



Southern *Lepidopterists'* **NEWS**

EST. 1978 Official Newsletter of the Southern Lepidopterists' Society (ISSN 2167-0285)

Vol. 34 NO. 3

September 30, 2012

THE OFFICIAL PUBLICATION OF THE SOUTHERN LEPIDOPTERISTS' SOCIETY
ORGANIZED TO PROMOTE SCIENTIFIC INTEREST AND KNOWLEDGE RELATED
TO UNDERSTANDING THE LEPIDOPTERA FAUNA OF THE SOUTHERN REGION
OF THE UNITED STATES (WEBSITE: www.southernlepsoc.org/)

J. BARRY LOMBARDINI: EDITOR

HAPLOA CLYMENE (BROWN, 1776) (LEPIDOPTERA: EREBIDAE)
IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

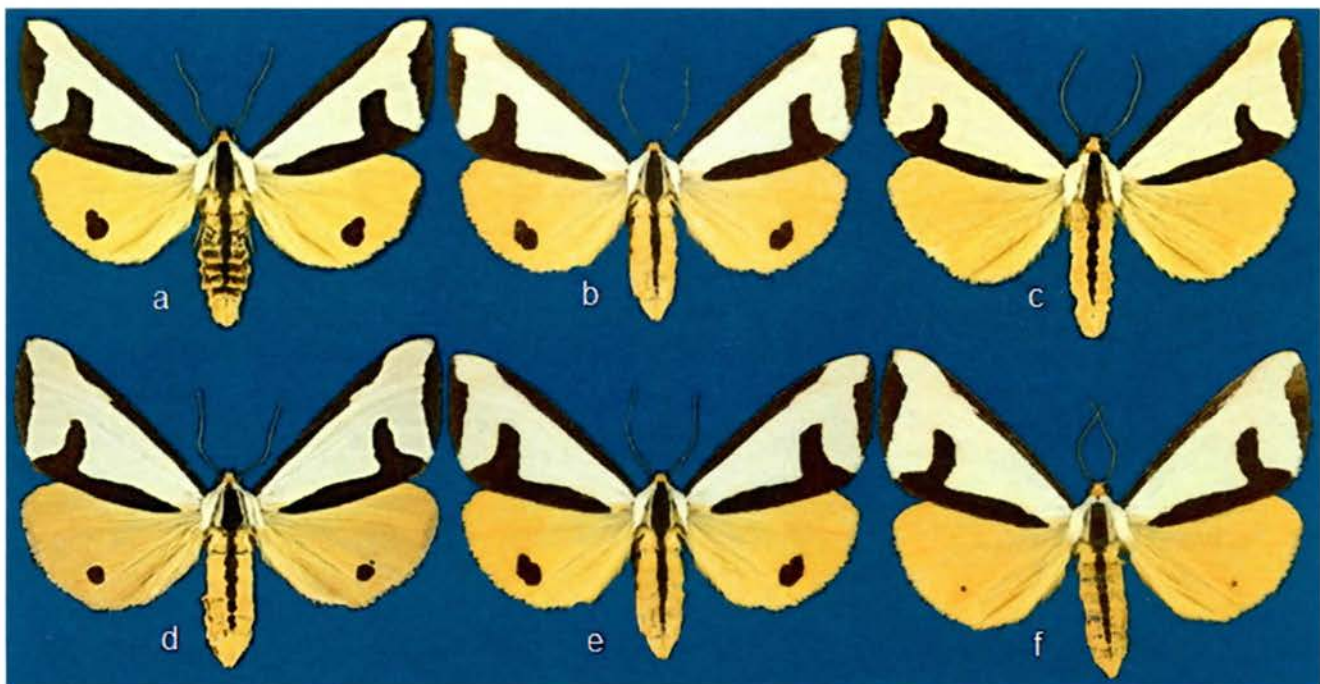


Fig. 1. *Haploa clymene*: males a-c, females d-f.

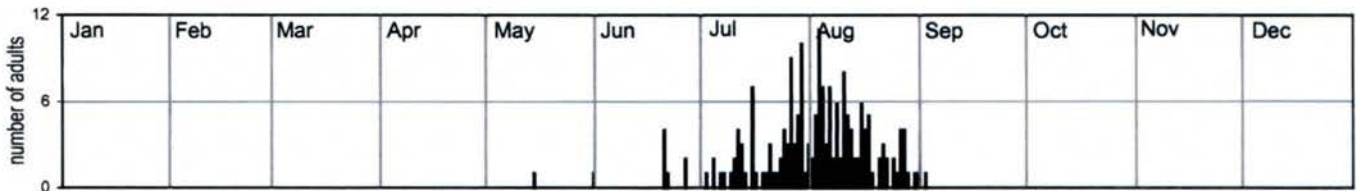


Fig. 2. Adult *Haploa clymene* captured in Louisiana. n = 184

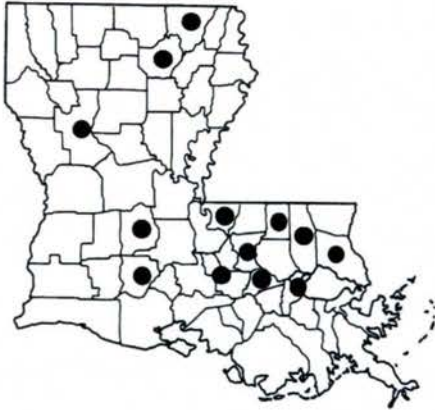


Fig. 3. Parish records by this author.

I have taken the colorful moth *Haploa clymene* (Brown) (Fig. 1) for the past four decades within Louisiana using ultraviolet light traps. This species as other *Haploa* species found in Louisiana can be encountered flying about in daylight hours. Heppner (2003) listed the range of *clymene* in eastern North America to include Quebec to Florida and west to Kansas and Texas and adults occurring in Florida from July to August. Covell (1984) listed the flight period of *clymene* to be June through August in eastern North America.

In Louisiana, adults have been captured from mid-May to the beginning of September, with the single annual brood peaking early August (Fig. 2). The parish records are illustrated in Fig. 3.

Literature Cited

Covell, Jr., C.V., 1984. *A Field Guide to the Moths of Eastern North America*. The Peterson Field Guide Series No. 30. Houghton Mifflin Co., Boston. xv + 496pp., 64 plates.
 Heppner, J.B., 2003. *Arthropods of Florida and neighboring land areas*, vol. 17: Lepidoptera of Florida, Div. Plant Industry, Fla. Dept. Agr. & Consum. Serv., Gainesville. x + 670 pp., 55 plates.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 USA; E-Mail: vabrou@bellsouth.net)

AN "ODD" *SCHINIA*, A NEW STATE RECORD,
AND A NEW US RECORD

These 3 photographs were sent in by James Adams as part of his State of Georgia report which is on page 169.



Schinia nundina
(an "odd" specimen)



Papaipema rigida
(a new State Record)



Dinumma deponens
(a new U.S. Record)

The Southern Lepidopterists' Society

OFFICERS

Debbie Matthews: Chairman
 P.O. Box 141034
 Gainesville, FL 32614-1034
 E-Mail: mothnut@hotmail.com

Jeffrey R. Slotten: Treasurer
 5421 NW 69th Lane
 Gainesville, FL 32653
 E-Mail: jslotten@bellsouth.net

Donald M. Stillwaugh: Secretary
 604 Summerhill Ct Apt. D
 Safety Harbor, FL 34695-4387
 E-Mail: don.stillwaugh7@verizon.net

Marc Minno: Membership Coordinator
 600 NW 34 Terrace
 Gainesville, FL 32607
 E-Mail: mminno@bellsouth.net

Rick Gillmore: Member-at-Large
 1772 Willa Circle
 Winter Park, FL 32792
 E-Mail: rickgillmore@yahoo.com

Dave Morgan: Website Manager
 4355 Cobb Parkway
 Suite J461
 Atlanta, GA 30339
 E-Mail: mrdavemorgan@hotmail.com

J. Barry Lombardini: Editor
 3507 41st Street
 Lubbock, Texas 79413
 E-Mail: jbarry.lombardini@ttuhsc.edu

The Southern Lepidopterists' Society is open to anyone with an interest in the Lepidoptera of the southern region of the United States. Annual membership dues:

Regular	\$20.00
Student	\$15.00
Sustaining	\$30.00
Contributor	\$50.00
Benefactor	\$70.00

A newsletter, The News of the Southern Lepidopterists' Society is published four times annually.

Information about the Society may be obtained from the Membership Coordinator or the Society Website: www.southernlepsoc.org/

INDEX

Page

1. <i>Haploa clymene</i> (Brown, 1776)(Lepidoptera: Erebidae) In Louisiana by Vernon A. Brou Jr.....	122
2. An "Odd" <i>Schinia</i> , A New State Record, And A New US Record by James Adams.....	123
3. Thanks To Our Recent Donors.....	124
4. SLS Receives ISSN by Jeff Slotten.....	125
5. The Genus <i>Balsa</i> Walker, 1860 (Lepidoptera: Noctuidae) In Louisiana by Vernon A. Brou Jr.....	126
6. Definitions.....	127
7. Moth Records From St. Catherines Island, Georgia by Lance A. Durden.....	128
8. The Genus <i>Argyrostromis</i> Hübner (1821) (Lepidoptera: Noctuidae) In Louisiana by Vernon A. Brou Jr.....	134
9. Frosted Elfins At Rick Evans/Grandview Prairie WMA, Arkansas, Using An Apparent Different Host Plant From Those In Louisiana by Craig W. Marks.....	139
10. Definitions.....	141
11. Coyote Cloudywing (<i>Achalarus toxeus</i>) Life History by Berry Nall.....	142
12. Butterfly Grandeur by Sarah Rayner.....	144
13. Definition.....	148
14. Maria Martin - A Biography by J. Barry Lombardini.....	149
15. Southern Lepidopterists At The International Lepidopterists' Conference In Denver, Colorado by Deborah L. Mathews and Jacqueline Y. Miller.....	150
16. New Members.....	151
17. William Jacob Holland - A Biography by J. Barry Lombardini.....	152
18. <i>Panopoda rufimargo</i> Hübner (Lepidoptera: Erebidae) in Louisiana by Vernon A. Brou Jr.....	154
19. Lycaenids At Work? by Mike Rickard.....	155
20. 2012 John Abbot Award Recipient - Barry Lombardini.....	156
21. Diary Of An Obsessive Butterflier - Part One Pieces of April (As Well As March And May) by Craig W. Marks.....	158
22. Definitions.....	164
23. Critically Low Populations Of The Schaus' Swallowtail (<i>Heracles aristodemus ponceanus</i> , Papilionidae) And Bartram's Scrub-Hairstreak (<i>Strymon acis bartrami</i> , Lycaenidae) In The Florida Keys by Marc C. Minno.....	165
24. Treasurer's Report by Jeff Slotten.....	167
25. Reports of State Coordinators.....	167

DONATIONS

**Many Thanks to the Following Donors to the SL SOCIETY
 (June - September, 2012)**

Steven Bransky (Benefactor +)
John Snyder (Sustaining)
Gary Ross (Sustaining)

Debbie L. Matthews (Sustaining)
Tom Emmel (Benefactor)

SOUTHERN LEPIDOPTERISTS' SOCIETY
RECEIVES
INTERNATIONAL STANDARD SERIAL NUMBER

After 24 years of publication, the Southern Lepidopterists' Society has been issued an ISSN. This number applies to the printed medium of our newsletter. Other medium versions (e.g., CD ROM, online) will need separate ISSN assignments.

According to the Library of Congress U.S. ISSN Center, "The preferred locations for displaying the ISSN on a printed serial are the upper right-hand corner of the cover, or the masthead, or another prominent place. The ISSN should always be printed with the letters ISSN preceding the number; Southern Lepidopterists' NEWS ISSN 2167- 0285. The preferred location for display of the ISSN on an online publication is the title screen or home page. If you publish a title in both print and online versions, please print both ISSN together on each version, filling in the blanks:

ISSN _____ - _____ (print)
ISSN _____ - _____ (online)

An ISSN remains valid as long as the title remains unchanged. Otherwise, the Library of Congress U.S. ISSN Center must be contacted to determine if a new ISSN would need to be assigned."

So, what is an ISSN and what are the advantages to having our publication assigned one? ISSN stands for International Standard Serial Number. It is a unique, internationally used identification number for serial publications and other continuing resources. It can be thought of as the social security number of the serials world. As explained above, it looks like this: ISSN 2167-0285. This is our official number assignment.

Our ISSN distinguishes our title from any others with which it might be confused. It helps libraries and others who handle large numbers of serials to check our title so it can get to users more quickly. It helps users search and link to digital records, articles, and other files. It differentiates the medium versions of our serial for ordering, claiming, and other identification purposes since each version(print, online, CD-ROM, etc.) is assigned a different ISSN.

So far we have only applied for an ISSN for the print version of our newsletter. In the future, we may want to apply for an ISSN for an online version.

I thank members Richard Gillmore and Jackie Miller for their input in applying for the ISSN.

Jeffrey R. Slotten
SLS Treasurer

BILL HOUTZ

The Editor of the Southern Lepidopterists Society wishes to inform the membership of the unfortunate news that Bill Houtz died on June 11th of this year. This was a tragic, unexpected loss as it appeared that he was in good health. An obituary will appear in the December issue of the NEWS.

Our sincerest condolences to his wife LaVerne and to his family.

THE GENUS *BALSA* WALKER, 1860 (LEPIDOPTERA: NOCTUIDAE)
IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

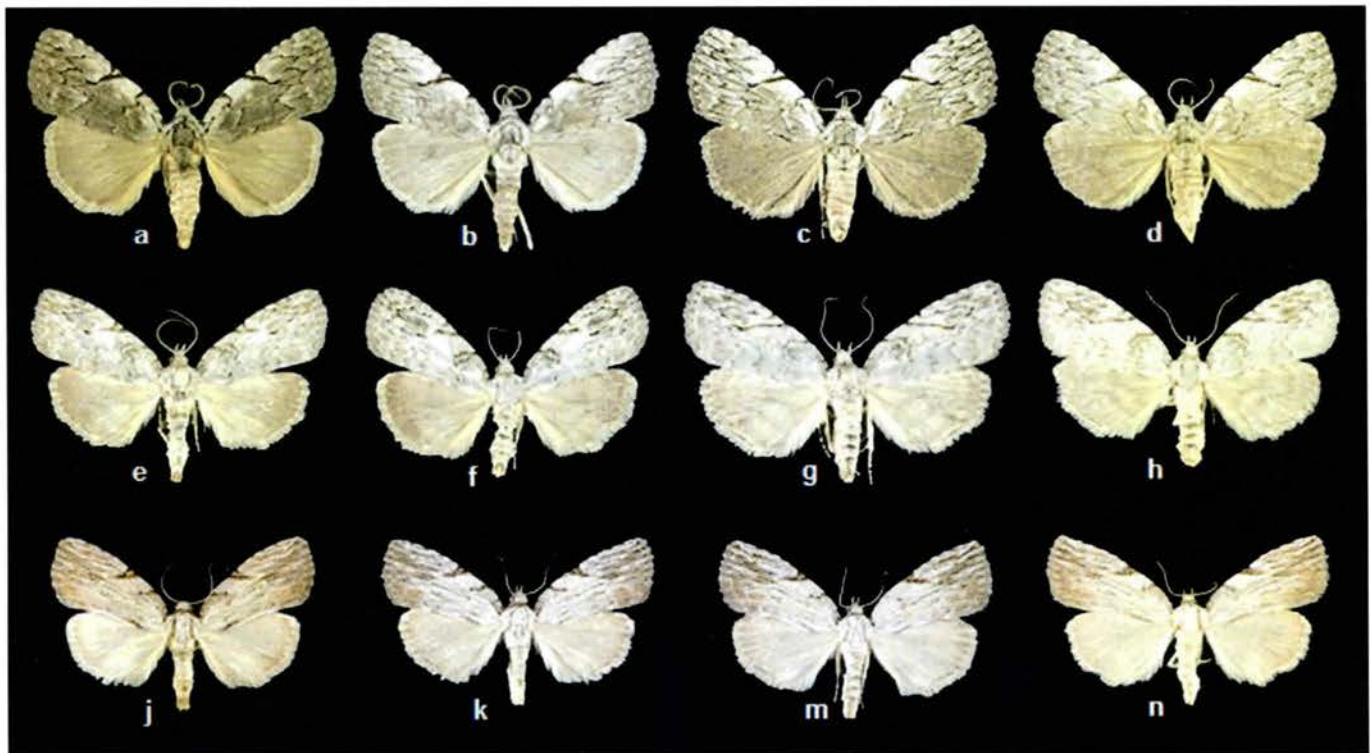


Fig. 1. *Balsa* phenotype variations. *B. malana*: males a-b, females c-d;
B. labecula: males e-f, females g-h; *B. tristrigella*: males j-k, females m-n.

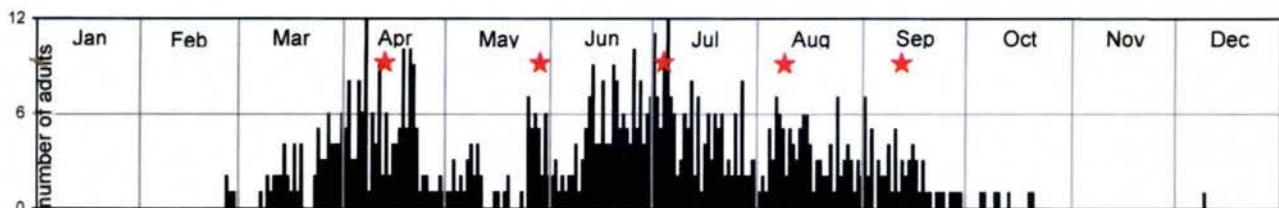


Fig. 2. Adult *B. malana* captured in Louisiana. n = 745

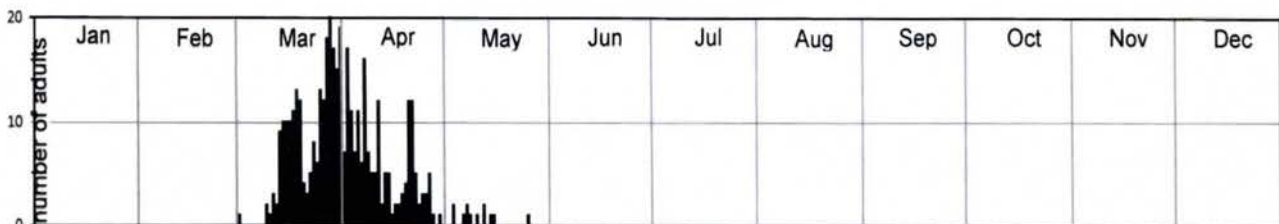


Fig. 3. Adult *B. labecula* captured in Louisiana. n = 409

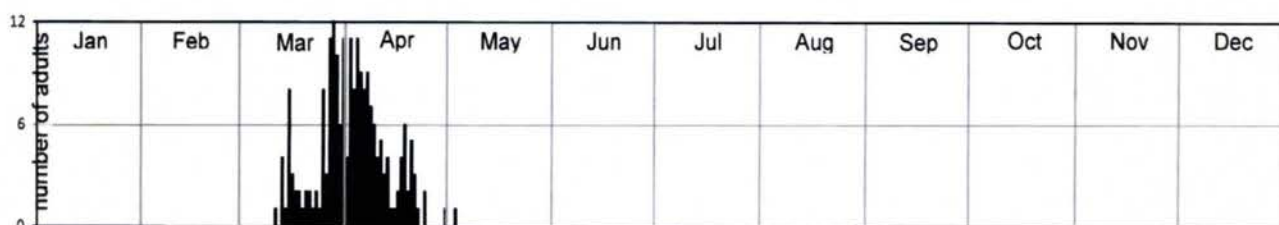


Fig. 4. Adult *B. tristrigella* captured in Louisiana. n = 211



Fig. 5. Parish records for *M. malana*

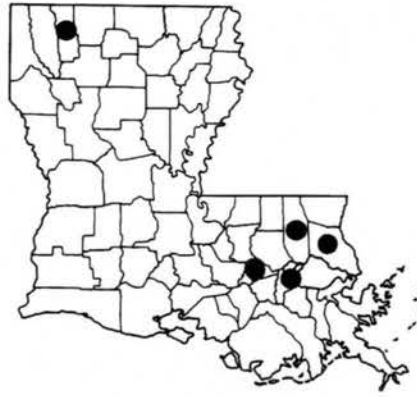


Fig. 6. Parish records for *M. labecula*



Fig. 7. Parish records for *M. tristrigella*

The small grey noctuid moths of the genus *Balsa* (Fig. 1): *Balsa malana* (Fitch, 1856), *Balsa tristrigella* (Walker, 1866), and *Balsa labecula* (Grote, 1880) are common residents at the *Abita Springs entomological study site. Only these three species are listed by Lafontaine and Schmidt (2010) under the subfamily Balsinae Grote.

One species, *malana* has five annual broods within Louisiana, while both species *labecula* and *tristrigella* are univoltine (Figs. 2, 3, 4). The brood peaks for *malana* are identified in Fig. 2 with red markers. The parish records for each of the three species are illustrated in Figs. 5, 6, and 7.

* Abita Springs entomological study site: sec.24T6SR12E, 4.2 miles northeast of Abita Springs, St. Tammany Parish, Louisiana USA.

Literature Cited

Lafontaine J.D. and B.C. Schmidt, 2010. Annotated check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. *ZooKeys* 40: 1–239. doi: 10.3897/zookeys.40.414.

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420 USA; E-mail: yabrou@bellsouth.net)

DEFINITIONS:

Dioecious (adj.), *Dioecism* (n) ⁽¹⁾ - having the male reproductive organs in one individual and the female organs in another; having separate sexes.

Monoecious ⁽²⁾ - having unisexual reproductive organs of both sexes on a single individual - usually occurs in plant species; separate male flowers and female flowers on the same plant (examples are, corn, pines, and maize). *Hermaphroditism* ⁽³⁾ - an individual (plant or animal) with the sexual organs of both the male and the female.

Gynodioecious ⁽⁴⁾ - having female flowers on one plant and hermaphrodite flowers on another plant of the same species.

- 1) <http://www.thefreedictionary.com/dioecism>
- 2) <http://www.thefreedictionary.com/monoecious>
- 3) <http://www.thefreedictionary.com/hermaphroditism>
- 4) <http://dictionary.reference.com/browse/gynodioecious>

MOTH RECORDS FROM ST. CATHERINES ISLAND, GEORGIA

BY

LANCE A. DURDEN

St. Catherines Island is one of the eight large (8 – 25 km long) barrier islands that extend along the Georgia (USA) Atlantic coast. It is approximately 5,670 ha in area and is located in Liberty County about 6 km off the Georgia coast and about 65 km south of Savannah (Thomas *et al.*, 1978). Most of the island is undisturbed and vegetation is dominated by live oaks draped in Spanish moss, but with abundant pines and palmettos, frequent palms, and extensive peripheral, intertidal salt marshes. Freshwater ponds are present and several tidal creeks innervate the island (Thomas *et al.*, 1978). Geologically, St. Catherines Island originated as part of the mainland Silver Bluff Terrace which was subsequently isolated from mainland Georgia by rising sea levels approximately 4,070 years ago (Booth & Rich, 1999). Except for a survey of the moths of Kittles Island, Georgia (Hyatt, 2004), a small (~10 ha) coastal island adjacent to the mainland and about 16 km southwest of the southern tip of St. Catherines Island, there do not appear to be any previously published surveys of moth faunas of the Georgia coastal or barrier islands.



