

Moths of a Small Island on the Coast of Georgia

(Lepidoptera, Heterocera)

by

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Abstract: The Atlantic coast of Georgia in the United States of America consists of a large number of islands partially or completely surrounded by salt marshes; the islands vary in size from less than one hectare to about 50 km² and lie in a region of subtropical climate. This paper gives the results of a faunal study of the moths of Kittles Island in McIntosh Co., GA undertaken between 1997 and 2004. No previous studies of the moth fauna of the GA coastal region appear to have been published. In this study 314 species were identified; this fauna was compared to the extensive collections made by DOMINICK at McClellanville on mainland coastal South Carolina, about 220 km north of Kittles Island. It was found that 45 species (14%) of the Kittles Island fauna are unrecorded at the South Carolina site.

Introduction

In the United States of America, the coast of the state of Georgia (GA) stretches about 230 km from Savannah at the border with South Carolina, to Jacksonville, Florida on the south. This coastline consists of a series of eight barrier islands of 8 to 25 km in length, separated by wide ocean inlets and tidal rivers. Between these barrier islands and the continental mainland lies a 3-10 km wide zone of salt marshes and a complex network of tidal streams. The marshes are completely flooded at high tide. This tidal zone is littered with hundreds of islands ranging from tiny (ca. 0.2 hectare) "hammocks" to larger islands up to 200 hectares. The eight large barrier islands have undergone extensive development for the most part, but large parts of three (Wassaw, Sapelo, and Cumberland Islands) have been retained as nature preserves. In contrast to the larger barrier islands, the much smaller marsh islands are often difficultly accessible and many remain undeveloped. The barrier islands and most of the larger marsh islands were partially cleared for production of the valuable "Sea Island" cotton in the early 1800's, but after the American Civil War of 1861-1865 the region was depopulated and agriculture was largely abandoned until the present day. The geography and history of this island zone were studied by VANSTORY (1965) and by SULLIVAN (1990). The geological history and biology (excluding entomology) were reviewed by SCHOETTLE (1996).

This coastal zone of Georgia has a decidedly subtropical aspect that is not apparent even as little as 10-15 km inland, and the rigors of a saline and windy environment and sandy soil add to the warm and humid climate to produce an unusual biotope for this latitude. Furthermore, very little data on the Lepidoptera of this region has been published. HARRIS (1972) reported on the Rhopalocera of the region, but careful examination of his records indicates that the coastal zone records came almost entirely from the readily accessible, but much disturbed, developed barrier islands such as Tybee, St. Simons, and Jekyll Islands. OPLER's County Atlas of

North American Butterflies (1983) and the related Moths of North America website (FERGUSON et al., 1999) disclose the same situation: records heretofore came only from the developed barrier islands which are popular holiday destinations. It appears that no faunal study of the moths from any site on the Georgia coast has ever been published.

Study Site

Kittles Island lies at 31° 27' 30" N, 81° 21' 20" W, in McIntosh County, Georgia, about 25 km north of the town of Brunswick and 90 km south of the city of Savannah. The island consists of approximately 10 hectares of land elevated 1–2 meters above sea level. It is connected to the mainland by a ca. 1 km causeway and is surrounded by salt marsh and a deep-water tidal river (col. pl. XXV, figs. 1, 2). The climate of this area is subtropical, average maximum and minimum temperatures being in July, 31.7 °C and 26.5 °C, and in January 20.6 °C and 7.2 °C. Light frosts occur several times each winter, but hard freezes are rare. Long-term average annual rainfall is about 130 cm, although a period of marked reduction in rainfall occurred in 2001–2004.

The vegetation of Kittles Island is typical of the coastal barrier and marsh islands (col. pl. XXV, figs. 3, 4). Palms (*Sabal palmetto* and *Serenoa repens*) form a prominent part of the landscape, while the larger trees include live oak (*Quercus virginiana*) and other oak species (*Quercus laurifolia* and *Q. nigra*), pines (*Pinus* spp. including *elliotti*, *taeda*, and *palustris*), bays (*Persea borbonia*), sweet gum (*Liquidambar styraciflua*), red cedar (*Juniperus virginiana*), persimmon (*Diospyros virginiana*) and magnolia (*Magnolia virginiana*). The moss-like bromeliad *Tillandsia usenoides* drapes many of the larger tree branches. The salt marsh is for the most part filled with *Spartina alterniflora* and *S. patens*, and such salt-tolerant plants as *Salicornia virginica*, *Batis maritima*, and *Borrhichia frutescens* occur at the edge of the marsh. Introduced elements of the flora include *Citrus* spp., *Cycas revoluta*, *Nerium oleander*, *Lantana camara*, figs (*Ficus corica*) and loquat (*Eriobotrya japonica*). Vegetation cover is quite heavy except in the several clearings occupied by houses, most of which are of recent construction.

