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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

Candy Sarikonda presents this experience of hers and her colleagues with the migrating monarchs in Ohio, her home state. Her story "***Historic Numbers of Monarchs Seek Shelter at Roost Sites in the Lake Erie Region***" is presented on pp.128-135. Candy's elegant viewings of this phenomenon are expressed as: "*...truly a once-in-a-lifetime experience....Remarkable, Unforgettable, Historic.*"

Monarch cluster in willow at the Ottawa National Wildlife Refuge in Oak Harbor, Ohio (Photo by Candy Sarikonda; September 10, 2018).

South Bass Island, close-up of clustering monarchs (Photo by Candy Sarikonda; September 8, 2018).

MANY THANKS TO THE FOLLOWING DONORS TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY

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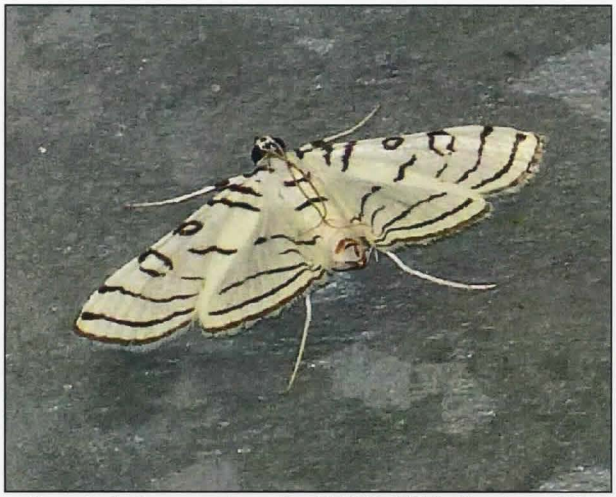
TWO UNCOMMON MOTHS FROM SOUTH TEXAS

BY

MIKE RICKARD



Conchylodes concinnalis: 25-IV-2019, Bentsen SP, Hidalgo Co., TX. Uncommon in south Texas, but two other members of the genus occur here so it's perhaps overlooked.

Lamprosema canacealis: 12-IV-2019, Estero Llano Grande SP, Hidalgo Co., TX. Restricted to extreme south Texas, where four other members of the genus also occur.

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Regular	$30.00
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A newsletter, The News of the Southern Lepidopterists' Society is published four times annually.

Website: www.southernlepsoc.org/

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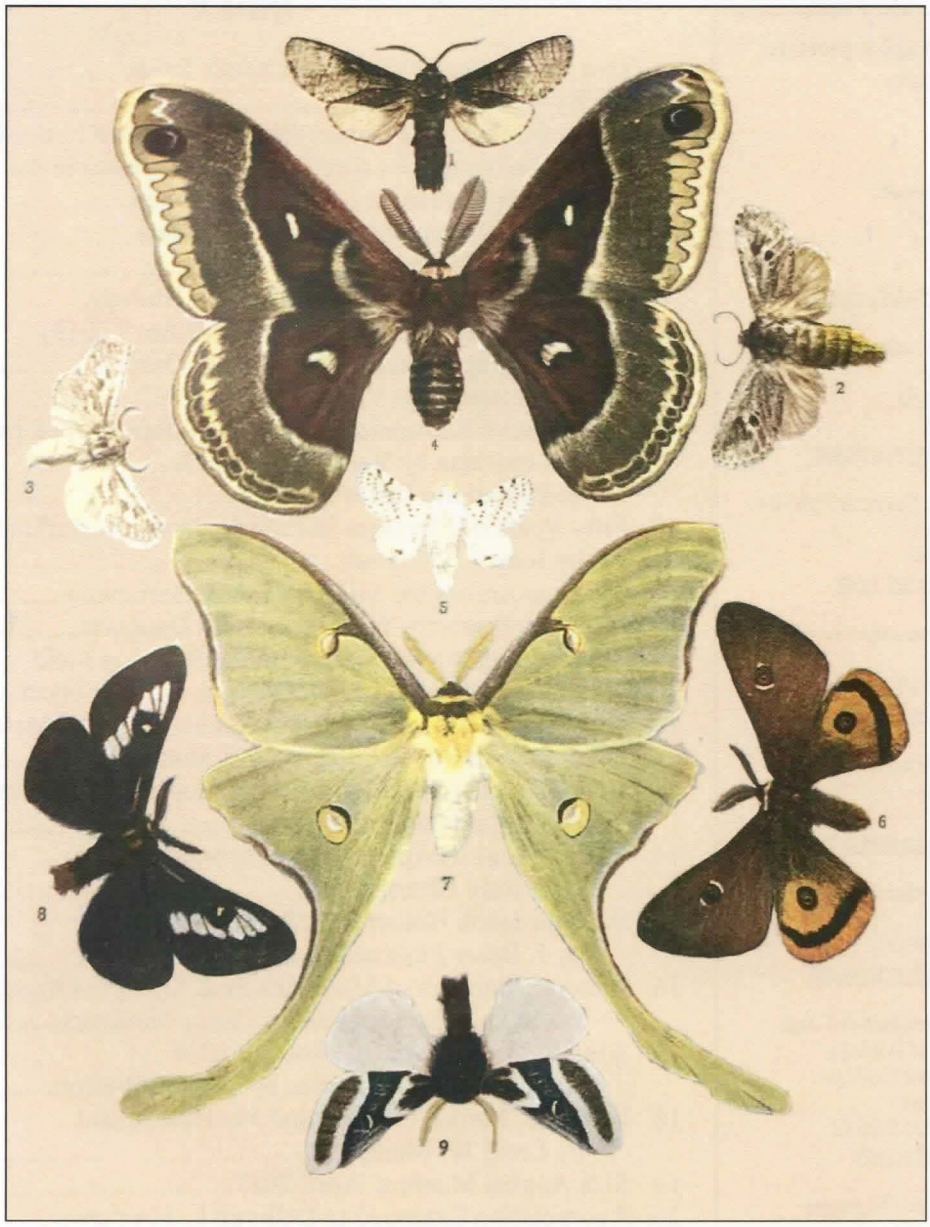
"Cover illustration: First known drawing of a North American butterfly from the Modern Age: Eastern Tiger Swallowtail *(Papilio glaucus)* by John White, North Carolina, 1587 (original design by J.V. Calhoun, 1996)."



Explanation of Plate XII

(Except when otherwise indicated the specimens figured are in the collection of W. J. Holland.)

1. *Cossus conternsis* Linter, ♂, US. N. M.
2. *Hypopta bertholdi* Grote, ♀,
3. *Hypopta henraicre* Grote, ♂, U.S N. M.
4. *Samia gloveri* Strecker, ♂,
5. *Atace punctisriga* Walker, ♂, U.S. N. M.
6. *Satuarnia mendocino* Behrens, ♂,
7. *Actias luna* Linnaeus, ♂,
8. *Hemileuca juno* Packarad, ♂,
9. *Hemileuca tricolor* Packard, ♂.

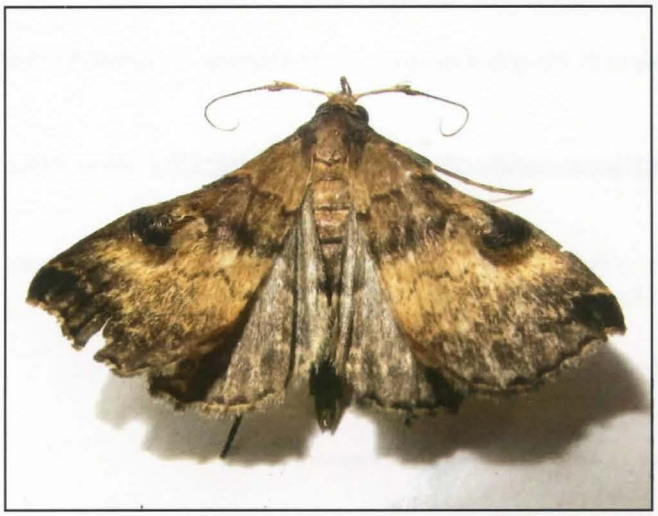
Note: many of the scientific names may have changed since 1903 when *The Moth Book* was published.

See Page 125 for a short biography of W. J. Holland.

PHLYCTAINA IRRIGUALIS (EREBIDAE: HERMINIINAE) IN THE FLORIDA PANHANDLE

BY

PETER H. HOMANN



***Phlyctaina irrigualis*, M (forewing ≈12mm)**
Tallahassee, FL., 2/20/2019

***Phlyctaina irrigualis*, F (forewing≈12mm)**
Tallahassee, FL., 2/16/2019

Between mid-February 2019 and early March I photographed five *Phlyctaina irrigualis*, named "Skirted Owlet" by Leckie and Beadle (2018), which had been attracted to our outdoor lights or my black light illuminated white sheet in a suburban area of Tallahassee, Florida. When the night time temperatures dropped below 5C a few days after I had encountered the early-March moth, I was quite certain it was the last one of this neotropical species I would see. I was wrong. Another individual showed up on April 11, and at the time I was editing this manuscript, I discovered that Bob Cross had just posted in *BugGuide* a photo of a specimen that had been attracted on April 22 by black light at his home a few miles from here, closer to downtown. My friend Fran Rutkovsky, who lives two blocks from my home, on the other hand, has not yet noticed the species at her lights. All these moths except one were males as judged by the presence or absence of antennal tufts. The single female stood out by representing the dark form of the species, but the photographs in BOLD reveal that its distinction does not reflect a sex dependence of the species' overall appearance.

Phlyctaina irrigualis was first described in 1830 from Puerto Rico by Möschler (Schaus 1916). James Hayden (in litt.) reported to me that he and Hugo Kons have caught several *Phlyctaina irrigualis* in the Gainesville, Florida, area of the north-central region of the Florida Peninsula, but that all specimens in the Florida State Collection of Arthropods/McGuire Center for Lepidoptera are "from Orlando southward." According to him, mine "are by far the most northern." On the distribution map of the Moth Photographers Group website, however, a location in Florida's northeastern corner near Jacksonville is marked.

The new records of *Phlyctaina irrigualis* from two locations in Tallahassee suggest that the moth is trying to expand its range northward and that this year's relatively cool winter has not prevented it from doing so. However, it was a winter without the short periods of subfreezing temperatures that usually occur, a condition that may become more common in our era of global warming and would favor the species to become established in this region.

Regarding the distribution of *Phlyctaina irrigualis* outside the United States, the map on the Moth Photographers Group website indicates records from several Caribbean islands, and DNA analysis data are reported by BOLD for specimens from Costa Rica. DNA bar-coding by BOLD reveals a 99.85 to 100% match of sequences obtained from Costa Rica and Florida specimens. Moths from the southern tip of Texas, on the other hand, are revealed to represent a not yet described *Phlyctaina* species. My female (BOLD-3N7JMCL82), it turned out, fits in perfectly among the DNA bar-coded Florida and Costa Rico moths. Regrettably, no DNA data are available from Caribbean specimens.

REFERENCES

BOLDSystems: Barcode of Life Data System website: http://v4.boldsystems.org/index.php/Taxbrowser_Taxonpage?taxon=Phlyctaina+irrigualis&searchTax=Search+Taxonomy, last accessed 27 April 2019.

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Schaus, William, 1916. *A generic revision of the American moths of the subfamily Hypeninae, with description of new genera and species.* Proceedings of the United States National Museum 50: 305.

(Peter H. Homann, E-Mail: ph-homann@comcast.net)

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Seeking OOP Books

Dear Members: If you or someone you know has copies no longer being referenced, or you know of a source for –

The Butterflies of Colorado –
Part 1 (Satyriinae) and/or
Part 2 (Heliconiinae and Danainae) and/or
Part 3 (Nymphalinae),
by Michael S. Fisher (C. P. Gillette Museum series), **please contact** --

Parker Backstrom at dpbackstrom@embarqmail.com.

Many Thanks

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NEW HESSEL'S HAIRSTREAK SITE IN ALABAMA

BY

PAULETTE OGARD

Hessel's Hairstreak 20-III-2019
(Photo by Karen Chiasson)

Hessel's Hairstreaks were first documented in Alabama in 2010 (*Southern Lepidopterists' News* 35.2 (2013). Since that time, the few known sites have all been along the Perdido River, which forms part of the boundary between Alabama and Florida. In October 2018, Karen Chiasson decided to investigate the Magnolia Branch Wildlife Reserve near Atmore, Alabama. She was intrigued with the large cedar trees she saw growing along the banks of Big Escambia Creek and wondered if Hessel's Hairstreaks might occur there. On March 20, 2019, Karen and a small group of friends returned and were able to photographically document the presence of Hessel's Hairstreaks as they puddled on damp, white sand. This find is particularly important because Big Escambia Creek flows into the Conecuh River, making it the first known Hessel's sighting in Alabama outside of the Perdido River system.

Near Atmore in Escambia County,Alabama
(Photo by Karen Chiasson)

The Magnolia Branch site is important for another reason: it provides a relatively easy location for butterfly enthusiasts to encounter Hessel's Hairstreaks. The previous go-to spot contains breathtakingly beautiful habitat but is often difficult to access by car. The creek at Magnolia Branch is lined with Atlantic White Cedars, the only known host for Hessel's Hairstreaks. A paved road runs along portions of it, making it easy to step out and view the treetops where the hairstreaks often swirl.

Magnolia Branch Wildlife Reserve (MBWR) is owned and operated by the Poarch Band of Creek Indians. Starting with a few hundred acres in 2002, the Reserve has expanded over the years to include approximately 6,000 acres. Twenty-three hundred acres are along Big Escambia Creek. Billy Smith, Tribal Elder and MBWR General Manager, says, "One thing we are proud to offer our Tribe and the public is the pristine Big Escambia Creek. We own 12-14 miles of the creek bank, so we are able to control a lot of what goes on along the banks..." This spring, he was pleased to hear about the Hessel's Hairstreak find and said that the "Junipers" (as Atlantic White Cedars are known locally) are concentrated primarily in the area of Big Escambia Creek that flows through the Preserve. According to Smith, once it runs into the Conecuh River, they play out. Within the Reserve, there are hundreds, perhaps thousands, making it prime Hessel's Hairstreak habitat.

Atlantic White Cedars line Big Esambia Creek
(Photo by Karen Chiasson)

The current high count for Hessel's Hairstreaks at MBWR is 7 individuals, but we anticipate that when more surveying is done, the population will be extensive. We also have high hopes that the Reserve may provide habitat for other imperiled butterfly species. Magnolia Branch Wildlife Reserve, which has been awarded a Helene Mosley Memorial TREASURE

Forest Award for outstanding forestry practices, is committed to Longleaf Pine habitat restoration, and much of the acreage is managed for Longleaf. Billy Smith says they are currently on a two-year burn cycle, and he has noticed that as fire clears out the underbrush, native grasses are making a big comeback. Who knows what skippers may be lurking among them?!

For more information about Hessel's Hairstreaks in Alabama, visit the Alabama Butterfly Atlas: https://alabama.butterflyatlas.usf.edu/species/details/29/.

For more information about Magnolia Branch Wildlife Reserve, visit the website: http://www.magnoliabranch.com/.

(Paulette Ogard, E-Mail: habitatdesigns@hotmail.com.)

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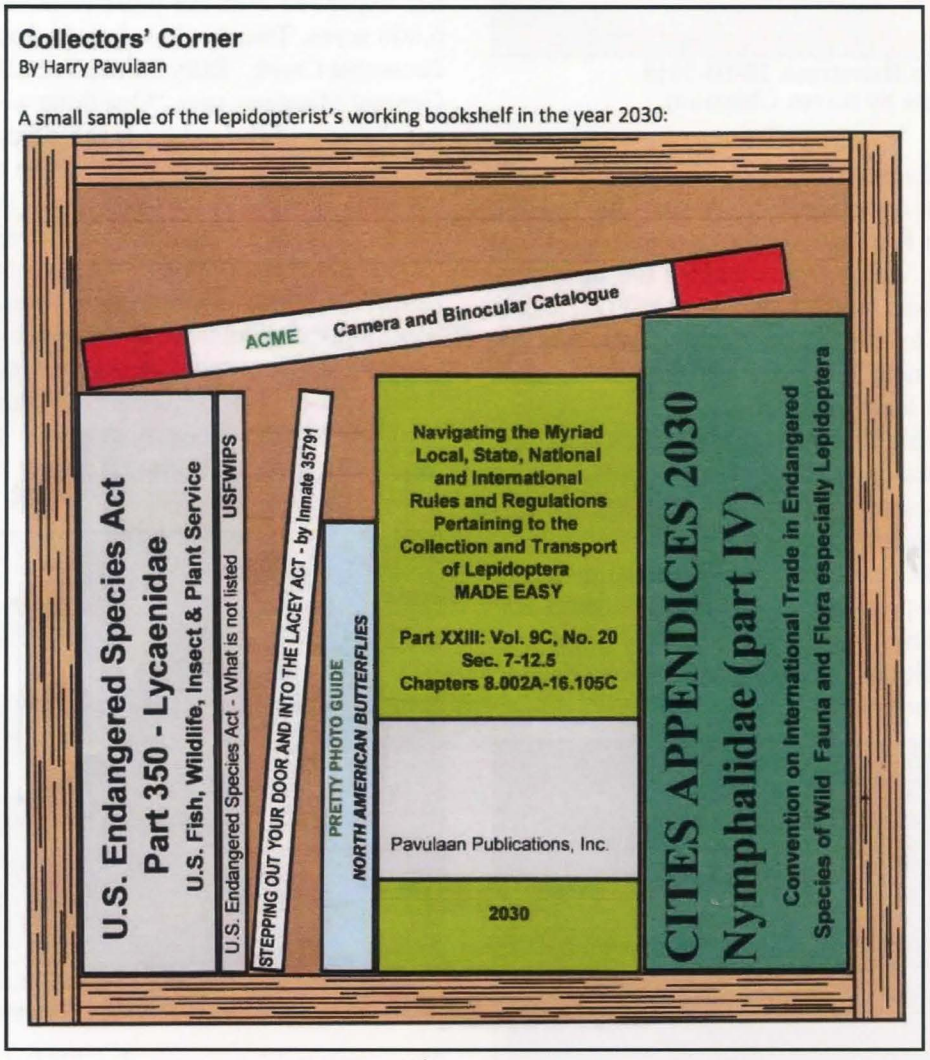
Collectors' Corner
By Harry Pavulaan

A small sample of the lepidopterist's working bookshelf in the year 2030:



(Harry Pavulaan: E-Mail: harrypav@hotmail.com)

SLS/ATM MEETING IMAGES (DEPT. OF BIOLOGY, GEORGIA SOUTHERN UNIVERSITY, 5-7 APRIL 2019)

PHOTOGRAPHS SENT IN BY LANCE A. DURDEN

Group image of meeting attendees (6 April).

Front row (sitting/kneeling), L-R: Joanne Auth, Jim Hayden, Debbie Matthews, Jeff Slotten, James Adams, John Douglass.
Second row, L-R: Jim Monroe, John Hyatt, John Peacock, Stuart Marcus, Charles Watson, Jackie Miller, Charles Covell, Debbi Albanese, Don Tangren, Brian Scholtens.
Third row, L-R: Riley Gott, Rachel Gott, Emily Peyton, Leroy Koehn, David Auth, Rick Cech, Peter VanZandt, Jon Turner, Lance Durden, Steve Mix.
Back row, L-R: Keith Willmott, Lynn Lanning, Joe Riddlebarger, Matt Cousins.

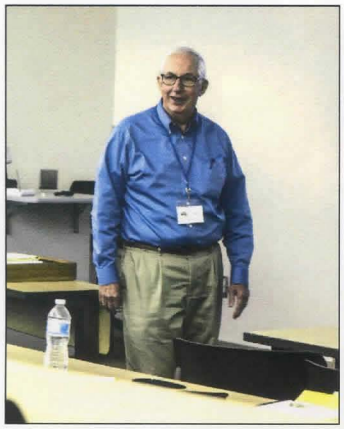
(Not present: Lucia Botnaru, Terry Lott, Carol Tangren).

Photo by Alan Harvey.

Moth night (5 April) at Georgia Southern University "south campus." L-R: Jackie Miller with net, Stuart Marcus, Brian Scholtens, Terry Lott. Photo by John Hyatt.

Debbi Albanese moderating Saturday afternoon presentations. Photo by Rick Cech.

Keith Willmot discussing *Helicopis gnidus* from Ecuador. Photo by Rick Cech.



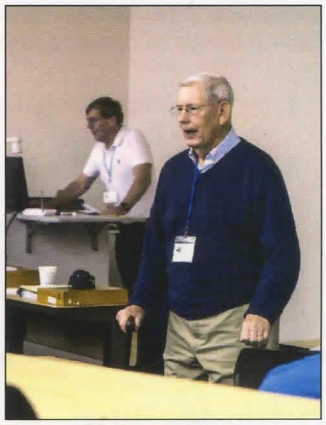
John Hyatt. Photo by Rick Cech.

Charles Watson and John Hyatt. Photo by Rick Cech.

Rachel Gott. Photo by Rick Cech.

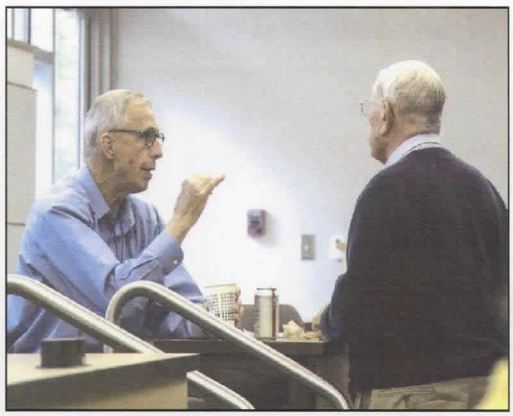
James Adams. Photo by Rick Cech.

Jackie Miller (and Charlie Covell asking a question). Photo by Rick Cech.

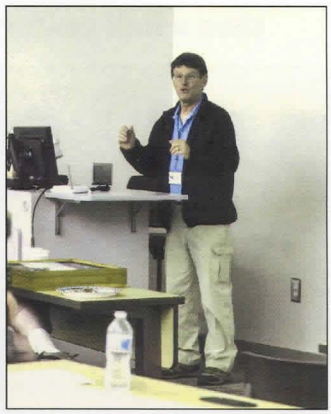


Charlie Covell (Lance Durden in background). Photo by Rick Cech.

Leroy Koehn and Jon Turner.
Photo by Rick Cech.



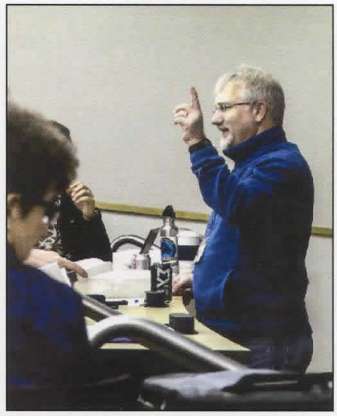
Jon Turner and Charlie Covell.
Photo by Rick Cech.



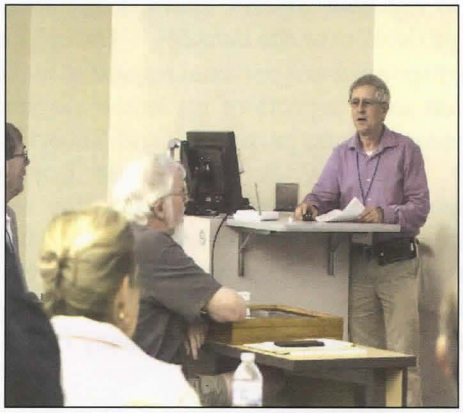
Stuart Marcus.
Photo by Rick Cech.

James Adams and Peter VanZandt.
Photo by Rick Cech.

John Douglass.
Photo by Rick Cech.



Brian Scholtens.
Photo by Rick Cech.



Jeff Slotten.
Photo by Rick Cech.

Maria Sibylla Merian plate from Georgia Southern University Museum as displayed at the meeting.
Photo by Rick Cech.

A volume of John Abbot's 1797 book from Georgia Southern University Museum as displayed at the meeting.
Photo by Rick Cech.

(Lance A. Durden, E-Mail: ldurden@georgiasouthern.edu)

Recent award presented to Vernon Antoine Brou Jr. in recognition of more than a half century of entomological research concerning the insects of Louisiana.

On March 16-2019, I was pleased to receive this award and recognition (Figs. a,b,c). Though I was not affiliated with this organization, I was unexpectedly surprised with this presentation. I have usually and routinely declined participating in these and similar activities due to my own always heavy schedule of entomological projects over the decades. Though on this occasion, I responded to a personal request to make a presentation on some aspects of my entomological work from my near lifelong personal friend Robert A. Thomas, Ph.D., Professor & Director at Loyola University, New Orleans, Louisiana, USA. 'Bob' can be seen presenting me with this award in Fig. c. My talk and presentation centered upon the half century of research and collecting of about 400,000 adults of the moth family sesiidae (clearwing moths) across the state of Louisiana. The location of this event was at a three-day bioblitz in Fontainebleau State Park, St. Tammany Parish, Louisiana.

Along this long journey we (Vernon and Charlotte D. Brou) found it necessary to create, design and fabricate several hundreds of various insect traps and associated collecting devices and methods which did not exist previously. Currently we have documented about 60+ different species of sesiids as occurring in Louisiana. Prior to our research only five sesiid species were listed in previous scientific literature to occur in the state of Louisiana.

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

THE GENUS *CALLOSAMIA* PACKARD (LEPIDOPTERA: SATURNIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

Fig 1. Phenotype variations of ***Callosamia promethea*** males (a-c), females (d-f), captured at **Abita Entomological Study Site*, except as noted.
a. April 9-1996 Tangipahoa Par., b. April 11-2007, c. March 20-2004, d. May 9-1996 Tangipahoa Par., e. May 5-1999, f. March 31-2004.

Up to date phenological information on the Saturnidae genus ***Callosamia*** Packard in Louisiana is presented based upon 4,080 wild captures taken and recorded over the past 49 years for three species. ***Callosamia promethea*** (Drury) (Fig. 1) was first reported for the state of Louisiana by von Reizenstein (1863), who stated the species had one brood occurring in February and March in the New Orleans area. Two additional species, ***Callosamia angulifera*** (Walker) (Fig. 2) and ***Callosamia securifera*** (Maassen) (Fig. 3) were first reported specifically for the state of Louisiana by Brou (1994).

Ferguson (1972) reviewed three species of ***Callosamia*** Packard in North America, north of Mexico, restoring the genus to full rank and listed the ranges of the species in the Gulf costal area as: ***Callosamia promethea*** (Drury) to include the geographical areas, states of Florida to eastern Texas, and ***Callosamia angulifera*** (Walker) to include the geographical areas Florida to the Mississippi River, and ***Callosamia securifera*** (Maassen) to include the geographical areas, states of Florida to Mississippi.

Ferguson (1972), Covell (1984), and Tuskes, et. al., (1996) stated both ***angulifera*** and ***securifera*** are double-brooded in the southern part of their ranges, though Ferguson did note the possibility of a third brood of ***securifera*** in Florida, and Tuskes et. al., stated "*three broods in Florida (J. Kutis pers. comm)*" and "*three broods are also reported in southeastern Louisiana (V. Brou, pers. comm)*". During this current study only a few dozen female specimens of ***promethea*** were collected using ultraviolet light traps during this study, confirming Ferguson's statement "*...only females of* ***promethea*** *were collected at light*". No wild collected males were collected at light despite far in excess of 900,000 light traps hours logged throughout Louisiana over the past 50 years in this study. The authors did not make any special efforts to capture species of ***Callosamia***. A small number of wild occurring males of ***promethea*** captured in this study were attracted to reared newly emerged females of ***securifera.***

Fig. 2. Phenotype variations of ***Callosamia angulifera***: males (a,b,d,e,g,h), females (c,f,j,k,m,k,n) all collected at **Abita Entomological Study Site.*

a. April5-2000, b. March 29-1992, c. May 2-1987, d. March 19-1995, e. August 25-1991, f. June 12-1986, g. April 15-1992, h. April 23-1999, j. June 27-1986, k. April 13-2009, m. August 9-1997, n. April 27-2009.

Fig 3. Phenotype variations of ***Callosamia securifera*** males: (a,b,d,e,g,h,k), females (c,f,j,m,n) all collected at **Abita Entomological Study Site.*

a. June 24-2007, b. April 17-1994, c. March 27-1986, d. September 4-1985, e. September 1-1983, f. April 13-1986, g. July 6-1995, h August 13-2002, j. June 7-2007 k. April -1999, m. June-26-1986, n. August 12-1986.