Fig. 1. The mercury vapor trap used to collect moths.



Fig. 2. Representative moths from St. Catherines Island: *Erinyis obscura* (female) (Sphingidae) (top), *Haploa colona* (Arctiidae) (bottom).

From 1993-1995, I studied the ecology of ticks and tick-borne diseases on St. Catherines Island and also recorded some of the other arthropods present on the island. As part of the latter study, I operated a light trap during 10 of the 12 months of the year and recorded moth species present in the trap. Moths were sampled at the same site (31.683N, 81.151W) each trapping night in order to take advantage of a remote electrical outlet at this location. The light trap (Fig. 1) used a 100W frosted mercury vapor bulb above a large, removable, plexiglass funnel that opened into a larger receptacle (a modified tea chest) that included a rain drain and ample space (egg cartons or foam) on which captured, live moths could rest. The light was switched on from dusk until the catch was recorded the following morning just after daybreak. The majority of moths were recorded and then released alive but a few voucher specimens were retained.

The trap was operated during the following nights: 27-28 January 1993; 16-17 February 1993; 27-28 April 1993; 27-28 July 1993; 9-10 and 10-11 August 1993; 21-22 September 1993; 12-13 October 1993; 12-13 November 1993, 4-5 and 8-9 March 1994; 4-5 and 7-8 April 1994; 17-18, 18-19 and 19-20 May 1994; 16-17, 17-18 and 18-19 August 1994; 13-14 September 1994; 25-26 and 26-27 October 1994; and 3-4 May 1995. Therefore, moths were sampled during all months except June and December. No bait or pheromone traps were set but a few diurnal moths from daytime records from the same site have been added to the species list. Table 1 lists the moth species recorded during the

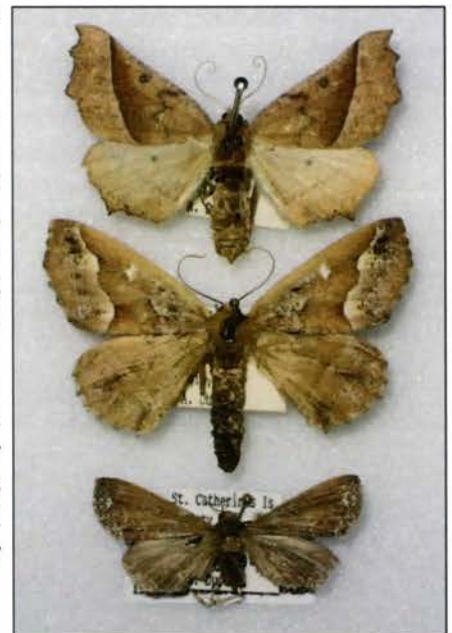


Fig. 3. Representative moths from St. Catherines Island: *Pero zalissaria* (Geometridae) (top), *Caripeta arenaria* (Geometridae) (middle), *Physula albipunctilla* (male) (Noctuidae) (bottom).

21-22 September 1993; 12-13 October 1993; 12-13 November 1993, 4-5 and 8-9 March 1994; 4-5 and 7-8 April 1994; 17-18, 18-19 and 19-20 May 1994; 16-17, 17-18 and 18-19 August 1994; 13-14 September 1994; 25-26 and 26-27 October 1994; and 3-4 May 1995. Therefore, moths were sampled during all months except June and December. No bait or pheromone traps were set but a few diurnal moths from daytime records from the same site have been added to the species list. Table 1 lists the moth species recorded during the



Fig. 4. Representative noctuid moths from St. Catherines Island: *Metria amella* (top), *Zale calycantha* (middle), *Xestia elimata* (bottom).

species (314) identified by Hyatt (2004) on Kittles Island. Kittles Island is much smaller than St. Catherines Island (about 1/567 of the size); also, it is not a barrier island and it is connected to the mainland by a causeway. This and the fact that sampling was more intensive and employed additional trapping techniques for the Kittles Island survey, presumably partly explain the similar numbers of moth species recorded for the two islands despite their vast size difference. Although Kittles Island is about 16 km southwest of the southern tip of St. Catherines Island, the light trapping site on the latter island was on the northern end of the island and was about 32 km northeast of Kittles Island. Nevertheless, the two islands are geographically and ecologically quite close despite their different geological origins



Fig. 6. Representative moths from St. Catherines Island: *Idaea hilliaata* (Geometridae) (top), *Acrapex relicta* (Noctuidae) (bottom).



Fig. 5. Representative noctuid moths from St. Catherines Island: *Doryodes bistrialis* (top), *Doryodes spadaria* (bottom).

have been undersampled and some probably escaped from the trap before they were recorded. Nevertheless, Table 1 can be considered to be a working moth list for the island. Some representative moths recorded on St. Catherines Island are shown in Figs. 2-6.

Interestingly, the total number of moth species recorded (341) from St. Catherines Island during this survey is very close to the total number of species recorded on Kittles Island by Hyatt (2004) demonstrating the similarity between the moth faunas of both islands. Conversely, some less commonly collected moth species that were recorded on St. Catherines Island but not on Kittles Island highlight some differences between the moth faunas of these islands. These moths include the sphingid, *Erinnyis obscura* (probably a migrant from further south), the geometrids, *Caripeta arenaria* and *Idaea hilliaata*, and the noctuids *Physula albipunctilla*, *Doryodes spadaria* and *Acrapex relicta*.

Some moth species appear to reach their northern limit (or close to it) on the Georgia barrier islands, likely because of the subtropical climate which only extends a few km into the mainland from the Atlantic coast (Hyatt, 2004). Based on records reported here for St. Catherines Island and comparing them with distributions depicted online in the Moth Photographers Group species maps (<http://mothphotographersgroup.msstate.edu/MainMenu.shtml>), these moths appear to include the crambids *Diacme phyllisalis* and *Diaphania modialis*, the geometrids *Idaea hilliaata*, *Idaea micropterata* and *Cyclophora benjamini*, and the noctuid *Physula albipunctilla*. Some other moths recorded here for St. Catherines Island appear to have decidedly coastal/subcoastal distributions when they occur north of Florida. Moths that could be included in this category are the

survey. Each species is listed sequentially by its unique MONA number. Capture months for each species are listed by Roman numerals.

Because this survey relies on records from one site using one trapping technique, the 341 moth species listed in Table 1 must be considered to represent a subset of the moth fauna of St. Catherines Island. Sampling other sites and habitats and using additional sampling techniques will provide additional moth records for the island. Also, microlepidopterans appear to

geometrids *Pero zalissaria*, *Idaea hilliata*, and *Xanthotype rufaria*, the arctiid *Syntomeida epilais*, and the noctuids *Hypena degasalis*, *Panopoda repanda*, *Zale declarans*, *Doryodes bistrialis*, *Doryodes spadaria*, *Spragueia onagrus*, *Callopietria granitosa*, *Elaphria fuscimacula* and *Eucoptocnemis dapsilis*.

Another noteworthy trend on St. Catherines Island was the presence of typically non-winter moth species during winter mild spells such as a pristine male *Enyo lugubris* (Sphingidae) in January and *Eupithecia miserulata* (Geometridae), *Actias luna* (Saturniidae), *Symmerista albifrons* (Notodontidae), *Meganola miniscula* (Nolidae), and *Zale lunifera* and *Xystocheilus rufago* (Noctuidae) all in January and/or February. Also, all seven recorded specimens of *Acrapex relictus* (Noctuidae) were collected during one night (18-19 May 1994) underlining the brief phenology of some species (the trap was also set on 17-18 and 19-20 May 1994).

Lastly, some moth species that were expected to be present on St. Catherines Island because of abundant larval foodplants and the presence of the moths on the adjacent mainland, were not recorded. Two species in this category are *Dahana atripennis* Grote (Arctiidae) and *Litoprosopus futilis* (Grote & Robinson) (Noctuidae), whose larvae feed on Spanish moss and saw palmetto, respectively (Covell, 1984) both of which are abundant on St. Catherines Island. The mammal fauna and some arthropod faunas that have been studied on St. Catherines Island are depauperate with respect to the number of species present when compared to the faunas of adjacent mainland Georgia (Thomas *et al.*, 1978; Durden, 1995; Wilson and Durden, 2003). Additional survey data will be needed in order to ascertain whether this is also the case for the moth fauna of this island.

Clearly, St. Catherines Island has a fascinating and partly unique moth fauna but much more remains to be learned about the moths of this island as well as the moth faunas of the other Georgia barrier and coastal islands.

TABLE 1. Moths recorded on St. Catherines Island, Georgia, USA, from 1993-1995.

ACROLOPHIDAE

- 373 - *Acrolophus popeanella* (Clemens): V, VII
374 - *Acrolophus propinquus* (Walsingham): VII
383 - *Acrolophus texanella* (Chambers): V, VIII

PSYCHIDAE

- 442 - *Cryptothelea gloverii* (Packard): V, VII
454 - *Oiketicus abbotii* Grote: II, III, VII

BLASTOBASIDAE

- 1162 - *Blastobasis glandulella* (Riley): VIII, IX, X

ATTEVIDAE

- 2401 - *Atteva aurea* (Fitch): V, VII, VIII, IX

LACTURIDAE

- 2405 - *Lactura pupula* (Hübner): VIII, IX, X

URODIDAE

- 2415 - *Urodus parvula* (H. Edwards): IV, V

SESIIDAE

- 2567 - *Synanthedon rubrofascia* (H. Edwards): V

COSSIDAE

- 2674 - *Cossula magnifica* (Strecker): V
2693 - *Prionoxystus robiniae* (Peck): IV, V

TORTRICIDAE

- 3072 - *Eucosma cocana* Kearfott: IV
3653 - *Archips semiferana* (Walker): IV, V
3695 - *Sparganothis sulfureana* (Clemens): VII
3743 - *Platynota exasperatana* (Zeller): VIII

COCHYLIDAE

- 3764 - *Carolella sartana* (Hübner): VIII

ZYGAENIDAE

- 4624 - *Harrisina americana* (Guérin-Ménéville): IX, X
4629 - *Acoloitus falsarius* Clemens: VII

MEGALOPYGIDAE

- 4647 - *Megalopyge opercularis* (J. E. Smith): VII, VII, IX

LIMACODIDAE

- 4671 - *Prolimacodes badia* (Hübner): VII, VII
4675 - *Isochaetes bettenmuelleri* (H. Edwards): V, VII
4681 - *Isa textula* (Herrich-Schäffer): IV, V, VII, VIII
4700 - *Acharia stimulea* (Clemens): VII, VIII

CRAMBIDAE

- 4743 - *Neocataclysta magnificentis* (Hübner): X, XI
4751 - *Elophila gyralis* (Hulst): VII, VIII
4759 - *Parapoynx maculalis* (Clemens): V
4764 - *Parapoynx allionealis* Walker: V, VII, XI
4953 - *Anania coronata* (Hufnagel): III, IV
4980 - *Helvibotys helvialis* (Walker): VII
5142 - *Diacme elealis* (Walker): IX, X
5144 - *Diacme phyllisalis* (Walker): VIII, IX, X
5150 - *Samia ecclesialis* Guenée: IX, X
5151 - *Samia multiplicalis* (Guenée): VII
5156 - *Nomophila nearctica* Munroe: VIII, IX, X
5159 - *Desmia funeralis* (Hübner): IV, V, VII
5169 - *Hymenia perspectalis* (Hübner): VIII
5176 - *Anageshna primordialis* (Dyar): IV, V
5182 - *Blepharomastix ranalis* (Guenée): IV, V
5205 - *Diaphania modialis* (Dyar): VIII
5212 - *Omiodes indicata* (Fabricius): VIII, IX
5273 - *Herpetogramma ipomoealis* (Capps): VIII, IX
5274 - *Herpetogramma phaeopteralis* (Guenée): IX, X
5277 - *Herpetogramma thestealis* (Walker): X
5284 - *Syngamia florella* (Stoll): VIII, IX
5311 - *Rupela tinctella* (Walker): V, VI

- 5314 - *Donacaula unipunctellus* (Robinson): IV, V
 5316 - *Donacaula melinellus* (Clemens): VII, VIII
 5450 - *Parapediasia decorella* (Zincken): V
 5464 - *Urola nivalis* (Drury): IV
 5478 - *Diatraea evanescens* Dyar: V

PYRALIDAE

- 5533 - *Hypsopygia olinalis* (Guenée): VII, VIII
 5591 - *Talulla atrifascialis* (Hulst): IX, X
 5595 - *Pococera robustella* (Zeller): VII
 5602 - *Pococera subcanalis* (Walker): V, VII, VIII
 5622 - *Galleria mellonella* (Linnaeus): VIII, IX, X
 5853 - *Dioryctria amatella* (Hulst): IX, X, XI
 5896 - *Elasmopalpus lignosellus* (Zeller): IX, X

THYRIDIDAE

- 6077 - *Thyris sepulchralis* Guérin-Ménéville: III, IV

PTEROPHORIDAE

- 6120 - *Lioptilodes albistriolatus* (Zeller): X
 6210 - *Hellinsia balanotes* (Meyrick): IX, X, XI

DREPANIDAE

- 6255 - *Oreta rosea* (Walker): IX, X

GEOMETRIDAE

- 6258 - *Alsophila pometaria* (Harris): XI, I, II
 6273 - *Speranza pustularia* (Guenée): II, III, IV
 6339 - *Macaria transitaria* (Walker): IV, V, X
 6341 - *Macaria bicolorata* (Fabricius): IV, V, VIII
 6353 - *Macaria multilineata* Packard: VIII, IX
 6362 - *Digrammia continuata* (Walker): IV, V, VII, VIII
 6405 - *Digrammia gnophosaria* (Guenée): V
 6443 - *Glenoides texanaria* (Hulst): V, VII, X
 6449 - *Glena cribataria* (Guenée): VII
 6582 - *Anacamptodes vellivolata* (Hulst): IV, V
 6583 - *Iridopsis ephyraria* (Walker): V
 6590 - *Anavitrinella pampinaria* (Guenée): IV
 6594 - *Cleora sublunaria* (Guenée): VII
 6599 - *Epimecis hortaria* (Fabricius): II, III, IV, V, VII
 6620 - *Melanolophia canadaria* (Guenée): V
 6652 - *Lycia ypsilon* (S. A. Forbes): II, III
 6654 - *Hypagyrtis unipunctata* (Haworth): VIII, IX
 6655 - *Hypagyrtis esther* (Barnes): VII, VIII
 6659 - *Phigalia denticulata* Hulst: I, II, III
 6711 - *Ilexia intractata* (Walker): III, IV
 6733 - *Euchlaena amoenaria* (Guenée): VII, VIII, IX
 6742 - *Xanthotype rufaria* Swett: V, VII
 6745 - *Cymatophora approximaria* Hübner: VIII, IX, X
 6752 - *Pero zalissaria* (Walker): IV, V
 6753 - *Pero honestaria* (Walker): IV, VII
 6763 - *Nacophora quernaria* (J. E. Smith): II, III
 6828 - *Metarranthis homuraria* (Grote & Robinson): IV
 6832 - *Metarranthis obfirmaria* (Hübner): II, III, IV
 6838 - *Probole amicarua* (Herrich-Schäffer): IV, V
 6843 - *Plagodis fervidaria* (Herrich-Schäffer): III, IV
 6869 - *Caripeta aretaria* (Walker): IX, X
 6885 - *Besma quercivoraria* (Guenée): III, IV, V, VII, VIII,
 IX
 6888 - *Lambdina fiscellaria* (Guenée): V
 6894 - *Lambdina fervidaria* (Hübner): IV, V
 6908 - *Nepytia semichusaria* (Walker): IV, V
 6941 - *Eusarca confusaria* Hübner: IV, V

- 6966 - *Eutrapela clemataria* (J. E. Smith): I, II, III, IV
 6974 - *Patalene olyzonaria* (Walker): I, IV, VIII, IX, X
 6982 - *Prochoerodes lineola* (Goeze): II, III, IV
 7029 - *Nemoria elfa* Ferguson: V
 7033 - *Nemoria lixaria* (Guenée): III, VIII
 7034 - *Nemoria saturiba* Ferguson: III
 7084 - *Hethemia pistasciaria* (Guenée): III
 7094 - *Lobocleta ossularia* (Geyer): VII, IX
 7101 - *Idaea minuta* (Schaus): IX
 7114 - *Idaea demissaria* (Hübner): IV, V
 7118 - *Idaea hilliata* (Hulst): IX, X
 7119 - *Idaea micropterata* (Hulst): IV, V
 7122 - *Idaea takturata* (Walker): VII, VIII, IX
 7132 - *Pleuroprucha insularia* (Guenée): VII, IX
 7138 - *Cyclophora benjamini* (Prout): VIII
 7159 - *Scopula limboundata* (Haworth): IV, V
 7173 - *Leptostales pannaria* (Guenée): X
 7181 - *Lophosus laberculata* (Hulst): IX
 7196 - *Eulithis diversilineata* (Hübner): IV
 7197 - *Eulithis gracilineata* (Guenée): V
 7330 - *Anticlea multiferata* (Walker): III
 7414 - *Orthonama obstipata* (Fabricius): V, VII, X
 7416 - *Costaconvexa centrostrigaria* (Wollaston): VII, VIII,
 IX, X
 7417 - *Disclisoprocta stellata* (Guenée): IV, V, VII, VIII,
 IX, X
 7474 - *Eupithecia miserulata* Grote: I, II, III, VIII, IX, X
 7647 - *Heterophleps triguttaria* Herrich-Schäffer: V, VI

MIMALLONIDAE

- 7659 - *Lacosoma chiridota* Grote: V, VII

APATELODIDAE

- 7663 - *Apatelodes torrefacta* (J. E. Smith): VII
 7665 - *Ocleclostera angelica* (Grote): VII

LASIOCAMPIDAE

- 7674 - *Tolyte notialis* Franclemont
 7683 - *Artace cribrarius* (Ljungh)
 7698 - *Malacosoma disstria* Hübner
 7701 - *Malacosoma americana* (Fabricius)

SATURNIIDAE

- 7704 - *Eacles imperialis* (Drury): V, VII
 7706 - *Citheronia regalis* (Fabricius): V, VIII
 7715 - *Dryocampa rubicunda* (Fabricius): VII, VIII, IX
 7716 - *Anisota stigma* (Fabricius): IV, V, VII
 7723 - *Anisota virginiana* (Drury): IV, V, VII, VIII
 7746 - *Automeris io* (Fabricius): V, VII, VIII
 7757 - *Antheraea polyphemus* (Cramer): IV, V, VII, VIII,
 IX
 7758 - *Actias luna* (Linnaeus): II, III, IV, V, VII, VIII, IX,
 X

SPHINGIDAE

- 7771 - *Agrius cingulata* (Fabricius): V, VII, VIII
 7775 - *Manduca sexta* (Linnaeus): VII, VIII
 7778 - *Manduca rustica* (Fabricius): VII, X, XI
 7784 - *Dolba hyloeus* (Drury): VII
 7787 - *Ceratonia undulosa* (Walker): V, VII
 7793 - *Paratrea plebeja* (Fabricius): VIII
 7816 - *Lapara coniferarum* (J. E. Smith): III, IV, V, VII,
 VIII, IX

- 7824 - *Paonias excaecata* (J. E. Smith): VII, IX
 7825 - *Paonias myops* (J. E. Smith): VII, VIII
 7827 - *Amorpha juglandis* (J. E. Smith): VIII
 7837 - *Erimmyia obscura* (Fabricius): IX
 7851 - *Enyo lugubris* (Linnaeus): I, VIII, IX, X, XI
 7853 - *Hemaris thysbe* (Fabricius): V, VII
 7855 - *Hemaris diffinis* (Boisduval): V, VII, VIII
 7859 - *Eumorpha pandorus* (Hübner): IX
 7873 - *Amphion floridensis* B. P. Clark: II, III, IV
 7885 - *Darapsa myron* (Cramer): VII
 7890 - *Xylophanes tersa* (Linnaeus): VIII, IX, X, XI

NOTODONTIDAE

- 7896 - *Clostera inclusa* (Hübner): V, IX
 7908 - *Datana perspicua* Grote & Robinson: VII, VIII
 7915 - *Nadata gibbosa* (J. E. Smith): III, IV, V, VII, VIII, IX
 7917 - *Hyperaeschra georgica* (Herrich-Schäffer): V, VII, VIII
 7920 - *Peridea angulosa* (J. E. Smith): VII, IX, X
 7921 - *Peridea ferruginea* (Packard): IX, X
 7937 - *Furcula cinerea* (Walker): VII, VIII
 7951 - *Symmerista albifrons* (J. E. Smith): I, II, III, IV, VIII
 7957 - *Dasylophia anguina* (J. E. Smith): IV
 7975 - *Macurocampa marthesia* (Cramer): III, IX, X
 7983 - *Heterocampa obliqua* Packard: VII, VIII
 7990 - *Heterocampa umbrata* Walker: III, X, XI
 7994 - *Heterocampa guttivitta* (Walker): VII, VIII
 7995 - *Heterocampa biundata* Walker: IV, V
 7998 - *Lochmaeus manteo* Doubleday: VII, VIII, IX
 8005 - *Schizura ipomoeae* Doubleday: VII, VIII
 8011 - *Schizura leptinoides* (Grote): VII, VIII, IX

ARCTIIDAE

- 8045 - *Crambidia lithosoides* Dyar: V, IX, X
 8045.1 - *Crambidia pallida* Packard: VIII
 8067 - *Cisthene plumbea* Stretch: IX, X
 8089 - *Hypoprepia miniata* (Kirby): V, VII, VIII
 8090 - *Hypoprepia fucosa* Hübner: V, VII
 8098 - *Clemensia albata* Packard: III, IV, V, VII, VIII, IX, X, XI
 8106 - *Utetheisa bella* (Linnaeus): V, VIII, X, XI
 8108 - *Haploa colona* (Hübner): VII, VIII
 8121 - *Virbia aurantiaca* (Hübner): IV, V, IX
 8122 - *Virbia rubicundaria* (Hübner): IV, V, VII
 8124 - *Virbia immaculata* (Reakert): V, IX
 8131 - *Estigmene acraea* (Drury): III
 8134 - *Spilosoma congrua* Walker: III, VIII
 8137 - *Spilosoma virginica* (Fabricius): III, VIII, IX
 8140 - *Hyphantrea cunea* (Drury): III, IV, V, VIII
 8146 - *Hypercompe scribonia* (Stoll): III, IV, V
 8170 - *Apantesis vittata* (Fabricius): VII, VIII, IX, X
 8203 - *Halysidota tessellaris* (J. E. Smith): V, VII, VIII
 8217 - *Leucanopsis longa* (Grote): VIII, IX, X
 8267 - *Cisseps fulvicollis* (Hübner): V, VI, VIII, X, XI
 8284 - *Syntomeida epilais* (Walker): IX, X