Methods

Construction of a vacation cottage on Kittles Island by the author in 1995–1996 provided an opportunity to conduct a faunal study of the moths of this typical small marsh island. Moth sampling was conducted on 15–20 nights/year beginning in March 1997 and ending in July 2004. Although some limited collecting has been done in December and February, most of the data was obtained in the months of March through November. No sampling was done in January in any year.

Sampling methods included the use of mercury-vapor lamps and UV “black lights” at a vertical sheet, a black-light Robinson-type bucket trap, fermented sugar-fruit baits in tropical-type bait traps, and pheromone traps for sesiids. Macromoths (and a small portion of the micromoths) were spread and determined using both literature and reference to the collections of Prof. JAMES ADAMS (Dalton State University, Dalton, GA), Prof. C. V. COVELL, Jr. (University of Kentucky, Lexington, KY), the Dominick collection at the University of South Carolina (Columbia,

SC), and the Florida State Collection of Arthropods (Gainesville, FL). Sesiids were determined by the late Mr. JOHN HOLOVDA of Chicago, IL. The nomenclature used is that of HODGES et al. (1983). Material collected on Kittles Island resides in the collection of the author and in the Florida State Collection of Arthropods in Gainesville, FL.

Results and Discussion

Approximately 360 species of moths were collected during the study period of this paper. Of these, 46 species (principally micros) still await determination. The remaining 314 species are listed below, together with their observed flight period and additional comments. The locality data for all species listed is: USA: Georgia, McIntosh County, vic. Merdian, Kittles Island, 1997–2004, leg. J. A. HΥΑΠ.

It is interesting to compare the moth fauna of Kittles Island with that collected by R. DOMINICK at the Wedge Plantation in McClellanville, Berkeley County, South Carolina (WALLACE & VOGT, 2003). This site, about 220 km northeast of Kittles Island, is within a few kilometers of the Atlantic coast. Wedge Plantation differs from Kittles Island in being a mainland location characterized by freshwater and brackish water marshes (abandoned rice fields and cypress swamps). The rice fields and freshwater cypress swamps are replaced by tidal saltwater marshes at Kittles Island. Whereas DOMINICK found about 1000 species of moths at McClellanville over 10 years' sampling, I have only found about 360 on Kittles Island. The comparatively depauperate fauna of the Georgia marsh island can be attributed to its smaller size (ca. 10 hectares vs. a 600 hectare area sampled by DOMINICK), lack of mainland continuity, and more limited plant diversity due to the saline, windy, and occasionally dry conditions. For instance, the salt marsh that surrounds Kittles is populated largely by two plant species (*Spartina alterniflora* and *S. patens*), whereas the old rice field marshes at McClellanville contain a myriad of grass, sedge, and broad-leaved plants.

Despite the limited diversity of moth species, I have found that about 14% of the identified species on Kittles Island are absent from the McClellanville fauna. This can be attributed in part to the more southerly location of Kittles Island, and perhaps in part to the presence of saline-adapted plants absent at McClellanville. *Doryodes bistrialis* (GEY., 1832) (col. pl. XXVI, fig. 13) is an example of a *Spartina* feeder absent from Dominick's site. Moths which apparently find their northern distribution limit somewhere between Kittles Island and McClellanville include the Arctiids *Utethesia bella* (L., 1758) (col. pl. XXVI, fig. 7), *Syntomeida ipomoeae* (HARR., 1839) (col. pl. XXVI, fig. 9), and *Syntomeida epilaus* (Wlk., 1854) (col. pl. XXV, fig. 5, col. pl. XXVI, fig. 10). Nevertheless, the scarcity of species in such strong-flying groups as the Sphingidae and Catocaline Noctuids on Kittles Island is surprising.

List of Species

Family Tineidae

Acrolophus plumifrontella (CLEM., 1859). June–July.

Acrolophus popeanella (CLEM., 1859). May–August.

Family Psychidae

Cryptothelea gloverii (PACK., 1869). September.

Oiketicus abbotii GRT., 1880. July.

Family Oecophoridae

Eupragia hospita HODGES, 1969. May–August.

Antaeotricha vestalis (ZELL., 1873). May.

Inga sparsiciliella (CLEM., 1864). July.