(Brou, 1994) also incorrectly reported that both ***angulifera*** and ***securifera*** appeared to have at least three annual broods within Louisiana. Now 25 years later, it is clearly evident based on a continuation of this long term, now near half-century long study based upon composite multi-year phenograms (using 4,080 wild-captured ***Callosamia*** adults), that both ***angulifera*** and ***securifera*** have four annual broods in southeast Louisiana (Figs. 4 and 5). The initial brood of ***angulifera*** peaks approximately the third week of April, the second brood peaks near near third week of June, with subsequent broods at 41-day intervals. In this study, the initial brood of ***angulifera*** accounted for nearly 40% of the entire annual population. The initial brood of ***securifera*** (Fig. 5) peaks during the second week

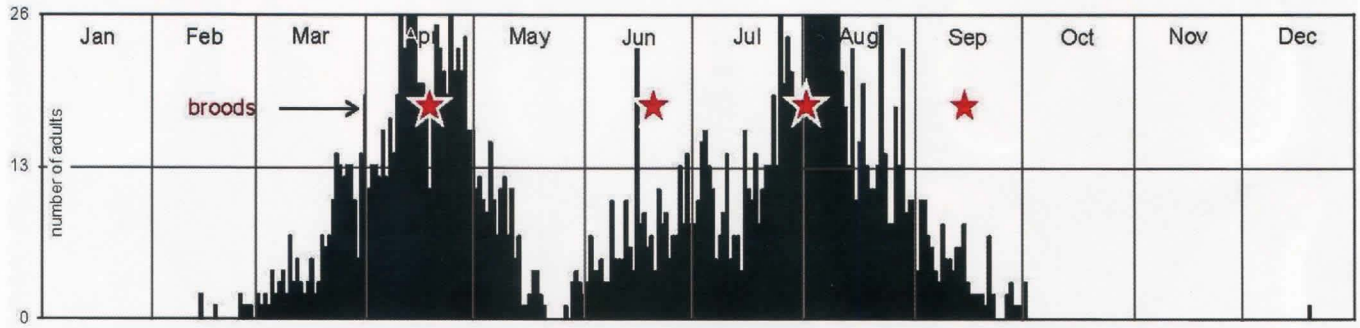


Fig. 4. Adult ***Callosamia angulifera*** captured at the **Abita Entomological Study Site.* n = 2,376

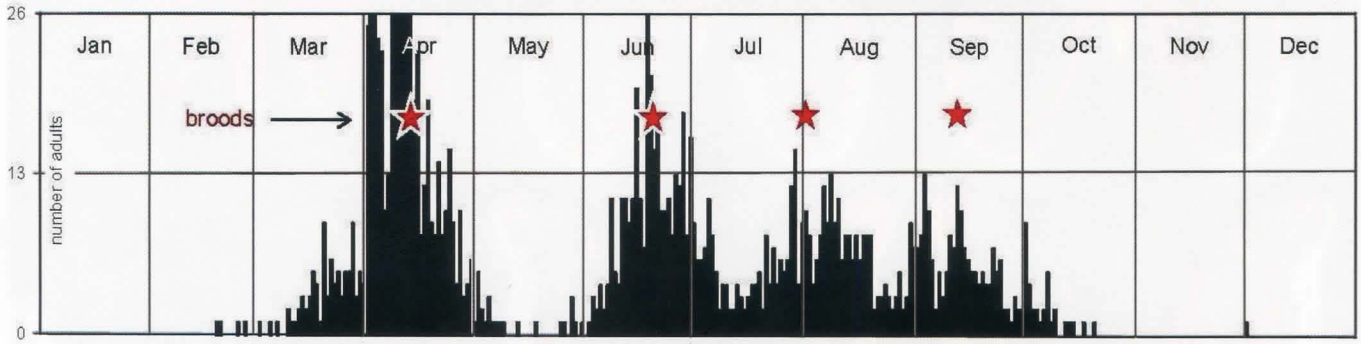


Fig. 5. Adult ***Callosamia securifera*** captured at the **Abita Entomological Study Site.* n = 1,647

of April, the second brood peaks the third week of June, with subsequent broods at 43-day intervals. In this study, the initial brood of ***securifera*** accounted for 47% of the entire annual population. These additional incorporated capture dates for adults over the past 49 consecutive years for all members of the genus ***Callosamia*** in Louisiana now confirm that neither the one, two, or three broods reported are correct for ***promethea, angulifera*** and ***securifera*** by previous authors: von Reizenstein (1863), Ferguson (1972), Covell (1984), Brou (1994), Tuskes et al., (1996).

The phenology of all three species of ***Callosamia*** appear quite similar in that initial broods peak around mid April. Because male ***promethea*** are not attracted to ultraviolet light, and females are only mildly attracted to light, the total number of wild adult ***promethea*** taken amounted to 57 specimens which resulted in confirming the definite number of annual broods for for ***promethea*** at best to only two, peaking second week of April and the beginning of August (Fig. 6). Though, I suspect when a much more populated sample becomes available, this species will prove to have additional annual broods as well.

The confirmed parish records for all three species of ***Callosamia*** are illustrated in Fig. 7, ***promethea*** is now reported from East Baton Rouge, Iberville, Orleans, St. Tammany, and Tangipahoa, and ***angulifera*** from Ascension, East Feliciana, Evangeline, St. Helena, St. Tammany, Tangipahoa, and West Feliciana, and ***securifera*** from St. Tammany and West Feliciana.

Over the past near four decades, I have reared ***securifera*** dozens of times. The thousands of adults resulting from these efforts do not appear anywhere among the natural wild data presented in this study. I need to mention some heretofore undocumented procedures and observations. Ova were obtained from wild captured females at the **Abita Entomological study site*, and resulting larvae were enclosed in (polyester garden quilting) machine sewn into open ended tubes using 12'-24' widths of fabric cut to various 10', 20', 30' lengths. After being placed upon a small tree or large branch of the proven foodplant ***Magnolia virginiana*** Linnaeus, the ends of the tube are either sewn or tied

***Abita Springs Study site*: sec. 24,T6S, R12E, 4.2 miles northeast of Abita Springs, Louisiana.**

shut at the terminal end, and the opposite end very tightly fastened to the living trunk or branch (Fig. 8). Dozens of first or second instar larvae are placed upon the living foilage within the closed bag. We also constructed a (4'X4'X4') wooden screened cage enclosure to hang resulting cocoons and allowed the resulting adults to emerge, fly about, and most importantly provide a near natural free flow of air and wind to promote mating (Figs. 9 and 10). Fig. 11 illustrates a late instar larva of ***angulifera*** on its foodplant, and Figs. 12 and 13 illustrate late instar larvae of ***securifera*** on its foodplant. My observations over several decades of rearing ***securifer***a resulting in the emergenceof adults is noteworthy to document. Though not obvious from a jpg screenshot taken from a video in

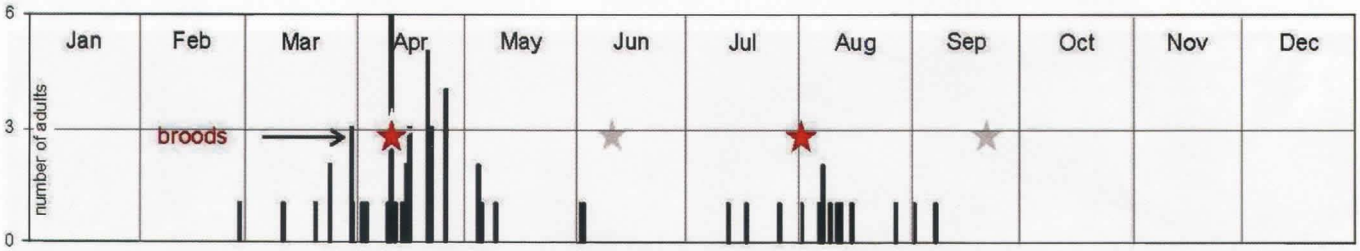


Fig. 6. Adult ***C. promethea*** captured at the **Abita Entomological Study Site.* n = 57

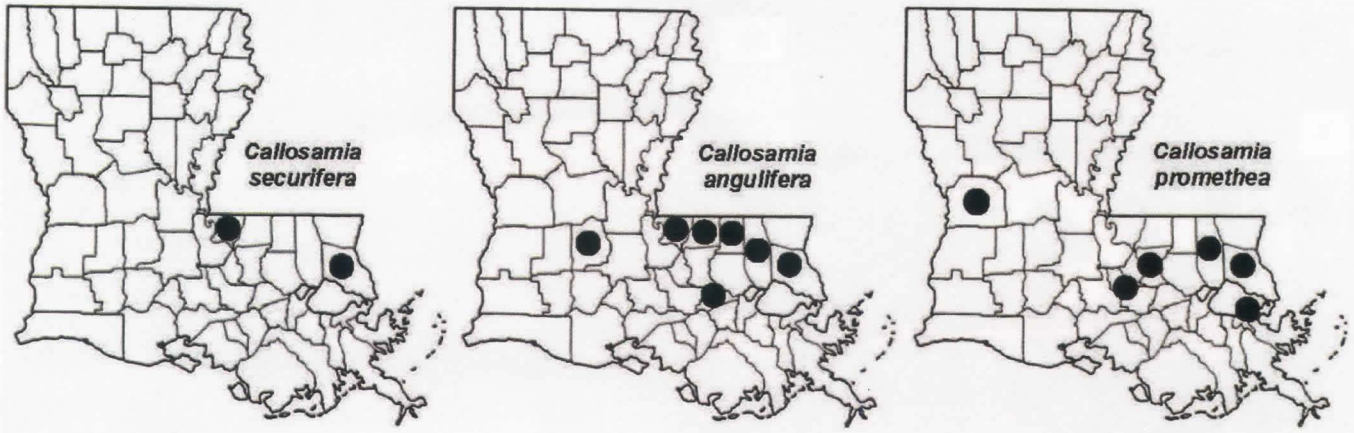


Fig 7. Parish records for ***Callosamia*** species for Louisiana in this study.

Fig. 9, the junior author photographed a remarkable occurrance where there are three newly emerged females of ***securifera*** within the cage and a frenzy of 40+ males flying around the cage on April 13-2007 at 12:28 PM in the bright mid-day sun at our home near Abita Springs. This same scenario has been witnessed and photographed at this same location numerous times during subsequent years. Female ***securifera*** appear begin calling through the night time hours of darkness, but precisely at dawn, male ***securifera*** begin falling out of the sky as if from out of nowhere, and begin a non-stop frenzied cloud of ***securifera*** males which continues unabated around the cage until 4 PM. A few males of ***securifera*** do not leave and are still flying about at 6 PM. But, additionally a handful of male ***promethea*** begin arriving in a similar frenzied flight attracted to the female ***securifera*** around 4 PM and remained there for hours attempting to gain access to the female ***securifera***. These male ***promethea*** mix in among the frenzied group of ***securifera*** males already present throughout the daylight hours.

We thank and are most grateful to the following individuals for providing access to the holdings of the Louisiana State Arthropod Museum (LSAM), and additional confirmed records and specimens documented in this study by Charles M. Allen, Chris Carlton, Victoria M. Bayless, and Jon Kemp.

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Brou, Jr., V.A., 1994. The genus Callosamia Packard (Saturnidae) in Louisiana. *South. Lepid. News* 16: 2-4.

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 + 469pp., 64 plates.

Ferguson, D.C. in Dominick, R.B. et al., 1972. *The Moths of America North of Mexico*, fasc. 20.2B, Bombycoidea (in part), E.W. Classey Limited & R.B.D. Prod. Inc.. London, 275p., 22 pl.

Tuskes, P.M., J.P. Tuttle, M.M. Collins, 1996. *The Wild Silkmoths of North America a natural history of the Saturnidae of the United States and Canada.* Comstock Pub. Assoc. Corn. Univ. Press. 250pp. 30 pl.

von Reizenstein, L., 1863. *Catalogue of the Lepidoptera of New Orleans and its vicinity.* Issac T. Hinton, New Orleans, 8pp.

[N.B. An addendum page is available from the authors concerning the reporting history of this genus.] .

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

FIFTY YEARS OF FLORISTICS IN FLORIDA: JAMES R. BURKHALTER

BY

JOHN F. DOUGLASS

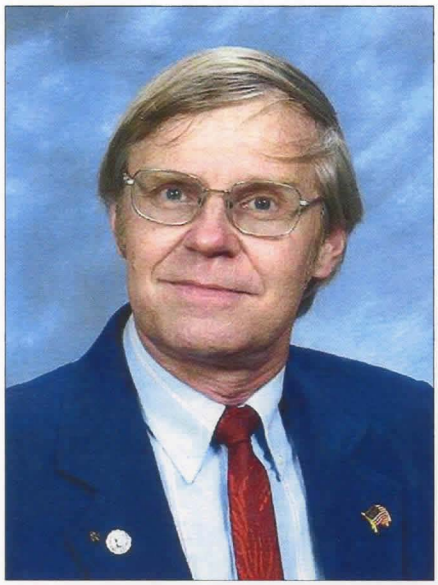

Fig. 1. James R. Burkhalter, Curator, UWF Herbarium.

Fifty years ago this month, on June 19, 1969, a young man arrived in Pensacola from Chicago driving an old DeSoto. In the ensuing half-century, through his tireless exploration and scrutiny of West Florida's vegetational marvels, the driver, Jim Burkhalter (Figs. 1, 2), has assembled a world-class library of specimens which is of perpetual benefit to students of the South.

At a young age, Jim recognized the need for a botanical collection representative of the region, and he began this effort on his own in 1971. Founded in 1974, the University of West Florida's Michael I. Cousens Herbarium has flourished under Jim's direction: today it is wonderfully comprehensive, and comprises an invaluable record of plant life. Jim reports that the UWF campus at Pensacola has the richest vascular flora of any campus in the eastern U.S. (921 species), and that Escambia County (home to UWF) is one of the top five U.S. counties in terms of the size of its documented vascular flora (1,726 species). Over the years, Jim has personally added 61 vascular-plant species to the known flora of Florida.

Concerning all sorts of botanical matters about the Panhandle (taxonomic, distributional, historical), Jim's knowledge is encyclopedic. He shares information generously, and has provided visiting lepidopterists with detailed information on localities and microhabitat preferences of presumptive larval foodplants throughout the area. Naturalists who work with Jim respect and benefit from his scrupulous attention to detail. His 24,000 completed herbarium sheets at UWF (Fig. 3) are invariably rich with context, and reflect in every respect the highest standards of scholarship and museum care. Field outings led by Jim are remembered by participants as some of the high points of their environmental education.

Fig. 2. Master botanist Jim Burkhalter at work, 2017 (photo by D. L. Matthews).

Jim would welcome questions or exchanges of biological information with any one of us at any time. With his help, botanists can prearrange 24-hour use of the UWF Herbarium, 7 days a week. Lepidopterists have a true friend in Pensacola.

Fig. 3. A lifetime of care.

Jim's contact information is as follows.
Work [UWF, Bldg. 58, Rm. 70]: (850) 474-2060
Home (5:30-11:30 PM Central time): cell (850) 221-0643
E-Mail: jburkhalter@uwf.edu

(John F. Douglass, E-Mail: jfdouglass7@gmail.com)

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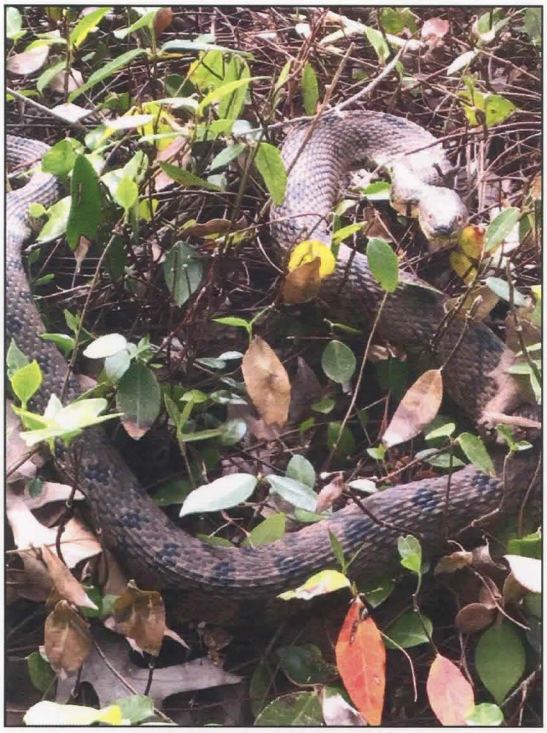

Snakes in San Antoinio on the banks of the Riverwalk (where there are no restaurants and few people)
(Photo by Richard Lombardini, May 2019)

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MESSAGE ACROSS THE MILES

BY
CANDY SARIKONDA

Grief is a funny thing. You can glide along for days, and then suddenly it hits you like a ton of bricks.

That's the way I was feeling on my recent birthday.

Photo by Stephanie Turcotte

My dad passed away in 2016. He and I were very close. We even share the same birthday. And as my birthday loomed, it became increasingly daunting to accept that this would be my 3rd birthday without him.

Not long after his passing, he had sent me a special message in the form of a butterfly. It was a story I told in this journal, in the 2016 Vol. 38 no. 4 issue. The article was titled, "The Messenger." My dad had sent a beautiful Checkered Skipper to visit my young son and me, as I dropped my son off for school. The color of this beautiful butterfly matched his Navy uniform, and I knew it was him letting us know that he was okay. And that we would be okay.

As my birthday approached, I wondered if my dad would send me another message. How cool it would be if he sent me another butterfly, I mused. Especially a monarch. But alas, it has been bitterly cold this spring in Ohio, and I figured there was no chance of getting a butterfly message from my dad on our birthday.

I briefly opened Facebook, and the birthday wishes appeared on my timeline. A mixed blessing. It was wonderful to see birthday wishes from my dear friends, but also painful to know my dad would not be sharing them with me. I closed Facebook, I wasn't ready. In doing so, I missed a message. A friend in California, Stephanie Turcotte, had posted a message on my timeline. She told me, "Happy, happy birthday Candy! If I see a monarch today, I will think of you. (I have seen quite a few this spring). Wishing you all the best!" I missed that initial message, but a few hours later I opened Facebook again. This time, Stephanie had posted a photo of a monarch to my timeline. "See, I told you one would come for your birthday!" Huh? I was stunned. I scrolled back through the birthday wishes I had received to see what she was talking about, and I saw her initial message. Joy filled my soul as I read her initial message, and realized what was happening. "Ohhh! This is the BEST present! Thank you!" I replied.

I hesitated. Many of my friends do not know that my dad and I share the same birthday, and I debated whether or not to mention how I was truly feeling. But it was time. I explained to Stephanie, "My dad passed away 2 years

ago. He and I share the same birthday, so today has been a little tough. I've been really missing him the last few days. I was hoping he would send me a message. He's sent a butterfly before, but it's freezing in Ohio, so I thought there'd be no chance of that. But he did! And thanks to you, I got the message!"

Stephanie replied with a heart, and said, "I am happy I could relay your father's birthday message. Life is amazing."

Indeed it is.

"*The caterpillar dies so the butterfly could be born. And yet, the caterpillar lives in the butterfly and they are but one. So, when I die, it will be that I have been transformed from the caterpillar of the earth to the butterfly of the universe*."– John Harricharan

(Candy Sarikonda, E-Mail: koundinya@buckeye-express.com)

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WANTED:

Home for Cornell cabinets and drawers (several), 1000 watt MVL bulb in working Vernon Brou light trap, and complete set of fascicles of Moths of America North of Mexico (MONA), and Lemaire's 3 volume central/South America Saturniidae.

Please help out my downsizing and take advantage of this free offer any lepidopteran might enjoy!

Contact
Steve Mix at:

(843) 271-3975 (text),
citheroniaregalis@hotmail.com

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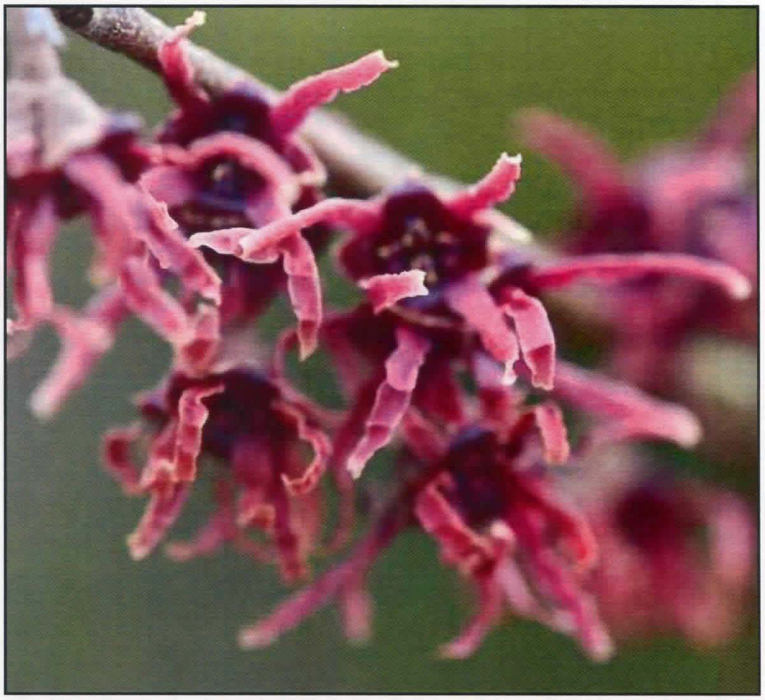
Friends on the Riverwalk in San Antonio
(Photo by Richard Lombardini, April 2019)

Ozark witch hazel (*Hamamelis vemalis*) [photo by Steven Foster 2019].



Ozark witch hazel (*Hamamelis vemalis* 'Kohankie Red') [www.gardenia.net].

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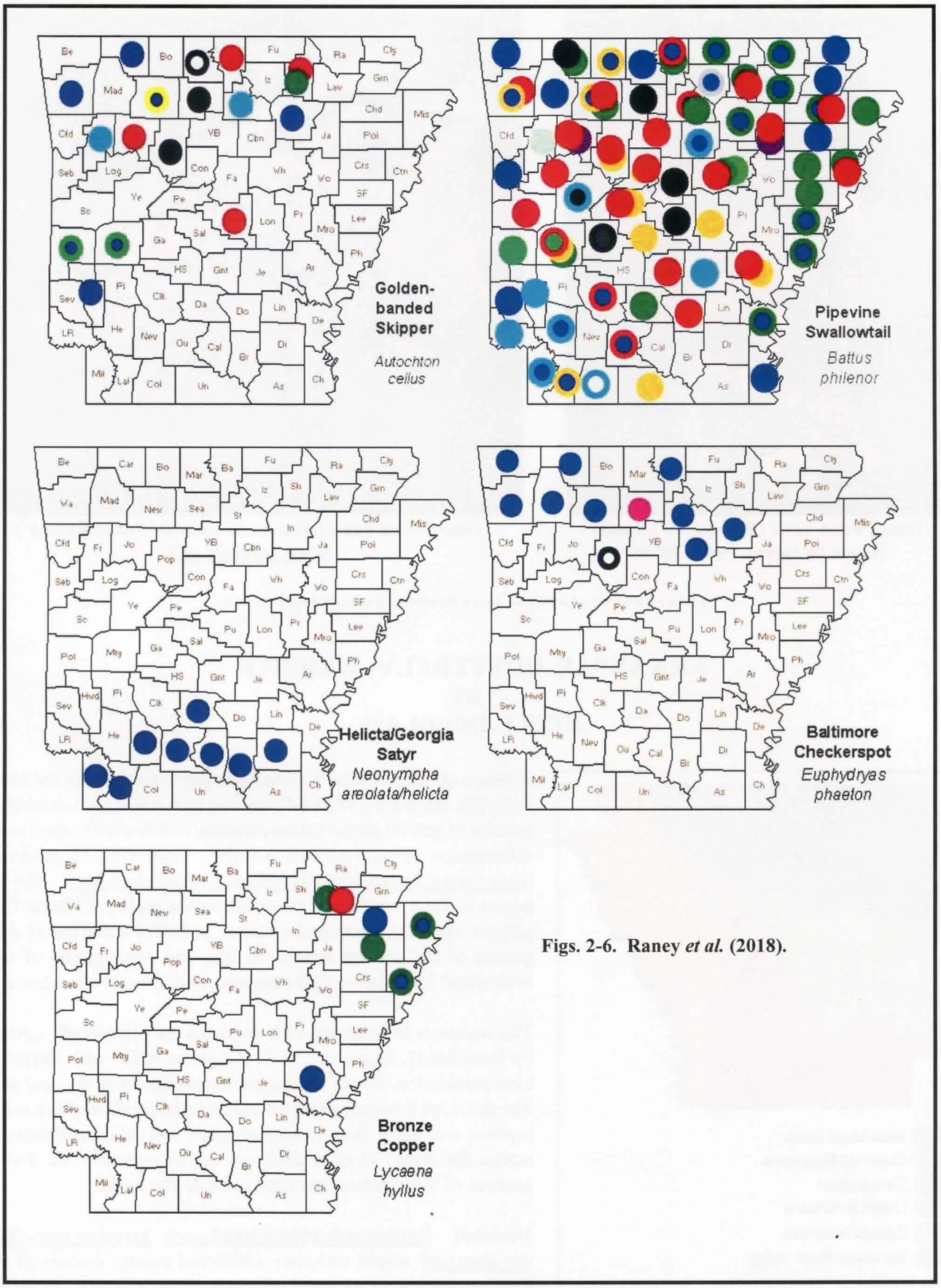
ARKANSAS BUTTERFLY WEBSITE
BY
JOHN F. DOUGLASS

Fig. 1. Physiographic regions of Arkansas [Arkansas Travel (www.lasr.net)].

Readers of the article by S. Scheiman and C. Osborne in the March issue [SL NEWS 41(1):81-84], dealing with Arkansas' Lepidoptera species of special conservation concern, will find additional useful information on an excellent website, "Butterflies of Arkansas" [http://www.hr-rna.com/RNA/Butterfly%20main.htm]. The site, begun in 2004, contains a checklist for the state (162 butterfly & skipper species), county dot maps, beautiful galleries of color photos of the various species in life, and descriptions of local butterflies' foodplants, flight seasons, and relative abundance.

The website's information-rich dot maps are periodically updated by Herschel D. Raney, Jr., M.D. (Conway, AR): with Herschel's kind permission, five of the maps are reproduced on the next page. The dot maps incorporate historical records, localities from survey reports, and input from twenty or more individual collaborators across the state. Dots of different colors represent the distinct sources of information incorporated into the maps.

Herschel [hrdragonfly1958@gmail.com; herschel.raney@conwaycorp.net] would welcome additional county records of rare species and those of special conservation concern, especially from underrepresented counties in the state.



Figs. 2-6. Raney *et al.* (2018).

(John F. Douglass, E-Mail: jfdouglass7@gmail.com)

REPORT FROM THE SOUTHERN LEPS 2019 SPRING FIELD MEETING: SAPELO ISLAND, GEORGIA

BY

JOHN HYATT

A group of five Southern Leps members took advantage of the opportunity to sample Lepidoptera on Sapelo Island, Georgia, during the Society's 2019 Field Meeting on April 26-8.

Sapelo is a largely undeveloped barrier island midway between Savannah and Jacksonville; the roughly 12 X 2 mile island is state-owned for the most part, and access is limited. We were fortunate to have lodging and transport provided at very minimal cost by the Georgia DNR and the University of GA Marine Institute.

James Adams reached the island on April 25 to get in an additional night's trapping; Lance Durden, Jeff Slotten, Brian Scholtens, and John Hyatt arrived at various times on the 26th. Thus moth trapping was carried out on three nights, and butterfly hunting was done during three days.

Moths for breakfast: Adams and Scholtens sort moths; Slotten is in the background. Sapelo Island, GA, 28 April 2019. (Photo by J. Hyatt)

Weather was acceptable, but not great. Nights were mostly very clear with a half-moon rising late. Days were partly to mostly cloudy, with significant wind on Friday the 26th; the winds dropped at sundown. The group's efforts utilized 17 battery-powered light traps, four bait traps, a pheromone trap, and a generator/sheet setup. Oddly, despite warming temperatures, decreasing moonlight, and diminishing winds, the moth volume in the traps dwindled each night. Baits and pheromones were ineffective.

Our results were quite respectable despite the relatively modest (judging from previous years' work on Sapelo by some of the group) catches. We recorded at least a dozen new species for the island, raising the total moth species count for the site to 1,059. The new species included a number of species known to migrate; perhaps the strong southerly winds on the 26th brought some of these in. We found for the first time on Sapelo:

Megalopyge pyxidifera
Uresephita reversalis
Diaphania infirmalis
Palpita quadristigmalis
Leptostales laevitaria
**Pleuroprucha asthenaria*
Ennomos subsignaria
Dasylophia thyatiroides
Zanclognatha lituralis
**Ephyrodes cacata*
Sympistis perscripta
Xanthopastis regnatrix

(* Apparent new Georgia state records)

A number of moths, particularly micros, await determination and will probably add to this list. We were also pleased to see single specimens of *Lactura pupula* and *Lactura* sp. nov., which had been lost to

***Ephyrodes cacata*, a new GA record from Sapelo Island (J. Adams photo)**

sight after the 2017 hurricane flooded the island. Some other lovely things, such as *Alypia wittfeldii* and *Derrima stellata*, were taken in modest numbers. However, *Sympistis eleaner* Adams 2018, thus far endemic to Sapelo, remained missing in action.

The butterfly list for the weekend topped out at 33 species. The outstanding species was a close-at-hand sight record of *Anaea andria* - a truly remarkable sighting by Adams.