LYMANTRIIDAE

- 8296 - *Dasychira basiflava* (Packard): IV, V
 8307 - *Dasychira manto* (Strecker): IX, X
 8314 - *Orgyia definita* Packard: V, VII, VIII, IX
 8316 - *Orgyia leucostigma* (J. E. Smith), IV, V, VII, VIII, XI

NOLIDAE

- 8983 - *Meganola miniscula* (Zeller): II, III, IV
 8983.1 - *Meganola phylla* (Dyar): VII

NOCTUIDAE

- 8322 - *Idia americanis* (Guenée): VIII
 8323 - *Idia aemula* Hübner: II, III, IV
 8326 - *Idia rotundalis* (Walker): IV, V
 8334 - *Idia lubricalis* (Geyer): IV, V
 8338 - *Phalaenophana pyramusalis* (Walker): V
 8360 - *Macrochilo orciferalis* (Walker): IV
 8368 - *Tetanolita floridana* (J. B. Smith): V, VII, VIII, IX, X
 8381 - *Renia discoloralis* Guenée: IV, V, X, XI
 8384.1 - *Renia flavipunctalis* (Geyer): III, IV
 8385 - *Renia fraternalis* J. B. Smith: III, IV, V
 8386 - *Renia adspersigillus* (Bosc): II, III, IV
 8390.2 - *Physula albipunctilla* Schaus: VIII
 8393 - *Lascoria ambigualis* Walker: IV, V, VII
 8398 - *Palthis asopialis* (Guenée): VIII, IX
 8401 - *Redectis vitrea* (Grote): V
 8411 - *Colobochyla interpuncta* (Grote): VII, VIII
 8431 - *Schrankia macula* (Druce): V, VII
 8441 - *Bomolocha manalis* Walker: V, VIII
 8459 - *Hypena degasalis* (Walker): VIII, IX, X
 8465 - *Hypena scabra* (Fabricius): VII, VIII, IX
 8467 - *Hemeroplanis scopulepes* (Haworth): VIII
 8471 - *Hemeroplanis habitalis* (Walker): VII
 8490 - *Pangrapta decoralis* Hübner: IV
 8491 - *Ledaea perditalis* (Walker): V, VII
 8493 - *Isogona tenuis* (Grote): VII, VIII
 8500 - *Metalectra quadrisignata* (Walker): VII, VIII
 8505 - *Metalectra richardsi* Brower: VII
 8514 - *Scolecampa liburna* (Geyer): V, VII, VIII, IX
 8527 - *Hypsoropha monilis* (Fabricius): III, IV, V
 8534 - *Plusiodonta compressipalis* Guenée: VII
 8545 - *Anomis erosa* Hübner: IX, X, XI
 8560 - *Diphthera festiva* (Fabricius): VIII, IX
 8574 - *Anticarsia gemmatilis* Hübner: VIII, IX, X, XI
 8587 - *Panopoda rufimargo* (Hübner): VII
 8589 - *Panopoda repanda* (Walker): III, IV, V
 8591 - *Phoberia atomaris* Hübner: I, II, III
 8592 - *Cissusa spadix* (Cramer): III, IV, V
 8607 - *Melipotis jucunda* (Hübner): V, VII
 8649 - *Ascalapha odorata* (Linnaeus): IX
 8651 - *Lesmone detrahens* (Walker): IV, V
 8658 - *Selenisa sueroides* (Guenée): IX
 8666 - *Metria amella* (Guenée): III, IV, V, VII, VIII
 8679 - *Matigramma pulverilinea* Grote: III
 8683 - *Pseudanthracia coracias* (Guenée): III, IV
 8689 - *Zale lunata* (Drury): III, IV, V
 8691 - *Zale declarans* (Walker): III, IV, VII, VIII
 8713 - *Zale lunifera* (Hübner): I, II, III
 8714 - *Zale calycantha* (J. E. Smith): III, IV
 8721 - *Allotria elonympha* (Hübner): V, VII
 8727 - *Parallelia bistriaris* Hübner: III, IV, VII
 8731 - *Euclidean cuspidea* (Hübner): III
 8733 - *Caenurgina chloropa* (Hübner): VII
 8743 - *Mocis latipes* (Guenée): IX, X, XI
 8744 - *Mocis marcida* (Guenée): XI
 8746 - *Mocis disserverans* (Walker): IX, X
 8747 - *Celiptera frustulum* Guenée: VII
 8749 - *Ptichodis vinculum* (Guenée): IX, X

- 8765 - *Doryodes bistrialis* (Geyer): III, IV, V, VII, VIII
 8767 - *Doryodes spadaria* Guenée: III
 8774 - *Catocala muliercula* Guenée: V, VII
 8857 - *Catocala ultronia* (Hübner): V, VII, VIII
 8873 - *Catocala similis* Edwards: V
 8876 - *Catocala micronympha* Guenée: V, VII, VIII, IX
 8878 - *Catocala amica* (Hübner): V, VII
 8885 - *Argyrogramma verruca* (Fabricius): VII, VIII, X, XI
 8890 - *Chrysodeixis includens* (Walker): IX, X, XI
 8907 - *Megalographa biloba* (Stephens): III, V
 8924 - *Anagrapha falcifera* (Kirby): VII, VIII
 8956 - *Marathyssa basalis* Walker: III, IV
 8957 - *Paectes oculatrix* (Guenée): IV
 8962 - *Paectes abrostoloides* (Guenée): V
 9025 - *Oruza albocostaliata* (Packard): V
 9044 - *Thioptera nigrofimbria* (Guenée): V, VII, VIII, IX
 9062 - *Cerma cerintha* (Treitschke): V, VII
 9070 - *Amyna axis* (Guenée): IX, X, XI
 9090 - *Ponometa candefacta* (Hübner): V
 9126 - *Spragueia onagrus* (Guenée): VIII
 9136 - *Tarache aprica* (Hübner): V, IX
 9182 - *Panthea furcilla* (Packard): IX, X
 9189 - *Charadra deridens* (Guenée): III, IV, V, VIII
 9200 - *Acronicta americana* (Harris): VIII, IX
 9219 - *Acronicta connecta* Grote: IV, V, VII, VIII
 9254 - *Acronicta afflicta* Grote: IV, V
 9272 - *Acronicta oblonita* (J. E. Smith): VII, VIII
 9285 - *Polygrammate hebraeicum* Hübner: IV, V, VII, VIII
 9299 - *Eudryas unio* (Hübner): V, VII
 9314 - *Alypia octomaculata* (Fabricius): III, IV
 9449 - *Capsula oblonga* (Grote): V
 9463 - *Parapamea buffaloensis* (Grote): X, XI
 9520.1 - *Acrapex relicta* Ferguson: V
 9522 - *Iodopepla u-album* (Guenée): III, IV, V
 9524 - *Bellura brehmei* (Barnes & McDunnough): IV, V
 9556 - *Chytonix palliatricula* (Guenée): V, VII
 9619 - *Phosphila miselioides* (Guenée): VII, VIII
 9630 - *Callopietria floridensis* (Guenée): VII, VIII, IX
 9632 - *Callopietria granitosa* (Guenée): V
 9638 - *Amphipyra pyramidoides* Guenée: V, VII, VIII
 9665 - *Spodoptera exigua* (Hübner): VIII, IX, X
 9666 - *Spodoptera frugiperda* (J. E. Smith): VII, VIII, IX, X, XI
 9669 - *Spodoptera ornithogalli* (Guenée): IX
 9670 - *Spodoptera latifascia* (Walker): X
 9671 - *Spodoptera dolichos* (Fabricius): X, XI
 9672 - *Spodoptera eridania* (Stoll): IX, X
 9675 - *Elaphria fuscimacula* (Grote): VIII
 9679 - *Elaphria chalconia* (Hübner): VII, VIII
 9680 - *Elaphria georgei* (Moore & Rawson): III, V
 9681 - *Elaphria festivoidea* (Guenée): VII, VIII, IX, X, XI
 (not *E. cornutinis* – genitalia dissected and examined for some specimens)
 9682 - *Elaphria exesa* (Guenée): VII
 9688 - *Galgula partita* Guenée: V, VII, IX
 9690 - *Condica videns* (Guenée): IV
 9693 - *Condica mobilis* Walker: IX, X, XI
 9696 - *Condica vecors* (Guenée): VIII, IX
 9699 - *Condica sutor* (Guenée): IX, X
 9718 - *Emarginea percara* (Morrison): IV, IX
 9720 - *Ogdoconta cinereola* (Guenée): VIII
 9725 - *Azenia obtusa* (Herrich-Schäffer): VII
 9818 - *Amolita fessa* Grote: IV, V
 9942 - *Xystocheilus rufago* (Hübner): II, III
 9944 - *Metaxaglaea viatica* (Grote): X, XI
 9949 - *Chaetoglaea tremula* (Harvey): I, X, XI
 10019 - *Psaphida resumens* Walker: II, III
 10414 - *Lacinoplia implicata* McDunnough: IX
 10438 - *Mythimna unipuncta* (Haworth): VII, VIII, IX, X, XI
 10440 - *Leucania linita* Guenée: III, IV, VIII
 10454 - *Leucania latiuscula* Herrich-Schäffer: IX, X
 10455 - *Leucania scirpicola* Guenée: V, X, XI
 10456 - *Leucania adjuta* (Grote): IV, X
 10519 - *Morrisonia mucens* (Hübner): III, IV, V
 10521 - *Morrisonia confusa* (Hübner): III, IV
 10567 - *Ulolonche culea* (Guenée): IV
 10663 - *Agrotis ipsilon* (Hufnagel): VII, VIII, IX, X
 10664 - *Agrotis subterranea* (Fabricius): I, IX, X, XI
 10696 - *Eucrotopcnemis dapsilis* (Grote): X
 10901 - *Anicla lubricans* (Guenée): III, IV, V
 10911 - *Anicla infecta* (Ochsenheimer): VIII, IX, X, XI
 10915 - *Peridroma saucia* (Hübner): V, VII
 10967 - *Xestia elimata* (Guenée): IX, X, XI
 10998 - *Choephora fungorum* Grote & Robinson: X, XI
 11068 - *Helicoverpa zea* (Boddie): VIII, IX, X, XI
 11149 - *Schinia trifascia* Hübner: X

Acknowledgements: Research trips to St. Catherines Island were funded by the Edward John Noble Foundation of the American Museum of Natural History, New York. Gratitude is extended to Royce Hayes (Superintendent of St. Catherines Island) for facilitating and organizing research trips, James K. Adams (Dalton State University, Georgia) for identifying some of the moths reported here and John A. Hyatt (East Tennessee State University) for helpful discussions and advice.

LITERATURE CITED

- Booth, R. K. and Rich, F. J., 1999. Palynology and depositional history of late Pleistocene and Holocene coastal sediments from St. Catherines Island, Georgia, U.S.A. *Palynology* 23: 67-86.
 Covell, C. V., Jr., 1984. A Field Guide to the Moths of Eastern North America. Houghton Mifflin, Boston.
 Durden, L. A., 1995. Fleas (Siphonaptera) of cotton mice on a Georgia barrier island: a depauperate fauna. *Journal of Parasitology* 81: 526-529.
 Hyatt, J. A., 2004. Moths of a small island on the coast of Georgia (Lepidoptera, Heterocera). *Atalanta* 35: 453-465 (+ 2 color plates).
 Thomas, D. H., Jones, G. D., Durham, R. S. and Larsen, C. S., 1978. The anthropology of St. Catherines Island. 1. Natural and cultural history. *Anthropological Papers of the American Museum of Natural History* 55: 155-248.
 Wilson, N. and Durden, L. A., 2003. Ectoparasites of terrestrial vertebrates inhabiting the Georgia barrier islands, USA: an inventory and preliminary biogeographical analysis. *Journal of Biogeography* 30: 1207-1220.

THE GENUS *ARGYROSTROTIS* HÜBNER (1821)
(LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

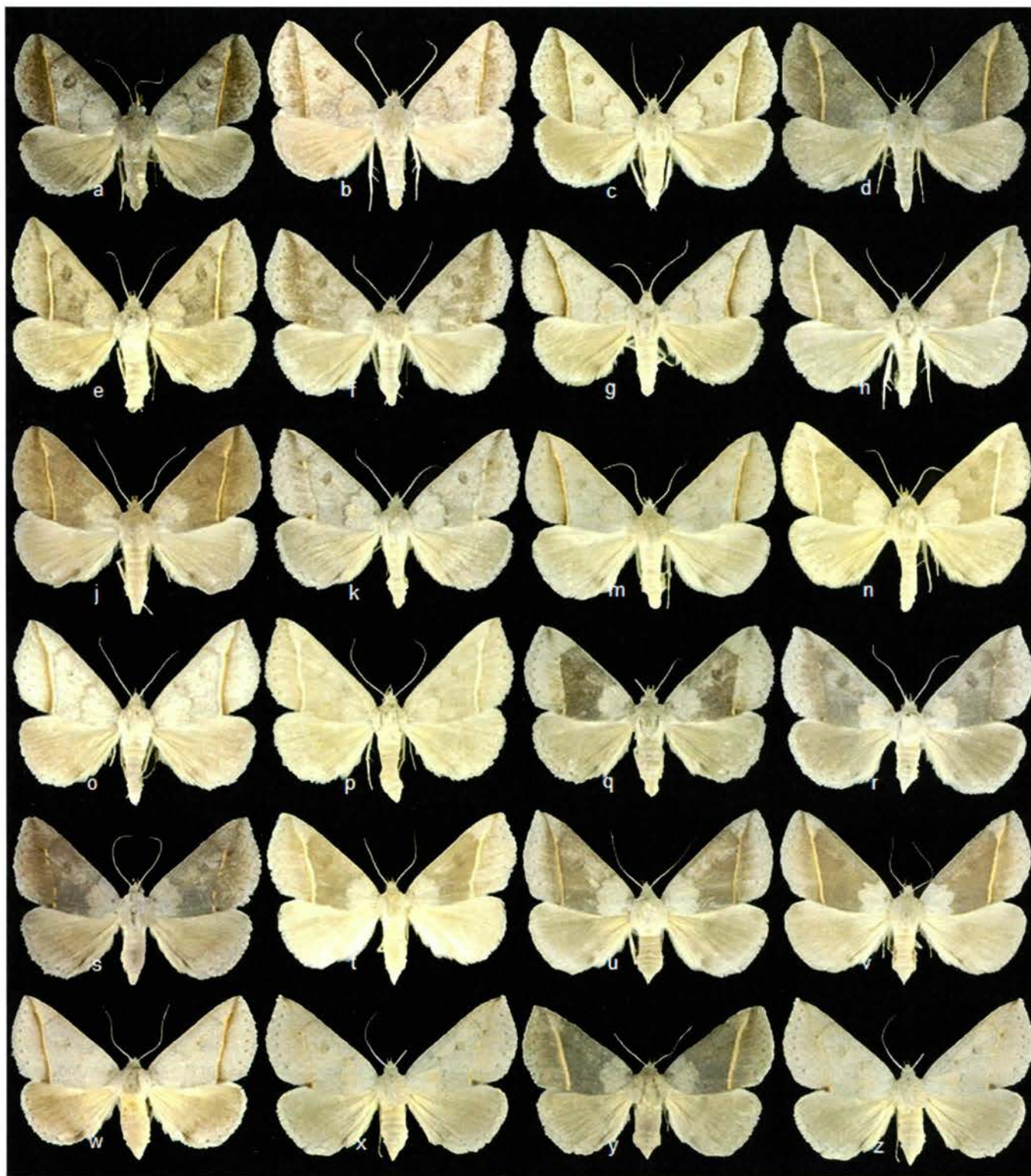


Fig. 1. *A. flavistriaria* phenotypes: a-o. males, p-z. females.

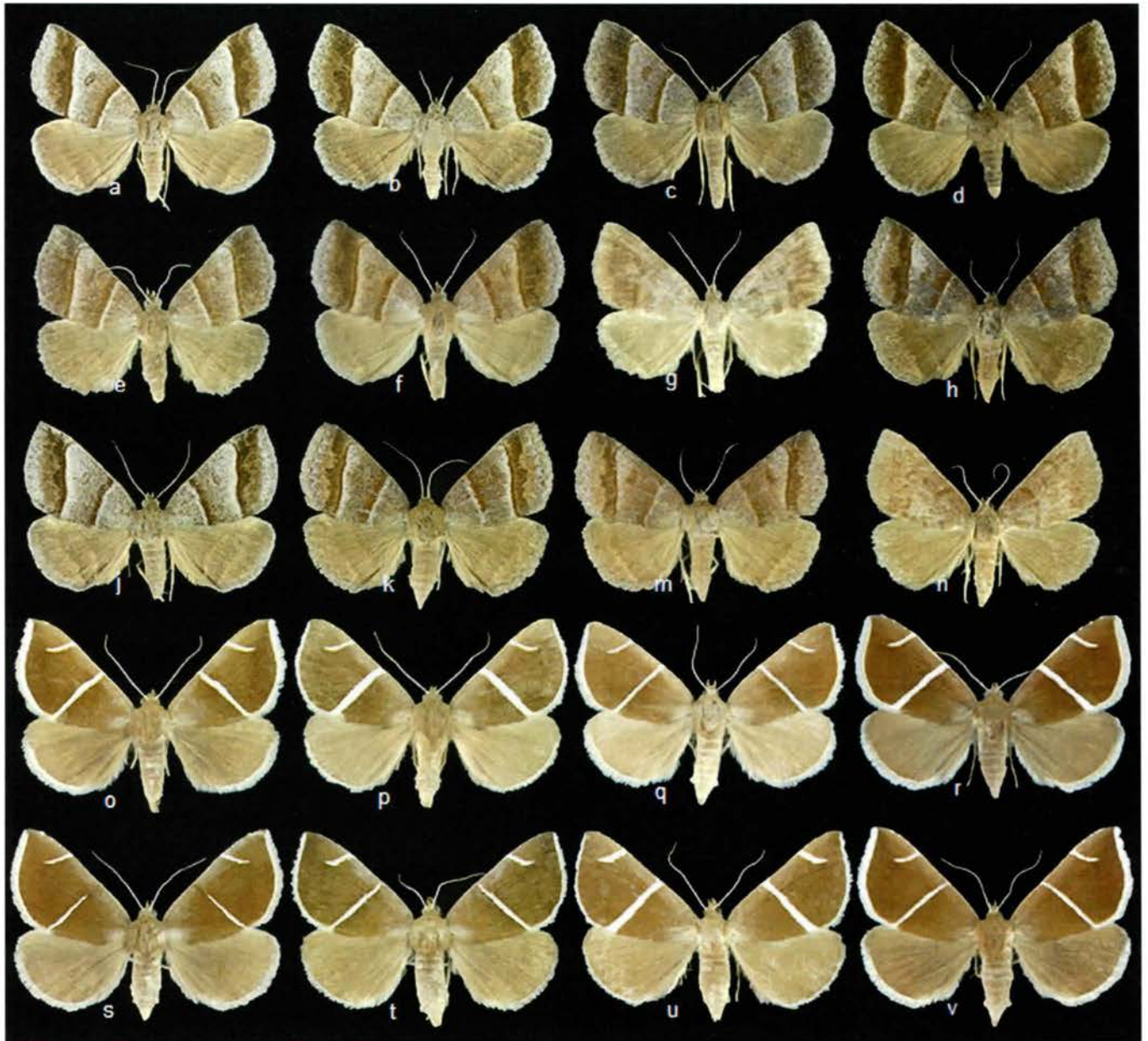


Fig. 2. *A. sylvarium* phenotypes: a-g. males, h-n. females,
A. anilis: o-q. males, r-v. females.

Franclemont & Todd, in Hodges *et. al.* (1983) listed ten species in the noctuid moth genus *Argyrostroma* Hübner for America north of Mexico. Sullivan and Lafontaine (2011) reviewed the type specimens for these ten species and via synonymy reduced that number to six species: *Argyrostroma flavistriaria* (Hübner, [1831]), *Argyrostroma sylvarium* (Guenée, 1852), *Argyrostroma erasa* (Guenée, 1852), *Argyrostroma deleta* (Guenée, 1852), *Argyrostroma quadrifilaris* (Hübner, [1831]), and *Argyrostroma anilis* (Drury, 1773).

Readers are referred to Sullivan and Lafontaine (2011) for the details of these nomenclature changes and the superb genitalia illustrations. Specifically, four species were synonymized under *Argyrostroma flavistriaria* (Hübner). Five of the currently recognized species of *Argyrostroma* have been captured in Louisiana and are discussed here.



Fig. 3. *A. erasa* phenotype variations: a-d. males, e-f. females, *A. deleta*: g-k. males, m-n. females.

Argyrostroma sylvarum (Guenée), Figs. 2a-k.

This variably marked species can be found commonly at the *Abita Study Site. Probably five annual broods, though only broods one (peaking late March) and two (peaking late May) are substantially populated, thus accounting for the majority of the annual population (Fig. 4).

Argyrostroma erasa (Guenée), Figs. 3a-f.

Based on a small sample size at the *Abita Study Site, one annual brood occurs peaking early April with evidence of several additional minor partial broods into September (Fig. 5).

Argyrostroma anilis (Drury, 1773), Figs. 2p-w.

This species is the most encountered of the genus across the state, but taken in low numbers at the *Abita Study Site. There appears to be four annual broods, the initial brood peaking end of March - early April (Fig. 6).

Argyrostroma flavistriaria (Hübner), Figs. 1a-z.

This variably marked species has been the cause of much confusion. A very common species at the *Abita Study Site occurring in four or more annual broods (Fig. 7).

Argyrostroma deleta (Guenée, 1852), Figs. 3g-n.

A very common species at the *Abita Study Site occurring in four or more annual broods (Fig. 8).

The parish locations of the five species of *Argyrostroma* occurring in Louisiana are illustrated in Figs. 9-13.

