 M. OBVERTENS (Walker)

Pl. XVI, Fig. 22, ♀.

List Lep. Ins. Br. Mus. 15: 1580. 1858.

IV. Archbold Biological Station: May, YU. Sarasota: May, (King), CPK. Fort Myers: April, AMNH. Miami: May, Aug., AMNH. V. Everglades: April, AMNH. Marco: April, AMNH. VI. Homestead: one May, one June, CPK. Florida City: apparently not rare, April-June, Aug., OB, JGF; May, June, AKW; May, Aug., WRB; May, Sept., CNC; Sept., AEB. Paradise Key: Jan., AEB; Jan., April, FMJ. VIII. Key Largo: May, DPI. Tavernier: Sept., CPK. The Fort Myers, Everglades, and Marco records were given in Grossbeck (1917, p. 77) under the name *M. larina* Druce. The determinations were incorrect.

[3533, 1 *M. larina* Druce]

Biol. Cent. Amer. Het. 1: 413. 1881.

See *obvertens* above.

PANOPODA Guenée

3534 P. RUFIMARGO (Hübner)

Pl. XVI, Fig. 23, ♂.

Zutr. exot. Schmett. 1: 13; Figs. 45, 46. 1818.

Rufimargo is not at all common. I. Escambia Co.: April, SMH. Quincy: March, July-Sept., CPK. II. Gainesville: March, April, UFA; March, May, UM. III. Cassadaga: Aug., SVF. Orlando: April, June, CNC. IV. Oneco: March, April, JGF; June, CPK. Punta Gorda: Feb.-April, AKW. Fort Lauderdale: March, UM.

3535 P. CARNEICOSTA Guenée

Pl. XVI, Fig. 24, ♂.

Spec. Gén. 7: 325. 1852.

Carneicosta is relatively common though the records are few; possibly it is local. Both typical *carneicosta* and form *combinata* (Walker) are present. Florida: July, CNC. I. Warrington: WP. Quincy: July, Aug., CPK. Monticello: Sept., DPI. II. Suwannee Springs: April, Slosson (1893, p. 150). III. Weekiwachee Springs: April, CPK. Orange Co.: DPI. Orlando: Sept.,

WRB. IV. Oneco: April, JGF. Archbold Biological Station: March, YU. Siesta Key: March, CPK. Punta Gorda: Feb.-April, June, CPK, AKW. Food: oak, basswood, hickory, willow.

SIAVANA Walker

3536 S. REPANDA Walker

Pl. XVI, Fig. 25, ♀.

List Lep. Ins. Br. Mus. 13: 1009. 1858.

Repanda is quite common from Escambia County and Fernandina to Paradise Key. It is subject to some variation, and has been taken in every month except December. Food: Para grass, DPI; live oak, Dyar (1899, p. 328).

CISSUSA Walker

3539 C. SPADIX (Cramer)

Pl. XVI, Fig. 26, ♂.

Pap. Exot. 3: 149; Pl. 275, Fig. F. 1780.

Here is one of the species which is occasionally quite common but in some years not seen at all. I. Escambia Co.: March, SMH. Quincy: April, CPK. II. East Florida: (Doubleday), BM. This was listed, Grsb. 72, under the name *Panula remigipila* Guenée. IV. Bradenton: Feb., DPI. Sarasota: March, AKW. Siesta Key: Jan.-March, CPK. Punta Gorda: Feb., CPK. Belle Glade: Feb., DPI. Miami: Feb., AKW.

PHOBERIA Hübner

3545 P. ATOMARIS Hübner

Pl. XVI, Fig. 27, ♀.

Zutr. exot. Schmett. 1: 16; Figs. 75, 76. 1818.

The color of this varies greatly, exhibiting all manner of shades of brown, gray, to nearly black, and olive green. It is sometimes common. I. Escambia Co.: March, SMH. West Pensacola: Feb., VFG. Quincy: Jan., DPI; Feb., CPK. Monticello: Feb., March, DPI. II. East Florida: type of *porrigens* (Walker) (1858, p. 1474). Gainesville: Jan., Feb., DPI. Keystone Heights: March, HEW. III. Cassadaga: March, SVF. Weekiwachee Springs: April, CPK. IV. Bradenton: Feb., DPI. Port Sewall: Jan., AMNH. Siesta Key: Jan.-March, CPK. Punta Gorda: Feb., March, AKW. Belle Glade: Feb., DPI. Biscayne Bay: (Slosson), Grsb. 75. VI. Paradise Key: Feb., FMJ.

MELIPOTIS Hübner

3546, 1 M. PERPENDICULARIS (Guenée)

Pl. XVII, Fig. 1, ♂.

Spec. Gén. 7: 65. 1852.

I. West Pensacola: June, VFG. IV. Port Sewall:

six Jan., AMNH; three Jan. 15-March 23, OB. Captiva: March 24, 1954, CPK. Coral Gables: Jan., AKW. VI. Paradise Key: March, FMJ; Dec., AMNH.

3547 M. FASCIOLARIS (Hübner)

Pl. XVII, Fig. 5, ♂; Fig. 6, ♀.
Zutr. exot. Schmett. 3: 15; Fig. 443. 1825.

IV. Port Sewall: Dec., AMNH. Siesta Key: June, CPK. Miami: Jan., WRB; April, July, AMNH. VI. Homestead: Feb., May, July-Sept., (Wolfenbarger), CPK. Paradise Key: FMJ. VIII. Key Largo: March, SVF; May, Nov., DPI, CPK.

[3548 *M. stygialis* Grote]

Bull. U. S. Geol. Geograph. Surv. Territ. 4: 184. 1878.

This name appears on Mrs. Forsyth's sale list. Richards (1939, p. 19) made it a synonym of *perpendicularis*, but McDunnough (1938, pp. 122, 123) made them distinct. If they are distinct, it is probable that what Mrs. Forsyth had was *perpendicularis*.

3549 M. INDOMITA (Walker)

Pl. XVII, Fig. 10, ♂.
List Lep. Ins. Br. Mus. 13: 1161. 1857.

III. Brooksville: June 20, 1955, AKW. IV. Sarasota: June 21, 1951, (King), det. Franclemont, CPK.

3549, 1 M. CELLARIS (Guenée)

Pl. XVII, Fig. 2, ♂.
Spec. Gén. 7: 66. 1852.

IV. Charlotte Harbor: (Slosson), Grsb. 72. This was listed by Grossbeck under the name *Panula inconstans* Guenée. The correct name was pointed out by Richards (1937, p. 219). VI. Homestead: May, June, Aug., Oct., (Wolfenbarger), CPK. It was also listed from south Florida on the Forsyth sale list. VIII. Key Largo: March 27, 1957, SVF.

3549, 2 M. JANUARIS (Guenée)

Pl. XVII, Fig. 3, ♂.; Fig. 4, ♀.
Spec. Gén. 7: 67. 1852.

A very variable species which is relatively common south of the Siesta Key-Port Sewall line, but it has not been taken further north, except: III. St. Petersburg: Jan., Feb. 1960, AKW, nor has it been taken inland from the coast except at Florida City. Very common in Dade County. Also taken in the Dry Tortugas. It flies in every month.

3550 M. FAMELICA (Guenée)

Spec. Gén. 7: 62. 1852.

III. Egmont Key: May, AKW. IV. Port Sewall: Jan., Dec., AMNH. Siesta Key: Feb., CPK. Miami: May, AMNH. Coral Gables: May, HFS. V. Chokoloskee: USNM. VI. Homestead: Feb., DPI; Feb., April-Nov., CPK. Florida City: Jan., May, OB; March, Richards (1939, p. 76). Paradise Key: Jan., Feb., FMJ. VIII. Tavernier: March, May-Dec., DPI. Windley Key: abundant, Feb., April-Aug., DPI. Craig: March, May-Oct., DPI. Key West: April, DPI; Aug., WRB.

3550, 1 M. CONTORTA (Guenée)

Pl. XVII, Fig. 16, ♂.
Spec. Gén. 7: 64. 1852.

III. Indian River: AMNH. Egmont Key: May, AKW. IV. Port Sewall: Jan., AMNH. Siesta Key: Feb., CPK. North Miami Beach: Feb., HEW. Biscayne Bay: (Slosson), AMNH. VI. Florida City: Dec., OB. Paradise Key: Feb., CPK. VIII. Dry Tortugas: July, WMD.

3551 M. JUCUNDA Hübner

Pl. XVII, Fig. 7, ♂.
Zutr. exot. Schmett. Fig. 81. 1818.

Jucunda is the commonest species of the genus, and surely state-wide in occurrence. It has been taken in every month.

3551, 1 M. PROLATA (Walker)

Pl. XVII, Fig. 8, ♀.
List Lep. Ins. Br. Mus. 13: 1169. 1857.

Judging by the records this is a distinctly coastal species. IV. Port Sewall: Jan., AMNH. Siesta Key: Dec.-March, May, June, CPK. Charlotte Harbor: AMNH. Lee Co.: OB. Sanibel Island: March, OB. Fort Myers Beach: April, JGF. V. Marco: April, AMNH. VI. Homestead: July, Aug., CPK. Florida City: May, OB; Aug., JGF. VIII. Tavernier: Sept., DPI. Craig: Feb., DPI. Dry Tortugas: AMNH; May, DPI; July, WMD.

3553 M. ACONTIOIDES (Guenée)

Pl. XVII, Fig. 9, ♂.
Spec. Gén. 7: 61. 1852.

III. Tampa: Oct., WRB. IV. Port Sewall: Dec., AMNH. Sarasota: one June, DPI. Siesta Key: one Nov., CPK. Lake Worth: June, DPI. Miami: May, JGF; Aug., GWK; Sept., (Sleight), Grsb. 73. Coral Gables: Nov., HFS. Dade Co.: Jan., HFS. VI. Homestead: May, June, Oct., CPK. Florida City: May, HEW; May, June, JGF, AKW; May-Aug., AMNH. VIII. Key Largo: Jan., May, DPI; March, SVF. Key West: Sept. I believe this last was a larval record on

royal poinciana by "CBM," but my notes are obscure. Food: *Delonix regia*, Coop. Ins. Pest Surv. 6: 10.

3553, 1 M. SP.

There is a very small, unplaced, and apparently distinct specimen from south Florida, (Palm), AMNH.

PANULA Guenée

[3554 *P. inconstans* Guenée]

Spec. Gén. 7: 59. 1852.

The record for this (Grsb. 72) belongs under *Melipotis cellaris* above.

3555 [P.] SCINDENS (Walker)

List Lep. Ins. Br. Mus. 15: 1829. 1858.

This belongs in the genus *Isogona*, q.v.

BULLIA Walker

3556 B. DEDUCTA (Morrison)

Proc. Boston Soc. Nat. Hist. 17: 220. 1874.

I. West Pensacola: June 22, 1961, det. Franclemont, VFG.

DRASTERIA Hübner

3563 D. GRAPHICA Hübner

Pl. XVII, Fig. 11, ♂; Fig. 12, ♀.

Zutr. exot. Schmett., p. 3; Figs. 11, 12. 1818.

Graphica is a fairly common species, especially along the coasts, taken January-June. III. Indian River: type of *faceta*, Henry Edwards (1881a, p. 119). In some specimens the forewing is quite uniformly gray and occasionally the hind wing is red instead of orange.

LOIS Dyar

3563, 1 L. LORINA (Druce)

Pl. X, Fig. 27, ♀.

Proc. Zool. Soc. London, p. 515. 1890.

VI. Homestead: two May 23, 1958, (Wolfenbarger), CPK. Paradise Key: April 12, 1927, (Blatchley), det. Benjamin, ANSP. VIII. Key West: det. Schaus, USNM. Barnes & Benjamin (1926, p. 20) questioned the authenticity of the last specimen. However, in view of the fact that Benjamin subsequently determined the Blatchley specimen, Schaus' specimen should also be all right.

SYNEOIDA Henry Edwards

3565 S. GRANDIRENA (Haworth)

Pl. XVII, Fig. 18, ♂.

Lep. Brit., p. 264. 1809.

Florida: Smith (1893, p. 327). Richards (1939, p. 48) said: "Florida, including the southern part." The following is the only locality I am able to record. I. Escambia Co.: March, April 1961, SMH. Food: *Hamamelis*.

BORYZOPS Richards

3584 B. PURISSIMA (Dyar)

Pl. XVII, Fig. 17, ♀.

Proc. U. S. Natl. Mus. 38: 252. 1910.

VI. Homestead: Jan., (Wolfenbarger), CPK. Florida City: JGF; May 23-June 17, OB. Paradise Key: March, FMJ; April, (Blatchley), Richards (1939, p. 71). VIII. Tavernier: Aug., Oct., Nov., CPK. Craig: Aug., CPK.

EULEPTIDOTIS Hübner

[3587 *E. dominicata* (Guenée)]

Spec. Gén. 6: 276. 1852.

V. Chokoloskee: Sept. 1907, USNM. Todd (1961, p. 136) viewed the locality label as of extremely doubtful authenticity.

3589, 1 E. METAMORPHA Dyar

Proc. U. S. Natl. Mus. 47: 109. 1914.

VI. South Florida: Todd (1961, p. 136).

ANTICARSIA Hübner

3590 A. GEMMATILIS Hübner

Velvetbean caterpillar. Pl. XVII, Fig. 13, ♂; Figs. 14, 15, ♀.

Zutr. exot. Schmett.; Figs. 153, 154. 1818.

Gemmatilis is an extremely variable species, common throughout, January-November. I. Quincy: Aug.-Dec., small peak in Oct. IV. Bradenton: Feb., July-Oct. VI. Homestead: March-Nov., peak in July falling off slowly through Oct. There are many references in the economic literature as to its presence and activities in Florida. Food: alfalfa; *Canavalia*, Watson (1916, pp. 49-58); *Stizolobium* sp., *Pueraria thunbergiana* [*Phanaria thunbergiana*], Watson (1915, p. 419); peanuts (Coop. Econ. Ins. Rept. 3: 657); peas, velvetbeans, kudzu (*ibid.*: 698); soybeans (USDA Summary of Insect Conditions in 1947, p. 6).

3591 A. REPUGNALIS (Hübner)

Pl. XVII, Fig. 19, ♀.

Zutr. exot. Schmett. 3: 37; Figs. 575, 576. 1839.

Repugnalis is also prone to variation but not to such an exaggerated degree as *gemmatilis*. Florida: type of *ferruginea* Smith (1900b, p. 174); July, CNC. I. Warrington: VFG. III. Egmont Key: April, May, UM. IV. Bradenton: Feb.,

DPI. Port Sewall: Jan., Dec., AMNH. Siesta Key: not rare, Nov.-April, June, CPK. Useppa Island: April, SIM. Sanibel Island: March, OB. Lake Worth: OB, AMNH. Miami: Oct., OB. VI. Florida City: June, OB. VIII. Tavernier: Oct., DPI. Dry Tortugas: July, WMD. Food: *Canavalia lineata* [*obtusifolia*], Dyar (1901a, p. 455).

EUTHERMISIA Butler

3593 E. ABSUMENS Walker

Pl. XVII, Figs. 20, 21, ♂; Figs. 22, 23, ♀.
Trans. Ent. Soc. London, Ser. 3, 1: 106. 1862.

Absumens is better known under the name *Antiblemma inexacta* Walker. It is very variable, and is found in Florida in all the named forms as well as intergrades. It is probably found throughout the state as the records cover from Pensacola and St. Augustine to Florida City. It has been taken from March-September, November, and December.

ATHYRMA Hübner

3593, 1 A. GANGLIO Hübner

Zutr. exot. Schmett.; Figs. 421, 422. 1806-1824.

VI. Homestead: Feb. 8, Sept. 19, 1958 (Wolfenbarger), CPK. Florida City: not rare, May-Sept., in the following collections: OB, WRB, CNC, JGF, AMNH, CPK, AKW, HEW; also mentioned by Richards (1937, p. 219). Paradise Key: not rare at bait, Jan.-April, FMJ.

3593, 2 A. ADJUTRIX (Cramer)

Pap. Exot. 3: 144. 1782.

IV. Fort Lauderdale: two July 19-Aug. 1, 1923, (Bates), CPK, UM. VI. Paradise Key: one April 15, 1917, (Blatchley), det. Franclemont, USNM. Franclemont explains that "*ganglio* has moderate sized reniform with or without the tail, or stem; *adjutrix* has an enormous reniform."

EPHYRODES Guenée

3594 E. CACATA Guenée

Pl. V, Fig. 11, ♂.
Spec. Gén. 7: 366. 1852.

III. Cassadaga: Oct., SVF. Tampa: Sept., Oct., AEB. IV. Bradenton: July-Nov., CPK. Oneco: April, JGF; Sept., Oct., CPK. Archbold Biological Station: Oct., YU. Siesta Key: Dec., CPK. VI. Florida City: June, Aug.-Oct., OB; July-Sept., AMNH, AKW; Aug., JGF; Aug., Sept., CNC; Sept., HEW; Sept., (Forsyth), Richards (1937, p. 219). VIII. Tavernier: Aug., DPI. Craig: June, July, DPI.

STRENOLOMA Grote

3595 S. LUNILINEA Grote

Pl. X, Fig. 21, ♀.
Bull. Buffalo Soc. Nat. Sci. 1: 127. 1873.
I. Quincy: Nov. 17, 1956, (Tappan), DPI.

CONCANA Walker

3597, 1 C. MUNDISSIMA Walker

List Lep. Ins. Br. Mus. 12: 940. 1857.

VI. Florida City: three May 21-June 18, (Forsyth), OB.

LITOPROSOPUS Grote

3598 L. FUTILIS (Grote & Robinson)

Pl. XVII, Fig. 24, ♀.
Trans. Amer. Ent. Soc. 2: 202; Pl. 3, Fig. 73. 1868.

It has been taken quite frequently from Pensacola to Paradise Key, January-July, September and November. Food: saw palmetto, Crumb (1934, p. 150); larvae boring in the flower stalks of *Serenoa repens*, DPI; pupating in dirt dauber's nest, DPI. The larvae incorporate any available fabric, even fiber glass, into their cocoons and are somewhat of a household pest in consequence. Vero Beach: Aug. 1959, pupating in plastic, DPI.

3598, 1 L. BAHAMENSIS Hampson

Desc. new genera & spec. (Noctuidae), p. 146. 1926.

Forbes (1941, p. 148) wrote: ". . . decidedly colder brown, and with a much paler hindwing than true *L. futilis* from Florida. The larger Texas species that passes for *futilis* appears to be undescribed, and matches this specimen much more closely in color." It might be added that the eye on the hind wing is larger in proportion and the line before it curves around farther over the eye. VI. Florida City: June 1, 1939, June 15, 1940, OB. VIII. Dry Tortugas: summer, 1936, (Plough), CU. This last specimen is the one which Forbes discussed above.

NOROPSIS Guenée

3601 N. HIEROGLYPHICA (Cramer)

Pl. V, Fig. 8, ♀.
Pap. Exot. 2: 81; Pl. 47, Fig. D. 1779.

I. Escambia Co.: May, SMH. Warrington: very common summer and fall, VFG. Pensacola: Oct., GWK. Quincy: July-Oct., CPK. Jefferson Co.: Sept., UM. Monticello: Sept., DPI. II. Rai-

ford: larva on pecan, Oct. 31, DPI. Alachua Co.: Aug., DPI. Gainesville: common, May, UFES. Fernandina: July, Aug., HEW; Aug., JGF; Sept., AKW. III. Daytona Beach: Oct., LH. Cassadaga: Oct., Nov., SVF. Brooksville: June, AKW. Orange Co.: Oct., DPI. Orlando: April, WMD; Sept., CNC, JGF. Tampa: June, UT; Sept., Oct., WRB. IV. Bradenton: GCES; Sept., Oct., CPK. Archbold Biological Station: Sept., YU. Sarasota: Aug., Sept., HLK. Miami: Sept., CMNH. Coral Gables: Aug., WHH. Since this is an essentially tropical species, the food plant record on pecan seems unusual, though the relative abundance of *hieroglyphica* at Quincy might substantiate this. The statement by Grossbeck (1917, p. 63) that "Cocoons of this species were common in Jamaica, attached to the trunks of coconut palms," might imply such to be their food, but certainly no evidence to support this has been adduced in Florida.

GONODONTA Hübner

3602 G. UNICA Neumoegen

Pl. XVII, Fig. 25, ♂.
Can. Ent. 23: 125. 1891.

III. Indian River: type, Neumoegen. IV. Port Sewall: Jan., AMNH. South Bay: April, AMNH. Palm Beach: Dyar (1901a, p. 455). Fort Lauderdale: larva on *Annona cherimola*, Jan., UM. Miami: Feb., WRB. Coconut Grove: Todd (1959, p. 42). V. Chokoloskee: USNM. VI. Homestead: Sept., CPK. Florida City: May, June, CNC; May-Aug., OB, JGF; June, AMNH. Paradise Key: Todd. Key Largo: May, DPI. Food: *Annona glabra* [*laurifolia*], Dyar (1901b, p. 272); pond apple, DPI.

3604 G. NUTRIX (Cramer)

Pl. XVII, Fig. 26, ♀.
Pap. Exot. 4: 46; Pl. 312, Fig. B. 1780.

IV. Port Sewall: Feb., Dec., AMNH. Fort Pierce: July, DPI. King and Thompson (1958, pp. 61-65) observed this specimen making punctures with its proboscis into citrus fruit and subsequently *Mocis latipes* following and feeding in the holes thus made by *nutrix*. Fort Lauderdale: Aug., AMNH; May, Aug., Sept., UM. Miami: Todd (1959, p. 25). Coconut Grove: larvae abundant, Jan., DPI. VI. Homestead: March, DPI; larva, Oct., DPI. Florida City: common, May-July, JGF, HEW; May, WRB, CPK; May-June, AMNH; May, June, Nov., OB; June, AKW. Paradise Key: March, FMJ. Food: *Annona diversifolia*, DPI.

3604, 1 G. INCURVA (Sepp)

Surinaam. Vlinders 2; Pl. 89. 1832-1840.

III. St. Petersburg: (Pasche), det. Forbes, CU. Forbes' notes add: "dark var. *terebimacula* Sepp." and "Only record for U. S. Is it authentic? Most of this lot with green labels seem ok." Food: *Artanthe*.

3604, 2 G. SICHEAS (Cramer)

Pap. Exot. 2: 86; Pl. 150, Fig. E. 1777.

IV. La Belle: Oct. 5, 1956, (Heness), det. Todd, CPK. Miami: May, AMNH.

CAPNODES Guenée

3606 C. RUFINANS Guenée

Spec. Gén. 7: 377. 1852.

Rufinans is variable, the forms including more or less uniformly colored specimens ranging thence to others with prominent white transverse lines. In these are the forms *discerpta* (Walker) and *marita* Schaus together with intergrades. IV. Siesta Key: May 15, 1963, CPK. Charlotte Harbor: type of female of *punctivena* Smith, (Slosson), AMNH. Punta Gorda: Dec.-Feb., AKW. Palm Beach: Dyar (1901a, p. 455). Miami: June, HEW. V. Everglades: April, AMNH. Marco: April, JGF. Allen River to Deep Lake: April, SIM. Chokoloskee: Barnes & McDunnough (1917a, p. 217). VI. Florida City: May, WRB, JGF. Paradise Key: abundant at bait, Jan.-April, FMJ; May, June, Dec., OB; Dec., AMNH. Jones' specimens were determined as *marita* by Dyar, who wrote that this was probably a variety of *rufinans*. Franclemont agrees that is correct.

3607, 1 C. CONCINNULA Walker

Pl. V, Fig. 22, ♂.
List Lep. Ins. Br. Mus. 33: 1074. 1865.

Concinnula is very similar to *rufinans*, but much smaller. The males never have the white spots on the costa; the females occur with or without these. III. Central Florida: Feb., WMD. Cassadaga: Sept., Dec., SVF. Orlando: Oct., det. Franclemont, WMD. IV. Bradenton: Sept.-Nov., det. Franclemont, CPK. Oneco: March, April, JGF; June, Aug., CPK. Archbold Biological Station: Jan., PSU. Siesta Key: Nov.-June, JGF, CPK. VI. Homestead: May, June, Oct., Nov., CPK. Florida City: Feb., May-Aug., Oct., Nov., OB; June, det. Franclemont, HEW. VIII. Tavernier: Sept., CPK.

HYPSOROPHA Hübner

3610 *H. MONILIS* (Fabricius)

Pl. XVIII, Fig. 1, ♂.
Spec. Ins. 2: 219. 1781.

Florida: (Slosson), Grsb. 72. I. Escambia Co.: March, SMH. Warrington: occasional, summer, VFG. Monticello: March, CPK. II. Alachua Co.: April, CPK. Gainesville: March, Oct., UM; April, (Watson), UFES. Micanopy: March, DPI. Island Grove: larva feeding on persimmon at night, concealed on the ground during the day, (Seifert), Dyar (1903a, p. 291).

3611 *H. HORMOS* Hübner

Pl. XVIII, Fig. 2, ♂.
Zutr. exot. Schmett. 10; Figs. 27, 28. 1818.

The color of this varies from gray to yellowish brown. I. Escambia Co.: March, Aug., SMH. West Pensacola: June, VFG. Quincy: May, July, CPK. Monticello: June, DPI. II. Alachua Co.: March, April, Sept., DPI. Gainesville: March, April, UM; April, CPK; July, CU; Aug., DPI. III. Cassadaga: March, April, SVF. Weeki-wachee Springs: May, CPK. Orange Co.: May, DPI. Orlando: April, May, CNC. Winter Park: Sept., DPI. Oldsmar: July, Aug., WRB. St. Petersburg: May, OB. Stemper: Aug., Sept., CNC. Lakeland: May, AMNH. IV. Oneco: March, JGF. Archbold Biological Station: March, PSU; April, May, YU. Siesta Key: April, CPK. Punta Gorda: March, April, AKW. VI. Homestead: May, CPK. Florida City: June, HEW. Paradise Key: March, FMJ. Food: persimmon, probably with the same habits as *monilis*. Also reported on sassafras.

PLUSIODONTA Guenée

3612 *P. COMPRESSIPALPIS* Guenée

Spec. Gén. 6: 359. 1852.

I. Escambia Co.: March, SMH. Warrington: Feb., occasional in summer, Sept., VFG. Myrtle Grove: June, WJW. Florida Caverns State Park: April 13, 1960, (Denmark), DPI. Monticello: June 22, 1955, (Phillips), CPK. II. Gainesville: March 2, 1925, UM; April 23, 1963, (Perry), DPI.

CECHARISMENA Moeschler

3613, 1 *C. ABARUSALIS* (Walker)

Pl. XVIII, Fig. 3, ♀.
List Lep. Ins. Br. Mus. 19: 869. 1858.

Though *abarusalis* was originally placed in *Blepina* and subsequently in *Matiloxis*, Todd believes the species belongs in this genus. VI.

Homestead: Feb., May, July-Nov., (Wolfenbarger), det. Todd, CPK.

3613, 2 *C. NECTAREA* Moeschler

Abhandl. Senck. Naturf. 16: 165. 1890.

VIII. Tavernier: Oct. 17, 1955, (J. N. Todd), det. E. L. Todd, CPK.

HYPOCALA Guenée

3614 *H. ANDREMONA* (Cramer)

Pl. XVIII, Fig. 4, ♂.
Pap. Exot. 4; Pl. 358. Fig. C. 1782.

Florida: June, Smith (1893, p. 318). I. Warrington: one WP; Nov. 16, 1961, VFG. III. Cassadaga: five May, June, Sept., Oct., SVF. VI. Homestead: four Aug.-Oct., (Wolfenbarger), CPK. Food: persimmon.

ALABAMA Grote

3616 *A. ARGILLACEA* (Hübner)

Cotton leafworm. Pl. XVIII, Fig. 5, ♂.
Zutr. exot. Schmett.; Figs. 399, 400. 1823.

This is probably quite common through the entire state from mid-July to mid-October, and holding on into December. The larva feeds on cotton and is sometimes a pest. There is a large literature on the subject.

ANOMIS Hübner

Collectors have had difficulty with this genus, partly because of the similarity of certain species, partly because certain names do not apply, and partly because there is sexual dimorphism in most of the species.

3617 *A. EROSA* Hübner

Pl. V, Fig. 12, ♂.
Zutr. exot. Schmett.; Figs. 287, 288. 1818.

Erosa is the commonest of the genus. It is found all over the state and has been taken in every month. Food: cotton, *Urena lobata*, Creighton (1936, p. 279); okra, roselle, *Hibiscus rosa-sinensis*, *H. sabdariffa*, *H. esculentus*, Fla. Agr. Exp. Sta. Bull. 134: 93, 155: 177, and 232: 72; *Hibiscus moscheutos*, *H. mutabilis*, *Abutilon striatum*, *A. theophrasti* [avicennae], *Gossypium* spp., *Peperomia* spp., Dozier (1917, p. 536); *Hibiscus cannabinus* Coop. Econ. Ins. Rept. 2: 243.

3618 *A. FLAVA FIMBRIAGO* (Stephens)

Pl. V, Fig. 13, ♂.
Ill. Brit. Ent. 3: 67. 1829.

Fimbriago is easily confused with *erosa*. It is probably quite common though the records are few. They cover May-March. Food: *Malvaviscus*, okra; hibiscus leaves, (Stegmaier), DPI.

3618, 1 A. [IMPASTA Guenée]

Pl. XVIII, Fig. 6, ♂.
Spec. Gén. 6: 40. 1852.

According to Franclemont neither this name nor *doctorium* Dyar applies, and the species probably has no name. In addition to sexual dimorphism, the species is complicated by forms with or without a large white reniform. III. DeLand: March, AKW. Cassadaga: Oct., SVF. Brooksville: June, AKW. Orange Co.: Feb., July, WMD. St. Petersburg: April, Dec., AKW. IV. Bradenton: March, May, Aug.-Dec., CPK. Oneco: April, JGF; May, June, Sept., CPK. Archbold Biological Station: Dec., PSU. Sarasota: May, June, Sept., CPK. Siesta Key: Nov.-April, June, CPK. Arcadia: March, JGF. Punta Gorda: Jan., Dec., AKW. Dade Co.: June, HFS. V. Everglades: April, SIM. Grossbeck noted that this was determined as *doctorium* by Dyar who had recently revised the genus. However, this does not agree with Franclemont's view mentioned above. VI. Florida City: May, HEW; May-July, OB; May-Aug., AMNH; June, AKW. VIII. Long Key: larva on wild cotton blooms, Rainwater (1934, p. 761).

3618, 2 A. ILLITA Guenée

Pl. XVIII, Fig. 7, ♀.
Spec. Gén. 6: 400. 1852.

This is not unlike the foregoing species in appearance, but the outer margin of the forewing is straighter. III. Orlando: Nov., DPI. Tarpon Springs: Feb., JLC. St. Petersburg: Feb., Oct., AKW. IV. Bradenton: March-Jan., DPI, CPK. Oneco: March, JGF; May, July, Aug., Oct., CPK. Archbold Biological Station: Dec., YU. Fort Pierce: (J. R. King), DPI. Siesta Key: Oct., Nov., CPK. VI. Homestead: Oct., CPK. Florida City: Aug., HEW; Aug., Nov., OB.

[3620 A. *texana* Riley]

4th Rept. Ent. Comm., p. 350, app. 120. 1885.
V. Chokoloskee: USNM. Grossbeck (1917, p. 66) noted: "The determination of the specimens on which this record is based is somewhat doubtful." Until there is something more to go on, this species should not be credited to Florida. Furthermore, because of the variability in the species of *Anomis*, especially this group and the fact that *texana* and *editrix* as represented in the United States National Museum collection appear

to be very close, it would not be at all surprising if this specimen were not actually *editrix* below.

3622 A. EDITRIX (Guenée)

Spec. Gén. 6: 404. 1852.

IV. Bradenton: Jan., Nov., CPK. Oneco: one Oct., (Dillman), CPK. Siesta Key: three Oct., Dec., CPK. VI. Homestead: one Nov., CPK. Florida City: one July, OB.

Subfamily HYPENINAE

SCOLECOCAMPA Guenée

3623 S. LIBURNA (Geyer)

Pl. XVIII, Fig. 9, ♀.

Zutr. exot. Schmett. 482; Figs. 963, 964. 1825.

Some Florida specimens are reddish brown but Franclemont has made genitalic studies that indicate they do not differ from typical *liburna*. I. Escambia Co.: May, SMH. Myrtle Grove: Sept., WJW. Avalon: Feb., DPI. Apalachicola: (Thaxter), Grote (1876, p. 415). II. Gainesville: July, CPK; Oct., DPI. Fernandina: Aug., HEW. III. Cassadaga: Aug., SVF. Weekiwachee Springs: April, May, CPK. Orlando: April, June, CNC. Oldsmar: Aug., WRB. IV. Oneco: March, April, JGF; April, Sept., CPK. Archbold Biological Station: April, Sept., YU. Siesta Key: May, CPK. VI. Florida City: May, OB. Paradise Key: Jan., March, FMJ. The larva lives in decaying wood; bark of fallen limbs, Dozier (1920, p. 377).

GABARA Walker

The determinations in this genus are subject to question. Richards (1942) revised the eastern species, sinking a number of names to the synonymy and making others races. He credits the following to Florida: *pulverosalis* (Walker), *subnivosella bipuncta* (Morrison), and *distema humeralis* (Smith). Since a number of names have been used in the literature in connection with Florida species, it is necessary to give them all and unravel the lot in order to knit it up again. Even so it is almost impossible to fit certain specimens into any of Richards' three species, and it looks as though further study is needed for Florida specimens.

3633 G. PULVEROSALIS (Walker)

List Lep. Ins. Br. Mus. 34: 1478. 1865.

Perhaps the Cornell specimens listed under *subnivosella bipuncta* belong here; Forbes did not know. II. Hastings: Oct., Richards (1942, p 4).

III. Eustis: Oct., AEB. IV. Oneco: Sept., Oct., (Dillman), CPK. These Oneco specimens are all small and would seem to fit into *minorata* (Smith), which Richards characterizes as atypical, dwarfish specimens of *pulverosalis*. Siesta Key: May, CPK.

[3631 *G. subnivosella* (Walker)]

List Lep. Ins. Br. Mus. 35: 1740. 1866.

Reported by Smith (1903, p. 221) from Hastings. Richards strongly doubts that this typical form is found in Florida.

3632 *G. SUBNIVOSELLA BIPUNCTA*
(Morrison)

Pl. XVIII, Fig. 10, ♀.

Ann. Lyceum Nat. Hist. N. Y. 11: 103. 1875.

Besides the Hastings record mentioned above, which presumably would go here, there is a Florida record (Smith, 1893, p. 191) and two specimens in the Cornell collection which Forbes noted are "the small dark thing often called *bipuncta* but I should make them *pulverosalis* Wlk." I. Escambia Co.: July, SMH. III. Cassadaga: Aug. 14, 1962, SVF. IV. Archbold Biological Station: June, AKW. Punta Gorda: May, June, AKW.

2699 *G. DISTEMA* (Grote)

N. Amer. Ent. 1: 100. 1880.

This species was transferred by Richards from the genus *Cilla* to *Gabara*. The Florida specimens fall largely to the race *humeralis* (Smith) according to Richards. However, some of them look very much like the description of *strigata* (Smith), which Richards makes a synonym of typical *distema*, although he does state that the longitudinal stripe is not distinctive. I am listing here all the Florida records that have appeared or have been listed under any of the names which Richards places either in the synonym of *distema* or *distema humeralis*. I. Escambia Co.: July, SMH. West Pensacola: Sept., VFG. II. Jacksonville: Oct., CNC. Hastings: paratypes of *umbonata* (Smith) and *humeralis*, April, CNC; June, Sept., Oct., Richards (1942, p. 9). III. Altamonte Springs: Oct., Richards. Cassadaga: May, Aug., Oct., SVF. Weekiwachee Springs: May, Aug., CPK. St. Petersburg: Aug., Richards. Fort Meade: Richards. IV. Bradenton: Oct., CPK. Oneco: May, June, Aug., Oct., CPK. Archbold Biological Station: April, May, YU. Siesta Key: May, CPK. Punta Gorda: April-June, AKW. VI. Homestead: June, Aug.-Oct., CPK.

[3634 *G. apicalis* (Smith)]

Trans. Amer. Ent. Soc. 29: 220. 1903.

Richards makes this a synonym of *distema humeralis*. Described from Hastings.

[3635 *G. strigata* (Smith)]

J. N. Y. Ent. Soc. 10: 45. 1902.

Another synonym of *distema*.

[3636 *G. umbonata* (Smith)]

Trans. Amer. Ent. Soc. 29: 221. 1903.

Also a synonym of *distema humeralis*, and also described from Hastings.

[3637 *G. humeralis* (Smith)]

Trans. Amer. Ent. Soc. 29: 220. 1903.

Richards places this as a race of *distema*. It, too, was described from Hastings.

[3638 *G. minorata* (Smith)]

Trans. Amer. Ent. Soc. 29: 221. 1903.

Richards makes this a synonym of *pulverosalis*. Yet one more of the species described from Hastings.

Genus unrecognized

3638, 1 —. SP.

A specimen of a genus unknown to Forbes, Franclemont, or Todd, belongs at approximately this point. There is nothing like it in the U. S. National Museum. Franclemont will describe it. III. Weekiwachee Springs: Aug. 1954, (May), CPK. IV. Bradenton: Sept., (Kelsheimer), CPK. Archbold Biological Station: Aug., (Archbold), YU.

PHYPROSOPUS Grote

3639 *P. CALLITRICHOIDES* Grote

Pl. XVIII, Fig. 8, ♂.

Trans. Amer. Ent. Soc. 4: 90. 1782.

I. Escambia Co.: March, SMH. Warrington: summer, WP. De Funiak Springs: (Fisher), Grsb. 67. Quincy: Sept., CPK. Monticello: June, CPK. II. Gainesville: July, CU; Sept., DPL III. Cassadaga: May, June, SVF. Weekiwachee Springs: April, CPK. Orange Co.: April, DPI. Orlando: March, April, CNC; Oct., DPI. Tarpon Springs: Feb., JLC. Stemper: Aug., CNC. Egmont Key: May, UM. IV. Oneco: March, April, JGF; April-June, Oct., CPK. Archbold Biological Station: Feb., March, PSU, YU. Siesta Key: Jan.-June, Nov., CPK. Punta Gorda: Jan.-April, AKW. VI. Florida City: March, May, HEW. Food: *Smilax rotundifolia*.

ISOGONA Guenée

3555 I. SCINDENS (Walker)

Pl. V, Fig. 14, ♂.

List Lep. Ins. Br. Mus. 15: 1829. 1858.

Scindens was formerly classed in the genus *Panula*. VI. Florida City: June 15, 1937, (Forsyth), OB.

3643 I. TENUIS Grote

Trans. Amer. Ent. Soc. 4: 22. 1872.

I. Quincy: two July 29, 1960, one June 26, 1961, (Tappan), DPI, CPK. IV. Bradenton: May 25, (Kelsheimer), det. Franclemont, CPK.

GLYMPIS Walker

3648, I G. CONCORDS (Hübner)

Pl. XVIII, Fig. 11, ♀.

Zutr. exot. Schmett. 1 (2): 22; Figs. 315, 316. 1823.

Records of this have been going under the name *Isogona agilaria* (Druce). IV. Oneco: three Aug., Oct., (Dillman), det. Todd, CPK. Siesta Key: Nov. 25, 1957, CPK. Matheson Hammock: Sept., DPI. Cutler: reared from *Sesbania* sp., Aug., (Nakahara), DPI. VI. Homestead: one each March, June, July, abundant, Aug.-Oct., CPK. Florida City: one May, five Sept., one Oct., OB; two Sept., (Forsyth), HEW; "9.3," CNC. VIII. Tavernier: Aug., Sept., CPK. Windley Key: one Dec. 18-Feb. 22, (J. N. Todd), det. E. L. Todd, CPK. Craig: Sept., CPK.

PANGRAPTA Hübner

3650 P. DECORALIS Hübner

Pl. XVIII, Fig. 12, ♀.

Zutr. exot. Schmett. 1: 18; Figs. 93, 94. 1818.

I. Escambia Co.: March, April, SMH. II. Gainesville: UFES; March, Sept., DPI. III. Cassadaga: April, July, SVF. Weekiwachee Springs: April, May, Aug., AEB. Orlando: March, OB. Stemp-er: Feb., June-Sept., CNC. Tampa: April, AEB. Lakeland: May, Grsb. 71. IV. Oneco: March, April, JGF; May, CPK. Archbold Biological Station: Jan., PSU; Jan.-April, YU; June, AKW. Siesta Key: Jan., May, CPK. Punta Gorda: Feb., March, AKW. Fort Myers: April, Grsb. 71.

METALECTRA Hübner

3651 M. DISCALIS (Grote)

Pl. XVIII, Fig. 13, ♀.

Can. Ent. 8: 206. 1876.

I. Myrtle Grove: April, WJW. Quincy: Sept., CPK. II. Gainesville: UFES. III. Cassadaga: April, SVF. Weekiwachee Springs: May, CPK. Orlando: April, CNC. IV. Oneco: March, April, JGF; May, June, CPK. Archbold Biological Station: Feb., April, YU. Punta Gorda: Feb.-May, AKW. VI. Homestead: July, Oct., CPK. Florida City: May, July, Aug., HEW; July-Sept., AMNH. Paradise Key: Jan.-April, FMJ. Food: dry fungus.

3652 M. QUADRISIGNATA (Walker)

Pl. XVIII, Fig. 14, ♂.

List Lep. Ins. Br. Mus. 13: 1073. 1857.

I. Escambia Co.: May, SMH. Warrington: WP. Quincy: June, July, CPK. III. Central Florida: June, WMD. Marion Co.: July, UM. Tampa: Oct., AEB. IV. Bradenton: Aug., CPK. Oneco: March, April, JGF; May, June, CPK. Port Sew-all: Aug., Sept., AMNH. Archbold Biological Station: Sept., YU. Siesta Key: May, Oct., CPK. Punta Gorda: March, April, AKW. VI. South Florida: Forsyth sale list. Homestead: May, July, Oct., CPK. Food: cultivated mushrooms, bracket fungus.

3652, I M. SP.

Franclemont has taken a single male of this in Alabama, but none of the specimens are in good enough condition to warrant a description. It is probably new. III. Cassadaga: two April 14-15, 1960, JGF, SVF.

3654 M. TANTILLUS (Grote)

Pl. XVIII, Fig. 15, ♂.

Proc. Acad. Nat. Sci. Phila., p. 214. 1874.

I. Escambia Co.: July, SMH. Myrtle Grove: June, WJW. II. Gainesville: UFES. Hastings: Oct., AMNH. III. DeLand: March, AKW. Cassadaga: April, SVF. Orlando: June, DPI. Rockledge: NYSM. Stemper: May-July, CNC; June, AEB, AKW. Tampa: Sept., AEB. IV. Bradenton: Aug., CPK. Oneco: common, March, April, JGF; April, May, Aug., CPK. Siesta Key: April, May, CPK. Charlotte Harbor: (Slosson), Grsb. 72. Punta Gorda: Feb.-April, AKW. Coconut Grove: (Schwarz), Grsb. 72. V. Everglades: April, SIM. VI. Homestead: Sept., Oct., CPK. Florida City: Jan.-Aug., OB; May, WRB; May, June, AKW. Food: bark of dead maple and possibly fungus.

3655 M. [DIABOLICA Barnes & Benjamin]

Ent. News 35: 17. 1924.

II. Archer: one March 1882, (Koebele), USNM.

The specimen has been determined by Franclemont as probably this, but he believes that the determination should be verified by examination of the genitalia before accepting it as final.

3656, 1 M. ALBILINEA Richards

Amer. Mus. Nov. 1115: 1. 1941.

Florida: allotype, AMNH; two paratypes, USNM. II. Jacksonville: type, April, AMNH. III. Weekiwachee Springs: Aug., CPK. IV. Bradenton: Oct., Nov., CPK. Oneco: March, April, JGF; April, May, Oct., CPK. Port Sewall: Jan., AMNH. Sarasota: May, Nov., CPK. Siesta Key: April, June, CPK. Punta Gorda: April, OB.

3656, 2 M. [RICHARDSI Brower]

Trans. Amer. Ent. Soc. 67: 272. 1941.

Here again Franclemont feels that final acceptance of the species as of our fauna should be reserved until genitalic comparison is made; the species are deceptively close in appearance. III. Egmont Key: April 25, 1904, (Ramstedt), AKW. IV. Punta Gorda: Feb.-May, AKW; April, OB.

MURSA Walker

The determinations in this genus are subject to revision.

3658, 1 M. SUBRUFATA Warren

Pl. XVIII, Fig. 16, ♀.

Trans. Ent. Soc. London p. 235. 1889.

IV. Oneco: Aug. 25, 1953, (Dillman), det. Franclemont, two Jan. 7-26, 1957, Nov. 23, 1957, CPK. Siesta Key: Jan., Feb., CPK. Bonita Springs: Dec. 3, OB. Jupiter: Dec. 17, OB; two Dec. 17-30, 1938, (Sanford), AMNH. VI. Paradise Key: det. Schaus, FMJ.

3658, 2 M. PHTISIALIS (Guenée)

Spec. Gén. 8: 87. 1854.

IV. Siesta Key: Dec. 26, 1951, Jan. 3, 1954, det. Franclemont, Feb. 12, 1961, CPK.

3658, 3 M. GRACILIS (Moeschler)

Abhandl. Senck. Naturf. 16: 222. 1888.

IV. Riviera: Jan., det. Franclemont, MOG. Miami: Aug. 28, 1950, USNM. VI. Paradise Key: Jan. 10, 1930, (Jones), det. Franclemont, USNM. It also was intercepted by customs at Miami Aug. 1953, from Cuba.

SYLECTRA Hübner

3659 S. ERICATA (Cramer)

Pl. XVIII, Fig. 17, ♂.

Pap. Exot. 3; Pl. 287, Fig. D; 4, Pl. 370, Fig. E. 1782.

Florida: Dyar (1902, p. 217); Smith (1893, p. 376). IV. Siesta Key: Nov. 16, 1956, det. Franclemont, CPK. Miami: Aug. 28, 1950, (Niedsgar), USNM. V. Chokoloskee: USNM. VI. Florida City: May-July, Sept., OB; July, HEW; "7.2," CNC.

EGRYRLON Smith

3660 E. FILARIA Smith

Pl. V, Fig. 23, ♀.

J. N. Y. Ent. Soc. 8: 177. 1900.

Superficially *filaria* resembles *Capnodes rufinans* Guenée, but the wings have blue streaks and the palpi are quite different. IV. Biscayne Bay: type, (Slosson), AMNH. Miami: USNM. V. Chokoloskee: USNM.

ARUGISA Walker

3661 A. LATIORELLA (Walker)

Pl. V, Fig. 17, ♂.

List Lep. Ins. Br. Mus. 27: 29. 1863.

Latiorella is quite a common species which has been taken from Escambia County and Fernandina to Florida City, in every month except December.

3661, 1 A. WATSONI Richards

Pl. V, Fig. 18, ♂.

Amer. Mus. Nov. 1114: 2. 1941.

III. Weekiwachee Springs: March 20, 1955, (May), CPK. Elfers: April, JGF. IV. Oneco: March, JGF. Siesta Key: March 10, 1956, March 11 and 30, 1960, March 5, 1961, CPK. Miami: type, three, (Schaus), USNM. V. Everglades: allotype, April 8, 1912, AMNH. VI. Florida City: May, OB.

RAPARNA Moore

3662 R. MELANOSPILA (Guenée)

Pl. XVIII, Fig. 18, ♂; Fig. 19, ♀.

Spec. Gén. 6: 4. 1852.

III. Cassadaga: Sept., Oct., SVF. Altamonte Springs: Sept., Benjamin (1933, p. 6). Weekiwachee Springs: Aug., CPK. St. Petersburg: Sept., Oct., Benjamin; Dec., AKW. IV. Bradenton: March, Aug., Nov., CPK. Siesta Key: Nov.-Jan., CPK. Fort Lauderdale: Jan., Aug., UM. V. Chokoloskee: Benjamin. VI. Homestead:

Feb.-April, July, Sept., CPK. Florida City: April, Aug., Oct., OB.

HEMEROPLANIS Hübner

3664 H. SCOPULAEPES (Haworth)
Pl. XVIII, Fig. 21, ♂; Fig. 22, form *geometralis*, ♂.
Lep. Brit. 2: 260. 1809.

This occurs as typical *scopulaepes*, form *geometralis* (Grote), and other, unnamed forms. It is probably to be found throughout the state, having been taken from Escambia County to the Dry Tortugas, in all months.

3668 H. HABITALIS (Walker)
Pl. XVIII, Fig. 20, ♂.
List Lep. Ins. Br. Mus. 16: 39. 1859.

Habitalis is quite common and unquestionably found throughout the state. It has been taken January-November. There is either an undescribed form of this or an additional species in the Keys.

PHYTOMETRA Haworth

3677 P. ERNESTINANA (Blanchard)
Pl. V, Fig. 19, ♂.
Hist. Nat. Ins., p. 549. 1840.

This is the earliest name for what has been known as *coccineifascia* (Grote). In Grossbeck (1917, p. 67) the records for *ernestinana* were under *rhodarialis* (Walker). For information on this confusion of names, see Forbes (1954, pp. 378-379). *Ernestinana* is a fairly common species which has been taken from Warrington to Florida City, in every month. I. Quincy: one each, June, Sept. IV. Bradenton: Feb., March, June-Aug. VI. Homestead: Feb., April, May, July-Oct., small peak in May.

3678 P. RHODARIALIS (Walker)
Pl. V, Fig. 20, ♂; Fig. 21, form *semipurpurea* (Wlk.), ♀.
List Lep. Ins. Br. Mus. 19: 860. 1859.

Both typical *rhodarialis* and form *semipurpurea* (Walker), as well as various intermediate forms are found. For the separation of the named forms, see Forbes (1954). This is commoner than *ernestinana*. While there are no records from the Keys, it is presumably of state-wide occurrence, and has been taken in every month.

OMMATOCHILA Butler

3683 O. MUNDULA (Zeller)
Pl. XVIII, Fig. 31, ♀.
Verh. zool.-botan. Ges. Wien 22: 460. 1872.

VI. Homestead: one Feb., five Sept.-Nov., (Wolfenbarger), CPK. VIII. Tavernier: one each, Sept., Oct., (Todd), CPK.

LEGNA Walker

3685 L. PERDITALIS (Walker)
Pl. XVIII, Fig. 23, ♀.
List Lep. Ins. Br. Mus. 16: 234. 1858.

I. Escambia Co.: May, SMH. Quincy: April, CPK. II. Gainesville: June, DPI. III. Central Florida: March, WMD. Weekiwachee Springs: April, Aug., CPK. Winter Park: May, DPI. St. Petersburg: Feb., OB. Stemper: June, CNC. IV. Bradenton: Feb.-April, July, AEB, CPK. Oneco: March, JGF; May-Aug., CPK. Myakka City: Feb., CU. Archbold Biological Station: Feb., PSU; YU; June, AKW; July, AMNH. Port Sewall: Jan.-March, AMNH. Siesta Key: Feb., March, May, CPK. Punta Gorda: March, AKW. Citrus Center: May, AMNH, SIM. V. Everglades: AMNH. VI. Homestead: March, July, Nov., CPK. Florida City: Feb., April-June, OB; March, May-July, JGF; April, May, AMNH. Paradise Key: Jan., March, FMJ. VIII. Craig: Jan., Feb., DPI. Food: *Scirpus cyperinus*.

HORMOSCHISTA Moeschler

3686 H. LATIPALPIS (Walker)
Pl. XVIII, Fig. 24, ♂.
List Lep. Ins. Br. Mus. 15: 1763. 1858.

Latipalpis is of general and fairly common occurrence from Escambia County to Key West, and probably occurs in the western counties, though there are no records from them. *Latipalpis* exhibits confusing variation. It flies the year round.

BOMOLOCHA Hübner

3687 B. MANALIS (Walker)
Pl. XVIII, Fig. 25, ♀.
List Lep. Ins. Br. Mus. 16: 33. 1858.

Florida: CNC. I. Warrington: June, VFG. Monticello: June, DPI. II. Alachua Co.: Sept., DPI. Gainesville: May, UM. III. Brooksville: June, AKW. IV. Oneco: March, JGF; May, June, CPK. Archbold Biological Station: April, June, YU. Port Sewall: Feb., AMNH. Sarasota: June, CPK. Siesta Key: June, CPK. Citrus Center: May, Grsb. 81. Fort Myers: April, AMNH. South Bay: April, May, AMNH, SIM. Palm Beach: Dyar (1901a, p. 456). Fort Lauderdale: July, UM. VI. Homestead: April, GWK; May-July, CPK. Florida City: Jan., May, WRB; April-July, AMNH. Paradise Key: April, FMJ.

3688 B. BALTIMORALIS (Guenée)

Pl. XVIII, Fig. 26, ♂.
Spec. Gén. 8: 34. 1854.

I. Warrington: occasional, summer, VFG. West Pensacola: Aug., VFG. II. Gainesville: Feb., March, det. Franclemont, DPI. III. Cassadaga: June, SVF. Weekiwachee Springs: May, CPK. IV. Oneco: April, JGF. Archbold Biological Station: May, YU. Fort Myers: April, AMNH. Food: maple.

3689 B. BIJUGALIS (Walker)

Pl. XVIII, Fig. 27, ♀.
List Lep. Ins. Br. Mus. 16: 32. 1859.

Florida: Smith (1893, p. 391). I. Escambia Co.: March, April, SMH. Warrington: occasional, summer, VFG. Quincy: April, CPK. IV. Punta Gorda: one Jan., (Ramstedt), AKW. Food: *Cornus stolonifera*.

3690 B. PALPARIA Walker

Can. Nat. Geol. 6: 40. 1861.

II. Gainesville: March, UM; June 15, 1945, det. Franclemont, UFES.

3691 B. ABALINEALIS (Walker)

List Lep. Ins. Br. Mus. 16: 31. 1859.

I. West Pensacola: May 15, June 17, 1963, VFG.

3692 B. DECEPTALIS (Walker)

List Lep. Ins. Br. Mus. 16: 30. 1859.

II. Alachua Co.: July 25, 1958, (Weems), DPI.

3696 B. SORDIDULA (Grote)

Trans. Amer. Ent. Soc. 4: 103. 1872.

I. Escambia Co.: April, SMH. Food: alder and butternut.

3698 B. TOREUTA (Grote)

Trans. Amer. Ent. Soc. 4: 24. 1872.

Toreuta is now known to be ♂ *bijugalis*, q.v.

3699, 1 B. SP.

Near *exoletalis* (Guenée), of which there is a possibility that *umbralis* Smith below may be a synonym. II. Gainesville: June 22, 1955, (Morse), det. Franclemont, CPK. IV. Archbold Biological Station: May 18, 1958, (Pease), YU. Punta Gorda: April 18, 1953, (Ramstedt), det. Franclemont, AKW. VI. Homestead: July 10, 1958, (Wolfenbarger), det. Todd, CPK.

3700 B. UMBRALIS Smith

Bull. Brooklyn Ent. Soc. 7: 4. 1884.

Florida: no date, USNM; Nov., USNM. III. Altamonte Springs: 1924, (Cole), USNM. Indian River: type, USNM. St. Petersburg: Sept., USNM. IV. South Florida: Forsyth sale list.

LOMANALTES Grote**3703 L. EDUCTALIS** (Walker)

List Lep. Ins. Br. Mus. 16: 36. 1859.

I. Escambia Co.: Sept. 9, 1962, SMH. IV. Fort Myers: (McDunnough), AMNH. Grossbeck (1917, p. 81) quoted McDunnough: "The specimen is smaller and darker than the more northern form."

OPHIUCHE Hübner**3701 O. MINUALIS** (Guenée)

Pl. XVIII, Fig. 28, ♀.
Spec. Gén. 8: 36. 1854.

Minualis is more commonly known as *Bomolocha citata* (Grote). I. Escambia Co.: Feb., July, SMH. Quincy: Oct., Nov., CPK. II. St. Augustine: Oct., AMNH. III. Cassadaga: Sept., SVF. Stemper: Oct., CNC. St. Petersburg: April, AKW. IV. Oneco: May, June, Aug., Oct., CPK. Jupiter: Dec., AMNH. Sarasota: May, CPK. Punta Gorda: Jan., AKW. Fort Myers: AMNH. Loxahatchee: Oct., UM. Miami: Jan., AMNH. V. Everglades: April, AMNH. VI. Homestead: May, Nov., CPK. Florida City: March, Nov., JGF; Oct., OB. VIII. Tavernier: Oct., CPK.

3701, 1 O. SP.

This is near *minualis* but is much larger. It is apparently the same as an unnamed species in the U. S. National Museum, represented by specimens from Jamaica and Cuba. E. L. Todd has checked the genitalia of the latter and finds they are distinct from *minualis* and *porrectalis* (Fabricius). IV. Siesta Key: Dec. 24, 1953, CPK. VI. Homestead: Oct. 22, 1959, (Wolfenbarger), CPK. VIII. Tavernier: Sept. 9 and 14, 1955, (J. N. Todd), CPK.

3704 O. ABJURALIS (Walker)

Pl. V, Fig. 27, ♀.
List Lep. Ins. Br. Mus. 16: 68. 1858.

Specimens under the name *lividalis* (Hübner) or *bipartita* (Smith) belong here. III. Central Florida: June, WMD. Brooksville: June, AKW. IV. Bradenton: Aug., CPK. Oneco: March, JGF;

April-June, CPK. Archbold Biological Station: Dec., YU. Siesta Key: April, May, Nov., CPK. Punta Gorda: April, JGF; May, AKW. VI. Homestead: Feb., May, July, Oct., Nov., CPK; reared from Liminaceae leaves, Nov., (Nakahara), DPI. Florida City: JGF; March, HEW; March-Aug., Oct., Dec., OB; April, May, AMNH; Oct., WRB. VIII. Key West: cotype, holotypes, three of *bipartita*, AMNH.

3704, 1 O. DEGASALIS (Walker)

Pl. V, Fig. 25, ♂.
List Lep. Ins. Br. Mus. 19: 843. 1859.

Florida: as *ancara* (Druce), det. Smith, AMNH. I. Escambia Co.: Sept. 25, Oct. 5, 1961, SMH. III. Cassadaga: Sept. 4, 1962, SVF. IV. Bradenton: Aug., Oct., CPK. Oneco: June 6, (Dillman), det. Franclemont, CPK. Siesta Key: March 8, 1952, Dec. 30, 1951, det. Franclemont; June 11, 1957, CPK. Fort Myers: April 10, 1923, det. Franclemont, USNM; *ancara*, April 22, (Davis), SIM. VI. Homestead: Nov., CPK. Florida City: May 1, Nov. 20, OB.

[3704, 1 *Hyphenan ancara* (Druce)]

Biol. Cent. Amer. Het. 1: 433. 1881.

Listed under this name by Grossbeck (1917, p. 81) it is a synonym of the preceding species.

3704, 2 O. PORRECTALIS (Fabricius)

Ent. Syst. 3 (2): 223. 1794.

IV. Oneco: five April, Aug., Oct., (Dillman), det. Franclemont, CPK. Siesta Key: three Nov.-Jan., det. Franclemont, CPK. VI. Homestead: April-July, Sept.-Nov., CPK. Florida City: March, Nov., JGF; June 17, July 3, Aug. 24, OB. Franclemont believes this may be rather common in the southern part of the state.

PLATHYPENA Grote

3705 P. SCABRA (Fabricius)

Green cloverworm. Pl. XVIII, Fig. 30, ♂.
Ent. Syst. 4: 448. 1794.

Though abundant in the North, it does not seem to be very common here. I. Escambia Co.: Feb., March, Sept., SMH. Warrington: VFG. West Pensacola: Aug., Oct., VFG. Gadsden Co.: larva on crimson clover, March, Coop. Econ. Ins. Rept. 3: 204. Quincy: Aug.-May, CPK. Monticello: Feb., March, DPI. Lake Miccosukee: Oct., AMNH. II. Alachua Co.: March, DPI. Gainesville: UFES; April, UM; Dec., DPI. Fernandina: Aug., Sept., HEW; Sept., OB. Jacksonville: March, HEW. South Jacksonville: Dec., AMNH. III. Cassadaga: Nov., SVF. St. Peters-

burg: Dec., AKW. IV. Bradenton: March, DPI; Aug., CPK. Oneco: June, CPK. Siesta Key: Feb., March, Dec., CPK. VI. South Florida: Forsyth sale list. Food: clover, beans, and other legumes.

Subfamily RIVULINAE

DYSPYRALIS Warren

3719, 1 D. SP.

This is a new species which is being described by Franclemont. I. Escambia Co.: Sept. 13, Oct. 27, 1962, SMH. III. Cassadaga: Aug. 4 and 31, 1962, SVF. IV. Oneco: ten March, JGF; nine May-July, Sept., Oct., (Dillman), CPK. Siesta Key: one Nov., CPK. Englewood: one Nov., CPK.

MELANOMMA Grote

3720 M. AURICINCTARIA Grote

Trans. Amer. Ent. Soc. 5: 117. 1875.

Florida: Forbes (1954, p. 379). VI. Homestead: May 21, 1963 (Wolfenbarger), CPK. Food: huckleberry.

HYPENOPSIS Dyar

3727 H. MACULA (Druce)

Pl. XVIII, Fig. 29, ♂.
Biol. Cent. Amer. Het. 1: 441. 1881.

Though the records for this are surprisingly few, it seems abundant where it has been taken. I. Escambia Co.: Feb., SMH. Pensacola: Nov., CU. Myrtle Grove: Sept., Oct., WJW. Monticello: Oct., DPI. II. Gainesville: June, CU. III. DeLand: March, OB. Cassadaga: Feb.-April, SVF. Weekiwachee Springs: March, April, Aug., CPK. Orlando: June, CU. IV. Bradenton: Feb.-July, Oct., Nov., CPK. Oneco: March, April, JGF; April-June, CPK. Archbold Biological Station: Feb., PSU; April, Dec., CU; Oct., YU. Siesta Key: Jan.-May, Nov., CPK. Fort Myers: AMNH. Belle Glade: July, DPI. V. Everglades: April, AMNH. VI. Homestead: Feb.-May, Aug., Oct., Nov., CPK. Paradise Key: March, CU. VIII. Tavernier: Sept., DPI. Food: bracket fungus.

HYPENODES Doubleday

3728, 5 H. SP.

It is a new species to be described by Franclemont: II. Gainesville: June 3, 1927, (Rogers), CU. III. Wacassassa River: one April, JGF. IV. Oneco: twelve March, April, JGF. Archbold Biological Station: Dec. 17, 1945, (Needham), CU.

PARAHYPENODES Barnes & McDunnough

3729 P. QUADRALIS Barnes & McDunnough
Contrib. 4: 124. 1918.

IV. Punta Gorda: Feb., April, (Ramstedt), det. Benjamin, AKW.

PROSOPARIA Grote

3730 P. PERFUSCARIA Grote

Can. Ent. 15: 130. 1883.

Rindge has made a genitalic dissection of the American Museum of Natural History specimen and finds that it is the same as others from Texas. He comments that the species becomes progressively larger and darker as it ranges across the Gulf States and into Florida. III. Cassadaga: May 13, 1950, May 24, 1962, Aug. 2 and 10, 1961, SVF. Weekiwachee Springs: May 1955, (May), CPK; July 20, 1938, (Hubbell & Friauf), UM. IV. Oneco: one May, (Dillman), CPK. Archbold Biological Station: April, CU; Aug. 20, 1955, (Archbold), YU. Punta Gorda: two May 3, 1951, (Ramstedt), AMNH.

SALIA Hübner

3731 S. INTERPUNCTA (Grote)

Pl. XVIII, Fig. 32, ♂.

Trans. Amer. Ent. Soc. 4: 93. 1872.

Florida: (Slosson), Grsb. 81; (Schwarz), Grote (1880, p. 220). I. Escambia Co.: July, SMH. Myrtle Grove: Aug., WJW. III. Cassadaga: May, July, SVF. Weekiwachee Springs: April, CPK. Leesburg: March, AMNH. IV. Bradenton: April, AEB; March, April, Aug., Sept., CPK. Oneco: March, JGF; May-July, CPK. Fort Lauderdale: May, UM. VI. Homestead: April-Sept., CPK. Florida City: March-June, Aug., Sept., OB; July, HEW. Food: willow.

RIVULA Guenée

3732 R. PROPINQUALIS Guenée

Pl. XVIII, Fig. 33, ♂.

Spec. Gén. 8: 49. 1854.

I. Escambia Co.: Oct. 22, 1961, SMH. IV. Oneco: three April, Aug., Sept., (Dillman), det. Franclemont, CPK. VI. South Florida: Forsyth sale list, possibly in error for the next species.

3732, 1 R. PUSILLA Moeschler

Pl. XVIII, Fig. 34, ♂.

Abhandl. Senck. Naturf. 16: 234. 1888.

III. Cassadaga: Nov. 15, 1962, Dec. 4, 1955, SVF. Clearwater: reared from St. Augustine grass, Nov. 3, 1961, (Whitton), DPI. IV. Bradenton:

April, May, Aug.-Nov., CPK. Oneco: common, April-Oct., (Dillman), det. Forbes, JGF, CPK. Archbold Biological Station: Dec., (Needham), CU; reared from pupae on grass, Oct., (Pease), YU. VI. Homestead: May, Oct., Nov., (Wolfenbarger), CPK.

Subfamily **HERMINIINAE****EPIZEUXIS** Hübner

3734 E. AMERICALLIS (Guenée)

Pl. XVIII, Fig. 35, ♂.

Spec. Gén. 8: 78. 1854.

Florida specimens are generally paler than those from northern states. I. Escambia Co.: March, SMH. Quincy: July, Sept.-Nov., CPK. Monticello: June, DPI. II. Gainesville: April, Dec., DPI. Hastings: AMNH. III. Central Florida: April, WMD. Cassadaga: Sept., Dec., SVF. Orange Co.: Aug., DPI. St. Petersburg: April, AKW. IV. Bradenton: May, CPK. Oneco: March, April, JGF; Aug., CPK. Archbold Biological Station: Feb., March, Nov., Dec., PSU; April, YU. Siesta Key: Jan.-March, CPK. Punta Gorda: March, AKW. Food: lichens.

3735 E. AEMULA (Hübner)

Pl. XVIII, Fig. 36, ♀.

Samml. exot. Schmett. 1; Pl. 213, Figs. 1-4. 1815.

I. Escambia Co.: Feb., March, SMH. Quincy: July-Sept., CPK. Monticello: Oct., AMNH. II. Gainesville: March, May, DPI; July, UFES, CU. III. Marion Co.: Feb., DPI. Cassadaga: Feb., June, Aug., Dec., SVF. Winter Park: April, DPI. IV. Oneco: May, Oct., CPK. Archbold Biological Station: Jan., April, YU; Feb., PSU. Siesta Key: Jan., CPK. Punta Gorda: Jan.-May, AKW. Food: dead leaves.

3737 E. ROTUNDALIS (Walker)

Pl. XVIII, Fig. 37, ♀.

List Lep. Ins. Br. Mus. 34: 1144. 1865.

I. Escambia Co.: April, SMH. II. Old Town: April, AKW. Gainesville: March, UM. III. Juniper Springs: Aug., DPI. Cassadaga: April, SVF. Weekiwachee Springs: March, April, CPK. St. Petersburg: Dec., AKW. IV. Bradenton: March, CPK. Oneco: March, April, JGF; April, AKW; May-Aug., Oct., CPK. Archbold Biological Station: Jan., Feb., PSU. Siesta Key: Feb.-April, June, Nov., CPK. Punta Gorda: Feb., CGM; Feb.-April, AKW. Food: dead leaves, fungus, humus.

3740 E. DIMINUENDIS Barnes &

McDunnough

Pl. XVIII, Fig. 38, ♂.

Contrib. 4: 126. 1918.

I. Escambia Co.: March 30, 1962, SMH. II. Gainesville: Oct. 27, 1962, DPI. Jacksonville: one March 1953, HEW. III. Cassadaga: Oct. 29, 1962, SVF. Weekiwachee Springs: four March 1955, (May), CPK. IV. Archbold Biological Station: March 25, 1958, (Pease), YU.

3741 E. SCOBIALIS (Grote)

N. Amer. Ent. 1: 95. 1880.

II. Hastings: AMNH.

3745 E. GOPHERI Smith

Pl. XVIII, Fig. 39, ♂.

Can. Ent. 31: 94. 1899.

Florida: type, (Hubbard), Smith. As I understand Hubbard's paper (1896a), I believe the places mentioned by him all produced this moth. It is probable that *gopheri* will be found wherever gopher holes are present, as the larvae live in the burrows. Perhaps it should be explained that in Florida, "gopher" refers to the gopher tortoise, as well as the little rodent of the west. I. Escambia Co.: May, SMH. DeFuniak Springs: Hubbard (1896a, p. 299). II. Putnam Co.: larva, Feb., DPI. Crescent City: Hubbard. III. Cassadaga: April, May, Oct., SVF. Altamonte Springs: CU. Orlando: April, CNC. Clearwater: Hubbard. IV. Port Sewall: Jan., Nov., OB; Dec.-March, AMNH. Lake Worth: Hubbard.

3746 E. LUBRICALIS Geyer

Pl. XVIII, Fig. 40, ♂.

Zutr. exot. Schmett. 4: 19; Figs. 665, 666. 1832.

I. Escambia Co.: June, Aug., SMH. II. Gainesville: March, May, UM. Lake Geneva: March, HEW. III. Marion Co.: July, UM. Cassadaga: March, April, Aug., Sept., SVF. Chulota: reared from calamondin, April, DPI. Stemper: Feb., CNC. IV. Bradenton: March, CPK. Oneco: May-Aug., Oct., CPK. Archbold Biological Station: Jan., Feb., PSU; Jan., March, YU; June, AKW. Sarasota: July, CPK. Siesta Key: May, June, CPK. Punta Gorda: Feb.-April, AKW. V. Chokoloskee: April, AMNH. VI. South Florida: Forsyth sale list. VIII. Tavernier: Aug., DPI. Food: rotten wood, lichens.

PHALAEOPHANA Grote

3750 P. PYRAMUSALIS (Walker)

List Lep. Ins. Br. Mus. 16: 106. 1859.

I. Escambia Co.: March 1961, SMH. Quincy: April 27, 1962, April 28, 1963, (Tappan), DPI, CPK. Food: dry leaves.

ZANCLOGNATHA Lederer

3752, 1 Z. SP.

It is highly probably that most of the specimens which have been reported under *lituralis* (Hübner), *theralis* (Walker), and *minoralis* Smith, are one and the same species and distinct from any of these names. Whether it is new or not, remains to be seen. If it is, Franclemont will describe it. The records are given below as they stand at present, but all of them are almost certainly incorrect.

3752 Z. LITURALIS (Hübner)

Zutr. exot. Schmett. 1, 9; Figs. 19, 20. 1818.

Florida: Smith (1893, p. 380). I. Escambia Co.: April, SMH. Quincy: June 23, 1960, (Tappan), det. Franclemont, DPI. IV. Punta Gorda: Feb., AKW. Food: dead leaves.

[3753 *Z. theralis* (Walker)]

List Lep. Ins. Br. Mus. 19: 855. 1859.

III. Cassadaga: April 29, July 9, 1962, SVF, CPK. Weekiwachee Springs: Aug. 1954, (May), CPK. IV. Siesta Key: Nov. 8, 1952, CPK.

[3754 *Z. minoralis* Smith]

U. S. Natl. Mus. Bull. 48: 34. 1895.

III. DeLand: March 27, 1954, AKW. Cassadaga: April 20, 1960, Sept. 23, 1962, SVF. IV. Siesta Key: Nov. 9, 1952, CPK.

3758 Z. OBSCURIPENNIS (Grote)

Pl. XVIII, Fig. 41, ♀.

Trans. Amer. Ent. Soc. 4: 309. 1872.

I. Escambia Co.: June, Aug., SMH. Quincy: July-Sept., CPK. II. Alachua Co.: April, May, DPI. Gainesville: March, UM. Lake Geneva: March, HEW. III. Central Florida: March, WMD. Oklawaha: June, DPI. Cassadaga: Nov., SVF. Sanford: April, DPI. Winter Park: April, DPI. Leesburg: June, DPI. Clermont: Nov., DPI. Lutz: Feb., DPI. IV. Bradenton: March, Aug., Oct., CPK. Oneco: March, JGF; April-June, CPK. Punta Gorda: Dec., AKW. Food: dead leaves.

3759 Z. PEDIPALALIS (Guenée)

Spec. Gén. 8: 57. 1854.

VIII. Key Largo: June 29, 1959, SVF. Although Key Largo is a long way south of the known range, Franclemont believes the determination is correct. Food: dead leaves.

3760 Z. PROTUMNUSALIS (Walker)

List Lep. Ins. Br. Mus. 16: 104. 1859.

Florida: Forbes (1954, p. 398). I. Quincy: April 14, 1963, (Tappan), det. Forbes, CPK. III. Rockledge: NYSM. The latter should be checked as it is not the specimen on which Forbes based his range record. Hillsborough Co.: Aug. 18, 1938, UM.

3762 Z. CRURALIS (Guenée)

Spec. Gén. 8: 58. 1854.

II. Gainesville: May 15, 1956, (Weems), det. Todd, DPI. Food: balsam fir.

3763 Z. JACCHUSALIS (Walker)

List Lep. Ins. Br. Mus. 16: 104. 1859.

I. Rocky Bluff: March, DPI. II. Gainesville: April, det. Franclemont, March, DPI. IV. Bradenton: March, det. Franclemont, CPK. Oneco: March, April, JGF. These specimens are somewhat darker than normal. Siesta Key: March, CPK. Punta Gorda: Feb., CGM; Feb.-April, Dec., AKW.

CHYTOLITA Grote

3767 C. PETREALIS FULICALIS Smith

Trans. Amer. Ent. Soc. 33: 143. 1907.

I. Escambia Co.: June 26, 1962, SMH.

PHALAEENOSTOLA Grote

3769 P. LARENTIOIDES CITIMA Grote

Pl. XVIII, Fig. 42, form normal, ♂.

Trans. Amer. Ent. Soc. 4: 303. 1873.

Florida: Forbes (1954, p. 401). II. Gainesville: July 15, 1957, (Denmark), CPK. III. Cassadaga: May 23, 1962, SVF. Monta Vista: Sept. 1, 1961, (Felshaw), CPK.

HORMISA Walker

[3773 *H. absorptalis* Walker]

List Lep. Ins. Br. Mus. 16: 74. 1859.

This was listed by Mrs. Forsyth on her southern Florida sale list, but inasmuch as Forbes (1954, p. 399) gives the range as Nova Scotia to Virginia, one wonders if what she had was not the next species.

3773, 1 H. SP.

This is an apparently new species near *absorptalis*, which is to be described by Franclemont. I. Escambia Co.: Sept. 16, 1961, SMH. III. Weekiwachee Springs: March, (May), CPK. IV. Bradenton: March, (Kelsheimer), CPK. Oneco: March, April, JGF; April, May, Aug., Oct., (Dillman), CPK. VI. Homestead: Oct., (Wolfenbarger), CPK.

3776 H. ORCIFERALIS Walker

Pl. XVIII, Fig. 43, ♂.

List Lep. Ins. Br. Mus. 16: 235. 1859.

Most of the specimens are dark, but some are pale with or without the dark dash. It is relatively common and has been taken from Warrington to Tavernier in every month. IV. Bradenton: April, May, July, Nov., Dec. VI. Homestead: Feb.-Nov., small peaks in May and Aug.

3777 H. LOUISIANA (Forbes)

Pl. V, Fig. 24, ♀.

Ent. News 33: 101. 1922.

I. Escambia Co.: June, Aug., SMH. Monticello: Oct., AMNH. II. Gainesville: May, UM. III. Cassadaga: May, SVF. Wacassassa River: JGF. Weekiwachee Springs: Feb., CPK. IV. Bradenton: March, April, July-Sept., CPK. Oneco: March, April, JGF. Myakka City: Feb., CU. Archbold Biological Station: Jan., PSU; March, CU; Dec., ABS. Siesta Key: April, May, Nov., CPK. Englewood: March, CU. Punta Gorda: Feb., May, OB; May, Dec., AKW. Palmdale: Aug., CU. Fort Lauderdale: May, UM.

TETANOLITA Grote

3778 T. MYNESALIS (Walker)

Pl. V, Fig. 26, ♀.

List Lep. Ins. Br. Mus. 19: 860. 1859.

Mynesalis is very common and presumably found throughout the state though there are no records from west of Quincy. It is on the wing all year. I. Quincy: March, June, July, Sept.-Nov. IV. Bradenton: Jan.-March, May, June, Aug.-Oct. VI. Homestead: Feb.-Nov., peaks in May, Aug., Sept.

3780 T. FLORIDANA Smith

Pl. V, Fig. 28, ♂.

U. S. Natl. Mus. Bull. 48: 63. 1895.

Floridana is probably confused to some extent with *mynesalis*, which it resembles, but it lacks the dark shining ground of the latter. It was listed by Grossbeck (1917, p. 80) as a synonym of *palligera* Smith, which is a distinct, western species. *Floridana* has been recorded only from Old Town and Hastings to Punta Gorda and South Bay, and has not been taken in September.

RENIA Guenée

3782 R. SALUSALIS (Walker)

Pl. XVIII, Fig. 44, ♀.

List Lep. Ins. Br. Mus. 16: 107. 1859.

I. Escambia Co.: May, SMH. II. Old Town:

March, CPK. Gainesville: March, DPI. Hastings: March, AMNH. III. Central Florida: April, WMD. Enterprise: April, Castle & Laurent (1896, p. 302). Leesburg: March, AMNH. Orange Co.: May, WMD. Orlando: June, CU. Rockledge: NYSM. Stemper: July, CNC. IV. Oneco: March, DPI; March, April, JGF. Archbold Biological Station: Feb., March, YU; Nov., Dec., CU; Dec., AMNH. Siesta Key: May, CPK. VI. Florida City: Jan., AMNH; April-July, HEW. Food: reported to be dead leaves.

3783 R. FACTIOSALIS (Walker)

List Lep. Ins. Br. Mus. 16: 37. 1859.

I. Quincy: Sept. 7, 1961, (Tappan), CPK. III. Rockledge: as *clitosalis* (Walker), NYSM. IV. Archbold Biological Station: Nov. 12, 1958, (Frost), PSU. VI. Florida City: April 26, OB. South Florida: three females, det. with "?," Forsyth sale list.

3784 R. NEMORALIS Barnes & McDunnough
Contrib. 4: 127. 1918.

II. Gainesville: Aug. 6, 1958, (Ayers), det. Todd, DPI.

3785 R. DISCOLORALIS Guenée

Pl. XIX, Fig. 1, ♀.

Spec. Gén. 8: 82. 1854.

There is some question as to whether the Florida specimens are this species or another which is very closely related. I. Florida Caverns State Park: one April, DPI. II. Gainesville: one April, DPI. III. St. Petersburg: one Feb., OB. IV. Oneco: three March, JGF. VI. Florida City: eight Feb., April-June, OB; March, JGF.

3789 R. FLAVIPUNCTALIS Geyer

Pl. XIX, Fig. 2, ♀.

Zutr. exot. Schmett. 4, 25; Figs. 701, 702. 1832.

II. Gainesville: April, UFES; May, DPI, UM. III. Orlando: April, CNC. IV. Bradenton: March-May, Dec., CPK. Oneco: March, JGF. Port Sewall: Jan., AMNH. Punta Gorda: April, AKW.

3792 R. FRATERNALIS Smith

Pl. XIX, Fig. 3, ♀.

U. S. Natl. Mus. Bull. 48: 70. 1895.

II. Lake Butler: April, DPI. Alachua Co.: April, Aug., Dec., DPI. Gainesville: April, May, Sept., DPI. Archer: Feb., Smith (1895, p. 71). Jacksonville: April, HEW. III. Marion Co.: June, UM. Glenwood: AMNH. De Land: March, AKW. Cassadaga: March, April, June, Sept.-Nov., SVF. Weekiwachee Springs: March, May,

Aug., CPK. Winter Park: March, Aug., DPI. Orlando: April, CNC; May, DPI. Rockledge: April, Smith. Stemper: June, CNC; May, DPI. St. Petersburg: Jan., Feb., AKW. IV. Bradenton: March, CPK. Oneco: March, DPI; March, April, JGF; May, July, Oct., CPK. Archbold Biological Station: Dec.-Feb., PSU; Feb., March, YU; June, AKW. Parker's Island: June, AKW. Siesta Key: Feb., March, June, CPK. Punta Gorda: Jan.-March, OB; Feb.-April, Dec., AKW. V. Everglades: AMNH. VI. Homestead: Jan., DPI. Florida City: March, June, OB. Paradise Key: March, OB. Food: reported to be dead leaves.

3793 R. SOBRIALIS (Walker)

Pl. XIX, Fig. 7, ♀.

List Lep. Ins. Br. Mus. 16: 228. 1859.

II. Starke: June, AKW. III. Orlando: March, OB. Tarpon Springs: Feb., det. Rindge: with "?," JLC. IV. Port Sewall: March, AMNH. Sarasota: May, CPK. Punta Gorda: Dec., CGM. South Bay: April, AMNH. Food: dead leaves.

3794 R. LARVALIS Grote

Trans. Amer. Ent. Soc. 4: 26. 1872.

Florida: March, Smith (1895, p. 73). II. Archer: NYSM. Jacksonville: March 13, 1953, HEW. Keystone Heights: two March 7, 1953, HEW. The last three determined by Franclemont. III. Stemper: June, CNC. Larva will eat persimmon leaves, fresh or wilted.

PHLYCTAINA Moeschler

3796, 1 P. IRRIGUALIS Moeschler

Pl. XIX, Fig. 8, ♂.

Abhandl. Senck. Naturf. 16: 228. 1888.

IV. Oneco: April 2, 1954, JGF; one May, (Dillman), CPK. Punta Gorda: Dec. 28, 1947, AKW.

CARTERIS Dognin

3796, 2 C. OCVLATALIS (Moeschler)

Pl. XIX, Fig. 4, ♂.

Abhandl. Senck. Naturf. 16: 225. 1890.

VI. Homestead: ten Feb., May, June, Sept., Oct., (Wolfenbarger), det. Todd, CPK.

BLEPTINA Guenée

In addition to the species listed below, there is reason to believe that there are several others of the genus present, but more material and study is needed to prove the theory. Some may be seasonal forms.

3797 B. CARADRINALIS Guenée

Pl. XIX, Fig. 6, ♂.
Spec. Gén. 8: 67. 1854.

The Florida race is quite distinct from the northern one and is just as variable; it may even represent a different species. I. Myrtle Grove: April, WJW. Quincy: May, Oct., CPK. Monticello: Feb., DPI. II. Gainesville: Jan., Feb., Nov., DPI. Lake Geneva: March, HEW. Hastings: March, Grsb. 80. III. Cassadaga: May, SVF. Weekiwachee Springs: Feb., Aug., CPK. Brooksville: June, AKW. Winter Park: April, DPI. Tampa: Feb., DPI. Lakeland: May, AMNH. IV. Bradenton: Feb., May-July, Sept., Nov., Dec., CPK. Oneco: March, April, JGF; April, May, CPK. Archbold Biological Station: Feb., April, YU; March, Nov., PSU. Siesta Key: Nov.-June, CPK. Useppa Island: April, SIM. Palm Beach: Dyar (1901a, p. 456). VI. Homestead: May, June, Aug., Sept., CPK. Paradise Key: March, FMJ. VIII. Tavernier: Aug.-Oct., DPI. Windley Key: April, July, Oct., Nov., DPI. Craig: Sept., DPI. Food: dead leaves.

3798 B. MEDIALIS Smith; **3799 B. INFERIOR** Grote

Pl. XIX, Fig. 5, ♂; Fig. 9, ♀.
U. S. Natl. Mus. Bull. 48: 60. 1895; Trans. Amer. Ent. Soc. 4: 94. 1872.

According to Franclemont, *medialis* is merely a synonym of *inferior*. It is a fairly common insect through the peninsula and Keys, and exhibits some variation. There are records for all months. The larva is supposed to feed on dead leaves.

3800 B. SANGAMONIA Barnes & McDunnough

Contrib. 1, pt. 5, p. 27. 1912.

Florida: Forbes (1954, p. 403). III. Cassadaga: April 20, 1961, det. with "?", SVF. IV. Siesta Key: Jan. 22, 1952, CPK.

3802, 1 B. HYDRILLALIS Guenée

Pl. XIX, Fig. 10, ♀.
Spec. Gén. 8: 67. 1854.

In Florida this occurs both as typical *hydrillalis*, with the reniform concolorous with the ground, and as form *atymnusalis* (Walker), with the reniform black. III. Cassadaga: Feb. 16, 1956, SVF. Hillsborough Co.: Aug., UM. IV. Bradenton: March, CPK. Oneco: June, CPK. Port Sewall: April, AMNH. Siesta Key: Jan-May, CPK. Punta Gorda: Dec.-April, AKW; Feb., OB. VI. Homestead: Aug., CPK. Some of my material is now in the following collections, and perhaps others: CNC, JGF, AMNH, USNM.

NODARIA Guenée**3802, 2 N. SP.**

III. Egmont Key: April 13, 1904, (Ramstedt), UM. IV. Siesta Key: four March-May, det. E. L. Todd as near *araealis* Hampson, CPK. VIII. Tavernier: six July, Sept., Oct., (J. N. Todd), CPK.

HYPENULA Grote**3803 H. CACUMINALIS** (Walker)

Pl. XIX, Fig. 11, ♂.
List Lep. Ins. Br. Mus. 16: 37. 1859.

Cacuminalis is undoubtedly much more common than the records indicate. I. Monticello: April, CU; Aug., DPI. II. Alachua Co.: Aug., DPI. Gainesville: May, UFA; July, CU. III. Cassadaga: April, SVF. Winter Park: July, DPI. Orlando: April, CNC; June, CU. Indian River: AMNH. Oldsmar: Sept., WRB. Stemper: June, Sept., CNC. IV. Bradenton: March, AEB; Sept.-Nov., CPK. Oneco: March, April, JGF; May, Sept., CPK. Archbold Biological Station: April, Sept., YU. Okeechobee: Jan., CPK. Siesta Key: Nov.-June, CPK. Charlotte Harbor: (Slosson), Grsb. 80. Punta Gorda: March-May, AKW. Miami: Sept., (Sleight), Grsb. 80. VIII. Key Largo: May, DPI. Tavernier: Aug.-Oct., DPI.

LASCORIA Walker**3805 L. AMBIGUALIS** (Walker)

Pl. XIX, Fig. 12, ♂; Fig. 15, ♀.
List Lep. Ins. Br. Mus. 34: 1198. 1865.

I. Escambia Co.: Feb., SMH. Florida Caverns State Park: April, DPI. Quincy: Aug., Oct., CPK. II. Gainesville: Feb., March, CPK. Jacksonville: March, HEW. III. Cassadaga: Oct., Dec., SVF. Weekiwachee Springs: May, CPK. Groveland: Nov., DPI. Winter Park: April, DPI. Orlando: Jan., DPI. Lakeland: May, AMNH. IV. Bradenton: March, May, Sept.-Nov., CPK. Oneco: March, JGF; July, Aug., CPK. Archbold Biological Station: Jan., PSU; March, April, Dec., YU. Parker's Island: June, AKW. Port Sewall: Feb., AMNH. Siesta Key: Nov.-Feb., June, CPK. Charlotte Harbor: (Slosson), Grsb. 80. Punta Gorda: March-May, AKW. V. Everglades: April, AMNH, SIM. VI. Homestead: Feb., May-July, Sept.-Nov., CPK; Dec., DPI. Florida City: Feb., AMNH. VIII. Tavernier: Aug., DPI.

3805, 1 L. ALUCITALIS (Guenée)

Pl. XIX, Fig. 13, ♂; Fig. 16, ♀.
Spec. Gén. 8: 73. 1854.

The generic status of this and the following spe-

cies has been shifted about from time to time and is placed here on the advice of Franclemont who believes it fits *Lascoria* more closely than *Epitomiptera* Kaye. The two species are close. The male palpi of *alucitalis* are longer than those of *orneodalis*, and the female has a dark diagonal mark from the apex of the forewing which is absent in *orneodalis*. The records are mixed, and are further complicated by the fact the determinations were first made as *aon* Druce. So far as is now known, the latter is not present in Florida and would not be expected, being western. Definite records for *alucitalis* are: III. Cassadaga: Dec., SVF. St. Petersburg: Feb., AKW. IV. Bradenton: March, Aug., Oct., CPK. Oneco: March, April, JGF. Archbold Biological Station: April, YU. Siesta Key: Feb., Nov., CPK. VI. Homestead: Feb.-April, Aug.-Nov., CPK. Florida City: JGF; USNM; Feb.-May, July, Aug., OB; June, Aug., CU. The following may belong here or to *orneodalis* below; they will all need to be reviewed. III. Cassadaga: Nov., SVF. Orlando: Jan., WMD. IV. Bradenton: March, CPK. Oneco: April-June, Aug., Sept., CPK. Okeechobee: Jan., JGF. Port Sewall: Feb., AMNH. Archbold Biological Station: Feb., YU. Siesta Key: Oct.-May, CPK. VI. Homestead: Oct., CPK. Florida City: Feb., AMNH; Feb., April, WRB; July, HEW. VIII. Tavernier: Sept., DPI. Except for a few specimens, all my material has been distributed to other collections, and consequently is not readily reviewable.

3805, 2 L. ORNEODALIS (Guenée)

Pl. XIX, Fig. 14, ♂; Fig. 17, ♀.
Spec. Gén. 8: 73. 1854.

Most of these have been determined by Franclemont. Florida: USNM. III. Cassadaga: Aug., SVF. Weekiwachee Springs: June, CPK. Leesburg: Nov., DPI. Tarpon Springs: Feb. 1949, det. at British Museum, JLC. IV. Bradenton: USNM; Sept., CPK. Oneco: March, April, JGF; June, Aug., CPK. Archbold Biological Station: April, YU. Siesta Key: Nov.-Feb., April, June, CPK, AKW. V. Chokoloskee: USNM. VI. Homestead: Feb., May, June, CPK. Florida City: JGF; Feb., April-Sept., OB, June, Aug., CU. VIII. Key Largo: May, DPI.

PALTHIS Hübner

3807 P. ANGULALIS Hübner

Pl. XIX, Fig. 18, ♀.
Samml. eur. Schmett. Pyr.; Fig. 107. 1796.

I. West Pensacola: April 17, 1963, VFG. Quincy: May 3, 1961, July 22, 1963, (Tappan), CPK. III. Cassadaga: Dec. 1, 1955, Dec. 25, 1962, SVF.

3808 P. ASOPIALIS (Guenée)

Pl. XIX, Fig. 19, ♂.
Spec. Gén. 8: 96. 1854.

Asopialis is a common species throughout, except that there are no records from the Keys. It has been taken in every month. Food: reported on corn and beans; *Bidens*, (Needham), Forbes (1954, p. 409); *Erechtites hieracifolia*, Marshall & Musgrove (1937, p. 103).

DERCETIS Grote

3810 D. VITREA Grote

Pl. XIX, Fig. 20, ♀.
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 186. 1878.

I. Escambia Co.: April, SMH. II. Alachua Co.: April, DPI. Gainesville: April, DPI. III. DeLand: March, AKW. Cassadaga: April, Sept., Nov., SVF. IV. Bradenton: March, Aug., Sept., CPK. Some of the Bradenton specimens are straw colored instead of the typical gray, and may be a color form. Oneco: April, JGF; April, May, CPK. Food: *Digitaria* [*Syntherisma*].

3811 D. PYGMAEA Grote

Pl. XIX, Fig. 21, ♂.
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 187. 1878.

I. Escambia Co.: April, SMH. Pensacola: AMNH. Crestview: AMNH. II. Gainesville: July, CU. III. St. Petersburg: OB. IV. Bradenton: March, April, July, Aug., CPK. Oneco: March, April, JGF; April, May, Aug.-Oct., CPK. Port Sewall: Dec., AMNH. Siesta Key: March-May, Nov.-Jan., CPK. La Belle: April, AMNH. V. Everglades: April, AMNH. VIII. Tavernier: Sept., CPK.

Family PERICOPIDAE

COMPOSIA Hübner

3816 C. FIDELISSIMA VAGRANS Bates

Cover.
Psyche 40: 123. 1933.

According to Bates, all Florida specimens belong to the subspecies *vagrans*. The species is relatively common in the Keys and is taken frequently in the Miami-Paradise Key region. North of Miami it is very rare, most of these records dating before the freeze of 1899. However, there are two recent records which suggest that it may be moving its range slowly north once more. III. Indian River: (Dyar), Grsb. 82. IV. Jupiter: Westcott (1894, p. 118); March 10, 1946, OB. Lake Worth: (Slosson),

Dyar (1890a, p. 105); Dec. 1952, (Capron), LH. Palm Beach: larvae on *Echites umbellata* and cultivated oleander, eggs on *Cynanchum scoparium* [*Vincetoxicum scoparium*], Dyar (1901a, p. 452). Food: *Canavalia*.

THEBRONE Boisduval

3816, 1 T. TRICOLORA (Sulzer)

Gesch. Ins.; Pl. 22. 1776.

IV. Miami: Dec. 25, 1945, (Klots), AMNH. As this was taken at the airport, it is certainly an accidental stray, probably introduced by plane.

Family **NOTODONTIDAE**

ICHTHYURA Hübner

3825 I. INCLUSA JOCOSA Henry Edwards

Pl. XIX, Fig. 22, form normal, ♂; Fig. 23, form *jocosa*, ♂.
Ent. Amer. 2: 10. 1886.

Inclusa is apparently found only in the form *jocosa* in Florida. I. Quincy: Feb., CPK. Monticello: Feb., DPI. II. Gainesville: Jan., Feb., DPI. Jacksonville: Packard (1895, p. 136). III. Weekiwachee Springs: April, May, CPK. Orange Springs: Dec., UFES. Cassadaga: Jan., SVF. Orlando: Nov., WMD. Indian River: type, Henry Edwards. St. Petersburg: Oct., CU. IV. Bradenton: Jan.-March, CPK. Archbold Biological Station: Feb.-April, YU. Port Sewall: Jan., Feb., AMNH. Siesta Key: Jan., April, CPK. VI. Homestead: Feb., March, CPK. Florida City: Feb., AMNH; May, JGF. Paradise Key: March, FMJ. Food: Willow; larvae abundant on *Populus* sp., Dozier (1920, p. 377).

DATANA Walker

3829 D. MINISTRA (Drury)

Ill. Exot. Ent. 2: 25; Pl. 14, Fig. 3. 1773.

I. Monticello: larva on blueberry, Sept., DPI. II. Gainesville: UFA; July, DPI, CU. III. St. Petersburg: Aug., Sept., CU. Eustis: larva on loquat, Nov., DPI. IV. Bradenton: GCES. Sarasota: Aug., CPK. Larva a general feeder on trees, sometimes injurious to apple.

3830 D. ANGUSI Grote & Robinson

Proc. Ent. Soc. Phila. 6: 9. 1866.

I. Warrington: common, spring 1961, VFG. Monticello: April 15, 1933, UM; Aug. 21, 1956, DPI. II. Gainesville: July 19, 1945, det. Franclemont, UFES. Food: linden, hickory, also reported to be walnut, birch.

3832 D. MAJOR Grote & Robinson

Pl. XIX, Fig. 24, ♂; Fig. 25, ♀.
Proc. Ent. Soc. Phila. 6: 12. 1866.

I. Escambia Co.: May, July, SMH. West Pensacola: July, VFG. Gadsden Co.: larva on azalea, Aug., Coop. Econ. Ins. Rept. 3: 647. Quincy: Aug., CPK. Monticello: Sept., DPI. II. Welaka: July, UFA. Gainesville: larva on azalea, det. Capps, DPI; on azalea, Oct., Coop. Econ. Ins. Rept. 4: 924. III. Ocala: larvae on azalea, July, DPI. Cassadaga: July, Aug., SVF. Weekiwachee Springs: Aug., CPK. Ormond Beach: larvae on azalea, Aug., DPI. Orlando: Aug., Sept., WRB; larva on azalea, DPI. Forbes (1948, p. 215), but not referring to Florida, states that food is "apparently *Andromeda* only, perhaps on other Ericaceae in emergency."

3834 D. RANAECES Guérin-Ménéville

Pl. XIX, Fig. 26, ♀.
Icon. Règne Anim. Ins. 2; Pl. 87, Fig. 1. 1829-1844.

Florida: type of *floridana*, Graef (1879, p. 37); March, USNM; larvae, Oct., USNM; NYSM. I. Escambia Co.: July, SMH. II. Gainesville: Sept., UM. III. Marion Co.: July, UM. Cassadaga: July, Aug., SVF. Orange Co.: Sept., WMD. Winter Haven: larvae on citrus, Aug., DPI. Tampa: Sept., Oct., WRB. IV. Oneco: summer, JGF; Oct., CPK. Archbold Biological Station: Aug., YU; Sept., CPK; Nov., PSU. Sarasota: form *palmi* Beutenmueller, Sept., CPK. Bonita Springs: Dec., OB. Food: *Andromeda*.

3835 D. MODESTA Beutenmueller

Psyche 6: 297. 1890.

According to Franclemont, true *modesta* is confined to peninsular Florida, and is a valid species. Florida: Packard (1895, p. 117). I. Warrington: fairly common, July, 1961, VFG. II. Alachua Co.: May, DPI. Gainesville: June, DPI; Sept., UFES. III. St. Petersburg: Aug., Sept., (Pasche), CU. IV. Bradenton: Sept., Oct., CPK. Oneco: June, July, CPK. Kissimmee: type, May, (Palm), Beutenmueller. Archbold Biological Station: Aug., Sept., YU. Sarasota: Sept., Oct., CPK. Fort Lauderdale: Aug., UM. VI. Dade Co.: May, HFS. Matheson Hammock: June, DPI. Most of the determinations were made by Franclemont.

3837 D. [ROBUSTA Strecker]

Pl. XIX, Fig. 27, ♂.
Lep. Rhop. Het., p. 131. 1872.

Here again we have a species to which the name does not apply, but for lack of one, we must list it under that by which it has been known. II.

Alachua Co.: Sept., DPI. III. Cassadaga: Aug., SVF. Orlando: Sept., UM. Titusville: Sept., AKW. IV. Bradenton: Oct., Nov., CPK. Siesta Key: Nov., CPK. Venice: USNM. Miami: Oct., Nov., OB, AMNH. VI. Homestead: Oct., CPK.

3838 D. PERSPICUA Grote & Robinson
Proc. Ent. Soc. Phila. 4: 489. 1865.

Florida: Forbes (1948, p. 215). I. Escambia Co.: May, SMH. Warrington: fairly common, summer, VFG, WP. Quincy: July 29, Aug. 9, 1960, Sept. 7, 1961, (Tappan), CPK. Monticello: Aug. 14, 1933, UM. Food: sumac.

3839 D. INTEGERRIMA Grote & Robinson
Proc. Ent. Soc. Phila. 6: 12. 1866.

Florida specimens represent a slightly different race. I. Warrington: fairly common, summer, VFG. Quincy: June-Aug., CPK. Tallahassee: larva on pecan, W. P. A. file card. Jefferson Co.: larvae abundant on pecan, Sept., Ins. Pest Surv. Bull. 6: 314. II. Gainesville: June, UFES. Jacksonville: larvae on pecan, July, Aug., DPI. III. Cassadaga: April, SVF. Weekiwachee Springs: Aug., CPK. Elfers: larvae on pecan, July, DPI. Orlando: larvae on pecan, Sept., DPI. Dunedin: larva on hickory, July, DPI. St. Petersburg: CU. IV. Bradenton: GCES. Fort Pierce: larva on water oak, Nov., DPI. Archbold Biological Station: Sept., YU. Fort Myers: April, AMNH. Food: walnut, Ins. Pest Surv. Bull. 10: 377.

3842 D. CONTRACTA Walker
List Lep. Ins. Br. Mus. 5: 1062. 1855.

Florida: det. Franclemont, CPK. This specimen was taken at either Monticello, Gainesville, or Sanford, but the label was lost. III. Mount Dora: larvae on *Quercus nigra*, Aug., DPI. IV. Bradenton: three, (Kelsheimer), det. Franclemont, GCES. Food: oak, chestnut, hickory, witch hazel.

HYPERAESCHRA Butler

3845 H. GEORGICA (Herrich-Schaeffer)
Pl. XIX, Fig. 28, ♂; Fig. 29, ♀.
Samml. aussereur Schmett. p. 66; Fig. 384.
1856.

Most of the Florida specimens are decidedly atypical. Franclemont finds no genitalic difference, but it may be that they represent a Florida subspecies. Florida: USNM. I. Escambia Co.: April, SMH. Warrington: VFG. Quincy: Oct., CPK. Monticello: April, CPK. II. Alachua Co.: March, DPI. High Springs: Aug., GWK. Gainesville: April, CPK. III. DeLand: March, AKW. Cassadaga: Feb.-May, Sept., SVF. Wee-

kiwachee Springs: March, April, CPK. Brooksville: June, AKW. Tampa: Aug., GWK. IV. Archbold Biological Station: March, PSU. Food: oak.

LOPHODONTA Packard

3854 L. ANGULOSA (Abbot & Smith)
Pl. XIX, Fig. 30, ♀.
Lep. Ins. Ga. 2: 165; Pl. 83. 1797.

Typical *angulosa*, which is what is found in Florida, is more brightly colored than northern specimens. I. Escambia Co.: July, SMH. Warrington: VFG. West Pensacola: July, VFG. Lanark Beach: Sept., CPK. Quincy: April-Oct., CPK. Monticello: April, UM. II. Gainesville: April, Aug., UFA; Sept., DPI. III. Cassadaga: March, July, Aug., Oct., SVF. Weekiwachee Springs: April, June, Aug., CPK. Orange Co.: June, Sept., DPI; Oct., WMD. Tarpon Springs: Feb., JLC. St. Petersburg: April, Dec., AKW. IV. Bradenton: Feb.-April, DPI; Oct., CPK. Oneco: March, JGF; May, July, Sept., Oct., CPK. Archbold Biological Station: Dec.-March, YU. Siesta Key: March, June, CPK. Food: oak; centipede grass, DPI.

EUNYSTALEA Grote

3855 E. INDIANA (Grote)
Pl. XIX, Fig. 32, ♂.
Papilio 4: 7. 1884.

III. Indian River: type, Grote, also Smith (1893, p. 231). Note that this was before the freeze. IV. Siesta Key: June 2, 1957, CPK. Fort Lauderdale: Feb. 11, Aug. 28, 1923, UM. Coral Gables: HFS. VI. Homestead: Feb., Dec., CPK. Florida City: May-July, OB, JGF. Paradise Key: March, Dyar (1921b, p. 142). VIII. Key Largo: March, SVF. Tavernier: Aug., CPK.

3856 E. EUTALANTA (Dyar)
Ins. Insc. Mens. 9: 142. 1921.

This is not rare in the Miami-Paradise Key region and a few have been taken at Fort Lauderdale, Tavernier, and on Windley Key. The dates include all months.

NADATA Walker

3857 N. GIBBOSA (Abbot & Smith)
Pl. XIX, Fig. 31, ♀.
Lep. Ins. Ga. 2: 163; Pl. 82. 1797.

I. Escambia Co.: March, SMH. Warrington: occasional, summer, VFG. Quincy: April, June, DPI; July, Aug., CPK. Tallahassee: March, JPK. Monticello: March, CPK; April, UM. II. Gainesville: Feb., DPI; April, UFA, DPI. III. Weekiwachee Springs: May, CPK. IV. Bradenton:

Feb., March, GCES. Oneco: May, Oct., CPK.
Food: oak.

NERICE Walker

3858 N. BIDENTATA Walker

List Lep. Ins. Br. Mus. 5: 1076. 1855.

II. Gainesville: March 28, 1939, UM. III. Cassadaga: Feb., April, SVF. Food: elm.

SYMMERISTA Neumoegen & Dyar

3859 S. ALBIFRONS (Abbot & Smith)

Pl. XIX, Fig. 33, ♀.

Lep. Ins. Ga. 2: 159; Pl. 80. 1797.

According to Franclemont this is the only species of the complex which is found in Florida. I. Escambia Co.: Feb., March, SMH. Warrington: fairly common, late summer, VFG. Quincy: July, CPK. Monticello: Feb., March, DPI. II. Gainesville: Jan., Feb., July, DPI; Sept., UFES. III. Cassadaga: Feb., SVF. Sanford: Feb., DPI. Orange Co.: March, Sept., DPI. Orlando: Feb., WMD. Tarpon Springs: Feb., JLC. IV. Bradenton: Feb., DPI; Aug., CPK. Oneco: June, July, Oct., CPK. Archbold Biological Station: Jan., Feb., Sept., YU; Nov., PSU. Siesta Key: Jan., Feb., CPK. Charlotte Harbor: (Slosson), Grsb. 83. Punta Gorda: Feb., AKW. Food: oak, UFES.

HYPARPAX Hübner

3865 H. AURORA (Abbot & Smith)

Lep. Ins. Ga. 2: 173; Pl. 87. 1797.

Neumoegen & Dyar (1894c, p. 186) gave the range as "N. Y. to Fla." I. Escambia Co.: April 28, 1962, a pale color form, May 5, 1962, race *venusta* Walker, July 28, Aug. 8, 1961, SMH. Myrtle Grove: Sept. 10, 1962, WJW. There is an ambiguous sentence in Packard (1895, p. 187) which deserves comment. It reads: "Mrs. Slosson, who tells me she has seen in Florida hundreds of the normal *H. aurora*, thinks this variety (meaning *perophoroides*) is distinct." Oddly enough on the previous page (186) in giving the geographical distribution of *aurora*, Packard does not list Florida, although Georgia is mentioned. Why, then, with this statement from Mrs. Slosson in front of him did he not credit *aurora* to Florida, and if Mrs. Slosson did see hundreds of normal *aurora*, why have only five specimens, some of them not normal, been recorded otherwise? The only reasonable answer would appear to be that Mrs. Slosson was confused, and yet from her collecting experience in New Hampshire, she must have been well acquainted with *aurora*.

3866 H. PEROPHOROIDES (Strecker)

Pl. XIX, Fig. 34, ♂.

Proc. Acad. Nat. Sci. Phila., p. 152. 1876.

Perophoroides is not an uncommon species and has been taken from Warrington to Florida City in every month. The color form *tyria* which was described by Slosson (1894a, p. 198) from Charlotte Harbor is a "deep Indian red." The form is a very striking insect and is apparently very rare. An occasional specimen has the ground color golden yellow. Franclemont says that *auristriata* Graef is not a form *perophoroides*, but the color form of another, western species.

RIFARGIA Walker

3873, 1 R. BICHORDA Hampson

Ann. Mag. Nat. Hist. 7(7): 251. 1901.

II. Gainesville: two Aug. 17 and 27, 1958, (Weems), DPI. VI. Homestead: May 23 and Aug. 8, 1958, Sept. 29 and 30, 1959, (Wolfenbarger), CPK. VIII. Key Largo: Jan. 29, 1959, SVF. Tavernier: Sept., Oct., Dec., (J. N. Todd), det. E. L. Todd, CPK.

ELLIDA Grote

3875 E. CANIPLAGA (Walker)

List Lep. Ins. Br. Mus. 9: 18. 1856.

I. Quincy: April 13, 1961, July 29, 1960, (Tappan), CPK. II. Gainesville: Jan. 1958, (Hetrick), CPK.

DASYLOPHIA Packard

3880 D. ANGUINA (Abbot & Smith)

Pl. XX, Fig. 1, ♀.

Lep. Ins. Ga. 2: 167; Pl. 84. 1797.

In the northern part of the state typical *anguina* is present, but at Oneco both this and form *puntagorda* Slosson show up, with only the latter found farther south. II. Jacksonville: April, HEW. Lake Geneva: March, HEW. III. Deland: March, AKW. Cassadaga: Feb., April, SVF. IV. Bradenton: Nov., CPK. Oneco: March, JGF; June, CPK. Archbold Biological Station: April, May, Aug., YU. Siesta Key: May, CPK. Punta Gorda: type of *puntagorda*, Slosson (1892, p. 139).

3881 D. THYATIROIDES (Walker)

Trans. Ent. Soc. London (3), 1: 79. 1862.

I. Torreya State Park: April 12, 1960, (Denmark), DPI. Instead of the basal patch being reddish, as is typical, it is close to the ground color. Quincy: Sept. 9 and 27, 1960, (Tappan), CPK. Both the latter are also off color.

LITODONTA Harvey

3883 L. HYDROMELI Harvey

Pl. XX, Fig. 3, ♂.
Can. Ent. 8: 5. 1876.

III. Cassadaga: April, Aug., SVF. IV. Archbold Biological Station: Nov., PSU. Charlotte Harbor: (Slosson), Grsb. 83. Punta Gorda: March, AKW. Bonita Springs: Nov., WRB. VI. South Florida: Forsyth sale list. Homestead: July, CPK. VIII. Tavernier: July, Sept.-Nov., DPI., CPK. Key West: larva on *Bumelia celastrina* [*angustifolia*], (Schwarz), Dyar (1904a, p. 3).

HETEROCAMPA Doubleday

[3887 *H. lineata* (Druce)]

Biol. Cent. Amer. Het. 1: 240. 1881.

This was listed from Florida by Dyar (1902, p. 253) with a "P." Nothing was turned up to warrant the removal of the question mark. Whether Dyar's questioned record was based on a specimen in the USNM, is impossible to say at this point. The specimen is labeled "Sarasota, Manatee Co." which places the date before 1921, but how much before is again impossible to say. One thing is certain, that the specimen looks very suspiciously like "dealer" material.

3888 H. ASTARTE Doubleday

Pl. V, Fig. 6, ♂; Fig. 15, ♀.
Entomologist, p. 57. 1841.

I. Warrington: from pupa, April, VFG. Apalachicola: as *picta* (Felder), (Chapman), Grsb. 83. II. Alachua Co.: April, DPI. O'Leno State Park: July, UFA. Gainesville: Feb., DPI; March, CPK. St. Johns Bluff: (Doubleday), BM. III. DeLand: March, AKW. Cassadaga: March, May, June, Aug., SVF. Crystal River: Feb., CPK. Weekiwachee Springs: March, CPK. Orlando: March, April, CNC; Sept., WMD. Titusville: March, May, AKW; May, CNC. Polk Co.: Feb., DPI. IV. Bradenton: GCES; Feb., March, Aug., Oct., CPK; March, AEB. Archbold Biological Station: Feb., March, Sept., YU; Oct., Nov., PSU. Port Sewall: Jan.-March, AMNH. Sarasota: form *perolivata* Packard, July, CPK. Fort Myers: as *picta*, March, AMNH. Miami: Jan., WRB. VI. Paradise Key: as *picta*, Dyar (1921b, p. 139). Food: oak.

[3887, 1 *H. distinguenda* (Walker)]

List Lep. Ins. Br. Mus. 9: 63. 1856.

IV. Sarasota: USNM. The label is similar to that on *lineata* above, and open to the same strong suspicions.

3890 H. VARIA Walker

Pl. V, Fig. 7, ♀; Fig. 16, ♂.
List Lep. Ins. Br. Mus. 5: 1023. 1855.

Florida: type of *georgiana* Dyar (1921b, pp. 139-140). I. Warrington: VFG. West Pensacola: July, VFG. Quincy: Aug., CPK. Monticello: June, CPK. II. Gainesville: May, DPI. III. Weekiwachee Springs: March, May, (May), AEB, CPK. IV. Bradenton: GCES. Oneco: March, JGF; May, June, Aug., (Dillman), CPK. Archbold Biological Station: Jan., Feb., PSU; April, YU. Siesta Key: March, CPK. Food: oak.

3891 H. OBLIQUA Packard

Proc. Ent. Soc. Phila. 3: 368. 1864.

I. Escambia Co.: July, SMH. Quincy: June, CPK. Monticello: June, DPI. III. Cassadaga: May, SVF. Enterprise: Grsb. 83. Weekiwachee Springs: May, June, Aug., (May), CPK. Winter Park: (Slosson), Grsb. 83. IV. Archbold Biological Station: March, Dec., YU. Sarasota: July, (King), CPK. Food: oak.

3893 H. CUBANA Grote

Pl. XX, Fig. 2, ♀.
Proc. Ent. Soc. Phila. 5: 252. 1865.

IV. Siesta Key: not rare, Nov.-April, CPK. Venice: Barnes & McDunnough (1918, p. 128). Miami: three Jan.-April, WRB. Matheson Hammock: Sept., DPI. VI. Homestead: Jan., DPI; March-May, July, Sept., CPK. Paradise Key: March, Blatchley ms.; (Schwarz & Barber), Dyar (1921b, p. 139). VII. Flamingo: Feb., April, DPI. VIII. Key Largo: March, SVF. Windley Key: Oct., DPI.

3899 H. SUBROTATA Harvey

Bull. Buffalo Soc. Nat. Sci. 1: 263. 1874.

I. Quincy: March 31, 1962, July 29, 1960, July 7, 1961, (Tappan), CPK. Very dark specimens. IV. Punta Gorda: (Slosson), Packard (1895, p. 253).

3902 H. UMBRATA Walker

Pl. XX, Fig. 4, ♂; Fig. 5, ♀.
List Lep. Ins. Br. Mus. 5: 1023. 1855.

I. Warrington: WJW. Quincy: March, April, July-Nov., CPK. Monticello: March, June, Nov., DPI; April, UM. II. O'Leno State Park: Oct., AB. Gainesville: Dec.-April, DPI; Sept., UFES; Oct., UM. Callahan: ab. *nigra* Chermock, Aug., GWK. Pablo Beach: Nov., SIM. Keystone Heights: March, HEW. III. Cassadaga: June, Aug., Sept., Dec., SVF. Crystal River: Feb., CPK. Weekiwachee Springs: May, CPK. Sanford: Feb., March, DPI. Orange Co.: DPI. Titusville: Feb., CNC. Plant City: Nov., DPI.

Tampa: Sept., WRB. St. Petersburg: Feb.-April, AKW. IV. Bradenton: Feb., March, GCES. Oneco: March, JGF; Oct., CPK. Archbold Biological Station: Nov.-March, PSU; Sept., Dec., YU. Port Sewall: Feb., AMNH. Sarasota: July, CPK. Charlotte Harbor: (Slosson), Grsb. 83. Dade Co.: June, HFS. VI. Florida City: March, July, OB. Food: oak.

3905 H. MANTEO Doubleday

Variable oak leaf caterpillar. Pl. XX, Fig. 8, ♂. Entomologist, p. 58. 1841.

I. Escambia Co.: May 6, 1962, SMH. A very heavily marked female. West Pensacola: Aug., VFG. Myrtle Grove: Sept., WJW. Quincy: one Sept., CPK. An off-color, dark specimen. Tallahassee: Packard (1895, p. 230). Monticello: June, UM. II. Gainesville: May, DPI; Oct., UM. Lake Geneva: March, HEW. III. Cassadaga: June, Aug., SVF. Some of these also show heavy markings. Orange Co.: July, DPI. Winter Park: Sept., AMNH. Orlando: Oct., WMD. IV. Oneco: June, CPK. Archbold Biological Station: Sept., YU. Food: oak and occasionally other trees.

3906 H. BIUNDATA Walker

Pl. XX, Fig. 6, ♂; Fig. 7, ♀. List Lep. Ins. Br. Mus. 5: 1025. 1855.

All Florida specimens, with the exception of those from Escambia County, are the reddish form mentioned by Packard (1895, p. 241). However, Franclemont is of the opinion that this may be a distinct race or species. I. Escambia Co.: March, April, SMH. Quincy: Sept., CPK. II. Gainesville: UFES; Feb., DPI. III. Cassadaga: Sept., SVF. Winter Park: (Slosson), Packard. IV. Oneco: March, JGF; April, May, Aug.-Oct., CPK. Archbold Biological Station: Feb., March, Aug., Sept., YU; Nov., Dec., PSU. Siesta Key: Jan., CPK. Food: maple and other trees.

3907 H. GUTTIVITTA (Walker)

Saddled prominent.

List Lep. Ins. Br. Mus. 5: 992. 1855.

Here again Franclemont thinks that a separate species or race may be involved. I. Escambia Co.: form *hugoi* Chermock, April, typical *guttivitta*, Aug., SMH. Warrington: WP. Quincy: April, CPK. II. Gainesville: Feb., CPK; Sept., UFES. St. Johns Bluff: March, April, (Doubleday), BM. III. Marion Co.: July, UM. St. Petersburg: April, AKW. IV. Bradenton: Feb., March, CPK. Oneco: March, JFG. Archbold Biological Station: Jan., YU; March, PSU. Siesta Key: June, CPK. Fort Myers: (McDunnough), AMNH. VI. Homestead: March, CPK.

Food: beech, apple, maple, and other trees; lychee, DPI.

3908 H. BILINEATA EXSANGUINIS Dyar

Pl. XX, Fig. 9, ♂.

Bull. Brooklyn Inst. Arts Sci. 1: 97. 1908.

The Florida specimens are all this form, with one exception, and that is intermediate between *bilineata* and *exsanguinis*. I. Escambia Co.: Oct., SMH. Quincy: Sept., CPK. II. Gainesville: March, UM; April, UFA. III. Cassadaga: Feb., March, July, SVF. Brooksville: June, AKW. Weekiwachee Springs: May, CPK. IV. Bradenton: Feb., March, Aug., CPK. Oneco: May, Oct., CPK. Siesta Key: May, CPK. Food: usually elm.

MISOGADA Walker

3909 M. UNICOLOR (Packard)

Proc. Ent. Soc. Phila. 3: 373. 1864.

I. Myrtle Grove: May 26, 1963, WJW.

3909, 1 M. PALLIDA Schaus

Trans. Amer. Ent. Soc. 30: 145. 1904.

There is a great deal of variation in *pallida*, and it is almost certain that the dark form is the same thing that was described from Cuba by Torre & Alayo (1959, p. 21) as *Disphragis zayasi*. Franclemont also believes that the species probably belongs under *Heterocampa*. VI. Dade Co.: May 31, 1951, CPK. Florida City: JGF; May 31, (Strohecker), CPK. Paradise Key: JGF; March 20, 1941, (Jones), CPK. VIII. Key Largo: two Jan. 30, 1959, SVF; Jan. 31, April 10, 1959, (Weems), DPI. Tavernier: Oct. 24, 1955, (J. N. Todd), CPK.

FENTONIA Butler

3910 F. MARTHESIA (Cramer)

Pl. XX, Figs. 10, 11, ♀.

Pap. Exot. 2: 3; Pl. 98, Fig. A. 1779.

These are decidedly atypical, but Franclemont has been unable to find any genitalic differences that would indicate another species is involved. I. Escambia Co.: March, SMH. Warrington: WP. Quincy: form *nigra* Chermock, Sept., CPK. Monticello: Feb., March, DPI. II. Old Town: March, CPK. Gainesville: Feb., DPI; April, UM. III. Cassadaga: April-July, SVF. Orlando: May, CNC; Nov., WMD. Indian River, opposite Micco: larva, (Jenks), Grsb. 84. Polk Co.: Feb., DPI. IV. Bradenton: Feb., March, GCES. Oneco: March, JGF. Archbold Biological Station: Jan., March, YU. Siesta Key: Feb., March, CPK. Biscayne Bay: (Slosson), Grsb. 84. VI. Dade Co.: May, Sept., HFS. Paradise Key: March, CPK. Food: oak, maple.

DICENTRIA Herrich-Schaeffer

3912 **D. LIGNICOLOR** (Walker)

Pl. XX, Fig. 13, ♀.

List Lep. Ins. Br. Mus. 5: 1101. 1855.

Lignicolor is much paler than northern specimens, especially the longitudinal streaks which are nearly washed out. I. Escambia Co.: Sept., SMH. Quincy: March, July, Aug., CPK. III. Weekiwachee Springs: Aug., (May), CPK. Orlando: Nov., WMD. IV. Archbold Biological Station: Feb., Nov., Dec., (Frost), PSU. Food: oak, beech, birch.

3919 **D. SEMIRUFESCENS** (Walker)

List Lep. Ins. Br. Mus. 32: 424. 1865.

IV. Biscayne Bay: (Slosson), Grsb. 84. Food: willow, birch.

3919, 1 [D.] SP.

This is the same thing as a specimen taken by Mather in Mississippi, and determined by Todd as probably new, either *Dicentria*, *Schizura*, or possibly a new genus. I. Escambia Co.: one each, April, May, 1962, SMH. Quincy: May 19, 1963, (Tappan), CPK.

SCHIZURA Doubleday

3920 **S. IPOMOEA** DoubledayPl. XX, Fig. 12, form *cinereofrons*, ♂.

Entomologist, p. 59. 1841.

Typical *ipomoeae* and form *cinereofrons* (Packard) are not uncommon, with the form *telifer* Grote very infrequent; some intergrades occur. I. Escambia Co.: April, May, SMH. West Pensacola: June, VFG. Quincy: July, Sept., CPK. Monticello: March, Aug., DPI. II. Gainesville: April, UM; Sept., UFES. Jacksonville: larva on rose, Feb., DPI. Ortega: Sept., SIM. III. Cassadaga: April, Aug., SVF. Weekiwachee Springs: March-June, AEB, CPK. Winter Park: June, Sept., AMNH. Orange Co.: Oct., WMD. IV. Bradenton: March, GCES; Aug., Sept., CPK. Oneco: March, JGF; May-Aug., Oct., CPK. Archbold Biological Station: July, AMNH; Feb., March, Aug., YU; June, AKW; Nov., PSU. Port Sewall: Jan.-March, AMNH. Siesta Key: Jan., Feb., March, June, CPK. VI. South Florida: Forsyth sale list. Homestead: July-Sept., CPK. Food: oak, maple, other trees.

3921 **S. CONCINNA** (Abbot & Smith)

Red-humped caterpillar.

Lep. Ins. Ga. 2: 169; Pl. 85. 1797.

I. Santa Rosa: larva on azalea, Sept., DPI. Monticello: larva on rose, May, DPI. II. Alachua

Co.: June, DPI. High Springs: larva on persimmon, May, DPI. Jacksonville: larva on rose, Aug., DPI; on *Camellia sasanqua*, Oct., DPI. III. Bartow: larva on red bay, Sept., DPI. Lakeland: larvae, May 6, adults emerged June 12-18, AMNH. IV. Fort Lauderdale: July, UM. VI. Paradise Key: reared adult, April, FMJ. Food: apple, walnut, and other trees.

3923 **S. BADIA** (Packard)

Pl. XX, Fig. 14, ♂.

Proc. Ent. Soc. Phila. 3: 361. 1864.

II. Gainesville: Feb. 22, 1955, (Morse), DPI. IV. Siesta Key: Feb. 19, 1955, CPK. Food: *Viburnum*.

3924 **S. UNICORNIS** (Abbot & Smith)

Pl. XX, Fig. 15, ♂; Fig. 16, ♀.

Lep. Ins. Ga. 2: 170; Pl. 86. 1797.

I. Escambia Co.: March, April, SMH. Warrington: March, VFG. Quincy: April, CPK. Monticello: Feb., Sept., DPI; June, UM. II. Gainesville: Feb., March, UM; Feb., April, Sept., DPI. Archer: larva on pecan, Sept., UFES. III. Cassadaga: March, SVF. Weekiwachee Springs: Aug., UM. Orange Co.: DPI; Oct., WMD. IV. Oneco: March, JGF; April, Dec., CPK. Archbold Biological Station: Dec.-Feb., PSU; Jan.-March, Sept., YU. Port Sewall: Jan., March, AMNH. Siesta Key: Feb., CPK. VI. Homestead: Feb., DPI; Nov., CPK. Florida City: Feb., AMNH. Paradise Key: April, FMJ. Food: various kinds of trees.

3926 **S. APICALIS** (Grote & Robinson)

Proc. Ent. Soc. Phila. 6: 15. 1866.

Florida: Dyar (1921a, p. 99). II. Gainesville: March, UM. III. Cassadaga: June, SVF. Weekiwachee Springs: April, May, CPK. IV. Oneco: one March, JGF. Archbold Biological Station: Jan., April, YU; March, PSU. Port Sewall: six Jan.-March, (Sanford), AMNH; one Feb., OB. Charlotte Harbor: (Slosson), Grsb. 84. Food: bayberry.

3927 **S. LEPTINOIDES** (Grote)

Pl. XX, Fig. 17, ♀.

Proc. Ent. Soc. Phila. 3: 323. 1864.

I. Escambia Co.: April 24, 1962, SMH. Monticello: June 5, 1930, (Walker), MCZ; June 22, 1956, (Phillips), CPK. II. Gainesville: July 18, 1956, (Denmark), CPK. III. Weekiwachee Springs: one March, (May), DPI. IV. Archbold Biological Station: Nov., PSU. Port Sewall: seven Jan.-March, (Sanford), AMNH. VIII. Key Largo: March 27, 1957, SVF. Food: oak, walnut.

[3928, 1 S.] SP.

I. Escambia Co.: Aug., 21, 1961, SMH; Sept. 4, 1962, (Hills), CPK. Todd places this as possibly *Schizura*, possibly *Misogada*, or possibly an unrecognized genus. There is nothing like it in U. S. National Museum collection.

CERURA Schrank

3929 C. SCITISCRIPTA Walker

Pl. XX, Fig. 18, ♂; Fig. 19, ♀.
List Lep. Ins. Br. Mus. 32: 408. 1865.

I. Quincy: Feb., CPK. II. Gainesville: May, July, DPI. Jacksonville: (Slosson), Grsb. 84. III. Cassadaga: two March, one Dec., SVF. Weekiwachee Springs: May, CPK. Orlando: March, WMD. Davidson had several larvae which he believed differed somewhat from those of *multiscripta* Riley, which Forbes (1948, p. 236) made a race of *scitiscrpta*. Indian River: AMNH. IV. Archbold Biological Station: one Aug., YU. Siesta Key: one Jan., CPK. Belle Glade: on oak tree, Oct. 25, 1955, EES. VI. Florida City: nine May, June, Oct., Nov., OB. Paradise Key: larvae not rare on willow, Feb.-May, FMJ; March, CPK. Food: poplar, wild cherry.

[3930 C. multiscripta Riley]

Trans. St. Louis Acad. Sci. 3: 241. 1875.

As noted above, Forbes makes this a subspecies of *scitiscrpta*, and one whose range is probably too northern to reach Florida. The following records, then, are likely to belong under typical *scitiscrpta*. II. Union Co.: larvae on *Salix caroliniana* [*longipes*], March 25, 1956, (Hetrick), UFA. III. Tavares: Oct. 26, 1940, (Norris), W. P. A. Card, with no other data. Georgiana: NYSM.

3931 C. CANDIDA Lintner

Ent. Contr. 4: 87. 1878.

VI. Paradise Key: April 10, 1930, (Englehardt), OB. This was reported by Lemmer (1932, p. 177).

3933 C. BOREALIS (Boisduval)

Pl. XX, Fig. 20, ♂; Fig. 21, ♀.
Icon. Règne Anim. Ins. 88; Fig. 5. 1829.

I. Warrington: WP. West Pensacola: April, VFG. Quincy: March, DPI; July, Aug., CPK. Tallahassee: March, det. Franclemont, JPK. II. Gainesville: March, April, UM. III. Cassadaga: April, SVF. Ormond: (Slosson), Grsb. 84. Orlando: June, WMD. Brooksville: June, AKW. Polk Co.: Feb., DPI. Food: wild cherry.

3935 C. CINEREA Walker

Pl. XX, Fig. 22, ♂.
List Lep. Ins. Br. Mus. 32: 407. 1865.

Probably all Florida specimens of *cinerea* are a form close to *placida* Dyar. Florida: form *placida*, Seitz (1913, p. 948), (Slosson), Grsb. 84. I. Warrington: WP. Quincy: June, Aug., CPK. II. Gainesville: May, UM. IV. Bradenton: Feb., AKW. Oneco: March, JGF. Sarasota: May, CPK. VI. Homestead: Feb., May, CPK. Florida City: March, JGF. Food: willow, poplar.

GLUPHISIA Boisduval

3939 G. SEPTENTRIONALIS Walker

List Lep. Ins. Br. Mus. 5: 1038. 1855.

I. West Pensacola: July, VFG. Quincy: two Sept. 13, 1960, (Tappan), DPI.

Family LIPARIDAE

HEMEROCAMPA Dyar

The separation of the three species is sufficiently difficult so that some of the determinations may be unreliable.

3948 H. LEUCOSTIGMA (Abbot & Smith)

White-marked tussock moth.
Lep. Ins. Ga. 2; Pl. 79. 1797.

Florida: larva on live oak, Packard (1890a, p. 163); H. T. Fernald (1926, p. 263). I. Gulf Co.: April, AKW. Quincy: Oct., (Tappan), CPK. II. Gainesville: larvae on live oak, (Hetrick), UFA. Jacksonville: Felt (1898, p. 163); Howard (1899, p. 12). St. Augustine: larvae on live oak and redbud, (Hetrick), UFA. Food: apple and shade trees; *Pyracantha coccinea*, *Gordonia lasianthus*, *Mimosa*, all DPI.

3949 H. DETRITA (Guérin-Ménéville)

Icon. Règne Anim. Ins. p. 544. 1844.

Grossbeck (1917, p. 85) said this was a common species in some parts of Florida. I. Escambia Co.: May, SMH. West Pensacola: June, VFG. Quincy: Oct., CPK. II. Gainesville: April, CPK; Nov., DPI. Anastasia Island: Grsb. 85. III. Enterprise: type of *inornata*, May, Beutenmuller (1890, p. 300). Tampa: larvae abundant on oak shade trees (U. S. Dept. Agri. Bull. 54: 80). IV. Bradenton: April, Oct., CPK. Oneco: larvae on mango and avocado, April, det. Merrill with "?," DPI; May, June, CPK. Siesta Key: Dec., CPK. Fort Myers: April, (McDunnough), AMNH. Palm Beach: March, OB. Miami: May, OB. V. Everglades: April, AMNH. Allen River to Deep Lake: larvae, April, AMNH, SIM. VI. Homestead: June-Aug., CPK. Florida City:

May, OB. Paradise Key: Dec., det. with "?," AMNH.

3950 H. PLAGIATA (Walker)

List Lep. Ins. Br. Mus. 4: 799. 1855.

This is the southern race. I. Warrington: June, VFG. Quincy: Nov., (Tappan), CPK. IV. Oneco: common, March, April, JGF; April, CPK. Archbold Biological Station: Jan., YU. Franclemont has reared a specimen on oak.

OLENE Hübner

A genus which is in such a state of confusion that practically none of the determinations can be considered final. There are some Florida specimens which cannot be placed even tentatively.

[3951 *O. achatina* (Abbot & Smith)]

Lep. Ins. Ga. 2: 153; Pl. 77. 1797.

III. Rockledge: NYSM. Barnes & McDunnough (1913b, pp. 53-54), cast doubt as to the presence of this in Florida.

3952 O. BASIFLAVA MERIDIONALIS

Barnes & McDunnough

Pl. XXI, Fig. 1, ♂.

Contrib. 2: 58. 1913.

Basiflava occurs in Florida in this form only, and is one of the few where the determinations are reasonably safe, even though the specimen illustrated may be open to question. Florida: Aug., AMNH. I. Tallahassee: April, AMNH. II. Alachua Co.: May, DPI. Gainesville: Feb., UM; April, CPK; April, May, UFES; May, DPI. Island Grove: CNC; May, AKW; May, July, Aug., Grsb. 85. Hogarth Landing: Barnes & McDunnough. III. Cassadaga: Oct., SVF. Winter Park: June, AMNH. Orlando: April, June, CNC. Titusville: May, June, CNC. Lakeland: May, June, (McDunnough), AMNH. IV. Oneco: Oct., CPK. Archbold Biological Station: Jan., Feb., det. Franclemont, PSU. Port Sewall: Jan-April, AMNH. Longboat Key: Jan., CPK. Siesta Key: Feb., April, Nov., Dec., CPK. Punta Gorda: May, Dec., AKW. Bonita Springs: July, Dec., OB. Food: oak.

3956 O. LEUCOPHAEA (Abbot & Smith)

Pl. XXI, Fig. 2, ♀.

Lep. Ins. Ga. 2: 155; Pl. 78. 1797.

I. Warrington: occasional, summer, VFG. II. Gainesville: Jan., UFA; June, UM. III. Cassadaga: Feb., SVF. IV. Oneco: reared from larva on live oak, April, JGF; April-July, CPK. Siesta Key: Dec.-May, CPK. Miami: Jan., WRB.

3958 O. ATOMARIA PARALLELA

(Grote & Robinson)

Proc. Ent. Soc. Phila. 6: 5. 1866.

Barnes & McDunnough (1913b, p. 70) listed a specimen from Tallahassee, but noted that the locality required confirmation. However, Franclemont has determined two specimens from Weekiwachee Springs, May 15, 1955, (May), CPK, as unquestionably *parallela*. There are others which match, as well as one can match *Olene*, the series of *atomaria* and *parallela* in U. S. National Museum collection. III. Weekiwachee Springs: April, May, CPK. IV. Oneco: May, CPK. Archbold Biological Station: Dec., YU. Siesta Key: May, CPK. Food: oak, elm.

[3959 *O. cinnamomea* (Grote & Robinson)]

Proc. Ent. Soc. Phila. 6: 6. 1866.

Dyar (1911a, p. 17) recorded it from Coconut Grove, but Barnes & McDunnough, (1913b, p. 71) believed this was possibly an error. The record needs confirmation. Food: wild cherry.

3960 O. MANTO (Strecker)

Lep. Rhop. Het. Suppl. 3: 29. 1900.

I. Escambia Co.: March, VFG. Ensley: April, VFG. Quincy: Oct., Nov., CPK. II. Alachua Co.: May, DPI. O'Leno: May, CPK. Fernandina: Sept., OB. Hastings: May, Barnes & McDunnough (1913b, p. 72). III. Cassadaga: Jan., Feb., SVF. Weekiwachee Springs: March, April, CPK. Fort Meade: Feb., Barnes & McDunnough. IV. Archbold Biological Station: Jan., PSU; Jan., Dec., YU. South Miami: March, OB. Buchholz's determination of this species does not agree with that currently accepted in the USNM collection. Food: pine.

SUPERFAMILY BOMBYCOIDEA

Family LASIOCAMPIDAE

ARTACE Walker

3977 A. CRIBRARIA (Ljung)

Pl. XXI, Fig. 3, ♂.

Vet. Acad. Handl., p. 348. 1825.

Cribraria is a moderately common species found throughout the state. It has been taken in every month. Food: oak; laurel cherry, DPI; rose, DPI.

3977, 1 A. ALBICANS Walker

List Lep. Ins. Br. Mus. 6: 1492. 1855.

III. Tarpon Springs: Feb., 1949, JLC. Inasmuch as the determination of this, as well as of *cribraria*, was made for Campbell by Tams at the British Museum, the record would appear to be valid, though Forbes says he knows of no record for an *Artace* with pink palpi being taken in the United States, and has always believed that Walker's locality record ("Georgia?") was an error. Since the two species are very similar in pattern, all *Artace* specimens should be carefully examined for pink palpi.

TOLYPE Hübner

The more material one sees in this genus, the more apparent it is that a thorough study of Florida specimens, with rearings and genitalic dissections, is needed in order to find out how many species are actually present. The three below seem certain, but many specimens do not readily fit into them. Among specimens from the northern part of the state are some which strongly suggest *laricis* Fitch, and in addition to what we are calling *minta* Dyar and *Tolype* sp., it is possible to sort out what appears to be a third species, all three exhibiting fairly uniformly different characteristics when arranged in a series, but the characters are still too close to venture claiming definitely the third species.

3978 T. VELLEDA (Stoll)

Pl. XXI, Fig. 7, ♀.

Pap. Exot. Suppl.; Pl. 52, Fig. 4. 1791.

I. Pensacola: March, VFG. Myrtle Grove: Oct., WJW. Quincy: Oct. 19, 1960, four Oct. 23-29, 1962, (Tappan), CPK. II. Gainesville: reared from pupae, two Nov. 1953, (Hetrick), det. Franclemont, UFA. Food: apple, poplar and other trees.

3979 T. MINTA Dyar

Pl. V, Fig. 29, ♂.

Bull. Brooklyn Inst. Arts Sci. 1: 195. 1908.

Minta has a white ground instead of gray; which is characteristic of all other Florida species. I. Escambia Co.: Dec. 6, 1961, SMH. Holmes Co.: Oct. 5, 1954, (Dickenson), DPI. Jefferson Co.: three Oct. 1-18, 1932, UM. III. Cassadaga: Sept. 17, 1950, SVF. Weekiwachee Springs: April 8, 1954, (May), CPK. There are others in May's collection. Tampa: two Sept. 21-Oct. 4, 1944, WRB. IV. The Archbold Biological Station records given by Frost (1963, p. 27, et seq.) are in error and belong under the complex below.

3979, 1 T. SP.

This complex which may include two, if not three species, is quite common from Quincy to Florida City. It occurs in every month. Cocoons of this or *minta* have been reported on pine trees, Grossbeck (1917, p. 86) and Dozier (1920, p. 378). The latter found them on *Pinus australis* [*palustris*].

MALACOSOMA Hübner

3980 M. AMERICANA (Fabricius)

Eastern tent caterpillar. Pl. XXI, Fig. 4, ♂.

Ent. Syst. 3: 433. 1793.

Americana is fairly common from Gainesville and Orlando north, and west to Quincy, but there are no records south or west of these localities. Food: apple and other fruit trees, oak; pecans, Univ. of Fla. Pecan Investigations Laboratory file; wild plum, Ins. Pest Surv. Bull. 19: 9; wild crab-apple, *ibid.* 21: 44; *Prunus serotina*, Coop. Ins. Pest Surv. 8: 28.

3997 M. DISSTRIA Hübner

Forest tent caterpillar. Pl. XXI, Fig. 5, ♂.

Verz. bek. Schmett., p. 122. 1822.

I. Warrington: common, July, Aug., VFG. Quincy: April-June, CPK. II. Gainesville: April, UFA; May, DPI; May, June, UM. III. Holder: larva on plum, April, DPI. Orange Co.: May, DPI; very abundant at light, Ins. Pest Surv. Bull. 11: 299. Orlando: May, OB, DPI; abundant, May, Ins. Pest Surv. Bull. 11: 672. IV. Siesta Key: Very infrequent, April, CPK.

HETEROPACHA Harvey

3998 H. RILEYANA Harvey

Bull. Buffalo Soc. Nat. Sci. 1: 262. 1874.

Florida: Forbes (1923, p. 683).

EPICNAPTERA Rambur

3999 E. AMERICANA Harris

Lappet moth. Pl. XXI, Fig. 6, ♂.

Rept. Ins. Mass., p. 273. 1841.

I. Escambia Co.: Feb., SMH. Quincy: Jan. 17, 1957, March 8, 1961, (Tappan), DPI. Monticello: Feb., March, (Phillips), CPK, DPI. II. Gainesville: Jan. 4, 1956, (Denmark), March 2, 1960, DPI, Feb. 17, 1955, (Perry), CPK. These are close to the form *ferruginea* Packard, although one specimen from Escambia County looks like *californica* Packard. Food: apple, oak, maple, and other trees.

Family ZANOLIDAE

APATELODES Packard

4001 A. TORREFACTA FLORIDANA

Henry Edwards

Pl. XXI, Fig. 8, ♂.

Ent. Amer. 2: 13. 1886.

Torrefacta is probably found primarily in this form. Florida: (French), Packard, (1895, p. 103); typical *torrefacta*, (Edwards), Packard. I. Escambia Co.: March, Aug., SMH. Warrington: fairly common, VFG, WP. Quincy: July, Aug., CPK. Monticello: March, DPI; July, UM. II. Hamilton Co.: May, UFA. Gainesville: Aug., DPI. III. Indian River: AMNH. IV. Bradenton: one, (Kelsheimer), GCES; one March, CPK. Oneco: two May, June, (Dillman), CPK. Archbold Biological Station: typical *torrefacta*, April 11, 1958, (Pease), YU. Food: many kinds of trees and shrubs.

4003 A. ANGELICA (Grote)

Pl. XXI, Fig. 9, ♂.

Proc. Ent. Soc. Phila. 3: 322. 1864.

Some specimens with smoother outer margin tend toward the Texan form *seraphica* Dyar. Florida: (French), Packard (1895, p. 104). I. Escambia Co.: March, SMH. III. Enterprise: (Thaxter), Packard. Cassadaga: March, SVF. Weekiwachee Springs: March-June, (May), det. Todd, CPK. Indian River: type of *indistincta* Henry Edwards (1886, p. 13). III. Egmont Key: May, UM. IV. Oneco: March, JGF; *indistincta*, May, det. Todd, CPK. Food: ash, lilac.

SUPERFAMILY
DREPANOIDEA

Family THYATIRIDAE

EUTHYATIRA Smith

4011 E. CANDIDA (Smith)

Ent. Amer. 6: 179. 1890.

Candida was described from Florida, (Slosson), Smith. Rindge (1961, p. 10) placed this in the geometrid genus *Stenocharis* Crossbeck. However, as Franclemont believes it is a synonym of *Ceratomyx satanaria* Guenée, q.v., further study may be needed to clarify the situation.

Family DREPANIDAE

EUDEILINEA Packard

4018 E. LUTEIFERA Dyar

Pl. V, Fig. 30, ♂.

Ins. Insc. Mens. 5: 68. 1917.

I. Escambia Co.: March, SMH. Warrington: VFG. IV. Oneco: June 6, 1953, (Dillman), det. Todd, CPK. Siesta Key: May 4, 1960, CPK. Dade Co.: May 20, 1958, (Denmark), DPI.

ORETA Walker

4019 O. ROSEA (Walker)

Pl. XXI, Fig. 10, ♀.

List Lep. Ins. Br. Mus. 5: 1164. 1855.

Florida: form *irrorata* (Packard), Dyar (1905, p. 128), CU, a specimen which Forbes thinks a good race. I. Escambia Co.: April, Aug., SMH. Warrington: *irrorata*, occasional, typical *rosea* rare, summer, VFG, WP. Quincy: July 13 and 19, two Sept. 21, 1960, including one *irrorata*, (Tappan), CPK. II. Gainesville: June 6, 1936, (Tissot), UFES; Aug. 17, 1949, (Weems), DPI. III. Orlando: *irrorata*, Aug. 1, 1940, WRB. IV. Sarasota: form *marginata* (Walker), Jan. 21, 1953, CPK. Myakka State Park: *irrorata*, Jan. 31, 1956, CPK. Food: *Viburnum*.

[*O. adona* Strecker]

Lep. Rhop. Het. Suppl. 3: 30. 1900.

This was erroneously described from Florida. The species is oriental. The record appears in Dyar (1902, p. 264) and also Grsb. 86.

SUPERFAMILY
GEOMETROIDEA

Family GEOMETRIDAE

Dr. Frederick H. Rindge has generously made many determinations for me in this family and has assisted in straightening out problems which have arisen because of the long needed revision of practically the entire family.

Subfamily OENOCHROMINAE

ALSOPHILA Hübner

4026 A. POMETARIA (Harris)

Pl. XXI, Fig. 11, ♂.
Rept. Ins. Mass., p. 333. 1841.

I. Escambia Co.: one Feb. 1961, abundant, Jan., Feb. 1962, SMH.

AMETRIS Hübner

4027 A. NITOCRIS (Cramer)

Pl. XXI, Fig. 17, ♂.
Pap. Exot. 3: 148. 1780.

This is another example of those species which are found now only in Dade County or the Keys, possibly not even in the latter since there are no records from there, but which before the 1899 freeze were taken farther north on the peninsula. III. Indian River: AMNH. IV. Lake Worth: (Slosson), Dyar (1901a, p. 458). Fort Lauderdale: July, Aug., Nov., UM. V. Chokoloskee: USNM. In Dade County it has been taken in every month except October and December. Jones observed that it was often abundant on the hammock paths of Paradise Key at night. Food: *Coccoloba diversifolia* [floridana], Dyar (1900b, p. 70).

ALMODES Guenée

4028 A. TERRARIA Guenée

Spec. Gén. 9: 390. 1857.

Florida: type of *rivularia* Grote (1883b, p. 79). IV. Dade Co.: Aug., AMNH. Miami: Sept., (Davis), SIM. Biscayne Bay: (Slosson), Grsb. 86. VI. Florida City: May, OB, WRB, CPK, HEW. The Coconut Grove record (Grsb. 86) was the type of *subaustralis* Hulst (1898c, p. 194) which Forbes says is actually an *Epimecis*, q. v. VIII. Key Largo: July 20, 1962, (Weems), DPI.

Subfamily GEOMETRINAE

RACHEOSPILA Guenée

A difficult genus, but most of the determinations have been made by Rindge or some other specialist.

4029 R. LIXARIA Guenée

Pl. XXI, Fig. 12, ♂.
Spec. Gen. 9: 374. 1857.

As a help in separating this, Franclemont has pointed out that one segment of the abdomen is green without a blister. Barnes & McDunnough (1917a, pp. 217-218) have discussed certain errors in Grossbeck's determinations of this species as well as of *extremaria* Walker. Not common, but taken in many places from Escambia County and Macclenny to Florida City, the dates covering every month except October.

4030 R. CATACHLOA (Hulst)

Can. Ent. 30: 160. 1898.

Franclemont notes that all segments have blisters. II. Keystone Heights, March, AMNH. III. Cassadaga: May, SVF. Weekiwachee Springs: Aug., AMNH, CPK. Belleair: Grsb. 87. IV. Oneco: March, April, JGF; May, CPK. Archbold Biological Station: Jan., March, April, Dec., YU; June, July, Nov., Dec., AMNH. Port Sewall: March, AMNH. Sarasota: June, CPK. Siesta Key: Feb., May, CPK. Charlotte Harbor: type, Hulst. Fort Myers: March, April, SIM; May, USNM. Bonita Springs: Jan., AMNH.

4032 R. ABDOMINARIA Barnes &

McDunnough

Contrib. 3: 218. 1917.

The abdomen has a yellowish white dorsal stripe. I. Escambia Co.: June, SMH. III. Weekiwachee Springs: April, May, CPK. Leesburg: Sept., (Englehardt), Grsb. 87. Belleair: Grsb. 86. Stempert: type, Aug., Barnes & McDunnough. IV. Oneco: June, CPK. Archbold Biological Station: Jan., YU. Port Sewall: Jan., March, AMNH. Siesta Key: May, CPK. Fort Myers: types, April, USNM. Biscayne Bay: (Slosson), Grsb. 86.

4033 R. ASSOCIARIA Barnes & McDunnough

Contrib. 3: 219. 1917.

Barnes & McDunnough noted the "much longer palpi in female separate this species from the preceding with which it has great similarity . . ." IV. Fort Myers: type, one female, April 16-23, USNM.

4034 R. EXTREMARIA Walker

List Lep. Ins. Br. Mus. 22: 584. 1861.

Barnes & McDunnough stated that the "pinkish fringes without any red marginal line seem to be characteristic" The Grossbeck records (1917, p. 87) belong under *abdominaria* as pointed out by Barnes & McDunnough (1917a, p. 218). III. Weekiwachee Springs: Feb., Aug., (May), det. Rindge, AMNH, CPK. IV. Oneco: March, April, JGF. Archbold Biological Station: Feb.-April, YU. Port Sewall: Feb., March, Nov., Dec., AMNH.

4034, 1 R. [INTEGRA (Warren)]

Nov. Zool. 4: 425. 1897.

II. Gainesville: Feb. 22, 1955, (Morse), det. Todd as "either this species or very close to it," CPK. The fringes of this specimen are strongly checked.

[4036 R. KNOBELARIA Cassino;

4307 R. TEXANA (Hulst)]

Pl. XXI, Figs. 13, 15, ♀.

Lepidopterist 4: 66. 1927. Can. Ent. 30: 160. 1898.

These have been determined by Rindge as possibly *knobelaria*, but unfortunately the types of this could not be found in the Museum of Comparative Zoology collection. However, the specimen from Warrington matched Cassino specimens in that collection under *texana*. Until the types of *knobelaria* are located, the status of the Florida specimens will have to remain uncertain, although Rindge determines these as agreeing with what he is tentatively placing under *knobelaria*. I. Escambia Co.: one Feb. 1961, two Feb. 19, 1962, Dec. 9, 1961, SMH. Warrington: one Feb. 1961, VFG. Quincy: Dec. 21, 1962, (Tappan), CPK. IV. Siesta Key: Jan. 16, 1961, AMNH.

[4039 R. rubrolinearia (Packard)]

Rept. Peabody Acad. Sci. 5: 74. 1873.

Barnes & McDunnough (1917a, p. 218) cast considerable doubt on the presence of this species in Florida. All reports of *rubrolinearia* which were received for the current list, proved to be for *lixaria* when they were checked. Food: bayberry. It has also been reared on oak.

4042 R. GERULARIA (Hübner)

Pl. V, Fig. 31, ♀.

Verz. bek. Schmett., p. 284. 1816.

I. Warrington: WP. *Gerularia* is a relatively common species from Weekiwachee Springs and Port Sewall south, taken in every month. In the typical form, the cell spots are points; in the commoner form *marginiplaga* Walker, they are enlarged. Food: mango, lychee, DPI.

4043 R. HERBARIA HULSTIANA (Dyar)

Pl. V, Fig. 32, ♀.

Proc. Ent. Soc. Wash. 4: 457. 1901.

Herbaria is found in Florida in the form *hulstiana* only. III. Lake Lucy: Jan., AMNH. IV. Port Sewall: Nov.-Jan., AMNH. Siesta Key: Jan.-June, Nov., AMNH, CPK. Punta Gorda: May, AKW. Lake Worth: larva on flower head of *Lantana camara*, Dyar (1901a, p. 457). However, there is some question as to whether the record refers to this or the following species, as Dyar lists it under *louisa* Hulst, now considered a synonym of *cupedinaria*, but he adds: "It may be called var. *hulstiana* (or bon. sp.?)". Delray Beach: April, CPK. Dade Co.: March, AMNH. Biscayne Bay: (Slosson), Grsb. 87. V. Marco: April, Grsb. 87. Everglades: April, AMNH. VI. Homestead: March-May, Oct., Nov., CPK. Florida City: April, WRB; May, OB. Paradise Key: March, FMJ. VIII. Key Largo: March, AMNH; Sept.-Nov., DPI. Big Pine Key: March, AMNH.

4044 R. CUPEDINARIA Grote

Pl. V, Fig. 33, ♂.

Can. Ent. 12: 218. 1880.

III. Enterprise: May, Grote (1880, p. 218). Casadaga: Oct., SVF. St. Petersburg: OB. IV. Oneco: March, April, JGF; April, AKW. Port Sewall: Feb., April, AMNH. Siesta Key: Dec.-May, CPK. Bonita Springs: Jan., OB. Dade Co.: April, June, July, Oct., AMNH. Biscayne Bay: (Slosson), Grsb. 87. Coconut Grove: type of *louisa* Hulst, AMNH. V. Everglades: April, (McDunnough), USNM. VI. Homestead: May, ANSP, but see the next species; March, July, Sept., Oct., CPK. Florida City: March, April, WRB; March-May, Oct., OB. Paradise Key: March, FMJ, AKW. VIII. Key Largo: Sept.-Nov., DPI, CPK. Dry Tortugas: June, AMNH.

[4045, 1 R. atrapes Druce]

Biol. Cent. Amer. Het. 2: 91. 1897.

Haimbach (1916, p. 143) "recorded *Racheospila atripes* [sic] Druce from Homestead, May 14, (1915), collected by Dr. Castle." This specimen is in the Academy of Natural Science collection, and Mr. H. J. Grant, Jr., Asst. Curator, kindly examined it for me. He writes: "detn. label reads on obverse '*R. atrapes*,' and on reverse '*R. cupedinaria-atrapes* is So. Amer., det. F. Lemmer.'" The Buchholz collection has a specimen labeled "Ulysses Id.," presumably meant to be Useppa Island, which may belong here or under the next species. In any event it does not belong to any of the usually recognized Florida species.

4045, 2 R. TENUIMARGO Warren

Nov. Zool. 12: 319. 1905.

VI. Florida City: two, (Forsyth), in San Francisco Academy of Science collection. These were obtained from Mrs. Forsyth by the Rev. Edward Guedet, who later gave them to the Academy. They were reported by him (1939, p. 29). Dr. Guedet informs me that the determination of these was made at the U. S. National Museum by comparison with named material and that Schaus agreed with the determination. The species is very close to *cupedinaria*. Again, Buchholz had an odd specimen from Florida City, October 12, 1938, which may fit in here. It would seem, therefore, that there is an opportunity for someone to amass material in this complex and find out just what we do have in Florida, as the evidence strongly suggests that we have more than one species.

[4045, 3 *R. expulsata atrapoides* Prout]
In Seitz, *Macrolep.* 8: 39. 1931.

Prout said this: "seems to be a constant local race in Central America and perhaps Florida." While not acceptable for the list on the basis of a "perhaps," it is at least something to be borne in mind.

NEMORIA Hübner

[4048 *N. mimosaria* (Guenée)]
Spec. Gén. 9: 377. 1857.

Florida: Prout (Seitz, 1931, p. 22). However, Forbes (1948, p. 113) limits the southern range to New Jersey. The Division of Plant Industry has a record of adults which emerged August 13, 1933, from ornamentals at Avon Park, but as they are no longer in existence, the record cannot be verified and must be considered highly doubtful. Food: oak, alder, hemlock, and fir.

SYNCHLORA Guenée

4070 *S. AERATA* (Fabricius)
Ent. Syst. Suppl. 1: 456. 1798.

A number of records for this have turned out to be *denticularia* below, but there are a few valid records. I. Escambia Co.: March, SMH. III. Cassadaga: April 17, 1953, SVF. IV. Punta Gorda: May 2, det. Rindge, AKW; June 6, AMNH. Bonita Springs: March 8, 1939, (Blaicher), OB. Grossbeck (1917, p. 87) listed two specimens from Fort Myers. The one reported in the American Museum of Natural History cannot be located under this name, nor any other. The specimen in the Staten Island Museum has not been examined. Forbes (1941, p. 147) recorded a specimen from the Dry Tortugas. On re-examination he reports that it is *denticularia*. Food: Compositae.

4071 *S. DENTICULARIA* (Walker)

Pl. V, Fig. 34, ♀.
List Lep. Ins. Br. Mus. 22: 536. 1861.

Denticularia is a common species from Warrington and Gainesville south to the Dry Tortugas, and collected in every month. IV. Bradenton: Feb., June-Dec. VI. Homestead: Feb.-Nov., small peaks in May and July. Food: chrysanthemum, DPI, CPK; blackberry, (Bratley), UFES. The larva was described by Dyar (1894b, p. 62).

4072 *S. FRONDARIA AVIDARIA* Pearsall

Bull. Brooklyn Ent. Soc. 12: 34. 1917.
Florida: Pearsall. Prout (Seitz, 1931, p. 41). As the Florida record was included in the original description, it is a species to be looked for.

CHETEOSCELIS Prout

[4079 *C. bistriaria* (Packard)]
Mono. Geom. Moths p. 378. 1876.

Larvae found on *Thysanella robusta* at Lake Hamilton, Dec. 17, 1948, were determined as this by the Division of Plant Industry. However, as the species is found only in the West and as Hulst (1888, p. 193) gives the food plant as *Solidago*, there is undoubtedly an error in the determination.

PHRUDOCENTRA Warren

4081 *P. CENTRIFRUGARIA* (Herrich-Schaeffer)

Pl. XXI, Fig. 16, ♂.
Corresp. Blatt. Regensb. 24: 182. 1870.

Centrifrugaria is a highly variable species to which a number of names have been given. Practically all the males from Florida which I have seen are the plain green form; whereas the females usually have spots—often large, sometimes round, sometimes an irregular blotch—all of which may be white, red, or white ringed with red. II. Gainesville: Feb., Nov., DPI. St. Johns River: type of *hollandaria* (Hulst) (1886b, p. 122). III. Weekiwachee Springs: May, CPK. Indian River: AMNH. IV. Bradenton: March, May, CPK. Oneco: March, April, JGF; April, May, July, Aug., Oct., Nov., CPK. Archbold Biological Station: March, April, Sept., YU; April, CU. Port Sewall: March, AMNH. Sarasota: July, DPI. Siesta Key: March-May, CPK. Charlotte Harbor: types of *jaspidaria* (Hulst) and *viridipurpurea* (Hulst), AMNH. Punta Gorda: Feb., April, Dec., AKW. Fort Myers: (Mattes), Grsb. 87. Lake Worth: (Hulst), Grsb. 87. Dade Co.: March, May-July, Oct., AMNH. V. Marco: April, AMNH. Everglades: April, USNM.

VI. Homestead: May, July-Sept., CPK. Florida City: Jan., April-July, Oct., OB; May, July, WRB. Paradise Key: April, FMJ. VIII. Tavernier: Sept., Oct., DPI, AMNH, CPK.

DICHORDA Warren

4082 D. IRIDARIA LATIPENNIS (Hulst)

Pl. XXI, Fig. 18, ♂.
Can. Ent. 30: 217. 1898.