(John Hyatt, E-Mail: jkshyatt@centurylink.net)

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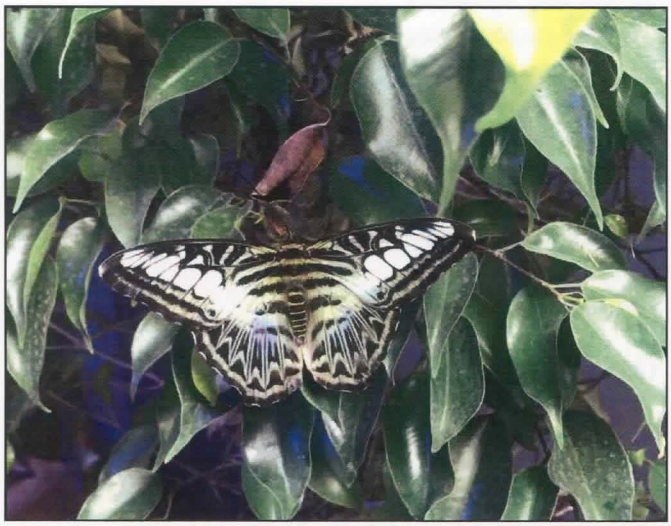
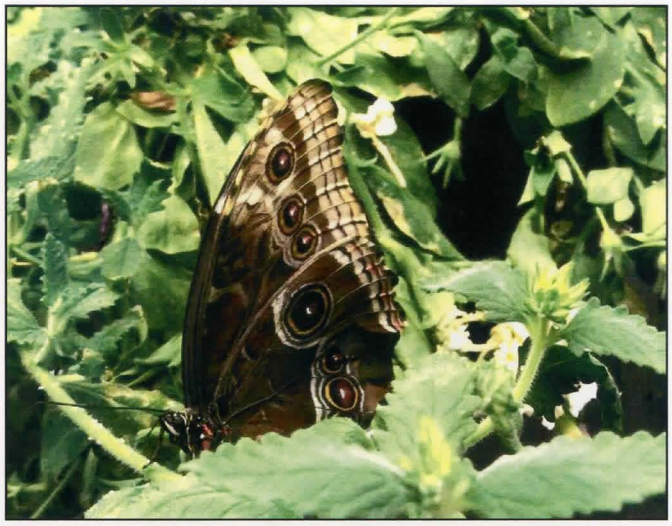
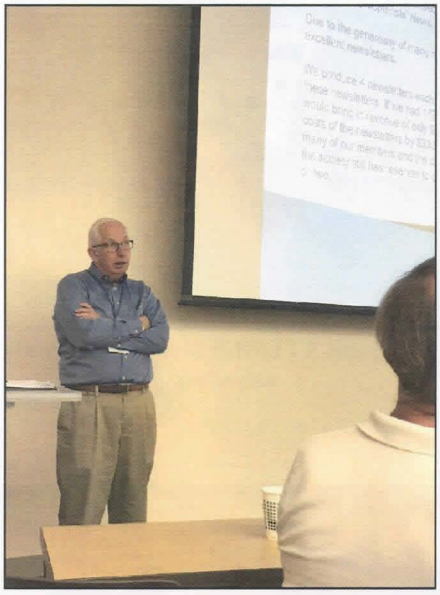
EXOTIC BUTTERFLIES AT THE SCIENCE SPECTRUM IN LUBBOCK, TEXAS (APRIL 2019)



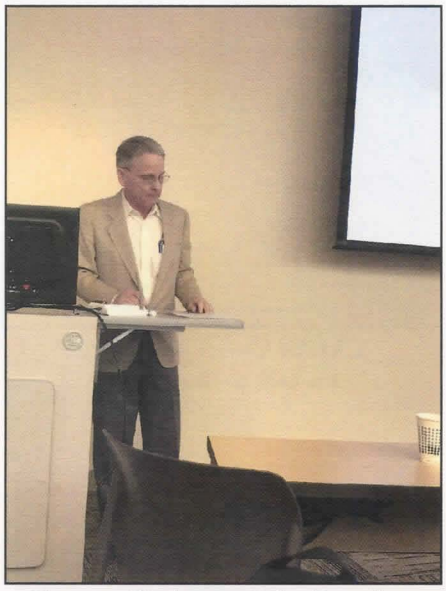


PHOTOGRAPHS OF THE SL SOCIETY ANNUAL BUSINESS MEETING IN STATESBORO, GEORGIA

BY
JEFF SLOTTEN

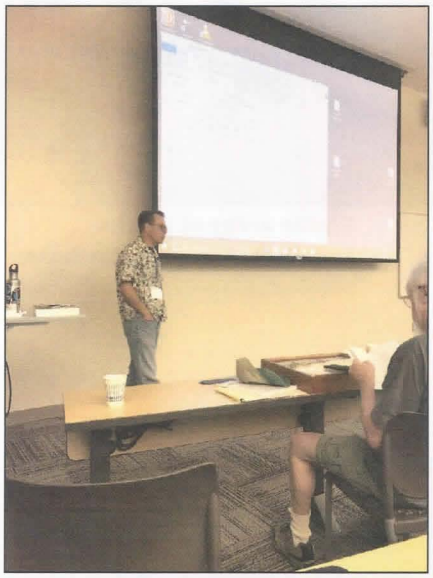


Chairman John Hyatt presiding over the Annual Business Meeting.

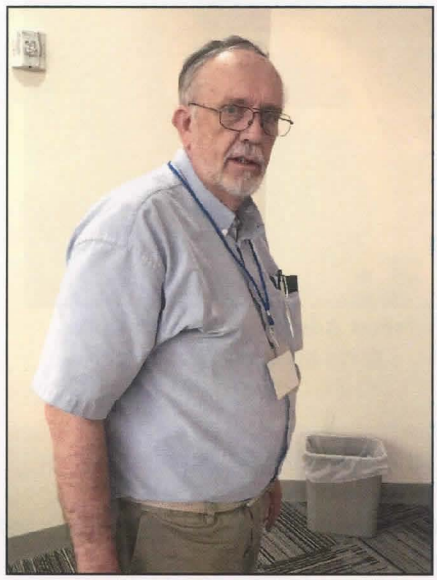


Former Chairman John Douglass talking about Business Matters at the Annual Business Meeting in Statesboro, Georgia.

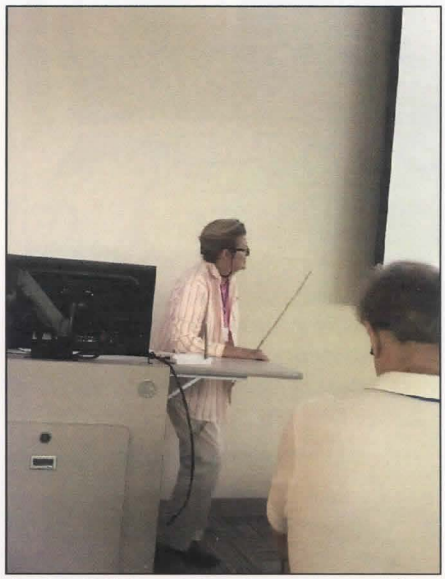
Field Coordinator and Meeting Organizer Lance Durden spreading his knowledge.



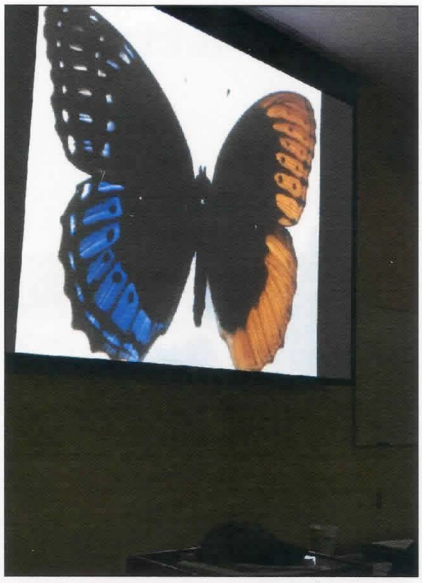
Peter VanZandt presenting his talk on New Zealand lepidoptera.



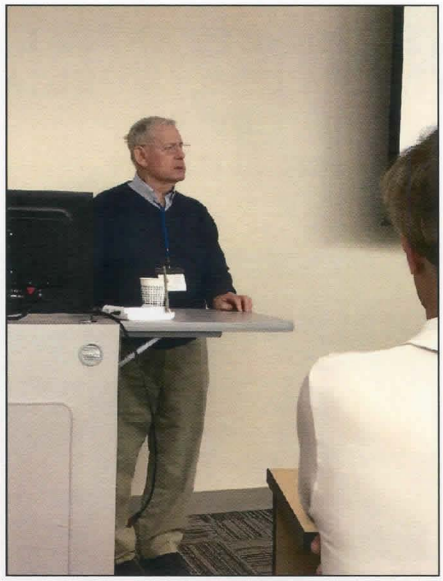
Leroy Koehn ready to give his presentation on bait traps.



Jackie Miller giving her presentation.



Gynandromorph of Speyeria Diana.



Charlie Covell pesenting his talk to the group.

Our joint ATL/SLS Meeting was well attended.

Debbie Albanese (Graduate Student), Lucia Botnaru (Undergraduate Student), and Lance Durden at the registration desk.

James Adams sorting his moths form his blacklight traps.

A wide array of species of moths collected by James Adams.

(Jeff Slotten, E-Mail: jslotten@bellsouth.net)

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APPRAISING THE VALUE OF YOUR LEPIDOPTERA COLLECTION

BY

F. MATTHEW BLAINE

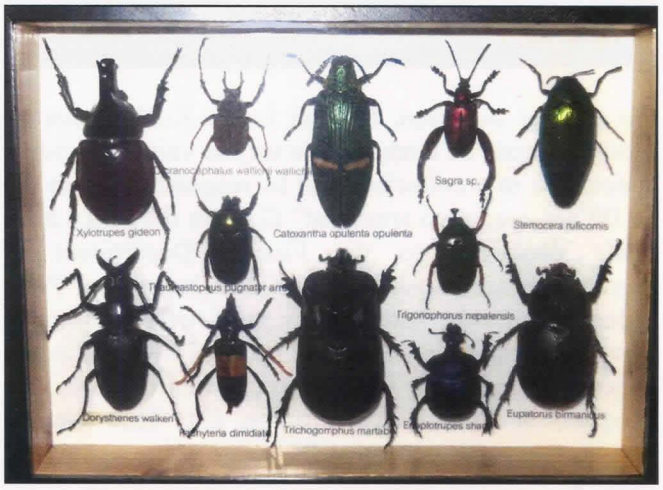
The monetary value of something is determined by how much money it sells for or has sold for in an open market. Appraisers must be knowledgeable about the current and historic prices realized by the objects being sold.

Shells for instance have been bought and sold for hundreds of years in worldwide markets. They are actively sold currently in the United States and around the world in large shows such as the Paris Shell show or the Conchologists of America Annual Convention bourse. In addition there are 20 or more traders and dealers of shells in the United States and around the world. Many shell clubs have yearly shows that also include dealers where shells can be bought and sold. This active market means that there is adequate documentation for current price and historic prices of specific species.

When he decided to donate his massive shell collection to the University of Florida Natural History Museum a few years ago, Dr. Harry Lee had his shell collection appraised by a mutual friend and world renowned dealer, Mr. Don Pisor. Mr . Pisor is a collector, Writer, and dealer, who lives in California and maintains a shell business there. Mr. Pisor once lived in Florida and was a founding member of the Astronaut Trail Shell Club. He now visits Florida almost every year to participate in the Astronaut Trail Shell Club show and other shows in Florida. As you may have read, Dr. Lee is now transporting his massive donation to Gainesville one carload at a time.

To my knowledge, this availability of a market and price information unfortunately is not readily available in the United States for insects. There are markets in Europe, Russia, and Asia that have active trading in insects for collectors where large bourses are held annually. Worldwide there are countries where live beetles are sold, bought, raised, and shown competitively as prized pets but in the United States these activities are not popular or are restricted. Therefore determining a fair market price for insects in the United States is difficult. We do have Bio Quip Bugs where one can buy a variety of dried or live insects and a few shops and museum stores carry insects in frames which are used primarily for decorative purposes.

It is my observation that many insects for sale in the United States are the very colorful, beautiful Lepidoptera or very large insects that are imported. This is what we would call pretty or interesting specimens. I must admit that I have quite a few of these on my walls. One would probably be hard-pressed however, to find a market in micro moths, mosquitoes, or flies among anyone other than collectors with scientific interests in mind. So how do you come up with a fair value appraisal for a scientific collection?



When I sent my first donation of papered butterflies from Sussex County, Delaware collected in the early 70s to the McGuire Center, Dr. Emmel wrote me an e-mail stating: "They were then placed in a secure place in one of our refrigerated collection rooms to be examined on a future visit by Peter J. Eliazar, a biological appraiser, who would supply an official appraisal for you" (1).

On another occasion, I asked Leroy Koehn what he thought would be a reasonable way to value individual specimens in a collection and he responded "I use the $5.00 per specimen appraisal" (2). In the past I have made donations to the Florida Department of Agriculture and Consumer Services Division of Plant Industry. Florida State Collection of Arthropods using a process originally developed by Dr. Howard Vincent Weems Jr. He also initiated the Research Associate Program at the same institution (3). This method involves assigning a specific value to a variety of factors.

An unmounted dried papered specimen with collection data has a $0.50 factor. A pin mounted specimen has a value of one dollar and so on. Extra value is added for specimens on a point or minuten. Value is added for labeling, exotic, spread, identified by authority to genus, and to species … where applicable. Next these are compiled for each specimen to arrive at the value of that insect. Finally everything is added up to arrive at a total value for a group of insects (4). The form also has space or inclusion of drawers, unit trays, and other things that might be included in the donation allowing for an estimation of value to be included (4). Using this process, a spread micro moth in a minuten mounted, labeled specimen identified to Genus is valued at five dollars.

I first used the specimen donation forms for my February 2013 donation and at that time I was told that over the years the use of this form system had worked well. The appraisals reached by it had been unchallenged by the IRS up to that point. There was a second form which required the donor to list by family the total number donated in each family also but the newly revised form does not have that.

In conclusion, I think that Leroy's, suggestion is a very good one and is similar to the Florida State Collection of Arthropods' method with less paperwork. Having a simple system in place by an institution for the use of donors is definitely a positive thing. Of course having someone come to the institution and make the appraisal for the donor is ideal for the donor. Requiring donors to try to find a reliable appraiser to make an assessment makes things much more difficult unless one lives in a place where many insects are bought and sold.

CREDITS:

(1) Thomas C. Emmel – personal e-mail – 31-VIII-2013
(2) Leroy C. Koehn – personal e-mail – 02-IX-2016
(3) Paul Skelly – personal e-mail – 01-V-2019
(4) Paul Skelly – Specimen Donation Estimation Form FDACS – 08076 0909 header update I-2009
(5) Dona Blaine – Proof Reading

F. Matthew Blaine
Curatorial Associate
Delaware Museum of Natural History
Research Associate
The Florida State Collection of Arthropods
Research Associate
The McGuire Center for Lepidoptera and
Biodiversity at the Florida Museum of
Natural History, University of Florida

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YUCCA GIANT-SKIPPER (*MEGATHYMUS YUCCAE*)

BY

VITALY CHARNY

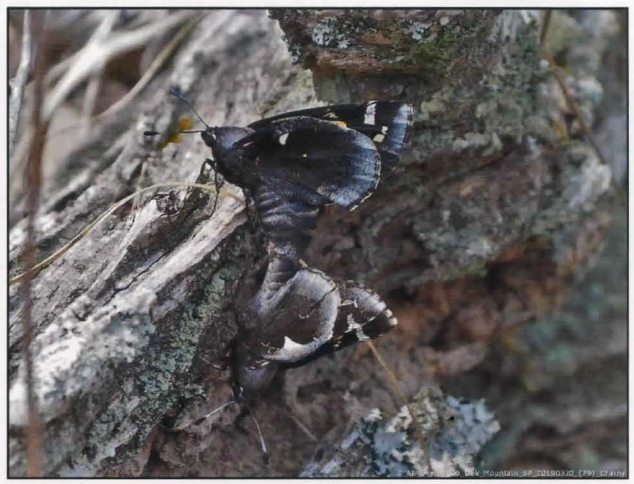
Yucca filamentosa

Tent of Yucca Giant-Skipper

Larissa Charny pointing to the emerged skipper

Female Yucca Giant-Skipper recently emerged

Courtship of Yucca Giant-Skippers



Mating Yucca Giant-Skippers

Larissa Charny recording species and numbers of specimens during the field trip

Oak Mountain State Park, Shelby County, Alabama (March 30, 2019)

(Vitaly Charny, E-Mail: vcharny@aol.com)

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WILLIAM JACOB HOLLAND, A SHORT BIOGRAPHY [1]

BY

J. BARRY LOMBARDINI

William Jacob Holland (1848-1932)

William Jacob Holland was born in Jamaica in 1848. He grew up in Salem, North Carolina, and attended Amerst College earning an A.B. degree in 1869 and then attending Princeton Theological Seminary in 1874. He was a man of many talents: he was the Chancellor of he University of Pittsburgh (1891-1901), Director of the Carnegie Museums of Pittsburgh, an ordained Presbyterian minister, and well known paleontologist and zoologist.

Holland's seminal contributions to lepidoptera include his two books *The Butterfly Book* (1898), *The Moth Book* (1903), and the donation of his 250,000 specimens of butterflies/moths to the Carnegie Museum.

Holland died in 1932.

1) https://en.wikipedia.org/wiki/William_Jacob_Holland

[The next two pages are Plates VIII and IX from *The Moth Book*.]

EXPLANATION OF PLATE VIII

(The specimens figured are contained in the collection of W. J. Holland.)

1. *Samia cecropia* Linnæus, ♂.
2. *Samia rubra* Behr, ♂.
3. *Callosamia angulifera* Walker, ♂.
4. *Callosamia angulifera* Walker, ♀.
5. *Automeris zephyria* Grote, ♀.
6. *Pinconia coa* Schaus, ♂.
7. *Heteropacha rileyana* Harvey, ♀.
8. *Samia columbia* Smith, ♂.
9. *Anisota virginiensis* Drury, ♂.
10. *Anisota virginiensis* Drury, ♀.
11. *Anisota rubicunda* Fabricius, ♂.
12. *Hylesia alinda* Druce, ♂.

Note: many of the scientific names may have changed since 1903 when *The Moth Book* was published.

EXPLANATION OF PLATE IX

(Except when otherwise indicated the specimens figured are contained in the collection of W. J. Holland.)

1. *Telea polyphemus* Cramer, ♀.
2. *Philosamia cynthia* Drury, ♂.
3. *Agapema galbina* Clemens, ♂. U. S. N. M.
4. *Automeris io* Fabricius, ♂.
5. *Automeris io* Fabricius, ♀.
6. *Automeris patina aurosea* Neumœgen, ♂.
7. *Pseudohazis eglanterina nuttalli* Strecker, ♂.
8. *Pseudohazis hera* Harris, ♂.
9. *Zeuzera pyrina* Linnæus, ♂

Note: many of the scientific names may have changed since 1903 when *The Moth Book* was published.

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HISTORIC NUMBERS OF MONARCHS SEEK SHELTER AT ROOST SITES IN THE LAKE ERIE REGION

BY
CANDY SARIKONDA

The monarch fallout which occurred during the weekend of September 7-10, 2018, was truly of historic proportion. Thousands of monarchs were reported roosting at numerous sites from Toronto to Chicago, with countless monarchs sheltering from a powerful storm at roost sites in the Lake Erie islands and along Ohio's Lake Erie shoreline. This once-in-a-lifetime event triggered by remnants of Tropical Storm Gordon sent monarch enthusiasts squealing with delight on social media. The Nor'easter swept through the Lake Erie region during peak fall migration for the monarchs, and sent the monarchs dropping from the sky to seek shelter from the powerful winds and rain that swept through the region.

I raise monarchs from wild eggs I have collected in my northwest Ohio garden. This allows me to be better able to predict the timing and size of the fall migration in my area, based on when my wild-collected monarchs begin to eclose in September. The first week of September 2018 my wild monarchs were eclosing, and I knew peak migration was moving through my area. I carefully watched the weather, and noted the remnants of Tropical Storm Gordon moving through the Lake Erie region. I had also noted reports of large numbers of monarchs being sighted much of the summer and I knew this combination of peak migration, large population size and storm activity had the potential to create large monarch roosts at favored sites in and along Lake Erie. But nothing could have prepared me for just how spectacular this migratory event would be.

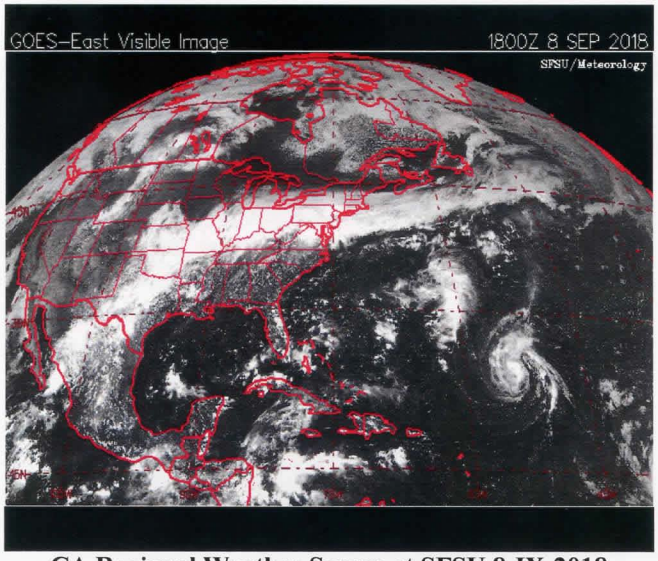
I journeyed to South Bass Island in Lake Erie with my mother and children to document the anticipated monarch roosts. We arrived at Catawba Point the afternoon of Friday, September 7th, and were stunned to learn that the Nor'easter had already moved in quite fiercely, to the point that the Miller Ferry boat captains were warning passengers that they would likely be cancelling ferry service for Saturday evening and Sunday, due to 10 foot waves on Lake Erie and the storm surge created by the powerful winds. We sought the advice of friends on the island, and decided to still make the journey to South Bass Island, just 3 miles off shore. We had to leave our car on the mainland, and journeyed over to South Bass Island as foot passengers on the ferry.

We arrived on the island and my friend DJ Parker gave us his electric golf cart to use. We headed to our favorite chocolate shop and the downtown area for some lobster bisque. As we ate, I noticed only about a half dozen boats in the harbor, the place seemed empty. VERY unusual for a Friday night, and a bit concerning. I checked the radar, and noted rain was headed our way. So we finished eating and headed back to DJ's to spend the night.

Screenshot of meterorologist Ryan Wichman's facebook page during storm (Photo by Candy)

My gut instinct told me the monarchs would be at the lighthouse grounds on the southernmost tip of the island. But I did not want to risk my family getting caught in the rain. So my family stayed at DJ's, and I headed to the lighthouse grounds alone.

As I reached the sunflower field next to the lighthouse grounds, I scanned it for monarchs. I saw 4 monarchs still feeding. It was getting a little dark due to sunset and the approaching storm. I knew the monarchs should be roosting, but I did not see any flying toward the usual spot in the trees next to the sunflower field.



CA Regional Weather Server at SFSU 8-IX-2018 satellite image of Gordon

I headed to the adjacent lighthouse grounds, parked, and stood in the driveway watching for monarchs that were flying toward the line of trees. Nothing was happening near the sunflower field. But out of the corner of my eye, through a gap in the trees, I saw 2 monarchs hovering around the other side of the trees (on the lighthouse side). They flitted along the trees, clearly looking for a roosting spot, and I followed them. They flew further down along the trees, I pursued them, and as I rounded the tree line I was greeted with hackberry and maple trees filled with clusters.

I found 1000 monarchs taking refuge at this location on the leeward side of the trees at the South Bass Island lighthouse grounds. This is the largest number I have documented at this site in 5 years, and I have never seen them roost in this particular location on the lighthouse grounds. But it was a perfect location, warm and sheltered from the sustained 20-30 mph NNE winds which were still increasing. I messaged my friend, Darlene Burgess, who does the monarch counts at Point Pelee National Park. She reported 10,000 monarchs were roosting at the tip of Point Pelee. We were excited.

I continued to observe the monarchs before me. The stable flies were biting me like crazy. I could barely stand to take pictures of the roosts.

The things one does to document monarchs.

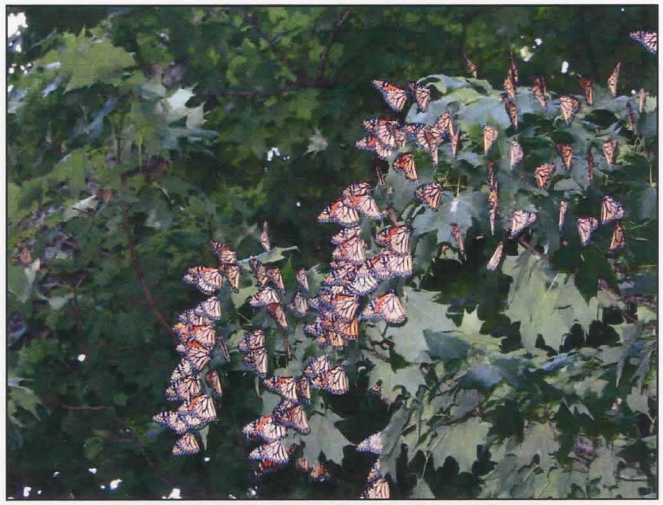
Determined, I texted Jackie Taylor of the Lake Erie Islands Nature and Wildlife Center, and she joined me at the roosts. Her partner is a ferry boat captain, and she warned me that the ferrymen were now saying they would likely stop ferry service after just a few runs in the morning. I needed to leave the island with my family first thing in the morning, or be forced to stay until Monday.

All night I listened to the winds as my children slept.

We got up early the next morning, ate a quick breakfast, and went with DJ to the lighthouse grounds. As expected, the monarchs were still roosting just after sunrise. A few dozen monarchs would erupt from clusters in bursts to the delight of my family, but then quickly returned to the clusters.

We enjoyed them for a bit, but alas we knew we had to leave. Time was running out to get home safely...

September 8, 2018, South Bass Island monarchs roosting in maple tree (Photo by Candy)



September 7, 2018, South Bass Island, monarchs roosting in maple tree (Photo by Candy)

We arrived home, and I watched the roost reports pour in on Journey North and social media throughout the day on September 8th. DJ Parker texted me to say he had a roost of 100 monarchs for the first time ever, in the trees next to his ice cream shop's garden near downtown Put-in-Bay on South Bass Island. Another observer on the island reported seeing 100 monarchs in a roost near

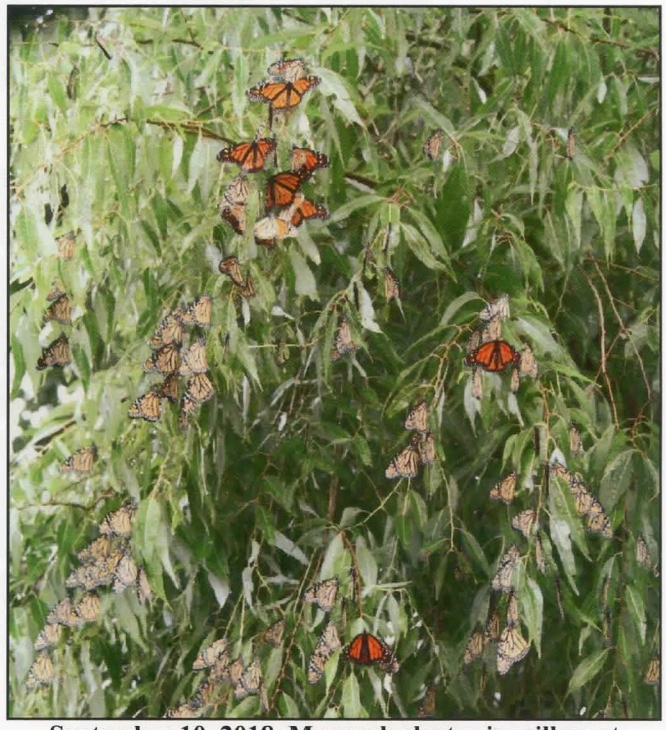
Park Hotel adjacent to the downtown park. Researchers with Pelee Island Bird Observatory reported on their Facebook page that they were seeing "innumerable monarchs" on Pelee Island's West Beach beginning 9-IX-2018, ultimately staying 3 days to ride out the strong winds before leaving their roosts to fly out over Lake Erie. Several observers at Wendy Park, on the Lake Erie shoreline near downtown Cleveland, OH, also reported seeing 1000 monarchs roosting in the trees along the leeward side of the main woodlot and other areas of the park, remaining there through September 9th.

September 7, 2018, South Bass Island, monarchs cluster in maple tree (Photo by Candy)

Tagged monarch YUJ012 by Patrick Hogan

September 9th also saw several more reports. Steve Altic on Kelleys Island in Lake Erie reported seeing 200 monarchs at the southernmost tip of the island, roosting in a birch tree about 50 feet from the water's edge to escape the 25mph winds. A second observer, Bryan Plonski, reported seeing at least 500 monarchs roosting on Kelleys Island from 9-IX-2018 to 10-IX-2018, on the west side of trees away from the strong NNE winds. He was delighted, reporting that he had never seen so many

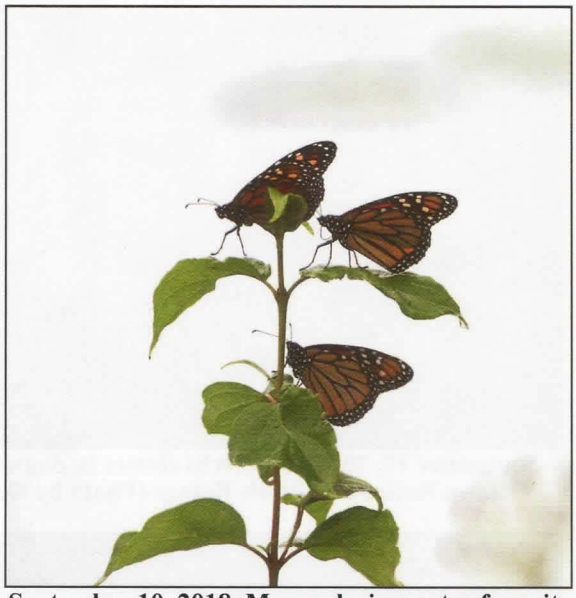
September 10, 2018, Monarchs cluster in dogwood at Ottawa National Wildlife Refuge (Photo by Candy)



September 10, 2018, Monarch cluster in willow at Ottawa National Wildlife Refuge (Photo by Candy)

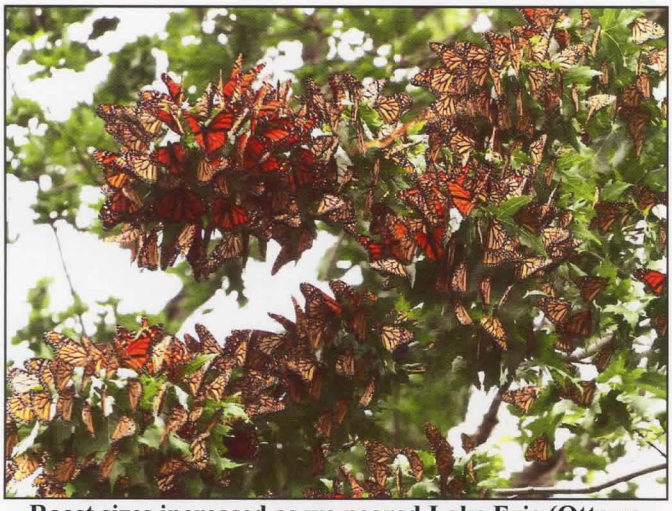
butterflies roosting at this site before. The Lake Erie Islands Conservancy reported on Facebook on September 9th, noting monarchs were taking refuge in several island preserves. "Large concentrations of monarchs were found in large trees out of the wind" near Lake Erie on 8-IX-2018 and 9-IX-2018, including at Scheeff East Point Preserve and Massie Cliffside Preserve on South Bass Island in Lake Erie and at Middle Bass East Point Preserve on Middle Bass Island in Lake Erie. Video and images of the roosts were posted to their Facebook page on September 9th.