Family Coleophoridae

Homaledra heptathalama Bsk., 1900. September. Not reported by DOMINICK.

Family Yponomeutidae

Atteva punctella (CRAM., 1781). April–December.

Lactura pupula (HBN., 1827–31). September. Not reported by DOMINICK.

Urodus parvula (H. EDW., 1881). April–August.

Family Sesiidae

Vitacea polistiformis (HARR., 1854). September.

Vitacea scepsiformis (H. EDW., 1881). July.

Synanthedon rubrifasciata (H. EDW., 1881). July. Illustrated in col. pl. XXVI, fig. 1.

Synanthedon decipens (H. EDW., 1881). July. Not reported by DOMINICK.

Carmenta pyralidiformis (Wlk., 1856). August. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 2.

Carmenta texana (H. EDW., 1881). July. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 3.

Family Cossidae

Givira francesca (DYAR, 1909). June–October.

Prionoxystus robiniae (PECK, 1818). May.

Cossula magnifica (STKR., 1876). May. Illustrated in col. pl. XXVI, fig. 4.

Family Tortricidae

Cydia ingens (HEINR., 1926). June.

Cydia anaranjada (MILLER, 1959). June. Not reported by DOMINICK.

Melissopus latiferreanus (WLSM., 1879). August.

Choristoneura rosaceana (HARR., 1841). May.

Sparganothis sulfureana (CLEM., 1860). July.

Platynota exasperatana (ZELL., 1875). July.

Carolella sartana (HBN., 1823). July.

Family Zygaenidae

Acoloithus falsarius CLEM., 1860. August.

Family Megalopygidae

Megalopyge opercularis (J. E. SMITH, 1797). May–July. Not reported by DOMINICK.

Family Limacodidae

- Lithacodes fasciola* (H.-S., 1854). July.
Apoda y-inversum (PACK., 1864). April.
Apoda biguttata (PACK., 1864). July.
Prolimacodes badia (HBN., 1822). June.
Phobetrion pithecius (J. E. SMITH, 1797). July.
Isa textula (H.-S., 1854). April–August.
Euclea delphinii (BDV., 1832). September. Not reported by DOMINICK.

Family Pyralidae

- Synclita oblitalis* (WLK., 1859). September.
Parapaynx maculalis (CLEM., 1860). May
Paraponyx allionealis WLK., 1859. May–September.
Phlyctaenia coronata (HUFN., 1767). May.
Achyra rantalis (GN., 1854). September.
Pyrausta laticlavata (G. & R., 1867). October.
Udea rubigalis (GN., 1854). October–November.
Diacme elealis (WLK., 1859). October–November.
Samia ecclesialis GN., 1854. September–December.
Nomophila nearctica MUN., 1973. March.
Desmia funeralis (HBN., 1796). March.
Hymenia perspectalis (HBN., 1796). July.
Spoladea recurvalis (F., 1794). September–October.
Apogeshna stenialis (GN., 1854). September.
Blepharomastix ranalis (GN., 1854). April, August.
Glyphodes sibillalis WLK., 1859. September–November.
Omiodes indicata (F., 1775). December. Not reported by DOMINICK.
Palpita kimballi MUN., 1959. July–November.
Palpita magniferalis (WLK., 1861). July.
Terastia meticulosalis GN., 1854. August–October.
Agathodes designalis GN., 1854. May–October.
Pleuroptya silicalis (GN., 1854). September–October.
Herpetogramma bipunctalis (F., 1794). June–September.
Herpetogramma thestealis (WLK., 1859). September.
Syngamia florella (STOLL, 1781). October–December.
Crambus praefectellus (ZINCK., 1821). October.
Crambus quinquareatus ZELL., 1877. August.
Crambus satrapellus (ZINCK., 1821). May.
Agriphila vulgivagella (CLEM., 1860). April.
Pediasia trisecta (WLK., 1856). August.
Urola nivalis (DRURY, 1773). July.
Herculia alinalis (GN., 1854). June–August.
Clydonopteron tecomae RILEY, 1880. June. Not reported by DOMINICK.
Epipaschia zelleri (GRT., 1876). June. Not reported by DOMINICK.
Talulla atrifascialis (HULST, 1886). May, October. Not reported by DOMINICK.
Tetralopha robustella ZELL., 1848. June.

Tetralopha asperatella (CLEM., 1860). June. Not reported by DOMINICK.
Galleria mellonella (L., 1758). August.
Dioryctria pseudotsugella MUN., 1959. April. Not reported by DOMINICK.
Dioryctria amatella (HULST, 1887). May–October.
Elasmopalpus lignosellus (ZELL., 1848). September.