The Florida specimens are sufficiently distinct to warrant the racial name. Rindge has made genitalic slides and finds, however, that it is no more than a subspecies. *Latipennis* was described by Hulst and also listed by Dyar (1902, p. 335) under the genus *Slossonia* in the subfamily Ennominae. I. Escambia Co.: close to typical *iridaria*, April, SMH. West Pensacola: July, VFG. Florida Caverns State Park: April, DPI. Tallahassee: AMNH. Monticello: Aug., DPI. II. Alachua Co.: Sept., DPI. Gainesville: March, UM. III. Orlando: March, OB; April, WMD. Georgiana: NYSM. IV. Oneco: April, JGF; May-July, Oct., CPK. Archbold Biological Station: Feb., PSU; Feb., Nov., Dec., YU. Port Sewall: Jan., March, AMNH. Siesta Key: Feb.-April, June, CPK. Charlotte Harbor: Grsb. 88. Dade Co.: Jan., July, AMNH. Coconut Grove: type of *latipennis*, (Slosson), Hulst. VI. Homestead: May, July, Oct., CPK. Florida City: May, July, Sept., OB. Food: sumac.

CHLORISSA Stephens

4087 C. PISTASCIARIA (Guenée);

4088 C. SUBCROCEATA (Walker)

Spec. Gén. 9: 348. 1857; List Lep. Ins. Br. Mus. 26: 1557. 1862.

These are currently considered to be no more than color forms of the same species, the one being green, the other orange-yellow. Florida: (Slosson), Grsb. 88; "Whitfield (Strecker)," Grsb. 88. I strongly suspect that this refers to Wittfeld, the collector, as I find no such locality as Whitfield as of Strecker's era. I. Tallahassee: Jan. 4, det. Rindge with "?," JPK. In view of the query involved in this determination, there may be some question as to the others and perhaps we should leave the record for the species in the tentative category. However, a recent communication from Wyatt states that Strecker's type of *auranticolorata* is labeled "Fla. 1896," although the date in the description is given as 1899. Also, in the Chicago Museum of Natural History is the Whitfield specimen, two given to Wyatt by Charles Krueger taken by the latter at Miami, February 28, 1929, and specimens reared by Seifert in 1904, from Florida material

probably picked up in the fall of 1903. These were also given to Wyatt. Food: oak.

MESOTHEA Warren

[4089 *M. incertata* (Walker)]

List Lep. Ins. Br. Mus. 26: 1557. 1862.

Forbes (1948, p. 116) said: "two specimens seen labelled Biscayne Bay, Florida (Slosson) possibly by confusion with *Franconia*, New Hampshire."

CHLOROCHLAMYS Hulst

4093, 1 C. PAULARIA (Moeschler)

Pl. XXI, Fig. 20, ♂.

Abhandl. Senck. Naturf. 14: 68. 1886.

Paularia is apparently well established and quite common. It was originally assigned to the genus *Chloropteryx* but Sperry placed it here. I do not know that he ever published this point. III. Weekiwachee Springs: Aug., CPK. St. Petersburg: Nov., AKW. IV. Bradenton: April, May, Oct., CPK. Oneco: May, June, CPK. Archbold Biological Station: Dec., YU. Port Sewall: Jan.-March, AMNH. Siesta Key: Oct-June, CPK. Dade Co.: July, Nov., AMNH. VI. Homestead: April, July-Oct., CPK. Florida City: May, WRB; a series, OB. Paradise Key: March, FMJ. VIII. Tavernier: Sept., DPI. Big Pine Key: April, AMNH. Most of my material has been distributed and is in the following collections, probably others: AEB, CNC, AMNH, LRR, CU, AKW.

[4095 *C. chloroleucaria* (Guenée)]

Blackberry looper.

Spec. Gén. 9: 351. 1857.

In the opinion of both Sperry and Rindge, it is probable that all records for this species in Florida belong to the next one. Food: blackberry.

4096 C. INDISCRIMINATA (Walker)

Pl. XXI, Fig. 21, ♂.

List Lep. Ins. Br. Mus. 26: 1556. 1862.

Indiscriminata is quite common from Monticello and Fernandina to Big Pine Key, flying January-October.

CHLOROPTERYX Hulst

4102 C. TEPPERARIA (Hulst)

Pl. XXI, Fig. 19, ♀.

Ent. Amer. 2: 122. 1886.

I. Escambia Co.: March, April, SMH. Warrington: WP. II. Gainesville: July, CU. Lake Geneva: March, HEW. III. DeLand: March, AKW. Cassadaga: Feb., March, SVF. Winter Park: June, DPI. IV. Bradenton: March, June,

Nov., CPK. Oneco: March, April, JGF; May-July, Oct., CPK. Archbold Biological Station: Jan., March, YU. Sarasota: April, AKW. Siesta Key: Dec., CPK. Englewood: May, CU. Forbes notes that this last has an abnormal wing form and may be *paularia*. Almost certainly it is *paularia*. Punta Gorda: March, AKW. Bonita Springs: Feb., AMNH.

EUEANA Prout

4104 E. NIVEOCILIARIA (Herrich-Schaeffer)
Corresp. Blatt. Regensb. 24: 182. 1870.

Niveociliaria apparently is another of the species which may have been driven back to the lower end of the peninsula by the 1899 freeze. II. St. Johns River: (Holland), Grsb. 88. III. Indian River: type of *saltusaria* (Hulst), AMNH. IV. Lake Worth: (Slosson), OB; Dyar (1901a, p. 456). Matheson Hammock: Feb., AMNH. VIII. Tavernier: Sept., Oct., DPI, AMNH, CPK. Key Vaca: Nov., det. Rindge with "?," CPK. Big Pine Key: April, AMNH. Food: *Krugidendron ferreum* [*Condalia ferreum*], Dyar (1900d, p. 118).

EUCROSTES Hübner

4108 E. DOMINICARIA Guenée
Spec. Gén. 9: 367. 1857.

VIII. Key West: (Riley), Hulst (1895a, p. 71).

Subfamily STERRHINAE

EUMACHRODES Warren

4108, 1 E. YPOMEUTARIA (Guenée)
Spec. Gén. 9: 471. 1857.

VI. Homestead: June 25, 1959, (Wolfenbarger), det. Todd, CPK.

EUACIDALIA Packard

4109 E. SERICEARIA Packard
Rept. Peabody Acad. Sci. 5: 69. 1873.

Florida: (Slosson), Grsb. 88. There is no Slosson specimen in the American Museum of Natural History collection. What Grossbeck's record refers to is anyone's guess; it might be this, the preceding, or the next species. VIII. Key West: USNM. The Key West specimen, looks very much like Texan material, but for a conclusive answer, genitalic comparison would be essential.

4109, 1 E. SP.

This is closer to *ypomeutaria* above than it is to *sericearia*, but it apparently belongs here

in the belief of both Todd and Rindge. VI. Homestead: April, June-Aug., CPK. Florida City: March, May, June, AMNH.

METASIOPSIS Prout

4115 M. OSSULARIA (Geyer)

Pl. XXI, Fig. 22, ♂.

Zutr. exot. Schmett.; Figs. 909, 910. 1837.

There are two species involved here, and because it is impossible to separate the records, I am lumping them all under this name. I. Escambia Co.: June, July, SMH. II. Gainesville: March, UM; July, CU. East Florida: as *magniferaria* (Walker), (Doubleday), Packard (1876, p. 356). Starke: June, AKW. III. Cassadaga: March, SVF. Weekiwachee Springs: April, CPK. Lakeland: May, AMNH. IV. Bradenton: April, May, July, CPK. Oneco: March, April, JGF; May, Aug., AMNH, CPK. Archbold Biological Station: June, AKW; July, Dec., CU; AMNH; Dec., AMNH. Siesta Key: Nov.-May, CPK. Punta Gorda: March, May, AKW. Fort Myers: April, May, AMNH. La Belle: April, AMNH. Lake Worth: Dyar (1901a, p. 457). Dade Co.: March, Oct.-Dec., AMNH. Food: *Galium* and chickweed.

4115, 1 M. SP.

This species is very close to *ossularia* but darker. As yet Rindge has not been able to find out whether it has a name or is new. If new, he will describe it. As explained above the records are confused and presently inextricable. I have both species from Gainesville and Siesta Key. In the American Museum of Natural History collection there are specimens from: IV. Port Sewall: March. Dade Co.: Oct., Miami: Feb., March.

4118 M. BALISTARIA (Guenée)

Spec. Gén., 9: 453. 1857.

Here too the records are mixed because Rindge finds that *rufescens* (Hulst) is a good species, and both certainly occur. IV. Port Sewall: Jan., Feb., Nov., AMNH. Siesta Key: May, CPK. Englewood: March, CU. Punta Gorda: April, May, AKW. Fort Myers: April, AMNH. Lake Worth: Dyar (1901a, p. 457). Dade Co.: April, June, July, Oct., Dec., AMNH. VI. Modello: April, HEW. Homestead: May, June, Sept., Oct., CPK. VIII. Tavernier: Sept., Oct., AMNH, CPK. Windley Key: May, DPI, CPK. Craig: May, DPI, CPK.

4118, 1 M. RUFESCENS (Hulst)

Trans. Amer. Ent. Soc. 23: 305. 1896.

III. Winter Park: Sept., AMNH. IV. Bonita Springs: March, Nov., Dec., AMNH. Fort

Lauderdale: March, April, June, det. Rindge, UM. South Miami: June, AMNH. VI. Homestead: June, det. Rindge, CPK.

4120 M. PERIRRORATA (Packard)

Rept. Peabody Acad. Sci. 5: 71. 1873.

IV. Archbold Biological Station: Dec., YU, PSU. VI. Modello: Dec., CWK. Homestead: Feb., det. Rindge, CPK. VIII. Key Largo: July-Oct., AMNH, CPK. Windley Key: Dec., CPK. Craig: Sept., AMNH.

4122 M. LANCEOLATA (Hulst)

Trans. Amer. Ent. Soc. 23: 305. 1896.

Florida: Dyar (1902, p. 296). VI. Paradise Key: occasional at light, FMJ. VIII. Key Vaca: Nov. 13, 1952, CPK.

4124 M. PERALBATA Packard

Pl. XXI, Fig. 23, ♂.

Rept. Peabody Acad. Sci. 5: 70. 1873.

I. Escambia Co.: Aug., SMH. II. Gainesville: June, July, CU. Jacksonville: Grsb. 91. III. Weekiwachee Springs: Aug., CPK. Egmont Key: April, UM. IV. Oneco: March, JGF; June, AMNH, CPK. Archbold Biological Station: June, AKW. Port Sewall: Feb., Dec., AMNH. Siesta Key: Jan., March, May, CPK, LRR. Biscayne Bay: (Slosson), Grsb. 91.

SCELOLOPHIA Hulst

There has probably been a certain amount of misdetermination in this genus as several of the species are quite similar and there is just sufficient sexual dimorphism to cause further confusion. Very roughly the species may be separated as follows: *pannaria* is rather pale reddish; *crossii* is a purplish red; and *purpurascens* has a certain infusion of orange red, particularly along the costa.

4125 S. PANNARIA (Guenée)

Pl. V, Fig. 35, ♀.

Spec. Gén. 9: 470. 1857.

Pannaria is a common species from Pensacola to Big Pine Key, especially in its southern range. It has been taken in every month. Food: cowpea.

4126 S. CROSSII (Hulst)

Pl. V, Fig. 38, ♀.

Can. Ent. 32: 105. 1900.

I. Quincy: Aug., Oct., CPK. III. Cassadaga: Sept., SVF. IV. Bradenton: March, Aug.-Nov., CPK. Oneco: May-July, Oct., CPK. Archbold

Biological Station: Dec., PSU. Siesta Key: Jan., Feb., Oct., Nov., CPK. Fort Myers: Dyar (1913g, p. 120); April, AMNH. Miami: Oct., WRB. South Miami: Oct., CWK. VI. Modello: May, Aug., Oct.-Dec., AMNH. Homestead: April, May, July, Oct., CPK. The Homestead specimens are all undersized. Food: *Lantana involu-crata* [odorata].

4128 S. PURPURASCENS (Hulst)

Pl. V, Fig. 36, ♂.

Can. Ent. 32: 105. 1900.

III. Volusia Co.: Aug., DPI. DeLand: March, AKW. Cassadaga: April, July, Oct., SVF. Orange Co.: March, May, DPI. IV. Bradenton: July, Nov., CPK. Oneco: June, CPK. Siesta Key: Nov.-Jan., March, May, June, CPK. Punta Gorda: May, AKW. Dade Co.: May-Aug., Oct.-Dec., AMNH. Miami: July, USNM, CWK. Coconut Grove: type, Hulst (1900b, p. 105). VI. Homestead: Feb., DPI; March-Sept., Nov., CPK. The Homestead specimens cover a wide range of color shading in the red and orange and the median band varies greatly in width, sometimes disappearing altogether. Florida City: July, WRB, HEW.

4129 S. RUBROTINCTA (Hulst)

J. N. Y. Ent. Soc. 8: 216. 1900.

Dyar (1913e, p. 84) said that *rubrotincta* might be a suffused specimen of *purpurascens*. Franclemont is of the opinion that it is nothing more than the female of *crossii*. Florida: (Slosson), Grsb. 89. IV. Oneco: March, JGF. Lake Worth: Dyar (1901a, p. 457). Palm Beach: type, March or April, Hulst.

4131 S. LAEVITARIA (Hübner)

Pl. V, Fig. 39, ♀.

Zutr. exot. Schmett. 5: 20; Pl. 150, Figs. 873, 874. 1837.

Laevitaria is a very common and variable species, taken from Escambia County to Windley Key, throughout the year.

XYSTROTA Hulst

4136 X. SUAVATA (Hulst)

J. N. Y. Ent. Soc. 8: 217. 1900.

IV. Lake Worth: (Slosson), Grsb. 92. Palm Beach: type, AMNH. V. Marco: April, SIM. Barnes & McDunnough (1916d, p. 219) believed that this record belonged to *davisi* below. Everglades; April, AMNH. Dade Co.: April-June, Nov., Dec., AMNH. VI. Homestead: May, June, CPK. Florida City: March, JGF; May, OB, WRB; July, CWK. Paradise Key: FMJ. VIII.

Tavernier: July, Sept., Oct., AMNH, CPK. Food: *Randia aculeata*, Dyar (1900c, p. 106).

4137 X. DAVISI (Grossbeck)

Bull. Amer. Mus. Nat. Hist. 37: 90. 1917.

V. Marco: types, four females, April 17 and 20, (Davis), Grsb. 90. Everglades: paratype, April, (McDunnough), USNM. F. E. Watson, the editor of Grossbeck's Lepidoptera of Florida, noted that these specimens could not be located. The whereabouts of the first four is still a mystery, unless as suggested by Barnes & McDunnough (1916d, p. 219) they are in the Davis collection. VI. Dade Co.: May, AMNH. VIII. Big Pine Key: April 4-9, 1951, (Sanford), AMNH. Key West: two June 11-19, 1941, (Wyatt), AMNH; Aug. 19, 1944, WRB.

SCOPULA Schrank

4141 S. AEMULATA (Hulst)

Pl. XXI, Fig. 24, ♂.

Trans. Amer. Ent. Soc. 23: 303. 1896.

Aemulata is a fairly common species but is recorded only from Gainesville to Paradise Key, October-August. There is a specimen, I. Escambia Co.: Sept. 13, 1961, which is not typical and may represent another species.

4149 S. ENUCLEATA (Guenée)

Pl. XXI, Fig. 14, ♀.

Spec. Gén. 9: 505. 1857.

I. Escambia Co.: abundant including form *rel-evata* Swett, April, May 1961, SMH. Myrtle Grove: Nov., WJW. Torreya State Park: April, DPL. Quincy: one Sept., (Tappan), CPK. Monticello: Aug., AMNH. II. Gainesville: March 13, 1925, UM. Fernandina: April 23, 1941, (Forsyth), AMNH. East Florida: (Doubleday), BM. Food: wild cherry, but doubtless a general feeder.

[4158 *S. inductata* (Guenée)]

Spec. Gén. 9: 494. 1857.

II. Alachua Co.: April 8, 1959, (Perry), det. Rindge with query, DPI.

4159 S. TIMANDRATA (Walker)

List Lep. Ins. Br. Mus. 22: 724. 1861.

This is found as both typical *timandrata* and form *rufilineata* (Walker) which has dark patches at the inner angle of the primaries. II. Alachua Co.: Nov., DPI. Gainesville: March, taken at *Phlox drummondii*, UFES; April, AMNH, CPK; July, UFES. East Florida: (Doubleday), Packard (1876, p. 355). Jacksonville: (Slosson),

Grsb. 89. III. Daytona: Sept., (Englehardt), Grsb. 89. Brooksville: June, AKW. Orlando: Oct., DPI. Rockledge: NYSM. IV. Bradenton: Feb., CPK. Oneco: March, JGF. Punta Gorda: Feb.-April, AKW; March, OB.

4161 S. COMPENSATA (Walker)

List Lep. Ins. Br. Mus. 22: 724. 1861.

This was listed by Grossbeck (1917, p. 89) as *Synelis subquadrata* Guenée. Rindge has found that *obluridata* (Hulst) is a valid species. Consequently it is impossible to separate the records, except for the long series in the American Museum of Natural History, and a few others. Otherwise all one can say is that the complex is very common from Jacksonville to Florida City, and that specimens have been taken in all months. I. Escambia Co.: March, SMH. II. Gainesville: Feb., CPK. III. Leesburg: March, AMNH. St. Petersburg: March, AMNH. IV. Bradenton: March, CPK. Charlotte Harbor: March, AMNH.

4161, 1 S. OBLURIDATA (Hulst)

Ent. Amer. 2: 185. 1887.

I. Escambia Co.: July, SMH. II. Gainesville: Sept., DPI, AMNH. III. Cassadaga: April, July, SVF. Orlando: March, AMNH. Rockledge: type, April, AMNH. St. Petersburg: March, AMNH. IV. Bradenton: Feb.-May, July-Oct., CPK. Oneco: May, July, Oct., AMNH. South Bay: April, AMNH. Lake Worth: AMNH. South Miami: May, AMNH. V. Marco: April, AMNH. VI. Modesto: Dec., AMNH. Homestead: March-May, July-Sept., CPK. Florida City: Jan., April-July, AMNH.

4162 S. INDOCTARIA (Walker)

List Lep. Ins. Br. Mus. 22: 731. 1861.

I. Monticello: Oct., AMNH. II. Gainesville: July, CU. Jacksonville: AMNH. III. Glenwood: AMNH. St. Petersburg: May, AMNH. Stemper: July, AMNH. Lakeland: May, SIM. IV. Bradenton: Aug., CPK. Oneco: May, June, Aug., CPK. Archbold Biological Station: April, CU. Siesta Key: April, May, CPK. Fort Myers: April, May, AMNH. Useppa Island: AMNH. Bonita Springs: Feb., March, OB. La Belle: April, AMNH. Dade Co.: May-July, Nov., Dec., AMNH. VI. Homestead: May-July, CPK. Florida City: March, JGF; May, WRB; June, OB; July, det. Rindge with "?," HEW; Oct., CWK. Paradise Key: March, FMJ. VIII. Big Pine Key: April, AMNH.

4164 S. TAWNEATA (Cassino)

The Lepidopterist 5: 23. 1931.

There is every probability that *tawneata* is nothing more than *aemulata* (Hulst). The latter was described from a male and the former from a female. Superficially Cassino's type series is indistinguishable from *aemulata*. III. St. Petersburg: types, three July 8, MCZ. IV. Punta Gorda: five Feb., April, May, AKW; one April, OB. VI. Florida City: one April, WRB; one June, OB.

4165 S. PLANTAGENARIA (Hulst)

Ent. Amer. 2: 185. 1887.

Florida: Dyar (1902, p. 295). III. DeLand: two March 27-30, AKW. IV. Archbold Biological Station: June, AKW.

4166 S. PURATA (Guenée)

Spec. Gén. 9: 488. 1857.

I. Escambia Co.: July 5, 1962, SMH. West Pensacola: June, VFG. Myrtle Grove: Oct. 28, 1961, WJW.

4166, 1 S. NIGROCANDIDA (Hulst)

Can. Ent. 30: 121. 1898.

II. Gainesville: UFES. Jacksonville: Grsb. 89. III. Ormond: type, (Slosson), Hulst.

4167 S. LAUTARIA (Hübner)

Pl. XXI, Fig. 25, ♂.

Zutr. exot. Schmett. 3: 33; Pl. 93, Figs. 539, 540. [1827] - [1831].

Lautaria occurs throughout the state at least as far south as Florida City, flying all year.

4168 S. ROSEOTINCTA (Hulst)

Trans. Amer. Ent. Soc. 23: 303. 1896.

It has been found that this is merely the female of *Lophosis labeculata* (Hulst), q. v.

STERRHA Hübner

4174 S. MINUTA (Schaus)

Trans. Amer. Ent. Soc. 27: 193. 1901.

IV. Miami: type, Schaus. VI. Modello: Nov., OB; Nov., Dec., AMNH; Dec., WRB.

4175 S. PARVULARIA (Hulst)

Ent. Amer. 3: 213. 1888.

IV. Oneco: April 1, det. with "?," JGF. V. Marco: April 16-23, (McDunnough), AMNH.

4175, 1 S. SP.

Dyar (1915, pp. 235-236) described from Panama three closely related species of *Ptychoda*, a genus now incorporated in *Sterrha*. The three—*cedrica*, *umbrimargo*, and *sincerio*—are also re-

lated to *parvularia* above. The following Florida specimens are probably either *cedrica* or an undescribed species. In none of them is the condition sufficiently good to be certain, for though the maculation in the one from Fort Lauderdale is fairly distinct, the abdomen is missing. IV. Fort Lauderdale: Aug. 4, 1923, (Bates), UM. VIII. Tavernier: six, Aug. 16-Sept. 17, 1955, (Todd), CPK.

4175, 2 S. SP.

The fore wing of this species is almost identical to that of the species above, but the hind wing is quite distinct. Again, unfortunately, the condition is very poor. IV. Siesta Key: May 24, 1946, CPK. VIII. Tavernier: Sept. 18, 1955, (Todd), CPK.

4178 S. MICROPHYSA (Hulst)

Trans. Amer. Ent. Soc. 23: 305. 1896.

III. Egmont Key: April 29, 1904, (Ramstedt?), det. J. B. Smith, UM.

4179 S. SCINTILLULARIA (Hulst)

Ent. Amer. 3: 213. 1888.

Florida: type, female, (Beutenmueller), AMNH. IV. Oneco: March 30, 1954, JGF. Punta Gorda: April 1-20, (Ramstedt), AKW.

4180 S. DEMISSARIA (Hübner)

Pl. XXI, Fig. 26, form *inclusaria* (Walker), ♂. Zutr. exot. Schmett. 3: 36; Pl. 97, Figs. 563, 564. [1827]-[1831].

Demissaria occurs mostly as form *inclusaria* (Walker) and rarely as form *russata* (Hulst). It is quite common and has been taken from Escambia County and Fernandina to Florida City, in every month. However, as Rindge believes several species may be involved, perhaps we should speak of the complex being common, rather than the species.

4181, 1 S. FLAVESCENS (Hulst)

Trans. Amer. Ent. Soc. 23: 304. 1896.

I. Escambia Co.: April 24 and 29, 1962, det. Rindge, SMH. II. Gainesville: April 29, 1960 (Peterson), DPI. Jacksonville: (Slosson), AMNH. III. Cassadaga: April 28, 1960, det. Rindge, SVF. IV. Archbold Biological Station: March 25, April 7, 1958, (Pease), AMNH, YU; March 27, 1962, (Frost), PSU.

4184 S. HILLIATA (Hulst)

Pl. XXI, Fig. 27, ♀.

Ent. Amer. 2: 187. 1887.

Hilliata is a very rare and striking little species which seems to have suddenly turned up after

being unknown since its discovery in 1884 by Hill. It is pale yellow with a most unusual, narrow, black, scalloped or crenulate line extending from near the apex to one-third of the inner margin of the forewing. III. Cassadaga: Aug. 23, 1962, SVF. Weekiwachee Springs: one Aug. 1954, (May), CPK. Rockledge: type, April 1884, (Hill), AMNH. IV. Bradenton: one each, March 13, 1954, May 5, 1955, Oct. 1955, (Kelsheimer), CPK. Vero Beach: May 6, Oct. 2, (Malloch), USNM. Siesta Key: May 7, 1946, twelve March 16-May 11, 1960, one March 25, 1961, three Feb. 20-22, 1962, CPK. Punta Gorda: two Feb. 21, April 2, (Ramstedt), AKW.

4186 S. VIOLACEARIA (Walker)

List Lep. Ins. Br. Mus. 23: 786. 1861.

Rindge finds two species involved, the second apparently undescribed. The following records must include both for the present. Florida: May, (Hulst), Grsb. 91. II. East Florida: (Doubleday), Packard (1876, p. 357). III. DeLand: March, AKW. Cassadaga: April-June, SVF. Orlando: March, AMNH. St. Petersburg: March, AMNH. Stemper: Oct., AMNH, AKW. Lakeland: May, USNM. IV. Port Sewall: Jan., Feb., AMNH. Siesta Key: March, Nov., CPK. Lake Worth: as *Emilitis floridata* (Hulst), Dyar (1901a, p. 457). VIII. Big Pine Key: March, April, AMNH.

4186, 1 S. SP.

Some of the records for *violacearia* will be found to belong here.

4187 S. MICROPTERATA (Hulst)

J. N. Y. Ent. Soc. 8: 217. 1900.

Here also there may be two species involved, but further study and material will be required to settle the point. II. Hastings: type, May, AMNH. III. DeLand: March, AMNH, AKW. Cassadaga: June, SVF. Lakeland: May, AMNH. IV. Bradenton: March, CPK. Oneco: March, JGF; May, July, Nov., CPK. Siesta Key: March, May, June, Nov., CPK. Punta Gorda: April, AKW. V. Allen River to Deep Lake: April, AMNH. VI. Modello: Nov., OB.

4188 S. OSTENTARIA (Walker)

List Lep. Ins. Br. Mus. 23: 784. 1861.

II. East Florida: (Doubleday), Packard (1876, p. 356).

4189 S. LACTEOLA Linter

Ent. Contrib. 4: 112. 1878.

II. Gainesville: July, CU. III. DeLand: April,

AKW. Lake Lucy: Feb., AMNH. Lakeland: May, AMNH. IV. Oneco: May, CPK. Archbold Biological Station: April, CU; June, AMNH. Port Sewall: Jan., March, Dec., OB. Siesta Key: May, CPK, LRR. Englewood: March, CU. Punta Gorda: April, AKW. Bonita Springs: Dec., AMNH. Dade Co.: March, May, June, Oct.-Dec., AMNH. South Miami: March, May, Oct., Nov., AMNH.

4189, 1 S. SP.

This species is very close to *lacteola*, but with distinct genitalia. Cassino had made slides of both. In the Cassino collection at the Museum of Comparative Zoology there are three specimens, two males and one female, taken at St. Petersburg in May and June. On one is a label "type No. 21802" and on another "o. d. written Sept. 28, 1931." These are presumably in Cassino's hand, but no written, nor published description can be found. I have one specimen which matches these, Siesta Key, May 21, 1946, the determination having been made by Forbes. There are also two specimens in the University of Michigan collection, both determined by Cassino: IV. Fort Lauderdale: Feb. 9, 1923; May 25, 1928. Archbold Biological Station: Dec., YU.

4190 S. TACTURATA (Walker)

Pl. XXI, Fig. 28, ♂.

List Lep. Ins. Br. Mus. 22: 721. 1861.

There may be more than one species involved here too. It, or the complex, is found throughout the peninsula and has been taken in every month.

4191 S. OBFUSARIA (Walker)

List Lep. Ins. Br. Mus. 23: 786. 1861.

II. East Florida: (Doubleday), Packard (1876, p. 357). III. Cassadaga: May 5, 1961, SVF. Weekiwachee Springs: Aug. 1954, (May), CPK. IV. Oneco: May 11, 1953, (Dillman), det. Rindge, CPK.

4192 S. PUNCTOFIMBRIATA (Packard)

Rept. Peabody Acad. Sci. 5: 70. 1873.

I. Escambia Co.: May 24, 1962, det. Rindge, SMH. VI. Biscayne Bay: one, (Slosson), OB.

4193 S. MARCEATA (Cassino)

The Lepidopterist 5: 19. 1931.

The range of color exhibited by *marceata* reminds one of *Cosymbia pendulinaria* Guenée although it does not reach the extreme dark specimens of the latter. I. Escambia Co.: April, SMH. Myrtle Grove: Sept., WJW. III. De-

Land: April, OB. Cassadaga: April, June, Oct., SVF. Weekiwachee Springs: Aug., CPK. Orlando: May, DPI. St. Petersburg: types, thirty-eight, March, April, Oct., MCZ; two May, Oct., OB. IV. Archbold Biological Station: April, PSU. Grove City: Feb., CPK. Bonita Springs: three March, May, Nov., OB. West Hollywood: April, CPK, JMP. Miami: Oct., OB. South Miami: two June, Oct., OB; Oct., CWK. VI. Modello: one Nov., OB. Homestead: March, June, July, Sept., Oct., CPK. Florida City: March, CPK; one July, OB.

4194 **S. BENUBIA** (Cassino)
The Lepidopterist 5: 21. 1931.

III. St. Petersburg: types, two males, Jan. 13, March, MCZ.

4196 **S. REFRACTARIA** (Walker)
List Lep. Ins. Br. Mus. 23: 785. 1861.

II. East Florida: (Doubleday), Packard (1876, p. 356). IV. Archbold Biological Station: July, AMNH. Port Sewall: Nov., (Sanford), AMNH.

4196, 1 **S. INSULENSIS** Rindge
Amer. Mus. Nov. 1910: 1. 1958.

VIII. Tavernier: types, July-Oct., (J. N. Todd), AMNH, CPK, USNM.

4196, 2 **S. SP.**
Pl. XXI, Fig. 29, ♂.

I. Escambia Co.: May 6, 1962, det. Rindge, as unknown to him, SMH. This specimen was illustrated by mistake as I did not intend to illustrate any unknown species.

LOBOCLETA Warren

4196, 3 **L. SP.**

I. Escambia Co.: April 20 and 23, 1961, det. Todd as an unrecognized species, SMH. Hills reports seeing many more during the summer.

SYNOMILA Hulst

4199 **S. AUSTRALIS** (Hulst)
Trans. Amer. Ent. Soc. 23: 306. 1896.
Florida: type, (Graef), AMNH.

GONIACIDALIA Hulst

4201 **G. FURCIFERATA** (Packard)
Pl. XXI, Fig. 30, ♀.
Rept. Peabody Acad. Sci. 5: 68. 1873.
I. Escambia Co.: May 2, 1961, det. Forbes, May 6, 1961, SMH.

LOPHOSIS Hulst

4202 **L. LABECULATA** (Hulst)
Ent. Amer. 2: 187. 1887.

The sexes of *labeculata* are dimorphic, the female, described under the name *roseotincta* (Hulst), having much more yellow in streaky blotches on both wings. I. Escambia Co.: March, April, SMH. Warrington: April, VFG. II. Lake City: Feb., AKW. Gainesville: June, CU. Starke: June, AKW. III. DeLand: March, AKW. Cassadaga: Feb.-April, June, July, SVF. Weekiwachee Springs: Feb.-June, Aug., CPK. Winter Park: May, AMNH. St. Petersburg: April, OB, AKW. Stemper: June, July, OB. IV. Bradenton: Feb.-April, CPK. Oneco: March, April, JGF; May, Oct., CPK. Archbold Biological Station: Feb., March, Nov., PSU; Feb., Dec., YU; April, CU; June, AKW; Dec., AMNH. Port Sewall: March, AMNH. Siesta Key: Jan.-April, CPK. Punta Gorda: Feb., April, OB; Dec.-Feb., AKW. Dade Co.: March, Nov., AMNH. Biscayne Bay: (Slosson), Grsb. 90. V. Everglades: April, AMNH. VI. Homestead: Feb., CPK. Paradise Key: March, CU.

HAEMATOPSIS Hübner

4204 **H. GRATARIA** Fabricius
Ent. Syst. Suppl. 112. 1798.

I. Escambia Co.: Aug. 11, 1962, SMH.

TIMANDRA Duponchel

4205 **T. AMATURARIA** (Walker)
List Lep. Ins. Br. Mus. 35: 1634. 1866.
Florida: Forbes (1948, p. 119).

PLEUROPRUCHA Moeschler

4206 **P. INSULARIA** (Guenée)
Pl. V, Fig. 41, ♂.
Spec. Gén. 9: 469. 1857.

Besides *asthenaria* below, there may be still another species mixed with this as some specimens look far from normal. However, it must not be forgotten that *insularia* is a very variable insect. *Insularia* itself is common through the peninsula, though like so many other species there are no records from the western counties, except at Quincy. It flies all year and probably is a general feeder, reported from oak, *Solidago*, and *Celastrus*.

4206, 1 **P. ASTHENARIA** (Walker)
List Lep. Ins. Br. Mus. 22: 737. 1861.
This is presumably a valid species, as the lines

are slightly different from those on *insulsaria*. It is most readily spotted by its greenish color, but should not be confused with the occasional green color form of *insulsaria*. II. Fernandina: Aug., AMNH. IV. Bradenton: April-June, CPK. Oneco: Aug., CPK. Sarasota: April, CPK. Siesta Key: common, May, June 1957, OB, AMNH, CPK, USNM, AKW. Miami: July, AMNH. VI. Homestead: June-Oct., CPK. Florida City: May, June, OB; June, July, AMNH. VIII. Tavernier: Sept., CPK.

COSYMBIA Hübner

4207 *C. CULICARIA* (Guenée)
Spec. Gén. 9: 407. 1857.

Florida: three, (Slosson), AMNH. I. Myrtle Grove: April, WJW. II. Lake City: June, CPK. Gainesville: Sept., AMNH. Hastings: May, AMNH. III. Weekiwachee Springs: Aug., CPK.

4209 *C. MYRTARIA* (Guenée)
Spec. Gén. 9: 408. 1857.

Because this and the next two species are closely parallel in appearance and because it is practically impossible to separate the females, the records are very uncertain. Furthermore, there are the very slightly different forms *triseriata* Prout and *ignotaria* (Walker), both of which are probably present along with typical *myrtaria*. The latter is probably found throughout the state, as Franclemont has found it common at Oneco and there are specimens from Florida City in the American Museum of Natural History, and Hills has taken it near Pensacola. In both cases the determinations were made by genitalic dissection. Records for the species cover all months but may not have much meaning because of the largely unrecognized presence of the other two.

4209, 1 *C. BENJAMINI* Prout
In Seitz 8: 96. 1931.

This is the only species of the three which has a simple, untufted hind tibia in the male. *Culicaria* also has the untufted hind tibia, but is easily separated on general appearance. *Benjamini* may, therefore, be determined by simple examination. Except for the types, all the determinations have been made by Rindge. II. Gainesville: Sept., AMNH. Hastings: June, AMNH. III. St. Petersburg: type, USNM; AMNH. Stemper: paratype, July, USNM, AMNH. IV. Bradenton: March, CPK. Oneco: May, June, Aug., Oct., CPK. Archbold Biological Station: Nov., PSU. Siesta Key: April, Dec., CPK. VI. Homestead: May, CPK.

4209, 2 *C. PACKARDI* Prout
In Seitz 8: 95. 1931.

IV. Oneco: April, JGF; May, June, Aug., Oct., (Dillman), det. Rindge, AMNH, CPK. Port Sewall: Feb., AMNH. VI. Homestead: April, CPK.

4212 *C. SERRULATA* (Packard)
Rept. Peabody Acad. Sci. 5: 73. 1873.

I. Escambia Co.: July, SMH. II. Gainesville: June, CU. III. Weekiwachee Springs: May, CPK. Central Florida: May, WMD. St. Petersburg: Dec., AKW. IV. Bradenton: April, Aug., Sept., CPK. Oneco: May-Aug., CPK. Siesta Key: not rare, Dec.-June, CPK. Englewood: CU. VI. Florida City: July, AMNH. VIII. Tavernier: Dec., DPI.

Subfamily LARENTIINAE

DYSPTERIS Hübner

4234 *D. ABORTIVARIA* Herrich-Schaeffer
Pl. XXI, Fig. 31, ♂.
Samml. aussereur. Schmett. 62, 82; Pl. 61, Fig. 346. 1855.

I. Escambia Co.: Feb., March, SMH. Warrington: rare, summer, VFG, WP. Tallahassee: March, JPK. II. Gainesville: Feb., DPI; March, Dozier (1920, p. 378). Hastings: May, AMNH. III. Pierson: Feb., CPK. Orange Co.: June, DPI. Indian River: AMNH. IV. Oneco: March, DPI; May, CPK. Archbold Biological Station: Jan., YU. Port Sewall: March, AMNH. VI. Florida City: April-Aug., Nov., AMNH; May-July, OB; June, CWK. Paradise Key: March, FMJ. Food: grape.

HYDRIA Hübner

[4247 *H. undulata* (Linnaeus)]
Syst. Nat. p. 524. 1758.

The larva of this was reported on melons and young corn by Watson (Ins. Pest Surv. Bull. 18: 56). However, Ferguson, who has made a recent study of this and a new species *prunivorata*, vide infra, strongly doubts the accuracy of the determination. He writes: "They are very selective in their feeding habits. *Undulata* feeds on willow, azalea, rhododendron, and syringa, but the other one seems to confine itself entirely to wild black cherry as far as is known."

4247, 1 *H. PRUNIVORATA* Ferguson
Can. Ent. 87: 325. 1955.

I. Escambia Co.: March 1961, det. Rindge by genitalic dissection, SMH, AMNH. Hills saw several others.

CORYPHISTA Hulst

- 4248 **C. MEADI** (Packard)
Rept. Peabody Acad. Sci. 6: 41. 1874.
III. Cassadaga: two Aug. 12-19, 1952, SVF.

EUPITHECIA Curtis

- 4266 **E. MISERULATA** Grote
Proc. Ent. Soc. Phila. 2: 32; Pl. 2, Fig. 4. 1876.
I. Escambia Co.: Feb., SMH. Quincy: Feb., Oct., CPK. Monticello: Feb., DPI. II. Perry: March, CPK. Gainesville: March, DPI. Jacksonville: March, HEW; Nov., AMNH. Crescent City: April, Packard (1890a, p. 190). III. Central Florida: April, Nov., WMD. DeLand: March, AKW. Cassadaga: Jan.-March, May, June, Sept., Oct., SVF. Lake Lucy: March, AMNH. Orlando: Feb., DPI. St. Petersburg: March, Nov., AMNH. IV. Bradenton: March, April, DPI. Oneco: April, AKW; April, June, CPK. Archbold Biological Station: Feb., March, PSU; Dec., AMNH. Siesta Key: Feb., March, Oct.-Dec., AMNH, CPK. VI. Homestead: Feb., May, June, Aug., Oct., CPK. Florida City: June, AMNH. Larva a general feeder.

- 4275, 1 **E. JEJUNATA** McDunnough
Bull. Amer. Mus. Nat. Hist. 93: 574. 1949.

I. Ensley: det. Rindge, VFG. II. Gainesville: Feb., CPK. III. Central Florida: Feb., WMD. IV. Bradenton: April, CPK. Archbold Biological Station: March, PSU. Siesta Key: sometimes common, Jan.-March, det. Rindge, CNC, AMNH, CPK, BM, NSMS. The male was described from this series by Rindge (1956, p. 3).

- 4287, 1 **E. SLOSSONATA** McDunnough
Bull. Amer. Mus. Nat. Hist. 93: 547. 1949.
Florida: type female, (Slosson), AMNH. III. Weekiwachee Springs: one male, Feb. 22, 1955, (May), AMNH. The latter was described as the male type by Rindge (1956, p. 2).

- [4323 **E. russeliata** Swett]
Can. Ent. 40: 245. 1908.

III. Tarpon Springs: Feb. 1949, JLC. Although this specimen was determined at the British Museum, there is some question as to whether it may have been determined before or after McDunnough's revision, issued Aug. 22, 1949, was actually available. Before the list went to press, a letter was received from Campbell containing additional information. "As regards *E. russeliata* he (Rindge) did not think the specimen belonged to this species, though Fletcher whom I saw at the British Museum on my way

to this country was firmly of the opinion that it was. . . . I shall ask Fletcher if he ever made a genitalia examination of *russeliata*." Since there is a difference of opinion and as Forbes (1948, p. 170) gave Virginia as the southern limit of the known range, it seems wisest to list the species only tentatively. Of course, if Fletcher did examine the genitalia, the question would be resolved.

HORISME Hübner

- 4393 **H. INTESTINATA** (Guenée)
Spec. Gén. 10: 432. 1857.
Florida: Packard (1876, p. 171); Forbes (1948, p. 159). I. Quincy: March 7, 1961, April 30, 1963, (Tappan), CPK.

LYGRIS Hübner

- 4401 **L. DIVERSILINEATA** (Hübner)
Grapevine looper. Pl. XXI, Fig. 36, ♂.
Samml. exot. Schmett. 1: 1, 2, 3, 4; Pl. 206. 1806.

Because this and the next species are apt to be confused, the records may be in error in some instances. I give them as received. I. Escambia Co.: May, SMH. Warrington: WP. DeFuniak Springs: Oct., AMNH. II. Gainesville: UFA; May, DPI. IV. Bradenton: Oct., CPK. Oneco: March, April, JGF; May, CPK. Archbold Biological Station: Jan., April-June, YU; Nov., PSU. Siesta Key: May, June, CPK. In May 1960 the species was fairly common and uniformly very pale. Punta Gorda: April, OB. Fort Myers: April, AMNH. VI. Florida City: HEW; July, CWK. Food: Virginia creeper and grape.

- 4401, 1 **L. GRACILINEATA** Guenée
Pl. XXI, Fig. 37, ♀.
Spec. Gén. 10: 476. 1857.

I. Escambia Co.: July, SMH. Warrington: VFG. II. Hastings: May, AMNH. III. Glenwood: AMNH. Indian River: AMNH. St. Petersburg: March, AMNH. IV. Bradenton: May, CPK. Siesta Key: April, CPK. Punta Gorda: April, Dec., AKW. Miami: April, AMNH. VI. Florida City: April-June, Nov., AMNH. Paradise Key: abundant at light, April, FMJ. Food: Virginia creeper and grape.

DIACTINIA Warren

- 4409 **D. ATROCOLORATA** (Grote & Robinson)
Ann. Lyceum Nat. Hist. N. Y. 8: 462. 1867.
I. Escambia Co.: May, SMH. Liberty Co.: May 29, 1924, (Hubbell), UM.

HYDRIOMENA Hübner

The genus is a difficult one and because so little has been known about Florida specimens, all those available have been determined by McDunnough or Rindge.

4477 H. PLUVIATA MERIDIANATA

McDunnough

Bull. Amer. Mus. Nat. Hist. 104: 285. 1954.

I. Quincy: Jan. 13, Feb. 19, 1963, (Tappan), CPK. Monticello: four Feb. 21, 1955, (Phillips), AMNH, CPK. II. East Florida: Packard (1876, p. 93). At a time when no other Florida specimens were known, I wrote to Mr. D. S. Fletcher to inquire about the latter. Mr. Fletcher very kindly searched for it in the British Museum collection but reported that it was no longer there (Oct. 1954). III. Cassadaga: March 17, 1954, SVF.

4477, 1 H. TRANSFIGURATA Swett

Can. Ent. 44: 195. 1912.

II. Gainesville: two Feb. 22-26, 1955, (Morse), CPK. Boulogne: April 1, 1936, JGF. Keystone Heights: two March 3, 1953, HEW. III. Central Florida: March, 1958, WMD. Cassadaga: Feb. 14, 1953, March 10, 1954, March 8, 1961, SVF.

[4485 *H. renunciata* (Walker)]

List Lep. Ins. Br. Mus. 24: 1187. 1862.

Florida: Forbes (1948, p. 142). This record was based on Franclemont's specimen from Boulogne which has since been determined as *transfigurata* above.

NYCTEROSEA Hulst

4535 N. OBSTIPATA (Fabricius)

Pl. XXI, Fig. 32, ♂; Fig. 33, ♀.

Ent. Syst. 3, (2): 199, 257. 1793.

This does not seem to be so common as it is in many northern localities. In some species the maculation is somewhat aberrant. I. Escambia Co.: Feb., April, SMH. Warrington: occasional, late summer, VFG. Pensacola: Sept., CU. Quincy: Jan.-June, Sept.-Nov., CPK. Monticello: Feb., March, DPI; April, CU. II. Gainesville: Feb., DPI, AMNH, CPK; March, CU; Nov., DPI. Jacksonville: March, HEW. III. Cassadaga: Oct.-Jan., SVF. Weekiwachee Springs: March, Aug., CPK. Winter Park: Oct., DPI. Orlando: Jan., June, WMD. St. Petersburg: Dec., AKW. IV. Bradenton: Feb., March, June, Oct., CPK. Archbold Biological Station: Feb., PSU; April, YU; Dec., CU. Siesta Key: Feb., CPK. Palm Beach: Dyar (1901a, p. 457). VI. Homestead: Feb., DPI; April-July, Sept., CPK.

VIII. Tavernier: Oct., CPK. Food: *Polygonum* and other low plants.

EUPHYIA Hübner

4559 E. CENTROSTRIGARIA (Wollaston)

Pl. XXI, Fig. 34, ♀.

Ann. Mag. Nat. Hist. Ser. 3, 1: 120. 1858.

I. Warrington: June, Oct., VFG. DeFuniak Springs: Oct., AMNH. Florida Caverns State Park: April, DPI. Quincy: March, May, June, CPK. Monticello: Oct., AMNH. II. Gainesville: Feb., May, DPI. Ferdinandina: April, Aug., Sept., AMNH. III. Cassadaga: May, SVF. Weekiwachee Springs: May, CPK. Lake Lucy: Feb., AMNH. Leesburg: Nov., W. P. A. card. Winter Park: June, July, AMNH. Orlando: May, WMD. IV. Bradenton: April-June, CPK. Oneco: April, JGF; May-July, CPK. Archbold Biological Station: March, May, Sept., YU. Port Sewall: Feb., AMNH. Siesta Key: Feb., March, May, CPK. VI. Modello: Nov., AMNH. Homestead: March-May, CPK. Florida City: March, April, June, AMNH. Food: *Polygonum*.

4561 E. MULTIFERATA (Walker)

Pl. XXI, Fig. 35, ♂.

List Lep. Ins. Br. Mus. 26: 1715. 1862.

I. Escambia Co.: two March 1961, SMH. Myrtle Grove: April 3, 1963, WJW. Food: *Epilobium*.

[4562 *E. implicata grandiosa* (Hulst)]

Can. Ent. 30: 118. 1898.

This was credited to Florida by Dyar (1902, p. 284). However, Sperry pointed out that this was a western species, the larva feeding on *Abronia villosa*, which West informs me does not grow in Florida. It is safe to assume that the species does not belong in our fauna.

PTEROCYPHA Herrich-Schaeffer

4565, 1 P. [DECERTARIA Herrich-Schaeffer]

Pl. VI, Fig. 2, ♀.

Corresp. Blatt. Regensb. 24: 189. 1870.

IV. Dade Co.: May 1954, (Strohecker), det. E. L. Todd as "apparently this," CPK. VIII. Key Largo: July 20, 1962, (B. K. Dozier), DPI. Tavernier: Aug. 17, Nov. 25, 1955, (J. N. Todd), CPK.

HAMMAPTERA Herrich-Schaeffer

4566 H. PARINOTATA (Zeller)

Pl. XXII, Fig. 1, ♀.

Verh. zool.-botan. Ges. Wien 22: 495. 1872.

Only typical *parinotata* is found here, the subspecies *densata* Grossbeck being western. III. Volusia Co.: Jan., CPK. DeLand: March, AKW. Clermont: Jan., Dec., DPI. Orlando: Feb., WMD. Rockledge: NYSM. Indian River: AMNH. St. Petersburg: Jan., April, AKW. IV. Bradenton: March, April, CPK. Oneco: March, April, JGF; May, Aug., CPK. Archbold Biological Station: April, Dec., YU. Fort Pierce: April, JGF. Port Sewall: Feb., AMNH. Siesta Key: two March, April, CPK. Charlotte Harbor: (Slosson), Grsb. 93. Punta Gorda: Jan., March, April, Dec., AMNH, AKW; Jan., Dec., CPK. South Bay: April, SIM. Palm Beach: Dyar (1901a, p. 457). Fort Lauderdale: CU. Biscayne Bay: AMNH. Coconut Grove: Feb., AMNH. V. Everglades: April, AMNH. VI. Homestead: April, May, Oct., CPK. Paradise Key: FMJ. VII. Flamingo: Feb., DPI. VIII. Tavernier: Sept., Oct., DPI. Key West: AMNH.

ARCHIRHOE Herbulot

4567 A. NEOMEXICANA (Hulst)

Pl. VI, Fig. 3, ♂.

Trans. Amer. Ent. Soc. 23: 285. 1896.

IV. Lake Worth: Grsb. 93. Biscayne Bay: (Slosson), Hulst.

CAMPTOGRAMMA Stephens

4570 C. FLORIDATA (Walker)

List Lep. Ins. Br. Mus. 26: 1719. 1862.

II. East Florida: (Doubleday), BM. III. "Mangroves," Indian River Inlet: April 14, 1880, USNM.

4571 C. AUSTRALATA (Hulst)

Pl. VI, Fig. 1, ♀.

Ent. Amer. 1: 205. 1886.

Rindge feels that there may be two species involved. III. Indian River: type, AMNH. IV. Port Sewall: Feb., March, Dec., AMNH. Lake Worth: AMNH. Biscayne Bay: AMNH. VI. Florida City: Jan., OB. VIII. Key Largo: July, DPI. Tavernier: July, Sept., Oct., Dec., AMNH, CPK. Plantation Key: July, AMNH. Key West: Aug., WRB.

CAMPTOLINA Schaus

4572 C. STELLATA (Guenée)

Pl. XXII, Fig. 2, ♀.

Spec. Gén. 10: 443. 1857.

Stellata is a common species found all through the state from Pensacola to the Dry Tortugas, flying all year. I. Quincy: June-Oct., small peak in Sept. IV. Bradenton: Feb., April, May, Aug.,

Sept. VI. Homestead: April, June, Oct., small peak in June. Food: *Pisonia aculeata*, Dyar (1900b, p. 59); *Amaranthus*, Russell (1910, p. 177) using the name *Gypsochroa sitellata* Guenée for the insect.

EULYPE Hübner

[4573 *E. hastata* (Linnaeus)]

Syst. Nat., p. 527. 1758.

Packard (1876, p. 165) on the authority of Walker, listed Florida. However, there must be some error here as this is primarily a northern species. Forbes (1948, p. 146), gave the southern limit of range as Pennsylvania.

EUBAPHE Hübner

4599 E. MENDICA (Walker)

List Lep. Ins. Br. Mus. 2: 576. 1854.

Florida: one March, one n. d., AMNH. I. Quincy: April 2, 1963, (Tappan), CPK. II. Gainesville: June, (Hetrick), CPK. III. New Smyrna: April, AMNH.

4600 E. MERIDIANA (Slosson)

Pl. XXII, Fig. 3, ♂.

Ent. Amer. 5: 7. 1889.

I. Escambia Co.: March, SMH. West Pensacola: June 14, 1961, VFG. This is apparently an aberration, there being but a single translucent spot on each primary. II. Gainesville: UFES. III. DeLand: March, AKW. Weekiwachee Springs: March, May, CPK. Winter Park: (Slosson), Grsb. 92. Orlando: March, WMD. St. Petersburg: Feb., March, AMNH. Tampa: Grsb. 92. Lakeland: May, SIM. Kissimmee: AMNH. IV. Bradenton: April, CPK. Oneco: March, April, JGF. Archbold Biological Station: Dec.-March, YU; March, CU; June, AKW; July, AMNH; Nov.-March, PSU. Port Sewall: Jan., March, AMNH. Stuart: May, UM. Siesta Key: Feb.-April, June, CPK. Charlotte Harbor: type, Slosson. Bonita Springs: Feb., Dec., OB.

CYSTEOPHORA Hulst

4604 C. PERVERTIPENNIS Hulst

J. N. Y. Ent. Soc. 8: 215. 1900.

IV. Palm Beach: the type and one other specimen, March or April, (Dyar), Hulst.

Subfamily ENNOMINAE

BAPTA Stephens

4606 B. VESTALIATA (Guenée)

Pl. XXII, Fig. 4, ♀.

Spec. Gén. 10: 59. 1857.

I. Escambia Co.: Feb.-April, SMH. Florida Caverns State Park: April 13, 1960, (Denmark), DPI.

4608 B. GLOMERARIA (Grote)

Papilio 1: 41. 1881.

I. Escambia Co.: Feb., SMH.

DEILINIA Hübner

[4611 *D. quadrifasciaria* (Packard)]

Rept. Peabody Acad. Sci. 5: 62. 1873.

There is apparently some mix-up on the type, and it would appear that a label has been misapplied. I quote from Rindge (1955, p. 142, under *elimaria* Hulst, *Acidalia*): "Type male, Florida. . . . According to the original description, the type locality is Colorado, and the species was described from four males in the Hulst collection. There is another male labelled *quadrifasciata* Packard, typical, from Colorado." There is no good reason for accepting the species as valid in the Florida fauna.

4612 D. VARIOLARIA Guenée

Spec. Gén. 10: 56. 1857.

II. Gainesville: May 16, 1925, (Bates), det. Rindge, UM.

SYRRHODIA Hübner

The nomenclature used herein is in accordance with Rindge's recent studies (1950 and 1953). For the separation of the species these papers should be consulted.

4642 S. COLORARIA (Fabricius)

Syst. Ent. Suppl. p. 452. 1798.

Florida: Jan., March, USNM. I. Warrington: occasional, summer, VFC, WP. II. East Florida: (Doubleday), BM. Andrews: May, USNM. Jacksonville: (Slosson), Grsb. 95; AMNH. III. Glenwood: USNM. Winter Park: (Fernald), DPI. Orlando: March, April, MCZ. Lutz: March, AMNH. Stemper. March, USNM. Lakeland: May, AMNH. Food: *Ceanothus americanus*, and reported on *Trifolium* and *Rubus*.

4643 S. CRUENTARIA (Hübner)

Sammul. eur. Schmett.; Pl. 10, Fig. 48. "1796."

Cruentaria was formerly known as *sphaeromacharia* (Harvey). The form *penolivata* (Hulst) is also found in Florida. Florida: AMNH. Quincy: June, CPK. II. Gainesville: March, UM; April, UFES. River Rise: June, UFES. Prairie Creek: June, UFES. Lake Alice: April,

UFES. Hogtown Creek: moths abundant among grasses and blackberry bushes, April, Dozier (1920, p. 378); June, UFES. Hastings: April-June, USNM, AMNH. III. Levy Co.: AMNH. Enterprise: (Slosson), AMNH. Cassadaga: Aug., SVF. Lake Apopka: April, MCZ. Lake Louise: May, UFES. St. Petersburg: April, MCZ. Bartow: FMJ. Fort Meade: April, USNM. V. Deep Lake: April, SIM. Allen River to Deep Lake: April, Grsb. 95. VI. Homestead: March, CPK.

EPISEMASIA Hulst

4650 E. MORBOSA Hulst

Pl. XXII, Fig. 6, ♀.

Trans. Amer. Ent. Soc. 23: 328. 1896.

Forbes (1948, p. 70) makes this a race of *solitaria* (Walker). It is found here primarily as *morbosa*, though some of the records have appeared under the former name. I. Escambia Co.: March, May, det. Rindge, SMH. II. East Florida: (Doubleday), BM. Gainesville: March, DPI. Hastings: type of *morbosa*, June, AMNH. III. Wacassassa River: JCF. DeLand: March, AKW. Cassadaga: two March, one det. Forbes as *solitaria*, SVF; April, AMNH. Winter Park: May, DPI. St. Petersburg: March, AMNH. Lutz: April, HEW. IV. Oneco: March, April, JCF. Archbold Biological Station: March, CU; Aug., YU. VI. Florida City: Sept., OB.

MELLILLA Grote

4656 [M.] INEXTRICATA (Walker)

List Lep. Ins. Br. Mus. 23: 889. 1861.

This species is an *Itame* and the records for it will be found under that genus.

HELIOMATA Grote

4659 H. INFULATA (Grote)

Pl. XXII, Fig. 5, ♂.

Proc. Ent. Soc. Phila. 2: 67. 1863.

III. Cassadaga: April 4, 1951, SVF.

PHYSOSTEGANIA Warren

4663 P. PUSTULARIA (Guenée)

Spec. Gén. 10: 49. 1857.

Florida: Forbes (1948, p. 39). Food: maple.

PHILOBIA Duponchel

4665 P. AEMULATARIA (Walker)

List Lep. Ins. Br. Mus. 23: 884. 1861.

I. Escambia Co.: July, SMH. Warrington: July,

VFG. Quincy: May, CPK. Monticello: Aug., DPI. II. Gainesville: Aug., UFES; Sept., AMNH. East Florida: Packard (1876, p. 289). III. Winter Park: June, DPI. VI. Paradise Key: March, (Blatchley), Jones, ms.

4665, 1 P. SP.

III. Lutz: two March 23-25, 1916, (Friday), LACM. Stemper: April 21, 1911, (Friday), LACM. VI. Homestead: three Dec. 21-22, 1955, (Wolfenbarger), CPK, CWK. All det. Kirkwood as probably undescribed.

SEMIOTHISA Hübner

This genus is in a state of confusion and until it is thoroughly revised a large part of the records given herein must be considered tentative.

4669 S. AEQUIFERARIA (Walker)

List Lep. Ins. Br. Mus. 23: 886. 1861.

I. Escambia Co.: March, SMH. Myrtle Grove: Sept., WJW. Quincy: June, Sept., CPK. II. Gainesville: Feb., UFES; March, DPI. East Florida: type, (Doubleday), BM. Hastings: AMNH. III. Central Florida: March, Sept., WMD. Cassadaga: May-July, SVF. Weekiwachee Springs: April-June, CPK, CWK. Winter Park: March, Oct., DPI. Stemper: June, AMNH. IV. Oneco: June, CPK. Archbold Biological Station: Dec., AMNH; YU. Port Sewall; Jan.-March, AMNH. Siesta Key: Dec., CPK. Punta Gorda: April, AMNH. Palmdale: Aug., CU. Fort Myers: April, AMNH, SIM. V. Everglades: very common at light, April, AMNH, SIM. Allen River to Deep Lake: April, Grsb. 94. VI. Homestead: Feb., CPK. VIII. Tavernier: Aug., CWK.

4669, 1 S. SP.

This specimen is near *aequiferaria*, but there is nothing like it in either the U. S. National Museum or American Museum of Natural History collections. IV. Siesta Key: Dec. 31, 1951, CPK.

[4672 *S. inaptata* (Walker)]

List Lep. Ins. Br. Mus. 23: 886. 1861.

There is an inconclusive passage by Hulst (1894, p. 306) which deserves mention, though it cannot be a basis for claiming this species for Florida. He says: "*Macaria inaptata* Walker (type 886 in BM) is also a variety" (of *E. solitaria* Walker). While he did not say that *inaptata* is from Florida, he did to some extent infer it from the earlier part of the passage: "*Ephyra stabilitata* Walker, 632, and *Anisodes repugnata* Walker, 1577, all from E. Florida, are, I think,

the same (as *solitaria*) though varying somewhat in appearance." *Solitaria* is found in Florida and has been discussed on an earlier page. I have been unable to find anything about the actual status of *stabilitata* and *repugnata*.

4673 S. [BICOLORATA (Fabricius)]

Ent. Syst. Suppl., p. 454. 1798.

These are not like typical northern *bicolorata*, but Kirkwood has made genitalic studies and has found no differences. I. Escambia Co.: March, SMH. Torreya State Park: April, DPI. Quincy: Aug.-Oct., CPK, CWK. Monticello: Oct., AMNH. II. Gainesville: March, UFA; April, UM; Aug., CWK. Hogtown Creek: abundant, March, Dozier (1920, p. 378). III. Cassadaga: Feb.-May, Oct., SVF. Weekiwachee Springs: March-June, Aug., CPK, CWK; Aug., AMNH. Winter Park: March, May, DPI. IV. Archbold Biological Station: Jan., PSU; June, AKW; Nov., CU; Dec., YU. Punta Gorda: April, AKW.

4673, 1 S. SP.

Close to the above but obviously distinct, the underside being quite different. III. Cassadaga: Aug., SVF.

4674 S. DISTRIBUARIA (Hübner)

Pl. XXII, Fig. 9, ♀.

Zutr. exot. Schmett. 3: 39. 1825.

The records for this and the next species are unquestionably mixed, but I am including under the smaller one (i.e., 4674, 1) only those of which I am sure. I. Escambia Co.: March, SMH. West Pensacola: April, VFG. Ocean City: July, Oct., HOH. Quincy: May, June, Aug., Oct., Dec., CPK. II. Alachua Co.: Jan., DPI. Gainesville: Jan., AMNH; Feb., DPI; March, May, Nov., UFA, CPK; Oct., DPI. Starke: June, AKW. East Florida: as *transitaria*, Packard (1876, p. 295); as *proxanthata* (Walker), Packard (1876, p. 297). Hastings: May, AMNH. III. Central Florida: April, WMD. Cassadaga: March, May, Dec., SVF. Dunedin: April, OB. St. Petersburg: Dec.-March, Aug., AMNH. Tampa: March, AMNH. IV. Bradenton: Oct., CPK. Oneco: March, April, JGF; Oct., CPK. Archbold Biological Station: Nov.-Feb., PSU; Jan.-March, Sept., YU; Dec., AMNH, CU. Port Sewall: Jan., Feb., OB, AMNH. Siesta Key: Dec.-March, May, Oct., CPK. Miami: May, WRB; Sept., Oct., OB. South Miami: June, Nov., AMNH. VI. Homestead: Dec.-March, DPI; March-June, Sept.-Nov., CPK. Florida City: March, HEW; March, April, Aug., AMNH; May, WRB; July, OB. VIII. Big Pine Key: March, AMNH.

4674, 1 S. SANFORDI Rindge

Pl. XXII, Fig. 8, ♂.
Amer. Mus. Nov. 1910: 5. 1958.

See comments under *distribuaria* above. Florida: USNM. III. Cassadaga: Jan.-March, Sept., Nov., SVF. Weekiwachee Springs: March-June, Aug., AMNH, CPK, USNM. Orlando: Feb., WMD. St. Petersburg: Feb., March, AMNH. IV. Archbold Biological Station: Jan., April, Aug., Oct., YU; Nov., PSU. Port Sewall: Nov.-April, AMNH. Vero Beach: April, USNM.

4677 S. MULTILINEATA Packard

Rept. Peabody Acad. Sci. 5: 65. 1873.

I. Quincy: July 3, 1960, (Tappan), CPK. III. Cassadaga: Nov. 20, 1955, SVF. Both det. Rindge.

4679 S. PUNCTOLINEATA (Packard)

Pl. XXII, Fig. 7, ♂.
Rept. Peabody Acad. Sci. 5: 64. 1873.

The color of this does not quite match western specimens. Kirkwood very generously made a number of slides of what had been suspected to be a complex and found that in addition to *punctolineata*, there are present two and possibly three additional species. Unfortunately so much of the material is in such poor condition that nothing satisfactory can be done about placing the additional species, nor can the records be untangled until the species can be named and all Florida specimens reexamined. It can be said, however, that one of the additional species has been taken only at Homestead. The following records cover the rest of the complex. II. O'Leno State Park: Oct., DPI. Hastings: May, Grsb. 94. III. Central Florida: May, WMD. Weekiwachee Springs: March, May, CWK. Sanford: Oct., DPI. St. Petersburg: Dec.-Feb., AKW. IV. Bradenton: Feb., CPK. Archbold Biological Station: June, AKW; Aug., YU. Port Sewall: Dec.-Feb., April, AMNH. Siesta Key: Nov.-June, CPK, CWK. Punta Gorda: April, AKW. Davie: April, CPK, JLP. West Hollywood: April, June, CPK. Dade Co.: Aug., CPK. South Miami: June, NSMS. V. Collier Co.: Dec., DPI. Everglades: April, AMNH. Marco: April, AMNH. Chokoloskee: USNM. VI. Homestead: Feb., DPI; April, AMNH; Feb.-Nov., CPK, CWK. Florida City: Feb., CPK; April, OB; June, NSMS; June, July, AEB; July, HEW, CWK. Paradise Key: March, April, FMJ. VIII. Tavernier: Sept.-Nov., CPK.

[4680 S. granitata (Guenée)]

Granite moth.
Spec. Gén. 10: 85. 1857.

Florida: Chapman (Packard, 1876, p. 286), specimen said to be in the collection of the Boston Society of Natural History, which would now presumably be in the Boston University Collection. As all the species or races in this complex are supposed to be spruce feeders, there may be some error here, and the specimen, if still extant, should be re-examined. There is also a record from East Florida: (Doubleday), BM. This, too, should be checked.

4689 S. QUADRINOTARIA Herrich-Schaeffer

Pl. XXII, Fig. 15, ♂.
Samml. aussereur. Schmett.; Fig. 347. 1855.

I. Escambia Co.: Feb., March, July, SMH.

[4695 S. EREMIATA (Guenée)]

Spec. Gén. 10: 109. 1857.

I. Ocean City: April, HOH. Quincy: May 3, 1962, (Tappan), det. Rindge as probably *eremita*, CPK.

4696 S. ORDINATA (Walker)

List Lep. Ins. Br. Mus. 24: 1038. 1862.

Florida: (Doll), Grsb. 94; Barnes & McDunnough (1917a, p. 220). III. Weekiwachee Springs: May 1955, AKW. IV. Sarasota: two males May 8-June 1, 1951, (King), det. Rindge, CPK.

4710 S. CONTINUATA (Walker)

Pl. XXII, Fig. 11, ♂; Fig. 12, ♀.
List Lep. Ins. Br. Mus. 25: 1445. 1862.

Both *continuata* and the form *strigularia* (Walker) were described from Florida. The difference between them is small and every degree of intergrade may be found. I. Escambia Co.: March, SMH. Quincy: Sept., CPK. II. Gainesville: April, Oct., DPI; June, UFA. Fernandina: Aug., AMNH. East Florida: (Doubleday), BM. III. Central Florida: June, WMD. Ormond: (Slosson), Grsb. 93. DeLand: March, AKW. Cassadaga: April, May, Aug., SVF. Weekiwachee Springs: May, CPK. Titusville: Dec., AKW. St. Petersburg: April, AKW; May, AMNH. Lakeland: May, AMNH. IV. Bradenton: April, AEB, DPI. Oneco: March, JGF; April, CPK. Siesta Key: frequent, Dec.-June, CPK. Food: perhaps *Celtis*, also reported to be cedar, and doubtfully boneset. It might be noted that of these three, cedar is the only one growing on Siesta Key, at least where I have taken the insect.

4723 S. OCELLINATA (Guenée)

Spec. Gén. 10: 85. 1857.

"Hammock land" (Alachua Co.?), May 30, 1914, det. Franclemont, accession No. 248, UFES. III.

Central Florida: Aug. 1955, det. Rindge, WMD.
Food: locust.

4723, I S. INFIMATA (Guenée)

Spec. Gén. 10: 81. 1857.

III. Weekiwachee Springs: Aug., (May), CPK.
IV. Sarasota: Feb., (Hegener), CU. Siesta Key:
May, CPK. Fort Myers: April, (McDunnough),
AMNH. V. Everglades: April, AMNH.

4738 S. GNOPHOSARIA (Guenée)

Pl. XXII, Fig. 10, ♂.

Spec. Gén. 10: 99. 1857.

I. Escambia Co.: Feb., SMH. Warrington: April,
VFG. Quincy: July, CPK. III. Cassadaga: June,
Sept., SVF. Weekiwachee Springs: May, June,
CPK. Orlando: March, WMD. IV. Bradenton:
Sept., CPK. Oneco: March, April, JGF. Arch-
bold Biological Station: June, AKW. Port Sew-
all: March, AMNH. Siesta Key: May, CPK.
Punta Gorda: April, AKW. Bonita Springs: Feb.,
OB. Fort Lauderdale: May, July, UM. Bis-
cayne Bay: (Slosson), AMNH. VI. Homestead:
April, AMNH; April-July, Sept., CPK. Florida
City: Feb., CPK; March-June, AMNH; April,
OB. Paradise Key: March, JGF; (Blatchley),
Jones ms. Food: willow.

4745 [S.] FLUMENATA (Pearsall)

Brooklyn Inst. Arts Sci. Bull. 1: 215. 1906.

Rindge states that this is not a *Semiothisa* but is
unable to place it generically. IV. Punta Gorda:
three March 4, April 23, June 3, (Ramstedt), det.
Franclemont, AKW.

ENCONISTA Lederer

4703 E. DISLOCARIA (Packard)

Mono. Geom. Moths, p. 282. 1876.

II. Gainesville: Jan. 30, 1957, (Denmark), det.
Rindge, CPK. IV. Archbold Biological Station:
Feb. 10, 1959, (Frost), det. Rindge, PSU.

ITAME Hübner

4774 I. LATIFERRUGATA BRUNNEATA

(Packard)

Rept. Peabody Acad. Sci., p. 567. 1873.

Latiferrugata probably occurs in Florida as this
subspecies only. Florida: AMNH. I. Escambia
Co.: April, June, SMH. Ocean City: Feb.,
March, HOH. II. Gainesville: Feb., CPK;
March, June, Aug., Oct., DPI; May, UFES.
Fernandina: April, AMNH. East Florida:

(Doubleday), Packard (1876, p. 296). III. Week-
iwachee Springs: Feb., CPK. Lake Lucy: Feb.,
March, AMNH. Orlando: April, AMNH. St.
Petersburg: May, AMNH. Lakeland: May,
AMNH. Food: apple, plum, and wild cherry.

4656 I. INEXTRICATA (Walker)

List Lep. Ins. Br. Mus. 23: 889. 1861.

This has gone under the genus *Mellilla* in the
past. I. Escambia Co.: May, SMH. Ocean City:
May, HOH. II. East Florida: Packard (1876,
p. 295). III. Enterprise: April, AMNH, Illinois
State Lab. Cassadaga: April, SVF. Weeki-
wachee Springs: May, CPK. Tarpon Springs:
April, AKW. Egmont Key: April, UM. IV.
Archbold Biological Station: April, CU, YU.
Charlotte Harbor: (Slosson), Grsb. 95. Punta
Gorda: April, May, AKW. Fort Myers: April,
AMNH. South Florida: type male, AMNH;
type female of *floridensis* (Hulst), AMNH.

4781 I. VARADARIA (Walker)

Pl. XXII, Fig. 16, ♂.

List Lep. Ins. Br. Mus. 20: 251. 1860.

Florida: type of *florida* (Hulst), AMNH. I. Myr-
tle Grove: Sept., WJW. Quincy: Dec., CPK.
III. Orlando: May, WMD. St. Petersburg:
March, AMNH. IV. Bradenton: May, Dec.,
CPK. Oneco: March, April, JGF. Archbold
Biological Station: Jan., Feb., YU; Feb., PSU;
Dec., CU. Port Sewall: Jan.-March, AMNH.
Siesta Key: Jan.-March, May, June, CPK. Char-
lotte Harbor: AMNH. Punta Gorda: Feb.-April,
AKW. Lake Worth: Dyar (1901a, p. 458). Fort
Lauderdale: July, OB. V. Marco: April, AMNH.
Everglades: April, AMNH. VI. Homestead:
May-Aug., CPK. Florida City: April, WRB;
April, May, OB. Paradise Key: Feb., March,
FMJ.

[4788 I. CRASSATA (Hulst)]

Trans. Amer. Ent. Soc. 23: 333. 1896.

II. Hastings: type female, June, AMNH. Rindge
(1955, p. 140) said: "According to the original
description, the type locality is Colorado. How-
ever, the specimen with the type label agrees
with the original description." Since the fore-
going was published, Rindge (1956, p. 8) has
made a genitalic slide of the type and has found
that this specimen is a *Glena cognataria* (Hüb-
ner), to which it will fall as a synonym.

4790 I. PARTICOLOR (Hulst)

Can. Ent. 30: 163. 1898.

IV. Lake Worth: type, (Slosson), Hulst (1898b,
p. 163).

4793 I. GAUSAPARIA (Grote)

Pl. XXII, Fig. 13, ♂.
Papilio 1: 41. 1881.

Forbes (1948, p. 70) says that this is a northern race of *intractata* (Walker), which he places in the genus *Thysanopyga* Herrich-Schaeffer. Florida records would presumably belong under *intractata*. Florida: Dyar (1902, p. 312). I. Escambia Co.: Feb., April 5, 1961, SMH. Quincy: Aug., CPK. III. Cassadaga: Dec. 13, 1955, det. Rindge, SVF. IV. Oneco: April, JGF. Archbold Biological Station: March 28, 1958, (Pease), det. Rindge, YU. VI. Paradise Key: March, det. Benjamin, FMJ. The records given by Grossbeck (1917, p. 94) under *Cymatophora cervinaria* Blanchard, to wit: III. Lakeland: May 6. IV. La Belle: April 27, and V. Deep Lake: April 13, (Davis). All belong here in Sperry's opinion. He wrote, "*cervinaria* was named from Chile, supposedly equals *evarsaria* (Guenée) and perhaps *gausaparia* (Grote) from Wisconsin."

4794 I. NICETARIA (Guenée)

Spec. Gén. 10: 107. 1857.

Florida: Hulst (1894, p. 305); two, AMNH. I. Escambia Co.: March 17, 1961, VFG. II. Hastings: May, AMNH. III. Central Florida: June, WMD. IV. La Belle: April, AMNH. VI. Florida City: May, Sept., AMNH. Paradise Key: Dec., AMNH.

4795 I. SOLITARIA (Walker)

List Lep. Ins. Br. Mus. 22: 631. 1861.

See *Episemasia morbosa* Hulst.

4796 I. NERVATA (Guenée)

Spec. Gén. 10: 85. 1857.

Florida: (Hulst), Grsb. 94.

EUFIDONIA Packard

[4803 *E. notataria* (Walker)]

List Lep. Ins. Br. Mus. 21: 407. 1860.

Forbes (1948, p. 63) wrote, "A single specimen labelled Florida is probably in error."

HYPAGYRTIS Hübner**4807, 1 H. PUSTULARIA** Hübner

Pl. XXII, Fig. 18, ♀.

Zutr. exot. Schmett. 1: 20. 1818.

Florida: AMNH. I. Escambia Co.: March, VFG; March, June, SMH. Florida Caverns State Park: April, DPL. Quincy: July, CPK. II. Starke: June, AKW. Gainesville: March, AMNH; April,

UFA; June, Aug., UFES. Fernandina: Aug., AMNH. Jacksonville: Jan., AKW. III. DeLand: March, AKW. Cassadaga: Feb., Nov., Dec., SVF. Weekiwachee Springs: May, Aug., CPK. IV. Bradenton: Feb., CPK. Oneco: April, May, Sept., Oct., CPK. Archbold Biological Station: March, PSU, Sept., YU. Punta Gorda: Feb., AKW. Food: oak, elm.

4808 H. ESTHER Barnes

Pl. VI, Fig. 4, ♀.

Pan-Pacific Ent. 5: 11. 1928.

I. Escambia Co.: May 8, June 12 and 20, 1961, det. Rindge, SMH. Hills reports seeing others. Warrington: WP. Florida Caverns State Park: April 14, 1960, (Denmark), det. Rindge, DPL. Quincy: July 7, 1961, Sept. 10, 1962, (Tappan), CPK. II. Gainesville: April 1958, UFA.

TORNOS Morrison

This genus has been revised by Rindge (1954) and practically every record has been determined by him. The subspecies of *scolopacinaris* (Guenée) and *abjectarius* Hulst are listed separately, contrary to the normal practice in this text, because in spite of some overlapping, their ranges are primarily distinct.

4812 T. SCOLOPACINARIUS SPODIUS

Rindge

Pl. XXII, Fig. 19, ♀.

Bull. Amer. Mus. Nat. Hist. 104: 223. 1954.

I. Warrington: Sept., det. Rindge, VFG. West Pensacola: March, May, Sept., (Grant), AMNH. II. Gainesville: Feb., March, AMNH, CPK; Aug., UFES. St. Augustine: MCZ. III. Ocala: Feb., CM. Dade City: Aug., MCZ. Orlando: Feb., WMD. St. Petersburg: Jan.-March, Sept.-Nov., AMNH, CAS, MCZ. Stemper: CM. Lutz: Sept., CM. Tampa: Sept., AMNH, AKW. Fort Meade: Dec., CM. IV. Bradenton: April, CM. Archbold Biological Station: Jan.-March, YU; Feb., PSU; July, AMNH. Port Sewall: Jan., AMNH. Punta Gorda: as *scolopacinaris*, Feb., Slosson (1890b, p. 82).

4812 T. SCOLOPACINARIUS FORSYTHAE

Rindge

Bull. Amer. Mus. Nat. Hist. 104: 224. 1954.

IV. Bradenton: March, Oct., Dec., CPK. Oneco: May, CPK. Sarasota: April, CPK. Siesta Key: Feb., CPK. Fort Myers: May, AMNH. Bonita Springs: March, Dec., OB. Miami: March, June-Aug., Oct., AMNH, CM. VI. Homestead: Jan., Feb., AMNH; May-Aug., Oct., CPK. Florida City: April-June, Nov., Dec., OB, AMNH.

4812, 1 **T. ABJECTARIUS RAVUS** Rindge
Bull. Amer. Mus. Nat. Hist. 104: 229. 1954.

I. Monticello: Sept., AMNH. II. Gainesville: March, DPI; April, CPK; May, July, UFES. III. Ocala: Dec., CM. DeLand: Dec., AMNH. Cassadaga: March, Aug., SVF. Weekiwachee Springs: April, CPK. Lake Lucy: Feb., AMNH. Sanford: June, CAS. Orlando: April, MCZ. Titusville: Jan.-March, Oct., Nov., CM. St. Petersburg: MCZ. IV. Childs: Feb., March, YU. Port Sewall: Dec.-March, AMNH.

4812, 1 **T. ABJECTARIUS KIMBALLI** Rindge
Bull. Amer. Mus. Nat. Hist. 104: 230. 1954.

IV. Oneco: June, Sept., (Dillman), CNC, CPK. Archbold Biological Station: Sept., YU. Sarasota: allotype, May, AMNH. Siesta Key: holotype, Feb., AMNH. Punta Gorda: April, Dec., AKW. VI. Homestead: July, CPK.

4816 **T. CINCTARIUS** Hulst
Ent. Amer. 2: 192. 1887.

Florida: type female, AMNH. I. Escambia Co.: March 1961, SMH. Quincy: May 3, 1961, CPK. Monticello: Feb. 17, 1955, CPK. II. Gainesville: Jan., DPI; May, MCZ. III. Cassadaga: Aug. 20, 1962, SVF. Winter Park: AMNH. Orlando: April 3, 1899, Pearsall (1908, p. 133). St. Petersburg: Jan., Feb., USNM, MCZ. Stemper: CM. IV. Archbold Biological Station: Jan. 29, 1961, (Frost), PSU. Siesta Key: Jan. 6, 1957, April 16, 1953, CPK.

EXELIS Guenée

4818 **E. PYROLARIA** Guenée
Spec. Gén. 9: 324. 1857.

Florida: AMNH. I. Escambia Co.: April 2, Sept. 6, 1961, SMH. Quincy: April 4, 1961, CPK. II. Gainesville: July 1927, (Rogers), CU. Hastings: April, AMNH. III. Weekiwachee Springs: two May 21-24, 1960, (Mrs. May), det. Rindge, CPK. Orlando: Feb., March, AMNH. Lakeland: March 28, May 1-7, AMNH; May 5, SIM. Food: *Pyrola*, persimmon.

MELANOLOPHIA Hulst

Rindge has in preparation a paper describing new Florida subspecies of both species.

4856 **M. CANADARIA** (Guenée)
Spec. Gén. 9: 263. 1857.

I. Escambia Co.: Feb., SMH. Pensacola: July, AMNH. Quincy: Feb., May, July, CPK. Florida Caverns State Park: April 24, 1960, DPI. Torreya State Park: April 12, 1960, DPI. Monticello: Feb. 17, 1955, AMNH; June 22, 1955,

(Phillips), CPK. II. Prairie Creek: June 25, 1942, (Watson), det. Rindge with "?", UFES. Gainesville: Feb. 17, 1955, (Morse), May 1958, (Hetrick), CPK; March 1, 1942, (Watson), AMNH; April 30, 1960, (Peterson), DPI. East Florida: (Doubleday), BM. Hastings: May, AMNH. III. Levy Co.: (Laurent), AMNH. Ocala: Jan. 5, 1962, AMNH. Cassadaga: Feb. 27, 1962, SVF. Food: presumably conifers.

4857 **M. SIGNATARIA** (Walker)
List Lep. Ins. Br. Mus. 21: 350. 1860.

I. Escambia Co.: March 1961, March 9, 1962, SMH. Monticello: Feb. 16, 1955, (Phillips), det. Franclemont, CPK.

PROTOBOARMIA McDunnough

4875 **P. PORCELARIA** (Guenée)
Spec. Gén. 9: 252. 1857.

I. Torreya State Park: April, det. Forbes as form *indicataria* (Walker), DPI. II. East Florida: as *filaria* (Walker), (Doubleday), Packard (1876, p. 456). III. DeLand: March, AKW. Cassadaga: March, Aug., SVF. IV. Punta Gorda: Jan., Feb., NSMS; Jan., Feb., April, May, AKW; March, OB.

CLEORA Curtis

4876 **C. SUBLUNARIA** Guenée
Pl. XXII, Fig. 20, ♂.
Spec. Gén. 9: 376. 1857.

I. Escambia Co.: three Feb. 1961, det. Rindge, SMH.

4877 **C. MANITOBA** Grossbeck
Can. Ent. 43: 325. 1911.

I. Quincy: March 29, 1962, (Tappan), det. Rindge, CWK.

PSEUDOBOARMIA McDunnough

4880 **P. UMBROSARIA** (Hübner)
Samml. exot. Schmett. 1; Pl. 204. 1813.

I. Ensley: April, VFG. Myrtle Grove: March, July, WJW. Ocean City: March, June, HOH. Florida Caverns State Park: April, DPI. Torreya State Park: April, DPI. II. Gainesville: Nov., DPI. Lake Geneva: March, HEW. III. Cassadaga: March, June, SVF. Glenwood: July, UM. Winter Park: May, June, AMNH. Orlando: March, April, AMNH. Oldsmar: July, WRB. St. Petersburg: Aug., AMNH. Tampa: March, AMNH. Lakeland: May, AMNH, SIM. IV. Archbold Biological Station: Feb.-April, YU. Port Sewall: Jan., Feb., AMNH. Food: birch and oak.

4881 P. BUCHHOLZARIA Lemmer

Pl. VI, Fig. 5, ♂.
Bull. Brooklyn Ent. Soc. 32: 24. 1937.

Florida: type, USNM. In his description Lemmer says, "the specimen in the U. S. National Museum is labelled *Selidosema fuliginaria* type Hulst." III. Volusia Co.: July 29, 1938, UM. Weekiwachee Springs: March, AMNH; May, CPK. Winter Park: July 9, 1942, (Fernald), det. Franclemont, DPI. Orlando: Feb., det. Franclemont, WMD. IV. Port Sewall: Jan.-March, AMNH. Food: *Comptonia peregrina* var. *asplenifolia*, Lemmer.

4881, 1 P. LURIDULA (Hulst)

Trans. Amer. Ent. Soc. 23: 346. 1896.

Rindge (1956, p. 9) has established the validity of *luridula* and has placed it in this genus. The species closely resembles *Glana cognataria* but has much more heavily pectinated antennae. Florida: type, (Slosson), AMNH. III. Cassadaga: Sept., SVF. Weekiwachee Springs: Aug., (May), CPK. IV. Archbold Biological Station: Feb., (Frost), PSU; March, (Pease), YU.

GLENA Hulst**4882 G. COGNATARIA** (Hübner)

Zutr. exot. Schmett. 3: 34; Figs. 549, 550. 1825.

Florida specimens differ slightly from northern examples and fall under the subspecific name *crassata* (Hulst). I. Escambia Co.: Oct., SMH. Millview: March, VFG. DeFuniak Springs: May, Oct., AMNH. II. Gainesville: March, DPI. Hastings: type of *Diastictis crassata* Hulst, AMNH. III. Cassadaga: March, May, SVF. Weekiwachee Springs: May, June, CPK. La Grange: Sept., SIM. St. Petersburg: Jan., AKW; March, AMNH. Stemper: July, AMNH. Lakeland: May, AMNH. Fort Meade: type of *insaria* (Dyar) (1909, p. 27). Osceola Co.: Aug., UM. IV. Bradenton: Nov., CPK. Oneco: March, April, JGF; May, Aug., CPK. Archbold Biological Station: Jan., YU; March, PSU; April, CU; June, AKW; Dec., AMNH. Port Sewall: Jan., March, AMNH. Siesta Key: Jan., Feb., May, June, CPK. Punta Gorda: April-June, AKW. Fort Myers: April, AMNH; May, USNM. Bonita Springs: Jan., March, OB.

4883 G. CRIBRATARIA (Guenée)

Pl. XXII, Fig. 21, ♂.
Spec. Gén. 9: 260. 1857.

I. Escambia Co.: March, SMH. Warrington: VFG. VIII. Key Largo: Jan. 29, 1959, SVF.

[4891 G. fuliginaria (Hulst)]

Ent. Amer. 3: 215. 1888.

This false type which is in the U. S. National Museum has already been referred to under *Pseudoboarmia buchholzaria*.

ANAVITRINELLA McDunnough**4908 A. PAMPINARIA** (Guenée)

Pl. XXII, Fig. 22, ♀; Fig. 23, ♂.
Spec. Gén. 9: 245. 1857.

Pampinaria occurs throughout the state, though it may be absent south of Miami, and is common from February-December. The larva is a general feeder.

ANACAMPTODES McDunnough**4915 A. DEFECTARIA** (Guenée)

Pl. VI, Fig. 10, ♂.
Spec. Gén. 9: 247. 1857.

Defectaria is the commonest species of the genus, and has been taken from Pensacola to Tavernier, probably throughout the year. Food: poplar and willow.

4916 A. EPHYRARIA (Walker)

Pl. VI, Fig. 11, ♂.
List Lep. Ins. Br. Mus. 21: 349. 1860.

III. Lakeland: May 5, 1912, (Davis), AMNH. IV. Archbold Biological Station: Jan. 16, 1955, (Remington), det. Rindge, YU.

4917 A. HUMARIA (Guenée)

Pl. VI, Fig. 15, ♂.
Spec. Gén. 9: 246. 1857.

I. Warrington: July, VFG. Monticello: March, CPK. II. Perry: Dec., DPI. Alachua Co.: Feb., DPI. Gainesville: Feb., DPI. St. John's Bluff: (Doubleday), BM. III. DeLand: March, AKW. Cassadaga: March, May, June, SVF. Altamonte Springs: July, USNM. Brooksville: June, AKW. St. Petersburg: CU; March, AMNH. Lakeland: May, AMNH. IV. Archbold Biological Station: Aug., YU. Sarasota: April, May, CPK. The larva a general feeder; on *Petalostemum corymbosus* [*Kuhnistera pinnata*], UFES accession No. 7317.

4918 A. VELLIVOLATA (Hulst)

Pl. VI, Fig. 16, ♂.
Bull. Brooklyn Ent. Soc. 4: 34. 1881.

Florida specimens are dull in color with two tones of purple brown, not contrasting like northern specimens. Florida: type, May 6, 1880, AMNH. I. West Pensacola: Dec., VFG. Quin-

cy: Feb. 28, 1961, Aug. 23, 1960, (Tappan), CPK. II. Gainesville: March 13, 1925, UM; May 6, 1948, DPI. III. Marion Co.: July 24, 1938, UM. Weekiwachee Springs: May, CPK. Orlando: April, AMNH. IV. Oneco: one April 1955, JGF. Archbold Biological Station: Dec., PSU. Port Sewall: March, AMNH. Siesta Key: May, CPK. Miami: June, Dec., AMNH. VI. Homestead: April-June, CPK. Florida City: May, AMNH. Food: pine.

4919 A. PLUMOSARIA (Packard)

Pl. VI, Fig. 14, ♂.
Rept. Peabody Acad. Sci. 6: 51. 1874.

II. Hastings: McDunnough (1920, p. 31). IV. Oneco: March, JGF.

4920 A. CYPRESSARIA (Grossbeck)

Pl. VI, Fig. 13, ♂.
Bull. Amer. Mus. Nat. Hist. 37: 96. 1917.

In the original description Grossbeck speaks of this as being very abundant in the cypress swamps. Records other than his, however, are few. II. Hastings: May, June 24-30, AMNH. III. Lakeland: May 4-5, (Davis), SIM. IV. Okeechobee Co.: three on bald cypress, Coop. Econ. Ins. Rept. 4: 890. Punta Gorda: two March 10, April 24, (Ramstedt), AKW. Fort Myers: April 21, (Jones), OB. V. Deep Lake: April 13, Grsb. 96. Allen River to Deep Lake: April 12-14, OB, AMNH, SIM. VI. Homestead: Aug., CPK.

4921 A. PERGRACILIS (Hulst)

Pl. VI, Fig. 12, ♀.
Can. Ent. 32: 105. 1900.

Grossbeck (1917, pp. 98-99) refers to two forms, one "in which the two principal cross lines are very broad and conspicuous and the intervening space white"; the other "has the cross lines narrow edged with a broad deep ochreous band and the color is grayer." The latter has no name. I. Escambia Co.: Feb., SMH. III. Cassadaga: May, June, SVF. Winter Park: June, DPI. Lakeland: April, May, AMNH. IV. Archbold Biological Station: Sept., AMNH, CPK, YU; Nov., Dec., PSU. Port Sewall: March, AMNH. Siesta Key: Jan., CPK. Punta Gorda: April, Dec., AKW. Fort Myers: April, AMNH. South Bay: April, AMNH. Biscayne Bay: (Slosson), AMNH. Miami: April, AMNH. South Florida: type, Hulst. V. Allen River to Deep Lake: April, AMNH. Everglades: April, AMNH, SIM. VIII. Big Pine Key: April, AMNH.

AETHALURA McDunnough

4945 A. ANTICARIA (Walker)

List Lep. Ins. Br. Mus. 21: 404. 1860.

Florida: Forbes (1948, p. 58). I. Quincy: two Oct. 19, 1960, one Oct. 24, 1961, (Tappan), CPK. III. Anthony: Oct. 18, 1960, (Adkins), DPI. Cassadaga: Feb. 2, April 8, 1961, det. Rindge, SVF. IV. Punta Gorda: April 5, 1941, AMNH. Biscayne Bay: (Slosson), AMNH.

ECTROPIS Hübner

4946 E. CREPUSCULARIA (Dennis & Schiffermueller)

Syst. Verz. Wien., p. 101. 1776.

Florida: (Slosson), Grsb. 99. I. Quincy: April, CPK. Monticello: Oct. 7, AMNH. II. Alachua Co.: June, July, DPI. III. Winter Park: April, DPI. Food: according to Forbes (1948, p. 59), hemlock in Canada, with none other indicated. Grossbeck, on the other hand, gives a long list of purported food plants.

GLENOIDES McDunnough

4948 G. TEXANARIA (Hulst)

Ent. Amer. 3: 216. 1888.

Florida: (Slosson), AMNH. I. Escambia Co.: March, SMH. Myrtle Grove: Nov., WJW. Quincy: June, Aug., Oct., CPK. II. Starke: June, AKW. Gainesville: June, DPI. Ortega: Nov. 3, AMNH. Lake Geneva: March 6, 1953, det. Rindge, HEW. III. Central Florida: Feb. 1956, det. Rindge, WMD. DeLand: two March 27, OB, AKW. Cassadaga: March, July-Sept., Dec., det. Rindge, SVF. Weekiwachee Springs: Aug., CPK. Citrus Co.: April, (Wyatt), AMNH. Groveland: Dec., DPI. IV. Bradenton: July, CPK. Oneco: July, Sept., Oct., (Dillman), det. Rindge, AMNH, CPK. Archbold Biological Station: Nov.-Feb., PSU; April, YU.

PIMAPHERA Cassino & Swett

4950 P. SPARSARIA (Walker)

Pl. XXII, Fig. 17, ♂.
List Lep. Ins. Br. Mus. 26: 1596. 1862.

II. Fernandina: April, AMNH. East Florida: type, (Doubleday), BM. IV. Port Sewall: Jan., March, Dec., AMNH. Sarasota: May, AMNH. Siesta Key: Feb., CPK. La Belle: April 27, SIM. VI. Florida City: June, July, AMNH. VIII. Tavernier: July-Oct., AMNH, CPK. Big Pine Key: March, AMNH.

EPIMECIS Hübner

As there are several species of the genus found in the Florida City region, it is quite possible that the records may be mixed and even that there may be additional names involved.

4951 E. HORTARIA (Fabricius)

Pl. XXII, Fig. 24, ♂.
Ent. Syst. 3(2): 138. 1794.

This has been taken as both typical *hortaria* and form *dendraria* (Guenée). I. Escambia Co.: March, May, SMH. Myrtle Grove: Aug., WJW. Quincy: Sept., CPK. Tallahassee: March, JPK. II. Lake City: CU. III. Gulf Hammock: Laurent (1897, p. 47). Daytona: March, CPK. Ormond Beach: Feb., CPK. Enterprise: Slosson (1917, p. 94). Cassadaga: March, May, SVF. Brooksville: June, HEW. Winter Park: Sept., DPI. Indian River: AMNH. Plant City: March, UM. IV. Rye: July, OB. Archbold Biological Station: March, Nov., PSU. Stuart: Jan., UM. Port Sewall: March, AMNH. Punta Gorda: March, OB. Fort Lauderdale: July, UM. VI. Florida City: April, AMNH. Food: tulip tree, sassafras; *Nectandra coriacea* [*Persea catesbyana*], Slosson (1905, p. 70).

4951, 1 E. SUBAUSTRALIS (Hulst)

Can. Ent. 30: 194. 1898.

This is the species which was erroneously assigned to the genus *Almodes*. It is placed here on the authority of Forbes, who with Capps, examined the type. Forbes notes that it is close to *jamaicaria* (Oberthur) but much smaller and hardly angled. IV. Coconut Grove: type, USNM.

4951, 2 E. MATRONARIA (Guenée)

Pl. VI, Fig. 21, ♂.
Spec. Gén. 9: 288. 1857.

IV. Biscayne Bay: (Slosson), AMNH. Miami: USNM. South Florida: Aug., OB. V. Cypress Swamp: AMNH. VI. Homestead: Sept. 30, Oct. 1, 1959, (Wolfenbarger), CPK. Paradise Key: March, (Barber), USNM.

4951, 3 E. ANONARIA (Felder)

Reise Nov. 2; Pl. 125, Fig. 20. 1874.

V. Cypress Swamp: one male, AMNH. Chokoloskee: one female, AMNH.

4951, 4 E. FRATERNARIA (Guenée)

Pl. VI, Fig. 20, ♂.
Spec. Gén. 9: 288. 1857.

IV. Matheson Hammock: two March, JGF. Coral Gables: Jan. 9, 1949, Oct., (Strohecker), CPK; one Feb., JGF.

4951, 5 E. DETEXTA (Walker)

Pl. VI, Fig. 22, ♂.
List Lep. Ins. Br. Mus. 21: 452. 1860.

IV. Archbold Biological Station: June 24, ABS.

South Miami: June 17, 1944, (Forsyth), AMNH. VI. Homestead: Dec.-Feb., May-Oct., (Wolfenbarger), AMNH, CPK; reared from larva collected by Wolfenbarger on avocado, June 16, CPK. Florida City: Aug. 14, OB.

PHAEOURA Hulst**4953 P. QUERNARIA** (Abbot & Smith)

Pl. XXII, Fig. 26, ♂; Fig. 27, ♀.
Lep. Ins. Ga. 2: 205. 1797.

This and *Lycia ypsilon* below are both variable and are quite similar in appearance. The males are readily separable by the antennae, which in *quernaria* are evenly pectinate, gradually tapering; in *ypsilon* they are somewhat shaggy. Florida: (Slosson), Grsb. 100. I. Escambia Co.: March, VFG. Quincy: May, CPK. II. Old Town: March, CPK. Gainesville: Jan., UFA; Feb., DPI. III. Cassadaga: March, SVF. Winter Park: March, DPI. IV. Archbold Biological Station: Feb., PSU. Siesta Key: Jan., Feb., DPI, AMNH, CPK. Punta Gorda: Feb., AMNH. Food: oak.

PHIGALIA Duponchel**4956 P. OLIVACEARIA** (Morrison)

Proc. Boston Soc. Nat. Hist. 16: 200. 1874.

I. Long Beach: det. Ferguson, HEW. II. Gainesville: Feb. 15, 1955, CPK. III. Williston: Feb. 14, AKW.

4957 P. DENTICULATA Hulst

J. N. Y. Ent. Soc. 8: 219. 1900.

I. Escambia Co.: Feb. 15, 1961, VFG. Quincy: five Feb. 1-22, 1961, (Tappan), AMNH, CPK. II. Gainesville: two Feb. 1-19, 1955, (Morse), AMNH, CPK.

4958 P. TITEA (Cramer)

Pl. XXII, Fig. 29, ♂.
Pap. Exot. 3: 148; Pl. 275, Fig. C. 1782.

I. West Pensacola: Feb. 14, 1961, (Grant), AMNH. Wright: March, HOH. Quincy: Feb. 28, 1961, (Tappan), AMNH. Monticello: Feb., March, (Phillips), det. Franclemont, CPK. II. Gainesville: Feb., (Perry), DPI, CPK. III. Cassadaga: Feb. 20, 1953, det. Franclemont, SVF. IV. Siesta Key: March 12, 1961, det. Rindge, CPK. Larva a general feeder.

LYCIA Hübner**4952 L. YPSILON** (S. A. Forbes)

Pl. XXII, Fig. 25, form *carlotta* Hulst, ♂.
Rept. State of Ill. Ent. 14: 95; Pl. 10, Fig. 4. 1885.

In Florida it occurs as both *ypsilon* and form *carlotta* Hulst, along with intergrading specimens. I. Escambia Co.: March, SMH. II. Gainesville: Jan., AMNH, Feb., DPI. III. Wiliston: Feb., AKW. Cassadaga: Feb., March, SVF. Orlando: Jan., Feb., WMD. St. Petersburg: USNM; Feb., AEB; May, OB. IV. Bradenton: Jan., CPK. Archbold Biological Station: Feb., PSU. Siesta Key: Feb., March, CPK. Charlotte Harbor: type of *carlotta*, AMNH. Punta Gorda: Feb., March, AKW; March, AEB. Food: apple.

CERATONYX Guenée

4954 C. SATANARIA Guenée

Pl. XXII, Fig. 28, ♂.

Spec. Gén. 9: 194. 1857.

Forbes says the type of this is lost. It was described by Guenée from a drawing by Abbot, evidently unpublished. Forbes also tells me that *Euthyatira candida* Smith, q.v., is a synonym of this. These determinations are based on some larval studies by Franclemont on a congeneric Arizona species. I. Escambia Co.: three Feb. 1961, SMH, CPK, USNM.

STENOTRACHELYS Guenée

4978 S. APPROXIMARIA (Hübner)

Pl. XXII, Fig. 30, ♂; Fig. 31, ♀.

Samml. exot. Schmett. 1; Pl. 205, Figs. 1-4. 1812.

Florida: UFES accession No. 72. I. Escambia Co.: Oct., SMH. Myrtle Grove: Oct., WJW. Quincy: Oct., Nov., CPK. II. Gainesville: Sept., DPI; Nov., CPK. Crescent City: larva on live oak, Packard (1890a, p. 187). III. Silver Springs: Sept., AMNH. Cassadaga: Oct., Nov., SVF. Leesburg: Sept., (Englehardt), AMNH. Winter Park: Nov., DPI. Orlando: Nov., DPI. Titusville: Dec., OB, AMNH. St. Petersburg: AMNH. IV. Archbold Biological Station: Nov., Dec., PSU. Punta Gorda: Dec., AKW. Bonita Springs: Nov., OB. Food: smilax.

SERICOPTERA Herrich-Schaeffer

4980 S. VIRGINARIA (Hulst)

Pl. XXIII, Fig. 1, ♂.

Ent. Amer. 1: 202. 1886.

The species occurs about equally as *virginaria* and form *vestalis* (Hulst), the latter an immaculate white. I. Monticello: Aug., DPI. III. Indian River: type, AMNH. IV. Bradenton: OB. Port Sewall: Jan., March, AMNH. Siesta Key: Dec.-March, May, June, CPK. Venice: May,

CU. Charlotte Harbor: (Slosson), AMNH. Useppa Island: AMNH. Jupiter: Feb., Dyar (1907, p. 233). South Florida: type of *vestalis*, AMNH; April, OB. V. Collier Co.: Dec., DPI. Everglades: April, AMNH, SIM, USNM. VI. Homestead: July, CPK. Florida City: April, May, OB. VII. Flamingo: Feb., April, DPI. VIII. Key Largo: March, OB, AMNH, HFS. Tavernier: Aug.-Oct., Dec., DPI. Cudjo Key: Dyar. Craig: July, DPI.

LYTROSIS Hulst

4993 L. UNITARIA (Herrich-Schaeffer)

Samml. aussereur. Schmett., pp. 65, 80; Pl. 41, Fig. 204. 1854.

Florida: Forbes (1948, p. 78) wrote, "A specimen in the National Museum labelled Florida without details."

4993, 1 L. SP.

An apparently new species which Knudsen has also taken in Georgia and Franclemont in New Jersey. The latter will describe it. I. Escambia Co.: April 29, 1962, SMH. Tallahassee: May 1, 1951, det. Franclemont, JPK.

EUCHLAENA Hübner

Rindge (1956, pp. 16-19) made a revision of the genus insofar as it applies to Florida. Since it has not been possible to re-examine all the specimens in the light of his findings, the following records must be considered as subject to error and review. Collectors and institutions holding material in the genus should refer to his paper. All that may be said at the present writing is that records for certain species as listed here will probably belong under certain other names, to wit: those under *obtusaria* (Hübner) will probably be correct; the specimen of *muzaria* (Walker) should be re-examined; *amoenaria* (Guenée) is probably all right; records for *vinulentaria* (Grote & Robinson) and *tiviaria* (Walker) will probably belong under *madusaria* (Walker); records for *astylusaria* (Walker) will probably belong under that name which is a subspecies of *amoenaria* (Guenée); 5001, 1, *E. sp.*, is probably *deplanaria* (Walker); and records for *pectinaria* (Denis & Schiffermueller), with its synonym *deductaria* (Walker), are probably correct.

4995 E. OBTUSARIA (Hübner)

Pl. XXIII, Fig. 2, ♂.

Samml. eur. Schmett.; Pl. 75, Fig. 390. 1809-1820.

I. Escambia Co.: July, SMH. Warrington: VFG.

Quincy: Oct. 19, 1960, (Tappan), det. Rindge, Oct. 30, 1961, CPK. Monticello: March 28, 1961, (Phillips), det. Rindge, CPK. III. Brooksville: June 13, 1937, VGS. IV. Oneco: two May, Oct., (Dillman), CPK. Archbold Biological Station: Dec., YU. Sarasota: May 4, 1951, (King), CPK. Siesta Key: May 2, 1953, CPK.

4995, 1 E. MUZARIA (Walker)

List Lep. Ins. Br. Mus. 20: 154. 1860.

I. Monticello: April 8, 1919, (Hoffman), CU.

4999 E. AMOENARIA (Guenée)

Pl. XXIII, Fig. 3, form *astylusaria* (Wlk.), ♂. Spec. Gén. 9: 124. 1857.

The records under *astylusaria* (Walker) below probably belong here, as Rindge (1956, p. 18) considers the latter a southern subspecies of *amoenaria*. I. Quincy: Sept., CPK. Tallahassee: March, JPK. Monticello: March, CPK. II. Gainesville: UFES; common, Aug., Sept., Dozier (1920, p. 378). IV. Oneco: Aug., CPK. Archbold Biological Station: Feb., March, PSU. Punta Gorda: Jan., AMNH; Jan., Feb., AKW; Feb., March, AEB; March, OB.

4999, 1 E. MADUSARIA (Walker)

List Lep. Ins. Br. Mus. 20: 153. 1860.

On the basis of Rindge's studies (1956, p. 16), I am placing here all records received under the name *vinulentaria* (Grote & Robinson). Florida: AMNH. I. Escambia Co.: March, April, SMH. Ocean City: March, HOH. II. Alachua Co.: Jan., CPK. Gainesville: July, CU. Fernandina: April, AMNH. Lake Geneva: March, AMNH, HEW. III. Cassadaga: Feb., SVF. St. Petersburg: March, May, Oct., AMNH. Lakeland: April, AMNH. IV. Oneco: May, Oct., CPK. Archbold Biological Station: Jan., PSU; Feb., det. Rindge, March, Dec., YU. Port Sewall: Feb., AMNH. Siesta Key: Jan., May, CPK. Charlotte Harbor: (Slosson), AMNH. Fort Myers: April, AMNH.

5000 E. VINULENTARIA (Grote & Robinson)
Ann. Lyceum Nat. Hist. N. Y. 8: 446. 1867.

As noted above, the records for this belong under *madusaria*.

5001 E. ASTYLUSARIA (Walker)

List Lep. Ins. Br. Mus. 20: 152. 1860.

Inasmuch as Rindge (1956, p. 18) believes this to be the southern subspecies of *amoenaria* the records should go under that name, but since both subspecies may be present, I am leaving them separate. I. Escambia Co.: March, SMH.

Warrington: April, VFG. Ocean City: March, HOH. Florida Caverns State Park: April, DFI. Monticello: Feb., AMNH; Feb., March, CPK. II. East Florida: Grsb. 101. Gainesville: March, DPI. Jacksonville: Jan., AKW. St. John's Bluff: *astylusaria* and *tiviaria* (Walker), (Doubleday), BM. The *tiviaria* record should probably belong under *madusaria*, of which Rindge (1956, p. 16) made *tiviaria* a synonym. III. Juniper Springs: Sept., UM. DeLand: March, AKW. IV. Bradenton: Nov., CPK. Oneco: May, June, CPK. Archbold Biological Station: March, YU. Punta Gorda: Feb., OB; March, June, AKW. Fort Myers: May, USNM. La Belle: April, SIM. As Grossbeck includes *vinulentaria* as a synonym of *astylusaria*, the East Florida and La Belle records may be either *amoenaria*, *amoenaria astylusaria*, or *madusaria*. Food: various kinds of trees.

5001, 1 E. DEPLANARIA (Walker)

Pl. XXIII, Fig. 4, ♂.

List Lep. Ins. Br. Mus. 26: 1510. 1862.

I. Escambia Co.: July, SMH. IV. Oneco: May, June, Aug., (Dillman), det. Rindge, AMNH, CPK. Archbold Biological Station: Nov., PSU. Port Sewall: AMNH. Siesta Key: Feb., May, det. Rindge, CPK.

5003 E. PECTINARIA (Denis & Schiffermueller)

Syst. Verz. Wien., p. 103; Fig. 6. 1776.

Florida: as *deductaria* (Walker), (Slosson), Grsb. 95. I. Warrington: June, VFG. Monticello: Feb., (Phillips), det. Franclemont, CPK. II. East Florida: (Doubleday), BM. IV. Oneco: July, CPK. Food: wild cherry.

XANTHOTYPE Warren

[5007 *X. crocataria* (Fabricius)]

Ent. Syst. Suppl., p. 146. 1794.

Grossbeck (1917, p. 100) listed several records under this name. Mrs. Forsyth had it on her sale list, and Beebe reported a specimen in the University of Michigan collection, which he was unable to re-examine. However, I believe all of these belong under the next species as it seems to be the consensus that *rufaria* Swett is the only species of the genus present in Florida.

5009 X. RUFARIA Swett

The Lepidopterist 2: 88. 1918.

Rufaria is not uncommon from Warrington to Venice and the Archbold Biological Station, taken February-June, August-October, and in December.

APOLEMA Hulst

- 5018 A. CARATA (Hulst)
Ent. Amer. 2: 211. 1887.
Florida: type, (Franck), AMNH. IV. Myakka:
July 3, (Grossbeck), OB.

HOMOCHLODES Hulst

- 5022 H. FRITILLARIA (Guenée)
Spec. Gén. 10: 136. 1857.
Florida: Rupert (1949, p. 143). Food: *Pteridium*.

TACPARIA Walker

- 5023 T. DETERSATA (Guenée)
Spec. Gén. 10: 105. 1857.
Florida: Rupert (1949, p. 149). Food: alder.

- 5024 T. ZALISSARIA Walker
List Lep. Ins. Br. Mus. 20: 234. 1860.
Florida: two, (Slosson), AMNH. I. Escambia
Co.: March 12, 1962, SMH. Myrtle Grove:
March 30, 1963, WJW. Quincy: April 14, (Tap-
pan), CPK. IV. Oneco: March 22, 1955, JGF.
Port Sewall: Feb., AMNH. Siesta Key: form
darlingtoni (Lemmer), Feb. 23, 1952, CPK.

LOXOGRAMMA Stephens

- 5025 L. SUBAEQUARIA Walker
List Lep. Ins. Br. Mus. 26: 1660. 1862.
Florida: Rupert (1949, p. 147). Food: various
ferns.
5026 L. DIVISATA (Hübner)
Samml. exot. Schmett. 1; Pl. 207. 1818.
East Florida: (Doubleday), BM. I. Escambia
Co.: March 18, 1962, SMH.

PRIOCYCLA Guenée

- 5029 P. DECOLORARIA (Hulst)
Ent. Amer. 1: 107. 1886.
I. Quincy: April 4, Sept. 16, 1963, (Tappan), det.
Forbes, CPK.

PLAGODIS Hübner

- 5036 P. FERVIDARIA Herrich-Schaeffer
Samml. aussereur. Schmett. p. 63; Pl. 41, Fig.
203. 1854.
I. Tallahassee: March 10, 1951, det. Franclemont,
JPK. Monticello: March 29, 1960, (Phillips),
CPK. II. Gainesville: form *arrogaria* (Hulst),
May 23, 1945, (Bates), UM.

HYPERETIS Guenée

- 5043 H. ALIENARIA (Herrich-Schaeffer)
Samml. aussereur. Schmett. pp. 63, 82; Pl. 64,
Fig. 364. 1855.
I. Escambia Co.: March 1961, SMH. Quincy:
March 28, 1963, (Tappan), CPK. Tallahassee:
form *nyssaria* Guenée, April 10, 1951, JPK. II.
Gainesville: Feb. 28, 1938, UFES; April 7, 1924,
UM. Food: *Cornus*, *Nyssa*, and *Hypericum*.
5043, 1 H. AMICARIA Herrich-Schaeffer
Pl. XXIII, Fig. 5, ♂.
Samml. aussereur. Schmett. 63; Fig. 361. 1855.
I. Escambia Co.: May 27, 1961, SMH. Torreya
State Park: April 16, 1963, (Woodruff), DPI.
Quincy: March 28, 1963, (Tappan), CPK.

NUMIA Guenée

- 5043, 3 N. TEREBINThERIA Guenée
Spec. Gén. 9: 403. 1857.
VIII. Tavernier: Sept. 18, 1955, (J. N. Todd), det.
E. L. Todd, CPK.

NEMATOCAMPA Guenée

- 5044 N. FILAMENTARIA Guenée
Pl. XXIII, Fig. 6, ♂.
Spec. Gén. 9: 121. 1857.
I. Myrtle Grove: May, WJW. II. Gainesville:
one April, one June, the latter with a curious
greenish tint, (Hetrick), UFA. Hastings: (Hulst),
Grsb. 101. Larva a general feeder.
5151 N. BRUNNEOLINEATA (Hulst)
J. N. Y. Ent. Soc. 8: 218. 1900.
I. Escambia Co.: April 29, 1961, det. Rindge as
probably this, SMH. There is also a possibility
that this may be *expunctaria* Grote. West Pensa-
cola: May 13, 1963, VFG. II. Gainesville: reared
from sweetgum, April 11, 1948, (Weems), DPI.
This specimen does not agree entirely with the
type, with which it has been compared, but is
closer to it than to *filamentaria* in the opinion
of Rindge. The type shows only the two prin-
ciple lines, whereas in this the wings above show
some faint reticulations or mottling. Unfortu-
nately, the abdomen has been gutted by pests.
Hastings: type, May, AMNH.

METARRANTHIS Warren

- 5046, 2 M. HOMURARIA (Grote & Robinson)
Pl. XXIII, Fig. 7, ♂.
Trans. Amer. Ent. Soc. 2: 80. 1868.
Contrary to Grossbeck's belief (1917, p. 101)

that the typical form, by which he actually meant the distinct species *hypochararia* (Herrich-Schaeffer), occurs in Florida, there is no evidence thereof. Florida: (Slosson), AMNH. This specimen is labeled, presumably by Grossbeck, "(homuraria typical)." Florida: type of *amethystaria* (Strecker), Rupert (1943, p. 148). I. Escambia Co.: March, SMH. Florida Caverns State Park: April, DPI. Quincy: July, CPK. II. Gainesville: April, DPI. III. Cassadaga: Aug., SVF. Brooksville: June 12, 1940, VGS. Winter Park: Sept. 2, (Fernald), DPI.

[5049 **M. PILOSARIA** (Packard)]

Mono. Geom. Moths, p. 501. 1876.

I. West Pensacola: May 10, 1962, det. Rindge with "?," VFG. The specimen is a female and is fairly close to a female from North Carolina in the collection of the American Museum of Natural History, placed tentatively under this name.

5052 **M. OBFIRMARIA** (Hübner)

Pl. XXIII, Fig. 16, ♀.

Samm. exot. Schmett. 2: 219; Pl. 432, Figs. 1-4. 1806.

Florida: (Slosson), AMNH. I. Escambia Co.: March, SMH. Warrington: occasional, summer, VFG. Quincy: March, CPK. II. Gainesville: UFA. East Florida: (Doubleday), BM. III. Cassadaga: March, SVF. Weekiwachee Springs: March, CPK. Food: *Vaccinium*.

ENNOMOS Treitschke

5059 **E. SUBSIGNARIUS** (Hübner)

Samm. exot. Schmett. 2; Pl. 429. 1806.

I. Warrington: WP. West Pensacola: June 5, 1960, VFG. III. New Smyrna: two April 24, AMNH. IV. Dade Co.: eggs on bark of gumbo-limbo, det. at USNM, Peterson letter of May 23, 1962. V. Deep Lake: April 13, SIM. Allen River to Deep Lake: April 14, det. Rindge by genital comparison, AMNH. Food: apple, elm, maple, and many other kinds of trees and shrubs.

STENASPILATES Packard

5053 **S. ANTIDISCARIA** (Walker)

List Lep. Ins. Br. Mus. 26: 1513. 1862.

Antidiscaria is easily separable from the other species of the genus by its red brown color with a violaceous tinge. Florida: type of *lentaria* (Hulst), AMNH. II. East Florida: (Doubleday), BM. III. Central Florida: (Neumoegen), Grsb. 101. Marion Co.: June, July, UM. Dunnellon: Aug., UM. Cassadaga: Jan., SVF. Weekiwachee

Spring: April, CPK; Aug., UM. St. Petersburg: March, AMNH. IV. Oneco: March, April, JGF; April, AKW; April, June, CPK. Archbold Biological Station: Jan.-March, YU; June, AKW. Port Sewall: Feb., AMNH.

5061 **S. ZALISSARIA** (Walker)

Pl. XXIII, Fig. 9, ♀.

List Lep. Ins. Br. Mus. 20: 187. 1860.

This is not to be confused with *Tacparia zalissaria* Walker, which has been more generally known as *Apaecasia atropunctata* (Packard). However, there is every possibility of confusion with the next three species, all of which are quite similar. *S. zalissaria* has a relatively smooth t.p. line, at least if this is the true *zalissaria*, about which there is some question. Florida: AMNH, USNM. I. Myrtle Grove: Nov., WJW. II. Fernandina: April, OB. East Florida: (Doubleday), BM. III. Ormond: March, AMNH. Cassadaga: Oct., SVF. Umatilla: June, DPI. Indian River: AMNH. St. Petersburg: March, AMNH; March, Oct., USNM; April, AKW. IV. Gillette: Feb., DPI. Bradenton: Feb.-May, DPI; March, AMNH. Oneco: March, JGF. Archbold Biological Station: Jan., March, PSU. Vero Beach: April, DPI. Port Sewall: Feb., March, AMNH. Siesta Key: Jan.-April, CPK. Charlotte Harbor: (Slosson), OB, AMNH. VI. Homestead: Feb., DPI. Florida City: April, May, OB. Paradise Key: March, USNM.

5071 **S. ATROCOLORATA** (Hulst)

Ent. Amer. 1: 205. 1886.

The t.p. line has a prominent tooth near the inner margin. Florida: type female, AMNH. III. Titusville: Jan. 15, AKW.

[5071, 1 *S. rectissima* Dyar]

Proc. U. S. Nat. Mus. 38: 263. 1910.

Grossbeck (1917, p. 101) listed specimens from: II. Jacksonville: Sept. 28, (Davis), SIM. IV. Charlotte Harbor: Biscayne Bay: (Slosson). However, as the species was described from the mountains of Mexico and as no Florida specimen has been located, there must be some error. The species is much paler than *zalissaria* or *atrocolorata*, though of the same general pattern. It is possible that the records belong under the next species, which is a shade lighter in tone but not so pale as *rectissima*. The latter name should not stand in our fauna until we have better proof of the presence of the species.

5071, 2 **S. SP.**

So far this must stand without a name, though it may be one of the tropical species. Florida:

as "*Azelina hubnerata atrocolorata*," AMNH. III. Ormond: (Slosson), AMNH. Indian River: two, AMNH. IV. Biscayne Bay: (Slosson), OB. VIII. Tavernier: nine April, July, Aug., Oct., Dec., AMNH, CPK.

PERO Herrich-Schaeffer

5072 P. HONESTARIUS (Walker)

List Lep. Ins. Br. Mus. 20: 258. 1860.

Florida: (Slosson), Grsb. 102. In view of the recent separation of *barnesi* and the fact that it is present in Florida, the foregoing might belong under either name. III. St. Petersburg: type of *dyari* Cassino & Swett, MCZ. Forbes examined the genitalic slide of this at my request, and states that it is *honestarius* without the slightest question.

5082, 1 P. BARNESI Cassino & Swett

Pl. VI, Fig. 6, ♂.

The Lepidopterist 3: 143. 1922.

I. Escambia Co.: one Feb. 1961, one Feb. 25, 1962, SMH. Quincy: one March, CPK. Monticello: three Feb., March, 1955, (Phillips), det. Rindge by genitalic dissection, two March 1961, AMNH, CPK. II. Gainesville: Feb. 27, 1955, (Morse), DPI; four March, April, (Hetrick), UFA, AMNH.

NEPYTIA Hulst

5111 N. SEMICLUSARIA (Walker)

Pl. VI, Fig. 23, ♂.

List Lep. Ins. Br. Mus. 26: 1506. 1862.

Florida: (Koebele), Grsb. 95. I. Warrington: fairly common, summer, VFG, WP. II. Gainesville: April, May, UFA; May, DPI; May, June, UFES. III. Cassadaga: May, SVF. Holly Hill: May, DPI. Brooksville: June, VGS. Eustis: reared from *Pinus clausa*, May, (Hetrick), UFA, CPK. Orlando: April, WMD. St. Petersburg: April, OB; May, AEB; Sept., AMNH. Tampa: AMNH. Lakeland: May, AMNH. The life history was reported by Hetrick (1960, p. 205).

CARIPETA Walker

5125 C. DIVISTATA Walker

List Lep. Ins. Br. Mus. 26: 1525. 1862.

Florida: Packard (1876, p. 238) wrote, "The Floridian example, though in bad condition, does not differ from northern ones, except that the margin of the wing is clearer and the adjoining white band wider." Food: hemlock, balsam, and white pine.

5129 C. LATIORATA Walker

List Lep. Ins. Br. Mus. 26: 1525. 1862.

II. East Florida: (Doubleday), BM. Food: white pine or pitch pine.

5130 C. ARETARIA (Walker)

List Lep. Ins. Br. Mus. 20: 258. 1860.

Florida: (Slosson), OB; pupa found on *Pinus resinosa*. I. Ocean City: March, Oct., HOH. Monticello: March 1, 1955, March 8, 1960, (Phillips), CPK. III. Cassadaga: Jan., SVF.

LAMBIDINA Capps

[5149 *L. fervidaria* (Hübner)]

Zutr. exot. Schmett. 3: 8; Figs. 409, 410. 1831.

Capps (1943, p. 122) said, "I have seen no example of any species of *Lambdina* that agrees in detail with Hübner's figure, nor any specimens of *Lambdina* from the type locality (Georgia) except a few examples of *pellucidaria*, which is evidently not what Hübner had." However, Franclemont (1950a, p. 90) indentified the species. What the following records may refer to is conjectural; they may be *fervidaria*, *pellucidaria*, or what is more likely, *pultaria*, but until we have a record for *fervidaria* of which we can be sure, it is best to leave the name off our list. II. East Florida: (Doubleday), BM. III. Ocala: April, OA. Indian River: AMNH. Lakeland: May, Grsb. 100. IV. La Belle: April, AMNH, SIM. Chamberlain (1931, p. 1036) said it was, "reported to range from Florida to Montreal . . .," but that, of course, was prior to the date of Capps' and Franclemont's papers.

5150 L. FISCELLARIA PULTARIA (Guenée)

Pl. XXIII, Fig. 11, ♂.

Spec. Gén. 9: 131. 1857.

This appears to be the only form of the species found in Florida. It is not uncommon and occurs as far south as Florida City, and has been taken December-May and in October. The life history was described by Dyar (1903d). Food: *Quercus virginiana*.

5142 L. ATHASIA PELLUCIDARIA

(Grote & Robinson)

Ann. Lyceum Nat. Hist. N. Y. 8: 456. 1867.

Florida: Capps (1943, p. 131). III. Rockledge: NYSM. The last record should be verified. Food: pine.

BESMA Capps

5145 B. QUERCIVORARIA (Guenée)

Pl. XXIII, Fig. 10, ♂.

Spec. Gén. 9: 172. 1857.

I. Monticello: March, June, Aug., DPI. II. Alachua Co.: May, DPI. Gainesville: March, UFA; April, DPI. East Florida: (Doubleday), BM. III. DeLand: March, OB; March, April, AKW. Cassadaga: April, May, SVF. IV. Oneco: April, JGF; April-June, Oct., CPK. Food: oak.

LYCHNOSEA Grote

5154 L. INTERMICATA (Walker)

List Lep. Ins. Br. Mus. 24: 1076. 1862.

I. Quincy: May, Aug., CPK. II. Hastings: May, AMNH. IV. Archbold Biological Station: April 25, 1945, (Needham), CU. Port Sewall: March, AMNH. VI. Homestead: May, CPK. Florida City: May 6, OB, AMNH. Paradise Key: Feb., FMJ.

DEUTERONOMOS Prout

5170 D. MAGNARIUS (Guenée)

Spec. Gén. 9: 174. 1857.

I. Escambia Co., near Alabama line: WP. Food: maple and many other trees.

APICIA Guenée

5180 A. FUNDARIA Guenée

Pl. XXIII, Fig. 12, ♀; Fig. 13, ♂.

Spec. Gén. 9: 87. 1857.

Florida: type of *effascinaria* (Hulst) (1886a, p. 204). II. Alachua Co.: June, DPI. Gainesville: March, DPI. III. DeLand: March, AKW. IV. Bradenton: Oct., CPK. Oneco: May, June, AMNH, CPK. Archbold Biological Station: March, Sept., YU. Siesta Key: Feb. 3, 1951, det. Forbes as *crameraria* Guenée, May, CPK. Punta Gorda: Feb., March, May, AKW. Bonita Springs: March, OB. VI. Homestead: May, Aug., CPK. Florida City: April-June, AMNH; April-Sept., OB; May, July, CWK; June, WRB; June, July, HEW. VII. Flamingo: Feb., DPI. VIII. Key Largo: April, HFS.

5184 A. CONFUSARIA (Hübner)

Pl. XXIII, Fig. 14, ♂; Fig. 15, ♀.

Samml. exot. Schmett. I; Pl. 199, Figs. 1-4. 1813.

I. Escambia Co.: May, SMH. Warrington: WP. II. Gainesville: UFA, UFES. East Florida: (Doubleday), BM. III. Levy Co.: March, AMNH. Marion Co.: Feb., DPI. Enterprise: Castle & Laurent (1896, p. 302). Lake Lucy: Jan., AMNH. Orlando: Jan., March, WMD; March, AMNH. St. Petersburg: March, April, June, AMNH. IV. Oneco: May, June, Sept., AMNH, CPK. Archbold Biological Station: Jan., PSU; April, YU; May, AMNH. Port Sew-

all: Jan.-March, AMNH. Englewood: March, CU. Forbes believes this last may be *crameraria*. Punta Gorda: April, AMNH. V. Deep Lake: April, Grsb. 102. Everglades: April, AMNH. VI. Paradise Key: March, April, FMJ. Food: dandelion, aster, goldenrod, and clover.

SYSSAURA Hübner

5185 S. HAMULATA (Guenée)

Spec. Gén. 9: 67. 1857.

Characterized in the male by the simple antennae. IV. Archbold Biological Station: two females, April, Dec., CU. Forbes notes that though these were verified at the U. S. National Museum, they are a little off and may possibly be only very dark *olyzonaria*. Port Sewall: Jan., OB. Bonita Springs: March, OB. VI. Florida City: Jan., May, June, OB.

5186 S. OLYZONARIA (Walker)

Pl. XXIII, Fig. 8, ♀.

List Lep. Ins. Br. Mus. 20: 69. 1860.

Olyzonaria is very variable and fairly common, probably found throughout the state, though the records are scattered. It has been taken in every month. Florida: type of *syzygiaria* Hulst (1886b, p. 121).

5187, 1 S. HORTULARIA (Hulst)

Ent. Amer. 1: 205. 1886.

This was described by Hulst from New Jersey and Florida, but there is no further mention of the species in the literature, nor are the types in the American Museum of Natural History.

TETRACIS Guenée

[5197 T. CROCALLATA Guenée]

Spec. Gén. 9: 141. 1857.

I. Quincy: June 16, 1963, (Tappan), CPK. This is way out of range, according to Forbes, (1948, p. 107), who gives New Jersey and Kansas as the southern limits. It is quite heavily speckled, which is more characteristic of Canadian specimens, but there does not seem to be anything else this could be.

ABBOTTANA Hulst

5199 A. CLEMATARIA (Abbot & Smith)

Lep. Ins. Ga. 2: 201. 1797.

The maculation of most Florida specimens is brighter and more pronounced than in northern examples. Florida: (Slosson), AMNH. I. Escambia Co.: four Feb., SMH. Warrington: a form that matches Holland's illustration (1903,

Pl. XLV, Fig. 33), WP. Quincy: March, July, CPK. Tallahassee: May, JPK. Monticello: Feb., Nov., DPI; Aug., UM. II. Gainesville: March, DPI; April, CPK; May, UFA; July, UFES, CU. St. Johns Bluff: (Doubleday), BM. IV. Archbold Biological Station: a very dark specimen, Feb. 24, 1958, (Pease), YU. The larva is a general feeder.

PROCHOERODES Grote

5211 P. TRANSVERSATA (Drury)

Pl. XXIII, Fig. 17, form *incurvata* (Guenée), ♂. Ill. Exot. Ent. 1: 16; Pl. 8, Fig. 2. 1770.

Transversata is quite common and somewhat variable, though most specimens seen run rather small and pale. Walker described both *transvertens* (1860, p. 16) and *transmutens* (1860, p. 17) from St. Johns Bluff. Barnes & Benjamin (1927, p. 10) stated that the name *incurvata* (Guenée) "should be used for the Gulf strip race of *transversata* with *transvertens* (Walker) as a color form, slightly paler but with more heavily marked lines." Both *incurvata* and *transvertens* are certainly present, as is probably *transmutens*, another color form, but typical *transversata* does not seem to occur. The dates cover September-July. VI. Homestead: May, June, Sept., peak in May. Larvae are general feeders, common on oak and maple.

NEPHELOLEUCA Butler

5212 N. POLITIA (Cramer)

Pap. Exot. 2: 65; Pl. 139, Fig. E. 1779.

This is the large, more brightly colored species, which according to Sperry is found primarily in the Miami region, but because most of the records for Florida have been under this name, it is only possible to list the few specimens which I know belong here. IV. Bradenton: one n.d., one Dec. 1955, (Kelsheimer), CPK. Oneco: one April, (Dillman), CPK. Miami: June, HFS; July, AMNH. V. Chokoloskee: AMNH. VI. Homestead: Oct., CPK.

5212, 1 N. FLORIDATA (Grote)

Pl. XXIII, Fig. 18, ♂. Can. Ent. 15: 6. 1883.

Floridata is a smaller, duller species. It is quite common from Daytona south and has been taken in every month.

OXYDIA Guenée

This genus has been reviewed recently by

Rindge (1957) and the arrangement follows his paper.

5214 O. VESULIA TRANSPONENS (Walker)

Pl. XXIII, Fig. 22, form *transponens* (Wlk.), ♂. List Lep. Ins. Br. Mus. 20: 20. 1860.

It is found all over the peninsula and flies throughout most, if not all of the year. The specimen listed by Forbes (1941, p. 148) as *peosina* Guenée from Dry Tortugas is almost certainly a female *vesulia*. The species shows a wide range of color variation, as first noted by Slosson (1890c, p. 102), with more or less uniformly gray specimens, gray with yellowish median area, gray with dark green median area, and gray mottled with brownish yellow, all intergrading. The basal and posterior lines may vary from quite sharp and distinct to obsolete. One valid larval record is on oak, the pupal case and adult being in the American Museum of Natural History collection. The larva, presumably of this species, has been found on citrus (DPI, and Bates, 1924a, p. 22). It has also been reported on *Croton* (DPI), but both of these should be confirmed to be sure it is this species, although the citrus record is probably correct. It also has been reared from *Triplaris* sp., (Pease), ABS.

5214, 1 O. CUBANA W. Warren

Proc. U. S. Natl. Mus. 30: 544. 1906.

Cubana is a rare species which was described from Cuba. The color is reddish. There are some specimens without data from the Slosson collection in the American Museum of Natural History which Rindge suspects are the "very dark purple brown" specimens mentioned by her in the note referred to under *vesulia*, and presumably they came from Florida. IV. Oneco: March, JGF. Archbold Biological Station: Feb. 28, 1960, (Frost), PSU. Siesta Key: Nov.-March, May, AMNH, CPK, BM. Venice: USNM. Bonita Springs: March, OB. Matheson Hammock: reared from cocoon found under loose bark of mangrove, November, HFS. Strohecker reports that there was very little else in the vicinity on which the larva could have fed. V. Everglades: April, AMNH; Nov., CPK. VIII. Tavernier: Oct., CPK.

[*O. guenéei* (W. Warren)]

Nov. Zool. 11: 157. 1904.

Rindge (1957, p. 16) called this "of dubious authenticity, so it should not be accepted as occurring in Florida. . . ." He gives the following "Florida" records: IV. Manatee Co.: USNM. Miakka [sic]: two CM. Miami (?): AMNH. V. Chokoloskee: June, Oct. 12, 1901, AMNH.

[*O. nimbata* Guenée]

Spec. Gén. 9: 59. 1857.

Rindge noted (1957, p. 17), that the label "Chokoloskee, Fla., June," is in the same hand as that of the Chokoloskee, June, specimen of *guenéei* above, and that Forbes had added a label: "Probably false locality," a suspicion in which Rindge concurred. Rindge also mentioned two male specimens in the Strecker collection, CHNM, labeled "Florida" which are similar in appearance but he is doubtful that they are *nimbata*, and in any event, he feels the locality data may be disregarded.

[5213 *O. mundata* Guenée]

Spec. Gén. 9: 57. 1857.

Rindge (1957, p. 17) made *zonulata* Hulst a synonym of this. However, all Florida specimens of it are of very dubious validity, and, in fact, Rindge determined them as *masthala* Druce below.

[*O. masthala* Druce]

Biol. Cent. Amer. 2: 28. 1892.

V. Everglades: one, AMNH; thirteen, USNM; one, CU. Chokoloskee: "A. E. Co., Big Cypress Swamp," Feb. 1900, AMNH; Dec., OB. Rindge (1957, p. 18) said, "it seems doubtful that the above really were taken in Florida, and it would be highly advisable not to accept this name at this time."

PALYAS Guenée

5216 *P. AURIFERARIA* (Hulst)

Pl. XXIII, Fig. 19, ♂.

Ent. Amer. 2: 188. 1887.

This species exhibits a fine range of color variation from a brilliant golden yellow to mignonette green, sometimes with large brownish patches on the inner angle of the forewing. I have often disturbed it in the daytime around palmettos, but have no reason to think that that is the food plant. III. Indian River: AMNH. IV. Port Sewall: Feb., AMNH. Siesta Key: Nov.-June, CPK. Charlotte Harbor: (Slosson), Grsb. 102. Fort Myers: April, AMNH, AKW. Biscayne Bay: (Slosson), Grsb. 102. Coral Gables: Nov., HFS. V. Marco: April, AMNH. Deep Lake: April, SIM. Everglades: April, AMNH, SIM. VI. Florida City: Feb., March, May, June, July, Sept., OB; March-May, AMNH; May, CWK; June, AKW; Sept., HEW. Paradise Key: March, April, FMJ. VIII. Tavernier: Sept., DPI.

PHRYGIONIS Hübner

5217 *P. ARGENTATA* (Drury)

Pl. XXIII, Fig. 20, ♀.

Ill. Exot. Ent. 2: 25; Pl. 14, Fig. 2. 1773.

III. Cassadaga: Sept., SVF. Brooksville: June, AKW. Orlando: June, WMD. Rockledge: NYSM. Indian River: AMNH. IV. Siesta Key: Nov.-Jan., March, April, CPK. Charlotte Harbor: type of *cerussaria* Grote (1882, p. 101); AMNH. Punta Gorda: Feb., (Slosson), Grsb. 103. South Bay: April, AMNH. Palm Beach: Dyar (1901a, p. 458). V. Deep Lake: April, AMNH. Everglades: April, AMNH, SIM. Chokoloskee: USNM; April, SIM. VI. Homestead: Aug., CPK. Florida City: Jan., April, May, Nov., OB; Feb., CWK; May, June, Sept., AKW; May-Oct., AMNH; May, Nov., WRB; Aug., HEW; Oct., CPK. Paradise Key: Jan., AKW; Jan.-April, FMJ. Food: *Ardisia escallonioides* [*Ardisia pickeringia*], Dyar. Grossbeck (1917, p. 103) gave an interesting note which is too long to quote here.

MELANCHROIA Hübner

[5218 *M. regnatrix* Grote & Robinson]

Ann. Lyceum Nat. Hist. 8: 441; Pl. 16, Fig. 15. 1867.

"This is questionably recorded from Florida by Hulst," Grsb. 103.

5219 *M. CHEPHISE* (Cramer)

Pl. XXIII, Fig. 21, ♂.

Pap. Exot. 4: 182; Pl. 381, Fig. E. 1782.

Chephise is a common and sometimes abundant day flier, found throughout the state and recorded in every month. In some specimens the white, apical patch is greatly reduced and in others there are certain undefinable characteristics that make one suspect that a second species may be involved. In three specimens from Key West, two of them reared from *Phyllanthus acidus*, Jan., (Knowles), the white is entirely absent, but genitalic dissection made by Rindge places them as *chephise*. Food: *Phyllanthus* spp., DPI, Ins. Pest Surv. Bull. 10: 187, and Wickwire (1932, p. 16); *Breynia nivosa*, DPI; ornamentals, DPI.

5220 *M. GEOMETROIDES* Walker

List Lep. Ins. Br. Mus. 2: 387. 1854.

The status of this in Florida is probably that of a very rare stray. Florida: AMNH. VIII. Key West: several, (Morrison), Edwards (1886, p. 9); two, AMNH; one, OB. Food: *Phyllanthus acidus* [*Cicca disticha*] in Cuba.

SPHACELODES Guenée

5221 **S. VULNERARIA** (Hübner)
Zutr. exot. Schmett. 2: 23; Figs. 319, 320. 1823.

III. Indian River: types of *floridensis* Holland, (Papilio 4, p. 72), AMNH. IV. Archbold Biological Station: Sept. 2, 1960 (Pease), YU. Siesta Key: June 9, 1957, CPK. V. Chokoloskee: June, Dec., AMNH. VI. Homestead: May, June, Aug.-Oct., CPK; Dec., DPI. Florida City: Oct., OB. VIII. Tavernier: Sept., Oct., (J. N. Todd), CPK.

5221, 1 **S. SP.**

VI. Homestead: May 14, 1959, (Wolfenbarger), det. Forbes as not *vulneraria*, CPK. The specimen, which is a male, lacks the contrasting costal triangle, which in this is concolorous with the rest of the wing, and the color of the antennae is quite different. There is every reason to believe that it is distinct from *vulneraria* and not just an aberration, as I am informed by Sr. Ing. Fernando de Zayasi, of the Estacion Exp. Agronómica, Santiago de las Vegas, Cuba, that he has three aberrant *vulneraria* in which the ground color is light brown instead of grayish and the coastal triangle is white.

SUPERFAMILY URANIOIDEA

Family EPIPLEMIDAE

PHILAGRAULA Hulst

5222 **P. SLOSSONIAE** Hulst
Trans. Amer. Ent. Soc. 23: 310. 1896.

IV. Port Sewall: Feb., AMNH. Siesta Key: Jan., March-June, Dec., CPK. Punta Gorda: Feb., AKW. South Florida: type, AMNH. V. Everglades: April, (McDunnough), AMNH. VI. Homestead: May, June, CPK. Florida City: May, AMNH; May, July, OB. Paradise Key: April, (Jones), USNM. VIII. Tavernier: Aug., (J. N. Todd), CPK. The Jones specimen was originally determined by Dyar as *Epilema brevidens* Dognin, which is very similar, but a larger species.

CALLIZZIA Packard

5223 **C. AMORATA** Packard
Mono. Geom. Moths, p. 315. 1876.

IV. Oneco: one March, JGF. Punta Gorda: three Feb., March, May, CGM. Food: *Lonicera dioica*.

5224, 1 **C. SP.**

This is not *amorata*; it may be Antillean or new. IV. Siesta Key: April 6, 1954, April 22, 1959, June 13, 1957, det. Forbes, CPK.

SCHIDAX Hübner

5226 **S. CORONARIA** Strecker
Lep. Rhop. Het. Suppl. 2: 8. 1899.

Florida: type, (Koebele), CNHM. I am indebted to Mr. A. K. Wyatt for supplying not only the data on this apparently unique specimen, but also a sketch and photographs, which unfortunately could not be used as part of a plate for technical reasons. The shape of the wings is so unusual that no collector would pass the species by, and it makes one wonder if this might not be another case of locality error on Strecker's part, like *Oreta adona*.

DIRADES Walker

5226, 1 **D. INFANS** Warren
Nov. Zool. 14: 192. 1908.

IV. Siesta Key: Jan., Feb., May, June, det. E. L. Todd, CPK. VI. Homestead: May, June, Aug., CPK. Florida City: May 2-8, 1947, OB. VIII. Tavernier: Aug.-Oct., (J. N. Todd), CPK.

Family LACOSOMIDAE

LACOSOMA Grote

5227 **L. CHIRIDOTA** Grote
Pl. XXIV, Fig. 1, ♂; Fig. 2, ♀.
Proc. Ent. Soc. Phila. 3: 78. 1864.

I. Escambia Co.: March, May, Aug., SMH. Quincy: March, CPK. II. Alachua Co.: June, DPI. Gainesville: March-May, (Hetrick), UFA, CPK; May, DPI, UM. III. Central Florida: April, Oct., WMD. Leesburg: March, AMNH. Orlando: Aug., DPI. IV. Oneco: March, JGF. Food: oak.

CICINNUS Blanchard

5229 **C. MELSHEIMERI** (Harris)
Pl. XXIV, Fig. 3, ♀.
Rept. Ins. Mass., p. 290. 1841.

Florida specimens are usually smaller and a rosier pink than those from northern states. Florida: AMNH. I. Escambia Co.: April, SMH. Warrington: rare, summer, WP. Monticello: March, Sept., DPI; April, UM. II. Alachua Co.: Aug., DPI. St. Augustine: (Johnson), Grsb. 104. III. Old Town: April, AKW. Weekiwachee

Springs: April-June, AMNH, CPK. Vineland: larva on oak, June, DPI. Lakeland: larval case, SIM. IV. Bradenton: GCES. Oneco: March, JGF. Archbold Biological Station: May, Aug., Sept., YU. Port Sewall: March, AMNH. Siesta Key: Nov., CPK. Charlotte Harbor: Grsb. 104. Fort Myers: March, AMNH. Lake Worth: (Slosson), Grsb. 104. Biscayne Bay: (Slosson), AMNH. Miami: Jan., WRB. South Miami: Feb., HEW. VI. Paradise Key: March, (Blatchley), Jones ms.; Dec., CNC.

SUPERFAMILY ZYGAENOIDEA

Family LIMACODIDAE

SIBINE Herrich-Schaeffer

5230 **S. STIMULEA** (Clemens)
Pl. XXIV, Fig. 4, ♀; Fig. 5, ♂.
Proc. Acad. Nat. Sci. Phila. 12: 158. 1860.

Stimulea is found all over the state, the Division of Plant Industry having a long list of records. It has been taken in every month except December. Food: various kinds of trees; corn and citrus, Fla. Agr. Exp. Sta. Bull. 148: 246; *Ixora coccinea*, Coop. Econ. Ins. Rept. 4: 1043.

5230, 1 **S. EXTENSA** Schaus
J. N. Y. Ent. Soc. 4: 55. 1896.

V. Chokoloskee: two, det. Dyar, USNM. The origin of these specimens is open to the usual skepticism, but as I have seen other specimens which might belong under this name, it would be advisable to check any not readily recognized as *stimulea*. VI. Paradise Key: Seitz (1913, p. 1110).

PARASA Moore

5232 **P. CHLORIS** (Herrich-Schaeffer)
Samml. aussereur. Schmett. 1, Fig. 176. 1854.
III. Hillsborough Co.: Aug. 18, 1938, (Friauf), UM.

EUCLEA Hübner

5233 **E. NANINA** Dyar
Pl. XXIV, Fig. 6, ♂.
Ent. News 2: 61. 1891.

Nanina was reported by Grant as fairly common in summer in the Pensacola area and is not rare from Levy and St. Johns Counties to the Keys. It has been taken in every month except July and December. It is variable in the size

of the green spots, though not to the same extent as *delphinii* below, from which it may be separated by the round discal dot, the latter being elongated in *delphinii*. Because of the similarity, the records are probably mixed. Clench is of the opinion that there may be an unrecognized species involved in *Euclea* in Florida. The point should be investigated.

5234 **E. DELPHINII** (Boisduval)
Cuvier An. King. (Griffith), Pl. 103, Fig. 6.
1832.

As noted under *nanina* the records are probably mixed, though there is a good chance that those below are mostly correct. I. Escambia Co.: March, SMH. Warrington: occasional, late summer, VFG. Liberty Co.: July, UM. Quincy: July-Sept., CPK. Leon Co.: form *querceti* (Herrich-Schaeffer), April, UM. Tallahassee: AMNH; March, JPK. Monticello: June, Sept., DPI. II. Gainesville: March, Sept., Oct., UM; July, Aug., DPI. III. Marion Co.: *querceti*, June, UM. Cassadaga: Oct., SVF. Leesburg: *querceti*, Aug., UM. Eustis: DPI. Hillsborough Co.: form *viridiclava* Walker, Aug., UM. IV. Oneco: March, DPI; Aug., CPK. Archbold Biological Station: Jan., AMNH. Port Sewall: Jan., March, April, AMNH. Palm Beach: larvae, Jan., Dvar (1896b, p. 125). Fort Lauderdale: July, UM; form *viridiclava*, April, UM. V. Everglades: April, AMNH. VI. Paradise Key: Jan.-March, (Blatchley), Jones ms. Food: various kinds of trees and shrubs; *Rhizophora mangle*, *Coccoloba uvifera*, *C. diversifolia* [floridana], Dyar.

MONOLEUCA Grote & Robinson

The species are all very similar and there is a great question as to whether some, if not most, may not be simply forms of a single species. The genus should be revised.

5238 **M. SUBDENTOSA** Dyar
Trans. Amer. Ent. Soc. 18: 156. 1891.

In *subdentosa*, the band is narrow and preceded by a ferruginous shade; in *semifascia*, below the band is wider and the shade is lacking. Florida: type, Dyar. I. Warrington: WP. II. Gainesville: Aug., DPI. Crescent Beach: April, May, CM. III. Levy Co.: Sept., DPI. Marion Co.: July, Sept., UM. Pellicer Creek: May, June, CM. Cassadaga: July 17 and 18, 1961, Sept., SVF, CPK. In the July specimens the fascia is reduced to a hairline. Weekiwachee Springs: Aug., CPK. The fascia on these is reduced to a very fine, clear-cut line, and they may represent still another species or form. In the Cassadaga July specimens the ground color is pale

with the basal area lighter, whereas in those from Weekiwachee Springs the color except for the fascia is uniform dark brown. Dade City: Sept., OB. Orange Co.: Sept., DPI. Titusville: Sept., Oct., CM. St. Petersburg: Sept., OB. Hillsborough Co.: Aug., UM. Stemper: Sept., CM. Lutz: July, Sept., CM. Osceola Co.: Aug., UM. IV. Bradenton: May, CM. Oneco: May, June, Aug.-Oct., CPK. Stuart: May, UM. Fort Myers: USNM. Fort Lauderdale: July, Aug., UM. VI. Homestead: June, Sept., Oct., CPK.

5239 M. ANGUSTILINEA Dyar

J. Wash. Acad. Sci. 17: 548. 1927.

Capron: type, March 23, (Hubbard), USNM.

5240 M. SEMIFASCIA (Walker)

Pl. XXIV, Fig. 7, ♀.

List Lep. Ins. Br. Mus. 5: 1151. 1855.

This occurs as both *semifascia* and form *sulfurea* Grote, the latter having the fascia yellow instead of white. Florida: Neumoegen and Dyar (1894, p. 69). I. Escambia Co.: July, SMH. III. Levy Co.: Sept., DPI. Marion Co.: July, UM. Cassadaga: Aug., SVF. Stemper: Sept., AKW. IV. Archbold Biological Station: June, AKW; July, YU. Port Sewall: March, AMNH. Miami: Oct., AMNH. VI. Florida City: May, June, AMNH; Oct., HEW.

5241 M. OBLIQUA Henry Edwards

Ent. Amer. 2: 10. 1886.

III. Indian River: type, Edwards.

5242 M. ERECTIFASCIA Dyar

Ins. Insc. Mens. 13: 15. 1925.

III. Cassadaga: July, Aug., SVF, CPK. Altamonte Springs: type, Sept., 1924, (Cole), USNM. Weekiwachee Springs: Aug., CPK. IV. Siesta Key: June, CPK.

ADONETA Clemens

5246 A. SPINULOIDES Herrich-Schaeffer

Samml. aussereur. Schmett.; Figs. 187, 188. 1854.

Florida: Seitz (1913, p. 1120). This record may belong here or to the species below. I. Escambia Co.: April 29, 1962, det. Davis, SMH.

5248, 1 A. SP.

According to Capps, who has examined some of my specimens, this is not *pygmaea* Grote and Robinson, and is either an unrecognized tropical species or new. I. Escambia Co.: SMH. Warrington: May 16, 1961, VFG. Myrtle Grove:

July, WJW. Monticello: April, (Phillips), CPK. III. Pellicer Creek: April, CM. IV. Bradenton: two April, Sept., (Kelsheimer), CPK. Oneco: three May, June, Aug., (Dillman), CPK. Punta Gorda: April, (Ramstedt), MOG, AKW.

SISYROSEA Grote

5250 S. TEXTULA (Herrich-Schaeffer)

Samml. aussereur. Schmett.; Fig. 184. 1854.

I. Escambia Co.: March, May, July, Aug., SMH. Monticello: March, DPI; June, CM. III. Central Florida: June, WMD. DeLand: March, MOG, AKW. Sanford: Oct., DPI. Orlando: March, OB. Hillsborough Co.: Aug., UM. Food: wild cherry and other shrubs.

NATADA Walker

5252 N. NASONI (Grote)

Can. Ent. 8: 112. 1876.

I. Escambia Co.: April, July, Aug., SMH. Quincy: Sept. 9, 1960, (Tappan), CPK. II. Gainesville: May 3, 1960, (Perry), DPI; Nov. 30, 1956, (Denmark), DPI. III. Pellicer Creek: April, CM. 5-8 mi. S. of Marineland: May, CM. Cassadaga: May 19, June 15, 1962, SVF, CPK. IV. Oneco: one May 1954, (Dillman), CPK. Punta Gorda: May 4, 1953, (Ramstedt), OB; May 7, (Ramstedt), AKW. Food: oak.

PHOBETRON Hübner

5254 P. PITHECIUM (Abbot & Smith)

Hag moth. Pl. XXIV, Fig. 8, ♀.

Lep. Ins. Ga. 2; Pl. 74. 1797.

I. Escambia Co.: June, SMH. Santa Rosa: Aug., DPI. II. Lake Butler: Sept., DPI. Gainesville: July, Sept., DPI. III. Hernando Co.: July, UM. New Port Richey: July, DPI. Winter Park: May, UFES. Malabar: Nov., DPI. St. Petersburg: DPI. Ybor City: Aug., DPI. IV. Bradenton: April, CPK. Wauchula: Nov., DPI. Avon Park: Oct., DPI. Indian River Co.: Oct., UM. Vero Beach: Sept., DPI. Alva: May: DPI. Fort Lauderdale: July, UM. Larva a general feeder on shrubs; citrus, Fla. Agr. Exp. Sta. Bull. 148: 247.

ISOCHAETES Dyar

5256 I. BEUTENMUELLERI

(Henry Edwards)

Pl. XXIV, Fig. 9, ♂.

Can. Ent. 19: 145. 1887.

I. Escambia Co.: April, May, July-Sept., SMH. III. 5-8 mi. S. of Marineland: May, CM. Enterprise: type, March 31, 1887, (Beutenmueller),

AMNH. DeLand: March 27, AKW. Titusville: Sept., CM. There are several Florida references in the literature but I suspect they all refer to the type specimen. Food: swamp oak.

ALARODIA Moeschler

5258 A. SLOSSONIAE (Packard)

Pl. XXIV, Fig. 10, ♀.

Ent. News 4: 169. 1893.

Slossoniae is quite common, especially along the coast in the vicinity of its food plant, red mangrove, from Oneco and Port Sewall south. There is only one record north of this line, namely: III. Cassadaga: May, Aug., SVF. Other food plants are given as *Myrsine floridana*, *Ardisia pickeringia*, *Myrica cerifera*, *Hypelate paniculata*, and *Chrysobalanus icaco*. The dates for the adults cover August-May.

PROLIMACODES Schaus

5260 P. BADIA (Hübner)

Pl. XXIV, Fig. 11, form *argentimacula*, ♂.

Samml. eur. Schmett.; Pl. 150, Figs. 696, 697. 1822.

Badia presumably occurs here only as the form *argentimacula* Barnes & McDunnough, but some specimens, especially from Quincy, suggest typical *badia*. It is quite common from Escambia County to Paradise Key and has been taken in every month but December. One specimen from Escambia County is almost black instead of brown. Food: various trees and shrubs, *Rhodendron* sp., DPI.

LIMACODES Latreille

5262 L. BIGUTTATA Packard

Proc. Ent. Soc. Phila. 3: 341. 1864.

I. Escambia Co.: May, 1961, SMH. Quincy: May 1, 1961, (Tappan), CPK. Monticello: Feb. 24, 1955, (Phillips), CPK.

5263 L. RECTILINEA (Grote & Robinson)

Pl. XXIV, Fig. 13, ♂.

Trans. Amer. Ent. Soc. 2: 188. 1868.

The strongly colored typical form is predominant, but some specimens, if not faded, might be classed as the form *latomia* Harvey. I. Escambia Co.: some of these are oddly marked and may represent a new subspecies, April, July, Aug., SMH. Myrtle Grove: Aug., WJW. Ocean City: Aug., HOH. II. Gainesville: May, DPI, UM; July, CU. Moultrie: June, CM. Crescent Beach: April, CM. III. 5-8 mi. S. of Marineland: April, CM. Pellicer Creek: April, CM.

DeLand: April, AKW. Cassadaga: April, May, July, Sept., SVF. Weekiwachee Springs: April-June, Aug., CPK. Titusville: Sept., CM. Winter Park: Aug., DPI. Stemper: April, Oct., CM. IV. Oneco: March, April, JGF; May-Sept., CPK. Archbold Biological Station: March, PSU; April, YU. Sarasota: May, CPK. Siesta Key: April, CPK. Punta Gorda: March, April, AKW; April, MOG. Fort Lauderdale: April, UM. Miami: April, OB, AMNH; Oct., CM. VI. Florida City: Oct., OB.

5264 L. Y-INVERSA Packard

Proc. Ent. Soc. Phila. 3: 341. 1864.

Occurs in Florida as both typical *y-inversa* and form *parallela* Henry Edwards. I. Escambia Co.: April, May, SMH. Quincy: April, DPI. III. Cassadaga: April, Sept., SVF. Weekiwachee Springs: April, May, CPK. Indian River: typical, Grsb. 106; type of *parallela*, AMNH. IV. Oneco: March, JGF. Archbold Biological Station: March, April, Sept., YU. Punta Gorda: April, MOG, CPK; April, May, AKW. Food: hickory and blue beech.

LITHACODES Packard

The more one tries to unravel the relationships of *fasciola* (Herrich-Schaeffer), *laticlavata* (Clemens), *belfragei* Dyar, and *gracea* Dyar, as separated by Dyar (1925, p. 16), the more confusing it becomes. Northern specimens are a jumble of the first three, with intergrading and overlapping of the characters; in some the indentation of the median line is so slight as to approach *gracea*. In Florida specimens, this line is either straight or slightly indented, but the width of the dark border beyond varies greatly, and the transverse subapical line is often present and distinct. In *fasciola* and its forms, the hind wings are usually dark but there are specimens where they are pale, though perhaps always with a slightly darker shade near the inner angle. In *gracea*, the hind wing is always pale. *Fasciola* has been reported a number of times from Florida, but I am inclined to believe that only *gracea* is present, except in the extreme western or northern counties. Whether it is a distinct species or merely a geographical subspecies of *fasciola*, I would not care to say. Beebe reported that the genitalia were similar to those of *fasciola*, but there is need for much further study of the subject.

5266 L. FASCIOLA (Herrich-Schaeffer)

Samml. aussereur. Schmett. 1; Fig. 186. 1854.

I. Escambia Co.: April 2, 1961, SMH. Warring-

ton: May, VFG. I believe these two are correct, but they could be wrong. See the comment above and also the records for *gracea* below, which may include some actual records for *fasciola*.

5267 L. GRACEA Dyar

Pl. XXIV, Fig. 12, ♂.

Ins. Insc. Mens. 9:144. 1921.

As noted above, some of the records may belong under *fasciola*. Florida: as *laticlavata*, AMNH. I. Escambia Co.: April, July, SMH. II. Gainesville: July, CU. Crescent Beach: April, CM. III. Marion Co.: July, UM. 5-8 mi. S. of Marineland: April, CM. Pellicer Creek: April, CM. Cassadaga: April, SVF. Orange Co.: Oct., DPI. Winter Park: May, DPI. Lutz: Sept., CM. Stemper: March, April, Sept., CM. IV. Bradenton: July, CPK. Oneco: March, April, JGF; April, June, Aug.-Oct., CPK. Highland Hammock State Park: JGF. Archbold Biological Station: Feb., March, YU. Indian River Co.: May, UM. Siesta Key: Feb., March, CPK. VI. Florida City: March, April, Oct., OB; March Oct., CM. Paradise Key: Jan.-March, FMJ; four, types, March 4-9, 1919, (Schwarz & Barber), USNM.

HETEROGENEA Knoch

5274 H. SHURTLEFFI Packard

Proc. Ent. Soc. Phila. 3:346. 1864.

I. Quincy: May 3, 1961, (Tappan), CPK. II. Alachua Co.: May 9, 1958, (Denmark), DPI. Gainesville: April 20, 1960, (Denmark), CPK.

SLOSSONELLA Dyar

5276 S. TENEBROSA Dyar

Proc. Ent. Soc. Wash. 6:117. 1904.

II. Jacksonville: type, USNM. III. Cassadaga: April 28, 1960, SVF. IV. Archbold Biological Station: March 5, 1958, (Pease), YU; April 1, 1948, (Needham), CU. Hobe Sound: March 3, 1956, (Mrs. Wible), CM. Punta Gorda: three April 10-12, (Ramstedt), AKW.

Family MEGALOPYGIDAE

NORAPE Walker

5280 N. OVINA Sepp

Surinaam. Vlinders 3:233. 1848-1855.

II. Alachua Co.: June 21, 1935, (Cantrell), UM. IV. Broward Co.: May 1928, (Bates), UM. Biscayne Bay: (Slosson), Grsb. 106. Food: *Cercis canadensis*; *Lavandula* sp., DPI.

MEGALOPYGE Hübner

5283 M. OPERCULARIS (Abbot & Smith)

Pl. XXIV, Fig. 14, ♂.

Lep. Ins. Ga. 2; Pl. 53. 1797.

Opercularis is of state-wide occurrence and has been taken in every month. Food: orange, Fla. Agr. Exp. Sta. Bull. 148:245; pecan, Pecan Investigations Laboratory file; almond, DPI; Brazilian pepper, DPI; persimmon, DPI; moonflower vine, DPI. Reported annoying to persons coming in contact with it, Ins. Pest. Surv. Bull. 20:517.

5288 M. PYXIDIFERA (Abbot & Smith)

Pl. XXIV, Fig. 15, ♀.