Reports continued along Ohio's shoreline. Nothing was more spectacular than the monarch fallout that occurred at Ottawa National Wildlife Refuge in Oak Harbor, Ohio, along the Lake Erie shoreline beginning on

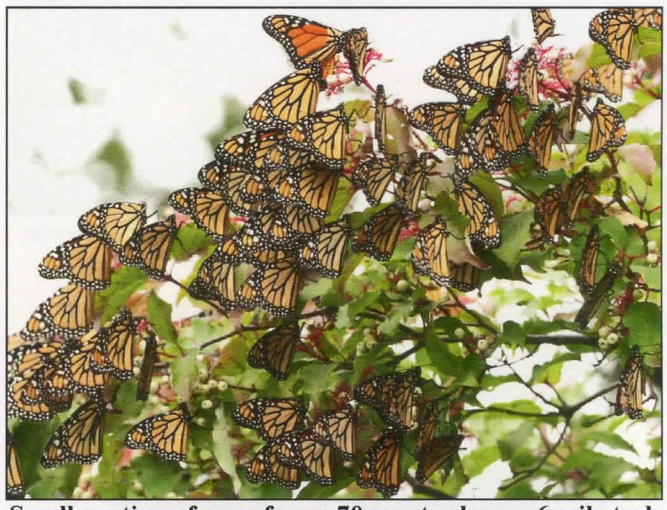


September 10, 2018, Monarch sips water from its body at Ottawa National Wildlife Refuge (photo by Candy)

Monarchs lined up on the leeward side at Ottawa National Wildlife Refuge (Photo by Jackie Riley)



Roost sizes increased as we neared Lake Erie (Ottawa National Wildlife Refuge) (Photo by Jackie Riley)

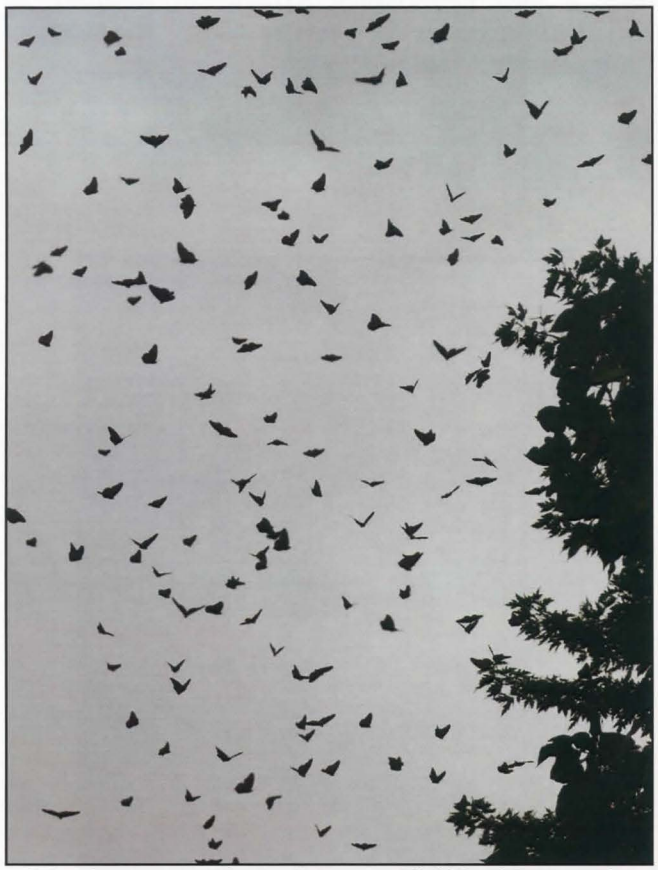


Small portion of one of over 70 roosts along a 6 mile trek (Ottawa National Wildlife Refuge) (Photo by Jackie Riley)

Struggling to gain a foothold in the winds (Ottawa National Wildlife Refuge) (Photo by Jackie Riley)

Holding steady on the nearest plant (Ottawa National Wildlife Refuge) (Photo by Jackie Riley)

8-IX-2019. Refuge staff reported conducting a monarch count from 7-9:30am on 9-IX-2018, during which they counted 30,000 monarchs roosting in trees along the roads on the park's Wildlife Drive. Staff reported, "We are experiencing the remnants of Gordon, so we have strong wind pushing off of Lake Erie (16-20mph) creating a Nor'easter. The water levels are pretty high from a combination of rainfall and lake levels over the past 20 hours. Temps are about 60 degrees F with high humidity. The monarchs are roosting on the western side of the trees out of the wind as much as they can be, but they are still bouncing around like crazy. There are pockets of them low in willows and dogwood, but even more towards the tops of cottonwood and maple trees. They were packed in there so tightly that in spots we thought that the leaves had started to change until we had a closer look! There are also monarchs moving over the marshes in the hundreds…Every tree had monarchs on it, from South Estuary Avenue thru North Estuary Avenue and parts of Veler Road and Trumpeter Trail, and a small section of Stange Road. Absolutely incredible."



Massive roost estimated at over 50,000 with many in motion (Ottawa National Wildlife Refuge) (Photo by Jackie Riley)

Jackie W. Riley of the Ohio Lepidopterists Society also reported from Ottawa National Wildlife Refuge later that same day (9-IX-2018). Riley reported viewing monarchs from 2-4:15 pm at the refuge, and at first

Monarchs roosting in Ottawa National Wildlife Refuge (Photo by Douglas Brockway)

estimated seeing approximately 2 million monarchs. She later revised her estimate to 200,000 after counting monarchs from over 400 photos she had taken during that 2 hours. Her photos were instrumental in documenting the magnitude of the event. This was truly a remarkable fallout of monarchs, nothing close to this has been seen since 96,000 monarchs were recorded at Point Pelee on September 6, 1993, including two overnight roosts of 7,500 and 3,000 individuals [cited in Wormington, A. 1994. A mass migration of Monarchs at Point Pelee, Ontario. pp. 26-27. In Hanks, A. J. (ed.), Butterflies of Ontario and summaries of Lepidoptera encountered in Ontario in 1993. Toronto Entomologists Association Occasional Publications 27-95.]

Riley reported, "There were many independent roosts, but outstanding were the wooded stretches along the dike roads that held mega roosts with strands of smaller roosts that continued for many yards. Six different dike roads were involved. I was at the refuge the day before (Saturday 8-IX-2019), and saw NO roosts. However, there were reports of some smaller ones. So, in 24 hours, the roosts went from some, (I think it read a count of 1,000 individuals or more) to the exponential numbers that I saw."

Riley further stated, "I would guess there were 50 roosts (several dozen). I stopped counting the roosts after the first 12 and figured I was less than one-third the way through the refuge auto-tour. The bulk of the roosts were further north which was the last two-thirds of the tour. Roosts were spread out and thin for the first one-fourth to one-third of the tour…The massive roosts were at one point 100 feet off the lakeshore that had pounding waves and 35mph+ sustained winds. All the monarchs were on the leeward side of the woods that sat between the road and the shoreline. A perfect scenario for them to find shelter immediately coming in off the lake. Weather notes for 9-IX-2018: 2 pm-4:15 pm is when I saw them, 63F, 100% sky cover, raining at

4:15pm. Winds over the lake were at least NE 35mph sustained. Winds inside the refuge ranged from NE 10-25 mph depending on location. I believe the overnight temps were in the mid-high 50Fs with rain in the a.m. through 12pm." Riley noted there were fields of sunflowers and a small amount of goldenrod available for nectaring along the Wildlife Drive.

Notably, Patrick Hogan of Tomahawk Archers and Douglas Brockway of Ottawa National Wildlife Refuge (ONWR) both separately found a tagged monarch at ONWR during the weekend storm. The monarch was tagged with the code YUJ012 and was originally tagged 4 days earlier in Waterford, PA, on 5-IX-2018. This monarch's likely southwest trajectory along Lake Erie's southern shoreline, unexpectedly moving west to northwest in the last leg of its flightpath, was likely due to the strong NNE winds moving through the region as Tropical Storm Gordon remnants moved through the area. Doug stated, "I have been coming to ONWR for over 60 years, and never before in my lifetime have I seen this many monarchs."

By September 10th, the Nor'easter was moving out of the Lake Erie region. The sun emerged and it quickly began to warm up. I had been unable to visit Ottawa National Wildlife Refuge on 9-IX-2018, but I rushed to the refuge early in the morning on the 10th. It was still rainy and a little cool when I arrived, and the rangers kindly arranged to shuttle visitors out to the monarchs. It continued to warm up as we waited for the shuttle, with light winds around 8-10 mph at times. We left at 10:30am, and air temperatures were 58-62F at that time. Clearly, these temperatures were above flight threshold. As a result, most of the monarchs were gone by the time we reached the roosting sites, with only around 1000 monarchs left, scattered along South Estuary drive. I captured a few dozen photos and it was wonderful enjoying the company of fellow monarch enthusiasts, despite the near constant drizzle. I figured the monarchs would head for fields with large numbers of wildflowers to feed (nectar source). I later found some monarchs in the meadows surrounding the nature center, and a small roost was forming in the line of cottonwood trees across from the barn. But it was clear—the improving weather meant the monarchs would now resume their journey south. Subsequent posts on Journey North and social media indicated the roosts were breaking up throughout the region, and our adventure was over.

The weekend's historic monarch migratory event was truly a once-in-a-lifetime experience, resulting in cherished memories for years to come. Remarkable. Unforgettable. Historic.

https://www.flickr.com/photos/candy__kasey/albums/72157700912789324

Monarchs roosting in Ottawa National Wildlife Refuge (Photo by Douglas Brockway)

One of the largest roosts observed at the Ottawa National Wildlife Refuge (Photo by Jackie Riley)

(Candy Sarikonda, E-Mail: koundinya@buckeye-express.com)

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SOUTHERN LEPIDOPTERISTS' SOCIETY
2019 ANNUAL MEETING MINUTES

The meeting was called to order by SLS Chairman John Hyatt at 4:30 pm on Saturday, April 6, at Georgia Southern University in Statesboro, GA. An agenda was handed out.

Reports:

Secretary – It was noted that the minutes of the most recent meeting in September, 2017 have been published. The published minutes were approved as written.

Treasurer (Jeff Slotten) – As of December 31, 2018, the society had 173 members. We started the year with slightly over $15K on hand, and ended with slightly more than $13K. Expenditures exceeded income by about $2K. Although the Society is solvent at the moment, we will face financial difficulties in about 6 years barring any changes. James Adams suggested making changes to the newsletter to save money, such as making electronic delivery of the News available, perhaps as a PDF file. Leroy Koehn offered to talk to Barry about possible changes in font or format. Gifts are helping meet expenses. It was suggested that the Society add higher donation categories above the Benefactor level.

Membership – It was observed that our membership is ageing, and ways were discussed to increase membership by younger people. James Adams suggested that we solicit donations to be earmarked for providing 1 year student memberships to be conferred by SLS members to interested students. John Hyatt agreed to write a short appeal for such donations in the News.

Field Coordinator (John Hyatt) – A report on the July 2018 field meeting in east Tennessee was given. The Spring field meeting will be at Sapelo Island, GA, on April 26-28.

Old Business:

Abbot Award changes: John Douglass explained changes in the Abbot Award process. Henceforth only a single awardee will be nominated at a time. Two awards will be presented this year, to Debbie Lott and Harry Pavulaan.

Changes to the method of electing officers – It has been suggested that all members be given an opportunity to vote in elections of officers, rather than our long-standing rule that only members present at the annual meeting may vote. Such a change would require amending our Constitution. The floor was opened for discussion. A motion was made and seconded that the Constitution be amended in Article 5, Section 3 to read that officers "*shall be elected by ballot vote by members in good standing*". The motion was passed. Subsequent to the meeting, a vote of the Board approved the amendment by greater than the required 3/4 majority, and the Constitution was therefore amended. The new voting procedure will be used for the election of officers starting with the 2021 election.

Changing the time of elections was briefly discussed, but no motion was forthcoming.

There was also discussion regarding the mechanics of carrying out future elections; electronic balloting and paper balloting via an insert accompanying the annual dues notice were considered.

It was concluded that the balloting method can be decided prior to the 2021 election.

New Business:

Special Thanks – The Society's appreciation was extended to meeting organizer and host Lance Durden and his assistants, and to our appointed officers. A special letter of appreciation to Editor Barry Lombardini was signed by all the members in attendance.

Election of officers – No nominations being made from the floor, ballots listing the names of those chosen by the Nominating Committee (with space for write-in votes) were distributed. The officers elected for the 2020-2021 term were: Chairman, Lance Durden; Secretary, Laura Gaudette; Members at Large, David Fine, Riley Gott, and Steve Mix.

No changes in appointed officers were made. James Adams stated [perhaps tongue in cheek] that Jeff Slotten should be Treasurer for life.

Changes to the Constitution – John Douglass and John Hyatt have made a number of non-substantive changes (i.e., correction of typos, consolidation of format/style differences). These were presented by John Douglass. A motion was made, seconded, and passed stating that non-substantive changes to the Constitution may be made by the Chairman without going through the amendment process.

John Douglass then presented a proposed amendment adding Articles 11.2a and 11.2b to the Constitution. This proposed amendment was published in the December 31, 2017 News, and has been approved by more than 3/4 majority vote of the Board. The amendment had not been voted on by the membership at an annual meeting. A motion that the amendment be accepted was made, seconded, and passed. A revised edition of the Constitution as amended and corrected will be made available on the Society website.

Meeting adjourned at 5.55 pm.

Respectfully submitted,

Charles Watson, Secretary *pro tem*

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Photo and Legend by Matt Blaine

Early one morning last week I took a walk out to the garden to see if any of the seeds that I planted a few days before had come up yet. When I walked past the grape vines I was stunned by what I saw. On one of the vines there was a ring of water droplets around the edge of each of the new grape leaves. The droplets were glistening in the early morning light. So beautiful that I ran back into the house and got my camera and was lucky enough to get back in time to take a photograph. I have had grape vines in the same location for 46 years now and this is a first.

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FERRELL C. MARKS, MY DAD AND MY BEST FRIEND
BY
CRAIG W. MARKS

After several months of failing health, my father, Ferrell C. Marks, passed away on May 5, 2019. He was 87. My Dad has been a member of SLS for several years, and I would like to use this forum to pay tribute to him. I grew up in the unincorporated neighborhood of Whitehaven, south of Memphis, Tennessee and just north of the Mississippi state line. My Mom, Janice G. Marks, and Dad had moved to Memphis in the late 1950's from central Oklahoma in furtherance of my Dad's work.

My Dad was born on a farm (the "old Waller place"), outside of Edmond, Oklahoma. As a boy, he loved being outdoors, fishing, hunting and hiking. My brother, Gary, and I grew up hearing stories of his youth in Oklahoma. He raised, for sale no less, skunks, as well as homing pigeons. He had one special pigeon that would follow him as he rode his bike. One extremely bitter winter, while hunting in the snow and ice, he came upon the one and only snowy owl he ever saw. He speculated it was a young owl that had traveled far from its typical range to avoid the frigid winter further to the north. He talked about that owl well into his 80's. Wild creatures always held a special place with him.

After high school, he attended college at Oklahoma A&M (now Oklahoma State) where he studied to be a forest ranger, but marriage and then two sons required a change of those plans. He once got in trouble for having rattlesnakes in his dorm room while in college. He had caught the snakes over a weekend and had to store them in his room until the Biology department opened Monday morning. The story was that his roommate took exception when one snake escaped for no more than a few minutes.

When the reality of life sent him to Memphis, working as a sales representative for 3M, he still retained his love for the outdoors. As a result, it wasn't long before first he, and then my brother and I with him, were exploring locations in the Memphis area where we could experience nature and share that love of the outdoors. His stories about hunting and fishing, taught my brother and I to respect our environment and its non-human inhabitants.

One of our favorite places to go was Shelby Forest about which I have previously reported [SLS News, Vol. 36, No. 2 (2014)]. During quail season one year, we were hunting there in Shelby Forest when a bird suddenly exploded straight up out of the high grass. Even to my inexperienced eyes, I sensed this bird was different. The hunter in my Dad reacted without hesitation, and the bird was dropped by a remarkably good shot.

First row (seated) Craig Marks (Son), my Dad, Gary Marks (Son). Back row (standing) Brett Marks (grandson), Veasey Nevitt (Brett's significant other), Mattie Marks (granddaughter, holding Hudson), MaryAnn Marks (my wife), Ben Lehrer (Elyse's husband), Elyse Marks (granddaughter), Wyatt Marks (grandson), Kelsey Melancon (Wyatt's finance), Leanne Marks (Gary's wife), Mitchell Marks (grandson), Becca Marks (Mitchell's wife).

No sooner had the bird hit the ground than my Dad's smile turned to a frown. It was not quail; rather, it was a woodcock. Now, I don't remember if it was the first one he had seen in Tennessee, but I know it was the first one I had seen. My Dad agonized over his mistake (it was not woodcock season). He explained that while his was an honest mistake, as hunters, it is our responsibility to know what we are shooting before doing so. He had not done that. Another life lesson learned about respect for the natural world in which we live.

I have another story from my youth in Memphis. During the 1960's segregation was the rule there, in schools and in housing/neighborhoods. Despite that prevalent mindset, my Dad taught us what words were disrespectful, and what words were absolutely forbidden. He did not use those words, and they were not allowed in our house.

One winter evening, while driving in a snowstorm, my Dad discovered a car in the ditch (it didn't snow a lot in Memphis, and people were not particularly experienced driving in such conditions). He stopped and discovered a woman with small children huddled inside the car. Keep in mind this was many years before cell phones, so my Dad got everyone into his car and drove them to the location where the woman had requested she be taken to

get help. The woman was an African-American, and the drive took us into a section of town in which we would not have otherwise ventured, yet he never hesitated.

Nothing in particular was said at the time, but later my father told me, as Paul Harvey used to say, "the rest of the story." Specifically, one afternoon back in Oklahoma when he had just started as a young salesman for 3M, he had a flat on a dusty country road. He was wearing a suit at the time. As he was standing there getting ready to change the tire, a truck pulled up, and three American Indians got out. They insisted that he stand in the shade while they changed his tire, noting that he shouldn't get his nice suit dirty. So, his explanation to me was very simple: people are people, and we should help each other.

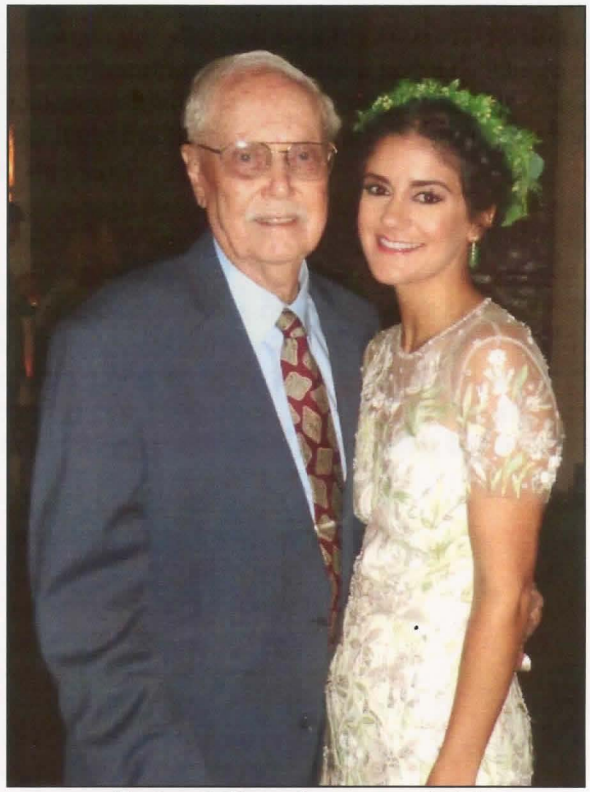
My Dad had run track in high school and then on scholarship at Oklahoma A&M. I had played baseball and basketball in grade school, but when I started high school, I went out for track and, to my surprise, experienced some success as a distance runner. Later, my brother ran a little but became an exceptional high school wrestler. Throughout our high school careers, our Dad was at every meet he could make. Keep in mind he was basically a traveling salesman selling 3M "Scotch" tape around the Mid-South. At least two nights a week he was out of town, but he always managed to show up when we were competing.

I recall one meet my junior year that he simply could not make. As I stated, we lived in what was known as south Memphis. This meet was in east Memphis, probably a 30 minute drive from our house. Yet, while I was warming up, I saw my Mom in the stands. During my races I could hear her yelling for me. Afterwards I asked why she was there. Now, it wasn't unusual for her to come to a home meet, but this was out in east Memphis. She told me that Dad had told her that "someone needs to be there," that it was important someone be there. Another lesson learned, and the best explanation I can give for why I travel without hesitation to such out of the way places as Cleveland MS and Livingston Alabama to "be there" for my daughter, Mattie.

After I began to "chase butterflies" again, he and I made several trips during which we were able to combine his love of American history and our love of wild places. We traveled to the Little Bighorn Battlefield in Montana twice (once with my son, Brett), the Rosebud Battlefield twice, the Black Hills and Wounded Knee, Palo Duro Canyon/Battlefield and several locations in the mountains of Colorado and Wyoming (once with my daughter, Elyse, my oldest daughter). In each location, he not only tolerated my butterfly searches but actually went with me and began to learn what we were seeing. When we visited the Rosebud Battlefield, there were no interpretive signs or markers. Using the drawings and pictures within the two books we had on that battle, we walked around and convinced ourselves we were able to identify where various aspects of the battle occurred. When we returned a few years later there was a tour group present so we "blended in" and followed the group. What we learned was that our prior efforts to lay out the battle were completely incorrect. In fact, where we thought the battle occurred was far to the rear of Crook's position. We were not even close, and he laughed at our presumptuousness.

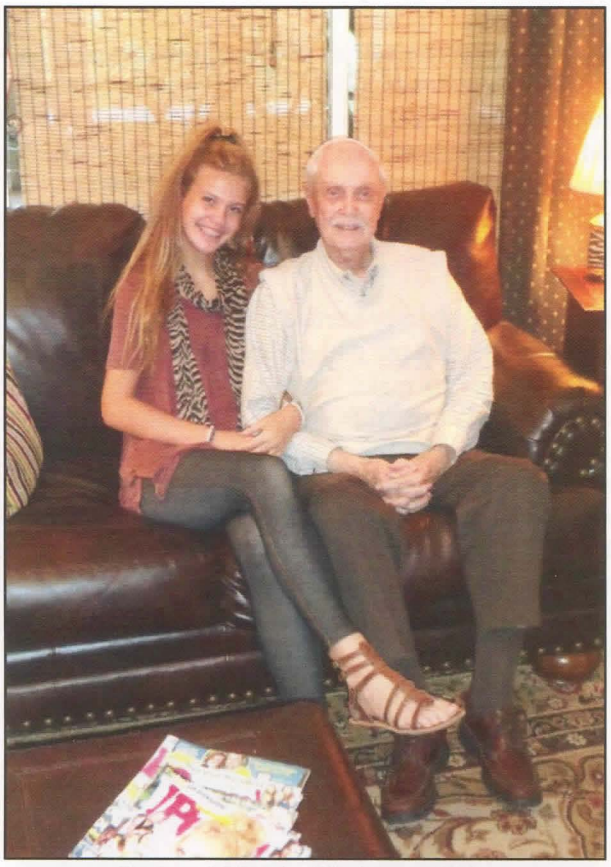
One of his favorite stories involved the trip with Elyse to Colorado and then Wyoming. We were camping in a remote campground north of Laramie, at altitude. My Dad liked pancakes, and he loved Bisquick Shake and Pour pancakes. So, when camping, he always had a supply of those yellow plastic shake and pour bottles with the blue tops.

This day I had already headed out of our camp to search for fritillaries. As my dad grabbed one of those yellow plastic bottles to make some pancakes, he shook the bottle slightly to the loosen the powder inside. Apparently, due to the altitude, pressure had built up, and the blue top suddenly "popped off," sailing about 20 feet straight up. As the top gently floated back to earth, Elyse, unfamiliar with Bisquick Shake and Pour pancakes and with all the innocence of youth, asked, "Does it always do that?" He always giggled when he told that story.



Dad and Elyse, September 2116

He also started participating in one of my annual NABA Butterfly Counts, Rick Evans/Grandview Prairie WMA near Hope, Arkansas. About a four-hour drive from Memphis for him, we would meet the day before and have dinner. On the day of the count, I would place him at a shaded spot near a large stand of purple cone flowers, known as an excellent spot to see Dianas (particularly males) and Great Spangled Fritillaries, and he would keep count of what came by him. Now, we are talking about June and sometimes July, in southern Arkansas, but no matter how hot, he came.



Dad and Mattie, Christmas 2015

He actually began to know his butterflies quite well. One time he packaged and sent to me a male Great Purple Hairstreak that he had taken away from a crab spider in his front yard because he knew those hairstreaks are unique. He also used to laugh about the fact that he had seen a Gold-banded Skipper there in his garden in Memphis and, at the time, that was a species on my wish list that I had not yet seen.

After my Mom passed in 2013, my Dad moved to Louisiana in 2014. The last two trips we took were both back to Oklahoma. One was to see his relatives that still lived there. The second was for his 50th high school reunion. On each occasion, the time spent driving was filled with stories about our family's history [see my article in the SLS News, Vol. 38, No. 1(2016)]. On both trips we again mixed his love of American history with my love of butterflies. On the first trip we visited the Washita Battlefield and the Antelope Hills. On the second trip, we went back to the Washita Battlefield and then turned southeast to the Wichita Mountains.

Once he moved to Louisiana, he was surrounded by grandkids that, before the move, he would only get to see a couple of times a year. Brett and Mitchell, Gary's oldest son, would visit and they would spend time together talking about hunting and guns. My other nephew, Wyatt, Gary's youngest son, was a pitcher for the University of Louisiana Lafayette, and Dad enjoyed immensely going to all of ULL's games, not just those in which Wyatt pitched. At the same time Mattie, my youngest daughter, was playing high school and select soccer so he had soccer games to attend virtually all year. Also, before she started driving, he would pick Mattie up after school and then chauffeur her around to get ice cream or some other snack. Only Elyse was missing, attending grad school at Columbia in NYC and then finding employment there [see my article in the SLS News, Vol. 33 No. 3 (2011)]. While he missed Mom tremendously, his days were filled with family, and family was more important to him than all else.

After his move to Louisiana, it was my practice to call him each day, sometimes several times each day. Old habits are old to break, and, about one week after he had passed, when Mattie made a summer league semi-pro soccer team comprised of college level players, my very first impulse was to grab my phone to tell Dad. One final life lesson, don't take the little things for granted. They may not seem so little when they are gone.

Bye Dad, thanks for everything.

(Craig W. Marks, E-Mail: cmarks@landcoast.com)

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SLS-ATL ANNUAL MEETING, APRIL 2019

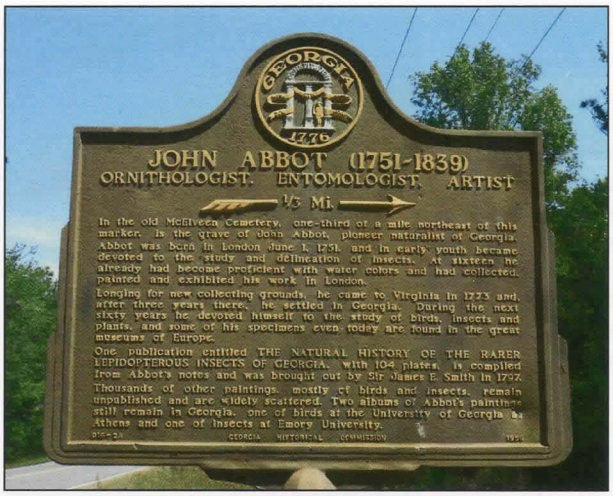

Fig. 1. Georgia Historical Society marker in Bulloch County commemorating the life of pioneer naturalist John Abbot (Photo by Debbie Matthews).

Fig. 2. Memorial with bronze-relief portrait marking the burial place of naturalist John Abbot, Bulloch County, Georgia (Photo by Debbie Matthews).

Fig. 3. Bulloch County, Georgia, final resting place of naturalist John Abbot and site of the 2019 SLS-ATL Annual Meeting [https://secretmuseum.net].

Fig. 4. Debbie Matthews and Jackie Miller (recipients of the Abbot Award in 2019 and 2005, respectively) pay their respects at the gravesite of naturalist John Abbot (the award's namesake) in Bulloch County, Georgia, April 2019 (Photo by Terry Lott).

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APPRECIATION EXTENDED TO DEBORAH L. MATTHEWS

Fig. 1. In recognition of her academic achievements, years of devoted service to the society, and generous mentoring of others, Debbie Matthews is presented with the Abbot Award by SLS Chairman John Hyatt at the annual SLS-ATL dinner in Statesboro, Georgia, April 6, 2019. Harry Pavulaan (Herndon, Virginia) and Debbie each received the award by unanimous acclamation of the members present at the 2019 SLS Business Meeting (Photo by Riley Gott).