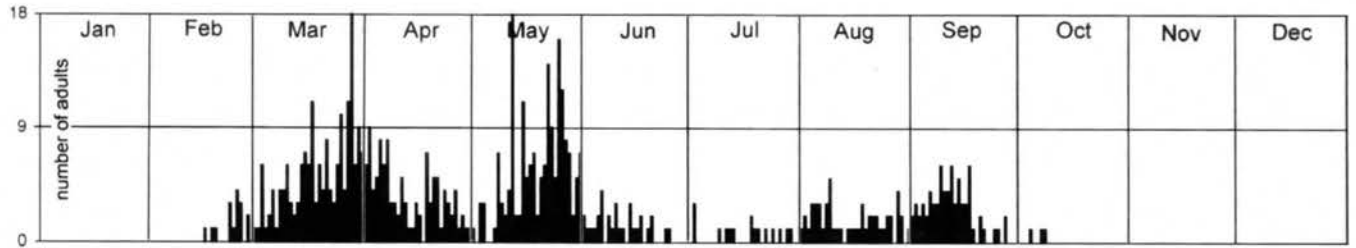


Fig. 4. Adult *A. sylvarum* captured at the *Abita Study site. n = 637

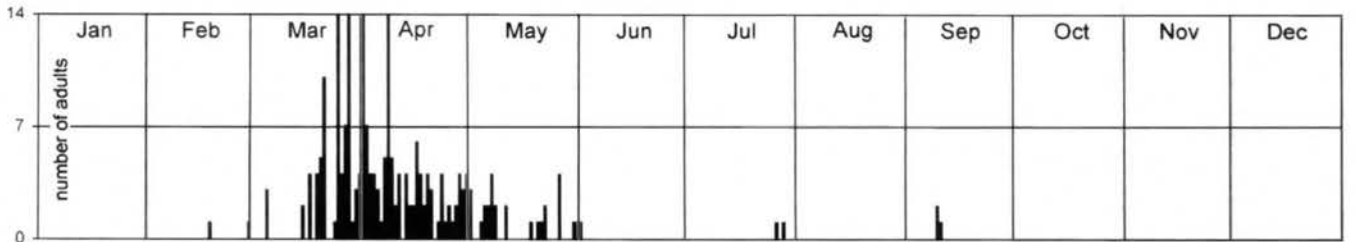


Fig. 5. Adult *A. erasa* captured at the *Abita Study site. n = 228

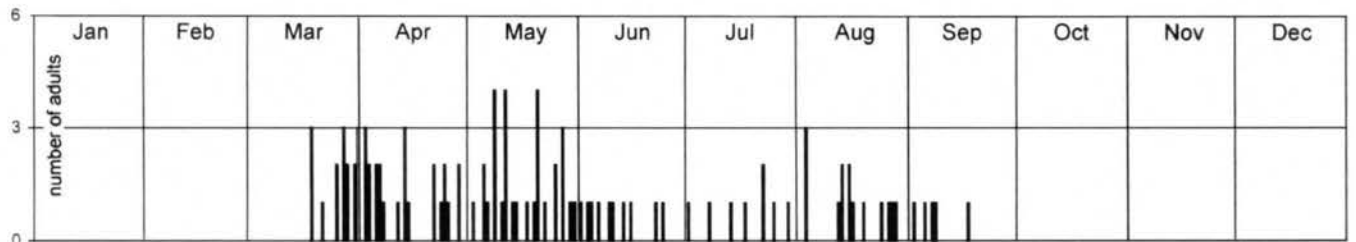


Fig. 6. Adult *A. anilis* captured at the *Abita Study site. n = 106

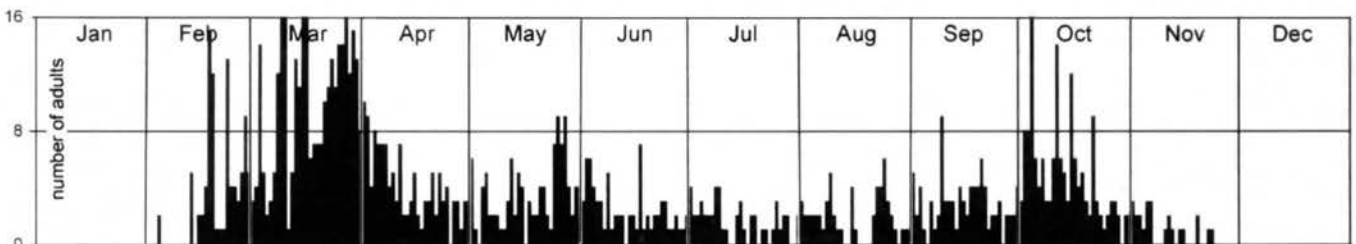


Fig. 7. Adult *A. flavistriaria* captured at the *Abita Study site. n = 1077

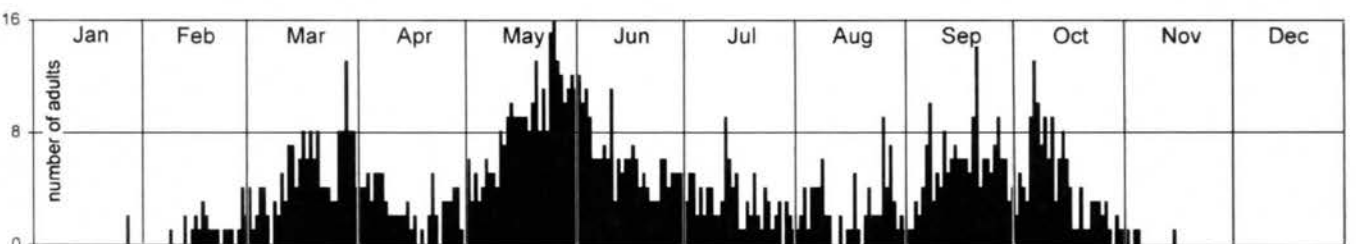


Fig. 8. Adult *A. deleta* captured at the *Abita Study site. n = 1188

*Abita Entomological Study Site: sec.24,T6,SR12E 4.2 miles NE of Abita Springs, St. Tammany Parish, Louisiana, USA



Fig. 9. Parish records for *A. sylvaram*.



Fig. 10. Parish records for *A. erasa*.



Fig. 11. Parish records for *A. anilis*.



Fig. 12. Parish records for *A. flavistriaria*.



Fig. 13. Parish records for *A. deleta*.

Literature Cited

Hodges, R.W., 1971. *The Moths of America North of Mexico*, fasc. 21, Sphingoidea. E.W. Classey Limited and R.B.D. Publications Inc. London.

Sullivan J.B. and J.D. Lafontaine, 2011. *New synonymies and combinations in Argyrostrotis Hübner (Lepidoptera, Erebidae, Erebininae, Poaphilini)*, In Schmidt B.C., Lafontaine J.D. (Eds) *Contributions in the systematics of New World macro-moths III*. ZooKeys 149: 107-116, doi: 10.3897/zookeys. 149.2347

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana 70420, USA;
E-mail: vabrou@bellsouth.net)



Close-up of a variety of pansy planted in autumn. Looks a bit like a butterfly!



Close-up of the interior of the blossom of a Japanese magnolia. Most blooms escaped the burn from spring freezes.

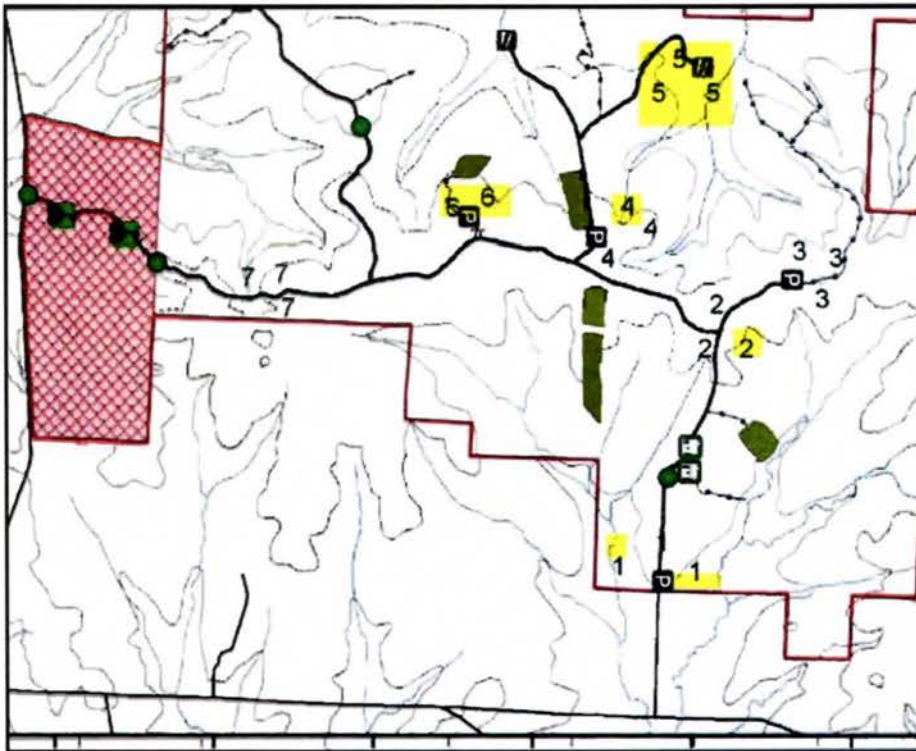
From the Garden of Gray Noel Ross in Baton Rouge, Louisiana (2012)

FROSTED ELFINS AT RICK EVANS / GRANDVIEW PRAIRIE WMA, ARKANSAS, USING AN APPARENT DIFFERENT HOST PLANT FROM THOSE IN LOUISIANA

BY
CRAIG W. MARKS

In 2008 I wrote an article (Marks, 2008) about *Dianas*, *Speyeria diana*, at Rick Evans/Grandview Prairie Wildlife Management Area (WMA). Rick Evans/Grandview Prairie WMA is located in rural Hempstead County in Southwest Arkansas off Highway 73 near Columbus, Arkansas. Rick Evans/Grandview is owned by the Arkansas Game and Fish Commission and operates as a Conservation Education Center and a Wild Life Management Area. The area is comprised of open prairie, woodlands, savanna, bottomland habitats and non-native grasslands. It represents the most significant example of blackland prairie (which is characterized by a special deep dark mixture of soil and calcareous deposits) existing for management and restoration in Arkansas.

Due to the variety of habitats, the plant community presents a wide range of species. At that time I noted the flowers present include wild indigo. I always enter the WMA from Highway 73 via the side entrance shown at the bottom of the drawing below. I start the count at the first parking area on that end. I've marked the first area canvassed with the number "1". I included the following comment, "With all of the wild indigo growing in this area, I would expect *Frosted Elfins*, *Callophrys irus*, to be present in the early spring.



The numbered areas are those areas that are typically walked during the NABA count each year. Those marked in yellow are where *Dianas* have been seen in the past. The area covered in red hash marks is where the main building and other facilities are located (to include some cabins, a shooting range and a small pond). This is actually the main entrance to the WMA. Where we start the count each year is what I refer to as the back or side entrance to the area.

than those found in the east. In particular, there is significant blurring of, even the virtual absence of a midline on the hindwing.

The reference material I used to write that 2009 article suggested the indigo plant used by *Callophrys irus hadra* was *Baptisia tinctoria*. As a result of research by Jeff Trahan, he and I had serious doubt that plant was present in Louisiana, and I ultimately wrote that the food plant being used there was a similar looking species of indigo, *Baptisia*

In 2009 I wrote an article summarizing my efforts to locate colonies of Frosted Elfins in Louisiana. Within that article (Marks, 2009), I noted that the Frosted Elfin, *Callophrys irus*, has a range that extends across much of the eastern U.S., from western Maine to Florida then west to central Wisconsin down to eastern Texas. Living in small, scattered colonies, this butterfly has a single flight period in the spring which starts progressively later as the latitude moves north, March to April in the south, May to June in the north. Its habitat is given as pine barrens or oak savannah, places where wild lupine (*Lupinus*) and wild indigo (*Baptisia*), its larval hostplants, grow.

There are three subspecies, each of which has regional distributions. *Callophrys irus hadra* confined to east Texas, west Arkansas and into northwestern Louisiana. Several authors suggest that *Callophrys irus hadra* should be recognized as a separate species. Raney notes this subspecies has less distinct markings

nutalliana. Both produce yellowish colored flowers and prefer dry, open woodland habitats.

In Arkansas, Spencer described *Callophrys irus hadra* as an uncommon butterfly found in the Coastal Plain and Ouachita Mountains of Arkansas, flying in March and April. While I had done several surveys at Evans/Grandview during the summer and fall over the last ten years, I had never been there during the spring so I made the trip on March 31 and April 1, 2012, to visit. Despite the lack of the wildflowers that are so abundant in May, I ended up with 31 species, including four species new to the total list of butterflies seen at this preserve. Three of those new species were an Eastern Pine Elfin, Falcate Orangetips and Bell's Roadside Skippers.

The fourth were numerous Frosted Elfins, common over the weekend I was present. I counted in excess of 20 on that Saturday, perched on or flying near the many wild indigo plants growing at the back of the preserve in area 1. Below are some pictures of some of those Frosted Elfins. The last (large) picture is of a particularly popular indigo plant that routinely had multiples of these butterflies on it. I actually witnessed three females ovipositing on this and other similar plants.



These indigo plants were growing in the open, along the treelines and actually within the open woods. Most of the plants were not yet blooming, but there were a few (out in the open and on higher ground) that had tall spikes of yellow flowers. Initially, I thought the species of indigo present there was *Baptisia nuttalliana* as it closely resembled the indigo I found Frosted Elfins using at Kisatchie National Forest and other locations in Louisiana. I've included a picture (next page) from that earlier article, showing the plant used in Louisiana.

This indigo subspecies, whatever it was, also grew in profusion in area 5 shown on the diagram, one of my favorite areas. It is



Kisatchie National Forest (Louisiana)

in this particular area that I have seen Dianas each year of the count. Unlike area 1, the indigo does not grow out in the open. Rather, it grows just along the tree line as it follows the road and then back into the open area under the trees (an area where I have found female Dianas, Northern Pearly-eyes and Zabulon Skippers). On Saturday, there was a male Frosted Elfin flying under those trees, perching on stalks of tall grass, similar to behavior I have seen at Indian Creek Recreation Area in Rapides Parish, Louisiana.

When I posted my results and pictures on the Arkansas listserv, I quickly received e-mails from several people (including Jeff Trahan and Bill Shepherd), suggesting the indigo reflected in the pictures from Evans/Grandview was not *Baptisia nuttalliana*. According to Jeff (by e-mail),

“the indigo that the Frosted Elfins use in northwest Louisiana have a single flower at leaf axils or at the end of a stem rather than a raceme as shown in the photos from Rick Evans/Grandview. So the species of indigo used by Frosted Elfins at Rick Evans/Grandview is different from the species used in northwest Louisiana.”

Bill Shepherd was also helpful in describing the distinctions between the two plants. He noted to me (also via e-mail) that *Baptisia sphaerocarpa* has, “bright yellow flowers borne on vertical spikes that arise from the top of the plant.” In contrast, “*Baptisia nuttalliana* has small wads of just a few flowers each scattered over the surface of a globular, bush-like plant, and the flowers are cream-colored.” He concluded the photos from Evans/Grandview definitely reflected *Baptisia sphaerocarpa*.

I wish to express my great appreciation to both Jeff and Bill for not only assisting me in identifying the subspecies of indigo growing at Rick Evans, but also for their patience in explaining how that subspecies differs from those found at Kisatchie.

REFERENCES

Marks, C.W., 2008. Dianas in Southwest Arkansas at Rick Evans/Grandview Prairie WMA, *Southern Lepidopterists' News* 30(4): 136-140.
Marks, C.W., 2009. My Search for the 'Frosted' Grail, *Southern Lepidopterists' News* 30(3): 93-7.

(Craig W. Marks, e-mail: cmarks@landcoast.com)

DEFINITIONS:

Varzea forest ⁽¹⁾ - a freshwater swamp forest, a flooded forest. Usually refers to seasonally flooded forests found in the Amazon.

Introgression ⁽²⁾ - the infiltration of genes from the gene pool of one species into that of another species accomplished by the repeated backcrossing of an interspecific hybrid with one of its parent species.

1) http://en.wikipedia.org/wiki/Freshwater_swamp_forest
2) <http://en.wikipedia.org/wiki/Introgression>

COYOTE CLOUDYWING (*ACHALARUS TOXEUS*) LIFE HISTORY

BY
BERRY NALL

One of the reasons I started raising caterpillars is that so many disappeared when I tried to observe them in their normal surroundings. In 2007 I watched a female Coyote Cloudywing deposit an egg on Blackbrush (*Acacia rigidula*). I was able to observe the growth of the caterpillar for a week, and then it was gone. In the intervening years I never again found eggs or a female ovipositing. So, in the spring of 2011, I decided to capture a female in the hopes she would give me a few eggs.

It is difficult to sex Cloudywings, but eventually I caught an older specimen that I hoped was female. Things did not go as planned; she died the day after I caught her. I decided to open up her body and, inside, were several eggs. I removed them and one (only) eventually eclosed. I consider this the worst way imaginable to get an egg, but at least she did not die totally in vain.

The caterpillar grew quickly for the first few days, and then things slowed down. By steps the head and body became progressively reddish, and then brown. At first the caterpillar stayed in a leaf shelter that it made by sewing two leaves together. It remained in that shelter long after the leaves had turned brown, and sewed the leaves back together whenever I opened them to take a picture. I was putting branches of the host plant in a plastic-wrap covered bottle to keep them fresh, so I just moved the leaf shelter whenever I replaced the branches. Eventually, the caterpillar moved down the branches and started nesting in the plastic wrap. This gave me the idea



Egg, 12-III-2011

Pre-emergent egg,
16-III-2011

New Caterpillar, 17-III-2011



Body becoming deeper green, 19-III-2011

New instar has brown head (it will darken a little),
20-III-2011Next instar has reddish-brown head and yellow stripes,
28-III-2011

Body has changed color, 4-IV-2011

Body attains mature color; neck band no longer red,
17-IV-2011

to put some leaf litter and bark chips in the bottom of the container; soon, the caterpillar was nesting among the bark chips. Since older caterpillars are too big to hide between Blackbrush leaves, perhaps they move off the plant when not feeding as a safety mechanism.



Mature caterpillar, 25-IV-2011



New chrysalis, 29-IV-2011



Chrysalis on 9-V-2011



Pre-emergent chrysalis, 12-V-2011

The caterpillar fed during the night, but I never discerned any distinct pattern. Sometimes I found it out of the nest late in the evening, and once early in the morning, but there was no consistency.

The egg, once removed from the female, took 5 days to eclose. The caterpillar took 43 days to pupate; the adult emerged 14 days later. Thus, it took a full two months for the Coyote Cloudywing to go from egg to adult.



Fresh adult female Coyote Cloudywing, dorsal, 13-V-2011



Fresh adult female Coyote Cloudywing, ventral, 13-V-2011

[The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Coyote Cloudywing. The original publication can be seen at http://leps.thenalls.net/content2.php?ref=Species/Eudaminae/toxeus/life/toxeus_life.htm Mr. Nalls website "Berry's Butterfly Photos" can be viewed at <http://leps.thenalls.net/> His contact E-mail is: lb@thenalls.net]

BUTTERFLY GRANDEUR

BY
SARAH RAYNER

In late February 2009, I planted a dozen milkweed plants (*Asclepias currasavica*) in my yard, and within weeks the Monarch butterflies began to appear in my gardens. The females sought out the milkweed plants, laying eggs on the undersides of the leaves. Over the years, I have expanded my gardens adding other hosts and nectar plants to attract the butterflies that are common to this area (I reside in Baton Rouge, Louisiana). I have learned how to collect the eggs and larvae from the host plants and care for the larvae as they mature and pupate, and then release the butterflies when they were ready to take flight. I have been fortunate to be able to share these experiences not only with family, friends and neighbors, but also with students in my Biology classes, and with people in the community as a Master Gardener. When asked about my raising of butterflies, I reply that being able to observe the complete metamorphosis of the butterfly is an incredible experience. With each butterfly that I release, I experience a feeling of spiritual renewal and hope.

The following are some of the photos that I have taken over the years. Included are a series of photos of the Monarch Butterfly (*Danaus plexippus*), Eastern Black Swallowtail (*Papilio polyxenes*), Gulf Fritillary (*Agraulis vanilla*), Spicebush Swallowtail (*Pterourus troulis*), Palamedes Swallowtail (*Pterourus palamedes* - not commonly found in Baton Rouge). The larvae were collected from a Redbay - *Persea borbonia*, located in a park about 10 minutes from my home. I collected leaves from the tree and raised and released the butterflies. It was interesting to compare the larvae and chrysalises of the Palamedes to that of the Spicebush Swallowtail, Question Mark (*Polygonia interrogationis*), Giant Swallowtail (*Heracles cressphontes*), and the Queen Butterfly (*Danaus gilippus* - not commonly found in Baton Rouge, this female strayed into one of my gardens on Thanksgiving Day in 2010).

About the author: My name is Sarah Rayner. I reside in Baton Rouge, Louisiana. I teach High School Biology and am a Louisiana Master Gardener.



Monarch caterpillar feeding on milkweed.



Monarch chrysalis.



Monarch chrysalises pinned to cork board.



Monarch butterfly emerging from its chrysalis.



Male Monarch nectaring on *Pentas*.



Male Monarch drying its wings.



Monarch nectaring on *Pentas*.



Spicebush Swallowtail larva feeding on camphor.



Spicebush Swallowtail larva on camphor.



Spicebush Swallowtail larvae feeding on camphor.



Spicebush Swallowtail chrysalises pinned on corkboard, June 24, 2012.



Spicebush Swallowtail butterfly nectaring on *Lantana*.



Palamedes Swallowtail larva feeding on Redbay.



Palamedes Swallowtail larva on Redbay. Note the similarities to that of the Spicebush Swallowtail larva.



Palamedes Swallowtail chrysalis.



Palamedes Swallowtail butterfly newly emerged.



Black Swallowtail larvae - note the difference in pigmentation. The photograph was taken in late May 2012. The eggs were all collected from the same plant on the same day.



Black Swallowtail chrysalises pinned to cork board.

Black Swallowtail chrysalises on container lid. The darker chrysalis is that of the more pigmented swallowtail larva.





Question Mark butterfly larvae feeding on Hackberry.



Question Mark butterfly chrysalis pinned to cork board.



Question Mark butterfly shortly after eclosing nectaring on *Salvia*.



Gulf fritillary caterpillar feeding on passionvine.



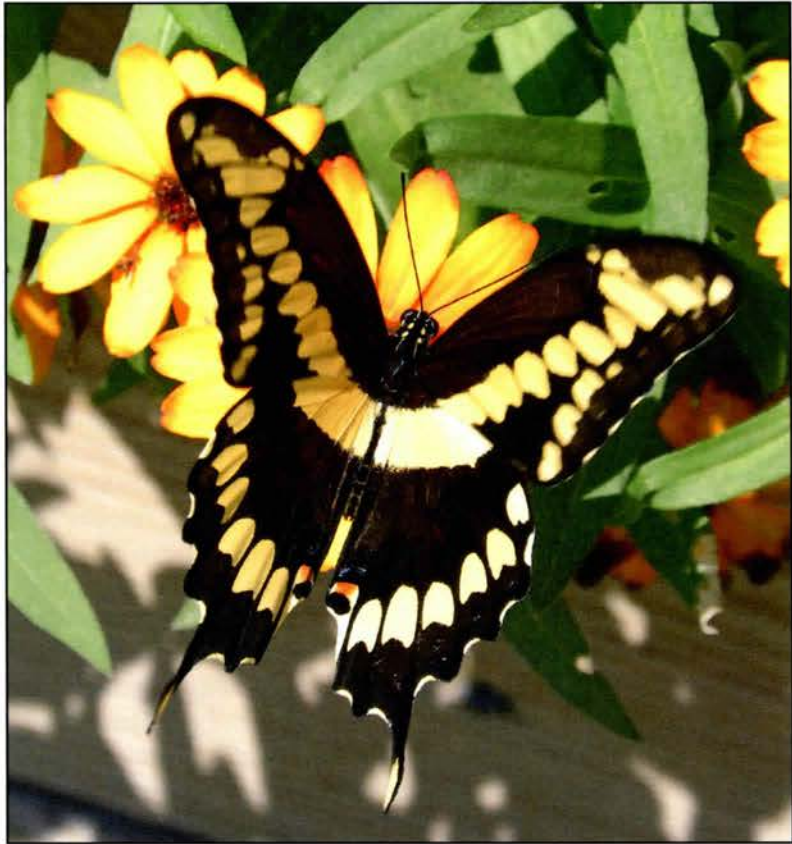
Gulf Fritillary butterfly nectaring on *Buddelia*.