Lep. Ins. Ga. 2; Pl. 53. 1797.

Pyxidifera is fairly common and probably found throughout the state. It has been taken in every month. Food: *Vaccinium*, oak; young shoots of live oak, Dyar (1897b, p. 160).

LAGOA Harris

5286 L. CRISPATA Packard

Proc. Ent. Soc. Phila. 3:335. 1864.

See discussion in text of 5287 below. I. Escambia Co.: WJW. This specimen has the "kinky hair" on the forewings like *crispata* and may be a very pale race. II. Gainesville: May 23, 1933, UM; June 7, 1957, Coop. Ins. Pest Surv. 4:(24):5. III. Marion Co.: five July 24-28, 1938, UM. IV. Archbold Biological Station: June, AKW. Food: various kinds of shrubs and trees.

5287 L. [LACYI Barnes & McDunnough]

Can. Ent. 42:252. 1910.

The determination of these specimens is tentative and needs more critical study. In the long series in the University of Michigan collection, the six males all have a yellow tone and there is a more or less distinct discal dot. The nineteen females vary from a somewhat paler yellow to a dirty cream color, the discal dot being fainter and in the cream colored specimens, obsolete. With this long series before one with small, indescribable features hinted at, one is tempted to guess that this might be an unrecognized subspecies of *crispata* Packard rather than *lacyi*. However, none of these have "kinky hair" as has the Escambia specimen of *crispata* mentioned above. II. Gainesville: July, CPK, CU. III. Ocala National Forest: July, UM. Cassadaga: Aug., SVF, CPK. Orlando: July, WMD. Lakeland: June, UM. IV. Oneco: April, JGF; May, June, CPK. VI. Paradise Key: July, CU.

Family EPIPYROPIDAE

EPIPYROPS Westwood

5292 E. BARBERIANA Dyar

Proc. Ent. Soc. Wash. 5: 43. 1902.

I. Escambia Co.: July 29, 1961, det. Franclemont, SMH; Ocean City: Aug. 6, 1963, det. Davis, HOH.

Family ZYGAENIDAE

MALTHACA Clemens

5293 M. DIMIDIATA (Herrich-Schaeffer)

Pl. XXIV, Fig. 16, ♂.

Samml. aussereur. Schmett.; Pl. 43, Fig. 222. 1855.

Florida: Forbes (1923, p. 114).

[5294 *M. centralis* (Walker)]

List Lep. Ins. Br. Mus. 2: 288. 1854.

Florida: (Barnes), Grsb. 107. Grossbeck added, "A Mexican species of doubtful occurrence in Florida, according to Dyar" (1903c, p. 329).

5297, 1 M. SP.

III. Dade City: Oct. 13, 1961, (Wade), det. Franclemont as in this genus, but it does not fit into any of the described species, CPK.

ACOLOITHUS Clemens

5302 A. FALSARIUS Clemens

Pl. XXIV, Fig. 17, ♀.

Proc. Acad. Nat. Sci. Phila. 12: 540. 1860.

I. Escambia Co.: April, June, July, Sept., SMH. Myrtle Grove: June, WJW. II. Lake City: April, UFES. Gainesville: April, EU. III. Juniper Springs: July, DPI. Cassadaga: July, Sept., SVF. La Grange: Sept., SIM. Oak Hill: March, CPK. Fort Meade: Nov., CPK. IV. Laurel: March, CPK. VI. Biscayne Bay: (Slosson), AMNH. Food: *Ampelopsis*, *Vitis*.

5304 A. RECTARIUS Dyar

J. N. Y. Ent. Soc. 6: 44. 1898.

I. Florida Caverns State Park: taken by sweeping *Senecio glabellus* blossoms, four April 13, 1960, (Denmark), DPI, CPK. IV. Lake Worth: Grsb. 107. Biscayne Bay: (Slosson), Grsb. 107.

HARRISINA Packard

5307 H. AMERICANA (Guérin-Ménéville)

Grape leaf skeletonizer.

Icon. Règne Anim. Ins. p. 500; Pl. 84bis, Fig. 11. 1829.

Americana is common throughout the state with

the possible exception of the Keys whence there are no records. It is on the wing March-September. It probably occurs only as the form *australis* Stretch, but most of the records read simply *americana*. There is also one report for form *texana* Stretch: III. Hernando Co.: Aug., UM. Food: *Ampelopsis*; grapevine, Coop. Econ. Ins. Rept. 4: 830. Grossbeck (1917, p. 107), gave a long quotation from McDunnough relative to the larva on an unrecognized vine.

SUPERFAMILY PYRALIDOIDEA

Family THYRIDIDAE

THYRIS Laspeyres

5315 T. LUGUBRIS Boisduval

Pl. XXIV, Fig. 19, ♂.

Spec. Gén.; Pl. 14, Fig. 11. 1852; Spec. Gén. Het. 1: 490. 1874.

Florida: type of *margaritana* Clemens (1862, p. 137). I. Escambia Co.: March, SMH. Florida Caverns State Park: April, DPI. II. Alachua Co.: March, DPI. Gainesville: March, April, UFES. St. Augustine: (Johnson), Grsb. 107. III. Orange Co.: (Fernald), DPI. Food: grape.

DYSODIA Clemens

[5319 *D. speculifera* (Sepp)]

Surinaam. Vlinders 3; Pl. 135. 1830.

Florida: (Hampson), Grsb. 107. Dyar (1913b, p. 42) said that the type of *aequalis* (Walker) was, "presumably from Florida." This is insufficient evidence to accept the record as valid. I have not located the Hampson reference quoted by Grossbeck.

5320 D. FLAGRATA (Walker)

List Lep. Ins. Br. Mus. 33: 826. 1865.

Florida: type of *floridana* (Hulst) (1886c, p. 182). Dyar's record (1913b, p. 43) probably referred to this same specimen.

HEXERIS Grote

5321 H. ENHYDRIS Grote

Seagrape borer. Pl. XXIV, Fig. 20, ♂; Fig. 21a, gall formed by larva.

Can. Ent. 7: 176. 1875.

The common name is not officially recognized but is in general usage in Florida. Fort Capron: type, Grote. III. Volusia Co.: two Aug. 1956,

(Denmark), DPI. IV. Fairly common from St. Petersburg and Wabasso Beach south, March-May, July-September, December. Food: larva found boring in the stem of *Coccoloba uvifera*, DPI; pigeon plum and dove plum, DPI.

MESKEA Grote

5323 M. DYSPTERARIA Grote

Pl. XXIV, Fig. 21, ♂.
Can. Ent. 9: 115. 1877.

Florida: NYSM. I. Escambia Co.: May, SMH. IV. Bradenton: May, CPK. Siesta Key: April 26, 1956, CPK. Punta Gorda: April 25, 1941, AKW. Fort Lauderdale: April, UM. Opa Locka: emerged from galls, March, DPI. Biscayne Bay: (Slosson), Grsb. 108. VI. Paradise Key: three March 20-April 5, (Jones), FMJ, CPK. Food: *Malvaviscus arboreus* var. *drummondii*.

[5323, 1 M. SUBAPICULA Dyar]

Proc. U. S. Natl. Mus. 44: 317. 1913.

This is a synonym of the next species, *Rhodoneura terminalis* (Walker), q.v. IV. Useppa Island: (Erb), USNM; Lemmer (1932, p. 177).

RHODONEURA Guenée

5323, 1 R. TERMINALIS (Walker)

Pl. XXIV, Fig. 22, ♀.
List Lep. Ins. Br. Mus. 32: 522. 1865.

Terminalis was first found in the United States, March 24, 1932, on Ulyssa (Useppa?) Island, by H. J. Erb. It was originally determined as *M. subapicula* Dyar but the latter was subsequently found to be a synonym of this species. Rainwater (1934, p. 757), stated that it is found throughout Florida wherever wild cotton grows, which he calls roughly the Cape Sable region and along the rivers and creek banks from there up to Tampa. However, I have found no specific records for it except for the first one.

5323, 2 R. MYRSUSALIS (Walker)

List Lep. Ins. Br. Mus. 19: 892. 1859.

VIII. Tavernier: subspecies *idalialis* (Walker), Oct. 24, 1955, CPK; typical, Nov. 25, 1955, CPK. Craig: June 9, 1955, CPK. All taken by J. N. Todd and determined by Forbes. No Name Key: both forms, Aug., CM, CNC.

THYRIDOPYRALIS Dyar

5324 T. GALLAERANDIALIS Dyar

Pl. VI, Fig. 38, type, ♂.
J. N. Y. Ent. Soc. 9: 23. 1901.

IV. Palm Beach: galls in old wood of *Randia aculeata*, Dyar (1901, and 1901a, p. 464). VI. Paradise Key: galls plentiful but rearing so far unsuccessful, (Craighead). VIII. Key West: larva, (Schwarz), Dyar.

Family HYBLAEIDAE

The family is placed here on the authority of Comstock, 1920 (1924), p. 655.

HYBLAEA Fabricius

3814 H. PUERA (Cramer)

Pl. XXIV, Fig. 23, ♀.
Pap. Exot.; Pl. 103, Fig. D. 1779.

III. Cassadaga: fifteen June, July, Sept., Oct., SVF. IV. Archbold Biological Station: Nov. 29, 1959, PSU. Siesta Key: five, mostly in the daytime on *Cestrum diurnum* blossoms, Nov. 21-24, 1959, CPK; one Feb. 2, one March 9, 1960, CPK. Miami: imago in Jan., from larva on tulip tree, DPI; imago in April, from larva on *Kigelia pinnata*, DPI; one Dec., HEW. Coral Gables: found pupating on *Tecomaria capensis*, DPI. VI. Homestead: reared on *Tabebuia avellanedae*, emerging May 17, 1960, (Baranowski), STES. Florida City: one Nov., OB. VIII. Tavernier: six Aug.-Sept., (J. N. Todd), CPK. Key West: one Aug., WRB.

Family PYRALIDAE

Dr. Eugene G. Munroe has rendered me great assistance with the Pyralidae, having not only made many determinations but also by bringing the nomenclature and arrangement into the currently accepted pattern. He was kind enough to list all pyralid specimens from Florida in the Canadian National Collection as well. Inasmuch as this family was the last one drawn up, and as a result of a conference with Munroe just before the last typing, a number of new combinations or even new synonymies may appear in the following pages. Many of these new combinations and synonymies were either in press or in papers by Munroe which would be published before the appearance of the present work, or shortly thereafter. For discussion of these changes, then, the reader should refer to papers by Munroe as they appear. I am also deeply indebted to Mr. Hahn W. Capps for many determinations and clarifications of the nomenclature.

Munroe's "Synopsis of Odontiinae" (1961) was received too late to permit the bringing together of the Florida species under this subfamily heading.

Subfamily GLAPHYRIINAE

GLAPHYRIA Hübner

5325 *G. GLAPHYRALIS* (Guenée)

Spec. Gén. 8: 366. 1854.

Florida: AMNH. II. Gainesville: April, CNC. III. Cassadaga: April, SVF. Orange Co.: May, DPI. Lakeland: Grsb. 110. IV. Bradenton: Aug., CPK. Oneco: May, CPK. V. Marco: USNM. VI. Princeton: April, CNC. Homestead: April, CNC.

5326 *G. SESQUISTRIALIS* Hübner

Zutr. exot. Schmett. 2:29. 1823.

I. Escambia Co.: May, SMH. Warrington: WP. Myrtle Grove: Oct., WJW. Monticello: Oct., AMNH. II. Alachua Co.: May, DPI. Gainesville: April, DPI; July, CU. III. Elfers: April, CNC. Orange Co.: April, DPI. Windermere: larva on live oak, April, DPI. Lakeland: USNM. Fort Meade: April, AKW. IV. Bradenton: April, July, Aug., CPK. Oneco: March, JGF; May, June, CPK. Archbold Biological Station: June, AKW; Oct., YU. Siesta Key: Feb.-May, CPK. Punta Gorda: March, MOG. Fort Myers: April, AMNH. Key Biscayne: April, CPK. VI. Princeton: April, CNC. Homestead: Feb.-May, June-Sept., CPK. Paradise Key: FMJ. VIII. Key Largo: May 5, 1957, DPI.

5327 *G. INVISALIS* Guenée

Spec. Gén. 8: 361. 1854.

I. Escambia Co.: May 5, 1961, SMH. III. Cassadaga: June 25, 1961, SVF. Egmont Key: April 25, 1904, (Ramstedt ?), det. Dyar, UM.

5328 *G. [PSYCHIALIS* (Hulst)]

Trans. Amer. Ent. Soc. 13: 149. 1886.

Munroe believes there is a possibility that these are not *psychialis*, especially the specimens from Tavernier. I. Escambia Co.: May, July, SMH. Quincy: May, CPK. II. Gainesville: May, UM; July, CU. III. Volusia Co.: Aug., DPI. Cassadaga: June, SVF. Egmont Key: April, det. Dyar, UM. IV. Siesta Key: March, May, CNC, CPK. VIII. Tavernier: Sept., DPI, CPK.

5330 *G. FULMINALIS* (Lederer)

Wien. ent. Monat. 7: 487. 1863.

Grossbeck (1917, p. 110) quoted an observation by McDunnough that there are two color forms, one with the ground color of the primaries a deep brown, the other with pale yellow ground suffused with purple-brown in the median area. I. Escambia Co.: May, SMH. Myrtle Grove:

June, WJW. Ocean City: April, HOH. III. Cassadaga: July, SVF. IV. Bradenton: April, June, Aug., CPK. Oneco: March, JGF; May, July, Oct., CPK. Siesta Key: Feb.-June, Nov., CPK. The Oneco and Siesta Key specimens include both forms. Fort Myers: the pale form, Grossbeck. V. Everglades: the dark form, USNM.

5332 *G. BASIFLAVALIS* Barnes & McDunnough

Contrib. 2: 172. 1913.

I. Escambia Co.: July, SMH. Quincy: March, CPK. II. Gainesville: Sept., DPI. IV. Bradenton: March, May, July, CPK. Oneco: May, CPK. Siesta Key: Dec.-April, June, CPK. Palm Beach: Jan., Dyar (1917b, p. 69). V. Everglades: USNM. Chokoloskee: type, USNM. VI. Homestead: March, July, CPK.

LIPOCOSMA Lederer

5340 *L. SICALIS* (Walker)

List Lep. Ins. Br. Mus. 19: 942. 1859.

III. Hernando Co.: Aug. 20, 1938, (Hubbell & Friauf), UM. IV. Punta Gorda: May, MOG.

5341 *L. DIABATA* Dyar

Ins. Insc. Mens. 5: 70. 1917.

Florida: type, USNM. III. Cassadaga: Aug., SVF. IV. Bradenton: Aug., CPK. Oneco: June, CNC, CPK. Vero Beach: April, (Malloch), USNM. Siesta Key: Feb., CPK. VI. Paradise Key: FMJ.

5341, 1 *L. SP.*

IV. Oneco: May 21, Aug. 3, 1953, (Dillman), det. Munroe as probably new, CPK. Siesta Key: Dec. 7, 1952, CPK.

5342 *L. FULIGINOSALIS* Fernald

Ent. Amer. 4: 37. 1888.

I. Escambia Co.: May, SMH. II. Gainesville: June, DPI. III. Cassadaga: July, SVF. Egmont Key: May, UM. IV. Bradenton: March, April, July, Aug., CPK. Oneco: Oct., CPK. Siesta Key: Jan.-June, Nov., CPK. VI. Homestead: March, April, May, Sept., CPK; April, CNC.

5343 *L. INTERMEDIALIS*

Barnes & McDunnough

Contrib. 1; 5: 32. 1912.

IV. Punta Gorda: three April 19-May 1, (Jones), det. Munroe, CPK. VI. Florida City: March 3, 1946, (Buchholz), det. Munroe, CPK.

CHALCOELA Zeller

[5346 *C. IPHITALIS* (Walker)]

List Lep. Ins. Br. Mus. 17: 444. 1859.

Munroe believes that these may very possibly be *D. pegasalis* below. The specimens should be located, if possible, and re-examined. IV. Charlotte Harbor: Grsb. 127. Biscayne Bay: (Slosson), Grsb. 127.

DICYMOLOMIA Zeller

5347 *D. JULIANALIS* (Walker)

List Lep. Ins. Br. Mus. 17: 438. 1859.

I. Escambia Co.: April, SMH. Myrtle Grove: July, WJW. II. Gainesville: July, CU. IV. Bradenton: Aug., CPK. Oneco: May, Sept., CPK. Archbold Biological Station: Sept., ABS. Siesta Key: March, May, CPK. V. Everglades: USNM. VI. Homestead: Aug., CPK. Larva in cattails.

5350 *D. PEGASALIS* (Walker)

List Lep. Ins. Br. Mus. 17: 438. 1859.

Florida: AMNH. I. West Pensacola: May, VFG. Quincy: July, CPK. II. Alachua Co.: Sept., DPI. Gainesville: Nov., DPI. III. Glennwood: USNM. Cassadaga: Aug., SVF. Lakeland: USNM. IV. Bradenton: March, July, Sept., CPK. Oneco: March, JGF; May, July, Aug., CPK. Archbold Biological Station: March, Aug., YU. Siesta Key: March, CPK. Punta Gorda: April, MOG. V. Chokoloskee: USNM. VI. Paradise Key: April, FMJ; Aug., UM.

5350, 1 *D. METALOPHOTA* (Hampson)

Trans. Ent. Soc. London, p. 166. 1897.

The species was described as *Ambia* but Munroe places it here. II. Gainesville: April 27, 1925, (Bates), UM. III. Cassadaga: Feb. 11, 1963, June 24, Sept. 4, 1962, SVF. V. Everglades: Nov. 13, 1952, CPK. VI. Paradise Key: March 15, 1955, CPK. VIII. Tavernier: Aug. 27, 1955, (J. N. Todd), CPK.

5350, 2 *D. SP.*

This species is probably new according to Munroe. IV. Archbold Biological Station: April, YU. Siesta Key: four Feb. 24-April 22, 1956, ten Feb., April-June 1957, one Nov. 15, 1958, CPK.

Subfamily PYRAUSTINAE

SUFETULA Walker

5351 *S. DIMINUTALIS* (Walker)

List Lep. Ins. Br. Mus. 34: 1315. 1865.

V. Everglades: (McDunnough), USNM; April 6, AMNH.

5352 *S. PHILEGELOS* Dyar

Ins. Insc. Mens. 10: 15. 1922.

IV. Miami: type, (Schaus), USNM. VI. Homestead: June 11, 1963, (Wolfenbarger), det. Munroe, CPK.

5352, 1 [S.] SP.

This and the next species were erroneously believed to be the two named *Sufetula*, but Munroe has found that they are probably undescribed, and possibly not *Sufetula*. Determinations made by me as 5351 and 5352 should be changed to 5352, 1 and 5352, 2, respectively. Other determinations may or may not be correct. III. Stemper: CM. IV. Oneco: April 1, 1954, JGF; May 5, 1953, det. Munroe, CPK. Siesta Key: Feb. 26, 1951, Nov. 10, 1952, CPK. VI. Homestead: April, May, Nov., CPK. Paradise Key: March 18, 1939, (Bradley), CU; July, Aug., CM.

5352, 2 [S.] SP.

To the unaided eye this bears a strong resemblance to small males of *Synclita oblitalis* (Walker), a resemblance that is immediately dispelled under magnification. IV. Lake Okechobee: June, CM. Oneco: May 1, May 28, July 15, Nov. 2, 1953, CPK. Siesta Key: two Feb. 14-15, 1954, April 8, 1953, May 1, 1956, Nov. 1, Dec. 1, 1952, CPK. VI. Paradise Key: two April 2, 1952, (Wallen), CNC.

HYMENIA Hübner

5353 *H. PERSPECTALIS* (Hübner)

Spotted beet webworm. Pl. XXIV, Fig. 24, ♂. Samml. eur. Schmett.; Fig. 101. 1796.

There are two very slightly different color forms of this which are found in both the northern states and in Florida, but Forbes says that he is unable to find any points for separating them into two species. The species is common throughout the state, including the Dry Tortugas, probably the whole year. I. Quincy: July-Dec., no peak. IV. Bradenton: April, July, Aug. VI. Homestead: Feb., May-Nov., peak in June and a small one in Nov. Food: chard, *Lilium canadense*, in greenhouses *Alternanthera*; beets, amaranth, Fla. Agr. Exp. Sta. Bull. 323: 34; Irish potatoes, Ins. Pest Surv. Bull. 3: 321.

5354 *H. RECURAVLIS* (Fabricius) *

Pl. XXIV, Fig. 25, ♂.

Ent. Syst., p. 644. 1775.

There are two slightly varying forms of *recuravilis* based on size, and again both are found in the North as well as in Florida, and again Forbes finds no basis for separation into species. It is common through the state, including the Dry Tortugas, and flies all year. I. Quincy: June-Nov., high plateau, Sept., Oct. IV. Bradenton: July-Dec. VI. Homestead: June-Oct., peak July-Sept. Food: chard, mangels, *Amaranthus*, and various weeds; "beets, and wild plants. During July the moths collect about the blossoms of catnip and other flowers in great numbers," Watson (1931, p. 34); greybeard, DPI.

DESMIA Westwood

All names except *funeralis* and *tages* must be considered tentative at present. Both Capps and Munroe have done a certain amount of reviewing of the specimens in their respective custodies, but neither has reached the stage of making genitalic slides, nor attempted to assign names authoritatively. I am indebted to both of them for very recent assistance with the genus.

5355 D. FUNERALIS (Hübner)

Grape leaf folder. Pl. XXIV, Fig. 26, ♂; Fig. 27, ♀.
Samml. eur. Schmett., Pyr.; Fig. 103. 1796.

Funeralis is another common species with statewide distribution. The records cover February-October, and December. I. Quincy: June-Sept., infrequent. IV. Bradenton: April, May, July-Oct. VI. Homestead: April, May, July-Sept., small peaks May and July. Food: wild grape, more rarely on *Oenothera* and *Cercis*; wild grape, Coop. Econ. Ins. Rept. 4: 717.

5355,1 D. SUBDIVISALIS Grote

Can. Ent. 3: 126. 1871.

Florida: USNM. IV. Siesta Key: April 27, 1957, April 30, 1959, det. Munroe, CPK.

5355,2 D. DIVISALIS Walker

List Lep. Ins. Br. Mus. 34: 1292. 1865.

VI. Homestead: rare, May, June, Aug.-Nov., det. Munroe, CPK. VII. Flamingo: April 7, 1958, DPI. VIII. Tavernier: Sept. 17, 1955, (Todd), CPK.

5355,3 D. DEPLORALIS Hampson

Ann. Mag. Nat. Hist. (8)9: 244. 1912.

IV. Siesta Key: two March 8-21, 1953, det. Munroe, CPK. Miami: USNM. The latter is provisionally classed by Capps as *ploralis* (Guenée), but in order to keep together specimens of the

same species, whatever be its real name, I am listing it here.

5355,4 D. [PLORALIS (Guenée)]

Pl. XXIV, Fig. 28, ♂.

Spec. Gén. 8: 192. 1854.

The species was determined by Munroe as "probably *ploralis*," but in the U. S. National Museum collection, it stands simply as "*ex tages*." Some of the U. S. National Museum specimens were determined at one time as something else, as noted below. III. Enterprise: USNM, at one time det. as *geminalis* Snellen. IV. Oneco: March 20, 1957, (Dillman), CPK. Lake Placid: reared from *Psychotria nervosa*, USNM. Also previously det. as *geminalis*. Archbold Biological Station: Feb. 15, 1961, Nov. 10, 1958, (Frost), PSU. Siesta Key: March 12, 1952, March 7, 1953, Nov. 22, 1959, CPK. Palm Beach: USNM. V. Everglades: April 11, AMNH. I have not examined this specimen since being straightened out by Munroe on the probable nomenclature of the genus, but inasmuch as it was, or is, determined as *geminalis*, and is so listed by Grossbeck (1917, p. 111), I would hazard a guess that it belongs here. VI. Homestead: reared from leaf tier on *Psychotria undata*, emerged April 8, 1959, (Baranowski) STES. Paradise Key: a series, Jan., (Jones), USNM. Most of these were determined originally by Heinrich as *repandalis* Schaus, but one he determined as "nr. *stenizonalis* Hamp." VIII. Key Largo: Jan. 29, 1959, SVF; Dec. 5, 1961, CNC.

5355,5 D. UFEUS (Cramer)

Pap. Exot. 2: 2; Pl. 97, Fig. E. 1779.

VII. Flamingo: Dec. 2, 1961, CNC.

5356 D. TAGES (Cramer)

Pap. Exot. 2: 2. 1777.

IV. Bradenton: two Nov., det. Munroe, CPK. Archbold Biological Station: Feb. 10, 1960, (Frost), PSU. Oneco: March, DPI; "*stenizonalis*," March, JGF. Palm Beach: Dyar (1901a, p. 462). V. Chokoloskee: USNM. VI. Florida City: Oct., CNC. Paradise Key: not rare, Jan.-April, FMJ. Northeast corner of Monroe County: Aug., CM. Everglades National Park: reared from *Psychotria* sp., (Craighead), ENP. Miami: USNM; July 10, 1949, DPI. Food: *Psychotria undata*, Dyar (1901c, p. 22).

SYNCLERA Lederer

5357 S. TRADUCALIS (Zeller)

Pl. XXIV, Fig. 29, ♀.

Lep. Caffr., p. 54. 1852.

Florida: Dyar (1902, p. 373). III. Indian River: AMNH. VI. Homestead: Oct., CPK. VIII. Key Largo: Aug., CM; Aug.-Nov., CPK, CNC. Plantation Key: Nov., DPI.

ANTIERCTA Amsel

5358 A. ORNATALIS (Duponchel)

Pl. XXIV, Fig. 30, ♀.

Hist. Nat. Lep. France 8 (2): 207. 1831.

IV. Bradenton: Feb., May, June, Aug., Oct., CPK. Port Sewall: Jan., Dec., AMNH. Siesta Key: March, Nov.-Jan., CPK. Fort Myers: April, (Davis), Grsb. 111. III. Riviera: Dec., MOG. V. Everglades: common, (McDunnough), USNM; April, AMNH. Marco: April, AMNH; April, (Davis), Grsb. 111. VI. Homestead: Feb., March, May, Dec., CPK. Florida City: May, CNC. Paradise Key: FMJ; July, CM, CNC. VIII. Key Largo: Dec., CNC. Tavernier: Sept., CPK. Craig: Jan., Feb., CPK. Loggerhead Key, Dry Tortugas: Jan., DPI.

ERCTA Walker

5359, 1 E. VITTATA (Fabricius)

Ent. Syst. 3 (2): 217. 1794.

Florida: Ins. Pest Surv. Bull. Spec. Suppl. No. 1 (1947), p. 4. VIII. Tavernier: five July-Sept., (J. N. Todd), CPK. Craig: two Jan., (Todd), CPK. Dry Tortugas: summer 1936, (Plough), CU; June, (Mead and Weems), DPI. Food: in Puerto Rico, *Euclasta torquillalis*.

MARASMIA Lederer

5360 M. COCHRUSALIS (Walker)

Pl. XXIV, Fig. 31, ♂.

List Lep. Ins. Br. Mus. 19: 959. 1859.

Florida: (Dyar), Grsb. 111. I. Escambia Co.: March, SMH. Warrington: WP; June, VFG. Monticello: June, CPK. II. Alachua Co.: Aug., DPI. Gainesville: Feb., DPI; July, CU. III. Cassadaga: April, SVF. Orlando: Dec., DPI. Weekiwachee Springs: May, June, CPK. St. Petersburg: Jan., AKW. IV. Bradenton: Aug., Nov., CPK. Oneco: March, JGF; May-Aug., CPK. Longboat Key: Dec., CPK. Archbold Biological Station: March, May, Dec., YU. Siesta Key: infrequent, Nov.-June, CPK. Fort Myers: USNM. VI. Homestead: May, Aug., CPK. VIII. Tavernier: Sept., Oct., DPI. Windley Key: April, May, DPI.

5361 M. TRAPEZALIS (Guenée)

Pl. XXIV, Fig. 32, ♀.

Spec. Gén. 8: 200. 1854.

Trapezalis is slightly larger with slightly different maculation, but close to *cochrusalis*. There are some specimens that do not quite match either species; they may represent only an aberration, or may be another closely related species. More material is needed. I. Escambia Co.: July, SMH. III. Orange Co.: Oct., Nov., DPI. Stemper: AEB. IV. Bradenton: Dec., CPK. Oneco: Aug., CPK. Ona: Oct., UFES. Siesta Key: Jan., Dec., CPK. Punta Gorda: April, MOG. Fort Myers: April, AMNH. Belle Glade: emerged from pupae on Carib grass, Sept. 18, 1956, (Genung), DPI. Palm Beach: Dyar (1901a, p. 462). Delray Beach: Nov., CPK. Fort Lauderdale: Aug., UM. V. Everglades: USNM. VI. Homestead: DPI; July-Oct., CPK. Paradise Key: FMJ.

5362 M. FLORIDALIS Fernald

J. N. Y. Ent. Soc. 9: 49. 1901.

IV. Bradenton: March, Nov., CPK. Siesta Key: Jan., May, CPK. Palm Beach: type, (Dyar), Fernald; Dyar (1901a, p. 462). Coral Gables: Oct., DPI. VIII. Pine Key (Big Pine Key?): July, CNC. Key West: (Fernald), Grsb. 112. Food: *Gonolobus palustre* [*Vincetoxicum palustre*], Dyar.

LEUCOCHROMA Guenée

5362, 1 L. COROPE (Cramer)

Pap. Exot. 4: 130; Pl. 357, Fig. 1. 1781.

IV. Fort Lauderdale: Aug. 9, 1925, (Bates), UM. VI. Modello: Jan., Nov., CNC. VIII. Key Largo: Dec. 6, 1961, CNC. Windley Key: one Dec. 23, 1954-Feb. 22, 1955, (J. N. Todd), det. Munroe, CPK.

ANANIA Hübner

5363 A. FLORELLA (Cramer)

Pl. XXIV, Fig. 33, ♀.

Pap. Exot. 4; Pl. 348, Fig. L. 1781.

I. Escambia Co.: Sept., Oct., SMH. *Florella* is relatively common from Gainesville south with records for every month.

5363, 1 A. TYTIUSALIS (Walker)

List Lep. Ins. Br. Mus. 18: 605. 1859.

III. Weekiwachee Springs: May, (May), CPK. IV. Bradenton: Aug., CPK. Oneco: Aug.-Dec., (Dillman), det. Munroe, CPK. Siesta Key: May, CPK. VI. Homestead: March-July, Oct., Nov., CPK. Paradise Key: (Jones), USNM.

5363, 2 A. MIZARALIS Druce

Biol. Cent. Amer. Het. 2: 558. 1899.

IV. Lake Okeechobee: July, CM, CNC. Northeast corner of Monroe County: Aug., CM, CNC. VI. Everglades National Park: Dec., CNC.

5363, 3 **A. HAEMORRHODALIS** (Guenée)
Spec. Gén. 8: 201. 1854.

III. Central Florida: April, 1956, WMD. IV. Siesta Key: June 1, 1957, CPK. Oneco: three May, June, Oct., (Dillman), CPK. VI. Homestead: March-July, Sept.-Nov., CPK. Florida City: one March, (Franclemont), CU; July, CNC. Paradise Key: Dec., CNC.

EURRHYPARODES Snellen

5364 **E. LYGDAMIS** Druce
Ann. Mag. Nat. Hist., Ser. 7, 9: 329. 1902.

I. Escambia Co.: April, SMH. II. Gainesville: May, DPI. III. Cassadaga: April, SVF. Weekiwachee Springs: May, CPK. IV. Bradenton: March, April, CPK. Oneco: March, JGF; May, CPK. Siesta Key: March, April, CPK. Riviera: April, MOG. Northeast corner of Monroe County: Aug., CM. VIII. Key Largo: Dec., CNC.

SAMEA Guenée

5365 **S. ECCLESIALIS** Guenée
Pl. XXIV, Fig. 34, ♀.
Spec. Gén. 8: 194. 1854.

Of the two species of *Samea* present this is the larger and more heavily marked. *Ecclesialis* is found all over the state, is very common and is flying all the year. I. Quincy: Oct. IV. Bradenton: Nov.-Jan., Aug., Sept. VI. Homestead: March-May, July-Nov., small peak in Oct. It is somewhat variable in the extent of the ground color.

5366 **S. MULTIPLICALIS** (Guenée)
Pl. XXIV, Fig. 35, ♀.
Spec. Gén. 8: 227. 1854.

This is likewise common all over the state throughout the year. I. Quincy: Aug.-Oct. IV. Bradenton: March-Oct., Dec. VI. Homestead: May-Nov., steady, but low plateau June-Oct. Food: water hyacinth, CNC.

DIASICTIS Hübner

5367 **D. ARGYRALIS** Hübner
Zutr. exot. Schmett. 1, 21; Fig. 113. 1818.

I. Escambia Co.: April, Aug., SMH. Warrington: VFG. Myrtle Grove: Sept., WJW. Portland: Munroe (1956a, p. 210). Liberty Co.: July, UM. II. Devil's Mill Hopper: Sept., Grsb. 112.

III. Lutz: Munroe. Stemper: Munroe. Lakeland: May, AMNH. IV. Punta Gorda: March, AKW. Biscayne Bay: (Slosson), Grsb. 112. The last specimen probably belongs under *holguinalis* below.

5367, 1 **D. PSEUDARGYRALIS** Munroe
Can. Ent. 88: 210. 1956.

Florida: (Slosson), AMNH. I. Millview: March 26, 1961, VFG. Warrington: July 20, 1963, VFG. III. Stemper: type, Sept., Oct., CM.

5367, 2 **D. VENTRALIS** (Grote & Robinson)
Trans. Amer. Ent. Soc. 1: 21. 1867.

III. Avon Park: Munroe (1956a, p. 212). IV. Fort Lauderdale: April 15, 1928, (Bates), UM.

5367, 3 **D. HOLGUINALIS** Munroe
Can. Ent. 88: 215. 1956.

IV. Biscayne Bay: two, paratypes, (Slosson), AMNH.

COLOMYCHUS Munroe

5370 **C. TALIS** (Grote)
Pl. XXIV, Fig. 36.
Can. Ent. 10: 26. 1878.

I. Escambia Co.: May 18, 1961, SMH. IV. Punta Gorda: April, MOG.

PILOCROCIS Lederer

5371 **P. RAMENTALIS** Lederer
Pl. XXIV, Fig. 37, ♀.
Wien. ent. Monat. 7: 430. 1863.

Florida: type of *perfusalis* (Hulst), AMNH. I. Escambia Co.: Nov., VFG., SMH. Quincy: Oct., Nov., CPK. II. Gainesville: Aug., CPK. III. Central Florida: Aug., WMD. IV. Bradenton: Feb., Dec., CPK. Oneco: May, June, Oct., CPK. Archbold Biological Station: April, YU. Palm Beach: Dyar (1901a, p. 465). Davie: larva on *Boehmeria cylindrica*, Feb., DPI. Tamiami Trail: March, WMD. Dade Co.: March, HFS. Miami: Oct., CNC. VI. Homestead: March, May-Dec., CPK. Paradise Key: March, FMJ; Nov., CNC. VIII. Tavernier: Aug.-Oct., Dec., CPK. Additional food plant records: false nettle, DPI; *Odontonema strictum* [*Jacobinia coccinia*], DPI.

5372 **P. TRIPUNCTATA** (Fabricius)
Sweetpotato leaf roller.
Ent. Syst. 3, 2, 217. 1794.

I. Escambia Co.: Sept., SMH. West Pensacola: June, July, VFG. Crestview: Oct., AMNH.

Quincy: June-Oct., CPK. Tallahassee: larva on sweetpotato, Sept., DPI. Monticello: Oct., AMNH. II. Gainesville: July, DPI. III. DeLand: March, MOG. Cassadaga: Aug., Oct., SVF. Orange Co.: Aug., DPI. Winter Park: Aug., DPI; Sept., AMNH. Indian River: Grsb. 112. IV. South Bay: April, Grsb. 112. Miami: Sept., (Sleight), Grsb. 112. V. Everglades: April, AMNH. VI. Homestead: May, July-Oct., CPK. Florida City: May, July, Aug., CNC. Paradise Key: Aug., UM. VIII. Tavernier: Sept., CPK.

5373 P. PLUMBICOSTALIS (Grote)

Pl. XXIV, Fig. 38, ♂.
Can. Ent. 3: 103. 1871.

I. Warrington: WP. III. Winter Park: (Slosson), AMNH. This was listed by Grossbeck (1917, p. 112) as "West Park," but since there is no such place in Florida, and as Slosson did collect at Winter Park, I prefer my interpretation of the label "W. Park." Rockledge: NYSM. IV. Biscayne Bay: (Slosson), Grsb. 112. V. Chokoloskee: USNM. VI. Florida City: May, CNC.

5374 P. INGUINALIS (Guenée)

Spec. Gén. 8: 34. 1854.

These specimens should all be checked to be sure they are not 5404, 1 below, q.v. I. Escambia Co.: April 22, July 11, Aug. 2, 1961, SMH. Monticello: Oct. 4, AMNH. III. Orlando: April, CNC. Indian River: type of *levalis* (Hulst), AMNH. Stemper: Sept., CNC; CPK. VI. Homestead: Sept., CPK. Paradise Key: Sept., UM.

5375 P. TRISTIGMALIS Hampson

Pl. XXIV, Fig. 39, ♀.
Proc. Zool. Soc. London, p. 659. 1898.

IV. Siesta Key: infrequent, Nov.-March, CNC, CPK. Lee Co.: Nov., DPI. Miami: (Schaus), Grsb. 112. VI. Florida City: April, CNC. Paradise Key: March, JGF; not rare, March, April, FMJ. VIII. Key Largo: Dec., CNC.

5375, 1 P. RUFESCENS Hampson

Pl. XXIV, Fig. 40, ♀.
Ann. Mag. Nat. Hist. Ser. 8, 9: 266. 1912.

IV. Miami: type of *Sylepta miamialis* Dyar, which Munroe makes a synonym of this, (Schaus), USNM. Coconut Grove: Dec. 1897, (Thaxter), AEB. VI. Homestead: May, Sept., Oct., CPK. Paradise Key: Jan., March, FMJ. VIII. Key Largo: Jan., April, SVF; Dec., CNC. Tavernier: common, Sept., Oct., CNC, CPK. Plantation Key: May, DPI. Windley Key: April, CPK. Key West: June, DPI.

CONCHYLODES Guenée

5376 C. DIPHTERALIS (Geyer)

Pl. XXIV, Fig. 41, ♂.
Zutr. exot. Schmett. 4, 24; Fig. 691. 1832.

II. Gainesville: Oct., DPI. Jacksonville: (Slosson), Grsb. 112. VIII. Key Largo: March, SVF; Aug., Sept., Nov., DPI, CPK, Dec., CNC.

5378, 1 C. CONCINNALIS Hampson

Proc. Zool. Soc. London, p. 675. 1898.

The following records may include some for *ovulalis* Guenée which is a distinct species according to Munroe. I. Escambia Co.: May, SMH. Warrington: WP. Quincy: April, Aug., Sept., CPK. Tallahassee: May, JPK. II. Gainesville: UFES; June, July, CU; Aug., DPI. Fernandina: April, CPK; April, May, Aug., Sept., CNC. III. DeLand: March, MOG. Cassadaga: April, May, July-Sept., SVF. Weekiwachee Springs: April, Aug., CPK. Fern Park: Aug., DPI. Altamonte Springs: Aug., DPI. Orange Co.: March, DPI. Winter Park: May, July, Sept., AMNH. Orlando: April, AMNH; Aug., CNC. Tampa: April, AEB. Lakeland: AEB; May, AMNH; June, AKW. IV. Archbold Biological Station: March, April, Aug., YU.

DICHOGAMA Lederer

5379 D. REDTENBACHERI Lederer

Pl. XXIV, Fig. 42, ♀.
Wien. ent. Monat. 7: 396. 1863.

IV. Palm Beach: Dyar (1901a, p. 460). V. Chokoloskee: USNM. VIII. Key Largo: Aug.-Dec., DPI, CNC, CPK. Food: *Capparis cynophallophora*, Dyar (1900f, p. 271).

5380 D. AMABILIS Moeschler

Abhandl. Senck. Naturf. 16: 296. 1890.

Amabilis occurs with and without the red dot in the apex of the forewing. IV. Siesta Key: rare, March-May, CNC, CPK. Palm Beach: Dyar (1901a, p. 460). VIII. Tavernier: Oct., CNC, CPK. Food: *Capparis cynophallophora* [*jamaicensis*], Dyar (1901c, p. 20).

ALATUNCUSIA Amsel

5381 A. BERGII (Moeschler)

Pl. XXIV, Fig. 43, ♀.
Abhandl. Senck. Naturf. 16: 297. 1890.

IV. Palm Beach: Dyar (1901a, p. 460). VIII. Key Largo: Dec., CNC. Tavernier: Aug.-Oct., det. Munroe, CNC, CPK. Food: *Capparis cynophallophora*, Dyar (1901c, p. 21).

PHOSTRIA Hübner

5381, 1 P. SIMIALIS (Guenée)

Pl. VI, Fig. 7, ♂.

Spec. Gén. 8: 357. 1854.

IV. Oneco: Aug. 25, 1953, (Dillman), det. Munroe, CPK. Siesta Key: March 31, 1957, two Nov. 11-12, 1955, CPK. Fort Lauderdale: two Aug. 9, 1925, (Bates), UM. Coconut Grove: Nov. 1897, (Thaxter), AEB.

MICROTHYRIS Lederer

5381, 2 M. PROLONGALIS (Guenée)

Spec. Gén. 8: 353. 1854.

VIII. Tavernier: Oct. 17, 1955, (J. N. Todd), det. Munroe, CPK.

5396 M. ANORMALIS (Guenée)

Pl. VI, Fig. 8, ♂.

Spec. Gén. 8: 352. 1854.

IV. Port Sewall: Dec., AMNH. Siesta Key: one each, Jan., Dec., CPK. Charlotte Harbor: (Slosson), Grsb. 114. Palm Beach: Dyar (1901a, p. 460). Fort Lauderdale: Aug., UM. V. Chokoloskee: USNM. VI. Homestead: July, CPK. Florida City: Jan., May-July, CNC. Paradise Key: Jan.-April, FMJ. VII. Flamingo: Dec., CNC. VIII. Plantation Key: Nov., DPI, CPK. Food: *Ipomoea*, Dyar (1901c, p. 20).

LAMPROSEMA Hübner

5382, 1 L. IARCHASALIS (Walker)

List Lep. Ins. Br. Mus. 19: 983. 1859.

IV. Siesta Key: a very dark specimen, May 14, 1956, det. Munroe, CPK. Coconut Grove: Nov. 1897, (Thaxter), AEB. VIII. Tavernier: Aug.-Nov., CPK. Windley Key: March, det. Munroe, CPK.

5384, 1 L. [SCHISTISEMALIS (Hampson)]

Pl. XXIV, Fig. 44, ♀.

Ann. Mag. Nat. Hist. Ser. 8, 9: 632. 1912.

Although *schistisemalis* was described from Panama, Munroe believes the specimens fit more closely the type of *strigivenalis* Hampson from Ecuador. Either name, therefore, is tentative. III. Cassadaga: June, SVF. IV. Bradenton: May, June, Aug., CPK. Oneco: March, JGF; June, CPK. Siesta Key: rare, Nov.-Jan., March-May, CNC, CPK.

CRYPTOBOTYS Munroe

5384, 2 C. ZOILUSALIS (Walker)

List Lep. Ins. Br. Mus. 18: 603. 1859.

Munroe (1956b, p. 123) made *Sylepta masculinalis* Barnes & McDunnough, a synonym of this. The records for the latter are accordingly transferred hither. V. Marco: April, (McDunnough), USNM. Chokoloskee: type of *masculinalis* (McDunnough), USNM. VI. Florida City: July, CNC. VII. Flamingo: Dec., CNC. VIII. Craig: Feb. 1955, (J. N. Todd), det. Munroe, CPK.

HEDYLEPTA Lederer

5385 H. INDICATA (Fabricius)

Pl. VI, Fig. 37, ♀.

Syst. Ent. 3(2): 218. 1794.

I. Escambia Co.: Nov., SMH. III. Orange Co.: Aug., DPI. IV. Archbold Biological Station: April, YU. Siesta Key: Nov., Dec., CPK. Fort Myers: April, SIM. Biscayne Bay: (Slosson), Grsb. 113. V. Everglades: USNM. Marco: USNM; April, SIM. VI. Homestead: Jan., DPI; Feb.-May, July-Dec., CPK. Florida City: March, CNC. Paradise Key: March, (Blatchley), Jones ms. VIII. Upper Matecumbe Key: Feb., AMNH. Tavernier: Aug., Oct., det. Munroe, CPK.

BLEPHAROMASTIX Lederer

5387 B. EBULEALIS (Guenée)

Pl. VI, Fig. 35, ♂.

Spec. Gén. 8: 196. 1854.

I. Warrington: June, VFG. West Pensacola: Oct., VFG. Quincy: July, CPK. II. Gainesville: June, CPK; Sept., DPI. Hastings: Sept., AFB. III. DeLand: March, MOG. Cassadaga: Nov., SVF. Orange Co.: Oct., WMD. Winter Park: Sept., AMNH. Merritt Island: Oct., AMNH. IV. Oneco: June, CPK. Archbold Biological Station: Jan., Aug., Dec., YU; July, AMNH; Nov., Dec., PSU, Dec., CU. Port Sewall: Nov., AMNH. Siesta Key: April, Nov., CPK. Fort Myers: USNM. VI. Homestead: Sept., CPK. Everglades National Park: Dec., CNC. VIII. Key Largo: July, AMNH; Sept., DPI.

5387, 1 B. DIFFERENTIALIS (Dyar)

Proc. U. S. Natl. Mus. 47: 266. 1914.

II. Gainesville: March 9, 1927, (Bates), UM. IV. Siesta Key: Dec. 28, 1953, CPK. VI. Homestead: not rare, July-Nov., CPK. Paradise Key: taken on *Baccharis*, April, (Jones), USNM; Dec., CNC. VIII. Tavernier: three Sept. 6-9, 1955, (J. N. Todd), CPK.

5390 B. [ACUTANGULALIS (Snellen)]

Tids. Ent. 19: 201. 1875.

Munroe thinks this name may not apply. If it does apply, it should be moved to the genus

Pseudopyrausta Amsel, of which it was made the type. III. Cassadaga: Sept., Oct., SVF. IV. Bradenton: one March, CPK. Oneco: seven May-July, Sept., Oct., (Dillman), CPK. Siesta Key: one May, CPK. Miami: July, Aug., CNC, CM. VI. Homestead: Feb.-Sept., CPK. Paradise Key: July, CM.

5391 B. MAGUALIS (Guenée)

Spec. Gén. 8: 230. 1854.

I. Escambia Co.: April, SMH. Myrtle Grove: April, Sept., WJW. II. Gainesville: April, CNC. III. Weekiwachee Springs: May, CPK. Stemp-er: AEB. IV. Bradenton: April, June-Sept., CPK. Archbold Biological Station: July, AMNH. Siesta Key: April-June, CPK. Charlotte Harbor: (Slosson), Grsb. 113. Punta Gorda: April, CNC. Fort Myers: common, (McDunnough), USNM; April, AMNH. Biscayne Bay: (Slosson), Grsb. 113. V. Everglades: common, (McDunnough), USNM. Allen River to Deep Lake: April, AMNH. VII. Flamingo: Dec., CNC.

5392 B. RANALIS (Guenée)

Spec. Gén. 8: 243. 1854.

Ranalis in Florida is a small, dark subspecies which may or may not have a name. I. Escambia Co.: May, SMH. Myrtle Grove: July, WJW. III. Sea Horse Key: Sept., DPI. Cassadaga: March-May, SVF. Weekiwachee Springs: May, Aug., CPK. Lakeland: May 6, AMNH. IV. Bradenton: Aug., CPK. Archbold Biological Station: April, YU. Siesta Key: May, Dec., CPK. Punta Gorda: March-June, MOG.

PTERYGISUS Butler

5388 P. APLICALIS (Guenée)

Spec. Gén. 8: 229. 1854.

Aplicalis was placed in this genus by Amsel, 1956. I. Escambia Co.: Aug., SMH. II. Gainesville: six July, (Rogers), CU. III. Orlando: April, CNC. IV. Bradenton: one March, (Kelsheimer), CPK. Siesta Key: one May, CPK. VI. Homestead: May, Aug., CPK.

5393 P. STENIALIS (Guenée)

Pl. VI, Fig. 36, ♂.

Spec. Gén. 8: 231. 1854.

Florida: type of *Hydrocampa australis* Hulst, May, AMNH. Munroe thinks that in Florida there is a subspecies, but the application of some earlier names is in doubt. I. Escambia Co.: April, SMH. Myrtle Grove: April, WJW. Torreya State Park: April, May, CNC. III: Cassadaga: March, SVF. Enterprise: April, Castle & Laurent (1896, p. 302). Weekiwachee Springs:

March, May, CPK. Indian River: AMNH. IV. Oneco: Oct., CPK. Siesta Key: April, May, CPK. Punta Gorda: March, MOG. Fort Myers: April, Grsb. 113. Biscayne Bay: (Slosson), Grsb. 113. V. Everglades: April, AMNH. VI. Paradise Key: March, April, CNC; April, FMJ.

NACOLEIA Walker

5394 N. HAMPSONI Barnes & McDunnough
Contrib. 2: 173. 1913.

III. Orange Co.: March, (Fernald), DPI. IV. Siesta Key: Jan., May, June, CPK. V. Marco: type, USNM. Everglades: May, SIM. Chokoloskee: USNM. VI. Homestead: June, Sept., CPK. Paradise Key: FMJ. VII. Flamingo: Feb., CPK; Dec., CNC. VIII. Tavernier: Aug.-Nov., CPK. Craig: Jan., Feb., May, CPK.

ASCIODES Guenée

5395 A. GORDIALIS Guenée

Pl. XXIV, Fig. 45, ♂.

Spec. Gén. 8: 374. 1854.

Gordialis is quite common from Cassadaga south. It has been taken in every month except June. Food: *Pisonia aculeata*, Dyar (1901c, p. 20); bougainvillea, Coop. Econ. Ins. Rept. 4: 890.

PANTOGRAPHIA Lederer

5397 P. LIMATA Grote & Robinson

Basswood leaf roller. Pl. XXIV, Fig. 46, ♂.
Ann. Lyceum Nat. Hist. N. Y. 8: 464. 1867.

Florida: HEW; (Slosson), Grsb. 114. I. Quincy: June, DPI; July, CPK. Torreya State Park: April, DPI; May, CNC. Leon Co.: April, UM. Tallahassee: May, JPK. II. Gainesville: May, UM; Oct., UFES. Food: oak; basswood, Dozier (1920, p. 378).

LEPTOTYGRIS Marion

5397, 1 L. REGINALIS (Cramer)

Pl. VI, Fig. 9, ♀.

Pap. Exot. 4: 163; Pl. 372, Fig. C. 1782.

IV. Matheson Hammock: March 27, 1957, (Fuller), CPK. VIII. Key Largo: in daytime flight, March 27, 1957, det. Capps, SVF.

SYLEPTA Hübner

5398 S. [PENUMBRALIS (Grote)]

Can. Ent. 9: 106. 1877.

Munroe believes this may be the same as *silicalis* (Guenée) below. I. Escambia Co.: July, Oct.,

SMH. Warrington: VFG. Myrtle Grove: Sept., WJW. Quincy: Sept., CPK. IV. Fort Myers: April, AMNH.

5399 S. [FLUCTUOSALIS (Lederer)]
Wien. ent. Monat. 7: 473. 1863.

IV. Palm Beach: larva on *Boehmeria cylindrica*, Dyar (1901a, p. 460). Grossbeck (1917, p. 114), noted that "The specimen on which this record is based was determined for Dyar by Fernald with a query."

5400 S. SILICALIS (Guenée)
Spec. Gén. 8: 349. 1854.

I. Quincy: Sept., Oct., CPK. II. Live Oak: larvae tying leaves of ramie, Sept., det. Heinrich, UFES. III. Central Florida: May, WMD. Weekiwachee Springs: Aug., CPK. Elfers: April, CNC. IV. Bradenton: Sept., Oct., CPK. Oneco: two May, June, CPK. Archbold Biological Station: Sept., YU. Siesta Key: April, CPK. Belle Glade: July, DPI. Miami: Dec., DPI. VI. Homestead: May-July, CPK; Dec., DPI. Paradise Key: April, USNM. VIII. Tavernier: Sept., Oct., CPK.

5401 S. OBSCURALIS (Lederer)
Pl. XXIV, Fig. 47, ♂.
Wien. ent. Monat. 7: 472. 1863.

Florida: (Dyar), Grsb. 114. I. Escambia Co.: June, SMH. Warrington: VFG. Ocean City: April, HOH. II. Gainesville: April, CNC; larva on *Amaranthus*, adult emerged Oct. 20, 1925, (Watson), UM; Nov., UM. III. Orlando: April, CNC. Doctor Phillips: June, DPI. Windermere: April, DPI. IV. Archbold Biological Station: April, YU. Punta Gorda: March, MOG. VIII. Tavernier: Aug., Sept., det. Munroe, CPK.

[5402 S. MASCULINALIS Barnes & McDunnough]
Contrib. 2: 172. 1913.

Munroe makes this a synonym of *Cryptobotys zoilusalis* (Walker), to which the records have been transferred.

5404, 1 S. SP.

Tropical specimens of this are classed in the collection of the U. S. National Museum as "species A." There is a close similarity to *Pilocrosis inguinalis* (Guenée), from which it may be separated by the uniformly dark discal spot of the forewing; whereas in *inguinalis* there is a light center, and also by the absence of the fuscous patch of *inguinalis* at the apex of the secondary. VI. Homestead: June 25, 1959, (Wolfenbarger), det. Capps, CPK.

[5405 S. MIAMIALIS Schaus]
In Dyar, Ins. Insc. Mens. 5: 71. 1917.

See *Pilocrosis rufescens* Hampson, of which this is a synonym.

LYGROPIA Lederer

5408 L. STICTIGRAMMA (Hampson)

Pl. XXIV, Fig. 48, ♂.
Ann. Mag. Nat. Hist. Ser. 8, 10: 16. 1912.

III. Cocoa: larva reared from stem of *Coccoloba wifera*, adult emerged Oct. 7, 1959, DPI. St. Petersburg: MCZ. Egmont Key: May, UM. IV. Siesta Key: two May 15, 1956, det. Munroe, April-June, CPK. VI. Florida City: June, CNC. VIII. Tavernier: Aug., Oct., CPK. Windley Key: April, CPK.

5409 L. [CHROMALIS (Guenée)]
Spec. Gén. 8: 204. 1854.

Munroe is of the opinion that the following records may be misdeterminations for the above species. They should all be re-examined. IV. Miami: Sept. 23, SIM. Biscayne Bay: (Fernald), DPI. V. Everglades: (McDunnough), USNM; April 11, AMNH.

AGATHODES Guenée

5410 A. DESIGNALIS Guenée

Pl. XXIV, Fig. 49, ♂.
Spec. Gén. 8: 209. 1854.

I. Escambia Co.: March, SMH. Warrington: summer, WP. II. Alachua Co.: Sept., DPI. High Springs: Aug., GWK. III. Volusia Co.: Aug., DPI. Cassadaga: April, July, Sept., SVF. From Siesta Key and Indian River southward it is relatively common, and has been taken January-September. Food: *Erythrina glauca*, *Citharexylum fruticosum*, *Inga vera*, all in Puerto Rico; *Erythrina herbacea*, Dyar (1901a, p. 463).

[5411 A. monstralis Guenée]
Spec. Gén. 8: 209. 1854.

Capps has made an extensive study of *designalis* and *monstralis*, and reports that all specimens he has seen from Florida, Arizona, South America, etc., are the same, and in his opinion are *designalis*. He adds that *monstralis* becomes a *species inquirendum*. I have accordingly transferred all records for the latter to *designalis*.

GLYPHODES Guenée

The two species, *pyloalis* and *sibillalis*, are easily confused but readily separable. The former is

the smaller, with more modest coloration and with one large translucent patch on the forewing which is open on the costa. *Sibillalis* is larger, of a richer color, and with two large patches both of which are more or less closed on the costa.

5412 G. PYLOALIS Walker

Pl. XXIV, Fig. 50, ♂.

List Lep. Ins. Br. Mus. 19: 973. 1859.

I. Warrington: March, VFG. Myrtle Grove: July, WJW. Quincy: Sept., CPK. II. Gainesville: May, DPI. Fernandina: Aug., CNC. III. Cassadaga: March, SVF. Eustis: Sept., DPI. Tampa: Aug., GWK. Fort Meade: Sept., DPI. IV. Bradenton: Oct., CPK. Sarasota: July, (King), CPK. Siesta Key: April, CPK.

[*G. bivitalis* Guenée]

Spec. Gén. 8: 293. 1854.

The larva of this was reported by Dyar (1901c, p. 20) and then he noted: "This should be *Glyphodes sibillalis*," q.v.

5420 G. SIBILLALIS Walker

Pl. XXIV, Fig. 51, ♀.

List Lep. Ins. Br. Mus. 17: 506. 1859.

Heretofore this was assigned to the genus *Diaphania* but is better placed here according to Munroe. I. Warrington: rare in early summer, then somewhat more frequent, VFG, WP. Quincy: Sept., Oct., CPK. II. Gainesville: Oct., DPI, UFES; Nov., UM. III. Central Florida: Aug., WMD. Cassadaga: March, July, Aug., Oct., SVF. Orange Co.: July, Nov., DPI. Indian River: type of *alitalis* Hulst, AMNH. Stemper: AFB. St. Petersburg: March, AKW. Lake Alfred: Nov., DPI. IV. Bradenton: Aug., CPK. Archbold Biological Station: Aug., YU; Dec., PSU. Siesta Key: Nov., CPK. Fort Myers: USNM. Palm Beach: Dyar (1901a, p. 459). Miami: July, CNC, HEW. V. Chokoloskee: USNM. VI. Florida City: March, June, Aug., Sept., AMNH; June-Sept., CNC. VIII. Key Largo: March, SVF. Tavernier: Sept., CPK. Food: *Morus rubra*, Dyar (1901c, p. 20).

PALPITA Hübner

5413 P. FLEGIA (Cramer)

Pl. XXV, Fig. 1, ♂.

Pap. Exot. 2: 66. 1777.

Flegia is not uncommon from Daytona Beach and Tarpon Springs to Key West, the records including all months. Food: *Thevetia peruviana [nereifolia]*, DPI.

5419 P. QUADRISTIGMALIS (Guenée)

Pl. XXV, Fig. 2, ♀.

Spec. Gén. 8: 304. 1854.

Because Munroe has found two other species involved with this, the records are mixed. True *quadrastigmalis* has a yellowish tinge, the others being gleaming white. It is probably more common than indicated, but I have been able to find only a few definite records. I. Escambia Co.: Feb., SMH. Warrington: WP. West Pensacola: June, VFG. II. Alachua Co.: May, DPI. Gainesville: April, CNC; May, CPK. III. Weekiwachee Springs: April, May, CPK. IV. Archbold Biological Station: Feb., April, YU; March, PSU. Siesta Key: March, May, CPK.

5419, 1 P. KIMBALLI Munroe

Pl. XXV, Fig. 3, ♀.

Can. Ent. 91: 641. 1959.

III. DeLand: April, MOG. IV. Oneco: July, CPK. Siesta Key: common, Nov.-June, CNC, CPK. Englewood: type, CNC. Punta Gorda: MOG. Miami: May, CNC. VI. Homestead: Feb., April-June, CPK. Florida City: May, June, CNC. VIII. Key Largo: Dec., CNC.

5589 P. ILLIBALIS (Hübner)

Zutr. exot. Schmett. 1, 19; Figs. 95, 96. 1818.

This and the next species were placed in *Palpita* by Munroe, 1952. Ocean City: Aug. 17, 1963, HOH. III. Dade City: Munroe (1952, p. 46). Lakeland: larva on plant with ficus-like leaf, (McDunnough), USNM. IV. Siesta Key: May 1, 1953, CPK. Punta Gorda: May, AKW.

5590, 1 P. EUPHAESALIS (Walker)

List Lep. Ins. Br. Mus. 19: 1008. 1859.

I. Escambia Co.: March 1961, SMH. Myrtle Grove: Sept. 10, 1962, WJW.

5590, 3 P. MAGNIFERALIS (Walker)

Can. Natl. Geol. 6: 41. 1861.

I. Escambia Co.: March, a melanic specimen, July, SMH. Quincy: May, CPK. Torreya State Park: April, CNC. II. San Mateo: Sept., DPI. III. Oklawaha: March, DPI. Cassadaga: Aug., Sept., SVF. Weekiwachee Springs: May, CPK. IV. Indiantown: May, DPI. Siesta Key: May 26, 1946, CPK.

5590, 4 P. CINCINNATALIS Munroe

Can. Ent. 84: 44. 1952.

III. Weekiwachee Springs: Feb. 21, 1955, (May), det. Munroe, May 1955, five May 21-25, 1960, (Mrs. May), CPK; Aug. 20, 1938, (Hubbell & Friauf), UM.

DIAPHANIA Hübner

5414 *D. OLEALIS* (Felder)

Reise Nov.; Pl. 135, Fig. 35. 1874.

Fort Myers: (McDunnough), USNM. South Bay: April 30, Grsb. 114. V. Everglades: April 9, AMNH. VIII. Craig: July, DPI. This last should be re-examined as it is probably *lualis* below.

5415 *D. NITIDALIS* (Stoll)

Pickle worm. Pl. XXV, Fig. 4, ♂.

Pap. Exot. 4: 160. 1781.

Nitidalis is common throughout the state, flying every month. Food: cucumbers, melons, squash, and gourds, Watson (1931, p. 63); summer squash, Coop. Econ. Ins. Rept. 4: 450; watermelon, Ins. Pest Surv. Bull. 15: 300.

5416 *D. MODIALIS* (Dyar)

Pl. XXV, Fig. 5, ♂.

Pomona College J. Ent. 4: 749. 1912.

Capps has called my attention to the fact that North American specimens have been erroneously called *infimalis* (Guenée). The latter looks like a small *hyalinata* (Linnaeus) with narrow black borders, whereas in *modialis* the borders are much wider, and in some specimens the white is reduced to a narrow ribbon. II. Alachua Co.: Sept., DPI. III. Shepard Lake: Oct., DPI. Orange Co.: June, DPI. Orlando: July, CU. IV. Bradenton: March, Aug., Oct., Nov., CPK. Oneco: May, June, Oct., CPK. Archbold Biological Station: Sept., Dec., YU; Nov., PSU. Port Sewall: Dec.-Feb., AMNH. Sarasota: June, CPK. Siesta Key: Nov.-April, June, CPK. Fort Myers: USNM; April, AMNH. South Bay: April, AMNH, SIM. Fort Lauderdale: Dec., det. Capps, UM. V. Marco: Grsb. 114. Everglades: USNM. VI. Homestead: Aug.-Oct., CPK. Paradise Key: March, April, FMJ. VIII. Key Largo: Dec., CNC. Tavernier: Sept.-Nov., DPI. Windley Key: Sept., CPK. Food: *Melothria pendula* [*grendula*], Dyar (1901c, p. 20).

5418 *D. HYALINATA* (Linnaeus)

Melonworm. Pl. XXV, Fig. 6, ♂.

Syst. Nat., p. 1874. 1758.

Hyalinata is common all over the state, but with no records for February or December. It has also been reported as ab. *niveocilia* (Hampson). Food: cucumbers, melons, squash, and gourds, Watson (1931, pp. 63-66); squash, Ins. Pest Surv. Bull. 5: 387; watermelon, *ibid.*, 15: 300; wild cucumbers, Coop. Econ. Ins. Rept. 4: 577; chayote, *ibid.*, 3: 463.

5418, 1 *D. INDICA* (Saunders)

Exotic pumpkin caterpillar. Pl. XXV, Fig. 7, ♂. Trans. Ent. Soc. London 1(2): 163. 1851.

The first records for this in the United States were published in 1959 (Coop. Ins. Pest Surv. 6: 90). Very close to *hyalinata*, but the latter has a white abdomen, whereas *indica* has the next to last segment banded in black. Furthermore, in *hyalinata* the black band along the outer margin of the forewing is of uniform width, but in *indica* it is slightly enlarged in the lower half of its course. II. Gainesville: Oct. 11, 1946, (Weems), DPI. III. Cassadaga: Sept. 2, 1952, SVF. IV. Bradenton: Aug. 23, Oct. 14, 1955, (Kelsheimer), det. Munroe, CPK, USNM. Avon Park: Jan. 12, 1960, DPI. Archbold Biological Station: Dec. 26, 1959, (Frost), PSU. Three miles south of Childs: Jan. 22, 1960, DPI. Siesta Key: Nov. 25, 1957, CPK. VI. Homestead: six Oct. 14-23, 1958, two Aug. 19-Sept. 1, 1959, (Wolfenbarger), CPK. VIII. Dry Tortugas: July 13, 1960, WMD.

5419, 2 *D. SP.*

This is superficially very close to the new species of *Palpita*, No. 5419, 1, but it has a very prominent, black abdominal tuft. Munroe believes it may be *D. innotata* (Druce). VI. Florida City: one male, June (Forsyth), HEW.

5420, 1 *D. IMPULSALIS* (Herrich-Schaeffer)

Corresp. Blatt. Regensb. 25: 29. 1871.

VI. Paradise Key: Feb., March, det. Heinrich, FMJ.

5420, 2 *D. LUALIS* (Herrich-Schaeffer)

Pl. XXV, Fig. 8, ♂.

Corresp. Blatt. Regensb. 25: 30. 1871.

IV. Siesta Key: Jan. 24, 1962, Nov. 17, Dec. 4, 1955, det. Capps, CPK. VI. Homestead: June 30, Sept. 1 and 13, 1959, (Wolfenbarger), det. Capps, CPK.

NEOLEUCINODES Capps

5420, 3 *N. PROPHETICA* (Dyar)

Pl. XXV, Fig. 9, ♀.

Proc. U. S. Natl. Mus. 47: 278. 1914.

IV. Siesta Key: Dec. 18, 1959, det. Capps, CPK.

OMMATOSPILA Lederer

5422 *O. NARCAEUSALIS* (Walker)

List Lep. Ins. Br. Mus. 19: 972. 1859.

VIII. Tavernier: two Oct. 10-17, 1955, (J. N. Todd), det. Munroe, CPK.

HELLULA Guenée

5423 H. ROGATALIS (Hulst)

Cabbage webworm. Pl. XXV, Fig. 10, ♂.
Trans. Amer. Ent. Soc. 13: 149. 1886.

Rogatalis is a fairly common species probably occurring throughout the state, with records in every month. Food: corn; collards, Coop. Econ. Ins. Rept. 4: 405; cabbage, *ibid.* 4: 1026.

5424 H. PHIDILEALIS (Walker)

List Lep. Ins. Br. Mus. 19: 972. 1859.

Phidilealis is distinguished from the foregoing by the iridescence in the cell. It does not seem to be very common. III. Cassadaga: May, SVF. Weekiwachee Springs: Aug., CPK. IV. Siesta Key: May, CPK. Miami: Dyar (1917a, p. 44); reared from pepper grass, Feb., DPI. V. Everglades: April, Dyar. VI. Homestead: Feb., March, May, July, Sept., Nov., CPK. VII. Monroe Co.: April, CPK. VIII. Key Largo: Dec., CNC. Craig: March, April, DPI. Windley Key: Feb., April, Dec., CPK. Dry Tortugas: June, DPI.

CHRYSOBOTYS Munroe

5425, 1 C. CAMBOGIALIS (Guenée)

Spec. Gén. 8: 331. 1854.

Cambogialis was placed in this genus by Munroe (1956b, p. 125). VIII. Dry Tortugas: summer 1936, (Plough), CU.

SAMEODES Snellen

There is a good deal of difficulty in separating the species of this genus and some of the records may not be reliable. Munroe has supplied notes on characters which should make the separation much simpler.

5427 S. ELEALIS (Walker)

Pl. VI, Fig. 29, ♂.

List Lep. Ins. Br. Mus. 18: 732. 1859.

The abdomen of *elealis* is pale on top. The large square orbicular is adjoined to spot behind cell. I. Torreya State Park: May, CNC. Quincy: June, Aug., Oct., CPK. Monticello: Sept., Oct., AMNH. II. Gainesville: Feb., CPK; June, CU; July, DPI. Jacksonville: Sept., HEW. Lake Geneva: March, HEW. III. Weekiwachee Springs: May, CPK. Indian River: May, UM. Hillsborough Co.: Aug., UM. Egmont Key: April, AKW. IV. Bradenton: May, CPK. Oneco: May, CPK. Port Sewall: Jan., Feb., AMNH. Siesta Key: Feb.-April, Nov., Dec., CPK. Punta

Gorda: March, MOG. VI. Homestead: Feb., det. Munroe, April-July, CPK. Florida City: March, CNC. VIII. Tavernier: Sept., DPI, CPK. Windley Key: Feb.-April, DPI.

5427, 1 S. ADIPALOIDES (Grote & Robinson)

Pl. VI, Fig. 30, ♀.

Trans. Amer. Ent. Soc. 1: 27. 1867.

I. Escambia Co.: Feb., SMH. Portland: Feb., CM. II. Gainesville: Feb., June, det. Munroe, CPK. VI. Homestead: July, det. Munroe, CPK. There are several specimens under this name in the University of Michigan collection, but as I have not seen them, I am not sure where they belong.

5427, 2 S. PHYLLISALIS (Walker)

Pl. VI, Fig. 31, ♂; Fig. 32, aberrant ♀.

List Lep. Ins. Br. Mus. 19: 936. 1859.

Hind wings paler than forewings, with fleshy tints on the forewings. There is an aberration which is darker above. III. Egmont Key: April, UM. IV. Siesta Key: Nov.-March, det. Munroe, CPK. VI. Homestead: May, CPK. VII. Flamingo: April, DPI.

5429 S. MOPSALIS (Walker)

Pl. VI, Fig. 33, ♀; Fig. 34, aber. *griseicinctus* Hamp., ♂.

List Lep. Ins. Br. Mus. 18: 594. 1859.

The minute orbicular spot is not joined to the spot behind the cell in *mopsalis*. The species is normally yellow, but there is a brown and gray aberration described by Hampson as *Paratalanta griseicinctus*. Both are present. I. Escambia Co.: Feb., SMH. II. Old Town: March, CPK. IV. Siesta Key: Jan.-April, CPK. Dade Co.: HFS. VI. Homestead: Feb.-Nov., CPK. Florida City: May, CNC. Paradise Key: Jan., March, USNM; April, Dec., CNC. VIII. Tavernier: Aug.-Oct., CPK.

TERASTIA Guenée

5431 T. METICULOSALIS Guenée

Pl. XXV, Fig. 11, ♂.

Spec. Gén. 8: 212. 1854.

Meticulosalis is not uncommon through the peninsula and Keys, but there are only two records from the western counties, both from Warrington. The dates include all months. The larva bores in young stems of *Erythrina herbacea*, Dyar (1901c, p. 21) and in the seed pods of *Erythrina* spp.; it has been "taken in a number of localities in Florida on *Erythrina* spp.," DPI.

CYBALOMIA Lederer

- 5432, 1 C. EVINCALIS** (Moeschler)
Pl. XXV, Fig. 17, ♂.
Abhandl. Senck. Naturf. 16: 287. 1890.
VIII. Key Largo: Jan. 30, 1959, det. Munroe, SVF; July 20, 1962, (Weems), DPI. Tavernier: Aug.-Oct. 1955, (Todd), det. Munroe, CNC, CPK.

EVERGESTIS Hübner

- 5442 E. RIMOSALIS** Guenée
Cross-striped cabbage worm. Pl. XXV, Fig. 16, ♂.
Spec. Gén. 8: 371. 1854.
I. Escambia Co.: July, SMH. Quincy: Oct., CPK. II. Gainesville: Feb., Dec., UFES; April, CNC. III. Orange Co.: March, July, WMD. Weekiwachee Springs: May, CPK. Winter Park: April, DPI. IV. Archbold Biological Station: Feb., PSU. V. Marco: April, AMNH. VI. Homestead: Feb.-June, Oct., CPK. Food: collards, DPI; radish, UFES acc. No. 9202.
- 5643 E. UNIMACULA** Grote & Robinson
Trans. Amer. Ent. Soc. 1: 14. 1867.
Unimacula was removed from *Pyrausta* by Munroe. Florida: Forbes (1923, p. 571).

TRISCHISTOGNATHA Warren

- 5450 T. PALINDIALIS** (Guenée)
Spec. Gén. 8: 380. 1854.
Palindialis is placed here by Munroe. Florida: May, CNC. I. Monticello: April, CU. II. Gainesville: July, UFES. III. Weekiwachee Springs: March, CPK. IV. Bradenton: April, Aug., CPK. Siesta Key: April, CPK. Punta Gorda: April, MOC. Lake Worth: type of *Evergestis dyaralis* Fernald (1901, p. 49). Dade Co.: May, HFS. VI. Florida City: May, CNC. VIII. Craig: April, June, CPK. Windley Key: Feb.-April, CPK. Food: *Drypetes lateriflora* [crocea], Dyar (1901a, p. 460).

AZOCHIS Walker

- 5447 A. RUFIDISCALIS** Hampson
Pl. XXV, Fig. 12, ♀.
Ann. Mag. Nat. Hist. Ser. 7, 14: 186. 1904.
Some specimens have been reported as *cubanalisis* Hampson, but Munroe believes they are the same thing. IV. Miami: Dyar (1917b, p. 73). VI. Florida City: Feb., MOC; May, HEW; May, July, Sept., CNC. Paradise Key: Jan., Feb., CPK; Feb., March, AEB; March, JGF.

CROCIDOPHORA Lederer

- 5449 C. PUSTULIFERALIS** Lederer
Wien. ent. Monat. 7: 477. 1863.
Florida: Dyar (1902, p. 381); since 1937 in bamboo, Ins. Pest Surv. Bull. Spec. Suppl. No. 2 (1947): 7. I. Escambia Co.: April 5, 1961, SMH. Millview: March 26, 1961, VFG. Monticello: April 4, 1961, (Phillips), CNC.
- 5451 C. TUBERCULALIS** Lederer
Wien. ent. Monat. 7: 476. 1863.
I. Escambia Co.: June 29, 1962, SMH. Quincy: April 24, 1963, (Tappan), det. Forbes, CPK. II. Gainesville: March 15, 1925, (Bates), det. Forbes, UM.

EPIPAGIS Hübner

- 5451, 1 E. FORSYTHAE** Munroe
Can. Ent. 87: 250. 1955.
III. Tampa: July 30, 1930, AEB. VI. Homestead: May 21, 1958, (Wolfenbarger), det. Munroe, CPK. Florida City: type, May, June, CNC, CPK. Everglades National Park: Dec. 1, 1961, (Munroe), CNC. Paradise Key: Feb. 5, March 16, 1930, (Jones), USNM; April, AMNH.
- 5452 E. HURONALIS** (Guenée)
Pl. XXV, Fig. 13, ♀.
Spec. Gén. 8: 198. 1854.
I. Escambia Co.: April-Sept., SMH. Warrington: WP. Quincy: May, Sept., Oct., CPK. Monticello: Sept., CPK; Oct., AMNH. Lake Miccosukee: Oct., AMNH. II. Gainesville: June, DPI, Sept., Oct., AMNH; Oct., UM. Devil's Mill Hopper: Sept., AMNH. East Gainesville: June, CPK; Sept., AMNH. Hastings: Sept., AFB. III. Dunellon: DPI. Lakeland: May, AMNH. IV. Bradenton: March, CPK. Oneco: July, Sept., CPK. Avon Park: April, CU. Archbold Biological Station: Sept., Dec., YU. Vero Beach: April, CPK. Sarasota: Oct., CPK. Myakka State Park: Aug., CPK. Siesta Key: May, CPK. Punta Gorda: May, MOC. Fort Myers: USNM; April, SIM. La Belle: April, SIM. Miami: July, CM. Northeast corner of Monroe Co.: Aug., CM. VI. Homestead: Oct., CPK.

POLYGRAMMODES Guenée

- 5404 P. ELEVATA** (Fabricius)
Ent. Syst. 3(2): 216. 1794.
Elevata was placed here by Munroe (1956b, p. 122). IV. Port Sewall: Nov.-Feb., AMNH. Lee Co.: Nov., DPI. Lake Worth: Grsb. 114. Biscayne Bay: (Slosson), Grsb. 114. Coconut Grove:

AEB. VI. Florida City: Jan., April-June, CNC; May, DPI. Paradise Key: (Blatchley), Jones ms; Dec., CNC. VIII. Key Largo: Dec., CNC. Tavernier: Sept., CPK.

5583 P. OXYDALIS Guenée
Spec. Gén. 8: 328. 1854.

This species is very close to *flavidalis* below, but smaller and darker. At Homestead it becomes even smaller. Munroe is of the opinion that the latter may be a subspecies, in which case *oxydalis* would take priority by page. II. Gainesville: Aug., UFES. Devil's Mill Hopper: Sept., AMNH. III. Weekiwachee Springs: May, CPK. Port Orange: June, CPK. Rockledge: NYSM. IV. Bradenton: Oct., CPK. Oneco: two May, Oct., CPK. VI. Homestead: May-July, Sept., CPK. Florida City: June, CNC.

5584 P. FLAVIDALIS Guenée
Spec. Gén. 8: 329. 1854.

Florida: Forbes (1923, p. 567). I. Myrtle Grove: May 16, 1963, WJW.

COMPACTA Amsel

5453 C. CAPITALIS (Grote)
Bull. U. S. Geol. Geograph. Surv. Territ. 6: 272. 1881.

Florida: locality of female type, Barnes & McDunnough (1914a, p. 214).

NOMOPHILA Hübner

5455 N. NOCTUELLA (Denis and Schiffermueller)

Pl. XXV, Fig. 14, ♂.
Syst. Verz. Wien.; Pl. 136. 1776.

Noctuella is undoubtedly found throughout the state and is probably common. It has been taken in every month.

PILEMIA Moeschler

5456 P. PERIUSALIS (Walker)
Pl. XXV, Fig. 18, ♂.
List Lep. Ins. Br. Mus. 18: 623. 1859.

II. Gainesville: Sept., UFES. III. Frostproof: Sept., DPI. IV. Bradenton: May, CPK. Oneco: June, CPK. Archbold Biological Station: Jan., Dec., YU. Okeechobee: larvae webbing together seedlings of eggplant and pepper, and doing considerable injury, Oct. 1926, USNM. Fort Pierce: larva on eggplant, Nov., DPI. Fort Myers: April, SIM. V. Everglades: USNM. VI.

Homestead: Oct., CPK; larva on *Solanum verbaseifolium*, DPI. VIII. Key Largo: Dec., CNC. The larva also feeds on tobacco.

HERPETOGRAMMA Lederer

5457 H. BIPUNCTALIS (Fabricius)
Southern beet webworm. Pl. XXV, Fig. 19, ♀.
Ent. Syst. 3(2): 232. 1794.

Bipunctalis is generally distributed, including the Dry Tortugas and very common. It has been taken in every month. I. Quincy: July-Nov., not abundant. IV. Bradenton: July-October. VI. Homestead: Feb., April-July, Sept., peak in July, another small one in September. Food: *Amaranthus*, *Achyranthes indica*, *Borreria ocimoides*, eggplant, and Swiss chard; beet, DPI; weed, DPI; shrub, DPI; greybeard, DPI.

PACHYZANCIA Meyrick

5459 P. PHAEOPTERALIS (Guenée)
Pl. XXV, Fig. 20, ♂.
Spec. Gén. 8: 349. 1854.

Phaeopteralis is likewise common through the peninsula and Keys, although there are no records from the western counties, except Quincy where it is not common, and one from Escambia County. It flies all year. I. Quincy: Oct.-Dec. IV. Bradenton: July-Dec. VI. Homestead: Feb.-Nov., peak in July, falling in Aug. and rising again to a high peak in Sept. and Oct. Food: *Stenotaphrum secundatum*; St. Augustine grass, Coop. Econ. Ins. Rept. 4: 788, 828, 903; centipede grass, *ibid.* 4: 987.

5459, 1 P. SP.

A new species which is being described by Capps. It has been reared from sweet potato in Louisiana. Florida: (Slosson), USNM. I. Escambia Co.: June 7, 1962, det. Munroe, SMH. Warrington: May 15, 1961, det. Munroe, VFG. West Pensacola: June 12, 1961, VFG. III. Daytona: 1910 (Boyden), USNM. IV. Archbold Biological Station: Dec. 17, 1959, (Frost), PSU. Siesta Key: April, CPK. Northeast corner of Monroe Co.: July, CM. VI. Homestead: Oct. 22, 1959, (Wolfenbarger), CPK.

5578 P. AEGLEALIS (Walker)
List Lep. Ins. Br. Mus. 18: 565. 1859.

This and the two following species are placed here on the authority of Munroe. I. Quincy: Aug. 9, 1960, (Tappan), CPK. Leon Co.: April 15, 1945, (Hubbell), UM. III. Weekiwachee Springs: May 24, 1960, (Mrs. May), CPK. V. Marco: Nov. 4, AMNH.

5579 P. THESTEALIS (Walker)

List Lep. Ins. Br. Mus. 18: 733. 1859.

IV. South Bay: April 30, AMNH; May 1, SIM. Fort Lauderdale: Aug. 9, 1925, (Bates), UM.

5581 P. [THESEUSALIS (Walker)]

List Lep. Ins. Br. Mus. 18: 562. 1859.

Munroe is of the opinion that this name is applied incorrectly and that the species that we have should probably be called *feudalis* (Grote). I. Escambia Co.: June, SMH. II. Gainesville: May, UM; May, Aug., DPI. III. Weekiwachee Springs: May, CPK. Orange Co.: DPI. Stemp-er: Sept., CM. Lakeland: May, SIM. IV. Oneco: May, June, CPK. Sarasota: larva on fern, June 15, adults Aug. 24, (King), CPK. Siesta Key: May, CNC, CPK. Fort Myers: USNM; April, AMNH. Fort Lauderdale: Sept., UM. V. Marco: USNM; April, AMNH. VI. Paradise Key: Sept., UM.

LOXOSTEGE Hübner

Capps has been working on this genus, and I am indebted to him for information on certain Florida species.

5460 L. DASCONALIS Walker

List Lep. Ins. Br. Mus. 18: 773. 1859.

I. Escambia Co.: April, SMH. II. Jacksonville: (Slosson), Grsb. 116. III. Weekiwachee Springs: May 20, 1960, (Mrs. May), CPK.

5464 L. OBLITERALIS (Walker)

List Lep. Ins. Br. Mus. 34: 1392. 1865.

I. Escambia Co.: April 26, 1962, SMH.

5467 L. MANCALIS (Lederer)

Pl. XXV, Fig. 21, ♂.

Wien. ent. Monat. 7: 464. 1863.

Some of the records may be in error for the next species. Florida: Dyar, (1902, p. 382). I. Escambia Co.: July, SMH. II. Gainesville: April, May, CPK; June, DPI; July, CU. III. Orange Co.: March, July, DPI. IV. Bradenton: Aug., CPK. Oneco: June, CPK. Sarasota: June, CPK. Siesta Key: Jan., May, CPK.

5467, 1 L. SP.

A new species close to *mancalis*, which Capps is describing. The only certain records are: II. Gainesville: July 11, 1945, UFES. III. Lakeland: two May 1-11, USNM.

5468 L. HELVIALIS Walker

List Lep. Ins. Br. Mus. 18: 772. 1859.

I. Monticello: March, DPI. II. Gainesville: June, DPI; July, CU. III. Tampa: Sept., AEB. Egmont Key: April, UM. Lakeland: USNM; May, AMNH, SIM. IV. Archbold Biological Station: April, CU. Siesta Key: Feb.-June, CNC, CPK. Punta Gorda: April, MOC. Fort Myers: April, AMNH. VI. Homestead: May, CPK. VIII. Tavernier: Sept., Oct., DPI.

5471 L. SIMILALIS (Guenée)

Pl. XXV, Fig. 22, ♀.

Spec. Gén. 8: 405. 1854.

I. Escambia Co.: July, SMH. Warrington: WP. Quincy: May-Oct., CPK. Monticello: June, Aug., DPI. II. Gainesville: June, DPI, CU. III. Volusia Co.: Aug., DPI. Cassadaga: Feb., June, July, Sept., SVF. Weekiwachee Springs: March, Aug., AEB, CPK. Sanford: April, DPI. Brooksville: June, AKW. Lakeland: USNM; May, AMNH. IV. Bradenton: April, AEB; June-Aug., DPI. Oneco: July, CPK. Siesta Key: May, June, CPK. Fort Myers: Grsb. 116. V. Everglades: USNM. VI. Homestead: July-Oct., CPK. VIII. Key Largo: Dec., CNC. Tavernier: Aug., Oct., DPI. Craig: Feb., March, DPI. Windley Key: July, Aug., DPI.

5483 L. ALBICERALS FLORIDALIS

Barnes & McDunnough

Pl. XXV, Fig. 15, ♀.

Contrib. 2: 173. 1913.

Albiceralis is probably found only in this form, though there is one old report of typical *albiceralis* Grote. III. Weekiwachee Springs: Feb., CPK. Titusville: Feb., April, CM. IV. Siesta Key: infrequent, Jan.-April, CPK. Charlotte Harbor: *albiceralis*, (Slosson), Grsb. 116. V. Everglades: types, eight April 26-30, USNM. VII. Flamingo: Feb., April, DPI; Dec., CNC. VIII. Tavernier: Sept.-Nov., CPK. Big Pine Key: May, DPI. Larva on "Florida cranberry," Barnes & McDunnough.

MICROTHERIS Meyrick**5492 M. OPHIONALIS** (Walker)

List Lep. Ins. Br. Mus. 17: 316. 1859.

Assigned to this genus by Munroe. Florida specimens are not typical. I. Escambia Co.: Sept., SMH. Ocean City: May, HOH. II. Gainesville: April, DPI; June, CNC, CPK; June, July, CU. III. Cassadaga: July, SVF. Weekiwachee Springs: May, CPK. Lakeland: USNM. VIII. Windley Key: Sept., CPK.

SERICOPLAGA Warren

5497 S. MACLURAE Riley

Ins. Life 5: 155. 1893.

I. Escambia Co.: July, SMH. Quincy: Oct., CPK. Monticello: one April, (Hoffman), CU. II. Gainesville: April, DPI. IV. Bradenton: one Feb., (Kelsheimer), CPK. VI. Homestead: one Dec., (Wolfenbarger), CPK.

DIASEMOPSIS Munroe

5498, 1 D. LEODOCUSALIS (Walker)

Pl. XXV, Fig. 24, ♀.

List Lep. Ins. Br. Mus. 19: 947. 1859.

Munroe finds this a valid species, and the one present in Florida instead of *ramburialis* (Duponchel) as it has usually been called. I. Escambia Co.: April, SMH. Warrington: WP. Quincy: Oct., Nov., CPK. II. Alachua Co.: Sept., DPI. Gainesville: April, Aug., DPI; June, July, CU. III. Cassadaga: June, SVF. Weekiwachee Springs: April, May, Aug., CPK. Lakeland: Grsb. 117. IV. Bradenton: April-June, Sept.-Nov., CPK. Oneco: April, JGF; May, June, Aug., CPK. Archbold Biological Station: Feb., March, PSU; Dec., YU. Siesta Key: March, May, CPK. Fort Myers: USNM. VI. Everglades National Park: Dec., CNC. VIII. Tavernier: Oct., DPI.

DIASEMOIDES Munroe

5499 D. NIGRALIS (Fernald)

Pl. XXV, Fig. 25, ♂.

Can. Ent. 24: 178. 1892.

I. Escambia Co.: May, July, Aug., Oct., SMH. Warrington: WP. Cold Harbor: types, two March, Fernald. Cold Harbor is one of the localities which has not been possible to place. The question arises as to whether this may be in error for Charlotte Harbor, or whether it may be some inlet off Charlotte Harbor, because Rindge in listing the type material in the Hulst collection (1955, p. 166) gives the locality for the type male as Charlotte Harbor. The second of the type specimens from Florida was stated by Fernald in the original description as being in his collection. III. Cassadaga: Sept., Nov., det. Munroe, SVF. Weekiwachee Springs: Feb.-May, det. Munroe, CPK. IV. Bradenton: April, CPK. Archbold Biological Station: Feb., March, Nov., PSU; July, AMNH. Charlotte Harbor: type, March (Slosson), AMNH. Punta Gorda: April, MOG. Fort Myers: USNM. V. Everglades: April 8-19, USNM; April, AMNH. VI. Paradise Key: Jan., March, FMJ.

5500 D. JANASSIALIS (Walker)

Pl. XXV, Fig. 26, ♂.

List Lep. Ins. Br. Mus. 17: 337. 1859.

Florida: type of *hariolalis* (Hulst), AMNH. I. Escambia Co.: Jan.-April, Oct., SMH. Torreya State Park: April, CNC. Quincy: Nov., CPK. Monticello: Jan., CPK. II. Alachua Co.: Oct., DPI. III. Cassadaga: March, April, SVF. Weekiwachee Springs: Feb.-April, det. Munroe, CPK. Stemper: Feb., AFB. IV. Archbold Biological Station: Feb., PSU; July, AMNH. Punta Gorda: March, MOG. VII. Mahogany Hammock: Dec., CNC.

DAULIA Walker

5504 D. MAGDALENA (Fernald)

Can. Ent. 24: 122. 1892.

Magdalena was placed in this genus by Munroe. Florida: types, two, Fernald. I. Myrtle Grove: Sept., WJW. III. Volusia Co.: Aug., UM. Weekiwachee Springs: Feb., Aug., det. Munroe, CNC, CPK. IV. Bradenton: March, April, Sept., CPK. Archbold Biological Station: Jan., Feb., YU. Siesta Key: Dec., CPK.

GONOCAUSTA Lederer

5509 G. SABINALIS Dyar

Ins. Insc. Mens. 2: 163. 1914.

VIII. Tavernier: three Aug. 16-Sept. 21, 1955, (J. N. Todd), det. Munroe, CPK.

ISCHNURGES Lederer

5509, 1 I. EUDAMIDASALIS Druce

Biol. Cent. Amer. Het. 2: 560. 1899.

VI. Paradise Key: (Jones), USNM. VIII. Tavernier: May, Sept., Oct., (J. N. Todd), det. Munroe, CPK.

PORTENTOMORPHA Amsel

5511, 1 P. XANTHIALIS (Guenée)

Spec. Gén. 8: 343. 1854.

VIII. Tavernier: Aug. 25, 1955, (Todd), det. Munroe, CPK.

CONDYLORRHIZA Lederer

5512 C. VESTIGIALIS (Guenée)

Spec. Gén. 8: 321. 1854.

I. Monticello: Aug. 26, 1958, (Phillips), det. Munroe, CPK. IV. Fort Lauderdale: July 12, 1923, (Bates), det. Forbes, UM. VI. Homestead: Aug. 19, 1958, (Wolfenbarger), det. Munroe, CPK.

MICROCAUSTA Hampson

5513 *M. FLAVIPUNCTALIS*

Barnes & McDunnough
Contrib. 2: 174. 1913.

IV. Siesta Key: rare, Dec.-March, CPK. Fort Myers: type, April 1-7, USNM. VI. Homestead: March, April, CPK. Paradise Key: April, CNC. VII. Mahogany Hammock: Dec. 3, 1961, CNC.

THOLERIA Hübner

5515 *T. REVERSALIS* (Guenée)

Genista caterpillar. Pl. XXV, Fig. 31, ♂.
Spec. Gén. 8: 409. 1854.

I. Escambia Co.: March, SMH. Warrington: rare, summer, VFG. Avalon: larva on *Lupinus*, Feb., DPI. Crestview: Oct., AMNH. DeFuniak Springs: Oct., AMNH. Quincy: May, June, Sept., CPK. Monticello: June, DPI. II. Gainesville: UFES; Feb., Aug., DPI; April, CNC. III. Osteen: Feb., DPI. Cassadaga: July, SVF. Weekiwachee Springs: March, April, June, Aug., AEB, CPK. Altamonte Springs: USNM. Orlando: May, WMD. Indian River: AMNH. Tarpon Springs: Feb., JLC; April, UM. IV. Archbold Biological Station: Feb., Nov., Dec., PSU; June, AKW. Spring Valley: reared from *Lupinus cumulicola*, det. Brass, Jan., YU. Siesta Key: Nov.-March, May, June, CNC, CPK. Englewood: April, CNC. Charlotte Harbor: (Slosson), Grsb. 117. Boca Grande: April, Grsb. 117. Useppa Island: April, SIM. Punta Rassa: April, AMNH. Palm Beach: Dyar (1901a, p. 461). V. Collier Co.: DPI. VI. Homestead: larva on *Cassia*, Nov., DPI; Aug., Oct., CPK. Florida City: May, HEW. Paradise Key: FMJ. Food: *Baptisia tinctoria*; *Sophora tomentosa*, Hyslop (1934, p. 559).

5516 *T. PYRAUSTALIS* Dyar

Pl. XXV, Fig. 30, ♂.
Ins. Insc. Mens. 13: 8. 1925.

I. Escambia Co.: May 13, 1962, SMH. III. Altamonte Springs: type, 1924, (Cole), USNM. IV. Bradenton: March 12, April 16, 1955, (Kelsheimer), CPK. Archbold Biological Station: two Dec. 19-25, 1957, (Pease), YU.

BOEOTARCHA Meyrick

5519 *B. STIGMOSALIS* (Warren)

Ann. Mag. Nat. Hist. Ser. 6, 9: 209. 1892.

IV. Miami: (Schaus), Dyar (1917b, p. 73); June, CNC. South Miami: Oct., CNC. VIII. Key Largo: March, Dec., CNC; SVF.

PERISPASTA Zeller

5545 *P. CAECULALIS* Zeller

Pl. XXV, Fig. 23, ♀.
Verh. zool.-botan. Ges. Wien 25: 333. 1875.

I. Escambia Co.: Feb., May, June, SMH. IV. Oneco: June 4, 1954, (Dillman), det. Munroe, CPK.

UDEA Guenée

5546 *U. RUBIGALIS* (Guenée)

Celery leaf tier, Greenhouse leaf tier.
Pl. XXV, Fig. 28, ♂.
Spec. Gén. 8: 398. 1854.

Rubigalis is sometimes erroneously known as *Phlyctaenia ferrugalis* (Hübner). It is surely common throughout the state, especially in the celery districts, the records covering September-April. Food: celery, Ins. Pest Surv. Bull. 15: 46.

PHLYCTAENIA Hübner

5548, 1 *P. VINOTINCTALIS* (Hampson)

Pl. XXV, Fig. 27, ♂.
Ann. Mag. Nat. Hist. Ser. 6, 16: 340. 1895.

There has been confusion over this species, most of the records having passed under the name *desistalis* Walker. Munroe has examined the type of *vinotinctalis*, which definitely is our species, whereas the application of the name *desistalis* is doubtful. The species is common and often abundant from Jacksonville, Gainesville, and Bradenton to the Keys, all year. Reared from *Eupatorium* sp., DPI.

5560 *P. ACUTELLA* Walker

List Lep. Ins. Br. Mus. 35: 1753. 1866.

II. Gainesville: Aug. 8, 1957, (Denmark), DPI.

5562 *P. EXTRICALIS* (Guenée)

Spec. Gén. 8: 338. 1854.

I. Escambia Co.: July 5, 1961, SMH.

5564 *P. CORONATA TERTIALIS* (Guenée)

Spec. Gén. 8: 364. 1854.

I. Escambia Co.: June, SMH. Quincy: June, CPK. II. Gainesville: Sept., UFES. IV. Bradenton: March, April, July-Sept., CPK. Oneco: Aug., Oct., CPK. Archbold Biological Station: reared from *Sambucus* sp., Feb., March, (Frost), PSU; Feb., March, Dec., YU. Siesta Key: March, CPK. Fort Myers: April, AMNH.

FRAMINGHAMIA Strand

5563 *F. HELVALIS* (Walker)

List Lep. Ins. Br. Mus. 18: 757. 1859.

Florida: (Hulst), Grsb. 117. IV. Bradenton: April 10, 1955, (Kelsheimer), det. Munroe, CPK.

CINDAPHIA Lederer

5565 C. BICOLORALIS (Guenée)

Pl. XXV, Fig. 32, ♀.
Spec. Gén. 8: 205. 1854.

Florida specimens of *bicoloralis* for the most part are somewhat larger and paler than those from northern states. I. Escambia Co.: July, SMH. West Pensacola: Aug., VFG. Quincy: July 29, Sept. 13, 1960, (Tappan), CPK. Monticello: Oct. 7, AMNH. II. Alachua Co.: May 13, 1958, (Denmark), DPI. Gainesville: June 9, 1945, UFES; June 22, 1955, det. Munroe, CPK. III. Weekiwachee Springs: May, June, CPK. IV. Highlands Co.: Sept., DPI.

EPICORSIA Hübner

5567, 1 E. OEDIPODALIS Guenée

Pl. VI, Fig. 17, ♀.
Spec. Gén. 8: 336. 1854.

Munroe has resurrected this name from the synonymy to replace the species commonly known as *mellinalis* Hübner. Florida: (Fernald), DPI. IV. Charlotte Harbor: Grsb. 117. Palm Beach: Dyar (1901a, p. 461). Biscayne Bay: April, May, Sept., Nov., AMNH. Miami: larva on Cherokee bean, April, DPI; larva on Florida fiddlewood, March, DPI; May, CPK; reared from *Citharexylum* sp., Dec., DPI. Brickell Hammock: March, HFS. Coral Gables: larva on *Citharexylum berlandieri*, Feb., DPI. Matheson Hammock: reared from *Coccoloba diversifolia* and *Nectandra coriacea* emerging in Sept.-Oct., DPI. VI. Homestead: Sept., CPK. Florida City: May, CPK; May, Sept., Nov., AMNH. Paradise Key: March, FMJ. Everglades National Park: reared from *Cytharexylum fruticosum*, March, (Craighead), ENP. The larva has also been reported on *Citharexylum fruticosum [villosum]*, Dyar (1901c, p. 21).

MECYNA Doubleday

5586 M. SUBMEDIALIS (Grote)

Can. Ent. 8: 111. 1876.

III. Indian River: type of *pilalis* (Hulst), AMNH.

HAPALIA Hübner

5606, 1 H. SP.

III. Cassadaga: Sept. 2, 1962, SVF. IV. Siesta Key: May 11, 1960, CPK. Both det. Capps as probably undescribed.

PYRAUSTA Schrank

5593, 1 P. NUBILALIS Hübner

European corn borer.

Samml. eur. Schmett. Pyr.; Pl. 14, Fig. 94. 1796.

Fortunately this pest does not seem to have established a foothold in Florida. I. Warrington: WP. Quincy: Oct. 2, 1960, (Tappan), CPK. IV. Sebring: larva in Italian broomstraw (presumably imported), May 2, 1951, det. Capps, DPI. Boynton: July 29, 1930, det. Wilson, DPI. Miami: Aug. 6, 1917, det. Wilson, DPI. In addition, there are three quarantine interceptions, all of larvae: Jacksonville, Sept. 6, 1941 ex Center Square, Pa.; July 13, 1948 ex Martinsburg, W. Va.; and Oct. 14, 1936 ex Boston, Mass.

5594 P. PENITALIS (Grote)

Can. Ent. 8: 98. 1876.

I. Escambia Co.: March, June, July, SMH. Myrtle Grove: May, WJW. Quincy: June, Aug., Sept., CPK. II. Alachua Co.: Sept. 29, 1959, det. Capps, DPI. Gainesville: reared from *Nelumbo lutea*, June 23, 1937, det. Heinrich, UFES. III. Central Florida: June 1960, WMD. Weekiwachee Springs: six Aug., det. Munroe, one June, CPK. IV. Bradenton: March 14, 1955, det. Munroe, CPK. Archbold Biological Station: Aug., YU. Siesta Key: May 10, 1946, det. Forbes, CPK. VIII. Dry Tortugas: Rawson & Davidson ms.

[5595 *P. ainslei* Heinrich]

Smartweed borer.

J. Agr. Res. 18: 175. 1919.

The presence of this needs to be confirmed as the determination is far from easy. IV. Vero Beach: larva on goldenrod, May 16, 1946, DPI.

5598 P. FUMALIS (Guenée)

Pl. XXV, Fig. 29, ♂.

Spec. Gén. 8: 358. 1854.

I. Myrtle Grove: Sept. 24, 1963, WJW. Quincy: Sept. 13, 1960, (Tappan), DPI.

5611 P. ACHROALIS Hampson

Ann. Mag. Nat. Hist. Ser. 8, 12: 26. 1913.

Florida: (Schaus), Dyar (1917b, p. 73). IV. Siesta Key: Jan. 26, 1957, Nov. 7, 1956, CPK. Charlotte Harbor: March, USNM. VII. Flamingo: two Feb. 14, 1959, DPI; four May 8, 1963, (Kimball), ENP. VIII. Tavernier: July 31, 1955, (J. N. Todd), CPK.

5613 P. PHOENICEALIS (Hübner)

Zutr. exot. Schmett. 1, 22; Figs. 115, 116. 1818.

There is the possibility of two species being involved in this; if not, there is wide variation in color. I. Escambia Co.: April, SMH. Bayou Chico: Oct., AMNH. Quincy: Aug.-Oct., CPK. Monticello: Aug., DPI. II. Gainesville: July, CU. East Gainesville: Sept., AMNH. III. Cassadaga: Aug., SVF. Weekiwachee Springs: Feb.-June, Aug., CPK. Orlando: June, CU. Indian River: AMNH. IV. Bradenton: March-May, Aug., CPK. Archbold Biological Station: Nov., PSU. Siesta Key: April, May, CPK. Punta Gorda: April, CNC. Fort Myers: USNM; March, April, AMNH. Riviera: April, MOG. VI. Homestead: May, June, Sept.-Nov., CPK. Paradise Key: Jan., Feb., FMJ; April, CNC. VIII. Tavernier: Sept., Oct., CPK.

5613, 1 P. SP.

Det. Munroe as probably new. III. Stemper: March 1, 1911, (Krautwurm), CNC. IV. Oneco: two May 2, 1953, (Dillman), det. Munroe, CPK.

5613, 2 P. SP.

I. West Pensacola: May 26, 1963, det. Munroe as undescribed, VFG.

5615, 1 P. INSIGNATALIS (Guenée)

Spec. Gén. 8: 173. 1854.

Most of the determinations have been made by Munroe. Some of the records were reported originally in error as *onythesalis*, which is very closely related to *insignatalis* with identical genitalia but Munroe doubts the presence of *onythesalis* in Florida. I. Escambia Co.: Sept., SMH. Quincy: July, Sept., CPK. Monticello: Aug., DPI. II. Gainesville: April, CNC. IV. Bradenton: March, April, June-Oct., CPK. Oneco: March, JGF; May, CNC, CPK. Archbold Biological Station: April, YU. Punta Gorda: April, MOG. VI. Homestead: Feb., March, May-Aug., Nov., Dec., CPK.

5615, 2 P. SP.

I. Quincy: July 29, 1959, (Tappan), det. Munroe as probably new, CPK. IV. Highland Hammock State Park: Sept. 4, 1959, (Weems), DPI.

5616 P. ACRIONALIS (Walker)

List Lep. Ins. Br. Mus. 19: 925. 1859.

I. Escambia Co.: form *rufifimbrialis* Grote, Feb., typical *acrionalis*, Aug., SMH. II. Gainesville: June 2, 1927, (Rogers), CU. Forbes notes that the specimen is dark. III. Cassadaga: Dec. 19, 1955, SVF. This, too, is dark. Lakeland: May 4, AMNH. Fort Myers: (McDunnough), USNM.

5622 P. SUBSEQUALIS (Guenée)

Pl. XXV, Fig. 33, ♂.
Spec. Gén. 8: 177. 1854.

I. Escambia Co.: July, SMH. Warrington: three April 9-May 23, 1961, VFG. West Pensacola: Aug., VFG. Myrtle Grove: Nov., WJW.

5623 P. ORPHISALIS Walker

List Lep. Ins. Br. Mus. 17: 310. 1859.

I. De Funiak Springs: Oct. 17, AMNH. Monticello: Oct. 5 and 7, AMNH. II. Devil's Mill Hopper: Sept. 27, AMNH. East Gainesville: Sept. 28, AMNH. Pablo Beach: Nov. 4, AMNH.

5624 P. GENEROSA (Grote & Robinson)

Trans. Amer. Ent. Soc. 1: 20. 1867.

IV. Punta Gorda: May, det. Munroe, MOG.

5624, 1 P. SUBMARGINALIS (Walker)

List Lep. Ins. Br. Mus. 34: 1286. 1865.

III. Stemper (?): June 22-30, CNC, CM.

5628 P. LATICLAVIA (Grote & Robinson)

Pl. XXV, Fig. 34, ♀.
Trans. Amer. Ent. Soc. 1: 17. 1867.

I. Escambia Co.: form *cinerosa* (Grote & Robinson), Feb., typical *laticlavia*, April, May, Aug., SMH. Crestview: Oct., AMNH. Monticello: Oct., AMNH. II. Gainesville: April, CNC; form *cinerosa*, May, UFES; June, CPK; Oct., UFES. Jacksonville: Nov., AMNH. Lake Geneva: March, HEW. III. Cassadaga: *cinerosa*, Feb., SVF. Rockledge: *cinerosa*, NYSM. Egmont Key: April, AKW. Lakeland: May, AMNH, SIM. IV. Bradenton: April, CPK. Siesta Key: May, June, *cinerosa*, Nov., CPK. Punta Gorda: May, MOG. Fort Myers: USNM; March, April, AMNH. V. Everglades: April, AMNH.

5629 P. TYRALIS (Guenée)

Pl. VI, Fig. 28, ♂.
Spec. Gén. 8: 169. 1854.

Tyralis is a common species taken all year. I. Escambia Co.: one only, Sept. Quincy: one only, Nov. IV. Bradenton: Feb., April, June-Dec. VI. Homestead: April-Sept., Nov., peak in May. The normal form is dark red with yellow patches, but there are all manner of intergrading variations from this to the form *erosnealis* Walker which is darker, almost a purple red, with the patches reduced and their color pinkish red instead of yellow. Food: *Psychotaria undata*.

5631 P. COSTIMACULALIS Fernald

J. N. Y. Ent. Soc. 9: 50. 1901.

IV. Bradenton: March, July, Aug., CPK. Oneco: March, JGF; May, CPK. Siesta Key: infrequent, Dec.-May, CPK. Punta Gorda: June, MOG. Fort Lauderdale: Aug., UM. Lake Worth: Dyar (1901a, p. 462). Palm Beach: type, USNM; larva on *Psychotria undata*, (Dyar), Fernald. VI. Homestead: July, CPK. Paradise Key: Jan., Feb., FMJ; July, (Sweadner), CNC, CM. VIII. Key Largo: Dec., CNC. Tavernier: Sept., Oct., CPK.

5632 P. INORNATALIS (Fernald)

Can. Ent. 17: 57. 1885.

Florida: two, (Slosson), USNM, AMNH. Rindge (1955, p. 106) wrote: "A female type from Texas labelled 'type'. According to the original description, this specimen was collected in Florida and sent to Fernald by Hulst." III. Cassadaga: Aug. 3, 1962, SVF. Orlando: March 29, 1899, USNM.

5633 P. SIGNATALIS (Walker)

List Lep. Ins. Br. Mus. 34: 1282. 1865.

I. Escambia Co.: March 1961, SMH. Myrtle Grove: Sept. 6, 1962, det. Capps as probably this though a most unusual color, WJW. II. Gainesville: Oct. 2, AMNH.

5633, I P. SP.

I. Pensacola: March 1961, det. Munroe as probably new, SMH.

5646 P. NIVEICILIALIS Grote

Bull. Buffalo Soc. Nat. Sci. 2: 232. 1875.

I. Escambia Co.: Sept. 21, 1961, SMH.

MIMOPHOBETRON Munroe**5637 M. LIOPASIALIS** (Dyar)

Proc. U. S. Natl. Mus. 47: 284. 1914.

IV. Coconut Grove: AEB. VI. Homestead: Feb., DPI. Florida City: April-July, CNC; July, HEW. Paradise Key: March, FMJ; March, (Schwarz & Barber), Dyar (1921b, p. 143). VIII. Key Largo: May, DPI; common, Sept.-Dec., DPI, CNC, CPK.

LOXOSTEGOPSIS Dyar**5649 L. MERRICKALIS** (Barnes & McDunnough)

Contrib. 4: 165. 1918.

I. Escambia Co.: March, SMH. Myrtle Grove:

April, WJW. Quincy: April, CPK. II. Old Town: March, CPK. III. Marion Co.: July, UM. Cassadaga: April, Sept., SVF. Weekiwachee Springs: March, CPK. IV. Bradenton: Sept., CPK. Oneco: Aug., CPK. Punta Gorda: April, MOG.

EUSTIXIA Hübner**5653 E. PUPULA** Hübner

Pl. XXV, Fig. 35, ♀.

Zutr. exot. Schmett. 2, 24; Figs. 327, 328. 1823.

I. Escambia Co.: May, SMH. Myrtle Grove: June, WJW. Torreya State Park: May, CNC. II. Gainesville: April, DPI. III. DeLand: March, MOG. Cassadaga: April, June, July, SVF. Orange Co.: April, May, DPI. Winter Park: AMNH. Orlando: June, WMD. IV. Oneco: May, CPK. Siesta Key: March-May, CPK.

NOCTUELIA Guenée**5659 N. RUFOFASCIALIS** (Stephens)

III. Brit. Ent. 4: 33. 1834.

I. Warrington: May 16, 1961, VFG. VIII. Windley Key: one Oct. 17-24, 1955, (J. N. Todd), det. Forbes, CPK.

LINEODES Guenée

As the four species are very similar in maculation, determinations are only possible by comparison with known material.

5673, I L. FONTELLA Walsingham

In Hampson, Ann. Mag. Nat. Hist. Ser. 8, 12: 305. 1913.

North American specimens have commonly gone under the name *contortalis* Guenée, which according to Munroe, does not apply. Florida: (Doubleday), Hampson. III. Cassadaga: Aug., SVF. Orange Co.: Feb., May, DPI. Egmont Key: April, AKW; April, May, UM. IV. Bradenton: Oct., CPK. Oneco: April, June, CPK. Siesta Key: common, Nov.-May, CNC, CPK. Palm Beach: Dyar (1901a, p. 463). VI. Homestead: May, CPK.

5674 L. INTEGRA (Zeller)

Verh. zool.-botan. Ges. Wien 23: 328. 1873.

I. Escambia Co.: June, SMH. Warrington: VFG. II. Gainesville: reared from *Solanum melongena* var. *esculentum*, Sept., DPI. III. Cassadaga: Sept., SVF. IV. Bradenton: May, Nov., CPK. Oneco: June, Aug., Oct., CPK. Archbold Biological Station: April, CU. Siesta Key: March-May, CPK. Englewood: March, CU. Punta Gorda: April, MOG. Palm Beach: Dyar (1901a,

p. 463). Miami: DPL. V. Everglades: USNM; April, AMNH. VI. Medley: reared from folded leaves of *Physalis* sp., USNM. Homestead: April, June, July, Sept., Nov., CPK. VIII. Key Largo: Dec., CNC. Tavernier: Aug., Sept., Nov., Dec., DPL. Craig: Jan., Feb., DPL. Food: *Solanum radula* and *S. jasminifolium*, Dyar (1901c, p. 22).

5675 L. INTERRUPTA (Zeller)

Verh. zool.-botan. Ges. Wien 23: 329. 1873.

IV. Biscayne Bay: (Slosson), Grsb. 119.

5676 L. TRIANGULALIS Moeschler

Abhandl. Senck. Naturf. 16: 305. 1890.

IV. Palm Beach: Dyar (1901a, p. 463). VIII. Tavernier: Sept. 26, 1955, (J. N. Todd), det. Munroe, CPK. Food: *Capsicum frutescens*, Dyar (1901e, p. 22).

STENOPTYCHA Zeller

5677 S. SOLANALIS Barnes & McDunnough
Contrib. 2: 174. 1913.

Solanalis resembles the species of *Lineodes*, but is of a uniform dark color. Florida: as *pterothoralis* Walker, (Dyar, 1913f, p. 104); Barnes & McDunnough (1914b, p. 31). V. Everglades: type, reared from *Solanum* sp., April, USNM.

The following genera with their included species were removed from Nymphulinae by Lange (1956) and in lieu of making any attempt to place them in the approximate sequence in Pyraustinae where, according to Munroe, they belong, they are placed here in a temporary status.

GESHNA Dyar

5717 G. CANNALIS (Quaintance)

Lesser canna leaf roller.

Fla. Agr. Exp. Sta. Bull. 45: 68. 1898.

I. Escambia Co.: Aug., SMH. Myrtle Grove: July, WJW. Santa Rosa Co.: from calla lily, Aug., DPL. Lynn Haven: larva on *Canna*, May, DPL, and Ins. Pest Surv. Bull. 2: 97. II. Perry: larva on *Canna*, April, DPL. Lake City: type, from larva on *Canna flaccida* and *C. indica*, Nov., Quaintance. Gainesville: April, UFES; May, CU. Alachua Co.: March, UM. IV. Bradenton: April, CPK. Oneco: May, CPK. Archbold Biological Station: Dec., YU. Palm Beach: Feb., March, Dyar (1906, p. 96). V. Marco: April, AMNH, USNM.

5718 G. PRIMORDIALIS Dyar

J. N. Y. Ent. Soc. 14: 97. 1906.

I. Escambia Co.: March, SMH. Warrington: VFG. Ocean City: Sept., HOH. III. Juniper Springs: Oct., DPI, CNC. DeLand: March, MOG. Weekiwachee Springs: June, CPK. IV. Bradenton: March, May, July, CPK. Oneco: May, June, Oct., Nov., det. Munroe, CPK. Archbold Biological Station: March, YU. Sarasota: Nov., CPK. Tamiami Trail West: July, Aug., CNC. VI. Homestead: March, CNC. VIII. Tavernier: Sept., CPK.

DIATHRAUSTA Lederer

5719, 1 D. HARLIQUINALIS LAUTA

Munroe

Can. Ent. 88: 582. 1956.

III. Cassadaga: Aug. 2, 1953, Sept. 2, 1962, SVF. IV. Archbold Biological Station: two April 2-6, 1945, (Needham), CU; July 15-31, 1948, CNC, AMNH, three Sept. 2-15, 1960, (Pease), CPK, YU. VI. Paradise Key: March 17, 1939, (Bradley), CU.

STENIODES Snellen

[5721 *S. Gelliasalis* (Walker)]

List Lep. Ins. Br. Mus. 19: 988. 1859.

Munroe believes that the records for *gelliasalis* may be in error and may refer to *indianalis* below. Capps agrees with this. II. Archer: Dec. 3, (Koebele), Grsb. 122. IV. Punta Gorda: March, AKW. Lake Worth: (Slosson), Dyar (1906, p. 99). V. Marco: (McDunnough), USNM.

5721, 1 S. INDIANALIS (Dyar)

Pl. XXV, Fig. 36, ♂.

Proc. U. S. Natl. Mus. 47: 286. 1915.

IV. Bradenton: July, Sept., CPK. Siesta Key: abundant, Oct.-June, CPK. This material has been deposited in a number of other collections as well. V. Marco: April 17, 1912, AMNH. VI. Homestead: April, Aug., Sept., CPK. VIII. Key Largo: Dec., CNC.

SOMATAMIA Moeschler

5721, 2 S. PELLUCIDALIS Moeschler

Abhandl. Senck. Naturf. 16: 301. 1890.

III. Marion Co.: July 1948, (Hubbell and Friauf), det. Munroe, UM. Cassadaga: Aug. 2, 1962, SVF. IV. Coconut Grove: Nov. 1897, (Thaxter?), det. Munroe, AEB.

PILETOCERA Lederer

5722 P. BUFALIS (Guenée)

Pl. XXV, Fig. 37, ♀.

Spec. Gén. 8: 245. 1854.

The records, including my own, for this and the following species are almost certainly mixed, but Munroe is of the opinion that *bufalis* is the commoner of the two species as far as Florida is concerned. III. Volusia Co.: Aug., DPI. IV. Bradenton: Aug., CPK. Siesta Key: Feb., March, May, June, Nov., Dec., CPK. Englewood: Nov., CPK. Charlotte Harbor: Dyar (1906, p. 98). Lake Worth: Dyar. Miami: Dyar. Matheson Hammock: March, CNC. V. Everglades: USNM. Chokoloskee: USNM. VI. Homestead: Feb.-April, CPK. VII. Flamingo: Feb., DPI. Crocodile Point: Feb., DPI. VIII. Key Largo: July, Dec., CNC. Tavernier: Aug.-Nov., DPI. Windley Key: Dec.-Feb., DPI. Craig: June, Sept., Oct., CPK. Pine Key: Aug., CNC, CM. Garden Key, Dry Tortugas: May, DPI.

5723 P. SIMPLICIALIS Barnes & McDunnough
Contrib. 2: 175. 1913.

III. Cassadaga: May, June, SVF. Lakeland: May, AMNH. IV. Sarasota: July, CPK. Siesta Key: May, CPK. Miami: Feb., March, CU. V. Collier Co.: Dec., DPI. Marco: April, AMNH, SIM. Everglades: very common, April, AMNH, USNM. Chokoloskee: type, USNM. VII. Wild cotton location "K-8", March, CPK. VIII. Windley Key: Feb., DPI. Stock Island: Aug., CNC, CM.

Subfamily NYMPHULINAE

The arrangement in the Nymphulinae follows that set up by Lange in his revision (1956). I am indebted to Dr. Lange for many determinations in the subfamily, and for additional data, the latter in his letter of Sept. 6, 1955, and hereinafter cited as "Lange (1955)."

UNDULAMBIA Lange

5693 U. STRIATALIS (Dyar)
J. N. Y. Ent. Soc. 14: 90. 1906.

III. Orlando: May, CNC. St. Petersburg: March, Lange (1955). Stemper: April, CM. IV. Oneco: March, April, JGF, CPK. Archbold Biological Station: March, YU. Charlotte Harbor: type, March, (Slosson), USNM. A specimen labeled "co-type," without data, in the Fernald collection at the Division of Plant Industry Florida State Collection of Arthropods. Franclemont has observed that all his captures have been made near the bottom of the sheet used in light trapping. Perhaps this habit of flying close to the ground accounts for the great rarity of the insect in collections. Where he took over twenty specimens, Dillman never took any in a light-trap run within a hundred yards of his.

AMBIA Walker

None of the following specimens reached Lange's hands, and the determinations were all made by Munroe subsequent to the appearance of Lange's revision.

5693, 1 A. SP.

This species is near but not *albitesselis* Hampson. VI. Florida City: March, (Forsyth), CNC.

5693, 2 A. SP.

This and the three following "species" are probably all nothing but forms of one variable species and are all probably the leatherleaf fern pest which Capps is describing. Much more material will be needed to solve the problem. IV. Oneco: two Oct., (Dillman), CPK. Siesta Key: four Jan., Feb., CPK.

5693, 3 A. SP.

IV. Siesta Key: two Feb. 16-22, 1951, CPK.

5693, 4 A. SP.

II. Gainesville: Dec. 1949, (Walley), CNC.

5693, 5 A. SP.

There are two reports for this: II. Jacksonville: Oct. 16. III. Maitland: Oct. 29. Both are from Coop. Ins. Pest Surv. 4: 267, where they are named as "near *fulvitinctella* Hampson." Denmark states that this is an error for which there is no explanation, and the mystery is further compounded as Munroe tells me there is no such species.

OLIGOSTIMA Guenée

[*O. juncealis* Guenée]

Spec. Gén. 8: 261. 1854.

This name appeared in the Dyar list (1902, p. 396). Later, Dyar (1906, p. 89) pointed out that this name was being used erroneously for the North American *Paraponyx seminealis* (Walker) below. True *juncealis* is probably restricted to South America.

NEOCATACLYSTA Lange

5699 N. MAGNIFICALIS (Hübner)

Pl. XXV, Fig. 43, ♂.

Samml. eur. Schmett., Pyr.; Pl. 16; Fig. 104. 1794.

I. Warrington: summer, WP. III. Levy Co.: April, DPI. Marion Co.: July, UM. DeLand: March, MOG, AKW. Cassadaga: March, SVF. Weekiwachee Springs: Feb., March, CPK. Lake

Co.: Aug., UM. Orlando: March, Lange (1955). Lutz: Lange (1956, p. 89). Egmont Key: May, UM. IV. Archbold Biological Station: Feb., Dec., PSU; March, CU, YU; April, Lange (1955). Indian River Co.: Oct., UM. Siesta Key: Feb., CPK. Punta Gorda: April, AKW.

PARAPONYX Hübner

5680 P. MACULALIS (Clemens)

Pl. XXV, Fig. 38, ♂.

Proc. Acad. Nat. Sci. Phila. 12: 218. 1860.

Florida: form *masculinalis* Dyar, CU. I. Escambia Co.: March, SMH. Quincy: Oct., CPK. II. Jacksonville: (Slosson), Grsb. 119. III. Cassadaga: Feb., March, Dec., SVF. Weekiwachee Springs: form *foeminalis* Dyar, Feb., CPK. Indian River: AMNH. IV. Archbold Biological Station: Dec.-Feb., PSU. Siesta Key: Feb., *masculinalis*, May, CPK. Lake Worth: Dyar, (1906, p. 80). Palm Beach: type of *foeminalis*, Jan. 25, Dyar. Fort Lauderdale: Jan., UM. Coconut Grove: type of *masculinalis*, Dyar. Biscayne Bay: (Slosson), Grsb. 119. V. Everglades: USNM; April, AMNH. VI. Homestead: May, July, Sept., *foeminalis*, Dec., CPK. Paradise Key: Jan., FMJ. Food: water lilies.

5681 P. ALLIONEALIS (Walker)

Pl. XXV, Fig. 46, ♀.

List Lep. Ins. Br. Mus. 12: 458. 1859.

An abundant species, undoubtedly found throughout the state, and taken in every month. It is quite variable and ranges somewhat in color, but in Florida does not seem to reach the extreme white of *itealis* (Walker), except very rarely; in fact, I have seen only one specimen of this latter form.

5682 P. OBSCURALIS (Grote)

Pl. XXV, Fig. 41, ♂.

Papilio 1: 18. 1881.

I. Escambia Co.: May, Aug., SMH. III. Marion Co.: July, UM. Cassadaga: April, SVF. Hernando Co.: Aug., UM. Brooksville: June, AKW. Leesburg: Aug., UM. Orange Co.: May, July, DPI. Hillsborough Co.: Aug., UM. Stemper: Sept., AFB. IV. Bradenton: Aug., Sept., CPK. Oneco: April, July, Sept., Oct., CPK. Archbold Biological Station: Jan., PSU; Feb., Dec., CU; Aug., Dec., YU. Indian River Co.: Oct., UM. Siesta Key: Nov.-Feb., April, June, CPK. Charlotte Harbor: (Slosson), Grsb. 120. Punta Gorda: Feb.-April, AKW. VI. Homestead: Sept., CPK. Paradise Key: Jan., FMJ. Food: *Vallisneria spiralis* and *Potamogeton natans*.

5683 P. SEMINEALIS (Walker)

Pl. XXV, Fig. 42, ♂.

List Lep. Ins. Br. Mus. 17: 430. 1859.

I. West Pensacola: Aug., VFG. Quincy: May, CPK. II. Gainesville: Aug., DPI; Sept., UFES. III. DeLand: March, MOG. Cassadaga: June, Aug.-Oct., SVF. Weekiwachee Springs: Feb., May, Aug., CPK. Lake Co.: Aug., UM. Altamonte Springs: Aug., Lange (1955). Sanford: Lange (1955). St. Petersburg: Aug., USNM. IV. Bradenton: Sept., CPK. Oneco: April, JGF; June, Sept., CPK. Highland Hammock State Park: April, CU. Archbold Biological Station: Jan., March, PSU; March, April, Sept., YU, May, Nov., Dec., CU. Sarasota: June-Aug., CPK. Siesta Key: Dec.-March, CPK. Punta Gorda: March, AKW; April, CNC. Fort Myers: USNM. La Belle: April, Grsb. 121. Fort Lauderdale: Dec., UM. Coconut Grove: Dyar (1906, p. 89). V. Everglades: April, AMNH. VI. Florida City: CNC. VII. Mahogany Hammock: Dec., CNC.

CHRYSENDETON Grote

5697, 1 C. MEDICINALIS Grote

Papilio 1: 15. 1881.

Because of the similarity between *medicinalis*, which has been known as *claudialis* Walker, and the next two species, one of which has been described only recently, there is sure to be a mixing of the records. They are given as received or as in the literature. II. Gainesville: July, CU. Hastings: June, Dyar (1906, p. 92). III. Marion Co.: July, UM. Lake Co.: Aug., UM. Winter Park: Sept., AMNH. Orlando: Sept., AMNH. Hillsborough Co.: Aug., UM. IV. Oneco: July, CPK. Archbold Biological Station: March, April, Nov., Dec., CU; July, AMNH. Fort Drum: Dyar. Wauchula: June, UM. Punta Gorda: April, MOG. Fort Myers: USNM. Fort Lauderdale: Feb., UM. V. Chokoloskee: USNM. VI. Paradise Key: Jan., CPK.

5707 C. IMITABILIS (Dyar)

Ins. Insc. Mens. 5: 78. 1917.

Florida: USNM. I. Escambia Co.: April, SMH. Myrtle Grove: June, WJW. Paradise Beach: Oct., SSN. II. Gainesville: July, Lange (1955). Hastings: June, Dyar. III. Volusia Co.: Aug., DPI. Cassadaga: July, SVF. Stemper: Feb., Aug.-Oct., Lange. Lakeland: type, March, USNM. IV. Bradenton: March, Aug.-Oct., CPK. Archbold Biological Station: March, April, CU; April, Nov., Lange; May, YU; June, AKW. Fort Drum: Dyar. Sarasota: Sept., CPK. Siesta Key: Feb.-April, June, Oct., Nov., CPK. Punta Gorda: March, MOG. Belle Glade: July, DPI.

VI. Homestead: Sept.-Nov., CPK. Paradise Key: Jan., Feb., FMJ; April, CPK; Aug., UM.

5707, 1 C. KIMBALLI Lange

Pl. XXV, Fig. 47, ♂.

Wasmann J. Biol. 14: 97. 1956.

I. Escambia Co.: July, SMH. II. Gainesville: May, (Peterson), DPI. IV. Bradenton: May, Sept., CPK. Oneco: types, May-July, Sept., (Dillman), CPK, CAS. Archbold Biological Station: Sept., YU. Siesta Key: March, allotype and paratypes, May, CNC, CPK, CAS. VI. Homestead: June, Sept., Oct., (Wolfenbarger), CPK.

MUNROESSA Lange

5691 M. ICCIUSALIS (Walker)

List Lep. Ins. Br. Mus. 19: 971. 1859.

I. Escambia Co.: May, SMH. Quincy: May, CPK. Crestview: Oct., AMNH. II. Gainesville: March, April, UM; April, DPI; May, Aug., UFES. Jacksonville: March, HEW. III. Marion Co.: July, UM. Volusia Co.: Aug., UM. Weeki-wachee Springs: May, CPK. IV. Oneco: May, June, Oct., CPK. Highland Co.: Aug., UM. Archbold Biological Station: Jan., March, April, YU; March, Nov., PSU. Indian River Co.: Oct., UM. Siesta Key: April, CPK. Charlotte Harbor: (Slosson), Grsb. 120. Punta Gorda: March-May, MOC. La Belle: April, AMNH. Biscayne Bay: (Slosson), Grsb. 120.

5691, 1 M. FAULALIS (Walker)

List Lep. Ins. Br. Mus. 19: 973. 1859.

II. Hatched Creek: April 24, 1952, det. Munroe, CPK. IV. Siesta Key: Dec. 9, 1952, det. Munroe, CPK. Paradise Key: April, CNC.

5688 M. GYRALIS (Hulst)

Pl. XXV, Fig. 40, ♀.

Trans. Amer. Ent. Soc. 13: 159. 1886.

As Lange has found what appears to be a new species close to *gyralis*, some of the records may be mixed. Florida: lectoparatype, AMNH; type of *Nymphula dentilinea* Hampson (1897, p. 139). I. Escambia Co.: July, Sept., SMH. Myrtle Grove: June, WJW. De Funiak Springs: March, DPI. Quincy: April-Oct., CPK. Monticello: Aug., DPI. II. Alachua Co.: May, DPI. Gainesville: April, CNC, UM; Sept., Nov., DPI. Crescent City: Dyar (1906, p. 85). III. Central Florida: Nov., WMD. Cassadaga: Feb., April-June, SVF. Weeki-wachee Springs: May, Sept., CPK. Elfers: April, CNC. IV. Bradenton: April, AEB; Sept., Oct., CPK. Oneco: May, June, CPK. Archbold Biological Station: Jan., Feb., Nov., PSU. Indian River Co.: Oct., UM. Fort Pierce:

March, CPK. Port Sewall: Nov., AMNH. Siesta Key: Feb.-May, Nov., Dec., CPK. Punta Gorda: March, MOC; May, AKW. Palm Beach: Feb., Dyar. V. Everglades: April, AMNH, SIM; USNM. Chokoloskee: USNM. VI. Homestead: Feb.-April, Aug., CPK. Paradise Key: Jan., Feb., FMJ; Dec., CNC.

5688, 1 M. SP.

Among the specimens sent to Lange in connection with his revision, were three females close to *gyralis* which were apparently an unrecognized species, but with such limited material and with no males, further study was indicated before any conclusion could be reached. III. Weeki-wachee Springs: Aug. 1954, (May), CPK. IV. Bradenton: Sept. 10, 1955, (Kelsheimer), CPK. Siesta Key: March 20, 1955, CPK.

5690 M. NEBULOSALIS (Fernald)

Pl. XXV, Fig. 44, ♀.

Ent. Amer. 3: 127. 1887.

Nebulosalis is not rare from Monticello to Paradise Key. It is probably to be found in the western counties, as there is a specimen in the Cornell collection from the Sabine River, between Louisiana and Texas. The dates cover all months but September.

NYMPHULA Schrank

5687 [N.] NOMOPHILALIS Dyar

Pl. XXV, Fig. 45, ♂.

J. N. Y. Ent. Soc. 14: 84. 1906.

Lange removed this species not only from the genus *Nymphula* but from the subfamily as well. However, as no one has made any suggestion as to where it belongs, I am perforce required to leave it here as it cannot be left dangling in mid-air. It is probably found all over the state though there are no records from the Keys, November-August. IV. Bradenton: Nov. VI. Homestead: Feb., April-June, small peak in May.

SYNCLITA Lederer

5686 S. OBLITERALIS (Walker)

Waterlily leaf cutter.

List Lep. Ins. Br. Mus. 17: 399. 1859.

Obliteralis is common throughout the state the entire year.

CONTIGER Lange

5685 C. VITTATALIS (Dyar)

J. N. Y. Ent. Soc. 14: 89. 1906.

I. Escambia Co.: Sept. 12, 1961, SMH. Quincy:

April 22, 1963, (Tappan), CPK. II. Hastings: type, April, (Kearfott), Dyar. There is a specimen labeled "co-type" in the Fernald collection at the Division of Plant Industry, but without data. III. Cassadaga: June 30, 1952, July 2, 1962, SVF. Stemper: CNC. IV. Biscayne Bay: (Slosson), USNM.

NEARGYRACTIS Lange

5698, 1 N. MONILIGERALIS (Lederer)
Wien. ent. Monat. 7: 454; Pl. 18; Fig. 10. 1863.
IV. Punta Gorda: May, det. Capps, MOG. VI. Paradise Key: Feb., det. Heinrich, FMJ.

5698 N. SLOSSONALIS (Dyar)
Pl. XXV, Fig. 48, ♂.
J. N. Y. Ent. Soc. 14: 93. 1906.

I. Escambia Co.: July, SMH. Myrtle Grove: July, WJW. II. Alachua Co.: May, DPI. Gainesville: May, UM. Hatchet Creek: April, Lange (1955). III. Glenwood: USNM. Hernando Co.: Aug., UM. Weekiwachee Springs: June, Aug., CPK. Elfers: April, CU. Indian River: AMNH. Lakeland: common, (McDunnough), USNM. IV. Bradenton: Feb., March, July, Sept., Oct., CPK. Oneco: May, June, Oct., CPK. Archbold Biological Station: Jan., Nov., PSU; Jan., March, April, Dec., YU; March, Nov., CU. Siesta Key: Jan-March, May, CPK. Englewood: March, CU. Charlotte Harbor: March, (Slosson), Dyar. Palmdale: Aug., CU. V. Everglades: common, April, (McDunnough), USNM. VI. Northeast corner of Monroe Co.: July, Lange (1955). Homestead: March, Sept., CPK.

PARARGYRACTIS Lange

5695 P. BIFASCIALIS (Robinson)
Ann. Lyceum Nat. Hist. N. Y. 9: 154. 1869.
IV. Charlotte Harbor: (Slosson), Grsb. 121.

5700 P. FULICALIS (Clemens)
Proc. Acad. Nat. Sci. Phila. 12: 217. 1860.
II. Gainesville: April, UM. Archer: March, (Koebele), Dyar (1906, p. 94). III. Marion Co.: July, UM. Lakeland: May, AMNH. IV. Indian River Co.: Oct., UM. Fort Myers: (McDunnough), USNM.

5701, 1 P. [OPULENTALIS (Lederer)]
Wien. ent. Monat. 7; Pl. 18, Fig. 7. 1863.

As Lange has not seen the type of *opulentalis*, and as there is confusion and belief on the part of others that it may be the same as *fulicalis* (Clemens), *plevie* Dyar, or *confusalis* (Walker),

the name should not be accepted as definite. III. Juniper Springs: Sept. 3-13, 1938, (Hubbell & Friauf), UM; Nov. 8, 1960, (Adkins), CPK. Silver Springs: Dec. 8, 1960, (Adkins), CPK. Weekiwachee Springs: Aug. 20, 1938, (Hubbell & Friauf), Lange. All but author's specimens det. Lange.

5696 P. DRUMALIS (Dyar)
J. N. Y. Ent. Soc. 14: 92. 1906.

III. Weekiwachee Springs: May, June, Aug., CPK. Stemper: USNM; Sept., CM. IV. Bradenton: Aug., Sept., CPK. Oneco: May, Aug.-Nov., CPK. Fort Drum: type, USNM. Lake Okeechobee: July, Lange (1955). Fort Lauderdale: Aug., UM.

EOPARARGYRACTIS Lange

5711 E. IRRORATALIS (Dyar)
Ins. Insc. Mens. 5: 77. 1917.

I. Escambia Co.: June, SMH. Myrtle Grove: June, WJW. Ocean City: Aug., HOH. Quincy: Oct., CPK. Tallahassee: 1880, Lange (1955). II. Gainesville: April, DPI. Archer: type, March 8, 1882, (Koebele), USNM. III. Levy Co.: March, DPI. Cassadaga: Aug.-Oct., SVF. Weekiwachee Springs: May, June, Aug., CPK. Leesburg: Aug., UM. Orlando: March, Lange. Stemper: Oct., Lange. Lakeland: March, Dyar. IV. Bradenton: March, AEB; Sept., CPK. Oneco: April-June, Aug., Sept., CPK. Archbold Biological Station: Jan., Feb., Nov., PSU; June, AKW; Aug., Dec., YU. Sarasota: March, May, CPK. Siesta Key: March, April, June, Nov., CPK. Punta Gorda: March, MOG.

5711, 1 E. FLORIDALIS Lange
Wasmann J. Biol. 14: 126. 1956.

III. Crystal River: four Oct. 16, 1957, det. Monroe, CPK. IV. Lake Okeechobee: types, four July 22-31, (Sweadner), CM. Lange.

5712 E. PLEVIE (Dyar)
Ins. Insc. Mens. 5: 78. 1917.

I. Quincy: April 24, 1963, (Tappan), CPK.

Subfamily SCOPARIINAE

EUDORIA Chapman

5735 E. STRIGALIS (Dyar)
Pl. XXV, Fig. 49, ♀.
J. N. Y. Ent. Soc. 14: 104. 1906.

I. Escambia Co.: Feb. 5, 1962, July 11 and Sept. 14, 1961, SMH. V. Everglades: April 17, (Davis), SIM.

SCOPARIA Haworth

[5747 *S. BASALIS* Walker]

List Lep. Ins. Br. Mus. 34: 1497. 1865.

As Munroe has recently found that *basalis* and *biplagiatis* are distinct species, this determination should be reviewed. II. Archer: Dec. 3, 1882, (Koebele), Dyar (1906, p. 106).

5747, I *S. BIPLAGIALIS* Walker

List Lep. Ins. Br. Mus. 34: 1499. 1865.

II. Gainesville: Feb. 22, 1955, (Morse), det. Munroe, CPK.

Subfamily PYRALINAE

AGLOSSA Latreille

5752 *A. CUPREALIS* Hübner

Verz. bek. Schmett., p. 348. 1826.

Florida: (Slosson), AMNH. I. Pensacola: larva, Oct. 21, 1959, Coop. Ins. Pest Surv. 6: 112. II. Jacksonville: larva, Feb. 7, 1959, Coop. Ins. Pest Surv. 6: 12. III. New Smyrna: May, DPI. The caterpillar is a scavenger.

5753 *A. CUPRINA* Zeller

Verh. zool.-botan. Ges. Wien 22: 497. 1872.

III. Cassadaga: Aug. 29, 1962, SVF. Weekiwachee Springs: two May 1955, (May), CPK. IV. Siesta Key: May 11, 1953, CPK. The last three det. Munroe.

PYRALIS Linnaeus

5758 *P. FARINALIS* Linnaeus

Meal Moth. Pl. XXV, Fig. 39, ♂. Syst. Nat. 1: 533. 1758.

I. Escambia Co.: March, Aug., SMH. Warrington: VFG. II. Jacksonville: (Slosson), AMNH. III. DeLand: May, DPI. Cassadaga: Oct., SVF. Lake Helen: Oct., DPI. Winter Park: Nov. 18, 1940, (Fernald), DPI. Orlando: April 30, 1960, DPI; one July 2-4, 1927, (McBride), CU. IV. Punta Gorda: April, MOG. Food: stored grain.

5760 *P. DISCIFERALIS* Dyar

Pl. XXV, Fig. 50, ♂.

Proc. Ent. Soc. Wash. 10: 98. 1908.

I. Escambia Co.: April, May, July, Aug., SMH. Torreya State Park: May, CNC. IV. Bradenton: March, det. Munroe, CPK. Punta Gorda: April, MOG.

5763 *P. MANIHOTALIS* Guenée

Spec. Gén. 8: 121. 1854.

IV. Siesta Key: rare, Nov.-Jan., March, CPK.

Fort Myers: (McDunnough), USNM. Miami: (Schaus), Dyar (1908c, p. 99). VI. Paradise Key: Jan., FMJ. VIII. Plantation Key: May, DPI.

HERCULIA Walker

5766 *H. INTERMEDIALIS* (Walker)

Trans. Ent. Soc. London, Ser. 3, 1: 118. 1862.

Florida: as *squamealis* (Grote), (Slosson), AMNH. I. Escambia Co.: April, Aug., SMH. Monticello: April, CU. IV. Bradenton: March, Aug., Sept., CPK. Archbold Biological Station: April, YU.

5771 *H. BINODULALIS* (Zeller)

Verh. zool.-botan. Ges. Wien 22: 501. 1872.

I. West Pensacola: April, May, VFG. Myrtle Grove: Sept., WJW. Quincy: May, July, Sept., Oct., CPK. III. Cassadaga: April, July, SVF. Central Florida: July, WMD. Winter Park: May, DPI. IV. Oneco: March, JGF. Archbold Biological Station: Jan., PSU; March, April, YU. Sarasota: Oct., (King), CPK. Siesta Key: Jan.-March, May, Nov., CPK.

5772 *H. SORDIDALIS* Barnes &

McDunnough

Pl. XXV, Fig. 51, ♀.

Contrib. 2: 175. 1913.

There has been some confusion of this with *psammioxantha* Dyar, but Munroe has studied the question and believes that even if *psammioxantha* is distinct, all the records are for *sordidalis*. I. Quincy: July, Oct., CPK. II. Gainesville: reared from larvae on peanut hay, Jan., UFES; June, CU; Nov., DPI. III. Marion Co.: Feb., DPI. Volusia Co.: Aug., DPI. Weekiwachee Springs: March, Aug., CPK. St. Petersburg: March, Oct., AKW. IV. Bradenton: Feb., March, May, Aug., Sept., Nov., Dec., CPK. Archbold Biological Station: April, PSU; June, MOG, AKW. Siesta Key: Jan.-June, Oct., Nov., CPK. Punta Gorda: April, CNC. Fort Myers: type, April 1-7, (McDunnough), USNM. Naples: MOG. South Miami: Jan., CNC. VI. Homestead: Feb., April, May, July-Oct., CPK; Dec., DPI. VIII. Key Largo: Dec., CNC. Tavernier: Sept.-Nov., CPK. Lower Matecumbe: Dec., DPI. Craig: Jan., Feb., DPI. Windley Key: Feb.-April, DPI. Key West: May, DPI.

5774 *H. OLINALIS* (Guenée)

Spec. Gén. 8: 118. 1854.

I. Escambia Co.: Aug., SMH. West Pensacola: April, VFG. Warrington: one April, two summer, VFG. Pensacola: July, WJW. II. Gainesville: April, CNC. III. DeLand: March, AKW. Cassadaga: April, July, Aug., SVF. Weeki-

wachee Springs: May, Aug., CPK. IV. Archbold Biological Station: June, AKW. Punta Gorda: March, MOG; March, April, AKW.

OMPHALOCERA Lederer

My understanding of the species has been faulty, and I am sure that I am guilty of several misdeterminations. Certain records, in consequence, will be interchanged, but with the illustrations, there should be no difficulty for collectors in rectifying my errors.

5777 O. MUNROEI Martin

Pl. VI, Fig. 18, ♂.
Entomologist 89(1118). 1956.

Munroei was formerly known as *cariosa* Lederer. II. Jacksonville: (Slosson), Grsb. 122. III. Cassadaga: March, Oct., SVF. Stemper: AEB; March, AKW. Tampa: Aug., AEB. Windermere: larvae on papaw, April, June, DPI. Lakeland: May, SIM. IV. Port Sewall: Feb., AMNH. Archbold Biological Station: June, AKW. Sarasota: June, CPK. Fort Ogden: reared from *Asimina reticulata*, June 15, 1952, (Walley), CNC. Charlotte Harbor: (Slosson), Grsb. 122. Punta Gorda: March, June, AKW; June, MOG. Fort Myers: larvae common on *Asimina triloba*, (McDunnough), USNM. There is a long note by McDunnough on the larva, Grsb. 122. Lake Park: larva, Sept., DPI. Hypoluxo: May, DPI. V. Marco: larva, April, AMNH; USNM.

5778 O. DENTOSA Grote

Pl. VI, Fig. 19, ♂.
Bull. U. S. Geol. Geograph. Surv. Territ. 6: 272. 1881.

Dentosa is very close to *munroei* but the wings are narrower and not quite so dark a red. II. Putnam Co.: April, CPK. III. Central Florida: Oct., WMD. Cassadaga: April, SVF. Weeki-wachee Springs: March, CPK. IV. Archbold Biological Station: Aug., Sept., YU. Sarasota: June, July, CPK. Siesta Key: May, CPK. Arcadia: March, JGF. West Palm Beach: larva on soursop, Sept., DPI.

Subfamily CHRYSAUGINAE

GALASA Walker

5780 G. NIGRINODIS Zeller

Verh. zool.-botan. Ges. Wien 23: 206. 1873.

There is something curious about this species in Florida. Beebe made some genital dissections and reported that they did not agree with north-

ern specimens. However, Munroe believes that what we have is probably a southern subspecies. Certainly the color is a richer, darker red. There would seem to be room for further study of the subject. I. Escambia Co.: May, SMH. Warrington: WP; April, VFG. Quincy: May, CPK. II. Gainesville: May, UM. III. Cassadaga: May, Sept., SVF. IV. Bradenton: March, April, July-Oct., CPK. Archbold Biological Station: Jan., Feb., Nov., PSU; March, April, YU. Siesta Key: Jan., April, June, Oct., Nov., CPK. Englewood: April, CU. Punta Gorda: April, MOG. Fort Myers: April, AMNH. Palm Beach: as *rubidana* Walker, Dyar (1901a, p. 463). V. Everglades: April, USNM, AMNH. VI. Homestead: Feb., July, CPK.

TOSALE Walker

5784 T. OVIPLAGALIS (Walker)

List Lep. Ins. Br. Mus. 34: 1265. 1865.

Florida: Dyar (1908b, p. 93). I. Escambia Co.: May, Aug., SMH. Quincy: June, CPK. II. Gainesville: June, CU. III. Marion Co.: Feb., DPI; Sept., UM. East Lake Weir: June, DPI. Howey-in-the-Hills: Dec., DPI. Monteverde: Feb., DPI. Polk Co.: Feb., Sept., Dec., DPI. Frostproof: May, DPI. IV. Bradenton: six March-May, July-Sept., CPK. Oneco: three May, June, Sept., CPK. Sarasota: July, DPI. Punta Gorda: May, MOG, AKW. VI. Homestead: March, Oct., Nov., CPK.

LEPIDOMYS Guenée

5787 L. IRRENOSA Guenée

Pl. XXV, Fig. 52, ♂; Fig. 53, ♀.
Spec. Gén. 6: 202. 1852.

Florida: as *olealis* (Ragonot), Dyar (1902, p. 401); DPI; UFES: (Koebele), Van Duzee (1930, p. 8). I. Escambia Co.: April, May, SMH. Warrington: WP. West Pensacola: Sept., VFG. II. Gainesville: larva on *Osmanthus americanus* [*floridanus*], UFES, USNM. III. Cassadaga: June-Nov., SVF. Weeki-wachee Springs: March-May, CPK. IV. Oneco: March, JGF. Archbold Biological Station: March, PSU; March, April, YU.

EPITAMYRA Ragonot

5787, 1 E. MINUSCULALIS (Moeschler)

Pl. VI, Fig. 39, ♂.
Abhandl. Senck. Naturf. 16: 278. 1890.

Florida: Ins. Pest Surv. Bull. Spec. Suppl. 1947, No. 1. III. Orlando: Nov., WMD. St. Petersburg: Feb., Nov., AKW. IV. Bradenton: June,

Nov., Dec., CPK. Oneco: May, June, det. Munroe, CPK. Siesta Key: rare, Oct.-June, CPK. Delray Beach: April, CPK. South Miami: larvae on *Tabebuia pallida*, April, (Dowling), DPI. VI. Homestead: Dec., CPK.

5787, 2 E. BIRECTALIS Hampson

Pl. VI, Fig. 41, ♀.

Proc. Zool. Soc. London, p. 686. 1897.

I. Escambia Co.: Feb. 25, 1962, SMH. IV. Siesta Key: four Feb. 23-29, 1952, det. Munroe, CPK.

BONCHIS Walker

5787, 3 B. MUNITALIS (Lederer)

Wien. ent. Monat. 7: 345; Pl. 6, Fig. 13. 1863.

VI. Redlands: reared from *Parmentiera cereifera* fruit, Oct. 16, 1961, (Nakahara), USNM.

CLYDONOPTERON Riley

5793 C. TECOMAE Riley

Pl. XXV, Fig. 54, ♀.

Amer. Ent. 3: 288. 1880.

I. Escambia Co.: March-May, SMH. Warrington: WP. Quincy: Oct. 30, 1961, CPK. II. Gainesville: six Feb. 9, 1937, UFES. III. Cassadaga: Feb. 4, 1950, Sept. 4, 1961, Nov. 14, 1955, Dec. 5, 1955, SVF. VIII. Key Largo: Nov. 27, 1955, (Denmark), DPI.

ARTA Grote

[5795 *A. statalis* Grote]

Bull. Buffalo Soc. Nat. Sci. 2: 230. 1875.

The following records have been reported under this name but I strongly suspect that they belong under the unnamed *Xantippe* below. Florida: (Hulst), Grsb. 123. III. Lake Co.: Aug., UM. IV. Englewood: March, CU. Forbes notes that this is undersized, which would fit in with my theory. Punta Gorda: April, MOC.

HELIADES Ragonot

5798 H. MULLEOLELLA (Hulst)

Ent. Amer. 3: 133. 1887.

Florida: type, AMNH.

TETRASCHISTIS Hampson

5799, 1 T. LEUCOGRAMMA Hampson

Ann. Mag. Nat. Hist. Ser. 7, 14: 183. 1904.

IV. Miami: three Feb. 15-March 1, 1949, DPI. Food: *Duranta repens* [plumier], DPI.

XANTIPPE Ragonot

5801 X. URANIDES Dyar

Ins. Insc. Mens. 9: 144. 1921.

I. Escambia Co.: April 19, 1962, det. Capps as possibly this, SMH. There is enough difference in the maculation on this specimen to suggest a distinct species. Torreya State Park: May, CNC. III. DeLand: March, MOC. IV. Bradenton: Feb., March, May, Aug., Sept., Nov., Dec., CPK. Oneco: March, JGF; April-June, Oct., Nov., CPK. Archbold Biological Station: Jan., PSU. Siesta Key: Feb., March, June, Oct.-Dec., CNC, CPK. Fort Ogden: April, CNC. VI. Homestead: Feb.-May, July, Sept.-Nov., CPK. Paradise Key: type, Feb., USNM; Feb., FMJ.

5801, 1 X. SP.

This is an apparently new species resembling both *uranides* and *Arta statalis*, but small and somewhat variable in color. I. Escambia Co.: April, SMH. Lake City: June, CPK. II. Gainesville: Nov., DPI. III. Juniper Springs: Oct., DPI. Cassadaga: May, SVF. Lake Co.: Aug., UM. IV. Bradenton: May, June, Aug.-Nov., CPK. Oneco: May (abundant), June, Aug., Oct., Nov., CPK. Siesta Key: April, June, Oct., CPK. VI. Homestead: Feb.-May, Sept., Nov., CPK.

5801, 2 X. SP.

This is another unrecognized species distinct from 5801, 1. IV. Oneco: May, (Dillman), det. Munroe, CPK.

5801, 3 [X.] SP.

An unrecognized species which Capps places as either *Xantippe*, *Parachma*, or a closely related genus. I. Escambia Co.: April 20, Aug. 20, 1961, SMH, CPK.

PARACHMA Walker

5803 P. OCHRACEALIS Walker

Pl. XXV, Fig. 55, ♂.

List Lep. Ins. Br. Mus. 34: 1263. 1865.

Ochracealis occurs also in the form *culiculis* (Hulst), and there is a note in the Jones manuscript to the effect that Dyar says that his *nua* is not a synonym of *ochracealis*. Dyar (1914, p. 164) said that *nua* was like *ochracealis* but larger and with deeper color. Dyar (1921b, p. 144) also said that the hind wing of *culiculis* was fuscous ochreous, whereas in *nua* it was distinctly red. There is no question about the variation in color, as well as size, but it is difficult, if not impossible, to fit specimens into the named

forms. The records are given as submitted or found in the literature. Florida: type of *culiculis*, AMNH. I. Escambia Co.: May, SMH. Warrington: summer, WP. De Funiak Springs: March, DPI. Torreya State Park: May, CNC. Quincy: May, CPK. II. High Springs: Aug., GWK. Gainesville: April, May, DPI. Lake Geneva: both typical *ochracealis* and *culiculis*, March, HEW. Clay Co.: May, DPI. III. Cassadaga: April, May, July, Aug., SVF. Weekiwachee Springs: March, CPK. Lakeland: type of *nua*, March, Dyar (1914, p. 164). IV. Oneco: March, JGF; April-Oct., CPK. Wauchula: June, UM. Archbold Biological Station: March, CU, PSU; April, YU. Port Sewall: March, AMNH. Sarasota: CU; July, CPK. Siesta Key: April, May, CPK. Englewood: March, CU. Punta Gorda: *culiculis*, March, det. Capps, MOG; April, AKW. VI. Princeton: April, CNC. Florida City: March, CNC, CU. Paradise Key: *nua*, March, det. Dyar, USNM. VIII. Tavernier: Aug., Sept., CPK.

PENTHESILEA Ragonot

5810 *P. SACCULALIS* Ragonot
Ann. Soc. Ent. France, p. 493. 1890.

II. Gainesville: June, CU. Cross Creek: Nov., CPK. III. Cassadaga: June, SVF. IV. Siesta Key: June, CPK. Fort Lauderdale: April, UM. Miami: Oct., DPI. VI. Homestead: Sept., CPK. Paradise Key: March, JGF, HFS, USNM. VIII. Monroe Co.: Nov., (Denmark), DPI. Key Largo: May, DPI.

5810, 1 *P. SP.*

IV. Hialeah: two Sept. 24, 1962, reared from *Stachytarpheta jamaicensis*, (Stegmaier), det. Munroe as new, DPI, CPK.

Subfamily SCHOENOBIINAE

PATISSA Moore

5811 *P. XANTHOLEUCALIS* (Guenée)

Pl. XXV, Fig. 56, ♂.
Spec. Gén. 8: 253. 1854.

Florida: type of *fasciella* (Fernald), AMNH. I. Ocean City: Aug., HOH. II. Gainesville: June, July, CU. III. Cassadaga: June, Aug., SVF. Hillsborough Co.: Aug., UM. Stemper: CNC, CM. IV. Archbold Biological Station: June, AKW. Punta Gorda: May, MOG. VI. Homestead: May, CPK.

5811, 1 *P. SP.*

Near *xantholeucalis*, of which it may be only a form according to Munroe. VI. Modello: CNC.

5812 *P. FLAVICOSTELLA* (Fernald)

Ent. Amer. 3: 38. 1887.

Florida: type, AMNH. II. Gainesville: June, July, CU; July-Sept., DPI. III. Cassadaga: June, SVF. Weekiwachee Springs: May, CPK. Orlando: July, CNC. Stemper: April, Aug., CNC. Tampa: Aug., Sept., Nov., AEB. IV. Bradenton: Aug., Sept., Nov., CPK. Oneco: May-Oct., CPK. Archbold Biological Station: Nov., PSU. Siesta Key: May, June, CPK. Fort Lauderdale: April, UM. VI. Homestead: Aug., CPK.

5813 *P. FLAVIFASCIALIS* Barnes & McDunnough

Contrib. 2: 176. 1913.

III. Elfers: one April, CU. IV. Oneco: May, CPK; June, CNC. Archbold Biological Station: one Dec., CU. Lake Okeechobee: July, CM. Punta Gorda: April, MOG. Fort Myers: type, one May 1-7, USNM.

5814 *P. PARTHENIALIS* Dyar

Ins. Insc. Mens. 5: 82. 1917.

IV. Tamiami Trail: four July, CNC, CM.

5816 *P. SORDIDALIS* Barnes & McDunnough

Contrib. 2: 176. 1913.

I. Escambia Co.: three July, SMH. IV. Oneco: three May, June, Sept., CPK. Archbold Biological Station: April 6, 1937, CU. V. Everglades: type, one April 8-15, USNM.

5817 *P. VESTALIELLA* (Zeller)

Verh. zool.-botan. Ges. Wien 22: 532. 1875.

Munroe states that the white *Patissa* need critical study. Therefore the records should be considered tentative. II. Gainesville: July, CU. III. Cassadaga: June, SVF. IV. Bradenton: Aug., Sept., CPK. Oneco: May, CPK. St. Lucie Co.: June, CM. Siesta Key: May, CPK. Punta Gorda: May, MOG. Fort Myers: not rare, (McDunnough), USNM.

5817, 1 *P. SP.*

Munroe has been unable to place this. III. Stemper: Aug.-Oct., CNC, CM.

SCIRPOPHAGA Treitschke

5818 *S. PERSTRIALIS* (Hübner)

Pl. XXVI, Fig. 7, ♂.

Zutr. exot. Schmett. 3: 18. 1825.

Perstrialis is fairly common from Pensacola and Gainesville to Paradise Key at least, but surely

will be found elsewhere in the state as strays have been taken as far north as Massachusetts and Michigan, March-December.

5818, 1 S. SP.

This species is unlike anything in the U. S. National Museum. I. Escambia Co.: July 3, 1961, Sept. 8, 1962, det. Capps, SMH. These two differ sufficiently, so that they may represent two distinct species, or they may be only one sexually dimorphic species.

5819 S. REPUGNATALIS (Walker)

Pl. XXVI, Fig. 8, ♂.
List Lep. Ins. Br. Mus. 27: 144. 1863.

Florida: UFES. I. Escambia Co.: July, SMH. West Pensacola: Sept., VFG. III. Cassadaga: June, Aug.-Oct., SVF. Weekiwachee Springs: April, CPK; Aug., UM. Dade City: type of *consortalis* (Dyar) (1909, p. 28). Hillsborough Co.: Aug., UM. IV. Bradenton: June-Aug., CPK. Archbold Biological Station: April, Aug.-Oct., YU. Siesta Key: May, CPK. Fort Myers: USNM. Fort Lauderdale: May, UM. Ochopee: April, DPI, CPK. VI. Homestead: Feb., April, July-Oct., CPK. Florida City: June, July, CNC; June, Aug., HEW.

RUPELA Walker

[5820 *R. nivea* Walker]

List Lep. Ins. Br. Mus. 28: 523. 1863.