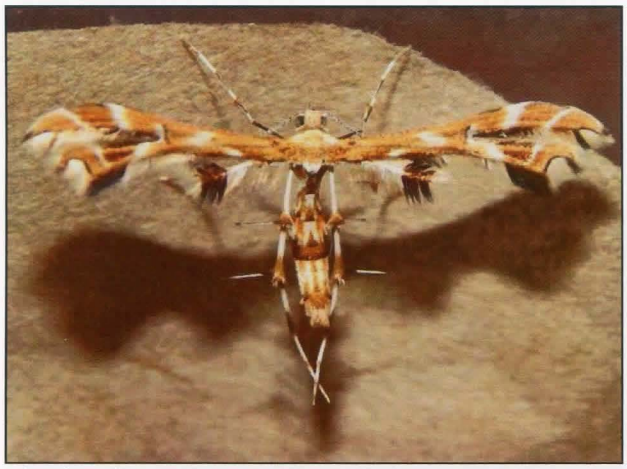

Fig. 2. Grape Plume Moth, *Geina periscelidactylus*, Missouri (Photo by Kevin Firth, http://springfieldmn.blogspot.com).

Fig. 3. Miami Blue, *Cyclargus thomasi bethunebakeri*, freshly-emerged female (Photo by David Fine, www.keysmoths.com).

Fig. 4. Deep Yellow Euchlaena, *Euchlaena amoenaria*, North Carolina (Photo by T. DeSantis, http://dpr.ncparks.gov/moths).

MARIUS HAIRSTREAK (*REKOA MARIUS*) LIFE HISTORY

BY
BERRY NALL

In the summer and fall of 2008, Marius Hairstreaks were consistent visitors to my yard and the females were regularly laying eggs on my Esperanza (*Tecoma stans*) and Duranta (*Duranta erecta*) bushes. I decided to try to raise some after I realized that most of the caterpillars were disappearing and probably being eaten by various insect predators.

Marius Hairstreak egg on Duranta, 27-X-2008.

The Marius larvae eat flower blooms. I began with half-grown caterpillars from the Esperanza plant, as these plants had large blooms in plentiful supply. I added a fresh bloom or two each day to the container, and this method worked well. I raised 3 of 5 caterpillars to maturity. One that died appeared to me to be dehydrated; the other simply stopped moving after I moved it from one flower to another.

Caterpillar on 2nd day (29-X-2008); note damage on bud above the caterpillar and droppings at bud's base. The caterpillars eat round holes into the flower buds.

After I had gained this experience, I decided to try to raise a Marius from the egg. I wanted to be able to leave the young caterpillars on the same plant for several days, at least. I chose Duranta as the host because the cut flowers seemed to keep better than those of Esperanza. Also, I knew the larvae would take the color of their food, and I wanted to be able to compare larvae from different hosts. A comparison of Marius Hairstreaks at various stages raised on different hosts can be seen on page 145.

5-XI-2008: caterpillar is 9 days old and showing purple from the Duranta flowers.

After two eggs I was monitoring hatched, I cut the flower stems and placed them in a small cup of water that was covered with plastic wrap. I then inverted an empty mayonnaise jar over the stem. (I have learned the hard way that caterpillars will climb off a host plant, or climb down a plant stem and drown. Now, when I use water to keep a host plant fresh, I strip the stem and push it through the plastic wrap — see the 18-XI-2008 picture. If done properly, the caterpillar is isolated from the water. If not done properly, it can still drown itself.)

13-XI-2008: Both caterpillars are 17 days old; the one on the right (the focus of this study) is maturing noticeably faster than the one on the left.

When the first stem showed signs of wilting, it was time to move the caterpillars. I fixed a new stem. I decided after I lost that caterpillar on Esperanza that it was better not to handle the small larva, so I cut away as much of the old stems as possible and laid the old on the new. The next day the caterpillars had moved to fresh flowers.

18-XI-2008: The caterpillar sewed together two leaves to form a resting place. This is the only time I have observed this behavior, and it only used the "tent" 3 or 4 days.

At one point, one of the caterpillars looked to me as if it might be showing signs of dehydration. I did not want to mist the plants (because of a bad experience with other caterpillars). Since the only natural moisture the caterpillars might receive was from dew, I began to occasionally replace the flower stems in the morning when the new flowers would be dew covered. This seemed to work well. To avoid the formation of mold, I would either vent or replace the mayo jar when it was covered with moisture.

21-XI-2008: 25 days since eclosing from the egg.

I generally keep my caterpillars on the porch, where they experience the normal environment but are protected from extreme weather. Temperatures dropped into the low 40s while the larva were growing, and stayed in the low 40s for a couple of days while they were pupating. They did not seem adversely affected.

27-XI-2008: The mature caterpillar is ready to pupate.

29-XI-2018, 1-XII-2008, and 23-XII-2008 respectively: the pupa took four days to develop and was fully formed 33 days after eclosion. The butterfly appeared ready to emerge after 22 days in the pupal stage. However cool weather delayed it until Christmas day.

Between 12:00 and 12:30 on 25-XII-2008 the butterfly emerged. Its wings are still wet. Notice the purplish sheen on the wings of the fresh Marius.

1:02 p.m. on Christmas Day:
The newly emerged butterfly is ready to fly.

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Marius Hairstreak (*Rekoa marius*) in the SLS NEWS. The original publication on the internet is listed: http://leps.thenalls.net/content2.php?ref=Species/Theclinae/marius/life/marius_life.htm

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COMPARISON OF MARIUS HAIRSTREAKS (*REKOA MARIUS*) RAISED ON ESPERANZA (*TECOMA STANS*) AND DURANTA (*DURANTA ERECTA*)

BY

BERRY NALL

Caterpillar on Esperanza, 20-X-2008.

Caterpillar on Duranta, 26-XI-2008.

Caterpillar on Esperanza, 25-X-2008.

Caterpillar on Duranta, 4-XII-2008.

(All Caterpillars found and raised in Starr County, TX)

Fresh male raised on Esperanza, 17-XI-2008.

Fresh female raised on Duranta, 25-XII-2008.

Both of these females emerged and were released on 13-XI-2008. The upper butterfly was raised on Eperanza; the lower, on Duranta; I wondered if the hostplant might affect the adult's color, but the 25-XII-2008 (page 145) butterfly suggests otherwise.

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint the comparison of the Marius Hairstreak (*Rekoa marius*) raised on Esperaza and Duranta in the SLS NEWS. The original publication on the internet is listed as Berry's Butterfly Photos and the webite is: http://leps.thenalls.net/content2.php?ref=Species/Theclinae/marius/life/marius_comp.htm

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A Marius caterpillar found by Berry Nall on *Bauhinia mexicana* (July 4, 2013), Falcon Heights, TX); it nicely complements those feeding on Duranta and Esperanza.

SHADOWED HAIRSTREAK *(MICHAELUS IRA)* LIFE HISTORY

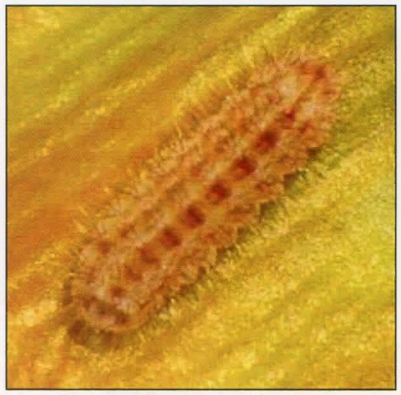
BY

BERRY NALL

Shadowed Hairstreak was first reported in the U.S. in Harlingen in 2015, by Mike Rickard. In the fall of 2017, Linda Cooper recorded the first one in Starr County at Falcon State Park. At the same time, the butterflies were regularly sighted along the Bentson Wall in Mission, where they were breeding on Esperanza (*Tecoma stans*). As opportunity presented itself, I made several brief stops at the wall in hopes of photographing the hairstreaks, but I never found any. On the Friday after Thanksgiving I was able to spend a day in the field with friends from Indiana. We spent a good portion of the afternoon looking for Shadowed Hairstreaks, but struck out yet again. We did find abundant Marius Hairstreaks. A couple got our attention because they seemed to have dark eyes, rather than the typical grey. When I later looked at photos, they were clearly Marius, but at the time I wasn't 100% certain. When it was nearly dusk, I saw what I took to be a dark-eyed Marius lay an egg near the top of an Esperanza bush. I decided to rear the caterpillar to make sure it was Marius. So, in a case of mistaken identity, I actually collected a Shadowed Hairstreak egg – and got my first look at an identifiable adult when when it emerged in January.

Egg, 25-XI-2017

First instar, 29-XI-2017



Probable second instar, 2-XII-2017

Entry hole with silk

In flower; note red streaks on caterpillar and on flower

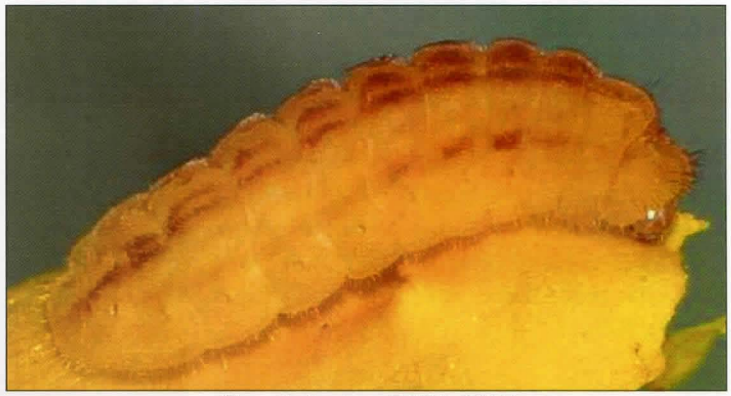
Probable third instar, 4-XII-2017

The egg was deposited on a sprig of small flower buds. When the caterpillar emerged from the egg, it clearly was not happy with these buds. I found it off plant; when I placed it on the plant it wandered around. This was my first clue that it might not be a Marius caterpillar. I also could see the caterpillar looked different after I photographed it. I knew from Bill Beck that the Shadowed Hairstreaks liked to eat inside larger flowers. On a hunch I offered one, and the next day it was inside that flower. The hole made when it entered the flower was not silked over, but subsequent holes were. Bill's excellent observations were a great help to me and were published in the News of the Lepidopterists Society (Vol. 60, No. 1: Spring, 2018).

Because the caterpillar was for the most part inside a flower, I did not observe any molts. Therefore, my identification of the second-and

third-instars is only a guess based on size and appearance.

The egg was deposited on November 24; the caterpillar emerged November 29. It pupated about 2 weeks later. The adult emerged January 13, but was not released until several days later due to a cold front.



Fourth instar, 7-XII-2017

Pupa, 20-XII-2017

Fresh adult Shadowed Hairstreak, ventral view, 17-I-2018

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RED - BORDERED METALMARK (*CARIO INO*) LIFE HISTORY

BY
BERRY NALL

I obtained several Red-bordered Metalmark eggs from a captive female. The host was Desert Hackberry, *Celtis ehrenbergiana.* Two eggs eclosed after six days, and I was able to rear one of the caterpillars successfully.

Eggs, 5-XI-2013

Recently emerged caterpillar, 13-XI-2013

The larvae were tiny, slow-moving and slow-growing. The study caterpillar took 9 days just to enter the second instar. At that time I noticed it made a silk pad that it would rest on. It would scrape the leaves when feeding, rather than eat holes in them. Beginning in the second instar, and increasingly with each molt, nodule appeared on the head of the caterpillar. By the time it was fully grown, it appeared to have wig on its head! In the closeup below, the caterpillar is in the fourth instar. You can see the normal caterpillar head below the "bangs", and the mop of yellow nodules above.

First instar, 16-XI-2013

Second instar, 24-XI-2013

Face of Red-bordered Metalmark

Third instar, 30-XI-2013

In the final instar only, the caterpillar sewed two leaves together to make a shelter. It was about 1.3 long cm when fully grown, pupating 30 days after eclosing. The adult emerged 15 days later.

Fourth instar, 4-XII-2013

Fifth and final instar, 9-XII-2013

Pupa, 17-XII-2013

Fresh Red-bordered Metalmark, 28-XII-2013

Falcon Heights, Texas, 25-VIII-2007

Red-bordered Metalmark, 25-VIII-2007

The SL Society and the Editor thank Mr. Berry Nall for allowing us to print his life history of the Red-bordered Metalmark (*Cario ino*) in the SLS NEWS. The original publications on the internet are listed:
http://leps.thenalls.net/content2.php?ref=Species/Riodinidae/ino/life/ino_life.htm
http://leps.thenalls.net/speciesnum.php?lep=48

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[All photographs are copyrighted by Berry Nall.]

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WELCOME TO OUR NEW MEMBERS OF THE SOUTHERN LEPIDOPTERISTS' SOCIETY

Jackie Riley
3115 Goddard Rd.
Toledo, OH 43606

Gail Morris
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Denise Gibbs
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THE COAST OF SOUTHERN CALIFORNIA

BY
KELLY RICHERS

Perhaps no area has been so transformed by humans as the coastal areas of California. More people (38 million) live in California than it can hold already, so space is at a premium, and everyone wants to live on the coast. This situation has resulted in the extirpation or reduction in range of several known species of butterflies, and presumably of moths also, due to habitat destruction.

With this in mind, it is difficult to locate areas along the coast that have collecting possibilities. When one is located, it is usually in a state or regional park or private land that is not accessible. This is a coast that is also vastly different from the continental east coast or the Texas Gulf coast, both of which have, at least toward the southern half of the continent, gently sloping sandy areas that result in a gradual increase in elevation.

By contrast, in California, one can be at 4000' elevation within minutes of leaving the coast, and many areas go from dunes to different habitat in a distance of yard, not miles. One such area is the central coast, from Pismo Beach up to Morro Bay. South of this the coast is either full of houses or a military base, and north of this the coast is private or inaccessible in many places.

However, there is a bay at Morro Bay (hence the tricky name) and it has largely been preserved through both Morro Bay State Park and Montana De Oro State Park, protecting the dune and tidal areas.

Coast of Southern California, Montana de Oro

Such was not always the case. North of the Morro Bay downtown area, my wife's grandparents bought a little cabin about half a mile from the ocean, but with ocean views, if one stands on the roof of the one story cabin. Imagine my surprise, after buying this place from the estate, of getting a notification that is was on top of a WWII ordinance depot, but that in the past ten years, "no live ordinance has been reported". I suppose that is good news, but digging too deep might be problematic, one might guess.

Through the University of California, Berkeley, and other contacts such as the Los Angeles Museum of Natural History, I was able to obtain a permit to collect in both of the above state parks, and for some six years have been irregularly sampling the moths through trapping. Even this proved to be exciting. The picture that accompanies this article is from one of the collecting sites in Montana de Oro, where little signs advise staying on the paths only. The reason? Well, remember that ordinance depot? This is where they practiced their artillery fire in case of invasion, and unexploded shells are known to be all over in the sand on the hills where I collect.

So, if one day I disappear in a cloud of vapor, at least it will be doing what I enjoy. I step carefully, to say the least.

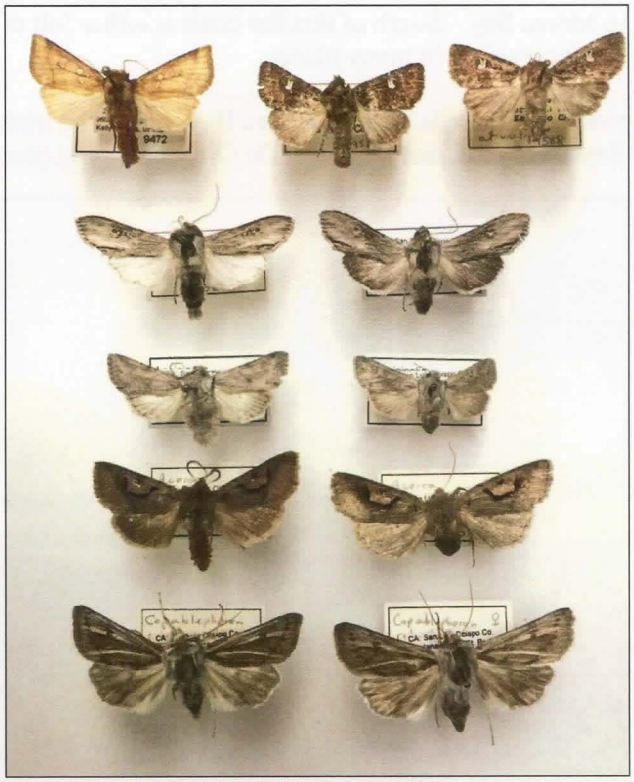
However, I regularly sample this area, and it is unique in many ways. Dr. Jerry Powell has collected at the Pismo Dunes, some 50 miles south, and between there and Montana de Oro is the Diablo Canyon Nuclear Plant and a completely inaccessible area, so there seemed to be a good opportunity for new or previously uncollected areas. North of Morro Bay, in Monterey County, at least another 50 miles away is another reserve where the team from Berkeley has done extensive collecting, but this area has no beach.

Generally I set two traps in any one habitat, and collect no more than every two months, so I have set traps in the area some 20+ times. In addition, I set traps 7 miles inland in the Coast Range, to contrast and compare what is there. Bauer and Buckett collected within a mile of the Coast Range location in the 1960's, so I have an idea of what is there.

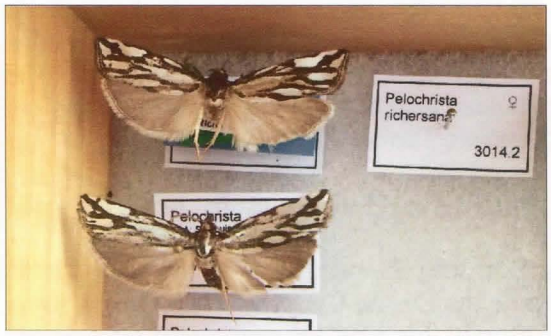
In the coastal dunes, at about 300', however, the moths are unique and different. At least two species taken there were undescribed until I obtained series of them and sent them to experts in the proper area of study – *Sympistis richersi* and *Pelochrista richersana*. Both are not rare in the area, but apparently are not found to have a great range.

One reason is the weather. During the spring and the fall the weather is "normal" in the sense that the sun rises, the weather is clear or rainy, and the wind blows inland during the day in a fairly gentle breeze and back out in the evening the same way, due to the difference in warming of the ocean and the land. However, during the summer and the winter, fog sets in, and the area is kept under a blanket of cloud until noon or so every day. This is the same reason that San Francisco is colder in the summer than in the winter. This phenomenon means that insect flight is greatest in the spring (April and May) and the fall (September and October). It is almost like collecting in the desert, but for completely different reasons.

Geometrids, top to bottom:
***Nemoria pisaciaria* M and F**
***Dichorda illustraria* M and F**
***Nemoria leptalea* M an F**



Noctuids, top, left to right, then down:
***Papaipema harrissii, Properigea albimacula* M and F**
***Cucullia incresa* M and F**
***Lacinipolia patalis* M and F**
***Acerra normalis* M and F**
***Copablepharon robertsoni* M and F**



Pelochrista richersana

Below is a list of some of the collected moths from the area. MDO means Montana de Oro, 7.1 refers to 7.1 miles inland on Route 41 from the Morro Bay intersection with Route 1.

Morro Bay Jun 30, 2012			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.1**	**7.1**
9695	Condica	albolabes			1	

Morro Bay Apr 13, 2013			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.1**	**7.1**
6924	Plataea	californiaria	1			
7901.a	Clostera	apicalis ornata	1			
7935	Gluphisia	severa		1		
8135	Spilosoma	vestalis	2			
8177	Apantesis	ornata	3			
9347	Apamea	albina	1			
10188	Dolocucullia	dentilinea				1
10270	Admetovis	similaris			1	
10508	Egira	crucialis			2	
10514	Egira	rubrica		1		
10583	Pseudorthodes	puerilis	1			

Morro Bay Aug 23, 2013			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.1**	**7.1**
4846	Hellula	rogatalis	1			
6553	Pterotaea	lamiaria lamiaria	1			
7461	Eupithecia	subvirens		1		

Morro Bay Oct 10, 2014			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.1**	**7.1**
2625	Alcathie	verrugo			1	
3014.2	Pelochrista	richersana	2	3		
3350	Epinotea	kasloana		1		
4846	Hellula	rogatalis	1			
8181	Apantesis	proxima	1			
10427.1	Trichocerapoda	oceanis	2			
10583	Pseudorthodes	puerilis	1			
10607	Zosteropoda	hirtipes		2		
10839	Euxoa	cicatricosa	1	2		
11068	Helicoverpa	zea		1		

Morro Bay Jun 12, 2015			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.1**	**7.1**
1896	*Prolita*	*recens*	5	1		
3014	*Pelochrista*	*ridingsana*	3			
3020	*Pelochrista*	*avalona*	1			
3157.3	*Pelochrista*	*richersana subsequalis*	5	1		
5060.c	*Pyrausta*	*petaluma*	3	1		
5967	*Rhagea*	*stigmalla*		1		
6431	*Hesperumia*	*sulphuraria*			1	

Morro Bay Sep 16, 2016			**M**	**F**	**M**	**F**
MONA	**Genus**	**Species**	**MDO**	**MDO**	**7.2**	**7.2**
1861	Pseudochelaria	manzanitae	1			
4722	Eudonia	rectilinea		1		
5695	Acrobasis	caliginella		1	1	
7461	Eupithecia	subvirens	1			
8998	Nola	involuta	1	1		

Montana de Oro Jun 12, 2015

MONA	Genus	Species	M spread	F spread
403	Tinea	occidentella		1
1615	Walshia	misceocolorella	1	1
3749	Amorbia	cuneanum	1	
5695	Acrobasis	caliginella	2	1
6288	Speranza	quadrilinearia		1
6301	Speranza	guenearia	1	
6553	Pterotaea	lamiaria lamiaria	1	
5695	Acrobasis	caliginella	2	1
6298	Macaria	extemporata	1	
6674	Sericosema	wilsonensis	2	
6774	Aethaloida	packardaria	3	
6922	Plataea	personaria	1	
6924	Plataea	californiaria	5	
6927	Eusarca	falcata subpunctata	1	
6952.a	Pherne	vernararia	2	
6977	Prochoerodes	truxaliata		1
6995	Sabulodes	aegrotata	2	
7027	Nemoria	pistaciaria	5	
7041	Nemoria	leptalea	1	
7055	Dichorda	illustraria	1	
7248	Hydriomena	glaucata	1	
7328	Perizoma	custodiata	1	
7461	Eupithecia	subvirens	1	2
7770	Hyalophora	euryalus	1	
7940	Furcula	scolopendrina	1	
8734	Caenurgia	togataria	1	2
8801.a	Catocala	ilia zoe	1	
8900	Pseudeva	palligera	1	
9268	Acronicta	perdita	4	1
9529	Aseptis	perfumosa	1	
9531.1	Aseptis	fanatica	4	
10192.1	Cucullia	eccissica	9	
10212	Cucullia	incresa	2	1
10135.5	Sympistis	richersi	10	8
10687.1	Copablepharon	robertsoni		1
10691	Copablepharon	sanctaemonicae	3	1
10915	Peridroma	saucia	1	
11047.1	Parabagrotis	formalis	2	
11072	Heliothis	phloxiphagus		1

7.2 mi E Rt 41 Jun 12, 2015

MONA	Genus	Species	M spread	F spread
3749	Amorbia	cuneanum		1
3801	Henricus	umbrabasana	1	
4722	Eudonia	rectilinea		1
5695	Acrobasis	caliginella	1	
6323	Speranza	marcescaria		1
6981.a	Prochoerodes	forficaria catenulata	2	
7027	Nemoria	pistaciaria		1
7248	Hydriomena	glaucata	4	1
7901	Clostera	apicalis	1	
7922	Pheosia	rimosa	2	
8309	Orgyia	vetusta	1	

8900	Pseudeva	palligera	1	
9403	Viridiseptis	marina	4	
9529	Aseptis	perfumosa	1	
9588	Properigea	albimacula	1	
9816	Zotheca	tranquilla	3	
10033	Catabena	lineolata	1	
10282	Orthodes	noverca (delecta)	2	
10423	Lacinipolia	patalis		1

Montana de Oro May 18, 2018

MONA	Genus	Species	M spread	F spread
1730	Aristotelia	argentifera	1	
3749	Amorbia	cuneanum	2	
4722	Eudonia	rectilinea	3	
5107	Lineodes	integra	1	
5752	Pima	granitella	1	
5816	Phoebus	curvatellus	3	1
6323	Speranza	marcescaria	1	
6553	Pterotaea	lamiaria lamiaria	17	1
6672	Sericosema	juturnaria	3	3
6674	Sericosema	wilsonensis	7	
6685.a	Drepanulatrix	quadraria usta	1	2
6757	Pero	mizon	2	3
6774	Aethaloida	packardaria	2	
6922	Plataea	personaria	3	3
6924	Plataea	californiaria		2
6927	Eusarca	falcata subpunctata	3	2
6952.a	Pherne	vernararia	6	
6977	Prochoerodes	truxaliata	1	2
7027	Nemoria	pistaciaria	9	
7041	Nemoria	leptalea	4	
7055	Dichorda	illustraria		2
7258	Hydriomena	quinquefasciata		1
7328	Perizoma	custodiata	1	
7770	Hyalophora	euryalus	1	
8177	Apantesis	ornata	9	
8734	Caenurgia	togataria	1	1
8998	Nola	involuta	1	1
9347	Apamea	albina	1	
9527	Aseptis	fumosa		1
9531.1	Aseptis	fanatica	2	
10192.1	Cucullia	eccissica	3	1
10135.5	Sympistis	richersi	3	
10423	Lacinipolia	patalis	3	2
10514	Egira	rubrica	1	
10539	Homorthodes	hanhami	2	
10575	Ulolonche	niveiguttata	7	3
10583	Pseudorthodes	puerilis	3	
11047.1	Parabagrotis	formalis		1

7.2 mi E, Rt 41 May 18, 2018

MONA	Genus	Species	M spread	F spread
3749	Amorbia	cuneanum	1	
6952.a	Pherne	subpunctata vernararia	1	

7901	Clostera	apicalis	2	2
7935	Gluphisia	severa	1	
7805	Sphinx	perelegans	1	
10282	Orthodes	noverca (delecta)	2	
10509	Egira	crucuialis		1

Montana de Oro Sep 29, 2017

MONA	Genus	Species	M spread	F spread
403	Tinea	occidentella	3	1
3014.2	Pelochrista	richersana	6	1
3350	Epinotea	kasloana	1	
6757	Pero	mizon	2	
6924	Plataea	californiaria	1	
6927	Eusarca	falcata	3	
6952.a	Pherne	subpunctata vernararia	1	
7055	Dichorda	illustraria	1	
7067	Synchlora	faseolaria	1	
8152.e	Arachnis	picta insularis	6	1
8222	Pseudohemihyalea	edwardsii		1
8734	Caenurgia	togataria	1	
9660	Caradrina	distinctoides	13	2
10427.1	Trichocerapoda	oceanis	11	2
10489	Orthosia	arthrolita	1	
10583	Pseudorthodes	puerilis	3	1
10607	Zosteropoda	hirtipes	1	1
10631.a	Tricholita	chipeta endiva	12	3
10839	Euxoa	cicatricosa	5	3

7.2 mi E Morro Bay Rt 41

MONA	Genus	Species	M spread	F spread
6757	Pero	mizon	3	2
6927	Eusarca	falcata	1	
8222	Pseudohemihyalea	edwardsii	4	2
9296	Bryolymnia	viridata	8	
9472	Papaipema	harrisii	1	
9660	Caradrina	distinctoides	1	
10489	Orthosia	arthrolita	1	

Montana de Oro Jun 22, 2018

MONA	Genus	Species	M spread	F spread
5655	Acrobasis	tricolorella	1	
5695	Acrobasis	caliginella	1	
5816	Phobus	curvatellus	1	
6288	Macaria	quadrilinearia	2	
6301.1	Macaria	austrinata		1
6323	Speranza	marcescaria		1
6553	Pterotaea	lamiaria lamiaria	18	1
6672	Sericosema	juturnaria	1	4
6922	Plataea	personaria	3	
6924	Plataea	californiaria		1
6927	Eusarca	falcata subpunctata	1	
6952.a	Pherne	vernararia	1	
7027	Nemoria	pistaciaria	6	
7067	Synchlora	faseolaria	1	
7461	Eupithecia	subvirens	2	1

7940	Furcula	scolopendrina	1	
8135	Spilosoma	vestalis	1	
9268	Acronicta	perdita	1	
9325	Apamea	cuculliformis	1	
9531.1	Aseptis	fanatica	3	1
10135.5	Sympistis	richersi	8	5
10423	Lacinipolia	patalis patalis	1	
10575	Ulolonche	niveiguttata	9	
10583	Pseudorthodes	puerilis	2	

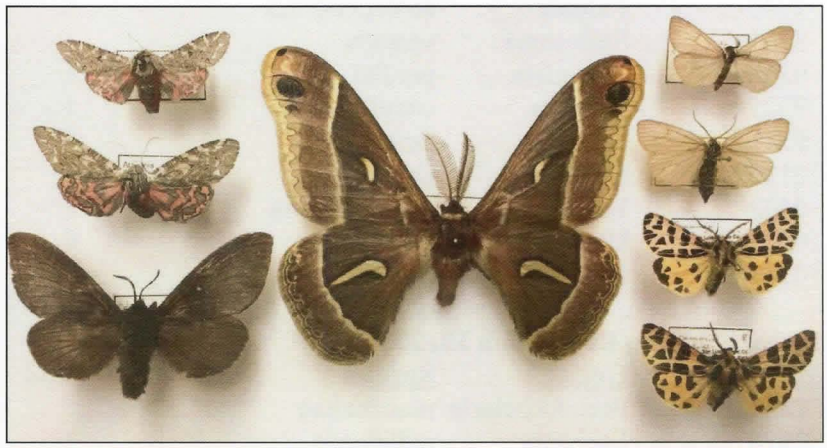
5.9 mi E Morro Bay Jun 22, 2018

MONA	Genus	Species	M spread	F spread
1861	Pseudochelaria	manzanitae		1
2976	Eucosma	pallidarcis	3	
6301.1	Macaria	austrinata	2	3
6396	Digrammia	neptaria	2	
6912.b	Sicya	macularia lewisi	2	
6924	Plataea	californiaria		1
6927	Eusarca	falcata subpunctata	2	
6952.a	Pherne	vernararia	1	
6981.a	Prochoerodes	forficaria catenulata	1	
7027	Nemoria	pistaciaria	5	
7901	Clostera	apicalis apicalis	2	
8322	Idia	americalis	1	
8900	Pseudeva	palligera	1	
9325	Apamea	cuculliformis	3	
9588	Properigea	albimacula	3	
9816	Zotheca	tranquilla	5	
10423	Lacinipolia	patalis patalis		2
10539.a	Homorthodes	hanhami semicarnea	3	1