Family Pterophoridae

Oidaematophorus balanotes (MERY., 1908). July. An extremely large plume-moth, illustrated in col. pl. XXVI, fig. 5.

Family Geometridae

Itame varadaria (WLK., 1860). July.
Semiothisa transitaria (WLK., 1861). April–October.
Semiothisa bicolorata (F., 1798). March–November.
Semiothisa continuata (WLK., 1862). April–December.
Glenoides texanaria (HULST, 1888). July.
Glena cribrataria (GN., 1857). March.
Anacamptodes vellivolata (HULST, 1881). March.
Anacamptodes ephyriaria (WLK., 1860). May. Not reported by DOMINICK.
Anacamptodes defectaria (GN., 1857). May–July.
Anavitrinella pampinaria (GN., 1857). March.
Cleora sublunaria (GN., 1857). July.
Epimecis hortaria (F., 1794). March.
Melanolophia canadaria (GN., 1857). July.
Lycia ypsilon (S. A. FORBES, 1885). February–March.
Hypagyrtis unipunctata (HAW., 1809). September.
Hypagyrtis esther (BARNES, 1928). September.
Phigalia titea (CRAM., 1782). April.
Thysanopyga intracta (WLK., 1863). March, August.
Thysanopyga proditata (WLK., 1861). March. Not reported by DOMINICK.
Lytrosis unitaria (H.-S., 1854). March.
Euchlaena obtusaria (HBN., 1809–13). September.
Euchlaena amoenaria (GN., 1857). April.
Clymatophora approximaria HBN., 1812. April, September–November.
Pero zalissaria (WLK., 1860). February–March.
Pero honestaria (WLK., 1860). September.
Pero hubneraria (GN., 1857). February.
Nacophora quernaria (J. E. SMITH, 1797). March.
Metarranthis homuraria (G. & R., 1868). April.
Metarranthis obfirmaria (HBN., 1823). February.
Lambdina fiscellaria (GN., 1857). May.
Tacparia zalissaria WLK., 1860. March.
Nepytia semiclusaria (WLK., 1863). May.
Eusarca fundaria (GN., 1857). April.
Eusarca confusaria (HBN., 1813). May.
Eutrapela clementaria (J. E. SMITH, 1797). February–May.

Patalene olyzonaria (Wlk., 1860). June, October. Not reported by DOMINICK.
Prochoerodes transversata (Drury, 1770). April. Not reported by DOMINICK.
Nemoria lixaria (Gn., 1857). April–June.
Dichorda iridaria (Gn., 1857). September.
Synchlora frondaria Gn., 1858. May–June, October.
Idaea fruciferata (Pack., 1873). June. Not reported by DOMINICK.
Idaea demissaria (Hbn., 1831). May, September.
Idaea violacearia (Wlk., 1861). July.
Idaea taturata (Wlk., 1861). August.
Pleuroprucha insularia (Gn., 1857). September–October.
Scopula limboundata (Haw., 1809). May–June.
Leptostales pannaria (Gn., 1857). September.
Lophosus labeculata (Hulst, 1887). September.
Eulithis diversilineata (Hbn., 1813). May.
Hydriomena transfigurata Swett, 1912. March. Not reported by DOMINICK.
Anticlea multiferata (Wlk., 1863). March. Not reported by DOMINICK.
Orthonama centrostrigaria (Woll., 1858). October–November.
Eupithecia miserulata Grt., 1863. October. Not reported by DOMINICK.
Dyspteris arbotivaria (H.-S., 1855). July.

Family Mimallonidae

Lacosoma chiridota Grt. 1864. April.
Cincinnati melsheimeri (Harr., 1841). October.

Family Lasiocampidae

Tolype minta Dyar, 1906. July–November.
Artace cribraria (Lung, 1825). May–July.
Phyllodesma occidentalis (Wlk., 1855). February.
Malacosoma americanum (F., 1793). April–May.

Family Saturniidae

Eacles imperialis (Drury, 1773). March–May. Illustrated in col. pl. XXVI, fig. 6.
Citheronia sepulchralis G. & R., 1865. September.
Dryocampa rubicunda (F., 1793). March.
Anisota virginiana (Drury, 1773). July–August.
Automeris io (F., 1775). April–July.
Antheraea polyphemus (Cram., 1776). March–April.
Actias luna (L., 1758). March–April, July.