Nivea was listed from Florida by Dyar (1902, p. 402) and by Barnes & McDunnough: V. Everglades: Barnes & McDunnough (1914a, p. 216). The last was subsequently described as *sejuncta* Heinrich, q. v. What the Dyar record was we do not know, but it was certainly not *nivea*, which Heinrich (1937, p. 370) does not credit to North America.

5821 R. TINCTELLA (Walker)

List Lep. Ins. Br. Mus. 28: 526. 1863.

I. Escambia Co.: May, SMH. West Pensacola: Aug., VFG. Panacea: Aug., Heinrich (1937, p. 369). II. Alachua Co.: Aug., DPI. Gainesville: June, CPK. III. Weekiwachee Springs: March, May, Aug., CPK. Winter Park: May, det. Capps, DPI. Dade City: Heinrich. St. Petersburg: April, July, Heinrich. Fort Meade: April, Heinrich. IV. Archbold Biological Station: April, Sept., YU. Vero Beach: April, CPK. Siesta Key: June, CPK. Grove City: May, Heinrich. Fort Lauderdale: April, May, Oct., UM. Miami: Dyar (1913f, p. 105); April, June, CNC. South Miami: June, CNC. Coconut Grove: Heinrich. V. Collier Co.: April, CNC. Everglades: type

of *unicolor* (Barnes & McDunnough), April, USNM. VI. Homestead: May, CPK. Florida City: April-June, CNC.

5822 R. SEGREGA Heinrich

Proc. U. S. Natl. Mus. 84: 366. 1937.

II. Gainesville: May, UFES; July, CU. III. Marion Co.: July, UM. Glenwood: Heinrich. Cassadaga: June, SVF. Weekiwachee Springs: May, CPK. Dade City: Sept., Heinrich. Elfers: April, CNC. Orlando: June, CNC. Fort Meade: April, Heinrich. IV. Highland Hammock State Park: April, CU. Siesta Key: May, CPK. Punta Gorda: April, MOG. Fort Myers: as *albinella* (Cramer), SIM. The last may not belong here. South Bay: April, May, Heinrich. Miami: April, May, CNC. Biscayne Bay: Heinrich. Coral Gables: June, DPI. Coconut Grove: Heinrich. V. Collier Co.: April, CNC. Everglades: April, AMNH, SIM. The latter of these two may also not belong here. VI. Florida City: May, CNC; Oct., CU. Paradise Key: Heinrich.

5823 R. SEJUNCTA Heinrich

Proc. U. S. Natl. Mus. 84: 373. 1937.

V. Everglades: paratypes, (Schwarz), Sept. 1880, USNM. Allen River to Deep Lake: paratypes, April 12, 1912, USNM.

SCHOENOBIVS Duponchel

With the possible exception of *sordidellus* and *maximellus*, the determinations in this genus are hopelessly confused. Several investigators have undertaken a revision and given up the unequal struggle. I have several hundred specimens representing several species but any determinations are purely tentative and highly speculative. All the records must be looked upon in much the same way.

5824 S. SORDIDELLUS (Zincken)

Pl. XXV, Fig. 57, ♂; Fig. 58, ♀.
Germ. Mag. 4: 247. 1821.

Florida: Fernald (1888, p. 136). I. Warrington: May, VFG. II. Gainesville: May, DPI. IV. Bradenton: June, Sept., Nov., CPK. Oneco: March, May, June, CPK. Archbold Biological Station: Jan., PSU. Siesta Key: May, CPK.

5825 S. UNIPUNCTELLUS Robinson

Ann. Lyceum Nat. Hist. N. Y. 9: 314. 1870.

II. Gainesville: June, July, CU. Lake Geneva: March, HEW. III. Marion Co.: July, UM. Lake Co.: Aug., UM. Indian River: AMNH. Hillsborough Co.: Aug., UM. IV. Bradenton: April, Aug.-Oct., CPK. Oneco: April, May, Oct., CPK. Archbold Biological Station: March, April, YU;

April, Nov., Dec., CU. Siesta Key: Feb., April, May, CPK. Punta Gorda: May, MOG. Palmdale: Aug., CU. Fort Myers: USNM. Fort Lauderdale: May, UM. Dade Co.: March, HFS. V. Everglades: April, AMNH, SIM. VI. Homestead: April, Sept., CPK. VII. Flamingo: April, DPI.

5826 S. TRIPUNCTELLUS Robinson
Ann. Lyceum Nat. Hist. N. Y. 9: 314. 1870.

I. Myrtle Grove: Sept. 2, 1963, WJW. II. Jacksonville: Grsb. 124. IV. Biscayne Bay: (Slosson), Grsb. 124.

5827 S. MELINELLUS (Clemens)
Proc. Acad. Nat. Sci. Phila. 12: 205. 1860.

Specimens that apparently belong under this name show a narrow range of color variation, being mostly rather dark. They may belong under *uxorialis* Dyar below. I. West Pensacola: July, VFG. III. Rockledge: NYSM. Indian River: AMNH. Punta Gorda: April, MOG. V. Everglades: USNM. VI. Paradise Key: Jan., March, FMJ.

[5831 *S. amblyptepennis* Dyar]
Ins. Insc. Mens. 5: 80. 1917.

I. Escambia Co.: June 2, 1962, SMH. This is different from any other Florida *Schoenobius* I have seen, and it fits in with northern specimens tentatively determined as *ampliptepennis*.

5832 S. ROSCIDELLUS Dyar
Ins. Insc. Mens. 5: 81. 1917.

I. Escambia Co.: July, SMH. Quincy: June, CPK. III. Cassadaga: April, SVF. Weekiwachee Springs: March, May, Aug., CPK. Fort Meade: types, April, USNM. IV. Bradenton: May, June, CPK. Oneco: April, CPK. Archbold Biological Station: March, YU. Siesta Key: Feb.-June, Nov., CPK. Punta Gorda: April, MOG. Miami: paratypes, April, USNM.

5834 S. UXORIALIS Dyar
Ins. Insc. Mens. 9: 143. 1921.

II. Gainesville: April, DPI. III. Cassadaga: March, April, SVF. Weekiwachee Springs: March, Aug., CPK. IV. Bradenton: May, June, Sept., Oct., CPK. Oneco: April-Aug., Oct., CPK. Archbold Biological Station: Feb., PSU; Sept., YU. Siesta Key: Feb., April-June, CPK. Punta Gorda: Jan., MOG. VI. Homestead: July, Aug., CPK. Paradise Key: type, March 9, 1919, USNM; FMJ. VII. Flamingo: Feb., DPI.

5835 S. MAXIMELLUS Fernald
Pl. XXV, Fig. 59, ♂; Fig. 60, ♀.
Can. Ent. 23: 30. 1891.

I. West Pensacola: March, VFG. Myrtle Grove: June, July, WJW. Cassadaga: Jan., SVF. IV. Archbold Biological Station: March, April, YU. Siesta Key: March, May, CPK. Fort Lauderdale: June, UM.

Subfamily ANCYLOMIINAE

PRIONAPTERYX Stephens

5841 P. NEBULIFERA Stephens
Ill. Brit. Ent. 4: 317. 1834.

I. Quincy: May 12, 1963, (Tappan), CPK. Jacksonville: (Slosson), Grsb. 125. IV. Archbold Biological Station: May 1962, (Evans), MCZ. Fort Lauderdale: May, (Bates), UM.

5842 P. ACHATINA Zeller
Chil. et. Cramb., p. 13. 1863.

I. Escambia Co.: Aug. 30, 1961, SMH. Myrtle Grove: June, WJW. II. Gainesville: July 8, 1927, (Rogers), CU. Forbes notes: "much too small (distinct?)." III. Cassadaga: June 5, 1961, four Sept. 9-27, 1962, SVF. These males are also undersized. IV. Biscayne Bay: (Slosson), Grsb. 125.

5844 P. SERPENTELLA Kearfott
Pl. XXVI, Fig. 1, ♀.
Proc. U. S. Natl. Mus. 35: 376. 1908.

As this varies in size and also in the extent of contrasting light and dark areas, there is a possibility of two species being involved. I. Warrington: summer, WP. II. Gainesville: July, CU. III. Cassadaga: May, July, SVF. Egmont Key: USNM; April, AKW. IV. Oneco: Aug., CPK. Archbold Biological Station: Jan., March, Sept., Dec., YU. Siesta Key: Dec.-May, CPK. Coconut Grove: type, USNM. VI. Homestead: Feb., DPI.

5844, 1 P. SP.

This species is unlike anything in the U. S. National Museum. III. Cassadaga: Feb. 15, 1950, May 16, 1953, det. Capps, SVF.

EUGROTEA Fernald

5845 E. INCERTELLA (Zincken)
Germ. Mag. 4: 253. 1821.

Again there are either two species involved, or there is a pale form and a dark form. I. Escambia Co.: July, VFG. Myrtle Grove: Aug., WJW. II. Gainesville: Dec., UM. III. Marion Co.: July, UM. Cassadaga: June, Sept., SVF. Weekiwachee Springs: Aug., CPK. IV. Bradenton: Aug., CPK. Oneco: June-Aug., CPK. Sebring:

June, UM. Archbold Biological Station: June, AKW. Siesta Key: June, CPK. Punta Gorda: June, MOG. Fort Myers: USNM. Fort Lauderdale: April, July, UM.

Subfamily CRAMBINAE

Because this subfamily is undergoing extensive revision by Klots at the present time, the nomenclature, as well as some of the determinations may be subject to change when the revision appears. The following covers the situation as well as it can under the circumstances, and I am indebted to Dr. Klots for looking it over and adding comments.

The larvae of some of the species are injurious to grass and to young corn (Watson, 1931, p. 232).

RAPHIPTERA Hampson

5849 R. MINIMELLA (Robinson)

Ann. Lyceum Nat. Hist. N. Y. 9: 315. 1870.

I. Escambia Co.: Aug., SMH. Myrtle Grove: Sept., WJW. II. Perry: March, CPK. Starke: June, AKW. Gainesville: Jan.-May, DPI; July, CU. Jacksonville: March, HEW. Hastings: USNM. III. Daytona: Haimbach (1930, p. 115). DeLand: March, MOG. Weekiwachee Springs: Feb., Aug., CPK. Orlando: Ainslie (1923, p. 54). Melbourne: Haimbach. Lakeland: Ainslie. IV. Bradenton: Feb.-April, June-Sept., Nov., CPK. Oneco: April-June, CPK. Myakka City: Feb., CU. Archbold Biological Station: Jan., March, YU; Feb., March, PSU; April, Dec., CU; June, AKW. Siesta Key: Feb., March, Nov., CPK. VI. Homestead: Oct., CPK. Everglades National Park: Dec., CNC.

CRAMBUS Fabricius

5851 C. SATRAPELLUS (Zincken)

Pl. XXVI, Fig. 4, ♀.

Germ. Mag. 4: 247. 1821.

I. West Pensacola: May, VFG. Millview: April, VFG. Carabelle: April, AKW. Quincy: Oct., CPK. II. Gainesville: Feb., March, DPI; March, UM; April, UFA. Jacksonville: April, HEW. Lake Geneva: March, HEW. Hastings: USNM. III. Cassadaga: Feb., April, May, July, SVF. Weekiwachee Springs: Feb., March, CPK. Plymouth: Ainslie (1923, p. 52). Orlando: June, CNC. Melbourne: Ainslie. La Grange: Sept., (Sleight), Grsb. 125. Dade City: USNM. Lakeland: May, AMNH. Kissimmee: USNM. IV. Bradenton: Feb.-April, June-Aug., Oct., CPK. Oneco: March, JGF; May, CPK. Archbold Biological Station: Jan., Feb., YU; Feb., March, PSU; April,

CU; June, AKW. Vero Beach: April, DPI. Fellsmere: Ainslie. Siesta Key: Feb., May, CPK. Charlotte Harbor: March, CU. Punta Gorda: March, April, AKW; April, CNC; May, MOG. Fort Myers: April, AMNH. V. Marco: USNM. VI. Homestead: Nov., CPK.

5853 C. QUINQUAREATUS Zeller

Pl. XXVI, Fig. 2, ♂.

Hor. Soc. Ent. Ross. 13: 38. 1877.

Quinquareatus is common all over the state and is taken in every month. The species was also listed by Grossbeck (1917, pp. 125-126) as *extorralis* Hulst and *extornalis* Walker. The former was described from Florida and Louisiana (Hulst, 1886d, p. 165). The latter name was not used by Walker, at least not in this subfamily, and must be a *lapsus calami* on Grossbeck's part.

5861 C. LEACHELLUS (Zincken)

Germ. Mag. 3: 114. 1818.

I. Pensacola: Oct. 24, 1960, det. Klots, VFG. Crestview: Oct. 15, 1914, (F. E. Watson), AMNH. De Funiak Springs: Oct. 18, 1914, (F. E. Watson), AMNH. Quincy: six Oct. 19-Dec. 6, 1960, (Tappan), AMNH, CPK.

5861, 1 C. WATSONELLUS Klots

Amer. Mus. Nov. 1191: 5. 1942.

I. Pensacola: types, nine Oct. 10-14, 1914, (F. E. Watson), AMNH; Dec., CNC.

5863 C. PRAEFECTELLUS (Zincken)

Germ. Mag. 4: 249. 1821.

II. Gainesville: March, April, DPI; April, CNC. Jacksonville: USNM; March, HEW. Lake Geneva: March, HEW. III. Weekiwachee Springs: March, CPK. Orlando: Ainslie (1923, p. 51). Lakeland: Ainslie. IV. Bradenton: March-May, July, Nov., CPK. Oneco: May, June, AMNH, CPK. These last are smaller and paler than northern specimens. Fellsmere: Ainslie. Siesta Key: April, CPK. Punta Gorda: April, CNC.

5863, 1 C. SANFORDELLUS Klots

Amer. Mus. Nov. 1191: 8. 1942.

IV. Port Sewall: type, Nov. 26, 1938, (Sanford), AMNH.

5882 C. MULTILINEELLUS Fernald

Ent. Amer. 3: 37. 1887.

Florida: co-types, USNM, ANSP. I. Escambia Co.: May, SMH. West Pensacola: May, VFG. Myrtle Grove: Sept., WJW. II. Hastings: USNM. III. Weekiwachee Springs: May, (May), CPK. IV. Oneco: May, (Dillman), CPK. Siesta Key: March, CPK. Fort Myers: USNM.

5874, 1 C. BRAUNELLUS Klots

North American Crambus I, pp. 65-66; Figs. 4 and 11. 1940.

I. Escambia Co.: May 13, 1963, det. Klots, SMH.

5886 C. BIGUTTELLUS Forbes

J. N. Y. Ent. Soc. 28: 219. 1920.

I. Escambia Co.: July, Sept., SMH. III. Cassadaga: May, SVF. Weekiwachee Springs: March, CPK. IV. Siesta Key: Feb. 14, 1951, Feb. 2, March 3, 1956, CPK. Punta Gorda: April, (Ramstedt), MOG.

5889 C. ELEGANS Clemens

Proc. Acad. Nat. Sci. Phila., p. 204. 1860.

I. Escambia Co.: April, SMH. Myrtle Grove: Oct., WJW. Ocean City: Aug., HOH. II. Archer: USNM. Gainesville: April, DPI; July, CU. III. Cassadaga: May, SVF. De Bary: Feb., CPK. Weekiwachee Springs: Aug., CPK. IV. Bradenton: March, April, CPK. Oneco: May, CPK. Myakka City: Feb., CU. Archbold Biological Station: Feb., PSU; March, CU, YU. Siesta Key: Feb.-June, CPK. Punta Gorda: March, MOG. Miami: USNM.

5890, 1 C. MINOR Forbes

J. N. Y. Ent. Soc. 28: 220. 1920.

II. Gainesville: July 31, 1961, (Perry), det. Klots, CPK.

5891, 1 C. SP.

In the *polingi* Kearfott group Klots has distinguished several species, one of which is found in Florida: I. Monticello: Oct., AMNH. II. Perry: March, CPK. III. Weekiwachee Springs: Aug., CPK. Winter Park: May, AMNH. IV. Archbold Biological Station: Jan., PSU; July, AMNH. Siesta Key: March, May, CPK. VI. Homestead: March, April, Nov., CPK. Paradise Key: Dec.-Feb., AMNH.

5891, 2 C. DISCLUDELLUS Moeschler

Abhandl. Senck. Naturf. 16: 323. 1890.

VI. Paradise Key: Jan., (Jones), det. Heinrich as "probably this." The specimen is presumably in the U. S. National Museum; although I have not been able to locate it. When located, it will undoubtedly fall into the species of the *polingi* group discussed above.

5892 C. VULGIVAGELLUS Clemens

Vagabond crambus.

Proc. Acad. Nat. Sci. Phila., p. 204. 1860.

I. Escambia Co.: Nov. 6, 1961, SMH. Quincy: common, Oct., Nov., (Tappan), AMNH, CPK, DPI. Food: grass.

5896 C. TETERRELLUS (Zincken)

Bluegrass webworm.

Germ. Mag. 4: 252. 1821.

Teterrellus is probably abundant throughout the state, and flying every month.

5897 C. DECORELLUS (Zincken)

Pl. XXVI, Fig. 3, ♀.

Germ. Mag. 4: 250. 1821.

I. Escambia Co.: May, Aug., SMH. Myrtle Grove: July, WJW. Ocean City: July, HOH. II. Greenville: Sept., UM. Archer: March, USNM. Gainesville: March, July, UFA; April, CNC, UFA. III. Central Florida: July, WMD. Cassadaga: March, June, SVF. Hernando Co.: Aug., UM. Weekiwachee Springs: May, CPK. Dunedin: March, Haimbach (1930, p. 123). Lakeland: May, AMNH. IV. Bradenton: March, April, Aug., Sept., CPK. Oneco: May, June, Oct., CPK. Sebring: June, UM. Siesta Key: Feb., March, May, CPK. Punta Gorda: March, MOG; April, CNC. Fort Myers: April, May, USNM. La Belle: April, AMNH.

5910 C. MUTABILIS Clemens

Proc. Acad. Nat. Sci. Phila., p. 204. 1860.

Mutabilis is abundant on the peninsula but there are no records from west of Quincy. It flies all year. There is the possibility of a new closely related species in addition to *mutabilis*.

5912, 1 C. SP.

These are determined by Klots as being in the *hemiochrellus* Zeller group. There may be more than one species involved. I. Escambia Co.: March 1961, Aug. 3, 1961, SMH. Quincy: common, Oct.-Jan., AMNH, CPK. II. Hastings: AMNH. III. Lake Kissimmee: Sept. 30, 1938, (Englehardt), AMNH. IV. Miami: Jan. 1938, (P. Johnson), AMNH.

5913 C. HAYTIELLUS (Zincken)

Germ. Mag. 4: 254. 1821.

It is possible that some of these records belong under 5912,1 or under one of the other unplaced species which Klots has found in this group. IV. Bradenton: July, CPK. Oneco: May-Oct., CPK. Archbold Biological Station: Dec.-Feb., YU; March, PSU. Siesta Key: Oct.-April, June, AMNH, CPK. Englewood: April, CU. Punta Gorda: April, CNC. Fort Myers: April, AMNH, USNM. Miami: Wylie (1944, pp. 5-9). Coconut Grove: USNM. V. Everglades: April, AMNH, USNM; Dec., CPK. Chokoloskee: USNM. VI. Homestead: Feb., DPI; Feb.-Nov., CPK. Paradise Key: Jan., USNM; Dec., CNC. VIII. Tavernier: July, UFES. Craig: Sept., CPK. Food: Bermuda grass and Japanese grass, Wylie.

5913, 1 C. MINUELLUS Walker

List Lep. Ins. Br. Mus. 27: 164. 1863.

The determinations of this species have been made by Klots, who has resurrected the name from the synonymy in which it had been submerged. III. Cassadaga: May, Oct., SVF. IV. Bradenton: two Aug., Nov., CPK. Port Sewall: Nov. 13-14, Dec. 13-17, 1938, (Sanford), AMNH. Siesta Key: abundant, Oct.-June, CNC, AMNH, CPK, USNM, CU. Fort Lauderdale: Feb., April, May, Dec., UM. VI. Homestead: July, Aug., CPK. VIII. Tavernier: Sept., Oct., DPI, CPK. Garden Key, Dry Tortugas: May, DPI. Perhaps it is extremely local, for in spite of its abundance on Siesta Key, only two specimens have turned up in the trap when run at Oneco or Bradenton, neither of them more than twenty miles away, but inland. Only four were taken in the trap at Homestead.

[5919 *C. trisectus* (Walker)]

List Lep. Ins. Br. Mus. 9: 119. 1856.

IV. Miami: USNM. Ainslie (1923, p. 52) questioned the correctness of the locality label.

5925 C. CALIGINOSELLUS Clemens

Corn root webworm.

Proc. Acad. Nat. Sci. Phila., p. 204. 1860.

This and the next species, *zeelus* Fernald, are part of a complex which Klots has not unraveled as yet. They may or may not be one species, but for the present we may keep them separated. I. Escambia Co.: April, SMH. II. Gainesville: Oct., AMNH. Hastings: USNM. III. Weekiwachee Springs: March 20, 1955, det. Klots with "?," CPK. Winter Park: May, July, AMNH. IV. Siesta Key: March 4, 1952, det. Klots, CPK. VI. Homestead: Feb., March, July, Sept.-Nov., CPK.

5927 C. ZEELUS Fernald

Can. Ent. 17: 55. 1885.

I. Escambia Co.: April, SMH. Torreya State Park: April, CNC. II. Hastings: USNM. III. DeLand: March, MOG. Elfers: April, CU. Orlando: Ainslie (1923, p. 52). Port Tampa: Ainslie. Lakeland: Ainslie. IV. Archbold Biological Station: Feb., PSU. Punta Gorda: April, CNC. VI. Homestead: Nov., det. Klots as "*zeelus* group, n. sp.?" CPK.

5932 C. TRIPSACAS Dyar

Pl. XXVI, Fig. 9, ♂.

Ins. Insc. Mens. 9:66. 1921.

III. De Bary: Feb. 28, 1962, CPK. St. Petersburg: USNM. IV. Archbold Biological Station:

April 6, 1958, (Pease), YU. Siesta Key: May 1, 1956, CPK. Miami: type, USNM. VI. Homestead: one Feb., two May, CPK. Paradise Key: March, April, FMJ, CPK, USNM. VIII. Big Pine Key: two March 17-April 9, 1951, (Sanford), AMNH.

THAUMATOPSIS Morrison**5934 T. PEXELLUS** (Zeller)

Chil. et Cramb. p. 48. 1863.

VII. Flamingo: Dec. 1, 1961, CNC.

5936 T. EDONIS Grote

Can. Ent. 12: 19. 1880.

I. Escambia Co.: Oct. 17, 1961, det. Capps, SMH. Myrtle Grove: Sept. 20, 1961, WJW. Quincy: four Oct. 16-29, 1962, (Tappan), det. Forbes, CPK. III. Cassadaga: Sept. 28, 1962, det. Forbes, SVF.

5937 T. FERNALDELLUS Kearfott

Can. Ent. 37: 121. 1905.

I. Escambia Co.: Oct. 11, 1961, SMH. See also under 5938 below.

5938 T. FLORIDELLUS Barnes &

McDunnough

Contrib. 2: 177. 1913.

IV. Siesta Key: infrequent, Jan.-May, CPK. Punta Gorda: Nov., AMNH. V. Everglades: types, April, USNM. Marco: types, USNM. VIII. Tavernier: Sept., CPK. Windley Key: one Dec.-Feb., DPI. Key West: Grossbeck (1917, p. 126) said: "in describing *T. fernaldella* (from N. J. and the West) Kearfott included a specimen from Key West with a query, which Barnes & McDunnough say is probably *floridella*."

5946 T. PECTINIFER (Zeller)

Hor. Soc. Ent. Ross. 13: 51. 1877.

I. Escambia Co.: Sept. 24, 1961, SMH. Warrington: May 4, 1961, VFG. II. Gainesville: March 1925, (Bates), UM. III. Weekiwachee Springs: March, Aug., det. Klots, CPK. Orlando: (Ainslie), USNM. Lakeland: Grsb. 126. However, this Lakeland specimen belongs under *actuellus* below.

5947 T. ACTUELLUS Barnes &

McDunnough

Contrib. 4: 172. 1918.

The following is all type material. III. Stemper: July, USNM. St. Petersburg: Nov., USNM. Lakeland: May, USNM. This last specimen is the one listed by Grossbeck as *pectinifer*.

5947, 1 T. SP.

This specimen is of an unapparently undescribed species. IV. Sarasota: Nov. 11, 1951, (King), det. Klots, CPK.

5947, 2 T. SP.

This specimen is unlike 5947,1, and unnamed in the U. S. National Museum collection. III. St. Petersburg: April 21-22, 1915, (Ludwig), USNM. IV. Siesta Key: Jan. 26, May 24, 1957, April 2, 1953, CPK.

LOXOCRAMBUS Forbes**5948 L. CANELLUS Forbes**

J. N. Y. Ent. Soc. 28: 226. 1920.

I. Escambia Co.: March 29, 1962, SMH. IV. Siesta Key: infrequent, Nov.-June, det. Forbes, CPK. Manasota Key: Feb., CPK.

EUCHROMIUS Guenée**5952 E. TEXANA (Robinson)**

Pl. XXVI, Fig. 10, ♂.

Ann. Lyceum Nat. Hist. N. Y. 9: 154. 1870.

I. Myrtle Grove: June, WJW. Quincy: March, April, Oct., CPK. II. Gainesville: April, CPK. III. Sanford: April, DPI. IV. Bradenton: April, AEB, AMNH; Oct., CPK. Oneco: March 22, 1954, JGF. Archbold Biological Station: March, YU. Siesta Key: Feb., CPK; March, CU.

ARGYRIA Hübner

Munroe believes there may be other closely related species involved with both *nivalis* (Drury) and *argentana* (Martyn). Collectors should save all material in this complex.

5954 A. NIVALIS (Drury)

Ill. Exot. Ent. 2: 25. 1773.

I. Escambia Co.: April, SMH. West Pensacola: April, VFG. Quincy: July, Sept., CPK. Monticello: April, CU. II. Gainesville: May, UM. III. DeLand: March, MOG. Cassadaga: April, June, SVF. Orlando: Ainslie (1923, p. 50). Port Tampa: Ainslie. Lakeland: Ainslie. IV. Bradenton: March, AEB; Aug., CPK. Archbold Biological Station: Jan., March, April, Dec., YU; Feb., Nov., PSU; Dec., CU. Siesta Key: Jan., CPK. Punta Gorda: April, CNC. Fort Myers: USNM; March, AMNH. Palm Beach: Dyar (1901a, p. 464). Fort Lauderdale: March, UM. Coconut Grove: USNM. V. Everglades: April, AMNH. VI. Homestead: Feb., DPI; June, July, Sept., Nov., CPK. Paradise Key: Feb., FMJ.

5955 A. ARGENTANA (Martyn)

Psyche; Pl. 32, Fig. 95. 1797.

I. Escambia Co.: April, SMH. II. Gainesville: July, CU. Crescent City: USNM. Hastings: Sept., CNC; USNM. III. Central Florida: Sept., WMD. Daytona: March, Haimbach (1930, p. 128). DeLand: March, AKW. Cassadaga: May, June, Sept., SVF. Weekiwachee Springs: March, AEB, CPK. Orlando: April, CNC; Ainslie (1923, p. 50). Dunedin: April, Haimbach. St. Petersburg: USNM. Lakeland: May, AMNH. IV. Archbold Biological Station: Jan., Feb., Nov., PSU; Feb., March, Aug., Dec., YU; March, April, CU; June, AKW. Fort Drum: USNM. Sarasota: Feb., CU. Punta Gorda: Feb., April, AKW; April, CNC, MOG. Fort Myers: April, AMNH. Miami: USNM. Coconut Grove: USNM. VI. Homestead: Feb., May, Oct., CPK, April, CNC. Paradise Key: March, FMJ.

5956 A. RILEYELLA Dyar

Ins. Insc. Mens. 1: 113. 1913.

I. Myrtle Grove: May 26, 1963, WJW.

5957 A. AURATELLA (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 204. 1860.

I. Escambia Co.: Sept., SMH. Tallahassee: USNM. II. Hastings: USNM. III. Cassadaga: June, SVF. Weekiwachee Springs: April, Aug., CPK. Lakeland: USNM. IV. Oneco: May, June, CPK. Archbold Biological Station: Jan., Feb., PSU; March, Dec., CU; April, YU. Siesta Key: April, CPK. Fort Lauderdale: Dec., UM. V. Everglades: USNM. Forbes notes that the southern form, *pulchella* Walker, is small.

5957, 1 A. CRITICA Forbes

J. N. Y. Ent. Soc. 28: 222. 1920.

I. Escambia Co.: May, SMH. II. Hastings: paratype, April, USNM. IV. Oneco: July 15, 1953, (Dillman), CPK. Archbold Biological Station: March, PSU. V. Everglades: paratype, April, (McDunnough), USNM.

5958 A. LACTEELLA (Fabricius)

Ent. Syst. iii, 2: 313. 1794.

The head of this is white and the wings are usually pure, shining white. The next species, *diplomochalis* Dyar, if actually distinct, a point on which Klots has an open mind, is supposed to have a yellow head and the wings slightly enfuscated. Many of the records may be mixed because of the similarity. It is reportedly abundant in several localities. I. Escambia Co.: Sept., SMH. Warrington: May, VFG. Quincy: June, Oct., Nov., CPK. II. Alachua Co.: Nov., UM. Archer: USNM. Gainesville: USNM; May,

Sept., Nov., DPI. Hastings: April, CNC. III. DeLand: March, AKW. Cassadaga: April, SVF. Brooksville: June, AKW. Orlando: Ainslie (1923, p. 50). Dunedin: March, April, Nov., Haimbach (1930, p. 129). Lakeland: May, AMNH. IV. Bradenton: March, April, July-Dec., CPK. Oneco: March, JGF; May, Aug., CPK. Myakka City: Feb., CU. Archbold Biological Station: Feb., Dec., PSU; March, April, Nov., Dec., CU; June, AKW. Siesta Key: Feb., May, CPK. Punta Gorda: March, MOG. Palmdale: Aug., CU. Fort Myers: USNM. Fort Lauderdale: April, UM. Miami: USNM. V. Everglades: Grsb. 126. VI. Homestead: Feb., March, Oct., CPK.

5958, 1 A. DIPLOMOCHALIS Dyar

Ins. Insc. Mens. 1: 113. 1913.

The type locality is Puerto Rico. Whether the following records are actually this species, whether they are merely dark specimens of *lacteella*, or finally whether there are two really distinct species are all open to question. I. Escambia Co.: Nov., SMH. II. Gainesville: Feb., DPI; June-Aug., (Rogers), CU. III. Cassadaga: March, SVF. IV. Bradenton: March, AEB. Archbold Biological Station: Jan., Dec., YU; Nov., Dec., (Needham), CU. Siesta Key: Feb., May, June, Dec., CPK.

UESTA Dyar

5959 I. LISETTA Dyar

Proc. Ent. Soc. Wash. 11: 29. 1909.

Lisetta is apparently common all year as far up the peninsula as Quincy, Gainesville, and Glenwood, but the only records north of these localities are: I. Escambia Co.: July, SMH. Quincy: Oct., Nov., CPK, and an Alabama specimen in the Cornell collection.

DIATRAEA Guilding

5960 D. SACCHARALIS (Fabricius)

Sugarcane borer. Pl. XXVI, Fig. 5, ♀. Ent. Syst. iii, 2: 238. 1794.

In addition to a confusion of determinations, there is the further complication of nomenclature and synonymy. McDunnough (1939, p. 24) makes *crambidoides* (Grote) a valid species with *zeacolella* Dyar as a synonym. Dyar and Heinrich (1927, p. 19) sink *crambidoides* as a synonym of *saccharalis* and make *zeacolella* valid. Klots follows the latter tentatively, awaiting confirmation by genitalia comparison with the type of *crambidoides*. In any event, *saccharalis* has a whiter hind wing than *zeacolella*, and the genitalia, both male and female, are very different.

The range of infestation by *saccharalis* as given in the U. S. Dept. Agr. Tech. Bull. 41 (1928) was roughly south of the line Floral City to Daytona. There is one record for Monticello: Sept. 1934, DPI. Its favorite food plants are sugarcane and corn, but it has also been reported from sycamore (Ins. Pest Surv. Bull. 15: 125) and Napier grass, DPI. There are many customs interception records. In one stage or another, the insect has been reported in every month but February.

5961 D. EVANESCENS Dyar

Ins. Insc. Mens. 5: 84. 1917.

I. Escambia Co.: July, SMH. Myrtle Grove: April, WJW. Quincy: June, CPK. III. Cassadaga: July, Aug., SVF. Weekiwachee Springs: April, June, Aug., CPK. IV. Bradenton: Aug., CPK. Oneco: March, JGF; May-Aug., det. Capps, CPK. Archbold Biological Station: Aug., YU. Siesta Key: May, June, CPK. VI. Homestead: May, July, CPK.

5962 D. ZEACOLELLA Dyar

Southern cornstalk borer. Pl. XXVI, Fig. 6, ♂. Ent. News 22: 203. 1911.

The records cover about the same territory as those for *saccharalis*, but in addition there are a number of records, with corn as the food plant, from the western counties. The dates are for all months except July and September.

HAIMBACHIA Dyar

5967 H. SQUAMULELLA (Zeller)

Hor. Soc. Ent. Ross. 16: 5. 1881.

III. Marion Co.: July, UM. IV. Fort Myers: April 1, AMNH. V. Everglades: USNM. VI. Paradise Key: March, CPK. VIII. Tavernier: Sept., Oct., CPK.

DIATRAENOPSIS Dyar & Heinrich

5970 D. DIFFERENTIALIS (Fernald)

Ent. Amer. 4: 120. 1888.

I. Escambia Co.: May, SMH. II. Fernandina: April, CNC. Jacksonville: (Slosson), Grsb. 126. III. Weekiwachee Springs: May, CPK. Dunedin: Haimbach (1930, p. 130). St. Petersburg: USNM. Kissimmee: USNM. IV. Bradenton: Aug., CPK. Venice: USNM. Punta Gorda: April, CNC; May, AKW. Fort Myers: April, USNM. Palm Beach: USNM. Ochopee: April, DPI. Miami: April, CNC. Biscayne Bay: (Slosson), Grsb. 126. V. Everglades: April, AMNH. Chokoloskee: USNM. VI. Florida City: March, CPK.

CHILO Zincken**5976 C. PLEJADELLUS** Zincken

Rice stalk borer.

Germ. Mag. 4: 251. 1821.

I. Escambia Co.: May 24, 1962, SMH. II. Hastings: one, USNM.

5976, 1 C. SP.

VI. Paradise Key: det. Heinrich as not like anything in USNM, FMJ.

PLATYTES Guenée

Many of the determinations in this genus may be open to question because of the great similarity of the species.

5980 P. PUNCTILINEELLA Barnes &

McDunnough

Contrib. 2: 177. 1913.

IV. Bradenton: July, CPK. Vero Beach: April, DPI. Siesta Key: Jan., Feb., April, May, det. Capps, CPK. Fort Myers: USNM. V. Marco: USNM. Everglades: type, April, USNM. VI. Homestead: April, July, CPK. VIII. Tavernier: Sept., DPI. Dry Tortugas: June, DPI.

5981 P. MULTILINEATELLA (Hulst)

Ent. Amer. 3: 134. 1887.

II. Gainesville: July, CU. Hastings: USNM. III. Glenwood: USNM. Daytona: March, Haimbach (1930, p. 129). Cassadaga: March, April, June, Aug., SVF. Dade City: USNM. Orlando: Ainslie (1923, p. 53). Melbourne: March, Haimbach. IV. Bradenton: March, July, CPK. Oneco: May, June, Aug., det. Capps, CPK. Fellsmere: Ainslie. Archbold Biological Station: March, PSU; YU; June, AKW. Sarasota: Sept., CPK. Siesta Key: April, May, CPK. Punta Gorda: March, AKW; May, MOG. Palmdale: Aug., CU. Palm Beach: USNM. V. Chokoloskee: USNM. VI. Homestead: Feb., Aug., Nov., CPK. VIII. Key Largo: Sept., DPI.

5982 P. ACERATA Dyar

Ins. Insc. Mens. 5: 86. 1917.

III. Weekiwachee Springs: Aug., CPK. Dade City: type, Sept., USNM. Orlando: May, July, CU. IV. Oneco: April-June, Oct., det. Capps, CPK. Archbold Biological Station: March, YU. Siesta Key: Nov., CPK. VI. Homestead: March, April, CPK.

5983 P. PANALOPE Dyar

Ins. Insc. Mens. 5: 86. 1917.

II. Gainesville: July, CNC; Sept., DPI. III.

Marion Co.: July, UM. Weekiwachee Springs: Aug., CPK. Dunedin: March, April, Haimbach (1930, p. 129). IV. Oneco: June, CPK. Archbold Biological Station: Jan., YU. Siesta Key: May, CPK. Fort Lauderdale: April, Aug., UM. VI. Homestead: April, July-Sept., CPK.

5983, 1 P. SP.

This species has been determined by Klots as apparently new. I. Escambia Co.: July 1, Aug. 13, 1961, SMH. III. Winter Park: Sept., AMNH. IV. Bradenton: June, Aug., CPK. Oneco: June, Aug., CPK. Archbold Biological Station: July, AMNH; Jan., YU. Siesta Key: May, CPK. VI. Homestead: July, CPK. Paradise Key: March, CPK. VIII. Tavernier: Sept., Oct., CPK.

EOREUMA Ely**5987 E. DENSELLA** (Zeller)

Hor. Soc. Ent. Ross. 16: 5. 1881.

I. Quincy: Oct., CPK. II. Alachua Co.: March, UM. Hastings: USNM. III. Marion Co.: June, July, UM. Volusia Co.: Aug., UM. Cassadaga: April, SVF. Hernando Co.: Aug., UM. Weekiwachee Springs: Aug., CPK. Orlando: June, CU. Forbes notes: "very small and bright-race?" Rockledge: NYSM. Hillsborough Co.: Aug., UM. IV. Bradenton: Oct., CPK. Oneco: April-June, Aug., Oct., CPK. Sebring: June, UM. Indian River Co.: Oct., UM. Siesta Key: Nov.-June, CPK. Englewood: Nov., CPK. Palm Beach: not uncommon, Dyar (1901a, p. 464). Fort Lauderdale: May, UM. Coconut Grove: USNM. V. Everglades: USNM. Chokoloskee: USNM.

Subfamily **GALLERIIDAE****GALLERIA** Fabricius**5989 G. MELLONELLA** (Linnaeus)

Greater wax moth. Pl. XXVI, Fig. 11, ♂; Fig. 12, ♀.

Syst. Nat., p. 537. 1758.

Since the larva of this species feeds on beeswax in the hives, it will probably be found wherever bees are kept, but actual records are few. I. Myrtle Grove: May, WJW. II. Gainesville: Feb., March, UFA; June, CU. St. Augustine: (Johnson), Grsb. 127. III. Cassadaga: June, Oct., CPK. Eustis: Aug., DPI. Indian River: AMNH. IV. Bradenton: March, CPK. Oneco: Sept., CPK. Archbold Biological Station: March, April, Aug., YU. Sarasota: June, CPK. Siesta Key: Nov., CPK. Delray Beach: Aug., DPI. Miami: June, HEW. Biscayne Bay: (Slosson), Grsb. 127. V. Chokoloskee: USNM. VI. Homestead: May, June, Aug., CPK.

PARALISPA Butler

5993 P. DECORELLA Hulst

Can. Ent. 24: 63. 1892.

I. Escambia Co.: May 6, 1962, SMH.

599 P. SP.

The specimen is too rubbed to show any maculation that might give a hint of the species. It has been determined by Forbes to genus. VI. Homestead: May 1, 1959, (Wolfenbarger), CPK.

AGANACTESIS Dyar

5996, 1 A. INDECORA Dyar

Ins. Insc. Mens. 9: 65. 1921.

III. Cassadaga: Sept. 16, 1962, SVF. IV. Miami: June 1943, June 1945, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4. Coral Gables: reared from *Cassia fistula* pods, emerging Aug. 25-31, 1961, (Swanson), DPI, CPK. Coconut Grove: larva on *Cassia marginata*, April 18, 1944, det. Heinrich, DPI. There are two customs interception records, both at Miami, one from the Bahamas, the other from Jamaica.

Subfamily MACROTHERCINAE

MACROTHERCA Ragonot

6000 M. UNICOLORALIS Barnes & McDunnough

Contrib. 2: 176. 1913.

I. Myrtle Grove: April 16, 1963, WJW. II. Gainesville: sixteen June, July, 1927, (Rogers), CU. IV. Archbold Biological Station: five March 3, 1945, (Needham), CU; March, CNC, PSU.

6001 M. UNIPUNCTA Dyar

Ins. Insc. Mens. 1: 23. 1913.

I. Escambia Co.: four March 26-April 6, 1962, Aug. 4, 1961, SMH. Myrtle Grove: Sept. 12, 1962, WJW. IV. Siesta Key: three April 2-5, 1953, det. Munroe, May 15, 1960, CPK. Punta Gorda: April, det. Capps, MOG.

Subfamily EPIPASCHINAE

MACALLA Walker

6013 M. THRYSSALIS Walker

Pl. XXVI, Fig. 20, ♀.

List Lep. Ins. Br. Mus. 16: 156. 1858.

IV. Miami: March, CNC. South Miami: April, CNC. Coral Gables: May, June, Nov., HFS. Matheson Hammock: March, CNC. VI. Prince-

ton: April, CNC. Homestead: April, CNC; May, WMD; April, May, July, Sept., CPK. Florida City: March, CNC. Paradise Key: April, CNC. VIII. Key Largo: March, SVF; May, DPI, CPK. Key West: May, DPI. Food: mahogany, DPI.

6013, 1 M. PHAEOBASALIS Hampson

Ann. Mag. Nat. Hist. Ser. 8, 18: 144. 1916.

IV. Miami: April, det. Munroe, CPK. Coral Gables: April, CPK. VI. Homestead: May, CPK. Florida City: June, CNC. Paradise Key: Aug., (Bates), det. Stinson, UM. VIII. Tavernier: Sept., Oct., CPK.

EPIPASCHIA Clemens

6014 E. SUPERATALIS Clemens

Pl. XXVI, Fig. 14, ♂; Fig. 15, ♀.

Proc. Acad. Nat. Sci. Phila. 12: 14. 1860.

I. Escambia Co.: May, SMH. Torreya State Park: April, CNC. III. Cassadaga: Sept., SVF. Indian River: AMNH. IV. Archbold Biological Station: Sept., ABS. Siesta Key: May, CPK. Punta Gorda: May, MOG. VI. Florida City: June, CNC.

6016 E. ZELLERI (Grote)

Pl. XXVI, Fig. 16, ♂.

Can. Ent. 8: 157. 1876.

I. Escambia Co.: July, SMH. IV. Archbold Biological Station: Nov., Dec., PSU. Vero Beach: April, DPI. Siesta Key: April, May, CPK. Fort Myers: USNM. Fort Lauderdale: April, UM. Miami: May, June, CNC. Biscayne Bay: (Slosson), Grsb. 127. VI. Homestead: DPI. Florida City: April, CNC.

JOCARA Walker

6019 J. INCRUSTALIS (Hulst)

Ent. Amer. 3: 130. 1887.

III. Weekiwachee Springs: Aug., CPK. Stemp-er: CM. IV. Archbold Biological Station: Jan., Dec., PSU; Feb., May, Aug., YU; Dec., CPK. Siesta Key: March, Nov., CPK. Palm Beach: Dyar (1901a, p. 464). VI. Modello: Dec., CNC. Homestead: April, CPK. Florida City: Jan., June, Aug., CNC. Paradise Key: Jan., April, FMJ. Food: *Nectandra coriacea* [willdenowiana] Dyar (1901b, p. 283).

6020 J. PERSEELLA Barnes &

McDunnough

Contrib. 2: 180. 1913.

Florida: Dyar (1913f, p. 105). III. Weekiwachee Springs: Aug. 1954, CPK. V. Everglades: type, larva on *Persea americana*, April 16-23, (McDun-

nough), USNM. VI. Homestead: June, Aug.-Oct., (Wolfenbarger), CPK. VIII. Tavernier: Sept. 20, 1955, (Todd), CPK.

6021 J. BREVIORNATALIS Grote
Proc. Boston Soc. Nat. Hist. 19: 265. 1877.

I. Escambia Co.: July 5, 1961, det. Munroe, SMH. Myrtle Grove: Sept. 16, 1962, WJW. Ocean City: Aug. 16, 1963, HOH. III. Weekiwachee Springs: May 1955, (May), CPK.

6023 J. INTERRUPTELLA (Ragonot)
Ann. Soc. Ent. France, Séances Oct. 10, p. cl. 1888.

IV. Fort Myers: March 31, AMNH.

ONEIDA Hulst

6025 O. LUNULALIS (Hulst)
Ent. Amer. 3: 130. 1887.

III. Central Florida: two May 1957, WMD. IV. Fort Lauderdale: April 19, 1928, (Bates), UM.

TALLULA Hulst

There are two species which are very close and are best separated by referring to Barnes & McDunnough (1917a, p. 220).

6027 T. ATRIFASCIALIS (Hulst)
Trans. Amer. Ent. Soc. 13: 160. 1886.

It is my impression that *atrifascialis* is found only in the northern and western parts of the state, *watsoni*, below, in the southern two-thirds, with some overlapping of the zones. However, a recent capture of *atrifascialis* by Munroe in the Everglades National Park may cause a revision of this impression. *Atrifascialis* varies widely in size, but apparently is always larger than *watsoni*, although the latter varies as well. The older records are quite probably mixed. I. West Pensacola: May, VFG. Warrington: June, VFG. Myrtle Grove: Oct., WJW. Avalon: larva on citrus, Feb., det. Heinrich & Capps, DPI; larva on huckleberry, March, det. Capps as "near," DPI. Quincy: Oct., CPK. II. Gainesville: April, CNC. III. Cassadaga: Sept. 24, 1961, SVF. Winter Park (not "West Park"): (Slosson), Grsb. 128; June, det. Munroe, DPI. Doctor Phillips: larva on lemon, June, det. Dekle, DPI. Groveland: larva on orange, Dec., det. Dekle, DPI. Silver Glen Springs: larva on grapefruit, May, det. Dekle, DPI. Indian River: AMNH. IV. Charlotte Harbor: (Slosson), Grsb. 128. VII. Mahogany Hammock: Dec. 3, 1961, (Munroe), CNC.

6028 T. WATSONI Barnes & McDunnough

Contrib. 3: 220. 1917.

II. Gainesville: July, CNC, CU. III. Cassadaga: May, Oct., SVF. Weekiwachee Springs: April, CPK. Fruitland Park: Sept., DPI. Winter Park: May, DPI. Orlando: July, CU. Stemper: types, July, USNM; July, CU. Lake Alfred: larva on oranges, Oct., det. Heinrich, DPI. IV. Bradenton: Aug., CPK. Sarasota Co.: May, CNC. Siesta Key: April, May, Nov., CPK. Fort Lauderdale: April, UM. VI. Everglades National Park: Dec., CNC. Paradise Key: Dec., CNC. VII. Coot Bay: Dec., CNC. VIII. Key Largo: Dec., CNC. Tavernier: Sept., DPI.

TETRALOPHA Zeller

The determinations in this genus are very difficult and many of them unreliable. There is great need for a thorough revision.

6031 T. ROBUSTELLA Zeller
Pine webworm. Pl. XXVI, Fig. 19, ♀.
Isis 11: 881. 1848.

I. Escambia Co.: July, SMH. West Pensacola: May, VFG. II. Gainesville: larva on pine, adults emerged Feb., June, UFA; March, April, UM; May, DPI; Oct., UFES. Jacksonville: Packard (1890a, p. 787). III. McIntosh: June, DPI. Fellowship: Nov., DPI. Cassadaga: Oct., SVF. Christmas: larva on pine, Jan., DPI. Weekiwachee Springs: Aug., CPK. Lake Pickett: Jan., DPI. Tampa: larva on young pine, CU. Lakeland: Grsb. 128 in error; it belongs under *slossoni* below. IV. Archbold Biological Station: March, Nov., Dec., PSU; April, May, Dec., YU. Siesta Key: March, CPK. Fort Myers: as *dilucella* Grote, March, AMNH; April, USNM. South Miami: Oct., CNC, MOG. Coral Gables: March, CNC. VI. Homestead: May, Oct., CPK. Florida City: April, HEW; July, CNC. Food: slash pine, Coop. Econ. Ins. Rept. 4: 670. Observations in the field by Hetrick lead him to believe that at least some Florida specimens may be of another closely related species, because they pupate within webs on the pine foliage instead of in the litter or soil as is customary.

6032 T. SCORTEALIS (Lederer);

6033 T. SLOSSONI (Hulst)

Lespedeza webworm. Pl. XXVI, Fig. 18, ♀.
Wien. ent. Monat. 7: 347. 1863; Can. Ent. 27: 53. 1895.

Poos & Hetrick (1945, p. 312) on the authority of Heinrich, made *slossonii* (Hulst) a synonym of *scorteaalis*. It should be added that there is an error in the original description of the for-

mer. Hulst (1895), said that the type expands 25 mm. Rindge kindly measured the type in the American Museum of Natural History collection and reported that the length of the right primary is 8 mm. I. Escambia Co.: April, July, SMH. West Pensacola: June, VFG. Crestview: larva on *Lespedeza cuneata* [sericea], July, det. Heinrich, UFES. Monticello: April, CPK. II. Lake Geneva: March, HEW. III. Weekiwachee Springs: Aug., CPK. Orange Co.: Sept., (Fernald), det. Heinrich, DPI. Winter Park: May, DPI. Lakeland: reared from larva on trailing leguminous plant, (McDunnough), Grsb. 128; under *T. robustella*, Holland & Schaus (1925, p. 66). IV. Archbold Biological Station: March, Dec., YU. Siesta Key: March, May, CPK. Charlotte Harbor: type of *slossonii*, March, AMNH. Punta Gorda: March, det. Capps, MOG. Miami: types of *slossonii*, Feb., March, AMNH. South Miami: May, CNC. VI. Homestead: May, CPK. VIII. Tavernier: March, CPK.

6034 T. MELANOGRAMMOS Zeller

Verh. zool.-botan. Ges. Wien 22: 546. 1872.

Florida: (Slosson), Grsb. 128. I. Escambia Co.: May, SMH. II. Raiford: larva on slash pine, Sept., det. Merrill, DPI. Jacksonville: Jan., Hulst (1889, p. 67). III. Marion Co.: July, UM. Cassadaga: April, SVF. Weekiwachee Springs: March, April, CNC, CPK. IV. Archbold Biological Station: March, Aug., YU. Sarasota: May, CNC.

6037 T. SPECIOSELLA (Hulst)

J. N. Y. Ent. Soc. 8: 222. 1901.

Florida: (Dyar), Grsb. 128. II. Gainesville: March 21, 1925, det. Moore, UM.

6038 T. FLORIDELLA (Hulst)

J. N. Y. Ent. Soc. 8: 221. 1901.

IV. Archbold Biological Station: March, PSU. Siesta Key: May 25, 1946, det. Forbes, CPK. Lake Worth: type, AMNH. V. Marco: (McDunnough), USNM. Food: *Caesalpinia crista* [*Guilandina bonducella*], Dyar (1901a, p. 464); "nickerbean," Grsb. 128. VIII. Loggerhead Key, Dry Tortugas: June, DPI.

6039 T. SUBCANALIS (Walker)

Pl. XXVI, Fig. 17, ♀.

List Lep. Ins. Br. Mus. 27: 56. 1863.

I. Myrtle Grove: April, WJW. Quincy: Aug., CPK. Monticello: larva on pecan, April, Pecan Investigations Laboratory. II. Gainesville: March, UM; April, UFA; May, DPI. III. Cassadaga: March, April, SVF. Weekiwachee Springs: March, April, Aug., CPK. Orlando: April, CNC. Winter Park: March, DPI. IV.

Bradenton: March, CPK. Highlands Co.: Aug., UM. Archbold Biological Station: Feb., March, PSU; March, April, YU. Sarasota: May, July, CPK. Siesta Key: April, May, CPK. V. Marco: May 15-31, type of *querciella* Barnes & McDunnough (1913d, p. 180), the larvae webbing the terminal twigs of scrub oak. VI. Homestead: July, CPK.

6040 T. MILITELLA Zeller

Isis 11: 880. 1848.

I. Warrington: May 9, 1962, det. Munroe, VFG. II. Alachua Co.: a series reared from *Platanus occidentalis*, emerging May 1959, (Denmark), DPI, CPK. Gainesville: May, DPI.

6041 T. ASPERATELLA (Clemens)

Proc. Acad. Nat. Sci. Phila. 12: 207. 1860.

I. Escambia Co.: April, May, SMH. Pensacola: Aug., WJW. III. Marion Co.: June, UM. Volusia Co.: July, Oct., det. Munroe, UM. Windermere: larva on wild myrtle, June, det. Dekle, DPI. IV. Punta Gorda: May, MOG. Miami: larva on live oak, April, det. Dekle, DPI.

6042 T. APLASTELLA (Hulst)

Ent. Amer. 4: 113. 1888.

Florida: (Dyar), Grsb. 128.

6053 T. BAPTISIELLA Fernald

Ent. Amer. 3: 128. 1887.

I. Escambia Co.: July 29, 1962, det. Capps, SMH. Myrtle Grove: May 26, 1963, det. Munroe, WJW. VI. Florida City: March, April, (Forsyth), HEW.

6053, 1 T. SP.

This is an unplaced species. I. Torreya State Park: April, CNC. II. Gainesville: April, CNC. III. Elfers: April, CNC.

6053, 2 T. SP.

A second unplaced species. II. Gainesville: April, CNC. III. Elfers: April, CNC.

6053, 3 T. [JOVITA Schaus]

Proc. Ent. Soc. Wash. 24: 214. 1922.

VI. Cutler: reared from webbed leaves of nicker nut, April 30, 1961, (Nakahara), det. as near or *joventa*, USNM.

POCOCERA Zeller

6054, 1 P. ATRAMENTALIS Lederer

Pl. XXVI, Fig. 13, ♀.

Wien. ent. Monat. 7: 347; Pl. 7, Fig. 14. 1863.

III. Central Florida: April 1956, WMD; Nov. 1957, CPK. Mount Dora: larva on loquat, Dec.

3, 1949, det. Dekle, DPI. VI. Homestead: April, Nov., CPK; larva on loquat, Oct. 14, 1948, det. Capps, DPI.

Subfamily ENDOTRICHIIINAE

NEODAVISIA Barnes & McDunnough

6056 N. SINGULARIS Barnes & McDunnough

Contrib. 2: 179. 1913.

V. Marco: April 17, AMNH. Everglades: type, April 6, AMNH; April 8-15, (McDunnough), USNM. VIII. Tavernier: two Aug. 16-Sept. 18, 1955, (J. N. Todd), CPK. Pine Key: July 1-7, CNC.

Family PHYCITIDAE

Subfamily PHYCITINAE

A very difficult subfamily, which even with Heinrich's recent revision will still require genitalic dissection for many of the determinations. However, on the basis of his monumental work, order has been established out of the chaos in which the phycitids have wallowed. Needless to say, I have followed his arrangement and synonymy, and included all his Florida records. On the other hand the older records become quite a problem. In the case of those which are paralleled by specimens seen by Heinrich, it is not unreasonable to assume that they are generally correct. However, certain species are not credited by Heinrich to Florida, some of which may be perfectly valid, some may not be. Heinrich points out that in view of the difficulties of the determinations, he has limited the range of distribution to those localities from which he has examined specimens. Therefore, when Heinrich does not give a Florida locality, it has been necessary to study carefully the localities he does list, together with his comment, if any, as regards similar species. When such study suggests doubt, the old record is included on a tentative basis. Of course, if the determination has been made by Forbes, or Munroe, or by one of the staff at the U. S. National Museum within the past few years, there is no question about accepting it.

The general food plant records, as well as some specific Florida ones, are taken almost verbatim from Heinrich, the latter, as usual, being documented.

Any attempt to interpolate numbers based on the McDunnough list in the Phycitinae is meaningless because of the many shifts in arrangement. Where applicable, the McDunnough numbers are used, but for all additions

to his list, Heinrich's numbers are used with the prefix "H."

ACROBASIS Zeller

[6115 *A. indigenella* (Zeller)]

Leaf crumpler.

Isis, p. 867. 1848.

It is probable that the two records belong under *grossbecki* (Barnes & McDunnough) below. Certainly that is where Heinrich (1956, p. 13) placed the record given by Grossbeck (1917, p. 129) and he commented that *grossbecki* may be nothing more than a Florida race of *indigenella*. III. Plymouth: Dec. 16, 1946, DPI. Winter Garden: March 29, 1948, DPI. Food: apple, crabapple, plum, prune, cherry, quince, *Crataegus*, *Coton-easter*, and *Pyracantha coccinea*. Larvae have been found feeding on leaves and forming a serpentine resting and hibernating case of silk and frass. There are many records for *nebulella* Riley from Bonifay to Homestead, which Gill (U. S. Dept. Agr. Farmers Bull. 843: 16) calls one of the worst pests affecting the culture of pecans. According to Heinrich (1956, pp. 12, 13, 16, and 112) the name *nebulella* has been used for at least four different species, including *indigenella*. However, in this instance I suspect the reports refer to *juglandis* below, though there is no way of proving it.

6116 A. GROSSBECKI (Barnes & McDunnough)

Contrib. 3: 221. 1917.

I. Escambia Co.: May, SMH. II. Alachua Co.: reared from *Pyracantha*, Sept., DPI, CPK. III. Cassadaga: April, SVF. Lakeland: type, reared from larva feeding on the leaves of *Crataegus*, May, USNM. IV. Oneco: April, May, CPK. Siesta Key: Feb., CPK.

6114 A. VACCINII Riley

Cranberry fruitworm.

Can. Ent. 16: 237. 1884.

As Heinrich (1956, p. 13) listed this from Georgia, the records appear to be reasonable. I. Escambia Co.: April 26, 1962, SMH. Milton: larvae on blueberry, May 31, Ins. Pest Surv. Bull. 11: 280. IV. Archbold Biological Station: one Feb. 24-28, 1958, (Pease), YU. Food: cranberry and blueberry.

[6112 *A. amplexella* Ragonot]

N. Amer. Phycitidae, p. 3. 1887.

Except for the type locality, North Carolina, all Heinrich's records (1956, p. 14) are from Pennsylvania northward. I. Escambia Co.: May 14, 1961, SMH; apparently this species. Jefferson

Co.: May 2, 1927, (Walker), det. Beebe, UM.
IV. Fort Lauderdale: March 26, 1928, (Bates),
det. Beebe, UM.

6088 A. MINIMELLA Ragonot
Ent. Amer. 5: 113. 1889.

II. Alachua Co.: Sept., DPI. III. Cassadaga:
May, SVF. IV. Bradenton: May, CPK. Siesta
Key: April, CPK. Punta Gorda: April, det.
Capps, MOG. Food: oak.

[6082, I A. *palliolella* Ragonot]
N. Amer. Phycitidae, p. 4. 1887.

Heinrich (1956, p. 16) said, "The name *palliolella*
has been variously misapplied and has appeared
frequently in economic literature for the pecan
leaf casebearer' (*juglandis* LeBaron)." Since all
Heinrich's records run from Pennsylvania north-
ward, the larval records on pecan in the Divi-
sion of Plant Industry files probably belong un-
der the latter name. Food: presumably hickory.

6082 A. JUGLANDIS (LeBaron)
Pecan leaf casebearer.

Second annual report on the noxious insects of
the State of Illinois, p. 23. 1872.

I. Tallahassee: May, Heinrich (1956, p. 16).
Monticello: larva, March, Coop. Ins. Pest Surv.
7: 33; May, June, Heinrich. II. Palatka: May,
Heinrich. III. Orlando: May, Heinrich. The
Division of Plant Industry has a number of
records for larvae on pecan from Santa Rosa to
Zephyrhills, sometimes under this name, some-
times under *palliolella*. Food: hickory, pecan,
walnut, and butternut, (larvae feeding on leaves,
buds, and flowers).

6079 A. KEARFOTTELLA Dyar
Proc. Ent. Soc. Wash. 7: 34. 1905.

I. Escambia Co.: June 25, 1962, det. Munroe,
SMH. III. Cassadaga: May 10, 1953, det. Mun-
roe, SVF. Food: hickory.

6100 A. CARYAE Grote
Pecan nut casebearer.
Papilio 1: 13. 1881.

Florida: all as *hebescella* Hulst, larva on pecan,
May, U. S. Dept. Agr. Farmer Bull. 843: 3; Ins.
Pest Surv. Bull. 3: 76; "locally common," May
1918, Fla. Agr. Exp. Sta. Bull. 147: 152. I. Es-
cambia Co.: Sept. 27, 1961, SMH. Tallahassee:
May, Heinrich (1956, p. 17). Monticello: larvae,
March, Coop. Ins. Pest Surv. 7: 33; June, July,
Aug., Heinrich; as *hebescella*, Ins. Pest Surv.
Bull. 6: 204. The Division of Plant Industry has
a number of records for the larva on pecan from
Monticello to Leesburg. Food: hickory and pe-

can (overwintering larvae feed in early spring
upon opening leaves and in the stems of new
growth, later generations in the nuts. Larva
does not make a case during feeding period).

6089 A. STIGMELLA Dyar
Proc. Ent. Soc. Wash. 10: 43. 1908.

I. Escambia Co.: July 26, 1961, det. Munroe,
SMH.

6086 A. EVANESCENTELLA Dyar
Proc. Ent. Soc. Wash. 10: 44. 1908.

Florida: larva on pecan, 1917, Pecan Investiga-
tions Laboratory file. III. Orlando: type, April
28, 1908, USNM.

6106 A. PEPLIFERA Dyar
Ins. Insc. Mens. 13: 13. 1925.

I. Monticello: Heinrich (1956, p. 19). IV. Arch-
bold Biological Station: four March 23, April 6,
1958, (Pease), CPK, YU. Punta Gorda: March
25, 1951, (Ramstedt), AKW; April, det. Capps,
MOG.

6076 A. EXSULELLA (Zeller)
Isis, p. 868. 1848.

Florida: type of *septentrionella* Dyar, April 8,
USNM. I. Escambia Co.: May 21, 1962, SMH.
Warrington: May 9, 1961, VFG. Food: hickory
and pecan.

[6097 A. *normella* Dyar]
Proc. Ent. Soc. Wash. 10: 46. 1908.

As Heinrich (1956, p. 20) knew only the type
series, from Connecticut, the following record
would appear to be in error. I. Jefferson Co.:
May 28, 1927, (Walker), UM. Food: presuma-
bly hickory.

[6085 A. *hebescella* Hulst]
Trans. Amer. Ent. Soc. 17: 126. 1890.

The few "records" for this have been transferred
to *caryae*, that being the most likely species for
the misdeterminations. Food: oak.

6102 A. CUNULAE Dyar & Heinrich
Proc. Ent. Soc. Wash. 31: 37. 1929.

Heinrich (1956, p. 22) stated that this "is close to
but apparently distinct from *caryvorella*." I.
Monticello: May, Heinrich. Food: pecan.

6087 A. CARYIVORELLA Ragonot
N. Amer. Phycitidae, p. 4. 1887.

Florida: Hill (1938, p. 12). I. Monticello: May
1943 (U. S. Dept. Agr. "The more important
insect records for May 1943," p. 2); July, Hein-

rich (1956, p. 22); moderate infestation, 1954 (Coop. Econ. Ins. Rept. 4: 293). III. Orlando: April, Heinrich. Food: hickory, walnut, and pecan; larvae bore in buds and new growth of the stems.

[6104 *A. comptoniella* Hulst]

Trans. Amer. Ent. Soc. 17: 125. 1890.

The record for this given by Grossbeck (1917, p. 129) was found to be in error for the next species by Barnes & McDunnough, who made the specimens listed by Grossbeck as types thereof. Food: *Comptonia* and *Myrica*.

6105 *A. MYRICELLA* Barnes & McDunnough

Contrib. 3: 221. 1917.

IV. Bradenton: May, CPK. Oneco: May, CPK. Archbold Biological Station: April, YU. Fort Myers: types, April, May, USNM. VI. Paradise Key: April 5, 1929, (Jones), Heinrich (1956, p. 23). VIII. Tavernier: Oct., CPK. Food: *Myrica*.

6321 *A. TUMIDULELLA* (Ragonot)

N. Amer. Phycitidae, p. 13. 1887.

Heinrich (1956, p. 24) believed this might be no more than an abnormal specimen of *caryivorella*. Florida: type, Paris Museum.

6109, 1 *A. SP.*

This was determined by Heinrich as a new species, but as there were only females on hand at the time, he did not wish to describe it. II. Gainesville: one April 27, 1925, (Bates), UM. IV. Bradenton: May 2, 1955, CPK. Siesta Key: five May 1946, CPK, USNM; six April-June 1957, two May 14, 15, 1956, CPK.

ANABASIS Heinrich

H44 *A. OCHRODESMA* (Zeller)

Hor. Soc. Ent. Ross. 16: 209. 1881.

III. Crystal River: Nov., CPK. St. Petersburg: Heinrich (1956, p. 26). IV. Bradenton: Aug-Jan., CPK. Archbold Biological Station: Dec., CPK. Siesta Key: Nov.-March, CPK. Lake Worth: as *crassisquamella* Hampson, larva on *Cassia bahamensis*, May, DPI. West Palm Beach: larva, det. with "?," on *C. fistula* Nov., DPI. Miami: larva on *C. fistula*, Feb., DPI; on *C. sp.*, April, DPI; May, Heinrich. Coconut Grove: May, Heinrich. VI. Homestead: larva on *C. fistula* and *Lysiloma*, Dec., det. Capps, DPI; Sept., CPK. VIII. Tavernier: Sept., Oct., CPK. Key West: larva on *Cassia alata*, May, DPI. Other food plants: *Cassia siamea* [*Sciacas-*

siamea]; *C. nodosa*, *C. tora* (U. S. Dept. Agr. Florida rearings; larva a leaf folder).

HYPSIPYLA Ragonot

H48 *H. GRANDELLA* (Zeller)

Isis, p. 881. 1848.

IV. Miami: Nov. 19, 1943, det. Heinrich, (DPI?). The species has been intercepted frequently at quarantine. Food: *Cedrela* and *Swietenia* (larva bores in fruit and branches).

HYPARGYRIA Ragonot

6108 *H. SLOSSONELLA* (Hulst)

Can. Ent. 32: 170. 1900.

IV. Fort Myers: April 16-23, Barnes & McDunnough (1913d, p. 181). Miami: type, Feb., March, (Slosson), AMNH. V. Everglades: type of *tenuella*, April 8-15, Barnes & McDunnough. Reference is also made to *tenuella* by Barnes & McDunnough (1916c, p. 195) where it is sunk as a synonym of *slossonella*.

CHARARICA Heinrich

6073 *C. HYSTRICULELLA* (Hulst)

Ent. Amer. 3: 135. 1887.

III. Cassadaga: May 18, 1962, SVF. IV. Miami: Heinrich (1956, p. 39). Coconut Grove: Heinrich.

MYELOPSIS Heinrich

[6062 *M. SUBTETRICELLA* (Ragonot)]

Ent. Amer. 5: 113. 1889.

Florida: Hulst (1890, p. 118). Barnes & McDunnough (1916c, p. 193) writing of the synonymous *obnupsella* Hulst said, "Fla. specimen is not to be found and in any case it is doubtful if it would be conspecific." It was also reported as *obnupsella*, Forbes (1923, p. 613) and Ragonot (1893, p. 43) who listed the species for Florida, but presumably on the basis of the original Hulst record. Heinrich (1956, p. 41) said, "The Florida record cited above is from a spurious 'type (male)' of *Myelois immundella* Hulst, originally in the Fernald collection and now in the U. S. National Museum. It is not *immundella*, and in genitalia, color and markings agrees perfectly with other males of *subtetricella*." Heinrich gave the date as March.

APOMYELOIS Heinrich

6067 *A. BISTRATELLA* (Hulst)

Ent. Amer. 3: 136. 1887.

Florida: Hulst (1890, p. 117); March, Heinrich

(1956, p. 43). IV. Fort Lauderdale: May 17, 1928, (Bates), UM.

ECTOMYELOIS Heinrich

[*E. decolor* (Zeller)]

Hor. Soc. Ent. Ross. 16: 222. 1881.

Heinrich (1956, p. 44) pointed out that "presumably the species has much the same hosts and habits as the closely related *Ectomyelois ceratoniae*," and that the larvae are very difficult to separate from those of *ceratoniae*. Inasmuch as he quoted no Florida, nor North American distribution, it would seem well to await further, critical determinations before definitely placing the species on our list. III. Mount Dora: larva on loquat, Dec., DPI. IV. Miami: larva on tamarind, Sept., DPI. VIII. Key West: larva on pomegranate, May, DPI. Heinrich listed the following food plants: *Annona muricata* [squamosa], *Ceratonia siliqua*, and *Hymenaea courbaril*.

6065 E. CERATONIAE (Zeller)

Isis, p. 176. 1839.

IV. Siesta Key: Jan.-April, det. Munroe, CPK. Hallandale: larva on tamarind, June, DPI. Miami: May, July, Aug., Nov., Heinrich (1956, p. 45); larva on tamarind, March, det. Capps, DPI; intercepted at customs, July 1946, from Nassau; May 1948, on dates from Iraq; type of *Myelois oporedestella* Dyar, larva bred from dried loquat fruits, (Busck), USNM. VI. Homestead: May, Heinrich; larva on tamarind, June, DPI. VIII. Summerland Key: larva on tamarind, June, DPI. Key West: April, Heinrich. Food: *Carissa grandiflora*, *Cassia bicapsularis*, *Ceratonia siliqua*, *Eriobotrya japonica*, (chiefly in mummified fruits), *Livistona chinensis*, *Robinia*, *Tamarindus indica*, and *Vachellia insularis*. It has also been found on dried figs, dates, raisins, and nuts in storage and is primarily a leguminous feeder. The favored host seems to be the pods and seeds of carob, *Ceratonia siliqua*.

PARAMYELOIS Heinrich

6058 P. TRANSITELLA (Walker)

List Lep. Ins. Br. Mus. 27: 54. 1863.

Florida: type, "United States," probably Florida, BM. Dyar (1902, p. 417) gave two other references, but they presumably refer to the type. Ragonot's type of *Myelois duplipunctella*, in the Paris Museum, is also from Florida. III. Orlando: Oct., Nov., Heinrich (1956, p. 47). Tampa: custom's interception, May 24, 1948, ex British Honduras, under the synonym *notatalis*

(Walker). IV. Vero Beach: April, May, Heinrich. Siesta Key: Nov.-March, May, CPK. Food: orange, grapefruit, peach, apple, dates, figs, *Acacia farnestana*, *Aesculus glabra*, *Cassia grandis*, *Genipa clusiaefolia*, *Gleditsia triacanthos*, *Pithecellobium flexicaule*, *Robinia*, *Sapindus drummondii*, *Yucca*, and English walnut.

FUNDELLA Zeller

H119 F. PELLUCENS Zeller

Caribbean pod borer.

Isis 41: 866. 1848.

There are a number of records, all larval, from Orange and Manatee Counties south to Coconut Grove. IV. Siesta Key: adults, Dec.-March, May, CPK. Food: lima beans, cowpeas, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 5; *Bauhinia variegata*, *B. alba*, *B. purpurea*, black-eyed peas, *Vigna* sp., *V. repens*, *Canavalia gladiata*, *C. lineata*, *Cassia fasciculata*, mistletoe, dwarf poinciana, and *Acacia*, all DPI. Other food plants: *Canavalia ensiformis*, *C. maritima*, *Cajanus indicus* [cajan], and *Cassia occidentalis*.

H120 F. ARGENTINA Dyar

Ins. Insc. Mens. 7: 40. 1919.

Florida: Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4. III. Jumeau: larva on *Cassia corymbosa*, Feb., DPI. IV. Siesta Key: Dec.-May, Oct., CPK. Miami: larva on *C. corymbosa*, Jan., May, DPI; on *C. bicapsularis*, Jan., Feb., DPI; on *C. alata*, Feb., DPI; on *Canavalia gladiata*, Jan., March, DPI. Biscayne Bay: May, Heinrich (1956, p. 61). Coconut Grove: April, Heinrich. VI. Homestead: April, CPK. VIII. Stock Island: April, Heinrich.

ANADELOSEMIA Dyar

6143 A. TEXANELLA (Hulst)

Can. Ent. 24: 60. 1892.

II. Hastings: type of *dulciella* Hulst, Oct. 26, (Kearfott), AMNH. III. DeLand: two March 27, 1954, (Wyatt), det. Clarke, MOG, USNM.

DAVARA Walker

6119 D. CARICAE (Dyar)

Proc. Ent. Soc. Wash. 14: 218. 1913.

III. Largo: as *dalera* Dyar, DPI. Osceola Co.: larva on papaya, July, Ins. Pest Surv. Bull. 19: 377. IV. Rubonia: DPI. Oneco: May, June, CPK. Fort Pierce: May, Heinrich (1956, p. 74). Sarasota: DPI. Siesta Key: Oct.-June, CPK. Miami: type, reared from larva on wild papaya, Nov. 2, 1912, (Yothers), USNM; larva on papaya

and *Lotus*, DPI; April, Dec., Heinrich. Coral Gables: larva on papaya, det. with "?," DPI. VI. Homestead: April, May, July, Sept., CPK. Florida City: DPI; April, May, Heinrich. Paradise Key: Heinrich.

[*D. columnella* (Zeller)]

Hor. Soc. Ent. Ross. 16: 209. 1881.

In the Jones material taken at Paradise Key was a specimen reared from papaya determined some years ago by Heinrich as *columnella*. However, in this revision (1956, p. 74), Heinrich apparently placed the specimen as *caricae* above. Furthermore he cast doubt as to the distinctness of the two species. In the event they are the same, *columnella* would, of course, take precedence.

SARASOTA Hulst

6120 S. PLUMIGERELLA Hulst

J. N. Y. Ent. Soc. 8: 222. 1900.

IV. Lake Placid: abundant, March 31-April 2, 1945, (Needham), CU. Englewood: abundant, March 26-April 10, 1944, (Needham), CU. Palm Beach: type, larva on *Laguncularia racemosa*, USNM. VIII. Ramrod Key: April, Heinrich (1956, p. 77). Sugarloaf Key: April, Heinrich. Stock Island: April, Heinrich. Food: *Cocoloba uvifera* (larvae feeding under a light silk webbing on the leaves and flower buds).

ATHELOCA Heinrich

6121 A. SUBRUFELLA (Hulst)

Ent. Amer. 3: 132. 1887.

Reported both as *subrufella* and *filiolella* (Hulst). I. Escambia Co., and from II. Hastings, relatively common to VIII. Craig, Jan.-Sept. Larva on cabbage palm, Feb., and saw palmetto, March, DPI.

MONOPTILOTA Hulst

6141 M. PERGRATIALIS (Hulst)

Lima-bean vine borer.

Trans. Amer. Ent. Soc. 13: 162. 1886.

Florida: type, July 6, AMNH; Barnes & McDunnough (1916c, p. 195); type of *nubilella* Hulst, AMNH (USNM?); larva on lima beans, Chittenden (1900, p. 9). IV. Miami: April, Heinrich (1956, p. 90). Coconut Grove: April, May, Heinrich. Food: lima bean (larva a borer in the stems).

ZAMAGIRIA Dyar

6232 Z. AUSTRALLELLA (Hulst)

Can. Ent. 32: 174. 1900.

IV. Sarasota: June, CPK. Siesta Key: May, det. Brower as *bumeliella* Barnes & McDunnough, Jan., April, June, Sept., Dec., CPK. Fort Myers: type of *Immyrta bumeliella*, larva on *Bumelia microcarpa*, April 24-May 7, Barnes & McDunnough (1913d, p. 182). Miami: Heinrich (1956, p. 92). VI. Homestead: Aug., CPK.

H196 Z. LAIDION (Zeller)

Hor. Soc. Ent. Ross. 16: 211. 1881.

Florida: as *deia* Dyar, June 1943-June 1945, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4. IV. Miami: one male, (Schaus), det. Hampson, Dyar (1919, p. 46); Jan., Dec., Heinrich (1956, p. 93). VIII. Key West: April, May, Heinrich. Food: *Achras sapota*, *Mimusops emarginata*, and *Eriobotrya japonica* (larvae feeding on leaves and flowers). According to Heinrich, all of these hosts were recorded in Florida.

ANECCEPHALESIS Dyar

6176 A. ARCTELLA (Ragonot)

N. Amer. Phycitidae, p. 4. 1887.

IV. Miami: Heinrich (1956, p. 94). VI. Homestead: Aug., Sept., CPK. Paradise Key: Jan., March, det. Heinrich as *catheretes* Dyar, FMJ; Feb., Heinrich; March 3, 1919, (Schwarz & Barber), USNM. Food: *Dipholis salicifolia*.

ANCYLOSTOMIA Ragonot

H200 A. STERCOREA (Zeller)

Pl. XXVI, Fig. 26, ♀.

Isis, p. 873. 1848.

I. Escambia Co.: April 21, Aug. 1 and 23, 1961, SMH. Warrington: WP. Myrtle Grove: July 8, 1962, WJW. IV. Jupiter: April, Heinrich (1956, p. 96). Boynton Beach: March, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1):3. Miami: Feb., March, DPI; May, Heinrich; intercepted at customs April 1946, from Dominican Republic. Coconut Grove: April, May, Heinrich. VI. Goulds: May, Heinrich. Homestead: Feb., Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 3; April, DPI. VIII. Monroe Co.: April, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1):3. Food: chickpea; black-eyed peas, and cowpeas, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1):3; pigeonpea, larvae feeding in the pods, Heinrich.

CARISTANIUS Heinrich

6228 C. DECOLORALIS (Walker)

Pl. VI, Fig. 24, ♂.

List Lep. Ins. Br. Mus. 27: 42. 1863.

Florida: type of *furfurellus* Hulst, AMNH;

March, Heinrich (1956, p. 98). III. Volusia Co.: Aug., DPI. Cassadaga: April, SVF. Weekiwachee Springs: March, Aug., CPK. Orlando: Feb., Heinrich. St. Petersburg: June, Heinrich. Hillsborough Co.: Aug. 15, 1938, (Hubbell & Friauf), UM. Tampa: Heinrich. Egmont Key: April, UM. IV. Archbold Biological Station: Nov., PSU; Dec., YU. Stuart: May, Heinrich. Vero Beach: April-June, Oct., Dec., Heinrich. Siesta Key: Jan-May, Sept., CPK. Charlotte Harbor: type of *floridellus* Hulst, April, AMNH. Fort Myers: May, Heinrich. Cutler: reared from partridge pea(?) May, DPI. Food: *Cassia* [*Chamaecrista*] spp. (*brachiata*, *fasciculata*, *robusta*), larvae feeding on the leaves. These records are from Heinrich and are all presumably from Florida.

ETIELLA Zeller

6274 E. ZINCKENELLA (Treitschke)

Pl. VI, Fig. 26, ♀.

Schmett. Eur. 9, Pt. 1, p. 201. 1832.

Zinckenella is common throughout the state all year, in all its named forms. Food: pods and seeds of various Leguminosae (*Astragalus*, *Cajanus*, *Colutea*, *Dolichos*, *Glycine*, *Pisum*, *Vicia*, *Vigna*); lima beans, *Crotalaria*, DPI; beans, UFES.

GLYPTOCERA Ragonot

6148 G. CONSOBRINELLA (Zeller)

Verh. zool.-botan. Ges. Wien 22: 548. 1872.

Though not recorded from Florida by Heinrich (1956, p. 101), he presumed that the species was generally distributed over the eastern section of the country, therefore, the following records are probably valid. Florida: Hulst, (1890, p. 40). IV. Punta Gorda: April, MOG. Fort Lauderdale: May 24, 1928, (Bates), UM. Food: *Viburnum*, maple.

SALEBRIARIA Heinrich

6196 S. TURPIDELLA (Ragonot)

Nouv. Gen., p. 19. 1888.

I. Escambia Co.: Sept., det. Munroe, SMH. III. Cassadaga: July, Aug., SVF. Weekiwachee Springs: March, CPK. Gotha: one male, one female, (Rauterberg), Heinrich (1956, p. 116). IV. Oneco: June, July, CPK. Archbold Biological Station: March, PSU. Siesta Key: March, CPK.

6195 S. ENGELI (Dyar)

J. N. Y. Ent. Soc. 14: 107. 1906.

I. Escambia Co.: April 6, 1962, SMH.

6197 S. ANNULOSELLA (Ragonot)

N. Amer. Phycitidae, p. 7. 1887.

I. Myrtle Grove: April 21, 1963, WJW.

All others det. Munroe. II. Gainesville: April 27, 1947, (Weems), DPI. III. Weekiwachee Springs: six May 22-June 10, 1960, (Mrs. May), CPK. IV. Archbold Biological Station: March 10, 1960, (Frost), PSU; five March 25-April 1, 1958, (Pease), YU.

6190 S. PUMILIELLA (Ragonot)

N. Amer. Phycitidae, p. 8. 1887.

IV. Charlotte Harbor: type of *georgiella* Hulst, March, (Slosson), AMNH.

6203 S. FRUCTETELLA (Hulst)

Can. Ent. 24: 59. 1892.

I. Quincy: April 14, 1963, (Tappan), CPK. III. Orlando: March, Heinrich (1956, p. 118). IV. Fort Lauderdale: March 28, (Bates), UM. VIII. Key West: Heinrich. Food: larva a leaf feeder on oak.

NEPHOPTERYX Hübner

6213 N. SUBFUSCELLA (Ragonot)

N. Amer. Phycitidae, p. 8. 1887.

III. Cassadaga: May, SVF. Sanford: April, DPI. Lake Alfred: July, Heinrich (1956, p. 124). IV. Oneco: May, CPK. Archbold Biological Station: March, PSU. Siesta Key: March, CPK. Fort Myers: May, Heinrich. This is unquestionably the record given in Grossbeck (1917, p. 180) under the name *Meroptera pravella* Grote, and about which Barnes & McDunnough (1917a, p. 221) wrote: "This record was based on three females which further examination convinces us would be better referred to *Salebria subfuscella* Ragonot, or *S. semiobscurella* Hulst. . . . ; *pravella* scarcely occurs in Florida." VI. Homestead: Feb., May-Sept., CPK. Food: *Rhus*, locust (?). Larva a leaf folder.

H256 N. DAMMERSI FLORIDENSIS

Heinrich

U. S. Natl. Mus. Bull. 207: 126. 1956.

Williamsburg: male type, reared from *Amorpha herbacea*, June 25, 1944, USNM. III. Tampa: female paratype, reared June 29, 1944.

6224 N. VETUSTELLA (Dyar)

J. N. Y. Ent. Soc. 12: 106. 1904.

III. St. Petersburg: June, Heinrich (1956, p. 127). Food: *Amorpha* sp.?

6183 N. UVINELLA (Ragonot)

N. Amer. Phycitidae, p. 8. 1887.

I. Escambia Co.: April 23, 1961, SMH. Myrtle Grove: March 18, April 19, 1963, WJW. III. Weekiwachee Springs: Feb., Aug., CPK. Lakeland: as *afflictella* Hulst, AMNH; May, June, Heinrich (1956, p. 131). Food: *Liquidambar styraciflua* (larva a leaf tier).

6206 N. CELTIDELLA (Hulst)
Trans. Amer. Ent. Soc. 17: 155. 1890.

Florida: (Slosson), Grsb. 130. I. Torreya State Park: April 29-May 1, 1952, CNC. IV. Palm Beach: Feb., Dyar (1901a, p. 464). Food: *Celtis* (larva a leaf tier).

6170 N. CRASSIFASCIELLA Ragonot
N. Amer. Phycitidae, p. 8. 1887.

III. Lakeland: type of *crataegella* Barnes & McDunnough, May, USNM. Food: *Vaccinium*, *Crataegus*.

TULSA Heinrich

6177 T. FINITELLA (Walker)
List Lep. Ins. Br. Mus. 27: 53. 1863.

Florida: Hulst (1890, p. 147); type of *melanella* Hulst, April, AMNH; May, Ragonot (1893, p. 282). I. Myrtle Grove: March, WJW. Quincy: March, May, CPK. III. Cassadaga: Feb., April, SVF. Weekiwachee Springs: March, May, CPK. St. Petersburg: April, Heinrich (1956, p. 135). Tampa: Heinrich. IV. Bradenton: April, May, CPK. Archbold Biological Station: Jan., PSU. Siesta Key: Feb., April, June, Nov., CPK. Charlotte Harbor: March, Heinrich. Fort Myers: April, USNM. Miami: March, (Slosson), Barnes & McDunnough (1916c, p. 199). VI. Homestead: Feb., CPK. Food: blueberry.

DIORYCTRIA Zeller

6129 D. ABIETELLA (Denis & Schiffmueller)
Syst. Verz. Wien., p. 138. 1776.

Most of these records probably belong to *abietivorella* below. Alton: June, Heinrich (1956, p. 151). II. Live Oak: twenty-four June 6, 1950, det. Clarke, UFES. Alachua Co.: Dec., DPI. Gainesville: June, Heinrich. III. Cassadaga: April, SVF. Weekiwachee Springs: Aug., CPK. Brooksville: seven July 14, 1936, UFES. Eustis: June, July, Heinrich. Orlando: June, Heinrich. IV. South Florida: June, July, Aug., Heinrich. Fort Lauderdale: April, UM. Food: pine, spruce, and fir, chiefly in the cones, but Heinrich gives details of the varied habits, to which the interested reader should refer. A discussion of the larval instars is given by Merkel (1962).

6129, 1 D. ABIETIVORELLA (Grote)
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 701. 1878.

Munroe makes this a species distinct from *abietella*. It is more than probable that most of the records for *abietella* belong here. I. Escambia Co.: June 27, 1961, SMH. IV. Archbold Biological Station: Jan.-April, (Pease), det. Munroe, CPK, YU.

[6131 *D. reniculella* (Grote)]

Spruce coneworm.
N. Amer. Ent. 1: 67. 1880.

Forbes' distribution record including Florida (1923, p. 620) is unquestionably in error, as Heinrich (1956, p. 151) listed New York as the southernmost range, and noted that the species had been frequently confused with *abietella* which is essentially a pine feeder, whereas *reniculella* favors spruce.

[H312 *D. DISCLUSA* Heinrich]

U. S. Natl. Mus. Bull. 207: 152. 1956.

A specimen taken at Gainesville, May 24, 1945, and now in the University of Florida Agricultural Experiment Station collection was determined by Heinrich as one of his new species. It is similar in appearance to *disclusa* and *auranticella* (Grote), but as the latter is western and as Heinrich (1956, p. 153) recorded the former from North Carolina, it is presumably that species, but until it is examined and compared with Heinrich's description, it must remain in a tentative status as far as the Florida list is concerned. Another, Alachua Co.: May 26, 1957, (Denmark), DPI, has the abdomen missing and is faded, but it also is probably *disclusa*. Food: *Pinus* spp., larva feeding in the cones.

6136 D. PYGMAEELLA Ragonot

Pl. XXVI, Fig. 25, ♂.
N. Amer. Phycitidae, p. 5. 1887.

Florida: type, Paris Museum. I. Escambia Co.: July 10, 1962, SMH. Myrtle Grove: May 9, 1963, WJW. III. Winter Park: July, Heinrich (1956, p. 154). IV. Punta Gorda: April, det. Clarke, MOC. Food: *Taxodium distichum*.

6135 D. AMATELLA (Hulst)

Pl. XXVI, Fig. 22, ♂; Fig. 23, ♀.
Ent. Amer. 3: 131. 1887.

Florida: type, AMNH; CNC; reared series, CU. Alton: June, Heinrich (1956, p. 156). Camp Pinchot: June, Heinrich. I. Escambia Co.: Nov., SMH. Warrington: VFG. Ocean City: May, HOH. Monticello: Sept., Heinrich. II. Lake

City: May, June, Heinrich. Baker Co.: reared from *Pinus elliottii*, Oct., DPI, CPK. Starke: May, Heinrich. Gainesville: Oct., UFA. Yulee: larvae on slash pine, Sept., Coop. Econ. Ins. Rept. 4: 836. III. McIntosh: Larva on *Pinus* sp., June, DPI. Cassadaga: Jan., Feb., April, May, SVF. Weekiwachee Springs: May, CPK. Groveland: larva on *P. palustris*, March, DPI. Orlando: June, Heinrich. Fort Meade: May, Heinrich. IV. Southern Florida: June, July, Heinrich. Bradenton: Oct., Nov., CPK. Archbold Biological Station: March, May, YU; April, CU; Dec., PSU. Sarasota: June, July, CPK. Siesta Key: March, CPK. Dade Co.: May, CPK. The larva feeds in the cones and terminals, favoring diseased cones.

6125 D. CLARIORALIS (Walker)

Pl. XXVI, Fig. 24, ♀.

List Lep. Ins. Br. Mus. 27: 54. 1863.

I. Escambia Co.: Aug., SMH. II. Osceola National Forest: reared from *Pinus elliottii* cones, Oct., DPI. Gainesville: Sept., DPI. III. Cassadaga: April, SVF. Weekiwachee Springs: May, CPK. Dunedin: March, Heinrich (1956, p. 158). Rockledge: (Cassino), AEB. Tampa: Oct., CNC. IV. Archbold Biological Station: Nov.-March, PSU; March, April, YU. Vero Beach: April, CPK. Siesta Key: Jan., CPK. Fort Myers: AMNH; April, Heinrich. Miami: Heinrich, Oct., HEW. VI. Homestead: Feb., April, May, July, Oct., Nov., CPK. Florida City: March, CNC.

ADELPHIA Heinrich

6229 A. PETRELLA (Zeller)

Pl. VI, Fig. 25, ♀.

Isis, p. 771. 1846.

Florida: April, Hulst (1890, p. 158); type of *happella* Hulst, AMNH. I. Escambia Co.: July, SMH. Brent: March, VFG. Florida Caverns State Park: April, DPI. II. Alachua Co.: March, DPI. Gainesville: Feb., March, DPI; June, July, CU. III. Volusia Co.: Aug., DPI. Cassadaga: Jan., Feb., June, SVF. Glenwood: Heinrich (1956, p. 169). Orange Co.: June, DPI. Orlando: Feb.-April, Heinrich; Feb., DPI. St. Petersburg: Feb., Heinrich. Tampa: Heinrich. Lakeland: May, AMNH. Lake Alfred: July, Heinrich. IV. Bradenton: May, June, CPK. Archbold Biological Station: Jan., March, April, Sept., YU; June, AKW; Nov., PSU. Vero Beach: April, June, Sept., Oct., Dec., Heinrich. Siesta Key: Dec.-May, CNC, CPK. Charlotte Harbor: (Slosson), Grsb. 130. Coconut Grove: Heinrich. VI. Homestead: May, July, Sept., CPK.

UFA Walker

H359 U. RUBEDINELLA (Zeller)

Pl. VI, Fig. 40, ♂.

Isis, p. 885. 1848.

Lake Beach: Feb., Heinrich (1956, p. 172). III. Winter Park: July, Heinrich. Egmont Key: April, Heinrich. IV. Palmetto: Heinrich. Bradenton: Jan., March, July-Dec., CPK. Oneco: May, July, CPK. Archbold Biological Station: Dec., GWK. Vero Beach: Sept., Oct., Dec., Heinrich. Hobe Sound: May, Heinrich. Sarasota: Feb., CU; May, CPK. Siesta Key: Feb., April-June, Nov., CPK. Englewood: March, CU. Palm Beach: Heinrich. Hypoluxo: Heinrich. V. Everglades: Dec., CPK. VI. Homestead: Feb., May-Oct., CPK; Dec., DPI. VIII. Windley Key: July, Aug., Dec.-Feb., CPK. Dry Tortugas: May, DPI. Food: lima beans, black-eyed peas, larvae feeding on the leaves, Heinrich.

ELASMOPALPUS Blanchard

6231 E. LIGNOSELLUS (Zeller)

Lesser cornstalk borer. Pl. VI, Fig. 27, ♂.

Isis, p. 885. 1848.

Lignosellus occurs all over the state including the Dry Tortugas, in all months in all its forms. Food: *Cyperus esculentus*, crabgrass, sudangrass, Johnsongrass, Japanese cane, milo maize, sugar cane, sorghum, peanuts, turnips, wheat, strawberry plants, flax, cotton, and black locust, the larvae boring into the stems of growing plants, and to a lesser extent feeding on the leaves; corn, beans, Watson (1931, p. 30) cowpeas, *ibid.*, p. 63; beans, Coop. Econ. Ins. Rept. 4: 99; lupine, *ibid.*, p. 1023.

ULOPHORA Ragonot

6117 U. GROTEII Ragonot

Ann. Soc. Ent. France, Ser. 6, vol. 10, Bull., p. vii. 1890.

All the records are from Heinrich (1956, p. 176). III. Glenwood. Tampa: June. Polk Co.: Aug. Lake Alfred: May, July. Lakeland: Sept. Winter Haven: July. Food: *Tephrosia* spp., larva feeding on pods and seeds.

DIVITIACA Barnes & McDunnough

6357 D. OCHRELLA Barnes &

McDunnough

Contrib. 2: 183. 1913.

II. Gainesville: April, CPK. IV. Siesta Key: Feb., March, Dec., CPK. V. Marco: April 17,

USNM. Everglades: type, April 8-15, USNM; April 11, AMNH.

6356 D. SIMULELLA Barnes & McDunnough
Contrib. 2: 183. 1913.

IV. Bradenton: March, Aug., CPK. Siesta Key: Jan., March-May, CPK. Fort Myers: April 23, AMNH. V. Everglades: type, April 8-15, USNM; April 9-10, AMNH. VIII. Windley Key: Aug., CPK. Key Vaca: Nov., CPK.

6355 D. PARVULELLA Barnes & McDunnough
Contrib. 2: 183. 1913.

IV. Oneco: May 11, 1953, CPK. Vero Beach: April, Heinrich (1956, p. 190). V. Marco: type, April 16-23, USNM; April 17, AMNH. VIII. Tavernier: July, Sept., Oct., CPK. Key West: four reared, April 7, 1945, from larvae feeding on the flowers of *Achyranthes ramosissima*, Heinrich.

OCALA Hulst

6359 O. DRYADELLA Hulst
Can. Ent. 24: 61. 1892.

II. Gainesville: April, May, UM. III. Egmont Key: April 28, 1904, (Ramstedt), det. J. B. Smith, UM. IV. Siesta Key: Oct.-May, CPK. Charlotte Harbor: type, (Slosson), AMNH. Fort Myers: type of *platanella* Grossbeck, April 1 and 23, AMNH. V. Marco: April 17, Grsb. 131. Everglades: April 6, 10, and 11, AMNH.

HULSTIA Ragonot

6341 H. UNDULATELLA (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 205. 1860.

II. Hastings: April, U. S. Dept. Agr. Bureau of Entomology Bull. 54, "Some miscellaneous results of the work of the Bureau of Entomology, VIII," p. 34 (1905). III. Glenwood: Heinrich (1956, p. 196). Food: elm (?), sugar beets.

HONORA Grote

6343 H. MELLINELLA Grote
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 702. 1890.

III. Tampa: Heinrich (1956, p. 197). Lakeland: Jan., Heinrich. Food: *Palafoxia* (in California).

6349 [H.] DULCIELLA Hulst
J. N. Y. Ent. Soc. 8: 223. 1900.

Heinrich (1956, p. 313) doubts that *dulciella* belongs in *Honora*, but until such time as it can

be placed, it is as well off here as anywhere. It is known only from the female type. IV. Palm Beach: type, USNM.

WUNDERIA Grossbeck

6361, 1 W. NEAERATELLA Grossbeck
Bull. Amer. Mus. Nat. Hist. 37: 133. 1917.

IV. Fort Lauderdale: May 24, 1928 (Bates), UM. V. Everglades: type female, April 6, AMNH.

DIVIANA Ragonot

6358 D. EUDOREELLA Ragonot
Nouv. Gen., p. 27. 1888.

The Everglades record, Grsb. 132, was in error as pointed out by Barnes & McDunnough (1917a, p. 222). It belongs under *Palatka nymphaeella* (Hulst), below. I. Escambia Co.: Sept. 8, 1962, det. Munroe, SMH. III. Orlando: two Feb., USNM. IV. South Florida: type of *edentella* Hulst, April, AMNH.

PALATKA Hulst

6360 P. NYMPHAEELLA (Hulst)
Can. Ent. 24: 62. 1892.

I. Myrtle Grove: WJW. IV. Bradenton: Sept., Oct., CPK. Siesta Key: Jan., March, CPK; May, det. Heinrich, CPK, USNM. Charlotte Harbor: type, April, (Slosson), AMNH. Fort Myers: type of *verecuntella* Grossbeck, April, AMNH. V. Everglades: co-types of *verecuntella*, April, AMNH, SIM, USNM. VIII. Tavernier: Oct., CPK.

MESCINIA Ragonot

6322 M. ESTRELLA Barnes & McDunnough
Contrib. 2: 182. 1913.

IV. Bradenton: July, Aug., Nov., CPK. Oneco: May, CPK. Sarasota: Jan.-March, Heinrich (1956, p. 214). Siesta Key: Nov.-Feb., April, May, CPK. V. Marco: April 17, AMNH. Everglades: type, April, USNM; April 8-15, AMNH. VI. Homestead: Feb., April, Dec., CPK. VIII. Sugar Loaf Key: March, Heinrich. Key West: March, CPK; April, Heinrich. Food: *Melanthera radiata*, *Bidens* (larva in flower heads), Heinrich.

HOMOEOSOMA Curtis

6374 H. ELECTELLUM (Hulst)
Ent. Amer. 3: 137. 1887.

I. Escambia Co.: March, SMH. II. Alachua Co.: May, DPI. Gainesville: Oct., DPI. III. Orlando: June, Heinrich (1956, p. 220). IV. Brad-

enton: Nov., CPK. Sebring: June, UM. Siesta Key: Feb., June, CPK. Fort Myers: as *differtellum* Barnes & McDunnough (1913d, p. 184) and (1914d, p. 31). Fort Lauderdale: April, UM. V. Everglades: type of *differtellum*, April, USNM. Miami: April, Heinrich. VI. Homestead: April, July, CPK. Food: flower heads of *Anthemis*, *Aster*, *Bidens*, *Echinacea*, [*Brauneria*], *Chrysanthemum*, *Coreopsis*, *Dahlia*, *Helianthus*, *Heliopsis*, *Rudbeckia*, *Tagetes*, *Vi-guieria*, *Verbesina* [*Ximenesia*], flowers of *Opuntia* and cotton, and fruit of orange, with sunflower the most favored.

[6371 *H. stypticellum* Grote]

Bull. U. S. Geo. Geograph. Surv. Territ. 4: 703. 1878.

Since Heinrich (1956, p. 221) placed the distribution of the species no nearer than Pennsylvania, Arkansas and Texas, the following records may be in error. Certainly until they are confirmed on the basis of his diagnosis, they should not be considered valid. Florida: as *uncanale* Hulst, Dyar (1902, p. 434). III. Cassadaga: May, Dec., SVF. IV. Archbold Biological Station: Jan., PSU. Siesta Key: May, det. Brower, CPK. Fort Lauderdale: March, UM. V. Marco: April, Grsb. 133. Everglades: April, AMNH. VII. Flamingo: April, DPI.

ROTRUDA Heinrich

6370 R. MUCIDELLA (Ragonot)

N. Amer. Phycitidae, p. 15. 1887.

Although Heinrich (1956, p. 226) believed that the range of distribution for the species covers the United States, with typical *mucidella* found west of the Rocky Mountains and the darker race *reliquella* (Dyar), in the east, with other races in the West Indies, Central, and South America, he considered that the "races at best are dubious entities." Theoretically, therefore, we should find only *reliquella* in Florida, but I list it as reported. Florida: *mucidella*, Forbes (1923, p. 634). I. Escambia Co.: Feb., SMH. II. Gainesville: four Nov. 10, 1940, det. Heinrich as *mucidella*, UFES. III. DeLand: *mucidella*, March, MOG. Cassadaga: July, SVF. Lake Alfred: *reliquella*, July, Heinrich. IV. Bradenton: April, Oct., Nov., CPK. Oneco: May, June, CPK. Siesta Key: three May 14-24, det. Brower as *mucidella*, CPK. Fort Myers: *reliquella*, April, Heinrich. Pompano: *reliquella*, March, Heinrich. Miami: Feb. 24, 1949, det. Capps, as *reliquella*, DPI; April, Heinrich. V. Everglades: *reliquella*, April, Heinrich. Chokoloskee: *reliquella*, Heinrich. VI. Homestead: April, CPK. VIII. Big Pine Key: *reliquella*, April, Heinrich.

Food: *Aster*, *Cirsium horridulum* [*spinosissimum*], *Pyrrhopappus caroliniana* [*Sitilia caroliniana*], *Sonchus asper*, lettuce.

UNADILLA Hulst

H472 U. FLORIDENSIS Heinrich

U. S. Natl. Mus. Bull. 207: 229. 1956.

VIII. Key West: types, reared April 23-May 1, 1945, from larvae feeding in the blossoms and seed pods of *Pulchea odorata* and *Melanthera radiata*, USNM.

LAETILIA Ragonot

6328 L. COCCIDIVORA (Comstock)

N. Amer. Ent. 1: 26. 1879.

Coccidivora is common, probably all over the state, although there are no records from the Keys. Heinrich (1956, p. 232) listed *cardini* Dyar as a race described from Santiago de las Vegas, Cuba. He had seen specimens from Orlando, reared from larvae feeding on mealy bugs on grapefruit. Without referring specifically to Florida, Heinrich listed the following Coccidae as food: *Pulvinaria vitis*, *P. amygdali*, *P. bigeloviae*, *Toumeyella numismaticum*, *T. spp.*, *Coccus hesperidum*, *Eriococcus quercus*, *Saissetia oleae*, *Lecaniodiaspis* sp., *Cerococcus quercus*, *Lecanium arizonensis*, *Dactylopius* sp., *D. confusus*, *D. tomentosus*, *Neolecanium cornuparvum*, *Pseudococcus* sp., and also flowers of *Opuntia* [*Platyopuntia*] spp. Actual Florida records include: *Ceroplastes*, USNM; satsuma, black *Lecanium*, cottony cushion scales on citrus, *Kermes*, DPI.

ZOPHODIA Hübner

[6303 *Z. convolutella* (Hübner)]

Samml. eur. Schmett. Lep. 8, Tineae, 2; Pl. 5, Fig. 34. 1796.

Gooseberry fruit-worm.

On the basis of Heinrich's records for distribution the species should not be expected in Florida. The record here should be confirmed. IV. Fort Lauderdale: April 8, 1928, (Bates), UM. Food: *Ribes grossularia* and other *Ribes* species, the larva feeding in the fruit.

MELITARA Walker

6277 M. PRODENTIALIS Walker

Pl. XXVI, Fig. 21, ♂.

List Lep. Ins. Br. Mus. 27: 137. 1863.

Prodenialis is common throughout the peninsula and Keys, and probably in the western counties

as well, March-October. Food: *Opuntia*, Hubbard (1895, p. 129).

RUMATHA Heinrich

6311 R. GLAUCATELLA (Hulst)

Ent. Amer. 4: 117. 1888.

Florida: one female ex Fernald collection, USNM. Food: *Opuntia leptocaulis*.

METEPHESTIA Ragonot

H547 M. SIMPLICULA (Zeller)

Hor. Soc. Ent. Ross. 16: 246. 1881.

Florida: Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4. VI. Redlands: reared from *Indigofera* sp., Dec., det. Capps, DPI. VIII. Key West: March, April, reared from larvae webbing the leaves of *Indigofera tinctoria* and *I. verbasifolium*, Heinrich (1956, p. 265). I believe the first and third records refer to the same specimens.

EUZOPHERA Zeller

6317 E. SEMIFUNERALIS (Walker)

List Lep Ins. Br. Mus. 27: 57. 1863.

Florida: Hulst (1890, p. 175). I. Escambia Co.: April, SMH. Myrtle Grove: March, det. Duckworth, WJW. IV. Siesta Key: May, det. Forbes, CPK. Food: apple, apricot, pear, peach, plum, persimmon, cherry, mulberry, walnut, pecan, olive, linden, poplar, *Liquidambar*, *Ginkgo*, mountain ash; the larva a bark borer. Also stems of cotton and corn.

6319 E. OSTRICOLELLA Hulst

I. Escambia Co.: Sept. 11, 1962, SMH. Myrtle Grove: Sept., WJW. II. Baker Co.: larvae, det. Capps as probably *ostricolorella*, damaging roots in field-grown nursery stock of *Magnolia grandiflora*, Feb., April, July, Coop. Ins. Pest Surv. 8: 16. Macclenny: Jan. 14, 1957, det. Capps, Coop. Ins. Pest Surv. 4 (7): 5. Gainesville: Feb. 14, 1947, Oct. 15, 1949, DPI. III. Winter Haven: larvae from container-grown *M. grandiflora*, Feb., op. cit., 8: 16.

EULOGIA Heinrich

6318 E. OCHRIFRONTTELLA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 337. 1875.

I. Escambia Co.: Sept., SMH. Myrtle Grove: Sept., WJW. III. Volusia Co.: Aug., DPI. Orlando: March, Heinrich (1956, p. 275). IV. Brad-

enton: March, Nov., CPK. Archbold Biological Station: March, YU; Nov., PSU. Siesta Key: Feb., March, May, Oct., CPK. Punta Gorda: March, MOG. Food: pecan, oak, and apple.

EPHESTIODES Ragonot

6380 E. INFIMELLA Ragonot

N. Amer. Phycitidae, p. 16. 1887.

Among other localities Heinrich (1956, p. 279) listed North Carolina, Arkansas, and Texas. Its presence here is not open to question as is the case with some other species. I. Escambia Co.: Sept., det. Munroe, SMH. III. Marion Co.: Sept., UM. Volusia Co.: Aug., UM. Hernando Co.: Aug., UM. IV. Archbold Biological Station: June, AKW. VIII. Tavernier: Oct., CPK. Food: wild cherry and seeds of *Ambrosia*.

H576 E. ERASA Heinrich

U. S. Natl. Mus. Bull. 207: 280. 1956.

II. Gainesville: April, (Bates), Heinrich. III. Winter Park: July 23, 1939, (Fernald), Heinrich. Lake Alfred: types, May 6 and July 2, 1929, (Bottimer), USNM.

MOODNA Hulst

6396 M. OSTRINELLA (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 206. 1860.

Camp Pinchot: Dec., Heinrich (1956, p. 284). I. Escambia Co.: March, Aug., SMH. Warrington: April, VFG. Quincy: March, CPK. Monticello: March, Heinrich. II. Gainesville: Feb., DPI. Hastings: March, Heinrich. III. Cassadaga: Feb., June, SVF. Weekiwachee Springs: Feb., CPK. Lake Alfred: Aug., Heinrich. IV. Southern Florida: June, Heinrich. Archbold Biological Station: Jan., Feb., PSU. Siesta Key: Feb., March, May, Nov., CPK. Miami: July, Aug., Heinrich. VI. Homestead: Feb., CPK. Food: *Betula*, *Rhus*, *Quercus*, rose, pear, peach, apple, loquat, iris, cotton, and *Pinus*. The larva is more or less a scavenger.

VITULA Ragonot

6323 V. EDMANDSAE (Packard)

Proc. Essex Inst. 4: 120. 1864.

Florida: Hulst (1890, p. 178). I. Escambia Co.: common, Sept., SMH. II. Archer: March, Heinrich (1956, p. 285). IV. Fort Lauderdale: April 15, 1925, (Bates), UM. Food: honeycomb of bees, the larvae feeding on wax, pollen, and comb.

PLODIA Guenée

6408 P. INTERPUNCTELLA (Hübner)

Indian-meal moth.

Samml. eur. Schmett. Lep. 8, Tineae 5; Pl. 45, Fig. 310. [1810]-[1813].

Interpunctella is probably much more common than the records suggest. I. Escambia Co.: Sept., SMH. Monticello: April, CU. II. Gainesville: Sept., DPI. III. Plymouth: July, UFES. Dover: June, DPI. IV. Siesta Key: March, April, CPK. Food: all kinds of stored grain and dried vegetable products.

ANAGASTA Heinrich

6399 A. KUEHNIELLA (Zeller)

Mediterranean flour moth.

Stett. Ent. Zeit. 40: 466. 1879.

Like the previous species, *kuehniella* is undoubtedly relatively common, though there are only four strictly Floridian records: I. Escambia Co.: Oct. 19, 1961, SMH. IV. Archbold Biological Station: March 16, 1960, PSU. Siesta Key: Feb., CPK. Punta Gorda: March, MOG. Two customs interceptions are recorded: Jacksonville, May 1937, from Argentina and Key West, June 1919, and from Havana. Food: wheat and grain, flour especially, but many other dried and stored vegetable products are attacked by the larvae.

EPHESTIA Guenée

6403 E. CAUTELLA (Walker)

Almond moth, dried currant moth, or fig moth. List Lep. Ins. Br. Mus. 27: 73. 1863.

Cautella should likewise be common. II. Gainesville: July, Nov., det. Clarke, UFES. III. Orlando: USNM. Plymouth: larva in citrus seeds, July, det. Heinrich, UFES. Bartow: numbers found in an apartment, Nov., UFES. IV. Bradenton: Jan., CPK. Siesta Key: April, May, det. Brower, CPK. Miami: Aug., Ins. Pest Surv. Bull. 20: 246. Food: all kinds of dried, stored vegetable products. The congener *E. elutella* (Hübner) of similar habits and equally cosmopolitan in its distribution, should be present, but I have come across no reference to it here.

VARNERIA Dyar

6407 V. ARTIFASCIELLA Barnes & McDunnough

Contrib. 2: 184. 1913.

V. Everglades: type and one paratype, both females, April 8-15, USNM.

EURYTHMIA Ragonot

6385 E. HOSPITELLA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 338. 1875.

III. Winter Park: July, Heinrich (1956, p. 307).

IV. Siesta Key: Nov., CPK.

CABNIA Dyar

6427 C. MYRONELLA Dyar

J. N. Y. Ent. Soc. 12: 108. 1904.

II. Old Town: March 2, 1951, det. Brower, CPK.

IV. Lake Placid: March, April, Heinrich (1956, p. 310).

Subfamily ANERASTIINAE

The subfamily is in need of revision.

AURORA Ragonot

6411 A. LONGIPALPELLA Ragonot

N. Amer. Phycitidae, p. 18. 1887.

IV. Siesta Key: May 13, 1946, CPK.

TOLIMA Ragonot

6412 T. ROSEOPENNELLA (Hulst)

Trans. Amer. Ent. Soc. 17: 206. 1890.

III. Volusia Co.: type, AMNH.

PECTINIGERIA Ragonot

6419 P. BISTRATELLA (Hulst)

Trans. Amer. Ent. Soc. 17: 209. 1890.

Florida: Hampson (1918b, p. 106).

POUJADIA Ragonot

6422 P. QUADRICOLORELLA (Dyar)

Proc. Ent. Soc. Wash. 6: 116. 1904.

IV. Miami: three larvae feeding beneath waxy covering of cochineal clumps of soft bodied coccids, Hamlin (1926, p. 102).

OLLIA Dyar

6426 O. PARVELLA Dyar

J. N. Y. Ent. Soc. 14: 31. 1906.

III. Weekiwachee Springs: March, CPK. Oneco: Nov., CPK. Myakka City: Feb. 17, 1945, (Needham), CU. Archbold Biological Station: March 6, 1945, (Needham), CU. Siesta Key: March, CPK. Englewood: March 26, 1944, (Needham), CU.

ALAMOSIA Ragonot

6435 **A. BIPUNCTELLA** Barnes & McDunnough

Contrib. 2: 184. 1913.

II. Gainesville: June, July, CU. III. Ocala National Forest: June, UM. Weekiwachee Springs: March, April, Aug., AEB. Orlando: June, CU. IV. Bradenton: Aug., CPK. Oneco: Sept., CPK. Siesta Key: common, Feb.-June, Nov., CNC, CPK. VI. Homestead: May, CPK.

HYPSTROPA Zeller

6436 **H. LUTEICOSTELLA** Ragonot

N. Amer. Phycitidae, p. 19. 1887.

Florida: Hulst (1890, p. 212); type of *nodosella* (Hulst), April, AMNH. V. Marco: April 17, AMNH.

PEORIA Ragonot

6438 **P. BIPARTITELLA** Ragonot

N. Amer. Phycitidae, p. 19. 1887.

II. Gainesville: three July, (Rogers), CU. III. Cassadaga: April, SVF. IV. Oneco: April, May, CPK. Siesta Key: Feb., CPK. Fort Lauderdale: March, UM.

6439 **P. APPROXIMELLA** (Walker)

List Lep. Ins. Br. Mus. 35: 1722. 1866.

IV. Martin Co.: May 1928, (Bates), UM. Biscayne Bay: (Slosson), Grsb. 134. The Everglades record, Grsb. 134, belongs under 6439, 1 below, according to Barnes & McDunnough (1917a, p. 222).

6439, 1 **P. ALBICOSTELLA** (Grossbeck)

Bull. Amer. Mus. Nat. Hist. 37: 134. 1917.

IV. Fort Myers: co-type, April 23, Grossbeck. V. Everglades: co-type, April 7, Grossbeck; Barnes & McDunnough (1917a, p. 222).

ANERASTIA Hübner

6442 **A. ELLA** (Hulst)

Ent. Amer. 3: 138. 1887.

Florida: type, AMNH. I. Escambia Co.: Sept., SMH. II. Gainesville: July, CU; Sept., DPI. III. Cassadaga: May, Aug., Oct., SVF. Lakeland: June, UM. IV. Bradenton: May, CPK. Oneco: May, June, CPK. Archbold Biological Station: March, YU; June, AEB, AKW. Siesta Key: May, CPK. Fort Lauderdale: May, UM. V. Everglades: April, AMNH. VI. Homestead: Feb., April, July, CPK.

BANDERA Ragonot

6446 **B. CARNEELLA** Barnes & McDunnough

Contrib. 2: 184. 1913.

IV. Bradenton: March, Aug., CPK. Siesta Key: Nov. 9, 1952, det. Munroe, CPK. V. Everglades: type, one April 8-15, USNM.

TAMPA Ragonot

6450 **T. DIMEDIATELLA** Ragonot

N. Amer. Phycitidae, p. 20. 1887.

Florida: Hulst (1890, p. 203). I. Escambia Co.: April, SMH. Quincy: Oct., CPK. II. Gainesville: July, CU. III. Cassadaga: Aug., SVF. IV. Bradenton: Feb., March, July, Aug., Oct., Nov., CPK. Oneco: March, JGF; April, May, CPK. Archbold Biological Station: Jan., March, Nov., Dec., YU; April, CNC, CU; Nov., Dec., PSU. Siesta Key: Oct.-June, CPK. Fort Lauderdale: March, UM. VI. Homestead: Feb.-May, July, Nov., CPK.

STATINA Ragonot

6452 **S. ROSEOTINCTELLA** Ragonot

N. Amer. Phycitidae, p. 19. 1887.

Florida: Hulst (1890, p. 216). II. Gainesville: July, CNC, CU. III. Orlando: June, CU.

CHIPETA Hulst

6458 **C. PERLEPIDELLA** Hulst

Can. Ent. 24: 62. 1892.

Florida: type, AMNH.

PSAMMIA Hampson

6234 **P. FLAVIPICTA** Hampson

Ann. Mag. Nat. Hist. Ser. 10, 5: 71. 1930.

Flavipicta was moved from Phycitinae to Anerastiinae by Heinrich (1956, p. 315). Florida: type, BM.

Family PTEROPHORIDAE

Davidson called my attention to an odd habit of the Pterophorids. For some years he had used black nylon nets, of approximately $\frac{3}{4}$ " mesh for the purpose of capturing birds for banding. He had observed that the Pterophorids were very fond of settling on these nets, and that in Florida the smaller species oviposited on the nets. He reported further observing *Oidaematophorus balanotes* (Meyrick) resting on the nets in considerable numbers at Claiborne, Maryland, in September 1958.

TRICHOPTILUS Walsingham

6459 T. PARVULUS Barnes & Lindsey

Contrib. 4: 289. 1921.

I. Escambia Co.: Oct. 4, 1962, SMH. Quincy: April 7, 1961, (Tappan), CPK. III. Cassadaga: Sept. 14, 1962, SVF. IV. Bradenton: Sept. 30, 1955, (Kelsheimer), CPK. Oneco: May 28, 1953, (Dillman), CPK.

6460 T. DEFECTALIS (Walker)

List Lep. Ins. Br. Mus. 30: 943. 1864.

III. Orlando: July, CU. St. Petersburg: Oct., USNM. IV. Bradenton: Dec., CPK. Oneco: June, CPK. Archbold Biological Station: May, YU. Siesta Key: Jan., March, June, Nov., CPK. V. Chokoloskee: CNC, USNM. VI. Paradise Key: July, CU. VIII. Dry Tortugas: summer, CU.

6461 T. CALIFORNICUS (Walsingham)

Pteroph. Calif. Ore., p. 60. 1880.

Florida: May, USNM. II. Gainesville: July, CU. III. Orlando: June, CU. Lakeland: USNM. IV. Bradenton: Aug., CPK. Archbold Biological Station: March, April, Dec., YU. Fort Myers: USNM. V. Chokoloskee: USNM. VI. Paradise Key: March, CU. VII. Paurotis Pond, Everglades National Park: Oct., ENP.

[6463 T. lobidactylus (Fitch)]

Trans. N. Y. Agr. Soc. 14: 847. 1854.

The Lakeland, Fort Myers, and Chokoloskee records given by Grossbeck (1917, p. 135) were transferred to *californicus* by Barnes & Lindsey (1921, p. 295), where they also strongly suspected the following Everglades record belonged: April 9, AMNH. I have a record from Oneco: June 9, 1954, (Dillman), but cannot find the specimen. I suspect it too belongs under *californicus*.

PLATYPTILIA Hübner

6471, 1 P. PUSILLIDACTYLA (Walker)

Lantana plume moth

List Lep. Ins. Br. Mus. 30: 933. 1864.

Pusillidactyla is characterized by the very short third feather of the hind wing. IV. Oneco: May, (Dillman), CPK. Archbold Biological Station: Dec., YU. Siesta Key: Nov.-April, June, CPK. Food: *Lantana*, *Caperonia*.

6472, 1 P. BREVIPENNIS Zeller

Verh. zool.-botan. Ges. Wien 24: 442. 1874.

Florida: 1883, (Morrison), Walsingham (1909-1915, p. 437).

6483 P. BRACHYMORPHA Meyrick

Trans. Ent. Soc. London, p. 240. 1888.

I. Warrington: rare, late fall, VFG. III. St. Petersburg: Barnes & Lindsey (1921, Pl. 41, Fig. 15). IV. Oneco: June, Oct., CPK. Siesta Key: March, May, Dec., CPK. Fort Myers: April, May, co-types of *crenulata* Barnes & McDunnough (1913d, p. 185); May, CNC. Hialeah: reared from seed heads of *Phyla lanceolata*, Oct. 20, 1962, (Stegmaier), DPI. V. Everglades: co-types of *crenulata*, April, Barnes & McDunnough, April, AMNH. Chokoloskee: USNM. VI. Homestead: April, Nov., CPK.

6483, 1 P. TAPROBANES Felder

Reise Nov.; Pl. 140, Fig. 54. 1875.

VI. Florida City: three Feb. 1954, det. Clarke, MOG.

6488 P. CAROLINA Kearfott

Bull. Amer. Mus. Nat. Hist. 23: 155; Pl. 8, Fig. 17. 1907.

Apparently this species. I. Escambia Co.: May 9, Sept. 3, 1961, SMH. Myrtle Grove: Sept. 12, 1961, WJW.

6490 P. EDWARDSII Fish

Can. Ent. 13: 72. 1881.

I. Escambia Co.: July, SMH. Ocean City: Aug., HOH. III. Hillsborough Co.: Aug. 16, 1938, (Hubbell & Friauf), UM. IV. Bradenton: Aug., CPK. Oneco: common, May, June, CPK. Archbold Biological Station: Dec., YU. Siesta Key: Feb.-May, Dec., CPK. Biscayne Bay: (Slosson), Grsb. 135. VI. Homestead: March, CPK.

EXELASTIS Meyrick

6503 E. CERVINICOLOR (Barnes &

McDunnough)

Contrib. 2: 185. 1913.

I. Escambia Co.: Jan., SMH. IV. Siesta Key: May, CPK. South Bay: May, AMNH. V. Chokoloskee: USNM. Everglades: types, April, USNM. VI. Homestead: April, CPK. VIII. Key Vaca: Nov., CPK.

MARASMARCHA Meyrick

6504 M. PUMILIO (Zeller)

Verh. zool.-botan. Ges. Wien 23: 324. 1873.

Florida: May, Oct., Barnes & Lindsey (1921, p. 349). I. Escambia Co.: Sept., SMH. III. Cassadaga: Sept., SVF. Osteen: Aug., DPI. Orlando: June, CU. IV. Bradenton: July, Sept., CPK. Oneco: May, Oct., CPK. Siesta Key: Feb., June,

Nov., CPK. Fort Lauderdale: Feb., UM. VI. Homestead: July, CPK. Food: *Ambrosia*: in Cuba, *Desmodium* [*Meibomia*].

STENOPTILIA Hübner

6505 S. RHYNCHOSIAE (Dyar)
Psyche 8: 249. 1898.

III. Stemper: Barnes & Lindsey (1921; Pl. 42, Fig. 9). IV. Oneco: May, CPK. Miami: type, Dyar.

6506 S. PARVA (Walsingham)
Pteroph. Calif. Ore., p. 55; Pl. 3, Fig. 12. 1880.
Florida: May, Barnes & Lindsey (1921, p. 351). III. Orlando: June, DPI. IV. Oneco: four April, May, Oct., CPK. Siesta Key: one Nov., CPK. VI. Homestead: Nov., CPK.

6508 S. ZOPHODACTYLA (Duponchel)
Lep. France 11: 668. 1838.

III. St. Petersburg: March, USNM. Food: *Centaureium venustum*; *C. umbellatum*, Barnes & Lindsey (1912, p. 356).

6509 S. PALLISTRIGA Barnes & McDunnough
Contrib. 2: 186. 1913.

I. Escambia Co.: one March 1961, July 30, 1961, SMH. III. St. Petersburg: one female, Sept., Barnes & Lindsey (1921, p. 357). IV. Fort Myers: male type, May 1-7, USNM.

PSELNOPHORUS Wallengren

6516 P. BELFRAGEI (Fish)
Can. Ent. 13: 142. 1881.

I. Quincy: March, CPK. II. Gainesville: March, CPK, UM. Jacksonville: March, HEW. III. Weekiwachee Springs: March, CPK. IV. Bradenton: March, CPK. Oneco: infrequent, April, May, July-Sept., Nov., CPK. Archbold Biological Station: Jan., April, Dec., YU. Siesta Key: Feb., May, June, Nov., CPK. Fort Myers: April, USNM. Delray Beach: April, CPK. VI. Homestead: April, CPK.

ADAINA Tutt

6517 A. BIPUNCTATA (Moeschler)
Abhandl. Senck. Naturf. 16: 346. 1890.

Florida: March-May, USNM. IV. Bradenton: July, Sept., Nov., CPK. Oneco: common, April-June, Aug., Oct., Nov., CPK. Siesta Key: Oct.-Feb., May, CPK. Fort Myers: May, CU. V. Everglades: type of *simplicius*, Grossbeck (1917, p. 136). VI. Homestead: Oct., Nov., CPK.

6521 A. BUSCKI Barnes & Lindsey
Contrib. 4: 370. 1921.

I. Escambia Co.: April 2, 1961, SMH. II. Gainesville: two March, CPK. IV. Miami: paratype, USNM. Coconut Grove: type, USNM. VI. Homestead: Nov., CPK.

6522 A. AMBROSIAE (Murtfeldt)
Amer. Ent. 3: 236. 1880.

I. Myrtle Grove: Oct., WJW. Quincy: Oct., CPK. IV. Oneco: May-July, Oct., CPK. Siesta Key: Dec.-Feb., May, June, CPK. La Belle: April, co-type of *perplexus*, Grossbeck (1917, p. 137). V. Marco: co-type, of *perplexus*, April, Grsb. 137. Everglades: co-type of *perplexus*, April, Grsb. 137.

OIDAEMATOPHORUS Wallengren

6546 O. INQUINATUS Zeller
Verh. zool.-botan. Ges. Wien 23: 325. 1873.

IV. Siesta Key: May, CPK. Fort Myers: Grsb. 136. V. Everglades: USNM. Chokoloskee: USNM. Food: *Ambrosia artemisiifolia*.

6554, 1 O. SP.

This specimen is closer to *linus* Barnes & Lindsey than anything else, but it is not that. I. Escambia Co.: May 24, 1962, SMH.

6563 O. STRAMINEUS (Walsingham)
Pteroph. Calif. Ore., p. 41; Pl. 3, Fig. 3. 1880.
II. Gainesville: three June 21, 1935, (Cantrell), UM.

6566 O. VENAPUNCTATUS Barnes & Lindsey
In Heinrich, J. Agr. Res. 20: 827. 1921.

IV. Oneco: three May 19-June 8, 1953, (Dillman), CPK. There are two other specimens with similar maculation, Central Florida: Sept. 1955, WMD and Siesta Key: Feb. 18, 1956, CPK, but because of their size, 24 mm, as against the normal wing spread of 15-18 mm, I hesitate to include them as definite records.

6568 O. LACTEODACTYLUS (Chambers)
Can. Ent. 5: 72. 1873.

I. Escambia Co.: form *kellcottii* (Fish), Sept., SMH. III. Blanton: larva on groundsel, Oct., det. Dekle as "probably this," DPI. IV. Archbold Biological Station: March, Dec., YU. Siesta Key: May, CPK. Fort Lauderdale: form *kellcottii*, April-June, UM. V. Everglades: *kellcottii*, April, AMNH. VI. Modello: Jan., det. Capps, DPI. Paradise Key: larvae abundant in stems of *Baccharis* in March, adults emerging April, FMJ.

6569 *O. BALANOTES* (Meyrick)

Pl. XXVI, Fig. 29, ♂.

Trans. Ent. Soc. London, 1907, p. 503. 1908.

I. Escambia Co.: April, SMH. Monticello: Oct., DPI. II. Alachua Co.: Oct., DPI. Gainesville: March, UM; March, Nov., DPI. III. Titusville: type, Aug., Meyrick. St. Petersburg: Barnes & Lindsey (1921; Pl. 44, Fig. 12). IV. Archbold Biological Station: March, Sept., YU. Siesta Key: Dec.-Feb., May, CPK. Englewood: Nov., CPK. Fort Lauderdale: Jan., UM. VI. Homestead: May, CPK.

[6570 *O. grandis* (Fish)]

Can. Ent. 13: 141. 1881.

The following record is undoubtedly an error for *balanotes* which had not been described in 1884. Florida: 1884, (Morrison), Walsingham (1909-1915, p. 441).

6581 *O. UNICOLOR* (Barnes &

McDunnough)

Contrib. 2: 185. 1913.

II. Alachua Co.: Oct., DPI. Gainesville: May, UM. III. St. Petersburg: Oct., USNM. IV. Oneco: eight April-June, Aug., Oct., CPK. Archbold Biological Station: Sept., Dec., YU. Siesta Key: Feb., CPK. Englewood: Feb., CPK. Fort Lauderdale: Sept., UM. V. Marco: type, female, from larva boring in stem of *Eupatorium* sp., April, USNM; April, AMNH. VI. Homestead: Oct., CPK; a small specimen, but the faintly evident maculation matches.

6588 *O. MONODACTYLUS* (Linnaeus)

Syst. Nat., p. 542. 1758.

I. Escambia Co.: Feb., SMH. II. Gainesville: Feb., CPK. IV. Bradenton: Feb., Dec., CPK. Archbold Biological Station: Jan., YU. Indian River Co.: Oct., UM. Siesta Key: Jan., Feb., CPK. South Bay: May, AMNH. Palm Beach: Dyar (1901a, p. 466).

Family ALUCITIDAE

ALUCITA Linnaeus

6591, 1 *A. SP.*

This is probably an undescribed species near *Orneodes spilodesma* Meyrick. IV. Oneco: six May, June, (Dillman), CPK.

6591, 2 *A. SP.*

This species is distinct from the above, and also quite probably undescribed. VI. Homestead: April 10, 1959, (Wolfenbarger), CPK.

Grossbeck's records for the balance of the microlepidoptera were woefully few. Our knowledge of these smaller species in Florida is still meager, but the advance which has been made is largely due to the efforts of Dr. J. F. Gates Clarke.

I am far more indebted to Dr. Clarke for determinations and assistance with microlepidoptera than the occasional reference to him in the following pages would suggest. There has been generous help from others in limited fields as will be noted at the appropriate place, but it is primarily due to Dr. Clarke that we are able to point to the wealth of microlepidopterous fauna in Florida. It is not so much the additions to the list that his determinations have made possible, but it is the vast number of unrecognized species which he has noted. In most instances their status is too uncertain to warrant reporting them here, but I do not think it would be an exaggeration to say that for every determined species from this point to the end of the list, we probably now have in Florida collections one or more valid but unnamed species, many, perhaps most, of which will prove to be undescribed. In short, we have reached a point in the list where there are more problems than facts.

SUPERFAMILY TORTRICOIDEA

Family OLETHREUTIDAE

The food plants in this family have been listed largely on the basis of Heinrich's two papers (1923a and 1926).

Subfamily OLETHREUTINAE

EPISIMUS Walsingham

6592 *E. ARGUTANUS* (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 358. 1860.

I. Escambia Co.: Sept., SMH. II. Gainesville: July, CU. III. DeLand: March, MOG. IV. Bradenton: Nov., CPK. Archbold Biological Station: March, April, CU. Siesta Key: emerged from pupa on mangrove, June, CPK; common, Nov.-May, CPK. Fort Myers: USNM. Palm Beach: Dyar (1901a, p. 469). Dade Co.: reared from *Euphorbia* [*Poinsettia*] *heterophylla*, and *Sumac* sp., April, DPI. VI. Homestead: May, Sept., CPK. Food: *Euphorbia heterophylla*, *Rhus*, *Hamamelis*, *Crataegus*, *Ulmus*, and *Solidago*.

6593 E. AUGMENTUS (Zeller)

Hor. Soc. Ent. Ross. 13: 160. 1877.

IV. Lake Worth: (Fernald), DPI; larvae webbing together leaves of *Metopium* [*Rhus metopium*] *toxiferum*, Dyar (1901a, p. 468). Palm Beach: USNM.

6594 E. TYRIUS Heinrich

Proc. Ent. Soc. Wash. 25: 107. 1923.

I. Escambia Co.: July 5, 1961, SMH. Myrtle Grove: Aug. 20, 1962, WJW. III. Orange Co.: three reared from *Acer rubrum*, June 7, 1962, DPI, CPK. St. Petersburg: female paratype, USNM. IV. Archbold Biological Station: Jan. 2, 1960, (Frost), PSU. Siesta Key: May 1, 1960, Nov. 22, 1957, Dec. 4, 1955, CPK. Food: *Acer saccharium*.

CACOCHARIS Walsingham**6594, 1 C. CYMOTOMA** Meyrick

Trans. Ent. Soc. London, p. 26. 1917.

III. Cassadaga: Nov. 21, 1962, Dec. 17, 1955, SVF. IV. Bradenton: Sept.-Nov., CPK. Oneco: March, JGF; May, June, Nov., det. Clarke, CPK. Archbold Biological Station: Nov. 24 and Dec. 27, 1959, (Frost), PSU. Siesta Key: Feb., March, April, CPK; Dec., USNM. VI. Homestead: two reared from *Phyllanthus acidus*, Oct. 10, 1956, (Baranowski), DPI; March-May, Oct., Nov., CPK.

BACTRA Stephens

There is either tremendous variation in the species present or else there are additional species. In any event, the complex is very common and very difficult to determine short of genital dissection.

[6595 B. lanceolana (Hübner)]

Samml. eur. Schmett. Tort. Fig. 80. 1800.

As the only North American specimen reported by Heinrich (1926, p. 83) was from British Columbia, the following records would appear to be erroneous. IV. Fort Myers: Grsb. 137. Palm Beach: Dyar (1901a, p. 468). V. Everglades: (McDunnough), Grsb. 137. Food: *Juncus*.

6596 B. FURFURANA (Haworth)

Lep. Brit., p. 466. 1811.

II. Gainesville: three July 1927, CU. Forbes notes that the genitalia were not verified, but that the specimens seem to be this species. Food: *Juncus*.

6597 B. VERUTANA Zeller

Verh. zool.-botan. Ges. Wien 25: 247. 1875.

This is the commonest species of the genus and is probably the one which varies so greatly. It has been reported from Monticello to the Dry Tortugas, and has been taken in every month. IV. Bradenton: Nov.-Jan., April-Sept., VI. Homestead: Feb.-Nov., small peak in May, a very high one in July. Food: *Cyperus*.

6599 B. PRIAPEIA Heinrich

Proc. Ent. Soc. Wash. 25: 105. 1923.

Florida: USNM. I. Myrtle Grove: Sept., WJW. III. Cassadaga: June, SVF. IV. Oneco: June, CPK. Siesta Key: April, May, Dec., det. Heinrich, CPK. Fort Lauderdale: May, UM.

LOBESIA Guenée**6601 L. LIRIODENDRANA** (Kearfott)

Trans. Amer. Ent. Soc. 30: 293. 1904.

II. Gainesville: reared from larvae mining leaves of *Magnolia grandiflora*, emerging in May, (Peterson), det. Clarke, DPI, CPK. Peterson made a very thorough study of the life history which was reported by him (1960, pp. 105-114). The original determination is wrongly credited to me in this paper. It was made by Clarke. III. Cassadaga: Sept. 16, 1962, SVF.

6611 L. [VERNONIANA Kearfott]

Trans. Amer. Ent. Soc. 33: 7. 1907.

I. Brent: March 12, 1961, det. Powell with "?," VFG.

6617, 1 L. SP.

A new species according to Clarke and quite distinct from 6601 above. I am indebted to Dr. Tissot for the life history, as follows: "Larvae feed on tender leaves and in buds and blossoms of *Magnolia grandiflora*. Apparently the partly grown larvae go from the leaves and enter the buds where they feed among the stamens and bore into the young 'cones'. Some small larvae found in buds also. Small larvae are pale, half grown ones and larger are a deep, dark, purplish-red." This is taken from the University of Florida Agricultural Experiment Station Insect Record Ledger No. 9692. II. Gainesville: Jan. 25, 1949, UFES. Brooksville: May 11, 1949, UFES.

ENDOTHENIA Stephens**6625 E. HEBESANA** (Walker)

Verbena budmoth.

List Lep. Ins. Br. Mus. 28: 342. 1863.

I. Escambia Co.: Oct., Nov., SMH. Myrtle

Grove: June, WJW. II. Gainesville: April, UM. Rochelle: larvae abundant, feeding in seed pods of iris, Ins. Pest Surv. Bull. 10: 232. III. Cassadaga: Dec., SVF. IV. Oneco: Oct., CPK. Siesta Key: May, CPK. VIII. Tavernier: Oct., DPI. Food: *Antirrhinum*, *Gerardia*, *Iris*, *Orthocarpus*, *Penstemon*, *Physostegia*, *Solidago*, *Stachys*, *Tigridia*, *Verbascum*, *Verbena* (larva feeding on seeds).

6626 E. DAECKEANA Kearfott

Trans. Amer. Ent. Soc. 33: 12. 1907.

IV. Archbold Biological Station: Dec. 18, 1957, (Pease), det. Clarke, YU.

TANIVA Heinrich

6630 T. ALBOLINEANA (Kearfott)

Bull. Amer. Mus. Nat. Hist. 23: 160. 1907.

I. Escambia Co.: May 1, 1962, det. Davis, SMH.

EUMAROZIA Heinrich

6634 E. MALACHITANA (Zeller)

Verh. zool.-botan. Ges. Wein 25: 292. 1875.

I. Escambia Co.: April, July, SMH. Brent: March, VFG. II. Gainesville: April, UM; Aug., USNM. III. Cassadaga: Aug., Nov., SVF. Juniper Springs: July, DPI. IV. Bradenton: Oct., CPK. Archbold Biological Station: Nov.-April, PSU. Siesta Key: Jan., Feb., Oct., CPK. Dade Co.: reared from leaf-tier on *Cassia* sp., July, DPI. Coral Gables: reared from tied leaves of black sapota, Dec., USNM. VI. Homestead: Nov., CPK. Food: persimmon, DPI.

ZOMARIA Heinrich

6635 Z. INTERRUPTOLINEANA Fernald

Trans. Amer. Ent. Soc. 10: 70. 1882.

I. Escambia Co.: April 4 and Sept. 1, 1961, SMH. Myrtle Grove: Oct. 2, 1961, WJW. III. Weekiwachee Springs: April 3, 1955, (May), det. Clarke as probably this, CPK.

6636 Z. ROSAOCHEANA (Kearfott)

Trans. Amer. Ent. Soc. 33: 11. 1907.

In the original description the name is written "*rosaschreana*." Florida: type, AMNH. I. Escambia Co.: March, SMH. Myrtle Grove: Aug., WJW. III. Cassadaga: May, July-Sept., SVF. Weekiwachee Springs: June, Aug., CPK, UM. IV. Oneco: March, JGF; May, CPK. Archbold Biological Station: Jan., PSU; May, YU; June, AKW; Dec., CU, YU. Punta Gorda: March, MOG.

6637 Z. ANDROMEDANA (Barnes & McDunnough)

Contrib. 3: 223. 1917.

II. Gainesville: July, CU. III. Central Florida: June, WMD. Weekiwachee Springs: Aug., CPK. Altamonte Springs: USNM. IV. Bradenton: Sept., CPK. Oneco: May, CPK. Archbold Biological Station: ex pupa, Jan., YU; Jan., Nov., PSU. Sarasota: June, CPK. Siesta Key: Jan., May, CPK. Fort Myers: type, April, USNM. Fort Lauderdale: March, UM. VI. Homestead: Oct., CPK. Food: *Andromeda*, Barnes & McDunnough.

APHANIA Hübner

6652 A. REMOVANA Kearfott

Trans. Amer. Ent. Soc. 33: 15. 1907.

IV. Siesta Key: Jan. 9, 1951, det. Clarke as probably this, but without genitalic dissection, April 30, 1961, CPK.

BADEBECIA Heinrich

6654 B. URTICANA (Hübner)

Schmett. Eur. Tort. Fig. 65. 1800.

I. Escambia Co.: July, det. Freeman, SMH. Myrtle Grove: June, WJW. Quincy: common, March-June, Oct., (Tappan), CPK. Havana: April, CPK.

PHAECASIOPHORA Grote

[6655 *P. confixana* (Walker)]

List Lep. Ins. Br. Mus. 28: 340. 1863.

Since Heinrich (1926, p. 127) did not list Florida as a habitat for this species, nor in fact anything closer than Virginia and Texas, the probability of a misdetermination exists, and the record needs confirmation before placing the species on our list. III. Enterprise: April, Castle & Laurent (1896, p. 303).

6656 P. NIVEIGUTTANA Grote

Bull. Buffalo Soc. Nat. Sci. 1: 91. 1873.

Florida: Heinrich (1926, p. 127). II. Nassau Co.: April, CU. III. Cassadaga: Jan., March, April, Sept., SVF. IV. Archbold Biological Station: Feb., March, PSU; March, CU, YU. Siesta Key: Jan., CPK. The color of this last is brighter than in northern specimens. VI. Homestead: July, JAP. Food: *Sassafras* and perhaps *Hamamelis*.

6657 P. INSPERSA Heinrich

Proc. U. S. Natl. Mus. 79 (13): 13. 1931.

III. Vero Beach: April, (Malloch), USNM. St.

Petersburg: types, three March 3, 1915, (Ludwig), USNM. IV. Siesta Key: May 16, 1946, CPK.

EXARTEMA Clemens

6684 **E. HIPPOCASTANUM** Kearfott
Bull. Amer. Mus. Nat. Hist. 23: 155. 1907.

All but the Myrtle Grove and Gainesville specimens, which he did not see, were determined by Powell with "?". I. Myrtle Grove: April 20, 1963, WJW. Quincy: July 13, 1960, (Tappan), JAP. II. Gainesville: USNM; two, (Watson), UFES. IV. Bradenton: Sept. 25, 1955, (Kelsheimer), CPK. Oneco: Sept. 27, 1954, (Dillman), CPK. Archbold Biological Station: Nov. 11, 1958, PSU. Food: *Aesculus*.

6696 **E. PERMUNDANUM** Clemens
Raspberry leaf roller.
Proc. Acad. Nat. Sci. Phila., p. 356. 1860.

I. Escambia Co.: May 2, 1961, det. Freeman as this or close to it, SMH.

HEDIA Hübner

6710 **H. CYANANA** Murtfeldt
Amer. Ent. 3: 14. 1880.

I. Escambia Co.: July, Sept., SMH. IV. Archbold Biological Station: three March 2-17, 1958, (Pease), CPK, YU. Food: rose.

TSINILLA Heinrich

6711 **T. LINEANA** (Fernald)
J. N. Y. Ent. Soc. 9: 501. 1901.

IV. Palm Beach: type, USNM. VI. Paradise Key: larvae abundant, folding leaves of *Annona*, adults emerging in March, det. Heinrich, FMJ. Food: *Annona glabra* [*laurifolia*], Dyar (1901a, p. 468).

OLETHREUTES Hübner

6741 **O. DEVOTANA** Kearfott
Pl. XXVI, Fig. 27, ♀.
Trans. Amer. Ent. Soc. 33: 16. 1907.

When the wings are folded over the abdomen, a perfect white circle is formed against the black background. Other olethreutids exhibit a similar maculation, but no other has this perfect circle. II. Hastings: paratype, June, USNM. III. Marion Co.: July, UM. Volusia Co.: Aug., UM. Cassadaga: June-Aug., SVF. Weekiwachee Springs: Aug., CPK. Lake Co.: Aug., UM. IV. Archbold Biological Station: Feb.,

March, Nov., PSU; March, Aug., Sept., YU. Siesta Key: Jan., May, CPK. Charlotte Harbor: type, March, AMNH. VIII. Long Pine Key: reared from ripe seeds on spike of *Coccothrinax argentata* webbed together, (Craighead), ENP.

Subfamily **EUCOSMINAE**

PSEUDOGALLERIA Ragonot

6744, 1 **P. SP.**

Very similar to *P. inimicella* (Zeller) but it is not that species. I. Escambia Co.: March, Oct. 13, 1961, SMH. Quincy: March 27, 1961, CPK. III. Weekiwachee Springs: May 21, 1960, CPK. IV. Oneco: March 26, 1955, JGF. Archbold Biological Station: March 27, 1959, (Hodges), CU; April 8, 1958, (Pease), YU. Siesta Key: Jan. 30, 1952, Feb. 24, 1951, Feb. 24, 1960, May 6, 1946, CPK.

RHYACIONIA Hübner

6745 **R. BUOLIANA** (Denis & Schiffermueller)

European pine shoot moth.
Syst. Verz. Wien, p. 128. 1776.

II. Starke: larvae on *Pinus palustris*, adults emerging in June, det. Busck, DPI, USNM. IV. Archbold Biological Station: the records given by Frost (1963, p. 38) are in error for *subtropica* Miller. Food: Scotch, red, and white pine, Herick (1935, p. 252); pine, Hamilton (1931, p. 163).

6751 **R. RIGIDANA** (Fernald)
Rept. U. S. Dept. Agr. 1879: 237. 1880.

I. Leon Co.: one female, at *Pinus*, Dec. 10, 1958, (Cowan), det. Miller by genitalic slide, DPI. This specimen was received too late to be included in Miller's paper (1959b), on the distribution of *rigidana*. Food: *Pinus* spp.

6751, 1 **R. SUBTROPICA** Miller

Pl. XXVI, Fig. 30, ♂.
J. Lep. Soc. 14: 231. 1960.

I. Escambia Co.: Feb., SMH. Brent: March, VFG. Valparaiso: a series, USNM. II. Taylor Co.: from pupae in slash pine, at base of buds and terminal branches, Feb., March, (W. L. Beers), CPK. Bradford Co.: DPI. Alachua Co.: June, DPI. Crescent City: larvae in tips of long leaf pine, July, UFES. III. Cassadaga: April, SVF. St. Petersburg: USNM. Bartow: June, DPI. IV. Oneco: May, June, CPK. Archbold Biological Station: Jan., Dec., YU; Jan., March, Dec., PSU. Siesta Key: Dec.-Feb., May, CPK.

Palmetto Key: emerged from pupae in tips of pine, Jan., Dec., CPK. Fort Myers: May, UFES. VI. Homestead: Feb.-May, Sept., CPK.

6752 R. FRUSTRANA (Comstock)

Nantucket pine moth.

Rept. U. S. Dept. Agr. 1879: 236. 1880.

Although the name *frustrana* first appears in the above reference, the first actual description was given by Scudder in the Publications of the Massachusetts Society for the Promotion of Agriculture, 1883, p. 4. I. Escambia Co.: Aug., SMH. Cottage Hill: Dec., DPI. Quincy: Feb., CPK. Tallahassee: USNM. Monticello: Feb., CPK. II. Olustee: reared from *Pinus elliottii*, March, DPI. Gainesville: Feb., CPK; Sept., DPI. IV. Fort Pierce: Feb., DPI. Food: pine, DPI.

PETROVA Heinrich

6762 P. GEMISTRIGULANA (Kearfott)

Proc. U. S. Natl. Mus. 28: 349. 1905.

There are slight differences in the maculation of Florida and northern specimens, but Miller has done genitalic dissection and has found no differences therein. Florida: Heinrich (1923a, p. 26). I. Escambia Co.: April 23, 1962, SMH. II. Hastings: two May 15, det. Kearfott, AMNH. III. DeLand: March 27, 1954, (Wyatt), USNM. Cassadaga: two April 5-15, 1956, SVF. Weekiwachee Springs: April 20, 1955, det. Clarke, CPK. IV. Archbold Biological Station: four April 8-29, 1958, (Pease), YU.

SPILONOTA Stephens

6768 S. OCELLANA (Denis & Schiffermueller)

Syst. Verz. Wien, p. 130. 1776.

I. Escambia Co.: May 5, 1962, SMH. Food: oak, apple, blackberry, laurel, pear, plum, and *Crataegus*.

STREPSICRATES Meyrick

6769 S. SMITHIANA INDENTANA (Dyar)

Proc. Ent. Soc. Wash. 5: 306. 1903.

This is probably a common species through most of the state, as the records run from Escambia County to Tavernier, December-July, October. It shows a great range of color, which makes it difficult to determine. Food: *Eugenia*; *Myrica cerifera*, DPI; larvae abundant on *Myrica* at St. Augustine, July, AFB; leaf-tier on guava, Jan., DPI.

THIODIA Hübner

6781, 2 T. SP.

I. Escambia Co.: May 17, 1961, det. Freeman as near *scotiana* McDunnough and *annetteana* Kearfott, SMH. It is quite distinct from the next species.

6782, 1 T. SP.

Near *refusana* (Walker). IV. Siesta Key: Feb. 7, 1955, det. Clarke, two Jan. 20, 1952, CPK.

6786 T. RARACANA Kearfott

Trans. Amer. Ent. Soc. 33: 44. 1907.

Florida: Heinrich (1923a, p. 41). I. Escambia Co.: Sept. 9 and 18, 1961, SMH. Myrtle Grove: Sept. 2, 1962, WJW. II. Gainesville: Aug. 19, 1958, (Weems), DPI. III. Weekiwachee Springs: two May 13, 1960, (Mrs. May), CPK. Food: *Solidago*.

6808 T. ORNATULA Heinrich

J. Wash. Acad. Sci. 14: 385. 1924.

I. Escambia Co.: July 3, three Aug. 16-Sept. 1, 1961, SMH. Myrtle Grove: Aug. 30, 1962, WJW.

[6828 *T. dorsiatomana* Kearfott]

Can. Ent. 37: 44, 209. 1905.

IV. Archbold Biological Station: the records for this, Frost (1963, p. 38), are in error for 6228 *Caristanius decoloralis* (Walker), due to a typographical transposition.

6832, 1 T. SP.

VI. Homestead: Nov. 4, 1958, (Wolfenbarger), det. Clarke as "*pallidarcis* group," CPK.

6855 T. VERNIOCHREANA Heinrich

U. S. Natl. Mus. Bull. 123: 67. 1923.

II. Gainesville: twelve Aug. 1927, (Rogers), CU.

6861 T. OFFECTALIS (Hulst)

Trans. Amer. Ent. Soc. 13: 166. 1886.

Florida: Heinrich (1923a, p. 71). Food: "*Artemisia*."

EUCOSMA Hübner

6864 E. QUINQUEMACULANA (Robinson)

Trans. Amer. Ent. Soc. 2: 284. 1869.

Florida: USNM. I. Escambia Co.: Sept. 27, 28, Oct. 1, 1961, SMH. Warrington: VFG. Myrtle Grove: Sept. 18, 1961, WJW. Quincy: Oct. 26, 1960, Oct. 30, 1962, (Tappan), CPK. IV. Archbold Biological Station: Feb. 24, 1959, (Frost),

- PSU. Sarasota: April, AKW. Biscayne Bay: (Slosson), Grsb. 137.
- 6865 E. ROBINSONANA** (Grote)
Pl. XXVI, Fig. 31, ♀.
Can. Ent. 4: 101. 1872.
- Robinsonana* is very similar to the foregoing but separated from it by having the small basal spot followed by two transverse bands instead of one as in *quinquemaculana*. It is a common species from the Georgia line to Homestead, January-August, November.
- 6876 E. ADAMANTANA** (Guenée)
Ann. Soc. Ent. France Ser. 2, 3: 303. 1845.
- Florida: Heinrich (1923a, p. 84). I. Warrington: WJW. Pensacola: Nov. 17, 1962, SMH. Myrtle Grove: Oct. 2, 1961, WJW. Monticello: Oct. 23, 1956, (Phillips), det. Klots, CPK. III. Cassadaga: Oct. 15, 1954, SVF.
- 6908 E. CIRCULANA** Hübner
Zutr. exot. Schmett. 2: Figs. 363, 364. 1823.
- Heinrich (1923a, p. 96) wrote: "Hübner described *circulana* as from Pennsylvania, but I have seen specimens only from Florida and Louisiana. It is not common and the usual references to it in literature apply to *scintillana* Clemens. In Florida itself there appear to be two species or at least two distinct races on the east and west coasts, hardly to be distinguished in color or pattern, but with so much difference in the genitalia that I do not feel justified in including them under the same name. The name *gemellana* is proposed for the west coast specimens." I. Escambia Co.: April 9, May 23, 1961, SMH. II. Hastings: USNM. III. Cassadaga: July 7, 1962, det. Powell, SVF. St. Petersburg: type of *gemellana*, 1884, (Morrison), ex Walsingham collection, USNM; paratype, "4-11-14," (Ludwig), USNM. IV. Oneco: *gemellana*, Sept. 27, 1954, (Dillman), det. Clarke, CPK. Fort Myers: April 22, AMNH. This last would presumably also be *gemellana*.
- 6910 E. FRATRUELIS** Heinrich
U. S. Natl. Mus. Bull. 123: 98. 1923.
I. Escambia Co.: det. Powell, WJW, VFG.
- 6926 E. COCANA** Kearfott
Trans. Amer. Ent. Soc. 33: 26. 1907.
- III. Cassadaga: April 15, 1956, SVF. I have compared this with the type, which is from North Carolina and although the Florida specimen is slightly rubbed, it matches the distinctive maculation of the type.
- 6957 E. GIGANTEANA MINORATA** Heinrich
Pl. XXVI, Fig. 28, ♀.
J. Wash. Acad. Sci. 14: 388. 1924.
- Florida: Heinrich (1923a, p. 115). III. Cassadaga: April, June, SVF. The June specimen, which is the one illustrated, is typical *giganteana* (Riley), as det. Davis. Orlando: April, WMD; April, May, CNC; June, (Fernald), DPI. IV. South Bay: May, AMNH. Food: *Silphium perfoliatum*.
- 6967 E. [GOMONANA** Kearfott]
Can. Ent. 39: 78. 1907.
- All det. Powell with "?." I. Havana: April 18, 1961, CPK. Quincy: March 27, 1961, (Tappan), CPK. IV. Archbold Biological Station: March 2, 1958, (Pease), ABS; one no date, JAP.
- [6972 *E. dorsisignatana diffusana* Kearfott]
Proc. U. S. Natl. Mus. 28: 355. 1905.
- I. Quincy: Nov. 16, 1960, (Tappan), CPK. The specimen is badly rubbed and lacks the abdomen, but there is enough maculation to suggest strongly this form, a very tentative determination with which Forbes tentatively concurs. As Louisiana was the type locality the record is not unreasonable, but needs confirmation.
- [6974 *E. junctiliniiana* (Walsingham)]
Ill. Lep. Het. Br. Mus. 4: 75. 1879.
- Junctiliniiana* was recorded from Florida by Forbes (1923, p. 425) and by Heinrich (1923a, p. 123), but Heinrich's later studies (1929, p. 13) transferred the records to the next species.
- 6975 E. DERELICTA** Heinrich
Proc. U. S. Natl. Mus. 75 (8): 13-14; Pl. 5, Fig. 30. 1929.
- Florida: Heinrich. I. Escambia Co.: Sept. 3, 1961, SMH. Quincy: Oct. 19, 1960, (Tappan), CPK. The determination of this may be open to question as this Quincy specimen is brown rather than reddish. Food: *Solidago*.
- 7003 E. VANDANA** Kearfott
Trans. Amer. Ent. Soc. 33: 24. 1907.
- II. Hastings: types, sixteen March, April, Oct., (Brown), AMNH, USNM. III. Lakeland: June 27, 1935, (Cantrell), UM. IV. Archbold Biological Station: March 26, 1958, YU. Vero Beach: April, USNM. Siesta Key: Jan. 30, 1957, CPK.
- 7004 E. CATACLYSTIANA** (Walker)
List Lep. Ins. Br. Mus. 28: 378. 1863.
- I. Escambia Co.: July 29, 1961, SMH. Ocean City: July, HOH.

7006 E. FLORIDANA Kearfott

Trans. Amer. Ent. Soc. 33: 21. 1907.

In contrast to *vandana*, which is one of those nondescript, blackish species, *floridana* is a rather striking, burnt orange color. II. Hastings: types, seven Oct. 6-15, (Brown), AMNH, USNM.

EPIBLEMA Hübner**7014 E. STRENUANA** (Walker)

Ragweed borer.

List Lep. Ins. Br. Mus. 28: 383. 1863.

Including the so-called form *minutana* Kearfott, this is undoubtedly very common through a large part of the state, as it is abundant where it has been collected. The records run from Monticello to Tavernier, February-November. The larva a stem borer in *Ambrosia artemisifolia* and *A. trifida*.

7015 E. ABRUPTANA (Walsingham)

Ill. Lep. Het. Br. Mus. 4: 53. 1879.

IV. Siesta Key: March 12, 1956, CPK. Punta Gorda: March, MOG. V. Everglades: two April 6, 1912, det. Kearfott, AMNH.

7016 E. NUMEROSANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 317. 1875.

I. Myrtle Grove: April, WJW. IV. Siesta Key: rare, Feb.-May, CPK. Fort Lauderdale: five March-May, UM.

7017 E. GROSSBECKI Heinrich

U. S. Natl. Mus. Bull. 123: 142. 1923.

I. Myrtle Grove: April, WJW. IV. Siesta Key: infrequent, Jan.-June, CPK. Fort Myers: paratypes, AMNH. V. Everglades: types, April, AMNH, USNM. VIII. Tavernier: Sept., Oct., det. Powell, CPK.

7018, 1 E. SEPARATIONIS Heinrich

U. S. Nat. Mus. Bull. 123: 143. 1923.

VIII. Key Largo: Sept. 12, 1955, det. Powell, DPI. Tavernier: two Oct. 6, 1955, (J. N. Todd), det. Powell, CPK.

7020 E. OCHRACEANA Fernald

J. N. Y. Ent. Soc. 9: 51. 1901.

IV. Palm Beach: type, USNM. Lake Worth: (Dyar), Grsb. 137. Adults resting on *Iva imbricata*, very close to the sea, Dyar (1901a, p. 463).

7025 E. TRIPARTITANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 308. 1875.

III. Weekiwachee Springs: April, May, CPK.

Orange Co.: March, May, (Fernald), DPI. St. Petersburg: USNM. IV. Oneco: March, JGF; May, CPK. Archbold Biological Station: March, PSU; April, YU. Vero Beach: USNM. Siesta Key: May, CPK. Punta Gorda: March, MOG. Fort Lauderdale: April, May, UM. Miami: USNM. Coconut Grove: USNM. Food: "*Gutierrezia microcephala*," larva inquiline in cecidomyid galls on *Rudbeckia*.

7027 E. SCUDDERIANA (Clemens)

Pl. XXVI, Fig. 32, ♀.

Proc. Acad. Nat. Sci. Phila., p. 358. 1860.

I. Escambia Co.: April, SMH. Quincy: June, CPK. II. Gainesville: March, May, DPI; July, CU. III. Weekiwachee Springs: Aug., CPK, UM. Orange Co.: Feb., June, DPI. Winter Park: USNM. Orlando: June, July, CU. IV. Oneco: March, JGF. Archbold Biological Station: CU; March, YU; June, AKW. Vero Beach: USNM. Punta Gorda: March, MOG. Food: *Solidago*.