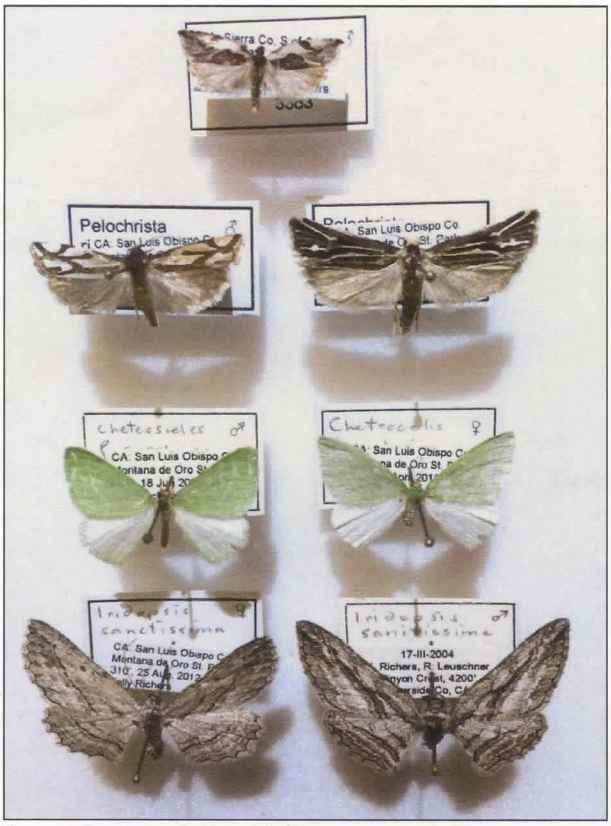
7.2 mi Morro Bay Jun 22, 2018

MONA	Genus	Species	M spread	F spread
2583	Synanthedon	exitosa form graefi	3	
5695	Acrobasis	caliginella	1	
6301.1	Macaria	austrinata	1	
6323	Speranza	marcescaria	1	
6396	Digrammia	neptaria		1
6431	Hesperumia	sulphuraria	1	2
6912.b	Sicya	macularia lewisi	4	1
6927	Eusarca	falcata subpunctata	1	
6981.a	Prochoerodes	forficaria catenulata	1	
7027	Nemoria	pistaciaria	3	
7055	Dichorda	illustraria	1	1
7248	Hydriomena	glaucata	4	1
8734	Caenurgia	togataria	1	
7901	Clostera	apicalis apicalis	1	
8322	Idia	americalis	1	1
9296	Bryolymnia	viridata	2	
9532	Aseptis	binotata	3	
9816	Zotheca	tranquilla	1	
10423	Lacinipolia	patalis patalis	1	
10607	Zosteropoda	hirtipes		1

Sympistis richersi



Left top, *Arachnis picta insularis* M and F
Gloveria medusa
middle, *Hyalophora euryalis*
Right, *Phyrigania californica* M and F
***Grammia ornata* (*hewlitti*) M and F**



Top to bottom, left to right
Ancylis simuloides
Pelochrista ridingsana
Pelochrista avalona
***Cheteoscelis fasciolaria* M and F**
***Iridopsis samctosso*, M and F**

***Plataea californiaria* M and F**
***Plataea personaria* M and F**
***Pherne subpunctata vernararia* M and F**
***Eusarca falcata* M and F**

(Kelly Richers, E-Mail: kerichers@wuesd.org)

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GEAUX GROW NATIVES UPDATE
SUPPORT YOUR LOCAL BUTTERFLIES

BY
LINDA BARBER AULD

My Geaux Grow Natives project launched on May 4 at Jefferson Feed in the morning and Double M in the afternoon. Louisiana Master Gardeners, Kathy and Rodney Bell, volunteered to help me talk with folks interested in knowing more about my native plant selections. My project mission is to make 12 specially selected native butterfly nectar and caterpillar host plants available to the public at local garden centers. During the day, Kathy suggested installing a Geaux Grow Natives display garden at LaSalle Park. What a great idea! Installing these important plants in public gardens would show folks the plants in action. Geaux Grow Natives spring plants are Aquatic Milkweed, Swamp Milkweed (Rose Milkweed), False Foxglove, Partridge Pea, Garden Phlox, Purple Coneflower, and Narrowleaf Mountain Mint.

Photo taken at Rivertown Garden, May 16, 2019. Garden planted May 13, 2019.

Close up of plants display.

LaSalle Park, tended by LA Master Gardeners and the LSU Ag Department, nestles between the Zephrs Stadium and the Jefferson Performing Arts Building, next to a public walking track. This location presents lots of opportunities for people to see and develop a taste for adding these plants to their own gardens.

Kathy's brilliant suggestion spawned ideas for two additional showcase locations that have established gardens and high foot traffic. An official Monarch WayStation in Kenner's Rivertown, at its Saturday morning Farmer's Market on the Mississippi River levee will be a perfect spot, as will the new Pollinator Garden at Audubon Zoo.

What butterflies are common to the New Orleans area? For twenty years, Frances Welden created and led a butterfly survey of about 50 New Orleans area gardens to document the local butterfly population. Which butterfly topped the list as most observed? The tiny Fiery Skipper was #1 and the Monarch was #2! This suggests abundant grasses and milkweeds grow in and near New Orleans area gardens. In our world of downward spiraling diversity and daily green space loss, the need for action is great. We can all enhance our local butterfly community by promoting and installing native plants. We can join our local native plant society and meet new friends who share the same passion to help butterflies. We can ask our local garden center to order and display native plants. Every native plant garden helps. By joining together we can make a difference.

The following ad for the the "BugLady's (Linda Auld)" new book which is now available is on the next page.

[Linda Auld, E-Mail: thisauldhouse@bellsouth.net]

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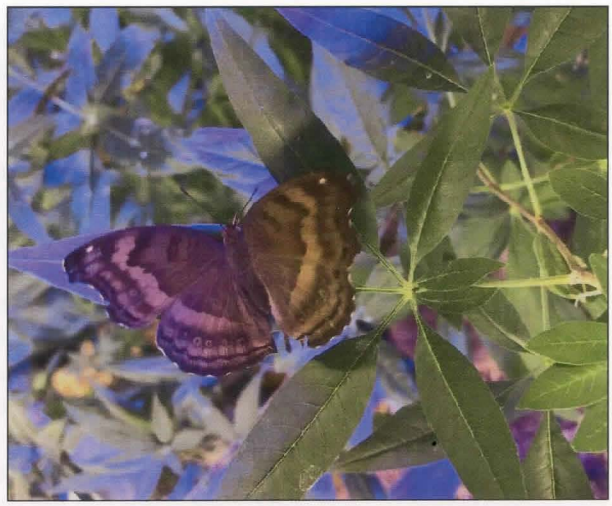
EXOTIC BUTTERFLIES AT THE SCIENCE SPECTRUM IN LUBBOCK, TEXAS (MAY 2019)



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THE ARCHBOLD BIOLOGICAL STATION COLLECTION OF BUTTERFLIES

BY

MARC C. MINNO

Introduction

The Archbold Biological Station is located in south central Florida in Highlands County near the southern limit of a physiographic feature called the Lake Wales Ridge. The Station is a privately funded biological and ecological research facility. Since it's beginning in 1941, thousands of scientists and students have visited the station to conduct research. In 1987 the Station was designated a National Natural Landmark and was placed on the National Register of Historic Places in 2007 by the National Park Service of the United States Department of the Interior.

The following historical account comes from Lohrer (2006), Minno and Myers (1986), Archbold publications, and online searches. The story begins in 1929 when John Augustus Roebling II (1867-1952) bought 1,058 acres of undeveloped land along the railroad tracks about eight miles south of the town of Lake Placid (formerly called Lake Stearns). His grandfather, John Augustus Roebling I, was famous for constructing large suspension bridges, and had designed the Brooklyn Bridge. His father, Washington Roebling, supervised construction of that bridge.

John Roebling II married Margaret Shippen MacIlvaine (1867-1930) in 1889. She was interested in botany, nature, and preservation of wild lands. She donated $50,000 during the Great Depression to help purchase Highlands Hammock, which in 1935 became one of Florida's first state parks. The land John and Margaret purchased south of Lake Placid was an outstanding example of Florida's scrub communities. Florida provided a winter refuge for Margaret who had contracted tuberculosis. The Roeblings planned to build a mansion on their property at the top of Red Hill, one of the highest elevations in the area at 213 feet above sea level, but Margaret died in 1930. Despite this tragedy, Mr. Roebling had his chief engineer, Alexander Blair, begin building the project. From 1930 through 1935 a large storehouse and associated buildings were built near the railroad tracks in preparation for construction of the house. All of the buildings were designed and constructed to withstand hurricanes. The project provided work for many people during the Great Depression. However, Mr. Roebling remarried in 1931 and lost interest in the project. The Red Hill mansion was never built.

John Roebling's son, Donald Roebling, used the Storehouse to construct an amphibious vehicle, The Alligator, which served as a prototype for the landing-vehicles used by the U.S. military during World War II. He tested The Alligator in nearby Lake Annie. Donald was a friend of Richard Archbold (1907-1976) during school days and later they kept in touch by ham radio. The Archbold family had done well in the oil business. Richard's grandfather, John Dustin Archbold, was a close associate of John D. Rockefeller, and served as Vice President of Standard Oil.

Richard Archbold was an explorer and adventurer with an interest in natural history. In 1929 Richard joined the Explorers Club based in New York City. He created Archbold Expeditions and between 1933 and 1939 financed and attended three trips to New Guinea with scientists from the American Museum of Natural History. On the latter two trips, sea planes were used to land on lakes and rivers in unexplored areas of New Guinea. During the 1940s World War II shut down additional expeditions to New Guinea. After the war, Archbold Expeditions financed several more trips to New Guinea, but Richard Archbold did not participate. Some of the artifacts he collected in New Guinea are still on display at the Station.

Richard Archbold visited Donald Roebling at the Red Hill Estate in 1939 to see if his amphibious vehicle could be used on future expeditions to New Guinea. Instead, Donald facilitated the donation of the property to Richard and in 1941 he created the Archbold Biological Station. The Storehouse, with it's distinctive sawtooth roof design, was renovated into the Main Building with offices, lodging, kitchen and dining room, and research laboratories. Five cottages were added to the main grounds to accommodate visiting scientists and students. The iconic Archbold water tower is a landmark visible for miles. In recent times, an annex building with conference room and offices was added just to the north of the Main Building. Richard's brother and sister also contributed to the Station with the Adrian Archbold Lodge and the Frances Archbold Hufty Learning Center.

Richard Archbold was intent on inventorying the plants and animals of the Station. He hired botanist Leonard John Brass and zoologist Austin Loomer Rand, who had accompanied him to New Guinea, to begin

collecting specimens. Over the years many others have participated, so that now the Archbold Biological Station has one of the most complete lists of plants and animals anywhere. However, species new to the Station continue to be found.

Regarding the butterflies, Charles P. Kimball (1965, pp. 14-15) mentions Roger W. Pease and Charles L. Remington of Yale University collecting Lepidoptera at the Station. Although he seems to have had access to Archbold butterfly specimens, Kimball only cites one butterfly record under *Marpesia petreus* for the Station. Kimball does cite the Station many more times for various moths.

Dr. Mark Deyrup (Fig. 1) was hired in 1982 to work on the entomological collections and conduct research. Although not a Lepidopterist, he picked interesting moths and butterflies from Malaise traps he used on a regular basis to add to the Station's collections. Dr. Deyrup retired in 2018, but continues to work part time at the Station as Emeritus Research Biologist. Stuart Frost and Colonel Lester Lampert ran light traps at the station over a number of years, but only contributed a few specimens to the Station's butterfly collection. Frost's specimens are mostly at Pennsylvania State University.

My wife, Maria, daughter, Angela, and I spent a summer at the Station in 1986. Maria studied Curtiss's Milkweed (*Asclepias curtissii*), a rare scrub endemic plant and I worked as an intern for Dr. Deyrup collecting butterflies and moths and curating the Archbold Lepidoptera collection (Minno 1992a, b). Southern Lepidopterists' Society members Dave Baggett and Lee Adair visited the Station one day that summer on their way to the Florida Keys and helped me identify some of the moths. Soon after I joined the Southern Lepidopterists' Society. Recently I have been doing a new inventory of the butterflies of the Station. As part of that work, I did an assessment of the butterfly specimens housed in the Archbold entomological collections. This paper summarizes the Archbold butterfly collection.

Methods

On December 29, 2018 I inventoried the Archbold Biological Station's butterfly specimens. For each specimen I recorded the species, locality, collection date, collector(s), and any other information that was written on a label.

The Archbold insect collections are housed in Cornell University specimen drawers stored in metal museum cabinets (Fig. 1). Species are separated in unit trays of various sizes with a scientific name label pinned at the top. Families and species within families are arranged alphabetically for convenience.

Results

The Archbold collection contains 571 pinned adult butterfly specimens representing 103 taxa. One specimen of *Panoquina ocola* is from Puerto Rico. Four specimens are from New Jersey (2 *Limenitis arthemis astyanax*, 1 *Pterourus g. glaucus*, and 1 *Pterourus t. troilus*). Sixteen specimens have no locality data, but are likely from the Station. All of the other specimens with locality information are from southern Florida, with the majority from Highlands County (Table 1).

Forty-one collectors contributed specimens to the collection. The oldest specimen is from July 21, 1954, without the collector listed. Richard Archbold contributed 18 specimens of 13 species in 1956 and 1961-1964. Rodger W. Pease, Jr. contributed 155 specimens of 52 species in 1957-1958, 1960-1962, 1980, 1986 mostly from the Station. Thomas E. Pliske contributed 85 specimens of 53 species in 1961, 1964-1966, 1968. Unlike Rodger Pease, Thomas Pliske collected in the Keys, other areas of southern Florida, and other areas of Highlands County. Mark Deyrup contributed 66 specimens of 31 species in 1983-1987, 1989, 2006-2008, 2010-2014, 2016, 2018, all from the Station. Marc Minno contributed 76 specimens of 43 species mostly in 1986, 1 in 2016, and 3 in 2017, also all from the Station.

Discussion

Today, the Archbold Biological Station has one of the best natural history reference collections representing south central Florida's flora and fauna. The collection is estimated to contain more than 250,000 pinned insect specimens. The Station recently received a grant from the National Science Foundation's Collections in Support of Biological Research program to digitize the natural history collections. Many Archbold butterfly specimens have additional information on the labels such as flowers visited, larval host plant, and other data.

Over the last few years, Archbold staff have been photographing specimens and entering label information into the searchable online databases iDigBio and Symbiota Collection of Arthropods Network (SCAN). The collection includes imperiled species such as *Cyclargus thomasi, Eunica tatila, Anthanassa frisia, Siproeta stelenes, Heraclides aristodemus, Glutophrissa drusilla* and many others that are declining and disappearing in Florida. I will post an appendix to this paper with detailed specimen data at my blog (https://marcminno.blogspot.com/)

Table 1. Butterflies represented in the Archbold Biological Station collection.

SCIENTIFIC NAME	COMMON NAME	COUNTY
Hesperiidae: Eudaminae		
Cecropterus d. dorantes	Dorantes Skipper	Broward, Highlands
Cecropterus p. pylades	Northern Cloudywing	Highlands
Epargyreus c. clarus	Silver-spotted Skipper	Highlands
Phocides pigmalion okeechobee	Mangrove Skipper	Sarasota
Polygonus leo histrio	Hammock Skipper	Broward, Monroe
Urbanus p. proteus	Long-tailed Skipper	Highlands
Hesperiidae: Hesperiinae		
Anatrytone l. logan	Delaware Skipper	Broward, Highlands
Ancyloxypha numitor	Least Skipper	Hendry, Highlands
Asbolis capucinus	Monk Skipper	Broward, Hendry, Highlands
Atalopedes campestris huron	Sachem	Highlands
Atrytonopsis loammi	Southern Dusted Skipper	Highlands
Calpodes ethlius	Brazilian Skipper	Hendry, Highlands
Copaeodes minima	Southern Skipperling	Hendry, Highlands
Cymaenes t. tripunctus	Three-spotted Skipper	Broward, Highlands
Euphyes arpa	Palmetto Skipper	Hendry, Highlands
Euphyes p. pilatka	Palatka Skipper	Highlands
Hesperia meskei straton	Meske's Skipper	Highlands
Hylephila p. phyleus	Fiery Skipper	Broward, Highlands
Lerema accius	Clouded Skipper	Highlands
Lerodea eufala eufala	Eufala Skipper	Collier, Highlands
Nastra lherminier	Swarthy Skipper	Collier, Highlands
Nastra neamathla	Neamathla Skipper	Highlands
Oligoria maculata	Twin-spot Skipper	Highlands
Panoquina o. ocola	Ocola Skipper	Puerto Rico, Highlands
Panoquina panoquin	Salt Marsh Skipper	Collier
Panoquina p. panoquinoides	Obscure Skipper	Collier
Poanes a. aaroni	Aaron's Skipper	Hendry, Highlands
Polites t. themistocles	Tawny-edged Skipper	Highlands
Polites v. vibex	Whirlabout Skipper	Broward, Highlands
Problema b. byssus	Byssus Skipper	Highlands
Wallengrenia o. otho	Southern Broken-Dash	Highlands
Hesperiidae: Megathyminae		
Megathymus cofaqui slotteni	Cofaqui Giant-Skipper	Highlands
Megathymus yuccae buchholzi	Yucca Giant-Skipper	Highlands

Table 1. Continued.

SCIENTIFIC NAME	COMMON NAME	COUNTY
Hesperiidae: Pyrginae		
Burnsius o. oileus	Tropical Checkered-Skipper	Highlands
Erynnis brizo somnus	Sleepy Duskywing	Highlands
Erynnis horatius	Horace's Duskywing	Highlands, Palm Beach
Erynnis j. juvenalis	Juvenal's Duskywing	Highlands
Erynnis zarucco	Zarucco Duskywing	Highlands
Lycaenidae: Polyommatinae		
Brephidium pseudofea	Eastern Pygmy-Blue	Sarasota
Cyclargus thomasi bethunebakeri	Miami Blue	Miami-Dade
Hemiargus ceraunus antibubastus	Ceraunus Blue	Highlands
Leptotes cassius theonus	Cassius Blue	Highlands
Lycaenidae: Riodininae		
Calephelis virginiensis	Little Metalmark	Hendry
Lycaenidae: Theclinae		
Atlides h. halesus	Great Purple Hairstreak	Hendry, Highlands
Calycopis cecrops	Red-banded Hairstreak	Highlands
Electrostrymon a. angelia	Fulvous Hairstreak	Broward
Eumaeus atala	Atala	Miami-Dade, Palm Beach
Parrhasius m-album	White M Hairstreak	Citrus, Highlands
Satyrium c. calanus	Banded Hairstreak	Highlands
Satyrium f. favonius	Oak Hairstreak	Highlands
Strymon istapa modesta	Mallow Scrub-Hairstreak	Collier
Strymon martialis	Martial Scrub-Hairstreak	Collier
Strymon m. melinus	Gray Hairstreak	Broward, Highlands
Nymphalidae: Apaturinae		
Asterocampa celtis reinthali	Hackberry Emperor	Highlands
Asterocampa clyton flora	Tawny Emperor	Hendry
Nymphalidae: Biblidinae		
Eunica tatila tatilista	Florida Purplewing	Monroe
Nymphalidae: Cyrestinae		
Marpesia p. petreus	Ruddy Daggerwing	Collier
Nymphalidae: Danainae		
Danaus eresimus tethys	Soldier	Broward, Palm Beach
Danaus gilippus berenice	Queen	Collier, Highlands
Danaus p. plexippus	Monarch	Highlands

Table 1. Continued.

SCIENTIFIC NAME	COMMON NAME	COUNTY
Nymphalidae: Heliconiinae		
Agraulis vanillae nigrior	Gulf Fritillary	Collier, Hendry, Highlands
Dryas iulia largo	Julia	
Heliconius charithonia tuckeri	Zebra Heliconian	Collier, Hendry, Highlands
Nymphalidae: Limenitidinae		
Limenitis archippus floridensis	Viceroy	Hendry, Highlands
Limenitis arthemis astyanax	Red-spotted Purple	NJ: Burlington
Nymphalidae: Nymphalinae		
Anartia jatrophae guantanamo	White Peacock	Hendry, Highlands
Anthanassa f. frisia	Cuban Crescent	Hendry
Junonia coenia	Common Buckeye	Highlands
Junonia neildi	Mangrove Buckeye	Collier
Phyciodes p. phaon	Phaon Crescent	Hendry, Highlands
Phyciodes t. tharos	Pearl Crescent	Collier, Highlands
Polygonia interrogationis	Question Mark	Highlands
Siproeta stelenes biplagiata	Malachite	Broward
Vanessa atalanta rubria	Red Admiral	Collier, Highlands
Vanessa cardui	Painted Lady	Hendry
Vanessa virginiensis	American Lady	Collier, Highlands
Nymphalidae: Satyrinae		
Hermeuptychia sosybius	Carolina Satyr	Highlands
Neonympha areolatus	Georgia Satyr	Highlands
Papilionidae: Papilioninae		
Battus p. philenor	Pipevine Swallowtail	Highlands
Battus polydamas lucayus	Polydamas Swallowtail	Highlands
Eurytides marcellus floridensis	Zebra Swallowtail	Broward, Highlands
Heraclides aristodemus ponceanus	Schaus' Swallowtail	Monroe
Heraclides cresphontes	Giant Swallowtail	Highlands
Papilio polyxenes asterius	Black Swallowtail	Highlands
Pterourus g. glaucus	Eastern Tiger Swallowtail	NJ: Burlington
Pterourus glaucus maynardi	Eastern Tiger Swallowtail	Highlands
Pterourus p. palamedes	Palamedes Swallowtail	Highlands
Pterourus troilus nr. *fakahatcheensis*	Spicebush Swallowtail	Highlands
Pterourus t. troilus	Spicebush Swallowtail	NJ: Burlington

Table 1. Continued.

SCIENTIFIC NAME	COMMON NAME	COUNTY
Pieridae: Coliadinae		
Abaeis nicippe	Sleepy Orange	Highlands
Aphrissa statira floridensis	Statira Sulphur	Palm Beach
Colias eurytheme	Orange Sulphur	Highlands
Eurema d. daira	Barred Yellow	Highlands
Nathalis iole	Dainty Sulphur	Highlands
Phoebis agarithe maxima	Large Orange Sulphur	Highlands, Monroe, Palm Beach
Phoebis p. philea	Orange-barred Sulphur	Collier, Highlands
Phoebis sennae eubule	Cloudless Sulphur	Highlands
Pyrisitia l. lisa	Little Yellow	Highlands
Zerene c. cesonia	Southern Dogface	Highlands
Pieridae: Pierinae		
Ascia monuste phileta	Great Southern White	Highlands, Palm Beach
Glutophrissa drusilla neumoegenii	Florida White	Monroe
Pieris r. rapae	Cabbage White	Highlands
Pontia protodice	Checkered White	Highlands

Acknowledgements

Since Maria and I first visited in the early 1980s, it has been a privilege and pleasure to conduct research on butterflies and moths at the Archbold Biological Station. I heartily thank the staff for their generous support, especially Director Dr. Hilary Swain, Sharon Hawkins, Ann Thompson, Dr. Mark Deyrup (Emeritus Research Biologist), and Fred E. Lohrer (Emeritus Librarian).

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(Continue to next page.)

Figure 1. Archbold Biological Staion main buildings in Highlands County, Florida (A). Marc Minno and Mark Deyrup (B). Part of the Lepidoptera collection and some of the butterfly specimens ©, D, and E).

(Marc C. Minno, E-Mail: marc.minno@gmail.com)

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REPORTS OF STATE COORDINATORS

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

James Adams sends in this report for Alabama:

Dekalb Co., Mentone, Alpine Camp, April 25-27:
GEOMETRIDAE: *Macaria fissinotata* (possible STATE record).

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:

Gainesville, Alachua Co., FL records from Charlie Covell for Nov. 1, 2018 – March 31, 2019. Numbers seemed reduced in spring, 2019, especially *A. vanillae and H. charithoniain* Gainesville.

Urbanus proteus, Nov. 1, 14
Hylephila phyleus, Nov. 21, 23, Feb. 21
Lerema accius, Nov. 1
Papilio glaucus , Feb. 22
Phoebis sennae, Nov. 19, 21, 23, 30, Dec. 18, 31, Jan. 2, Feb. 7, 8, 18, 19, 22, 28
Abaeis nicippe, Nov. 23, Feb. 28
Parhassius m-album, March 28, 29
Atlides halesus, March 22
Leptotes cassius, Nov. 12, Dec. 28, Jan. 9, 17
Libytheana carinenta, March 14, 23, 24, 28, 29
Limenitis archippus, Nov. 23
Junonia coenia, Nov. 14, 23, 30, March 14
Agraulis vanillae, Nov. 1, 13, 19, Jan. 22, March 13
Heliconius charithonia, Nov. 14, 19, Dec. 18, 28, 31
Danaus plexippus, Nov. 9, 13, 14, 21, 23, March 11, 12, 13, 28

Jan. 17. Andy Warren reported the following from the "Natural Area" near the Entomology Buiilding, Gainesville: *Urbanus proteus, Pyrgus oileus, Lerema accius, Hylephila phyleus, Phoebis philea, Calycopis cecrops, Strymon melinus* and *Heliconius charithonia.*

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Sightings by Barbara Woodmansee with Ronda Spink:

Triangle Road Gate 24/Lower Suwannee NWR – Dixie Co., FL (3/21/2019)
Start weather: Clear, calm, 54 degrees End weather: Clear, breezy, 10-17mph gusts, 64 degrees Start time: 9:30am End time: 11:00am Barbara

Sightings:

Least Skipper *Ancyloxypha numitor* Adult 1
Black Swallowtail *Papilio polyxenes* Adult 1
Palamedes Swallowtail *Papilio palamedes* Adult 2
Zebra Swallowtail *Eurytides marcellus* Adult 4
Question Mark *Polygonia interrogationis* Adult 1
Carolina Satyr *Hermeuptychia sosybius* Adult 5
Little Wood-Satyr *Megisto cymela* (includes *viola*) Adult 14

Dixie Mainline Road/Old Town Dixie Co., FL (03/21/2019)
Start weather: Clear, breezy 10-17mph wind gusts, 64 degrees End weather: Clear breezy 10-17mph wind gusts, 68 degrees Start time: 11:05am, End time: 4:00pm Barbara Woodmansee and Ronda Spink

Sightings:

Silver-spotted Skipper *Epargyreus clarus* Adult 1
Horace's Duskywing *Erynnis horatius* Adult 1
Zarucco Duskywing *Erynnis zarucco* Adult 1
Clouded Skipper *Lerema accius* Adult 1
Black Swallowtail *Papilio polyxenes* Adult 1
Eastern Tiger Swallowtail *Papilio glaucus* Adult 14 One dark form
Spicebush Swallowtail *Papilio troilus* Adult 14
Palamedes Swallowtail *Papilio palamedes* Adult 65 Six eggs and two caterpillars
Zebra Swallowtail *Eurytides marcellus* Adult 8
Cloudless Sulphur *Phoebis sennae* Adult 6
Sleepy Orange *Eurema nicippe* Adult 1
Henry's Elfin *Callophrys henrici* Adult 1
Juniper Hairstreak *Callophrys gryneus* Adult 1
Red-banded Hairstreak *Calycopis cecrops* Adult 2
Zebra Heliconian *Heliconius charithonia* Adult 1
Phaon Crescent *Phyciodes phaon* Adult 47
Pearl Crescent *Phyciodes tharos* Adult 29
Question Mark *Polygonia interrogationis* Adult 1
Viceroy *Limenitis archippus* Adult 2
Carolina Satyr *Hermeuptychia sosybius* Adult 14
Little Wood-Satyr *Megisto cymela* (includes *viola*) Adult 21
Queen *Danaus gilippus* Adult 2
Least Skipper *Ancyloxypha numitor* Adult 1
Southern Skipperling *Copaeodes minimus* Adult 1
Fiery Skipper *Hylephila phyleus* Adult 2
Whirlabout *Polites vibex* Adult 8
Sachem *Atalopedes campestris* Adult 1
Salt Marsh Skipper *Panoquina panoquin* Adult 2
Ocola Skipper *Panoquina ocola* Adult 1

San Felasco Hammock Preserve – Alachua Co., FL (03/22/2019)
Start weather: Clear, breezy 10mph wind gusts, 68 degrees End weather: Clear, breezy 10mph wind gusts, 71 degrees Start time: 12:30pm End time: 3:40pm Barbara Woodmansee and Ronda Spink

Sightings:

Northern Cloudywing *Thorybes pylades* Adult 1
Fiery Skipper *Hylephila phyleus* Adult 1
Whirlabout *Polites vibex* Adult 1
Zabulon Skipper *Poanes zabulon* Adult 3
Dun Skipper *Euphyes vestris* Adult 1
Yucca Giant-Skipper *Megathymus yuccae* (includes *coloradensis*) Adult 4 Two eggs
Zebra Swallowtail *Eurytides marcellus* Adult 3
Little Yellow *Eurema lisa* Adult 1
King's Hairstreak *Satyrium kingi* Adult 0 Two caterpillars
Question Mark *Polygonia interrogationis* Adult 2
Red Admiral *Vanessa atalanta* Adult 1
Common Buckeye Junonia coenia Adult 4
Hackberry Emperor *Asterocampa celtis* Adult 1
Carolina Satyr *Hermeuptychia sosybius* Adult 17
Little Wood-Satyr *Megisto cymela* (includes *viola*) Adult 36

Paynes Prairie-Jackson Gap Trail - United States, Florida, Alachua County (03/23/2019)
Start weather: Clear, breezy, wind gusts 10mph, 69 degrees End weather: Clear, breezy, wind gusts 10mph, 76 degrees Start time: 11:30am, End time: 1:00pm Barbara Woodmansee and Ronda Spink

Sightings:

Pipevine Swallowtail *Battus philenor* Adult 1
Eastern Tiger Swallowtail *Papilio glaucus* Adult 1
Spicebush Swallowtail *Papilio troilus* Adult 2
Palamedes Swallowtail *Papilio palamedes* Adult 7
Zebra Swallowtail *Eurytides marcellus* Adult 1
Red Admiral *Vanessa atalanta* Adult 3
Common Buckeye *Junonia coenia* Adult 1
Carolina Satyr *Hermeuptychia sosybius* Adult 1
Monarch *Danaus plexippus* Adult 1

Long Branch Road/Lower Waccassa WMA, Levy County, FL (03/23/2019)
Start weather: Clear, calm, 76 degrees End weather: Clear, calm, 77 degrees Start time: 2:07pm End time: 4:30pm Barbara Woodmansee and Ronda Spink

Sightings:

Giant Swallowtail *Papilio cresphontes* Adult 1
Spicebush Swallowtail *Papilio troilus* Adult 6
Palamedes Swallowtail *Papilio palamedes* Adult 19
Cloudless Sulphur *Phoebis sennae* Adult 8
Little Metalmark *Calephelis virginiensis* Adult 6
American Snout *Libytheana carinenta* Adult 361
Phaon Crescent *Phyciodes phaon* Adult 61
Pearl Crescent *Phyciodes tharos* Adult 11
American Lady *Vanessa virginiensis* Adult 1
Red Admiral *Vanessa atalanta* Adult 1
Common Buckeye *Junonia coenia* Adult 3
Viceroy *Limenitis archippus* Adult 2
Gemmed Satyr *Cyllopsis gemma* Adult 2
Carolina Satyr *Hermeuptychia sosybius* Adult 78
Little Wood-Satyr *Megisto cymela* (includes *viola*) Adult 79
Monarch *Danaus plexippus* Adult 1
Queen *Danaus gilippus* Adult 5
Juvenal's Duskywing *Erynnis juvenalis* Adult 1
Clouded Skipper *Lerema accius* Adult 1
Least Skipper *Ancyloxypha numitor* Adult 3
Whirlabout *Polites vibex* Adult 5
Ocola Skipper *Panoquina ocola* Adult 1

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.galeps.org).