Family Sphingidae

Lapara coniferarum (J. E. Smith, 1797). October.
Enyo lugubris (L., 1771). July–November.
Eumorpha pandorus (Hbn., 1821). July.
Sphexcodina abbottii (Swainson, 1821). May–July.
Amphion floridensis B. P. Clark, 1829. May–July.
Darapsa myron (Cram., 1780). April–September.

Darapsa pholus (CRAM., 1776). April–June.
Xylophanes tersa (L., 1771). September–October.

Family Notodontidae

Datana contracta Wlk., 1855. August.
Datana perspicua G. & R., 1865. August–September.
Nadata gibbosa (J. E. SMITH, 1797). April.
Peridea angulosa (J. E. SMITH, 1797). October.
Symmerista albifrons (J. E. SMITH, 1797). September–October.
Dasylophia anguinea (J. E. SMITH, 1797). March.
Macrurocampa marthesia (CRAM., 1780). April, July, October.
Heterocampa astarte DOUBLEDAY, 1841. April–August.
Heterocampa obliqua PACK., 1864. June.
Heterocampa umbrata Wlk., 1855. March.
Heterocampa guttivitta (Wlk., 1855). March, October–December.
Heterocampa biundata Wlk., 1855. July.
Lochmaeus manteo DOUBLEDAY, 1841. September.
Schizura ipomoeae DOUBLEDAY, 1841. August.

Family Arctiidae

Crambidia pallida PACK., 1864. July.
Cisthene plumbea STRETCH, 1885. July–August. Not reported by DOMINICK.
Cisthene subjecta Wlk., 1854. September.
Cisthene packardii (Grt., 1863). September.
Hypoprepia miniata (Kby., 1837). September. Not reported by DOMINICK.
Hypoprepia fucosa Hbn., 1827–31. April–June, October.
Comachara cadburyi FRANC., 1939. March.
Utethesia bella (L., 1758). May, October–December. Not reported by DOMINICK. Illustrated in col. pl. XXVI, Fig. 7.
Holomelina aurantiaca (Hbn., 1827–31). April–May, October.
Estigmene acrea (DRURY, 1773). February.
Spilosoma virginica (F., 1798). April.
Hyphantria cunea (DRURY, 1773). March.
Epantheria scribonia (STOLL, 1790). April–May.
Apantesis vittata (F., 1787). February, June.
Halysidota tessellaris (J. E. SMITH, 1797). March–April, August.
Dahana atripennis Grt., 1875. July. A surprisingly rare moth, given the abundance of its bromeliad food plant, *Tillandsia usenoides*. Illustrated in col. pl. XXVI, fig. 8.
Cisseps fulvicollis (Hbn., 1818). October–December.
Cosmosoma myrandora DYAR, 1907. September.
Syntomeida ipomoeae (HARR., 1839). October. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 9.
Syntomeida epilais (Wlk., 1854). October. Not reported by DOMINICK. Larvae on introduced *Nerium oleander* (col. pl. XXV, fig. 5, col. pl. XXVI, fig. 10).

Family Lymantriidae

Dasychira tephra HBN., 1809. May.

Family Noctuidae

Idia americalis (GN., 1854). May–July, November.

Idia aemula HBN., 1813. November.

Idia rotundalis (Wlk., 1866). May, August.

Idia lubricalis (Gey., 1832). June.

Macrochilo orciferalis (Wlk., 1859). March.

Macrochilo hypocritalis FERGUSON, 1982. May. Not reported by DOMINICK.

Bleptina cardinalis GN., 1854. April.

Hyperula cacuminalis (Wlk., 1859). May. Not reported by DOMINICK.

Renia adspersgillus (Bosc, 1800). March–April, November.

Palthis angulalis (HBN., 1796). May, October.

Redectis vitrea (Grt., 1878). April, September.

Schrankia macula (Druce, 1891). October.

Nigetia formosalis Wlk., 1866. May.

Plathyena scabra (F., 1798). September–November.

Hemeroplanis scopulepes (Haw., 1809). July–September.

Hemeroplanis habitalis (Wlk., 1859). March.

Pangrapta decoralis HBN., 1818. March.

Metalectra richardsi BROWER, 1941. July.

Arugisa latiorella (Wlk., 1863). September.

Arugisa watsoni RICHARDS, 1941. September. Not reported by DOMINICK.

Scolecocampa liburna (Gey., 1837). May.

Hypsoropha monilis (F., 1777). May.

Phyprosopa callitrichoides Grt., 1872. September–November. Not reported by DOMINICK.