7029 E. DISCRETIVANA (Heinrich)

J. Agr. Res. 20: 823. 1921.

I. Quincy: Feb., CPK. III. Cassadaga: Feb., April, May, SVF. Weekiwachee Springs: April, CPK. VI. Paradise Key: Jan., det. Heinrich, FMJ. Food: "wild myrtle."

7031 E. DESERTANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 306. 1875.

Florida: USNM. I. Escambia Co.: May, SMH. II. Atlantic Beach: (Slosson), Grsb. 138. III. Cassadaga: March, July, SVF. Orlando: USNM. St. Petersburg: USNM. IV. Bradenton: April, CPK. Archbold Biological Station: Feb., PSU; March, YU. Fort Pierce: March, CPK. Siesta Key: Feb., March, CPK. Fort Lauderdale: April, UM. The larva is a gall maker in stems of *Solidago*.

7035 E. WALSINGHAMI (Kearfott)

Trans. Amer. Ent. Soc. 33: 57. 1907.

Florida: Heinrich (1923a, p. 151).

7044 E. OTIOSANA (Clemens)

Bidens borer.

Proc. Acad. Nat. Sci. Phila., p. 354. 1860.

Florida: Heinrich (1923a, p. 154); Walsingham (1884, p. 140). I. Escambia Co.: April 24, May 13, 1961, SMH. II. Gainesville: Oct., DPI. III. Cassadaga: June, Oct., SVF. IV. Bradenton: March, CPK. Oneco: March, JGF. Siesta Key: March, CPK. Food: *Bidens frondosa*, *Polygonum*, *Ambrosia*.

[7047 **E. ABBREVIATANA** (Walsingham)]
Ill. Lep. Het. Br. Mus. 4: 54. 1879.

IV. Siesta Key: May 3, 1946, det. Forbes with
"?", CPK.

SULEIMA Heinrich

7048 **S. HELIANTHANA** (Riley)
Trans. St. Louis Acad. Sci. 4: 319. 1881.

I. Escambia Co.: June 7, 1962, SMH.

SONIA Heinrich

7054 **S. CONSTRICTANA** (Zeller)
Verh. zool.-botan. Ges. Wien 25: 305. 1875.

Constrictana is probably common throughout the state, being recorded from Escambia County and Boulogne to Fort Lauderdale, and abundant wherever collected, August-May.

GYPSONOMA Meyrick

7063 **G. SALICICOLANA** (Clemens)
Proc. Ent. Soc. Phila. 3: 514. 1863.

IV. Hialeah: reared from webbed leaves of *Salix* sp., March 23, 1961, (Nakahara), USNM.

PSEUDEXENTERA Heinrich

7080 **P. SPOLIANA** (Clemens)
Proc. Ent. Soc. Phila. 3: 513. 1864.

VI. Paradise Key: fifteen Feb. 1954, det. Clarke, MOG.

7086 **P. COSTOMACULANA** (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 349. 1860.

I. Escambia Co.: very common, Feb. 1961, det. Freeman, SMH.

GRETCHENA Heinrich

[7088 **G. deludana** (Clemens)]
Proc. Ent. Soc. Phila. 3: 513. 1864.

It would seem advisable to verify this before accepting the species as Florida fauna, as the only record is dated 1905, for larva on pecans, from the Pecan Investigations Laboratory file. This same record is repeated in the Fla. Agr. Exp. Sta. Bull. 79: 285. Heinrich (1923a, p. 181) said the food plant is unknown.

7089 **G. CONCURBITANA** Heinrich
U. S. Natl. Mus. Bull. 123: 181. 1923.

I. Monticello: type, March 15, 1914, (Gill), USNM. IV. Archbold Biological Station: March

6, 1945, (Needham), CU; two March 22-23, 1958, (Pease), YU. Food: *Carya [Hicoria]*, Heinrich.

7092 **G. BOLLIANA** (Slingerland)

Pecan bud moth.
Rural New Yorker, p. 401. 1896.

There are a number of records for the larva on pecan at Monticello, Glen St. Mary, Macclenny, and Gainesville, DPI; Florida Agr. Exp. Sta. Bull. 21: 9-13; Coop. Econ. Ins. Rept. 3: 373; *ibid.* 4: 293; Ins. Pest Surv. Bull. 3: 77. The larva also feeds on hickory and walnut.

GRISELDA Heinrich

7098 **G. PENNSYLVANIANA** (Kearfott)
Trans. Amer. Ent. Soc. 33: 48. 1907.

I. Escambia Co.: VFG; very common, some with the white dorsal patches strongly tinged with green, Feb. 1961, SMH. II. Gainesville: Feb. 2, 1958, (Perry), DPI. IV. Siesta Key: Feb. 17, 1956, det. Clarke, CPK.

CROCIDOSEMA Zeller

7101 **C. PLEBEIANA** Zeller
Isis, p. 721. 1847.

I. Escambia Co.: Oct., SMH. Quincy: Oct., Nov., CPK. II. High Springs: larvae on okra, Jan., Ins. Pest Surv. Bull. 9: 3. Gainesville: Feb., DPI. III. Mount Dora: larva on okra, Dec., DPI. IV. Bradenton: Jan., March, April, Dec., CPK. Oneco: May, June, CPK. Archbold Biological Station: Jan., Dec., YU. Jensen: larva on lima beans, March, UFES. Hobe Sound: larva on lima beans, March, UFES. Siesta Key: often common, Dec.-June, CPK. Punta Gorda: May, MOG. Pompano: larva on lima beans, Feb., UFES. Miami: DPI. Hialeah: reared from *Sida rhombifolia*, April, (Stegmaier), DPI. VI. Homestead: Feb., DPI; Feb., April, May, CPK. VIII. Tavernier: Sept., Oct., CPK. Key West: larva in pods of *Turnera ulmifolia*, April, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 6. Food: Malvaceae and *Crataegus*.

EPINOTIA Hübner

7113 **E. PERPLEXANA** (Fernald)
J. N. Y. Ent. Soc. 9: 51. 1901.

I. Escambia Co.: Oct., SMH. Myrtle Grove: Aug., WJW. IV. Oneco: May, CPK. Siesta Key: Dec.-Feb., April, May, CPK. Palm Beach: type, USNM. V. Everglades: April, AMNH.

7155 **E. UNICA** Heinrich
U. S. Natl. Mus. Bull. 123: 221. 1923.

IV. Punta Gorda: April, det. Clarke, MOG. Food: *Centrosema virginianum* [*Bradburya virginiana*].

7157 **E. TIMIDELLA** (Clemens)
Proc. Ent. Soc. Phila. 1: 96. 1861.

I. Escambia Co.: March 24 and 27, 1962, SMH. IV. Archbold Biological Station: March 10, 1962, (Frost), PSU.

7174, 1 **E. LANTANA** Busck
Proc. Ent. Soc. Wash. 12: 132. 1910.

Florida: June 1943-June 1945, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4. III. Tampa: larva on *Lantana aurora*, May 23, 1944, det. Heinrich, DPI; seven all ex *L. aurora*, May 1944, USNM. IV. Archbold Biological Station: Jan. 10, 1962, (Frost), det. Powell, PSU. Siesta Key: Dec.-Feb., May, det. Powell, CPK. VI. Homestead: March, May, (Wolfenbarger), det. Powell, CPK.

ANCHYLOPERA Stephens

7189 **A. PLATANANA** Clemens
Proc. Acad. Nat. Sci. Phila., p. 349. 1860.

I. Escambia Co.: May 22, 1962, SMH. II. Alachua Co.: three reared from *Platanus occidentalis*, July 1, 1959, (Denmark), DPI, CPK. Gainesville: Nov. 13, 1959, Coop. Ins. Pest Surv. 7: 32.

ANCYLIS Hübner

7193 **A. COMPTANA FRAGARIAE**
(Walsh & Riley)

Strawberry leaf roller.
Amer. Ent. 1: 89. 1869.

I. Escambia Co.: April, Sept., SMH. Quincy: March, May, June-Sept., Nov., CPK. III. Winter Garden: March 29, 1948, det. Heinrich, DPI. IV. Bradenton: Aug., CPK. Oneco: May, CPK. Food: strawberry, raspberry, blackberry, and perhaps *Solidago*.

7193, 1 **A. FLORIDANA** (Zeller)
Verh. zool.-botan. Ges. Wien 25: 258. 1875.

Forbes maintains that this is distinct from *comptana*. II. Alachua Co.: Sept., DPI. Gainesville: Feb., (Morse), DPI; June, July, (Rogers), CU. IV. Bradenton: Feb., CPK.

7194 **A. DIVISANA** (Walker)
List Lep. Ins. Br. Mus. 28: 385. 1863.

I. Escambia Co.: June 23, 1961, SMH. Myrtle Grove: Sept. 4, 1963, WJW. IV. Oneco: March, det. Clarke, JGF; May, CPK.

7196 **A. MURICANA** Walsingham

Ill. Lep. Het. Br. Mus. 4: 74. 1879.

I. Escambia Co.: May 6, 1962, det. Davis, SMH.

7198 **A. DIMINUTANA** (Haworth)
Lep. Brit., p. 452. 1812.

VI. Paradise Key: Jan., det. Heinrich, FMJ. Food: *Salix*.

7199 **A. GOODELLIANA** (Fernald)

Trans. Amer. Ent. Soc. 10: 69. 1882.

Florida: Heinrich (1923a, p. 250). III. Cassadaga: Jan. 29, 1963, SVF.

HYSTRICOPHORA Walsingham

7216 **H. DECOROSA** Heinrich

Proc. U. S. Natl. Mus. 75 (8): 20. 1929.

III. Enterprise: type, April 16, USNM; paratype, April 17, AMNH. Cassadaga: April 29, 1953, det. Clarke, SVF. IV. Punta Gorda: May, det. Clarke, MOG; May 5, 1941, AKW.

7217 **H. VESTALIANA** (Zeller)

Verh. zool.-botan. Ges. Wien 25: 286. 1875.

Florida: Heinrich (1923a, p. 259). III. Cassadaga: April 22, 1961, SVF.

Subfamily LASPEYRESIINAE

SATRONIA Heinrich

7232 **S. TANTILLA** Heinrich

U. S. Natl. Mus. Bull. 132: 17. 1926.

II. Starke: larva on *Pinus palustris*, May 28-June 1, 1929, (Harper), Heinrich (1931, p. 13). Archer: type, May 4, 1882, USNM.

RICULA Heinrich

7233 **R. MACULANA** (Fernald)

J. N. Y. Ent. Soc. 9: 51. 1901.

IV. Palm Beach: type series, reared from *Schoepfia arborescens*, Feb., Dyar (1901a, p. 469). Miami: larva on *S. chrysophylloides* [*phylloides*], April, DPI. Coral Gables: larva on same, March, DPI. VI. Homestead: larva on same, May, DPI.

TALPONIA Heinrich

7234 **T. PLUMMERIANA** (Busck)

Proc. Biol. Soc. Wash. 19: 181. 1906.

I. Escambia Co.: Feb. 1961, SMH. Food: *Asimina triloba*, feeding on the flowers.

HEMIMENE Hübner

7239, 1 H. SP.

Near *diagrapta* Meyrick. IV. Siesta Key: May 11, 1957, det. Clarke, CPK. VI. Homestead: March 31, 1959, (Wolfenbarger), reared from larvae feeding on *Calocarpus sapota* flowers, April 2, 1963, CPK.

ETHELGODA Heinrich

7240 E. TEXANANA (Walsingham)

Ill. Lep. Het. Br. Mus. 4: 70. 1879.

IV. Fort Lauderdale: April 22, 1928, (Bates), det. Clarke, UM. Biscayne Bay: USNM.

SEREDA Heinrich

7241 S. LAUTANA (Clemens)

Proc. Ent. Soc. Phila. 5: 139. 1865.

I. Escambia Co.: Feb. 7, 1962, SMH.

GRAPHOLITHA Treitschke

7242 G. MOLESTA (Busck)

Oriental fruit moth

J. Agr. Res. 7: 373. 1916.

There are numerous reports of *molesta* ranging from Escambia to Polk County, on nectarine, pecans, and stone and pome fruits, DPI; Fernald (1926, p. 245); Ins. Pest Surv. Bull. 4: 308; *ibid.* 10: 101; *ibid.* 19: 441; *Litchi chinensis*, Coop. Ins. Pest Surv. 6: 35.

7244 G. PACKARDI Zeller

Verh. zool.-botan. Ges. Wien 25: 300. 1875.

I. Escambia Co.: Feb. 19, 1962, SMH.

7258 G. TRISTRIGANA (Clemens)

Proc. Ent. Soc. Phila. 5: 133. 1865.

Florida: Heinrich (1926, p. 39). I. Escambia Co.: May 12, 1962, SMH. Avalon: March 27, 1948, DPI. IV. Siesta Key: April 11, 1955, det. Clarke, March 31, 1954, March 12, May 2, 1956, CPK. V. Marco: April 20, AMNH. Food: *Baptisia*, *Lupinus*.

LASPEYRESIA Hübner

7274 L. PALMETUM Heinrich

Proc. Ent. Soc. Wash. 30: 109. 1928.

VI. Homestead: May 23, 1958, (Wolfenbarger), CPK. Paradise Key: types, four, reared from small berry-like fruit, possibly *Ardisia escallonioides* [*Icacorea paniculata*], March 8, 1927, FMJ. VIII. Big Pine Key: April, CPK.

7280 L. CARYANA (Fitch)

Hickory shuckworm.

Third Rept. Ins. of N. Y., p. 459. 1856.

There are a number of important economic records from Jefferson, Duval, and Alachua Counties. Larva mining shucks of developing hickory nuts, Fla. Agr. Exp. Sta. Bull. 79: 304. Larva in pecans, Ins. Pest Surv. Bull. 8: 27; *ibid.* 17: 399; U. S. Dept. Agr. Farmers' Bull. 843: 9; DPI; Coop. Econ. Ins. Rept. 3: 212. Larva in hickory nuts and *Phylloxera* galls, Hill (1938, p. 10). Adult emergences, March, Coop. Ins. Pest Surv. 7: 33.

7287, 1 L. SP.

This is near *gallaesaliciana* (Riley). IV. Siesta Key: Feb. 14, 1955, det. Clarke, CPK.

7287, 2 L. SP.

This is another unrecognized species, of which there is a specimen from Maryland in the U. S. National Museum. I. Myrtle Grove: March 18, 1963, WJW. II. Gainesville: Feb., CPK. Crescent City: reared from *Polystichum*, Dec., DPI. IV. Oneco: March 31, 1954, det. Clarke, JGF. Siesta Key: Feb., CPK. VI. Homestead: Feb., CPK.

7291 L. FLAVICOLLIS (Walsingham)

Proc. Zool. Soc. London, p. 130. 1897.

V. Everglades: one female April 8-15, AMNH.

7296 L. INGENS Heinrich

U. S. Natl. Mus. Bull. 132: 63. 1926.

I. Escambia Co.: April, SMH. II. Olustee: reared from mature cones of *Pinus taeda*, Dec., (Merkel) Southeastern Forest Experiment Station. The two specimens are small, 11 mm, and the course of the subterminal band is not like *ingens*, nor *toreuta* Grote. They may represent a new species. Merkel plans to make more rearings. Gainesville: June, CU. III. Central Florida: April, WMD. Ocala National Forest: April, DPI. DeLand: MOG. Cassadaga: April, May, SVF. Weekiwachee Springs: April 8, 1955, (May), det. Clarke, CPK. St. Petersburg: type, USNM. IV. Oneco: March, det. Clarke, JGF. Punta Gorda: MOG.

7296, 1 L. ANARANJADA Miller

Fla. Ent. 42: 131. 1959.

Anaranjada also has been found in Georgia, where it has been reared on *Pinus palustris* cones. I. Warrington: May 24, 1961, VFG. II. Alachua Co.: May, DPI. Gainesville: April 26, 1963, DPI. Olustee: Jan., DPI; three, reared from *Pinus elliottii*, emerging April 17, April 24,

May 7, 1957, (Merkel), USNM. III. Cassadaga: six June, Sept., SVF. IV. Archbold Biological Station: one June 12-19, 1955, (Wyatt), USNM. Siesta Key: three May 14-19, 1956; three May 18-28, 1957, CPK, USNM. VI. Homestead: April, May, CPK. These Homestead specimens were not taken in time to be included in Miller's description.

MELISSOPUS Riley

7300 M. LATIFERREANUS (Walsingham)

Filbertworm.

Ill. Lep. Het. Br. Mus. 4: 70. 1879.

Florida: Heinrich (1926, p. 67). I. Escambia Co.: June, July, SMH. Myrtle Grove: Oct., WJW. Ocean City: Aug., HOH. II. Gainesville: Sept., Oct., DPI. III. Cassadaga: July 9, 1962, Nov. 6, 1955, SVF. Gabriella: Nov. 19, 1947, DPI. St. Petersburg: Nov. 17, 1959, AKW. IV. Archbold Biological Station: June 1956, AKW. Siesta Key: May, Oct., CPK. Food: oak acorns, beech nuts, and chestnut burrs.

CARPOCAPSA Treitschke

7301 C. POMONELLA (Linnaeus)

Codling moth.

Syst. Nat. 1: 538. 1758.

I. Gonzalez: larva on quince, Oct., DPI. Blountstown: Aug., DPI. II. Lake Butler: larva on pear fruit, Aug., DPI. III. Ocala: larva in may haws, May, DPI. There are also a number of customs interception records, DPI.

7301, 1 C. SALTITANS Westwood

Proc. Ent. Soc. London (3), 27: 34. 1854.

III. St. Petersburg: twenty to thirty, reared from Mexican jumping beans from a local grocery, April 1960, AKW.

GYMNANDROSOMA Dyar

7302 G. PUNCTIDISCANUM Dyar

Proc. Ent. Soc. Wash. 6: 60. 1904.

Florida: Heinrich (1926, p. 72). I. Escambia Co.: May, SMH. Myrtle Grove: June, WJW. Quincy: May, CPK. II. Gainesville: Sept. 3, 1956, DPI. III. Central Florida: two May 1957, WMD. Cassadaga: April, June, July, Sept., Oct., 1962, SVF. IV. Sarasota: June 20, Oct. 28, 1951, (King), CU. Siesta Key: June 2, 1957, det. Clarke, CPK.

7303 G. DESOTANUM Heinrich

U. S. Natl. Mus. Bull. 132: 72. 1926.

III. Cassadaga: Aug. 20, 1962, SVF. IV. Archbold Biological Station: June 1956, AKW. Siesta Key: common, Jan. 4-Feb. 27, 1951, but not seen at any other time, AEB, CPK. Miami Beach: three, reared from larvae feeding in red mangrove seed, June 30, July 21, Aug. 10, 1916, (Snyder), USNM. V. Everglades: types, five April 8-19, USNM. VIII. Tavernier: Oct., (Todd), CPK.

ECDYTOLOPHA Zeller

7304 E. INSITICIANA Zeller

Locust twig borer.

Verh. zool.-botan. Ges. Wien 25: 266. 1875.

Florida: Heinrich (1926, p. 74). Food: *Robinia*, *Wisteria*.

Family TORTRICIDAE

Subfamily SPARGANOTHINAE

Dr. Robert Lambert had nearly completed a revision of the subfamily, before his untimely death, and I was indebted to him for very detailed data on many of the species, as well as for numerous determinations. Lambert made numerous changes in the arrangement, but inasmuch as the publication of his revision has been delayed, it is best to follow here the arrangement of McDunnough's Check-List (1939, pp. 54-57). Nevertheless, in order that the reader might be able to correlate the new species mentioned in the present work with the names as they will appear in his revision, Lambert had assigned numbers to them and to which he planned to refer in the revision. The revision is being completed by Dr. Jerry W. Powell, in whose hands are additional Florida specimens for determination, but they have been available to him for too short a time to add much information. For such information, reference should be made to the revision when it is published.

COELOSTATHMA Clemens

7307 C. DISCOPUNCTANA Clemens

Proc. Acad. Nat. Sci. Phila. 12: 355. 1860.

I. Escambia Co.: April 11, 1962, SMH. II. Hastings: March, April, det. Lambert, AMNH.

7307, 1 C. SP. Lambert's No. 1

I. Escambia Co.: Feb., SMH. Torreya State Park: April, CNC. III. Lake Alfred: July, Aug., USNM. St. Petersburg: USNM. IV. Oneco: March, CU. Archbold Biological Station: March, April, CU. Siesta Key: two April 26-May 14, 1956, CPK. VI. Paradise Key: March, CU; April, CNC. VI. Homestead: April, CPK.

AMORBIA Clemens

7312, 1 A. SP. Lambert's No. 4

All determinations by Lambert. IV. Port Sewall: one March 28-31, 1949, (Sanford), AMNH. Miami: March, USNM; on flowers of avocado, April, USNM.

7314 A. HUMEROSANA Clemens

Proc. Acad. Nat. Sci. Phila. 12: 352. 1860.

I. Escambia Co.: Feb., March, SMH; March 17, 1961, VFG. III. Cassadaga: Oct. 13, 1960, det. Obraztsov, SVF. IV. Port Sewall: ten Nov. 26-Dec. 27, 1938, (Sanford), det. Lambert, AMNH.

SPARGANOTHIS Hübner

7317 S. PETTITANA (Robinson)

Trans. Amer. Ent. Soc. 2: 269. 1869.

I. Escambia Co.: May 21, 1961, SMH. Warrington: June 13, 1962, VFG. Myrtle Grove: June 1, 1963, WJW. Ocean City: April, May, HOH. II. Gainesville: May 1926, (Bates), det. Beebe, UM. Putnam Co.: reared from *Quercus laevis*, April 26, 1960, (Dekle and Bottimer), DPI. III. St. Petersburg: three females, det. Lambert, USNM.

7322 S. KARACANA (Kearfott)

Pl. XXVI, Fig. 33, ♂.

Trans. Amer. Ent. Soc. 33: 68. 1907.

This species will be transferred by Lambert to another genus. III. Cassadaga: April 28, May 19, 1962, May 2, 1953, SVF. St. Petersburg: July 30, 1923, det. Lambert, USNM. IV. Archbold Biological Station: seventeen females, May 21, 1947, (Needham), det. Lambert, CU.

7323 S. RETICULATANA (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 353. 1860.

I. Escambia Co.: May, July, SMH. Warrington: June 9, 1962, VFG. II. Alachua Co.: June 7, 1958, (Denmark), DPI.

7325 S. DILUTICOSTANA (Walsingham)

Ill. Lep. Het. Br. Mus. 4: 18. 1879.

I. Escambia Co.: May 22, 1962, SMH.

7327 S. TESTULANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 241. 1875.

I. Ocean City: May 21, 1963, HOH.

7328 S. DISTINCTA (Walsingham)

Trans. Ent. Soc. London, p. 126. 1884.

Florida: (Slosson), Grsb. 139. I. Myrtle Grove:

June, WJW. Quincy: July, CPK. II. Gainesville: Sept., Oct., AMNH. III. Cassadaga: May, June, SVF. Weekiwachee Springs: May, June, CPK. Moon Lake: April, CNC. Elfers: April, CNC. Winter Park: July, AMNH. St. Petersburg: April, May, USNM. IV. Archbold Biological Station: May, CU; May, Dec., YU. Siesta Key: Feb., CPK. Punta Gorda: May, USNM. Biscayne Bay: AMNH. VI. Paradise Key: April, CNC.

7330 S. DEMISSANA (Walsingham)

Ill. Lep. Het. Br. Mus. 4: 19. 1879.

The record, Florida: (Slosson), Grsb. 139, was transferred by Lambert to *distincta*, q. v. I. Escambia Co.: April 29, 1962, SMH. III. Juniper Springs: Sept. 1, 1938, (Hubbell & Friauf), UM. Cassadaga: June, SVF. Weekiwachee Springs: May, CPK. IV. Archbold Biological Station: March, Dec., YU; April, PSU. Siesta Key: March 26, 1952, det. Clarke, CPK. VI. Homestead: July, CPK.

7332 S. CANA Robinson

Trans. Amer. Ent. Soc. 2: 276. 1869.

I. Escambia Co.: June 2, 1961, SMH.

7348 S. CARYAE (Robinson)

Trans. Amer. Ent. Soc. 2: 270. 1869.

III. Ocala National Forest: July, UM. Weekiwachee Springs: May, CPK. Cassadaga: July, det. Clarke, SVF. St. Petersburg: Feb., det. Lambert, USNM. IV. Oneco: March, det. Clarke, JGF. Archbold Biological Station: July, det. Lambert, AMNH. Punta Gorda: April, det. Lambert, USNM.

7349 S. SULFUREANA (Clemens)

Proc. Acad. Nat. Sci. Phila. 12: 353. 1860.

Most of the determinations were made by Lambert, but in view of the fact that both this and the closely related *belfrageana*, which Lambert found distinct, are probably generally distributed, any errors are relatively unimportant. I. Quincy: June, Oct., CPK. Monticello: Feb., CPK. II. Gainesville: Feb., DPI; Sept., Oct., AMNH; Dec., UM. Hastings: April, Oct., AMNH. III. Marion Co.: June, UM. Cassadaga: June, SVF. Lake Co.: Aug., UM. Elfers: April, CNC. Orlando: larva in *Helenium incisum* [*helenium*], May, USNM. Winter Park: July, Sept., AMNH. Stemper: June, July, USNM. St. Petersburg: March, May, USNM. Lake Alfred: June, July, USNM. Lakeland: March, May, AMNH. IV. Bradenton: March-May, July, Nov., Dec., CPK. Oneco: March, CU; May, CPK. Myakka City: Feb., CU. Archbold Biological

Station: Jan., Dec., YU; March, Dec., CU; July, AMNH. Stuart: Dec.-Feb., DPI. Sarasota: Feb., CU. Siesta Key: Jan., Feb., May, CPK. Punta Gorda: April, CNC, MOG. Fort Myers: April, AMNH. Fort Lauderdale: March, UM. 16 miles west of Hialeah: March, CNC. VI. Homestead: March, DPI; March, April, CNC; March, April, July, Sept., Nov., CPK. Paradise Key: Jan.-April, Sept., USNM; April, CNC; Dec., AMNH.

7349, 1 S. BELFRAGEANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 232. 1875.

I. Escambia Co.: Jan., Feb., SMH. Warrington: VFG, WP. Crestview: Oct., AMNH. DeFuniak Springs: Oct., AMNH. Quincy: Sept., CPK. II. Gainesville: April, CNC; June, July, CU; Sept., Oct., AMNH. Hastings: June, AMNH. III. Cassadaga: June, Sept., SVF. Elfers: April, CNC. Winter Park: May, Sept., AMNH; June, July, USNM. St. Petersburg: April-July, USNM. Lake Alfred: July, USNM. IV. Archbold Biological Station: April, May, Dec., CU; July, AMNH; Dec., YU. Indian Town: in *Solanum* sp., May, USNM. IV. Sarasota: Feb., CU. Englewood: March, CU. Fort Lauderdale: Aug., USNM. VI. Princeton: April, CNC. Homestead: April, CNC; Nov., CPK. Paradise Key: March, CU.

7352 S. TARACANA Kearfott

Trans. Amer. Ent. Soc. 33: 66. 1907.

II. Hastings: types, Feb.-April, Sept., Oct., AMNH, USNM. III. Cassadaga: March, SVF. Weekiwachee Springs: May, CPK. St. Petersburg: Feb., det. Lambert, USNM. IV. Archbold Biological Station: Dec., det. Lambert, CU. Fort Lauderdale: May, UM.

[7353, 1 *S. calidana* (Zeller)]

Hor. Soc. Ent. Ross. 13: 16. 1881.

IV. Lake Worth: larva feeding on *Eugenia* sp., det. Fernald with "?, " Dyar (1901a, p. 468).

7355 S. BISTRATA Kearfott

Trans. Amer. Ent. Soc. 33: 67. 1907.

Florida: type female, AMNH; lectotype male, USNM. I. Quincy: April 28, 1962, (Tappan), CPK. III. Cassadaga: June 24, Aug. 30, 1962, SVF. Dunedin: April 24, 1925, (Blatchley), det. Lambert, ANSP. St. Petersburg: Feb., March, det. Lambert, USNM. Fort Meade: April, det. Lambert, USNM.

7356 S. TRISTRATA Kearfott

Trans. Amer. Ent. Soc. 33: 67. 1907.

II. Gainesville: June 30, 1959, (Perry), det. Obraztsov, DPI. III. Weekiwachee Springs: May 13, 1960, (Mrs. May), det. Obraztsov, CPK. IV. Port Sewall: three Dec. 13-17, 1938, (F. E. Watson & Sanford), det. Lambert, AMNH.

7356, 1 S. SP. Lambert's No. 1

I. Crestview: Oct., AMNH. II. Hastings: Feb., April, June, AMNH.

7356, 2 S. SP. Lambert's No. 3

Florida: USNM. I. Crestview: Oct., AMNH. De Funiak Springs: Oct., AMNH. II. Gainesville: July, CU. Hastings: Feb., AMNH. III. DeLand: March, USNM. Winter Park: May, Sept., Nov., AMNH. Orlando: Feb., April, USNM. Lakeland: March, USNM. IV. Jupiter: Nov., AMNH. Punta Gorda: April, USNM. VI. Florida City: Feb., USNM.

CENOPIS Zeller

7356, 3 C. SP. Lambert's No. 3

Florida: one male, one female, AMNH.

7326 C. DIRECTANA (Walker)

List Lep. Ins. Br. Mus. 28: 309. 1863.

III. Lake Alfred: one female, (Bottimer), USNM.

PLATYNOTA Clemens

7357 P. FLAVEDANA Clemens

Proc. Acad. Nat. Sci. Phila. 12: 348. 1860.

Most of the determinations were made by Lambert. Florida: (Slosson), AMNH. I. Escambia Co.: April, SMH. Brent: March, VFG. Quincy: June, Oct., CPK. II. Archer: March, USNM. Gainesville: April, DPI; larva on cowpeas, June, USNM. Crescent City: larva folding cotton leaf, July, USNM. III. DeLand: March, det. Clarke, MOG; April, USNM. Cassadaga: June, Aug., Sept., SVF. Winter Park: Sept., DPI. Orlando: Feb., March, USNM. St. Petersburg: USNM. Tampa: from *Sesbania vesicaria*, June, USNM. IV. Archbold Biological Station: Nov., CU; Dec.-Feb., YU. Sarasota: March, USNM. Siesta Key: Jan.-April, CPK. Punta Gorda: April, USNM. Fort Myers: June, USNM. Biscayne Bay: (Slosson), Grsb. 139. VIII. Tavernier: Sept., Oct., CPK. Plantation Key: Nov., CPK.

[7358 *P. tinctana* (Walker)]

List Lep. Ins. Br. Mus. 28: 289. 1863.

The determination of this is doubtful. IV. Biscayne Bay: (Slosson), Grsb. 139.

7361 P. ROSTRANA (Walker)

List Lep. Ins. Br. Mus. 28: 290. 1863.

Rostrana is abundant and probably found throughout the state the entire year although there are only two records from the western counties, namely, Avalon, DPI and Quincy, CPK. Lambert supplied the following Florida food plant records: avocado, pepper, Cuban jessamine, chrysalis on peanut, myrtle, orange, grapefruit, loquat, *Sesbania vesicaria*, and pecan. Dyar (1901a, p. 467) recorded it on *Rivinia humilis*, *Randia aculeata*, *Gnaphalium purpureum*, and *Rapanea guayanensis* [*Myrsine floridana*] Fernald (1882, p. 22) mentioned the leaves of orange as food plant, *Citrus paradisi*, DPI.

7364 P. METALLICANA (Walsingham)

Trans. Ent. Soc. London, p. 497. 1895.

Florida: Dyar (1902, p. 482). III. Levy Co.: June, CPK. Cassadaga: Aug. 3, 1953, det. Clarke, SVF.

7365 P. IRIDANA Barnes & Busck

Contrib. 4: 212. 1920.

II. Gainesville: June 14, 1961, (Denmark), CPK.
III. St. Petersburg: type, April, USNM.

7367 P. STULTANA (Walsingham)

Trans. Ent. Soc. London, p. 127. 1884.

Florida: det. Lambert, USNM. The following are mostly larval records. II. Gainesville: African violet, July, DPI. III. Zellwood: orange, Jan., DPI. IV. Bradenton: larva on *Dianthus caryophyllus*, emerged April 15, adult det. Clarke, Coop. Ins. Pest Surv. 6: 33. Archbold Biological Station: Easter lily, July, DPI. Jensen: lemon, March, DPI. Osprey: lychee tree, Coop. Econ. Ins. Rept. 4: 509. Siesta Key: May, CPK. Coconut Grove: *Pithecellobium*, Feb., DPI. VI. Homestead: avocado, Aug., Coop. Econ. Ins. Rept. 4: 769; July, Aug., CPK. VIII. Key Largo: mango, May, DPI; rose, citrus, lime, June, DPI.

7369 P. IDAEUSALIS (Walker)

List Lep. Ins. Br. Mus. 19: 839. 1859.

I. Monticello: April 15, 1919, (Hoffman), det. Lambert, CU.

CHRYSOXENA Meyrick**7375 C. AURIFERANA** (Busck)

Proc. U. S. Natl. Mus. 40: 227. 1912.

According to Lambert, this is not a Sparganothinae, though a Tortricidae; but until it is placed, it is best to leave it here. Florida: Meyrick (1911, p. 685).

CAPUA Stephens[7376 *C. lentiginosana* Walsingham]

III. Lep. Het. Br. Mus. 4: 22. 1879.

IV. Palm Beach: determined with "?," Dyar (1901a, p. 468).

APHELIA Stephens**7410 A. PALLORANA** (Robinson)

Trans. Amer. Ent. Soc. 2: 266. 1869.

III. Brevard Co.: May 16, 1946, (Hubbell), UM.

ARGYROTOXA Stephens**7467 A. CHIOCCANA** (Kearfott)

Trans. Amer. Ent. Soc. 33: 72. 1907.

IV. Palm Beach: type, AMNH. This was originally determined as *Cacoecia georgiana* [*Archips georgiana*] Walker in Dyar (1901a, p. 466) and that record was repeated in Grsb. 140.

7469 A. ALBICOMANA (Clemens)

Proc. Ent. Soc. Phila. 5: 137. 1865.

II. Gainesville: April 28, 1947, (Weems), det. Forbes, DPI. Jacksonville: April 1955, HEW.

7470 A. SEMIPURPURANA Kearfott

Can. Ent. 37: 9. 1905.

I. Escambia Co.: May 3, 1962, SMH.

7471 A. CURVALANA (Kearfott)

Trans. Amer. Ent. Soc. 33: 73. 1907.

IV. Punta Gorda: March, MOG.

Subfamily **ARCHIPINAE**

The nomenclature and arrangement follow that of Freeman in his recent revision, 1958.

ARCHIPS Hübner**7379 A. INFUMATANUS** (Zeller)

Verh. zool.-botan. Ges. Wien 25: 216. 1875.

Florida: Freeman (1958, p. 20). II. Gainesville: April 1955, (Hetrick), det. Freeman, CPK.

7393 A. SEMIFERANUS (Walker)

List Lep. Ins. Br. Mus. 28: 336. 1863.

II. Gainesville: May 1958, (Hetrick), det. Obraztsov, CPK. III. Cassadaga: May 5, 1961, SVF.

7394 A. NEGUNDANUS (Dyar)

Proc. Ent. Soc. Wash. 5: 78. 1902.

Florida: Freeman (1958, p. 21).

7384 A. CERACIVORANUS RILEYANUS

(Grote)

Trans. Amer. Ent. Soc. 2: 121. 1868.

I. Escambia Co.: May 19, 1962, SMH. Food: *Carya*, *Symphoricarpos*, *Prunus*, *Juglans*, *Vernonia*, *Aesculus*.**7388 A. ARGYROSPILUS (Walker)****Fruit-tree leaf roller.**

List Lep. Ins. Br. Mus. 28: 373. 1863.

Florida: (Slosson), Grsb. 139. I. Warrington: May, VFG. Panama City: larva common on quince, Dec. 1930, DPI. III. Central Florida: March 1957, WMD. IV. Punta Gorda: March, MOG.

7385 A. GEORGIANUS (Walker)

List Lep. Ins. Br. Mus. 28: 372. 1863.

Florida: USNM. I. Warrington: May, VFG. Ocean City: May, HOH. II. Jacksonville: (Slosson), Grsb. 139. Putnam Co.: reared from *Quercus laevis*, April 26, 1960, (Dekle & Bottimer), DPI. III. Enterprise: USNM. Cassadaga: April, May, SVF. Weekiwachee Springs: April, May, CPK. Winter Park: May, DPI, USNM. Tarpon Springs: April, USNM. Egmont Key: April 18, 1904, det. Dyar, UM; April 28, 1904, AKW. Lakeland: USNM. IV. Siesta Key: April, CPK. Punta Gorda: AKW; May, MOG. West Palm Beach: March, USNM. Palm Beach: Dyar (1901a, p. 466). However, Kearfott (1907, p. 73) pointed out that this last specimen is actually *Argyrotoxa chioccana* Kearfott, q. v.**7399 A. PURPURANUS (Clemens)**

Proc. Ent. Soc. Phila. 5: 136. 1865.

Florida: Freeman (1958, p. 30).

CHORISTONEURA Lederer**7408 C. FUMIFERANA (Clemens)**

Proc. Ent. Soc. Phila. 5: 139. 1865.

I. Escambia Co.: a purplish color form, Feb. 2, 1962, SMH. II. Gainesville: two April 1955, (Hetrick), det. Obraztsov, CPK, AMNH.

7386, 1 C. SP.Near *houstonana* (Grote). II. Gainesville: three April, (Hetrick), det. Clarke, UFA, CPK.**7405 C. ROSACEANA (Harris)****Oblique-banded leaf roller.**

Rept. Ins. Mass., p. 348. 1841.

I. Warrington: rare, summer, VFG. Myrtle Grove: June, WJW. Chipola: April, CU. Quincy: April, May, CPK. Jefferson Co.: April, UM.

II. Gainesville: May, UM. III. Cassadaga: May, SVF. Weekiwachee Springs: April, May, CPK. Winter Park: Aug., DPI. IV. Archbold Biological Station: Jan., PSU; Dec., YU. Punta Gorda: April, AKW. Food: celery, Bare (1934, p. 720).

7401 C. PARALLELA (Robinson)

Trans. Amer. Ent. Soc. 2: 267. 1869.

II. Gainesville: larva on red maple, March 24, 1938, (Tissot), UFES.

7381 C. OBSOLETANA (Walker)

List Lep. Ins. Br. Mus. 28: 288. 1863.

Florida: as *sanbornana* Robinson (1869, p. 265). I. West Pensacola: July, VFG. II. Gainesville: April, DPI. III. Central Florida: April, WMD. Marion Co.: Sept., UM. Altamonte Springs: USNM. Cassadaga: July, SVF. Sanford: larva on celery, Bare (1934, p. 721). Goldenrod: Dec., DPI. Winter Garden: June, DPI. Ocoee: May, DPI. Gotha: May, DPI. Vineland: June, DPI. Windermere: June, DPI. IV. Bradenton: larva on celery, Bare. Archbold Biological Station: Nov., PSU. Sarasota: Aug., CPK. Englewood: Nov., CPK.**7382 C. SEMINOLANA (Kearfott)**

Trans. Amer. Ent. Soc. 33: 71. 1907.

Florida: types, eight, AMNH. IV. Palm Beach: (Dyar), Grsb. 140. Food: *Chiococca alba* [race-mosa].**ARGYROTAENIA Stephens**

The arrangement is according to Freeman's revision (1944).

7443 A. VELUTINANA (Walker)**Red-banded leaf roller.**

List Lep. Ins. Br. Mus. 28: 313. 1863.

Florida: Forbes (1923, p. 490). It is possible that the record belongs under the recently described species which follows.

7443, 1 A. FLORIDANA Obraztsov

Amer. Mus. Nov. 2048: 8. 1961.

I. Escambia Co.: Feb. 2 and 7, 1962, det. Powell and Hodges, SMH. Quincy: three Feb. 27-28, 1962, (Tappan), CPK, JAP. III. Cassadaga: Oct. 2, 1962, det. Powell, SVF. IV. Port Sewall: types, two Nov. 13-14, two Dec. 13-17, 1938, (F. E. Watson), AMNH.

7443, 2 A. KIMBALLI Obraztsov

Amer. Mus. Nov. 2048: 13. 1961.

III. Cassadaga: Aug. 28, 1962, SVF. IV. Bradenton: May 25, 1955, (Kelsheimer), CPK. Archbold Biological Station: types, Jan. 5, Feb. 10,

and 22, 1958, Dec. 25, 1957, (Pease), AMNH, YU; three Dec. 31, 1959-Jan. 14, 1960, (Frost), CPK, PSU. VI. Homestead: four March 6-April 16, 1959, (Wolfenbarger), CPK.

7445 A. PINATUBANA (Kearfott)

Pine tube moth.

Can. Ent. 37: 9. 1905.

Florida: larva on pine, Herrick (1935, p. 255); on white pine as *Lophoderus politana* (Comstock) (1895, p. 246). I. Escambia Co.: Feb., SMH. III. Ocala National Forest: July 24, 1938, (Hubbell & Friauf), UM. Cassadaga: July, Nov., SVF. IV. Archbold Biological Station: Dec.-March, YU.

7450 A. MARIANA (Fernald)

Trans. Amer. Ent. Soc. 10: 67. 1882.

Florida: Walsingham (1884, p. 123); Dyar (1902, p. 485); Freeman (1944, p. 86).

7450, I A. TABULANA T. N. Freeman

Sci. Agr. 25: 87. 1944.

I. Escambia Co.: April, SMH. Florida Caverns State Park: April, DPI. III. Cassadaga: March, April, July, SVF. Weekiwachee Springs: Feb., March, May, CPK. All determinations except that for the Escambia County specimen were made by Obraztsov.

[**7414 A. CITRANA** (Fernald)]

Ent. Amer. 5: 18. 1889.

As this is credited only to the Pacific Coast by Freeman, the determinations should be checked. Obraztsov also says that he has seen it only from the Pacific Coast. Florida: larva on young grapefruit and mature orange and grapefruit, Thompson (1939, pp. 146-147). II. Gainesville: larva on orange, May, Ins. Pest Surv. Bull. 8: 110; Oct., UFES. III. Polk Co.: larva abundant on orange, Ins. Pest Surv. Bull. 10: 228. Lake Alfred: larva on citrus, May, *ibid.* 16: 122. IV. St. Lucie Co.: larva on orange, May, *ibid.* 20: 167.

7452 A. QUERCIFOLIANA (Fitch)

Rept. Ins. of N. Y., p. 826. 1858.

I. Quincy: April, CPK. II. Gainesville: April, UM. St. Augustine: larva on live oak, April, Packard (1890a, p. 191). III. Cassadaga: April, May, SVF. Egmont Key: April, UM. IV. Bradenton: March, CPK. Oneco: March, JGF. Punta Gorda: May, MOG.

7454 A. JUGLANDANA (Fernald)

Hickory leaf roller.

Can. Ent. 11: 155. 1879.

I. Escambia Co.: May 13 and 16, 1962, SMH, CPK. III. Weekiwachee Springs: April 1955, (May), CPK. IV. Punta Gorda: det. Clarke, MOG.

7446 A. AMATANA (Dyar)

J. N. Y. Ent. Soc. 9: 24. 1901.

II. Hastings: April, AMNH. IV. Siesta Key: Nov., det. Clarke, April-June, CPK. Palm Beach: type, reared from *Annona glabra [laurifolia]*, Dyar (1901a, p. 468). Delray Beach: April, CPK. Dade Co.: reared from *Eugenia* sp., July, DPI. VI. Perrine: June, Freeman (1944, Pl. 1). Homestead: April-Aug., Oct., Nov., CPK. VIII. Key Largo: Nov., DPI. Tavernier: Sept., Oct., CPK. Food: *Nectandra coriacea [willdenowiana]*.

7451 A. ALISELLANA (Robinson)

Trans. Amer. Ent. Soc. 2: 267. 1869.

Florida: Freeman (1958, p. 52).

7419 A. IVANA (Fernald)

J. N. Y. Ent. Soc. 9: 51. 1901.

Florida: larva on *Iva imbricata*, Fernald; Ins. Pest Surv. Bull. 11: 678. I. Warrington: May, VFG. III. Weekiwachee Springs: March, det. Obraztsov, CPK. IV. Siesta Key: common, Dec.-June, CPK. Belle Glade: larva on celery, Jan., Bare (1934, p. 720). Palm Beach: Dyar (1901a, p. 467). V. Everglades: larva on celery, Coop. Econ. Ins. Rept. 4: 405. VI. Homestead: April-July, Sept., Nov., CPK. Paradise Key: CU. Other food plant records: celery and *Gnaphalium obtusifolium*, Fla. Agr. Exp. Sta. Bull. 239.

ADOXOPHYES Meyrick

7309 A. NEGUNDANA (McDunnough)

Can. Ent. 55: 166. 1923.

Florida: Freeman (1958, p. 57). II. Gainesville: March 30, 1949, (Denmark), DPI.

PTYCHOLOMA Clemens

7420 P. PERITANA (Clemens)

Proc. Acad. Nat. Sci. Phila. 2: 356. 1860.

Probably general throughout the state. I. Warrington: May, VFG. Quincy: March, June, Oct., CPK. II. Gainesville: March, UM; July, CU. Jacksonville: March, HEW. IV. Bradenton: Feb.-July, Sept., Nov., CPK. Oneco: June, CPK. Lake Placid: March, CU. Siesta Key: abundant, Dec.-June, CPK. Englewood: March: CU. VI. Homestead: May, CPK. Florida City: Feb., MOG. Paradise Key: Jan., Feb., FMJ.

Subfamily CNEPHASIINAE

CNEPHASIA Curtis

7460 C. FERNALDANA Walsingham

Ill. Lep. Het. Br. Mus. 4: 47. 1879.

IV. Siesta Key: May 26, 1946, det. Forbes, CPK.

APOTOFORMA Busck

7471, 2 A. ROTUNDIPENNIS (Walsingham)

Proc. Zool. Soc. London, p. 132. 1897.

Florida: Forbes (1930, p. 83). The following are all larval records on acacia from the Division of Plant Industry files, except those from Gainesville, Siesta Key, and Homestead: II. Gainesville: Busck (1933, p. 154). St. Augustine: Oct. III. St. Petersburg: July. Temple Terrace: May. IV. Siesta Key: June 2, 1957, det. Clarke, CPK. Fort Pierce: May. VI. Goulds: June. Homestead: four June, Aug., det. Obraztsov, CPK., AMNH.

ACLERIS Hübner

7497 A. MACULIDORSANA (Clemens)

Proc. Ent. Soc. Phila., 3: 516. 1864.

I. Escambia Co.: Feb. 10, 1963, det. Hodges, SMH.

7503 A. LOGIANA Schiffermueller

Syst. Verz. Wien, p. 130. 1776.

I. Escambia Co.: May 3, 1962, SMH.

Family PHALONIIDAE

The entire family Phaloniidae is in such need of revision, especially the genus *Phalonia*, that very few of the determinations may be considered correct. Fortunately Clarke has undertaken the revision, but it will be some years yet before the task is completed. Meanwhile nearly all the names must be viewed as tentative.

LORITA Busck

7518, 1 L. ABORNANA Busck

Proc. Southern Calif. Acad. Sci. 38: 101. 1939.

IV. Englewood: many larvae, pupae, and imagoes, January-April, 1944, (Needham), CU. The larvae were boring through the flower heads and young seed heads of *Bidens*.

PHALONIA Hübner

Clarke has noted at least seven unrecognized species, most of them from Siesta Key. There

are undoubtedly many more, especially from other parts of the state.

7537 P. SERIATANA (Zeller)

Verh. zool.-botan. Ges. Wien 25: 244. 1875.

II. Gainesville: July, CU. IV. Archbold Biological Station: March, April, CU. Siesta Key: March, Dec., CPK. VI. Paradise Key: March, CU.

7539, 1 P. DORSIMACULANA Robinson

Trans. Amer. Ent. Soc. 2: 285. 1869.

III. Cassadaga: May 30, 1963, det. Davis, SVF.

[7541 *P. obliquana* Kearfott]

Can. Ent. 39: 163. 1907.

II. Hastings: two, AMNH. These have been determined by Clarke as *P. ziscana* Kearfott, q. v., according to Klots (1942, p. 418).

7542 P. ANGULATANA (Robinson)

Trans. Amer. Ent. Soc. 2: 286. 1869.

III. Orlando: June, CU. IV. Myakka City: Feb., CU. Archbold Biological Station: March, CU. V. Everglades: USNM.

7543 P. BOMONANA Kearfott

Trans. Amer. Ent. Soc. 33: 75. 1907.

II. Hastings: co-type, March 19, (Brown), Kearfott.

7545 P. ARGENTILIMITANA (Robinson)

Trans. Amer. Ent. Soc. 2: 287. 1869.

II. Gainesville: July 7, 1929, (Rogers), CU.

7552 P. BISCANA Kearfott

Trans. Amer. Ent. Soc. 33: 75. 1907.

I. Escambia Co.: Oct. 8, Nov. 15, 1961, det. Clarke as presumably this, SMH.

7558 P. BUNTEANA (Robinson)

Trans. Amer. Ent. Soc. 2: 288. 1869.

III. DeLand: March, MOG. Orlando: one June 14-18, 1927, CU. IV. Palm Beach: common, Dyar (1901a, p. 468).

7567 P. OENOTHERANA (Riley)

Trans. St. Louis Acad. Sci. 4: 316. 1881.

I. Escambia Co.: July, SMH. Myrtle Grove: June 12, 1962, WJW. III. Cassadaga: Aug. 4, 1962, SVF. IV. Siesta Key: March 30, 1954, det. Clarke, CPK.

7588 P. ZISCANA Kearfott

Trans. Amer. Ent. Soc. 33: 76. 1907.

II. Hastings: co-types, three Feb. 26, AMNH.

Two of these were originally determined by Kearfott as *P. obliquana* Kearfott, but were subsequently determined as *ziscana* by Clarke as noted above under the former species.

7591, 1 P. SUBOLIVACEA Walsingham
Proc. Zool. Soc. London, p. 137. 1897.

There are two, if not three species mixed here. IV. Archbold Biological Station: March, CU. Siesta Key: abundant, Oct.-May, CPK. Englewood: abundant, reared from *Bidens*, Jan.-April, CU.

COMMOPHILA Hübner

7599 C. CONTRASTANA Kearfott
Can. Ent. 39: 160. 1907.

I. Myrtle Grove: May 2, 1963, WJW. II. Gainesville: May 1, 1962, CPK.

CAROLELLA Busck

7602, 1 C. SP.

There is one, possibly a second species close to *C. sartana* Hübner, belonging here. III. Cassadaga: Sept. 5 and 12, 1962, SVF. IV. Bradenton: April, (Kelsheimer), det. Clarke, CPK.

7603 C. SARTANA Hübner

Zutr. exot. Schmett. 2: 111. 1823.

The separation of the preceding species, this, and the next is based on the bands, or patches, on the forewing. Since the status of the unrecognized species is uncertain, it is difficult to supply a key, but collectors should be on the watch for three, if not four distinct but closely related species. I. Escambia Co.: April, May, July, SMH. Myrtle Grove: Sept., WJW. Monticello: March, CU. II. Gainesville: May, DPL; June, July, CU. Boulogne: April, CU. III. Levy Co.: Sept., DPL. Ocala National Forest: July, UM. III. Cassadaga: June, SVF. Weekiwachee Springs: Aug., CPK. Elfers: April, CU. IV. Oneco: April-June, Oct., CPK. Archbold Biological Station: Jan., Nov., det. Clarke, PSU; March, Nov., Dec., CU; June, AKW. Siesta Key: Jan.-March, May, CPK. Fort Lauderdale: April, UM. VI. Paradise Key: Jan.-April, FMJ.

7604 C. BIMACULANA (Robinson)

Trans. Amer. Ent. Soc. 2: 285. 1869.

Florida: May, UM. III. DeLand: March, MOC. Winter Park: May, AMNH. IV. Oneco: May, June, CPK. Myakka City: Feb., CU. Archbold Biological Station: March, April, CU; July, AMNH; Dec., YU. Sarasota: April, CU. Siesta Key: Jan.-March, May, CPK. Englewood: March, CU. Fort Lauderdale: April, UM. VI. Paradise Key: AMNH; March, CU.

7605 C. ERIGERONANA (Riley)

Trans. St. Louis Acad. Sci. 4: 316. 1881.

III. Cassadaga: June, SVF. Winter Park: May, AMNH. IV. Bradenton: April, CPK. Oneco: May, June, CPK. Archbold Biological Station: July, AMNH; March, YU. Siesta Key: Feb., May, June, CPK. Fort Lauderdale: April, UM.

AETHES Billberg

7609, 1 A. SP.

I. Escambia Co.: Aug. 6, Nov. 15, 1961, det. Clarke, SMH.

7609, 2 [A.] SP.

I. Escambia Co.: two Dec. 1, 1961, det. Clarke as possibly in this genus, SMH.

PHARMACIS Hübner

7609, 3 P. SP.

I. Myrtle Grove: June 4, 1962, det. Davis, WJW.

HYSTEROSIA Stephens

7618 H. BIRDANA Busck

J. N. Y. Ent. Soc. 15: 32. 1907.

I. Escambia Co.: Oct. 19, 1961, det. Clarke as probably this, SMH.

[*H. inoptiana* (Haworth)]

Lep. Brit., p. 469. 1811.

The "Florida: (Slosson)" record, Grossbeck (1917, p. 140) is an error as the specimen which is in the American Museum of Natural History collection is labeled "Franconia" (N. H.). The species is confined to the old world, though there is always the possibility of a stray brought over by carrier.

Family CARPOSINIDAE

The two specimens, which are quite distinct, are determined by Clarke as in this family but the generic positions are uncertain.

7629, 1 SP.

I. Escambia Co.: Sept. 14, 1961, SMH.

7629, 2 SP.

I. Escambia Co.: July 28, 1961, SMH.

Family COSSIDAE

INGUROMORPHA Henry Edwards

7632 I. BASALIS (Walker)

List Lep. Ins. Br. Mus. 7: 1523. 1856.

I. Escambia Co.: April, SMH. Tallahassee: AMNH; (Koebele), Grsb. 108. II. Gainesville: April, CPK. St. Johns Bluff: (Doubleday), BM. Jacksonville: type of *slossoni* Henry Edwards (1888, p. 183). III. Weekiwachee Springs: May, CPK. Orlando: June, AEB. Indian River: (Wittfeld), AMNH. IV. Oneco: March, JGF. Biscayne Bay: (Slosson), Grsb. 108.

GIVIRA Walker

7641 G. ANNA (Dyar)

Pl. XXVI, Fig. 36, ♂.
Ent. News 9: 214. 1898.

There is some variation in this species, some specimens being an almost uniform purplish gray, whereas others are paler and slightly mottled. I. Escambia Co.: May, SMH. West Pensacola: May, July, VFG. Ocean City: Aug., HOH. De Funiak Springs: found emerging from trunks of large pine trees, April 29, 1919, (Jones), CPK. Quincy: July, CPK. Monticello: March, (Phillips), CPK. II. Alachua Co.: April, DPI. III. Cassadaga: April, SVF. Weekiwachee Springs: April, CPK. Titusville: June, CM. IV. Oneco: March, JGF. Archbold Biological Station: March, PSU; April, May, Aug., YU. Miami: type, (Slosson), USNM. Biscayne Bay: (Slosson), Dyar.

7644 G. FRANCESCA (Dyar)

Pl. XXVI, Fig. 35, ♂.
Proc. Ent. Soc. Wash. 11: 29. 1909.

I. West Pensacola: May, VFG. Ocean City: May, HOH. II. St. Augustine: May, CM. Moultrie: June, CM. III. Central Florida: June, WMD. Levy Co.: Sept. 9, 1955, (Denmark), DPI. Cassadaga: Jan., det. Clarke, May, July-Sept., SVF. Weekiwachee Springs: Aug., CPK. Winter Park: July, DPI. Titusville: June, CM. Fort Meade: types, two, (Merrick), USNM. IV. Bradenton: March, det. Clarke, CPK. Oneco: April 2, 1954, JGF. Archbold Biological Station: March, April, CU; Nov., Dec., PSU. Miami: Nov., OB. Matheson Hammock: April 30, (Chermock), JGF. VI. Homestead: May, Aug., Oct., Nov., CPK.

COSSULA Bailey

7652 C. MAGNIFICA (Strecker)

Pecan carpenterworm. Pl. XXVI, Fig. 37, ♂.
Proc. Acad. Nat. Sci. Phila., p. 151. 1876.

While not common, *magnifica* has been taken from Ensley to Punta Gorda, March-June, Food: oak, pecan, persimmon (Fla. Agr. Exp. Sta. Bull. 147: 16). The natural history of *magnifica* was discussed by Bailey (1882, pp. 93-94).

PRIONOXYSTUS Grote

7670 P. ROBINIAE (Peck)

Carpenterworm. Pl. X, Fig. 29, ♂; Fig. 30, ♀.
Mass. Agr. Rept. & Journal 5: 67. 1818.

This is relatively common from Escambia County to Paradise Key: In addition to typical *robiniae*, it is present as *reticulatus* (Lintner) and *zabolicus* (Strecker). Food: *Robinia pseudo-acacia*, *Populus*, *Salix*, oak and chestnut; *Quercus laevis* (Coop. Econ. Ins. Rept. 4: 179).

7671, 1 P. BACCHARADIS Clarke

J. Wash. Acad. Sci. 42: 156. 1952.

IV. North Miami Beach: Feb. 25, HEW. Coral Gables: types, BM, USNM, Dept. Zool. U. of Miami, topotype, CM; Mar., CPK; March, April, HFS. The larva lives in the trunk of *Baccharis* and an interesting account of the life history may be found in the original description. Strohecker reports that all emergences are in March and April.

SUPERFAMILY

GELECHIOIDEA

Family COSMOPTERIGIDAE

A revision of the family has recently been completed by Hodges (1962b), and almost all of the records below will be also found in his work, though not necessarily in the same form. I am indebted to Dr. Hodges for many determinations not only of my entire cosmopterigid material, but of other Florida material which was also submitted to him.

COSMOPTERYX Hübner

7674 C. PULCHRIMELLA Chambers

Cincinnati Quart. J. Sci. 2: 31. 1875.

I. Escambia Co.: Oct. 29, 1961, det. Hodges, SMH. IV. Siesta Key: Jan.-May, Oct., RWH, CPK. VI. Homestead: April, CPK.

7674, 1 C. BENDIDIA Hodges

Ent. Amer. 42: 22. 1962.

VI. Homestead: Feb. 24, 1959, (Wolfenbarger), CPK.

7677 C. ATTENUATELLA (Walker)

List Lep. Ins. Br. Mus. 30: 1019. 1864.

II. Hastings: MCZ. III. Winter Park: July, USNM. Orlando: Feb.-April, USNM; Aug.,

ABK. IV. Archbold Biological Station: Jan., PSU; March, April, RWH. Sarasota: Feb., CU. Siesta Key: March, April, Nov., Dec., RWH, CPK. Palm Beach: Dyar (1901a, p. 478). As Hodges does not list this, it may have been a misdetermination. V. Chokoloskee: USNM. VI. Homestead: Feb.-Nov., RWH, CPK. Paradise Key: April, AMNH.

7690, 2 C. DAPIFERA Hodges
Ent. Amer. 42: 31. 1962.

I. Escambia Co.: Feb. 27, 1962, det. Hodges, SMH.

7683 C. DELICATELLA Walsingham
Insect Life 1: 290. 1889.

IV. Archbold Biological Station: March 27, 29, 1959, RWH.

7683, 1 C. DICACULA Hodges
Ent. Amer. 42: 34. 1962.

II. Gainesville: holotype, July 7, 1927, (Rogers), CU.

7684 C. MINUTELLA Beutenmueller
Ent. Amer. 5: 10. 1889.

III. Central Florida: type, USNM. Lakeland: March, USNM. IV. Archbold Biological Station: March, RWH. V. Everglades: April, USNM. VI. Homestead: May, Nov., CPK.

7684, 1 C. ABDITA Hodges
Ent. Amer. 42: 40. 1962.

IV. Archbold Biological Station: holotype and paratypes, six March 27-April 4, 1959, RWH, CU. VI. Homestead: Feb. 8, April 24, 1959, Sept. 23, 1958, (Wolfenbarger), CPK.

7684, 2 C. INOPIS Hodges
Ent. Amer. 42: 41. 1962.

VI. Homestead: April 10, 1959, (Wolfenbarger), CPK.

7676 C. GEMMIFERELLA Clemens
Proc. Acad. Nat. Sci. Phila. 12: 10. 1860.

II. Boulogne: April 1, 1936, (Franclemont), CU.

7676, 1 C. BACATA Hodges
Ent. Amer. 42: 45. 1962.

III. Winter Park: paratype, May 1946, ABK.

7676, 2 C. DAMNOSA Hodges
Ent. Amer. 42: 46. 1962.

IV. Archbold Biological Station: holotype, March 27, 1959, (Hodges), CU.

7675, 1 C. SCIRPICOLA Hodges
Ent. Amer. 42: 49. 1962.

IV. Archbold Biological Station: March 27, 1959, RWH.

7675, 2 C. EBRIOLA Hodges
Ent. Amer. 42: 50. 1962.

II. Gainesville: July, CU. Hastings: three, MCZ. III. Lakeland: March, USNM. IV. Archbold Biological Station: holotype and paratypes, March 27-April 4, 1959, RWH, BM, USNM, CU. Siesta Key: April, May, RWH, CPK. Punta Gorda: March, MOC.

[7685 *C. fernaldella* Walsingham]
Trans. Amer. Ent. Soc. 10: 197. 1882.

There is an old record for this: II. Hastings: USNM, but Hodges has found that it is a misdetermination for *floridanella* below.

7685, 1 C. FLORIDANELLA Beutenmueller
Ent. Amer. 5: 10. 1889.

II. Hastings: USNM, MCZ. III. Central Florida: type, May, USNM. Orlando: Feb., USNM. Lakeland: March, USNM. IV. Archbold Biological Station: March, April, RWH, CU. Siesta Key: Jan.-May, CPK. Palm Beach: type of *nigrapunctella* Busck, Jan., USNM. Delray Beach: April, CPK. VI. Homestead: April, CPK. Paradise Key: March, CU.

TANYGONA Braun

7678 T. IPOMOEAE Busck
Proc. U. S. Natl. Mus. 23: 235. 1900.

IV. Palm Beach: type, USNM. Fort Lauderdale: reared from morning glory, May 21, 1945, USNM. The larval habits were described by Dyar (1901, p. 478).

ERALEA Hodges

7692, 1 E. STRIATA Hodges
Ent. Amer. 42: 62. 1962.

IV. Oneco: paratype, May 19, 1953, (Dillman), CPK. Siesta Key: holotype, May 13, 1960, (Kimball), CU.

MELANOCINCLIS Hodges

7713, 1 M. LINEIGERA Hodges
Ent. Amer. 42: 64. 1962.

I. Escambia Co.: Sept., det. Hodges, SMH. II. Lake City: reared from slash pine cones, Feb., USNM. IV. Archbold Biological Station: holo-

type, March, CU. Siesta Key: Feb.-May, RWH, CPK. VI. Homestead: Feb.-April, CPK.

ETEBALEA Hodges

7716 E. SEXNOTELLA (Chambers)

Bull. U. S. Geol. Geograph. Surv. Territ. 4: 88. 1878.

I. Escambia Co.: July, det. Hodges, SMH. III. Georgiana: gall on *Trichostema dichotomum*, emerged July 11, USNM. IV. Longboat Key: gall on *T. suffrutescens*, emerged Jan. 31, CU. Oneco: May, CPK. Archbold Biological Station: March, April, RWH; July, ABK. Sarasota: Feb., CU. Siesta Key: April, May, CPK.

SATHROBROTA Hodges

[7723 *S. rileyi* (Walsingham)]

Pink scavenger caterpillar.

Trans. Amer. Ent. Soc. 10: 98. 1882.

There are a number of older records for *rileyi*, all of which Hodges believes belong under his new species below. However, as there are records from Thomasville, Georgia, there is every possibility that it might occur here. Hodges (1962b, p. 73) gave the following foods, though it should be noted that these are not Florida records: rotten cotton bolls, corn husks, Milo maize, and the flower heads of castor beans and *Mesosphaerum rugosum*. Hodges also believes that *stigmatophora* (Walsingham) is probably a synonym of *rileyi*. There is a Florida record for the former: June 1943-June 1945, Ins. Pest Surv. Bull. Spec. Suppl. 1947 (1): 4.

7723, 1 S. BADIA Hodges

Ent. Amer. 42: 76. 1962.

I. Escambia Co.: Sept., Oct., SMH. II. Osceola National Forest: reared from rust infected cones of *Pinus elliottii*, June, USNM. III. 3 mi. S. "Clarcona" (I suspect this is a mistranscription by Hodges for Clermont. If not, I cannot place it.): reared from grapefruit, Sept., USNM. Lake Alfred: larva in pod of *Cassia occidentalis*, Aug., USNM. IV. South Florida: holotype, in pine cones infested by *Dioryctria*, emerged June, USNM. Palmetto: cabbage, June, USNM. Archbold Biological Station: April, RWH. Siesta Key: Dec.-May, RWH, CPK, BM. Miami: mummy fossil of loquat, USNM. Coconut Grove: from blossoms of coconut, May, USNM, CU. Matheson's Key (presumably Matheson Hammock): limes, May, USNM. VI. Paradise Key: USNM. Additional food sources given under the name *rileyi*: castor beans, Watson (1919c) (note this is one of the hosts quoted by Hodges above for *rileyi*, and that he states that the two

species have different hosts. This means that we may have a Florida record for *rileyi*); cotton, DPI. (here again is a host which Hodges limits to *rileyi*); *Antonina* scale on bamboo, cottony cushion scale on citrus, cotton mealybug on grapefruit, mealybug on orange and orchid, pustule scale on oleander, jumping plant louse on crape myrtle, corn, orange, and fruits of *Roystonea elata*, all DPI. Hodges (1962b, p. 73) also quoted these foods, but without Florida reference: peach mummies, grapefruit, bananas, and elm leaves.

LYMNAECIA Stainton

7744 L. PHRAGMITELLA Stainton

Cat. Brit. Tineinae Suppl. 4. 1851.

This species is not recorded from Florida by Hodges (1962b, pp. 80, 81) nor does he give any records closer than Maryland. They may possibly be in error, but it hardly seems likely that Heinrich could have been mistaken. IV. Fort Lauderdale: May 24, 1928, (Bates), UM. VI. Paradise Key: det. Heinrich, FMJ. This last specimen should now be in the YU collection and could be verified, as could the Fort Lauderdale specimen.

TRICLONELLA Busck

8354 T. PERGANDELLA Busck

J. N. Y. Ent. Soc. 8: 237. 1900.

II. Gainesville: March 9, 1927, (Bates), det. Braun, UM. III. Winter Park: larva on *Clitoria meriana*, May 10, 1948, det. Capps, DPI. Lake Alfred: May 29, 1929, (Bottimer), USNM. Winter Haven: reared on *Clitoria fragrans*, July 26 and 28, 1929, (Bottimer), USNM.

8355 T. DETERMINATELLA (Zeller)

Verh. zool.-botan. Ges. Wien 23: 289. 1873.

II. Gainesville: May 10, June 29, 1927, (Rogers), CU. III. Weekiwachee Springs: March 14, 1955, (May), CPK. IV. Archbold Biological Station: Jan. 18, 1962, (Frost), PSU.

Family WALSHIIDAE

This is one of three families into which Hodges (1962b) has divided the species listed under Cosmopterygidae by McDunnough (1939, pp. 63-65). Of the ten genera enumerated by Hodges (op. cit. pp. 113-115), he has published the revisions of only four so far: *Periploca*, *Walshia*, *Perimede*, and *Ithome*. There are Florida species in each of these, and in addition, there are records for one of the species in *Aeaea* which have been determined by Hodges.

I believe that of the remaining six genera none are known to be represented in Florida.

PERIPLOCA Braun

7714 **P. CEANOTHIELLA** (Cosens)

Can. Ent. 40: 107. 1908.

I. Escambia Co.: March 26, 1962, det. Hodges, SMH.

7719, 3 **P. LAETA** Hodges

Pan-Pacific Ent. 38: 92. 1962.

I. Monticello: holotypes and paratypes, ex juniper, six Feb. 15, 18, and 24, 1961, (Miller), RWH, CPK, CU.

7719, 6 **P. FESSA** Hodges

Pan-Pacific Ent. 38: 95. 1962.

IV. Siesta Key: holotype, April 6, 1957, (Kimball), CU.

WALSHIA Clemens

7743, 1 **W. MISCECOLORELLA** Chambers

Can. Ent. 7: 51. 1875.

II. Gainesville: March 10, 1927, (Bates), UM; July, CU. III. DeLand: March, MOG. Cassadaga: Jan. 2, 1956, SVF. Winter Park: May, (Klots), AMNH. Lakeland: Jan., USNM. IV. Archbold Biological Station: Jan. 9, 1960, (Frost), PSU. Siesta Key: March 31, 1951, CU; June 4, 1957, CPK. VI. Homestead: Feb. 22, 1955, (Wolfenbarger), STES.

7743, 2 **W. SIMILIS** Hodges

Bull. Brooklyn Ent. Soc. 56: 73. 1961.

I. Escambia Co.: Sept. 27, 1961, det. Hodges, SMH.

7721 **W. PARTICORNELLA** (Busck)

Proc. Ent. Soc. Wash. 11: 96. 1919.

IV. Siesta Key: Nov. 14, 1956, det. Braun, CPK. This specimen has been misplaced. I do not have it and Hodges has no record of it, nor does he recall seeing it.

PERIMEDE Chambers

7720 **P. ERRANSELLA** Chambers

Can. Ent. 6: 52. 1874.

I. Apalachicola: reared from *Taxodium*, June 7, 1906, USNM. II. Hastings: MCZ. IV. Bradenton: Feb., CPK. Siesta Key: Jan., March, Nov., RWH, CPK. VI. Homestead: March-May, CPK.

7722 **P. FALCATA** Braun

Ent. News 30: 263. 1919.

IV. Bradenton: March 17, 1956, Sept., Nov., (Kelshiemer), CPK. Archbold Biological Station: March 29, 1959, RWH. Siesta Key: Feb., March, Nov., Dec., RWH, CPK, CU. VI. Homestead: Feb. 10-28, 1959, (Wolfenbarger), RWH, CPK. Paradise Key: March 18, 1939, (Bradley), CU.

AEAEA Chambers

7708 **A. QUADRICRISTATELLA** Chambers

J. Cincinnati Soc. Nat. Hist. 2: 186. 1879.

IV. Siesta Key: June 1 and 2, 1957, det. Hodges, CPK.

ITHOME Chambers

7712 **I. CONCOLORELLA** (Chambers)

Can. Ent. 7: 55. 1875.

IV. Siesta Key: three March, CPK.

7712, 1 **I. QUINQUEPUNCTATA** (Forbes)

J. Dept. Agr. Puerto Rico 4: 361. 1931.

IV. Siesta Key: twelve Jan., Dec., RWH, CPK. VIII. Ramrod Key: reared from *Coccoloba uvifera*, ten March 3 and April 6, 1945, USNM.

7712, 3 **I. LASSULA** Hodges

J. Lep. Soc. 15: 89. 1961.

VI. Homestead: March 31, 1959, (Wolfenbarger), CPK. VIII. Key West: holotype and paratypes, reared from flowers of *Leucaena glauca*, March 16-April 17, 1945, RWH, USNM.

7712, 4 **I. FERAX** Hodges

J. Lep. Soc. 15: 89. 1961.

III. St. Petersburg: March 16 and 23, 1960, (Wyatt), MOG. IV. Siesta Key: holotype and paratypes, eleven Jan. 4-April 12, 1960, RWH, CPK, CU.

Family **MOMPHIDAE**

Hodges has published nothing as yet on his revisions in this family. Some of the records below may prove incorrectly determined, and other records may result from his studies.

MOMPHA Hübner

There are undoubtedly several new species in Florida.

7748 **M. BREVIVITELLA** (Clemens)

Proc. Ent. Soc. Phila. 2: 428. 1864.

IV. Siesta Key: May 2, 1946, det. Forbes, CPK.

7749 **M. STELLELLA** Busck

Can. Ent. 38: 123. 1906.

IV. Siesta Key: four March 31-April 2, 1952, CPK.

7750 M. CIRCUMSCRIPTELLA (Zeller)

Verh. zool.-botan. Ges. Wien 23: 312. 1873.

I. Escambia Co.: July 2, 1961, det. Hodges, SMH. II. Alachua Co.: June 14, 1961, det. Hodges, DPI. IV. Siesta Key: June 4, 1957, det. Clarke, CPK.

7751, 1 M. BOTTIMERI Busck

Bull. Southern Calif. Acad. Sci. 39: 87. 1940.

I. Escambia Co.: July 6, 1961, det. Hodges, SMH. Myrtle Grove: Sept., WJW. II. Gainesville: paratypes, reared from seeds of *Helianthemum* [*Crocantemum*], UFES. IV. Bradenton: Sept., det. Braun, CPK. Oneco: one May, (Dillman), det. Braun, CPK. Siesta Key: Feb., May, June, det. Clarke, Nov., CPK.**7739 M. PASSERELLA** Busck

Proc. Ent. Soc. Wash. 11: 95. 1909.

IV. Bradenton: March 14, 1956, CPK. Siesta Key: four April, CPK. All det. Braun.

7740 M. ELOISELLA (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 171. 1860.

I. Escambia Co.: June 15, 1961, det. Hodges, SMH. II. Gainesville: April 20, Dozier (1920, p. 379). IV. Siesta Key: May, Dec., det. Clarke, CPK.

7763, 1 M. SP.

I. Escambia Co.: two Oct. 27, 1961, det. Hodges, SMH, USNM.

HOMALEDRA Busck**7736 H. HEPTATHALAMA** Busck

Pl. XXVI, Fig. 34, ♂.

Proc. U. S. Natl. Mus. 23: 237. 1900.

I. Escambia Co.: Sept., SMH. III. Marion Co.: July, UM. Cassadaga: Sept., SVF. Hernando Co.: Aug., UM. Weekiwachee Springs: March, Aug., CPK. Pinellas Co.: Aug., UM. St. Petersburg: May, CNC. Stemper: July, Oct., AEB. IV. Bradenton: March, May-July, Sept., CPK. Oneco: May, June, CPK. Okeechobee: larval houses, Jan., CPK. Archbold Biological Station: March, PSU. Siesta Key: May, June, CPK. Venice: larval houses, Feb., CPK. Fort Myers: March, UM. Palm Beach: types, USNM. Fort Lauderdale: April, May, UM. VI. Homestead: April, May, Sept., CPK. The larva makes a very curious "mud house" in seven expanding stages on the fronds of *Sabal palmetto*, usually along a mid-vein. There is an illustration of this in the original description.**7737 H. SABALELLA** (Chambers)

Palm leaf skeletonizer.

J. Cincinnati Soc. Nat. Hist. 2: 7. 1880.

Sabalella is a common species all over the state, but since most of the records are larval, no satisfactory statement can be made as to when the adult flies. However, Bradenton records cover February-September, and Homestead, April, May, August, September, but there are no definite peak. In addition to its favorite food plant *Sabal palmetto*, on which it lives gregariously in a rather unsightly web mass, others have been recorded: *Serenoa repens* [*serrulata*], *Phoenix canariensis*, and *Washingtonia robusta*, Dozier (1920, p. 380); *P. reclinata*, DPI.**BATRACHEDRA** Herrich-Schaeffer**7703 B. MATHESONI** Busck

Proc. Ent. Soc. Wash. 18: 150. 1916.

IV. Siesta Key: March, April, June, Dec., det. Clarke, CPK. Coconut Grove: types, reared from blossoms of *Cocos nucifera*, USNM. VI. Homestead: April, May, Nov., CPK.Family **EPERMENIIDAE****EPERMENIA** Hübner**7773, 1 E. SP.**

IV. Siesta Key: May 11, 1960, det. Clarke as distinct from the species below, CPK.

7773, 2 [E.] SP.Superficially close to *E. cicutaella* Kearfott, but with characters that place it probably in a new genus according to Clarke. IV. Siesta Key: three May 4 and 16, 1960, CPK.Family **GELECHIIDAE**

Hodges has begun the revision of the Gelechiidae, a task which will require some years. One result of this will be to add many new names to the Florida list, of both known and undescribed species. It may also result in eliminating some of the names below.

NEALYDA Dietz**7775 N. PISONIAE** Busck

Proc. U. S. Natl. Mus. 23: 229. 1900.

IV. Palm Beach: types, reared from leaf miners in *Pisonia aculeata*, Feb., USNM.**7776 N. KINZELELLA** Busck

Proc. U. S. Natl. Mus. 23: 230. 1900.

IV. Palm Beach: types, reared from leaf miners in *Pisonia obtusata*, USNM.

7776, 1 N. PHYTOLACCAE Clarke

J. Wash. Acad. Sci. 36: 427. 1946.

VIII. Stock Island and Bone Fish Key: types, seventeen reared from *Phytolacca americana* [*decandra*] by C. L. Griswold, Clarke.

METZNERIA Zeller

7780 M. LAPPELLA (Linnaeus)

Syst. Nat., p. 537. 1758.

IV. Punta Gorda: April, MOG.

SITROTOGA Heinemann

7801 S. CEREALELLA (Olivier)

Angoumois grain moth.

Enc. Méth. 1: 121. 1819.

Florida: on corn, Grossman (1931); dePass (1892, p. 284). III. Tampa: May 17, 1943, DPI. Food: stored grains.

ARISTOTELIA Hübner

7817, 1 A. CORALLINA Walsingham

Biol. Cent. Amer. Het. 4: 23. 1900-1915.

In many specimens, the normally pink inner margin of the forewing is white, or yellowish. This may be a color form, or fading, or it might conceivably be another species. IV. Bradenton: Feb.-Sept., Nov., CPK. Archbold Biological Station: Jan., CPK. Siesta Key: abundant, Oct.-April, June, det. Forbes, CPK, CU. VI. Redlands: reared from *Cassia nictitans* var. *aspera*, DPI. Homestead: Feb., Sept., Nov., CPK. VIII. Tavernier: Sept., DPI.

7818 A. RUBIDELLA (Clemens)

Proc. Acad. Nat. Sci. Phila. 12: 163. 1860.

II. Gainesville: July, CU. IV. Archbold Biological Station: March, CU. La Belle: May 8-10, 1916, (Bradley), CU.

7825 A. IVAE Busck

Proc. U. S. Natl. Mus. 23: 225. 1900.

II. Gainesville: Nov. 30, 1934, (Hubbell), UM. IV. Bradenton: Feb., CPK. Siesta Key: Jan.-April, CPK. Palm Beach: types, reared from larvae on *Iva frutescens*, the adults issuing March 10-20, USNM. VIII. Key Largo: Nov. 14, 1955, DPI.

7834 A. [ROSEOSUFFUSELLA (Clemens)]

Proc. Acad. Nat. Sci. Phila. 12: 162. 1860.

There is some question as to whether it is this

species which is present in Florida or something undescribed. In fact, there may be more than one species involved. The complex, if such it be, is more common and widespread than the records suggest, because many specimens which are almost certainly not *roseosuffusella* have not been included. I. Escambia Co.: Nov. 12, 1961, SMH. Warrington: WJW. II. Alachua Co.: Sept., DPI. IV. Siesta Key: May, CPK. Fort Lauderdale: April, UM. VI. Paradise Key: FMJ. VIII. Tavernier: CPK.

7845 A. MONILELLA (Barnes & Busck)

Contrib. 4: 225. 1920.

I. Escambia Co.: April 26, 1963, det. Hodges, SMH.

GLAUCE Chambers

7859 G. PECTENALAEELLA Chambers

Can. Ent. 7: 12. 1875.

IV. Sarasota: Feb. 18, 1945, (Needham), CU. Siesta Key: three Feb. 16-27, 1951, CPK.

LEUCE Chambers

7860, 1 L. SP.

I. Myrtle Grove: Sept. 4, 1963, det. Hodges, WJW.

EVIPPE Chambers

7867 E. PRUNIFOLIELLA Chambers

Can. Ent. 5: 186. 1873.

I. Escambia Co.: several Aug.-Sept., 1961, SMH. Food: *Prunus americana*.

RECURVARIA Haworth

7884 R. CITRIELLA (Chambers)

Rept. U. S. Dept. Agr., p. 206. 1879.

Though this was described from Florida in 1879, I have not located a single subsequent record.

7891 R. CONDIGNELLA Busck

Proc. Ent. Soc. Wash. 31: 13. 1929.

I. Valparaiso: co-type, USNM. This was reared from yellow pine, and Busck expressed the opinion that the species might have been introduced from the West with nursery stock during the then recent re-forestation projects. Perhaps it has not survived the Florida environment. It would be interesting to look into this question.

EVAGORA Clemens

7888, 1 E. SP.

I. Escambia Co.: March 1961, det. Hodges as near *coniferella* Kearfott, SMH.

EXOTELEIA Wallengren

- 7913 E. PINIFOLIELLA Chambers
Pine needle miner.
J. Cincinnati Soc. Nat. Hist. 2: 181. 1880.
I. Escambia Co.: May 13, 1962, det. Hodges as probably this, SMH. Warrington: May 4, 1961, VFG.

TRYPANISMA Clemens

- 7917 T. PRUDENS Clemens
Proc. Acad. Nat. Sci. Phila. 12: 168. 1860.
IV. Siesta Key: three Jan. 1-Feb. 21, 1951, det. Brower, CPK.

BESCIVA Busck

- 7919, 1 B. SP.
Det. Clarke as near *longitudinella* Busck. IV. Oneco: May 5, 1953, (Dillman), CPK. Siesta Key: common, Nov.-April, June, CPK. Miami: Fairchild Tropical Gardens: reared from seed of *Sabal glaucescens*, July 7, 1960, and from fruit of *S. longipedunculata*, July 18, 1960, (Bottimer), DPI. VI. Homestead: Oct. 29, 1959, (Wolfenbarger), CPK. Everglades National Park: two reared from silver palm, (Craighead), in collection of Craighead and CPK.

EPITHECTIS Meyrick

- 7922 E. GALLAEGENITELLA (Clemens)
Proc. Ent. Soc. Phila. 2: 420. 1864.
IV. Siesta Key: Feb. 25, 1951, CPK.

LEUCOGONIA Meyrick

- 7928, 1 L. SP.
I. Escambia Co.: Aug. 30, 1961, det. Hodges as near *subsimella* (Clemens), SMH.

AROGALEA Walsingham

- 7931 A. CRISTIFASCIELLA (Chambers)
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 87. 1878.
II. Gainesville: "not abundant," April 13, Dozier (1920, p. 379). IV. Oneco: May, CPK.

TELPHUSA Chambers

- 7947 T. FUSCOPUNCTELLA (Clemens)
Proc. Ent. Soc. Phila. 2: 12. 1863.
IV. Siesta Key: May 12, 1946, det. Brower, CPK.

ADRASTEIA Chambers

- 7951 A. LONGIFASCIELLA (Clemens)
Proc. Ent. Soc. Phila. 2: 12. 1863.
I. Escambia Co.: March 26, 1962, det. Hodges, SMH.
7951, 1 A. SP.
I. Escambia Co.: March 8, 1962, det. Hodges, SMH.

GNORIMOSCHEMA Busck

- 8153 G. GALLAESOLIDAGINIS (Riley)
Rept. Ins. Mo. 1: 173. 1869.
I. Eglin Air Force Base: emerged from gall, Feb. 25, 1963, det. Hodges, HOH. III. Windermere: larva in *Solidago*, DPI.
8154, 1 G. SP.
This species is near but not *salinaria* Busck. I. Escambia Co.: Dec. 7, 1961, det. Hodges, SMH. IV. Siesta Key: Jan. 22, 1955, det. Clarke, CPK.

- 8187 G. SAPHIRINELLA Chambers
Cincinnati Quart. J. Sci. 2: 250. 1875.
I. Escambia Co.: April, SMH. II. Gainesville: June, July, CU. IV. Siesta Key: Feb., April, June, CPK.

- 8214 G. OPERCULELLA (Zeller)
Potato tubeworm.
Verh. zool.-botan. Ges. Wien 23: 262. 1873.
A common pest on potatoes and tobacco, recorded as far south as Pompano, at which locality it was reared on eggplant, the adult det. Clarke, DPI. The larvae are taken March-July.

- 8213, 1 G. GUDMANELLA (Walsingham)
Proc. Zool. Soc. London, p. 77. 1897.
The records are all for the larva on bell and hot peppers, May, June, and come from the Ins. Pest Surv. Bull. Spec. Suppl. 1947, No. 1. III. Orlando. IV. Hypoluxo, Boynton Beach, Delray Beach, Fort Lauderdale, Pompano, and Miami.

- 8211 G. STRIATELLA (Murtfeldt)
Can. Ent. 32: 163. 1900.
Florida: Swank (1937, p. 38). IV. Miami: Dec. 8, 1960, det. Capps, DPI.

- 8174 G. TERRACOTTELLA Busck
Proc. U. S. Natl. Mus. 23: 227. 1900.
IV. Siesta Key: Feb.-May, det. Clarke, CPK. Palm Beach: types, reared from larvae on *Iva imbricata*, March 8-10, USNM.

KEIFERIA Busck

8215 *K. LYCOPERSICELLA* (Busck)

Tomato pinworm.

Proc. Hawaii Ent. Soc. 7: 171. 1928.

Lycopersicella is a pest on tomatoes throughout the state (Swank, 1937). It has also been found mining the leaves of eggplant, DPI.

8218 *K. GLOCHINELLA* (Zeller)

Eggplant leaf miner.

Verh. zool.-botan. Ges. Wien 23: 263. 1873.

II. Gainesville: seven May 12, 1941, UFES.

CHIONODES Hübner

8080 *C. MACULIMARGINELLA* (Clemens)

Can. Ent. 6: 241. 1874.

IV. Archbold Biological Station: April 2, 1945, (Needham), CU.

8020 *C. MEDIOFUSCELLA* (Chambers)

Proc. Ent. Soc. Phila. 2: 11. 1863.

I. Escambia Co.: March 25, 1962, det. Hodges, SMH. Quincy: Feb. 28, March 8, 1961, (Tapan), CPK.

7981 *C. DENTELLA* (Busck)

Proc. U. S. Natl. Mus. 25: 862. 1903.

VIII. Key West: CU.

8089 *C. VERNELLA* (Murtfeldt)

Can. Ent. 15: 139. 1883.

IV. Siesta Key: five April 24-May 15, 1960, det. Clarke, CPK.

7985, 1 *C. PEREYRA* Clarke

J. Wash. Acad. Sci. 37: 253. 1947.

IV. Vero Beach: types, eight April, May, (Malloch), BM, USNM.

8051 *C. DISCOCELLELLA* (Chambers)

Can. Ent. 4: 194. 1872.

I. Quincy: Feb., Dec., CPK. III. Cassadaga: Feb., SVF. IV. Siesta Key: Jan., Feb., CPK. VI. Paradise Key: Jan., FMJ.

FILATIMA Busck

7979 *F. ALBILORELLA* (Zeller)

Verh. zool.-botan. Ges. Wien 23: 261. 1873.

This species, *Aroga coloradensis*, *Fascista cercerisella*, and *F. quinella* are all very much alike in appearance. *Quinella* has a light yellow head; *cercerisella* has brownish spots on the forewing; *coloradensis* has a black head, and a white spot on the fold; *albilorella* has a black head and

three white fasciae, two of them not reaching the inner margin. Otherwise the markings are quite similar. II. Jacksonville: (Slosson), AMNH.

7975 *F. BIMACULELLA* (Chambers)

Can. Ent. 4: 108. 1872.

I. Escambia Co.: April 20, 1962, det. Hodges, SMH.

AROGA Busck

7976 *A. COLORADENSIS* (Busck)

Pl. XXVI, Fig. 38, ♀.

Proc. U. S. Natl. Mus. 25: 857. 1903.

I. Myrtle Grove: Dec., WJW. Walton Co.: Feb., DPI. Quincy: April, CPK. Monticello: Feb., CPK. II. Gainesville: Jan., CPK; Feb., April, DPI. III. Marion Co.: July, UM. Cassadaga: Feb., June, Dec., SVF. Weekiwachee Springs: May, CPK. IV. Bradenton: April, May, July-Sept., CPK. Oneco: May, June, Aug., CPK. Archbold Biological Station: Dec.-Feb., YU; Nov.-Jan., PSU. Siesta Key: Nov.-June, CPK. La Belle: April, AMNH.

7965 *A. TRIALBIMACULELLA* (Chambers)

Cincinnati Quart. J. Sci. 2: 250. 1875.

I. Quincy: May, CPK. II. Gainesville: July, CU. III. Weekiwachee Springs: Feb., Aug., CPK. Vineland: larva on scrub oak, June, det. Capps, DPI. Winter Garden: larva on myrtle, April, det. Capps, DPI. IV. Oneco: May, CPK. Siesta Key: Feb., March, CPK. Miami: larva on myrtle, Dec., DPI. VI. Homestead: larva on myrtle, Nov., det. Capps, DPI.

8139, 1 *A. ALLERIELLA* Busck

Bull. Southern Calif. Acad. Sci. 39: 89. 1941.

III. Cassadaga: Jan. 19, 1963, det. Hodges, SVF.

PSEUDOCHELARIA Dietz

8021 *P. WALSHINGAMI* (Dietz)

Ent. News 11: 352. 1900.

I. Escambia Co.: June 25, 1961, SMH. Food: *Rhus typhina*.

FASCISTA Busck

7971 *F. CERCERISELLA* (Chambers)

Can. Ent. 4: 108. 1872.

I. Monticello: reared from redbud, Oct., (Phillips), DPI, CPK. II. Perry: May, DPI. Gainesville: larva abundant on redbud, April, Dozier (1920, p. 379); UFES.

7972 *F. QUINELLA* (Zeller)

Verh. zool.-botan. Ges. Wien 23: 260. 1873.

I. Warrington: WP. Walton Co.: Feb., DPI, CPK. II. Gainesville: June, July, CU. Boulogne: April, CU. III. Weekiwachee Springs: Feb.-April, Aug., CPK. IV. Siesta Key: May, CPK.

PECTINOPHORA Busck

8147, I **P. GOSSYPIELLA** (Saunders)

Pink bollworm.

Trans. Ent. Soc. London (1)3: 284. 1843.

II. High Springs: Oct. 1932, DPI. IV-VIII. Miami to Key West: larva on cotton, June, Ins. Pest Surv. Bull. 12: 230. VIII. Plantation Key: on okra, March, Coop. Econ. Ins. Rept. 4: 200. There are many customs interception records, DPI.

STEGASTA Meyrick

8148 **S. BOSQUELLA** (Chambers)

Red-necked peanut worm.

Can. Ent. 7: 92. 1875.

I. Escambia Co.: May, SMH. Quincy: Sept., Oct., CPK. Monticello: larva on peanuts, July, Coop. Econ. Ins. Rept. 4: 687. II. Trenton: larva on peanuts, Sept., *ibid.* 4: 847. Alachua Co.: on peanuts, *ibid.* 4: 884. Gainesville: abundant, July, CU; Sept., DPI. III. Volusia Co.: Aug., DPI. Cassadaga: Nov., SVF. Weekiwachee Springs: Aug., CPK. IV. Bradenton: March, Aug., Sept., Nov., Dec., CPK. Oneco: May, CPK. Siesta Key: Feb.-April, Nov., Dec., CPK. VI. Homestead: April, July, CPK. VIII. Key Largo: Aug.-Oct., CPK. Craig: June, CPK. Key West: Busck (1903, p. 864).

8148, I **S. CAPITELLA** (Fabricius)

Ent. Syst. 3(2): 330. 1794.

I. Quincy: Oct., Dec., CPK. II. Gainesville: Feb., CPK. III. Orlando: June, CU. Paisley: Dec., DPI. IV. Bradenton: March, Aug., CPK. Oneco: May, CPK. Archbold Biological Station: Dec., YU. Siesta Key: Feb., April-June, CPK. Punta Gorda: March, MOG. VI. Modello: April, HEW. Homestead: July, CPK. Paradise Key: March, CU. VIII. Tavernier: Oct., CPK.

POLYHYMNO Chambers

8239 **P. LUTEOSTRIGELLA** Chambers

Can. Ent. 6: 247. 1874.

There is a species of some other genus, as yet undetermined, which closely resembles *luteostrigella*. Florida: Busck (1903, p. 839). I. Escambia Co.: July, SMH. III. Volusia Co.: Aug., DPI. Orlando: June, CU. IV. Bradenton: March, June, Aug.-Oct., CPK. Oneco: May, CPK. Siesta Key: March-June, CPK. VI. Home-

stead: April, CPK. VIII. Tavernier: Oct., CPK. Food: *Cassia [chamaecrista] fasciculata*.

STOMOPTERYX Heinrich

8250 **S. CROTALARIELLA** (Busck)

Proc. U. S. Natl. Mus. 23: 226. 1900.

IV. Palm Beach: types, reared from larvae on *Crotalaria pumila*, imagoes issuing Feb. 18-March 10, USNM.

BATTARISTIS Meyrick

8258 **B. NIGRATOMELLA** (Clemens)

Proc. Ent. Soc. Phila. 2: 11. 1863.

I. Escambia Co.: April 26, 1963, det. Hodges, SMH. II. Old Town: March 2, 1951, det. with "?, CPK.

COMPSOLECHIA Meyrick

8260 **C. COVERDALELLA** (Kearfott)

Pl. XXVI, Fig. 40, ♂.

J. N. Y. Ent. Soc. 11: 162. 1903.

I. Escambia Co.: May, SMH. III. Weekiwachee Springs: Feb., CPK. IV. Bradenton: June, CPK. Oneco: May, June, CPK. Siesta Key: April, May, CPK. Punta Gorda: May, MOG.

8262 **C. LEVIPEDILLA** (Clemens)

Proc. Ent. Soc. Phila. 2: 4. 1863.

I. Escambia Co.: April 28, 1963, det. Hodge, SMH.

8264 **C. LAGUNCULARIELLA** (Busck)

Proc. U. S. Natl. Mus. 23: 230. 1900.

IV. Siesta Key: April 24, 1960, det. Clarke as apparently this, though the ground color is gray instead of brown and he believes it may be a color form, CPK. However, another specimen, not seen by him, May 3, 1946, does show the brown color. Palm Beach: types, reared from larvae on *Laguncularia racemosa*, USNM. V. Everglades: April 9, AMNH. VI. Homestead: April 16, 1959, (Wolfenbarger), CPK. The larva is a leaf tier.

8265 **C. LUPINELLA** (Busck)

Can. Ent. 33: 14. 1901.

I. Myrtle Grove: May 5, 1963, det. Hodges, WJW.

8271 **C. ARGYROTHAMNIELLA** (Busck)

Proc. U. S. Natl. Mus. 23: 231. 1900.

II. Anastasia Island: larva, Dyar (1901a, p. 474). IV. Palm Beach: type, from larva on *Argythamnia blodgettii*, USNM. The larva sews up the leaves of its food plant.

ANACAMPSIS Curtis

- 8279 **A. CONCLUSELLA** (Walker)
List Lep. Ins. Br. Mus. 29: 593. 1864.
IV. Siesta Key: May 12, 1946, det. Forbes, CPK.

GELECHIA Hübner

8211, 1 [G.] SP.

Det. Clarke as probably *Gelechia*, but slightly atypical. He has taken what is apparently the same thing on Tortola and St. John in the Virgin Islands. IV. Bradenton: Feb., May, Sept., Oct., CPK, USNM. Oneco: May, CPK. Siesta Key: common, Nov.-April, CPK, USNM. VI. Homestead: March, April, Nov., CPK, USNM.

STROBISIA Clemens

- 8281 **S. IRIDIPENNELLA** Clemens
Proc. Acad. Nat. Sci. Phila. 12: 165. 1860.
Florida: 1883, (Morrison), Walsingham (1900-1915, p. 79).

HOLOPHYSIS Walsingham

- 8283 **H. EMBLEMELLA** (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 164. 1860.
I. Escambia Co.: April 25, 1963, det. Hodges, SMH.

PROSTOMEUS Busck

- 8286 **P. BRUNNEUS** Busck
Proc. U. S. Natl. Mus. 25: 838. 1903.
Florida: types, USNM. IV. Bradenton: April 11, 1955, (Kelsheimer), CPK. Oneco: April, (Dillman), CPK. Siesta Key: March 26, April 18, 1960, det. Clarke, CPK. Food: in Cuba, *Psidium guajava*.

8286, 1 P. SP.

Near, but not *brunneus*. I. Escambia Co.: May 15, 1962, det. Hodges, SMH. IV. Siesta Key: Jan. 22, 1955, det. Clarke, CPK.

ANARSIA Zeller

8288 **A. LINEATELLA** Zeller

Peach twig borer.
Isis, p. 190. 1839.

I. Walton Co.: Oct. 25, 1948, DPI. VI. Homestead: Oct. 11, 1947, (DPI?). There is one customs interception record: Miami, July 8, 1948, from Puerto Rico, DPI.

BRACHYACMA Meyrick

- 8289, 1 **B. PALPIGERA** (Walsingham)
Trans. Ent. Soc. London, p. 94. 1891.
IV. Bradenton: Feb., Nov., CPK. Oneco: March, JGF; April-June, Aug., Oct., det. Clarke, CPK. Archbold Biological Station: Feb., Nov., PSU. Siesta Key: Nov.-Feb., June, CPK. Coral Gables: March, det. Capps, DPI. VI. Homestead: Feb.-Nov., CPK. One customs interception: Miami: Oct. 29, 1947, from Barbados, DPI.

DICHOMERIS Hübner

- 8293 **D. RUSTICA** (Walsingham)
Proc. Zool. Soc. London, p. 525. 1891.
IV. Range Cattle Station, Hardee Co.: larvae abundant on hairy indigo, Sept. 1954, det. Capps and Clarke, Coop. Econ. Ins. Rept. 4: 1064.
- 8294 **D. CITRIFOLIELLA** (Chambers)
J. Cincinnati Soc. Nat. Hist. 2: 184. 1880.
Florida: Dyar (1902, p. 508). Food: orange.
- 8296 **D. LIGULELLA** (Hübner)
Zutr. exot. Schmett., p. 25; Figs. 143, 144. 1818.
I. Myrtle Grove: April 15, 1963, det. Hodges, WJW.
- 8299 **D. MARGINELLA** (Fabricius)
Juniper webworm.
Spec. Ins. 2: 307. 1781.
III. Daytona Beach: larva on Irish juniper, Jan. 27, 1960, (Smith & Holley), det. Capps, Coop. Ins. Pest Surv. 7: 19.
- 8306 **D. BIPUNCTELLA** (Walsingham)
Trans. Amer. Ent. Soc. 10: 186. 1886.
Florida: Forbes (1923, p. 285). I. Escambia Co.: May 6, 1962, det. Hodges, SMH. Myrtle Grove: April 3, 1963, WJW. III. Weekiwachee Springs: May 15, 1955, (May), CPK.

8308, 1 **D. GLENNI** Clarke
Proc. Ent. Soc. Wash. 49: 188. 1947.

IV. Oneco: April 3, 1954, det. Clarke, JGF. Vero Beach: co-types, April, May, Aug., (Malloch), USNM. Siesta Key: March 31, 1953, det. Clarke, April 23, 1960, CPK.

8308, 2 **D. SP.**

This species is similar in appearance to *Brachyacma palpigera* (Walsingham), but easily distinguished by the smaller palpi. VI. Homestead: March, April, July-Nov., (Wolfenbarger), det. Clarke as probably new, CPK.

8308, 3 D. SP.

I. Myrtle Grove: April 14, 1963, det. Hodges as unrecognized, WJW.

EPICORTHYLIS Zeller

8310 E. INVERSELLA Zeller

Verh. zool.-botan. Ges. Wien 23: 248. 1873.

IV. Bradenton: March, May, Aug., Sept., CPK, USNM. Oneco: April-June, CPK. Siesta Key: April, det. Clarke, CPK.

TRICHOTAPHE Clemens

8315 T. SERRATIVITELLA (Zeller)

Verh. zool.-botan. Ges. Wien 23: 280. 1873.

All these records except the one determined by Clarke should be reviewed as the species is so close to *simpliciella* Busck, of which there is a valid record determined by Busck himself. I. Escambia Co.: April, SMH. II. Gainesville: Feb., CPK. III. Weekiwachee Springs: Aug., (May), CPK. IV. Bradenton: June, Sept., CPK. Oneco: May-July, (Dillman), CPK. Archbold Biological Station: Jan., Dec., PSU; April, YU. Siesta Key: Feb. 25, 1955, det. Clarke; May, CPK. VI. Medley: reared from ragweed leaf, July, (Nakahara), DPI. Homestead: March, May-Sept., CPK. Paradise Key: Jan., Feb., FMJ.

8317 T. SIMPLICIELLA Busck

Proc. U. S. Natl. Mus. 27: 761. 1904.

VI. Paradise Key: det. Busck, FMJ.

8319 T. FLAVOCOSTELLA (Clemens)

Proc. Acad. Nat. Sci. Phila. 12: 162. 1860.

Florida: (Slosson), Grsb. 142. I. Escambia Co.: May 23, 1962, SMH. Quincy: Aug. 9, 1960, (Tappan), CPK. III. Cassadaga: May 21, 1962, SVF. IV. Siesta Key: June 13, 1957, CPK.

8320 T. EUPATORIELLA (Chambers)

Can. Ent. 4: 221. 1872.

IV. Palm Beach: Dyar (1901a, p. 472). Bradenton: March, Aug., CPK. Oneco: May, June, CPK. Siesta Key: March, April, CPK.

8322 T. SETOSELLA Clemens

Proc. Acad. Nat. Sci. Phila. 12: 166. 1860.

I. Escambia Co.: Sept. 6, 1961, SMH. IV. Oneco: April-June, Sept., Oct., CPK. IV. Siesta Key: April 2, 1953, det. Clarke, June 1, 1957, CPK.

8326 T. CONDALIAVORELLA Busck

Proc. U. S. Natl. Mus. 23: 232. 1900.

IV. Palm Beach: types, reared from *Condalia ferrea*, USNM.

8327 T. MELANTHERELLA Busck

Proc. U. S. Natl. Mus. 23: 232. 1900.

IV. Palm Beach: types, reared from *Melanthera deltoidea*, March, USNM.

8328 T. TRINOTELLA Busck

Can. Ent. 38: 122. 1906.

IV. Myakka City: Feb. 17, 1945, (Needham), CU. Archbold Biological Station: Jan. 1, 1958, (Pease), YU. Siesta Key: April 15, 1960, det. Clarke, CPK.

8328, 1 T. MELISSIA (Walsingham)

Biol. Cent. Amer. Het. 4: 97. 1900-1915.

Florida: Ins. Pest Surv. Bull. Spec. Suppl., 1947 (1): 4. Food: in Cuba, *Ipomoea*; in Peru, sweet potatoes.

8331, 1 T. SP.

IV. Bradenton: May, June, CPK, USNM. Oneco: May, June, CPK, USNM. Archbold Biological Station: Jan., YU. Siesta Key: March, Dec., CPK. VI. Homestead: Feb., CPK. VIII. Key Largo: Sept., DPI.

8331, 2 T. SP.

This species is quite unlike the preceding species, and Clarke thinks it may be West Indian. VI. Homestead: Sept. 23, 1958, (Wolfenbarger), CPK.

SCEPTIA Walsingham

8341 S. ABERRATELLA (Busck)

J. N. Y. Ent. Soc. 15: 138. 1906.

II. Jacksonville: March 1953, det. T. N. Freeman, HEW; May, MOG.

GLYPHIDOCERA Walsingham

8342 G. LACTIFLOSELLA (Chambers)

Bull. U. S. Geol. Geograph. Surv. Territ. 4: 89. 1878.

I. Escambia Co.: Sept. 27, 1961, SMH. IV. Siesta Key: April, May, det. Forbes, Oct., CPK. Punta Gorda: April, det. Clarke, MOG.

8342, 1 G. SP.

This species is very much like *lactiflosella*, but Clarke determines it as distinct. IV. Siesta Key: April 10, 1955, CPK.

8343 **G. DIMORPHELLA** Busck
J. N. Y. Ent. Soc. 15: 136. 1907.

I. Escambia Co.: Sept. 2, 1961, det. Hodges, SMH.

8345 **G. SPERATELLA** Busck
Proc. Ent. Soc. Wash. 9: 88. 1908.

IV. Bradenton: two May 22, 1955, Sept. 8, 1955, CPK.

8348 **G. FLORIDANELLA** Busck
Proc. Ent. Soc. Wash. 4: 474. 1901.

II. Gainesville: July, CU. IV. Myakka City: Feb., CU. Archbold Biological Station: March, CU. Sarasota: Feb., CU. Forbes notes that these last three specimens are too dark and plain, but nearer this than anything else. Siesta Key: Jan., CPK. Palm Beach: types, USNM.

8351 **G. BARYTHYMA** Meyrick
Exot. Micro. 3: 530. 1929.

III. Orlando: abundant, June, July, CU. IV. Myakka City: one Feb., CU. Englewood: one March, CU. VI. Paradise Key: seven March, CU.

Family OECOPHORIDAE

AGONOPTERIX Hübner

8425 **A. AMISELLA** (Busck)
Proc. Ent. Soc. Wash. 9: 89. 1908.

III. Kissimmee: types, three, USNM.

8427 **A. AMYRISELLA** (Busck)
Proc. U. S. Natl. Mus. 23: 233. 1900.

IV. Palm Beach: types, reared from *Amyris floridana*, USNM.

8430, 1 **A. SP.**

I. Escambia Co.: two Feb., 1961, det. Clarke as close to but not *clemensella* Chambers, SMH.

PSILOCORSIS Clemens

8473 **P. QUERICELLA** Clemens
Proc. Acad. Nat. Sci. Phila. 12: 212. 1860.

III. DeLand: MOG.

8471 **P. OBSOLETELLA** (Zeller)
Verh. zool.-botan. Ges. Wien 23: 242. 1873.

Florida: (Slosson), Grsb. 143. I. Florida Caverns State Park: April 14, 1960, (Denmark), DPI.

8472 **P. FAGINELLA** (Chambers)
Can. Ent. 4: 131. 1872.

I. Escambia Co.: Aug. 10, 1961, SMH.

8472, 1 **P. CARYAE** Clarke
Proc. U. S. Natl. Mus. 90: 215. 1941.

I. Escambia Co.: July 3, 1961, SMH. Monticello: three paratypes, reared from hickory, April, June, USNM. IV. Siesta Key: March 24, 1960, det. Clarke as this or something new, CPK. As there is no hickory in this locality, it is probably new.

INGA Busck

8466 **I. SPARSICILIELLA** (Clemens)

Pl. XXVI, Fig. 41, ♂.

Proc. Ent. Soc. Phila. 2: 430. 1864.

I. Escambia Co.: April, SMH. West Pensacola: May, VFG. Myrtle Grove: June, WJW. Ocean City: June, HOH. II. Alachua Co.: Sept., DPI. Gainesville: April, DPI. III. Central Florida: March, April, WMD. Altamonte Springs: Sept., Clarke (1941, p. 224). Cassadaga: April, Nov., SVF. St. Petersburg: Clarke. IV. Bradenton: April, Aug., Sept., CPK. Oneco: April-July, CPK. Archbold Biological Station: April, YU. Punta Gorda: April, MOG. VI. Paradise Key: March, Clarke.

8388 **I. CRETACEA** (Zeller)

Verh. zool.-botan. Ges. Wien 23: 243. 1873.

I. Escambia Co.: Aug. 5, 1961, SMH. Myrtle Grove: Oct. 30, 1962, WJW.

MARTYRINGA Busck

8380, 1 **M. RAVICAPITIS** Hodges
Bull. Brooklyn Ent. Soc. 55: 81. 1960.

I. Escambia Co.: July 1, Aug. 6, 1961, SMH.

DECANTHA Busck

8358 **D. BOREASELLA** (Chambers)

Can. Ent. 5: 189. 1873.

I. Escambia Co.: April 6, 1962, SMH. Myrtle Grove: April 3, 1962, WJW. II. Foley: March 26, 1959, (Dekle), det. Clarke, DPI. Crescent City: reared from *Polystichum*, Dec. 8, 1959, (Dekle), DPI. IV. Archbold Biological Station: Jan. 8 and 14, 1960, three Feb. 8, 1963, (Frost), PSU. Siesta Key: two Feb. 11 and 25, 1951, CPK.

EPICALLIMA Dyar

8361 **E. ARGENTICINCTELLA** (Clemens)

Proc. Acad. Nat. Sci. Phila. 12: 167. 1860.

I. Escambia Co.: May, Aug. 16, Sept. 1, 1961, SMH. Quincy: May 3, 1961, (Tappan), CPK. III. Cassadaga: Sept. 11, 1962, SVF.

Family **BLASTOBASIDAE**

Almost all determinations in this family are open to question since so many species are so similar. There is great need of revision, a task which is being undertaken by R. B. Selander. Until such time as his revision is published, most of the records below should be considered as tentative. A number of determinations were made by Brower, but inasmuch as he himself has expressed dissatisfaction with them, references to him have been omitted.

BLASTOBASIS Zeller8477 **B. GUILANDINAE** Busck

Proc. U. S. Natl. Mus. 23: 234. 1900.

IV. Siesta Key: May, CPK. Palm Beach: types, reared from larvae boring in stems of *Caesalpinia crista* [*Guilandina bonducella*], March 30, USNM.

8484 **B. ERIOBOTRYAE** Busck

Proc. Ent. Soc. Wash. 17: 85. 1915.

II. Gainesville: March 9, 1927, (Bates), UM. IV. Miami: type, reared from dry "mummy" fruit of loquat, emerging in July, USNM.

8485, I **B. OCHROBATHRA** Meyrick

Exot. Micro. 2: 463. 1921.

IV. Fairchild Tropical Gardens, Coral Gables: reared from decaying fruit of *Bromelia pingium*, Jan. 14, 1961, (Nakahara), USNM.

ZENODOCHIUM Walsingham8486 **Z. CITRICOLELLA** (Chambers)

Rept. U. S. Dept. Agr. for 1879, p. 207. 1880.

II. Jacksonville: type, reared from larva in dry orange infested by beetle (*Araeocerus fasciculatus*), issuing March 17, 1880.

8487 **Z. COCCIVORELLA** (Chambers)

Rept. U. S. Dept. Agr. for 1879: 207. 1880.

III. Cedar Key: type, larva in coccid scales (*Kermes* sp. near *pallidus*) on oak, March, issuing April 1-10, USNM.

VALENTINIA Walsingham8488 **V. GLANDULELLA** (Riley)

Pl. XXVI, Fig. 39, ♂.

Can. Ent. 3: 118. 1871.

I. Escambia Co.: Jan., common, July, Sept. 10, 1961, det. Clarke, SMH. II. Jacksonville: March,

MOG. Lake Geneva: March, det. T. N. Freeman, HEW. III. Brooksville: March, UM.

8489 **V. FRACTILINEA** (Zeller)

Verh. zool.-botan. Ges. Wien 23: 298. 1873.

IV. Siesta Key: May 17, 1946, CPK.

8490 **V. QUAINANCELLA** Dietz

Trans. Amer. Ent. Soc. 36: 15. 1910.

IV. Siesta Key: May 3-5, 1946, CPK.

8493 **V. FLORIDELLA** Dietz

Trans. Amer. Ent. Soc. 36: 17. 1910.

II. Crescent City: types, four from female cone of *Zamia integrifolia*, USNM. IV. Siesta Key: May 6-10, 1946, CPK. Fort Lauderdale: May 24, 1928, (Bates), UM.

CALOSIMA Dietz8497 **C. ARGYROSPLENDELLA** Dietz

Trans. Amer. Ent. Soc. 36: 22. 1910.

Among the few blastobasids of which the determination is reasonably simple, *argyrosplendella* may be distinguished from the next species by its narrower wings, acutely pointed hind wings, the costa of the forewing being nearly straight instead of depressed at the apex, paler color, and smaller size. I. Escambia Co.: Aug. 30, 1961, SMH. Warrington: May 4, 1961, VFG, CPK. II. Hastings: cotype, May 16, 1902, USNM. IV. Bradenton: March 22, 1955, (Kelsheimer), CPK.

8498 **C. DIANELLA** Dietz

Trans. Amer. Ent. Soc. 36: 22. 1910.

I. Escambia Co.: July 3, 1961, SMH. IV. Archbold Biological Station: Feb. 11, 1960, Feb. 26, 1962, (Frost), PSU, April 8, 1958, (Pease), YU. Siesta Key: Feb. 25, 1955, det. Clarke, April 27, 1956, CPK.

HOLCOCERA Clemens8507 **H. CRASSICORNELLA** Dietz

Trans. Amer. Ent. Soc. 36: 32. 1910.

Florida: unique type, USNM.

8516 **H. LIVORNELLA** (Zeller)

Verh. zool.-botan. Ges. Wien 23: 299. 1873.

IV. Fort Lauderdale: March 24, 1938, (Bates), UM.

8520 **H. FUNEBRA** Dietz

Trans. Amer. Ent. Soc. 36: 44. 1910.

IV. Fort Lauderdale: April 9, 1928, (Bates), UM.

8527 H. ELYELLA Dietz

Trans. Amer. Ent. Soc. 36: 49. 1910.

III. Brooksville: March 10, 1930, (Walker), UM.

8527, 1 H. LEPIDOPHAGA Clarke

Fla. Ent. 43: 115. 1960.

Camp Pinchot: Feb. 14, 1932, Clarke. Florida: six April, May, Clarke. I. Torreya State Park: April 29, 1952, Clarke. II. Columbia Co.: April 17, 1958, Clarke. Baker Co.: type, April 15, 1958, USNM. Archer: March 1882, Clarke. IV. Siesta Key: May 1, 1956, CPK. Food: *Pinus elliotii* and *P. palustris*, Clarke.

8531 H. MESSELINELLA Dietz

Trans. Amer. Ent. Soc. 36: 52. 1910.

II. Hastings: co-type, Dietz.

8534 H. CLEMENSELLA Chambers

Can. Ent. 6: 246. 1874.

IV. Fort Lauderdale: May 23, (Bates), UM.

8538 H. SPRETELLA Dietz

Trans. Amer. Ent. Soc. 36: 58. 1910.

II. Gainesville: March 9, 1927, (Bates), UM.

8540 H. PUNCTIFERELLA (Clemens)

Proc. Ent. Soc. Phila. 2: 119. 1863.

III. Volusia Co.: Sept. 10, 1938, (Hubbell), UM.

8546 H. MELANOSTRIATELLA Dietz

Trans. Amer. Ent. Soc. 36: 66. 1910.

I. Escambia Co.: Aug. 4, 1961, SMH. II. Gainesville: April 13, 1925, (Bates), UM.

GERDANA Busck**8465, 1 G. SP.**

I. Escambia Co.: July 13, 1961, det. Duckworth, SMH.

Family **XYLORICTIDAE**

Some of the genera currently standing under Stenomidae below belong here.

PSEUDEROTIS Clarke**8578, 1 P. SP.**

I. Escambia Co.: Feb., June 6, 1962, Sept. 4, 1961, det. Clarke as new, SMH.

Family **STENOMIDAE**

Dr. W. Donald Duckworth has recently finished a revision of Stenomidae, and I am indebted to him for many determinations and additional data.

STENOMA Zeller**8584 S. UNIPUNCTELLA** (Clemens)

Proc. Ent. Soc. Phila. 2: 126. 1863.

Florida: Dyar (1902, p. 519), USNM. I. Escambia Co.: Aug., Sept., SMH. West Pensacola: June, VFG. II. Hastings: April, Sept., USNM. III. Enterprise: May, USNM. Weekiwachee Springs: May, CPK. St. Petersburg: April, Oct., USNM. IV. Oneco: May-July, Sept., CPK. Siesta Key: May, CPK. Fort Myers: April, USNM. Coconut Grove: April, USNM.

8585 S. ALGIDELLA (Walker)

List Lep. Ins. Br. Mus. 29: 710. 1864.

I. Escambia Co.: March, SMH. Quincy: June, Aug., CPK. Monticello: Feb., CPK. II. Alachua Co.: July, Aug., DPI. Gainesville: July, CU. Orange Heights: May, CPK. III. Cassadaga: March, Nov., SVF. St. Petersburg: Jan., July, USNM. IV. Bradenton: Aug., CPK. Oneco: March, JGF; May, June, CPK. Archbold Biological Station: Feb., Dec., YU. Vero Beach: Feb., March, Oct., USNM. Siesta Key: Jan., April, May, CPK. Punta Gorda: April, MOG. VI. Paradise Key: Jan., det. Busck, FMJ.

8588 S. DECOROSELLA (Busck)

Proc. Ent. Soc. Wash. 10: 111. 1908.

III. St. Petersburg: April, USNM.

8590 S. HUMILIS (Zeller)

Pl. XXVI, Fig. 44, ♂.

Linn. Ent. 10: 156. 1855.

I. Escambia Co.: Sept., SMH. Avalon: larva on live oak, Feb., det. Capps, DPI. Panacea: Aug., USNM. Monticello: April, CPK. II. Gainesville: larva on oak, June, Dozier (1920, p. 379); July, CU. III. Glenwood: USNM. Cassadaga: June, SVF. Weekiwachee Springs: April, CPK. Mount Dora: Nov., DPI. Clearwater: Sept., DPI. St. Petersburg: May, USNM. Lake Alfred: July, USNM. IV. Bradenton: March-Sept., Nov., CPK. Oneco: April, June, Nov., CPK. Vero Beach: Feb., USNM. Sarasota: Dec., CU. Venice: Dec., CU. Fort Lauderdale: March, UM. Opa Locka: Dec., DPI. Miami: USNM; Feb., March, DPI. Coral Gables: March, DPI. Paradise Key: Jan., FMJ; March, USNM.

8592 S. VESTALIS (Zeller)

Verh. zool.-botan. Ges. Wien 23: 247. 1873.

I. Escambia Co.: May, SMH. Myrtle Grove: Sept., WJW. Ocean City: June, HOH. Quincy: Sept., CPK. Panacea: Aug., USNM. II. Alachua Co.: May, Aug., DPI. Gainesville: May, DPI. III. Marion Co.: June, UM. Volusia Co.: July,

UM. Cassadaga: May, SVF. Glenwood: USNM. Weekiwachee Springs: May, June, CPK. Altamonte Springs: USNM. Orlando: Oct., DPI. St. Petersburg: Oct., USNM. Lakeland: March, USNM; May, Grsb. 143. IV. Bradenton: July, Sept., Nov., CPK. Oneco: May, June, Nov., CPK. Archbold Biological Station: Jan., PSU; April, Dec., YU; Dec., CU. Sarasota: May, Sept., CPK. Siesta Key: March-May, Nov., Dec., CPK. Punta Gorda: May, MOG. Fort Myers: April, AMNH, CU. Miami: USNM. V. Everglades: April, USNM. Marco: April, USNM. VI. Florida City: March, CU. Paradise Key: Jan.-April, FMJ; March, CU; March, Sept., USNM.

8594 **S. MISTRELLA** Busck
Proc. Ent. Soc. Wash. 8: 93. 1907.

I. Escambia Co.: May 13, 1962, det. Duckworth, SMH. IV. Punta Gorda: March, MOG.

SETIOSTOMA Zeller

8597 **S. XANTHOBASIS** Zeller
Verh. zool.-botan. Ges. Wien 25: 325. 1875.

Florida: Fernald (1900, p. 245). I. Myrtle Grove: April 28, 1963, WJW. Quincy: May 3, 1961, (Tappan), CPK. II. Gainesville: April 21, 1956, (Denmark), DPI; Sept. 15, 1962, (Merrill), CPK. III. Cassadaga: Aug. 7, 1953, SVF. Lakeland: May 1-7, USNM. V. Chokoloskee: USNM. This last was not recorded by Duckworth and may not be there now.

DURRANTIA Busck

8600 **D. OBITERELLA** Busck
Proc. U. S. Natl. Mus. 35: 207. 1908. (This is not the original description, but the first use of the name.)

I. Escambia Co.: Feb., 1961, Nov. 4, 1961, (Hills), USNM; Clarke places these here on a tentative basis.

MENESTA Clemens

8602 **M. TORTRICIFORMELLA** Clemens
Proc. Acad. Nat. Sci. Phila., p. 213. 1860.

I. Quincy: June 15, 1961, (Tappan), det. Forbes, CPK. II. Alachua Co.: June 14, 1961, (Denmark), det. Forbes, DPI. Food: hazel.

8603 **M. MELANELLA** Murtfeldt
Insect Life 2: 304. 1890.

II. Jacksonville: (Slosson), Grsb. 142. III. Cassadaga: July 14, 1962, SVF. Food: oak.

MENESTOMORPHA Walsingham

8579 **M. OBLONGATA** Walsingham
Proc. U. S. Natl. Mus. 33: 215. 1907.

VI. Paradise Key: Jan. 18, USNM. Food: cynipid gall on oak.

MOTHONICA Walsingham

8604, 1 **M. SP.**

A new species which has been described by Duckworth with the name still in manuscript. The determinations have all been made by Duckworth or Clarke. II. Gainesville: Aug., UFES. IV. Oneco: May, June, Sept., CPK. Siesta Key: common, Nov.-June, CPK, USNM.

Family ETHMIIDAE

ETHMIA Hübner

In the material collected by the wild cotton survey at Tavernier and elsewhere in the Keys, there were many specimens of *Ethmia*, most of them in poor condition. There are two species in the lot, neither of which is *confusella* (Walker).

8619 **E. CONFUSELLA** (Walker)
List Lep. Ins. Br. Mus. 28: 531. 1863.

Florida: Dyar (1902, p. 524). Grossbeck (1917, p. 143) added the locality Key West to this reference. Busck (1933, p. 164) mentioned a series from Key West in the U. S. National Museum.

8620 **E. TRIFURCELLA** Chambers
Can. Ent. 5: 12. 1873.

I. Escambia Co.: April 23, 1961, det. Powell, SMH.

8632, 1 **E. SP.**

Powell says that the wing pattern is close to *hiramella* Busck, but that the genitalic characters differ and it is definitely not this species. VIII. Tavernier: abundant, Sept. 15-Oct. 27, 1955, (J. N. Todd), CPK.

8632, 2 **E. [PAUCELLA]** (Walker)
List Lep. Ins. Br. Mus. 28: 530. 1863.

Powell places this either here or as something very close to it. VIII. Tavernier: Sept. 14, 1955, (J. N. Todd), CPK.

SUPERFAMILY YPONOMEUTOIDEA

Family GLYPHIPTERYGIDAE

HILAROGRAPHA Zeller

8636, 1 H. JONESI Brower

Ann. Ent. Soc. Amer. 46: 96. 1953.

I. Escambia Co.: Sept. 28, 1961, SMH. Type locality Martha's Vineyard, Mass., and known only from there, Long Island, and New Jersey. This is the seventh specimen to be taken.

TORTYRA Walker

8640 T. DIVA (Riley)

Proc. Ent. Soc. Wash. 1: 158. 1889.

IV. Miami: det. Clarke, FMG. Biscayne Bay: (Slosson), Grsb. 141. Coconut Grove: types, three, larva skeletonizing the leaves of a wild *Ficus* (*pedunculata*?), May 1887, (Schwarz), Riley. VI. Florida City: CU; June 19, 1949, (Forsyth), HEW. Paradise Key: Jan., FMJ; Dec. 4-10, (Sanford), AMNH. VIII. Tavernier: three Aug.-Oct., (J. N. Todd), CPK.

8641 T. SLOSSONIA (Fernald)

Pl. XXVI, Fig. 45, ♂.

Can. Ent. 32: 244. 1900.

II. Gainesville: Aug. 19, 1958, DPI. IV. Sarasota: reared from leaf buds of *Ficus aurea*, Dec., (King), CPK. IV. Siesta Key: common, April-June, 1957, det. Clarke, Nov. 15, 1958, CPK. South Bay: April, Grsb. 141. Biscayne Bay: type, (Slosson), Fernald. Miami: larva on *Ficus*, Jan., April, Dec., DPI. Coconut Grove: larva on *Ficus*, Feb., DPI. V. Marco: April, Grsb. 141. Everglades: April, AFB, AMNH. VI. Snapper Point: reared from larvae on unopened terminal leaves of *Ficus* sp., May, (Nakahara), DPI. Homestead: May, CPK; larva on *Ficus*, Dec., DPI. Paradise Key: Jan., FMJ. VIII. Key Largo: Jan., DPI. Key West: larva on *Ficus*, June, DPI.

8642 T. BIFERANA (Walker)

List Lep. Ins. Br. Mus. 28: 418. 1863.

IV. Palm Beach: type of *dyari* Busck (1900b, p. 242).

[MACHLOTICA Meyrick]

8642, 1 M. SP.

Clarke determined this as "near *Machlotica*"

and probably new. II. Alachua Co.: reared from *Sabal palmetto*, May 1959, (Peterson), DPI. III. Monte Vista: Sept. 1, 1961, (Felshaw), DPI.

ALLONONYMA Busck

8645 A. VICARIALIS (Zeller)

Verh. zool.-botan. Ges. Wien 25: 322. 1875.

Florida: Dyar (1902, p. 495).

CHOREUTIS Hübner

8649 C. INFLATELLA Clemens

Proc. Ent. Soc. Phila. 2: 5. 1863.

I. Escambia Co.: July 31, Aug. 1, Sept. 7, 1961, SMH.

8656 C. CARDUIELLA Kearfott

J. N. Y. Ent. Soc. 10: 116. 1902.

Florida: Dyar (1902, p. 493). IV. Archbold Biological Station: one April 1958, (Pease), YU; April 2, 1962, (Frost), PSU. Siesta Key: three March, det. Clarke, CPK.

8657 C. BUSCKIELLA Kearfott

J. N. Y. Ent. Soc. 10: 120. 1902.

II. Hastings: March 15, (Brown), Kearfott.

8662 C. GNAPHALIELLA Kearfott

J. N. Y. Ent. Soc. 10: 113. 1902.

I. Escambia Co.: four July 13-14, two Sept. 12, 1961, det. Davis, SMH. III. DeLand: March, MOC. IV. Bradenton: April 26, 1955, (Kelsheimer), CPK. Oneco: May 28, 1953, (Dillman), CPK. This may be another species.

GLYPHIPTERYX Hübner

8670, 1 G. SP.

This species is close to but not *impigritella* Clemens. I. Escambia Co.: Sept. 13 and 30, 1961, SMH. IV. Oneco: May 8, 1953, (Dillman), CPK. Siesta Key: April 17, 1953, det. Forbes, April 25, 1961, CPK.

HOMADAULA Lower

8683, 1 H. ALBIZZIAE Clarke

Mimosa webworm.

Proc. U. S. Natl. Mus. 93: 206. 1943.

I. Pensacola: larva, July 8, 1959, Coop. Ins. Pest Surv. 6: 70. Myrtle Grove: Aug. 29, 1962, WJW. Milton: larvae, Aug. 19, 1958, (Beatty), Coop. Ins. Pest Surv. 5: 134. Fort Walton Beach: pupae on *Albizia julibrissin*, Sept. 30, 1958, (Collins), Coop. Ins. Pest Surv. 5: 149. Ocean City:

Aug. 5, 1963, HOH. II. Macclenny: larva on mimosa, July 6, 1960, Coop. Ins. Pest Surv. 7: 68. Jacksonville: larvae, May 1, 1959, *ibid.* 7: 75.

Family AEGERIIDAE

SANNINA Walker

8765 S. UROCERIFORMIS Walker

Persimmon borer.

List Lep. Ins. Br. Mus. 8: 64. 1856.

Florida: Feb., Lever (1892, p. 332). I. Liberty Co.: June, UM. Monticello: larva in persimmon, Jan., DPI. II. Glen St. Mary: larva in persimmon, April, July, Dec., DPI. Florahome: larva in persimmon, Feb., DPI.

SANNINOIDEA Beutenmueller

8691 S. EXITIOSA (Say)

Peach tree borer. Pl. XXVI, Fig. 42, ♀; Fig. 43, ♂.

J. Acad. Nat. Sci. Phila. 3: 216. 1823.

Most of the records are for the larva in peach trees. Florida: Beutenmueller (1901, p. 266); April, Fla. Agr. Exp. Sta. Bull. 2: 17; Sept., Ins. Pest Surv. Bull. 11: 16, 527. I. Tallahassee: form *fitchii* (Henry Edwards), (Koebele), Henry Edwards (1882b, p. 55). Woodville: Jan., DPI. Monticello: Jan., DPI; May, UM. I-II. Northern half of Florida: abundant, May, Ins. Pest Surv. Bull. 9: 124. II. Glen St. Mary: Dec., DPI. Starke: abundant, April, Ins. Pest Surv. Bull. 21: 91. Newberry: April, DPI. III. Blanton: March, DPI. Other foods: plum, almond, nectarine, wild and cultivated cherry, beach plum, and *Amelanchier arborea* [*canadensis*].

CARMENTA Henry Edwards

8755 C. PYRALIDIFORMIS AURANTIS

Engelhardt

U. S. Natl. Mus. Bull. 190: 47. 1946.

Northern Florida: Engelhardt. I. Escambia Co.: two Sept. 3, 1961, SMH. III. Volusia Co.: Aug. 3, 1938, (Hubbell & Friauf), UM.

8707 C. ANTHRACIPENNIS (Boisduval)

Spec. Gén. Hét. 1: 392. 1874.

III. Georgiana: (Wittfeld), Engelhardt (1946, p. 48). This was not listed by Grossbeck (1917, pp. 108-110), at least not under this name.

8742 C. TEXANA (Henry Edwards)

Papilio 1: 204. 1881.

III. Georgiana: (Wittfeld), Engelhardt (1928, p. 68). This is probably the same specimen that

was the type of *wittfeldii* Henry Edwards (1883, p. 156) for which the locality was given as Indian River. Dunedin: March, larva on *Grindelia*, USNM. St. Petersburg: May, USNM. IV. Lake Okeechobee: May, USNM. South Bay: May, (Davis), Grsb. 109. Archbold Biological Station: Jan., PSU. Palm Beach: June, USNM. Biscayne Bay: (Slosson), USNM. Miami: larva on *Eupatorium serotinum*, and fennel, March, DPI. Hialeah: reared from *Ambrosia*, July, DPI. VI. Florida City: reared from *E. serotina*, May, USNM. Paradise Key: on *Flaveria linearis*, March, DPI; reared from *Eupatorium*, May, USNM; April, May, (Jones), CPK. VIII. Lower Matecumbe: reared from *Melanthera deltoidea*, (Jones), USNM. Key West: on *Flaveria linearis*, Dec., DPI.

SYLVORA Engelhardt

8727 S. ACERNI BUSCKI Engelhardt

Maple callus borer.

U. S. Natl. Mus. Bull. 190: 79. 1946.

I. Escambia Co.: form *tepperi* (Henry Edwards) May, SMH. Myrtle Grove: *tepperi* Aug., WJW. Torreya State Park: *tepperi*, April, DPI. Quincy: *tepperi*, March, April, Oct., CPK. II. Gainesville: types, reared from white and red maple, March-May, USNM; reared from *Acer saccharinum*, emerging Sept. 15, 1960, (Hetrick), UFA, USNM. Hetrick has reported subsequently that he believes the species has continuous generations, emerging whenever the temperature is propitious.

SYNANTHEDON Hübner

8753 S. SAPYGAEFORMIS (Walker)

List Lep. Ins. Br. Mus. 8: 45. 1856.

As Engelhardt made *floridensis* (Grote) a form of this, the records are herewith combined. He stated that the proportion of bred material from cynipid galls gave 96% *floridensis* and only 4% typical *sapygaeformis*. I. Escambia Co.: *floridensis*, April, SMH. Monticello: March, April, *floridensis*, from spiny leafed scrub oak, June, Engelhardt (1946, p. 90). II. East Florida: AMNH. Gainesville: *floridensis*, March, CPK; from scrub oak, April, Engelhardt. Jacksonville: *floridensis*, (Slosson), Grsb. 109; (Ashmead), Engelhardt (1946, p. 89). III. Daytona Beach: April, Engelhardt; *floridensis*, Oct., Engelhardt. Coronado Beach: *floridensis*, March, Engelhardt. Edgewater: Sept., Oct., CPK. Enterprise: type of *floridensis*, March, May, AMNH. Lake Co.: *floridensis* on *Flaveria linearis*, March, DPI. Longwood: *floridensis*, from water oak, April, Engelhardt. Polk Co.: June, DPI. IV. Archbold Biological Station: Sept., YU. Dade Co.:

floridensis, April, May, HFS; May, CPK. Biscayne Bay: *floridensis*, (Slosson), Engelhardt. VI. Paradise Key: *floridensis*, Feb., Engelhardt; from water oak, March-May, FMJ, CPK. The reader is also referred to a paper by Morse (1957, p. 61) relative to emergence from galls of the gall wasp *Callirhytis batatoidea* (Ashmead).

8720 S. PICTIPES (Grote & Robinson)

The lesser peach tree borer.

Trans. Amer. Ent. Soc. 2: 182. 1868.

Florida: Beutenmueller (1901, p. 292); U. S. Dept. Agr. Bull. 68: 31. II. Glen St. Mary: infesting peach trees, Feb., Coop. Ins. Pest Surv. 9: 19. Gainesville: larva, April 10, 1960, det. Capps as probably this, Hetrick (1961, p. 53).

ALCATHOE Henry Edwards

8685 A. CAUDATA (Harris)

Amer. J. Sci. 36: 311. 1839.

Florida: April, May, Beutenmueller (1901, p. 241). Food: *Clematis virginiana*, *C. vitalba*, and *Ribes americanum* [*floridum*], boring in the roots of the first two and the stems of the last.

THAMNOSPHECIA Spuler

8731 T. SCITULA (Harris)

Dogwood borer.

Amer. J. Sci. 36: 313. 1839.

Florida: larva in peach, Fla. Agr. Exp. Sta. Bull. 79: 299. I. Paxton: reared from pecan, emerging, Sept. 1, 1927, UM. Monticello: larva in oak, Engelhardt (1946, p. 118).

8752 T. GELIFORMIS (Walker)

List Lep. Ins. Br. Mus. 8: 46. 1856.

I. Monticello: larva in oak galls, Engelhardt (1946, p. 118); March, May, UM; in pecan trunk and limbs, April, Pecan Investigations Laboratory file; in pecan buds on top worked trees, Aug., Sept., Pecan Investigations Laboratory file. II. Gainesville: dogwood badly infested, Engelhardt; from pupae in hickory, March, May, UM; June, UFES. Archer: (Koebele), Henry Edwards (1883, p. 157). Jacksonville: (Slosson), Grsb. 109. St. Augustine: Jan., UFES. III. Casadaga: Feb., SVF. Astor Park: Aug., DPI. Cocoa: from *Casuarina equisetifolia*, April, UFES. Tampa: Grsb. 109; from Australian pine, May, DPI. IV. Oneco: from hibiscus, Feb., DPI. Charlotte Harbor: (Slosson), Grsb. 109. Miami: boring in Australian pine, Dec., DPI.

8729 T. PYRI (Harris)

Apple bark borer.

New England Farmer 9: 2. 1830.

Florida: June 22, 1924, UM; June, July, Beutenmueller (1901, p. 297). Tallahassee: type of *koebelei* Henry Edwards (1881b, p. 197).

8743 T. REFULGENS SEMINOLE

(Beutenmueller)

J. N. Y. Ent. Soc. 7: 255. 1899.

I. Escambia Co.: three Sept. 1-30, 1961, SMH. West Pensacola: Aug. 6, 1963, VFG. De Funiak Springs: May 20-21, Engelhardt (1946, p. 121). II. Jacksonville: (Slosson), Grsb. 109. II-III. Central, Northern Florida: Engelhardt. IV. Lake Worth: (Truman), USNM.

8744 T. MARICA (Beutenmueller)

J. N. Y. Ent. Soc. 7: 254. 1899.

II. Gainesville: May 15, 1922, det. Engelhardt, UM; Sept. 13, 1914, USNM. Jacksonville: type, AMNH. IV. Punta Gorda: (Slosson), Grsb. 109.

8715 T. RUBROFASCIA (Henry Edwards)

Papilio 1: 191. 1881.

II. Jacksonville: (Slosson), Engelhardt (1946, p. 124). Food: *Nyssa*.

8715, I T. ALLERI Engelhardt

U. S. Natl. Mus. Bull. 190: 124. 1946.

I. Jefferson Co.: April 20, 1930, (Walker), UM.

SIGNAPHORA Engelhardt

8757 S. RUFICORNIS (Henry Edwards)

Papilio 1: 184. 1881.

Florida: AMNH. III. La Grange: Sept. 11, (Davis), SIM.

PARANTHRENE Hübner

8802 P. DOLLI CASTANEUM (Beutenmueller)

Bull. Amer. Mus. Nat. Hist. 9: 213. 1897.

VI. Paradise Key: larva boring in young willows, det. Engelhardt, FMJ.

8799 P. PALMII (Henry Edwards)

Can. Ent. 19: 145. 1887.

II. Gainesville: larva in oak, April, DPI. Jacksonville: Engelhardt (1946, p. 148). III. Daytona: in deciduous and evergreen shrubs, Engelhardt. Enterprise: type, (Palm), Henry Edwards.

8800 *P. ASILIPENNIS* (Boisduval)
Icon. Règne Anim. Ins. 3 (b): 496. 1829.

I. Tallahassee: Feb. 28, USNM. II. Jacksonville: March, (Slosson), USNM. Food: oak.

VITACEA Engelhardt

8801 *V. POLISITIFORMIS SEMINOLE*
(Neumoegen)

Grape root borer.
Ent. News 5: 330. 1894.

Florida: type, Neumoegen. I. Escambia Co.: Sept. 8, 1961, SMH. This determination is tentative, but there appears to be nothing else that this can be, other than the unknown male of *seminole*. Nor is this in any way an attempt to name this as the type male. However, for the benefit and guidance of collectors, a description of the strikingly marked abdomen may be useful. All segments except 3 and 4 are a rich red brown; 3 and 4 are a very blackish brown. All are separated by yellow except 3 and 4, this last giving the effect of a broad, black belt. I. Warrington: Aug. 3, 1963, (K. Sheehan), VFG. II. Greenville: Sept. 15, 1923, Sept. 3, 1932, det. Engelhardt, UM. Ortega: Sept. 6, (Sleight), Grsb. 110. Food: *Vitis labrusca*.

8797 *V. SCEPSIFORMIS* (Henry Edwards)
Papilio 1: 183. 1881.

IV. Fort Lauderdale: April 6, 1962, (D. P. B. McLean), CPK. Biscayne Bay: (Slosson), Grsb. 109.

GAEA Beutenmueller

8771 *G. EMPHYTIFORMIS* (Walker)
List Lep. Ins. Br. Mus. 8: 43. 1856.

I. Freeport: 1921, (Jones), Engelhardt (1946, p. 161).

MELITTIA Hübner

[8776 *M. satyriniformis* Hübner]
Zutr. Exot. Schmett.; Fig. 453. 1825.

According to Engelhardt (1946, p. 183), this species is not present in the United States and all records belong under the next one, *cucurbitae*.

8777 *M. CUCURBITAE* (Harris)

Squash vine borer.
New England Farmer 7: 33. 1828.

I. Escambia Co.: May-July, SMH. Pensacola: Aug. 13, 1962, VFG. Monticello: July 22, 1928, UM. II. Alachua Co.: May 2, 1951, CPK. Gainesville: April 2, 1938, UFES; April 24, 1924, UM. St. Augustine: (Johnson), Grsb. 108.

Family HELIODINIDAE

EUCLEMENSIA Grote

8806 *E. BASSETTELLA* (Clemens)

Proc. Ent. Soc. Phila. 2: 423. 1864.

Florida: Hollinger & Parks (1919, p. 94). I. Escambia Co.: May, July, SMH. Myrtle Grove: Aug., WJW. Ocean City: Aug., HOH. II. Alachua Co.: June, DPI. III. Cassadaga: June, SVF. Hernando Co.: Aug., UM. Brooksville: June, AKW. Winter Park: May, AMNH; July, DPI. Orlando: June, DPI. Hillsborough Co.: Aug., UM. IV. Bradenton: May, Sept., CPK. Siesta Key: April, May, CPK. Punta Gorda: May, MOG.

IDIOGLOSSA Walsingham

8810 *I. MIRACULOSA* Frey

Stett. Ent. Zeit. 39: 277. 1878.

I. Escambia Co.: Sept. 21, Oct. 25, 1961, det. Hodges, SMH.

CYCLOPLASIS Clemens

8811 *C. PANICIFOLIELLA* Clemens

Proc. Ent. Soc. Phila. 2: 422. 1864.

IV. Palm Beach: larva in *Lasiacis divaricata* [*Panicum divaricatum*], Jan., Dyar (1901a, p. 479). It also feeds in *Panicum clandestinum*.

SCELORTHUS Busck

8812 *S. PISONIELLA* Busck

J. N. Y. Ent. Soc. 8: 239. 1900.

IV. Palm Beach: types, reared from *Torruba longifolia* [*Pisonia obtusata*] and *Pisonia aculeata*, Feb., (Dyar), Busck.

LAMPROLOPHUS Busck

8813 *L. LITHELLA* Busck

J. N. Y. Ent. Soc. 8: 241. 1900.

IV. Palm Beach: types, reared from stems of *Pisonia aculeata*, Feb., (Dyar), USNM. V. Everglades: from stalk of *P. aculeata*, April 16-23, AFB.

HELIODINES Stainton

8515 *H. BELLA* Chambers

Can. Ent. 7: 73. 1875.

IV. Bradenton: four Aug. 18-Sept. 17, 1955, (Kelsheimer), CPK. VI. Homestead: Aug. 26, 1958, (Wolfenbarger), det. Clarke, CPK; on velvet bean, June 14, 1959, (Baranowski), STES.

8815, 1 H. SP.

Near *bella* (Chambers). In view of the record for *bella* above, it would be reasonable to assume that this is actually *bella*. II. Gainesville: taken at chinquapin bloom, May 21, Dozier (1920, p. 379).

8824, 1 H. SP.

I. Escambia Co.: Oct. 20, 1961, det. Clarke as probably undescribed, SMH.

8824, 2 H. SP.

VIII. Tavernier: three Oct. 9-23, 1955, (Todd), det. Hodges, CPK.

ABEBAEA Hübner**[8839 A. nella** Busck]

J. N. Y. Ent. Soc. 11: 54. 1903.

This is another of the clerical errors that plagued the Pest Survey records for a short period. However, in this case it would not be amiss to guess that the record was intended for 8939, *Ateva aurea* (Fitch), the error resulting from a slip in the second digit of the number. I. Quincy: July 31, 1956, Coop. Ins. Pest Surv. 3: 5.

Family HYPONOMEUTIDAE**PLUTELLA** Schrank**8870 P. PORRECTELLA** (Linnaeus)

Syst. Nat., p. 546. 1758.

I. Escambia Co.: July, SMH. III. Cassadaga: Jan., SVF. IV. Bradenton: April, CPK. Siesta Key: March, April, det. Clarke, CPK. VI. Homestead: Feb.-May, Nov., det. Clarke, CPK.

8878 P. MACULIPENNIS (Curtis)

Diamondback moth.

Brit. Ent.; Pl. 420. 1832.

Maculipennis is probably general throughout the state, November-August. It feeds on cabbage all winter at Gainesville (Fla. Agr. Exp. Sta. Bull. 232: 37); cabbage and cauliflower, *ibid.* 59: 436; collards (Coop. Econ. Ins. Rept. 4: 383); corn, peanuts, sugarcane, *ibid.*: 394.

ARGYRESTHIA Hübner**8898 A. SUBRETICULELLA** Walsingham

Trans. Amer. Ent. Soc. 10: 173. 1882.

I. Escambia Co.: Dec. 6, 1961, SMH.

8900 A. EUGENIELLA Busck

Proc. Ent. Soc. Wash. 18: 153. 1916.

III. New Smyrna: DPI. IV. Vero Beach: larva on guava, Heinrich, in U. S. Dept. Agr. "The more important insect records for the winter and spring to March 31, 1945," p. 3. Fort Myers: DPI. Belle Glade: Heinrich. Fort Lauderdale: Heinrich. VI. Naranja: on guava, July, DPI. Homestead: Feb., Heinrich; July, UFES. Florida City: DPI. VIII. Key West: type, on guava, March, USNM.

8903 A. CONJUGELLA Zeller

Apple fruit moth.

Isis, p. 204. 1839.

IV. Vero Beach: Nov. 5, 1938, (Bass), det. Heinrich, DPI. Food: *Sorbus aucuparia* berries, fruit of apple.

PODIASA Busck**8920 P. CHIOCOCCELLA** Busck

Proc. U. S. Natl. Mus. 23: 240. 1900.

IV. Siesta Key: Jan. 16, 1960, CPK. Palm Beach: Feb. 17 and 28, 1931, (Frost), CU; cotype, emerged March 15, 1900, CU; types, reared from *Chiococca alba [racemosa]*, USNM. Miami: on snowberry, Feb.-April, DPI; on stopper, March, DPI. VI. Homestead: reared from leaf miners on *Chiococca alba*, Jan., (Baranowski), det. Hodges, CPK, STES.

ZELLERIA Stainton**8921, 1 Z. RETINIELLA** Forbes

Lep. New York, p. 348. 1923.

Forbes ascribed the authorship to Kearfott, but as the latter never published his manuscript description, Forbes himself becomes the author. The type is in the U. S. National Museum collection. I. Escambia Co.: May 21, 1961, SMH.

EUCATAGMA Busck**8929 E. AMYRISELLA** Busck

J. N. Y. Ent. Soc. 8: 247. 1901.

IV. Palm Beach: types, reared from *Amyris floridana*, March, (Dyar), USNM.

YPONOMEUTA Latreille**8931 Y. MULTIPUNCTELLA** Clemens

Proc. Acad. Nat. Sci. Phila., p. 8. 1860.

I. Escambia Co.: May 3, 1961, SMH. Myrtle Grove: May 5, 1963, WJW.

ATTEVA Walker**8937 A. FLORIDANA** (Neumoegen)

Can. Ent. 23: 122. 1891.

Floridana is sometimes reported under the name *gemmata* (Grote). Florida: Aug., AMNH. II. Gainesville: May, UM. III. Upper Indian River: type, Neumoegen. IV. Lake Worth: larva on *Simaruba glauca*, Dyar (1897a, p. 48). Biscayne Bay: (Slosson), Grsb. 141. Miami: Dyar. VI. Homestead: April-June, Sept., Oct., CPK. Paradise Key: Jan.-April, FMJ; May, AEB.

8939 **A. AUREA** (Fitch)

Ailanthus webworm. Pl. XXVI, Fig. 46, ♀.
Rept. Ins. N. Y. 3: 168. 1856.

I. Escambia Co.: April, SMH. Myrtle Grove: June, WJW. Big Bayou: Oct., Grsb. 140. Warrington: VFG. De Funiak Springs: Oct., Grsb. 140. Lake Stanley: Oct., Grsb. 140. Quincy: abundant, May, July-Nov., CPK; Sept., DPI. Jefferson Co.: autumn, UM. Monticello: June, Aug., Sept., DPI. II. Alachua Co.: Aug., DPI; Sept., UM. III. Cassadaga: fairly common, Oct., Nov., SVF. Weekiwachee Springs: May, Aug., CPK. IV. Archbold Biological Station: April, YU. Siesta Key: Feb., CPK.

LACTURA Walker

8940 **L. PUPULA** (Hübner)

Pl. VI, Fig. 42, ♀.
Zutr. exot. Schmett. 3; Figs. 489, 490. 1824.

I. Quincy: one each, Sept., Oct. *Pupula* is a fairly common species from IV. Rye and Port Sewall to VIII. Key West, Jan.-June, Oct., Nov. Food: *Bumelia celastrina [angustifolia]*, Grsb. 140.

URODUS Herrich-Schaeffer

8944 **U. PARVULA** (Henry Edwards)

Pl. XXVI, Fig. 47, ♂.
Papilio 1: 80. 1881.

Parvula is frequently taken but often reported as *Cydosia majuscula* (Henry Edwards) because it was illustrated instead of that species, which it does closely resemble, by Holland (1903, Pl. 29, Fig. 66). It has been taken December-July. Although there are sufficient records to indicate that *parvula* is a relatively common species none of them suggest that it is abundant. However, figures compiled by Frost at the Archbold Biological Station and based on light trap catches from November 7, 1958 to April 1, 1959, indicate a definite abundance at that period for that locality. From November 7, to December 3, twenty or more specimens were taken on 16 nights. From January 28 to February 20, ten or more specimens were taken on 39 nights. These were the peak periods, with a single high

of 78 specimens. During the rest of the season, *parvula* was continuously present, though in smaller numbers, the average during March being five. The larva constructs an open-work net cocoon which is suspended by a short length of silk. It is recorded from various plants: bay tree, Dyar (1913c, p. 148); *Persea*, Dyar (1900e, p. 40), and DPI; *P. borbonia*, DPI; orange, UFES; oak, DPI, and with "?" by Bonniwell (1918, p. 59); *Persea borbonia [Tomala pubescens]*, DPI; *Bumelia reclinata*, det. Brass, CPK; and hibiscus, DPI.

Family **SCYTHRIDAE**

SCYTHRIS Hübner

8953 **S. EBORACENSIS** Zeller

Linn. Ent. 10: 205. 1855.

I. Escambia Co.: April 24 and 26, 1963, det. Duckworth, SMH.

8967 **S. TRIVINCTELLA** (Zeller)

Verh. zool.-botan. Ges. Wien 23: 292. 1873.

V. Everglades: April 7, AMNH.

8975, 1 **S. SP.**

I. Escambia Co.: Oct. 1, 1961, det. Hodges, SMH.

8975, 2 **S. SP.**

IV. Siesta Key: March 31, 1962, det. Hodges, CPK.

**SUPERFAMILY
CYCNODIOIDEA**

Family **HELIOZELIDAE**

ANTISPILA Hübner

8981 **A. EUGENIELLA** Busck

Proc. U. S. Natl. Mus. 23: 236. 1900.

IV. Palm Beach: unique type, reared from *Eugenia rhombea [procera]*, Feb. 25, (Dyar), USNM.

COPTODISCA Walsingham

8990 **C. CONDALIAE** Busck

Proc. U. S. Natl. Mus. 23: 242. 1900.

IV. Palm Beach: types, reared from *Krugiodendron ferreum [Condalia ferrea]*, Feb. 12-14, (Dyar), USNM.

Family ELACHISTIDAE

ELACHISTA Treitschke

9044 E. CUCULATTA Braun

Ohio J. Sci. 21: 206. 1921.

I. Escambia Co.: (Hills), USNM.

SUPERFAMILY TINEOIDEA

Family COLEOPHORIDAE

COLEOPHORA Hübner

In addition to the three unplaced species below, there are a number of others awaiting determination.

9085 C. CARYAEFOLIELLA Clemens

Pecan cigar casebearer.

Proc. Ent. Soc. Phila. 1: 78. 1861.

Caryaefoliella is very common on hickory and pecan trees with a number of records for March-May and in July, DPI. The records are mostly from the western counties, but include Orlando and St. Petersburg. The species will probably be found wherever its food plant grows.

9092 C. CORUSCIPENNELLA Clemens

Proc. Acad. Nat. Sci. Phila. p. 4. 1860.

I. Escambia Co.: May 21, 1962, det. Davis, SMH.

9158 C. OCTAGONELLA Walsingham

Trans. Ent. Soc. London, p. 431. 1882.

Florida: type, Walsingham.

9158, 1 C. SP.

IV. Miami: reared from flowering heads of *Chenopodium ambrosioides*, June, July, 1961, (Stegmaier), DPI, CPK.

9158, 2 C. SP.

III. Groveland: cases of "pistol" type on *Citrus* sp., Aug. 1961, (Henderson), CPK. Bereah: cases and adults, July, 1961, (Snell), DPI, CPK.

9158, 3 C. SP.

I. Escambia Co.: two Sept. 13, 1961, det. Davis as perhaps new, SMH, USNM.

Family GRACILLARIIDAE

Dr. Donald R. Davis has begun a revision of the Gracillariidae. He will describe a number of new species from Florida.

LITHOCOLLETIS Hübner

9180 L. RILEYELLA Chambers

Cincinnati Quart. J. Sci. 2: 236. 1875.

I. Escambia Co.: March 30, 1962, SMH.

9216 L. LUCETIELLA Clemens

Proc. Acad. Nat. Sci. Phila., p. 319. 1859.

II. Gainesville: numerous blotch mines in leaves of linden, May 15, adults emerging later, Dozier (1920, p. 379).

9227 L. CELTIFOLIELLA Chambers

Can. Ent. 3: 128. 1871.

IV. Oneco: three May 5-19, 1953, (Dillman), CPK. Food: *Celtis*.

9233 L. CARYAEFOLIELLA Clemens

Proc. Acad. Nat. Sci. Phila. p. 323. 1859.

II. Glen St. Mary: larva on pecan, Dec. 2-3, 1936, (Knight), DPI. III. Doctor Phillips: on hickory, DPI.

9239 L. [CINCINNATIELLA Chambers]

Can. Ent. 3: 144, 149. 1871.

IV. Miami: reared from leafminer in oak, Dec. 8, 1960, (Nakahara), det. as probably this, USNM.

9243 L. CONGLOMERATELLA Zeller

Verh. zool.-botan. Ges. Wien 25: 346. 1875.

I. Escambia Co.: Sept. 15 and 30, Oct. 22 and 25, 1961, SMH. IV. Oneco: eight May 5-28, 1953, (Dillman), CPK. Food: oak.

9246 L. QUERCIVORELLA Chambers

Can. Ent. 11: 45. 1879.

IV. Oneco: May 1954, CPK.

PORPHYROSELA Braun

9268 P. DESMODIELLA (Clemens)

Proc. Acad. Nat. Sci. Phila., p. 220. 1859.

III. Brooksville: larvae mining leaves of *Lespedeza bicolor* and *L. thumbergii*, early spring to late frost, (Roof), det. Capps & Clarke, USNM. IV. Miami Beach: reared from leafminers in *Desmodium tortuosum*, Aug., (Stegmaier), DPI. Hialeah: reared from *D. tortuosum*, Apr., (Stegmaier), DPI. Food: in Cuba *Centrosema [Bradburya]*.

CREMASTOBOMBYCIA Braun

9274 C. VERBESINELLA (Busck)

Proc. U. S. Natl. Mus. 23: 246. 1900.

IV. Palm Beach: type, reared from *Verbesina virginica*, (Dyar), USNM.

MARMARA Clemens

9277 M. GUILANINDELLA Busck
Proc. U. S. Natl. Mus. 23: 245. 1900.

IV. Palm Beach: type, reared from stems of *Caesalpinia crista* [*Guilandina bonducella*], March 27, (Dyar), USNM.

9288 M. SMILACISELLA Chambers
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 123. 1878.

I. Escambia Co.: Oct. 19, 1961, SMH. IV. Siesta Key: May 14, 1956, CPK.

LEUCANTHIZA Clemens

9290, 1 L. SP.

VI. Chapman Field, Dade Co.: reared from Jamaica dogwood, Aug. 1961, (Nakahara), det. Davis as new, USNM.

NEUROLIPA Ely

9291 N. RANDIELLA (Busck)
Proc. U. S. Natl. Mus. 23: 247. 1900.

IV. Siesta Key: Feb. 25, 1957, det. Clarke, CPK. Palm Beach: types, reared from *Randia aculeata*, (Dyar), USNM. VI. Homestead: March 31, 1959, (Wolfenbarger), CPK.

CHILOCAMPYLA Busck

9295 C. DYARIELLA Busck
Proc. U. S. Natl. Mus. 23: 249. 1900.

IV. Palm Beach: types, reared from *Eugenia myrtooides* [*buxifolia*] and *E. rhombea* [*procera*], Feb. 18-March 20, (Dyar), USNM.

ACROCERCOPS Wallengren

9297 A. ALBINOTELLA (Chambers)
Can. Ent. 4: 25. 1872.

I. Escambia Co.: April 29, 1963, det. Davis, SMH. IV. Siesta Key: two June 3-5, 1957, det. Clarke, CPK.

9298 A. QUINQUESTRIGELLA (Chambers)
Can. Ent. 7: 75. 1875.

IV. Hialeah: three reared from *Sida rhombifolia*, March 7, 1963, (Stegmaier), DPI, CPK.

9305 A. SIDEROXYLONIELLA (Busck)
Proc. U. S. Natl. Mus. 23: 250. 1900.

IV. Palm Beach: type, reared from *Sideroxylon pallidum*, Feb. 27, (Dyar), USNM.

NEUROBATHRA Ely

9306 N. STRIGIFINITELLA (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 6. 1860.

I. Escambia Co.: Oct. 10, 1961, SMH. IV. Oneco: seven May 5-25, 1953, (Dillman), det. Forbes, CPK. Food: *Quercus*, *Castanea*, and *Fagus*.

PHYLLOCNISTIS Zeller

9309 P. VITIFOLIELLA (Chambers)
Can. Ent. 3: 206. 1871.

II. Gainesville: mines abundant on wild grape leaves, July 16, adult, July 18, Dozier (1920, p. 379).

9312 P. MAGNOLIELLA Chambers
Psyche 3: 67. 1880.

II. Gainesville: serpentine mines abundant in leaves of *Magnolia virginiana* [*glauca*] and *M. grandiflora*. Mines fresh from before July 15 to August 2, with imagoes issuing July 17-21 and again November 2-3, Dozier (1920, pp. 379-380). Dozier was of the opinion that mines observed in *Persea borbonia* were made by the same species. Here is another of the problems for someone to solve.