James sends in the following report:

The contributors include James Adams (JKA or no notation), Brian Scholtens (BS), John Hyatt (JH) and Lance Durden (LD). Others are indicated with their 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 2018 unless otherwise specified.

Dalton, Whitfield Co., March 4:
NOLIDAE: *Nycteola metaspilella.*

Rocky Face ridgeline, just W of Dalton at crest of Dug Gap Battle Rd., Whitfield Co:
March 6-7:
GEOMETRIDAE: *Ceratonyx satanaria* (abundant). **NOCTUIDAE:** *Feralia major*, still flying.
April 6-7:
EREBIDAE: *Euclidea cuspidea.* **NOCTUIDAE:** *Hadena ectypa* (third record for the STATE).
May 7-8:
GEOMETRIDAE: *Lytrosis permagnaria.* **EUTELIIDAE:** *Eutelia pulcherimmus.* **NOCTUIDAE:** *Acronicta noctivaga, A. funeralis, A. laetifica, Sympistis badistriga, Apamea vulgaris, Dipterygia patina.*

Taylor's Ridge, 5 mi. W of Villanow, Walker Co., March 29-30, 2019:
GEOMETRIDAE: *Caripeta aretaria, Orthofidonia flavivenata, Cladara atroliturata.* **EREBIDAE:** *Dinumma deponens* (COUNTY). **NOCTUIDAE:** *Cerma cora, Elaphria georgei* (abundant), *Lithophane querquera* (LATE).

Crockford-Pigeon Mountain WMA, 9 mi. WSW of LaFayette, Walker Co.:
March 16:
PAPILIONIDAE: *Eurytides marcellus* (EARLY).
March 23:
LYCAENIDAE: *Atlides halesus, Callophrys henrici.* **PIERIDAE:** *Pieris virginiensis.*

Calhoun, James Adams residence:
NOCTUIDAE: *Dipterygia patina* (Mar. 6; COUNTY)

Bibb County, 2.6 km SSW of Walden, 32.68599, -83.67626 April 13-16 2018, Lindgren funnel trap, Chris Barnes:
NYMPHALIDAE: *Anaea andria*

Bibb Co., GA (Rose Payne):
EREBIDAE: *Oxycilla mitographa* (COUNTY), July 25, 2018; *Catocala alabamae*, June 15, 2018

Ohoopee Dunes, Tract 3 (Hall's Bridge), 8 mi. WSW of Swainsboro, Emanuel County, April 4, with JH and BS:
GEOMETRIDAE: *Fernaldella georgiana*; both at dusk and at lights (first April records at lights). **NOCTUIDAE:** *Ulolonche modesta, Anicla lubricans/sullivani.*

Statesboro, GA Southern Campus new land acquisition, south of hwy. 301 loop, west of Lanier Road:
April 5-6:
NOCTUIDAE: *Bellura anoa* (4 males, 1 female).
April 17:
NOCTUIDAE: *Cydosia aurivitta* (LD; COUNTY).

Alligator Creek WMA, Wheeler Co., May 12, LD, Dirk Stevenson & Frankie Snow:
Probably almost all county records.
TORTRICIDAE: *Henricus edwardsiana.* **PYRALIDAE:** *Pococera melanogrammos, Tulsa finitella, Lepidomys irrenosa* (lots). **COSSIDAE** (or DUDGEONIDAE): *Cossula magnifica.* **GEOMETRIDAE:** *Scopula lautaria, S. timandrata, Nemroria elfa, N. bifilata.* **EREBIDAE:** *Leucanopsis longa, Idia scobialis* (pretty far south), *Hyperstrotia aetheria, Lesmone hinna, Catocala clintoni, Zale perculta*, numerous larvae (COUNTY). **NOCTUIDAE:** *Harrismemna trisignata, Callopistria cordata, Callopistria granitosa.*

Sapelo Island, McIntosh Co., April 25-28, JA, LD, JH, BS and Jeff Slotten:
MEGALOPYGIDAE: *Megalopyge pyxidifera* (new to island). **CRAMBIDAE:** *Uresephita reversalis* (new to island), *Diaphania infimalis* (new to island and possible STATE record), *Palpita quadristigmalis* (new to island). **SATURNIIDAE:** *Eacles imperialis* (EARLY). **GEOMETRIDAE:** *Leptostales laevitaria* (new to island), *Pleuroprucha asthenaria* (STATE record), *Ennomos subsignaria* (new to island). **NOTODONTIDAE:** *Dasylophia thyatiroides* (new to island). **EREBIDAE:** *Pygarctia abdominalis, Zanclognatha lituralis* (new to island), *Ephyrodes cacata* (STATE record), *Palpidia pallidior* (first spring record). **NOCTUIDAE:** *Sympistis perscripta* (new to island, third location in the state), *Derrima stellata, Gonodes liquida* (second for island and state), *Xanthopastis regnatrix* (2; new to island).

Jekyll Island, Glynn Co., September 14, 2018, Theresa Schwinghammer:
SESIIDAE: *Vitacea polistiformis* (COUNTY).

Grassy Pond area, just SW of Lake Park, Lowndes Co., GA, April 9-12:
ACROLOPHIDAE: *Acrolophus mycetophagus* (common). **LIMACODIDAE:** *Adoneta spinuloides, Lithacodes fasciola, Apoda rectilinea, Apoda y-inversum, A. biguttata, Isa textula, Euclea delphinii, Natada nasoni.* **PYRALIDAE:** *Aglossa disciferalis.* **SPHINGIDAE:** *Atreides plebeja.* **SATURNIIDAE:** *Callosamia securifera.* **EREBIDAE:** *Zanclognatha atrilineela, Melanomma auricinctaria, Dyspyralis nigellus, Dahana atripennis, Zale fictilis.* **NOCTUIDAE:** *Fagitana littera, Bagisara repanda* (abundant), *Bellura densa, B. obliqua, B. gortynoides.*

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

REPORT (12) ON BUTTERFLIES OBSERVED ON AVERY ISLAND, IBERIA PARISH, LOUISIANA

Contributed by Gary Noel Ross 6095 Stratford Ave., Baton Rouge, LA 70808, E-mail: GNRoss40@yahoo.com

On Friday February 22-Tuesday February 26, 2019, I revisited Avery Island to survey the butterflies and to check on the status of the vegetation. Weather was not ideal: a cold front became stationary over south LA. Feb. 22-23: sky cloudy, wind S (5-10 mph), temperature 71-77 F; Feb. 24: a second cold front passed in early morning dropping temp to 55 F with strong north/northwesterly winds of 10-23 mph, but a clearing sky and a high temp of 65 F; Feb. 25: morning temp 45 F, partly cloudy sky, wind E 6 mph, afternoon high 63 F; Feb. 26: morning temp 51 F, extensive rainy periods during night, wind E (9-11 mph), afternoon high 64 F, partly cloudy in morning, clouds in the afternoon. All roads were wet due to high rainfall prior to my visit.

Sugarcane fields between New Iberia and Avery Island saturated, but cane showing new growth.

Lantana (*Lantana camara*) bushes that were growing beneath a protective tree canopy still featured a few old blossoms, and some new ones; old leaves crinkly or absent, but new leaves were sprouting. Bull thistles were beginning to emerge in un-mowed area near the Cargill docking facility. Rye grass in last year's pepper fields had been cut but was rejuvenating. Other fields were still being grazed by small groups of cattle, goats, and sheep. Bamboo nesting racks for egrets in BIRD CITY were now hosting a fair number of great egrets (no snowy egrets). Many of the birds were in the process off courting and sitting on eggs; nuptial plumage was magnificent! American robins (*Turdus migratorius*) were common throughout the island's open, grassy areas.

Within JUNGLE GARDENS, sasanqua camellias (*Camellia sasanqua*) were no longer flowering. Japanese camellias (*Camellia japonica*), however, were now in full bloom, and according to several residents, this year the displays out matched those of recent years. Some individual bushes still featured many un-opened buds. Additionally, many azaleas were coming into bloom with a few in full bloom. Honey bees were pollinating many blossoms on sunny days. Live oak trees (*Quercus virginiana*) were beginning to drop their yellowing leaves. Christmas berry (*Ardesia crenata*), a plant that has invaded many wooded venues throughout the gardens and in other wooded sections of the island, was still displaying red berries. Butterweed (*Packera glabella*) and common fleabane (*Erigeron philadelphicus*) in full bloom in several low/wet venues. Yellow thistle/bull thistle/bristly thistle (*Cirsium horridulum*) between 12-18 inches in height, some with terminal flower buds. Edge of pond in BIRD CITY mowed and edged to encourage new growth of marginal plants, which were sprouting. Buttonbush trees (*Cephalanthus occidentalis*) on the edge of Saline Lake recently trimmed to within four to six feet of the ground to control height. Virginia crown beard (*Verbesina virginica*) with 12 inches or so of new growth, more or less. Dutch white clover (*Trifolium repens*) and violet wood sorrel (*Oxalis violacea*) in full bloom, establishing extensive colorful patches throughout the island.

Miscellaneous comments on flora: camphor trees (*Cinnamomum camphora*) sprouting first new leaves, swamp red maple (*Acer rubrum* var. *drummondii*) trees displaying both blooms and samaras; black willow trees (*Salix nigra*) budding with leaves and blossoms; a few bald cypress (*Taxodium distichum*) beginning to leaf, but most still dormant; pawpaw (*Asimina triloba*) sprouting first pair of leaves with several flower buds evident on a few trees; may haw (*Crataegus opaca*) and parsley hawthorne (*Crataegus marshalli*) beginning to leaf and bloom but no evidence of early spring ephemeral hairstreak butterflies (*Satyrium* sp.), which are partial to feeding on these flowers; Carolina jasmine (*Gelsemium sempervirens*) in full bloom in many woodlots; wild strawberry

(*Fragaria virginiana*) in full bloom (some fruits) throughout the island; false garlic (*Nothoscordum bivalve*) in full bloom and abundant throughout the island; arrowleaf sida (*Sida rhombifolia*) still dormant; frog fruit (*Phyla nodiflora*) beginning to sprout new leaves; native blue violets (*Viola* sp.) in bloom in many shaded areas; dewberry (*Rubus* sp.) was in flower, but no butterflies spotted; green antelopehorn milkweed (*Aaclepias viridis*) not showing any growth as yet; lyre-leaf sage (*Salvia lyrata*) common but localized; a sizable colony of Pennsylvania bittercress (*Cardamine pensylvnica*) is thriving in a wet depression adjacent to a swampy venue off to the right of a small bridge just off Sugar House Road (accessed from Pepper Field Road); the locale seems ideal habitat for the falcate orangetip (*Anthocharis midea*), but I observed no individuals. Eastern red bud (*Cercis canadensis*) trees (one in JUNGLE GARDENS, several at private residences) were in full bloom, but no Henry's elfin (*Callophrys herici*) present.

Six small alligators were on the banks of the lagoons bordering Bayou Petit Anse and two were on the banks of Saline Lake.

"The Gulf Coast Chapter of the American Bamboo Society was holding its 21st annual weekend (Feb. 22-24) commitment to maintenance of the groves of giant timber bamboo. Sixty folks from parts of LA, TX, AL, VA, WA, Costa Rica, and Germany showed up to assist with the thinning of the 4-5 acre grove dominated by "Moso" (*Phyllostachys edulis*) and "Madaka" (*Phyllostachys bambusoides*) species that are well established near the summit of Prospect Hill, the island's high point." Tools included chainsaws, machetes, pruning shears and saws, and a large power wood chipper. The thinning permits more light to penetrate the canopy, encourages strong new growth, and enriches the soil.

Last year (2018) I identified the grove to be the preferred habitat for the island's main populations of the southern pearly eye (*Enodia portlandia*) and the much rarer, Creole pearly eye (*Enodia creola*). Both species are reputed to utilize native switch cane (*Arundanaria*) as their host plants. On the island, however, both butterflies seem to have co-opted various exotic bamboos that were originally brought to the island by E.A. McIlhenny in the early 20th century for research into the feasibility of establishing a profitable commercial bamboo industry in south Louisiana.

Accordingly, I was curious as to what impact human activity would have on the butterflies, which in February, are most likely in their developmental larval/pupal stages. I was pleasantly surprised! Because pearly eye butterflies fly low to the ground in shaded conditions, and require fermenting sugars for nourishment (no flower nectars for these species), I am able to hypothesize the following: The thinning of the timber bamboo with chain saws (the stalks—technically, "culms"—are cut deftly within one to two inches of the ground) is advantageous for the butterflies. Advantages include: (1) creation of additional open space for butterfly movement while maintaining considerable amount of shaded ground, (2) stimulation of new vegetative growth of secondary, low-growing bushy sprigs of moso that most likely serve as sites for egg laying, (3) creation of natural catch basis for rainwater, which then facilitates the fermentation of fresh saw dust and fresh sap from the wounds—an excellent source of food for the adult butterflies that will emerge a few weeks into the future. By contrast, other groves of bamboo scattered about the island (in particular, JUNGLE GARDENS) that are not routinely thinned, usually become heavily congested with mature culms. This density most likely obstructs butterfly flight, and slows renewed growth of low-level sprigs of bamboo. As a result, populations of the two pearly eye butterflies are eventually extirpated from the groves, or remain low in numbers, concentrating along borders—as my observations have confirmed.

Debatably, the human activity in the grove causes some damage to the in situ larval/pupal stages of the butterflies. Possible reactions: (1) inadvertent trampling by human workers, and (2) smothering of the low-growing bamboo sprigs by the discarded wood chips (not very likely, though, because the chipper is periodically moved about, and because the volume of wood chips is minimal due to the fact that the internodes of individual culms are hollow, ergo, 60-70 percent air). If, however, there is some loss of immature pearly eyes, the enhanced habitat creates a venue for easier flight—especially during courtship and forays for food. Such advantages, based on my hours of observing thinning procedures, would in my opinion more than likely compensate for any insect losses due to thinning.

Below is the list of species I encountered. Asterisk (*) indicates unique to site.

Jungle Gardens

*Tiger Swallowtail (*Papilio glaucus*)—1 male (nectaring on white clover in a patch bordering the Venetian Lagoons)
Spicebush Swallowtail (*Papilio troilus*)—2 males (flying along edge of woodlands)
Cloudless Sulphur (*Phoebis sennae*)—6 (flying high near Buddha Temple and near Bird City)
American Snout (*Libytheana carinenta*)—1 (flying near Buddha Temple)
Carolina Satyr (*Hermeuptychia sosybius*)—4 (flying along edge of wooded venue near Bird City)
Monarch (*Danaus plexippus*)—1 fresh male (flying along Venetian Lagoons)

(SUBTOTAL SPECIES FOR SITE: 6; only 1 unique to site)

Sites on private property

*Zebra Swallowtail (*Eurytides marcellus*)—3 (1 fresh male flying near pawpaw grove near a ravine spanned by a wooden walking bridge, and 2 *in copula* in their nuptial flight from the same grove into a grassy meadow where they settled and where I got a photo)

*Giant Swallowtail (*Papilio cresphontes*)—1 (flying near grove of moso bamboo
Spicebush Swallowtail (*Papilio troilus*)—3 (flying along edge of moso bamboo grove)
*Palamedes Swallowtail (*Papilio palamedes*)—1 fresh male (flying over the lawn of a resident)
Cloudless Sulphur (*Phoebis sennae*)—6 (flying along grassy road behind Saline Lake and near grove of moso bamboo)
American Snout (*Libytheana carinenta*)—2 (flying along border of moso bamboo grove)
*Pearl Crescent (*Phyciodes tharos*)—1 male (flying along roadside near a residence)
*Question Mark (*Polygonia interrogationis*)—4 (badly tattered individuals basking on palmetto leaf near grove of moso bamboo and on nearby soil along roadsides in residential locales)
Carolina Satyr (*Hermeuptychia sosybius*)—15 fresh specimens (flying along shaded road near dump site)
Monarch (*Danaus plexippus*)—3 fresh males (near patches of clover near docking facilities for Cargill Salt)
*Tropical Checkered Skipper (*Pyrgus oileus*)—4 fresh specimens (flying in area of last year's colony of arrowleaf sida at end of Black Bear Corridor road)

(SUBTOTAL SPECIES FOR SITE: 11; only 6 unique to site)

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TOTAL SPECIES FOR TWO SITES: 7

TOTAL INDIVIDUALS FOR TWO SITES: 58

NEW SPECIES FOR CURRENT SURVEY: 0

CUMULATIVE SPECIES FROM TWELVE: 47 (no change)

CUMULATIVE INDIVIDUALS FROM TWELVE REPORTS: 1,624

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REPORT (13) ON BUTTERFLIES OBSERVED ON AVERY ISLAND, IBERIA PARISH, LOUISIANA

Contributed by Gary Noel Ross 6095 Stratford Ave., Baton Rouge, LA 70808, E-mail: GNRoss40@yahoo.com

Between Tuesday March 19-Sunday March 24, 2019, I revisited Avery Island. Weather: March 19—46-72 F, NE breeze, partly cloudy to fair; March 20—41-70 F, NE slight breeze, fair; March 21—49-71 F, NE slight breeze, fair; March 22—50 -73 F, morning fog, partly cloudy later, wind calm; March 23—51-76 F, S breeze, morning fog, partly cloudy later; March 24—51-74 F, SE 5-10 mph, no fog, partly cloudy in morning/cloudy in afternoon.

All mornings were cool, and with Daylight Savings Time in effect, I didn't begin my observations until 10:30-11:00 am, continuing until 5:00 pm. Roads dry but dusty.

GENERAL COMMENTS: Most trees were exhibiting fresh leaves. In ***Jungle Gardens***, azaleas were past their prime, although a few plants were still cloaked in flowers. Most camellias were still a constellation of color, but past their prime. Louisiana irises (*Iris gigantacerulea*) and the exotic yellow flag iris (*Iris pseudacorus*) were beginning to bloom. Native fringe tree (*Chinonanthus virginicus*) and imported tung oil tree (*Vernicia fordii*) were in full bloom. Japanese wisteria (*Wisteria floribunda*) was in full bloom on the "Wisteria Arbor" but not heavy enough to cover. Live oak trees (*Quercus virginiana*) were in full bloom and beginning to re-leaf (many with bronze color) although some trees were still dropping old leaves, which can be confused with butterfly movement. Hawthornes (*Crataegus* spp.) was past bloom and now leafing. Several small alligators were basking in "Venetian Gardens." In ***Bird City***, great egrets incubating eggs, but no showy egrets were noticeable. In ***Saline Lake***, two dozen or so great egrets, 1-2 roseate spoonbills, and a several anhingas had taken up residency. In ***residential sectors***, the bushy lantanas (*L. camara*) were beginning to blossom. Dewberry (*Rubus* sp.) and lyre-leaf sage (*Salvia lyrata*) were in bloom throughout the island. Wet, unmowed venues were covered with an abundance of butterweed (*Packera glabella*), common fleabane (*Erigeron philadelphicus*), and spiny buttercup (*Rununculus muricatus*). Pawpaw trees (*Asimina triloba*) were exhibited several inches of new leaves and purple blossoms. Ligustrum and privets were beginning to produce flower buds. Yaupon (*Ilex vomitoria*) was beginning to blossom. Pennsylvania bittercrest (*Cardimine pensylvanica*) was vittually leafless with dried seedpods that could not possibly host falcate orange tips (*Anthocharis midea*) if indeed that butterfly occurs on the island. White clover (*Trifolium repens*) was in full bloom, particularly outside the pepper fields and pastures on the extensive "marsh headland" corridor, but I observed not a single orange sulphur (*Colias eurytheme*). Bull thistle (*Cirsium horridulum*) was in full bloom and abundant along "marsh headland" causeway directly behind the pepper fields, along roadsides near edge of marsh near "Osborn boat house," skeet range, and atop Prospect Hill; the thistle proved a nectar source for bees and swallowtail/monarch butterflies. Passionvine (*Passiflora incarnata*) sprouting near Cargill dock facility, moso bamboo grove, and Prospect Hill. Agricultural fields were now being plowed and dressed for planting the new crop of tabasco seedlings. Green antelopehorn milkweed (*Asclepias viridis*) showing no sign of growth on the two known colonies located on residential lands. Most roadsides were now being mowed at least once per month, limiting extensive wildflower displays.

The number of monarchs increased each day. Butterflies appeared worn (migrants) and seemed to be searching for milkweeds to begin their first new generation. I observed four pairs *in copula*, an indication that the island was their first landfall after departing Mexico. At least two-three dozen individuals were flying in the grassy area atop Prospect Hill (because of the presence of dried grass and numerous bull thistles, the area apparently hadn't been mowed since the previous fall); the butterflies often paused to nectar on the large flower heads of the thistles. I am convinced that the presence of so many monarchs on this highland in coastal LA is further evidence that Avery Island, as with the cheniers of Cameron Parish, is providing respite for monarchs in both spring and fall during what I in the 1990s christened "Monarch Trans-Gulf Express." Fortunately, after about two hours of diligence, I managed to obtain several relevant photographs.

In the grove of moso bamboo (*Phyllostachys edulis*) near the high point of the island (Prospect Hill), many new canes were emerging. Southern pearly eye (*Enodia portlandia*) butterflies were common—at least 8 observed between 2:00-4:00 pm on March 23 (temperature approx. 72 F) and 6 observed between 9:45 am-1:30 pm on March 24 (temp. approx. 60-65 F). All were easy to observe because of the openness of the grove. Most butterflies appeared to be attracted to the odor of what reminded me of fermenting yeast in the brewing of beer. I eventually located the source: a medium-size bamboo cane that had been cut to ground level the previous month during the thinning of the grove (see REPORT 12). The raw cut had become a de facto "cup," that is, a concavity that could contain liquid. Furthermore, the liquid in question appeared to be fermenting. My guess was that sugar-rich sap had oozed into the cup and had been inoculated with an anaerobic yeast. The fermenting brew was producing carbon dioxide (responsible for the froth), alcohol, and assorted other by-products (responsible for the odor)—all of which were attracting assorted small flies and wasps. Positioning myself on the ground about six feet from was tantamount to a "banquet table," I set up watch to observe if any butterflies would respond. Sure enough, disregarding my presence, *Enodia* butterfly soon flew to the venue, alighting on a nearby dried leaf of cane. After nearly 20 minutes of motionless behavior, the butterfly walked to the edge of the cup and began imbibing. This was incontrovertible evidence that *Enodia* feeds on plant juices, in this case, fermenting sap. Furthermore, the presence and feeding of the butterflies support my former hypothesis that intense human

activities in the grove in February each year do not wipe out all (or even any) developing butterfly larvae or pupae. (Of course, the actual oviposition sites for females—and hence, actual location of larvae and pupae—remain an unknown.) As such, I conclude that the periodic cutting of the bamboo canes creates enhanced feeding opportunities for the first spring generation of adult *Enodia* butterflies. An exhaustive walk throughout the grove revealed the presence of at least a dozen other cut bamboo stalks with fermenting/frothing sap. None, however, was attracting butterflies. One probable explanation is that the bamboo cups represented different stages of fermentation; another possibility is that after feeding on the alcoholic brew, the butterflies become so intoxicated that they are unable to fly about but instead remain relatively docile in close proximity to their addictive meal. (Such behavior has been noted by me and others with tropical butterflies that habitually feed on fermenting fruit that has fallen from rainforest trees.) I will describe more detailed observations and present photographs of the *Enodia* – bamboo sap relationship in a future article.

I located 5 colonies of the little wood satyr (*Megisto cymela*). All were along the edges of woodlands—especially those adjacent to mowed lawns. Venues included two sites along Sugar Mill Road, atop Prospect Hill, and on the properties of two residents. In each colony, two to six individuals were "dancing" about in sun dappled spots along with individuals of the smaller Carolina satyr (*Hermeuptychia sosybius*). In all colonies, the adjacent woodlands contained an abundance of tufted course grasses—possibly host plants. The butterflies, however, seemed to prefer the interface between the shadowy forest and sunny lawns.

A check of many red cedar trees (*Juniperus virginiana*) throughout the island failed to reveal the presence of the 'olive' juniper hairstreak (*Callophrys g. gyrneus*), a small butterfly that should be present on the island. Even atop Prospect Hill, the numerous cedars were devoid of the butterfly.

In response to a peninsular of land created over the years by spoils created by the dredging of the Venetian Lagoons, the administrators gave the manager of grounds permission to plant a large grouping of lantana (dwarf yellow and trailing purple varieties) along with the taller vitex/chaste tree (*Vitex agnus-casstus*). These plants will reduce the need for grass maintenance, create a palate of color for tourists, and provide good nectar sources for butterflies and other pollinators; in addition, seeds will be relished by various birds. Kudos!

Small deer flies (*Chrysops* spp.) were noticeable in low/wet areas, but not too pesky—yet!

In shaded areas, i.e., paths in wooded areas or along their margins, green metallic colored tiger beetles were noticeably abundant—my first encounter. The beetles lacked characteristic six white dots on their dorsal wing pads, but nonetheless I think the species is *Cicindela sexguttata*.

Below is the list of species I encountered. [NOTE: Asterisk (*) indicates unique to site. **Bold type** indicates new for this survey.]