Plusiodonta compressipalpis GN., 1852. July–August.

Anomis erosa HBN., 1821. November. Not reported by DOMINICK.

Anomis flava (F., 1775). June.

Litoprosopus futilis (G. & R., 1868). June–July. Larvae are borers in *Sabal palmetto* palms. Illustrated in col. pl. XXVI, fig. 11.

Dipthera festiva (F., 1775). July–October. Illustrated in col. pl. XXVI, fig. 12.

Metallata absumens (Wlk., 1862). September.

Anticarsia gemmatalis HBN. 1818. September–November. Not reported by DOMINICK.

Panopoda rufimargo (HBN., 1818). April, July.

Panopoda repanda (Wlk., 1858). April–October.

Phoberia atomaris HBN., 1818. February.

Cissusa spadix (Cram., 1780). February.

Melipotis jucunda HBN., 1818. July.

Lesmone detrahens (Wlk., 1858). March–May, September.

Selenisa sueroides (GN., 1852). October–November.

Metria amella (GN., 1852). May–June.

Pseudanthracia coracias (GN., 1854). April.

Zale lunata (Drury, 1773). April–July.

Zale aeruginosa (GN., 1852). July.

Zale undularis (DRURY, 1773). May. Not reported by DOMINICK.
Zale obliqua (GN., 1852). April.
Zale helata (SM., 1908). April. Not reported by DOMINICK.
Zale bethunei (SM., 1908). July. Not reported by DOMINICK.
Allotria elonympha (HBN., 1818). April–June.
Dysgonia smithii (GN., 1852). December.
Parallelia bistriaris HBN., 1818. March.
Euclidean cuspidata (HBN., 1818). March.
Caenurgia chloropha (HBN., 1818). February–April, July–August.
Mocis latipes (GN., 1852). October–November.
Mocis marcida (GN., 1852). November.
Mocis disseverans (WLK., 1858). November.
Celiptera frustulum GN., 1852. July.
Ptichodis vinculum (GN., 1852). April–November.
Argyrostroma deleta (GN., 1852). July.
Doryodes bistrialis (GEY., 1832). March–December. Not reported by DOMINICK. Illustrated in col. pl. XXVI, fig. 13.
Catocala epione (DRURY, 1773). June.
Catocala muliercula GN., 1852. June. Illustrated in col. pl. XXVI, fig. 14.
Catocala maestosus HULST, 1884. September.
Catocala lacrymosa GN., 1852. June.
Catocala ilia (CRAM., 1776). May–June.
Catocala amestris STKR., 1874. June. A rare species, only one other Georgia record known.
Catocala coccinata GRT., 1872. June. Not reported by DOMINICK.
Catocala ultronis (HBN., 1823). May–June.
Catocala similis EDW. 1864. May.
Catocala micronympha GN., 1852. May–June.
Catocala amica (HBN., 1818). June–July.
Argyrogramma verruca F., 1794). September. Illustrated in col. pl. XXVI, fig. 15.
Pseudoplusia includens (WLK., 1858). September.
Marathyssa inficita (WLK., 1865). May–June.
Paectes oculatrix (GN., 1852). March.
Paectes abrostoloides (GN., 1852). May.
Paectes nubifera HAMP., 1912. November.
Meganola minuscula (ZELL., 1872). March, July.
Nola sorghiella RILEY, 1882. July.
Thioptera nigrofimbria (GN., 1852). April–July.
Homophoberia apicosa (HAW., 1809). March.
Tarachidia semiflava (GN., 1852). August.
Tarachidia candefacta (HBN., 1831). April.
Spragueia onagrifera (GN., 1852). August.
Bagisara repanda (F., 1793). September. Not reported by DOMINICK.
Bagisara rectifascia (GRT., 1874). June.
Panthea furcilla (PACK., 1964). October–December.
Acronicta americana (HARR., 1841). October.
Acronicta afflicta GRT., 1864. March–April.