Giant Swallowtail larvae on Meyer lemon.



Giant Swallowtail larvae day before they pupated.



Giant Swallowtail nectaring on Profusion Zinnias.



Queen butterfly - Thanksgiving 2010. Possibly a stray since Queen's are rarely seen in East Baton Rouge.

ACKNOWLEDGEMENTS

I would like to thank Dr. Gary Ross and Dr. Michael Israel for their wealth of information on butterflies.

(Sarah Rayner [sah13@hotmail.com])

DEFINITION:

Verdure⁽¹⁾ - the greenness of growing vegetation; a condition of freshness or healthy growth; flourishing green vegetation.

1) <http://www.thefreedictionary.com/verdure>

MARIA MARTIN - A BIOGRAPHY ^(1, 2)
BY
J. BARRY LOMBARDINI



Maria Martin Backman
 1796-1863 (Courtesy of
 the Charleston Museum,
 Charleston, South
 Carolina)

Maria Martin was born in July of 1796, in Charleston, South Carolina. Very little is known of Maria's early years as most records were destroyed during the Civil War. However, in 1831, some 35 years after her birth while caring for her ailing older sister she was fortunate to meet John James Audubon, a French-American ornithologist, naturalist and painter who is well known for producing the book "*The Birds of America*" which is considered one of the greatest treasures in the world of ornithology. This encounter changed Maria Martin's life forever.

Maria's sister, Harriet Martin, was married in 1816 to Reverend John Bachman who was a Lutheran clergyman and pastor of St. John's Lutheran Church in Charleston. John Bachman was also a noted naturalist of animal, bird and plant life. Harriet and John Bachman had 8 children and the spinster Maria initially became her sister's care giver when she became seriously ill along with being a tutor for the children. During this period, however, it became apparent that Maria's talents as an artist could and would make important contributions in illustrating John Bachman's writings.

The important event of 1831 was the chance meeting of John Bachman and John James Audubon who subsequently became a guest at the Bachman residence. Audubon also realized the artistic talents of Maria and encouraged her to assist him with his illustrations that he was publishing in his to be famous work *The Birds of America*. Maria contributed drawings of insects to approximately 50 pictures out of a total of 435 in Audubon's work.

Harriet Martin Backman died in 1846 and Maria Martin married John Backman two years later. Maria contributed her drawings for Audubon's works for 20 years (1831 - 1851) until he died in 1851. It is only in recent years that the talents of Maria Martin Backman have been understood as her paintings with Audubon were anonymous.

Maria Martin Backman died on December 18, 1863.



The above image of Maria Martin Backman and the 4 images of her butterfly/moth drawings have been reproduced in the SLS NEWS by Courtesy of the Charleston Museum, Charleston, South Carolina. The Editor and SLS members thank Ms. Jennifer Scheetz, Archivist, of the Charleston Museum (360 Meeting Street, Charleston, South Carolina 29403-6297) for allowing us to use these images. These images were retrieved from the Charleston County Public Library - South Carolina website (<http://www.ccpl.org/content.asp?id=15539&action=detail&catID=6013&parentID=5746>).

Sources

1. Charleston county Public Library-south, Carolina, website: <http://www.ccpl.org/content.asp?id=15539&action=detail&catID=6013&parentID=5746>
2. Maria Martin. http://en.wikipedia.org/wiki/Maria_Martin

SOUTHERN LEPIDOPTERISTS AT THE INTERNATIONAL LEPIDOPTERISTS' CONFERENCE IN DENVER, COLORADO

BY

DEBORAH L. MATTHEWS AND JACQUELINE Y. MILLER

The Lepidopterists' Society and the Societas Europaea Lepidopterologica held a combined annual meeting in Denver, July 23-29, 2012. Twenty-three members of the Southern Lepidopterists' Society (SLS) attended the meetings and field trips. Several SLS members gave presentations or posters including James Adams, Julieta Brambila, Richard



Fig. 1. West Atrium special events entrance at the Denver Museum of Nature and Science.

Brown, John Calhoun, Charlie Covell, Jim Hayden, J. D. Lafontaine, Debbie Matthews, Eric Metzler, Jackie Miller, Paul Opler, Bob Patterson, Cassandra Romero, and Andy Warren. The meetings were hosted by the Denver Museum of Nature and Science (Fig. 1) and the Lepidoptera collection was open for tours and research by attendees.

The week began with field trips on Monday and Tuesday, a satellite symposium on Tortricidae on Monday and executive council/ committee meetings, as well as an evening reception on Tuesday. Field trips to multiple locations included activities for watchers and collectors, along with night collecting. Loveland Pass (Figs. 2 and 3) and Berthoud Pass were popular localities for organized trips nearby and several groups ventured out on their own to different areas for moth collecting. Wildflowers were in abundance at higher elevations with *Colias meadii*, *Erebia*

episodesea, *Aglais milberti*, *Boloria freija*, and *Speyeria coronis*, among others actively flying around flowers near seeps and streams. The collections were also active all week with attendees, including several SLS members, sorting and identifying material from their various areas of expertise (Fig. 4).



Fig. 2. Loveland Pass, route 6, West of Denver, just south of the continental divide (elevation 11,900 ft.).



Fig. 3. Wildflowers at Loveland Pass.

Formal meeting sessions began on Wednesday morning with the student papers, including a presentation by student member Cassandra Romero (Fig. 5) on the piercing spines of hawk moth legs. The student papers were followed by a symposium on Lepidoptera-Plant Interactions along with other contributed papers. The Thursday and Friday sessions covered a variety of topics: a special session on Holarctic Lepidoptera and the Beringian connection by Don Lafontaine, symposia on Lepidoptera inventorying and monitoring, global change and Lepidoptera conservation, as well as a lively discussion on current developments in zoological nomenclature. SLS member James Adams gave us the very latest Lep updates from Georgia and Kansas and John Calhoun gave a captivating account on John Abbot's butterflies and science and commerce in early Georgia. In addition to night collecting trips there was an open house at the Butterfly Pavilion Wednesday evening and a public lecture by Bob Pyle on Thursday. The traditional barbeque was held on Friday night with plenty of good-humored camaraderie and energetic discussion around the tables.

Activities on Saturday included a morning paper session with the business meetings after lunch. The formal business meeting was preceded by a special hello from June and Floyd Preston in Kansas via a film clip sent to us by Betsy



Fig. 4. Charlie Covell sorting Geometridae at the Denver Museum of Nature and Science with Eric Metzler (left) and Curatorial Assistant, David Bettman (right) (Photo by Cassandra Romero).



Fig. 5. Cassandra Romero on night collecting trip and wearing the colorful 2012 conference t-shirt (Photo by Francesca Ponce).

Betros. The evening banquet (Fig. 6) was held at the museum with a new twist on the traditional door prizes in the form of a trivia contest led by Charlie Covell and several assistants. Each table participated and received prizes for correctly answering a variety of questions.

A compelling address was given by Lepidopterists' Society president Andy Warren using *Colias* and other examples to emphasize the importance of collections, the need for series of specimens, and collecting while we still have the opportunity to legally pursue the science in the U.S. Gerhard Tarmann, president of Societas Europaea Lepidopterologica (SEL),

followed with an account of how SEL is working to survey several designated collecting areas and overcoming obstacles resulting from the change of attitudes on collecting in Europe.

Jackie Miller gave an overview of the upcoming 62nd Annual Meeting of the Lepidopterists' Society to be held in Gainesville, 27-30 June 2013. The evening concluded with student paper and poster awards as well as the honoring of Killian Roever with the 2012 John Adams Comstock Award.

A total of 70 papers and posters were presented at the Conference. The program and Abstracts for the meeting are available online: at www.dmns.org/media/1076163/lepiproceedingsweb.pdf



Fig. 6. Left to right: Brian Scholtens, James Adams, and Ranger Steve Mueller at the banquet.

(Deborah L. Matthews and Jacqueline Y. Miller, McGuire Center for Lepidoptera and Biodiversity)

A HEARTY WELCOME TO OUR NEWEST SLS MEMBERS

Sarah Rayner
4536 Blecker St.
Baton Rouge, LA 70809

Rose Payne
2991 Montpelier Station Road
Muscella, GA 31066

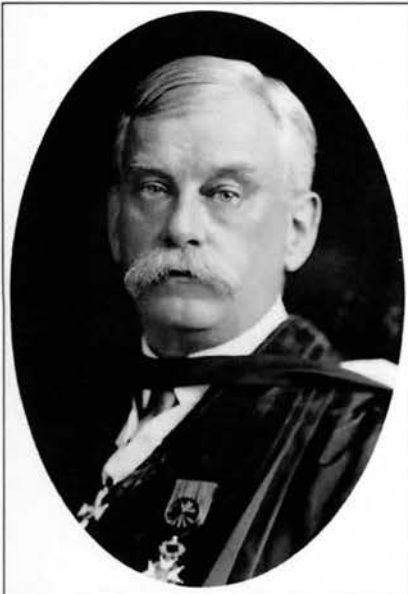
Steven Bransky
427 West Trail North
Grayslake, IL 60030

Bill Dempwolf
4403 Cumbria Lane
Austin, TX 78727

WILLIAM JACOB HOLLAND - A BIOGRAPHY ^(1,2)

BY

J. BARRY LOMBARDINI



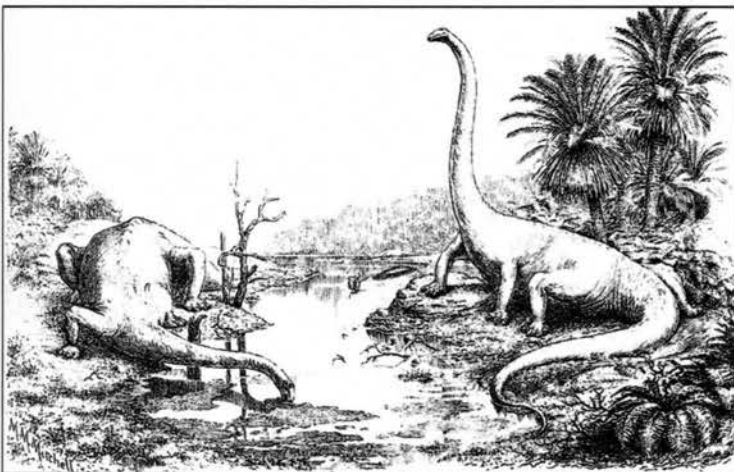
William Jacob Holland
(1848 - 1932) ⁽³⁾

William Jacob Holland was born on August 16, 1848, in Jamaica, in the West Indies. His father was a minister and obviously instilled a strong religious belief in his son as he matriculated at Moravian College and Theological Seminary which had its origins in early Protestant theology in the 15th century when John Hus, a Bohemian Protestant, was martyred in 1415. ⁽⁶⁾ Holland was awarded a bachelor of arts degree from Amherst College in 1869 and from there went to Princeton Theological Seminary earning a degree in 1874. Upon graduation from Princeton Theological Seminary he followed in his father's footsteps by becoming a minister and assumed the role of pastor of the Bellefield Presbyterian Church in Pittsburgh, Pennsylvania.

Holland was interested not only in religion but also in ancient languages which he taught at the Pennsylvania College for Women. As an individual with many talents he also had a keen, active interest in the natural sciences which led him to serve in 1887 as a naturalist for the United States Eclipse Expedition which took him on an exploratory field trip to Japan at the request of the National Academy of Sciences and the U.S. Navy.

Maintaining his interest in the natural sciences he taught anatomy and zoology at the University of Pittsburgh where in 1891 he became the Chancellor remaining in this academic administrative position for the next 10 years.

Holland's good friend Andrew Carnegie, the Scottish-American industrialist who built the Carnegie Steel Company which eventually became U.S. Steel ⁽⁷⁾, lured him away from the Chancellorship in 1901 to become the director of the Carnegie Museum where he remained as chief administrative officer until 1922.



Drawing by Oliver P. Hay of his version of what *Diplodocus* would have looked like (1910) ⁽⁴⁾

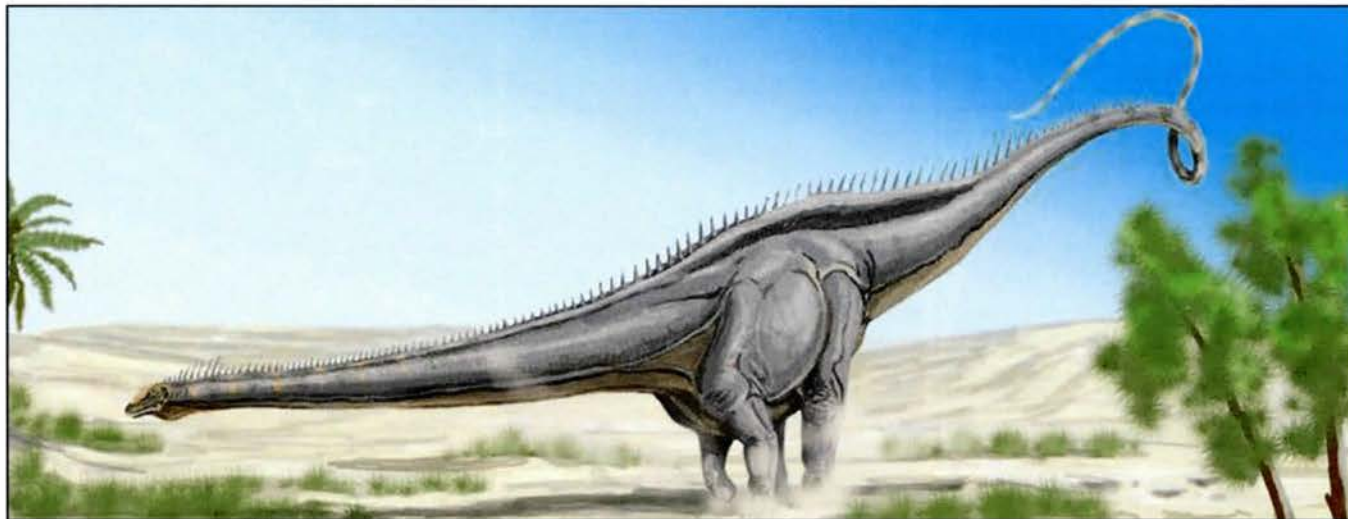
As director of the Carnegie Museum, Holland was instrumental in supervising the formation and assembling of casts of the sauropod dinosaur *Diplodocus* which Carnegie then donated to various natural history museums in Europe as part of his many philanthropic endeavors. Two skeletons of *Diplodocus* species were found in Sheep Creek Wyoming, in 1899 and 1900, and were named *Diplodocus carnegii* after Andrew Carnegie who had funded the scientific expeditions. ⁽⁸⁾

In 1912, Holland sailed to Argentina with a replica of *Diplodocus* which was a gift from Carnegie to the Argentinian people from a request by the President of the Argentine Republic, Dr. Roque Saenz Pena. Holland wrote a book entitled "*To the River Plate and Back*" in which he described his

travels in Argentina, the known (at that time) theorized facts about *Diplodocus*, and the arrangements to set up the replica of *Diplodocus* in a designated museum.

As Director of the Carnegie Museum he was in contact with the paleontologists who were attempting to describe the physical structure and walking properties of *Diplodocus* from the skeletons that had been discovered. In this regard "Oliver Hay, in 1908, suggested that the legs of *Diplodocus* must have splayed out like those of a crocodile." ⁽⁹⁾ Holland disagreed with Hay's conclusions and "scathingly attacked" ⁽⁹⁾ Hay's theories. Holland in his many studies "...demonstrated that a sprawling *Diplodocus* would have needed a trench to pull its belly through. Finds of sauropod footprints in the 1930's eventually put Hay's theory to rest." ⁽¹⁰⁾ Holland was obviously a better

theoretician in determining the walking status of prehistoric dinosaurs. The following figure of a reconstructed *Diplodocus hallorum* shows how modern day paleontologists consider this "beast" to look.



Diplodocus hallorum ⁽⁵⁾

The administrative talents of Holland in the casting of the *Diplodocus* skeletons and his travels described in his book earned him an international reputation in paleontology for which he was awarded the French legion d'honneur and the German's knight's cross.

Holland's interests in lepidoptera culminated in two books that have lasted the test of time. In 1898 he published *The Butterfly Book* and in 1903 *The Moth Book*. [These two books still have an honored place in my library although as expected a bit out of date.]

Holland amassed an enormous collection of lepidoptera by purchasing collections from other collectors and also supporting other collectors. The total number of specimens in his private collection was estimated at over 250,000 which he donated to the Carnegie Museum.

While Holland had considerable administrative expertise it had been reported these talents did not extend to getting along with colleagues. Supposedly he was very status conscious and consequently demonstrated a patronizing attitude toward his subordinates while to his superiors he expressed obsequious flattery.

William Jacob Holland died on December 13, 1932, thus ending an illustrative career in diverse areas that included: teacher, scientist, zoologist paleontologist, entomologist, Presbyterian minister, pastor, university administrator, museum director, and author. He was also a involved in a number of national and international societies such as the Entomological Society of France, the Zoological and Entomological Societies of London (Fellow), and the Entomological Society of Western Pennsylvania (President).

Sources Cited

- 1) http://en.wikipedia.org/wiki/William_Jacob_Holland
- 2) http://www.enotes.com/topic/William_Jacob_Holland
- 3) W. J. Holland (image in public domain). <http://en.wikipedia.org/wiki/File:HollandPitt.jpg>
- 4) Drawing by *Diplodocus* (image in public domain). http://en.wikipedia.org/wiki/File:Diplodocus_by_Hav_1910.jpg
- 5) Figure of *D. hallorum* (modern version)(This work has been released into the public domain by its author, ДИБГД at the wikipedia project). <http://en.wikipedia.org/wiki/File:SeismosaurusDB.jpg>
- 6) <http://www.moravian.edu/default.aspx?pageid=37>
- 7) http://wn.wikipedia.org/wiki/Andrew_Carnegie
- 8) <http://www.dinohunters.com/History/Diplodocus.htm>
- 9) <http://www.dinohunters.com/History/Diplodocus.htm>
- 10) <http://en.wikipedia.org/wiki/Diplodocus>

**PANOPODA RUFIMARGO HÜBNER (LEPIDOPTERA: EREBIDAE)
IN LOUISIANA**

BY
VERNON ANTOINE BROU JR.



Fig. 1. *Panopoda rufimargo* phenotype variations: males (a-h) and females (j-r).

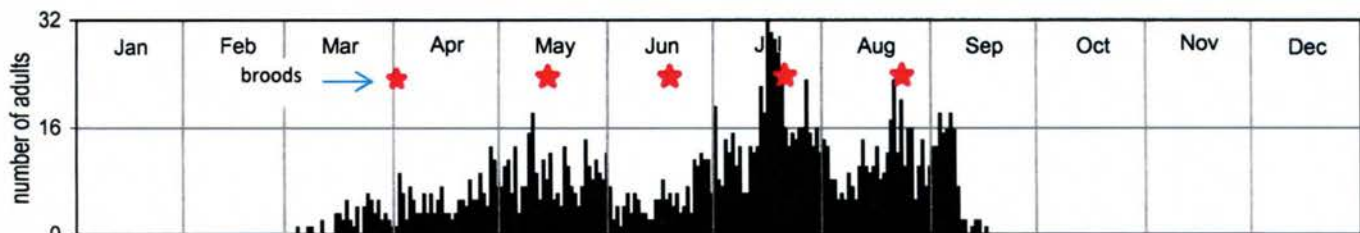


Fig. 2. Adult *Panopoda rufimargo* captured in Louisiana. n = 1620

The highly variable in appearance medium-size moth *Panopoda rufimargo* Hübner (Fig. 1) occurs quite commonly within the state of Louisiana. The antemedial line of the forewings appears as a distinct dark or reddish line bordered proximally with a line of yellowish scales. The postmedial line of the forewings appears as a distinct dark or reddish line bordered distally with a line of yellowish scales. The median line more often occurs as a wider broad line of dark scales which may extend onto the hindwing, or on some individuals may be absent or barely distinguishable. The ground color of some specimens may appear nearly as dark as that on some specimens of *Panopoda carneicosta* Guenée. Within Louisiana, adults of *rufimargo* have been captured continuously from mid-March through mid-September and it appears to have five annual broods, the initial brood peaking end of March, broods two through five at approximate 34-day intervals mid-May, mid June, late July and late August, as noted by red markers in the composite multi-year phenogram (Fig. 2).

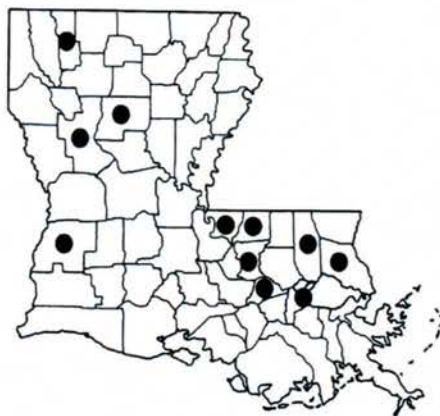


Fig. 3. Parish records by this author.

Records for *rufimargo* in Louisiana are from across the state (Fig. 3). Chapin and Callahan (1967) previously listed *rufimargo* for the area around Baton Rouge, Louisiana, from May to August.

Covell (1984) pictured *rufimargo* and listed its range from Maine and Quebec to Florida, west to Minnesota and Texas, and occurring May to September. In Florida, Heppner (2003) stated *rufimargo* flies February to November. Rockburne and Lafontaine (1976) listed Canadian records for southern Ontario to Lac Mondor, Quebec, in July.

Literature Cited

Chapin, J.B. and P.S. Callahan, 1967. A list of the Noctuidae (Lepidoptera, Insecta) collected in the vicinity of Baton Rouge, Louisiana. *Proc. La. Acad. Sci.* 30: 39-48.

Covell, Jr., C.V., 1984. *A Field Guide to Moths of Eastern North America*. The Peterson Field Guide Series No. 30. Houghton Mifflin Co., Boston. xv + 496pp., 64 plates.