9314 P. INTERMEDIELLA Busck
Proc. U. S. Natl. Mus. 23: 253. 1900.

IV. Palm Beach: type, reared from mine in *Sideroxylon pallidum*, early Feb., (Dyar), USNM.

9315 P. ERECHTHISELLA Chambers
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 104. 1878.

IV. Archbold Biological Station: reared from linear leaf miner in *Erechtites hieracifolia*, Feb., April, (Frost), det. Hodges, PSU, CPK.

CALLISTO Stephens

9344 C. GEMINATELLA (Packard)
Guide to the study of insects, p. 353. 1869.

II. Gainesville: larvae making blotch mines in wild cherry, early Feb., adults issuing from March 3 on, Dozier (1920, p. 379).

GRACILLARIA Haworth

9352 G. SEBASTIANELLA Busck
Proc. U. S. Natl. Mus. 23: 251. 1900.

IV. Palm Beach: types, reared from *Sebastiana ligustrina* [*lucida*], (Dyar), USNM.

9353 G. BURSERELLA Busck

Proc. U. S. Natl. Mus. 23: 251. 1900.

IV. Palm Beach: type reared from *Bursera simaruba* [gummifera], Feb. 21, (Dyar), USNM.**9354 G. PERSEAE** Busck

Can. Ent. 52: 239. 1920.

Florida: larva on avocado, April, U. S. Dept. Agr. Farmers' Bull. 1261: 20; Ins. Pest Surv. Bull. 3: 42; Rev. Appl. Ent. 10: 70. IV. Miami: larva on avocado, Jan., DPI; types, on avocado, July, (Moznette), Busck.

9362 G. BELFRAGEELLA Chambers

Can. Ent. 7: 92. 1875.

I. Escambia Co.: July 10, 1961, det. Davis, SMH.

9367 G. VIOLACELLA Clemens

Proc. Acad. Nat. Sci. Phila., p. 7. 1860.

I. Escambia Co.: Sept. 11 and 19, Oct. 10, 1961, det. Davis, SMH. VI. Perrine: larva on *Cajanus indicus*, June 2, 1941, (Link), DPI. Food: *Desmodium*.**9368 G. AZALEELLA** Brants

Azalea leaf miner.

Tids. Ent. 56: 72. 1913.

All but one of the following are records of the larva mining azalea, DPI. I. Escambia Co.: Oct. 7, 1961, det. Davis, SMH. Pensacola: Sept. Calloway. II. Glen St. Mary: April. Maccleenny: March. Gainesville: March; adult, May, UFES. Jacksonville: June. III. New Port Richey: April. Leesburg. Sanford: March. Piedmont: May. Plymouth. Orlando. Tampa: June. Lake Wales: June. IV. Oneco: July.

9371, 1 G. SP.I. Escambia Co.: Jan. 15, 1963, det Davis as either *glutinella* Ely or close to it, SMH. *Glutinella* feeds on aspen.**9379 G. RHOIFOLIELLA** Chambers

Can. Ent. 8: 31. 1876.

I. Escambia Co.: Sept., Nov., SMH. IV. Siesta Key: March, CPK. Miami: April, DPI. VI. Homestead: March, CPK. Food: *Rhus*.**9380 G. SASSAFRASELLA** Chambers

Can. Ent. 8: 33. 1876.

I. Escambia Co.: Feb. 19, 1962, SMH. IV. Siesta Key: Feb. 16, 1951, det. Brower, CPK. Food: *Sassafras*.**9384 G. QUERCINIGRELLA** Ely

Ins. Insc. Mens. 3: 60. 1915.

I. Escambia Co.: April 6, 1962, det. Davis, SMH.

Family **OPOSTEGIDAE****OPOSTEGA** ZellerAll of the *Opostega* were determined by Eyer by genitalic dissection.**9402 O. ALBOGALERIELLA** Clemens

Proc. Ent. Soc. Phila. 1: 131. 1862.

I. Escambia Co.: two Sept. 27, 1961, SMH. IV. Sarasota: Feb. 23, 1954, CPK. Siesta Key: Feb. 16, 1954, Dec. 2, 1952, CPK. The Sarasota County specimens are smaller than those from Escambia County, and there is a very slight difference in the vinculum, but until more and better material is available to prove otherwise, Eyer believes they belong here.

9407, 1 O. SP.VIII. Garden Key, Dry Tortugas: May 10, 1961, (Mead), DPI. This is a new species, but its condition is too poor to warrant description. This was taken on *Cordia* [*Sebestena*] *sebestena*, but that is not necessarily its food plant.Family **LYONETIDAE****LEUCOPTERA** Hübner**9408 L. ERYTHRINELLA** Busck

Proc. U. S. Natl. Mus. 23: 239. 1900.

IV. Palm Beach: types, reared from *Erythrina herbacea*, Feb. 10-20, (Dyar), USNM.**9409 L. GUETTARDELLA** Busck

Proc. U. S. Natl. Mus. 23: 239. 1900.

IV. Palm Beach: type, reared from *Guettarda elliptica*, (Dyar), USNM.**PROLEUCOPTERA** Busck**9414 P. SMILACIELLA** Busck

J. N. Y. Ent. Soc. 8: 244. 1901.

I. Escambia Co.: Sept. 21, 1961, det. Davis, SMH.

EUPRORA Busck**9415, 1 E. ARGENTILINEELLA** Busck

Proc. U. S. Natl. Mus. 30: 733. 1906.

IV. Archbold Biological Station: March, (Frost), PSU. Siesta Key: occasional, Nov.-April, June, det. Forbes, CPK. VI. Homestead: May, DPI, CPK.

METRIOCHROA Busck**9422 M. PSYCHOTRIELLA** Busck

Proc. U. S. Natl. Mus. 23: 245. 1900.

IV. Palm Beach: types, reared from *Psychotria undata*, (Dyar), USNM.

BEDELLIA Stainton

9424 **B. MINOR** Busck
Proc. U. S. Natl. Mus. 23: 243. 1900.

IV. Palm Beach: types, reared from *Ipomoea* sp., (Dyar), USNM.

EREUNTIS Meyrick

9424, 1 **E. MINUSCULA** Walsingham
Proc. Zool. Soc. London, p. 155. 1897.

III. Clearwater: larva on *Litchi chinensis*, Oct. 23, 1958, (Hill and Frierson), det. Capps, DPI. Polk Co.: Feb. 11, 1961, (Vild), DPI. IV. Siesta Key: three April 29-May 15, 1960, det. Clarke, CPK. Fairchild Gardens, Miami: reared from fruit of *Sabal parviflora*, July 18, 1960, (Bottimer), DPI.

PHILONOME Chambers

9425 **P. CLEMENSELLA** Chambers
Can. Ent. 6: 97. 1874.

I. Escambia Co.: Oct. 14, 1963, det. Davis, SMH.

BUCCULATRIX Zeller

Dr. Annette F. Braun recently has completed a revision of this genus. I am indebted to Dr. Braun for several determinations and for additional information. The numbers, other than the McDunnough numbers, refer to those appearing in her monograph.

9430 **B. FUSICOLA** Braun
Mem. Amer. Ent. Soc. 18: 38. 1963.

I. Escambia Co.: April 1, 1963, det. Davis, SMH.

2 **B. SOLIDAGINIELLA** Braun
Mem. Amer. Ent. Soc. 18: 39. 1963.

I. Escambia Co.: April 19, 1963, det. Davis, SMH.

9429 **B. MAGNELLA** Chambers
Can. Ent. 7: 54. 1875.

I. Escambia Co.: May 13, 1962, det. Davis, SMH.
III. Lakeland: March 1913, (Ainslie), USNM.

5 **B. NEEDHAMI** Braun
Ent. News 67: 69. 1956.

IV. Sarasota: paratype March 24, 1946, CU. Englewood: types, March 24-April 17, 1946, CU. Eight miles west of Moore Haven: paratypes,

April 7-May 17, YU. All reared from stems of *Helianthus agrestis*.

15 **B. BICRISTATA** Braun
Mem. Amer. Ent. Soc. 18: 55. 1963.

III. St. Petersburg: type, May, USNM.

9447 **B. STANTONELLA** Chambers
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 133. 1878.

I. Escambia Co.: Oct. 1, 1962, SMH. IV. Siesta Key: four March 2-April 17, det. Braun, CPK.

33 **B. KIMBALLI** Braun
Mem. Amer. Ent. Soc. 18: 80. 1963.

IV. Bradenton: paratype, Sept. 30, 1955, (Kelsheimer), CPK. Oneco: type male and three paratypes, May 5-8, 1953, (Dillman), CPK, ANSP. Siesta Key: female allotype, Apr. 8, 1953, ANSP.

9444 **B. IVELLA** Busck
Proc. U. S. Natl. Mus. 23: 243. 1900.

IV. Siesta Key: March, April, det. Braun, CPK. Palm Beach: types, reared from *Iva frutescens*, Feb. 23-March 7, 1900, (Dyar), USNM.

41 **B. PLUCHEAE** Braun
Mem. Amer. Ent. Soc. 18: 92. 1963.

IV. Oneco: paratype, May 5, 1953, (Dillman), ANSP. Siesta Key: paratype, Nov. 6, 1952, ANSP. VIII. Key West: types, ex *Pluchea odorata*, two Apr. 26, 1945, USNM.

86 **B. CERINA** Braun
Mem. Amer. Ent. Soc. 18: 163. 1963.

IV. Siesta Key: type, Jan. 5, 1951, ANSP. VIII. Key Vaca: paratype, Nov. 13, 1952, (Kimball), ANSP.

Family **TISCHERIIDAE**

TISCHERIA Zeller

9503 **T. AMBROSIAEELLA** Chambers
Cincinnati Quart. J. Sci. 2: 112. 1875.

IV. Hialeah: reared from stems and roots of *Ambrosia*, Aug. 14, 1962, (Stegmaier), DPI.

9509 **T. AENEA** Frey & Boll
Stett. Ent. Zeit. 34: 222. 1873.

The records are all for larval work on blackberry, DPI. III. San Antonio: July. Eustis: Sept. Mount Dora: March. Oldsmar: Feb. St. Petersburg: April, Aug., Sept., Nov. Tampa: June. Port Tampa: May. Auburndale: June. IV. Fort Myers: Dec.

9511, 1 T. SP.

IV. Siesta Key: March 10, 1956, det. Hodges, CPK.

COPTOTRICHE Walsingham

9512 C. ZELLERIELLA (Clemens)

Proc. Acad. Nat. Sci. Phila. p. 326. 1859.

I. Escambia Co.: April 24, 1961, det. Forbes, SMH.

Family PSYCHIDAE

Dr. Frank M. Jones, the authority on this family, supplied me with much of the information regarding the widespread occurrence of many of the species, together with many determinations. Dr. Davis has recently completed a revision of the family, which is not yet published. He reports that there are several changes in the status of species and generic names. When his revision appears, it will be necessary to refer to it in order to reconcile the changes with the present listing.

OIKETICUS Guilding

9514 O. ABBOTII Grote

Pl. XXVI, Fig. 48, ♂.

N. Amer. Ent. 1: 52. 1880.

Abbotii is generally distributed throughout the state. Jones reared a pale form from Key West, but found no anatomical differences. I have some that are apparently the same from Craig, Tavernier, and Windley Key. Davis has noted that the pale form seems limited to the Keys and perhaps the most southern part of the peninsula, as Cuban specimens are as dark as those from our more northern states. Because of the habit of the larva often crawling away from its food plant to pupate, the following host records must be viewed with some reservation, a reservation which applies to the entire family: cypress, Packard (1890a, p. 921); *Kentia* sp., crape myrtle, guava, *Photinia serrulata*, *Carissa*, *Ilex crenata*, *Persea americana*, all DPI; Japanese plum, citrus, Slosson (1894b, p. 106).

THYRIDOPTERYX Stephens

9519 T. EPHEMERAIFORMIS (Haworth)

Bagworm. Pl. XXVI, Fig. 50, ♂.

Lep. Brit., p. 72. 1803.

Jones wrote: "The relationship between *ephemeraeformis* and the following species (*pallidovenata*) needs further study, with knowledge of the early stages, sacks, more abundant adult

specimens, and of the distribution throughout the state." Based on our limited present information *ephemeraeformis* appears to be confined largely to the northern part of the state, *pallidovenata* to the southern. Perhaps the latter will turn out to be something analogous to the pale form of *abbotii* from the Keys. Food plant "records": oaks, willows, and shrubs, Ashmead (1886, p. 97); satsuma, apple, pear, *Bauhinia*, *Lantana*, *Thuja occidentalis* var. *globosa* [*Biota globosa*]; *T. orientalis* var. *pyramidalis* [*Biota pyramidalis*]; *T. orientalis* var. *conspicua* [*Aurea conspicua*]; citrus, and arborvitae, all DPI; cypress, Packard (1890a, p. 909); ornamentals, Coop. Econ. Ins. Rept. 4: 671; red cedar, *ibid.*: 775.

9519, 1 T. PALLIDOVENATA Grossbeck

Bull. Amer. Mus. Nat. Hist. 37: 104. 1917.

This was described as one-third larger than average *ephemeraeformis*, the wings a whiter hyaline and the veins a paler tint. Davis finds that this is not a valid species. The synonymy will have to wait for his revision. He has kindly supplied some of the records. II. Moultrie: June 23, 1954, CM. Crescent Beach: June 5, 1954, CM. III. Cassadaga: Sept. 19, 1955, SVF. Orlando: Sept. 20, 1939, USNM. St. Petersburg: April, USNM. IV. Archbold Biological Station: April 2, 1958, Sept., (Pease), YU; Nov. 28, 1959, (Frost), PSU. Fort Myers: type, April 23, AMNH. Biscayne Bay: (Slosson), AMNH, USNM. Miami: March 17, 1921, ANSP. VI. Florida City: March 26, 1936, USNM. VIII. Key Largo: (Jones), USNM; Sept. 27, 1955, CPK. Lower Matecumbe: (Jones), USNM.

PLATOECETICUS Packard

9523 P. GLOVERI Packard

Pl. XXVI, Fig. 49, ♂.

Guide to the study of insects, p. 291. 1869.

"A common species throughout the state," wrote Jones. Food "records": pineapple orange, Hunt (1923); orange (Ins. Pest Surv. Bull. 3: 12); Pomelo, citrus, *Feijoa* and avocado, DPI.

9524 P. NIGRITA (Barnes & McDunnough)

Contrib. 2: 170. 1913.

"Common and of wide distribution in Florida," according to Jones. The only food "record" is tung oil trees (Ins. Pest Surv. Bull. 9: 418).

EURUKUTTARUS Hampson

9528 E. CELIBATA Jones

Ent. News. 33: 130. 1922.

I. De Funiak Springs: types, adult emergences in May and June, from sacks collected here according to Jones. VI. Paradise Key: "larval sack on pine trunk, moth not reared but determination seems safe," FMJ. Jones wrote further, "*celibata* is probably widespread, but it is easily overlooked, and may be localized and of rare occurrence."

9529 **E. CACOCNEMOS** Jones
Ent. News 33: 133. 1922.

"Widely distributed throughout the state," Jones. I have seen very few specimens. In the type locality, De Funiak Springs, he found the sacks in open and sunny places, upon sedges, grasses, rushes, and sometimes on low growing herbaceous plants. In Paradise Key, he found empty larval cases not rare on pine trunks, with a few moths emerging in April and later.

PROCHALIA Barnes & McDunnough

9534 **P. PYGMAEA** Barnes & McDunnough
Contrib. 2: 171. 1913.

Type locality: Everglades. Jones found it abundant at Florida City and frequent throughout the state, northward and westward along the Gulf to New Orleans. He found it commonly feeding on lichenized tree trunks, and even on fences. Two other feeding "records" are: IV. Fort Myers: royal palm, DPI. V. Everglades: sacks on trunks of orange trees, Dyar (1923, p. 4).

Family ACROLOPHIDAE

This family has been recently revised by Dr. Frank F. Hasbrouck, who has most graciously permitted me to make full use of his paper which at present writing has not appeared, but which will be published eventually. The two new species described by Hasbrouck are herein referred to by the number of their position in his revision. When his paper appears this will enable the reader to fill in the names. Certain names have been sunk as synonyms by Hasbrouck, but in order not to confuse the authorship, I have done no more than to indicate that such is the case without stating categorically with what they are synonymous. Again the reader must await his paper to untangle the relationships. Except for those specimens mentioned as "also reported" or as being determined by someone else, all data have been taken from Hasbrouck's revision. Needless to say, the determination of specimens not seen by him may need reviewing. The undocumented records were supplied by Hasbrouck.

ACROLOPHUS Poey

9558 **A. TEXANELLUS** (Chambers)

Pl. XXVI, Fig. 52, ♂.

Bull. U. S. Geol. Geograph. Surv. Territ. 4: 79. 1878.

II. Gainesville: April, DPI. III. Marion Co.: July, UM. Volusia Co.: Aug., UM. Cassadaga: June, SVF. Hernando Co.: Aug., UM. Weekiwachee Springs: May, CPK. Winter Park: July, AMNH. Hillsborough Co.: Aug., UM. Osceola Co.: Aug., UM. IV. Bradenton: June-Nov., CPK. Oneco: May-Oct., CPK. Port Sewall: Nov., AMNH. Archbold Biological Station: May, YU. Indian River Co.: May, UM. Siesta Key: common, April-June, Oct.-Dec., CPK. Fort Lauderdale: May, UM. VI. Homestead: Sept., Oct., CPK. Florida City: June, HEW; Oct., AEB.

9559 **A. [HULSTELLUS** Beutenmueller]

Ent. Amer. 3: 139. 1887.

Hulstellus has been sunk by Hasbrouck to the status of a synonym of another species. I. Escambia Co.: July 13, 1962, det. Davis, SMH. III. Indian River: Beutenmueller.

9561 **A. SIMULATUS** Walsingham

Trans. Amer. Ent. Soc. 10: 168. 1882.

I. Camp Torreya, Liberty Co.: July 13, 1935, (Cantrell), UM. II. Gainesville: forty-six specimens June 2-July 7, 1927, (Rogers), CU. III. Cassadaga: Aug. 19, 1962, SVF.

9572 **A. EXAPHRISTUS** Meyrick

Exot. Micro. 2 (9): 279. 1919.

Exaphristus was described from one male from Florida. The identity and position of this is considered uncertain by Hasbrouck.

95— **A. SP.** No. 7 of the Hasbrouck revision. Hasbrouck ms.

The description is based on two males taken at III. Lake Alfred: July 13, 1928, (Bottimer), USNM.

9556 **A. PLUMIFRONTELLUS** (Clemens)

Pl. XXVI, Fig. 51, ♂.

Proc. Acad. Nat. Sci. Phila., p. 261. 1859.

Plumifrontellus is the commonest species of the genus, probably found all over the state, March-October. IV. Bradenton: June, Aug., Sept. VI. Homestead: March-May, July-Oct., small peak in May, a larger one Aug., Sept.

9557 **A. [CERVINUS** Walsingham]

Trans. Ent. Soc. London, p. 151. 1887.

The various records for this, together with *an-gustipennellus*, described from Florida by Beutenmueller (1887, p. 140), belong in the synonymy of another species according to Hasbrouck.

9566 A. [MORRISONI (Walsingham)]
Trans. Ent. Soc. London, p. 157. 1887.

This too has been sunk in the synonymy. It was described from Florida, but the only record I have found is that in the original description.

9570 A. POPEANELLUS (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 260. 1859.

II. Alachua Co.: Feb., May, DPI. Gainesville: June, det. Franclemont, UFES. III. Sanford: June. Winter Park: June. VIII. Key Largo: Aug. Key West: April, CPK.

9567 A. PROPINQUUS (Walsingham)
Trans. Ent. Soc. London, p. 157. 1887.

Florida: type, Walsingham. I. Warrington: June, VFG. Myrtle Grove: Aug., WJW. Liberty Co.: July, UM. Tallahassee: July, UM. II. Madison Co.: Sept., UM. Gainesville: June, July. III. Marion Co.: July, det. Beebe, UM. Cassadaga: April, SVF. Hernando Co.: Aug., det. Beebe, UM. Lake Co.: Aug., det. Beebe, UM. Winter Park: May-July. Orlando: June. Merritt Island: Sept. Hillsborough Co.: Aug., det. Beebe, UM. St. Petersburg: April, AKW. IV. Archbold Biological Station: July, Aug., YU. Punta Gorda: April, det. AKW. Okeelanta: May. VI. Paradise Key: (Jones), det. Heinrich, CPK.

9576 A. [TENUIS (Walsingham)]
Trans. Ent. Soc. London, p. 164. 1887.

Tenuis is another synonym. III. Volusia Co.: Sept., det. Beebe, UM. IV. Fort Myers: April, Grsb. 147, the specimen in the American Museum of Natural History collection.

9546 A. CRESSONI (Walsingham)
Trans. Amer. Ent. Soc. 10: 169. 1882.

I. Escambia Co.: two July 5-19, 1961, SMH. III. Cassadaga: Aug. 15, 1961, SVF. Weekiwachee Springs: June 16, 1960, (Mrs. May), CPK. Winter Park: one male, Sept. 1946, (Klots), AMNH.

9579 A. PIGER (Dyar)
Can. Ent. 32: 327. 1900.

III. Winter Park: three males, June, July, Sept., (Klots), AMNH. IV. Archbold Biological Station: one female, July 15-31, 1948, (Klots), AMNH.

9582 A. ARCANELLUS (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 262. 1859.

I. West Pensacola: June, VFG. Myrtle Grove: WJW. II. Gainesville: April, May, det. Beebe, UM. III. Orlando: Aug. IV. Bradenton: April, May, Oct., Nov., CPK. Oneco: May, June, det. Forbes, CPK. Archbold Biological Station: Aug., Sept., YU. Biscayne Bay: (Slosson). Miami: Dec. Coral Gables: June. VI. Homestead: May, Sept., Oct., CPK. Florida City: March. Paradise Key: Dec.

9585 A. [MORA (Grote)]

I. Escambia Co.: June 24, 1962, det. Davis as "near *mora*," SMH.

95— A. SP. No. 33 of Hasbrouck's revision.
Hasbrouck ms.

I. Myrtle Grove: Aug., WJW. II. Gainesville: June, July, CU. III. Cassadaga: June, July, SVF. Winter Park: June, July, AMNH. St. Petersburg: types, June, July. IV. Bradenton: Sept., CPK. Oneco: May, July, CPK. Archbold Biological Station: July, AMNH; Sept., ABS. Delray Beach: April, CPK. Fort Lauderdale: May, det. Kimball, UM.

9685, 1 A. SP.

This is not like anything in the collection of the U. S. National Museum, nor does it fit in with any of Hasbrouck's new species. I. Escambia Co.: May 18, 1962, SMH. Warrington: four May, 1961, VFG.

Family TINEIDAE

9585, 2 SP.

Both the species and the genus are probably new according to Clarke. III. Central Florida: March 1957, det. Franclemont, WMD. Port Orange: April, DPI. Winter Park: June, DPI. IV. Bradenton: April, CPK. Oneco: March, JGF; April, May, CPK. Siesta Key: May, CPK.

AMYDRIA Clemens

9586 A. BREVIPENNELLA Dietz
Trans. Amer. Ent. Soc. 31: 5. 1905.

I. Escambia Co.: Oct. 3, 1961, det. Davis, SMH.

9587, 1 A. SP.

I. Escambia Co.: May 13, 1962, det. Davis as "nr. *effrenatella* Clemens," SMH.

9593, 1 A. SP.

III. Cassadaga: Aug. 12, 1961, det. Davis as near *confusella* Dietz, SVF.

9599 A. MARGORIEELLA (Dietz)

Trans. Amer. Ent. Soc. 31: 11. 1905.

Florida: paratype, Dietz. III. Orlando: June, July, CU. IV. Bradenton: Feb., March, May, Aug., Sept., Nov., CPK. Oneco: May, CPK. Archbold Biological Station: April, PSU. Siesta Key: March, det. Clarke, CPK. VI. Homestead: Feb., April, May, Aug., Nov., CPK.

SETOMORPHA Zeller**9606 S. RUTELLA** Zeller

Lep. Caffr., p. 94. 1852.

III. Oviedo: collected at *Zantedeschia* sp., Sept. 24, 1962, det. Capps, DPI. IV. Archbold Biological Station: four Aug. 25, 1952, (Tissot), USNM. Fort Myers: larva on potato, Dec. 30, 1942, DPI. One customs interception record: Key West: Oct. 13, 1919, ex Cuba, DPI.

SCARDIA Treitschke**9615 S. ANATOMELLA** Grote

Pl. XXVI, Fig. 53, ♀.

Bull. U. S. Geol. Geograph. Surv. Territ. 6: 274. 1882.

I. Escambia Co.: one March, Aug. 10, 1961, SMH.

9623 S. APPROXIMATELLA Dietz

Pl. XXVI, Fig. 54, ♂.

Trans. Amer. Ent. Soc. 31: 27. 1905.

I. Escambia Co.: May 3, 1961. SMH.

9624, 1 S. SP.

IV. Palm Beach: many specimens at light, Dyar (1901a, p. 485). Presumably these specimens are in the U. S. National Museum.

XYLESTHIA Clemens**9626 X. PRUNIRAMIELLA** Clemens

Proc. Acad. Nat. Sci. Phila., p. 257. 1859.

I. Escambia Co.: Sept., SMH. Myrtle Grove: Aug., WJW. II. Macclenny: reared from *Yucca* sp., DPI. Gainesville: April, DPI. III. DeLand: March, MOG. Cassadaga: Sept., SVF. Orlando: July, CU. IV. Bradenton: Feb., April, Oct., Nov., CPK. Oneco: March, JGF; April, June, CPK. Siesta Key: June, CPK. V. Everglades: April, AMNH. VI. Homestead: March-June, Oct., Nov., CPK. VIII. Tavernier: Oct., DPI.

KEARFOTTIA Fernald**9629 K. ALBIFASCIELLA** Fernald

Can. Ent. 36: 131. 1904.

IV. Oneco: Nov. 30, 1954, (Dillman), det. Clarke, CPK. VIII. Tavernier: five Aug.-Oct., (J. N. Todd), CPK.

MONOPIS Hübner**9635 M. CROCICAPITELLA** Clemens

Proc. Acad. Nat. Sci. Phila., p. 257. 1859.

IV. Belle Glade: July 26, 1956, (Denmark), DPI.

CHOROPLECA Durrant**9640 C. VISALIELLA** (Chambers)

Can. Ent. 5: 113. 1873.

Florida: Dietz (1905, p. 41). IV. Siesta Key: two Jan. 24-Feb. 28, 1951, CPK.

TINEA Linnaeus**9641 T. MISELLA** Zeller

Isis, p. 184. 1839.

Florida: Dietz (1905, p. 45).

9642 T. OBSCUROSTRIGELLA Chambers

Pl. XXVI, Fig. 55, ♂.

Can. Ent. 6: 232. 1874.

I. Escambia Co.: common, Feb., Oct., 1961, SMH. III. Cassadaga: Jan. 5, 1963, SVF. IV. Siesta Key: Dec. 30, 1956, det. Clarke, CPK.

9645 T. APICIMACULELLA Chambers

Cincinnati Quart. J. Sci. 2: 257. 1875.

Florida: Dietz (1905, p. 47). II. Alachua Co.: Jan., DPI. Jacksonville: March, HEW. III. DeLand: March, MOG. IV. Bradenton: Feb.-April, Nov., CPK. Siesta Key: Jan., Feb., April, May, Nov., CPK. VI. Homestead: Sept., CPK.

9648 T. BIMACULELLA Chambers

Can. Ent. 5: 87. 1873.

I. Warrington: May, VFG. III. Orlando: three June, July, CU. IV. Bradenton: May, Aug., Sept., Nov., Dec., CPK. Oneco: May, CPK. Siesta Key: March, CPK. VIII. Key West: Feb., CPK.

9649 T. TRIMACULELLA Chambers

Can. Ent. 5: 88. 1873.

I. Escambia Co.: Sept. 3, 1961, SMH.

9653 **T. PELLIONELLA** Linnaeus

Casemaking clothes moth.

Syst. Nat., p. 536. 1758.

Florida: April 10, 1948, (Tissot), UFES. II. Gainesville: larva in felt, Jan., DPI; in upholstery, Oct., DPI. III. Ocala: in wool rug, Oct., DPI. Tampa: in rugs, Aug., Dec., DPI. Port Tampa: in wool rugs, Sept., DPI.

9661 **T. VICINELLA** Dietz

Trans. Amer. Ent. Soc. 31: 55. 1905.

III. Gotha: type, Dietz.

9662 **T. UNOMACULELLA** Chambers

Cincinnati Quart. J. Sci. 2: 258. 1875.

III. Cassadaga: May 19, 1962, SVF. IV. Oneco: May 11, 1953, CPK. Siesta Key: Feb. 14, 1951, det. Brower, CPK.

9665 **T. SEMINOLELLA** Beutenmueller

Ent. Amer. 5: 9. 1889.

III. Central Florida: type, Beutenmueller. Orlando: one July 2-4, 1927, (McBride), CU.

9669 **T. MANDARINELLA** Dietz

Trans. Amer. Ent. Soc. 31: 57. 1905.

IV. Siesta Key: March 31, 1952, CPK.

9672 **T. RILEYI** Dietz

Trans. Amer. Ent. Soc. 31: 59. 1905.

I. Escambia Co.: Nov. 11, 1961, SMH. Myrtle Grove: Sept., WJW. II. Hastings: paratype, Dietz. IV. Bradenton: May, June, CPK. Siesta Key: four Jan. 17-Feb 2, 1951, CPK.

9677 **T. AUROPULVELLA** Chambers

Can. Ent. 5: 90. 1873.

I. Escambia Co.: Feb. 1961, SMH.

9678 **T. ACAPNOPENNELLA** Clemens

Proc. Acad. Nat. Sci. p. 257. 1859.

I. Escambia Co.: Feb., Nov., det. Davis, SMH.

9686, 1 **T. SP.**

I. Escambia Co.: July 2 and 14, 1961, det. Davis as near *granella* Linnaeus, SMH.

PHEREOCA Hinton and Bradley9695, 1 **P. WALSINGHAMI** (Busck)

Plaster bagworm.

Ent. Amer. 13: 188. 1934.

The cases of this species are found on woolen

goods and suspended from the plaster, rafters, wooden sidings, etc., in houses all over the lower half of the state, but it is seldom taken in the adult stage. Hetrick (1957) has written at length on the feeding habits and quotes several other papers on the subject. He also notes that "there is some doubt about the validity of the specific name . . ." Some of these records doubtlessly belong under *Praeacedes thecophora* (Walsingham) below. There is still apparently work to be done on the cases.

[9695, 2 *P. uterella* (Walsingham)]

Proc. Zool. Soc. London, p. 165. 1897.

Many records for *walsinghami* and *Praeacedes thecophora* appear under this name because until Busck made the separation, it was taken for granted that *uterella* was the insect found in Florida and the West Indies. The latter species is South American. The food habits were discussed by Kea (1933, p. 17), but as Kea had probably not seen Busck's paper describing *walsinghami* which also appeared in 1933, it is more than likely that he was really discussing the latter species. In connection with Kea's paper, Hetrick queried (1957, p. 145), whether *uterella* Walsingham did not equal *walsinghami* Busck.

PRAEACEDES Amsel9695, 3 **P. THECOPHORA** (Walsingham)

Proc. Zool. Soc. London, p. 1024. 1907.

II. Gainesville: Aug., Sept., (Hetrick), det. Clarke, USNM.

HYBROMA Clemens9697 **H. SERVULELLA** Clemens

Proc. Ent. Soc. Phila. 1: 137. 1862.

I. Escambia Co.: Sept. 27, 1961, SMH. There is another species of an as yet unplaced genus which has been taken in Florida at various localities and which bears a superficial resemblance to *servulella*.

MEA Busck9700 **M. BIPUNCTELLA** (Dietz)

Trans. Amer. Ent. Soc. 31: 77. 1905.

I. Escambia Co.: one May, three Sept., SMH. II. Hastings: type, Dietz. The type specimen which was in the Museum of Comparative Zoology collection is no longer on its pin and apparently has been destroyed. IV. Bradenton: March, July, CPK. Oneco: May, June, CPK. Archbold Biological Station: Nov. 14, 1959, (Frost), PSU. Siesta Key: March-May, det. Clarke, CPK, USNM.

- 9701 **M. FLORIDELLA** (Dietz)
Trans. Amer. Ent. Soc. 31:77. 1905.
II. Hastings: type, Dietz, MCZ.

HOMOSETIA Clemens

- 9704 **H. ARGENTINOTELLA** (Chambers)
Can. Ent. 8: 104. 1876.
I. Escambia Co.: three Sept. 4-12, 1961, det. Davis, SMH. II. Hastings: Dietz (1905, p. 81).
[9707 *H. chrysoadpersella* Dietz]
Trans. Amer. Ent. Soc. 31: 83. 1905.
IV. Siesta Key: Jan. 13, 1951, det. Brower with "P," CPK.

ACHANODES Meyrick

- 9718, 1 **A. ANTIPATHETICA** Forbes
J. Dept. Agr. Puerto Rico 4(4): 384. 1931.
IV. Miami: July 1962, (Mrs. F. Ludwig), USNM.
9718, 2 **A. SP.**
III. Orlando: in connection with the description of the preceding species, Forbes mentioned a specimen in his possession which was close to, if not the same, as *A. sympathetica* Meyrick, and which was also similar to the preceding species.

SUPERFAMILY

NEPTICULOIDEA

Family **NEPTICULIDAE**

NEPTICULA von Heyden

- 9741 **N. MYRICAFOLEIELLA** Busck
Proc. U. S. Natl. Mus. 23: 238. 1900.
IV. Palm Beach: types, reared from serpentine mines in *Myrica cerifera*, (Dyar), USNM.
9746 **N. CONDALIAFOLEIELLA** Busck
Proc. U. S. Natl. Mus. 23: 238. 1900.
IV. Siesta Key: three May 26-June 5, 1957; not compared with types but they key out here and fit the description. Palm Beach: types, reared from upper surface mines in *Krugiodendron ferreum* [*Condalia ferrea*], Feb. 22, (Dyar), USNM.
9747 **N. JUGLANDIFOLEIELLA** Clemens
Proc. Ent. Soc. Phil. 1: 84. 1861.
I. Escambia Co.: Sept. 7, 1961, SMH.

- 9752 **N. NYSSAEFOLEIELLA** Chambers
Psyche 3: 66. 1880.
I. Escambia Co.: Oct. 17, 1961, det. Davis, SMH.
9755, 1 **N. GOSSYPII** Forbes & Leonard
Cotton leaf miner.
J. Dept. Agr. Puerto Rico 14(3): 151-157; Pl. 15, 16. 1930.
IV, V, VII, VIII. Angelfish Key, Cape Sable, and numerous keys, islands, river and creek banks in the general vicinity of Fort Myers, Rainwater (1934, p. 761).
9772 **N. LATIFASCIELLA** Chambers
Bull. U. S. Geol. Geograph. Surv. Territ. 4: 106. 1878.
I. Escambia Co.: Oct. 1, Nov. 11, 1961, det. Davis, SMH, USNM.

ECTOEDEMLA Busck

- 9782 **E. OBRUTELLA** (Zeller)
Verh. zool.-botan. Ges. Wien 23: 316. 1873.
I. Escambia Co.: March 25, 1962, SMH. II. Lake Geneva: March 1953, det. T. N. Freeman, HEW. IV. Bradenton: March, CPK. Siesta Key: April 17, 1953, det. Clarke, CPK. VI. Homestead: May 1, 1959, (Wolfenbarger), CPK.
9787, 1 **E. SP.**
I. Escambia Co.: two Nov. 12, 1961, det. Davis as probably new, SMH, USNM.

SUPERFAMILY

INCURVARIOIDEA

Family **INCURVARIIDAE**

ISOCORYPHA Dietz

- 9819 **I. MEDIOSTRIATELLA** (Clemens)
Proc. Acad. Nat. Sci. Phila., p. 5. 1866.
IV. Siesta Key: April 2, 1952, CPK.

Family **PRODOXIDAE**

PRODOXUS Riley

- 9823 **P. QUINQUEPUNCTELLA** (Chambers)
Can. Ent. 7: 7. 1875.
Remington has suggested that there may be a second species involved not only here, but in the case of *Tegeticula alba* below as well, because

the food plant is sometimes *Yucca aloifolia* instead of the customary *Y. smalliana* [*filamentosa*].
 II. Gainesville: June, DPI. III. Weekiwachee Springs: May, CPK. Lakeland: May, AMNH.
 IV. Sebring: May, UM. Archbold Biological Station: March, April, CU. Siesta Key: March-June, CPK.

TEGETICULA Zeller

9834 **T. ALBA** Zeller

Verh. zool.-botan. Ges. Wien 23: 232. 1873.

III. Cassadaga: May, SVF. Weekiwachee Springs: May, CPK. Eagle Lake: May, DPI. Lakeland: common, May, AMNH. IV. Bradenton: May, CPK. Sebring: May, UM. Sarasota:

May, CPK. Siesta Key: March-June, CPK.
 Food: *Yucca smalliana* [*filamentosa*].

Family **ADELIDAE**

ADELA Latreille

9847 **A. BELLA** Chambers

Can. Ent. 5: 73. 1873.

I. Escambia Co.: March, SMH. Warrington: VFG. 12 miles east of Pensacola: March 29, 1963, WJW. Torreya State Park: five April 13, 1960, (Denmark), DPI, CPK.

9847, 1 **A. SP.**

II. Jacksonville: two, (Slosson), AMNH.

APPENDIX

Quarantine Interceptions

The following records are in no manner to be considered as forming a part of the Florida fauna. They are listed as an illustration of what might make a foothold, and to show how other, exotic species unquestionably have reached here and established themselves. From those for which the flora and climatic conditions are unfavorable, there is no danger, but there are many potential pests which are ready to pounce greedily on our vegetation and against which we must be on our guard.

ITHOMIIDAE

THYRIDIA Hübner

T. CONFUSA (Butler)

Cistula Entomologica 1: 151. 1873.

Miami: April 8, 1956, ex Venezuela, DPI.

ARCTIIDAE

ARCTIINAE

BERTHOLDIA Schaus

B. SPECULARIS (Herrich-Schaeffer)

Samml. aussereur. Schmett.; Fig. 59. 1853.

Miami: May 5, 1956, ex Costa Rica, DPI.

MELESE Walker

M. PERUVIANA Rothschild

Nov. Zool. 16: 48. 1909.

Miami: May 17, 1956, ex Venezuela, DPI.

NOCTUIDAE

ACRONICTINAE

SESAMIA Guenée

S. CRETICA Lederer

Noct. Eur., p. 225. 1857.

Ybor City: April 1951, ex Italy, in broom straw. Sebring: May 1951, larvae in Italian broom-straw.

AMPHIPYRINAE

GORTYNA Ochsenheimer

G. FLAVEGO Schiffermueller

Syst. Verz. Wien., p. 86. 1776.

Tampa: April 1951, ex Italy.

PERICOPIDAE

PERICOPIS Hübner

P. nr. MONTEZUMA Schaus

Proc. Zool. Soc. London, p. 283. 1892.

Miami: Nov. 1953, ex Venezuela.

NOTODONTIDAE

HETEROCAMPA Doubleday

H. DISTINGUENDA Walker

Miami: May 1956, ex Costa Rica. See also page 154.

BOMBYCIDAE

BOMBYX Linnaeus

4000 B. MORI Linnaeus

Syst. Nat. 1: 499. 1758.

Jacksonville: July 1947, ex Germany. Miami: April 1946, March 1948, May 1950, all ex Bahamas.

PYRALIDAE

PYRAUSTINAE

MARUCA Walker

5451, 1 M. TESTULALIS (Geyer)

Zutr. exot. Schmett. 4; Figs. 629, 630. 1832.

Miami: May 1946, June 1948, both ex Puerto Rico.

CRAMBINAE

CHILO Zincken

C. SUPRESALIS (Walker)

Proc. Zool. Soc. London, p. 690. 1880.

Jacksonville: June 1949, ex Japan. Miami: March 1950, ex Japan.

GALLERIINAE

CORCYRA Ragonot

- 5996 **C. CEPHALONICA** (Stainton)
Ent. Monthly Mag. 2: 172. 1865.
Miami: April 1949, ex Haiti; July 1946, ex Brazil.

PHYCITIDAE

EPHESTIA Guenée

- 6402 **E. FIGULILELLA** Gregson
Raisin moth.
Entomologist 5: 385. 1871.
Jacksonville: March 1950.

OLETHREUTIDAE

LASPEYRESIINAE

LASPEYRESIA Hübner

- L. SPLENDANA** (Hübner)
Samml. eur. Schmett., Tortrices Pl. 6, Fig. 31.
1796-1799.
Jacksonville: April 1951, ex Italy.

CARPOCAPSA Treitschke

- 7301, 1 **C. SALTITANS** Westwood
Proc. Ent. Soc. London, Ser. 3, 27: 34. 1854.
Jacksonville: Aug. 1929. Tampa: Aug. 1929, ex
Texas. See also page 264.

STENOMIDAE

CERCONOTA Meyrick

- C. ANONELLA** (Sepp)
Surninaam. Vlinders 3: 279; Pl. 137. 1830.
Jacksonville: March 1949, ex Mexico. Tampa:
March 1953, ex Nicaragua. Miami: Oct. 1948,
ex Panama; April 1951, ex Jamaica.

STENOMA Zeller

S. CATENIFER Walsingham

- Biol. Cent. Amer. Het. 4: 168. 1909-1915.
Jacksonville: May 1948, ex Colombia. Tampa:
Sept. 1951, ex Honduras. Miami: July 1945, ex
Guatemala; June and Dec. 1951, ex Peru; July
and Sept. 1951, ex Panama; Nov. 1951, Jan. 1953,
ex Colombia.

LYONETIDAE

LEUCOPTERA Hübner

L. COFFEELLA Guérin-Ménéville

- Mém. Ins. Cafiers Antill, 1-32; Pl. 1, 2. 1842.
Miami: two records ex Puerto Rico, three ex
Cuba, and one ex Colombia.

TINEIDAE

NEMAPOGON Schrank

9686 **N. GRANELLA** (Linnaeus)

- European grain moth.
Syst. Nat., p. 537. 1758.
Jacksonville: July 1948, in dried mushrooms.
However, Forbes is of the opinion that the mush-
room feeder is actually another species.

9687 **N. CLOACELLA** (Haworth)

- Lep. Brit., p. 563. 1829.
Jacksonville: May 1930, ex Switzerland.

TINEOLA Herrich-Schaeffer

9695 **T. BISELLIELLA** (Hummel)

- Webbing clothes moth.
Ess. Ent. 3: 13. 1829.
Miami: Feb. 1947, ex Argentina. It seems rather
surprising that the common clothes moth, a
pest of the northern states, should be recorded
in Florida only as a customs interception from a
distant country.

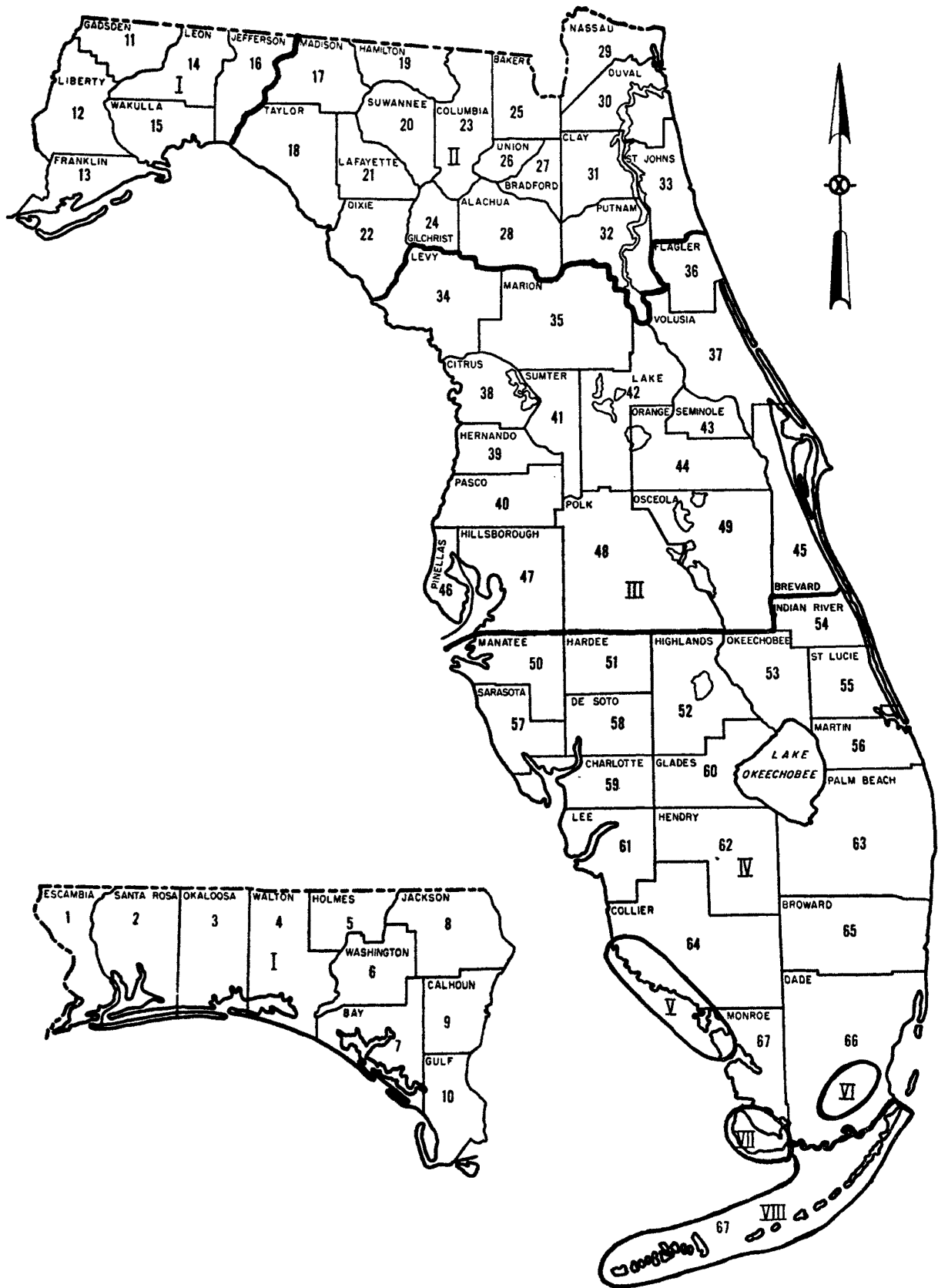


Figure 1.—Map of Florida showing Distributional Areas approximating those of West & Arnold, together with the counties.

GAZETTEER

The Gazetteer has been set up to coincide with the distributional areas as defined in the Introduction, p. 5. Roman numerals represent the distributional areas, and the Arabic numerals designate the counties. The Arabic numerals placed beside each locality refer to the county in which that particular place is located.

I. COUNTIES

Escambia 1
 Santa Rosa 2
 Okaloosa 3
 Walton 4
 Holmes 5
 Washington 6
 Bay 7
 Jackson 8
 Calhoun 9
 Gulf 10
 Gadsden 11
 Liberty 12
 Franklin 13
 Leon 14
 Wakula 15
 Jefferson 16

Paradise Beach 1
 Paxton 4
 Pensacola 1
 Portland 4
 Quincy 11
 Rocky Bluff 9
 St. Marks 15
 Santa Rosa 4
 Tallahassee 14
 Torreya State Park 12
 Valparaiso 3
 Wakulla 15
 Wakulla Springs 15
 Warrington 1
 West Pensacola 1
 Wewahitchka 10
 Woodville 14
 Wright 3

Glen St. Mary 25
 Gold Head Branch
 State Park 31
 Green Cove Springs 31
 Greenville 17
 Hastings 33
 Hatchett Creek 28
 High Springs 28
 Hogarth Landing 33
 Hogtown Creek 28
 Island Grove 28
 Jacksonville 30
 Keystone Heights 31
 Lake Alice 28
 Lake Butler 26
 Lake City 23
 Lake Geneva 31
 Live Oak 20
 Macclenny 25
 Madison 17
 Micanopy 28
 Moultrie 33
 Newberry 28
 Newnan's Lake 28
 Okefenokee Swamp 23
 Old Town 22
 O'Leno State Park 28
 Olustee 25
 Orange Heights 28
 Orange Park 31
 Ortega 30
 Osceola National
 Forest 23, 25
 Pablo Beach 30
 Palatka 32
 Perry 18
 Prairie Creek 28
 Raiford 26
 River Rise 28
 Rochelle 28
 Rocky Point 28
 St. Augustine 33
 St. Johns Bluff 30
 San Mateo 32
 South Jacksonville 30
 Starke 27
 Suwannee Springs 20
 Trenton 24
 Waldo 28
 Welaka 32
 Yulee 29

Lake 42
 Seminole 43
 Orange 44
 Brevard 45
 Pinellas 46
 Hillsborough 47
 Polk 48
 Osceola 49

LOCALITIES

Altamonte Springs 43
 Anthony 35
 Apopka 44
 Astor Park 42
 Auburndale 48
 Banana River 45
 Bartow 48
 Bayonet Point 40
 Belleair 46
 Bereah 48
 Blanton 40
 Brooksville 39
 Cassadaga 37
 Cassia 44
 Cedar Key 34
 Christmas 44
 Chuluota 43
 Clearwater 46
 Clermont 42
 Cocoa 45
 Coronado Beach 37
 Crystal Beach 46
 Crystal River 38
 Dade City 40
 Daytona 37
 Daytona Beach 37
 De Bary 37
 De Land 37
 De Leon Springs 37
 Doctor Phillips 44
 Dover 47
 Dunedin 40
 Dunnellon 35
 Eagle Lake 48
 East Lake Weir 35
 Egmont Key 47
 Elfers 40
 Enterprise 37
 Eustis 42
 Fellowship 35
 Fern Park 42
 Flagler Beach 36
 Floral City 38
 Fort Meade 48
 Fort Reed 43
 Frostproof 48
 Fruitland Park 42
 Gabriella 43
 Georgianna 45
 Glenwood 37
 Goldenrod 44

LOCALITIES

Alford 8
 Apalachicola 13
 Avalon 2
 Bayou Chico 1
 Big Bayou 1
 Blountstown 9
 Bonifay 5
 Brent 1
 Callaway 7
 Carrabelle 13
 Century 1
 Chipley 6
 Chipola 9
 Clarksville 9
 Cottage Hill 1
 Crestview 3
 Dead Lake 10
 De Funiak Springs 4
 Ensley 1
 Fisherville 1
 Florida Caverns
 State Park 8
 Fort Walton 3
 Freeport 4
 Gonzalez 1
 Havana 11
 Lake Miccosukee 16
 Lake Stanley 4
 Lamont 16
 Lanark Beach 13
 Long Beach 7
 Lynn Haven 7
 Marianna 8
 Milton 2
 Monticello 16
 Mulat 2
 Myrtle Grove 1
 Ocean City 3
 Old Camp Torreya 12
 Panacea 15
 Panama City 7

II. COUNTIES

Madison 17
 Taylor 18
 Hamilton 19
 Suwannee 20
 Lafayette 21
 Dixie 22
 Columbia 23
 Gilchrist 24
 Baker 25
 Union 26
 Bradford 27
 Alachua 28
 Nassau 29
 Duval 30
 Clay 31
 Putnam 32
 St. Johns 33

LOCALITIES

Alton 21
 Anastasia Island 33
 Andrews 29
 Archer 28
 Arlington 30
 Atlantic Beach 30
 Boulogne 29
 Callahan 29
 Catocala Glen 28
 Cherry Lake 17
 Crescent Beach 33
 Crescent City 32
 Devil's Mill Hopper 28
 Dinsmore 30
 East Gainesville 28
 Fairbanks 28
 Fernandina 29
 Florahome 32
 Foley 18
 Fort George 30
 Gainesville 28

III. COUNTIES

Levy 34
 Marion 35
 Flagler 36
 Volusia 37
 Citrus 38
 Hernando 39
 Pasco 40
 Sumter 41

Gotha 44
 Grand Island 42
 Groveland 42
 Gulf Hammock 34
 Gulfport 46
 Guntown 34
 Haines City 48
 Holder 35
 Holly Hill 37
 Howey-in-the-Hills 42
 Indian River 45
 Inverness 38
 Jumeau 38
 Juniper Springs 35
 Kissimmee 49
 Lacoochee 40
 La Grange 45
 Lake Alfred 44
 Lake Apopka 44
 Lake Beresford 37
 Lake George 42
 Lake Hamilton 48
 Lake Helen 43
 Lakeland 48
 Lake Louise 42
 Lake Lucy 42
 Lake Pickett 44
 Lake Thonotosassa 47
 Lake Wales 48
 Largo 46
 Leesburg 42
 Lisbon 42
 Lockhart 44
 Longwood 43
 Lutz 47
 Maitland 44
 Malabar 45
 Mango 47
 Marineland 36
 Markham 43
 McIntosh 35
 Melbourne 45
 Melonville 43
 Merritt Island 45
 Micco 45
 Mims 45
 Monteverde 42
 Monte Vista 42
 Moon Lake 40
 Mount Dora 42
 New Port Richey 40
 New Smyrna Beach 37
 Oak Hill 37
 Ocala 35
 Ocoee 44
 Oklawaha 35
 Oldsmar 46
 Orange City 37
 Orange Lake 35
 Orange Springs 35
 Orlando 44
 Ormond 37
 Osteen 37
 Oviedo 43
 Paisley 42
 Pellicer Creek 36
 Piedmont 44
 Pierson 37
 Plant City 47
 Plymouth 44
 Port Orange 37
 Port Tampa 47
 Rockledge 45

Rock Springs 44
 St. Petersburg 46
 San Antonio 40
 Sanford 43
 Sea Horse Key 34
 Seven Oaks 47
 Shepard Lake 42
 Silver Glen Springs 42
 Silver Springs 35
 Socrum 48
 Stemper 47
 Tampa 47
 Tarpon Springs 46
 Tavares 42
 Temple Terrace 47
 Tildenville 44
 Titusville 45
 Tomoka 37
 Umatilla 42
 Upper Indian River 45
 Vineland 44
 Volco 37
 Waccasassa 34
 Waccasassa River 34
 Weekiwachee Springs 39
 Wildwood 41
 Williston 34
 Windermere 48
 Winter Garden 44
 Winter Haven 48
 Winter Park 44
 Yalaha 42
 Yankeetown 34
 Ybor City 47
 Zellwood 44
 Zephyrhills 40

IV. COUNTIES

Manatee 50
 Hardee 51
 Highlands 52
 Okeechobee 53
 Indian River 54
 St. Lucie 55
 Martin 56
 Sarasota 57
 De Soto 58
 Charlotte 59
 Glades 60
 Lee 61
 Hendry 62
 Palm Beach 63
 Collier (in part) 64
 Broward 65
 Dade (in part) 66

LOCALITIES

Allen River 64
 Alva 61
 Arcadia 58
 Archbold Biological Station 52
 Avon Park 52
 Belle Glade 63
 Biscayne Bay 66
 Boca Grande 61
 Bokeelia 61
 Bonita Springs 61
 Boynton Beach 63
 Bradenton 50

Brickell Hammock 66
 Canal Point 63
 Captiva 61
 Casey Key 57
 Charlotte Harbor 59
 Childs 52
 Citrus Center 60
 Clewiston 62
 Coconut Grove 66
 Coral Gables 66
 Cutler 66
 Davie 65
 Deep Lake 64
 Delray Beach 63
 Englewood 57
 Fellsmere 54
 Fort Drum 53
 Fort Lauderdale 65
 Fort Myers 61
 Fort Ogden 58
 Fort Pierce 55
 Fruitville 57
 Gillette 50
 Grove City 59
 Hallandale 65
 Hialeah 66
 Highlands Hammock State Park 52
 Hillsboro 65
 Hobe Sound 56
 Hollywood 65
 Hypoluxo 63
 Immokalee 64
 Indian Town 56
 Jensen 58
 Jupiter 63
 Kendall 66
 Key Biscayne 66
 La Belle 62
 Lake Josephine 52
 Lake Park 63
 Lake Placid 52
 Lake Worth 63
 Laurel 57
 Lehigh Acres 61
 Longboat Key, 50, 57
 Loxahatchee 63
 Manasota Key 59
 Matheson Hammock 66
 Miami 66
 Monroe Station 64
 Moore Haven 60
 Myakka 57
 Myakka City, 50
 Myakka State Park 57
 Naples 64
 New Port Comfort 59
 North Miami 66
 Ochopee 66
 Okeechobee 53
 Okeelanta 63
 Ona 51
 Oneco 50
 Opa Locka 66
 Osprey 57
 Pahokee 63
 Palm Beach 63
 Palmdale 60
 Palmetto 50
 Palmetto Key 61
 Parrish 50
 Parker's Island 52
 Pine Island 61

Pompano 65
 Port Sewall 56
 Punta Gorda 59
 Riviera 63
 Rye 50
 Sanibel Island 61
 Sarasota 57
 Sebring 52
 Siesta Key 57
 Snapper Point 66
 South Bay 63
 South Miami 66
 Spring Valley 52
 Stuart 56
 Useppa Island 61
 Venice 57
 Vero Beach 54
 Wabasso Beach 54
 Wauchula 51
 West Palm Beach 63

V. COUNTIES

Collier (in part) 64

LOCALITIES

Cape Romano
 Chokoloskee
 Collier-Seminole Park
 Everglades
 Marco
 Royal Palm Hammock (See p. 8)
 Royal Palm State Park (See p. 8)

VI. COUNTIES

Dade (in part) 66

LOCALITIES

Everglades National Park
 Florida City
 Goulds
 Homestead
 Long Pine Key
 Mahogany Hammock
 Medley
 Modello
 Naranja
 Paradise Key
 Perrine
 Princeton
 Redlands
 Royal Palm Hammock (See p. 8)
 Royal Palm State Park (See p. 8)

VII. COUNTIES

Monroe (in part) 67

LOCALITIES

Cape Sable
 Coot Bay
 Crocodile Point
 Flamingo

VIII. COUNTIES

Monroe (in part) 67

LOCALITIES

Angelfish Key
 Big Pine Key
 Bone Fish Key
 Craig
 Cudjo Key
 Dry Tortugas

Garden Key
 Loggerhead Key
 Islamorada
 Key Largo
 Key Vaca
 Key West
 Long Key
 Long Pine Key
 Lower Matecumbe (Key)
 Pine Key
 Plantation Key
 Planters Point

Stock Island
 Sugarloaf Key
 Summerland Key
 Tavernier
 Tom Harbor
 Upper Matecumbe (Key)
 Windley Key
 UNLOCATED
 Alton
 Camp Pinchot

Capron, or Fort Capron
 (This is somewhere on
 the Indian River,
 Schwarz (1888, p.
 170.)
 Cold Harbor
 Fort Schuyler
 Lake Beach
 Rockdale
 Wilmington
 Williamsburg

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* For list of abbreviations see page 28.

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PLATE I

(All figures approximately two-fifths natural size.)

Fig.	McDun- nough No.	
1	15	<i>Papilio glaucus australis</i> Mayn. ♂, Gainesville, UF, p. 32.
2	15	<i>Papilio glaucus</i> L. ♀, Sebring, DPI, p. 32.
3	14	<i>Papilio aristodemus ponceanus</i> Schaus ♂, DPI, p. 32.
4	3	<i>Battus polydamas lucayus</i> (R. & J.) ♀, Sebring, DPI, p. 31.
5	1	<i>Battus philenor</i> (L.) ♂, New York, SVF, p. 31.
6	274	<i>Tritanassa texana seminole</i> (Skin.) ♀, DPI, p. 41.
7	98	<i>Euptychia gemma</i> (Hbn.) ♀, underside, Daytona Beach, SVF, p. 38.
8	67	<i>Eureme nicippe</i> (Cram.) ♀, underside, Naples, SVF, p. 36.
9	67	<i>Eureme nicippe</i> (Cram.) ♀, Alachua Co., UF, p. 36.
10	41	<i>Colias eurytheme</i> Bdv. ♂, Georgia, DPI, p. 33. (This and the following specimen are both probably pale <i>eurytheme</i> x <i>philodice</i> hybrids.)
11	41	<i>Colias eurytheme</i> Bdv. ♀, Georgia, DPI, p. 33.
12	41	<i>Colias eurytheme</i> form ♀ <i>alba</i> Stkr., New Mexico, DPI, p. 33.
13	58	<i>Phoebis philea</i> (L.) ♂, Cassadaga, DPI, p. 34.
14	58	<i>Phoebis philea</i> (L.) ♀, DPI, p. 34.
15	58	<i>Phoebis philea</i> form ♀ <i>albarithe</i> Brown, Cassadaga, SVF, p. 34.
16	100	<i>Euptychia areolata</i> (A. & S.) ♂, Daytona Beach, SVF, p. 38.
17	100	<i>Euptychia areolata</i> (A. & S.) ♀, underside, Daytona Beach, SVF, p. 38.
18	67	<i>Eureme nicippe</i> form <i>flava</i> (Stkr.) ♀, underside, Florida City, SVF, p. 36.
19	67	<i>Eureme nicippe</i> form <i>flava</i> (Stkr.) ♀, Gainesville, UFA, p. 36.
20	55	<i>Zerene cesonia</i> (Stoll) ♂, DeLand, SVF, p. 33.
21	55	<i>Zerene cesonia</i> form <i>rosa</i> McNeil ♀, underside, Arkansas, SVF, p. 33.
22	55	<i>Zerene cesonia</i> (Stoll) ♀, an albino, Cassadaga, SVF, p. 63.
23	64	<i>Eurema daira</i> (Godt.) ♀, Georgia, DPI, p. 35.
24	64	<i>Eurema daira</i> form <i>jucunda</i> (Bdv. & Lec.) ♂, Cassadaga, SVF, p. 35.
25	64	<i>Eurema daira</i> (Godt.) ♀, underside, DeLand, SVF, p. 35.
26	64	<i>Eurema daira</i> form <i>jucunda</i> (Bdv. & Lec.) ♂, underside, Gainesville, DPI, p. 35.
27	60	<i>Phoebis agarithe maxima</i> (Neum.) ♂, Big Pine Key, DPI, p. 34.
28	60	<i>Phoebis agarithe maxima</i> (Neum.) ♀, Stock Island, DPI, p. 34.
29	103	<i>Euptychia cymela viola</i> (Mayn.) ♂, Arkansas, SVF, p. 39.
30	103	<i>Euptychia cymela viola</i> (Mayn.) ♀, underside, Juniper Springs, p. 39.
31	116	<i>Cercyonis pegala</i> (Fabr.) ♀, Alachua Co., DPI, p. 39.
32	116	<i>Cercyonis pegala</i> (Fabr.) ♀, underside, Tomoka, SVF, p. 39.
33	310	<i>Eunica tatila tatilista</i> Kaye ♀, Matheson Hammock, DPI, p. 43.
34	354	<i>Eumaeus atala florida</i> Roeber ♀, DPI, p. 46.
35	356	<i>Atlides halesus</i> (Cram.) ♂, Gainesville, UFA, p. 46.
36	419	<i>Feniseca tarquinius</i> (Fabr.) ♀, Fairbanks, UFES, p. 49.
37	372	<i>Strymon m-album</i> (Bdv. & Lec.) ♂, Alachua Co., DPI, p. 47.
38	372	<i>Strymon m-album</i> (Bdv. & Lec.) ♀, Sebring, DPI, p. 47.
39	356	<i>Atlides halesus</i> (Cram.) ♀, Gainesville, UFA, p. 46.
40	356	<i>Atlides halesus</i> (Cram.) ♀, underside, Lake Helen, DPI, p. 46.
41	365,1	<i>Strymon maesites</i> H.-S. ♂, Miami, DPI, p. 47.
42	365,1	<i>Strymon maesites</i> H.-S. ♀, Miami, DPI, p. 47.
43	438	<i>Leptotes cassius theonus</i> (Luc.) ♂, Stock Island, DPI, p. 49.
44	438	<i>Leptotes cassius theonus</i> (Luc.) ♀, Stock Island, DPI, p. 49.
45	361	<i>Strymon martialis</i> (H.-S.) ♂, Big Pine Key, DPI, p. 46.
46	442	<i>Cyclargus thomasi bethune-bakeri</i> (Comst. & Hunt.) ♀, Key Largo, DPI, p. 49.
47	442	<i>Cyclargus thomasi bethune-bakeri</i> (Comst. & Hunt.) ♂, Key Largo, DPI, p. 49.
48	475	<i>Celastrina argiola pseudargiola</i> (Bdv. & Lec.) ♂, Jacksonville, CFZ, p. 50.
49	475	<i>Celastrina argiola pseudargiola</i> (Bdv. & Lec.) ♀, Jacksonville, CFZ, p. 50.

PLATE I

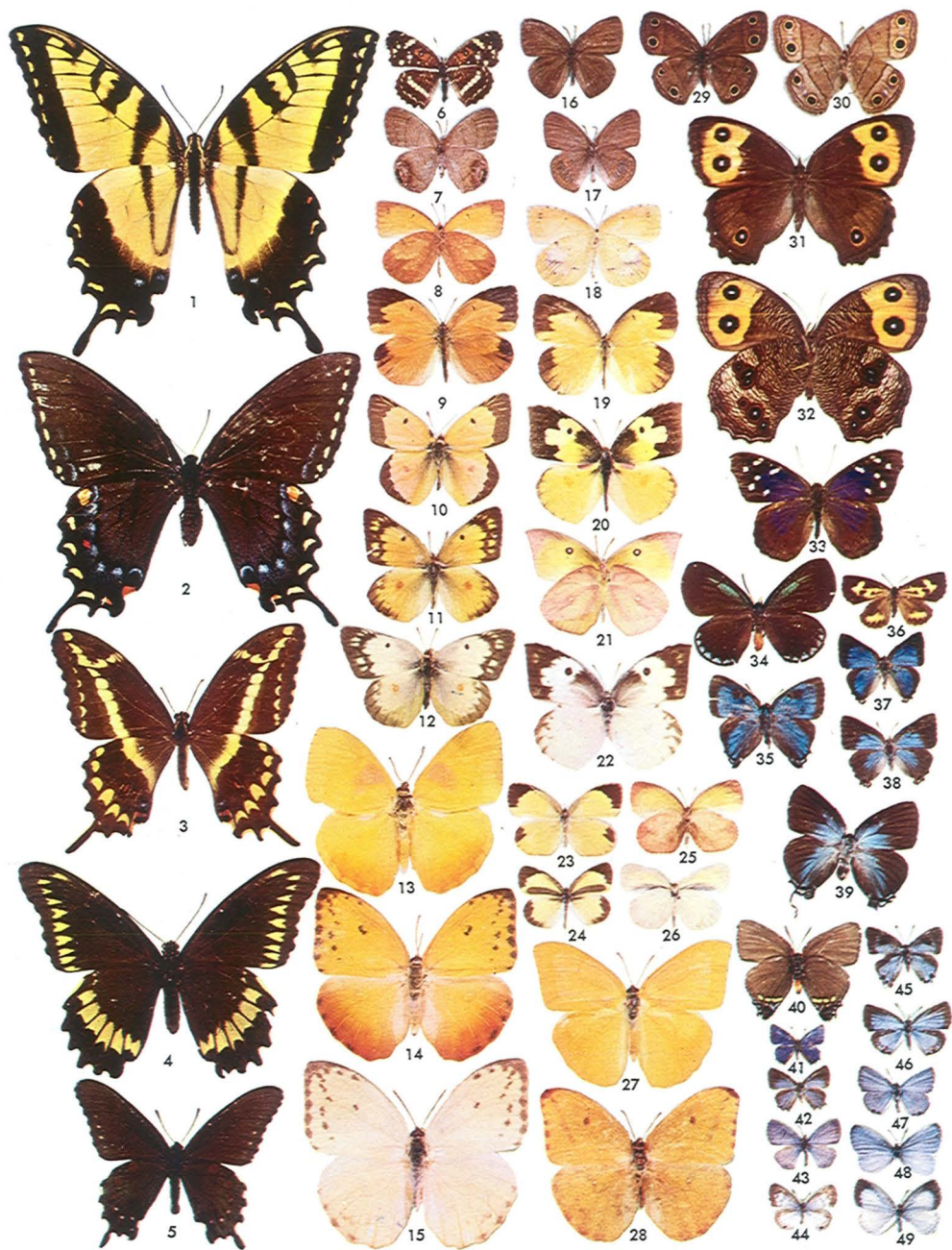


PLATE II

(All figures approximately two-fifths natural size.)

Fig.	McDun- nough No.	
1	477	<i>Phocides pigmalion okeechobee</i> Worth. ♀, Key Largo, SVF, p. 50.
2	477	<i>Phocides pigmalion okeechobee</i> Worth. ♂, underside, Key Largo, SVF, p. 50.
3	637	<i>Euphyes palatka</i> (Edw.) ♂, Cedar Key, SVF, p. 55.
4	683,1	<i>Asbolis capucinus</i> (Luc.) ♂, Siesta Key, CPK, p. 58.
5	486	<i>Goniurus proteus</i> (L.) ♂, Cassadaga, SVF, p. 51.
6	677	<i>Calpodes ethlius</i> (Stoll) ♂, Cassadaga, SVF, p. 57.
7	637	<i>Euphyes palatka</i> (Edw.) ♀, Cedar Key, SVF, p. 55.
8	683,1	<i>Asbolis capucinus</i> (Luc.) ♀, Siesta Key, CPK, p. 58.
9	684	<i>Megathymus yuccae buchholzi</i> Freeman ♀, Vero Beach, DPI, p. 58.
10	755	<i>Phryxus caicus</i> (Cram.) ♀, Flamingo, ENP, p. 64.
11	778	<i>Ampeloeca versicolor</i> (Harr.) ♂, Gainesville, DPI, p. 66.
12	775	<i>Pholus vitis</i> (L.) ♀, Florida City, SVF, p. 66.
13	776	<i>Pholus fasciatus</i> (Sulz.) ♂, Homestead, STES, p. 66.
14	738	<i>Protambulyx carteri</i> R. & J. ♂, Key Largo, SVF, p. 62.
15	738	<i>Protambulyx carteri</i> R. & J. ♀, Homestead, ENP, p. 62.
16	747	<i>Erinnyis alope</i> (Dru.) ♀, Cassadaga, SVF, p. 63.
17	749	<i>Erinnyis ello</i> (L.) ♀, Key Largo, DPI, p. 63.
18	752	<i>Erinnyis obscura</i> (Fabr.) ♂, Chokoloskee, USNM, p. 63.
19	743	<i>Paonias astylus</i> (Dru.) ♂, New York, SVF, p. 62.
20	772	<i>Pholus satellitia pandorus</i> (Hbn.) ♂, Georgia, DPI, p. 65.
21	773	<i>Pholus achemon</i> (Dru.) ♀, New York, SVF, p. 66.
22	811	<i>Actias luna mariae</i> Benj., dwarf ♂, Gainesville, UFA, p. 68.
23	809	<i>Callosamia promethea</i> (Dru.) ♂, Pennsylvania, SVF, p. 68.
24	810	<i>Callosamia angulifera</i> (Wlk.) ♀, New York, SVF, p. 68.
25	810,1	<i>Callosamia carolina</i> Jones ♂, Parker's Island, ABS, p. 68.
26	810,1	<i>Callosamia carolina</i> Jones ♀, Quincy, CPK, p. 68.

PLATE II

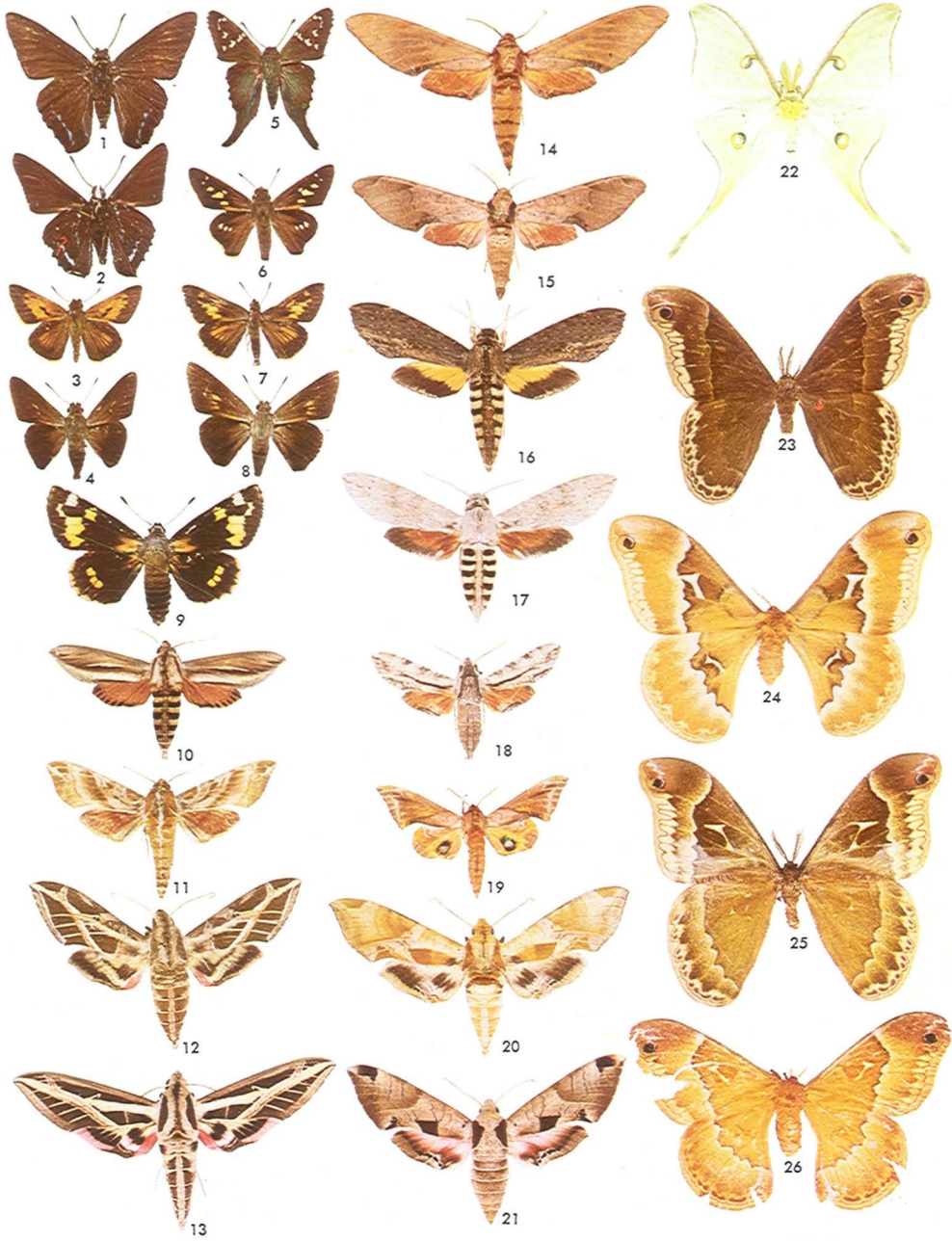


PLATE III

(All figures approximately two-fifths natural size.)

Fig.	McDun- nough No.	
1	703	<i>Dolba hylaeus</i> (Dru.) ♀, New York, SVF, p. 60.
2	760	<i>Enyo lugubris</i> (L.) ♀, Cassadaga, SVF, p. 64.
3	779	<i>Ampeloeca myron</i> (Cram.) ♂, a Florida form, Childs, ABS, p. 66.
4	780	<i>Darapsa pholus</i> (Cram.) ♂, New York, SVF, p. 67.
5	782	<i>Deidamia inscriptum</i> (Harr.) ♀, New York, SVF, p. 67.
6	762	<i>Cautethia grotei</i> (Hy. Edw.) ♀, Big Pine Key, SVF, p. 64.
7	794	<i>Xylophanes pluto</i> (Fabr.) ♂, Key Largo, DPI, p. 67.
8	739	<i>Smerinthus jamaicensis geminatus</i> (Say) ♂, Quincy, CPK, p. 62.
9	799	<i>Celerio lineata</i> (Fabr.) ♀, UFA, p. 68.
10	797	<i>Xylophanes tersa</i> (L.) ♀, Lake Helen, SVF, p. 68.
11	777	<i>Pholus labruscae</i> (L.) ♂, Quincy, STES, p. 66.
12	804	<i>Platysamia cecropia</i> (L.) ♂, Missouri, UFES, p. 68.
13	867	<i>Didsys belae</i> (Grt.) ♀, St. Andrews State Park, DPI, p. 71.
14	856	<i>Citheronia regalis</i> (Fabr.) ♂, Tennessee, SVF, p. 70.
15	856	<i>Citheronia regalis</i> (Fabr.) ♀, Tallahassee, SVF, p. 70.
16	860	<i>Eacles imperialis didyma</i> (Beauv.) ♂, Cassadaga, SVF, p. 70.
17	860	<i>Eacles imperialis</i> (Dru.) ♀, Virginia, SVF, p. 70.
18	758	<i>Madoryx pseudothyreus</i> (Grt.) ♂, Flamingo, ENP, p. 64.
19	818	<i>Automeris io lilith</i> (Stkr.) ♂, Cassadaga, SVF, p. 69.
20	818	<i>Automeris io lilith</i> (Stkr.) ♀, Cassadaga, SVF, p. 69.
21	842	<i>Anisota stigma</i> (Fabr.) ♂, New York, SVF, p. 69.
22	842	<i>Anisota stigma</i> (Fabr.) ♀, New York, SVF, p. 69.
23	845	<i>Anisota consularis</i> Dyar ♂, Cassadaga, SVF, p. 69.
24	845	<i>Anisota consularis</i> Dyar ♀, Cassadaga, SVF, p. 69.
25	845	<i>Anisota consularis</i> Dyar ♀, Cassadaga, SVF, p. 69.
26	846	<i>Anisota virginiensis</i> (Dru.) ♀, New York, SVF, p. 70.
27	846	<i>Anisota virginiensis</i> (Dru.) ♂, Gainesville, UFA, p. 70.
28	846	<i>Anisota virginiensis</i> (Dru.) ♀, Gainesville, UFA, p. 70.
29	848	<i>Anisota rubicunda</i> (Fabr.) ♂, Cassadaga, SVF, p. 70.
30	848	<i>Anisota rubicunda</i> (Fabr.) ♀, Cassadaga, SVF, p. 70.
31	870	<i>Lymire edwardsii</i> (Grt.) ♂, Homestead, DPI, p. 71.
32	953	<i>Palpudia pallidior</i> Dyar ♀, Fort Myers, USNM, p. 75.
33	968	<i>Eupseudosoma involutum floridum</i> Grt. ♀, Fort Myers, USNM, p. 75.
34	969	<i>Calidota strigosa</i> (Wlk.) ♂, Plantation Key, DPI, p. 75.
35	1054	<i>Apantesis phyllira</i> (Dru.) ♂, Cassadaga, SVF, p. 78.
36	1057	<i>Apantesis placentia</i> (A. & S.) ♂, Cassadaga, SVF, p. 78.
37	1057	<i>Apantesis placentia</i> (A. & S.) ♀, Cassadaga, SVF, p. 78.
38	1069	<i>Isia isabella</i> (A. & S.) ♂, Escambia Co., SMH, p. 79.
39	1070	<i>Estigmene acrea</i> (Dru.) ♂, Bradenton, CPK, p. 79.
40	1070	<i>Estigmene acrea</i> (Dru.) ♂, New York, SVF, p. 79.
41	1070	<i>Estigmene acrea</i> (Dru.) ♀, Escambia Co., SMH, p. 79.
42	1019	<i>Holomelina aurantiaca</i> (Hbn.) ♂, Alachua Co., DPI, p. 77.
43	861	<i>Cosmosoma myrodora</i> Dyar ♀, Escambia Co., SMH, p. 70.
44	1078	<i>Euerythra phasma</i> Harv. ♂, Escambia Co., SMH, p. 79.
45	1099	<i>Utetheisa bella</i> (L.) ♀, Gainesville, DPI, p. 80.

PLATE III



PLATE IV

(All figures approximately nine-tenths natural size.)

Fig.	McDun- nough No.	
1	1748	<i>Lacinipolia laudabilis</i> (Gn.) ♂, Siesta Key, CPK, p. 88.
2	1954,1	<i>Xanthopastis regnatrix</i> (Grt.) ♂, Cape Romano, DPI, p. 90.
3	2198	<i>Copipanolis styracis</i> form <i>stigma</i> (Slosson) ♀, Cassadaga, SVF, p. 92.
4	2540	<i>Euherrichia monetifera</i> (Gn.) ♀, Cassadaga, SVF, p. 94.
5	2542	<i>Euherrichia granitosa</i> (Gn.) ♀, Cassadaga, SVF, p. 95.
6	2544	<i>Phuphena u-album</i> (Gn.) ♀, Escambia Co., SMH, p. 95.
7	2571	<i>Cyathissa percara</i> (Morr.) ♂, Escambia Co., SMH, p. 96.
8	2623	<i>Platysenta sutor</i> (Gn.) ♀, Gainesville, DPI, p. 98.
9	2623,1	<i>Platysenta cervina</i> (Sm.) ♂, Siesta Key, CPK, p. 98.
10	2666	<i>Galgula partita</i> Gn. ♂, Cassadaga, SVF, p. 100.
11	2666	<i>Galgula partita</i> Gn. ♀, Cassadaga, SVF, p. 100.
12	2705	<i>Arzama densa</i> Wlk. ♂, Washington, D. C., USNM, p. 103.
13	2703	<i>Arzama obliqua</i> (Wlk.) ♂, New York, SVF, p. 102.
14	2683	<i>Spodoptera exigua</i> (Hbn.) ♀, Gainesville, DPI, p. 101.
15	2681	<i>Prodenia eridania</i> (Cram.) ♂, Alachua Co., DPI, p. 100.
16	2681,1	<i>Prodenia sunia</i> (Gn.) ♂, Key Largo, DPI, p. 101.
17	2680	<i>Prodenia latifascia</i> Wlk. ♀, Oneco, DPI, p. 100.
18	2678	<i>Prodenia ornithogalli</i> Gn. ♀, Georgia, DPI, p. 100.
19	2680	<i>Prodenia latifascia</i> Wlk. ♂, Gainesville, DPI, p. 100.
20	2695	<i>Amolita obliqua</i> Sm. ♂, Escambia Co., SMH, p. 102.
21	2695	<i>Amolita obliqua</i> Sm. ♀, Cassadaga, SVF, p. 102.
22	2696	<i>Amolita roseola</i> Sm. ♂, Oneco, UFA, p. 102.
23	2696	<i>Amolita roseola</i> Sm. ♀, Escambia Co., SMH, p. 102.
24	2704	<i>Arzama brehmei</i> B. & McD. ♀, Cassadaga, SVF, p. 103.
25	2704	<i>Arzama brehmei</i> B. & McD. ♂, USNM, p. 103.
26	2708	<i>Bellura gortynoides</i> Wlk. ♂, Gainesville, UFA, p. 103.
27	2866	<i>Acherdoa ferraria</i> Wlk. ♂, Escambia Co., SMH, p. 105.
28	3114	<i>Cydosia nobilitella</i> (Cram.) ♂, Monroe Co., DPI, p. 113.
29	3141	<i>Heliocontia apicella</i> (Grt.) ♂, USNM, p. 114.
30	3142	<i>Heliocontia margana</i> (Fabr.) ♂, Cuba, USNM, p. 115.
31	3142,1	<i>Heliocontia perstructana</i> (Wlk.) ♂, Cuba, USNM, p. 115.
32	3144	<i>Spragueia guttata</i> Grt. ♂, USNM, p. 115.
33	3147	<i>Spragueia onagrus</i> (Gn.) ♀, St. Petersburg, USNM, p. 115.
34	3149	<i>Spragueia dama</i> (Gn.) ♂, Cuba, USNM, p. 115.
35	3141	<i>Heliocontia apicella</i> (Grt.) ♀, Costa Rica, USNM, p. 114.
36	3142	<i>Heliocontia margana</i> (Fabr.) ♀, Puerto Rico, USNM, p. 115.
37	3142,1	<i>Heliocontia perstructana</i> (Wlk.) ♀, Jamaica, USNM, p. 115.
38	3161	<i>Fruva fasciatella</i> (Grt.) ♂, Everglades, USNM, p. 115.
39	3148	<i>Spragueia leo</i> (Gn.) ♀, Illinois, USNM, p. 115.
40	3149	<i>Spragueia dama</i> (Gn.) ♀, Cuba, USNM, p. 115.
41	2897	<i>Heliophana mitis</i> (Grt.) ♀, Cassadaga, SVF, p. 106.
42	2954	<i>Pippona carolinensis</i> (B. & McD.) ♀, Gainesville, DPI, p. 108.
43	2927	<i>Heliothis lupata</i> Grt. ♀, Cassadaga, SVF, p. 106.
44	2926	<i>Eupanychis scissoides</i> Benj. ♀, Cassadaga, SVF, p. 106.
45	2940	<i>Rhodophora gaurae</i> (A. & S.) ♀, Cassadaga, SVF, p. 107.
46	2948,1	<i>Rhododipsa fulleri</i> McElvare ♂, Cassadaga, SVF, p. 107.
47	3003	<i>Schinia gloriosa</i> (Stkr.) ♂, Cassadaga, SVF, p. 108.
48	3037	<i>Schinia siren</i> (Stkr.) ♂, Cassadaga, SVF, p. 110.
49	3038	<i>Schinia tuberculum</i> (Hbn.) ♂, Cassadaga, SVF, p. 110.
50	3035	<i>Schinia meskeana</i> (Grt.) ♀, Mississippi, CPK, p. 110.
51	2991	<i>Schinia arefacta</i> (Hy. Edw.) ♂, Cassadaga, SVF, p. 108.

PLATE IV

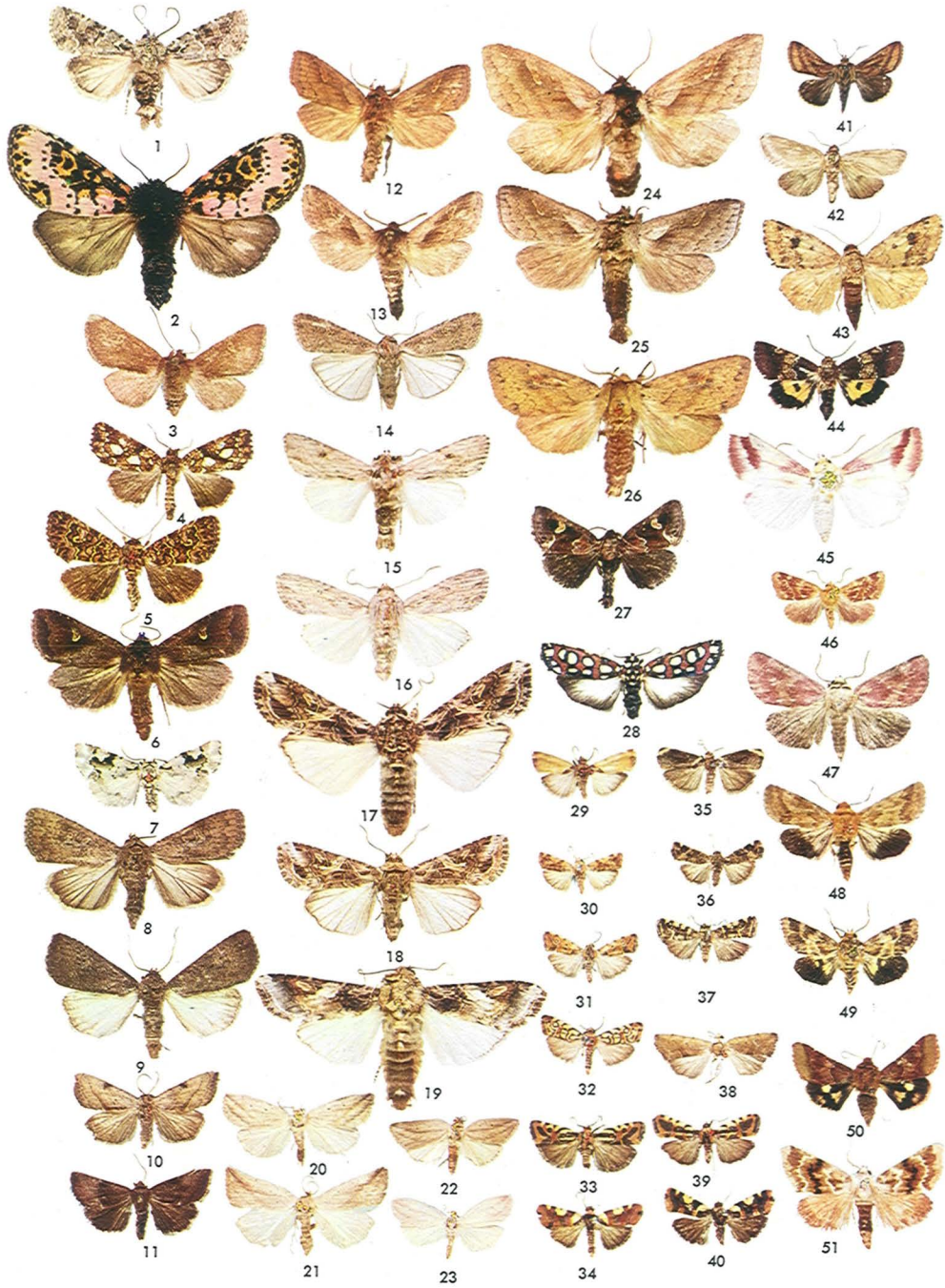


PLATE V

(All figures approximately nine-tenths natural size.)

Fig.	McDun- nough No.	
1	3432	<i>Caenurgia chloropha</i> (Hbn.) ♂, Stemper, USNM, p. 124.
2	3434	<i>Mocis marcida</i> (Gn.) ♂, Stemper, USNM, p. 125.
3	3435	<i>Mocis texana</i> (Morr.) ♂, USNM, p. 125.
4	3436	<i>Mocis disseverans</i> (Wlk.) ♂, Stemper, USNM, p. 125.
5	3438	<i>Mocis latipes</i> (Gn.) ♂, Texas, USNM, p. 125.
6	3888	<i>Heterocampa astarte</i> Dbldy. ♂, Cassadaga, SVF, p. 154.
7	3890	<i>Heterocampa varia</i> Wlk. ♀, Cassadaga, SVF, p. 154.
8	3601	<i>Noropsis hieroglyphica</i> (Cram.) ♀, Escambia Co., SMH, p. 135.
9	3516	<i>Kakopoda cincta</i> Sm. ♂, Chokoloskee, USNM, p. 130.
10	3134	<i>Diastema tigris</i> Gn. ♀, Cassadaga, SVF, p. 114.
11	3594	<i>Ephyrodes cacata</i> Gn. ♂, Homestead, CPK, p. 135.
12	3617	<i>Anomis erosa</i> Hbn. ♂, Cassadaga, SVF, p. 137.
13	3618	<i>Anomis flava fimbriago</i> (Steph.) ♂, Cassadaga, SVF, p. 137.
14	3555	<i>Isogona scindens</i> (Wlk.) ♂, Texas, USNM, p. 140.
15	3888	<i>Heterocampa astarte</i> Dbldy. ♀, Escambia Co., SMH, p. 154.
16	3890	<i>Heterocampa varia</i> Wlk. ♂, Gainesville, DPI, p. 154.
17	3661	<i>Arugisa latiorella</i> (Wlk.) ♂, Oneco, DPI, p. 141.
18	3661,1	<i>Arugisa watsoni</i> Rich. ♂, Siesta Key, CPK, p. 141.
19	3677	<i>Phytometra ernestinana</i> (Blanch.) ♂, Bradenton, CPK, p. 142.
20	3678	<i>Phytometra rhodarialis</i> (Wlk.) ♂, Siesta Key, CPK, p. 142.
21	3678	<i>Phytometra rhodarialis semipurpurea</i> (Wlk.) ♀, Siesta Key, CPK, p. 142.
22	3607,1	<i>Capnodes concinnula</i> Wlk. ♂, Florida City, USNM, p. 136.
23	3660	<i>Egrylron filaria</i> Sm. ♀, Palm Beach, USNM, p. 141.
24	3777	<i>Hormisa louisiana</i> (Fbs.) ♀, New York, CPK, p. 147.
25	3704,1	<i>Ophiuche degasalis</i> (Wlk.) ♂, Siesta Key, USNM, p. 144.
26	3778	<i>Tetanolita mynesalis</i> (Wlk.) ♀, Siesta Key, CPK, p. 147.
27	3704	<i>Ophiuche abjurialis</i> (Wlk.) ♀, Homestead, CPK, p. 143.
28	3780	<i>Tetanolita floridana</i> Sm. ♂, Siesta Key, CPK, p. 147.
29	3979	<i>Tolype minta</i> Dyar ♂, Mississippi, USNM, p. 159.
30	4018	<i>Eudeilinia luteifera</i> Dyar ♂, Oneco, CPK, p. 160.
31	4042	<i>Racheospila gerularia</i> (Hbn.) ♀, Siesta Key, UFA, p. 162.
32	4043	<i>Racheospila herbaria hulstiana</i> (Dyar) ♀, Key Largo, AMNH, p. 162.
33	4044	<i>Racheospila cupedinaria</i> Grt. ♂, Port Sewall, AMNH, p. 162.
34	4071	<i>Synchlora denticularia</i> (Wlk.) ♀, Gainesville, DPI, p. 163.
35	4125	<i>Scelolophia pannaria</i> (Gn.) ♀, Escambia Co., SMH, p. 166.
36	4128	<i>Scelolophia purpurascens</i> (Hulst) ♂, Bradenton, DPI, p. 166.
37	4202	<i>Lophosis laberculata</i> (Hulst) ♂, Escambia Co., SMH, p. 170.
38	4126	<i>Scelolophia crossii</i> (Hulst) ♀, Modello, AMNH, p. 166.
39	4131	<i>Scelolophia laevitaria</i> (Hbn.) ♀, Escambia Co., SMH, p. 166.
40	4202	<i>Lophosis laberculata</i> (Hulst) ♀, Siesta Key, CPK, p. 170.
41	4206	<i>Pleuroprucha insulsaria</i> (Gn.) ♂, Homestead, DPI, p. 170.

PLATE V

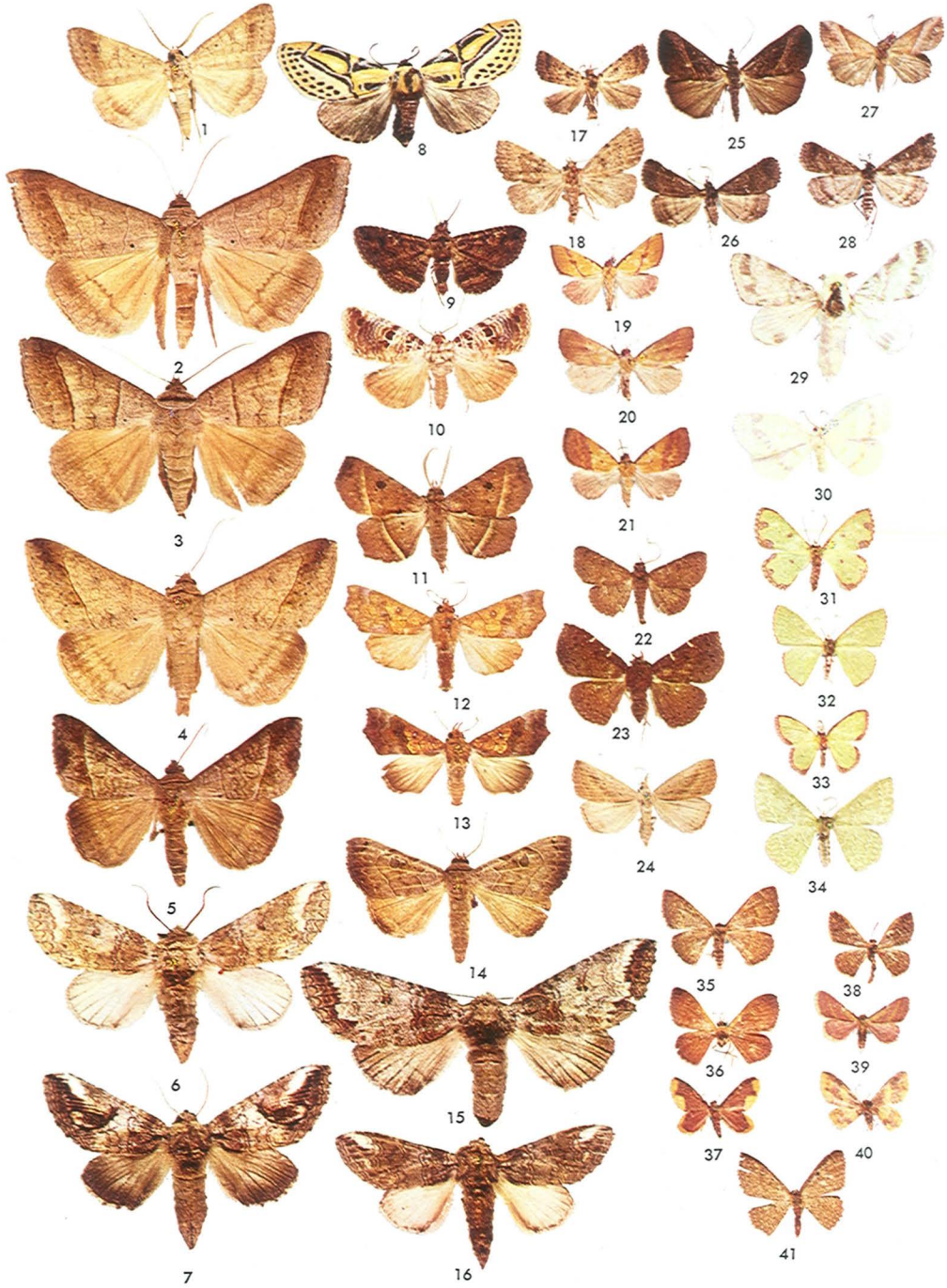


PLATE VI

(All figures approximately nine-tenths natural size.)

Fig.	McDun- nough No.	
1	4571	<i>Camptogramma australata</i> (Hulst) ♀, Tavernier, CPK, p. 174.
2	4565,1	<i>Pterocypha decertaria</i> H.-S. ♀, Dade Co., CPK, p. 173.
3	4567	<i>Archirhoe neomexicana</i> (Hulst) ♂, Texas, CPK, p. 174.
4	4808	<i>Hypagyrtis esther</i> Barnes ♀, Escambia Co., CPK, p. 179.
5	4881	<i>Pseudoboarmia buchholzaria</i> Lem. ♂, New Jersey, CPK, p. 181.
6	5082,1	<i>Pero barnesi</i> Cass. & Swett ♂, Monticello, CPK, p. 188.
7	5381,1	<i>Phostria simialis</i> (Gn.) ♂, Siesta Key, CPK, p. 205.
8	5396	<i>Microthyris anormalis</i> (Gn.) ♂, Plantation Key, CPK, p. 205.
9	5397,1	<i>Leptotygris reginalis</i> (Cram.) ♀, Matheson Hammock, SVF, p. 206.
10	4915	<i>Anacamptodes defectaria</i> (Gn.) ♂, Florida City, AMNH, p. 181.
11	4916	<i>Anacamptodes ephyraria</i> (Wlk.) ♂, New Jersey, AMNH, p. 181.
12	4921	<i>Anacamptodes pergracilis</i> (Hulst) ♀, Fort Myers, USNM, p. 182.
13	4920	<i>Anacamptodes cypressaria</i> (Grsb.) ♂, Hastings, AMNH, p. 182.
14	4919	<i>Anacamptodes plumosaria</i> (Pack.) ♂, New Jersey, AMNH, p. 182.
15	4917	<i>Anacamptodes humaria</i> (Gn.) ♂, St. Petersburg, AMNH, p. 181.
16	4918	<i>Anacamptodes vellivolata</i> (Hulst) ♂, South Miami, AMNH, p. 181.
17	5567,1	<i>Epicorsia oedipodalis</i> Gn. ♀, Matheson Hammock, CPK, p. 216.
18	5777	<i>Omphalocera munroei</i> Martin ♂, Marco, USNM, p. 225.
19	5778	<i>Omphalocera dentosa</i> Grt. ♂, Texas, USNM, p. 225.
20	4951,4	<i>Epimecis fraternaria</i> (Gn.) ♂, Coral Gables, CPK, p. 183.
21	4951,2	<i>Epimecis matronaria</i> (Gn.) ♂, Homestead, CPK, p. 183.
22	4951,5	<i>Epimecis detexta</i> (Wlk.) ♂, Homestead, CPK, p. 183.
23	5111	<i>Nepytia semiclusaria</i> (Wlk.) ♂, Gainesville, UFA, p. 188.
24	6228	<i>Caristanius decoloralis</i> (Wlk.) ♂, Volusia Co., DPI, p. 243.
25	6229	<i>Adelphia petrella</i> (Zell.) ♀, Escambia Co., SMH, p. 246.
26	6274	<i>Etiella zinckenella</i> (Treit.) ♀, Gainesville, DPI, p. 244.
27	6231	<i>Elasmopalpus lignosellus</i> (Zell.) ♂, Siesta Key, DPI, p. 246.
28	5629	<i>Pyrausta tyralis</i> (Gn.) ♂, Escambia Co., SMH, p. 217.
29	5427	<i>Sameodes elealis</i> (Wlk.) ♂, Siesta Key, CPK, p. 210.
30	5427,1	<i>Sameodes adipaloides</i> (G. & R.) ♀, Massachusetts, CPK, p. 210.
31	5427,2	<i>Sameodes phyllisalis</i> (Wlk.) ♂, Siesta Key, CPK, p. 210.
32	5427,2	<i>Sameodes phyllisalis</i> (Wlk.), aberrant ♀, Siesta Key, CPK, p. 210.
33	5429	<i>Sameodes mopsalis</i> (Wlk.) ♀, Homestead, CPK, p. 210.
34	5429	<i>Sameodes mopsalis griseicinctus</i> Hamp. ♂, Siesta Key, CPK, p. 210.
35	5387	<i>Blepharomastix ebulealis</i> (Gn.) ♂, Escambia Co., SMH, p. 205.
36	5393	<i>Pterygisis stenialis</i> (Gn.) ♂, Escambia Co., SMH, p. 206.
37	5385	<i>Hedylepta indicata</i> (Fabr.) ♀, Homestead, STES, p. 205.
38	5324	<i>Thyridopyralis gallaerandialis</i> Dyar ♂, type, Palm Beach, USNM, p. 198.
39	5787,1	<i>Epitamyrta minusculalis</i> (Moesch.) ♂, Siesta Key, CPK, p. 225.
40	Heinrich 359	<i>Ufa rubedinella</i> (Zell.) ♂, Egmont Key, USNM, p. 246.
41	5787,2	<i>Epitamyrta birectalis</i> Hamp. ♀, Siesta Key, CPK, p. 226.
42	8940	<i>Lactura pupula</i> (Hbn.) ♀, Siesta Key, CPK, p. 292.

PLATE VI

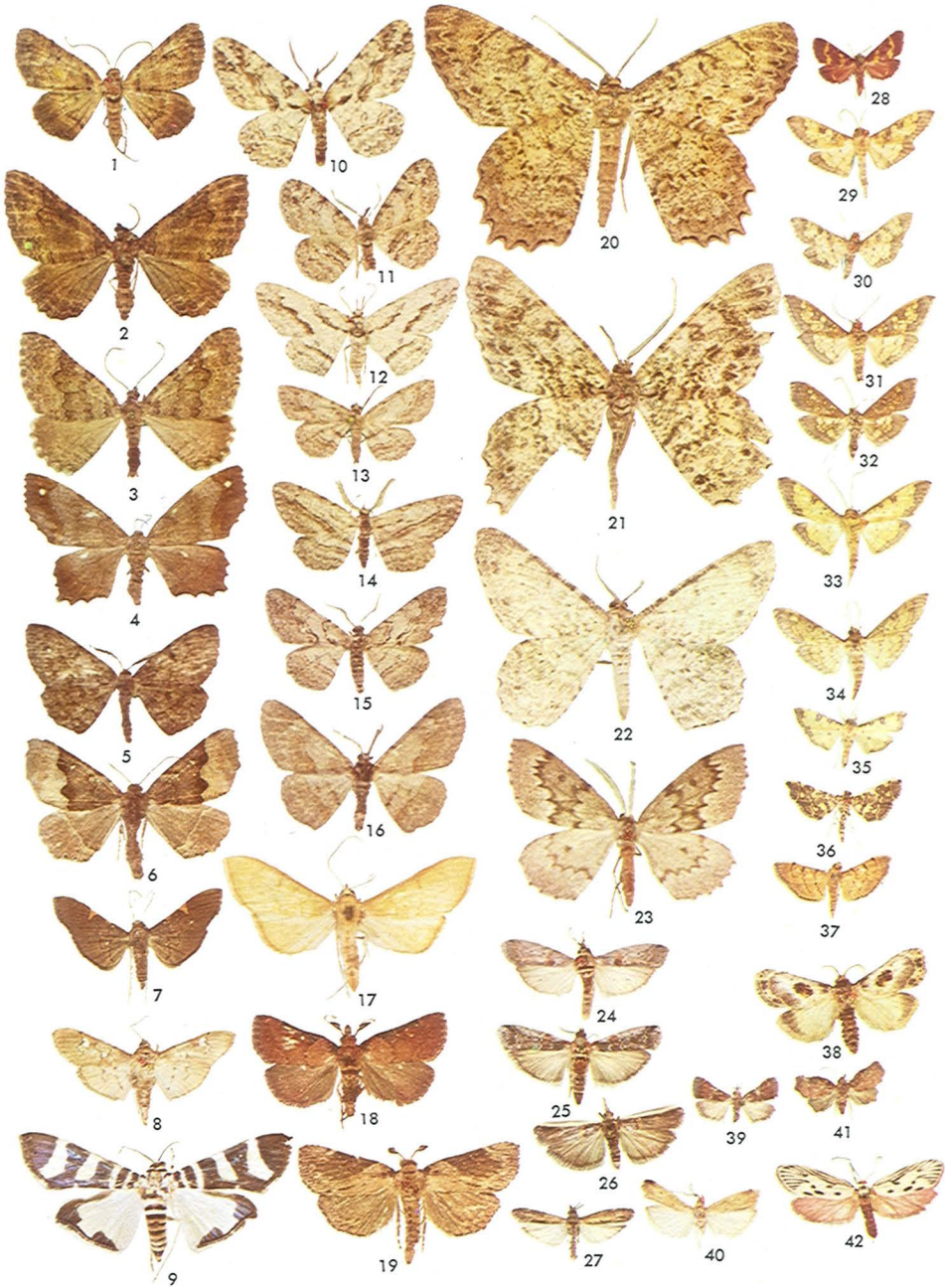


PLATE VII

(All figures one-half natural size.)

Fig. McDun-
nough
No.

1	693	<i>Herse cingulata</i> (Fabr.) ♂, Cassadaga, SVF, p. 59.
2	693	<i>Herse cingulata</i> (Fabr.) ♀, Miami, STES, p. 59.
3	697	<i>Phlegethontius quinquemaculata</i> (Haw.) ♀, New York, SVF, p. 59.
4	696	<i>Phlegethontius sexta</i> (Joh.) ♂, Siesta Key, STES, p. 59.
5	698	<i>Phlegethontius rustica</i> (Fabr.) ♀, Cassadaga, SVF, p. 59.
6	744	<i>Cressonia juglandis</i> (A. & S.) ♂, Oneco, UFA, p. 62.
7	744	<i>Cressonia juglandis</i> (A. & S.) ♀, Gainesville, UFA, p. 62.
8	741	<i>Paonias excaecatus</i> (A. & S.) ♂, Gainesville, UFES, p. 62.
9	741	<i>Paonias excaecatus</i> (A. & S.) ♀, Belle Glade, EES, p. 62.
10	694	<i>Cocytius antaeus medor</i> (Cram.) ♀, Eustis, SVF, p. 59.
11	708	<i>Ceratonia catalpae</i> (Bdv.) ♀, Gainesville, UFES, p. 60.
12	707	<i>Ceratonia undulosa</i> (Wlk.) ♂, New York, UFES, p. 60.
13	706	<i>Ceratonia amyntor</i> (Hbn.) ♂, New York, UFES, p. 60.
14	756	<i>Pachylia ficus</i> (L.) ♀, Homestead, STES, p. 64.
15	746	<i>Pseudosphinx tetrio</i> (L.) ♂, Belle Glade, EES, p. 63.

PLATE VII



PLATE VIII

(All figures 1.09 times natural size.)

Fig.	McDun- nough No.	
1	709	<i>Isoparce cupressi</i> (Bdv.) ♀, Monticello, USNM, p. 60.
2	735	<i>Lapara coniferarum</i> (A. & S.) ♂, Georgia, DPI, p. 61.
3	735	<i>Lapara coniferarum</i> (A. & S.) ♀, Cassadaga, SVF, p. 61.
4	734	<i>Lapara halicarniae</i> (Stkr.) ♂, Coral Gables, WES, p. 61.
5	711	<i>Paratreia plebeia</i> (Fabr.) ♂, Pensacola, VFG, p. 61.
6	785	<i>Amphion nessus</i> (Cram.) ♂, New York, SVF, p. 67.
7	871	<i>Cisseps fulvicollis</i> (Hbn.) ♀, Cassadaga, SVF, p. 71.
8	786	<i>Proserpinus gaurae</i> (A. & S.) ♂, Warrington, VFG, p. 67.
9	770	<i>Hemaris diffinis</i> (Bdv.) ♂, Virginia, SVF, p. 65.
10	866	<i>Pseudocharis minima</i> (Grt.) ♂, Key Largo, STES, p. 71.
11	742	<i>Paonias myops</i> (A. & S.) ♂, Alachua Co., DPI, p. 62.
12	764	<i>Aellopus tantalus zonata</i> (Dru.) ♂, Homestead, STES, p. 65.
13	767	<i>Hemaris thysbe</i> (Fabr.) ♂, Gainesville, DPI, p. 65.
14	869	<i>Eucereon carolina</i> (Hy. Edw.) ♂, Sanford, DPI, p. 71.
15	863	<i>Syntomeida ipomoeae</i> Harr. ♂, Cassadaga, SVF, p. 71.
16	864	<i>Syntomeida epilais jucundissima</i> Dyar ♀, Cassadaga, SVF, p. 71.

PLATE VIII

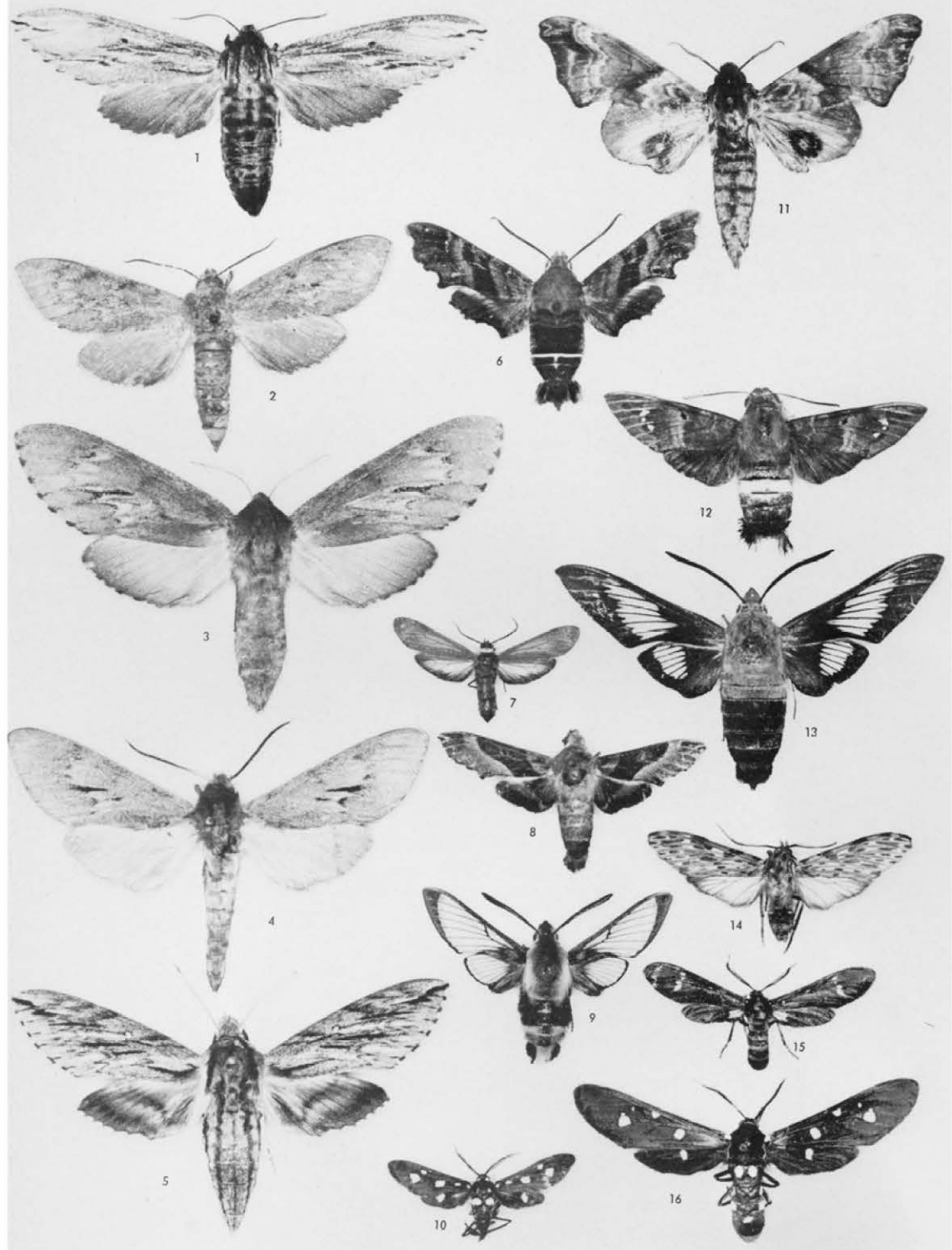


PLATE IX

(All figures natural size.)

Fig.	McDun- nough No.	
1	907	<i>Crambidia lithosoides</i> Dyar ♂, Cassadaga, SVF, p. 73.
2	907	<i>Crambidia lithosoides</i> Dyar ♀, Cassadaga, SVF, p. 73.
3	896	<i>Nigetia formosalis</i> Wlk. ♂, Escambia Co., SMH, p. 72.
4	918	<i>Pagara simplex</i> Wlk. ♂, Cassadaga, SVF, p. 73.
5	934	<i>Cisthene tenuifascia</i> Harv. ♂, Monticello, DPI, p. 74.
6	942	<i>Cisthene striata</i> Ottol. ♂, Siesta Key, CPK, p. 74.
7	944	<i>Cisthene bellicula</i> Dyar ♂, Siesta Key, CPK, p. 74.
8	947	<i>Cisthene plumbea</i> Stretch ♂, Warrington, CPK, p. 74.
9	952	<i>Clemensia albata</i> Pack. ♂, Glenwood, USNM, p. 75.
10	958	<i>Hypoprepia miniata</i> (Kby.) ♂, New York, SVF, p. 75.
11	958	<i>Hypoprepia miniata</i> (Kby.) ♀, Colorado, DPI, p. 75.
12	959	<i>Hypoprepia fucosa</i> Hbn. ♂, Siesta Key, DPI, p. 75.
13	959	<i>Hypoprepia fucosa</i> Hbn. ♀, Cassadaga, SVF, p. 75.
14	889	<i>Celama sorghiella</i> (Riley) ♂, Siesta Key, UFA, p. 72.
15	931	<i>Afrida ydatodes</i> Dyar ♂, Escambia Co., SMH, p. 74.
16	920	<i>Neoplynes eudora</i> (Dyar) ♀, Homestead, STES, p. 74.
17	984	<i>Halisidota tessellaris</i> (A. & S.) ♂, Childs, ABS, p. 76.
18	987	<i>Halisidota longa</i> (Grt.) ♂, Cassadaga, SVF, p. 76.
19	1037	<i>Apantesis doris</i> (Bdv.) ♂, Monticello, DPI, p. 78.
20	1037	<i>Apantesis doris</i> (Bdv.) ♂, Alachua Co., DPI, p. 78.
21	1038	<i>Apantesis arge</i> (Dru.) ♂, New York, SVF, p. 78.
22	1058	<i>Apantesis nais</i> (Dru.) ♂, Gainesville, DPI, p. 78.
23	1061	<i>Apantesis phalerata</i> (Harr.) ♀, Cassadaga, SVF, p. 78.
24	990	<i>Cyrcia insulata</i> (Wlk.) ♀, Cassadaga, SVF, p. 76.
25	1008	<i>Pygarctia grossbecki</i> Davis ♂, Childs, PSU, p. 77.
26	1016	<i>Holomelina laeta</i> (Guér.-Mén.) ♀, Cassadaga, SVF, p. 77.
27	1065	<i>Diacrisia virginica</i> (Fabr.) ♀, Cassadaga, SVF, p. 78.
28	1073	<i>Estigmene congrua</i> (Wlk.) ♀, Gainesville, UFA, p. 79.
29	1074	<i>Hyphantria textor</i> Harris ♂, Key Largo, SVF, p. 79.
30	1075	<i>Hyphantria cunea</i> (Dru.) ♀, Cassadaga, SVF, p. 79.
31	1114	<i>Alypia wittfeldi</i> Hy. Edw. ♀, Florida City, SVF, p. 81.
32	1114	<i>Alypia wittfeldi</i> Hy. Edw. ♂, Gainesville, UFA, p. 81.
33	1136	<i>Charadra circulifera</i> (Wlk.) ♀, Gainesville, UFA, p. 81.
34	1176	<i>Acronicta hasta</i> Gn. ♂, Quincy, CPK, p. 82.
35	1172	<i>Acronicta vinnula</i> (Grt.) ♂, Bradenton, DPI, p. 82.
36	1195	<i>Acronicta retardata</i> (Wlk.) ♂, Cassadaga, DPI, p. 83.
37	1167	<i>Acronicta connecta</i> Grt. ♂, Gainesville, DPI, p. 82.
38	1159	<i>Acronicta tritona</i> (Hbn.) ♂, Gainesville, DPI, p. 82.
39	1198	<i>Acronicta afflicta</i> Grt. ♂, New Jersey, USNM, p. 83.
40	1201	<i>Acronicta impleta</i> Wlk. ♀, Cassadaga, SVF, p. 83.
41	1207	<i>Acronicta longa</i> Gn. ♂, Alachua Co., DPI, p. 83.

PLATE IX

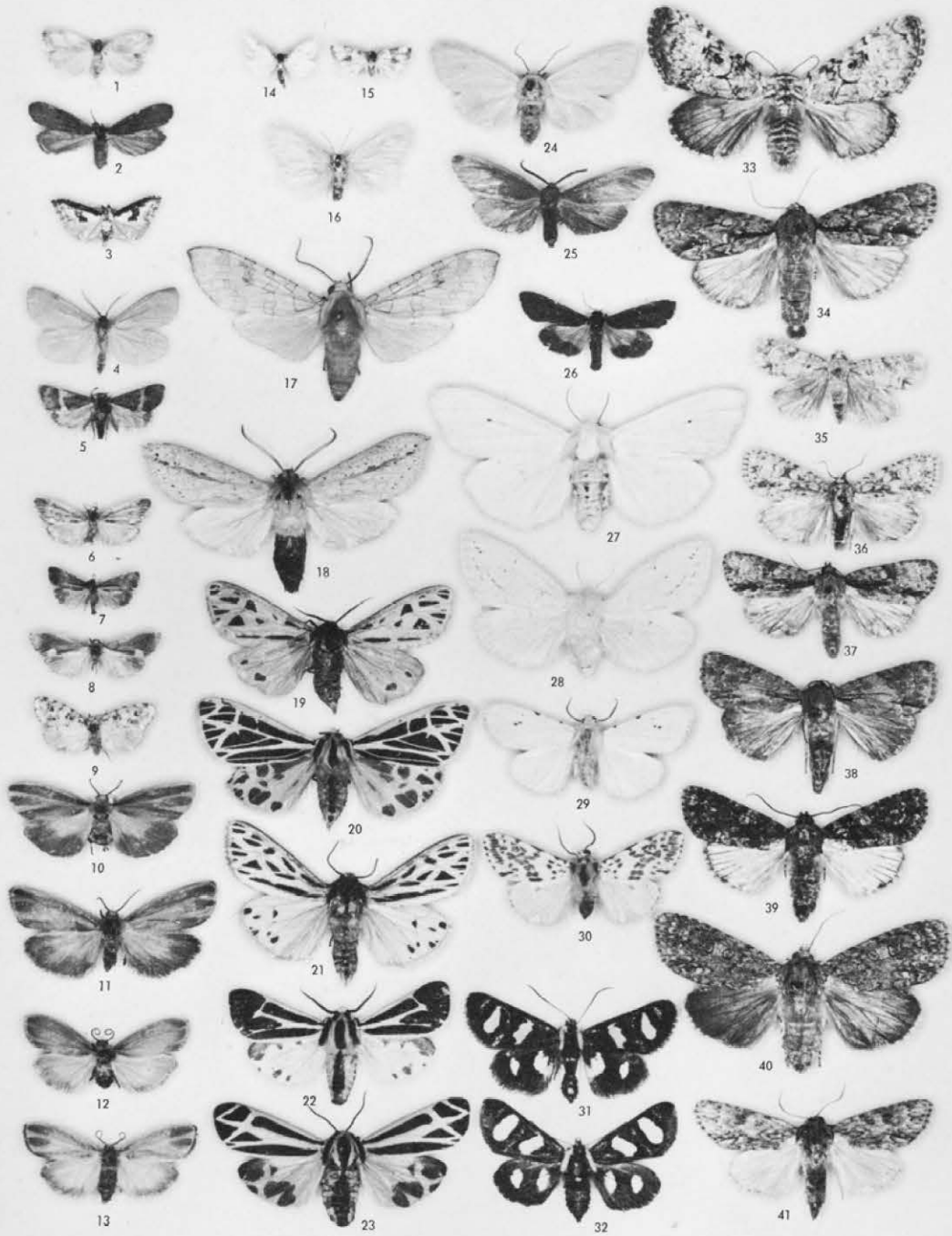


PLATE X

(All figures one-half natural size.)

Fig.	McDun- nough No.	
1	1091	<i>Seirarctia echo</i> (A. & S.) ♂, Cassadaga, SVF, p. 80.
2	830	<i>Hemileuca maia</i> (Dru.) ♂, Cassadaga, SVF, p. 69.
3	1085	<i>Ecpantheria scribonia</i> (Stoll) ♀, Escambia Co., SMH, p. 80.
4	858	<i>Citheronia sepulchralis</i> G. & R. ♂, Cassadaga, SVF, p. 70.
5	3311	<i>Catocala innubens</i> Gn. ♂, New York, SVF, p. 121.
6	3410	<i>Catocala micronympha</i> form <i>hero</i> Hy. Edw. ♀, Gainesville, DPI, p. 123.
7	3395	<i>Catocala ultronia</i> (Hbn.) ♂, Gainesville, UFES, p. 123.
8	3395	<i>Catocala ultronia</i> (Hbn.) ♀, North Carolina, UFES, p. 123.
9	3315	<i>Catocala nuliercula</i> Gn. ♂, Cassadaga, SVF, p. 121.
10	3313	<i>Catocala consors</i> (A. & S.) ♂, Cassadaga, SVF, p. 121.
11	812	<i>Telea polyphemus</i> (Cram.) ♂, Gainesville, UFA, p. 69.
12	858	<i>Citheronia sepulchralis</i> G. & R. ♀, Gainesville, DPI, p. 70.
13	3314	<i>Catocala epione</i> (Dru.) ♀, Pensacola, VFG, p. 121.
14	3339	<i>Catocala neogam</i> A. & S. ♀, New York, SVF. (This has not been taken in Florida. It was included by error.)
15	3328	<i>Catocala agrippina</i> Stkr. ♂, UFES, p. 121.
16	3333	<i>Catocala vidua</i> (A. & S.) ♂, New York, SVF, p. 122.
17	3334	<i>Catocala maestos</i> Hulst ♀, Starke, UFES, p. 122.
18	3406	<i>Catocala clintoni</i> Grt. ♀, Gainesville, UFES, p. 123.
19	3342	<i>Catocala ilia</i> (Cram.) ♂, Gainesville, UFA, p. 122.
20	3342	<i>Catocala ilia</i> (Cram.) ♀, SVF, p. 122.
21	3372	<i>Catocala cara</i> Gn. ♂, Gainesville, UFA, p. 122.
22	3389	<i>Catocala coccinata</i> Grt. ♂, Connecticut, SVF, p. 123.
23	3416	<i>Ophideres materna</i> (L.) ♀, Belle Glade, DPI, p. 124.
24	3523	<i>Hemeroblemma opigena</i> (Dru.) ♂, Gainesville, UFES, p. 131.
25	3524	<i>Latebraria amphipyroides</i> Gn. ♂, Cuba, UFES, p. 131.
26	3525	<i>Erebus odorata</i> (L.) ♂, Gainesville, UFES, p. 131.
27	3563,1	<i>Lois lorina</i> (Druce) ♀, Flamingo, ENP, p. 134.
28	3595	<i>Strenoloma lunilinea</i> Grt. ♀, Virginia, SVF, p. 135.
29	7670	<i>Prionoxystus robiniae</i> (Peck) ♂, Sanford, DPI, p. 272.
30	7670	<i>Prionoxystus robiniae</i> (Peck) ♀, Cassadaga, SVF, p. 272.

PLATE X

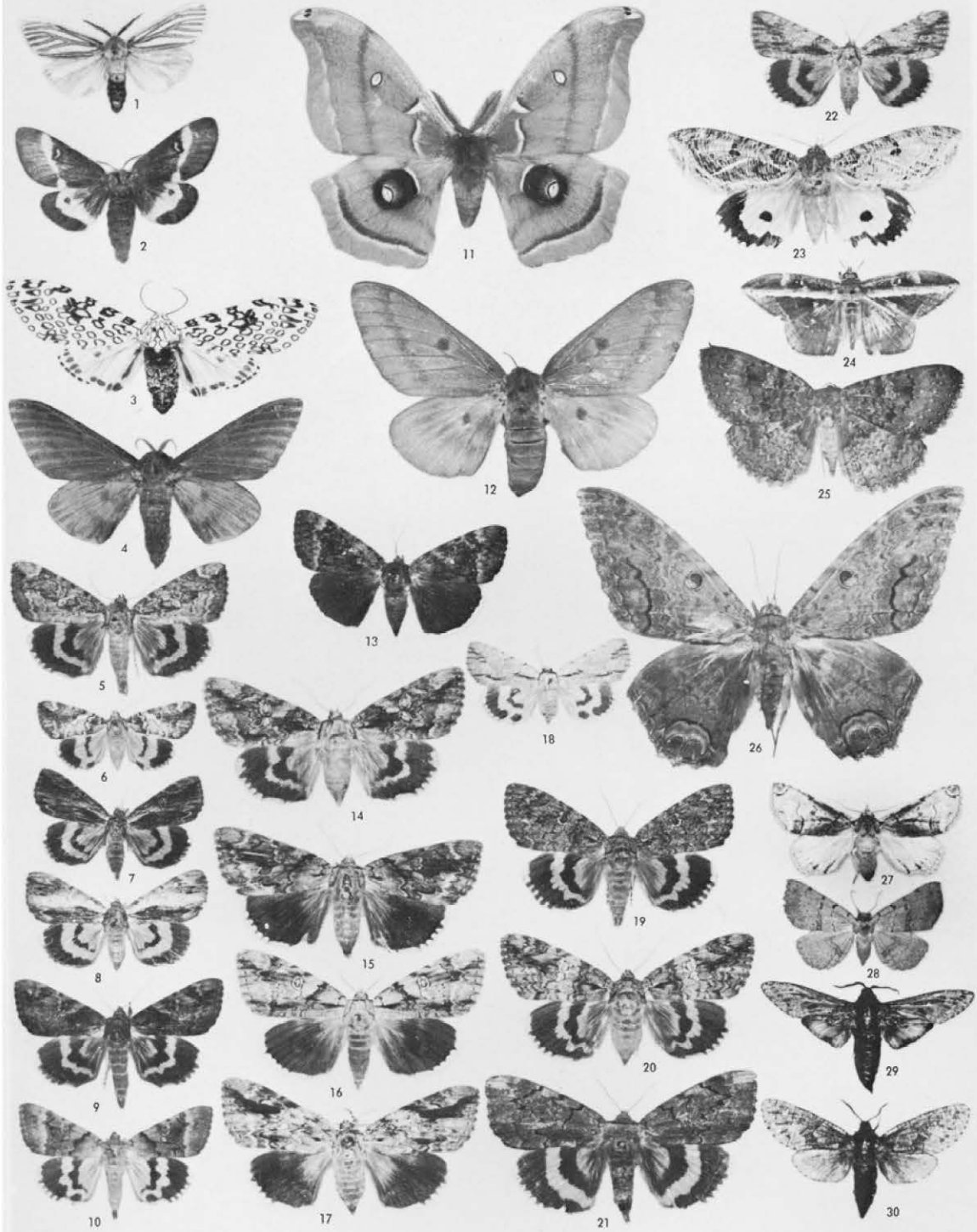


PLATE XI

(All figures 1.06 times natural size.)

Fig.	McDun- nough No.	
1	1214	<i>Acronicta arioch</i> Stkr. ♀, Pensacola, VFG, p. 84.
2	1215	<i>Acronicta oblinita</i> (A. & S.) ♂, Quincy, CPK, p. 84.
3	1215	<i>Acronicta oblinita</i> (A. & S.) ♀, New York, SVF, p. 84.
4	1216	<i>Acronicta lanceolaria</i> (Grt.) ♂, Maine, USNM, p. 84.
5	1222	<i>Simyra henrici</i> (Grt.) ♂, Alachua Co., DPI, p. 84.
6	1410	<i>Eucoptocnemis fimbriaris</i> (Gn.) ♂, Gainesville, DPI, p. 84.
7	1412	<i>Eucoptocnemis dapsilis</i> (Grt.) ♂, Cassadaga, SVF, p. 85.
8	1412	<i>Eucoptocnemis dapsilis</i> (Grt.) ♀, Cassadaga, SVF, p. 85.
9	1422	<i>Agrotis gladiaria</i> Morr. ♂, Massachusetts, STES, p. 85.
10	1451	<i>Feltia geniculata</i> (G. & R.) ♀, Cassadaga, SVF, p. 86.
11	1483	<i>Euagrotis illapsa</i> (Wlk.) ♂, Childs, PSU, p. 86.
12	1482	<i>Euagrotis lubricans</i> (Gn.) ♀, Warrington, VFG, p. 86.
13	1483	<i>Euagrotis illapsa</i> (Wlk.) ♀, New York, SVF, p. 86.
14	1743	<i>Lacinipolia erecta</i> (Wlk.) ♂, Quincy, CPK, p. 87.
15	1747	<i>Lacinipolia parvula</i> (H.-S.) ♂, Siesta Key, STES, p. 88.
16	1434	<i>Agrotis malefida</i> Gn. ♀, Gainesville, DPI, p. 85.
17	1450	<i>Agrotis subterranea</i> (Fabr.) ♂, Alachua Co., DPI, p. 85.
18	1435	<i>Agrotis ypsilon</i> Rott. ♀, Quincy, DPI, p. 85.
19	1481	<i>Anicla infecta</i> (Ochs.) ♀, Cassadaga, SVF, p. 86.
20	1496	<i>Peridroma margaritosa</i> (Haw.) ♀, Escambia Co., SMH, p. 86.
21	1561	<i>Anomogyna elimata</i> Gn. ♂, Escambia Co., CNC, p. 87.
22	1647	<i>Trichoclea florida</i> (Sm.) ♀, Key Largo, SVF, p. 87.
23	1657	<i>Trichoclea vindemialis</i> (Gn.) ♀, Cassadaga, SVF, p. 87.
24	1683	<i>Polia legitima</i> (Grt.) ♂, Alachua Co., DPI, p. 87.
25	1223	<i>Harrisimemna trisignata</i> (Wlk.) ♂, Cassadaga, SVF, p. 84.
26	1442	<i>Feltia ducens</i> Wlk. ♀, Colorado, STES, p. 85.
27	1804	<i>Anepia capsularis</i> (Gn.) ♀, Quincy, CPK, p. 88.

PLATE XI

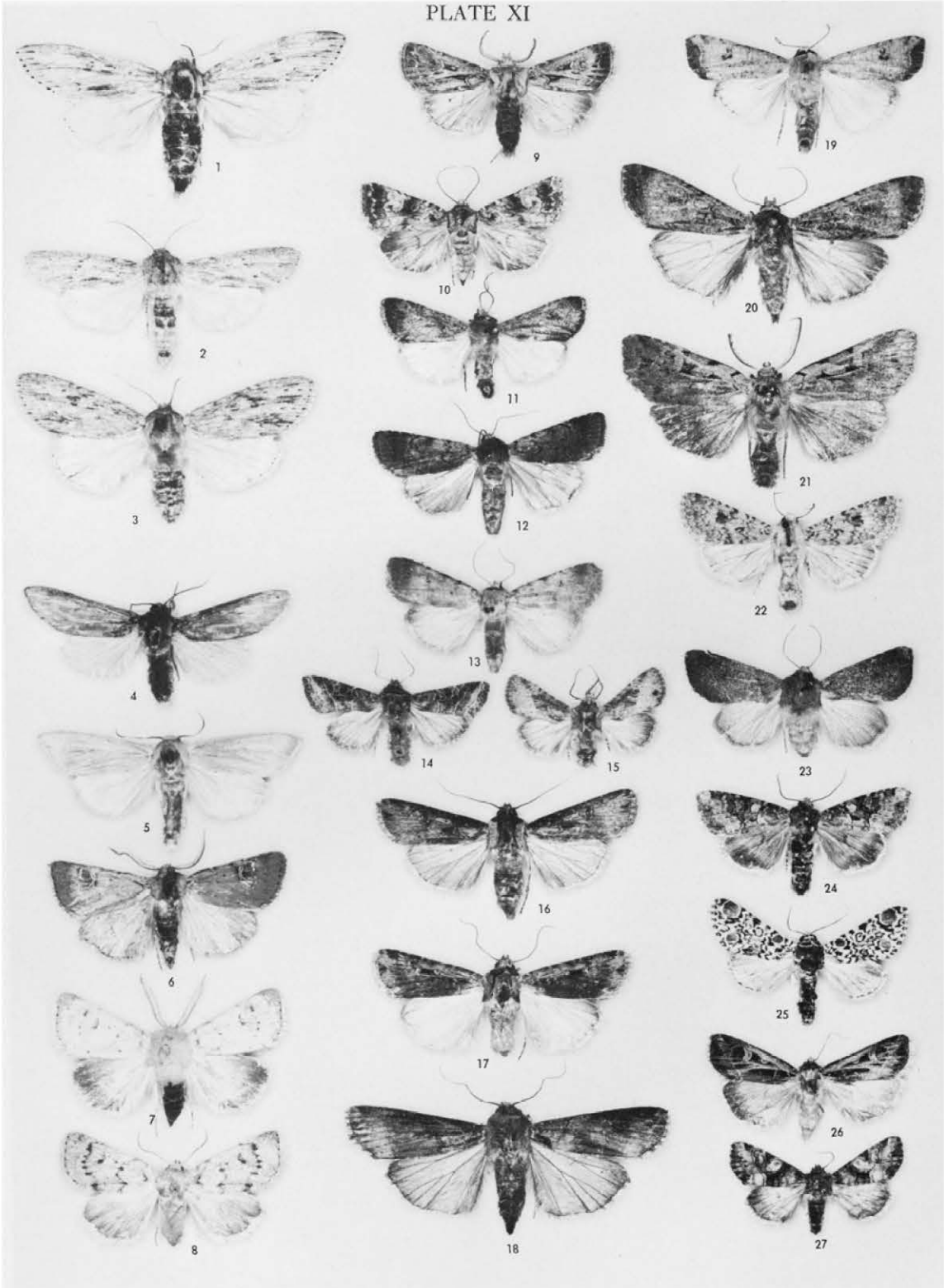


PLATE XII

(All figures natural size.)

Fig.	McDun- nough No.	
1	1821	<i>Tricholita signata semitropicae</i> (B. & B.) ♀, Siesta Key, STES, p. 88.
2	1827	<i>Tricholita lutina</i> (Sm.) ♂, Homestead, DPI, p. 88.
3	1855	<i>Orthodes oviduca</i> (Gn.) ♂, Cassadaga, SVF, p. 89.
4	1871	<i>Orthodes crenulata</i> (Butl.) ♂, Escambia Co., SMH, p. 89.
5	1901	<i>Morrisonia mucens sectilis</i> (Gn.) ♀, Gainesville, DPI, p. 89.
6	1904	<i>Morrisonia confusa</i> (Hbn.) ♀, Gainesville, DPI, p. 89.
7	1917	<i>Xylomyges alternans</i> (Wlk.) ♂, Escambia Co., SMH, p. 89.
8	1966	<i>Leucania extincta</i> Gn. ♀, Cassadaga, SVF, p. 90.
9	1972	<i>Leucania pilipalpis</i> (Grt.) ♂, St. Petersburg, DPI, p. 90.
10	1979	<i>Leucania scirpicola</i> Gn. ♀, Siesta Key, DPI, p. 90.
11	1989	<i>Leucania juncicola</i> Gn. ♂, Oneco, DPI, p. 91.
12	1991	<i>Leucania latiuscula</i> H.-S. ♀, Sanford, STES, p. 91.
13	1994	<i>Pseudaletia unipuncta</i> (Haw.) ♂, Gainesville, DPI, p. 91.
14	2036	<i>Cucullia alfarata</i> Stkr. ♂, North Carolina, USNM, p. 92.
15	2063	<i>Lepipolys perscripta</i> Gn. ♂, Escambia Co., SMH, p. 92.
16	2185	<i>Feralia major</i> Sm. ♂, Escambia Co., CPK, p. 92.
17	2190	<i>Psaphida resumens</i> Wlk. ♂, Escambia Co., SMH, p. 92.
18	2196	<i>Eutolype rolandi</i> Grt. ♂, Alachua Co., DPI, p. 92.
19	2290	<i>Chaetaglaea tremula</i> (Harv.) ♀, Alachua Co., DPI, p. 93.
20	2290	<i>Chaetaglaea tremula</i> (Harv.) ♂, aberrant, Escambia Co., SMH, p. 93.
21	2297	<i>Metaxaglaea viatica</i> (Grt.) ♀, Quincy, CPK, p. 93.
22	2308	<i>Xystopeplus rufago</i> (Hbn.) ♂, Cassadaga, SVF, p. 93.
23	2538	<i>Callopietria floridensis</i> (Gn.) ♀, Cassadaga, SVF, p. 94.
24	2539	<i>Haploolophus mollissima</i> (Gn.) ♀, New York, SVF, p. 94.
25	2543	<i>Fagitana littera</i> (Gn.) ♂, New York, SVF, p. 95.
26	2545	<i>Phuphena obliqua</i> (Sm.) ♂, Cassadaga, SVF, p. 95.
27	2548	<i>Phosphila turbulenta</i> Hbn. ♂, Cassadaga, SVF, p. 95.
28	2549	<i>Phosphila miselioides</i> (Gn.) ♀, Escambia Co., SMH, p. 95.
29	2554	<i>Chytonix palliatricula</i> (Gn.) ♀, Escambia Co., SMH, p. 96.
30	2554	<i>Chytonix palliatricula iaspis</i> (Gn.) ♂, New York, SVF, p. 96.
31	2555	<i>Chytonix sensilis</i> Grt. ♀, West Pensacola, VFC, p. 96.
32	2574	<i>Polygrammate hebraeicum</i> Hbn. ♂, Gainesville, DPI, p. 96.
33	2576	<i>Leuconycta diptheroides</i> (Gn.) ♂, New York, SVF, p. 96.
34	2578	<i>Agriopodes fallax</i> (H.-S.) ♀, Alachua Co., DPI, p. 96.
35	2587	<i>Dipterygia scabriuscula</i> (L.) ♀, New York, SVF, p. 96.
36	2588	<i>Dipterygia patina</i> (Harv.) ♂, Escambia Co., SMH, p. 97.
37	2589	<i>Nedra ramosula</i> (Gn.) ♀, Quincy, CPK, p. 97.

PLATE XII

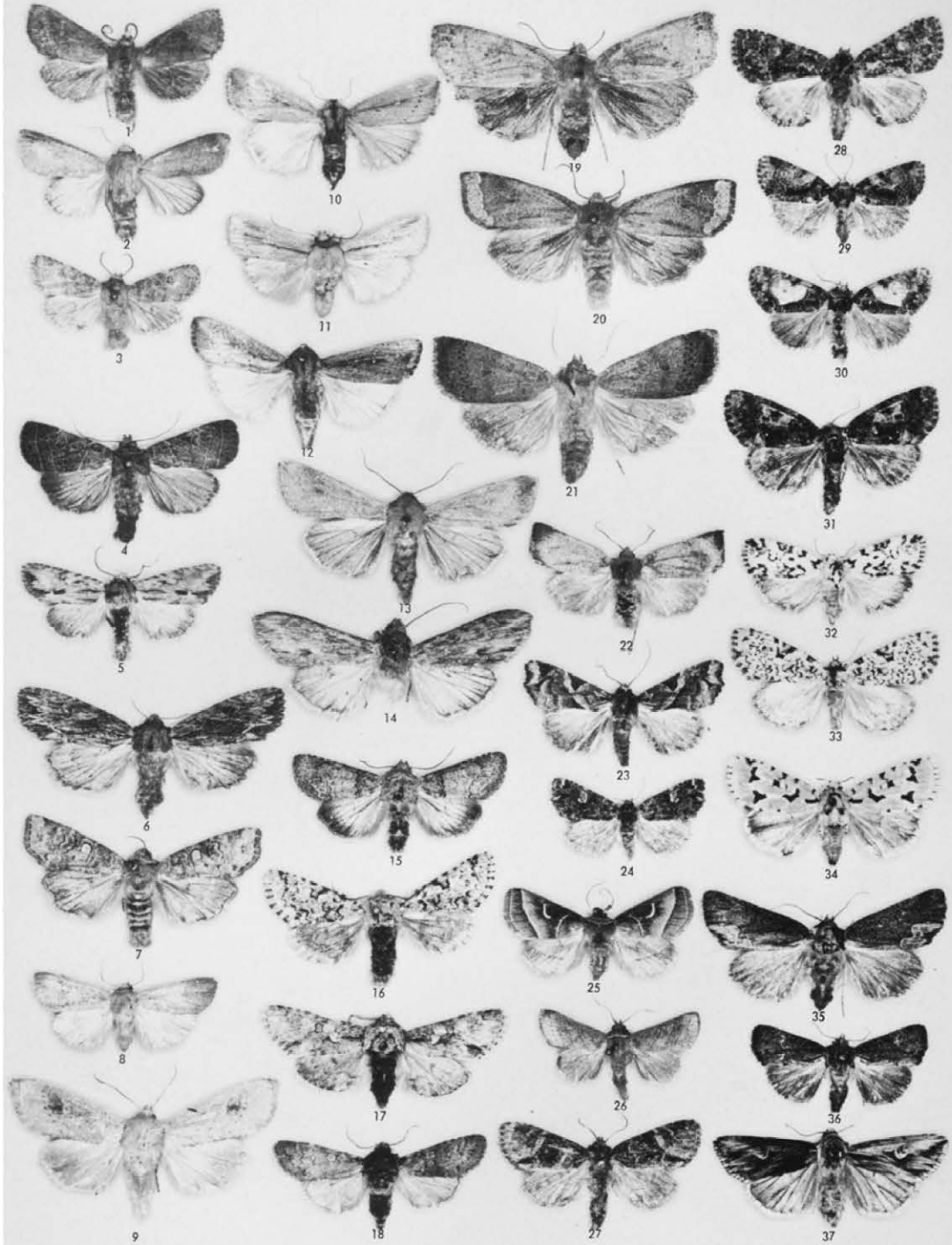


PLATE XIII

(All figures 1.08 times natural size.)

Fig.	McDun- nough No.	
1	2611	<i>Condica cupentia</i> (Cram.) ♂, Siesta Key, CPK, p. 97.
2	2611,1	<i>Condica confederata</i> (Grt.) ♂, Siesta Key, CPK, p. 97.
3	2613	<i>Platysenta videns</i> (Gn.) ♀, Quincy, CPK, p. 97.
4	2610	<i>Perigea xanthioides</i> Gn. ♀, Virginia, SVF, p. 97.
5	2617	<i>Platysenta apameoides</i> (Gn.) ♂, Escambia Co., SMH, p. 98.
6	2620	<i>Platysenta vecors</i> (Gn.) ♂, Escambia Co., AMNH, p. 98.
7	2622	<i>Platysenta concisa</i> (Wlk.) ♂, Chokoloskee, USNM, p. 98.
8	2625	<i>Platysenta albiger</i> a (Gn.) ♀, Key Largo, SVF, p. 98.
9	2642	<i>Elaphria fuscimacula</i> (Grt.) ♂, Escambia Co., SMH, p. 99.
10	2643	<i>Elaphria nucicolora</i> (Gn.) ♂, Homestead, DPI, p. 99.
11	2644	<i>Elaphria agrotina</i> (Gn.) ♂, Homestead, CPK, p. 99.
12	2645	<i>Elaphria versicolor</i> (Grt.) ♂, Escambia Co., SMH, p. 99.
13	2646	<i>Elaphria chalcedonia</i> (Hbn.) ♂, Siesta Key, DPI, p. 99.
14	2647	<i>Elaphria festivoidea</i> (Gn.) ♀, Escambia Co., SMH, p. 99.
15	2635	<i>Neperigea tapeta</i> (Sm.) ♂, Weekiwachee Springs, DPI, p. 98.
16	2648	<i>Elaphria exesa</i> (Gn.) ♂, Alachua Co., DPI, p. 99.
17	2650	<i>Elaphria grata</i> Hbn. ♂, Escambia Co., USNM, p. 99.
18	2651	<i>Anorthodes tarda</i> (Gn.) ♂, Escambia Co., SMH, p. 100.
19	2665	<i>Gonodes liquida</i> (Moesch.) ♂, Siesta Key, DPI, p. 100.
20	2667	<i>Micrathetis triplex</i> (Wlk.) ♂, Windley Key, STES, p. 100.
21	2682	<i>Laphygma frugiperda</i> (A. & S.) ♂, Escambia Co., SMH, p. 101.
22	2682	<i>Laphygma frugiperda</i> (A. & S.) ♀, Bradenton, UFA, p. 101.
23	2684	<i>Magusa orbifera</i> (Wlk.) ♂, Key Largo, SVF, p. 101.
24	2688	<i>Aeternia subusta</i> Hbn. ♀, Escambia Co., SMH, p. 101.
25	2711	<i>Achatodes zae</i> Harr. ♂, New York, SVF, p. 103.
26	2719	<i>Derrima stellata</i> Wlk. ♂, Cassadaga, SVF, p. 103.
27	2773	<i>Ogdoconta cinereola</i> (Gn.) ♀, Homestead, CPK, p. 104.
28	2832	<i>Stiriodes obtusa</i> (H.-S.) ♂, Escambia Co., SMH, p. 105.
29	2716	<i>Rhodoecia aurantiago</i> (Gn.) ♂, Escambia Co., SMH, p. 103.
30	2858	<i>Euthisanotia grata</i> (Fabr.) ♂, Gainesville, DPI, p. 105.
31	2860	<i>Euthisanotia unio</i> Hbn. ♂, North Carolina, DPI, p. 105.
32	2864	<i>Psychomorpha epimenis</i> (Dru.) ♂, Virginia, SVF, p. 105.
33	2916	<i>Melaporphyria immortua</i> Grt. ♀, Connecticut, STES, p. 106.
34	2925	<i>Eupanychis spinosae</i> (Gn.) ♀, Massachusetts, STES, p. 106.
35	2929	<i>Heliothis paradoxa</i> (Grt.) ♀, Cassadaga, SVF, p. 107.
36	2932	<i>Heliothis zea</i> (Boddie) ♀, Escambia Co., SMH, p. 107.
37	2933	<i>Heliothis virescens</i> (Fabr.) ♂, Texas, USNM, p. 107.
38	2933,1	<i>Heliothis subflexa</i> (Gn.) ♂, Illinois, USNM, p. 107.
39	2965	<i>Schinia imperspicua</i> (Stkr.) ♀, Escambia Co., SMH, p. 108.
40	2966	<i>Schinia trifascia</i> Hbn. ♀, Cassadaga, SVF, p. 108.
41	2990	<i>Schinia nundina</i> (Dru.) ♀, Escambia Co., STES, p. 108.
42	3005	<i>Schinia saturata</i> (Grt.) ♀, Cassadaga, SVF, p. 108.
43	3007	<i>Schinia marginata</i> (Haw.) ♀, Cassadaga, SVF, p. 109.
44	3018	<i>Schinia arcigera</i> (Gn.) ♂, New York, SVF, p. 109.
45	3030	<i>Schinia septentrionalis</i> (Wlk.) ♂, New York, SVF, p. 109.
46	3031	<i>Schinia sordida</i> Sm. ♂, Quincy, CPK, p. 109.

PLATE XIII

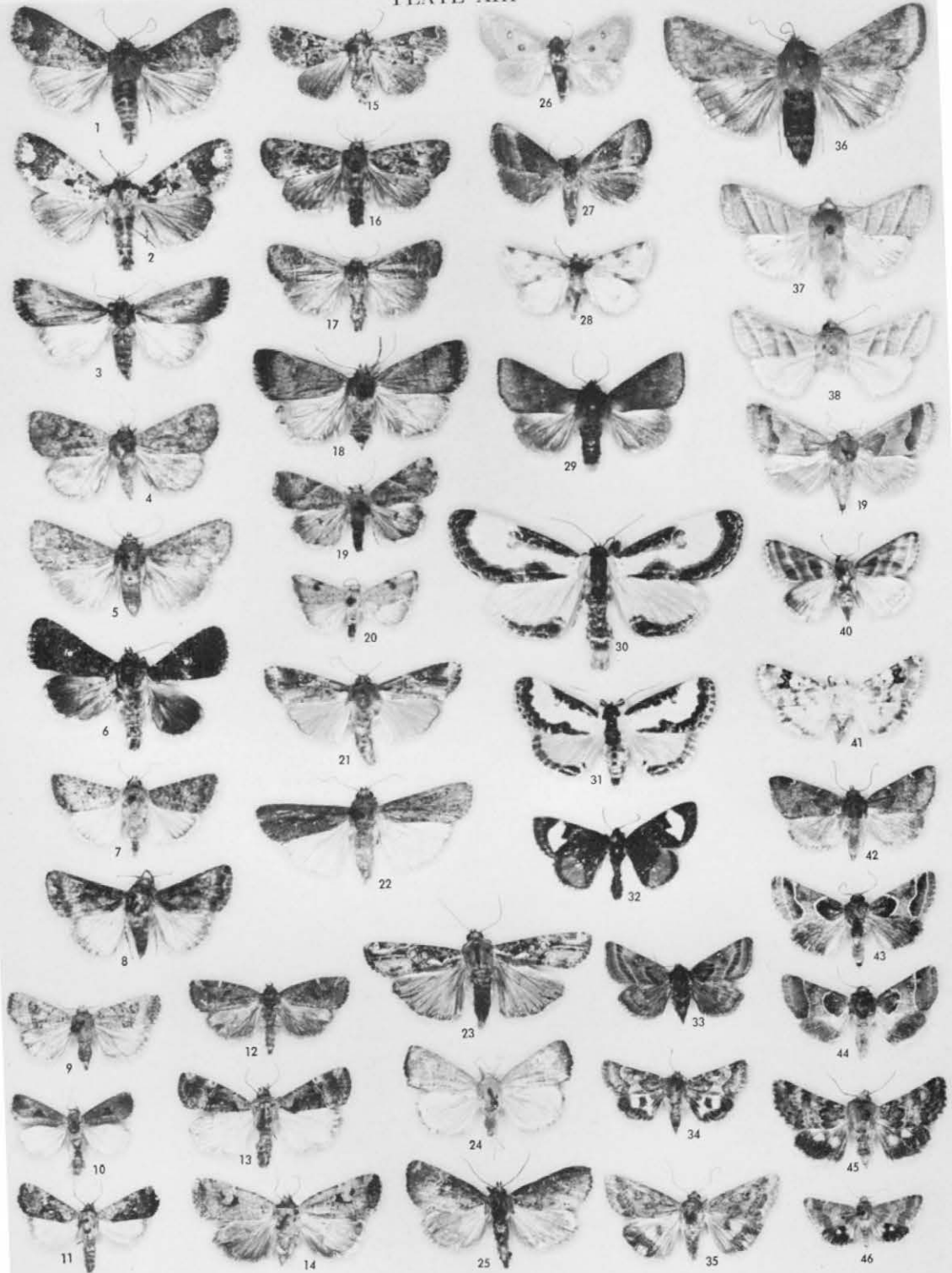


PLATE XIV

(All figures 1.09 times natural size.)

Fig.	McDun- nough No.	
1	2867	<i>Meropleon cosmion</i> Dyar ♀, Cassadaga, SVF, p. 106.
2	3061	<i>Eublemma minima</i> (Gn.) ♀, Cassadaga, SVF, p. 110.
3	3065	<i>Acidaliodes eoides</i> B. & McD. ♀, Siesta Key, UFA, p. 111.
4	3071	<i>Phobolosia brimleyana</i> Dyar ♂, Siesta Key, CPK, p. 111.
5	3062	<i>Eublemma cinnamomea</i> (H.-S.) ♀, Cassadaga, SVF, p. 110.
6	3063	<i>Eublemma obliquialis</i> (Fabr.) ♀, Bradenton, STES, p. 110.
7	3087	<i>Ozarba nebula</i> B. & McD. ♀, Cassadaga, SVF, p. 112.
8	3074	<i>Oruza albocostaliata</i> (Pack.) ♀, Cassadaga, SVF, p. 111.
9	3098	<i>Cryphia nana</i> Hbn. ♀, Cassadaga, SVF, p. 112.
10	3109	<i>Exyra semicrocea</i> (Gn.) ♂, Trenton, UFES, p. 113.
11	3117	<i>Lithacodia bellicula</i> Hbn. ♀, Childs, PSU, p. 113.
12	3126	<i>Neoerastria apicosa</i> (Haw.) ♂, Gainesville, DPI, p. 114.
13	3127	<i>Neoerastria caduca</i> (Grt.) ♂, Massachusetts, SMH, p. 114.
14	3131	<i>Chamyris cerintha</i> (Treit.) ♂, New York, SVF, p. 114.
15	3135	<i>Amyna bullula</i> (Grt.) ♂, St. Petersburg, USNM, p. 114.
16	3136	<i>Amyna octo</i> (Gn.) ♀, Alachua Co., DPI, p. 114.
17	3176	<i>Tarachidia candefacta</i> (Hbn.) ♀, Cassadaga, SVF, p. 116.
18	3185	<i>Tarachidia semiflava</i> (Gn.) ♀, Cassadaga, SVF, p. 116.
19	3203	<i>Acontia aprica</i> (Hbn.) ♂, Gainesville, DPI, p. 116.
20	3210	<i>Acontia terminimacula</i> (Grt.) ♂, Cassadaga, SVF, p. 116.
21	3220	<i>Eutelia pulcherrima</i> (Grt.) ♂, New York, SVF, p. 116.
22	3222	<i>Marathyssa basalis</i> Wlk. ♂, Siesta Key, CPK, p. 116.
23	3223	<i>Marathyssa inficita</i> (Wlk.) ♂, Escambia Co., SMH, p. 117.
24	3225	<i>Paectes oculatrix</i> (Gn.) ♂, Gainesville, DPI, p. 117.
25	3227	<i>Paectes burserae</i> (Dyar) ♂, Siesta Key, DPI, p. 117.
26	3230	<i>Paectes abrostoloides</i> (Gn.) ♂, Cassadaga, SVF, p. 117.
27	3233	<i>Paectes nubifera</i> Hamp. ♂, Cassadaga, SVF, p. 118.
28	3235	<i>Sarrothrips frigidana</i> (Wlk.) ♀, Escambia Co., CNC, p. 118.
29	3236	<i>Casandria abseuzalis</i> (Wlk.) ♀, Siesta Key, CPK, p. 118.
30	3237	<i>Casandria filifera</i> (Wlk.) ♂, Key Largo, DPI, p. 118.
31	3270	<i>Argyrogramma basigera</i> (Wlk.) ♂, Pennsylvania, USNM, p. 120.
32	3252	<i>Anagrapha falcifera</i> (Kby.) ♂, Georgia, DPI, p. 119.
33	3267	<i>Autoplusia egena</i> (Gn.) ♂, Belle Glade, DPI, p. 119.
34	3267,1	[<i>Autoplusia</i>] <i>illustrata</i> (Gn.) ♂, Bradenton, DPI, p. 119.
35	3268	<i>Argyrogramma verruca</i> (Fabr.) ♀, Homestead, CPK, p. 119.
36	3279	<i>Autographa biloba</i> (Steph.) ♀, New York, SVF, p. 120.
37	3269	<i>Trichoplusia ni brassicae</i> (Riley) ♂, Georgia, DPI, p. 119.
38	3277	<i>Trichoplusia oxygramma</i> (Geyer) ♂, Homestead, STES, p. 119.
39	3280	<i>Pseudoplusia includens</i> (Wlk.) ♀, Escambia Co., SMH, p. 120.
40	3289	<i>Rachiplusia ou</i> (Gn.) ♂, Escambia Co., SMH, p. 120.
41	3310	<i>Mouralia tinctoides</i> (Gn.) ♀, Cassadaga, SVF, p. 120.
42	3386	<i>Catocala gracilis</i> Edw. ♀, New York, STES, p. 122.
43	3387	<i>Catocala andromedae</i> (Gn.) ♀, New Jersey, STES, p. 122.