Polygrammate hebraeicum HbN., 1818. March–July.
Eudryas unio (HbN., 1827–31). April.
Meropleon cosmion ДУАР, 1924. April.
Chortodes enervata (GN., 1852). May. Not reported by DOMINICK.
Phosthila miselioides (GN., 1852). June–August.
Callopietria floridensis (GN., 1852). June, September.
Callopietria granitosa (GN., 1852). April.
Amphipyra pyramidoidea GN., 1852. August.
Spodoptera frugiperda (J. E. SMITH, 1797). August.
Spodoptera ornithogalli (GN., 1852). August.
Elaphria fuscimacula (GRT., 1881). November.
Elaphria chalconia (HbN., 1803–8). May, September.
Elaphria festivoidea (GN., 1852). August.
Elaphria exesa (GN., 1852). June. Not reported by DOMINICK.
Galgula partita GN., 1852. October–November.
Platysenta videns (GN., 1852). Spetember.
Platysenta mobilis (WLK., 1857). November.
Platysenta sutor (GN., 1852). May–September.
Emarginea percara (MORR., 1875). September.
Stiriodes obtusa (H.-S., 1854). July.
Amolita fessa GRT., 1874. September–October.
Metaxaglaea viatica (GRT., 1874). November. Not reported by DOMINICK.
Chaetoglaea tremula (HARV., 1875). October–December.
Lacinipolia implicata McD., 1937. November. Not reported by DOMINICK.
Pseudaletia unipuncta (HAW., 1809). October.
Leucania linita GN., 1852. February–October.
Leucania scirpicola GN., 1852. November.
Morrisonia mucens (HbN., 1827–31). March.
Agrotis ipsilon (HUFN., 1766). July.
Agrotis subterranea (F., 1794). March, October–December.
Anicla infecta (OCHS., 1816). October–November.
Anomogyna elimata (GN., 1852). November–December.
Abagrotis alternata (GRT., 1864). December. Not reported by DOMINICK.
Heliothis zea (BODDIE, 1850). July–October.
Schinia tuberculum (HbN., 1827–31). September.
Schinia lynx (GN., 1852). July, October. Not reported by DOMINICK.
Schinia rivulosa (GN., 1852). September.
Schinia saturata (GRT., 1874). October.
Schinia trifascia HbN., 1818. October.

Acknowledgment

The author is grateful to Profs. JAMES ADAMS and CHARLES COVELL, Jr. and to the late JOHN HOLOYDA for generous assistance in determination of various taxa, and to Prof. RICHARD VOGT for access to the DOMINICK collection.

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Explanation of colour plate XXV (p. 495):

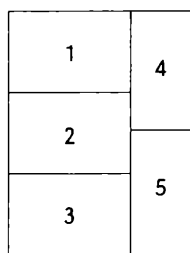
Fig. 1: Salt marsh seen from Kittles Island, McIntosh County, GA, USA.

Fig. 2: Marsh islands, McIntosh Co., GA, USA.

Fig. 3: Typical habitat, Kittles Island, McIntosh Co., GA, USA.

Fig. 4: Bait trap in *Quercus virginiana*; *Tillandsia usenoides* on branches. Kittles Island, McIntosh Co., GA, USA.

Fig. 5: Larva of *Syntomeida epilaus* on *Nerium oleander*, USA: GA, McIntosh Co., Kittles Isl. 22-XI-03.



Explanation of colour plate XXVI (p. 497):

Fig. 1: *Synanthedon rubrofasciata*, USA: GA, McIntosh Co., Kittles Isl., 2-VII-01, leg. J. HYATT.

Fig. 2: *Carmenta pyralidiformis*, USA: GA, McIntosh Co., Kittles Isl., 15-VIII-01, leg. J. HYATT.

- Fig. 3: *Carmenta texana*, USA: GA, McIntosh Co., Kittles Isl., 7-VII-01, leg. J. HYATT.
 Fig. 4: *Cossula magnifica*, USA: GA, McIntosh Co., Kittles Isl., 10-V-98, leg. J. HYATT.
 Fig. 5: *Oidaematophorus balanotes*, USA: GA, McIntosh Co., Kittles Isl., 8-IX-03, leg. J. HYATT.
 Fig. 6: *Eacles imperialis*, an unusually dark form. USA: GA, McIntosh Co., Kittles Isl., 20-V-01, leg. J. HYATT.
 Fig. 7: *Utethesia bella*, USA: GA, McIntosh Co., Kittles Isl., 9-V-99, leg. J. HYATT.
 Fig. 8: *Dahana atripennis*, USA: GA, McIntosh Co., Kittles Isl., 20-IX-01, leg. J. HYATT.
 Fig. 9: *Syntomeida ipomoeae*, USA: GA, McIntosh Co., Kittles Isl., 4-X-99, leg. J. HYATT.
 Fig. 10: *Syntomeida epilaus*, USA: GA, McIntosh Co., Kittles Isl., 21-X-00, leg. J. HYATT.
 Fig. 11: *Litoprosopus futilis*, USA: GA, McIntosh Co., Kittles Isl., 18-VII-02, leg. J. HYATT.
 Fig. 12: *Dipthera festiva*, USA: GA, McIntosh Co., Kittles Isl., 19-VII-02 leg. J. HYATT.
 Fig. 13: *Doryodes bistrialis*, USA: GA, McIntosh Co., Kittles Isl., 6-X-03, leg. J. HYATT.
 Fig. 14: *Catocala muliercula*, USA: GA, McIntosh Co., Kittles Isl., 15-V-04 leg. J. HYATT.
 Fig. 15: *Argyrogramma verruca*, USA: GA, McIntosh Co., Kittles Isl., 17-IX-01, leg. J. HYATT.