Heppner, J.B., 2003. *Arthropods of Florida and neighboring land areas*, vol. 17: Lepidoptera of Florida, Div. Plant Industry, Fla. Dept. Agr. & Consum. Serv., Gainesville. x + 670 pp., 55 plates.

Rockburne, E.W. and J.D. Lafontaine, 1976. *The cutworm moths of Ontario and Quebec*. Can. Dept. Agr. Pub. 1593.

LYCAENIDS AT WORK?

BY

MIKE RICKARD



Strymon yojoa ovipositing on Turks' Cap, Bentsen-Rio Grande Valley SP, Hidalgo Co., TX (April 3, 2012).



Strymon istapa ovipositing on *Sida* species, Santa Ana NWR, Hidalgo Co., TX (April 25, 2012).



Strymon melinus ovipositing on *Rumex* species, National Butterfly Center, Hidalgo Co., TX (April 9, 2012).



Zizula cyna ovipositing on *Ruellia* species, Bentsen-Rio Grande Valley SP, Hidalgo CO., TX (January 12, 2009).

**2012 JOHN ABBOT AWARD RECIPIENT
BARRY LOMBARDINI**

Dear Members of the Southern Lepidopterists' Society:

I am honored that I have been voted by the members of the Southern Lepidopterists' Society to receive the 2012 John Abbot Award for contributions primarily involved with the editorship of the Southern Lepidopterists' NEWS but also with my studies of the butterflies and moths of West Texas. I have been the editor of the SLS NEWS since 2001 and while it has been an enormous amount of work at times, I have always enjoyed these duties in my desire to put forth a newsletter that is a credit to our Society. I wish to thank all those members who have contributed articles, notes, photographs, and other items of interest which make up the NEWS. I encourage all to consider sending me an article, a short note, or almost anything connected to or with lepidoptera. Please remember that the newsletter is as good as the members want it to be. So please submit material to me for your colleagues to read and view and perhaps even render a comment or two.

A brief biography for those who do not know me. I was born in San Francisco, California, in July of 1941 which makes me 71 years old. My primary grades and high school education were in San Francisco, on to College in the East Bay (Saint Mary's College of California), and then back to San Francisco for my Ph.D. in Biochemistry at the University of California San Francisco. I got married in 1968 in San Francisco and then moved within two weeks to Baltimore, bought my first car, a Mustang, and started my first real job - all were very good choices. I was a Post-Doctoral Fellow at The Johns Hopkins University School of Medicine in Baltimore Maryland, from 1968 to 1973 in the Pharmacology Department. Education finally complete I took a faculty position at Texas Tech University Health Sciences Center in Lubbock, Texas, in February of 1973. Currently I am Professor in the Pharmacology and Neuroscience Department. My current duties are teaching Sophomore Medical Students and Graduate Students the

Pharmacology of chemotherapeutic agents. My research interests are on the Biochemistry/Pharmacology of sulfur amino acids.

My interests in collecting butterflies started when I was a child playing in the hills of San Francisco which in the 1950ties had few houses and lots of vegetation. Unfortunately, I never came across the Xerces Blue (*Glaucopsyche xerces*) which became extinct in either 1941 or 1943 a bit too early for me. From my reading I was in the right place but the wrong time. My parents house was located in the Sunset District of San Francisco which had many vacant areas of coastal sand dunes, the prime habitat of the Xerces Blue.

My aunt and uncle had a summer home on the Russian River (~70 miles north of San Francisco) where I and my family spent many enjoyable weekends during the



My office in the Department of Pharmacology and Neuroscience in the Texas Tech University Health Sciences Center, Lubbock, Texas. And yes, I do know where everything is! (Photograph by James Hutson)

summer months. I did a lot of fishing in the early mornings at sunrise and evenings before dusk. But during the day when it was hot and when the fish were not biting it was butterfly collecting time. Perhaps the "nicest" butterfly in my collection at that time was the California dogface (*Zerene eurydice*) — I remember 3 specimens. This butterfly became the official State Insect of California on July 28, 1972, and appeared on a US postal 13 cent stamp. California was the first State to designate a State Insect. Unfortunately, my early collection did not stand the test of time and

when I looked at it many years later it was totally consumed by dermestids. A hard lesson to be learned for when in the future I was to become really serious about collecting butterflies which was in 1969 in Baltimore.

I was a protégé of Robert Bryant who, while approximately the same age as I, was infinitely more knowledgeable of both the butterflies and moths. He had spent many years collecting in the Baltimore area and not only knew where certain species were to be found, both butterflies and moths, but he was a pretty good botanist and knew the food plants of the various lepidoptera which, I now well realize, is a tremendous advantage when looking for specific species. Many enjoyable discussions were had when looking over his very extensive collection of butterflies and moths of the Baltimore and surrounding areas.

And then I arrived in February of 1973 in Lubbock, Texas, which had a very different environment. West Texas is considered, and is, semi-arid with an average annual precipitation of 18.7 inches. It is hot (highest recorded temperature was 114 degrees in June of 1994), and fortunately very dry (no humidity), during the summer. I have had the pleasure of collecting butterflies in 108 degree heat. The winters can be quite cold (each year usually a few days in the single digits although there is a record of 17 degrees below zero) with a few days of snow — perhaps 2-6 inches each snowfall. However, about 15 years ago we had 17 inches of snow in 24 hours which shut down the City for 2 days. Still, even though sparse in vegetation and extremes in temperature, Lubbock has about 100 species of butterflies and many times that amount of moths. I have collected extensively in this area.

So for the last almost 40 years my wife, Leila, and I have resided in Lubbock. We raised 2 children, Andrea and Richard. Andrea is married and has 3 children. Richard is still single. While still working at the Medical School I do have time to go butterfly collecting and placing light traps out at night for moths.

One of the many interesting specimens that I have collected in the West Texas area is in the process of being described by Chuck Harp and Mike Pogue as a new species in the genus *Schinia*. The description and naming should appear in their soon to be published *Moths of North America* fascicle on Heliiothines. It is my understanding that 2 other specimens similar to mine have been collected in Oklahoma and Kansas.

Enough about me. Please consider writing an article, preferably with some photographs, on your many travels in the pursuit of butterflies and moths. I always need material as Editor of the Southern Lepidopterists' NEWS. Again I thank the members for being honored with the distinguished 2012 John Abbot Award.



Flower bud of purple opium poppy (April 1, 2012).



Close-up of blue columbine (March 15, 2012).

From the Garden of Gary Noel Ross in Baton Rouge, Louisiana.

**DIARY OF AN OBSESSIVE BUTTERFLIER – PART ONE
PIECES OF APRIL (AS WELL AS MARCH AND MAY)**

**BY
CRAIG W. MARKS**

Over the winter I read Robert Pyle's book about his "Big Year," and I started to wonder how many different species I might see over the course of one season. With the counts I do, my travel for work and my nomadic lifestyle as a soccer parent, I decided I would keep track. My emphasis was intended to be on butterflies that might be seen within the region covered by the Southern Lepidoptera Society

Fortunately, this past winter in south Louisiana was short and mild with unseasonably warm weather during the last two weeks of February. So, on March 4th, I ventured out into the field for the first time with my destination as Kisatchie National Forest in Natchitoches Parish. Upon arrival, it appeared that region had received sufficient rain over the winter to generate a lot of greenery, and there were many butterflies flying. I ended up seeing 21 species from 10:00 to 3:30, mostly at spots along the Scenic Byway.



**Frosted Elfin, female
(March 4, 2012)**



**Sleepy Duskywing (with deformed
forewing) (March 4, 2012)**

The swallowtails were out in numbers with numerous Spicebush, Palamedes, Pipevine and Zebra (obviously, the smaller, paler early season form) Swallowtails flying. Also seen were Eastern Tigers and Giants. There were Orange Sulphurs, Falcate Orangetips (5 males, 2 females, all in the back near Kisatchie Bayou), Red-banded Hairstreaks, Frosted Elfins (the wild indigo was already up to a height of about 10"), an Eastern Tailed Blue, Common Buckeyes, Red Admirals, an American

Lady, an Eastern Comma (the winter form, but fresh), Goatweed Leafwings, Gemmed Satyrs (large for so early in the season), Sleepy, Horace's and Juvenal's Duskywings (they were seen everywhere I went), and a Lacewing Roadside Skipper (early).

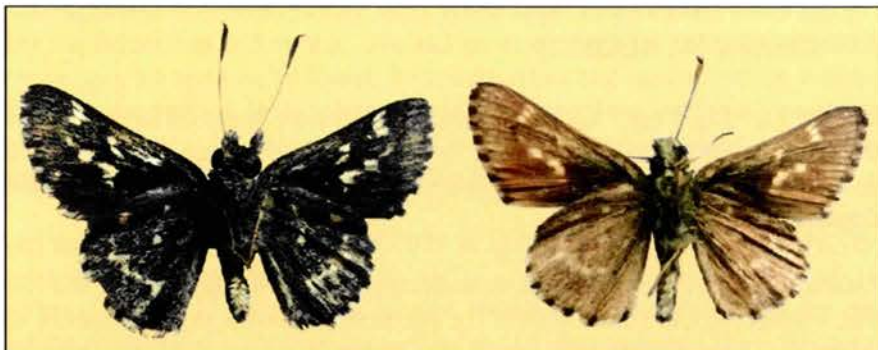
It was really nice to be back out in the field. Temps were in the mid-70's with a soft breeze. I checked three known areas with stands of Yucca plants for Yucca Giant-Skippers but saw no adults, nor any "tents". Two separate fields along FR 345 were filled with hundreds of tiny Buckeyes. The biggest were about the size of Falcate Orangetips, the smaller ones were the size of female Pearl Crescents. The Pipevine Swallowtails were also unusually small, even for this early in the season. I wonder if that was the result of last year's extreme drought in that region.

On March 10, despite gray skies and a forecast of afternoon rain, I decided to drive up to Sisily Island Hills Wildlife Management Area, primarily to look for Yucca Giant-skipper "tents", indicating the presence of pupae preparing to molt. This was to be my first visit to this remote location. It turned out that the weather stayed dry with some sun and temps rising into the mid to high 60's. While I found no tents (nor any Yucca Giant-skippers adults on the wing), I was able to total 17 species. Virtually all were on the gravel roads within the Wildlife Management Area or along the side of those roads, taking nectar from blooming wild garlic.

There were redbud and pear trees blooming but no elfins. I was surprised by the landscape, heavily wooded loess hills with deep ravines, similar to what can be found at Clark Creek Nature Area near Pond, Mississippi. There was a great deal of cane growing, both in the ravines and along the road. The forest was a combination of deciduous and coniferous trees. I found no real open areas or even pine flats, and the butterfly population on this day reflected this "deep forest" habitat.

Of the 17 species seen, four had not been seen the week before. The four new species included five, possibly six, Mourning Cloaks. This was easily the most Mourning Cloaks I had seen in one day in Louisiana. All were ragged, coursing up and down the roads, engaged in aerial dogfights with the Red Admirals. Also, flying were winter form Question Marks. Pepper and Salt Roadside Skippers were extremely abundant, both on the road basking and taking

nectar from wild garlic. I found that some were not the typical gunmetal gray with frosting, but were more of a tannish color. I don't believe this was a result of fading as all examples with this coloring appeared fresh. Finally, I had one Southern Pearl-eye, my earliest date on record.



Pepper and Salt Roadside Skippers (March 10, 2012)

On the following weekend, with my daughter scheduled for soccer games late Saturday afternoon, the 17th, and mid-day Sunday, the 18th, my opportunities to get into the field were limited. I got up early Saturday morning and drove to Castor Plunge Road in Kisatchie National Forest, Rapides Parish, Louisiana, arriving at 10:00 with the weather heavily overcast and windy but warm. At about 1:00, it began to clear, but I was running out of time. I ultimately left at 2:00 for the

drive back for her game (won 1-0 to secure an upper bracket seed in the State tourney).

I spent most of my time walking an old power-line cut, hoping to find Cobweb Skippers, but spent the last hour down in the lower sections along that road. First reported from Louisiana by Strickland, he found Cobweb Skippers on March 24, 1969, in St. Helena Parish. He described the habitat as long-leaf pine-scrub hills. Kil Roever reported finding this skipper on March 25, 1970, in the Kisatchie Unit of Kisatchie National Forest, Natchitoches Parish. Kil told me this skipper flies in the same area as Dusted Skippers, about two to three weeks earlier, so I was hopeful I might find some at this location as it had produced Dusted Skippers the last two years in early April.

I saw a total of 30 species as Louisiana's excellent early season continued. The swallowtails were out in large numbers (I saw all 7 regularly seen within the state). There were also several Duskywings on the wing, and the Little Wood Satyrs were out by the 100's. For the third weekend in a row, Palamedes Swallowtails were the most common swallowtail. The Frosted Elfins were still flying, but apparently at the end of their season.

I added eleven more species to my running total, most to be expected by mid-March. Last year when I visited this location during March, the lower areas were filled with Falcates, but this year the area's "dance-floor" was filled with Little Wood Satyrs, bobbing and swirling everywhere. I've never seen so many at one time. There were 2 Eastern Pine Elfins, both very fresh. I also found one Southern Dogface, a rosa-form male, another early date for typically a late season migrant in Louisiana.

To my surprise, there were many Dusted Skippers flying. I saw probably twice as many as I counted, but they were on the wing and I was never able to make the diagnosis. They ranged from heavily marked and laommi-like, to marked very little or hianna-like. As noted, I had hoped to find Cobweb Skippers but with the Dusted Skippers already flying I must assume I was again too late for the Cobweb's spring flight. The other seven "newbies" were Black Swallowtails, Cloudless Sulphurs, Sleepy Oranges, Pearl Crescents, Carolina Satyrs, Northern Cloudywings and Clouded Skippers.



Dusted Skipper (March 17, 2012)



Eastern Pine Elfin
(March 17, 2012)

My daughter's soccer schedule took me to Gulf Port, Mississippi, the next weekend, March 24th and 25th. Although her team played well, they didn't break bracket, and I had time to burn. I did add two new species just setting at the soccer fields, Fiery Skippers (in large numbers) and a Viceroy. With west Florida only a couple of hours away I took off for Blackwater River State Forest. Specifically, I headed to the Juniper Creek Bridge on Red Rock Road in Santa Rosa Co. The weather was clear, in the low 80's with a slight cool

breeze. It was a good day for butterflies.

Last year I visited this location on March 29th and had only eight species (including five Brown Elfins). Clearly, this year's season is more advanced. For example, the mountain laurel was all in full bloom with some actually beginning to lose their blooms. Last year, most were just beginning to bud.

This year, I had 20 species. The most numerous were Palamedes Swallowtails which were abundant (I stopped counting at 30). I was there looking to see more Brown Elfins and to hopefully see my second (and more) Hessel's Hairstreak. I accomplished both tasks. The Brownies had moved. Last year they were up high in the open pine flats along the tops of the red clay cliffs, flying along the edges of two ravines filled with their larval food-plant. This year they were down low, along Juniper Creek, flying around the edge and actually within the understory of Junipers and other trees by that stream. Those seen were well worn.

The Hessel Hairstreak was a case of right place at right time. While walking a trail into the red cliffs, in open pine woods about 25 yards from the stream (as well as any Junipers), I saw a small brownish hairstreak fly by so I followed. It turned out to be the only Hessel I saw all day. They are so small it is easy to see why they are so rarely seen.

Other new species for the year were one Spring Azure, a Silver-spotted Skipper, several Southern Cloudyings, Tropical Checkered-skippers, two Whirlabouts, a Swarthy Skipper and one Dusky Roadside Skipper, for a total of nine more species added to my running total. I must express my thanks to Mary Ann Friedman for directing me to this wonderful location.



Dusky Roadside Skipper
(March 26, 2012)



Brown Elfin (March 26, 2012)

With a lull in the soccer schedule, I headed off for the Rick Evan/Grandview Prairie Wildlife Management Area in Hempstead, Arkansas, on March 31st. I've done numerous counts there but none earlier than the third week of May. I had always wanted to visit this location in early spring and this was my chance. Despite the lack of the wildflowers that would be so abundant in May, I ended up with 31 species for the weekend. Much of the preserve (primarily on the north side of the main road from the office complex to the two lakes) had recently

been subject to a prescribed burn, so my search was limited to the rear of the preserve.

Unlike the Kisatchie region, sulphurs, not swallowtails, predominated, with numerous Cloudless and Orange Sulphurs, Southern Dogfaces and Sleepy Oranges seen. There were also multiple Monarchs present (new for the year's running total), and I stopped counting at 20. I found several species that I had not seen before, including a healthy colony of Frosted Elfins. I counted in excess of 20, perched on or flying near the many wild indigo plants (*Banksia sphaerocarpa*, I believe) growing at the back of the preserve. The other elfin seen and new to my list for this location was a single Eastern Pine Elfin. I also saw three Falcate Orangetips, not unexpected but still the first time seen there. Finally, I saw 15 Bell's Roadside Skippers in an area of moist woods near a small stream. Not only were the Bell's a new species for the year, they were a "lifer" species for me, my first of 2012. Other new species for the year were a Gray Hairstreak, a Silvery Checkerspot and a Northern Broken-dash. I had an azure fly by but I was unable to discern which species it might have been.



Bell's Roadside Skipper
(March 31, 2012)



Harvester (April 14, 2012)

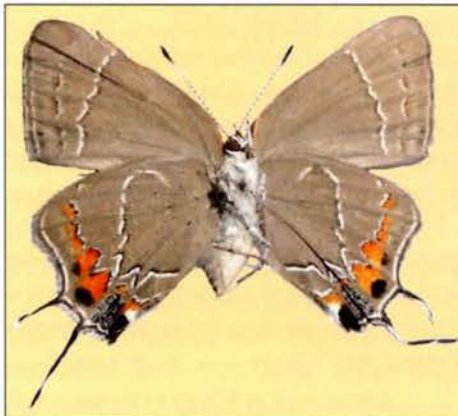
Thus ended March with a total of 52 species over four states. I was surprised to have seen four roadside skippers and three elfins (I have not seen a Henry's in two years), but disappointed to again not see any Yucca Giant-skippers or Cobweb Skippers. On the average, everything was flying about 10-14 days earlier than to be expected. With good rain during the month, April promised

more butterflies.

I missed the first weekend of April while skiing in Colorado (when did skiing with my 12 year old daughter change from, "Wait for me, Daddy," to "Come on, Dad, I'm waiting on you"?). I was able to return in time to get up to Kisatchie National Forest in Natchitoches Parish on April 14th, to participate in the annual NABA Count held in that unit. The weather was warm (high 70's) but with a steady cloud cover and windy conditions, the morning was slow. Despite those conditions, as the day warmed, the numbers increased. Along with Jean Trahan, Rosemary Seidler, Vickie Lefever and Jeff Trahan, we saw a total of 42 species (the most over the six year history of that count) and 458 individuals.

Highlights included 15 Southern Pearly-eyes which continue to make a strong showing this spring. I personally saw 32 species, and added eight new species to my running total. Most were butterflies to be expected as the season progressed, like Little Yellows, American Snouts, Variegated Fritillaries, Red-spotted Purples, Hoary Edges, and a Little Glassywing. I also had one spring specialty, a female Crossline Skipper. Others in the group saw a couple of males. Finally, I saw a Harvester, a bug that shows up occasionally, but is never predictable.

The last two weeks of April are typically the beginning of what I call "hairstreak season," primarily associated with the timeframe when ligustrum and Chinese privet in the region begins to bloom. With that in mind, I visited Avery Island in Iberia Parish late on the afternoon of April 19, 2012. Although several of the old ligustrum bushes present along the bayou have been removed and others cut back, there were enough blooming to bring in the Southern Oak Hairstreaks, new to my running total. I saw 12 in about 20 minutes, all as docile as could be while taking nectar at the ligustrum blooms. I also saw a large, fresh Mourning Cloak.



Southern Oak Hairstreak
(April 19, 2012)



Banded Hairstreak (April 28, 2012)

Still looking for hairstreaks, I made my first trip of the year to Thistlethwaite Wildlife Management Area in Louisiana on Sunday, April 22nd. The day before, a wet cold front moved through, bringing rain until noon with temperatures below 60 degrees most of the day, along with wind gusts to 33mph. Sunday was clear but cool in the morning. By noon, the temps had exceeded 70 (with a high of 83 at 4:00), but it remained very windy. Thistlethwaite was very green and had water standing in multiple places. The Chinese privet was blooming along

with a lot of slender vervain and prunella. I saw only 22 species but the total number of butterflies was very high as there were literally hundreds of Question Marks and Snouts flying everywhere. There was no time between 12:00 and 4:00 that at least one of these two species was not in sight.

There were also good numbers of Buckeyes, Orange Sulphurs and Pearl Crescents flying (I stopped counting each of these at 20). Also, within the pipeline cut where I have historically found Dukes Skippers (new to my 2012 list), I counted 40 without really trying. I added seven additional new species to my composite list. Of that seven, there was one late spring seasonal specialty, a couple of Banded Hairstreaks found on the privet. The other six were common species expected to be found such as Phaon Crescents, Hackberry Emperors, Southern Skipperlings, one Southern Broken-dash, one Eufala Skipper and one Dun Skipper.

This was my first field trip without seeing an Eastern Tiger Swallowtail. I also did not see any Red Admirals which have been showing up around the south in big numbers this spring. The surprise of the day was four fresh Mourning Cloaks. This is the fourth year in the last five that this bug has been seen here, and the fourth time so far this season that I had found it. I give those facts as a segue to my next field trip, to Tickfaw State Park in Livingston Parish in Louisiana on April 24th. Although I only found 14 species flying, the highlight was eight (yes, I said eight) fresh Mourning Cloaks. Like Red Admirals, and American Ladies to a lesser extent, this spring has seen an unusually high number of Mourning Cloak sightings.



Mourning Cloak (April 22, 2012)



Creole Pearly-eye (April 24, 2012)

I went to Tickfaw with the intent of seeing Creole Pearly-eyes and Delaware Skippers. Further, I also had hopes of finding Reversed Roadside Skippers there. This trip yielded three sightings of the first, but none of the other two. Flying with the Creole Pearly-eyes were several Southern Pearly-eyes. I also found a Common Checkered-Skipper, a common bug but new to my 2012 list. Finally, I believe I may have seen a single Arogos Skipper on a privet bush. I could get neither pictures nor could I

net it, but its size, color and profile were a match. I did not count it as a confirmed sighting, and I will be returning to search further for that skipper.

On the last Saturday of April, the 28th, I did a survey of the Kisatchie National Forest unit in Grant Parish, Louisiana, in and around the Catahoula Butterfly Garden. I had not visited here at all during 2011 and was interested in seeing how the garden and the general area had fared through last year's drought. While the garden had many different kinds of flowers in bloom, the flowers were significantly fewer and far between in the areas outside of the garden. Once I moved away from the garden, the region, although green, had few butterflies. I recorded a total of 28 species, and only three were exclusively outside of the garden.