PLATE XIV

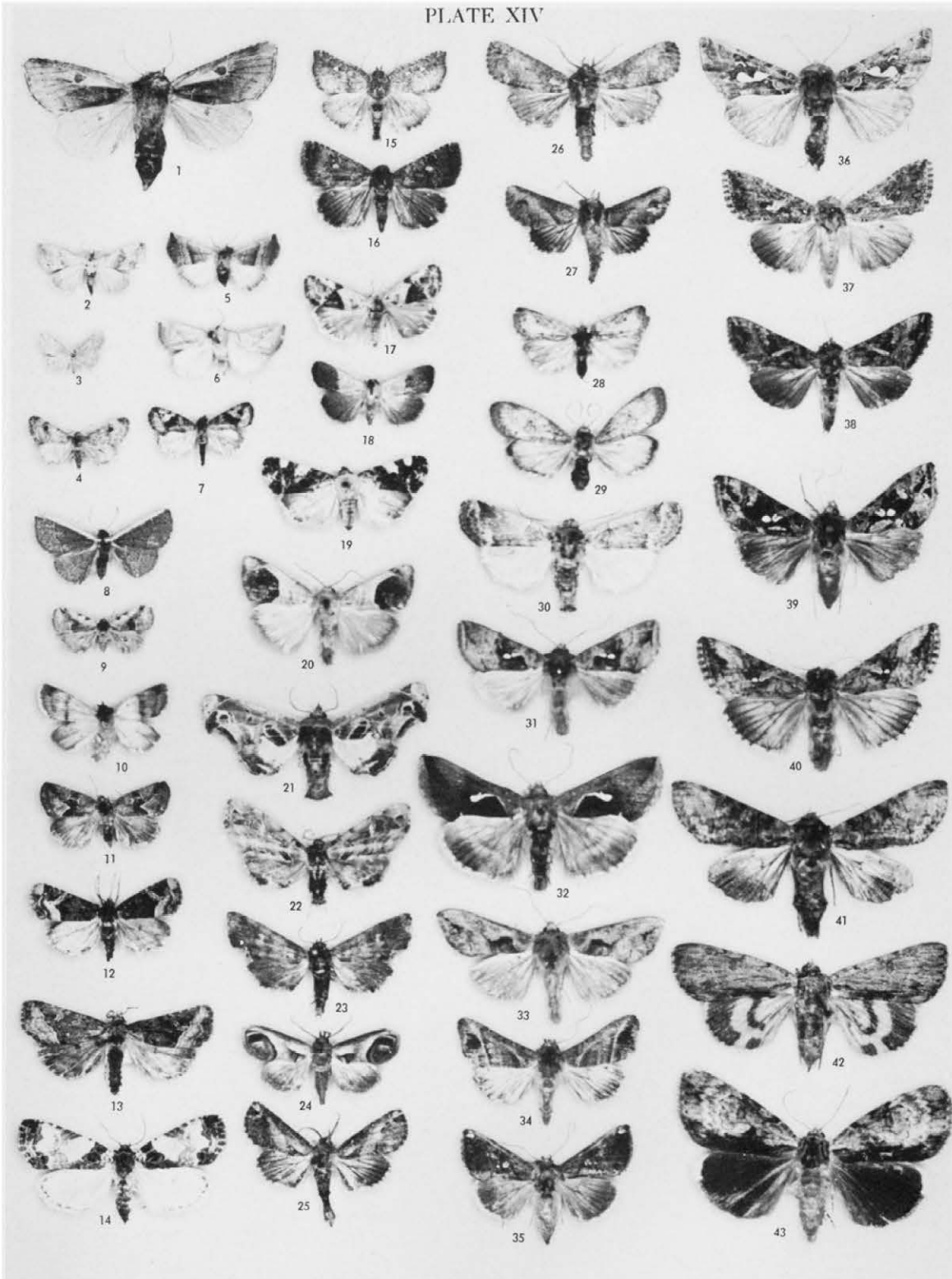


PLATE XV

(All figures natural size.)

Fig.	McDun- nough No.	
1	3395	<i>Catocala ultronia celia</i> Hy. Edw. ♀, Cassadaga, SVF, p. 123.
2	3396	<i>Catocala crataegi</i> Saund. ♂, New York, STES, p. 123.
3	3397	<i>Catocala mira</i> Grt. ♂, STES, p. 123.
4	3407	<i>Catocala similis</i> Edw. ♂, Cassadaga, SVF, p. 123.
5	3410	<i>Catocala micronympha</i> Gn. ♂, Cassadaga, SVF, p. 123.
6	3410	<i>Catocala micronympha gisela</i> Meyer ♀, Siesta Key, STES, p. 123.
7	3411	<i>Catocala connubialis cordelia</i> Hy. Edw. ♂, Escambia Co., SMH, p. 123.
8	3412	<i>Catocala amica</i> (Hbn.) ♂, Cassadaga, SVF, p. 124.
9	3415	<i>Allotria elonympha</i> (Hbn.) ♀, Cassadaga, SVF, p. 124.
10	3421	<i>Parallelia smithi</i> (Gn.) ♀, Escambia Co., AMNH, p. 124.
11	3420	<i>Parallelia similis apicalis</i> Gn. ♀, Cassadaga, SVF, p. 124.
12	3441	<i>Ptichodis herbarum</i> (Gn.) ♂, Escambia Co., SMH, p. 125.
13	3439	<i>Ptichodis vinculum</i> (Gn.) ♀, Escambia Co., SMH, p. 125.
14	3449	<i>Argyrostromis pacalis</i> (Wlk.) ♀, DeBary, CPK, p. 126.
15	3447	<i>Celiptera frustulum</i> Gn. ♂, New York, SVF, p. 125.
16	3457	<i>Argyrostromis quadrifilaris</i> (Hbn.) ♂, Cassadaga, SVF, p. 126.
17	3458	<i>Argyrostromis anilis</i> (Dru.) ♂, Escambia Co., SMH, p. 126.
18	3461	<i>Doryodes spadaria</i> Gn. ♀, Cassadaga, SVF, p. 127.
19	3460	<i>Doryodes bistrialis</i> (Geyer) ♂, Siesta Key, UFA, p. 126.
20	3460	<i>Doryodes bistrialis</i> (Geyer) ♀, Cassadaga, SVF, p. 126.
21	3463	<i>Cutina albopunctella</i> Wlk. ♂, Cassadaga, SVF, p. 127.
22	3464	<i>Cutina distincta</i> (Grt.) ♂, Cassadaga, SVF, p. 127.
23	3466	<i>Safia amella</i> (Gn.) ♀, Florida, USNM, p. 127.
24	3468	<i>Zale exhausta</i> (Gn.) ♂, Quincy, CPK, p. 127.

PLATE XV



PLATE XVI

(All figures 0.92 times natural size.)

Fig.	McDun- nough No.	
1	3470	<i>Zale fictilis</i> (Gn.) ♂, Oneco, DPI, p. 128.
2	3474	<i>Zale lunata</i> (Dru.) ♀, Cassadaga, SVF, p. 128.
3	3477	<i>Zale declarans</i> (Wlk.) ♂, Siesta Key, CPK, p. 128.
4	3477	<i>Zale declarans</i> (Wlk.) ♀, Childs, ABS, p. 128.
5	3480	<i>Zale aeruginosa</i> (Gn.) ♂, Escambia Co., AMNH, p. 128.
6	3481	<i>Zale undularis</i> (Dru.) ♂, Massachusetts, STES, p. 128.
7	3482	<i>Zale coracias</i> (Gn.) ♂, aberrant, Cassadaga, SVF, p. 128.
8	3485	<i>Zale lunifera</i> Hbn. ♀, Escambia Co., DPI, p. 129.
9	3487	<i>Zale obliqua</i> Gn. ♀, Marianna, DPI, p. 129.
10	3491	<i>Zale helata</i> (Sm.) ♀, Escambia Co., SMH, p. 129.
11	3493	<i>Zale metata</i> (Sm.) ♀, Escambia Co., SMH, p. 129.
12	3478	<i>Zale galbanata</i> (Morr.) ♀, Escambia Co., VFG, p. 128.
13	3501	<i>Zale horrida</i> Hbn. ♀, New York, SVF, p. 129.
14	3501	<i>Zale horrida</i> Hbn. ♀, Gainesville, STES, p. 129.
15	3502	<i>Coxina cinctipalpis</i> (Sm.) ♂, Siesta Key, CPK, p. 130.
16	3513	<i>Coenipeta bibitrix</i> (Hbn.) ♀, Alachua Co., CPK, p. 130.
17	3514	<i>Selenis monotropa</i> Grt. ♀, Homestead, STES, p. 130.
18	3522	<i>Tyryssa multilinea</i> B. & McD. ♀, DPI, p. 130.
19	3527	<i>Bendis detrahens</i> (Wlk.) ♀, Quincy, CPK, p. 131.
20	3529	<i>Bendis hinna</i> (Geyer) ♂, Gainesville, DPI, p. 131.
21	3532	<i>Epidromia delinquens</i> (Wlk.) ♀, Orlando, DPI, p. 131.
22	3533	<i>Massala obvertens</i> (Wlk.) ♀, Siesta Key, DPI, p. 132.
23	3534	<i>Panopoda rufmargo</i> (Hbn.) ♂, Escambia Co., SMH, p. 132.
24	3535	<i>Panopoda carneicosta</i> Gn. ♂, Illinois, USNM, p. 132.
25	3536	<i>Siavana repanda</i> Wlk. ♀, Alachua Co., DPI, p. 132.
26	3539	<i>Cissua spadix</i> (Cram.) ♂, Escambia Co., SMH, p. 132.
27	3545	<i>Phoberia atomaris</i> Hbn. ♀, Cassadaga, SVF, p. 132.

PLATE XVI

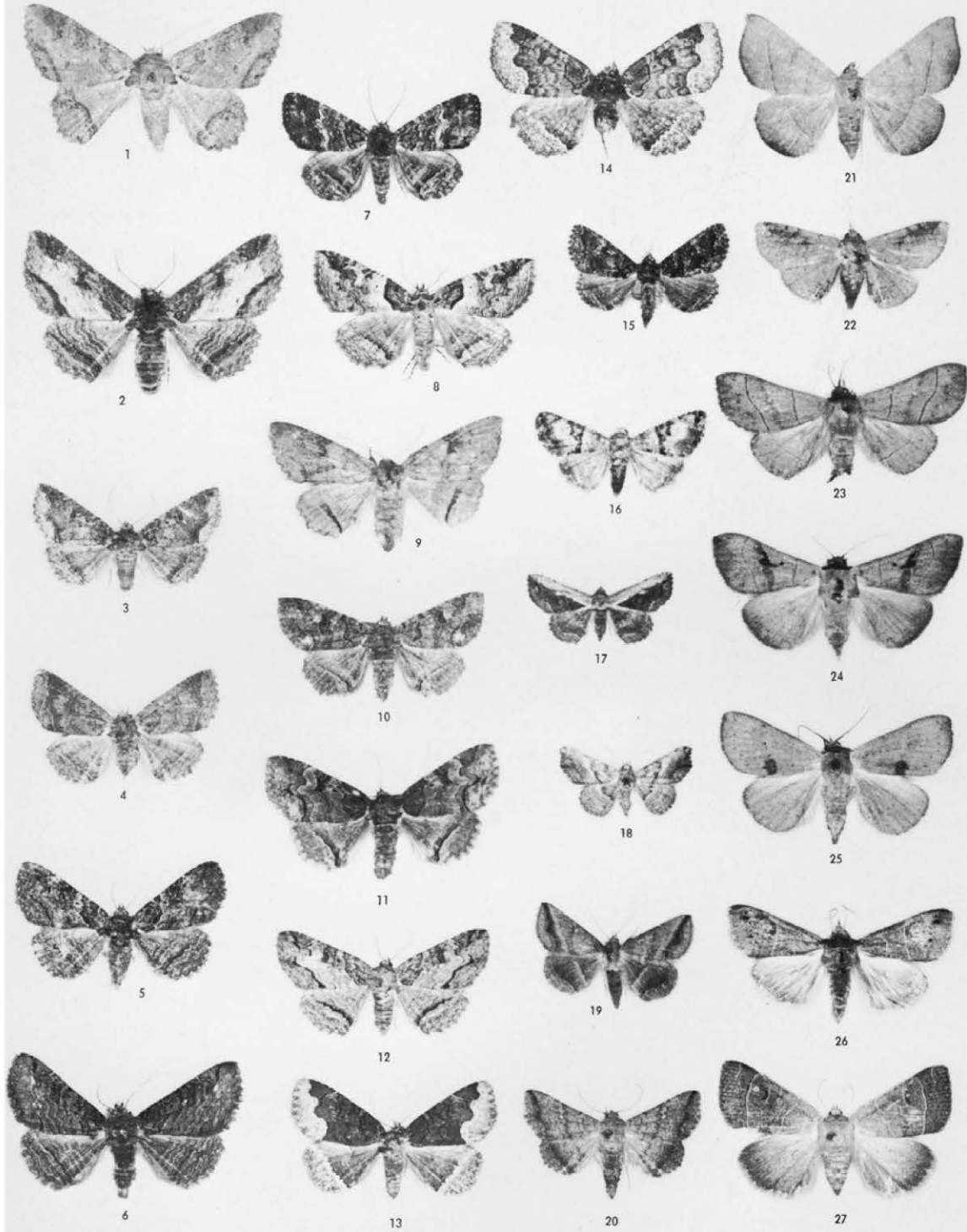


PLATE XVII

(All figures natural size.)

Fig.	McDun- nough No.	
1	3546,1	<i>Melipotis perpendicularis</i> (Gn.) ♂, West Pensacola, VFC, p. 132.
2	3549,1	<i>Melipotis cellaris</i> (Gn.) ♂, Texas, DPI, p. 133.
3	3549,2	<i>Melipotis januaris</i> (Gn.) ♂, Homestead, DPI, p. 133.
4	3549,2	<i>Melipotis januaris</i> (Gn.) ♀, Siesta Key, CPK, p. 133.
5	3547	<i>Melipotis fasciolaris</i> (Hbn.) ♂, Key Largo, DPI, p. 133.
6	3547	<i>Melipotis fasciolaris</i> (Hbn.) ♀, Key Largo, DPI, p. 133.
7	3551	<i>Melipotis jucunda</i> Hbn. ♂, Gainesville, DPI, p. 133.
8	3551,1	<i>Melipotis prolata</i> (Wlk.) ♀, Siesta Key, CPK, p. 133.
9	3553	<i>Melipotis acontioides</i> (Gn.) ♂, Key West, DPI, p. 133.
10	3549	<i>Melipotis indomita</i> (Wlk.) ♂, Texas, DPI, p. 133.
11	3563	<i>Drasteria graphica</i> Hbn. ♂, Cassadaga, SVF, p. 134.
12	3563	<i>Drasteria graphica</i> Hbn. ♀, Cassadaga, SVF, p. 134.
13	3590	<i>Anticarsia gemmatilis</i> Hbn. ♂, Escambia Co., SMH, p. 134.
14	3590	<i>Anticarsia gemmatilis</i> Hbn. ♀, Quincy, CPK, p. 134.
15	3590	<i>Anticarsia gemmatilis</i> Hbn. ♀, Quincy, CPK, p. 134.
16	3550,1	<i>Melipotis contorta</i> (Gn.) ♂, Siesta Key, UFA, p. 133.
17	3584	<i>Boryzops purissima</i> (Dyar) ♀, Tavernier, DPI, p. 134.
18	3565	<i>Synedoida grandirena</i> (Haw.) ♂, Maine, UFA, p. 134.
19	3591	<i>Anticarsia repugnalis</i> (Hbn.) ♀, Siesta Key, USNM, p. 134.
20	3593	<i>Euthermisa absumens</i> Wlk. ♂, Gainesville, DPI, p. 135.
21	3593	<i>Euthermisa absumens</i> Wlk. ♂, Cassadaga, SVF, p. 135.
22	3593	<i>Euthermisa absumens</i> Wlk. ♀, Cassadaga, SVF, p. 135.
23	3593	<i>Euthermisa absumens</i> Wlk. ♀, Cassadaga, SVF, p. 135.
24	3598	<i>Litoprosopus futilis</i> (G. & R.) ♀, Cassadaga, SVF, p. 135.
25	3602	<i>Gonodonta unica</i> Neum. ♂, Sebastian River, DPI, p. 136.
26	3604	<i>Gonodonta nutrix</i> (Cram.) ♀, Homestead, CPK, p. 136.

PLATE XVII

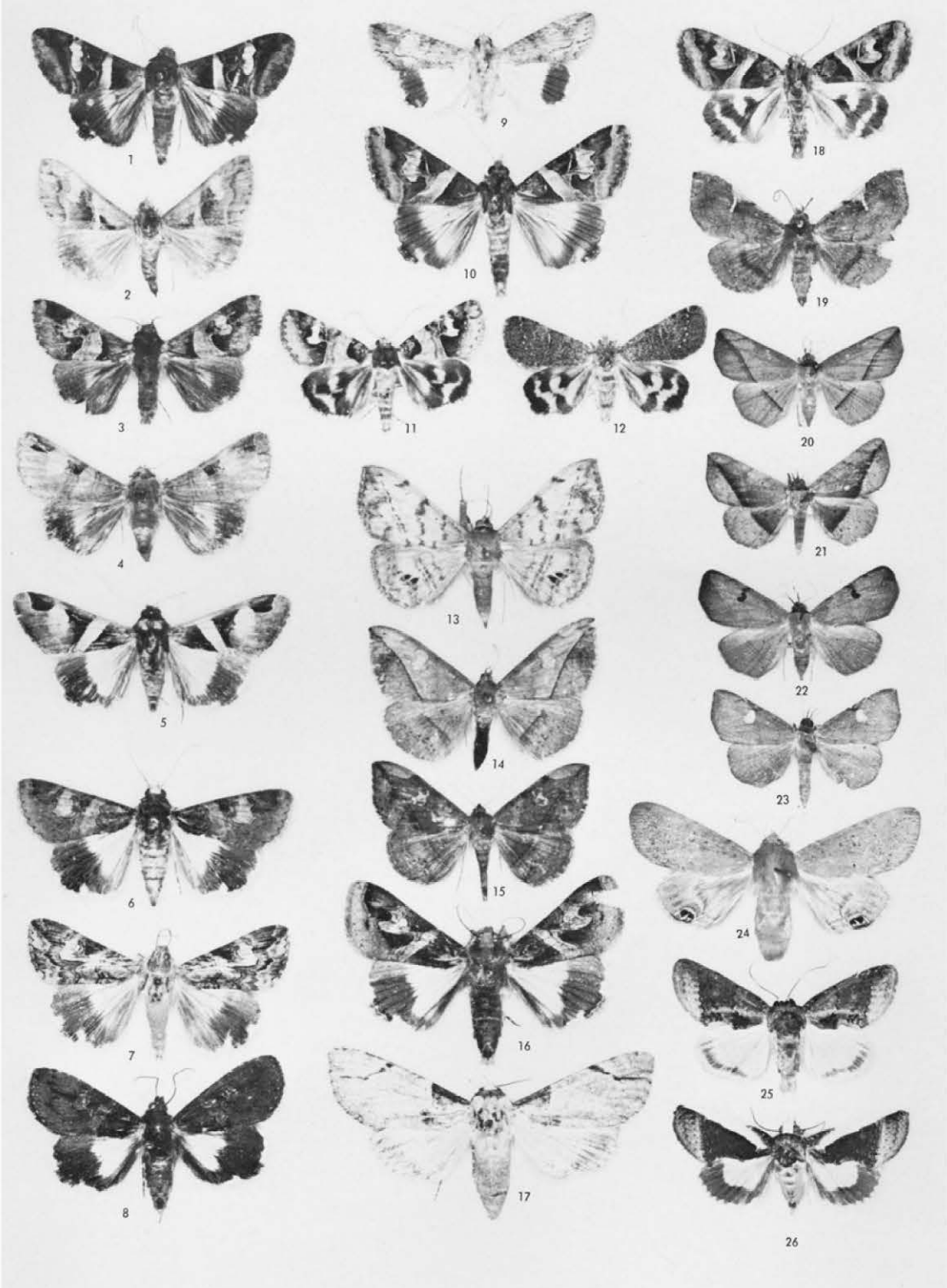


PLATE XVIII

(All figures 1.02 times natural size.)

Fig.	McDun- nough No.	
1	3610	<i>Hypsoropha monilis</i> (Fabr.) ♂, Micanopy, DPI, p. 137.
2	3611	<i>Hypsoropha hormos</i> Hbn. ♂, Escambia Co., SMH, p. 137.
3	3613,1	<i>Cecharismena abarusalis</i> (Wlk.) ♀, Homestead, STES, p. 137.
4	3614	<i>Hypocala andremona</i> (Cram.) ♂, Cassadaga, SVF, p. 137.
5	3616	<i>Alabama argillacea</i> (Hbn.) ♂, New Jersey, USNM, p. 137.
6	3618,1	<i>Anomis impasta</i> Gn. ♂, Cassadaga, SVF, p. 138.
7	3618,2	<i>Anomis illita</i> Gn. ♀, Siesta Key, CPK, p. 138.
8	3639	<i>Phyprosopus callitrichoides</i> Grt. ♂, Cassadaga, SVF, p. 139.
9	3623	<i>Scolecocampa liburna</i> (Geyer) ♀, Cassadaga, SVF, p. 138.
10	3632	<i>Gabara subnivosella bipuncta</i> (Morr.) ♀, Escambia Co., SMH, p. 139.
11	3648,1	<i>Glympis concors</i> (Hbn.) ♀, Oneco, STES, p. 140.
12	3650	<i>Pangrapta decoralis</i> Hbn. ♀, Gainesville, DPI, p. 140.
13	3651	<i>Metalectra discalis</i> (Grt.) ♀, Homestead, STES, p. 140.
14	3652	<i>Metalectra quadrisignata</i> (Wlk.) ♂, Escambia Co., SMH, p. 140.
15	3654	<i>Metalectra tantillus</i> (Grt.) ♂, Cassadaga, SVF, p. 140.
16	3658,1	<i>Mursa subrufa</i> Warr. ♀, Siesta Key, CPK, p. 141.
17	3659	<i>Stylectra ericata</i> (Cram.) ♂, Miami, DPI, p. 141.
18	3662	<i>Raparna melanospila</i> (Gn.) ♂, Cassadaga, SVF, p. 141.
19	3662	<i>Raparna melanospila</i> (Gn.) ♀, Belle Glade, EES, p. 141.
20	3668	<i>Hemeroplanis habitalis</i> (Wlk.) ♂, Siesta Key, CPK, p. 142.
21	3664	<i>Hemeroplanis scopulaepes</i> (Haw.) ♂, Key Largo, DPI, p. 142.
22	3664	<i>Hemeroplanis scopulaepes geometralis</i> (Grt.) ♂, Alachua Co., DPI, p. 142.
23	3685	<i>Legna perditalis</i> (Wlk.) ♀, Escambia Co., SMH, p. 142.
24	3686	<i>Hormoschista latipalpis</i> (Wlk.) ♂, Gainesville, DPI, p. 142.
25	3687	<i>Bomolocha manalis</i> (Wlk.) ♀, Cassadaga, SVF, p. 142.
26	3688	<i>Bomolocha baltimoralis</i> (Gn.) ♂, Cassadaga, SVF, p. 143.
27	3689	<i>Bomolocha bijugalis</i> (Wlk.) ♀, Cassadaga, SVF, p. 143.
28	3701	<i>Ophiuche minualis</i> (Gn.) ♀, Oneco, UFA, p. 143.
29	3727	<i>Hyphenopsis macula</i> (Druce) ♂, De Bary, DPI, p. 144.
30	3705	<i>Plathypena scabra</i> (Fabr.) ♂, Cassadaga, SVF, p. 144.
31	3683	<i>Ommatochila mundula</i> (Zell.) ♀, Tavernier, DPI, p. 142.
32	3731	<i>Salia interpuncta</i> (Grt.) ♂, Cassadaga, SVF, p. 145.
33	3732	<i>Rivula propinqualis</i> Gn. ♂, Escambia Co., SMH, p. 145.
34	3732,1	<i>Rivula pusilla</i> Moesch. ♂, Oneco, STES, p. 145.
35	3734	<i>Epizeuxis americalis</i> (Gn.) ♂, Cassadaga, SVF, p. 145.
36	3735	<i>Epizeuxis aemula</i> (Hbn.) ♀, Cassadaga, SVF, p. 145.
37	3737	<i>Epizeuxis rotundalis</i> (Wlk.) ♀, Siesta Key, UFA, p. 145.
38	3740	<i>Epizeuxis diminuendis</i> B. & McD. ♂, Weekiwachee Springs, DPI, p. 145.
39	3745	<i>Epizeuxis gopheri</i> Sm. ♂, Cassadaga, SVF, p. 146.
40	3746	<i>Epizeuxis lubricalis</i> Geyer ♂, Cassadaga, SVF, p. 146.
41	3758	<i>Zanclognatha obscuripennis</i> (Grt.) ♀, Cassadaga, SVF, p. 146.
42	3769	<i>Phalaenostola larentioides</i> Grt. ♂, New York, SVF, p. 147.
43	3776	<i>Hormisa orciferalis</i> Wlk. ♂, Cassadaga, SVF, p. 147.
44	3782	<i>Remia salusalis</i> (Wlk.) ♀, Oneco, DPI, p. 147.

PLATE XVIII

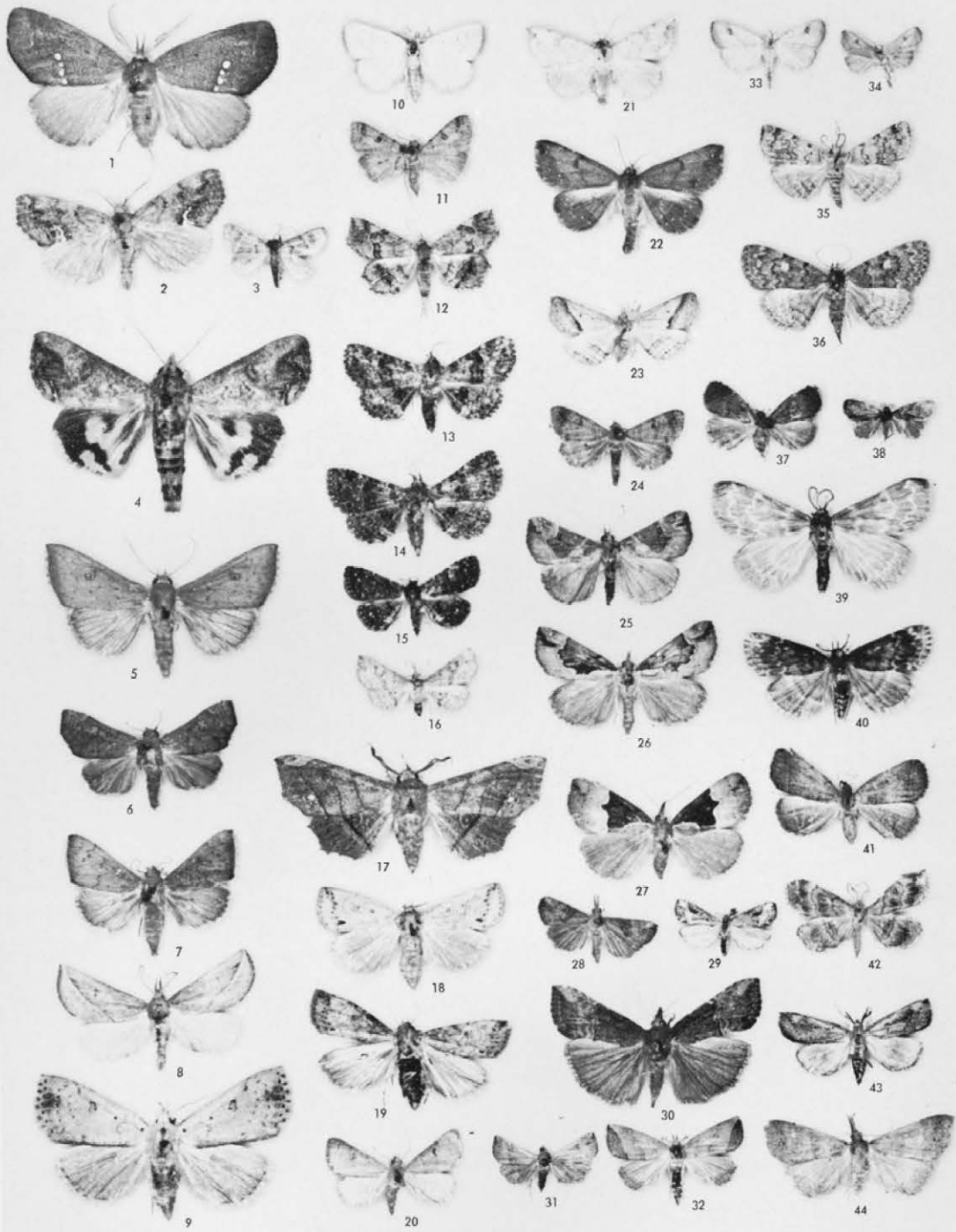


PLATE XIX

(All figures 1.1 times natural size.)

Fig. McDun-
nough
No.

1	3785	<i>Renia discoloralis</i> Gn. ♀, New York, SVF, p. 148.
2	3789	<i>Renia flavipunctalis</i> Geyer ♀, Sugarfoot, UFES, p. 148.
3	3792	<i>Renia fraternalis</i> Sm. ♀, Cassadaga, SVF, p. 148.
4	3796,2	<i>Carteris oculatalis</i> (Moesch.) ♂, Homestead, CPK, p. 148.
5	3799	<i>Bleptina inferior</i> Grt. ♂, Siesta Key, CPK, p. 149.
6	3797	<i>Bleptina caradrinalis</i> Gn. ♂, Siesta Key, UFA, p. 149.
7	3793	<i>Renia sobrialis</i> (Wlk.) ♀, Massachusetts, DPI, p. 148.
8	3796,1	<i>Phlyctaina irrigualis</i> Moesch. ♂, Jamaica, USNM, p. 148.
9	3799	<i>Bleptina inferior</i> Grt. ♀, Siesta Key, CPK, p. 149.
10	3802,1	<i>Bleptina hydrillalis</i> Gn. ♀, Siesta Key, CPK, p. 149.
11	3803	<i>Hypenula cacuminalis</i> (Wlk.) ♂, Cassadaga, SVF, p. 149.
12	3805	<i>Lascoria ambigualis</i> (Wlk.) ♂, Escambia Co., SMH, p. 149.
13	3805,1	<i>Lascoria alucitalis</i> (Gn.) ♂, Siesta Key, CPK, p. 149.
14	3805,2	<i>Lascoria orneodalis</i> (Gn.) ♂, Siesta Key, CPK, p. 150.
15	3805	<i>Lascoria ambigualis</i> (Wlk.) ♀, Escambia Co., SMH, p. 149.
16	3805,1	<i>Lascoria alucitalis</i> (Gn.) ♀, Siesta Key, CPK, p. 149.
17	3805,2	<i>Lascoria orneodalis</i> (Gn.) ♀, Siesta Key, CPK, p. 150.
18	3807	<i>Palthis angulalis</i> Hbn. ♀, Cassadaga, SVF, p. 150.
19	3808	<i>Palthis asopialis</i> (Gn.) ♂, Gainesville, DPI, p. 150.
20	3810	<i>Dercetis vitrea</i> Grt. ♀, Cassadaga, SVF, p. 150.
21	3811	<i>Dercetis pygmaea</i> Grt. ♂, Siesta Key, CPK, p. 150.
22	3825	<i>Ichthyura inclusa</i> Hbn. ♂, New York, SMH, p. 151.
23	3825	<i>Ichthyura inclusa jocosu</i> Hy. Edw. ♂, Childs, PSU, p. 151.
24	3832	<i>Datana major</i> G. & R. ♂, Escambia Co., SMH, p. 151.
25	3832	<i>Datana major</i> G. & R. ♀, Gainesville, DPI, p. 151.
26	3834	<i>Datana ranaeiceps</i> Guér.-Mén. ♀, Childs, ABS, p. 151.
27	3837	<i>Datana robusta</i> Stkr. ♂, Bradenton, DPI, p. 151.
28	3845	<i>Hyperaeschra georgica</i> (H.-S.) ♂, Weekiwachee Springs, STES, p. 152.
29	3845	<i>Hyperaeschra georgica</i> (H.-S.) ♀, Cassadaga, SVF, p. 152.
30	3854	<i>Lophodonta angulosa</i> (A. & S.) ♀, Oneco, DPI, p. 152.
31	3857	<i>Nadata gibbosa</i> (A. & S.) ♀, New York, SVF, p. 152.
32	3855	<i>Eunystalea indiana</i> (Grt.) ♂, Homestead, CPK, p. 152.
33	3859	<i>Symmerista albifrons</i> (A. & S.) ♀, Cassadaga, SVF, p. 153.
34	3866	<i>Hyarpax perophoroides</i> (Stkr.) ♂, Cassadaga, SVF, p. 153.

PLATE XIX

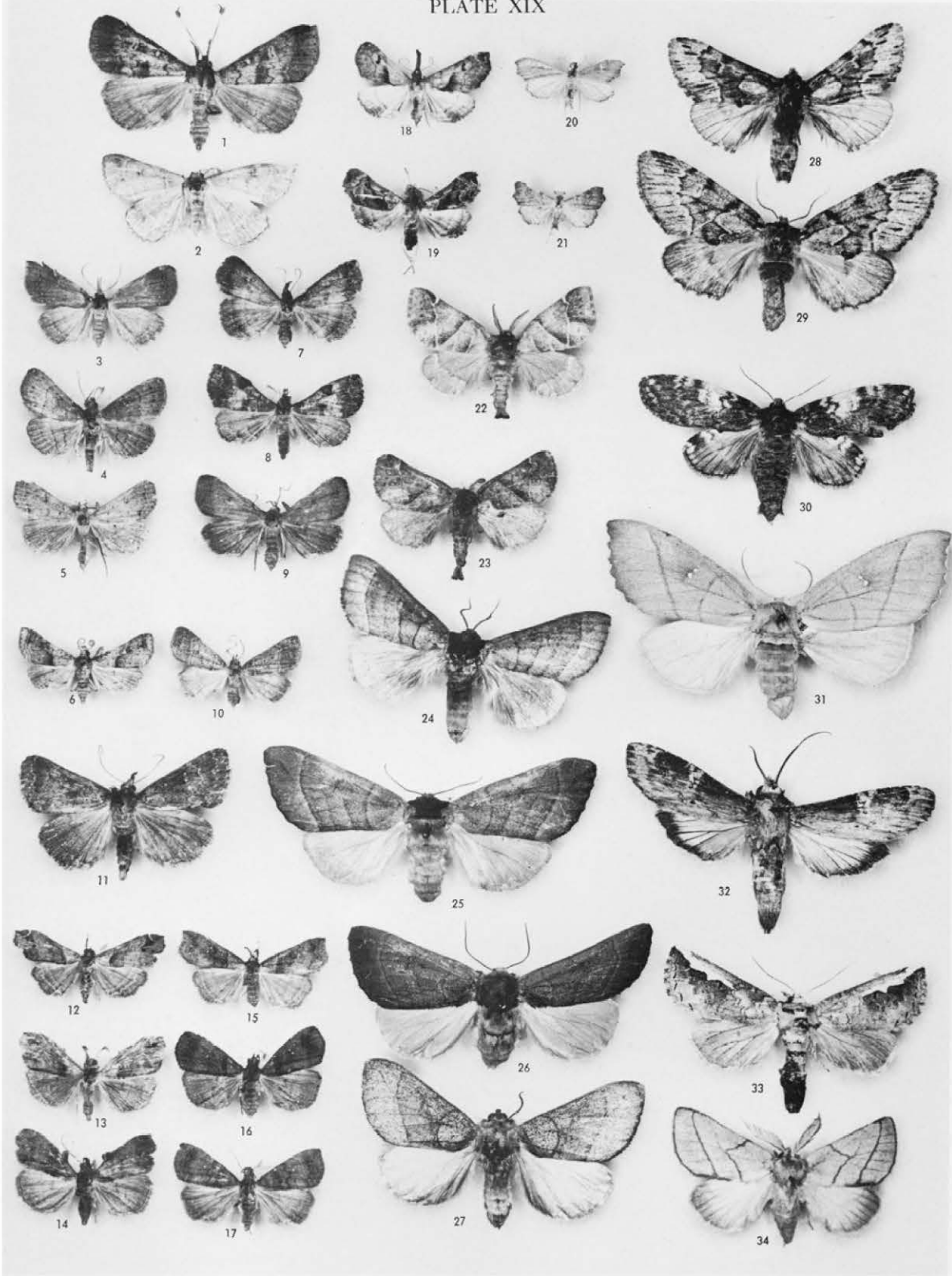


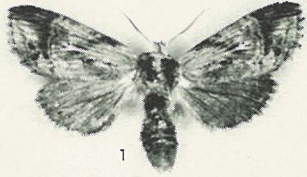
PLATE XX

(All figures natural size.)

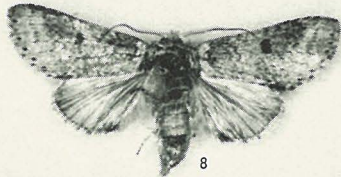
Fig. McDun-
nough
No.

1	3880	<i>Dasylophia anguina</i> (A. & S.) ♀, Cassadaga, SVF, p. 153.
2	3893	<i>Heterocampa cubana</i> Grt. ♀, Key Largo, SVF, p. 154.
3	3883	<i>Litodonta hydromeli</i> Harv. ♂, Tavernier, STES, p. 154.
4	3902	<i>Heterocampa umbrata</i> Wlk. ♂, Quincy, CPK, p. 154.
5	3902	<i>Heterocampa umbrata</i> Wlk. ♀, Cassadaga, SVF, p. 154.
6	3906	<i>Heterocampa biundata</i> Wlk. ♂, Childs, ABS, p. 155.
7	3906	<i>Heterocampa biundata</i> Wlk. ♀, Gainesville, UFES, p. 155.
8	3905	<i>Heterocampa manteo</i> Dbldy. ♂, Escambia Co., SMH, p. 155.
9	3908	<i>Heterocampa bilineata exsanguinis</i> Dyar ♂, Cassadaga, SVF, p. 155.
10	3910	<i>Fentonia marthesia</i> (Cram.) ♀, New York, SVF, p. 155.
11	3910	<i>Fentonia marthesia</i> (Cram.) ♀, Siesta Key, CPK, p. 155.
12	3920	<i>Schizura ipomoeae cinereofrons</i> (Pack.) ♂, New York, SVF, p. 156.
13	3912	<i>Dicentria lignicolor</i> (Wlk.) ♀, New York, SVF, p. 156.
14	3923	<i>Schizura badia</i> (Pack.) ♂, New York, SVF, p. 156.
15	3924	<i>Schizura unicornis</i> (A. & S.) ♂, West Pensacola, VFG, p. 156.
16	3924	<i>Schizura unicornis</i> (A. & S.) ♀, Cassadaga, SVF, p. 156.
17	3927	<i>Schizura leptinoides</i> (Grt.) ♀, Weekiwachee Springs, DPI, p. 156.
18	3929	<i>Cerura scitiscrupta</i> Wlk. ♂, Cassadaga, SVF, p. 157.
19	3929	<i>Cerura scitiscrupta</i> Wlk. ♀, Belle Glade, EES, p. 157.
20	3933	<i>Cerura borealis</i> (Bdv.) ♂, New York, SVF, p. 157.
21	3933	<i>Cerura borealis</i> (Bdv.) ♀, Gainesville, UFA, p. 157.
22	3935	<i>Cerura cinerea</i> Wlk. ♂, Homestead, DPI, p. 157.

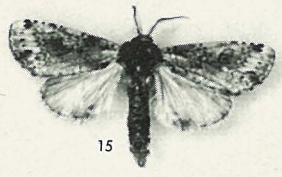
PLATE XX



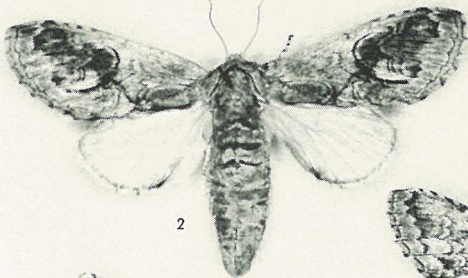
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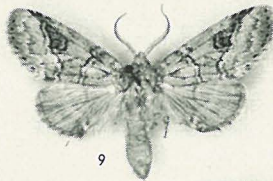
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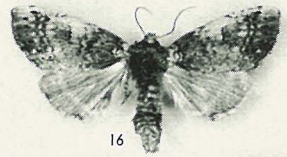
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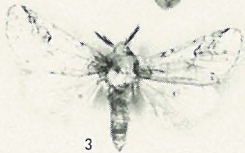
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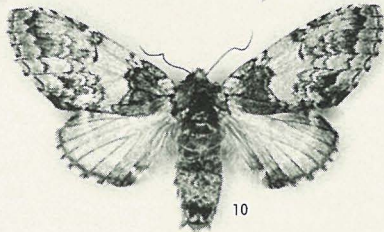
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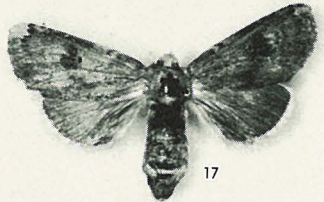
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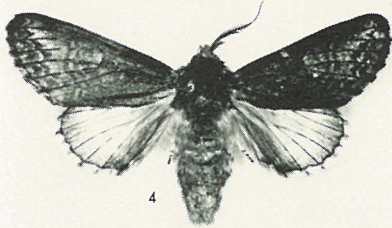
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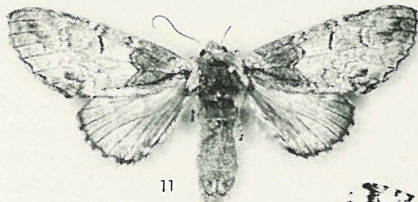
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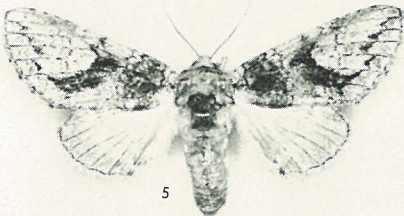
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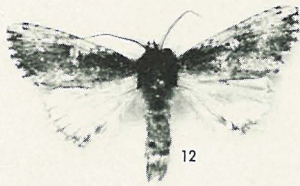
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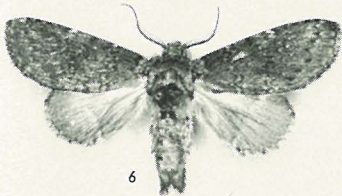
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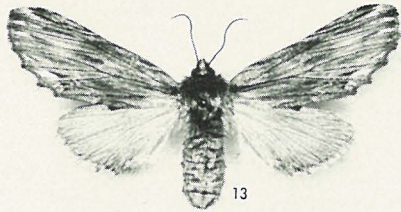
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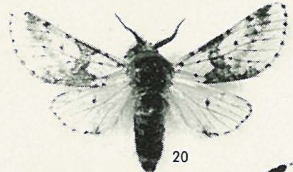
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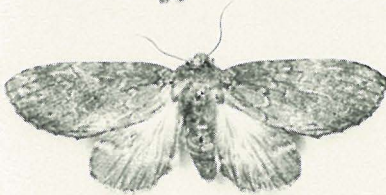
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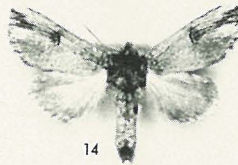
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PLATE XXI

(All figures 1.05 times natural size.)

Fig.	McDun- nough No.	
1	3952	<i>Olene basiflava meridionalis</i> B. & McD. ♂, Cassadaga, SVF, p. 158.
2	3956	<i>Olene leucophaea</i> (A. & S.) ♀, Gainesville, UFA, p. 158.
3	3977	<i>Artace cribraria</i> (Ljung) ♂, Cassadaga, SVF, p. 159.
4	3989	<i>Malacosoma americana</i> (Fabr.) ♂, Gainesville, DPI, p. 159.
5	3997	<i>Malacosoma disstria</i> Hbn. ♂, West Pensacola, VFG, p. 159.
6	3999	<i>Epicnaptera americana</i> Harr. ♂, New York, SVF, p. 160.
7	3978	<i>Tolype velleda</i> (Stoll) ♀, New York, SVF, p. 159.
8	4001	<i>Apatelodes torrefacta floridana</i> Hy Edw. ♂, Escambia Co., SMH, p. 160.
9	4003	<i>Apatelodes angelica</i> (Grt.) ♂, Cassadaga, SVF, p. 160.
10	4019	<i>Oreta rosea</i> (Wlk.) ♀, Escambia Co., AMNH, p. 160.
11	4026	<i>Alsophila pometaria</i> (Harr.) ♂, Escambia Co., DPI, p. 161.
12	4029	<i>Racheospila lixaria</i> Gn. ♂, Siesta Key, CPK, p. 161.
13	4036	<i>Racheospila knobelaria</i> Cass. (?) ♀, Warrington, VFG, p. 162.
14	4149	<i>Scopula enucleata</i> (Gn.) ♀, Escambia Co., STES, p. 167.
15	4036	<i>Racheospila knobelaria</i> Cass. (?) ♀, West Pensacola, VFG, p. 162.
16	4081	<i>Phrudocentra centrifrugaria</i> (H.-S.) ♂, Oneco, UFA, p. 163.
17	4027	<i>Ametris nitocris</i> (Cram.) ♂, Plantation Key, DPI, p. 161.
18	4082	<i>Dichorda iridaria latipennis</i> (Hulst) ♂, Siesta Key, CPK, p. 164.
19	4102	<i>Chloropteryx tepperaria</i> (Hulst) ♀, Cassadaga, SVF, p. 164.
20	4093,1	<i>Chlorochlamys paularia</i> (Moesch.) ♂, Siesta Key, DPI, p. 164.
21	4096	<i>Chlorochlamys indiscriminata</i> (Wlk.) ♂, Siesta Key, CPK, p. 164.
22	4115	<i>Metasiopsis ossularia</i> (Geyer) ♂, Siesta Key, DPI, p. 165.
23	4124	<i>Metasiopsis peralbata</i> Pack. ♂, Escambia Co., SMH, p. 166.
24	4141	<i>Scopula aemulata</i> (Hulst) ♂, Gainesville, DPI, p. 167.
25	4167	<i>Scopula lautaria</i> (Hbn.) ♂, DPI, p. 168.
26	4180	<i>Sterrrha demissaria inclusaria</i> (Wlk.) ♂, Cassadaga, SVF, p. 168.
27	4184	<i>Sterrrha hilliata</i> (Hulst) ♀, Siesta Key, CPK, p. 168.
28	4190	<i>Sterrrha taturata</i> (Wlk.) ♂, Gainesville, UFA, p. 169.
29	4196,2	<i>Sterrrha</i> sp. ♂, Escambia Co., SMH, p. 170.
30	4201	<i>Goniacidalia furciferata</i> (Pack.) ♀, Escambia Co., SMH, p. 170.
31	4234	<i>Dyspteris abortivaria</i> H.-S. ♂, New York, SVF, p. 171.
32	4535	<i>Nycterosea obstipata</i> (Fabr.) ♂, Georgia, DPI, p. 173.
33	4535	<i>Nycterosea obstipata</i> (Fabr.) ♀, Orlando, DPI, p. 173.
34	4559	<i>Euphyia centrostrigaria</i> (Woll.) ♀, Quincy, CPK, p. 173.
35	4561	<i>Euphyia multiferata</i> (Wlk.) ♂, Escambia Co., CNC, p. 173.
36	4401	<i>Lygris diversilineata</i> (Hbn.) ♂, Escambia Co., SMH, p. 172.
37	4401,1	<i>Lygris gracilineata</i> Gn. ♀, Escambia Co., SMH, p. 172.

PLATE XXI



PLATE XXII

(All figures 1.08 times natural size.)

Fig.	McDun- nough No.	
1	4566	<i>Hammaptera parinotata</i> (Zell.) ♀, Siesta Key, SMH, p. 173.
2	4572	<i>Camptolina stellata</i> (Gn.) ♀, Gainesville, DPI, p. 174.
3	4600	<i>Eubaphe meridiana</i> (Sloss.) ♂, Siesta Key, STES, p. 174.
4	4606	<i>Bapta vestaliata</i> (Gn.) ♀, Escambia Co., CNC, p. 174.
5	4659	<i>Heliomata infulata</i> (Grt.) ♂, Cassadaga, SVF, p. 175.
6	4650	<i>Episemasia morbosa</i> Hulst ♀, Gainesville, DPI, p. 175.
7	4679	<i>Semiothisa punctolineata</i> (Pack.) ♂, Siesta Key, CPK, p. 177.
8	4674,1	<i>Semiothisa sanfordi</i> Rindge ♂, Cassadaga, SVF, p. 177.
9	4674	<i>Semiothisa distribuaria</i> (Hbn.) ♀, Cassadaga, SVF, p. 176.
10	4738	<i>Semiothisa gnosopharia</i> (Gn.) ♂, Homestead, DPI, p. 178.
11	4710	<i>Semiothisa continuata</i> (Wlk.) ♂, Gainesville, DPI, p. 177.
12	4710	<i>Semiothisa continuata</i> (Wlk.) ♀, Escambia Co., SMH, p. 177.
13	4793	<i>Itame gausaparia</i> (Grt.) ♂, Escambia Co., CPK, p. 179.
14	4793	<i>Itame gausaparia</i> (Grt.) ♀, Cassadaga, SVF, p. 179.
15	4689	<i>Semiothisa quadrinotaria</i> H.-S. ♂, Escambia Co., CNC, p. 177.
16	4781	<i>Itame varadaria</i> (Wlk.) ♂, Siesta Key, UFA, p. 178.
17	4950	<i>Pimaphera sparsaria</i> (Wlk.) ♂, Tavernier, UFA, p. 182.
18	4807,1	<i>Hypagyrtis pustularia</i> Hbn. ♀, Gainesville, VFG, p. 179.
19	4812	<i>Tornos scolopacinarius spodius</i> Rindge ♀, Cassadaga, SVF, p. 179.
20	4876	<i>Cleora sublunaria</i> Gn. ♂, Escambia Co., CPK, p. 180.
21	4883	<i>Glena cribrataria</i> (Gn.) ♂, Key Largo, SVF, p. 181.
22	4908	<i>Anavitrinella pampinaria</i> (Gn.) ♀, Cassadaga, SVF, p. 181.
23	4908	<i>Anavitrinella pampinaria</i> (Gn.) ♂, De Bary, CPK, p. 181.
24	4951	<i>Epimecis hortaria</i> (Fabr.) ♂, Cassadaga, SVF, p. 183.
25	4952	<i>Lycia ypsilon carlotta</i> Hulst ♂, Punta Gorda, AMNH, p. 183.
26	4953	<i>Phaeoura quernaria</i> (A. & S.) ♂, Punta Gorda, AMNH, p. 183.
27	4953	<i>Phaeoura quernaria</i> (A. & S.) ♀, Gainesville, UFA, p. 183.
28	4954	<i>Ceratomyx satanaria</i> Gn. ♂, Escambia Co., USNM, p. 184.
29	4958	<i>Phigalia titea</i> (Cram.) ♂, Cassadaga, SVF, p. 183.
30	4978	<i>Stenotrachelys approximaria</i> (Hbn.) ♂, Escambia Co., SMH, p. 184.
31	4978	<i>Stenotrachelys approximaria</i> (Hbn.) ♀, Cassadaga, SVF, p. 184.

PLATE XXII



PLATE XXIII

(All figures 1.08 times natural size.)

Fig.	McDun- nough No.	
1	4980	<i>Sericoptera virginaria</i> (Hulst) ♂, Flamingo, DPI, p. 184.
2	4995	<i>Euchlaena obtusaria</i> (Hbn.) ♂, Oneco, STES, p. 184.
3	4999	<i>Euchlaena amoenaria astylusaria</i> (Wlk.) ♂, Quincy, CPK, p. 185.
4	5001,1	<i>Euchlaena deplanaria</i> (Wlk.) ♂, De Bary, CPK, p. 185.
5	5043,1	<i>Hyperetis amicaria</i> H.-S. ♂, Escambia Co., SMH, p. 186.
6	5044	<i>Nematocampa filamentaria</i> Gn. ♂, Gainesville, UFA, p. 186.
7	5046,2	<i>Metarranthis homuraria</i> (G. & R.) ♂, Escambia Co., SMH, p. 186.
8	5186	<i>Syssaura olyzonaria</i> (Wlk.) ♀, Cassadaga, SVF, p. 189.
9	5061	<i>Stenaspilates zalissaria</i> (Wlk.) ♀, Cassadaga, SVF, p. 187.
10	5145	<i>Besma quercivoraria</i> (Gn.) ♂, Monticello, STES, p. 188.
11	5150	<i>Lambdina fiscellaria pultaria</i> (Gn.) ♂, Cassadaga, SVF, p. 188.
12	5180	<i>Apicia fundaria</i> Gn. ♀, Gainesville, CPK, p. 189.
13	5180	<i>Apicia fundaria</i> Gn. ♂, Homestead, STES, p. 189.
14	5184	<i>Apicia confusaria</i> (Hbn.) ♂, Gainesville, UFA, p. 189.
15	5184	<i>Apicia confusaria</i> (Hbn.) ♀, Weekiwachee Springs, STES, p. 189.
16	5052	<i>Metarranthis obfirmaria</i> (Hbn.) ♀, Cassadaga, SVF, p. 187.
17	5211	<i>Prochoerodes transversata incurvata</i> (Gn.) ♂, Gainesville, SVF, p. 190.
18	5212,1	<i>Nepheloleuca floridata</i> (Grt.) ♂, Siesta Key, CPK, p. 190.
19	5216	<i>Palyas auriferaria</i> (Hulst) ♂, Siesta Key, SMH, p. 191.
20	5217	<i>Phrygionis argentata</i> (Dru.) ♀, Cassadaga, SVF, p. 191.
21	5219	<i>Melanchroia chephise</i> (Cram.) ♂, Fort Myers, DPI, p. 191.
22	5214	<i>Oxydia vesulia transponens</i> (Wlk.) ♂, Siesta Key, DPI, p. 190.

PLATE XXIII



PLATE XXIV

(All figures 0.94 times natural size.)

Fig.	McDun- nough No.	
1	5227	<i>Lacosoma chiridota</i> Grt. ♂, Gainesville, CPK, p. 192.
2	5227	<i>Lacosoma chiridota</i> Grt. ♀, Escambia Co., CPK, p. 192.
3	5229	<i>Cicinnus melsheimeri</i> (Harr.) ♀, Cassadaga, SVF, p. 192.
4	5230	<i>Sibine stimulea</i> (Clem.) ♀, Cassadaga, SVF, p. 193.
5	5230	<i>Sibine stimulea</i> (Clem.) ♂, Escambia Co., CPK, p. 193.
6	5233	<i>Euclea nanina</i> Dyar ♂, Cassadaga, SVF, p. 193.
7	5240	<i>Monoleuca semifascia</i> (Wlk.) ♀, Cassadaga, SVF, p. 194.
8	5254	<i>Phobetron pithecium</i> (A. & S.) ♀, UFES, p. 194.
9	5256	<i>Isochaetes beutenmuelleri</i> (Hy. Edw.) ♂, Escambia Co., STES, p. 194.
10	5258	<i>Alarodia slossoniae</i> (Pack.) ♀, Cassadaga, SVF, p. 195.
11	5260	<i>Prolimacodes badia argentimacula</i> B. & McD. ♂, Cassadaga, SVF, p. 195.
12	5267	<i>Lithacodes gracea</i> Dyar ♂, Alachua Co., DPI, p. 196.
13	5263	<i>Limacodes rectilinea</i> (G. & R.) ♂, Escambia Co., SMH, p. 195.
14	5283	<i>Megalopyge opercularis</i> (A. & S.) ♂, Cassadaga, SVF, p. 196.
15	5288	<i>Megalopyge pyxidifera</i> (A. & S.) ♀, Cassadaga, SVF, p. 196.
16	5293	<i>Malthaca dimidiata</i> (H.-S.) ♂, STES, p. 197.
17	5302	<i>Acoloithus falsarius</i> Clem. ♀, Escambia Co., CPK, p. 197.
18	5307	<i>Harrisina americana</i> (Guér.-Mén.) ♂, Escambia Co., SMH, p. 197.
19	5315	<i>Thyris lugubris</i> Bdv. ♂, Virginia, SVF, p. 197.
20	5321	<i>Hexeris enhydris</i> Grt. ♂, Siesta Key, STES, p. 197.
21	5323	<i>Meskea dyspteraria</i> Grt. ♂, Opalocka, DPI, p. 198.
21a	5323	Gall made by larva from which adult, Fig. 21, emerged.
22	5323,1	<i>Rhodoneura terminalis</i> (Wlk.) ♀, "Ulyss. Isl.", USNM, p. 198.
23	3814	<i>Hyblaea puera</i> (Cram.) ♀, Homestead, STES, p. 198.
24	5353	<i>Hymenia perspectalis</i> (Hbn.) ♂, Escambia Co., SMH, p. 200.
25	5354	<i>Hymenia recurvalis</i> (Fabr.) ♂, Alachua Co., DPI, p. 200.
26	5355	<i>Desmia funeralis</i> (Hbn.) ♂, Siesta Key, CPK, p. 201.
27	5355	<i>Desmia funeralis</i> (Hbn.) ♀, Escambia Co., SMH, p. 201.
28	5355,4	<i>Desmia ploralis</i> (Gn.) ♂, Everglades National Park, STES, p. 201.
29	5357	<i>Synclera traducalis</i> (Zell.) ♀, Homestead, DPI, p. 201.
30	5358	<i>Antiercta ornatalis</i> (Dup.) ♀, Winter Park, DPI, p. 202.
31	5360	<i>Marasmia cochrusalis</i> (Wlk.) ♂, Siesta Key, CPK, p. 202.
32	5361	<i>Marasmia trapezalis</i> (Gn.) ♀, Belle Glade, DPI, p. 202.
33	5363	<i>Anania florella</i> (Cram.) ♀, Cassadaga, SVF, p. 202.
34	5365	<i>Samea ecclesialis</i> Gn. ♀, Siesta Key, CPK, p. 203.
35	5366	<i>Samea multiplicalis</i> (Gn.) ♀, Siesta Key, CPK, p. 203.
36	5370	<i>Colomychus talis</i> (Grt.) Mississippi, USNM, p. 203.
37	5371	<i>Pilocrocis ramentalis</i> (Led.) ♀, Homestead, STES, p. 203.
38	5373	<i>Pilocrocis plumbicostalis</i> (Grt.) ♂, Chokoloskee, USNM, p. 204.
39	5375	<i>Pilocrocis tristigmatis</i> Hamp. ♀, Siesta Key, UFA, p. 204.
40	5375,1	<i>Pilocrocis rufescens</i> Hamp. ♀, Key Largo, SVF, p. 204.
41	5376	<i>Conchylodes diphteralis</i> (Geyer) ♂, Key Largo, SVF, p. 204.
42	5379	<i>Dichogama redtenbacheri</i> Led. ♀, Tavernier, STES, p. 204.
43	5381	<i>Alatuncusia bergii</i> (Moesch.) ♀, Tavernier, STES, p. 204.
44	5384,1	<i>Lamprosema schistisemalis</i> (Hamp.) ♀, Siesta Key, CPK, p. 205.
45	5395	<i>Asciodes gordialis</i> Gn. ♂, Siesta Key, CPK, p. 206.
46	5397	<i>Pantographa limata</i> G. & R. ♂, Cassadaga, SVF, p. 206.
47	5401	<i>Sylepta obscuralis</i> (Led.) ♂, North Carolina, USNM, p. 207.
48	5408	<i>Lygropia stictigramma</i> (Hamp.) ♂, Siesta Key, CPK, p. 207.
49	5410	<i>Agathodes designalis</i> Gn. ♂, St. Petersburg, USNM, p. 207.
50	5412	<i>Glyphodes pyloalis</i> Wlk. ♂, Cassadaga, SVF, p. 208.
51	5420	<i>Glyphodes sibillalis</i> Wlk. ♀, Cassadaga, SVF, p. 208.

PLATE XXIV



PLATE XXV

(All figures 1.1 times natural size.)

Fig.	McDun- nough No.	
1	5413	<i>Palpita flegia</i> (Cram.) ♂, Hiialeah, DPI, p. 208.
2	5419	<i>Palpita quadristigmalis</i> (Gn.) ♀, Siesta Key, CPK, p. 208.
3	5419,1	<i>Palpita kimballi</i> Munroe ♀, Siesta Key, CPK, p. 208.
4	5415	<i>Diaphania nitidalis</i> (Stoll) ♂, Escambia Co., SMH, p. 209.
5	5416	<i>Diaphania modialis</i> (Dyar) ♂, Florida, USNM, p. 209.
6	5418	<i>Diaphania hyalinata</i> (L.) ♂, Chokoloskee, USNM, p. 209.
7	5418,1	<i>Diaphania indica</i> (Saund.) ♂, French Guiana, USNM, p. 209.
8	5420,2	<i>Diaphania lualis</i> (H.-S.) ♂, Siesta Key, CPK, p. 209.
9	5420,3	<i>Neoleucinodes prophetica</i> (Dyar) ♀, Guatemala, USNM, p. 209.
10	5423	<i>Hellula rogatalis</i> (Hulst) ♂, Escambia Co., SMH, p. 210.
11	5431	<i>Terastia meticulosalis</i> Gn. ♂, Siesta Key, CPK, p. 210.
12	5447	<i>Azochis rufidiscalis</i> Hamp. ♀, Miami, USNM, p. 211.
13	5452	<i>Epipagis huronalis</i> (Gn.) ♀, Myakka State Park, CPK, p. 211.
14	5455	<i>Nomophila noctuella</i> (D. & S.) ♂, Escambia Co., SMH, p. 212.
15	5483	<i>Loxostege albiceraleis floridalis</i> B. & McD. ♀, Siesta Key, CPK, p. 213.
16	5442	<i>Evergestis rimosalis</i> (Gn.) ♂, Homestead, CPK, p. 211.
17	5432,1	<i>Cybalomia evincalis</i> (Moesch.) ♂, Tavernier, CPK, p. 211.
18	5456	<i>Pilemia periusalis</i> (Wlk.) ♂, Everglade, USNM, p. 212.
19	5457	<i>Herpetogramma bipunctalis</i> (Fabr.) ♀, Siesta Key, CPK, p. 212.
20	5459	<i>Pachyzancla phaeopteralis</i> (Gn.) ♂, Siesta Key, CPK, p. 212.
21	5467	<i>Loxostege mancalis</i> (Led.) ♂, District of Columbia, USNM, p. 213.
22	5471	<i>Loxostege simillialis</i> (Gn.) ♀, Siesta Key, STES, p. 213.
23	5545	<i>Perispasta caeculalis</i> Zell. ♀, Escambia Co., SMH, p. 215.
24	5498,1	<i>Diasemopsis leodocusalis</i> (Wlk.) ♀, Siesta Key, CPK, p. 214.
25	5499	<i>Diasemoides nigralis</i> (Fern.) ♂, Escambia Co., CPK, p. 214.
26	5500	<i>Diasemoides janassialis</i> (Wlk.) ♂, Escambia Co., CPK, p. 214.
27	5548,1	<i>Phlyctaenia vinotinctalis</i> (Hamp.) ♂, Siesta Key, CPK, p. 215.
28	5546	<i>Udea rubigalis</i> (Gn.) ♂, Escambia Co., VFG, p. 215.
29	5598	<i>Pyrausta fumalis</i> (Gn.) ♂, Massachusetts, STES, p. 216.
30	5516	<i>Tholeria pyraustalis</i> Dyar ♂, Altamonte, USNM, p. 215.
31	5515	<i>Tholeria reversalis</i> (Gn.) ♂, Escambia Co., VFG, p. 215.
32	5565	<i>Cindaphia bicoloralis</i> (Gn.) ♀, Escambia Co., SMH, p. 216.
33	5622	<i>Pyrausta subsequalis</i> (Gn.) ♂, Escambia Co., SMH, p. 217.
34	5628	<i>Pyrausta laticlavia</i> (G. & R.) ♀, Escambia Co., CPK, p. 217.
35	5653	<i>Eustixia pupula</i> Hbn. ♀, Siesta Key, CPK, p. 218.
36	5721,1	<i>Steniodes indianalis</i> (Dyar) ♂, Siesta Key, DPI, p. 219.
37	5722	<i>Pileocera bufalis</i> (Gn.) ♀, Siesta Key, CPK, p. 219.
38	5680	<i>Paraponyx maculalis</i> (Clem.) ♂, Massachusetts, STES, p. 221.
39	5758	<i>Pyralis farinalis</i> L. ♂, Quincy, CPK, p. 224.
40	5688	<i>Munroessa gyralis</i> (Hulst) ♀, Quincy, CPK, p. 222.
41	5682	<i>Paraponyx obscuralis</i> (Grt.) ♂, Cassadaga, SVF, p. 221.
42	5683	<i>Paraponyx seminealis</i> (Wlk.) ♂, Cassadaga, SVF, p. 221.
43	5699	<i>Neocataclysta magnificalis</i> (Hbn.) ♂, Weekiwachee Springs, STES, p. 220.
44	5690	<i>Munroessa nebulosalis</i> (Fern.) ♀, Cassadaga, SVF, p. 222.
45	5687	<i>Nymphula nomophilalis</i> Dyar ♂, Cassadaga, SVF, p. 222.
46	5681	<i>Paraponyx allionealis</i> (Wlk.) ♀, Siesta Key, CPK, p. 221.
47	5707,1	<i>Chrysendeton kimballi</i> Lange ♂, Siesta Key, CPK, p. 222.
48	5698	<i>Neargyractis slossonalis</i> (Dyar) ♂, Homestead, STES, p. 223.
49	5735	<i>Eudoria strigalis</i> (Dyar) ♀, Escambia Co., CPK, p. 223.
50	5760	<i>Pyralis disciferalis</i> Dyar ♀, Bradenton, CPK, p. 224.
51	5772	<i>Herculia sordidalis</i> B. & McD. ♀, Siesta Key, STES, p. 224.
52	5787	<i>Lepidomys irrenosa</i> Gn. ♂, Cassadaga, SVF, p. 225.
53	5787	<i>Lepidomys irrenosa</i> Gn. ♀, Cassadaga, SVF, p. 225.
54	5793	<i>Clydonopteron tecomae</i> Riley ♀, Escambia Co., CPK, p. 226.
55	5803	<i>Parachma ochracealis</i> Wlk. ♂, Siesta Key, CPK, p. 226.
56	5811	<i>Patissa xantholeucalis</i> (Gn.) ♂, North Carolina, USNM, p. 227.
57	5824	<i>Schoenobius sordidellus</i> (Zinck.) ♂, Illinois, USNM, p. 228.
58	5824	<i>Schoenobius sordidellus</i> (Zinck.) ♀, Illinois, USNM, p. 228.
59	5835	<i>Schoenobius maximellus</i> Fern. ♂, Texas, USNM, p. 229.
60	5835	<i>Schoenobius maximellus</i> Fern. ♀, Chokoloskee, USNM, p. 229.

PLATE XXV



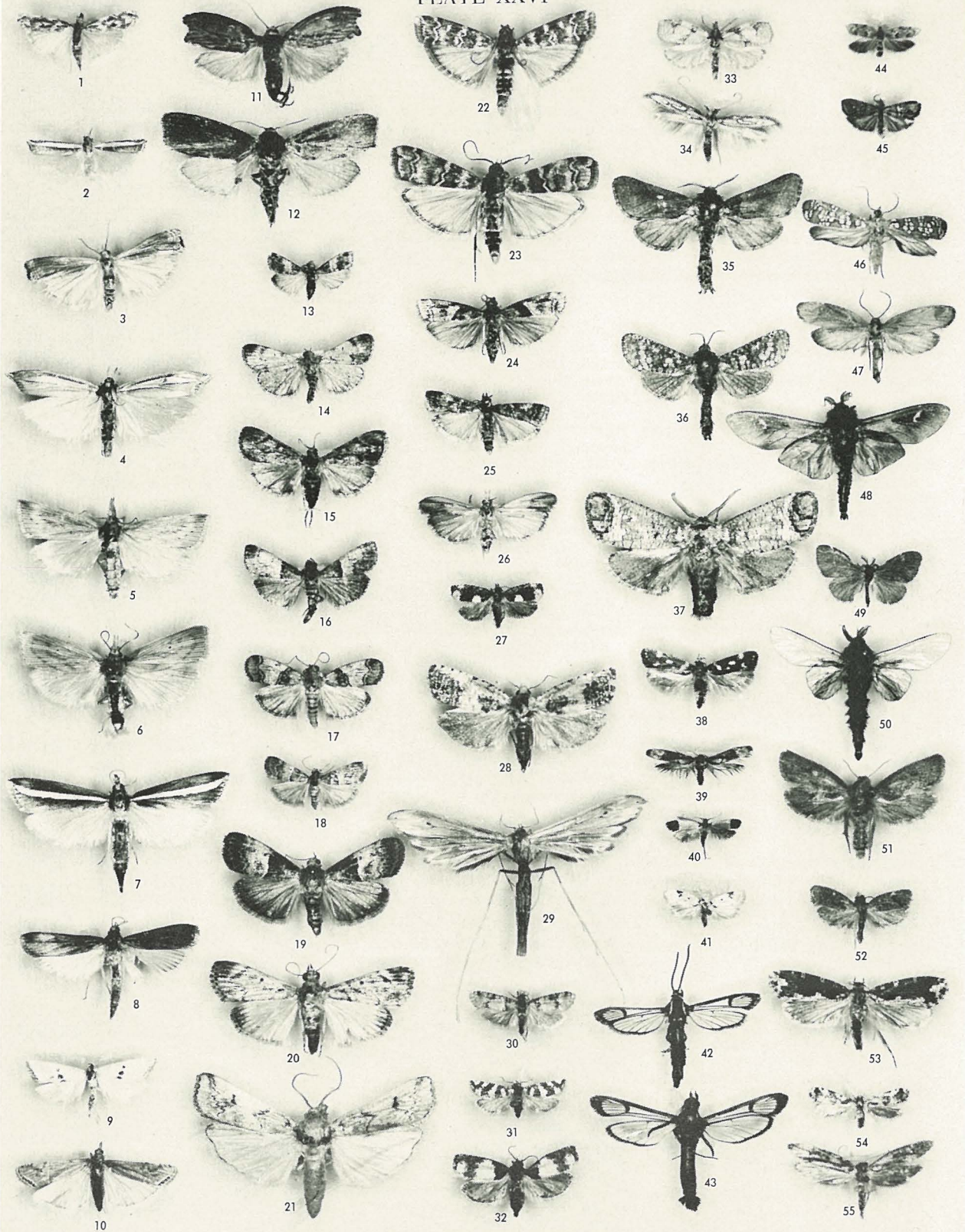
PLATE XXVI

(All figures 1.14 times natural size.)

Fig. McDun-
nough
No.

1	5844	<i>Prionapteryx serpentella</i> Kft. ♀, Siesta Key, STES, p. 229.
2	5853	<i>Crambus quinquareatus</i> Zell. ♂, Gainesville, DPI, p. 230.
3	5897	<i>Crambus decorellus</i> (Zinck.) ♀, Escambia Co., STES, p. 231.
4	5851	<i>Crambus satrapellus</i> (Zinck.) ♀, Gainesville, UFA, p. 230.
5	5960	<i>Diatraea saccharalis</i> (Fabr.) ♀, Louisiana, USNM, p. 234.
6	5962	<i>Diatraea zeacolella</i> Dyar ♂, type, USNM, p. 234.
7	5818	<i>Scirpophaga perstrialis</i> (Hbn.) ♂, Escambia Co., SMH, p. 227.
8	5819	<i>Scirpophaga repugnatalis</i> (Wlk.) ♂, Ochoppee, DPI, p. 228.
9	5932	<i>Crambus tripsacas</i> Dyar ♂, De Bary, CPK, p. 232.
10	5952	<i>Euchromius texana</i> (Rob.) ♂, Quincy, CPK, p. 233.
11	5989	<i>Galleria mellonella</i> (L.) ♂, Gainesville, UFA, p. 235.
12	5989	<i>Galleria mellonella</i> (L.) ♀, Cassadaga, SVF, p. 235.
13	6054,1	<i>Pococera atramentalis</i> Led. ♀, Homestead, STES, p. 238.
14	6014	<i>Epipaschia superatalis</i> Clem. ♂, Escambia Co., VFG, p. 236.
15	6014	<i>Epipaschia superatalis</i> Clem. ♀, Escambia Co., SMH, p. 236.
16	6016	<i>Epipaschia zelleri</i> (Grt.) ♂, Siesta Key, CPK, p. 236.
17	6039	<i>Tetralopha subcanalis</i> (Wlk.) ♀, Cassadaga, SVF, p. 238.
18	6032	<i>Tetralopha scortealis</i> (Led.) ♀, Cassadaga, SVF, p. 237.
19	6031	<i>Tetralopha robustella</i> Zell. ♀, Cassadaga, SVF, p. 237.
20	6013	<i>Macalla thyrissalis</i> Wlk. ♀, Key Largo, SVF, p. 236.
21	6277	<i>Melitara prodenialis</i> Wlk. ♂, Cassadaga, SVF, p. 248.
22	6135	<i>Dioryctria amatella</i> (Hulst) ♂, Orlando, USNM, p. 245.
23	6135	<i>Dioryctria amatella</i> (Hulst) ♀, Childs, ABS, p. 245.
24	6125	<i>Dioryctria clarioralis</i> (Wlk.) ♀, Escambia Co., SMH, p. 246.
25	6136	<i>Dioryctria pygmaeella</i> Rag. ♂, Virginia, USNM, p. 245.
26	H200	<i>Ancylostomia stercorea</i> (Zell.) ♀, Escambia Co., CPK, p. 243.
27	6741	<i>Olethreutes devotana</i> Kft. ♀, Cassadaga, SVF, p. 257.
28	6957	<i>Eucosma giganteana</i> (Riley) ♀, Cassadaga, SVF, p. 259.
29	6569	<i>Oidaematophorus balanotes</i> (Meyr.) ♂, Cassadaga, SVF, p. 254.
30	6751,1	<i>Rhyacionia subtropica</i> Miller ♂, Cassadaga, SVF, p. 257.
31	6865	<i>Eucosma robinsonana</i> (Grt.) ♀, Escambia Co., SMH, p. 259.
32	7027	<i>Epiblema scudderiana</i> (Clem.) ♀, Siesta Key, CPK, p. 260.
33	7322	<i>Sparganothis karacana</i> (Kft.) ♂, Cassadaga, SVF, p. 265.
34	7736	<i>Homaledra heptathalama</i> Busck ♂, Siesta Key, CPK, p. 276.
35	7644	<i>Givira francesca</i> (Dyar) ♂, Cassadaga, SVF, p. 272.
36	7641	<i>Givira anna</i> (Dyar) ♂, Cassadaga, SVF, p. 272.
37	7652	<i>Cossula magnifica</i> (Stkr.) ♂, Cassadaga, SVF, p. 272.
38	7976	<i>Aroga coloradensis</i> (Busck) ♀, Cassadaga, SVF, p. 279.
39	8488	<i>Valentinia glandulella</i> (Riley) ♂, Escambia Co., CPK, p. 284.
40	8260	<i>Compsolechia coverdalella</i> (Kft.) ♂, Escambia Co., SMH, p. 280.
41	8466	<i>Inga sparsiciliella</i> (Clem.) ♂, Cassadaga, SVF, p. 283.
42	8691	<i>Sanninoidea exitiosa</i> (Say) ♀, Gainesville, UFES, p. 288.
43	8691	<i>Sanninoidea exitiosa</i> (Say) ♂, Monticello, UFES, p. 288.
44	8590	<i>Stenomoma humilis</i> (Zell.) ♂, Oneco, UFA, p. 285.
45	8641	<i>Tortyra slossonia</i> (Fern.) ♂, Siesta Key, CPK, p. 287.
46	8939	<i>Atteva aurea</i> (Fitch) ♀, Arkansas, SVF, p. 292.
47	8944	<i>Urodus parvula</i> (Hy. Edw.) ♂, Cassadaga, SVF, p. 292.
48	9514	<i>Oiketeticus abbotii</i> Grt. ♂, Key Largo, SVF, p. 297.
49	9523	<i>Platoeceticus gloverii</i> Pack. ♂, Cassadaga, p. 297.
50	9519	<i>Thyridopteryx ephemeriformis</i> (Haw.) ♂, Cassadaga, SVF, p. 297.
51	9556	<i>Acrolophus plumifrontellus</i> (Clem.) ♂, Oneco, UFA, p. 298.
52	9558	<i>Acrolophus texanellus</i> (Cham.) ♂, Siesta Key, STES, p. 298.
53	9615	<i>Scardia anatomella</i> Grt. ♀, Escambia Co., SMH, p. 300.
54	9623	<i>Scardia approximata</i> Dietz ♂, Escambia Co., SMH, p. 300.
55	9642	<i>Tinea obscurostrigella</i> Cham. ♂, Escambia Co., CPK, p. 300.

PLATE XXVI



INDEX OF FOOD PLANTS

This index includes host plants, hosts other than plants, and plants on which adults or pupae have been found, whether or not the adults have been attracted thereto or have been there accidentally.

The plants and trees are listed in various ways: common names with scientific name in parenthesis, sometimes with an adjective preceding, sometimes with the name first. Botanically they are under the currently used generic name with synonym in brackets, followed by the common name in parenthesis. There may be more than one reference per page. Page numbers between 310 and 329, inclusive, refer to the bibliography.

- Abelia* (abelia), 65
Abies (balsam fir), 99, 147, 163, 188, 244
Abronia villosa Wats. (sand-verbena), 173
Abrus (rosary pea), 49
Abutilon striatum Dickson (flowering maple), 137
Abutilon theophrasti Medic. [avicennae], 137
Acacia (acacia), 242, 270
Acacia farnesiana Willd. (sweet acacia), 242
Acalypha (copperleaf), 101
Acanthaceae, 43
Acer (maple), 69, 76, 81, 83, 87, 92, 124, 143, 155, 156, 160, 175, 187, 189, 190, 244
Acer rubrum L. (swamp or red maple), 255
Acer saccharinum L. [dasycarpum] (silver or white maple), 255, 288
Achras sapota L. (sapodilla), 243
Achyranthes indica L. (achyranthes), 212
Achyranthes ramosissima (Mart.) Standley (achyranthes), 247
acorns, oak, 264
Actinopermium angustifolium (Pursh) T. & G., 107
Adams needle (*Yucca smalliana* Fern. [filamentosa]), 58
Aeschynomene viscidula Michx. [*Secula viscidula*] (sensitive joint vetch), 35
Aesculus (buckeye, horse-chestnut), 257, 268
Aesculus glabra Willd. (Ohio buckeye), 242
African violet (*Saintpaulia*), 267
Afzelia macrophylla see *Dasistoma macrophylla*, 103
Agaricus campestris L. (mushroom), 140
Agave (agave), 40
Agave neglecta [vivipara] Small, 11
Ageratum (ageratum), 76
Albizzia (mimosa), 60, 157
Albizzia julibrissin Durazz, 287
alder (*Alnus*), 82, 84, 143, 163, 186
alder, black (*Alnus serrulata* (Ait.) Willd.), 60, 82
Aleurites fordii Hemsl. (tung oil tree), 297
alfalfa (*Medicago sativa* L.), 33, 53, 134
Allamanda (allamanda), 63
Allium (onion), 101
almond (*Prunus amygdalus* Batsch.), 196, 288
Alnus (alder), 82, 84, 143, 163, 186
Alnus serrulata (Ait.) Willd. (black alder), 82
Alternanthera (alternanthera), 200
amaranth (*Amaranthus*), 101, 174, 200, 201, 207, 212
Amaranthus (amaranth), 101, 174, 200, 201, 207, 212
Amaryllis (amaryllis), 90
Ambrosia (ragweed), 104, 109, 116, 249, 253, 260
Ambrosia artemisiifolia L. [elatior] (common ragweed), 116, 253, 260
Ambrosia trifida L. (great ragweed), 104, 260
Amelanchier arborea (Michx. f.) [canadensis] (service-berry), 288
Amorpha (false indigo), 122
Amorpha fruticosa L. (indigobush), 34, 69
Amorpha herbacea Walt., 244
Ampelopsis (ampelopsis), 64, 66, 67, 80, 197
Amphicarpa (hog-peanut), 36, 51
Amsonia ciliata Walt. (amsonia), 67
Amyris clemifera L. [floridana] (torchwood), 32, 283, 291
Anacardiaceae, 62
Anacardium occidentale L. (cashew), 44
Anaphalis (everlasting), 110
Andromeda (bog-rosemary), 122, 151, 256
Anethum graveolens L. (dill), 31
Annona (custard apple), 59, 257
Annona cherimola Mill. (cherimoya), 136
Annona diversifolia Safford (ilama), 136
Annona glabra L. [laurifolia] (pond apple), 59, 136, 257, 269
Annona muricata L. (soursop), 225, 242
Annona reticulata L. (bullock's heart custard apple), 59
Annonaceae, 59
Anthemis (camomile), 248
Antirrhinum (snapdragon), 42, 92, 256
Antonina scale, 274
apes-earring (*Pithecellobium*), 34, 49, 130, 131
aphid, woolly, 49
Apium (celery), 31, 57, 85, 98, 101, 119, 215
Apocynum (dogbane), 38, 65
apple (*Malus*), 82, 83, 100, 123, 151, 155, 156, 157, 159, 160, 178, 184, 187, 239, 242, 249, 258, 291, 297
apple, pond (*Annona glabra* L. [laurifolia]), 59, 136, 257, 269
apple, custard (*Annona*), 59, 257
apricot (*Prunus*), 249
Aquilegia (columbine), 96
Arachis hypogaea L. (peanut), 35, 101, 134, 246
Aralia (aralia), 94
arbor-vitae, American (*Thuja occidentalis* var. *globosa* Gord. [Biota globosa]), 297
arbor-vitae, Oriental (*Thuja orientalis* var. *pyramidalis* Endl. [Biota pyramidalis]), 297
arbor-vitae, Oriental (*Thuja orientalis* var. *conspicua* Berckmans [Aurea conspicua]), 297
Ardisia escallonioides Schiede & Deppe [Ardisia pickeringia; *Icareoia paniculata*] (marlberry), 191, 195, 263
Argythamnia blodgettii prob. *Ditaxis blodgettii* (Torr.) Pax., 280
Aristolochia (birthwort), 31
arrowhead (*Sagittaria*), 119
Artanthe (artanthe), 136
Artemisia (wormwood), 258
artichoke (*Cynara scolymus* L.), 104
Arundinaria gigantea (Walt.) Muhl. (southern cane), 38
Arundinaria tecta (Walt.) Muhl. (switchcane), 38
Asarum (wild ginger), 31
Asclepias (milkweed), 38, 44, 76, 77
Asemeia cumulicola see *Polygala cumulicola*, 97
ash (*Fraxinus*), 60, 61, 160
ash, evergreen, 61
ash, mountain (*Sorbus americana* Marsh.), 249
ash, European mountain (*Sorbus aucuparia* L.), 291
Asimina (papaw), 60
Asimina reticulata Chapm., 225
Asimina triloba (L.) Dunal (papaw), 225, 262
Asparagus (asparagus), 101
aspen (*Populus*), 120, 295
Aster (aster), 40, 92, 109, 119, 189, 248
Aster novae-angliae L. (New England aster), 109

- Asterolecanium pustulans* (Ckll.) (pustle scale), 274
Astragalus (milk vetch), 33, 244
Aurea conspicua see *Thuja orientalis* var. *conspicua*, 297
 Australian pine (*Casuarina*), 289
Avicennia nitida Jacq. [*marina*] (black mangrove), 35
 Avocado (*Persea americana* Mill.), 69, 157, 183, 265, 267, 295, 297, 312
 azalea (*Rhododendron*), 26, 59, 67, 69, 82, 151, 156, 171, 295
- Baccharis* (baccharis), 26, 205, 253, 272
Bacopa (water hyssop), 43
 balsam (*Abies*), 147, 188
 bamboo, wild (*Lasiacis divaricata* (L.) Hitchc. [*Panicum divaricatum*]), 211
 banana (*Musa*), 80
Baptisia (wild indigo), 53, 121, 263
Baptisia tinctoria (L.) R. Br. (yellow or wild indigo), 52, 215
 Barbados-cherry (*Malpighia glabra* L.), 52, 215, 327
 bark of fallen limbs, 138
 basswood (*Tilia*), 42, 81, 132, 206
Batis maritima L. (saltwort), 37, 49
Bauhinia (orchid tree), 297
Bauhinia alba Hart. (orchid tree), 242
Bauhinia purpurea L. (orchid tree), 242
Bauhinia variegata L. (orchid tree), 242
 bay (*Persea*), 292
 bay, red (*Persea borbonia* (L.) Spreng), 156
 bay-bean (*Canavalia lineata* (Thunb.) DC.), 135, 242
 bayberry (*Myrica*), 121, 156, 162, 241, 258
 bay-cedar (*Suriana maritima* L.), 26
 bean pustle scale, 274
 beans (*Phaseolus*), 47, 51, 69, 101, 104, 107, 144, 150, 244, 246
 beans, broad (*Vicia faba* L.), 125
 beans, lima (*Phaseolus limensis* Macf.), 242, 243, 244, 246, 261
 beans, snap (*Phaseolus*), 107, 119
 beard-tongue (*Penstemon*), 256
 beauty berry, American (*Callicarpa americana* L.), 59
 bedstraw (*Galium*), 165
 beech (*Fagus grandifolia* Ehrh.), 69, 76, 81, 155, 156
 beech, blue (*Carpinus caroliniana* Walt.), 195
 beech nuts, 264
 beeswax, 235
 beet (*Beta vulgaris* L.), 68, 86, 100, 200, 201, 212
 beet, sugar (*Beta vulgaris* L.), 247
 beggartick (*Bidens*), 35, 40, 46, 47, 97, 150, 247
 beggartick, devil's (*Bidens frondosa* L.), 260
 beggarweed (*Desmodium* [*Meibomia*]), 40, 51, 107, 253
Beta (chard, Swiss chard), 200, 201, 212
Beta vulgaris L. (beet, mangel, sugar beet), 68, 86, 100, 200, 201, 212, 247
- betony (*Stachys*), 256
Betula (birch), 249
Bidens (beggartick), 35, 40, 46, 47, 97, 150, 247, 248
Bidens frondosa L. (devil's beggartick), 260
Bidens pilosa L. (Spanish needle), 26, 36, 98
Bignonia (bignonia), 59, 61
 bindweed (*Convolvulus*), 115
Biota globosa see *Thuja occidentalis* var. *globosa*, 297
Biota pyramidae see *Thuja orientalis* var. *pyramidae*, 297
 birch (*Betula*), 69, 81, 84, 128, 151, 156, 180
 birthwort (*Aristolochia*), 31
 bittersweet (*Celastrus*), 170
 black bead (*Pithecellobium guadalupense* (Pers.) Chapm.), 34, 35
 blackberry (*Rubus*), 84, 163, 164, 258, 262, 296
 black-eyed pea (*Vigna sinensis* (L.) Savi), 246
 black gum (*Nyssa sylvatica* Marsh.), 96, 124
 blackroot (*Pterocaulon undulatum* (Walt.) C. Mohr.), 110
 bladdersenna (Colutea), 244
Blechnum (coarse fern), 43
 bloolly (*Torrubia longifolia* (Heimerl) Britton [*Pisonia obtusata*]), 276, 290
 blueberry (*Vaccinium*), 62, 82, 84, 87, 89, 93, 122, 151, 175, 187, 196, 239, 245
 blueberry, dryland (*Vaccinium pallidum* Ait. [*vacillans*]), 48
 bluestem joe-pye weed (*Eupatorium purpureum* L.), 97
Boehmeria (falsenettle), 42
Boehmeria cylindrica (L.) Sw. (falsenettle), 203, 207
Boehmeria nivea (L.) Gaud. (ramie), 79, 207
 bog-rosemary (*Andromeda*), 122, 151, 256
 boneset (*Eupatorium perfoliatum* L.), 177
 bonnet lily (*Nuphar*), 103, 114
 borrieria (*Borreria ocimoides* (Burm.) DC.), 212
Bougainvillea (bougainvillea), 80, 206
 bracket fungus, 140, 144
 bracken (*Pteridium*), 186
Bradburya virginiana see *Centrosema virginianum*, 262
Brassica oleracea var. *acephala* DC. (collards), 37, 119, 210, 211
Brassica oleracea var. *botrytis* L. (cauliflower), 37
Brassica oleracea var. *capitata* L. (cabbage), 37, 51, 85, 119, 210
Brassica rapa L. (turnips), 51, 125, 246
Braunaria see *Echinacea*, 248
 Brazilian pepper (*Schinus terebinthifolius* Raddi), 196
*Breynia nivos*a Small (breynia), 191
Bromelia pingium L., 284
 broom straw, Italian, 216
 buckeye (*Aesculus*), 242, 257
 bullock's heart custard apple (*Annona reticulata* L.), 59
- bulrush (*Scirpus cyperinus* (L.) Kunth), 142
Bumelia celastrina H. B. K. [*angustifolia*] (saffronplum), 154
Bumelia microcarpa Small (bumelia), 243
Bumelia reclinata Vent., 292
 burnweed (*Erechtites hieracifolia* (L.) Raf.), 150
Bursera simarouba (L.) Sarg. [*gummifera*] (gumbo limbo), 117, 187, 295
 bustic (*Dipholis salicifolia* (L.) DC.), 243
 butterfly-pea (*Centrosema virginianum* (L.) Benth. [*Bradburya virginiana*]), 262
 butterfly-pea (*Clitoria mariana* L.), 274
 butternut (*Juglans cinerea* L.), 143, 240
 butterweed (*Senecio glabellus* Poir.), 197
 button-bush (*Cephalanthus*), 42, 66
 button plant (*Spermacoce*), 68
 buttonwood (*Platanus occidentalis* L.), 76, 238, 262
Byrsonima (byrsonima), 52
- cabbage (*Brassica oleracea* var. *capitata* L.), 37, 51, 85, 119, 210, 274, 291
Cacalia suffruticosa L., 11
 cactus, 319
Cactus cochenillifer L. [*Naphalea cochinchinensis* Salm-Dyck, according to Bailey 1949], 11
Caesalpinia [*Guilandina*] (nickerbean), 49
Caesalpinia crista L. [*Guilandina bonducella*], 238, 284, 294
 Caesar's weed (*Urena lobata* L.), 137
Cajanus (pigeon pea), 243, 244
Cajanus indicus Spreng. [*cajan*] (pigeon pea), 242, 295
Cakile maritima Scop. (sea-rocket), 37
 calamondin (*Citrus mitis* Blanco), 146
Calendula (calendula), 37, 119
Calliandra (calliandra), 35
Callicarpa americana L. (American beauty berry), 59
Callirhytis batatoidea (Ashm.) (a hymenopteron), 289
Calocarpum sapota (sapote), 263
Calonyction (moonflower vine), 59, 196
Calycanthus (sweetshrub), 129
Camellia sasanqua Thunb. (camellia), 156
 camomile (*Anthemis*), 248
 camphor (*Camphora*), 32
Camphora (camphor), 32
Canavalia (canavalia), 134, 151
Canavalia ensiformis DC. (jackbean), 242
Canavalia gladiata DC. (swordbean), 242
Canavalia lineata (Thunb.) DC. [*obtusifolia*] (bay-bean), 135, 242
Canavalia maritima Thou., 242
 candletree, Panama (*Parmentiera cecifera* Seem.), 226
 cane, southern (*Arundinaria gigantea* (Walt.) Muhl.), 38

- cane, sugar (*Saccharum officinarum* L.), 57, 85, 91, 99, 101, 106, 125, 234, 246, 291, 320
 cane, switch (*Arundinaria tecta* (Walt.) Muhl.), 38
Canna (canna), 57, 219
Canna flaccida Salisb. (wild canna), 219
Canna indica L. (India canna), 219
 caper (*Capparis*), 37
Caperonia (caperonia), 252
Capparis (caper), 37
Capparis cynophallophora L. (Jamaica caper), 204
Capsicum frutescens L. (red pepper), 219
Capsicum frutescens var. *grossum* Bailey (bell or sweet pepper), 278
 cardinal's guard (*Odontonema strictum* Kuntze [*Jacobinia coccinea* of authors]), 203
Carica (papaya), 63, 66, 242, 243
Carissa (carissa), 297
Carissa grandiflora A. DC. (natal plum), 242
 carnation (*Dianthus caryophyllus* L.), 267
 carob (*Ceratonia siliqua* L.), 242
Carpinus caroliniana Walt. (blue beech), 195
 Caribbean pine (*Pinus elliottii* Engelm.), 70, 317
 carrion flower (*Stapelia*), 38
Carya [*Hicoria*] (hickory), 261, 268
Carya illinoensis Koch (pecan), 68, 70, 79, 121, 122, 123, 136, 152, 156, 159, 196, 238, 239, 240, 241, 249, 261, 263
 cashew (*Anacardium occidentale* L.), 44
Casimiroa edulis Llave & Lex. (white sapote), 32
Cassia (cassia, senna), 26, 34, 35, 36, 49, 130, 215, 256
Cassia alata L. (ringworm cassia), 241, 242
Cassia bahamensis Mill., 241
Cassia bicapsularis L., 34, 35, 242
Cassia brachiata Pollard, 244
Cassia corymbosa Lam., 242
Cassia fasciculata Michx. [*Chamaecrista*] (partridge-pea), 26, 242, 244, 280
Cassia fistula L. (golden shower), 87, 131, 236, 241
Cassia grandis L. (pinkflower senna), 242
Cassia marginata Roxb., 236
Cassia nictitans var. *aspera* Chapm., 277
Cassia nodosa Buch.-Ham. (jointwood senna), 241
Cassia occidentalis L. (coffeeweed), 130, 242, 274
Cassia robusta Pollard (cassia), 244
Cassia siamea Lam. [*Sciacassia*] (kas-sodtree), 241
Cassia tora L. (sicklepod senna), 241
Castanea (chestnut), 84, 152, 294
Castanea pumila (L.) Mill. (chinquapin), 48, 78, 115
 castor bean (*Ricinus communis* L.), 80, 100, 101, 274, 328
Casuarina (Australian pine), 289
Casuarina equisetifolia Forst. (horse-tail tree), 289
Catalpa (catalpa), 32, 60
 catnip (*Nepeta cataria* L.), 51, 201
 cattail (*Typha*), 84, 94, 103, 200
 cauliflower (*Brassica oleracea* var. *botrytis* L.), 37, 291
Ceanothus americanus L. (New Jersey-tea), 175
 Caesar's weed (*Urena lobata* L.), 137
Cecropia (pumpwood), 64
 cedar (*Juniperus*), 48, 177
 cedar, southern red (*Juniperus silicicola* (Small) Bailey), 48, 297
Cedrela (cedrela), 241
Celastrus (bittersweet), 170
 celery (*Apium*), 31, 57, 85, 98, 101, 119, 215, 268, 269, 310, 327
 celery, wild (*Vallisneria spiralis* L.), 221
Celtis (hackberry), 42, 45, 61, 177, 245, 293
Cenchrus tribuloides L. (sandspur), 86
Centaurium umbellatum Gilid. (drug centaurium), 253
Centaurium venustum Robinson (pink centaurium), 253
Centrosema [*Bradburya*] (butterfly-pea), 293
Centrosema virginianum (L.) Benth. [*Bradburya virginiana*] (butterfly-pea), 262
Cephalanthus (button-bush), 42, 66
Ceratonia siliqua L. (carob), 242
Cercis (redbud), 32, 69, 157, 201
Cercis canadensis L. (eastern redbud), 196
 cereals, 91
Cerococcus quercus Comstock (a scale), 248
Ceroplastes (a scale), 248
Cestrum diurnum L. (day jessamine), 26, 120, 198
Cestrum nocturnum L. (night-blooming jessamine), 59, 60, 62, 88
Chamaecrista fasciculata see *Cassia fasciculata*, 26, 242, 244
 chard (*Beta*), 200, 201
 chard, Swiss (*Beta*), 212
 chayote (*Sechium edule* (Jacq.) Sw.), 209
Chenopodium (pigweed), 52, 78, 114
Chenopodium ambrosioides L., 293
 cherimoya (*Annona cherimola* Mill.), 136
 Cherokee-bean (*Erythrina herbacea* L.), 207, 210, 216
 cherry (*Prunus*), 40, 83, 84, 123, 249, 288
 cherry, pin, 96
 cherry, wild or black (*Prunus serotina* Ehrh.), 32, 44, 47, 62, 84, 94, 123, 157, 158, 167, 171, 178, 185, 194, 239, 249, 288, 294
 chestnut (*Castanea*), 84, 152, 272
 chickpea (*Cicer arietinum* L.), 243
 chickweed (*Stellaria media* (L.) Cyrillo), 36, 165
 chinaberry (*Melia*), 26
 Chinese lily (*Narcissus tazetta* var. *orientalis* Hort.), 90
 Chinese photinia (*Photinia serrulata* Lindl.), 297
 Chinese tallow tree (*Sapium sebiferum* (L.) Roxb. [*Triadica sebifera*]), 130
 chinquapin (*Castanea pumila* (L.) Mill.), 48, 78, 115, 291
Chiococca alba (L.) Hitchc. [*racemosa*] (milkberry), 64, 67, 268, 291
Chiococca pinetorum Britton, 67
 choke cherry (*Prunus virginiana* L.), 89, 94
 Christmasbush eupatorium (*Eupatorium odoratum* L.), 66
Chrysanthemum (chrysanthemum), 101, 163, 248
Chrysobalanus icaco L. (cocoplum), 195
 chufa (*Cyperus esculentus* L.), 246
Cicca disticha see *Phyllanthus acidus*, 191, 255
Cicer arietinum L. (chickpea), 243
Cirsium (thistle), 71
Cirsium horridulum Michx. [*spinosisimum*] (yellow thistle), 248
Cissus (treebine), 64, 66, 76
Cissus incisa (Nutt.) Des Moul. (marine ivy), 66
Citharexylum (fiddlewood), 216
Citharexylum berlandieri L. (fiddlewood), 216
Citharexylum fruticosum L. [*villosum*] (Florida fiddlewood), 207, 216
Citrullus vulgaris Schrad. (watermelon), 78, 79, 209
Citrus (citrus), 38, 67, 92, 100, 107, 136, 151, 190, 193, 194, 237, 267, 269, 293, 297, 322
Citrus aurantifolia Christm. (lime), 267
Citrus limon Osbeck (lemon), 80, 237
Citrus makima var. *uvacarpa* Merr. & Lee [*paradisi*] (pomelo), 297
Citrus mitis Blanco (calamondin), 146
Citrus nobilis var. *deliciosa* (Ten.) Swingle (tangerine), 80
Citrus nobilis var. *unshiu* Swingle (satsuma), 248
Citrus paradisi Macf. (grapefruit), 71, 100, 237, 242, 267
 citrus seeds, 250
Citrus sinensis Osbeck (orange), 80, 196, 237, 242, 248
Citrus sinensis Osbeck cv pineapple (pineapple orange), 297
Cladium jamaicensis Crantz [*Mariscus*] (saw grass), 56
 clematis (*Clematis virginiana* L.), 289
Clematis virginiana L. (clematis), 289
Clematis vitalba L. (travelers-joy), 289
Cleome rufosperma DC. [*ciliata*] (prickly spiderflower), 37
 climbing hempweed (*Mikania scandens* (L.) Willd.), 70
Clitoria fragrans Small, 274
Clitoria mariana L. (butterfly-pea), 274
 clover (*Trifolium*), 26, 33, 34, 36, 124, 144, 175, 189
 clover, bush (*Lespedeza*), 80, 125, 238
 clover, crimson (*Trifolium incarnatum* L.), 144
 clover, owls (*Orthocarpus*), 256

- clover, prairie (*Petalostemum corymbosum* Michx. [*Kuhnistera pinnata*]), 181
- clover, toothed bur (*Medicago hispida* Gaertn.), 53
- clover, white (*Trifolium repens* L.), 26, 33, 85
- Cnidocolus* (tread-softly), 63
- coccids (see scales), 248, 250, 284
- Coccoloba diversifolia* Jacq. [*floridana*] (pigeon-plum, dove-plum), 76, 161, 193
- Coccoloba uvifera* (L.) L. (seagrape), 76, 193, 198, 207, 243, 275
- Coccothrinax argentata* (Jacq.) Bailey (silver palm), 257, 278
- Coccus hesperidum* Linn. (soft brown scale), 248
- cocoplum (*Chrysobalanus icaco* L.), 195
- Cocos nucifera* L. (coconut palm), 58, 75, 136, 274, 276
- Codiaeum* (garden croton), 45, 47
- coffeeweed (*Cassia occidentalis* L.), 130, 242
- collards (*Brassica oleracea* var. *acephala* DC.), 37, 119, 210, 211
- columbine (*Aquilegia*), 96
- Colutea* (bladdersenna), 244
- Compositae, 26, 42, 163
- Comptonia* (sweet fern), 241
- Comptonia peregrina* var. *asplenifolia* Fern. (sweet fern), 181
- Condalia ferrea* see *Krugiodendron ferreum*, 101, 165, 282
- coneflower (*Rudbeckia*), 248, 260
- conifer, 180
- Convolvulus* (bindweed), 115
- coontie (*Zamia integrifolia* Ait.), 46, 80
- coral plant (*Jatropha manihot* L.), 43
- coral tree (*Erythrina*), 210
- Coreopsis* (coreopsis), 248
- corn (*Zea mays* L.), 69, 78, 79, 94, 100, 101, 103, 107, 115, 119, 120, 125, 150, 171, 193, 210, 230, 234, 246, 249
- Cornus* (dogwood), 186
- Cornus stolonifera* Michx. (red-osier dogwood), 143
- Corylus* (hazelnut), 53
- Cotoneaster* (cotoneaster), 239
- cotton (*Gossypium*), 47, 101, 107, 126, 137, 246, 248, 249, 266
- cotton bolls, 100
- cotton mealybug (*Phenacoccus gossypii* T. & C.), 274
- cotton-rose (*Hibiscus mutabilis* L.), 137
- cotton, sea-island (*Gossypium barbadense* L.), 70
- cotton, wild (*Hibiscus moscheutos* L.), 69, 137, 138, 198, 324
- cottonrose (*Hibiscus mutabilis* L.), 137
- cottony-cushion scale (*Icerya purchasi* Maskell), 248, 274
- courbaril (*Hymenaea courbaril* L.), 242
- cowbane (*Oxypolis filiformis* (Walt.) Britton), 31
- cowpea (*Vigna*), 166, 242, 243, 246, 266
- coyotillo (*Karwinskia*), 101
- crab apple, wild (*Malus angustifolia* Ait.), 159, 239
- cranberry (*Vaccinium macrocarpum* Ait.), 93, 239
- crape myrtle (*Lagerstroemia indica* L.), 297
- Crataegus* (hawthorne), 26, 96, 123, 239, 245, 254, 258, 261
- Crataegus aestivalis* (Walt.) T. & G. (may haw), 264
- Crocantemum* see *Helianthemum*, 276
- Crossopetalum floridanum* Gardner [Myginda *ilicifolia*], 71
- Crotalaria* (crotalaria), 80, 244
- Crotalaria pumila* Ortega (low crotalaria), 280
- croton (garden var.-*Codiaeum*; wild var.-*Croton*), 45, 47, 80
- Croton* (wild croton), 46, 190
- Croton linearis* Jacq. (croton), 45
- crowbeard (*Verbesina* [*Ximenesia*]), 40, 105, 248
- Cruciferae, 37
- "Cuban jessamine" (unable to determine genus and species), 267
- cucumber (*Cucumis sativus* L.), 209
- cucumber, wild (*Echinocystis lobata* (Michx.) T. & G.), 209
- Cucumis* (melons), 69, 171, 209
- Cucumis sativus* L. (cucumber), 209
- Cucurbita* (squash), 209
- Cucurbita okeechobeensis* (Small) Bailey [*Pepo*] (Okeechobee gourd), 79
- cudweed, purple (*Gnaphalium purpureum* L.), 267
- cudweed, rabbit-tobacco (*Gnaphalium obtusifolium* L. [*polycephalum*]), 110
- cup-plant (*Silphium perfoliatum* L.), 259
- currants (*Ribes*), 248, 289
- currant, American black (*Ribes americanum* Mill. [*floridum*]), 289
- custard apple (*Annona*), 59
- Cydonia oblonga* Mill. (quince), 239, 264
- Cynanchum palustre* (Pursh) Heller [*Vincetoxicum*] (vincetoxicum), 63, 71
- Cynanchum scoparium* Nutt. [*Vincetoxicum*] (vincetoxicum), 151
- Cynara scolymus* L. (artichoke), 104
- Cynodon dactylon* (L.) Pers. (Bermuda grass), 54, 231
- Cyperus* (flatsedge), 255
- Cyperus esculentus* L. (chufa), 246
- cypress (*Taxodium*), 60, 79, 297
- cypress, bald (*Taxodium distichum* L.), 182
- Dactylis glomerata* L. (orchard-grass), 90
- Dactylopius* (a scale), 248
- Dactylopius confusus* Cockerell (a scale), 248
- Dactylopius tomentosus* (Lam.) (a scale), 248
- Dahlia* (dahlia), 248
- Dalbergia ecastophyllum* (L.) Britt. (rosewood), 35
- dandelion (*Taraxacum officinale* Weber), 77, 78, 189
- dandelion, false (*Pyrrhopappus carolinianus* (Walt.) DC.), 106, 248
- Dasistoma macrophylla* (Nutt.) Raf. [*Afzelia*] (wild foxglove), 103
- dates, 242
- Daubentonia punicea* DC., 130
- day jessamine (*Cestrum diurnum* L.), 26, 120, 198
- Decodon* (waterwillow), 66
- deerberry (*Vaccinium stamineum* L.), 82
- Delonix regia* Raf. (royal poinciana), 134
- Desmodium* [*Meibomia*] (beggarweed), 40, 51, 107, 253, 294
- Desmodium tortuosum* DC., 293
- devil's potato (*Echites umbellata* Jacq. [*echites*]), 64, 71, 151
- devilwood osmanthus (*Osmanthus americanus* (L.) Gray [*floridanus*]), 225
- Dianthus caryophyllus* L. (carnation), 267
- Dictamnus* (gas plant), 32
- Digitaria* [*Syntherisma*] (crabgrass), 101, 125, 150, 246
- Digitaria ischaemum* (Schreb.) Muhl. [*Syntherisma ipomoea*] (crabgrass), 113
- Digitaria sanguinalis* L. (crabgrass), 101, 125, 150, 246
- dill (*Anethum graveolens* L.), 31
- Diospyros* (persimmon), 80, 121, 137, 148, 156, 180, 196, 249, 256
- Diospyros ebenaster* Retz. (black sapote), 256
- Diospyros kaki* L. f. (Japanese persimmon), 81
- Dipholis salicifolia* (L.) DC. (bustic), 243
- Dirca* (leatherwood), 84
- Ditaxis blodgettii* see *Argythamnia blodgettii*, 280
- dirt dauber's nest, 135
- dock (*Rumex*), 49, 96
- dock, curly (*Rumex crispus* L.), 49
- dogbane (*Apocynum*), 65
- dogweed (*Dyssodia*), 36
- dogwood (*Cornus*), 186, 289
- dogwood, Jamaica (*Piscidia piscipula* (L.) Sarg.), 50, 294
- dogwood, red-osier (*Cornus stolonifera* Michx.), 143
- Dolichos* (dolichos), 244
- doveplum (*Coccoloba diversifolia* Jacq. [*floridana*]), 76, 161, 193, 198
- Drypetes lateriflora* (Sw.) Krug & Urban [*crocea*] (Guiana plum), 37, 211
- Dryopteris thelypteris* (L.) Gray (marsh fern), 95
- Duranta repens* L. [*plumieri*] (skyflower), 226
- dwarf poinciana (*Poinciana pulcherrima* L.) 242
- Dyssodia* (dogweed), 36
- ebony (*Pithecellobium flexicaule* Coult.), 242
- Echinacea* [*Brauneria*] (echinacea), 248
- Echinocystis lobata* (Michx.) T. & G. (wild cucumber), 209
- Echites*, 47

- Echites umbellata* Jacq. [*echites*] (devil's potato), 64, 71, 151
 eggplant (*Solanum melongena* var. *esculentum* Nees), 212, 278, 279
Eichhornia crassipes (Mart.) Solms. (water hyacinth), 203
 elder (*Sambucus*), 103, 215
 elder, marsh (*Iva frutescens* L.), 277, 296
 elder, shore (*Iva imbricata* Walt.), 260
 elm (*Ulmus*), 42, 60, 82, 83, 153, 155, 158, 179, 187, 247, 254, 274
Epilobium (willow weed), 105, 173
Erechtites, 150, 294
Erechtites hieracifolia (L.) Raf. (burnweed), 150, 294
Eremochloa ophiuroides (Munro) Hack. (centipede grass), 152, 212
 Ericaceae, 151
Erigeron (fleabane), 109
Erigeron philadelphicus L. (fleabane), 109
Eriobotrya japonica Thunb. (Japanese plum; loquat), 47, 151, 238, 242, 243, 249, 297
Eriochloa polystachya H. B. K. (carib grass), 202
Eriococcus quercus Comstock (a scale), 248
Erythrina (coral tree), 210
Erythrina corallodendrum L., 11
Erythrina glauca Willd. (coral tree), Puerto Rico record, 207
Erythrina herbacea L. (eastern coral tree, Cherokee bean), 207, 210, 216
Euclasta torquillalis (unrecognized plant name—Puerto Rico record), 202
Eugenia (eugenia; stopper), 258, 266
Eugenia myrtilloides Poir. [*buxifolia*] (boxleaf eugenia), 75
Eugenia rhombea Krug & Urban [*pro-cera*] (eugenia), 292, 294
Eupatorium (eupatorium), 108, 215, 254
Eupatorium odoratum L. (Christmas-bush eupatorium), 66
Eupatorium perfoliatum L. (boneset), 177
Eupatorium purpureum L. (bluestem joe-pye weed), 97
Eupatorium serotinum Michx. (late eupatorium), 288
Euphorbia buxifolia L. (euphorbia), 63
Euphorbia heterophylla L. [*cyathophora*] (wild poinsettia), 63, 80, 254
Euphorbia pulcherrima Willd. (poinsettia), 26, 46, 47, 63
 everlasting (*Anaphalis* or *Helichrysum*), 42, 110
 Fabaceae, 35, 36, 51
Fagus, 294
Fagus grandifolia Ehrh. (beech), 69, 76, 81, 155, 156
 false dragonhead (*Physostegia*), 256
 false indigo see indigo, false, 122
 falsenettle (*Boehmeria*), 42, 203, 207
 false sunflower, 106
Feijoa (feijoa), 297
 felt, 301
 fennel (*Foeniculum vulgare* Mill.), 288
 ferns, 94, 186, 212
 fern (*Blechnum*), 43
 fern (*Osmunda*), 94
 fern, chain (*Woodwardia*), 94
 fern, coarse (*Blechnum*), 43
 fern, leatherleaf (*Polystichum adiantiforme* J. Smith), 220
 fern, marsh (*Dryopteris thelypteris* (L.) Gray), 95
 fern, sweet (*Comptonia*), 84, 181, 241
 fiber glass, 135
Ficus (fig), 64, 71, 90, 287
Ficus aurea Nutt., 287
Ficus brevifolia Nutt. (wild fig), 44
Ficus carica L. (common fig), 44
Ficus sycomorosa L. (sycamore fig), 44
 fiddlewood (*Citharexylum*), 216
 fiddlewood, Florida (*Citharexylum fruticosum* L. [*villosum*]), 207, 216
 fig (*Ficus*), 44, 287
 fig, common (*Ficus carica* L.), 44
 fig, sycamore (*Ficus sycomorosa* L.), 44
 fig, wild (*Ficus brevifolia* Nutt.), 44
 figs, dried, 242
 fir, balsam (*Abies*), 99, 163, 244
 firethorn (*Pyraecantha coccinea* Roem.), 157, 239
 flame vine (*Pyrostegia ignea* (Vell.) Presl. [*venusta*]), 80
 flame vine, Mexican (*Senecio confusus* Britten), 26
 flatsedge (*Cyperus*), 255
Flaveria linearis Lag. (flaveria), 26, 288
 flax (*Linum*), 246
 fleabane (*Erigeron*), 109
 fleabane, marsh (*Pulchea odorata* Cass.), 110, 248
 Florida cranberry (*Hibiscus sabdariffa* L.), 213
 Florida fishpoison-tree (*Piscidia piscipula* (L.) Sarg.), 50
 Florida trema (*Trema micrantha* (L.) Blume), 43, 46, 76
Foeniculum vulgare Mill. (fennel), 288
 four o'clock (*Mirabilis jalapa* L.), 63
 foxglove (*Dasistoma macrophylla* Nutt.) Raf. [*Afzelia*], 103
Fragaria (strawberry), 100, 246, 262
 frangipani (*Plumeria*), 63
Fraxinus (ash), 60, 61, 160
 fungus, 140
Galactia (milkpea), 69
Galactia volubilis (L.) Britton [*pilosa*] (milkpea), 49
Galium (bedstraw), 165
 galls, cecidomyid, 260
 galls, cynipid, 286, 288
 galls, oak, 289
 galls, phylloxera, 263
 garden crops, 120
Gardenia (gardenia), 61
 gas plant (*Dictamnus*), 32
Gaura biennis L. (gaura), 67, 107
 gayfeather (*Liatris*), 108
Gaylussacia (huckleberry), 62, 144, 237
 general feeder, 78, 79, 84, 85, 87, 89, 99, 151, 167, 172, 181, 183, 186, 190
Genipa clusiaefolia (Jacq.) Griseb. [*americana*] (seven-year-apple), 65, 242
Gerardia (*gerardia*), 42, 103, 256
 ginger, wild (*Asarum*), 31
Ginkgo (ginkgo), 249
 glasswort (*Salicornia bigelovi* Torr.), 49
Gladiolus (*gladiolus*), 107
Gleditsia (honeylocust), 121
Gleditsia triacanthos L. (honey locust; sweet locust), 242
Glycine, 244
Glycine max (L.) Merr. (soybean), 119, 134
Gnaphalium obtusifolium L. [*polycephalum*] (rabbit tobacco cudweed), 110
Gnaphalium purpureum L. (purple cudweed), 267
 goldeneye (*Viguiera*), 248
 goldenrod (*Solidago*), 96, 98, 108, 109, 119, 163, 170, 189, 216, 254, 256, 258, 259, 260, 262
 golden shower (*Cassia fistula* L.), 87, 131, 236, 241
Gonolobus (milkvine), 38, 63
Gonolobus palustris (Pursh) Small, 202
 gooseberry, English (*Ribes grossularia* L.), 248
 gooseberry-tree (*Phyllanthus acidus* Skeels [*Cicca disticha*]), 191, 255
 gopher holes, 146
Gopherus polyphemus (Dandini), 329
Gordonia lasianthus (L.) Ellis (loblolly-bay), 157
Gossypium (cotton), 47, 101, 107, 126, 137, 246, 248, 249, 266
Gossypium barbadense L. (sea-island cotton), 70
 gourd (*Lagenaria*), 209
 gourd, Okeechobee (*Cucurbita okeechobeensis* (Small) Bailey [*Pepo*]), 79
 grain, 224, 250, 277
 Gramineae, 125
 grape (*Vitis*), 64, 66, 67, 80, 101, 171, 172, 197
 grape, fox (*Vitis labrusca* L.), 290
 grape, wild (*Vitis rufotomentosa* Small), 201, 294
 grapefruit (*Citrus paradisi* Macf.), 71, 100, 237, 242, 267, 269, 274, 311
 grass, 56, 101, 102, 124, 125, 145, 230, 231, 298
 Bermuda (*Cynodon dactylon* (L.) Pers.), 54, 231
 canary (*Phalaris*), 106
 carpet, 329
 Carib (*Eriochloa polystachya* H. B. K.), 202
 centipede (*Eremochloa ophiuroides* (Munro) Hack.), 152, 212
 crab (*Digitaria* [*Syntherisma*]), 101, 125, 150, 246
 Japanese (*Zoysia matrella* (L.) Merr.), 101, 231
 Johnson (*Sorghum halepense* Pers.), 246
 millet (*Setaria*), 91
 Napier (*Pennisetum purpureum* Schumacher), 234
 orchard (*Dactylis glomerata* L.), 90
 para (*Panicum purpurascens* Rad-di), 124, 130, 132

- pasture, 101
pepper (*Lepidium*), 37, 210
St. Augustine (*Stenotaphrum secundatum* (Walt.) Kuntze), 90, 145, 212
saltmeadow (*Spartina patens* (Ait.) Muhl. [juncea]), 126
saw (*Cladium jamaicensis* Crantz [Mariscus]), 56
sudan (*Sorghum vulgare* var. *sudanense* Hitchc.), 246
timothy (*Phleum pratense* L.), 94
wide-bladed marsh (*Spartina*), 76
grasses (see also grass), 38, 39, 40, 53, 54, 55, 56, 57, 77, 85, 86, 90, 91, 94, 125, 175
greybeard (*Hydrangea quercifolia* Bart.), 201, 212
Grindelia (gumweed), 288
groundcherry (*Physalis*), 107, 219
groundsel (*Senecio*), 253
guaba (*Inga vera* Willd.), 207
guava (*Psidium guajava* L.), 258, 291, 297
guava (*Psidium guajava* var. *pyriferum* L.), 75
Cuettarda elliptica Sw. (velvet seed), 75
Guiana plum (*Drypetes lateriflora* (Sw.) Krug & Urban [crocea]), 37, 211
Guilandina see *Caesalpinia*, 49
gum, black (*Nyssa sylvatica* Marsh), 70, 96, 124
gumbo limbo (*Bursera simarouba* (L.) Sarg. [gummifera]), 117, 187
gumweed (*Grindelia*), 288
Gutierrezia microcephala (DC.) A. Gray (gutierrezia), 260
Gyrotheca see *Lachnanthes*, 55
hackberry (*Celtis*), 42, 45, 61, 177, 245
Hamamelis (witch hazel), 83, 93, 134, 152, 254, 256
Hamelia patens Jacq. (scarlet bush), 35
hammock, 43
hawthorne (*Crataegus*), 26, 96, 123, 239, 245, 254, 258, 261
hazel, 286
hazelnut (*Corylus*), 53
Helentium (sneezeweed), 36
Helentium incisum (T. & G.) [helentium], 265
Helianthemum [*Crocianthemum*] (sun rose), 276
Helianthus (sunflower), 80, 248
Helianthus agrestis Pollard (sunflower), 296
Helichrysum (everlasting), 42
Heliopsis (heliopsis), 248
hemlock (*Tsuga*), 163, 182, 188
Hevea (rubber tree), 47, 66
Hibiscus (hibiscus), 47, 76, 102, 107, 138, 289, 292
hibiscus, Chinese (*Hibiscus rosa-sinensis* L.), 137
Hibiscus cannabinus L. (kenaf hibiscus), 137
Hibiscus esculentus L. (okra), 47, 69, 107, 137, 138, 261
Hibiscus moscheutos L. (wild cotton), 69, 137, 138, 198
Hibiscus mutabilis L. (cotton-rose), 137
Hibiscus rosa-sinensis L. (Chinese hibiscus), 137
Hibiscus sabdariffa L. (roselle, Florida cranberry), 107, 137, 213
Hibiscus tiliaceus L. [elatus] (mahoe), 69
hickory (*Carya* [*Hicoria*]), 63, 68, 83, 84, 121, 122, 132, 151, 152, 195, 240, 241, 261, 263, 283, 289, 293
Hicoria see *Carya*, 261, 268
hog-peanut (*Amphicarpa*), 36, 51
holly (*Ilex*), 84
holly, Japanese (*Ilex crenata* Thunb.), 297
honeysuckle, 249
honeysuckle (*Lonicera*), 65, 80, 89, 192
hop (*Humulus*), 42, 47, 120
hop-tree (*Ptelea*), 32
horse-brier (*Smilax rotundifolia* L.), 139
horse-chestnut (*Aesculus*), 257
horse gentian (*Triosteum*), 65
horse-mint (*Monarda*), 96
horsetail tree (*Casuarina equisetifolia* Forst.), 289
huckleberry (*Gaylussacia*), 62, 144, 237
Humulus (hop), 42, 47, 120
humus, 145
Hydrangea arborescens L. (hydrangea), 66
Hydrangea quercifolia Bartr. (greybeard), 201, 212
Hymenaea courbaril L. (courbaril), 242
Hymenocallis keyensis Small, 90
Hymenocallis rotatum Leconte [*Pan-cratiun*] (spider lily), 90
Hypelate paniculata Cambess., 195
Hypericum (St. John's wort), 186
Icacorea paniculata see *Ardisia escalonioides*, 263
Icerya purchasi Maskell (cottony-cushion scale), 248
ilama (*Annona diversifolia* Safford), 136
Ilex (holly), 84
Ilex crenata Thunb. (Japanese holly), 297
India canna (*Canna indica* L.), 219
indigo, false (*Amorpha*), 122
indigo, hairy (*Indigofera hirsuta* Harvey), 281
indigo, tree (*Indigofera tinctoria* L.), 249
indigo, yellow or wild (*Baptisia tinctoria* (L.) R. Br.), 52, 215
indigo, wild (*Baptisia*), 53, 121, 263
indigobush (*Amorpha fruticosa* L.), 34, 69
Indigofera (indigo), 249
Indigofera hirsuta Harvey (hairy indigo), 281
Indigofera tinctoria L. (tree indigo), 249
Indigofera verbasifolium (unrecognized plant name), 249
Inga vera Willd. (guaba), 207
Ipomoea (morning-glory vine), 59, 71, 205, 282, 296
Ipomoea batatas L. (sweet potato), 38, 59, 100, 101, 204, 212, 281
Iris (iris), 249, 256
Irish juniper (*Juniperus communis hibernica* Gord.), 281
ironweed (*Vernonia*), 26, 97
Italian broomstraw, 216, 304
Iva frutescens L. (marsh elder), 277, 296
Iva imbricata Walt. (shore elder), 260, 269, 278
Ixora coccinea L. (ixora), 193
jackbean (*Canavalia ensiformis* DC.), 242
Jacobinia coccinea see *Odontonema strictum*, 203
Japanese cane, (unable to determine genus and species), 246
Japanese persimmon (*Diospyros kaki* L.f.), 81
Japanese plum (*Eriobotrya japonica* Thunb.), 297
jasmine, star (*Trachelospermum jasminoides* Lem.), 46
jasmine, night blooming see night blooming jessamine, 59, 60, 62, 88
Jatropha (nettlepurge), 63, 66
Jatropha manihot L. (coral plant), 43
jessamine, day (*Cestrum diurnum* L.), 26, 120, 198
jessamine, night-blooming (*Cestrum nocturnum* L.), 59, 60, 62, 88
Juglans (walnut), 63, 69, 81, 121, 122, 151, 152, 156, 240, 241, 249, 261, 268
Juglans cinerea L. (butternut), 143, 240
Juglans regia L. (English walnut), 242
jumping beans, 264
jumping plant louse, 274
Juncus (rush), 255
juniper (*Juniperus*), 48, 177, 275
Juniperus (juniper), 48, 177, 275
Juniperus communis hibernica Gord. (Irish juniper), 281
Juniperus silicicola (Small) Bailey (southern redcedar), 48
Jussiaea angustifolia Lam. (waterprimrose), 66
Karwinskia (coyotillo), 101
kassod-tree (*Cassia siamea* Lam. [*Sci-acassia*]), 241
kenaf (*Hibiscus cannabinus* L.), 137
Kentia (kentia), 297
Kermes (a mealybug), 248, 320
Kigelia pinnata DC. (sausage-tree), 198
knotweed (*Polygonum*), 96, 114, 173, 260
Krugiodendron ferreum (Vahl) Urban [*Condalia ferrea*] (leadwood), 101, 165, 292, 302
kudzu vine (*Pueraria thunbergiana* (S. & Z.) Benth.), 134
Kuhnistera pinnata see *Petalostemum corymbosum*, 181
Lachnanthes [*Gyrotheca*] (redroot), 55

- Lactuca* (Bibb lettuce), 119
Lactuca sativa L. (lettuce), 78, 98, 248
Lagenaria (gourd), 209
Lagerstroemia indica L. (crape myrtle), 297
Laguncularia racemosa (L.) Gaertn. f. (white or false mangrove), 72, 243, 280
 lancewood (*Nectandra coriacea* (Sw.) Griseb. [*Persea catesbyana*; *Nectandra willdenowiana*]), 71, 183, 216, 236
Lantana (lantana), 252
Lantana aurora (unrecognized plant name), 262
Lantana camara L. (lantana), 26, 162
Lantana involucrata L. [*odorata*], 166
 larch (*Larix*), 81
Larix (larch), 81
Lasiacis divaricata (L.) Hitchc. [*Panicum divaricatum*] (wild bamboo), 211, 290
 laurel, 258
 laurel cherry, Carolina (*Prunus caroliniana* (Mill.) Ait.), 26, 159
Lavandula (lavender), 196
 lawns, 86
 leadwood (*Krugiodendron ferreum* (Vahl) Urban [*Condalia ferrea*]), 101, 165
 leadwort (*Plumbago*), 49, 80
 leatherleaf fern (*Polystichum adiantiforme* J. Smith), 220
 leatherwood (*Dirca*), 84
 leaves, dead, 145, 146, 148, 149
 leaves, dry, 146
Lecaniodiaspis (a scale), 248
Lecanium, black, 248
Lecanium arizonensis King (a scale), 248
 legumes, 144
 Leguminosae, 26, 33, 51, 244
 lemon (*Citrus limon* Burm. f.), 237, 267
 lemon, rough (*Citrus limon* Burm. f.), 80
Lepidium (peppergrass), 37, 210
Lespedeza (bush clover), 80, 125, 324
Lespedeza bicolor Turez. (bush clover), 293
Lespedeza cuneata (Dumont) G. Don [sericea] (bush clover), 238
Lespedeza thunbergii Nakai (bush clover), 293
 lettuce (*Lactuca sativa* L.), 78, 98, 248
 lettuce, Bibb (*Lactuca*), 119
Leucaena glauca Benth., 275
Liatris (gayfeather), 108
 lichens, 75, 145, 146
Ligustrum (privet), 60, 61, 84
 lilac (*Syringa*), 61, 84, 160
Lilium (lily), 200, 267
Lilium canadense L. (meadow lily), 200
Lilium longiflorum var. *eximium* Baker (Easter lily), 267
 lily, calla (*Zantedeschia*), 219
 lily, Easter (*Lilium longiflorum* var. *eximium* Baker), 267
 lily, meadow (*Lilium canadense* L.), 200
 lily, spider (*Hymenocallis rotatum* Leconte [*Pancratium*]), 90
 lily, wild, 32
 lime (*Citrus aurantifolia* Christm.), 267
 Liminaceae, 144
Linaria (toadflax), 42
Linaria canadensis (L.) Dum. (toadflax), 92
 linden (*Tilia*), 42, 81, 82, 151, 249, 293
Lindera benzoin Blume (spicebush), 32
Linum (flax), 246
Lippia (lippia), 42, 43
Lippia lanceolata Michx. (lippia), 40
Lippia nodiflora (L.) Michx. (lippia), 40
Liquidambar (sweetgum), 79, 84, 117, 249
Liquidambar styraciflua L. (sweetgum), 245
Liriodendron (tuliptree), 68, 183, 198
Litchi chinensis Sonn. (lychee), 69, 162, 263, 296
Livistona chinensis R. Br. (Chinese fan palm), 242
 loblolly-bay (*Gordonia lasianthus* (L.) Ellis), 157
 locust (*Robinia*), 51, 78, 122, 124, 242, 244, 264
 locust, honey (*Gleditsia*), 121, 128, 242
 locust, black (*Robinia pseudoacacia* L.), 128, 246
 locust, wild, 130
Lonicera (honeysuckle), 65, 89
Lonicera dioica L. (honeysuckle), 192
Lonicera tatarica L. (Tatarian honeysuckle), 80
 loquat (*Eriobotrya japonica* Thunb.), 47, 151, 238, 242, 243, 249, 267, 274, 284
Lotus (trefoil lotus), 243
Ludwigia (seedbox), 42
 lupine (*Lupinus*), 33, 80, 215, 246, 263
Lupinus (lupine), 33, 80, 215, 246, 263
Lupinus cumulicola Small (sky-blue lupine), 215
Lupinus diffusus Nutt. (spreading lupine), 47
 lychee (*Litchi chinensis* Sonn.), 69, 162, 263, 267
Lycopersicon esculentum Mill. (tomato), 59, 68, 87, 101, 107
Lysiloma (lysiloma), 241
Lythrum (lythrum), 105

Magnolia (magnolia), 80
Magnolia grandiflora L. (southern magnolia, bullbay), 249, 255, 294, 324
Magnolia virginiana L. [*glauca*] (sweetbay), 32, 68, 294
 mahoe (*Hibiscus tiliaceus* L.), 69
 mahogany (*Swietenia*), 236, 241
 maize (*Zea mays* L.), 69
Malpighia glabra L. (Barbados-cherry), 52, 215
Malus (apple), 82, 83, 100, 123, 151, 155, 156, 157, 159, 160, 178, 184, 187, 239, 242, 249, 258
Malus angustifolia Ait. (wild crab apple), 159, 239
 Malvaceae, 52, 61
Malvaviscus (malvaviscus), 102
Malvaviscus arboreus var. *drummondii* (T. & G.) Schery (malvaviscus), 198
 mangels (*Beta vulgaris* L.), 201
Mangifera indica L. (mango), 157, 162, 267
 mango (*Mangifera indica* L.), 157, 162, 267
 mangrove (*Rhizophora*), 190, 254
 mangrove, American or red (*Rhizophora mangle* L.), 50, 193, 195, 264
 mangrove, black (*Avicennia nitida* Jacq. [*marina*]), 35
 mangrove, white or false (*Laguncularia racemosa* (L.) Gaertn. f.), 72, 243
 maple (*Acer*), 69, 76, 81, 83, 87, 92, 124, 143, 155, 156, 160, 175, 187, 189, 190, 244
 maple, bark of dead, 140
 maple, flowering (*Abutilon striatum* Dickson), 137
 maple, silver or white (*Acer saccharinum* L. [*dasycarpum*]), 255, 288
 maple, swamp or red (*Acer rubrum* L.), 70, 255, 268, 288
 marigold (*Tagetes*), 36, 98, 248
 marine ivy (*Cissus incisa* (Nutt.) Des Moul), 66
Mariscus jamaicensis see *Cladium jamaicensis*, 56
 marlberry (*Ardisia escallonioides* Schiede & Deppe [*Ardisia pickeringia*; *Icacorea paniculata*]), 191, 195, 263
 marsh elder (*Iva frutescens* L.), 277, 296
 mayapple (*Podophyllum*), 40
 may haw (*Crataegus aestivalis* (Walt.) T. & G.), 264
 mealybug (*Kermes*), 248
 meadow-beauty (*Rhexia*), 107
Medicago hispida Gaertn. (toothed bur clover), 53
Medicago sativa L. (alfalfa), 33, 53, 134
Meibomia see *Desmodium*, 40 51, 107, 253
Melaleuca leucadendron L. (punk tree), 37, 59
Melanthera (melanthera), 247, 282, 288
Melanthera deltoidea Michx. (melanthera), 282, 288
Melanthera radiata Small (melanthera), 247, 248
Melia (chinaberry), 26
 melons (*Cucumis*), 69, 171, 209
Melothria pendula L. [*grendula*] (melothria), 209
Menispermum (moonseed), 40
Mentha (mint), 26, 96
Mesosphaerum rogosum (L.) Pollard, 274
Metopium toxiferum (L.) Krug & Urban [*Rhus metopium*] (Florida poison-tree, poisonwood), 26, 255
 Mexican flamevine (*Senecio confusus* Britten), 26
Mikania scandens (L.) Willd. (climbing hempweed), 70

- milkberry (*Chiococca alba* (L.) Hitchc. [racemosa]), 64, 67
 milkpea (*Galactia*), 69, 49
 milkvine (*Gonolobus*), 38, 63
 milk vetch (*Astragalus*), 33
 milkweed (*Asclepias*), 38, 44, 77, 76
 milletgrass (*Setaria*), 91
 milo maize (*Sorghum*), 246, 274
 mimosa (*Albizia*), 60, 157
Mimosa pudica L. (sensitive plant), 36
Mimusops emarginata (L.) Britton (wild sapodilla), 243
 mint (*Mentha*), 26, 96
Mirabilis jalapa L. (four o'clock), 63
 mistletoe (*Phoradendron*), 242
Monarda (horse-mint), 96
 moonflower vine (*Calonyction*), 59, 196
 moonseed (*Menispermum*), 40
Morenia (morenopalm), 63
 morning-glory vine (*Ipomoea*), 59, 71, 205, 273
Morus rubra L. (mulberry, red or American), 208, 249
 mosses, 75
 mulberry, red or American (*Morus rubra* L.), 208, 249
 mullein (*Verbascum*), 256
 Musa (banana), 80
 mushroom (*Agaricus campestris* L.), 140, 305
Myginda ilicifolia see *Crossopetalum floridanum*, 71
Myrica (bayberry), 121, 156, 162, 241, 258
Myrica cerifera L. (wild myrtle), 195, 238, 258, 260, 302
 myrsine (*Rapanea guayanensis* Aubl. [*Myrsine floridana*]), 195, 267
 myrtle (*Myrtus*), 11, 37, 267, 279
 myrtle, wild (*Myrica cerifera* L.), 195, 238, 258, 260
Myrtus (myrtle), 11, 37
Narcissus (narcissus), 90
Narcissus tazetta var. *orientalis* Hort. (Chinese lily), 90
 nasturtium (*Tropaeolum*), 37
 necklace pod (*Sophora tomentosa* L.), 215
Nectandra coriacea (Sw.) Griseb. [*Persea catesbyana*; *Nectandra willdenowiana*] (lancewood), 71, 183, 216, 236, 269
 nectarine (*Prunus persica nectarina* (Ait.) Maxim.), 263, 288
Nelumbo lutea (Willd.) Pers. (American water-lotus), 216
Neolecanium cornuparvum (Thro) (magnolia scale), 248
Nepeta cataria L. (catnip), 51, 201
Nerium (oleander), 38, 63, 71, 151
 nettle (*Urtica*), 42
 nettlespurge (*Jatropha*), 63, 66
 New-Jersey-tea (*Ceanothus americanus* L.), 175
 nicker bean (*Caesalpinia*), 49, 238
Nicotiana tabacum L. (tobacco), 59, 78, 79, 86, 87, 107, 119, 212
 night-blooming jessamine (*Cestrum nocturnum* L.), 59, 60, 62
 nightshade (*Solanum*), 107, 212, 218, 219, 266
 nightshade, black (*Solanum nigrum* L.), 107
Nuphar (bonnet lily), 103, 114
 nuts, 242
Nymphaea (waterlily), 103, 221
Nyssa (tupelo), 186, 289
Nyssa sylvatica Marsh (black gum), 70, 96, 124
 oak (*Quercus*), 47, 48, 53, 69, 72, 83, 84, 92, 93, 95, 121, 122, 123, 124, 129, 132, 152, 153, 154, 155, 156, 157, 158, 159, 160, 162, 163, 164, 170, 179, 180, 183, 189, 190, 192, 193, 194, 196, 206, 240, 244, 249, 258, 272, 285, 286, 289, 290, 292, 293, 297
 oak, burr (*Quercus macrocarpa* Michx.), 124
 oak, live (*Quercus virginiana* Mill.), 69, 123, 128, 132, 157, 158, 184, 188, 196, 199, 238, 269, 285
 oak, scrub (*Quercus ilicifolia* Wang.), 48, 52, 123, 238, 279, 288
 oak, swamp (*Quercus palustris* Muenchh.), 195
 oak, turkey (*Quercus laevis* Walt.), 80, 265
 oak, water (*Quercus nigra* L.), 152, 288, 289
 oak, white (*Quercus alba* L.), 128
Odontonema strictum Kuntze [*Jacobinia coccinea*] (cardinal's guard), 203
Oenothera (oenothera), 67, 105, 201
Oenothera biennis L., 323
 Okeechobee gourd (*Cucurbita okeechobeensis* (Small) Bailey [Pepo]), 79
 okra (*Hibiscus esculentus* L.), 47, 69, 107, 137, 138, 261, 280
Olea (olive), 249
 oleander, (*Nerium*), 38, 63, 71, 151
 oleander, yellow (*Thevetia peruviana* Schum. [nereifolia]), 208
 olive (*Olea*), 249
 Onagraceae, 66, 68
 onion (*Allium*), 101
 opopanax (*Vachellia insularis* Small), 242
Opuntia [*Platyopuntia*] (prickly pear), 248, 249, 318
Opuntia leptocaulis L. [*cylindropuntia*] (prickly pear), 249
 orange (*Citrus sinensis* Osbeck), 80, 196, 237, 242, 243, 267, 269, 281, 284, 292, 297, 298
 orange, pineapple (*Citrus sinensis* Osbeck cv pineapple), 297
 orchid tree (*Bauhinia*), 242
 ornamentals, 69, 163, 191, 297, 318
Orthocarpus (owl clover), 256
Oryza sativa L. (rice), 125
Osmanthus americanus (L.) Gray [*floridanus*] (devilwood osmanthus), 225
Osmunda (fern), 94
Oxypolis filiformis (Walt.) Britton (cowbane), 31
Palafoxia (palafoxia), 247
 palm (*Raphis*), 69
 palm, cabbage (*Sabal palmetto* (Walt.) Lodd.), 243
 palm, Canary Island date (*Phoenix canariensis* Hort. ex Chabaud), 276
 palm, Chinese fan (*Livistona chinensis* R. Br.), 242
 palm, coconut (*Cocos nucifera* L.), 58, 75, 136
 palm, royal (*Roystonea*), 298
 palm, saw cabbage (*Paurotis wrightii* (Griseb.) Britton), 58
 palm, senegal date (*Phoenix reclinata* Jacq.), 276
 palm, silver (*Coccothrinax argentata* (Jacq.) Bailey), 257, 278
 palm, Mexican Washington (*Washingtonia robusta* Wendl.), 276
 palmetto (*Sabal*), 49, 58
 palmetto, cabbage (*Sabal palmetto* (Walt.) Lodd.), 80
 palmetto, saw or scrub (*Serenoa repens* (Bartr.) Small), 46, 47, 55, 69, 135, 191, 243
Pancreatium rotatum see *Hymenocallis rotatum*, 90
Panicum clandestinum L. (grass), 290
Panicum divaricatum see *Lasiacis divaricata*, 211
Panicum purpurascens Raddi (Paragrass), 124, 130, 132
 pansy (*Viola tricolor* var. *hortensis* DC.), 40
 papaw (*Asimina*), 60, 225, 262
 papaya (*Carica*), 63, 66, 242, 243
 paradise tree (*Simarouba glauca* DC.), 292
Parietaria (pellitory), 42
Parmentiera cereifera Seem. (candle-tree), 226
 parsley (*Petroselinum*), 41
Parthenocissus quinquefolia (L.) Planch. (Virginia creeper), 172
 partridge-pea (*Cassia fasciculata* Michx. [*Chamaecrista*]), 26, 242, 244
Passiflora (passion flower), 31, 39, 40, 61
Paurotis wrightii (Griseb.) Britton (saw cabbage palm), 58
 pea, low, 76
 peach (*Prunus persica* Batsch), 242, 249, 274, 288, 289
 peanuts (*Arachis hypogaea* L.), 35, 101, 134, 246, 267, 280, 291
 peanut hay, 224
 pear (*Pyrus*), 249, 258, 264, 297
 peas (*Pisum*), 107, 134, 244
 peas, black-eyed, 79, 242, 243
 pecan (*Carya illinoensis* Koch), 68, 70, 79, 121, 122, 123, 136, 152, 156, 159, 196, 238, 239, 240, 241, 249, 261, 263, 267, 272, 289, 293, 317, 319, 328
 pecan, bitter (*Carya*), 121
 pellitory (*Parietaria*), 42
 pencil flower (*Stylosanthes biflora* (L.) B.S.P.), 35
Pennisetum purpureum Schumacher (Napier grass), 234
Penstemon (beard-tongue), 256
Peperomia (peperomia), 137
 Pepo okeechobeensis see *Cucurbita okeechobeensis*, 79
 pepper (*Piper*; *Capsicum*), 67, 107, 212, 267
 pepper, bell or sweet (*Capsicum frutescens* var. *grossum* Bailey), 278
 pepper, Brazilian (*Schinus terebinthifolius* Raddi), 196

- pepper, red (*Capsicum frutescens* L.), 219, 278
 peppergrass (*Lepidium*), 37
 periwinkle (*Vinca*), 59
 periwinkle, Madagascar (*Vinca rosea* L.), 26, 59
Persea (bay; avocado), 32, 292
Persea americana Mill. (avocado), 69, 157, 183, 236, 265, 297
Persea borbonia (L.) Spreng. (red bay), 156, 292, 294
Persea catesbyana see *Nectandra coriacea*, 71, 183, 216, 236
 persimmon (*Diospyros*), 80, 121, 137, 143, 156, 180, 196, 249, 256, 272, 288, 328
Petalostemum corymbosum Michx. [*Kuhnistera pinnata*] (prairie-clover), 181
Petroselinum (parsley), 41
Petroselinum petroselinum [P. *crispum* Nym., according to Bailey 1949] (parsley), 41
Petunia (petunia), 26, 59, 60, 63, 64, 66, 67
Phalaris (canary grass), 106
Phaseolus (beans), 47, 49, 51, 69, 101, 104, 107, 119, 144, 150, 244, 246
Phaseolus limensis Macf. (lima bean), 242, 243, 244, 246, 261
Phenacoccus gossypii T. & C. (cotton mealybug), 274
Philadelphus (syringa), 171
 philibertia (*Sarcostemma* [*Philibertia*]), 63, 71
Phleum pratense L. (timothy), 94
Phlox (phlox), 59
Phlox drummondii Hook. (phlox), 167
Phoenix (palm), 58
Phoenix canariensis Hort. ex Chabaud (Canary Island date palm), 276
Phoenix reclinata Jacq. (senegal date palm), 276
Phoradendron (mistletoe), 242
Photinia serrulata Lindl. (Chinese photinia), 297
Phyla lanceolata (Michx.) Greene, 252
Phyllanthus (phyllanthus), 57, 191
Phyllanthus acidus Skeels [*Cicca disticha*] (gooseberry-tree), 191, 255
Physalis (ground-cherry), 107, 219
Physostegia (false dragonhead), 256
Phytolacca americana L. [*decandra*], 276
Picea (spruce), 87, 99, 177, 245
Picea rubens Sarg. (tamarack), 87
 pickerel-weed (*Pontederia*), 55, 56, 103
 pigeon pea (*Cajanus*), 243
 pigeon-plum (*Coccoloba diversifolia* Jacq. [*floridana*]), 76, 161, 193, 198
 pigweed (*Chenopodium*), 52, 78, 114
 pine (*Pinus*), 48, 61, 81, 87, 99, 129, 158, 159, 182, 188, 237, 245, 246, 249, 257, 258, 272, 274, 298, 312, 313, 319, 322
 pine, Australian (*Casuarina*), 289
 pine, Caribbean (*Pinus elliottii* Engelm.), 70, 317
 pine, loblolly or oldfield (*Pinus taeda* L.), 61, 263
 pine, longleaf or yellow (*Pinus palustris* Mill.), 3, 159, 246, 257, 262, 263
 pine, pitch (*Pinus rigida* Mill.), 70, 188, 322
 pine, red (*Pinus resinosa* Ait.), 188, 257
 pine, Scotch (*Pinus sylvestris* L.), 257
 pine, scrub (*Pinus clausa* (Chapm.) Vasey), 188
 pine, slash (*Pinus elliottii* Engelm.), 237, 238, 246, 257, 263, 273
 pine, Virginia (*Pinus virginiana* Mill.), 61
 pine, white (*Pinus strobus* L.), 70, 188, 257, 269
 pine, yellow (*Pinus palustris* Mill.), 277
Pinus (pine), 48, 61, 81, 87, 99, 129, 158, 159, 182, 188, 237, 245, 246, 249, 257, 258, 272, 274, 298, 312, 313, 319, 322
Pinus clausa (Chapm.) Vasey (scrub pine), 188
Pinus elliottii Engelm. (Caribbean pine; slash pine), 70, 237, 238, 246, 257, 258, 263, 273, 285, 317
Pinus palustris Mill. (longleaf pine; yellow pine), 3, 159, 246, 257, 262, 263, 277, 285
Pinus resinosa Ait. (red pine), 188, 257
Pinus rigida Mill. (pitch pine), 70, 188
Pinus strobus L. (white pine), 70, 188, 257
Pinus sylvestris L. (Scotch pine), 257
Pinus taeda L. (loblolly pine; oldfield pine), 61, 263
Pinus virginiana Mill. (Virginia pine), 61
Piscidia piscipula (L.) Sarg. (Jamaica-dogwood; Florida fishpoison-tree), 50
Pisonia aculeata L. (pisonia), 174, 206, 276, 290
Pisonia obtusata see *Torrubia longifolia*, 276, 290
Pisum (peas), 107, 134, 244
 pitcher-plant (*Sarracenia*), 113, 320
Pithecellobium (pithecellobium; apes-earring), 49, 131, 267
Pithecellobium dulce Benth. (Guama-chil apes-earring), 34, 130
Pithecellobium flexicaule Coult. (ebony), 242
Pithecellobium guadalupense (Pers.) Chapm. (black-bead), 34, 35
Plantago (plantain), 42, 77, 78, 80, 86, 96
 plantain (*Plantago*), 42, 77, 78, 80, 86, 96
 plastic, 135
Platanus (sycamore), 76, 234
Platanus occidentalis L. (buttonwood), 76, 238, 262
Platyopuntia see *Opuntia*, 248
Pluchea odorata Cass., 296
 plum (*Prunus*), 40, 47, 48, 61, 68, 83, 84, 123, 159, 178, 239, 249, 258, 288
 plum, beach (*Prunus maritima* Marsh.), 288
 plum, Japanese (*Eriobotrya japonica* Thunb.), 297
 plum, natal (*Carissa grandiflora* A. DC.), 242
 plum, wild (*Prunus americana* Marsh.), 26, 46, 51, 123, 159, 323
Plumbago (leadwort), 49, 80
Plumbago capensis Thunb., 100
Plumeria (frangipani), 63
Plumeria rubra L. (frangipani), 63
Podophyllum (mayapple), 40
 poinciana, dwarf (*Poinciana pulcherrima* L.), 242
Poinciana (poinciana), 130, 134
Poinciana pulcherrima L. (dwarf poinciana), 242
 poinsettia (*Euphorbia pulcherrima* Willd.), 26, 46, 47, 63
 poinsettia, wild (*Euphorbia heterophylla* L. [*Poinsettia heterophylla*; *Poinsettia cyathophora*]), 63, 80, 254
 poison ivy (*Rhus radicans* L.; *R. toxicodendron* L.), 49, 117
 poison-tree, Florida (*Metopium toxiferum* (L.) Krug & Urban [*Rhus metopium*]), 26, 255
 poisonwood (*Metopium toxiferum* (L.) Krug & Urban [*Rhus metopium*]), 26, 255
Polygala cumulicola Small [*Asemeia*] (polygala), 97
Polygonum (knotweed), 96, 114, 173, 260
Polystichum (fern), 263, 283
Polystichum adiantiforme J. Smith (leatherleaf fern), 220
 pomegranate (*Punica granatum* L.), 242
 pomelo (*Citrus maxima* var. *uvacarpa* Merr. & Lee [*paradisi*]), 297
 pondapple (*Annona glabra* L. [*laurifolia*]), 59, 136, 257
 pondweed (*Potamogeton natans* L.), 221
Pongamia pinnata (L.) Pierre (pongam), 50
Pontederia (pickerel-weed), 55, 56, 103
Pontederia cordata L. (pickerel-weed), 55, 56, 103
 poplar (*Populus*), 42, 44, 82, 84, 122, 157, 159, 181, 249
Populus (poplar, aspen), 120, 151, 272
Portulaca (portulaca; purslane), 40, 68, 86
Potamogeton natans L. (pondweed), 221
 potato, Irish (*Solanum tuberosum* L.), 59, 120, 200, 278, 300
 potato tree (*Solanum verbascifolium* L.), 212
 potato, sweet (*Ipomoea batatas* L.), 38, 59, 100, 101, 204, 212, 281
 prickly ash (*Zanthoxylum*), 32
 prickly pear (*Opuntia*), 248, 249
 prickly spiderflower (*Cleome rufidosperma* DC. [*celeata*]), 37
 privet (*Ligustrum*), 60, 61, 84
 prune (*Prunus*), 40, 47, 48, 61, 68, 83, 84, 123, 159, 178, 239, 249, 258
Prunus (plum; prune), 40, 47, 48, 61, 68, 83, 84, 123, 159, 178, 239, 249, 258, 268
Prunus americana Marsh. (wild plum), 26, 46, 51, 123, 159, 277
Prunus amygdalus Batsch (almond), 196

- Prunus caroliniana* (Mill.) Ait. (Carolina laurel cherry), 26, 159
Prunus maritima Marsh. (beach plum), 288
Prunus persica Batsch (peach), 242, 249
Prunus persica var. *nectarina* (Ait.) Maxim. (nectarine), 263
Prunus serotina Ehrh. (black or wild cherry), 32, 44, 47, 62, 84, 94, 123, 157, 158, 159, 167, 171, 178, 185, 194, 239
Prunus virginiana L. (choke cherry), 89, 94
Pseudococcus (a scale), 248
Psidium guajava L. (common guava), 75, 281
Psidium guajava var. *pyriferum* L. (guava), 258
Psychotria nervosa Sw. (wild coffee), 201
Psychotria undata Jacq. (wild coffee), 201, 217, 218, 296
Ptelea (hop-tree), 32
Pteridium (bracken), 186
Pterocaulon undulatum (Walt.) C. Mohr (blackroot), 110
Pueraria thunbergiana (S. & Z.) Benth. (kudzu vine), 134
Pulchea odorata Cass. (marsh flea-bane), 110, 248
Pulvinaria amygdali Cockerell (a scale), 248
Pulvinaria bigeloviae Cockerell (a scale), 248
Pulvinaria vitis (Linn.) (a scale), 248
pumpkin (*Cucurbita*), 209
pumpwood (*Cecropia*), 64
Punica granatum L. (pomegranate), 242
punk tree (*Melaleuca leucadendron* L.), 37, 59
purslane (*Portulaca*), 40, 68, 86, 325
pusley, 41
pustle scale (*Asterolecanium pustulans* (Ckll.)), 274
Pyracantha coccinea Roem. (firethorn), 157, 239
Pyrola (shinleaf), 180
Pyrostegia ignea (Vell.) Presl. [*venusta*] (flame vine), 80
Pyrrhoppappus carolinianus (Walt.) DC. (false dandelion), 106, 248
Pyrus (pear), 249, 258, 264
Quercus (oak), 47, 48, 53, 69, 72, 83, 84, 92, 93, 95, 121, 122, 123, 124, 129, 132, 152, 153, 154, 155, 156, 157, 158, 159, 160, 162, 163, 164, 170, 179, 180, 183, 189, 190, 192, 193, 194, 196, 206, 240, 244, 249, 258, 294
Quercus alba L. (white oak), 128
Quercus ilicifolia Wang. (scrub oak), 48, 52, 123, 238
Quercus laevis Walt. (turkey oak; scrub oak), 80, 265, 268, 272
Quercus macrocarpa Michx. (burr oak), 124
Quercus nigra L. (water oak), 152
Quercus palustris Muenchh. (swamp oak), 195
Quercus virginiana Mill. (live oak), 69, 123, 128, 132, 157, 158, 184, 188, 196, 199, 238
quince (*Cydonia oblonga* Mill.), 239, 264, 268
radish (*Raphanus sativus* L.), 211
ragweed (*Ambrosia*), 104, 109, 116, 249, 253, 260, 282
ragweed, great (*Ambrosia trifida* L.), 104, 260
raisins, 242
ramie (*Boehmeria nivea* (L.) Gaud.), 79, 207
Randia aculeata L. (randia), 167, 198, 267, 294
Rapanea guayanensis Aubl. [*Myrsine floridana*] (myrsine), 195
Raphanus sativus L. (radish), 211
raspberry (*Rubus*), 262
redbud (*Cercis*), 32, 69, 157, 279
redbud, eastern (*Cercis canadensis* L.), 196
redroot (*Lachnanthes* [*Gyrotheca*]), 55
Rhapis (palm), 69
Rhexia (meadow-beauty), 107
Rhizophora (mangrove), 190, 254
Rhizophora conjugata L., 11
Rhizophora mangle L. (American red mangrove), 50, 193, 195, 264
Rhododendron (azalea), 26, 59, 67, 69, 82, 151, 156, 171, 195
Rhus (sumac), 116, 117, 152, 164, 244, 249, 254
Rhus metopium see *Metopium toxiferum*, 26, 255
Rhus radicans L. (poison ivy), 49, 117
Rhus toxicodendron L. (poison ivy), 49, 117
Rhus typhina L. (staghorn sumac), 117
Rhus vernix (L.) Kuntze [*Toxicodendron vernix*] (poison sumac), 116
Ribes (currant), 248
Ribes americanum Mill. [*floridum*] (American black current), 289
Ribes grossularia L. (English gooseberry), 248
rice (*Oryza sativa* L.), 125
Ricinus communis L. (castor bean), 80, 100, 101
Rivina humilis L. (rouge-plant), 267
Robinia (locust), 51, 78, 122, 124, 242, 244, 264
Robinia pseudoacacia L. (black locust), 128, 246, 272
Rosa (rose), 42, 64, 69, 107, 156, 159, 249, 257, 267
Rosaceae, 62, 114
rosary pea (*Abrus*), 49
rose (*Rosa*), 42, 64, 69, 107, 156, 159, 249, 257, 267
rosegentian (*Sabatia*), 126
roselle (*Hibiscus sabdariffa* L.), 107, 137
rosewood (*Dalbergia ecastophyllum* (L.) Britt.), 35
rouge-plant (*Rivina humilis* L.), 267
royal palm (*Roystonea*), 298
royal poinciana (*Delonix regia* Raf.), 134
Roystonea (royal palm), 298
rubber tree (*Hevea*), 47, 66
Rubiaceae, 65, 68
Rubus (blackberry; raspberry), 84, 163, 164, 175, 258, 262
Rudbeckia (coneflower), 248, 260
rugs, wool, 301
Rumex (dock), 49, 96
Rumex acetosella L. (sheep sorrel), 42
Rumex crispus L. (curly dock), 49
rush (*Juncus*), 255
Sabal (palmetto), 49, 58
Sabal glaucescens Lodd., 278
Sabal longipedunculata Hort., 278
Sabal palmetto (Walt.) Lodd. (cabbage palm; cabbage palmetto), 80, 276, 287
Sabal parviflora Becc., 296
Sabatia (rosegentian), 126
Saccharum officinarum L. (sugar cane), 57, 85, 91, 99, 101, 106, 125, 234, 246, 291
saffronplum (*Bumelia celastrina* H. B. K. [*angustifolia*]), 154
Sagittaria (arrowhead), 119
St. John's wort (*Hypericum*), 186
Saintpaulia (African violet), 267
Saissetia oleae (Bernard) (a scale), 248
Salicornia bigelovi Torr. (glasswort), 49
Salix (willow), 42, 44, 62, 76, 80, 82, 83, 84, 93, 122, 132, 145, 151, 156, 157, 171, 178, 181, 261, 262, 272
Salix caroliniana Michx. [*longipes*] (coastal-plain willow), 157
salt meadow cordgrass (*Spartina patens* (Ait.) Muhl. [*juncea*]), 126
saltwort (*Batis maritima* L.), 37
saman (*Samanea*), 131
Sambucus (elder), 103, 215
sandspur (*Cenchrus tribuloides* L.), 86
sand-verbena (*Abronia villosa* Wats.), 173
Sapindus drummondii Hook. & Arn. (soapberry), 242
Sapium sebiferum (L.) Roxb. [*Triadica sebifera*] (Chinese tallowtree), 130
sapidilla (*Achras sapota* L.), 243
sapidilla, wild (*Mimusops emarginata* (L.) Britton), 243
sapote (*Calocarpus*), 263
sapote, black (*Diospyros ebenaster* Retz.), 256
sapote, white (*Casimiroa edulis* Llave & Lex.), 32
Sarcostemma [*Philibertia*] (philibertia), 63, 71
Sarcostemma clausum (Jacq.) R. Br. [*Philibertia viminalis*] (philibertia), 63, 71
Sarracenia (pitcher-plant), 113
Sarracenia flava L. (pitcher-plant), 113
Sarracenia minor Walt. (pitcher-plant), 113
Sassafras (sassafras), 26, 32, 137, 183, 256, 295
satsuma (*Citrus nobilis* var. *unshiu* Swingle), 248, 297
sausage-tree (*Kigelia pinnata* DC.), 198
scales: *Antonina*, 274
Asterolecanium pustulans (Ckll.) (pustle scale), 274
Cercococcus quercus Comstock, 248
Ceroplastes, 248
Coccus hesperidum Linnaeus (soft brown scale), 248

- Dactyloptus*, 248
Dactylopius confusus (Cockerell), 248
Dactyloptus tomentosus (Lam.) (not reported in Florida), 248
Eriococcus quercus (Comstock) (oak eriococcus), 248
Icerya purchasi Maskell (cottony-cushion scale), 248
Kermes (a mealybug), 248
Lecaniodiaspis, 248
Lecanium arizonensis King. (not reported in Florida), 248
Neolecanium cornuparvum (Thro) (magnolia soft scale), 248
Pseudococcus, 248
Pulvinaria amygdali Cockerell (not reported in Florida), 248
Pulvinaria bigeloviae Cockerell (not reported in Florida), 248
Pulvinaria vitis (Linnaeus) (not reported in Florida), 248
Saissetia oleae (Bernard) (black lecanium), 248
Toumeyella, 248
Toumeyella numismaticum Pettit & McDaniel, 248
scarlet bush (*Hamelia patens* Jacq.), 35
Schinus terebinthifolius Raddi (Brazilian pepper), 196
Schoepfia arborescens Roem. & Schult., 262
Schoepfia chrysohyllodes (A. Rich.) Planch. [*phyllodes*] (white wood), 262
Scirpus cyperinus (L.) Kunth (bulrush), 142
Sciacassia siamea see *Cassia siamea*, 241
seagrape (*Coccoloba uvifera* (L.) L.), 76, 193, 198, 207, 243
sea rocket (*Cakile maritima* Scop.), 37
sebastina bush (*Sebastiania ligustrina* (Michx.) Muell. Arg. [*lucida*]), 294
Sebastiania ligustrina (Michx.) Muell. Arg. (sebastina bush), 294
Sechium edule (Jacq.) Sw. (chayote), 209
Secula viscidula see *Aeschynomene viscidula*, 35
Sedum (stonecrop), 40, 42
sedges, 298
seedbox (*Ludwigia*), 42
Senecio (groundsel), 253
Senecio confusus Britten (Mexican flamevine), 26
Senecio glabellus Poir. (butterweed), 197
senna (*Cassia*), 26, 34, 35, 36, 130, 215, 256
senna, jointwood (*Cassia nodosa* Buch.-Ham.), 241
senna, pinkflower (*Cassia grandis* Linn.), 242
senna, sicklepod (*Cassia tora* L.), 241
sensitive plant (*Mimosa pudica* L.), 36
Serenoa repens (Bartr.) Small (saw or scrub palmetto), 46, 47, 55, 69, 135, 191, 243, 276
service-berry (*Amelanchier arborea* (Michx. f.) Fern. [*canadensis*]), 288
Sesbania (sesbania), 130, 140
Sesbania grandiflora Pers. (sesbania), 53
Sesbania vesicaris (Jacq.) DC. (sesbania), 266, 267
Setaria (milletgrass), 91
seven-year-apple (*Genipa clusiaefolia* (Jacq.) Griseb. [*americana*]), 65, 242
shinleaf (*Pyrola*), 180
shore elder (*Iva imbricata* (Walt.), 260
shrubs, 128, 160, 187, 193, 194, 195, 196, 212, 289, 297
Sida rhombifolia L. 261, 294
Sideroxylon pallidum Spreng., 294
Silphium perfoliatum L. (cup-plant), 259
Simarouba glauca DC. (paradise tree), 292
Sitilias caroliniana (Walt.) Raf., 248
sky-flower (*Duranta repens* L. [*plumieri*]), 226
Smilax (smilax), 95, 184
Smilax rotundifolia L. (horse-brier), 139
snapdragon (*Antirrhinum*), 42, 92, 256
sneezeweed (*Helenium*), 36, 265
snowberry (*Symphoricarpos*), 65, 291
soapberry (*Sapindus drummondii* Hook. & Arn.), 242
Solanum (nightshade), 107, 219, 266
Solanum jasminifolium Stendt, 219
Solanum melongena var. *esculentum* Nees (eggplant), 212, 218
Solanum nigrum L. (black nightshade), 107
Solanum radula L. (nightshade), 219
Solanum tuberosum L. (Irish potato), 59, 120, 200
Solanum verbascifolium L. (potato tree), 212
Solidago (goldenrod), 96, 98, 108, 109, 119, 163, 170, 189, 216, 254, 256, 258, 259, 260, 262, 278
Sonchus asper (L.) All. (sow thistle), 248
Sophora tomentosa L. (necklace pod), 215
Sorbus americana Marsh. (mountain ash), 249
Sorbus aucuparia L. (European mountain ash), 291
sorghum (*Sorghum vulgare* L.), 72, 107, 246
Sorghum halepense Pers. (Johnson grass), 246
Sorghum vulgare L. (sorghum), 72, 107, 246
Sorghum vulgare var. *subglabrescens* (Stend.) A. F. Hill (milo maze), 246
Sorghum vulgare var. *sudanense* Hitchc. (sudan grass), 246
sorrel, sheep (*Rumex acetosella* L.), 42
soursop (*Annona muricata* L.), 225, 242
soybean (*Glycine max* (L.) Merr.), 119, 134
sow thistle (*Sonchus asper* (L.) All.), 248
Spanish bayonet (*Yucca aloifolia* L.), 58
Spanish dagger (*Yucca gloriosa* L.), 58
Spanish moss (*Tillandsia usneoides* L.), 71
Spanish needle (*Bidens pilosa* L.), 26, 36, 98
Spartina patens (Ait.) Muhl. [*juncea*] (salt meadow grass), 126
Spathyphyllum, 119
Spermacoce (button plant), 68
spicebush (*Lindera benzoin* Blume), 32
spruce (*Picea*), 87, 99, 177, 245
squash (*Cucurbita*), 209
squash, summer, 209
Stachys (betony), 256
Stachytarpheta jamaicensis (L.) Vahl, 227
Stapelia (carrion flower), 38
star jasmine (*Trachelospermum jasminoides* Lem.), 46
Stellaria media (L.) Cyrillo (chickweed), 36, 165
Stenotaphrum secundatum (Walt.) Kuntze (St. Augustine grass), 90, 145, 212
Stizolobium (velvetbean), 134
stonecrop (*Sedum*), 40, 42
stopper (*Eugenia*), 291
strawberry (*Fragaria*), 100, 246, 262
Stylosanthes biflora (L.) B.S.P. (pencil flower), 35
sugar cane (*Saccharum officinarum* L.), 57, 85, 91, 99, 101, 106, 125, 234, 246, 291
sumac (*Rhus*), 116, 117, 152, 164, 244, 249, 254
sumac, poison (*Rhus vernix* (L.) Kuntze [*Toxicodendron*]), 116
sumac, staghorn (*Rhus typhina* L.), 117
sunflower (*Helianthus*), 80, 104, 248
sunflower, false, 106
sun rose (*Helianthemum* [*Crocantemum*]), 276
Suriana maritima L. (bay-cedar), 26
sweetbay (*Magnolia virginiana* L.), 32
sweetgum (*Liquidambar*), 79, 84, 117, 249
sweetgum (*Liquidambar styraciflua* L.), 245
sweetshrub (*Calycanthus*), 129
Swietenia (mahogany), 236, 241
swordbean (*Canavalia gladiata* DC.), 242
sycamore (*Platanus*), 76, 234
Symphoricarpos, 268
Syntherisma see *Digitaria*, 101, 113, 125, 150, 246
syringa (*Philadelphus*), 171
Syringa (lilac), 61, 84, 160
Tabebuia argentea Britt., 69
Tabebuia avellanedae Jorentz, 198
Tabebuia pallida Miers, 226
Tagetes (marigold), 36, 98, 248
tamarack (*Picea rubens* Sarg.), 87
tamarind (*Tamarindus*), 242
Tamarindus (tamarind), 242
Tamarindus indica L. (tamarind), 242
tangerine (*Citrus nobilis* var. *deliciosa* (Ten.) Swingle), 80
Taraxacum officinale Weber (dandelion), 77, 78, 189
Taxodium (cypress), 60, 79, 275

- Taxodium distichum* L. (bald cypress), 182, 245
Tecoma (trumpetbush), 61
Tecomaria capensis Spach, 198
 tecumseh, 80
Tephrosia (tephrosia), 246
Thevetia peruviana Schum. [*Nerifolia*] (yellow oleander), 208
 thistle (*Cirsium*), 71
 thistle, sow (*Sonchus asper* (L.) All.), 248
 thistle, yellow (*Cirsium horridulum* Michx. [spinosissimum]), 248
 thorn, 123
Thuja occidentalis var. *globosa* Gord. [*Biota*] (American arbor-vitae), 297
Thuja orientalis var. *pyramidalis* Endl. [*Biota pyramidae*] (Oriental arbor-vitae), 297
Thuja orientalis var. *conspicua* Berckmans [*Aurea conspicua*] (Oriental arbor-vitae), 297
Thysanella robusta Small, 163
 tiger-flower (*Tigridia*), 256
Tigridia (tiger-flower), 256
Tilia (basswood or linden), 42, 81, 82, 132, 151, 206, 249, 293
Tillandsia usneoides L. (Spanish moss), 71
 timothy (*Phleum pratense* L.), 94
 toadflax (*Linaria*), 42, 92
 tobacco (*Nicotiana tabacum* L.), 59, 78, 79, 86, 87, 107, 119, 212, 278
 tobacco seeds, 100
 tomato (*Lycopersicon esculentum* Mill.), 59, 68, 87, 101, 107, 279, 328
 torchwood (*Amyris elemifera* L. [*floridana*]), 32
Torrubia longifolia (Heimerl) Britt. [*Pisonia obtusata*] (blolly), 276, 290
Toumeyella (a scale), 248
Toumeyella numismaticum Pettit & McDaniel (a scale), 248
Toxicodendron vernix see *Rhus vernix*, 116
Trachelospermum jasminoides Lem. (star jasmine), 46
 travelers-joy (*Clematis vitalba* L.), 289
 tread-softly (*Cnidocolus*), 63
 treebine (*Cissus*), 64, 66, 76
 trees, 44, 128, 156, 157, 159, 160, 185, 187, 189, 193, 195, 196, 319, 320
Trema micrantha (L.) Blume [*floridana*] (Florida trema), 43, 46, 76
Trema lamarckiana (Roem. & Schult.) Blume (West Indies trema), 43
Triadica sebifera see *Sapium sebifer*, 130
Trichostema dichotomum L., 274
Trichostema suffrutescens Kearney, 274
Trifolium (clover), 26, 33, 34, 36, 124, 144, 175, 189
Trifolium incarnatum L. (crimson clover), 144
Trifolium repens L. (white clover), 26, 33, 85
Triosteum (horse gentian), 65
Triplaris, 190
 Triticum (wheat), 246, 250
Tropaeolum (nasturtium), 37
 truck crops, 78
 trumpetbush (*Tecoma*), 61
Tsuga (hemlock), 163, 182, 188
 tulip tree (*Liriodendron*), 68, 183, 198
 tung oil tree (*Aleurites fordii* Hemsl.), 297
 tupelo (*Nyssa*), 186
Turnera ulmifolia L. (turnera), 69, 261
 turnips (*Brassica rapa* L.), 51, 125, 246
Typha (cattail), 84, 94, 103, 200, 313
Typha angustifolia L. (cattail), 103
Typha latifolia L. (cattail), 84, 94
Ulmus (elm), 42, 60, 82, 83, 153, 155, 158, 179, 187, 247
 Umbeliferae, 31
 upholstery, 301
Urena lobata L. (Caesar's weed), 137
Urtica (nettle), 42
Vaccinium (blueberry), 62, 82, 84, 87, 89, 93, 122, 151, 175, 187, 196, 239, 245
Vaccinium macrocarpum Ait. (cranberry), 93, 239
Vaccinium stamineum L. (deerberry), 82
Vaccinium pallidum Ait. [*vacillans*] (dryland blueberry), 48
Vachellia insularis Small (opopanax), 242
Vallisneria spiralis L. (wild celery), 221
 vegetables, dried and stored, 250
 velvetbean (*Stizolobium*), 134
 velvet seed (*Guetarda elliptica* Sw.), 75
Verbascum (mullein), 256
Verbena (verbena), 256
 verbena, wild (*Verbena*), 65, 67
Verbesina [*Ximenesia*] (crownbeard), 105, 248
Verbesina helianthoides Michx. (crownbeard), 40
Verbesina virginica L. (crownbeard), 294
Vernonia (ironweed), 26, 97, 268
 vetch (*Vicia*), 33, 244
 vetch, sensitive joint (*Aeschynomene viscidula* Michx.), 35
Viburnum (viburnum), 65, 67, 96, 156, 160, 244
Vicia (vetch), 33, 244
Vicia faba L. (broad bean), 125
Vigna (cowpea), 242, 244
Vigna repens (L.) Kuntze (cowpea), 242
Vigna sinensis (L.) Savi (cowpea; black-eyed pea), 166, 242, 243, 244, 246, 266
Viguiera (goldeneye), 248
Vinca (periwinkle), 59
Vinca rosea L. (Madagascar periwinkle), 26, 59
 vincetoxicum (*Cynanchum* [*Vincetoxicum*]), 63, 71, 151
 Vincetoxicum see *Cynanchum*, 63, 71, 151
Viola (violet), 40, 99, 100
Viola tricolor var. *hortensis* DC. (pansy), 40
 violet (*Viola*), 40, 99, 100
 violet, African (*Saintpaulia*), 267
 Virginia creeper (*Parthenocissus quinquefolia* (L.) Planch.), 172
Vitis (grape), 64, 66, 67, 80, 101, 171, 172, 197
Vitis labrusca L. (fox grape), 290
Vitis rotundifolia Small (wild grape), 201
 walnut (*Juglans*), 63, 69, 81, 121, 122, 151, 152, 156, 240, 241, 249, 261
 walnut, English (*Juglans regia* L.), 242
Washingtonia robusta Wendl. (Mexican Washington palm), 276
 water hyacinth (*Eichhornia crassipes* (Mart.) Solms), 203
 water hyssop (*Bacopa*), 43
 waterlily (*Nymphaea*), 103, 221
 water-lotus, American (*Nelumbo lutea* (Willd.) Pers.), 216
 watermelon (*Citrullus vulgaris* Schrad.), 78, 79, 209
 water primrose (*Jussiaea angustifolia* Lam.), 66
 waterwillow (*Decodon*), 66
Wedelia, 98
 weeds, 79, 115, 120, 201, 212
 wheat (*Triticum*), 246, 250
 white wood (*Schoepfia chrysophylloides* (A. Rich.) Planch. [*phylloides*]), 262
 wild coffee (*Psychotria*), 201, 217, 218
 willow (*Salix*), 42, 44, 62, 76, 82, 83, 84, 93, 122, 132, 145, 151, 156, 157, 171, 178, 181, 261, 262, 289, 297
 willow, coastal plain (*Salix caroliniana* Michx. [*longipes*]), 157
 willow weed (*Epilobium*), 105, 173
 Wisteria (wisteria), 51, 53, 264
 witch hazel (*Hamamelis*), 83, 93, 134, 152, 254, 256
 wood, decaying, 138
 wood, rotten, 146
Woodwardia (chain-fern), 94
 woolen goods, 301
 woolly aphid, 49
 wormwood (*Artemisia*), 258
Ximenesia see *Verbesina*, 105, 248
Yucca (yucca), 63, 242, 300
Yucca aloifolia L. (Spanish bayonet), 58, 303
Yucca smalliana Fern. [*filamentosa*] (Adams-needle), 58, 303
Yucca gloriosa L. (Spanish dagger), 58
Zamia integrifolia Ait. (coontie), 46, 80, 284
Zamia umbrosa Small [*pumila*], 80
Zantedeschia (calla lily), 219, 300
Zanthoxylum (prickly ash), 82
Zanthoxylum pentamon, 43
Zea mays L. (corn; maize), 69, 78, 79, 94, 100, 101, 103, 107, 115, 119, 120, 125, 150, 171, 193, 210, 230, 234, 246, 249
Zoysia matrella (L.) Merr. (Japanese grass), 101, 231

INDEX TO COMMON NAMES

Some of these names are not officially accepted, but their usage is sufficiently common to warrant their inclusion. Page numbers between 310 and 329, inclusive, refer to the bibliography.