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HYATT, J. A.: Moths of a Small Island on the Coast of Georgia (Lepidoptera, Heterocera).
Atalanta 35 (3/4): 453-465.

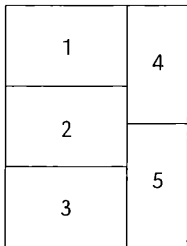
Fig. 1: Salt marsh seen from Kittles Island, McIntosh County, GA, USA.

Fig. 2: Marsh islands, McIntosh Co., GA, USA.

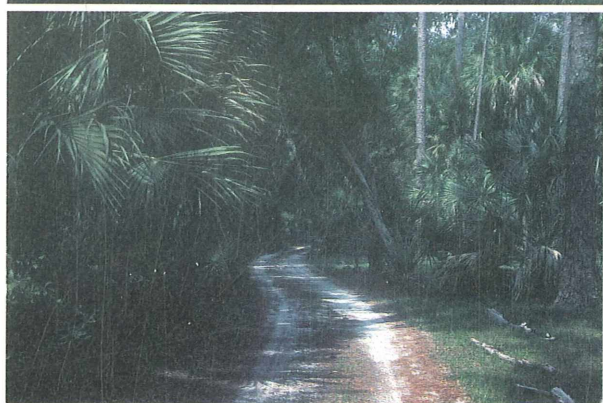
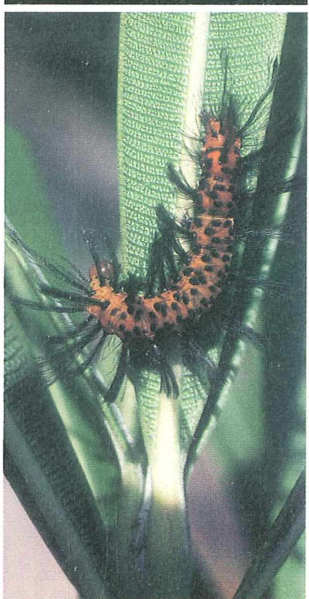
Fig. 3: Typical habitat, Kittles Island, McIntosh Co., GA, USA.

Fig. 4: Bait trap in *Quercus virginiana*; *Tillandsia usenoides* on branches. Kittles Island, McIntosh Co., GA, USA.

Fig. 5: Larva of *Syntomeida epilaus* on *Nerium oleander*, USA: GA, McIntosh Co., Kittles Isl. 22-XI-03.



Colour plate XXV

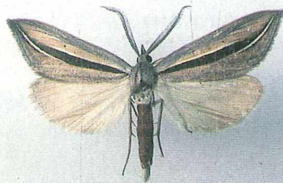
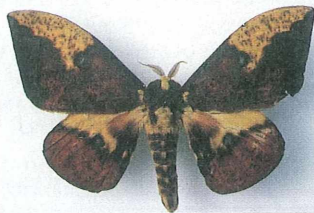
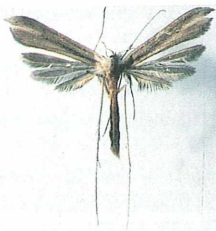


HYATT, J. A.: Moths of a Small Island on the Coast of Georgia (Lepidoptera, Heterocera). *Atalanta* 35 (3/4): 453-465.

- Fig. 1: *Synanthedon rubrofasciata*, USA: GA, McIntosh Co., Kittles Isl., 2-VII-01, leg. J. HYATT.
- Fig. 2: *Carmentis pyralidiformis*, USA: GA, McIntosh Co., Kittles Isl., 15-VIII-01, leg. J. HYATT.
- Fig. 3: *Carmentis texana*, USA: GA, McIntosh Co., Kittles Isl., 7-VII-01, leg. J. HYATT.
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- Fig. 9: *Syntomeida ipomoeae*, USA: GA, McIntosh Co., Kittles Isl., 4-X-99, leg. J. HYATT.
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Colour plate XXVI



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