The most common species was Pipevine Swallowtails, flying not only all over the garden, but also in the pine woods. There were several patches of butterfly weed in bloom along the road to Stewart Lake and four of the patches had a fresh Monarch patrolling around it. The highlight was a Mourning Cloak flying in and around the garden. That made four locations in a row where I had seen at least one. I added two species to my running total. The first was a single Dainty Sulphur flying inside the garden. Although seen every year in Louisiana, other than in Cameron Parish I can never really "expect" to see it elsewhere. The other was a female Tawny Emperor, also in the garden. While common in the southern portions of the state, this one is not regularly seen in the piney woods of Central Louisiana, and, in fact, was the first I had seen in Grant Parish.

At 2:30, I drove to Indian Creek Recreation Area in Rapides Parish, Louisiana. This was another location I had not visited in 2011, but for a different reason. In 2010, areas where I had found colonies of Georgia Satyr and Common Wood Nymph had undergone scheduled burns. I returned on the 28th to see how those colonies had fared. Alas, although completely grown back and very green, I found neither, however, I realized it might still be too early in the season for either to be flying.

I did walk (with much difficulty as the specific area has become extremely overgrown) into a low-lying area along a slough where in the past I had found large growths of sweetleaf and King's Hairstreaks. The sweetleaf bushes had grown extremely full and tall, but I suspected it would be two weeks before the Kings would appear. However, there were Banded Hairstreaks present, the males engaged in their aerial battles, flashing silver and blue in the patches of late afternoon sunlight (by then it was after 5:00). I stood and watched them as they chased each other or after a lone Red Admiral that seemed to have accidentally stumbled into their battle.

This area, which has in the past produced Bandeds, Kings and Delaware Skippers among others, is a special place, but other than that specific location, Indian Creek was devoid of butterflies. I only saw seven species with no new species toward my running total. The Red Admiral and Banded Hairstreaks brought the day's total to 30 species, and that trip brought April to a close with 73 species seen so far in 2012. There remain many more common species to be seen, mostly skippers, as spring heats into summer. Added to that will be the challenge of finding more rarities.

May started with a lot of butterflies on the wing. On May 5th, I oversaw the 12th annual Indian Bayou Wildlife Management Area NABA Count. Although I only saw 21 species (and no new species toward my running total for the year), there were high numbers of Pearl Crescents, Phaon Crescents, Snouts, Common Buckeyes, Question Marks and Carolina Satyrs flying. The Count totaled 31 species and over 1000 individual butterflies. We were disappointed to not see more species but the number of individual species was the highest (by far) in the history of the Count.

On May 12, I returned to Indian Creek Recreation Area in Rapides Parish to see if the Kings Hairstreaks, Georgia Satyrs and/or Common Wood Nymphs were flying yet. It had rained heavily the day before as well as during the early morning before I arrived, and the skies were grayish with more rain threatening throughout most of the day. Unlike my prior trip at the end of April, the recent rains had generated a plethora of butterflies. The second brood of Little Wood Satyrs was flying and abundant, and both Pearl Crescents and Common Buckeyes were everywhere I went. I saw a total of 21 species, but none of the three I had hoped to find.

I visited the King's Hairstreak area twice. On my first visit I thought I had found one perched on a high sweetleaf branch, but after netting it I realized it was a Striped Hairstreak. I have only seen this hairstreak in two other parishes (always in the same immediate area as King's Hairstreaks) and not since 2008. So, while not entirely unexpected at this location, it was still a nice bug to catch, and one of those rarities that I had hoped to add to my total now and then. I am still optimistic that I will see some King's Hairstreaks. Other hairstreaks I need for my list are White M and Great Purple Hairstreaks. I see the former regularly in June. The later, like Striped Hairstreaks, can never be expected. I've probably already missed the spring brood and will have to wait until late September when they show up again at Thistlethwaite.



Striped Hairstreak (May 12, 2012)



Yehl Skipper (May 28, 2012)

I also found two Southern Pearly-eyes in a swampy area near the King's Hairstreak location. With some cane present in the area, I was not surprised to see them there but this was the first time to document its presence at Indian Creek, and this bug continues to make a strong showing for the year.

While in New York City for the graduation of my eldest daughter, Elyse, from Columbia University Grad School (Preservation Architecture - please excuse the "proud Dad" moment there), she and I traveled out to Ward Pound Ridge Reservation in Westchester County on May 17, 2012, for a full day of great butterflying. The skies were exceptionally blue with mild temps in the 70's and a nice, soft breeze. I ended up seeing 24 species with three "lifers" and two seen for only the second time. Red Admirals and American Ladies were exceptionally abundant at Ward Pound. Little Wood Satyrs were the only other butterfly with equally high numbers, but I should note that Pearl Crescents and Hobomok Skippers were not too far behind in total numbers. Although very common here in the South, I understand the Pipevine Swallowtail I saw there was an unusual sighting.

I added ten new species to my list for the year. Although seen in New York, all ten are found within the South. I decided to exclude a possible eleventh species, Common Ringlets, because I don't believe that butterfly can be found within the territory covered by the Southern Lepidopterists' Society. The ten new butterflies for the year were a Cabbage White, American Coppers, two Dreamy Duskywings, two Wild Indigo Duskywings, two Long Dashes (which just does get into Virginia), several Tawny-edged Skippers, Peck's Skippers, two Indian Skippers, three Zabulon Skippers (including two females) and numerous Hobomok Skippers. The Dreamy Duskywings, Indian Skippers and Hobomok Skippers were lifers.

This is the second year in a row that I have visited Ward Pound, and I would highly recommend to anyone with plans to be in the New York City area and wants to do some butterflying that you take the train ride out to this location. From the corner of Broadway and 112th, we were able to use the subway and train systems to get there in less than two hours. It is an amazing place with multiple habitats that yield both diverse species and large numbers of individual butterflies.

I conducted my second NABA count for the year on May 26th at Thistlethwaite Wildlife Management Area. Personally, I saw 31 species. The group saw 37 species and 813 individual butterflies. The most common butterflies were Pearl and Phaon Crescents, Common Buckeyes, and Hackberry Emperors. Jeff Trahan and I saw 50 Duke's Skippers in the pipeline cut where they are regularly seen. Of the 30 species I saw, four were new to my year's list,

a Gulf Fritillary, a Queen, a female Sachem and a Yehl Skipper. After waiting until the end of May before seeing my first Gulf Fritillary, I saw another the next day in Lafayette, leading me to believe this species is flowing back into Louisiana from south Texas. Yehls turn up at Thistlethwaite yearly but not in large numbers. This one was in an area of thick cane. The Sachem was not only new to the Count but also the Wildlife Management Area, although not unexpected as I had seen several the previous October at a rest stop about nine miles north on I-49. I fully expect to see more during the fall in Cameron Parish.

The Queen seen at Thistlethwaite was also not unexpected. Two years ago there was a healthy colony of Queens breeding in the location where I saw it on May 26th. Last year's harsh winter and then subsequent summer drought seemed to have eliminated that colony, but now I wonder if possibly it survived. I will be continuing to monitor this Wildlife Management Area throughout the year and time will tell if I saw a single (and what appeared to be fresh male) vagrant or the colony is back.

The count ended at 3:45, and I immediately drove to Indian Creek Recreation Area, about 45 minutes north on I-49, arriving just before 5:00. I walked into the King Hairstreak area but again struck out despite having seen them in previous years by this time in late May. I was there about one hour and saw eleven species including a Summer Azure, another new bug for my list. In total, I saw 37 species this day.

My last May excursion was on May 28th, Memorial Day, to Tickfaw State Park. This trip was intended to look for Arogos Skippers. This skipper was first reported within this state in 1954 based on a single specimen caught in St. Tammany Parish on September 8, 1950. Gayle Strickland of Baton Rouge found it in a large colony within the same parish on August 12, 1970. The habitat was described as open pine flatland just north of Lake Pontchartrain. He noted that as many as four could be found feeding on a single flower. Via personal conversations with Strickland, he reported also seeing this skipper at Tickfaw State Park in Livingston Parish in August during the early 2000's. I had looked for it unsuccessfully last August, but the area was experiencing a drought. This visit was intended to investigate whether this skipper might be present as part of the first brood which flies in late May into June.

I had no luck, seeing no Arogos, only 15 species and few butterflies. Last September I had found a large colony of Yehl Skippers here, and I had seen one the previous week at Thistlethwaite, so I was not surprised to find two females on this visit. I also saw two male Creole Pearly-eyes along with several Southern Pearly-eyes, but no new species for my list. I ended May with 89 species.

With 89 species after three months, I thought a total of 150 species was possible over the remaining five to five and a half months of the season. I still had several trips to the Mississippi and Alabama Gulf Coast planned which I hoped would produce species that would be hard or impossible to find in Louisiana. So far I had not had any significant weather delays, nor had I gone any extended periods without adding to my year's list. Both of those stumbling blocks were about to present themselves in a big way as the summer progressed. Stay tuned, "same Bat-time, same Bat-channel," for part two, covering June through August, of this three part diary of my 2012 Butterfly Season.

(Craig W. Marks: cmarks@landcoast.com)

DEFINITIONS:

Adaxial⁽¹⁾ - upper side, on the side toward the axis or stem. Example: "the upper side of a leaf is known as the adaxial surface."

Abaxial⁽²⁾ - dorsal side, located away from or on the opposite side of the axis, facing away from the stem of a plant, lower surface of a leaf.

1) <http://www.thefreedictionary.com/adaxial>

2) <http://www.thefreedictionary.com/abaxial>

CRITICALLY LOW POPULATIONS OF THE SCHAUS' SWALLOWTAIL
(*HERACLIDES ARISTODEMUS PONCEANUS*, PAPILIONIDAE) AND
BARTRAM'S SCRUB - HAIRSTREAK (*STRYMON ACIS BARTRAMI*,
LYCAENIDAE) IN THE FLORIDA KEYS

BY
MARC C. MINNO

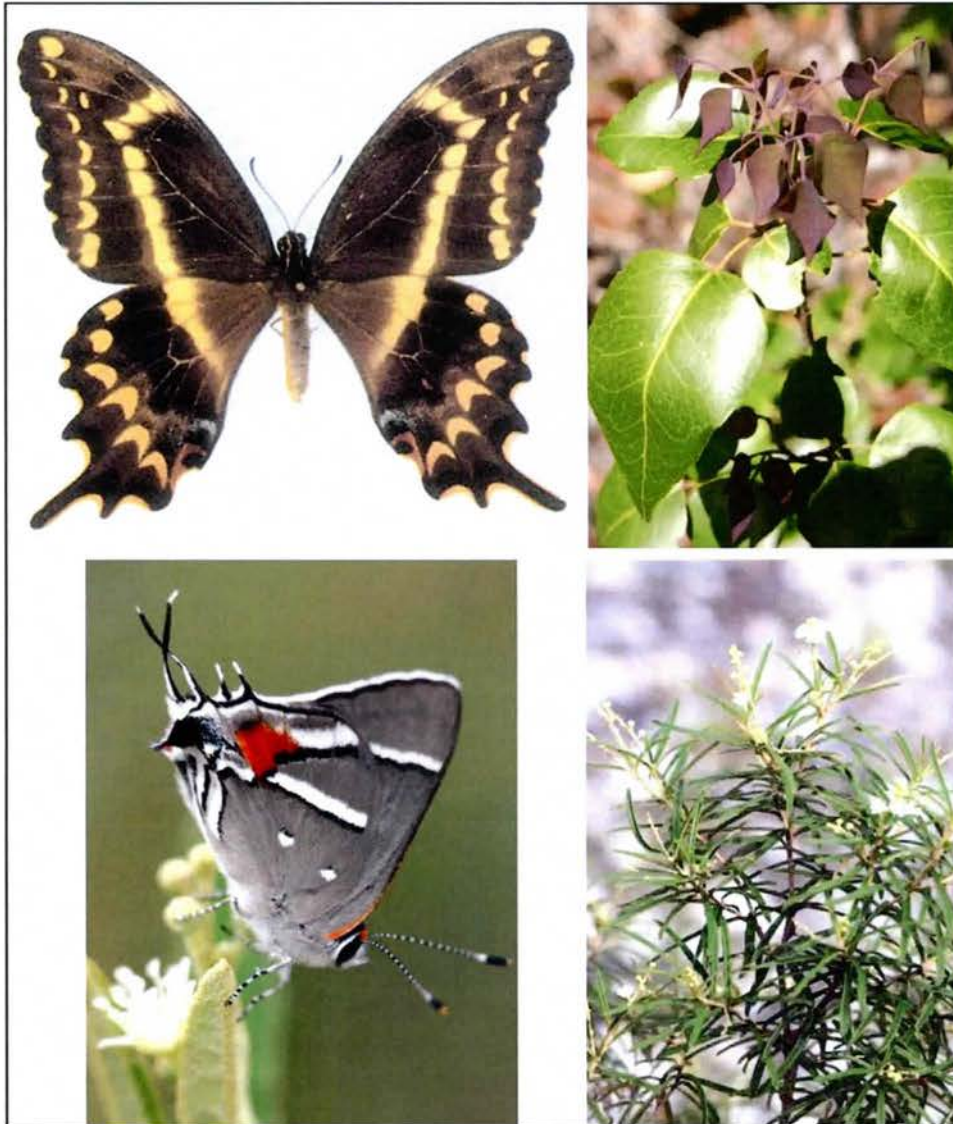


Fig. 1. Female *Heraclides aristodemus ponceanus* (upper left) and larval host plant *Amyris elemifera* (upper right). *Strymon acis bartrami* (lower left) and host plant *Croton linearis* (lower right).

The Federally endangered Schaus' Swallowtail butterfly (Fig. 1) is limited to West Indian hardwood hammocks having an abundance of the larval host plant, Torchwood (*Amyris elemifera*, Rutaceae), in the upper Florida Keys, from northern Key Largo to islands in Biscayne National Park. In the lower Florida Keys, Bartram's Scrub-Hairstreak is found only in pine rockland habitat on Big Pine Key near patches of its host plant, Pineland Croton (*Croton linearis*, Euphorbiaceae). This hairstreak is also found in a few pine rockland areas of Everglades National Park and southern Miami-Dade County on the mainland. Since the 1970s lepidopterists have been documenting the distribution and abundance of these butterflies in Florida (Minno and Emmel 1994). Although their populations have fluctuated greatly during this time, both species are now near their minimum viability limits in the Keys and these butterflies could disappear in the near future.

(April-June) (Table 1). Although other lepidopterists have seen Schaus' Swallowtails on northern Key Largo during this time period, I only observed this butterfly on Elliott Key and Adams Key in Biscayne National Park, Miami-Dade County. I found approximately 82 adults, mostly on Elliott Key, in more than 111 hours of searching (0.74 adults/hour). The highest numbers of adults were seen in 2007 (4.64/hr), 2008 (2.15/hr), and 2009 (4.20/hr). Lower numbers of Schaus' Swallowtails were seen in 2010 (0.09/hr), 2011 (0.46/hr), and 2012 (0.06/hr) despite many more hours of searching.

I found approximately 224 adults of Bartram's Scrub-Hairstreak (0.91/hr) on Big Pine Key, Monroe County, Florida, between August 2006 and July 2012 (Table 2). This butterfly was most abundant in 2007 (1.02/hr), 2008 (1.30/hr), and 2011 (0.96/hr), and less common in 2006 (0.52/hr), 2009 (0.68/hr), 2010 (0.63/hr), and 2012 (0.70/hr). The low number of adults in 2006 is likely due to impacts from Hurricane Wilma, which crossed over the southern tip of

Each year from 2007 to 2012 I searched for Schaus' Swallowtails in the upper Keys during the adult flight season

Florida (from southwest to northeast) on October 24, 2005. Although the center of the Hurricane Wilma passed north of the Keys, the storm caused extensive flooding and wind damage in the lower Keys (Kasper 2007). On Big Pine Key, storm surge of about 5 feet flooded large areas of the island with salt water and over the next few years, hundreds of mature pine trees died.

Table 1. Number of adult Schaus' Swallowtails (*Heraclides aristodemus ponceanus*) observed in the upper Florida Keys, Miami-Dade County, Florida.

YEAR	# ADULTS SEEN	# FIELD DAYS	FIELD HOURS	#/HOUR
2007	29	4	6.25	4.64
2008	12	1	5.58	2.15
2009	28	2	6.67	4.20
2010	2	8	22.17	0.09
2011	8	6	17.42	0.46
2012	3	14	53.00	0.06
TOTALS	82	35	111.08	

Since the 1990s, both the Schaus' Swallowtail and Bartram's Scrub-Hairstreak have disappeared from significant portions of their limited and highly fragmented ranges and are in such low abundance that extinction is likely in the near future unless major research and recovery programs are started. The Schaus' Swallowtail has an outdated Federal recovery plan that has hardly been implemented by the U.S. Fish & Wildlife Service. Bartram's Scrub-Hairstreak has been a candidate for Federal listing for years and has no recovery plan.

Table 2. Number of adult Bartram's Scrub-Hairstreaks (*Strymon acis bartrami*) observed on Big Pine Key, Monroe County, Florida.

YEAR	# ADULTS SEEN	# FIELD DAYS	FIELD HOURS	#/HOUR
2006	9	6	17.17	0.52
2007	57	12	55.92	1.02
2008	61	14	46.75	1.30
2009	17	9	25.08	0.68
2010	23	10	36.42	0.63
2011	42	11	43.92	0.96
2012	15	6	21.50	0.70
TOTALS	224	68	246.75	

The Schaus' Swallowtail and Bartram's Scrub-Hairstreak need regular monitoring to determine their status and distribution and research to identify why they are disappearing. Also needed are captive breeding programs to insure that these butterflies do not go extinct and to provide numbers of individuals for re-introduction into the wild. I am proposing that the U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission create partnerships with south Florida botanical gardens and zoos to begin rearing the butterflies in captivity. It will take years of fully-funded research and captive breeding efforts to prevent extinction of the Schaus' Swallowtail and Bartram's Scrub-Hairstreak. The U.S. Fish and Wildlife Service and Florida Fish and Wildlife Conservation Commission have sole legal authority over these species, and each month that goes by without any action the butterflies drift a little closer toward demise.

Literature

- Kasper, K., 2007. *Hurricane Wilma in the Florida Keys*. National Oceanic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Weather Forecast Office (WFO) Key West, Florida. Available at <http://www.srh.noaa.gov/media/key/Research/wilma.pdf>
- Minno, M. C. and T. C. Emmel, 1993. *Butterflies of the Florida Keys*. Scientific Publishers, Gainesville, Florida. 168 pp.

**TREASURER'S REPORT FOR 2012
(AS OF AUGUST 31, 2012)**

There are 161 paid members.

Beginning Bank Balance with SunTrust of Gainesville as of 1/1/2012: **\$4348.51**

Ending Balance as of 08/31/2012: **\$4372.31**

Deposits and Credits: **\$4574.00** Includes member dues and donations, collections from meetings and sales of old newsletters.

Withdrawals and Fees:

Bank Fees: \$4.00 Account Analysis Fee April 2012

Printing Newsletters: \$3103.32

Vol. 33 #4 \$1486.97

Vol. 34 #1 \$ 732.56

Vol. 34 #2 \$ 883.79

Postage for Newsletters: \$1442.88

Vol. 34 #1 \$ 847.59

Vol. 34 #2 \$ 595.29

Jeffrey R. Slotten
Research Associate McGuire Center
FSCA, SLS Treasurer 2012

REPORTS OF STATE COORDINATORS

Alabama: C. Howard Grisham, 573 Ohatchee Road, Huntsville, AL 35811, E-Mail: chgrisham@Comcast.net

Arkansas: Mack Shotts, 514 W. Main Street, Paragould, AR 72450, E-Mail: cshotts@grnco.net

Florida: Charles V. Covell Jr., 207 NE 9th Ave, Gainesville, FL 32601, E-Mail: covell@louisville.edu

Charlie sends in the following report from Florida:

Florida report for June – September, 2012

The big news is the return of the Zebra Longwood to North Florida, after almost no sightings since January 2009. Freezes on that date and following, and the winters after that, kept the Florida State Butterfly (since 1996) virtually absent from much of upper Florida. While the Gulf Fritillary had recovered each season nicely, *H. charithonia* took its time working its way northward again. The sightings of *Battus polydamas*, another tropical species, in Alachua Co. also reflect movement northward, back to its former northern limits after being “killed southward” by freezes in the winters previous to the milder winter of 2011-12. Rainfall in this area has been close to normal after several years of drought. Tropical Storm Debby dumped 13 inches in Gainesville over 3 days.

Reports on the annual survey for the endangered Schaus Swallowtail, *Papilio aristodemus ponceanus*, in Biscayne National Park and Key Largo turned up what I heard were only 5 sightings in several weeks of

concentrated searching by several workers. While this species is known to stay in the pupal stage for more than one full year, the outlook looks bleak for the survival of this Florida subspecies.

Butterfly records for the Gainesville, Alachua Co. area during the period include:

Epargyreus clarus – Sept. 11
Urbanus proteus – June 18, July 11, 14, 17, 21, Aug. 4, 6, 8, 30, Sept. 1, 8, 10, 11, 13
Urbanus dorantes – Aug. 1, 5, 24
Erynnis horatius – June 12, 15, July 11, 14, 15, 17, 21, Aug. 4, 5, 25, Sept. 5
Thorybes bathyllus – Aug. 1
Atalopedes campestris – June 16, Aug. 4
Hylephila phyleus – June 29, July 17, 21, Aug. 5, Sept. 14
Anatrytone delaware – Sept. 1
Euphyes vestris – Aug. 5, Sept. 13
Lerema accius – Sept. 12
Asbolus capucinus – Aug. 4
Panoquina ocola – July 11, 17, 21, Aug. 4, 5, Sept. 1, 12
Battus philenor – Aug. 4
Battus polydamas – Sept. 3, 10
Papilio glaucus – June 13, 16, Aug. 25, Sept. 16
Papilio troilus – Aug. 24, Sept. 5, 16
Papilio palamedes – Aug. 25, Sept. 1, 10, 14
Phoebis sennae – too many records to list; seen almost daily
Heraclides cresphontes – June 16, 18, 29, Aug. 1, 4, 6, 8, 25, 26, Sept. 1
Pontia protodice – June 10, July 4
Pyrisitia lisa – July 14, Aug. 25
Eurema दौरa – Sept. 16
Abaeis nicippe – June 16, 18, 29, July 4, 14, 21, Aug. 4, 5, 25, Sept. 15
Nathalis iole – June 14, July 21
Leptotes cassius – July 4
Hemiargus ceraunus – June 17
Libytheana carinenta – July 21, Aug. 25
Polygonia interrogationis – Sept. 5
Limenitis archippus – July 19, Aug. 4, 25, 26, Sept. 7, 13
Limenitis arthemis astyanax – July 21
Vanessa cardui – July 19, Sept. 14
Phyciodes phaon – Sept. 8
Junonia coenia – June 16, 18, Aug. 25
Euptoieta claudia – June 16, July 17, 21
Agraulis vanillae – almost daily; very common this summer
Heliconius charithonius – July 12, 19, 21, 25, Aug. 2, 4, 9, 25, 30, Sept. 3, 6, 8, 10, 14
Hermeuptychia sosybius – Aug. 25
Danaus plexippus – June 10, 22, 28, July 20, Aug. 4, 30
Danaus gilippus – Aug. 4, Sept. 1

Also in the Gainesville area, Eric Anderson recorded an *Anartia jatrophae* on Sept. 12. Kathy Malone reported a *H. charithonia* on Aug. 6 at High Springs, Alachua County.