- Aaron's skipper, 55
Abbot's sphinx, 67
Achemon sphinx, 66
Ailanthus webworm, 292
Almond moth, 250
American copper, 49
American dagger moth, 81
American painted lady, 42
Angoumois grain moth, 277, 314
Apple bark borer, 289
Apple fruit moth, 291
Apple sphinx, 61
Armyworm, 91, 313
Arogos skipper, 55
Arpa skipper, 55
Ash sphinx, 60
Asparagus fern caterpillar, 101
Atala, 46
Azalea leaf miner, 295
Azalea sphinx, 67
- Bagworm, 297
Banded hairstreak, 48
Banded woollybear, 79
Baracoa skipper, 54
Barred sulphur, 35
Bartram's hairstreak, 46
Basswood leaf roller, 206
Bean leaf skeletonizer, 119
Beautiful wood nymph, 105
Bella moth, 80
Berry's skipper, 56
Bidens borer, 260
Blackberry looper, 164
Black swallowtail, 31
Black witch, 131
Blind-eyed sphinx, 62
Bluegrass webworm, 231
Boisduval's sulphur, 36
Bollworm, 107
Brazilian skipper, 57
Broad-winged skipper, 54
Broken dash, 54
Bronze copper, 49
Brown elfin, 48
Buckeye, 42
Buck moth, 69
Bumble bee sphinx, 65
Byssus skipper, 55
- Cabbage looper, 119
Cabbage webworm, 210
Caribbean pod borer, 242
Carolina satyr, 38
Carpenterworm, 272, 313
Case making clothes moth, 301
Cassius blue, 49
Catalpa sphinx, 60
Cecropia moth, 68
Celery leaf tier, 215
Celery looper, 119
Celia's roadside skipper, 56
Ceraunus blue, 49
Checkered skipper, 52
Checkered white, 37
Clay-backed cutworm, 85
- Clouded crimson, 107
Clouded skipper, 56
Clouded sulphur, 33
Cloudless sulphur, 34
Cobweb skipper, 53
Codling moth, 264
Cofaqui skipper, 58
Columella hairstreak, 47
Common basket worm, 310
Common sulphur, 33
Confused cloudy wing, 51
Coral hairstreak, 47
Corn earworm, 107, 313, 327
Corn root webworm, 232
Cotton cutworm, 100
Cotton leaf miner, 302
Cotton leafworm, 137
Cottonwood dagger moth, 82
Cranberry fruitworm, 239
Creole pearly eye, 38
Cross-striped cabbage worm, 211
Cuban crescent, 41
Cypress sphinx, 311
- Dainty sulphur, 36
Dark-sided cutworm, 84
Delaware skipper, 55
Devilliers' swallowtail, 31
Diamondback moth, 291
Diana, 40
Dingy cutworm, 85
Dingy purple wing, 43
Dion skipper, 56
Dog face, 33
Dogwood borer, 289
Dorantes skipper, 51
Dotted skipper, 53
Dreamy dusky wing, 52
Dried currant moth, 250
Dun skipper, 56
- Eastern pigmy blue, 49
Eastern tailed blue, 49
Eastern tent caterpillar, 159
Edward's hairstreak, 47
Eggplant leaf miner, 279
Eight-spotted forester, 80
Elder shoot borer, 103
Ello sphinx, 63
Eufala skipper, 57
European cabbage butterfly, 37
European corn borer, 216
European grain moth, 305
European pine shoot moth, 257
Exotic pumpkin caterpillar, 209
Eyed brown, 38
- Fall armyworm, 101
Fall webworm, 79
Fatima, 43
Fiery skipper, 54
Fig moth, 250
Fig sphinx, 64
Filbertworm, 264
Florida dusky wing, 52, 327
Florida fern caterpillar, 94
- Florida hairstreak, 48
Florida leaf wing, 45
Florida purple wing, 43
Florida white, 36
Florida yucca skipper, 58
Forest tent caterpillar, 159
Four-horned sphinx, 60
Fruit-tree leaf roller, 268
Funereal dusky wing, 53
- Gaudy sphinx, 66
Gemmed satyr, 38
Genista caterpillar, 215
Georgia satyr, 38
Giant gray sphinx, 63
Giant sphinx, 59
Giant swallowtail, 32
Goatweed butterfly, 45
Golden-banded skipper, 51
Gooseberry fruitworm, 248
Gopher moth, 327
Gorgone crescent, 40
Granite moth, 177
Granulate cutworm, 85
Grape leaf folder, 201
Grape leaf skeletonizer, 197
Grape root borer, 290
Grapevine looper, 172
Gray dagger, 83
Gray hairstreak, 47
Greasy cutworm, 85
Great ash sphinx, 61
Great brocade, 86
Great purple hairstreak, 46
Great spangled fritillary, 40
Greater wax moth, 235
Green cloverworm, 144
Green fruitworm, 89
Greenhouse leaf tier, 215
Green-striped mapleworm, 70
Gulf fritillary, 40
- Hackberry butterfly, 44
Hag moth, 194
Hammock skipper, 50
Harris' three-spot, 84
Harvester, 49
Hecebolus skipper, 57
Hemlock looper, 313
Henry's elfin, 48
Hickory horned devil, 324
Hickory leaf roller, 269
Hickory shuckworm, 263
Hoary edge, 51
Horace's dusky wing, 53
Huckleberry sphinx, 62
Hummingbird moth, 65
Hydrangea sphinx, 66
- Imperial moth, 70
Indian-meal moth, 250
Indian skipper, 54
Io moth, 69
- Julia, 39
Juniper webworm, 281
Juvenal's dusky wing, 53

- King's hairstreak, 48
 Lantana plume moth, 252
 Lappet moth, 160
 Large orange sulphur, 34
 Leaf crumpler, 239
 Leaf wing, 322
 Least Florida skipper, 56
 Least skipper, 53
 Leonardus skipper, 53
 Lespedeza webworm, 237
 Lesser canna leaf roller, 219
 Lesser cornstalk borer, 246
 Lesser peach tree borer, 289
 Lima-bean vine borer, 243
 Lined stalk borer, 94
 Little metalmark, 46
 Little sulphur, 36
 Little wood satyr, 39
 Loammi skipper, 56
 Locust twig borer, 264
 Long-tailed skipper, 51
 Luna moth, 68
 Lyside, 35

 Maerula, 34
 Maesites hairstreak, 47
 Malachite, 43
 Mallow caterpillar, 314
 Mangrove skipper, 50
 Manuel's skipper, 50
 Many-banded dagger wing, 44
 Maple callus borer, 288
 Marine blue, 49
 Martial hairstreak, 46
 Meal moth, 224
 Mediterranean flour moth, 250
 Melonworm, 209
 Meske's skipper, 54
 Mexican fritillary, 40
 Miami blue, 49
 Milkweed butterfly, 37
 Mimosa webworm, 237
 Monarch, 37, 312
 Monk, 58
 Mottled dusky wing, 52
 Mourning-cloak, 42, 312
 Mourning sphinx, 64
 Mustard white, 37

 Nantucket pine moth, 258
 Neamathla skipper, 57
 Nessus sphinx, 67
 Northern cloudy wing, 51
 Northern hairstreak, 47

 Oak looper, 313
 Oblique-banded leaf roller, 268
 Obscure skipper, 58
 Ochre dagger, 82
 Ocola skipper, 58
 Okra caterpillar, 314
 Oleander caterpillar, 71
 Olive hairstreak, 48
 Orange-barred sulphur, 34
 Orange basketworm, 320
 Orange-striped oakworm, 69
 Orange sulphur, 33
 Oriental fruit moth, 263

 Painted lady, 42
 Palamedes swallowtail, 32
 Palatka skipper, 55
 Pale-sided cutworm, 85

 Palm leaf skeletonizer, 276
 Papaw sphinx, 60
 Peach tree borer, 288
 Peach twig borer, 281
 Pearl crescent, 40
 Pearly eye, 38
 Pearly wood nymph, 105
 Pecan bud moth, 261
 Pecan carpenterworm, 272
 Pecan cigar case bearer, 293
 Pecan leaf casebearer, 240
 Pecan nut casebearer, 240
 Peck's skipper, 54
 Persimmon borer, 288
 Persius' dusky wing, 52
 Pickleworm, 209
 Pied groundling, 97
 Pine devil moth, 70
 Pine elfin, 48
 Pine needle miner, 277
 Pine sphinx, 61
 Pine tube moth, 269
 Pine webworm, 237
 Pink bollworm, 280, 319
 Pink scavenger caterpillar, 274
 Pipevine swallowtail, 31
 Plaster bagworm, 301, 319
 Plebeian sphinx, 61
 Polydamas swallowtail, 31
 Polyphemus moth, 69
 Potato tuberworm, 278
 Promethea moth, 68

 Queen, 38
 Question mark, 41

 Ragweed borer, 260
 Raisin moth, 305
 Raspberry leaf roller, 257
 Reakirt's blue, 49
 Red admiral, 42
 Red-banded hairstreak, 46
 Red-banded leaf roller, 268
 Red-humped caterpillar, 156
 Red-necked peanut worm, 280
 Red-spotted purple, 44
 Rice stalk borer, 235
 Roadside skipper, 56
 Royal walnut moth, 70
 Rubber tree caterpillar, 312
 Ruddy dagger wing, 44
 Rustic sphinx, 59

 Sachem, 54
 Saddled prominent, 155
 Salt-marsh caterpillar, 79
 Salt-marsh skipper, 57
 Satellite sphinx, 65
 Schaus' swallowtail, 32
 Seagrape borer, 197
 Seminole crescent, 41
 Silver-spotted skipper, 51
 Six-spotted sphinx, 59
 Sleepy dusky wing, 52
 Sleepy orange, 36
 Small-eyed sphinx, 62
 Smartweed borer, 216
 Smear'd dagger, 84
 Snout butterfly, 45
 Southern armyworm, 100
 Southern beet webworm, 212
 Southern cloudy wing, 51
 Southern cornstalk borer, 234

 Southern hairstreak, 47
 Southern skipperling, 53
 Southern sooty wing, 52
 Spanish moth, 89
 Spice-bush swallowtail, 32
 Spiny oakworm, 69
 Spotted beet webworm, 200
 Spring azure, 50
 Spruce coneworm, 245
 Squash vine borer, 290
 Statira, 35
 Strawberry leaf roller, 262
 Streaked dagger, 84
 Striped garden caterpillar, 87
 Striped hairstreak, 48
 Sugarcane borer, 234
 Swarthy skipper, 57
 Sweetpotato leaf roller, 203
 Sweetpotato worm, 59
 Sylvicola skipper, 57

 Tawny-edged skipper, 54
 Tawny emperor, 45
 Tera sphinx, 68
 Textor skipper, 57
 Thoas swallowtail, 32
 Three-spotted skipper, 57
 Tiger swallowtail, 32
 Tobacco budworm, 107
 Tobacco cutworm, 313
 Tobacco hornworm, 59
 Tomato fruitworm, 107
 Tomato hornworm, 59
 Tomato pinworm, 278, 327
 Tropical checkered skipper, 52
 Tuliptree silkworm, 68
 Twin-spot skipper, 56
 Twin-spotted sphinx, 62

 Uncas' skipper, 53

 Vagabond crambus, 231
 Variable oak leaf caterpillar, 155
 Variegated cutworm, 86
 Variegated fritillary, 40
 Velvetbean caterpillar, 134, 328
 Verbena bud moth, 255
 Viceroy, 44
 Vine sphinx, 66
 Virginia-creeper sphinx, 66

 Waiter, 43
 Walnut sphinx, 62
 Waterlily leaf cutter, 222
 Waved sphinx, 60
 Webbing clothes moth, 305
 Western dogface, 33
 Whirlabout, 54
 White-lined sphinx, 68
 White M hairstreak, 47
 White-marked tussock moth, 157
 White peacock, 42
 Wild cherry sphinx, 61
 Wild indigo dusky wing, 52
 Wood nymph, 39

 Yehl skipper, 55
 Yellow-striped armyworm, 100

 Zabulon skipper, 55
 Zarucco dusky wing, 53
 Zebra, 39
 Zebra swallowtail, 33
 Zestos skipper, 50

INDEX TO GENERA, SPECIES AND SUBSPECIES

(Page numbers between 310 and 329, inclusive, refer to the bibliography.)

- aaroni* (Skin.), 55
Abagrotis, 87
abalinealis (Wlk.), 143
abarusalis (Wlk.), 137
Abbotana, 189
abbotii Grt., 297
abbotii Swains., 67
abbreviatana (Wlsh.), 261
abbreviatella Grt., 122
abdita Hodges, 273
abdominalis Grt., 77
abdominaria B. & McD., 161, 162
Abebaea, 291
aberratella (Busck), 282
abietella (D. & S.), 245, 322
abietivorella (Grt.), 245
abjectarius Hlst., 179, 180
abjuralis (Wlk.), 143
abornana Busck, 270
abortivaria H.-S., 171
abrotoloides (Gn.), 117
abrota (Druce), 119, 120
abrupta Grt., 81
abruptana (Wlsh.), 260
abseuzalis (Wlk.), 118
absorptalis Wlk., 147
absumens Wlk., 135
acapnopennella Clem., 301
acauda Ober., 31
accius (A. & S.), 56
acerata Dyar, 235
acerni (Clem.), 288
Achalarus, 51
Achanodes, 302
achatina (A. & S.), 158
achatina Zell., 229
Achatodes, 103
achemon (Dru.), 66
Acherdoa, 105
acheronta (Fabr.), 45
achroalis Hamp., 216
Acidalia, 175
Acadaliodes, 111
acis (Dru.), 46
Acleris, 270
Acoloitus, 197
Acontia, 116
acontioides (Gn.), 133
acraea (Dru.), 79
acrionalis (Wlk.), 217
Acrobasis, 239
Acrocercops, 294
Acrolophus, 298, 328
Acronicta, 81, 314, 327
Acronycta, 327
Actias, 15, 68
actuellus B. & McD., 232
acutangula Hamp., 117
acutangulalis (Snell.), 205
acutella Wlk., 215
Adaina, 253
adamantana (Gn.), 259
Adela, 303
Adelphiata, 246
adipaloides (G. & R.), 210
adjuta (Grt.), 91
adjutrix (Cram.), 135
adona Stkr., 160, 192
Adoneta, 194, 314
Adoxophyes, 269
Adrasteia, 278
Aeaea, 274, 275
Aegeria, 315
aeglealis (Wlk.), 212
Aellopus, 65
aemula (Hbn.), 145
aemulata (Hlst.), 167, 168
aemulataria (Wlk.), 175
aenea F. & B., 296
aequalis (Wlk.), 197
aequiferaria (Wlk.), 176
aerata (Fabr.), 163
aerea (Hbn.), 120
aeroides Grt., 120
aeria Grt., 112
aeruginosa (Gn.), 128
aesculapius (Fabr.), 57
Aethalura, 182
Aethes, 271
afflicta Grt., 83
afflicta Hlst., 245
Afrida, 74
Aganactes, 236
agarithe Bdv., 34, 314
Agathodes, 207
agillaria (Druce), 140
Aglossa, 224
Agonopterix, 283
Agraulis, 40, 317
Agriopodes, 96
agrippina (Cram.), 23, 131
agrippina Stkr., 121
agrotina (Gn.), 99
Agrotis, 85
aholah Stkr., 123
aidea Guér., 45
ainslei Hein., 216
ajax (Linn.), 31, 33
Alabama, 137
alabamae Grt., 123
alabamae (Lindsey), 56
Alamosa, 251
Alarodia, 195
Alatuncusia, 204
alba (Stkr.), *Colias*, 33
alba (Stkr.), *Eurema*, 36
alba Zell., 302, 303
albaclaudia Field, 40
albarithe Brown, 34
albata Pack., 75
albicans Wlk., 159
albiceralis Grt., 213
albicinerea Sm., 92
albicomana (Clem.), 267
albicosta (Wlk.), 76
albicostella (Grsb.), 251
albidentina (Wlk.), 107
albifasciella Fern., 300
albifrons (A. & S.), 153
albigera (Gn.), 98
albinella (Cram.), 228
albilinea Rich., 141, 325
albilorella (Zell.), 279
albinotella (Cham.), 294
albipuncta Sm., 98
albitesselis Hamp., 220
albizziae Clarke, 287
albocostaliata (Pack.), 111
albogaleriella Clem., 295
albolineana (Kft.), 256
albopunctella Wlk., 127
albovariegata (Strand), 99
m-album (Bdv. & Lec.), 47
u-album (Gn.), 95
Alcathoe, 289
Aletia, 91
alparata Stkr., 92
algidella (Wlk.), 285
alicia (Edw.), 44
alienaria (H.-S.), 186
alisellana (Rob.), 269
alitalis Hlst., 208
alleri Engl., 289
alleriella Busck, 279
allionealis (Wlk.), 221
Allononyma, 287
Allotria, 124
Almodes, 161, 183
alope (Dru.), 63
Alsophila, 161
alternans (Wlk.), 89
alternata (Grt.), 87
alternata (G. & R.), 56
Alucita, 254
alucitalis (Gn.), 149
alurina Sm., 89
Alypia, 80
amabilis Moesch., 204
amaryllidis Sepp, 90
amatana (Dyar), 269
amatella (Hlst.), 245
amatrix (Hbn.), 122
amaturaria (Wlk.), 170
Ambia, 200, 220
ambiguialis (Wlk.), 149
amblyptepennis Dyar, 229
Amblyscirtes, 56, 317
ambrosiae (Murt.), 253
ambrosiella Cham., 296
amella (Gn.), 127
americanalis (Gn.), 145
americana (Fabr.), 159
americana (Guér.), 197
americana Harr., *Acronicta*, 81
americana Harr., *Epicnaptera*, 160
americana Harr., *Lycæna*, 4, 49
americus Koll., 31
amestris Stkr., 122
amethystaria (Stkr.), 187
Ametris, 161, 314
amica (Hbn.), 124
amitcaria H.-S., 186

- amisella* (Busck), 283
amoenaria (Gn.), 184, 185
Amolita, 102
amorata Pack., 192
Amorbia, 265
Ampeloeca, 66
Amphion, 67
Amphipyra, 96
amphipyroides Gn., 131
amplexella Rag., 239
amphiata Mén., 31
Amydria, 299
Amyna, 114
amyntor (Hbn.), 60
amyrisella (Busck), *Agonopterix*, 283
amyrisella Busck, *Eucatagma*, 291
Anabasis, 241
Anacamptis, 281
Anacamptodes, 181
Anadlosemia, 242
Anaea, 45, 322
Anagasta, 250
Anagrapha, 119
Anania, 202
Anaphoria, 328
anaranjada Miller, 263
Anarsia, 281
Anartia, 42
anatomella Grt., 300
Anavitrinella, 181
ancara (Druce), 144
Anceryx, 312
Anchylopera, 262
Ancylicis, 262
Ancylostomia, 243
Ancyloxypha, 53
andraemon Hbn., 32
andremona (Cram.), 137
andria Scud., 45
andromacha Hbn., 326
andromedae (Gn.), 122
andromedana (B. & McD.), 256
Andropolia, 97
Anegcephalesis, 243
Anepia, 88
Anerastia, 251
anfracta (Hy. Edw.), 111
angelica (Grt.), 160
anguina (A. & S.), 153
angulalis Hbn., 150
angulatana (Rob.), 270
angulifera (Wlk.), 68
angulosa (A. & S.), 152
angusi G. & R., 151
angustilinea Dyar, 194
angustipennellus Beut., 299
Anicla, 4, 86
anilis (Dru.), 126
Anisodes, 176
Anisota, 69, 314
anna (Dyar), 272
annetteana Kft., 258
annexa (Treit.), 85
annulosella (Rag.), 244
anoa (Dyar), 103
Anomis, 137, 313
Anomogyna, 87
anonaria (Feld.), 183
anonella (Sepp.), 305
Anormalis (Gn.), 205
Anorthodes, 100
antaeus Dru., 59, 312, 322
Anteos, 34, 325
Anthanassa, 41
anthracipennis (Bdv.), 288
Antiblemna, 135
antibubastus Hbn., 49
anticaria (Wlk.), 182
Anticarsia, 134
antidiscaria (Wlk.), 187
Antiercta, 202
antillium Dyar, 90
antiopa (Linn.), 42, 312
antipathetica Fbs., 302
Antispila, 292
aon Druce, 150
Apaeasia, 187
apameoides (Gn.), 98
Apantesis, 77
Apatelodes, 160
Apatura, 315
apera Druce, 72
Aphania, 256
Aphelia, 267
apiata (Grt.), 93
apicalis (C. & R.), 156, 315
apicalis (Gn.), *Parallelia*, 124
apicalis (Gn.), *Pterygisis*, 206
apicalis (Sm.), 139
apicella (Grt.), 114
Apicia, 189
apicimaculella Cham., 300
apicosa (Haw.), 114
aplastella (Hlst.), 238
Apolema, 186
Apomyelois, 241
Apotoforma, 270
appalachia R. L. Cherm., 38
Appias, 36
approximaria (Hbn.), 184
approximatella Dietz, 300
approximella (Wlk.), 251
aprica (Hbn.), 116
ar Stkr., 109
Arachnis, 79
araealis Hamp., 149
Araeoptera, 111
arcanelus (Clem.), 299
Archanara, 94
archippus (Cram.), 44, 327
Archips, 267
Archirhoe, 174
arcigera (Gn.), *Paectes*, 118
arcigera (Gn.), *Schinia*, 109
arctella (Rag.), 243
Arctia, 323
arefacta (Hy. Edw.), 108
areolata (A. & S.), 38
Aresia, 74
aretaria (Wlk.), 188
argante (Fabr.), 34
arge (Dru.), 78
argentana (Martyn), 233
argentata (Dru.), 191
argenticinctella (Clem.), 283
argentimitana (Rob.), 270
argentina (Wlk.), 95
argentinella Busck, 295
argenticmacula B. & McD., 195
argentina Dyar, 242
argentinotella (Cham.), 302
argillacea (Hbn.), 137
argiola (Linn.), 4, 50
Argonut, 325
argutanus (Clem.), 254
argyralis Hbn., 203
Argyresthis, 291
Argyria, 233
Argyrogramma, 119
argyropsilus (Wlk.), 268
argyrosplendella Dietz, 284
Argyrostromis, 126
Argyrotaenia, 268, 317, 323
argyrothammiella (Busck), 280
Argyrotoxa, 267
arioch Stkr., 84
aristodemus Esp., 32, 317, 319
Aristotelia, 277
armigera Hbn., 107
Aroga, 279
Arogoalea, 278
arogos (Bdv. & Lec.), 55
arpa (Bdv. & Lec.), 55
arrogaria (Hulst), 186
Arta, 226
Artace, 159
arthemis (Dru.), 44
Arugisa, 141, 325
Arzama, 102
Asbolis, 2, 58
Ascia, 11, 36, 37
Asciodes, 206
asilipennis (Bdv.), 290
asopialis (Gn.), 150
asperatella (Clem.), 238
associaria B. & McD., 161
astarte Dbldy., 154
asterius Stoll, 31, 33
Asterocampa, 17, 44, 313
asthenaria (Wlk.), 170
astyanax (Fabr.), 44
astylus (Dru.), 62
astylusaria (Wlk.), 184, 185
ata Strand, 76
atala Poey, 46, 324, 326
atalanta (Linn.), 42, 45
Atalopedes, 54
atergatis (Dbldy.), 38
Atethmia, 101
athasiaria (Wlk.), 188
Atheloca, 243
Athena, 325
Athyra, 135
Athlides, 46
atomaria Wlk., 158
atomaris Hbn., 132
atramentalis Led., 238
atrapes Druce, 162, 318
atrapoides Prout, 163
atrifascialis (Hlst.), 237
atrifasciella B. & McD., 250
atripennis Grt., 71
atripes Druce, 162
atrocatorata (C. & R.), 172
atrocatorata (Hlst.), 187, 188
atropunctata (Pack.), 187
Atrytone, 55, 326
Atrytonopsis, 56
attalus Edw., 53
attenuatella (Wlk.), 272
Atteva, 291
atymnusalis (Wlk.), 149
auge Linn., 314
augmentus (Zell.), 255
augustinus (Westw.), 48
aurantiaca (Hbn.), 77
aurantiaco (Gn.), 103
auranticella (Grt.), 245
auranticolorata Stkr., 164
aurantis Engl., 288
auratella (Clem.), 233
aurea (Fitch), 292

- aurea* (Grt.), 92
auricinctaria Grt., 144
aurifera Wlk., 113
auriferana (Busck), 267
auriferaria (Hlst.), 191
aurivitta G. & R., 113
auropulvella Cham., 301
Aurora, 250
aurora (A. & S.), 153
aurostriata Graef, 153
australata (Hlst.), 174
australella (Hlst.), 243
australis (Grt.), 118
australis Hlst., *Hydrocampa*, 206
australis (Hlst.), *Synomila*, 170
australis Mayn., 32
australis Stretch, 197
Autochton, 51
autocles R. & J., 32
Autographa, 120
Automeris, 69
Autoplusia, 119
avidaria Pears., 163, 324
azaleella Brants, 295
Azelina, 188
Azochis, 211
- bacata* Hodges, 273
baccharadis Clarke, 272, 313
bachmanii (Kirt.), 45
Bactra, 255
Badebecia, 256
badia G. & R., 121
badia Hodges, 274
badia (Hbn.), 195
badia (Pack.), 156
bahamensis Clark, 65
bahamensis Hamp., 135
Baileya, 118
balanotes (Meyr.), 251, 254
balistaria (Gn.), 165
balluca Geyer, 120
Balsa, 100
baltimoralis (Gn.), 143
Bandera, 251
Bapta, 174
baptisiae (Fbs.), 52
baptisiella Fern., 238
baracoa (Luc.), 54
barberiana Dyar, 197
barnesi C. & S., 188
bartrami (Comst. & Hunt.), 46
baryihyma Meyr., 283
basalis Wlk., *Inguromorpha*, 271
basalis Wlk., *Marathyssa*, 116
basalis Wlk., *Scoparia*, 224
basiflava Pack., 158
basiflavalis B. & McD., 199
basigera (Wlk.), 120
Basilodes, 104
basipunctaria (Wlk.), 111
bassettella (Clem.), 290, 320
batabano (Luc.), 50
bathyllus (A. & S.), 51
Batrachedra, 276
Battaristis, 280
Battus, 31
Bedellia, 296
belae Grt., 71
belfrageana (Zell.), 265, 266
belfrageella Cham., 295
belfragei Dyar, 195
belfragei (Fish), 253
bella Cham., *Adela*, 303
- bella* Cham., *Heliodines*, 290, 291
bella (Linn.), 80
belli H. A. Freeman, 56
bellicula Dyar, 74
bellicula Hbn., 113
Bellura, 103
bendidia Hodges, 272
Bendis, 131
benesignata (Harv.), 129
benesimilis McD., 94
benjamini Prout, 171
benubia (Cass.), 170
beon (Cram.), 47
berenice (Cram.), 38
bergii (Moesch.), 204
berryi (Bell), 56
Bertholdia, 304
Besciva, 278
Besma, 188
bethune-bakeri (Comst. & Hunt.), 49
beutenmuelleri (Hy. Edw.), 194, 321
bitrix (Hbn.), 130
bichorda Hamp., 153
bicolorago (Gn.), 93
bicoloralis (Gn.), 216
bicolorata (Fabr.), 176
bicristata Braun, 296
bidentata Wlk., 153
bifascialis (Rob.), 223
bifasciata Bates, 125, 311
biferana (Wlk.), 287
biguttata Pack., 195
biguttellus Fbs., 231
bijugalis (Wlk.), 143
bilineata Pack., 155
biloba (Steph.), 120
bimaculana (Rob.), 271
bimaculella (Cham.), *Filatima*, 279
bimaculella Cham., *Tinea*, 300
bina (Gn.), 106, 110
binodulalis (Zell.), 224
bipartita (Sm.), 143, 144
bipartitella Rag., 251
biplagiatis Wlk., 224
bipuncta (Morr.), 138, 139
bipunctalis (Fabr.), 212
bipunctata (Moesch.), 253
bipunctata Wlk., 127
bipunctella B. & McD., 251
bipunctella (Dietz), 301
bipunctella (Wlsh.), 281
birdana Busck, 271
birectalis Hamp., 226
biscana Kft., 270
biselilla (Hum.), 305
bistrialis (Geyer), 126
bistriaria (Pack.), 163, 320
bistriaris Hbn., 124
bistriata Kft., 266
bistriatella (Hlst.), *Apomyelois*, 241
bistriatella (Hlst.), *Pectinigeria*, 250
bistrigata Hbn., 125
biundata Wlk., 155
bivitalis Gn., 208
blakei (Mayn.), 35
Blastobasis, 283
blatchleyi Haim., 127
Blepharomastix, 205
Bleptina, 148
Boeotarcha, 215
boisduvaliana (Feld.), 36
bolliana (Sling.), 261
Bombycia, 326
bombycoides Wlk., 61
- Bombyx*, 107, 304
Bomolocha, 142, 143
bomonana Kft., 270
Bonchis, 226
bonhotei Sharpe, 32
borealis (Bdv.), 157
boreasella (Cham.), 283
Boryzops, 134
bosqueella (Cham.), 280
bottimeri Busck, 276
Brachyacma, 281
brachymorpha Meyr., 252
brassicae (Riley), 119
braunellus Klots, 231
brehmei B. & McD., 103
Brephidium, 49, 324
brettus (Bdv. & Lec.), 54
brevidens Dognin, 192
breviornatalis Grt., 237
brevipennela Dietz., 299
brevipennis Zell., 252
brevis (Grt.), 109, 310
brevivittella (Clem.), 275
brimleyana Dyar, 111
brizo (Bdv. & Lec.), 52
brontes Dru., 59
brumosa Gn., 83
brunnea H.-S., 52
brunneata (Pack.), 178
brunneochracea Strand, 110
brunneolineata (Hlst.), 186
brunneus Busck, 281
Bucculatrix, 7, 296, 312
bucetum (Grt.), 125
buchholzaria Lemmer, 181
buchholzi H. A. Freeman, 58
buchholzi McD., 129
bufalis (Gn.), 219
Bullia, 134
bullula (Grt.), 114
bumeliella B. & McD., 243
bunteana (Rob.), 270
buoliana (D. & S.), 257, 317
burserae (Dyar), 117
burserella Busck, 295
buscki B. & L., 253
buscki Engl., 288
busckiella Kft., 287
Byssodes, 318
byssus (Edw.), 55
- Cabnia*, 250
cacata Gn., 135
Cacocharis, 255
cacocnemos Jones, 298, 321
Cacoecia, 267
cacuminalis (Wlk.), 149
cadburyi Franc., 118
caduca (Grt.), 114
caeculalis Zell., 215
Caenurgia, 124
Caenurgina, 124
caicus (Cram.), 64
calami (Harv.), 101
calanus (Hbn.), 48, 326
calhdana (Zell.), 266
Calidota, 75
californica Pack., 160
californicus (Wlsh.), 252
caliginosellus Clem., 232
Callicore, 43
Callidryas, 314, 315
Callimorphas, 322
Calliomma, 64

- Callisto*, 294
callitrichoides Grt., 139
Callizzia, 192
Calloptistria, 94
Callosamia, 68, 320
Calocalpe, 316
Calosima, 284
Calpodes, 57
calpota Sm., 91
calverleyi Grt., 31
calycanthata (A. & S.), 129
Calyptocome, 315
cambogialis (Gn.), 210
campanilis Sm., 125
campestris (Bdv.), 54
Campotogramma, 174
Campotolina, 174
cana Erichs., 41, 317
cana Rob., 265
canadaria (Gn.), 180
candefacta (Hbn.), 116
candida Lint., 157
candida (Sm.), 160, 184, 325
canellus Fbs., 233
caniplaga (Wlk.), 153
cannalis (Quaint.), 219
capitatis (Grt.), 212
capitella (Fabr.), 280
Capnodes, 136, 141
capsularis (Gn.), 88
Capua, 267
capucinus (Luc.), 2, 58
cara Gn., 122
Caradrina, 100
caradrinalis Gn., 149
carata (Hlst.), 186
cardini Dyar, 248
cardui (Linn.), 42
carduiella Kft., 287
caricae (Dyar), 242, 243
cariosa Led., 225
Caripeta, 188
carissima Hlst., 122
Caristianus, 243, 258
carlotta Hlst., 183
carmelita (Morr.), 110
Carmentis, 288
carmosina Neum., 108, 323
carneella B. & McD., 251
carneicosta Gn., 132
carneola (Gn.), 114
Carolella, 271
carolina Hy. Edw., 71
carolina Harr., 80
carolina Jones, 68, 320
carolina Kft., 252
carolinensis (B. & McD.), 108
Carpocapsa, 264, 305
carteri R. & J., 62
Carteris, 148
caryae Clarke, 283
caryae Grt., 240
caryae (Harr.), 75
caryae (Rob.), 265
*caryae*foliella Clem., *Coleophora*, 293
*caryae*foliella Clem., *Lithocolletis*, 293
caryana (Fitch), 263
caryvorella Rag., 240, 241
Casandria, 118
cassius (Cram.), 49
castaneum (Beut.), 289
Catabena, 104
catachloa (Hlst.), 161
cataclystiana (Wlk.), 259
catalpae (Bdv.), 60
catenifer Wlsh., 305
catheretes Dyar, 243
catilina (Fabr.), 49
Catocala, 16, 120, 312, 315, 318, 327, 328
caudata (Harr.), 289
Caularis, 105
cautella (Wlk.), 250
Cautethia, 64, 315
ceanothiella (Cosens), 275
Cecharismena, 137
cecropia (Linn.), 68
cecrops (Fabr.), 46
cedrica (Dyar), 168
celadon (Luc.), 33
Celama, 72
Celastrina, 4, 50
Celerio, 68
celia Hy. Edw., 123
celia Skin., 56
celibata Jones, 297, 321
Celiptera, 125, 311
cellaris (Gn.), 133, 134
cellus (Bdv. & Lec.), 51
celtidella (Hlst.), 245
celtifoliella Cham., 293
celtis (Bdv. & Lec.), 44
Cenopsis, 266
centralis (Wlk.), 197
centrifrugaria (H.-S.), 163
centrostrigaria (Woll.), 173
cephalonica (Stain.), 305
Ceramica, 89
cerasivoranus (Fitch), 268
Ceratonia, 60
ceratoniae (Zell.), 242
Ceratonyx, 160, 184
ceramus (Fabr.), 49
cercerisella (Cham.), 279
Cerconota, 305
Cercyonis, 39
cerealella (Oliv.), 277
ceres (Cram.), 38
cerina Braun, 296
cerintha (Treit.), 114
Cerma, 96
ceromatica (Grt.), 93
Cerura, 157
cerussaria Grt., 191, 318
cervina (Sm.), 98
cervinaria Blanch., 179
cervinicolor (B. & McD.), 252
cervinus Wlsh., 298
cesonia (Stoll), 33
ceyvestensis Dyar, 116
Chaetagnaea, 93
chalconia (Hbn.), 99
Chalcoela, 200
Chamyris, 114
Characoma, 118
Charadra, 81
Chararica, 241
charitonius (Linn.), 11, 39, 315
chephise (Cram.), 191, 328
chersis (Hbn.), 61
Cheteoscelis, 163
Chilo, 235, 304
Chilocampyla, 294
chiocana (Kft.), 267
chiococella Busck, 291
Chionodes, 279, 313
Chipeta, 251
chiridota Grt., 192
chiron Dru., 67
chiron (Fabr.), 44
Chlaenogramma, 60
Choerodes, 311
chloris (H.-S.), 193
Chlorissa, 164
Chlorochlamys, 164
chloroleucaria (Gn.), 164
chloropha (Hbn.), 124
Chloropteryx, 164
Chlorosea, 320
Choephora, 86
Choranthus, 326
Choreutis, 287, 316, 321
Choristoneura, 268
Choropleca, 300
chromalis (Gn.), 207
Chrysendeton, 221, 321
chrysoadpersella Dietz, 302
Chrysobotys, 210
Chrysoxena, 267
Chytolita, 147
Chytonix, 96
Cicinnus, 192
cicutaella Kft., 303
cilicoides (Grt.), 72
Cilla, 102, 139
cillene (Cram.), 39, 326
cimbiciformis (Steph.), 65
cinnamatalis Munroe, 208
cinnamatiella Cham., 293
cincta Edw., 41
cincta Sm., 130
cinctarius Hlst., 180
cinctipalpis (Sm.), 130
cinctipes Grt., 75, 76
Cindaphia, 216
cinerea Wlk., 157
cinereofrons (Pack.), 156
cinereola (Gn.), 104
cinerosa (G. & R.), 217
cingulata (Fabr.), 59, 315
cingulifera (Wlk.), 128, 129
cinnamomea (G. & R.), 158
cinnamomea (H.-S.), 110
circulana Hbn., 259
circulifera (Wlk.), 81
circumscripella (Zell.), 276
Cirrhophanus, 105
Cisseps, 71
Cissusa, 132
Cisthene, 74
citata (Grt.), 143
Citheronia, 70, 317
citima Grt., 147
citrana (Fern.), 269
citricolella (Cham.), 284
citriella (Cham.), 277
citrifoliella (Cham.), 281
clappii (Mayn.), 36
clara (Harv.), 99
clarescens Gn., 83
clarioralis (Wlk.), 246
clarus (Cram.), 51
claudia (Cram.), 40
claudialis Wlk., 221
cleis Cass., 121
clemataria (A. & S.), 189
clemensella Cham., *Agonopterix*, 283
clemensella Cham., *Holococera*, 285
clemensella Cham., *Philonome*, 296
Clemensia, 75
Cleora, 180
clintoni Grt., 123

- clitosalis* (Wlk.), 148
cloacella (Haw.), 305
Clydonopteron, 226
clymena (Cram.), 10, 11, 43
clymene (Brown), 80
clyton (Bdv. & Lec.), 45
Cnephasia, 270
c-nigrum (Linn.), 87
cnotus (Hbn.), 67
Cobubatha, 111
cocana Kft., 259
coccidivora (Comst.), 248
coccinata Grt., 123
coccineifascia (Grt.), 142
coccivorella (Cham.), 284
cochrusalis (Wlk.), 202
Cocytius, 59, 312, 322
Coelostathma, 264
coenia (Hbn.), 42
Coenipeta, 130
cofaqui (Stkr.), 58, 311, 318
coffeella Guér., 305
cognataria (Hbn.), 178, 181
Colaenis, 326
Coleophora, 293
Colias, 33
Colocasia, 81
Colomychus, 203
colona (Hbn.), 80
coloradensis (Busck), 279
coloraria (Fabr.), 175
columella (Fabr.), 47
columnella (Zell.), 243
Comachara, 118
combinata (Wlk.), 132
commoides Gn., 90
Commophila, 271
communis (Grt.), 52
Compacta, 212
compensata (Wlk.), 167
Composita, 2, 150, 311
compressipalpis Gn., 137
Compsolechia, 280
comptana Fröh., 262
comptoniella Hlst., 241
comstocki Gundlach, 40, 317
comyntas Godt., 49
Concana, 135
Conchylodes, 204
concinna (A. & S.), 156
concinna Hamp., 204
concinnulla Wlk., 136
conclisa (Wlk.), 98
conclusella (Wlk.), 281
concolorata B. & B., 114
concolorella (Cham.), 275
concors (Hbn.), 140
concurbitana Hein., 261
condaliae Busck, 292
condaliaefoliella Busck, 302
condaliavorella Busck, 282
Condica, 97
condignella Busck, 277
Condylorrhiza, 214
confederata (Grt.), 97
confixana (Wlk.), 256
confusa Butl., 304
confusa (Hbn.), 89
confusa McD., 129
confusalis (Wlk.), 223
confusaria (Hbn.), 189
confusella Dietz, 299
confusella (Wlk.), 286
confusis Bell, 51
conglomeratella Zell., 293
congrua (Wlk.), 79
coniferarum (A. & S.), 61
coniferella Kft., 277
conjugella Zell., 291
connecta Grt., 82
connubialis Gn., 123
consobrinella (Zell.), 244
consors (A. & S.), 121
consortalis (Dyar), 228
constrictana (Zell.), 261
consularis Dyar, 69, 314
contacta (Wlk.), 97
contempta (Gn.), 126
Contiger, 222
continentalis R. & J., 67
continuata (Wlk.), 177
contorta (Gn.), 133
contortalis Gn., 218
contracta Wlk., 152
contrastana Kft., 271
convalescens (Gn.), 124
convolutella (Hbn.), 248
Copaecodes, 53
Copanarta, 92
Copipanolis, 92, 326
Coptodisca, 292
Coptotriche, 297
cora Hbn., 96
coracias (Gn.), 128, 130
corallina Wlsh., 277
Corcyra, 305
cordata (Ljung), 94
cordelia Hy. Edw., 123
coresia (Godt.), 43
coronaria Stkr., 192
coronata Hufn., 215
corope (Cram.), 202
coruscipennella Clem., 293
corviana Butl., 41
Coryphista, 172
Cosmia, 101
cosmion Dyar, 106
Cosmophila, 314
Cosmopteryx, 272, 312
Cosmosoma, 70, 314
Cossula, 272, 310
costalis (Wlk.), 115
costimaculalis Fern., 218
costomaculana (Clem.), 261
Cosymbia, 169, 171
coverdalella (Kft.), 280
Coxina, 130
Crambida, 73
crambidoides (Grt.), 234
Crambus, 230, 321, 328
crameraria Gn., 189
crameri (Schaus), 63
crassata (Hlst.), 178, 181
crassicornella Dietz, 284
crassifasciella Rag., 245
crassisquamella Hamp., 241
crataegella B. & McD., 245
crataegi Saund., 123
Cremastobombycia, 293
crenulata B. & McD., 252
crenulata (Butl.), 89
creola (Skin.), 38, 326
crepuscularia (D. & S.), 182
crephontes Cram., 32
cressonii (Wlsh.), 299
Cressonia, 62, 326
cretacea (Zell.), 283
cretica Led., 304
cribraria (Ljung), 159
cribrataria (Gn.), 181
crispata Pack., 196
crisifasciella (Cham.), 278
critica Fbs., 233
Crocallata (Gn.), 189
crocataria (Fabr.), 185
crociapitella Clem., 300
Crocidophora, 211
Crociosema, 261
crossii (Hlst.), 166
crotalariella (Busck), 280
cruentaria (Hbn.), 175
cruralis (Gn.), 147
Cryphia, 112
Cryptobotys, 205, 207
cubana Grt., 154
cubana Warr., 190
cubanalisp Hamp., 211
cubensis (Grt.), 59
cubilis Sm., 92
cucullata Braun, 293
Cucullia, 92
cucurbitae (Harr.), 290
culea (Gn.), 89
culicaria (Gn.), 171
culiculalis (Hlst.), 226
cunea (Dru.), 79
cumulae Dyar & Hein., 240
cupedinaria Grt., 162, 163
cupentia (Cram.), 97
cuprealis Hbn., 224
cupressi (Bdv.), 60, 311
cuprina Zell., 224
curema (Sm.), 129
curvalana (Kft.), 267
curvifascia Brower, 124
curvifascia Skin., 31
cuspidata (Hbn.), 124
Cutina, 127
cyanana Murt., 257
Cyathissa, 96
Cybalomia, 211
cybele (Fabr.), 4, 40
cybira Hew., 47
Cyclargus, 49
Cycloplasis, 290
Cycnia, 76, 77
Cydostia, 113, 292
Cymaenes, 57
Cymatophora, 179
cymela (Cram.), 39
cymotoma Meyr., 255
cypressaria (Grsb.), 182
Cysteophora, 174
dactylina Grt., 81
daeckiana Kft., 256
Dahana, 71
daira (Godt.), 35, 37
dalera Dyar, 242
dama (Gn.), 115
dammeri Hein., 244
damnosa Hodges, 273
Danaus, 37
dapifera Hodges, 273
dapsilis (Grt.), 85
Darapsa, 67
darlingtoni (Lemmer), 186
dasconalis Wlk., 213
Dasylophia, 153, 326
Dasypoudeia, 107
Datana, 151, 317
Daulia, 214

- Davara*, 242
davisi (Grsb.), 166, 167
debilis (Wlk.), 116
Decantha, 283
deceptalis (Wlk.), 143
decertaria H.-S., 173
declarans (Wlk.), 128
decolor (Zell.), 242
decolora Hy. Edw., 315
decoloralis (Wlk.), 243, 258
decoloraria Hlst., 186
decolorata (Hy. Edw.), 59
decoloralis Hbn., 140
decorella Hlst., 236
decorellus (Zinck.), 231
decorosa Hein., 262
decorosella (Busck), 285
deducta (Morr.), 134
deductaria (Wlk.), 184, 185
defectalis (Wlk.), 252
defectaria (Gn.), 181
degalis (Wlk.), 144
deia Dyar, 243
Deidamia, 67
Deilinia, 175
delecta Wlk., 116
deleta (Gn.), 126
delicatella Wlsh., 273
delilah Stkr., 122
delinquens (Wlk.), 131
delioides Haskin, 35
delphinii (Bdv.), 193, 314
Delta, 313
deludana (Clem.), 261
demeter (Feld.), 38
demissana (Wlsh.), 265
demissaria (Hbn.), 168
demoditas Hbn., 319
dendaria (Gn.), 183
densa Wlk., 103
densata Grsb., 174
densella (Zell.), 235
dentella (Busck), 279
denticularia (Wlk.), 163
denticulata Hlst., 183
dentilinea Hamp., 222
dentosa Grt., 225
denudata Sloss., 80
deplanaria (Wlk.), 184, 185
deploralis Hamp., 201
Dercetis, 150
derelecta Hein., 259
deridens (Gn.), 81
Derrima, 103
desertana (Zell.), 260
designalis Gn., 207
desistalis Wlk., 215
Desmia, 201
desmodiella (Clem.), 293
desotatum Hein., 264
determinatella (Zell.), 274
detersata (Gn.), 186
detexta (Wlk.), 183
detrans (Wlk.), 131
detrita (Guér.), 157
Deuteronomos, 189
devilliers (Godt.), 31
devincta (Wlk.), 117, 118
devotana Kft., 257
diabata Dyar, 199
diabolica B. & B., 140
Diacrisia, 78
Diactinia, 172
Diadema, 316
Diaethria, 10, 11, 43
diagrapta Meyr., 263
diana (Cram.), 4, 40
dianella Dietz, 284
diaphana (Dru.), 9, 39
Diaphania, 208, 209
Diasemoides, 214
Diasemopsis, 214
Diastema, 114
Diastictis, 181, 203, 323
Diathrausta, 219
Diatraea, 234, 315
Diatraenopsis, 234
dicacula Hodges, 273
Dicentria, 156
Dichogama, 204, 314
Dichomeris, 281, 313
Dichorda, 164
dictynna (Wlk.), 68
Dicymolomia, 200
Didasys, 71
didyma (Beauv.), 70
differentialis (Dyar), 205
differentialis (Fern.), 234
differtellum B. & McD., 248
diffinis (Bdv.), 65
diffusana Kft., 259
digitalis (Grt.), 93
digna (Morr.), 86
Dilophontia, 63
diluticostana (Wlsh.), 265
diluculella Grt., 237
dimediatella Rag., 251
dimidiata (H.-S.), 197
diminuendis B. & McD., 145
diminutalis (Wlk.), 200
diminutana (Haw.), 262
diminutiva (Graef.), 77
dimorphella Busck, 283
dina Poey, 36
dion (Edw.), 56
Dioroctria, 245, 274, 322
diphtheralis (Geyer), 204
diphtheroides (Gn.), 96
diplomochalis Dyar, 233, 234
Dipterygia, 96
Dirades, 192
directana (Wlk.), 266
discalis (Grt.), 140
discerpta (Wlk.), 136
disciferalis Dyar, 224
discludellus Moesch., 231
disclusa Hein., 245
discoloralis Gn., 148
discoocellella (Cham.), 279
discopunctana Clem., 264
discretivana (Hein.), 260
dislocaria (Pack.), 178
Disphragis, 155
disseverans (Wlk.), 125
disstria Hbn., 159
distema (Grt.), 102, 138, 139
distincta (Grt.), 127
distincta (Hbn.), 87
distincta (Wlsh.), 265
distinguenda (Wlk.), 154, 304
distracta (Wlk.), 116
distribuaria (Hbn.), 176, 177
diva (Riley), 287
diversilineata (Hbn.), 172
Diviana, 247
divisa (H.-S.), 104
divisalis Wlk., 201
divisana (Wlk.), 262
divisata (Hbn.), 186
divisata Wlk., 188
Divitiaca, 246
doctorium Dyar, 138
Dolba, 60
dolichos (Fabr.), 100
dolli (Neum.), 289
domingonis (Butl.), 63
dominicaria Gn., 165
dominicata (Gn.), 134
dorantes (Stoll), 51
doris (Bdv.), 78
dorsiatomana Kft., 258, 317
dorsimaculana Rob., 270
dorsisignatana Clem., 259
Doryodes, 126
doubledayi (Gn.), 118
Drasteria, 134, 325
drumalis (Dyar), 223
drupiferarum A. & S., 61
drusilla (Cram.), 36
dryadella Hlst., 247
Dryadula, 39
Dryas, 39
dubia (Wlk.), 79
ducens Wlk., 85
dulciella Hlst., *Anadelosemia*, 242
dulciella Hlst., *Honora*, 247
duplicata (Beth.), 129
duplispunctella Rag., 242
duponchel (Poey), 59
Durrantia, 286
dyaralis Fern., 211
dyari Busck, 287
dyari C. & S., 188
dyariella Busck, 294
Dyops, 14
Dysodia, 197, 315
dyspteria Grt., 198
Dyspteria, 171
Dyspyralis, 144

Eacles, 70
eboracensis Zell., 292
ebriola Hodges, 273
ebriola (Poey), 35
ebriosa Gn., 90
ebulealis (Gn.), 205
ecclesialis Gn., 203
Ecdytolopha, 264
Echinargus, 49
echo (A. & S.), 80, 323
Ecpantheria, 80
Ectoedemia, 302
Ectomyeloides, 242
Ectropis, 182
edentella Hlst., 247
editrix (Gn.), 138
edmandsae (Pack.), 249
edonis Grt., 232
eductalis (Wlk.), 143
edusina (Harv.), 128, 129
edwardsii Butl., 63, 312
edwardsii Fish, 252
edwardsii (Grt.), 71, 312, 314
edwardsii (G. & R.), 47, 326
effascinaria (Hlst.), 189
effrenatella Clem., 299
egena (Gn.), 119, 120
egeremet (Scud.), 54
egle (Dru.), 77
eglenensis (Clem.), 76, 77
Egrylon, 141
Elachista, 293

- Elaphria*, 99
Elasmopalpus, 246
elathea (Cram.), 35
elealis (Wlk.), 210
electellum (Hlst.), 247
elegans Clem., 231
eleuche Hbn., 44
elevata (Fabr.), 211
elimaria Hlst., 175
elimata (Gn.), 87
ella (Hlst.), 251
Ellida, 153
ello (Linn.), 63
Ellopi, 312, 313
eloisella (Clem.), 276
elonympha (Hbn.), 124
elutella (Hbn.), 250
Elydna, 102
elyella Dietz, 285
emblemella (Clem.), 281
Emiltis, 169
emphytiformis (Wlk.), 290
Enconista, 178
Endamus (*Eudamus*), 328
Endothenia, 255
endymion (Fabr.), 46
enervata (Gn.), 102
engeli (Dyar), 244
enhydria Grt., 197
Ennomos, 187
Enodia, 326
enucleata Gn., 167
Enyo, 64
eoides B. & McD., 111
Eois, 314
Eoparargyractis, 223, 321
Eoreuma, 235
Epargyreus, 50
Epermenia, 303
ephemeraeformis (Haw.), 297
Ephestia, 250, 305
Ephesiodes, 249
Ephyra, 176
ephyraria (Wlk.), 181
Ephyriades, 52
Ephyrodes, 135
Epiblema, 260
Epicalima, 283
Epicnaptera, 160
Epicorsia, 216
Epicorthylis, 282
Epidromia, 131
Epiglaea, 93
epilais Wlk., 71, 314
Epimecis, 161, 182
epimenis (Dru.), 105
Epinotia, 261
epione (Dru.), 121
Epipagis, 211, 323
Epipaschia, 236
Epiplema, 192
Epipyrops, 197
Episemasia, 175, 179
Episimus, 254
Epitamyr, 225
Epithectis, 278
Epitomiptera, 150
Epizeuxis, 145, 320
Eralea, 273
erata (Gn.), 126
erata Hein., 249
erastrioides (Gn.), 116
Ercta, 202
Erebus, 42, 131
erechtea (Cram.), 124
erechtiisella Cham., 294
erecta (Wlk.), 87
erectifascia Dyar, 194
eremiata (Gn.), 177
Eresia, 41
eresimus (Cram.), 38
Ereuntis, 296
ericata (Cram.), 141
eridania (Cram.), 100
erigeronana (Riley), 271
Erinnyis, 63
eriobotryae Busck, 284
eriphyle Edw., 33
ernestinana (Blanch.), 142
erosa Hbn., 137, 138, 313, 314
erosnealis Wlk., 217
erransella Cham., 275
Erycides, 326, 328
Erynnis, 52
erythrinella Busck, 295
espea Sm., 108
esther Barnes, 179
Estigmene, 79
estrella B. & McD., 247
esula (Druce), 104
Eteobalea, 274
Ethelgoda, 263
ethlius (Stoll), 57
Ethmia, 286
Etiella, 244
Euacidalia, 165
Euagrotis, 86
Eubaphe, 174
Eublemma, 72, 110
eubule (Linn.), 34
Eucatagma, 291
Eucereon, 71
Euchaetias, 76, 315
Euchlaena, 184
Euchromius, 233
Eucirrhoedia, 93
Euclaea, 193, 314
Euclimensia, 290, 320
Euclidina, 124
Eucrotonemias, 84
Eucosma, 258
Eucrostes, 165
eudamidasalis Druce, 214
Eudeilinea, 160
Eudamus, 326
eudora (Dyar), 74
eudoreella Rag., 247
Eudoria, 223
Eueana, 165
Euerythra, 79
eufala (Edw.), 57
Eufidonia, 179
eugeniella Busck, *Antispila*, 292
eugeniella Busck, *Argyresthia*, 291
Eugrota, 229
Euherrichia, 94
Euleptidotis, 134
Eulogia, 249
Eulype, 174
Eumachrodes, 165
Eumaeus, 46, 324, 326
Eumarozia, 256
Eunica, 43
Eunystalea, 152
Eupanychis, 106
Euparthenos, 124
eupatoriella (Cham.), 282
Euphyia, 173
euphaesalis (Wlk.), 208
Euphanessa, 326
Euphyes, 55
Eupithecia, 172, 322
Euplexia, 94
Euprora, 295
Eupseudosoma, 75
Euptoieta, 40
Euptychia, 38
Eurema, 4, 35, 37, 319
Eurois, 86
Eurrhyarodes, 203
Eurukuttarus, 297, 321
eurydice (Bdv.), 33
eurydice (Joh.), 38
euryrhoda Hamp., 105
eurytheme Bdv., 33
Eurythmia, 250
Eustixia, 218
eutalanta (Dyar), 152
Eutelia, 116
euterpe Ménétriés, 36
Euthermisia, 135
Euthisanotia, 105
Euthyatira, 160, 184, 325
Eutolype, 92
Euvanessa, 312
Euxoa, 84
Euzophera, 249, 312
Evagora, 277
evanescens Dyar, 234
evanescentella Dyar, 240
evarete (Cram.), 42
evarsaria (Gn.), 179
evelina French, 122
Everes, 49
Evergestis, 211
evincalis (Moesch.), 211
Evippe, 277
exaphristus Meyr., 298
Exartema, 257
excaecatus (A. & S.), 62
Exelastis, 252
Exelis, 180
exesa (Gn.), 99
exhausta (Gn.), 127
exigua (Hbn.), 101, 328
exitiosa (Say), 283, 315
exoletalis (Gn.), 143
Exoteleia, 277
explicata McD., 88
explusata Wlk., 163
expunctaria Grt., 186
exsanguinis Dyar, 155
exsulella (Zell.), 240
extensa Schaus, 9, 193
extincta Gn., 90
extornalis Wlk., 230
extorralis Hlst., 230
extremaria Wlk., 161
extricalis (Gn.), 215
Exyra, 113
faceta Hy. Edw., 134 315
factiosalis (Wlk.), 148
fadius (Cram.), 65
faginella (Cham.), 283
Fagitana, 95
falacer Godt., 48
falcata Braun, 275
falcifera (Kby.), 119
fallax (H.-S.), 96
falsarius Clem., 197
famelica (Gn.), 133

- farinalis* Linn., 224
Faronta, 90
fasciata Stkr., 49
fasciatella (Grt.), 115
fasciatus (Sulz.), 66
fasciella (Fern.), 227
fasciola (H.-S.), 195
fasciolaris (Hbn.), 133
Fascista, 279
fatima (Fabr.), 43
faulalis (Wlk.), 222
favonius (A. & S.), 47
fax (Grt.), 113
Feltia, 85
Feniseca, 49
Fentonia, 155
Feralia, 92
ferax Hodges, 275
fernaldana Wlsh., 270
fernaldella Kft., 232
fernaldella Wlsh., 273
fernaldellus Kft., 232
ferraria Wlk., 105
ferrugalis (Hbn.), 215
ferruginea Pack., 160
ferruginea Sm., 134
ferrugineoides (Gn.), 93
ferruginosa Wlk., 77
fervidaria (Hbn.), 188, 313, 317
fervidaria H.-S., 186
fessa Grt., 102
fessa Hodges, 275
festivoides (Gn.), 99
feudalis (Grt.), 213
fictilis (Gn.), 128
ficus (Linn.), 64
fidellissima H.-S., 150
figulilella Greg., 305
figurata (Dru.), 78
filamentaria Gn., 186
filaria Sm., 141
filaria (Wlk.), 180
Filatima, 279
filifera (Wlk.), 118
filiolella (Hlst.), 243
finbriago (Steph.), 137
finbriaris (Gn.), 84, 85
finitella (Wlk.), 245
fiscellaria (Gn.), 188, 314
fitchii (Hy. Edw.), 288, 315
flabella of authors, 117
flabilis Grt., 90
flagrata (Wlk.), 197
flammea (Neum.), 78, 323
flava (Fabr.), 137
flava (Stkr.), 36
flavedana Clem., 266
flavego Schiff., 304
flavescens (Hlst.), 168
flavicollis (Wlsh.), 263
flavicornis (Sm.), 81
flavicostella (Fern.), 227
flavidalis Gn., 212
flavifascialis B. & McD., 227
flaviguttata (Grt.), 112
flavipicta Hamp., 251
flavipunctalis B. & McD., 215
flavipunctalis Geyer, 148
flavistriaria (Hbn.), 125
flavocostella (Clem.), 282
flavofasciata (Grt.), 112
flegia (Cram.), 208
flora (Edw.), 45, 315
florella (Cram.), 202
florestan (Stoll), 60
florida Gn., 107
florida (Hlst.), 178
florida Roeber, 46
florida (Sm.), 87
floridalis B. & McD., 213
floridalis Fern., 202
floridalis John. & Comst., 45
floridalis Lange, 223, 321
floridana Hy. Edw., 160
floridana Graef, 151, 317
floridana (Hlst.), 197
floridana Kft., 260
floridana (Neum.), 291, 314
floridana Obraz., 268, 323
floridana Sm., 147
floridana (Stkr.), 41, 317
floridana (Zell.), 262
floridanella Beut., 273
floridanella Busck, 283, 312
floridata (Grt.), 190
floridata (Hlst.), 169
floridata (Wlk.), 174
floridella B. & McD., 232
floridella Dietz, Mea, 302
floridella Dietz, *Valentinia*, 284
floridella (Hlst.), 238
floridellus B. & McD., 232
floridellus Hlst., 244
floridensis Bell & Comst., 52
floridensis Clark, *Amphion*, 67
floridensis Clark, *Dolba*, 60
floridensis (Grt.), 288, 323
floridensis (G. & R.), 65
floridensis (Gn.), 94
floridensis Hein., *Nephopteryx*, 244
floridensis Hein., *Unadilla*, 248
floridensis (Holl.), *Graphium*, 33
floridensis Holl., *Sphacelodes*, 192, 320
floridensis (Hlst.), 178
floridensis (Neum.), 2, 35
floridensis Stkr., 44
floridum Grt., 75
florodora Stkr., 41
fluctuosalis (Led.), 207
flumenata (Pears.), 178
Focillidia, 127
foeminalis Dyar, 221
fontella Wlsh., 218
formosalis Wlk., 72
formularis (Geyer), 131
forsythae Munroe, 211
forsythae Rindge, 179
forsythae Wood, 31
fractilinea (Grt.), 94
fractilinea (Zell.), 284
fragariae (Walsh & Riley), 262
Framinghamia, 215
francesca (Dyar), 272
fraternalis Sm., 148
fraternaria (Gn.), 183
fratrueis Hein., 259
frigidana (Wlk.), 118
frista (Poey), 41
fritillaria (Gn.), 186
frondaria Gn., 163
fructetella (Hlst.), 244
frugiperda (A. & S.), 101
frustrana (Comst.), 258
frustulum Gn., 125
Fruva, 115
fucosa Hbn., 75
fulcalis (Clem.), 223
fulcalis Sm., 147
fuliginaria (Hlst.), 181
fuliginosalis Fern., 199
fulleri McElvare, 107
fulminalis (Led.), 199
fulvicollis (Hbn.), 71
fulvicosta Clem., 80
fulvittinctella Hamp., 220
fumalis (Gn.), 216
fumiferana (Clem.), 268
fumosa (Stkr.), 79
fundaria Gn., 189
Fundella, 242
funebra Dietz, 284
funeralis (Hbn.), 201
funeralis (Scud. & Burg.), 53
fungorum G. & R., 86
furcata (Wlk.), 116
furcifera Gn., 82
furciferata (Pack.), 170
furcilla (Pack.), 81
furfurana (Haw.), 255
furfurellus Hlst., 243
fuscicaudis (Wlk.), 65
fuscimacula (Grt.), 99
fuscopunctella (Clem.), 278
fuscicola Braun, 296
futilis (G. & R.), 14, 135, 318

Gabara, 3, 102, 138, 325
Gaea, 290
Galasa, 225
galbanata (Morr.), 128
Galgula, 100
gallaegenitella (Clem.), 278
gallaerandialis Dyar, 198
gallaesaliciana (Riley), 263
gallaesolidaginis (Riley), 278
Galleria, 235
gangho Hbn., 135
gaurae (A. & S.), *Proserpinus*, 67, 323
gaurae (A. & S.), *Rhodophora*, 107
gausaparia (Grt.), 179
Gelechia, 281
geliformis (Wlk.), 289
gelliasalis (Wlk.), 219
gemellana Hein., 259
geminalis Snell., 201
geminatella (Pack.), 294
geminatus (Say), 62
gemistrigulana (Kft.), 258
gemma (Hbn.), 38
gemma (Grt.), 292
gemmatilis Hbn., 134
gemmiferella Clem., 273
generosa (G. & R.), 217
geniculata (G. & R.), 86
geometralis (Grt.), 142
geometroides Wlk., 191
georget Moore & Rawson, 99
georgiana (Dyar), 154
georgiana (Wlk.), 267
georgianus (Wlk.), 268
georgica (H.-S.), 152
georgiella Hlst., 244
Gerdana, 285
gerularia (Hbn.), 162
Geshna, 219
gibbosa (A. & S.), 152
giganteana Riley, 259
gilippus (Cram.), 38
gisela Meyer, 123
Givira, 272
gladiaria Morr., 85

- glandulella* (Riley), 284
glans Grt., 125
glaphyralis (Gn.), 199
Glaphyria, 199
glaucatella (Hlst.), 249
Glauce, 277
glaucus Linn., 11, 32
Glena, 181
glenni Clarke, 281, 313
Glenoides, 182
glochinelia (Zell.), 279
glomeraria (Grt.), 175
gloriosa (Stkr.), 108
gloveri Pack., 297
Gluphisia, 157
glutinella Ely, 295
Glympis, 140
Glyphidocera, 282, 312
Glyphipteryx, 287
Glyphodes, 207
Glyptocera, 244
gnaphaliella Kft., 287
gnophosaria (Gn.), 178
Gnorimoschema, 278, 327
gomonana Kft., 259
Goniacidalia, 170
Gonturus, 51
Conocaula, 214
Gonodes, 100
Gonodonta, 136, 321
goodelli Grt., 87
goodelliana (Fern.), 262
gopheri Sm., 146, 320
gordialis Gn., 206
gordius Cram., 61
gorgone (Hbn.), 40
Gortyna, 304
gortynoides Wlk., 103
gossypiella (Saund.), 280
gossypii Fbs. & Leonard, 302
gracea Dyar, 195, 196
gracilenta Hbn., 108, 109
gracilineata Gn., 172
gracilis Edw., 122
gracilis C. & R., 65
gracilis (Moesch.), 141
Gracillaria, 294, 312
gracillima (Grt.), 104
grandella (Zell.), 241
grandiosa (Hlst.), 173
grandirena (Haw.), 134
grandis (Fish), 254
granella (Linn.), 301, 305
granitata (Gn.), 177
granitosa (Gn.), 95
graphica Hbn., 134
Graphiphora, 87
Graphium, 31, 33
Grapholitha, 263
grata (Fabr.), 105
grata Hbn., 99
grataria Fabr., 170
grenadensis Hamp., 127
Greta, 9, 39
Gretchena, 261
grisatra Brower, 123
griseicinctus Hamp., 210
Griselda, 261
grossbecki (B. & McD.), 239
grossbecki Davis, 77, 314
grossbecki Hein., 260
grotei (Hy. Edw.), 64, 315
grotei Rag., 246
grynea (Cram.), 123
gryneus (Hbn.), 48
guantanamo Munroe, 42
gudmanella (Wlshn.), 278
gueneei (Warr.), 190, 191
guettardella Busck, 295
guilandinae Busck, 284
guilandinella Busck, 294
guttata Grt., 115
guttivitta (Wlk.), 155
Gymnandrosoma, 264
gyralis (Hlst.), 222
Gysochroa, 174, 314, 325
Gypsonoma, 261
habitalis (Wlk.), 142
Haematopsis, 170
haemorrhoidalis (Gn.), 203
haesitata Gn., 314
Haimbachia, 234
haitensis (Skin.), 55
halesus (Cram.), 46, 319
halicarniae (Stkr.), 61
Halisidota, 75
halli (Ck. & Wats.), 44
hamamelis Gn., 83
Hammaptera, 173
hampsoni B. & McD., 206
hamulata (Gn.), 189
hanno Stoll, 319
Hapalia, 216
Haploa, 80
Haplolophus, 94
hapsella Hlst., 246
hariolalis (Hlst.), 214
harliquinalis Dyar, 219
Harrisimemna, 84
Harrisina, 197
hasta Gn., 82
hastata (Linn.), 174
hastulifera (A. & S.), 81
hayhurstii (Edw.), 52
haytiellus (Zinck.), 231, 329
hebesana (Wlk.), 255
hebesella Hlst., 240
hebraeicum Hbn., 96
hecebolus (Scud.), 57
Hedia, 257
Hedylepta, 205
hegesia (Cram.), 40
helata (Sm.), 129
Heliades, 226
helianthana (Riley), 261
Heliconius, 11, 39, 315
Heliocontia, 114
Heliodines, 290
Heliomata, 175
Heliophana, 106, 110
helios M. Bates, 36
Heliopsis, 106, 313
Hellula, 210
helvalis (Wlk.), 215
helvialis Wlk., 213
Hemaris, 65
Hemeroblemma, 131
Hemerocampa, 157
Hemeroplanis, 142
Hemiargus, 49
Hemileuca, 69
hemiochrellus Zell., 231
Hemimene, 263
henrici (Grt.), 84
henrici C. & R., 48
heptathalama Busck, 276
herbaria (Fabr.), 162
herbarum (Gn.), 125
herbicola (Gn.), 126
Herculia, 224
herilis Grt., 86
hermes (Fabr.), 38
hero Hy. Edw., 123
Herpetogramma, 212
Herse, 59
Hesperia, 53
hesperidago (Gn.), 93
Heteranassa, 130
Heterocampa, 154, 155, 304
Heterogenea, 196
Heteropacha, 159
Hexeris, 197
hibisci (Gn.), 89
hiemalis Edw., 40
hieroglyphica (Cram.), 135
Hilarographa, 287
hilliata (Hlst.), 168
hinna (Ceyer), 131
hippocastaneum Kft., 257
hiramella Bsk., 286
hirsuta Skin., 31
Historis, 45
Holcocera, 284, 313
holguinalis Munroe, 203
hollandaria (Hlst.), 163
Holomelina, 77
Holophysis, 231
Homadaula, 287
Homaledra, 276
Homochlodes, 186
Homoeosoma, 247
Homohadena, 92
Homoptera, 327
Homosetia, 302
homuraria (C. & R.), 186
honestarius (Wlk.), 188
Honora, 247
horatius (Scud. & Burg.), 53
Horisme, 172
Hormisa, 147
hormos Hbn., 137
Hormoschista, 142
hornbeckiana (Harr.), 66
horrida Hbn., 129
hortaria (Fabr.), 183
hortularia (Hlst.), 189
hospitella (Zell.), 250
houstonana (Grt.), 268
howardi (Skin.), 55
hubbardiana Dyar, 113
hubnerata, 188
hugoi Chernock, 155
hugon (Godt.), 46
hulstellus Beut., 298
Hulstia, 247
hulstiana (Dyar), 162
humaria (Gn.), 181
humeralis (Sm.), 138, 139
humerosana Clem., 265
humilis (Zell.), 285
huronalis (Gn.), 211
hyalinata (Linn.), 209
Hyblaea, 198
Hybroma, 301
Hydria, 171
hydrillalis Gn., 149
Hydriomena, 173
Hydrocampa, 206
Hydroecia, 327
hydromeli Harv., 154, 314
hylaesus (Dru.), 60

- Hylephila*, 54
Hymenia, 200
Hypagyrtis, 179
Hyparygrina, 241
Hyparpax, 153, 326
Hypena, 144
Hypenodes, 144
Hypenopsis, 144
Hypenula, 149
Hyperaeschra, 152
hyperbola Sloss., 62, 326
Hyperetis, 186
hyperfusca Strand, 107
Hyphantria, 79
Hypocala, 137
hypochraria (H.-S.), 186
Hypocoena, 94
hypocritica (Dyar), 98
Hypolimnas, 41, 318
Hypoprepia, 75
Hypopta, 314
Hypsipyla, 241
Hypsoropha, 137
Hypsotropa, 251
Hysterostia, 271
Hystricophora, 262
hystriculella (Hlst.), 241

iarchasalis (Wlk.), 205
iaspis (Gn.), 96
iccusalis (Wlk.), 222
icelus (Scud. & Burg.), 52
Ichthyura, 151
icole (Grt.), 98
idaeusalis (Wlk.), 267
idalialis (Wlk.), 198
Idioglossa, 290
Iesta, 234
ignotaria (Wlk.), 171
ilia (Cram.), 122
ilioneus A. & S., 32
illapsa (Wlk.), 86
illibalis (Hbn.), 208, 323
illita Gn., 138
illudens (Wlk.), 81
illustrata (Gn.), 119, 120
imitabilis (Dyar), 221
imitella Stretch, 113
immaculata Benj., 113
immaculata (Reak.), 77
immortua Grt., 106
immundella Hlst., 241
Immyrta, 243
impasta Gn., 138
imperialis (Dru.), 70
imperspicua Stkr., 108
impigritella Clem., 287
impleta Wlk., 83
implicata Gn., 173
implicata McD., 88
impresa Wlk., 83
impulsalis (H.-S.), 209
inaptata (Wlk.), 176
incertata (Wlk.), 164
incertella (Zinck.), 229
incidens (Wlk.), 101
Incisalia, 48
includens (Wlk.), 120
inclusa Hbn., 151
inclusaria (Wlk.), 168
incognita B. & McD., 91
inconspicua H.-S., 91
inconstans Gn., 133, 134
incretata Morr., 83

incrustalis (Hlst.), 236
incurva (Sepp), 136
incurvata (Gn.), 190, 311
indecora Dyar, 236
indentana (Dyar), 258
indentata (Haw.), 125
indeterminata B. & McD., 114
indiana (Grt.), 152
indianalis (Dyar), 219
indica (Saund.), 209
indicata (Fabr.), 205
indicataria (Wlk.), 180
indigenella (Zell.), 239
indiscriminata (Wlk.), 164
indistincta Hy. Edw., 160
indoctaria (Wlk.), 167
indomita (Wlk.), 133
indubitans (Wlk.), 115
inductata (Gn.), 167
inexacta Wlk., 135
inextricata (Wlk.), 175, 178
infans Warr., 192
infecta (Ochs.), 86
inferior Grt., 149
inficita (Wlk.), 117
infimalis (Gn.), 209
infimata (Gn.), 178
infimella Rag., 249
infixa (Wlk.), 92
inflatella Clem., 287
infulata (Grt.), 175
infumatanus (Zell.), 267
Inga, 283
ingens Hein., 263, 322
inguinalis (Gn.), 204, 207
Inguromorpha, 271
inimicella (Zell.), 257
injecta (Dyar), 74
innotata (Druce), 209
innubens Gn., 121
inopiana (Haw.), 271
inopinatus (Hy. Edw.), 76, 77, 315
inopis Hodges, 273
inornata Beut., 157
inornatalis (Fern.), 218
inquieticolor Dyar, 127
inquinatus Zell., 253
insaria (Dyar), 181
inscriptum (Harr.), 67
insignatalis (Gn.), 217
insiticiana Zell., 264
insolabilis Gn., 121
inspersa Hein., 256
insulata (Wlk.), 76
insulensis Rindge, 4, 170
insulsaria (Gn.), 170
integerrima G. & R., 152
integra (Warr.), 162
integra (Zell.), 218
interlineata Wlk., 75
intermedia Clark, 66
intermedia (Stretch), 78
intermedialis B. & McD., 199
intermedialis (Wlk.), 224
intermediella Busck, 294
intermicata (Wlk.), 189
interpuncta (Grt.), 145
interpunctella (Hbn.), 250
interrogans (Wlk.), 103
interrogationis (Fabr.), 41, 45
interrupta Gn., 82, 83, 314
interrupta Wlk., 65
interrupta (Zell.), 219
interruptella (Rag.), 237

interruptolineana Fern., 256
interruptomarginata (Beauv.), 80
intestinata (Gn.), 172
intractata (Wlk.), 179
inusta Gn., 101
y-inversa Pack., 195
inversella Zell., 282
invisalis Gn., 199
involutum (Sepp), 75
io (Fabr.), 69
iole Bdv., 86
iphitalis (Wlk.), 200
ipomoeae Busck, 273
ipomoeae Dbldy., 156
ipomoeae Harr., 71
ipomoealis Capps, 312
iridana B. & B., 267
iridaria (Gn.), 164
iridipennella Clem., 281
irrenosa Gn., 225, 328
irrigualis Moesch., 148
irrorata (Grt.), 126
irrorata (Pack.), 160
irroratalis (Dyar), 223
isabella (A. & S.), 79
isabella Hy. Edw., 123
Ischnurges, 214
Isia, 79
ismeria (Bdv. & Lec.), 40
Isochaetes, 194, 321
Isocorypha, 302
Isogona, 134, 140
isolus (Reak.), 49
Isoparce, 60, 311
Itame, 175, 178
itealis (Wlk.), 221
Ithomia, 9, 39
Ithome, 274, 275, 319
ivae Busck, 277
ivana (Fern.), 269, 310
ivella Busck, 296
ixion (Linn.), 65

jacchusalis (Wlk.), 147
jaguaralis Hamp., 115
jaguarina (Gn.), 109
jair Stkr., 124, 327
jamaicaria (Ober.), 183
jamaicensis Bates, 38
jamaicensis (Dru.), 62
janassialis (Wlk.), 214
janualis Grt., 87
januarts (Gn.), 133
jasminearum (Guér.), 60
jaspidaria (Hlst.), 163
jatrophae (Joh.), 42
jejunata McD., 172
Jocara, 236
jocosa Hy. Edw., 151
jonesi Brower, 287
jozita Schaus, 238
jucunda (Bdv. & Lec.), 35
jucunda Hbn., 133
jucundissima Dyar, 71
juglandana (Fern.), 269
juglandifoliella Clem., 302
juglandis (A. & S.), 62
juglandis (Le Baron), 239, 240
julia (Fabr.), 39
julianalis (Wlk.), 200
juncealis Gn., 220
juncicola Gn., 91
junctiliana (Wlsh.), 259
junctura Wlk., 122

- Junonia*, 42
juvenalis (Fabr.), 53
Kakopoda, 130
karacana (Kft.), 265
kearfottella Dyar, 240
Kearfottia, 300
Keiferia, 278
kellcottii (Fish), 253
kentuckiensis (Dyar), 74, 75
kimballi Braun, 296
kimballi Lange, 222, 321
kimballi Munroe, 208
kimballi Obraz., 268, 323
kimballi Rindge, 180
kingi Klots & Clench, 48
kinzelella Busck, 276
knobelaria Cass., 162
koebeleri Hy. Edw., 289, 315
Kricogonia, 35
kuehniella (Zell.), 250
kumskaka Scud., 326
labe Stkr., 109
labecula (Grt.), 100
labeculata (Hlst.), 168, 170
labruscae (Linn.), 66
lachrymosa Gn., 122
Lacinipolia, 87
lacordairei (Bdv.), 34
Lacosoma, 192
lacteella (Fabr.), 233
lacteodactylus (Cham.), 253
lacteola Lint., 169
lactiflosella (Cham.), 282
Lactura, 292
lacy B. & McD., 196
laeta (Guér.), 77
laeta Hodges, 275
laetifica Sm., 82, 83, 314
Laetilia, 248
laevitaria (Hbn.), 166
Lagoa, 196, 314
lagunculariae Dyar, 72
lagunculariella (Busck), 280
laidion (Zell.), 243
Lambdina, 188
Lamprolophus, 290
Lamprosema, 205
lanceolana (Hbn.), 255
lanceolaria (Grt.), 84
lanceolata (Hlst.), 166
lantana Busck, 262
Lapara, 61
Laphygma, 100, 328
lappella (Linn.), 277
larentioides Grt., 147
laricis Fitch, 159
larina Druce, 132
larvalis Grt., 148
Lascoria, 149
Laspeyresia, 263, 305, 319, 322
lassauxii Bdv., 63
lassula Hodges, 275
Latebraria, 131
laticlavata (Clem.), 195, 196
laticlavata (G. & R.), 217
latifascia Wlk., 100
latifasciella Cham., 302
latiferreanus (Wlsh.), 264
latiferrugata Wlk., 178
laticlata Wlk., 188
latiorella (Wlk.), 141
latipalpis (Wlk.), 142
latipennis (Hlst.), 164
latipes (Gn.), 125, 136
latiuscula H.-S., 91
latomia Harv., 195
laudabilis (Gn.), 88
lauta Munroe, 219
lautana (Clem.), 263
lautaria (Hbn.), 168
lavinia (Fabr.), 43
leachellus (Zinck.), 230
lecontei (R. & J.), 33
legitima (Grt.), 87
Legna, 142
Legmeria, 93
lentaria (Hlst.), 187
lentiginosana Wlsh., 267
leo (Gmelin), 50
leo (Gn.), 115
leodocusalis (Wlk.), 214
leonardus Harr., 53
Lephelisca, 46
Lepidomys, 225, 328
Lepipolys, 92
lepidophaga Clarke, 285, 313
leptinoides (Grt.), 156
Leptotes, 49
Leptotygris, 206
lepusculina Gn., 82
Lerema, 56
Lerodea, 57
Lethe, 38
Leucania, 90, 327
Leucanthiza, 294
Leuce, 277
Leucochroma, 202
leucodesma Feld., 41
Leucogonia, 278
leucogramma Hamp., 226
Leuconycta, 96
leucophaea (A. & S.), 158
Leucoptera, 295, 305
leucostigma (A. & S.), 157
levalis (Hlst.), 204
levipedella (Clem.), 280
levitans (Sm.), 119
L'herminieri (Latr.), 57
liburna (Geyer), 138
Libytheana, 45
Lichnoptera, 81
lignicolor (Wlk.), 156
lignosellus (Zell.), 246
ligulella (Hbn.), 281
lilith Stkr., 69
lima (Gn.), 125
Limacodes, 195
limata G. & R., 206
Limenitis, 44
lineana (Fern.), 257
lineata (Druce), 154
lineata (Fabr.), 68
lineatella Zell., 281
lineigera Hodges, 273
Lineodes, 216, 219
linita Gn., 90
linitneri Ckll., 69
linus B. & L., 253
liopasialis (Dyar), 218
liparops (Lec.), 48
Lipocosma, 199
liquida (Moesch.), 100
liriodendrana (Kft.), 255, 324
lisa (Bdv. & Lec.), 36
lisetta Dyar, 234
Lithacodes, 195
Lithacodia, 113
lithella Busck, 290
Lithocolletis, 7, 293, 312
Lithophane, 93
lithosioides Dyar, 73
lithospila Grt., 84
Litodonta, 154, 314
Litoprosopus, 14, 135, 318
littera (Gn.), 95
lituralis (Hbn.), 146
liturata Sm., 83
lividalis (Hbn.), 143
lividus Hbn., 50
livornella (Zell.), 284
lixaria Gn., 161, 162
loammi (Whitney), 56
lobelia Gn., 83
Lobesia, 255, 324
lobidactylus (Fitch), 252
Lobocleta, 170
logan (Edw.), 55
logiana Schiff., 270
Lois, 41, 134
Lomanaltes, 143
longa (Grt.), 76
longa Gn., 83
longifasciella (Clem.), 278
longipalpella Rag., 250
longitudinella Busck, 278
Lophoderus, 269
Lophodonta, 152
Laphosis, 168, 170
lorina (Druce), 41, 134
Lorita, 270
louisa Hlst., 162
louisa Sm., 105
louisiana (Fbs.), 147
Loxocrambus, 233
Loxogramma, 186
Loxostege, 213
Loxostegopsis, 218
Lozogramma, 325
lualis (H.-S.), 209
lubricalis Geyer, 146
lubricans (Gn.), 86
lucayus (R. & J.), 31
lucens (Morr.), 107
lucetiella Clem., 293
lucilius (Scud. & Burg.), 52
lugubris Bdv., 197
lugubris (Linn.), 64
luna (Linn.), 15, 68
lunata (Dru.), 128
lunata Hamp., 105
lunifera (Hbn.), 128, 129
lumilinea Grt., 135
lunodes (Gn.), 117
lunulalis (Hlst.), 237
lupata Grt., 106
lupinella (Busck), 280
luridula (Hlst.), 181
lusca (Fabr.), 65
lustralis (Grt.), 87
luteicostella Rag., 251
luteifera Dyar, 160
luteopallens (Sm.), 91
luteostrigella Cham., 280
lutina (Sm.), 88
luxuriosa (Grt.), 107
Lycæna, 4, 49, 319
Lychnosea, 189
Lycia, 183
lyciades (Hbn.), 51
lycopersicella (Busck), 278, 327

- Lycorella*, 38
lygdamis Druce, 203
Lygris, 172
Lygropia, 207
Lymire, 71, 312
Lymnaecia, 274
lynx (Gn.), 109
lysida Godt., 35
Lytrosis, 184
- Macalla*, 236
macareus (H.-S.), 57
Macaria, 176
macerata Sm., 95
Machlotica, 287
macurae Riley, 214
Macrotheca, 3, 236
macula (Druce), 144
maculalis (Clem.), 221
maculana (Fern.), 262
maculata (Edw.), 56
maculidorsana (Clem.), 270
maculimarginella (Clem.), 279
maculipennis (Curt.), 291
Madoryx, 64
madusaria (Wlk.), 184, 185
maerula (Fabr.), 34, 325
maestites H.-S., 47, 329
maestosa Hlst., 122
magdalena (Fern.), 214
magnarius (Gn.), 189
magnella Cham., 296
magniferalis (Wlk.), 208
magniferaria (Wlk.), 165
magnifica (Stkr.), 272, 310
magnificalis (Hbn.), 220
magnolialis Capps, 312
magnoliella Cham., 294
magualis (Gn.), 206
Magusa, 101
maia (Dru.), 69
major G. & R., 151
major Sm., 92
majuscula (Hy. Edw.), 113, 292
malachitana (Zell.), 256
Malacosoma, 159
malana (Fitch), 100
m-album (Bdv. & Lec.), 47
malefida Gn., 85
Malthaca, 197
Mamestra, 326
manalis (Wlk.), 142
mancalis (Led.), 213
mandarinella Dietz, 301
manihotalis Gn., 224
manitoba Grsb., 180
manteo Dbldy., 155
manto (Stkr.), 158
manueli Bell & Comst., 50
Marasmarcha, 252
Marasmia, 202
Marathyssa, 116
marceata (Cass.), 169
marcellus (Cram.), 31, 33
marcia (Edw.), 40
marcida (Gn.), 125
margana (Fabr.), 115
margaretae dos P., 48
margaritana Clem., 197
margaritosa (Haw.), 86
marginata (Haw.), 109
marginata (Wlk.), 160
marginella (Fabr.), 281
marginiplaga Wlk., 162
- margoriella* (Dietz), 300
mariae (Benj.), 68
mariana (Fern.), 269
marica (Beut.), 289
marinus Reak., 49
marita Schaus, 136
Marmara, 294
Marpesia, 43
marthesia (Cram.), 155
martialis (H.-S.), 46
martialis (Scud.), 52
Martyringa, 283, 319
Maruca, 304
maryx (Gn.), 87, 88
masculinalis B. & McD., 205, 207
masculinalis Dyar, 221
Massala, 132
masthala Druce, 191
materna (Linn.), 124
mathesoni Busck, 276
Matigramma, 130
Matiloxis, 137
matronaria (Gn.), 183
maxima (Neum.), 34
maximellus Fern., 229
mazans Reak., 52
Mea, 301
meadi (Pack.), 172
Mecyna, 216
medialis Sm., 149
medicinalis Grt., 221
mediofuscella (Cham.), 279
mediostriata (Clem.), 302
mediosuffusana (Strand), 88
meditata (Grt.), 87
medor (Cram.), 59, 312, 322
megalippe (Hbn.), 37
Megalopyge, 196
Meganola, 72
Megathymus, 58, 311, 317, 318, 326
melancholica Grt., 63
Melanchrota, 191, 328
melanella Hlst., 245
melanella Murt., 286
melaneura Hoffman, 32
melanogrammos Zell., 238
Melanolophia, 180
Melanomma, 144
Melanocinclidis, 273
melanopyga (Grt.), 103
melanospila (Gn.), 141
melanostriata Dietz, 285
melantherella Busck, 282
Melaporphyria, 106
Melese, 304
Melicleptria, 106
melinellus (Clem.), 229
melinus Hbn., 47
Melipotis, 132, 134, 325
melissia (Wlsh.), 282
Melisoppus, 264
Melitara, 248, 320
Melittia, 290
Mellilla, 175, 178
mellinalis Hbn., 216
mellinella Grt., 247
mellitula Hlst., 123
mellonella (Linn.), 235
melsheimeri (Harr.), 192
mendica (Wlk.), 174
Menesta, 286
Menestomorpha, 286
mercurius (Fabr.), 50
merianae Grt., 63
- meridiana* (Sloss.), 174
meridianata McD., 173
meridionalis B. & McD., 158
meridionalis Dyar, 56
Meropleon, 106
Meroptera, 244
merrickalis (B. & McD.), 218
Mescinia, 247
Meskea, 198
meskeana (Grt.), 106, 110
meskei (Edw.), 54
Mesotheca, 164
Mestra, 41, 317
messalina (Fabr.), 35
messalina Gn., 122
messelinella Dietz, 285
messoria (Harr.), 84
meta Strand, 76
Metalectra, 140, 325
metallicana (Wlsh.), 267
metalophota (Hamp.), 200
Metamorphia, 43
metamorphia Dyar, 134
Metarranthis, 186, 325
Metasiopsis, 165
metaspilaris Wlk., 112
metata (Sm.), 129, 322
Metaxaglaea, 93
metea Scud., 53
Metephestia, 249
meticulosalis Gn., 210
Metrochroa, 295
Metzneria, 277
miamialis Dyar, 204
miamialis Schaus, 207
Micrathetis, 100
Microcausta, 215
Microgonia, 311
micronympha Gn., 121, 123
microphysa (Hlst.), 168
micropterata (Hlst.), 169
Microtheoris, 213
Microthyris, 205
militella Zell., 238
mima (Harv.), 130
Mimophobeton, 218
mimosaria (Gn.), 163
minea (Sloss.), 78
minerea (Gn.), 128
miniata (Kby.), 75
minima Edw., 53
minima (Gn.), 110
minima (Grt.), 71
minimella Rag., 240
minimella (Rob.), 230
ministra (Dru.), 151
minor Busck, 296
minor Fbs., 231
minoralis (Sm.), *Gabara*, 139
minoralis Sm., *Zanclognatha*, 146
minorata Hein., 259
minorata (Sm.), 138, 139
minta Dyar, 159, 317
minualis (Gn.), 143
minuellus Wlk., 232
minuscula Wlsh., 296
minuscula (Zell.), 72
minusculalis (Moesch.), 225
minuta, Edw., 123
minuta (Schaus), 168
minutana Kft., 260
minutella Beut., 273
mira Grt., 123
miraculosa Frey, 290

- miscelcolorella* Cham., 275
miscella Sm., 95
miselioides (Gn.), 95
misella Zell., 300
miserulata Grt., 172
misippus (Linn.), 41, 316, 318
Mitogada, 155, 157
mistrella Busck, 286
mitis (Grt.), 106
Mitoura, 48
mizaralis Druce, 202
Mocis, 125, 136
modesta Beut., 151
modesta (Harr.), 63
modesta (Mayn.), 47
modialis (Dyar), 209
modica Wlk., 83
molesta (Busck), 263
Mollissima (Gn.), 94
Mompha, 275
monetifera (Gn.), 94
monilella (B. & B.), 277
moniligeralis (Led.), 223
monilis (Fabr.), 137
monima (Stoll), 43
monodactylus (Linn.), 254
Monoleuca, 193, 314
Monopis, 300
Monoptilota, 243
monotropa Grt., 130
monstralis Gn., 207
montezuma Schaus, 304
montivagus Reak., 52
monuste (Linn.), 11, 36, 37
Moodna, 249
mopsalis (Wlk.), 210
mopsus Hbn., 47
mora (Grt.), 299
morbosa Hlst., 175, 179
mordecai McD., 61
mori Linn., 304
morrisoni (Wlsh.), 299
Morrisonia, 89, 326
morula G. & R., 82
Mothonica, 286
Mouralia, 120
mucens (Hbn.), 89
mucidella (Rag.), 248
muliercula Gn., 121
mulleolella (Hlst.), 226
multiferata (Wlk.), 173
multilinea B. & McD., 130
multilinea Wlk., 91
multilineata Pack., 177
multilineatella (Hlst.), 235
multilineellus Fern., 230
multiplicalis (Gn.), 203
multipunctella Clem., 291
multiscripta Riley, 157
mundata Gn., 191
mundissima Wlk., 135
mundula (Zell.), 142
munitalis (Led.), 226
munroei Martin, 225
Munroessa, 222
muricana Wlsh., 262
Mursa, 141
muscosa (Gn.), 113
musta (G. & R.), 113
mutabilis Clem., 231
muzaria (Wlk.), 184, 185
Myelotis, 241, 242
Myelopsis, 241
mynesalis (Wlk.), 147
myops (A. & S.), 62
myricafoliella Busck, 302
myricella B. & McD., 241
myrodora Dyar, 70
myron (Cram.), 66
myronella Dyar, 250
myrsusalis (Wlk.), 198
myrtaria (Gn.), 171

Nacoleia, 206
Nadata, 152
nais (Dru.), 78
nana Hbn., 112
nanina Dyar, 193
narcaeusalis (Wlk.), 209
nasoni (Grt.), 194
Nastra, 57
Natada, 194
Nathalis, 36
nattereri (Druce), 116
neaeriatella Grsb., 247
Nealyda, 276
neamathla (Skin. & Wms.), 57
Neargyactis, 223
nebula B. & McD., 112
nebulella Riley, 239
nebulifera Steph., 229
nebulosalis (Fern.), 222
nechus (Cram.), 67
nectarea Moesch., 137
neda (Godt.), 36
Nedra, 97
needhami Braun, 296
neglecta (Edw.), 50
negundana (McD.), 269
negundana (Dyar), 267
nella Busck., 291
nelphe (Feld.), 36
nelsoni Bdv., 48
Nemapogon, 305
Nematocampa, 186
nemoralis B. & McD., 148
Nemoria, 163
Neocataclysta, 220
Neodavisia, 239
Neoaerastia, 114
neogama (A. & S.), 122
Neoleucinodes, 209
neomexicana (Hlst.), 174
Neoplynes, 74
Neperigea, 98
Nepheleleuca, 190
Nephoptyx, 244
Nepticula, 302
Nepytia, 188, 319
nerea (Bdv.), 78
Nerice, 153
nero of authors, 57
nervata (Gn.), 179
nessus (Cram.), 67
neumoegenii (Skin.), 36
Neurobathra, 294
Neurolipta, 294
ni (Hbn.), 119
nicetaria (Gn.), 179
nicippe (Cram.), 36
Nigetta, 72
nigra Cherm., *Fentonia*, 155
nigra, Cherm., *Heterocampa*, 154
nigralis (Fern.), 214
nigrapunctella Busck, 273
nigratomella (Clem.), 280
nigricans (Reak.), 77
nigramacula Warr., 118

nigrinodis Zell., 225
nigrinotata Warr., 118
nigrior Mich., 40
nigrita (B. & McD.), 297
nigrocandida (Hlst.), 168
nigrofimbria Gn., 113
c-nigrum (Linn.), 87
nimbata Gn., 191
niphon (Hbn.), 48
nise (Cram.), 4, 36
nitidalis (Stoll), 209
nitocris (Cram.), 161, 314
nivalis (Dru.), 233
nivalis Stretch., 76
nivea Wlk., 228
niveiciliatis Grt., 218
niveiguttana Grt., 256
niveocilia (Hamp.), 209
niveociliaria (H.-S.), 165
nobilitella (Cram.), 113
Noctuella, 218
noctuella (D. & S.), 212
Nodaria, 149
nodosella (Hlst.), 251
Nola, 72
Nomophila, 212
nomophilalis Dyar, 222
Norape, 196
normella Dyar, 240
Noropsis, 135
notatalis (Wlk.), 242
notataria (Wlk.), 179
nua Dyar, 226
nubifera Hamp., 117, 118
nubila (Skr.), 109
nubilalis Hbn., 216
nubilella Hlst., 243
nubilis (Hbn.), 124
nucicolora (Gn.), 99
numa (Druce), 112
numerosana (Zell.), 260
Numia, 186
numitor (Fabr.), 53
nundina (Dru.), 108
nutrix (Cram.), 136, 321
Nycterosea, 173
nymphaeella (Hlst.), 247
Nymphalis, 42
Nymphula, 222
nyssaefoliella Cham., 302
nyssaria Gn., 186

oberon Worth., 50, 328
obfirmaria (Hbn.), 187
obfussaria (Wlk.), 169
obiterella Busck, 286
oblinita (A. & S.), 84
obliqua Hy. Edw., 194
obliqua Gn., 129, 322
obliqua Pack., 154
obliqua Sm., *Amolita*, 102
obliqua Sm., *Phuphena*, 95
obliqua (Wlk.), 102
obliqualis (Fabr.), 110
obliquana Kft., 270, 271
obliquata B. & McD., 72
obliteralis (Wlk.), *Loxostege*, 213
obliteralis (Wlk.), *Synclita*, 200, 222
obliterata (Grt.), 96
oblonga (Grt.), 94
oblongata Wlsh., 286
obluridata (Hlst.), 167
obnupsella Hlst., 241
obrotunda (Gn.), 118

- obrutella* (Zell.), 302
obscura Dyar, 114
obscura (Fabr.), 63
obscuralis (Grt.), 221
obscuralis (Led.), 207
obscurata Stkr., 109
obscuripennis (Grt.), 146
obscurostrigella Cham., 300
obsoleta (Fabr.), 107
obsoleta (Grt.), 126
obsoleta Niep., 34
obsoletana (Wlk.), 268
obsoletella (Zell.), 283
obstipata (Fabr.), 173
obtusa (H.-S.), 105
obtusa (Hbn.), 184
obvertens (Wlk.), 132
Ocala, 247
occulta (Linn.), 86
ocellana (D. & S.), 258
ocellinata (Gn.), 177
ochracea Sm., 96
ochracealis Wlk., 226
ochraceana Fern., 260
ochrella B. & McD., 246
ochrifrontella (Zell.), 249
ochrobathra Meyr., 284
ochradesma (Zell.), 241
ocola (Edw.), 58
octagonella Wlsh., 293
octo (Gn.), 114
octomaculata (Fabr.), 80
oculatalis (Moesch.), 148
oculatrix (Gn.), 117
ocypete (Linn.), 64
odius (Fabr.), 45
odora (Linn.), 42
odorata (Linn.), 131
Oedematophorus, 311
oedipodalis Gn., 216
oenotherana (Riley), 270
oenotrus Stoll, 63
Oeta, 314
effectalis (Hlst.), 258
Ogdoconta, 104
Oidaematophorus, 251, 253, 311
Oiketicus, 297
oileus (Linn.), 52
okeechobee Worth., 50, 328
olealis (Feld.), 209
olealis (Rag.), 225
Olene, 158, 311, 315
Olethreutes, 257
Oligia, 94
Oligoria, 56
Oligostima, 220
olinalis (Gn.), 224
olivacea Grsb., 111
olivacea (Morr.), 88
olivacearia (Morr.), 183
Ollia, 250
olyzonaria (Wlk.), 189
Ommatochila, 142
Ommatospila, 209
Omphalocera, 225
onagrus (Gn.), 115
Oncocnemis, 92
Oneida, 237
ontario (Edw.), 47
onythesalis (Wlk.), 217
oo (Cram.), 120
oonana (Strand), 120
opella (Grt.), 77
opercularis (A. & S.), 196
operculella (Zell.), 278
Ophideres, 124
ophionalis (Wlk.), 213
Ophiuche, 143
ophthalmica (Gn.), 118
opigena (Dru.), 131
oporedestella Dyar, 242
Opostega, 295
opulentalis (Led.), 223
orbifera (Wlk.), 101
orciferalis Wlk., 147
ordinata (Wlk.), 177
Oreta, 160, 192
orion (Fabr.), 45
orithya, 42
ornata Neum., 106, 314, 326
ornatalis (Dup.), 202
ornatrix (Linn.), 80
ornatula Hein., 258
orneodalis (Gn.), 150
Orneodes, 254
ornithogalli Gn., 100
orphisalis Wlk., 217
Orthodes, 89
Orthosia, 89
Oruza, 111
ossularia (Geyer), 165
ostentaria (Wlk.), 169
ostricolorella Hlst., 249, 312
ostrinella (Clem.), 249
otho (A. & S.), 54
otiosana (Clem.), 260
ou (Gn.), 120
ouana (Strand), 120
oviduca (Gn.), 89
ovilla (Grt.), 72
ovina Sepp., 196
oviplagalis (Wlk.), 225
ovulalis Gn., 204
Oxycnemis, 104
oxydalis Gn., 212
Oxydia, 190, 325
oxygala Grt., 91
oxygramma (Geyer), 119
Ozarba, 112

pacalis (Wlk.), 126
Pachylia, 64
Pachysphinx, 63
Pachyzancla, 212, 312
packardi Prout, 171
packardi Zell., 263
Packardia, 314
packardii Grt., 74
Paectes, 117
Pagara, 73
palamedes Dru., 32
Palatka, 247
palatka (Edw.), 55
palindialis (Gn.), 211
pallens (Hy. Edw.), 71
palliatricula (Gn.), 96
pallida Pack., 73
pallida (Schaus), *Eublemma*, 110
pallida Schaus, *Misogoda*, 155
pallidarctis Hein., 258
pallidior Dyar, 75
pallidovenata Grsb., 297
palligera Sm., 147
palliolella Rag., 240
pallistriga B. & McD., 253
pallorana (Rob.), 267
palmetum Hein., 263, 319
palmi Beut., 12, 151

palmii (Hy. Edw.), 12, 289
palmira (Poey), 35
palmyra Poey, 328
palparia Wlk., 143
Palpida, 75
palpiger (Wlsh.), 281
Palpita, 208, 209, 323
Palthis, 150
Palyas, 191
Pamphila, 315, 326
pampina (Gn.), 93
pamptnaria (Gn.), 181
panalope Dyar, 235
pandorus (Hbn.), 65
pandrosa (Cram.), 131
Pangrapt, 140
panicfoliella Clem., 290
pannaria (Gn.), 166
Panopoda, 132
panoquin (Scud.), 57
Panoquina, 57
panoquinoides (Skin.), 58
Panthea, 81
Pantographa, 206
Panula, 132, 133, 134, 140
Paonias, 62
Papaipema, 94
Papilio, 11, 31, 310, 317, 319, 328
Parachma, 226
paradoxa (Grt.), 107
Parahyponodes, 145
Paralipsa, 236
parallela (G. & R.), 158
parallela Hy. Edw., 195
parallela (Rob.), 268
Parallelia, 124
Paramiana, 96
Paramyelois, 242
Paranthrene, 289
Paraponyx, 220, 221
Parargyractis, 223
Parasa, 193, 314
Paratalanta, 210
Paratrea, 61
parce (Fabr.), 64
parinotata (Zell.), 173
parmeliana (Hy. Edw.), 100
parthenialis Dyar, 227
particolor (Hlst.), 178
particornella Busck, 275
partita Gn., 100
parva B. & McD., 74
parva (Wlsh.), 253
parvella Dyar, 250
parvula Edw., 123
parvula (Hy. Edw.), 113, 292, 315
parvula (H.-S.), 87, 88
parvula (Wlk.), 115
parvularia (Hlst.), 168
parvulella B. & McD., 247
parvulus B. & L., 252
pastphaeta (Grt.), 120
passerella Busck, 276
patina (Harv.), 97
Patissa, 227
patula Morr., 110
paucella (Wlk.), 286
paularia (Moesch.), 164, 165
paulina Hy. Edw., 122
peckius (Kby.), 54, 316
pectenalaeeella Cham., 277
rectinaria (D. & S.), 184, 185
pectintifer (Zell.), 232
Pectinigertia, 250

- Pectinophora*, 280
pedalis (Grt.), 120
pedipalalis (Gn.), 146
pegala (Fabr.), 39
pegasalis (Wlk.), 200
peleus (Sulz.), 44, 325
pellenis Godt., 44
pellionella Linn., 301
pellucens Zell., 242
pellucidalis Moesch., 219
pellucidaria (G. & R.), 188
pendens Sm., 91
pendulinaria Gn., 169
penitalis (Grt.), 216
pennsylvaniana Kft., 261
pennsylvanicus Cher. & Cher., 32
Penthesilea, 227
penumbrales (Grt.), 206
penumbrales Hlst., 111
Peoria, 251
Peosina, 131
peosina Gn., 190
pepita Gn., 104
peplifera Dyar, 240
peralbata Pack., 166
percara (Morr.), 96
perditalis (Wlk.), 142
pereyra Clarke, 279
perfusalis (Hlst.), 203
perfuscaria Grt., 145
pergandeella Busck, 274
pergracilis (Hlst.), 182
pergratialis (Hlst.), 243
Pericopsis, 9, 304
Peridroma, 86
Perigea, 97, 106, 327
Perigonia, 65
Perimede, 274, 275, 319
perimede (Pritt.), 36
Periploca, 274, 275, 319
perirrorata (Pack.), 166
Perispasta, 215
peritana (Clem.), 269
periusalis (Wlk.), 212
perlepidella Hlst., 251
permundanum Clem., 257
Pero, 188
perolivata (Hlst.), 175
perolivata Pack., 154
perophoroides (Stkr.), 153
perpendicularis (Gn.), 132, 133
perplexana (Fern.), 261
perplexus (Grsb.), 253
perscripta Gn., 92
perseae Busck, 295
perseella B. & McD., 236
persius (Scud.), 52, 316
perspectalis (Hbn.), 200
perspicua G. & R., 152
perstrialis (Hbn.), 227
perstructana (Wlk.), 115
persuasa Harv., 83
peruviana Roths., 304
pervertens B. & McD., 112
pervertipennis Hlst., 174
petrella (Zell.), 246
petrealis Grt., 147
petreus (Cram.), 44, 325
petreus (Sulz.), 325
Petrova, 258
pettitana (Rob.), 265
petulans (Hy. Edw.), 109
pexellus Zell., 232
Phaeasiophora, 256
phaedra Druce, 113
phaeobasalis Hamp., 236
phaeopteralis (Gn.), 212
Phaeoura, 183
phaetusa (Linn.), 39
Phalaenophana, 146
Phalaenostola, 147
phalerata (Harr.), 78
Phalonia, 270
phaon (Edw.), 40
Pharmacis, 271
phasma Harv., 79
Phereoca, 301
phidilealis (Wlk.), 210
Phigalia, 183
Philagraula, 192
philea (Linn.), 34
philegelos Dyar, 200
philenor (Linn.), 31
phileta (Fabr.), 36, 37
Philobia, 175
philodice Godt., 33
Philonome, 296
Philotes, 50
phlaeas (Linn.), 4, 49
Phlegethontius, 59
Phlyctaenia, 215
Phlyctaina, 148
Phoberia, 132, 325
Phobetron, 194
Phobolusia, 111
Phocides, 50
Phoebis, 2, 34
phoenicealis (Hbn.), 216
phoeno (Geyer), 9, 39
Pholus, 65
pholus (Cram.), 67
Phosphila, 95
Phostria, 205
phragmatidicola Gn., 90
Phragmatiphila, 103
phragmitella Stain., 274
Phrudocentra, 163
Phrygonis, 191
Phryxus, 64
phthisialis (Gn.), 141
Phuphena, 95
Phyciodes, 40
phyleus (Dru.), 54
phylla (Dyar), 72
phyllira (Dru.), 78
phyllisalis (Wlk.), 210
Phyllocnistis, 294
Phyprosopus, 139
Phyrostegania, 175
phytolaccae Clarke, 276
Phytometra, 142
piatrix Grt., 121
picta (Feld.), 154
picta (Harr.), 89
picta Pack., 79
pictipes (G. & R.), 289, 319
Pteris, 37
piger (Dyar), 299
pigmalion Cram., 50
pilalis (Hlst.), 216
Pilemia, 212
Piletocera, 219
pilipalpis (Grt.), 90
Pilocrosis, 203, 207
pilosaria (Pack.), 187
Pimaphera, 182
pinatubana (Kft.), 269
pinifoliella Cham., 277
Pippona, 108
pisoniae Busck, 276
pisoniella Busck, 290
pistaciaria (Gn.), 164
pithecium (A. & S.), 194
pityochromus Grt., 104
placentia (A. & S.), 78
placida Dyar, 157
plagiata (Wlk.), 158
Plagiomimicus, 104
Plagodis, 186
plantagenaria (Hlst.), 168
platanana Clem., 262
platanella Grsb., 247
Plathypena, 144
Platoeceticus, 297
Platynota, 266
Platyptilia, 252
Platysamia, 68
Platysenta, 97
Platytes, 3, 235
plebeia (Fabr.), 61
plebeiana Zell., 261
plejadellus Zinck., 235
Pleuroprucha, 170
plevie (Dyar), 223
plexippus (Linn.), 37
Plodia, 250
ploralis (Gn.), 201
plucheae Braun, 296
plumbea Stretch, 74
plumbicostalis (Grt.), 204
plumifrontellus (Clem.), 298
plumigerella Hlst., 243
plummeriana (Busck), 262
plumosaria (Pack.), 182
Plusia, 120, 323
Plusiodonta, 137
Plutella, 291
pluto (Fabr.), 67
pluviata Gn., 173
Poanes, 54
Poaphila, 106
Pococera, 238
Podiasa, 291
Pogocolon, 323
Poleta, 104
Polia, 87
polingi Kft., 231
polisiiformis (Harr.), 290
politana (Comst.), 269
politia (Cram.), 190
Polites, 54, 316
polydamas (Linn.), 31
Polygonia, 41
Polygonus, 50
Polygrammate, 96
Polygrammodes, 211
Polyhymno, 280
polymniae Bird, 94
polyphemus (Cram.), 69
polyxenes Fabr., 31, 328
pometaria (Harr.), 161
pomonella (Linn.), 264
Ponometia, 115
ponceanus Schaus, 32, 317, 319
popeanellus (Clem.), 299
porcelaria (Gn.), 180
porcus (Hbn.), 67
Porphyrosela, 293
porrectalis (Fabr.), 143, 144
porrectella (Linn.), 291
porrigens (Wlk.), 132
Portentomorpha, 214

- portia* Fabr., 322
portlandia (Fabr.), 38, 326
posticatus Grt., 65
Poujadia, 250
Praeacedis, 301
praeclara G. & R., 123
praefectellus (Zinck.), 230
pravella Grt., 244
Precis, 42
priapeia Hein., 255
prima (Sloss.), 79
primordialis Dyar, 219
Prionoclyta, 186
Prionapteryx, 229
Prionoxystus, 272, 313
Problema, 55
Prochalia, 298
Prochoerodes, 190
Prodenia, 100
prodenialis Wlk., 248, 320
Prodoxus, 302
prolata (Wlk.), 133
Proleucoptera, 295
Prolimacodes, 195
prolongalis (Gn.), 205
promethea (Dru.), 68
prophetica (Dyar), 209
propinquialis Gn., 145
propinquitinea (Grt.), 81
propinquitus (Wlsh.), 299
Problemma, 110
proserpina (Scud.), 45
Proserpinus, 67
Prosoparia, 145
Prostomeus, 281
Protambulyx, 62
proteella (Walsh), 118
Proteides, 50
proteus (Linn.), 51
Protoboarmia, 180
Protocryphia, 112
protodice Bdv. & Lec., 37
protumnusalis (Wlk.), 146
proxanthata (Wlk.), 176
prudens Clem., 278
pruni Harr., 83
prunifoliella Cham., 277
pruniramiella Clem., 300
prunivorata Ferg., 171
Psammia, 251
psammioxantha Dyar, 224
Psaphida, 92
Pselnophorus, 253
Pseudacontia, 105
Pseudaletia, 91
pseudargiola (Bdv. & Lec.), 4, 50
pseudargyalis Munroe, 203
Pseuderotis, 285
Pseudexentera, 261
Pseudoboarmia, 180, 181
Pseudocharis, 71
Pseudochelaria, 279
pseudofea (Morr.), 49, 324
Pseudogalleria, 257
Pseudoplusia, 120
Pseudopyrausta, 206
Pseudosphinx, 63
pseudothyreus (Grt.), 64
Psilocorsis, 283
psychialis (Hlst.), 199
Psychomorpha, 105
psychotriella Busck, 295
Pterocypha, 173
pterophoralis Wlk., 219
Pterygisis, 206
Ptichodis, 125
Pticholoma, 269
Ptychoda, 168
puera (Cram.), 198
pulchella (H.-S.), 100
pulchella Wlk., 233
pulcherrima (Grt.), 116
pulchrimella Cham., 272
pultaria (Gn.), 188
pulverilinea Grt., 130
pulverosalis (Wlk.), 138, 139
pulverulenta (Sm.), 97
pumiliella (Rag.), 244
pumilio (Zell.), 252
punctidiscanum Dyar, 264
punctifera (Wlk.), 98
punctiferella (Clem.), 285
punctilineella B. & McD., 235
punctivena Sm., 136
punctofimbriata (Pack.), 169
punctolineata (Pack.), 177
puntagorda Sloss., 153
pupula Hbn., *Eustixia*, 218
pupula (Hbn.), *Lactura*, 292
pura B. & McD., 73
purata (Gn.), 168
purissima (Dyar), 134
purpuranus (Clem.), 268
purpurascens (Hlst.), 166
pusilla Moesch., 145
pusillidactyla (Wlk.), 252
pustularia (Gn.), 175
pustularia Hbn., 179
pustuliferalis Led., 211
Pygarctia, 76, 77, 314
pygmaea B. & McD., 298
pygmaea Grt., 150
pygmaea G. & R., 194
pygmaea Hbn., 117
pygmaeella Rag., 245
pylades (Scud.), 51
pyloalis Wlk., 208
pyralidiformis (Wlk.), 288
Pyralis, 224
pyramusalis (Wlk.), 146
pyrastis Hamp., 116
Pyrausta, 211, 216
pyraustalis Dyar, 215
Pyreferra, 93
Pyrgus, 52
pyri (Harr.), 289
Pyrohotaenia, 315
pyrolaria Gn., 180
Pyrochopyge, 326
pyxidifera (A. & S.), 196, 314
quadralis B. & McD., 145
quadrannulata (Morr.), 90
quadricolorella (Dyar), 250
quadricristatella Cham., 275
quadrifasciaria (Pack.), 175
quadrifasciata Pack., 175
quadrifera (Zell.), 112
quadrifilaris (Hbn.), 126
quadrinotaria H.-S., 177
quadrisingnata (Wlk.), 140
quadrstigmatis (Gn.), 208
quaintencella Dietz, 284
querceti (H.-S.), 193
quercicella Clem., 283
querciella B. & McD., 238
quercifoliata (Fitch), 269
quercinigrella Ely, 295
quercivoraria (Gn.), 188
quercivorella Cham., 293
quernaria (A. & S.), 183
quinella (Zell.), 279
quinquareatus Zell., 230
quinquemaculana (Rob.), 258, 259
quinquemaculata (Haw.), 59
quinquepunctata (Fbs.), 275
quinquepunctella (Cham.), 302
quinqwestrigella (Cham.), 294
Racheospila, 161, 314, 318
Rachiplusia, 120
radians (Luc.), 55
radians Wlk., 78
ramburialis (Dup.), 214
ramentalis Led., 203
ramosula (Gn.), 97
ranaeiceps Guér., 151
ranalis (Gn.), 206
Rancora, 92
randiella (Busck), 294
rapae (Linn.), 37
Raparna, 141
Raphia, 81
Raphiptera, 230
rapidan (Dyar), 327
raracana Kft., 258
ravicapitis Hodges, 283, 319
ravus Rindge, 180
rectarius Dyar, 197
rectifascia (Grt.), 101
rectilinea (G. & R.), 195
rectissima Dyar, 187
recurvalis (Fabr.), 200
Recurvaria, 277
redtenbacheri Led., 204, 314
refractaria (Wlk.), 170
refulgens (Hy. Edw.), 289
refusana (Wlk.), 258
regalis (Fabr.), 70
regalis Wyatt & Beer, 94
reginalis (Cram.), 209
regnatricis (Grt.), 89, 90
regnatricis G. & R., 191
relevata Swett, 167
reliquella (Dyar), 248
Remigia, 125
remigipila Gn., 132
removana Kft., 256
Renia, 147
reniculella (Grt.), 245
renunctata (Wlk.), 173
repanda (Fabr.), 125
repanda Wlk., 132
repandalis Schaus, 201
repentis Grt., 130
repleta Wlk., 86
repugnalis (Hbn.), 134
repugnata Wlk., 176
repugnatalis (Wlk.), 228
resumens Wlk., *Pachylia*, 64
resumens Wlk., *Psaphida*, 92
retardata (Wlk.), 83
reticulatana (Clem.), 265
reticulatus (Lint.), 272
retiniella Kft., 291
retis (Grt.), 114
reversalis (Gn.), 215
rhodarialis (Wlk.), 142
Rhododipsa, 107
Rhodoecia, 103
Rhodoneura, 198
Rhodophora, 107

- rhoifoliella* Cham., 295
Rhyacionia, 257, 317, 322
rhyncosiae (Dyar), 253
richardsi Brower, 141
richii Grt., 104
Ricula, 262
ridingsi (Riley), 113
Rifargia, 153
rigidana (Fern.), 257
rileyana Harv., 159
rileyana Sm., 89
rileyanus (Grt.), 268
rileyella Cham., 293
rileyella Dyar, 233
rileyi Dietz, 301
rileyi (Wlsh.), 274
rimosalis Gn., 211
Rivula, 145
rivularia Grt., 161
robiniae (Peck), 272
robinsonana (Grt.), 259
robinsonii Butl., 62
robusta Stkr., 151
robustella Zell., 237, 238
rogatalis (Hlst.), 210
rolandi Grt., 92
rolandiana Grt., 113
rosa McNeil, 33
rosa Whit. & Stal., 42
rosaceana (Harr.), 268
rosaschreana Kft., 256
roscidellus Dyar, 229
rosea (Wlk.), 160
roseitincta (Harv.), 110
roseochreana (Kft.), 256
roseola Sm., 102
roseopennella (Hlst.), 250
roseostuffusella (Clem.), 277
roseotincta (Hlst.), 168, 170
roseotinctella Rag., 251
rostrana (Wlk.), 267
Rotruda, 248
rotundalis (Wlk.), 145
rotundipennis (Wlsh.), 270
rubedinella (Zell.), 246
rubicunda (Fabr.), 70
rubicundaria (Hbn.), 77
rubidana Wlk., 225
rubidella (Clem.), 277
rubigalis (Gn.), 215
rubripennis (Butl.), 62
rubripennis (G. & R.), 90
rubrofascia (Hy. Edw.), 289
rubrolinearum (Pack.), 162
rubromarginata (Davis), 68
rubrotincta (Hlst.), 166
rufago (Hbn.), 93
rufaria Swett, 185
rufescens Hamp., 204, 207
rufescens (Hlst.), 165
ruficornis (Hy. Edw.), 289
rufidiscalis Hamp., 211
rufifimbrialis Grt., 217
rufilineata (Wlk.), 167
rufimargo (Hbn.), 132
rufimedia (Grt.), 106, 110
rufinans Gn., 136, 141
rufofascialis (Steph.), 218
ruforrhorata (Strand), 88
rugifrons Grt., 104
Rumatha, 249
Rupela, 223, 319
russata (Hlst.), 168
russellata Swett, 172
rustica (Fabr.), 59
rustica (Wlsh.), 281
rutella Zell., 300
sabalella (Cham.), 276
sabinalis Dyar, 214
saccharalis (Fabr.), 234
sacculalis Rag., 227
Safia, 127, 318
Salebria, 244
Salebriaria, 244
Salia, 145
salicicolana (Clem.), 261
salinaris Busck, 278
saltitans Westw., 264, 305
saltusaria (Hlst.), 165, 314
salusalis (Wlk.), 147
Samea, 203
Sameodes, 210
sanantonio (Luc.), 50
sanbornana Rob., 268
sanfordellus Klots, 230
sanfordi Rindge, 177
sangamonia B. & McD., 149
sanguinea (Geyer), 108
Sannina, 288
Sanninoidea, 288
santiago (Luc.), 51
saphirinella Cham., 278
sappho Stkr., 121
sapygaeformis (Wlk.), 288, 323
Sarasota, 243
Sarothripsus, 118
sartana Hbn., 271
sassacus Harr., 54
sassafrasella Cham., 295
satanaria Gn., 160, 184
satellitica (Dru.), 65
Sathrobrotia, 274
satrapellus (Zinck.), 230
Satronia, 262
saturata (Grt.), 108
satyriniformis Hbn., 290
saucia (Hbn.), 87
saundersiana Grt., 92
savigny (Latr.), 50
scabra (Fabr.), 144
scabriuscula (Linn.), 96
Scardia, 300
Scelolophia, 166
Scelorthus, 290
scepsiformis (Hy. Edw.), 290
Scepsis, 314
Sceptia, 282
schmalzriedi Lemmer, 83
Schidax, 192
Schinia, 106, 108, 310, 323
schistisemalis (Hamp.), 205
Schizura, 156, 315
Schoenobius, 228, 316
scindens (Wlk.), 134, 140
scintillana Clem., 259
scintillularia (Hlst.), 168
scirpicola Gn., 90
scirpicola Hodges, 273
Scirpophaga, 227
scissa (Grt.), 106
scissoides Beni., 106
scitiscrpta Wlk., 157
scitula (Harr.), 289
scobialis (Grt.), 146
Scolecocampa, 138
scolopacinarium (Gn.), 179
Scoparia, 224
Scopula, 4, 167
scopulaepes (Haw.), 142
scortialis (Led.), 237, 324
scotiana McD., 258
scribonia (Stoll), 80
scudderiana (Clem.), 260
Scythris, 292
sebastianella Busck, 294
sectilana Strand, 89
sectilis (Gn.), 89
securifera Maas., 68
segrega Hein., 228
Seirarctia, 80, 323
sejuncta Hein., 228
Selenis, 130
selenosa (Gn.), 98
Selidosema, 181
semiclusaria (Wlk.), 188, 319
semicrocea (Gn.), 113
semifascia (Wlk.), 193, 194
semiferanus (Wlk.), 267
semiflava (Gn.), 116
semifuneralis (Wlk.), 249
seminealis (Wlk.), 220, 221
seminolana (Kft.), 268
seminole (Beut.), 289
seminole (Neum.), 290
seminole (Scud.), 53
seminole (Skin.), 41
seminolella Beut., 301
semiobscuraella Hlst., 244
Semiothisa, 176
semipurpurana Kft., 267
semipurpurea (Wlk.), 142
semirufescens (Wlk.), 156
semitropicae (B. & B.), 88
senatoria (A. & S.), 69
sennae (Linn.), 34
sensilis Grt., 96
Senta, 102
sentalis (Kaye), 102
separationis Hein., 260
septentrionalis Wlk., *Gluphista*, 157
septentrionalis (Wlk.), *Schinia*, 109
septentrionella Dyar, 240
sepulchralis G. & R., 70, 317
seraphica Dyar, 160
Sereda, 263
seriatana (Zell.), 270
sericea (Morr.), 93
sericearia Pack., 165
Sericoplaga, 214
Sericoptera, 184
serpentella Kft., 229
serratovitella (Zell.), 282
serrulata (Pack.), 171
servulella Clem., 301
Sesamia, 304
sesquialis Hbn., 199
Setamorphia, 300
Setiostoma, 286
setosella Clem., 282
sexnotella (Cham.), 274
sexplagiata (Wlk.), 128
sexta (Joh.), 59
shurtleffi Pack., 196
Siavana, 132
sibillalis Wlk., 208
Sibine, 9, 193
sicalis (Wlk.), 199
sicheas (Cram.), 136
Sideridis, 87, 88
sideroxytoniella (Busck), 294
Sigela, 111

- Stgnaphora*, 289
signata (Wlk.), 88
signatalis (Wlk.), 218
signataria (Wlk.), 180
silicalis (Gn.), 206, 207
simialis (Gn.), 205
similalis Gn., 213
similis Edw., 123
similis (Gn.), 124
similis Hodges, 275
simplex Wlk., 73
simplicialis B. & McD., 220
simplicella Busck, 282
simplicius (Grsb.), 253
simplicula (Zell.), 249
simulatus Wlsh., 298
stimulella B. & McD., 247
Simyra, 84
sincerio (Dyar), 168
singularis B. & McD., 239
sinon (Fabr.), 33
sinuosa Grt., 123, 317
stren (Stkr.), 110
Sisyrosea, 194
sitellata Gn., 174, 325
Sitrotoga, 277
slossonalis (Dyar), 223
slossonata McD., 172
Slossonella, 196
slossonella (Hlst.), 241
slossoni Hy. Edw., 272
slossoni (Hlst.), 237, 324
Slossonia, 164
slossonia (Fern.), 287
slossoniae Hlst., 192
slossoniae (Pack.), 195
Smerinthus, 62
smilaciella Busck, 295
smilacisella Cham., 294
smithi (Gn.), 124
smithi Haim., 128
smithiana (Wlsh.), 258
sobrialis (Wlk.), 148
solanalis B. & McD., 219
solidaginella Braun, 296
solita Wlk., 91
solitaria (Wlk.), *Episemasia*, 175, 178
solitaria (Wlk.), *Itame*, 179
Somatamia, 219
somniaria Hlst., 313
somnus (Lint.), 52
Sonia, 261
sonorensis (Feld.), 50
sordida Grt., 85
sordida Sm., 109
sordidalis B. & McD., *Herculta*, 224
sordidalis B. & McD., *Patissa*, 227
sordidellus (Zinck.), 228
sordidula (Grt.), 143
sorghiella (Riley), 72
sosybia (Fabr.), 38
spadaria Gn., 126, 127
spadix (Cram.), 132
Sparganothis, 265
sparsaria (Wlk.), 182
sparsiciliella (Clem.), 283
speciosella (Hlst.), 238
speciosissima (G. & R.), 94
specularis (H.-S.), 304
speculifera (Sepp.), 197
Speocropia, 95
speratella Busck, 283
Speyeria, 4, 40
Sphacelodes, 192, 319
sphaeromacharia (Harv.), 175
Sphecodina, 67
Sphida, 315
Sphinx, 61, 315
spilodesma Meyr., 254
spilomela (Wlk.), 100
Spilonota, 258
spinosa (Gn.), 106
spinuloides H.-S., 194
splendana (Hbn.), 305
spodius Rindge, 179
Spodoptera, 101
spoliana (Clem.), 261
Spragueia, 115
spretia Sm., 86
spretella Dietz, 285
spumosum Grt., 104
squamealis (Grt.), 224
squamularis (Dru.), 129
squamulella (Zell.), 234
stabilata Wlk., 176
staintonella Cham., 296
stallingsi H. A. Freeman, 53
Staphylus, 52
statalis Grt., 226
Statina, 251
statira (Cram.), 2, 35
Stegasta, 280
stelenes (Linn.), 43
stellata (Gn.), 174
stellata Wlk., 103
stellata Busck, 275
Stenaspilates, 187
stenialis (Gn.), 206
Steniodes, 219
stenizonalis Hamp., 201
Stenocharis, 160
Stenoma, 285, 305
Stenoptilia, 253
Stenoptycha, 219
stenoscelis (Dyar), 94
Stenotrachelys, 184
stercorea (Zell.), 243
Sterra, 168
Stibadium, 104
stictigramma (Hamp.), 207
stigma (Fabr.), 69
stigma Sm., 92
stigmatophora (Wlsh.), 274
stigmella Dyar, 240
stigmatosalis (Warr.), 215
stimulea (Clem.), 193
Stiria, 104
Stiriodes, 105
Stomopteryx, 280
stramineus (Wlsh.), 253
straton Edw., 54, 315
streckeri (Skin.), 55
Strenoloma, 135
strenuana (Wlk.), 260
Strepsicrates, 258
stretchii Butl., 80
striata Hodges, 273
striata Ottol., 74
striatalis (Dyar), 220
striatella (Murt.), 278
strigalis (Dyar), 223
strigata (Sm.), 139
strigifinitella (Clem.), 294
strigilis (Linn.), 62
strigiventalis Hamp., 205
strigosa Bates, 38
strigosa Harr., 48
strigosa (Wlk.), 75
strigularia (Wlk.), 177
strigularia (Sm.), 127
Strobisia, 281
Strymon, 12, 46, 329
stultana (Wlsh.), 267
stygialis Grt., 133
stypticellum Grt., 248
styractis Gn., 92
suavata (Hlst.), 166, 314
subaequaria Wlk., 186
subapicula Dyar, 198
subaustralis (Hlst.), 161, 183
subcanalis (Wlk.), 238
subcroceata (Wlk.), 164
subdentosa Dyar, 193
subdivisalis Grt., 201
subflava (Grt.), 94
subflexa (Gn.), 107
subfuscata (Rag.), 244
subjecta Wlk., 74
sublunaria Gn., 180
submarginalis (Wlk.), 217
submedialis (Grt.), 216
subnivosella (Wlk.), 138, 139
subochrea Grt., 83
subolivacea Wlsh., 271
subornata N. & D., 75
subquadrata Gn., 167
subreticulata Wlsh., 291
subrotata Harv., 154
subrufa Warr., 141
subrufella (Hlst.), 243
subsequalis (Gn.), 217
subsignarius (Hbn.), 187
subsimella Clem., 278
subterranea (Fabr.), 85, 86
subtrichella (Rag.), 241
subtropica Miller, 257, 322
subusta Hbn., 101
subviridis Harv., 121
Sufetula, 200
suffusa (Wlk.), 132
Suleima, 261
sulfureana (Clem.), 265
sulphurea Grt., 194
sumia (Gn.), 101
Sunira, 93
superatalis Clem., 236
supresalis (Wlk.), 304
sutor (Gn.), 98, 327
sweedneri F. H. Cherm., 48
Sylectra, 141
Sylepta, 204, 205, 206
sylvanum (Gn.), 126
sylvicola H.-S., 57
Sylvora, 288
Symmerista, 153
sympathetica Meyr., 302
Synanthedon, 288, 319, 323
Synchlora, 163, 324
Synclera, 201
Synclita, 200, 222
Syneda, 315
Synedoida, 134
Synelis, 167
Synomila, 170
Syntomeida, 71, 314
syrichtus (Fabr.), 52
Syrrhodia, 175, 325
Syssaura, 189
syzygiaria Hlst., 189
tabulana Freeman, 269
tacna (Barnes), 104

- Tacparia*, 186, 187
tacturata (Wlk.), 169
tages (Cram.), 201
talis (Grt.), 203
Tallula, 237
Talponia, 262
Tampa, 251
Tania, 256
tantalus (Linn.), 65
tantilla Hein., 262
tantillus (Grt.), 140
Tanygonia, 273
tapeta (Sm.), 98
taprobanes Feld., 252
taracana Kft., 266
Tarachidia, 115
tarda (Gn.), 100
tarquinius (Fabr.), 49
tatila H.-S., 43
tatillista Kaye, 43
tawneata (Cass.), 167
tecomae Riley, 226
Tegeticula, 302, 303
telamonides (Feld.), 33
Telea, 69
telea (Hew.), 47
telifer Grt., 156
Telphusa, 278
tenebrosa Dyar, 196
tenera Hbn., 76
tenuella B. & McD., 241
tenuescens (Sm.), 116
tenuifascia Harv., 74, 75
tenuimargo Warr., 162, 318
tenuis Grt., 140
tenuis (Wlsh.), 299
tepperaria (Hlst.), 164
tepperi (Hy. Edw.), 288
tepperi Morr., 104
Terastia, 210
teratophora (H.-S.), 96
terebimacula Sepp, 136
terebintharia Gn., 186
Terias, 328
terminalis (Wlk.), 198
terminimacula (Grt.), 116
terraccottella Busck, 278
terraria Gn., 161
tersa (Linn.), 68
tertialis (Gn.), 215
tessellaroides Strand, 76
tessellaris (A. & S.), 75, 76
tessellata (Harr.), 84
testa B. & McD., 110
testulalis (Geyer), 304
testulana (Zell.), 265
Tetanolita, 147
teterellus (Zinck), 231
tethys Fbs., 38
Tetracis, 189
tetragona Wlk., 116
Tetralopha, 237, 324
Tetrastichis, 226
tetrio (Linn.), 63
texana Clark, 67
texana (Edw.), 41
texana (Hy. Edw.), 288
texana Hamp., 127
texana (Hlst.), 162
texana (Morr.), 125
texana Riley, 138
texana (Rob.), 233
texana Stretch, 197
texanae French, 122
texanana (Wlsh.), 263
texanaria (Hlst.), 182
texanella (Hlst.), 242
texanellus (Cham.), 298
textor Harr., 79
textor (Hbn.), 57
textula (H.-S.), 194
Thammosphecia, 289
Thanaos, 316, 326
tharos (Dru.), 40
Thaumatoopsis, 232
Thebrone, 9, 151
Thecla, 311, 313, 315, 319, 326
thecophora (Wlsh.), 301
themistocles (Latr.), 54
theonus (Luc.), 49, 319
theralis (Wlk.), 146
Therina, 314, 317
theseusalis (Wlk.), 213
Thespeius, 57
thestealis (Wlk.), 213
thetys (Fabr.), 44
Thiodia, 258, 317
thoas Linn., 32
thoe (Guér.), 4, 49
Tholera, 215
thomasi Clench, 49
thoracica (Grt.), 82
thoreau (G. & R.), 108
Thorybes, 51
thyatiroides (Wlk.), 153
Thyridia, 304
Thyridopteryx, 297
Thyridopyralis, 198
Thyris, 197
thyrsialis Wlk., 236
Thysania, 23, 131
Thysanopyga, 179
thysbe (Fabr.), 65
tigris Gn., 114
timais (Cram.), 89, 315
Timandra, 170
timandrata (Wlk.), 167
Timetes, 325
timidella (Clem.), 262
tinctana (Wlk.), 266
tinctella (Wlk.), 228
tinctoides (Gn.), 120
Tinea, 300
Tineola, 305, 319, 321
Tischeria, 296
titan (Cram.), 65
titea (Cram.), 183
titus (Fabr.), 47
tityrus (Fabr.), 51
tiviaria (Wlk.), 185
Tolima, 250
Tolyte, 159, 317
toreuta (Grt.), *Bomolocha*, 143
toreuta Grt., *Laspeyresia*, 263
Tornos, 179, 324, 325
torrefacta (A. & S.), 160
tortirciformella Clem., 266
Tortrix, 310
Tortyra, 287
Tosale, 225
traducalis (Zell.), 201
tragopoginis (Linn.), 96
transfigurata Swett, 173
transitaria (Wlk.), 176
transitella (Wlk.), 242
transmutens (Wlk.), 190
transponens (Wlk.), 190
transversata (Dru.), 190
transvertens (Wlk.), 190
trapezalis (Gn.), 202
treatii Grt., 77
tremula (Harv.), 93
trialbamaculella (Cham.), 279
triangularis Moesch., 219
triangulifer Grt., 105
Trichoclea, 87
Tricholita, 88
Trichoplusia, 119
Trichoptilus, 252
Trichotaphe, 282
Trichostibus, 315
trichroma (H.-S.), 95
Triclonella, 274
tricolora (Sulz.), 9, 151
trifascia Hbn., 108
trifurcella Cham., 286
trimaculella Cham., 300
trinotella Busck, 282
tripars (Wlk.), 85
tripartitana (Zell.), 260
triplex (Wlk.), 100
tripsacas Dyar, 232
tripunctata (Fabr.), 203
tripunctellus Rob., 229
tripunctus (H.-S.), 57
triquetrana (Fitch), 72
Trischistognatha, 211
trisectus (Wlk.), 232
triseriata Prout, 171
trisinata (Wlk.), 84
tristigmatis Hamp., 204
tristis Edw., 122
tristriata Kft., 266
tristrigana (Clem.), 263
Tritanassa, 41
tritona (Hbn.), 82
trivinctella (Zell.), 292
troilus Linn., 31, 32, 328
Trypanisma, 278
Tsinilla, 257
tuberculalis Led., 211
tuberculum (Hbn.), 110
tuckeri Comst. & Brn., 39
Tulsa, 245
tumidulella (Rag.), 241
tura (Druce), 95
turbata (Wlk.), 106
turbulenta Hbn., 95
turnus Linn., 32
turpidella (Rag.), 244
tyralis (Gn.), 217
tyria Sloss., 153, 326
Tyryssa, 130
Tyrius Hein., 255
tytiusalis (Wlk.), 202
u-album (Gn.), 95
Udea, 215
Ufa, 246
ufeus (Cram.), 201
ulalume Stkr., 121
Ulolonche, 89
Ulophora, 246, 315
ultronia (Hbn.), 123
umbonata (Sm.), 139
umbralis Sm., 143
umbrata Wlk., 154
umbrimargo (Dyar), 168
umbrina (Grt.), 130
umbrosa Lint., 42
umbrosaria (Hbn.), 180
una (Stkr.), 94

- Unadilla*, 248
uncanale Hlst., 248
uncas Edw., 53
Undulambia, 220
undularis (Dru.), 128
undulata (Linn.), 171
undulatella (Clem.), 247
undulosa (Wlk.), 60
unica Hein., 261
unica Neum., 136
unicolor (B. & McD.),
Oidaematophorus, 254
unicolor (B. & McD.), *Rupela*, 228
unicolor (Pack.), 155
unicoloralis B. & McD., 236
unicornis (A. & S.), 156
unifascia G. & R., 74
uniformis Dyar, 73
unimacula G. & R., 211
unio Hbn., 105
unipuncta Dyar, 236
unipuncta (Haw.), 91
unipunctella (Clem.), 285
unipunctellus Rob., 228
unitaria (H.-S.), 184
unomaculella Cham., 301
uranides Dyar, 226
uroceriformis Wlk., 288
Urodus, 113, 292
ursula (Fabr.), 44
urticana (Hbn.), 256
uterella (Wlsh.), 301, 321
Utetheisa, 80
uvinella (Rag.), 244
uxorialis Dyar, 229

vaccini Riley, 239
vagrans Bates, 2, 150
Valentia, 284
vandana Kft., 259, 260
Vanessa, 42
vanillae (Linn.), 40, 317
varadaria (Wlk.), 178
varia (Wlk.), *Elaphria*, 99
varia Wlk., *Heterocampa*, 154
Varina, 106, 314, 326
variolaria Gn., 175
Varneria, 250
vecors (Gn.), 98
velleda (Stoll), 159
vellivolata (Hlst.), 181
velutina (Sm.), 88
velutinana (Wlk.), 268
venapunctatus B. & L., 253, 311
venerabilis Wlk., 85
ventralis (G. & R.), 203
venusta Wlk., 153
verbesinella (Busck), 293
verecuntella Grsb., 247
vernella (Murt.), 279
vermochreana Hein., 258
vernoniana Kft., 255
verruca (Fabr.), 119
versicolor (Grt.), 99

versicolor (Harr.), 66
verutana Zell., 255
vestaliana (Zell.), 262
vestaliata (Gn.), 174
vestaliella (Zell.), 227
vestalis (Hlst.), 184
vestalis (Zell.), 285
vestigialis (Gn.), 214
vestris (Bdv.), 56
vesulia (Cram.), 190
vetusta Wlk., 85
vetustella (Dyar), 244
vialis (Edw.), 56
viatica (Grt.), 93
viator (Edw.), 54
vibex (Geyer), 54
vicarialis (Zell.), 287
viciniella Dietz, 301
videns (Gn.), 97
vidua (A. & S.), 122
vilhelmina Dyar, 111
vinculum (Gn.), 125
vindemialis (Grt.), 87, 88
vindemialis (Gn.), 87, 88
vinnula (Grt.), 82
vinotinctalis (Hamp.), 215
vinulentaria (G. & R.), 184, 185
viola (Mayn.), 39
violacearia (Wlk.), 169
violacella Clem., 295
virescens (Fabr.), 107
virginaria (Hlst.), 184
virginica (Fabr.), 78
virginiensis (Dru.), *Anisota*, 69, 70
virginiensis (Dru.), *Vanessa*, 42
virginiensis (Guér.), 46
virgo (Linn.), 77
viridans (Gn.), 127
viridescens (Wlk.), 92
viridiclava Wlk., 193
viridipurpurea (Hlst.), 163
visaliella (Cham.), 300
Vitacea, 290
vitifoliella (Cham.), 294
vitis (Linn.), 66
vitrea Grt., 150
vitrina (Wlk.), 104
vittata (Fabr.), *Apantesis*, 78
vittata (Fabr.), *Ercta*, 202
vittatalis (Dyar), 222
Vitula, 249
vivida (Grt.), 77
volubilis Harv., 85
vulgivagellus Clem., 231
vulneraria (Hbn.), 192

wakulla Edw., 57
Wallengrenia, 54
walshi (Edw.), 33
Walshia, 274, 275, 319
walsinghami (Busck), 301, 319
walsinghami (Dietz), 279
walsinghami (Kft.), 260
watsonellus Klots, 230

watsoni B. & McD., 237
watsoni (dos P.), 44
watsoni Rich., 141, 325
wittfeldi Edw., 48, 311, 313, 315
wittfeldi Hy. Edw., 12, 80, 81, 288, 315
Wunderia, 247

xanthialis (Gn.), 214
xanthioides Gn., 97
xanthobasis Zell., 286
xantholeucalis (Gn.), 227
Xanthopastis, 89, 315
Xanthoptera, 113
Xanthotype, 185
Xantippe, 226
Xylesthia, 300
Xylomyges, 89, 326
Xylophanes, 67
Xystopeplus, 93
Xystrota, 166

ydatodes Dyar, 74
yehl (Skin.), 55
y-inversa Pack., 195
yponomeutaria (Gn.), 165
Yponomeuta, 291
Ypsilon (S. A. Forbes), 183
Ypsilon Rottenberg, 85
Yrias, 130
yuccae (Bdv. & Lec.), 58

zabolicus (Stkr.), 272
zabulon (Bdv. & Lec.), 55
Zale, 127, 130, 318, 322
Zaleops, 130
zalissaria Wlk., *Tacparia*, 186
zalissaria (Wlk.), *Stenaspilates*, 187
Zamagiria, 243
Zanclognatha, 146
zarucco (Luc.), 53
zayasi Torre & Alayo, 155
zea (Boddie), 107, 313
zeacolella Dyar, 234
zeae Harr., 103
zeelus Fern., 232
zelica French, 122
zelleri (Grt.), 236
Zelleria, 291
zelleriella (Clem.), 297
zenobia (Cram.), 131
Zenodochium, 284
Zerene, 33
zestos Geyer, 50
zinckenella (Treit.), 244
ziscana Kft., 270, 271
zoilusalis (Wlk.), 205, 207
Zomaria, 256
zonalis (Feld.), 42
zonata (Dru.), 65
zonulata (Hlst.), 191
zophodactyla (Dup.), 253
Zophodia, 248