In the Covell back yard survey for the year (Gainesville), the first sightings of species beginning June 1 were as follows (19th to 24th species recorded in our yard for 2012):

- | | |
|-----------------------------------|---|
| 19. <i>Urbanus proteus</i> | June 19, on lantana by the garage |
| 20. <i>Heliconius charithonia</i> | July 13, on lantana in our back yard |
| 21. <i>Battus polydamas</i> | Sept. 3, nectaring on Pentas in back yard |
| 22. <i>Phyciodes phaon</i> | Sept. 8, nectaring on lantana by garage |
| 23. <i>Papilio palamedes</i> | Sept. 10, in back yard |
| 24. <i>Eurema दौरa</i> | Sept. 17, flying in back yard |

Barbara Woodmansee recorded 51 species seen on Saturday Sept. 15 at Ecofina River State Park, Jefferson County near the village of Lamont. Two species of special note were *Poanes yehl* and *Cercyonis pegala*.

Georgia: James K. Adams, 346 Sunset Drive SE, Calhoun, GA 30701, E-Mail: jadams@daltonstate.edu (Please check out the GA leps website at: <http://www.daltonstate.edu/galeps/>).

James sends in the following report:

The contributors include James Adams (JKA or no notation) and Irving Finkelstein (ILF). Other contributors are spelled out with the appropriate records. Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, etc.), or more complete lists for new locations/new times of year. All known new **STATE** and **COUNTY** records are indicated, and all dates listed below are 2012 unless otherwise specified. Although there was not a lot of work done in Georgia this summer, there several new **STATE** records, several extremely uncommon records (few in **STATE**) and one **U.S. RECORD**.

Crest of Rocky Face Ridgeline, just SW of Dalton, Whitfield Co.:

Sept. 4-5:

EREBIDAE: *Virbia laeta*, *Grammia figurata*, *Anomis illita* (**COUNTY**). **NOCTUIDAE:** *Cirrhophanus triangulifer*, *Heliocheilus lupatus* (2), *Schinia lynx*, *S. arcigera*, *S. rivulosa*, *S. gracilentia* (3), *S. trifascia*, *S. mundina*, *Condica confederata*, *Callopietria cordata*, *Parapamea buffaloensis* (**COUNTY**, fourth location in state), *Dichagyris grotei*, *Noctua pronuba* (7, largest single night number to date in GA; I'm sure larger ones are coming). **GEOMETRIDAE:** *Stenoporpia polygrammaria* (**COUNTY**, second in **STATE**, but probably overlooked elsewhere). **CRAMBIDAE:** *Diaphania hyalinata*.

Sept. 10-11:

EREBIDAE: *Grammia parthenice intermedia*, *G. virgo*, *Selenisa sueroides* (uncommon fall migrant). **NOCTUIDAE:** *Meropleon diversicolor*, *Meropleon titan* (**COUNTY**, third record for GA), *Heliocheilus lupatus*, *Micrathetis triplex* (**STATE**), *Properigia near costa* (still only known location in **STATE**), *Dichagyris grotei* (downright common), *Feltia geniculata*. **GEOMETRIDAE:** *Digrammia continuata*, *Caripeta aretaria* (common, absent last week), *Euchlaena madusaria*. **CRAMBIDAE:** *Loxostege cereralis* (**COUNTY**, second location in **STATE**).

Carbondale, I-75 exit 326, Whitfield Co.:

SPHINGIDAE: *Enyo lugubris*, Sept. 13. **EREBIDAE:** *Hypena minualis*, Sept. 13. **GEOMETRIDAE:** *Euacidalia sericearia*, Aug. 26 (**STATE**, though expected and probably overlooked).

Calhoun, Gordon Co. (346 Sunset Drive SE; home of JKA), June 26, Patrick Adams (my son):

NYMPHALIDAE: *Speyeria diana* (**COUNTY**).

Cooper's Creek Recreational Area, Fannin Co., Fannin Co. (just west of Union Co. line), north of Hwy. 160:

June 14-15, with Paul Dennehy:

EREBIDAE: *Dyspyralis nigella*. **GEOMETRIDAE:** *Cepphis decoloraria* (2), *Sicya macularia* (**COUNTY**, second location in **STATE**, 50 mi. farther WSW than previously recorded). **LIMACODIDAE:** *Packardia elegans* (**COUNTY**, second location in **STATE**, 50 mi. farther WSW than previously recorded)

August 17-18, with Paul Dennehy and Patrick Adams:

GEOMETRIDAE: *Cepphis decoloraria*. **NOCTUIDAE:** *Papaipema rigida* (**STATE**).

Morganton, Fannin Co., at lights:

June 15, with Paul Dennehy:

EREBIDAE: *Dinnuma deponens* (**U.S. RECORD**).

August 11, with Patrick Adams:

EREBIDAE: *Ascalapha odorata* (**COUNTY**)

August 18, with Paul Dennehy and Patrick Adams:

NOCTUIDAE: *Basilodes pepita* (**COUNTY**), *Pyrrhia cilisca* (**COUNTY**).

Blue Ridge, Fannin Co.:

August 11, 2012, with Patrick Adams:

NOTODONTIDAE: *Hyparpax aurora*. **EREBIDAE:** *Catocala angusi*.

August 17, 2012, Paul Dennehy:

EREBIDAE: *Catocala angusi*.

Gates Chapel Rd., 8 mi. N.W. Ellijay, Gilmer Co., June 18 - 20, ILF:

NYMPHALIDAE: *Speyeria diana* (2 females; early date for females). **LASIOCAMPIDAE:** *Tolype notialis* (female, unusually large, nearly halfway between size of normal *notialis* and *T. vellea*). **EREBIDAE:** *Catocala andromedae*, *C. micronympha*, *C. sordid*. **NOCTUIDAE:** *Acronicta connecta* (first time at this location, COUNTY); *Panthea acronyctoides* (7). **GEOMETRIDAE:** *Selenia kentaria* (summer brood). **LIMACODIDAE:** *Parasa indetermina*. **SESSIIDAE:** *Synanthedon kathyae* (3 males, in pheromone trap), *Synanthedon sp.* (2 males).

Salacoa Road at Salacoa Creek (east side of road), 5 miles ESE of Fairmount, Bartow Co., Sept. 7-8:

EREBIDAE: *Virbia laeta*, *Grammia virgo*, *G. parthenice intermedia*. **NOCTUIDAE:** *Cirrhophanus triangulifer*, *Callopietria floridensis*, *Resapamea trigona* (LATE), *Papaipema polymniae*, *P. furcata*, *Leucania callidior*, *Dichagyris grotei*.

Evans, Columbia Co., June 19, Amy Mealing:

EREBIDAE: *Ascalapha odorata* (COUNTY).

Sapelo Island, McIntosh Co., May 10-11, John Hyatt and Lance Durden:

GELECHIIDAE: *Aroga compositella*. **TORTRICIDAE:** *Sparganothis sulfureana* (COUNTY). **CRAMBIDAE:** *Samea multiplicalis* (COUNTY), *Donacaula aquilella* (possible STATE). **GEOMETRIDAE:** *Idea retractaria* (STATE). **EREBIDAE:** *Catocala delilah* (STATE).

GA coast, Glynn County, Roy Brown, Sept. 4:

LYCAENIDAE: *Leptotes cassius* (2), *Hemiargus ceraunus* (many), *Brephidium pseudofea* (many). **NYMPHALIDAE:** *Heliconius charitonius*. **PIERIDAE:** *Eurema दौरa*, *Ascia monuste*. **HESPERIIDAE:** *Copaeodes minima*, *Panoquina panoquin*.

Americus, Sumter Co., Saunders Pinckard:

July 29:

NYMPHALIDAE: *Anthanassa texana* (COUNTY?).

August 5:

NYMPHALIDAE: *Satyrodes appalachia* (COUNTY).

Louisiana: Michael Lockwood, 215 Hialeah Avenue, Houma, LA 70363, E-Mail: mikelock34@hotmail.com

Mississippi: Rick Patterson, 400 Winona Rd., Vicksburg, MS 39180, E-Mail: rpatte42@aol.com

The following Mississippi records are reported by Ricky:

4 August 2012, Picayune, Pearl River county (county record, by Craig Marks), *Atrytone arogos arogos*.

12 August 2012, Grand Gulf, Claiborne County, *Manduca jasmineearum*.

24 August 2012, Picayune, Pearl River county, *Polites themistocles*, *Polites vibex*, *Nastra lherminier*, *Oligoria maculata*, *Pyrisitia lisa*, *Abais nicippe*, *Phoebis sennae eubule*, *Strymon melinus*, *Exyra semicrocrea*, *Papilio troilus*.

North Carolina: Steve Hall, North Carolina Natural Heritage Program, Div. of Parks & Recreation, 1615 MSC, Raleigh, NC 27699-1615, E-Mail: Stephen.Hall@ncmail.net

Steve sends in the following report:

The following selected butterfly records were submitted by Harry LeGrand. Place names refer to counties unless otherwise indicated, and records are not new county reports unless indicated. Records are all from June thru August 2012. This was an excellent season for species diversity and numbers, as luxuriant rainfall kept all parts

of the state from falling into drought status, which cannot be said for the past two summers. And, the fact that Florida and the coasts of Georgia and South Carolina were finally out of drought status meant that there was undoubtedly good reproduction and emigration of "southern" species into the state. Though certainly the large numbers of *Vanessa cardui* and *Pyrisitia lisa* this summer came to the state from the west or southwest, good numbers of *Urbanus proteus* and *Panoquina ocola*, plus the usual strong numbers of *Phoebus sennae*, likely entered the state from the south. The lush conditions also led to some remarkable high counts for some species. The flights of most species continued to be advanced by 7-14 days, though the relatively cool June temperatures "calibrated" flights more in line with previous years by late in the season.

SH = Stephen Hall; DJ = Doug Johnston; GL = Gail Lankford; HL = Harry LeGrand; CS = Curtis Smalling; GS = Gene Schepker.

PAPILIONIDAE:

Papilio cresphontes, in addition to the usual few coastal reports, one was seen in Ashe at New River State Park near US 221 on July 28 by Clyde Sorenson. There are a few local resident populations in the mountains, but it is quite rare in the state away from the coast.

PIERIDAE:

Pontia protodice, the only seasonal report outside of a known colony in Wake was one in Forsyth at a water treatment plant, on June 2 (GS). This species is in serious trouble in much of the East.

Pyrisitia lisa, this species became common over the Piedmont by midsummer and then moved into the Coastal Plain by August. It was already common in parts of the mountains in spring, a most unusual movement pattern (west to east) rather than the usual south to north.

Nathalis iole, this stray was previously known from just five counties in the state, but this season a remarkable colony was started (presumably by a single gravid female) in Forsyth (COUNTY). Three were first seen at the Archie Elledge water treatment plant on June 2; GS and others continued to monitor the colony, and by August 16, they counted about 100 individuals! The previous state high count was 6 individuals, in Mecklenburg in 2002.

LYCAENIDAE:

Feniseca tarquinius, this scarce species was found in at least seven counties during the season, including far to the east in Pitt; the species is quite rare in the Coastal Plain.

Satyrium caryaevorus, the rarest of the genus in the South, single individuals were photographed in Madison (COUNTY) on June 15 by DJ, GL, and party, and seen in Buncombe on June 27 by GL.

Satyrium liparops, GS observed one along the coast in Currituck (COUNTY) on June 4; the species is scarce across the state.

Callophrys gryneus, rarely found in the mountains, the species was seen in Madison (COUNTY) at several sites on June 15, June 18, and July 22 (DJ, GL, and others).

NYMPHALIDAE:

Agraulis vanillae, the species was found in increased numbers and locales in the state than in previous summers, and it was widespread in Wake, where normally quite rare.

Chlosyne nycteis, SH and HL extended the range slightly eastward into the Coastal Plain, finding one in western Bertie (COUNTY) on June 27.

Phycoides cocyta incognitus, HL and CS saw two worn individuals at a high elevation site in Watauga on June 19. Much is still to be learned about the range and abundance of this cryptic taxon in the southern states.

Euphydryas phaeton, CS and HL observed about 15 at a known high-elevation site in Watauga on June 19-20. This was the only report for the summer season, but it was found at a few other sites in the mountains in the spring season.

Polygonia faunus smythi, at the state's premier site, Taylor Piephoff saw 6 at Mount Mitchell State Park, Yancey, on August 5. Not too far away, along the Buncombe/Yancey line, another was photographed on August 16 by Dexter Yaddof.

Vanessa cardui, numbers increased gradually all season, from uncommon in June to often common by August, with several counts over 25 individuals. Interestingly, *Vanessa virginiensis* numbers trended just the opposite – from common in spring to surprisingly uncommon by August. Where were all of the adult *V. virginiensis*, given the large numbers of eggs laid by the females during the spring season? As the latter is a resident, is there any way that *V. cardui* could be responsible for depressing the numbers of adult *V. virginiensis*?

Lethe portlandia, HL and SH had a state record count of 120 individuals at Buzzard Point in eastern Halifax on August 22. Interestingly, only two *L. creola* were seen.

Lethe anthedon, SH and HL extended the range in the state slightly eastward, into western Bertie (COUNTY), finding one on June 6. As with *Chlosyne nycteis*, the only known Coastal Plain records in the state are along the Roanoke River floodplain.

Danaus gilippus, the only report for the season was from the "off-and-on" colony site at Fort Fisher in New Hanover, where an excellent 13 were counted on August 14 by Daniel Hueholt.

HESPERIIDAE:

Urbanus proteus, this immigrant species was widely reported from July onward, though nowhere in large numbers; this is a better flight than during the previous two years.

Autochton cellus, this rarity was seen once during the period – in Britten Cove in Buncombe on June 9, by GL. Though the species certainly has two broods, very few reports after early June have been made in the state in recent years. Is the second brood not a "full" one, somewhat like that of *Thorybes pylades*?

Staphylus hayhurstii, this local and often scarce species was found widely across the state, including a first record for Halifax (COUNTY), on August 22 (SH, HL). A few were found in Madison this season; the species is known from just two mountain counties.

Erynnis martialis, the only seasonal report for this rarity was found at a regular site in Madison, on June 18 (HL, GL, Ruth Young).

Copaeodes minima, this species is an uncertain resident outside the Coastal Plain. Thus, were two in Mecklenburg on August 12 (Taylor Piephoff) and one at a different site in this county on August 29 (Kevin Metcalf), from resident populations?

Hesperia sassacus, single individuals were photographed at two high-elevation sites in Watauga, on June 14 (GS) and June 19 (CS). Though not rare in the higher mountains, few observers are currently working the northern mountains.

Polites mystic, HL and CS found the species at a new high-elevation site in Watauga, observing four individuals on June 19-20. This is at the southern limit of the species' range.

Problema byssus, this species is clearly moving northward. Notable records were one seen by Jules Fraytet at Pee Dee National Wildlife Refuge in Anson (COUNTY) on June 9, and one seen by Richard Stickney at Howell Woods in Johnston (COUNTY) on August 13. Additional records near the northern edge of the range came from Hoke and Cumberland; it is locally common in southern coastal counties.

Poanes viator, this is another species expanding its range, though this time westward into the Piedmont, as one of its hostplants – *Zizaniopsis miliacea* – is also spreading inland. HL found a sizable colony of at least 10 individuals at a *Zizaniopsis* stand in Halifax (COUNTY) on June 7, and he found the species at another site in Halifax later in the season. Mike Turner discovered a colony along the Neuse River below Falls Lake Dam in Wake in June, and several observers had the species at two other known sites in Wake this summer.

Amblyscirtes vialis, an excellent state count was 10 in Madison on June 18 (GL, HL).

Oligoria maculata, a northwestern range extension by perhaps 30 miles was made by HL, who saw and photographed two adults in southern Bertie (COUNTY) on August 31.

Calpodus ethlius, adults are often difficult to find, at least away from the coast, and a remarkable record – the state's first for the western Piedmont – was one adult seen at Lake James State Park, McDowell (COUNTY) on August 24 by Jamie Cameron. Richard Stickney saw an adult in Durham on June 19, and he saw another near the Green Swamp in Brunswick on August 27. Salman Abdulali saw larvae in Pitt (COUNTY) during the season, though he has yet to see an adult in that county.

The following selected moth records were submitted by Merrill Lynch, most from his farm in Watauga County:

CRAMBIDAE:

Herpetogramma sphingealis 7/14, Watauga (newly described species; STATE). This species feeds on Christmas fern and is likely to be far more widespread within the state.

Pyrausta inveterascalis 7/23 (STATE) – feeds on Monarda, which is abundant on Merrill's property.

GEOMETRIDAE:

Leptostales pannaria 7/27 Madison (COUNTY), 8/20 Watauga (COUNTY). First records in the state from the northern mountains, i.e., north of the French Broad River.

NOCTUIDAE:

Anomis privata 7/27 Madison (**STATE**), 8/11 Watauga (**COUNTY**). Introduced species that feeds on Rose of Sharon and other Hibiscus (Wagner *et al.*, 2011).

Papaipema rigida - 8/25, Watauga (**COUNTY**). Only collected a few times in the state, all from the mountains.

The following selected records were submitted by Parker Backstrom. The high concentration of honeylocust feeders Parker has previously reported shows no sign of going away.

COSSIDAE:

Givira francesca (CHATHAM – May 22), (LEE – Jun 20) –ph

THYATIRIDAE:

Pseudothyatira cymatophoroides (CHATHAM – Aug 23) –ph

GEOMETRIDAE:

Mellilla xanthometata (CHATHAM – May 22) –ph

LASIOCAMPIDAE:

Heteropacha rileyana (CHATHAM – Aug 2) –ph

SATURNIIDAE:

Sphingicampa bicolor (CHATHAM – Aug 7, Aug 17, Aug 21, Aug 22, Aug 23) – total of 8 individuals –ph

NOTODONTIDAE:

Peridea ferruginea (LEE – Aug 16) -ph

Heterocampa subrotata (CHATHAM – Aug 10, Aug 17, Aug 21, Aug 22) -ph

NOCTUIDAE:

Cycnia oregonensis (CHATHAM – Aug 15) -ph

Magusa divaricata (CHATHAM – Aug 22) -ph

Spiloloma lunilinea (CHATHAM – Aug 11) -ph

Paectes nubifera 7/26 Chatham (**STATE**). Previously recorded in Florida, with at least one larva reared on live oak (Wagner *et al.*, 2011) – stray?

Heliocheilus lupatus (CHATHAM – Aug 15) -ph



Paectes nubifera (Photo by Parker Backstrom)

Jeff Sloten submitted the following record.

NOCTUIDAE:

Catocala grisatra 6/15 Moore (**COUNTY**). Previous attempts to find this species in Bladen County, where the first state specimens were collected by Jamie Cromartie, have been unsuccessful. Jeff's new record now re-confirms the presence of this species but also significantly extends its known range in North Carolina, adding the Fall-Line Sandhills to the Lower Coastal Plain.

Steve Hall and Bo Sullivan submitted the following records from a moth survey they are doing as part of a larger study of brownwater habitats along the Roanoke River being conducted by Hall and Harry LeGrand. This area contains some of the richest levees and bottomlands in the state – particularly anomalous for the Coastal Plain – and contains probably the biggest canebrakes, stretching along the river for over a mile in some areas.

NOCTUIDAE:

Leucania calidior 5/24-25 Halifax (**COUNTY**), 5/25 Northampton (**COUNTY**) (not submitted in the Spring Newsletter). A supposedly wide-spread cane-feeding species that we have failed to find at nearly all canebrake sites we've sampled over the past twenty years.

Catocala alabamiae 6/19 Northampton (**COUNTY**). This record extends the known range of this hawthorn-feeding species from the southern Coastal Plain and Sandhills to close to the Virginia state line. Levee hawthorns are particularly common along the Roanoke.

Catocala amatrix 7/19 Northampton (COUNTY) 8/2 Bertie (COUNTY). Recorded mainly in the mountains, with only a few Coastal Plain records. A cottonwood-feeding species, whose host plants – including both swamp and eastern cottonwood – are abundant in brownwater habitats.

Catocala connubialis 5/25 Northampton (COUNTY). Recorded mainly in the mountains, with only a few Coastal Plain records. Oak-feeding species.

Catocala mira 6/19 Northampton (COUNTY) New Coastal Plain record; recorded mainly in the mountains. Hawthorn-feeding species.

Catocala nebulosa 7/16 Northampton (COUNTY). New Coastal Plain record; recorded mainly in the mountains. A bitternut-feeding species, whose host plants are abundant in brownwater habitats.

Catocala neogama 6/19 Halifax (COUNTY). Recorded mainly in the mountains, with only a few Coastal Plain records. Walnut- and bitternut-feeder.

Catocala orba 6/18 Northampton (COUNTY). Hawthorn-feeder previously recorded along the Roanoke in Martin County.

Catocala piatrix 7/19 Northampton (COUNTY). Recorded mainly in the mountains, with only a few Coastal Plain records. Probably associated with bitternut or water hickory along the Roanoke.

Halysidota harrisii 7/13 Halifax (COUNTY). Larva found on the ground under a sycamore. This species is not only difficult to distinguish from the ubiquitous *H. tessalaris* as adults, but *harrisii* appears to be much more difficult to collect. Based on the distribution of its host plant, sycamore, it should not be as rare as it seems.

Rivula stepheni 6/19 Northampton (COUNTY). First record for the Northern Coastal Plain; most NC records are from the Croatan National Forest, Camp Lejeune, and Fort Bragg. Probably a wetland graminoid-feeder.

South Carolina: Brian Scholtens, College of Charleston, Charleston, SC 29424, E-Mail: scholtensb@cofc.edu

Tennessee: John Hyatt, 5336 Foxfire Place, Kingsport, TN 37664, E-Mail: jkshyatt@aol.com

Texas: Ed Knudson, 8517 Burkhart Road, Houston, TX 77055, E-Mail: eknudson@earthlink.net

Virginia: Harry Pavulaan, 494 Fillmore Street, Herndon, VA 22070, E-Mail: pavulaan@aol.com

The Southern Lepidopterists' News is published four times annually. Membership dues are \$20.00 annually. The organization is open to anyone, especially those with an interest in the Lepidoptera of the southern United States. Information about the Society may be obtained from Marc Minno, Membership Coordinator, 600 NW 34 Terrace, Gainesville, FL 32607, E-Mail: mminno@bellsouth.net, and dues may be sent to Jeffrey R. Slotten, Treasurer, 5421 NW 69th Lane, Gainesville, FL 32653.

SOUTHERN LEPIDOPTERISTS' SOCIETY
c/o J. BARRY LOMBARDINI, THE EDITOR
3507 41st Street
Lubbock, Texas 79413