Jungle Gardens

Spicebush Swallowtail (*Papilio troilus*)—20 males (flying throughout the gardens)
Cloudless Sulphur (*Phoebis sennae*)—8 (flying high near Buddha Temple and near Bird City)
Phaon Crescent (*Phyciodes phaon*)—1 (flying in sunny, damp area near Venetian Lagoons)
American Lady (*Vanessa virginiensis*)—1 (flying/resting over white clover near Venetian Lagoons)
*Red Admiral (*Vanessa atalanta*)—1 (fresh emergent resting on a fern frond on the edge of pond in Bird City)
Southern Pearly Eye (*Enodia portlandia*)—1 (flying along margin of bamboo grove adjacent to Bird City)
Carolina Satyr (*Hermeuptychia sosybius*)—10 (flying along edge of wooded/bamboo venues venue near Bird City)
Monarch (*Danaus plexippus*)—10 faded migrants (flying along Venetian Lagoons and near Bird City)
Least Skipper (*Ancyloxpha numitor*)—2 (flying in grassy border of pond at Bird City)
Southern Skipperling (*Copaeodes minimus*)—4 (flying/resting in grassy border of pond at Bird City)

(SUBTOTAL SPECIES FOR SITE: 10; only 1 unique to site)

Sites on private property

*Zebra Swallowtail (*Eurytides marcellus*)—1 fresh male (flying near pawpaw grove on a residential site and near a ravine spanned by a wooden walking bridge)
*Black Swallowtail (*Papilio polyxenes*)—1 (flying above bull thistle near Cargill salt dock)
*Giant Swallowtail (*Papilio cresphontes*)—2 (flying near grove of moso bamboo
Spicebush Swallowtail (*Papilio troilus*)—10 (flying along edge of moso bamboo grove and atop Prospect Hill)
*Palamedes Swallowtail (*Papilio palamedes*)—15 fresh individuals (flying near and feeding on bull thistles along "marsh headland" corridor and along road to skeet range)
Cloudless Sulphur (*Phoebis sennae*)—6 (flying along grassy road behind Saline Lake and near grove of moso bamboo)
*Red-banded Hairstreak (*Calycopis cecrops*)—2 flying over white clover on "marsh headland" corridor)
*American Snout (*Libytheana carinenta*)—2 (flying along border of moso bamboo grove)
Phaon Crescent (*Phyciodes phaon*)—5 (flying in recently mowed area near skeet range and where frogfuit was common during previous year)
*Pearl Crescent (*Phyciodes tharos*)—1 male (flying along roadside near a residence)
*Question Mark (*Polygonia interrogationis*)—4 badly worn individuals (basking on a leaf near grove of moso bamboo and on soil near Prospect Hill)
American Lady (*Vanessa virginiensis*)—1 (flying/resting along "marsh headland" corridor)
*Common Buckeye (*Junonia coenia*)—2 faded (flying low to ground along Bear Crossing Road)
*Viceroy (*Limenitis arthemis*)—3 (flying near willow trees on Bear Corridor Road)
Carolina Satyr (*Hermeuptychia sosybius*)—15 fresh specimens (flying along shaded road near dump site)
***Little Wood Satyr (*Megisto cymela*)**—5 colonies of 2-6 each (flying along edges of woodlands (see introduction)
Monarch (*Danaus plexippus*)—75 faded individuals (migrants) scattered about island, including atop Prospect Hill (attracted to bull thistle—see introduction)
***Juvenal's Duskywing (*Erynnis juvenalis*)**—4 (flying/resting in grass at residence off Sugar Mill Road)
***Horace's Duskywing (*Erynnis horatius*)**—1 (flying low to grassy ground on Sugar Mill Road)
*Least Skipper (*Ancyloxypha numitor*)—2 (flying in grassy area along road near community dump)
Southern Skipperling (*Copaeodes minimus*)—8 (flying in grassy area near bayou at end of Bear Corridor Road)
*Tropical Checkered Skipper (*Pyrgus oileus*)—2 fresh individuals (flying in area of last year's colony of arrowleaf sida at end of Black Bear Corridor road)
*Sachem (*Atalopedes campestris*)—50 (fresh emergents in large colony feeding on butterweed (*Packera glabella*) in swampy venue off "marsh headland" corridor)
*Dun Skipper (*Euphyes vestris*)—2 (worn individuals feeding on butterweed (*Packera glabella*) in swampy venue off "marsh headland" corridor; in company of *Euphyes* above)

(SUBTOTAL SPECIES FOR SITE: 24; only 17 unique to site)

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TOTAL SPECIES FOR TWO SITES: 25

TOTAL INDIVIDUALS FOR TWO SITES: 273

NEW SPECIES FOR CURRENT SURVEY: 4

CUMULATIVE SPECIES FROM THIRTEEN SURVEYS: 51 (plus 1 vagrant species)

CUMULATIVE INDIVIDUALS FROM THIRTEEN SURVEYS: 1,897

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REPORT (14) ON BUTTERFLIES OBSERVED ON AVERY ISLAND, IBERIA PARISH, LOUISIANA

Contributed by Gary Noel Ross, 6095 Stratford Ave., Baton Rouge, LA 70808, E-mail: GNRoss40@yahoo.com

Between Sunday April 21 and Wednesday April 24 (including Easter Sunday and Earth Day) I revisited Avery Island. Weather: A cold front with strong thunderstorms had moved through the area three days prior and so landscapes were still wet, but relatively dry by end of stay. During my five day visit temperatures ranged between lows of 53-69 F and highs of 76-80 F; skies progressed from sunny to partly cloudy to cloudy, with widespread rain the following day (April 25). Wind was from the NE and later, SE; breezy with gusts 13-23 mph, but calmer toward end of survey.

GENERAL CONDITIONS: Bull thistles (*Cirsium horridulum*) were seeding, although a few plants still were producing fresh secondary flowers that were extremely attractive to bees and swallowtail butterflies wherever they had not been mowed. Prairie nymphs (*Herbertia lahoe caerulea*) were in full bloom and located in numerous mowed venues around the island. Mexican evening primrose (*Oeonthera speciosa*) was in full bloom, scattered throughout many open areas; attractive to bees. Japanese honeysuckle (*Lonicera japonica*) was in full bloom and scattered throughout woodlands. White clover (*Trifolium repens*) was still blossoming throughout many mowed areas, but no orange sulphurs (*Colias eurytheme*) were observed. Both "Ham n' Eggs' and "Spanish Flag" varieties of bushy lantana (*Lantana camara*) were blooming profusely—much more so than at any time during 2019, probably as a response to the previous mild winter and lack of freeze-back; swallowtail butterflies were attracted. Wild onions (*Allium canadense*) were now abundant, replacing false garlic (*Nothoscordum bivalve*) from the previous month; flowers were attracting bees but no butterflies. Yaupon (*Ilex vomitoria*) was now beginning to berry. Dewberry (*Rubus* sp.) was in early fruit (red berries). Butterweed (*Packera glabella*) wanning; colonies that were being frequented by sachem and Dun skippers last month, were no longer attractive. Azaleas and camellias were spent, but a few Louisiana iris (*Iris gigantacaerulea*) and yellow flag iris (*Iris pseudacorus*) were still in bloom. Chinese privet (*Ligustrum sinense*) was in full bloom along the borders of many woodlands. In contrast, wax-leaf ligustrum (*Ligustrum japonicum*), most common in JUNGLE GARDENS and in abandoned home sites such as "old miner's village" was a bit behind. Both species, however, were perfuming the air, thus attracting numerous honeybees. Egrets in *Bird City* now had chicks. Saline Lake was now occupied by great egrets, cattle egrets, a few snowy egrets, and a dozen or so roseate spoonbills—all in their fanciful nuptial plumage. Tabasco pepper fields had been very recently planted with young pepper plants. Mosquitoes and gnats were become pesky, but still manageable.

I located a third venue of green antelopehorn milkweed (*Asclepias viridis*): atop Prospect Hill in a field that had not been mowed recently as evidenced by the numerous mature bull thistle plants. I estimate that at least 100-125 individual plants were observed in more or less 6-7 distinct colonies. The majority of the plants were either in bud or full bloom. Although I observed no monarch caterpillars, a few plants did exhibit minor leaf damage that was characteristic of young caterpillars having fed in the past. (In mid March when monarchs were migrating through, the milkweeds had not resumed their spring growth, hence, no oviposition on milkweeds, ergo, no discernable leaf damage now in mid April.)

Three of the five milkweed plants that were transplanted last May into the lawn of a resident who fenced them, had survived the transplant, and were now in bloom. The plan is to establish a new colony of the plants that will not be subject to frequent mowing.

Several of the cup-shaped receptacles created by the thinning of the moso bamboo this past February were still collecting rain water and fermenting plant sap—as evidenced during my March visit. Flies and wasp were attracted, but I observed no adults of either pearly eye butterflies (*Lethe porltlandia, L. creola*).

All butterfly populations were very low. Most swallowtails were worn, but many other species were very fresh, indicating that this mid April timing caught most species at the end of an overwintering generation or the beginning of a first new generation; others were still in between in their immature stages.

The most attractive plants for butterflies proved to be bull thistle (first) and lantana (second). Once again, the "old miner's village" near the Cargill docking facility and Prospect Hill proved to be the best venues for butterflies.

EPHEMERAL BUTTERFLIES: The primary purpose of this census was to search for butterflies that are considered spring ephemerals, that is, species that have relatively short flight periods during early spring. Examples in south Louisiana include several species of hairstreaks and blues. These species are often attracted to the blossoms of Chinese privet (*Ligustrum sinense*), wax-leaf ligustrum (*Ligustrum japonicum*) and the new growth of eastern red cedar (*Juniperus virginiana*). Although the plants seemed in excellent condition for nectaring and breeding butterflies, I failed to observe any of my targeted species. I did, however, observe two individuals of red-banded hairstreak (*Calycopis cecrops*) nectaring on *Ligustrum japonicum* along the Venetian Gardens road in JUNGLE GARDENS.

Below is the list of species I encountered. [NOTE: Asterisk (*) indicates unique to site. **Bold type** indicates new for this survey.]

Jungle Gardens

Spicebush Swallowtail (*Papilio troilus*)—20 males (flying throughout the gardens)
Cloudless Sulphur (*Phoebis sennae*)—1 male (flying near Bird City)
*American Lady (*Vanessa virginiensis*)—1 male (resting in patch of clover in Venetian Gardens
Carolina Satyr (*Hermeuptychia sosybius*)—10 (flying along edge of wooded/bamboo venues venue near Bird City)
*Red-banded Hairstreak (*Calycopis cecrops*)—2 (nectaring on wax-leaf ligustrum along road skirting Venetian Gardens)
Least Skipper (*Ancyloxpha numitor*)—2 (flying in grassy border of pond at Bird City)
Sachem (*Atalopedes campestris*)—1 (flying in grassy border of pond at Bird City)
Dun Skipper (*Euphyes vestris*)—1 (flying in grassy border of pond at Bird City)

(SUBTOTAL SPECIES FOR SITE: 8; 2 unique to site)

[NOTE: Following heavy rain on April 25 that caused me to depart A.I., Craig Marks (Lafayette) visited JUNGLE GARDENS on April 27, a warm sunny day. Marks reported the following: 1 pipevine swallowtail (*Battus philenor*), 1 black swallowtail (*Papilio polyxenes*), 21 southern oak hairstreaks (*Satyrium favonius*), 1 gray hairstreak (*Strymon melinus*), 1 American snout (*Libytheana carinenta*), 1 question mark (*Polygonia interogationis*), 2 red admirals (*Vanessa atalanta*), and 1 Delaware skipper (*Anatrytone logan*). All were associated with the flowering wax-leaf ligustrum flanking the road through "Venetian Gardens." The previous rain most probably triggered a mass emergence of *S. favonius*, a species I have yet to record but that had been observed by Marks in the past.]

Sites on private property

***Pipevine Swallowtail (*Battus philenor*)**—2 (1 fresh male, 1 worn female, feeding on bull thistle near Cargill salt dock; host plant not yet identified on island)
*Black Swallowtail (*Papilio polyxenes*)—1 (flying above bull thistle near Cargill salt dock)
*Eastern Tiger Swallowtail (*Papilio glaucus*)—1 male (nectaring on bull thistle on Prospect Hill)
Spicebush Swallowtail (*Papilio troilus*)—12 (flying along edge of moso bamboo grove and atop Prospect Hill)
*Palamedes Swallowtail (*Papilio palamedes*)—12 fresh small individuals (flying near and feeding on bull thistles along "marsh headland" corridor, along road to skeet range, and atop Prospect Hill)
Cloudless Sulphur (*Phoebis sennae*)—2 worn males (flying along Pepper Field Road)
*American Snout (*Libytheana carinenta*)—2 (flying along border of moso bamboo grove)
*Question Mark (*Polygonia interrogationis*)—3 fresh individuals (flying and basking along road to grove of moso bamboo)
*Common Buckeye (*Junonia coenia*)—1 faded (flying low to ground along Bear Crossing Road)
*Viceroy (*Limenitis arthemis*)—1 fresh male (flying near willow trees on Bear Corridor Road)
Carolina Satyr (*Hermeuptychia sosybius*)—1 fresh individual (flying along shaded road near dump site)
*Monarch (*Danaus plexippus*)—1 faded migrant male (attracted to bull thistle atop Prospect Hill in newly discovered colonies of green antelopehorn milkweed))
Least Skipper (*Ancyloxypha numitor*)—2 (flying in grassy area along road near community dump)
Sachem (*Atalopedes campestris*)—1 fresh male (nectaring on bushy "Ham 'n Eggs" lantana near Cargill docking facility)

Dun Skipper (*Euphyes vestris*)—1 worn individual basking on "Ham 'n Eggs" lantana near Cargill docking facility)

(SUBTOTAL SPECIES FOR SITE: 15; only 9 unique to site including 1 new for surveys)

TOTAL SPECIES FOR TWO SITES: 17

TOTAL INDIVIDUALS FOR TWO SITES: 81

NEW SPECIES FOR CURRENT SURVEY: 1

CUMULATIVE SPECIES FROM FOURTEEN SURVEYS: 52 (plus 1 vagrant species)

CUMULATIVE INDIVIDUALS FROM FOURTEEN SURVEYS: 1,978

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

All records by Ricky Patterson unless otherwise indicated:

30 March 2019, reported by Craig Marks, Beechnut Nature Area near Tylertown in Walthall County, *Poanes zabulon, Polites themistocles*

15 May 2019, Vicksburg, Warren county, MS, *Catocala clintoni*

A rather cool and wet spring which has turned warm quickly.

North Carolina: Steve Hall, Moths_of NC_ Website@outlook.com, E-Mail: stephen.phall@outlook.com

"WINTER" BUTTERFLY RECORDS FOR NORTH CAROLINA – 2019

Submitted by Harry LeGrand:

Records are from August 2018 through January 2019. Names in parentheses are counties.

NYMPHALIDAE:

Heliconius charithonia: There was a single report of the species for 2018 – one seen by Scott Dueweke in the Emerald Isle area of Bogue Banks (Carteret), on August 17.

Vanessa cardui: The first adult butterfly that Kevin Metcalf saw in 2019 was, surprisingly, this species, in Charlotte (Mecklenburg) on January 5. This irregular migratory species was rather rare across the state in 2018.

HESPERIIDAE:

Pyrgus albescens: Rob Gilson collected a male checkered-skipper at McDowell Nature Preserve (Mecklenburg) **(COUNTY)** on October 13, in the hopes that it might be this species. He dissected the genitalia, and Steve Hall determined from a photo that indeed it was of this species and not of *Pyrgus communis.* Derb Carter also collected a male checkered-skipper along US 17 (Brunswick), just a mile or two from the South Carolina state line, on November 2. .He took it to Steve Hall, who dissected it and also determined it to be *Pyrgus albescens.* Previously in North Carolina there was one specimen record.(Carteret), and two sight reports that were believed to be this species (Brunswick and Richmond). These two additional specimen records strongly suggest that *P. albescens* is moving into extreme southern North Carolina, perhaps now as a resident. The species is common now over much or most of South Carolina and has been expanding its range northward in that state, at the expense of *P. communis*.

"SPRING" BUTTERFLY RECORDS FOR NORTH CAROLINA – 2019

Submitted by Harry LeGrand:

Records are from February through May 2019, unless otherwise indicated (with a different year). Names in parentheses are counties.

Spring 2019 was wetter than normal into early or mid-May, but it became quite dry with little rainfall over the last 20 days of the month. The temperatures were somewhat warmer than normal over the state for the season, and after May 10 were much above normal. Not surprisingly, many butterfly species continue to be seen earlier in the spring with each passing year, especially so in the mountains. A few Nymphalids had outbreak numbers this season, especially *Polygonia interrogationis* and *Libytheana carinenta*. On the other hand, a few satyrs and browns, and perhaps some wetland skippers, have not yet rebounded from major flood events over the past several years.

PAPILIONIDAE:

Papilio palamedes, an outstanding single-party count of the species was made by Brian Bockhahn, Lori Carlson, and John Jarvis on a 21-mile bicycle route through Dismal Swamp State Park (Camden) on May 14. They tallied 1,010 individuals, the second highest count in the state, next to 1,206 at that site on a butterfly count in 2017.

PIERIDAE:

Euchloe olympia, the population at the single known Madison County site emerged very early this spring. Pete Dixon recorded them on many days, with the first on the remarkably early date of March 15. His peak count was nine individuals on March 28.

Eurema daira, Salman Abdulali continued digging up old records in various publications and museums, and found a few more for this formerly regular stray. A specimen at the University of Georgia was collected by R. Leuschner at Gastonia (Gaston), on August 5, 1935; and a "new" county record was one collected at Brevard (Transylvania), on July 7, 1975, by James Hargett; the specimen resides at the William Barr Museum (University of Idaho).

Pyrisitia lisa, seldom seen in the state before July, one was very notable at Eno River State Park (Orange), as carefully studied by Lori Carlson and John Jarvis on May 8.

LYCAENIDAE:

Lycaena phlaeas, one of the few recent records for the Piedmont was one photographed by Rob Van Epps on April 21 at Fisher Farm Park (Mecklenburg) (**COUNTY**).

Satyrium liparops, Nick Flanders encountered this rare species twice, and both sightings were first county records. He had single individuals along the Roanoke River (Bertie) (**COUNTY**) on May 17, and another at Swanquarter National Wildlife Refuge (Hyde) (**COUNTY**) on May 22. Also notable was one seen by Floyd and Signa Williams at Hanging Rock State Park (Stokes) (**COUNTY**) on May 31.

Satyrium favonius, this scarce species (except locally along the coast) was reported four times, with the best being a far inland one seen by Richard Stickney at Penny's Bend (Durham) on May 21. Ed Corey photographed one at Fort Fisher (New Hanover) on May 10; Parker Backstrom saw three at Ocean Isle Beach (Brunswick) on May 19; and John Fussell saw three at Theodore Roosevelt State Natural Area (Carteret) on May 22. All of these coastal individuals were close to *S. f. favoniusin* appearance, as is usual for individuals along the southern coast. The first report, and almost any inland ones, are certainly of *S. favonius ontario*.

Callophrys augustinus, the best of the many records was a state-tying one-day count of 34, made by Sven Halling and Gene Schepker at Pilot Mountain State Park (Surry) on April 11.

Callophrys henrici, the most notable report was a first county record made by Sven Halling, who saw one on April 10 at Pilot Mountain State Park (Yadkin) (**COUNTY**).

Callophrys hesseli, disappointing was just a single report of the species this season, of a worn individual photographed by Will Stuart on April 22 in the Richmond County portion of the Sandhills Game Land.

Glaucopsyche lygdamus, very early was one seen by Pete Dixon in Madison County on February 21; the previous early date for the state was March 8 (2017).

NYMPHALIDAE:

Libytheana carinenta, the second highest state count ever was the 75 counted by Richard Stickney at Elwell Ferry, along the Cape Fear River (Bladen) on April 29.

Agraulis vanillae, the only seasonal report was a fairly early one photographed by Dwayne Martin on May 28 at Riverbend Park (Catawba).

Speyeria diana, the first ever mountain record in the month of May was made by Pete Dixon, who saw one near Hot Springs (Madison) on May 31; there are a few Piedmont records for late May.

Phyciodes phaon, this coastal species is susceptible to population loss with flooding by hurricanes. Thankfully, John Fussell saw three at a known site – Rachel Carson Reserve – near Beaufort (Carteret), on April 8. Alicia Jackson photographed one on May 23 on a sandy roadside near Kure Beach (New Hanover), where a population was discovered last fall.

Phyciodes cocyta incognitus, Nora Murdock photographed a fresh male in the Great Smoky Mountains National Park (Swain), on May 5; this was the only spring report for the species, which is poorly known in the southern Appalachians.

Vanessa cardui, the species was scarce this spring, though there were at least five reports, but each was of just a single individual.

Polygonia interrogationis, a handful of observers noted a remarkable population outbreak of this species in mid-May, during the general emergence period of the new spring brood. Will Cook saw about 150 at Caswell Game Land (Caswell) on May 17, and Will Stuart observed about 140 at Pee Dee National Wildlife Refuge (Anson) on May 8.

Asterocampa celtis, one seen by Brian Bockhahn and others on their bicycle survey at Dismal Swamp State Park on May 14 was a first record for not only Camden (**COUNTY**) but for any county north of Albemarle Sound. Will Cook had a state record 75 individuals at Caswell Game Land (Caswell) on May 17.

Lethe anthedon, at the extreme eastern edge of the range was one seen along the Pee Dee River (Richmond) on May 3, as found by Harry LeGrand and Gail Lankford.

Hermeuptychia sosybius, though essentially unreported in the spring from Raleigh eastward, a count of 200 at Brumley Preserve (Orange) on May 7, made by Randy Emmitt, was outstanding considering that this site is barely 40 miles west of Raleigh. Flooding events over the past few years have obliterated most of the population of this formerly very common species in the eastern part of the state.

HESPERIIDAE:

Telegonus cellus, the colony found in western Madison County in recent years had state record numbers this spring. A butterfly count led by Gail Lankford on May 9 turned up a remarkable seven individuals, and Pete Dixon counted seven by himself on the next day in that area. Thankfully, there were two other records, both from the mountains, and both singletons – seen by Ed Corey near Fontana Village (Graham) on April 30 and by Jason Love in his yard at Otto (Macon) on May 27.

Staphylus hayhurstii, always tough to find, one was seen by Pete Dixon in Madison County on April 29, and Lori Carlson had one (the same individual?) in her Hillsborough (Orange) yard on many dates from April 24 to May 2.

Erynnis icelus, this species is scarce as far east as the central Piedmont; thus at least two photographed on April 27 by Mike Turner at the Dan River Game Land (Rockingham) was notable.

Erynnis martialis, interestingly, each of the two records for this rarity involved photographs of quite worn individuals! Sven Halling had two on April 27 in the Surry County foothills on April 27, and Pete Dixon had one near Hot Springs (Madison) on May 2. The fact that worn individuals were seen this early in the normal first brood time frame indicates that this flight was quite early this year.

Pholisora catullus, double-digit counts of this species are seldom made in the Piedmont, and thus notable was 20 seen by Sven Halling on April 24 near Pfafftown (Forsyth).

Hesperia metea, this strongly declining species was again unreported from the Piedmont, as most observers there have given up searching for them. Also, as usual, the only reports were of several seen by Pete Dixon at a known site in Madison County on April 15-16. Reasons for the alarming decline of the species are unknown, as suitable powerline clearings and other old field habitats are still numerous.

Hesperia meskei, Robert Dirig observed a female nectaring at Holly Shelter Game Land (Pender) (**COUNTY**) on September 27, 2003. This is a first record for that fairly well-worked county; this record appeared in The News of the Lepidopterists' Society newsletter.

Poanes viator, Nick Flanders saw one close to the Roanoke River (Bertie) (**COUNTY**) just upriver from Plymouth,on May 17. The probable hostplant – southern wild-rice (*Zizaniopsis miliacea*) – is present along the river. Brian Bockhahn and party noted one at Dismal Swamp State Park on May 14, apparently a first record for that park but not for Camden County.

Euphyes pilatka, this and most other coastal marsh species are neglected by observers these days, especially during the first brood. Fortunately, Nick Flanders went to a known hotspot and observed nine individuals on May 22 at Swanquarter National Wildlife Refuge (Hyde).

Euphyes dion, John Dole had an outstanding Piedmont count of 12, at a pond margin in his Raleigh (Wake) yard on May 27.

Atrytonopsis quinteri, there was great concern that most of the population of this state endemic butterfly would be lost due to flooding by Hurricane Florence last September. How much of the potential population was impacted is not clear, but three visits to Fort Macon State Park (Carteret) this spring showed that a sizable number of adults emerged. Counts between 20 and 32 individuals were made this spring by Dave Pavlik, Ralph Moore, and Chris Singleton.

Amblyscirtes carolina, one seen by Salman Abdulali at Boyd Lee Park (Pitt) on April 17 was a rare spring sighting for that part of the Coastal Plain.

Amblyscirtes reversa, Will Stuart had success in finding the species in the Sandhills Game Land, photographing individuals in both Scotland and Richmond counties between April 16-22.

Panoquina ocola, this species has a tiny first brood, as most eggs laid in fall by the numerous females in the state fail to generate adults in spring. One seen by Harry LeGrand near Raleigh (Wake) on May 27 was a notable find.

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

Brian sends in the following report for South Carolina:

Abbeville Co., SC; Due West; 4 Sep-4 Oct 2018; Matthew Campbell
Hesperiidae: *Pyrgus albescens*
Anderson Co., SC; Honea Path; 17 Oct 2018; David Ritland
Hesperiidae: *Pyrgus albescens*
Greenwood Co., SC; Ninety Six; 10 Nov 2018; Rusty Wilson
Hesperiidae: *Pyrgus albescens*

Chesterfield Co., SC; Cheraw State Park; 29 Mar 2019; Dave & Marty Kastner
- Papilionidae: *Papilio glaucus*
  - *Papilio troilus*
- Pieridae: *Phoebis sennae*
- Lycaenidae: *Callophrys hesseli* (probable)
  - *Callophrys augustinus*
  - *Callophrys henrici*
- Nymphalidae: *Vanessa virginiensis*
  - *Libytheana carinenta*
- Hesperiidae: *Erynnis juvenalis*

Chesterfield Co., SC; Carolina Sandhills NWR; 29 Mar 2019; Dave & Marty Kastner
- Papilionidae: *Papilio glaucus*
  - *Papilio troilus*
- Pieridae: *Phoebis sennae*
  - *Abaeis nicippe*
- Lycaenidae: *Cupido comyntas*
- Nymphalidae: *Junonia coenia*
- Hesperiidae: *Erynnis juvenalis*
  - *Erynnis brizo*

Hampton Co. SC; Webb WMA; Brian Scholtens
- Papilionidae: *Papilio palamedes*
- Pieridae: *Phoebis sennae*
- Lycaenidae: *Celastrina neglecta*
  - *Calycopsis cecrops*
- Nymphalidae: *Limenitis archippus*
  - *Junonia coenia*
  - *Vanessa virginiensis*
  - *Phyciodes tharos*
  - *Megisto cymela*
  - *Hermeuptychia sosybius*
- Hesperiidae: *Erynnis zarucco*
  - *Poanes zabulon*

Lancaster Co., SC; Forty Acre Rock HP; 27 Apr 2019; Dave & Marty Kastner
- Papilionidae: *Eurytides marcellus*
  - *Papilio glaucus*
  - *Papilio troilus*
- Lycaenidae: *Callophrys gryneus*
  - *Callophrys henrici*
- Nymphalidae: *Vanessa virginiensis*
  - *Vanessa atalanta*
  - *Limenitis arthemis astyanax*
  - *Cyllopsis gemma*
- Hesperiidae: *Lerema accius*
  - *Poanes zabulon*

Oconee Co., SC; Brasstown Falls Rd; 2 May 2019; Dennis Forsythe
- Hesperiidae: *Autochton cellus*

Berkeley Co., SC; Francis Marion NF; FS Rd 204; 4 May 2019; Brian Scholtens
- Papilionidae: *Papilio palamedes*
- Nymphalidae: *Megisto cymela*
  - *Phyciodes tharos*
  - *Hermeuptychia sosybius*
  - *Danaus plexippus*

Berkeley Co., SC; Francis Marion NF; FS Rd 204B; 4 May 2019; Brian Scholtens
- Tortricidae: *Grapholita tristrigana* – flying around *Lupinus perrenis* (2nd record for state)

Berkeley Co., SC; Francis Marion NF; Halfway Creek Rd @ powerline cut; 4 May 2019; Brian Scholtens
- Papilionidae: *Papilio palamedes*
  - *Papilio glaucus*

Pieridae: *Phoebis sennae*
Nymphalidae: *Neonympha areolata*
Vanessa virginiensis (larvae pupating)
Junonia coenia
Phyciodes tharos
Hesperiidae: *Thorybes pylades*
Hylephila phyleus
Polites origenes

Berkeley Co., SC; Francis Marion NF; Halfway Creek Rd @ Steed Creek Rd.; 4 May 2019; Brian Scholtens
Papilionidae: *Papilio palamedes*
Lycaenidae: *Strymon melinus*
Nymphalidae: *Megisto cymela*
Polygonia interrogationis

Tennessee: John Hyatt, 233 Park Ridge Court, Kingsport, TN 37664, E-Mail: jkshyatt@centurylink.net

Texas:

Virginia: Harry Pavulaan, 606 Hunton Place, Leesburg, VA. 20176, Pavulaan@aol.com

Harry sends in the following 2019 spring report for Virginia:

Butterflies [all reports H. Pavulaan except where noted]. County records indicated in all-caps.

Pterourus glaucus – Carroll County: Blue Ridge Parkway, Pipers Gap, 4/23/2019 (1 observed); Route 640 near Blue Ridge Parkway, 4/23/2019 (1 observed). Floyd County: Blue Ridge Parkway, Mabry Mill, 4/23/2019 (1 observed); local roads near Blue Ridge Parkway, 4/23/2019 (4 observed, 2 collected).

Pterourus appalachiensis – Fauquier County: George Thompson WMA near Markham, 5/2/2019 (one male observed, somewhat early), 5/16/2019 (several males, but see below).

Pterourus glaucus x *appalachiensis* hybrid swarm(?) – Fauquier County: George Thompson WMA near Markham, 5/16/2019 (several males observed, 8 confirmed by net). Interestingly, no members of the "Tiger Swallowtail" group have been observed outside this area on this date or through the previous week. However, what appears to be a hybrid swarm thrives at this particular site annually in May, in which males span the range of typical spring *glaucus* phenotypes to pure *appalachiensis* phenotypes and a complete range of sizes from small to giant. All degrees of variation and combination of features between the two species are present. This "swarm" does not occur in similar situations in other areas in this region. Curiously, NO females have ever been found within the hybrid swarm. Conversely, only pure *appalachiensis* phenotypes (including females) occur at higher elevations within the WMA where no intermediates have been documented.

Pterourus troilus – Floyd County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed, 1 net/release).

Pieris rapae – Carroll County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed). Floyd County: local roads near Blue Ridge Parkway, 4/23/2019 (2 net/released).

Anthocharis midea annickae – Patrick County: local roads near Blue Ridge Parkway, 4/23/2019 (1 observed).

Colias philodice – Carroll County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed).

Phoebis sennae – CARROLL county record: Blue Ridge Parkway, Fancy Gap, 4/23/2019 (1 observed flying north); Route 640 near Blue Ridge Parkway, 4/23/2019 (1 observed flying north). Fauquier County: George Thompson WMA near Markham, 5/2/2019 (2 observed flying north). Floyd County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed flying north). Loudoun County: Leesburg, 4/30/2019 (unusually early date); Purcellville, 5/2/2019 (one observed flying north). PATRICK county record:

powerline crossing Blue Ridge Parkway, 4/23/2019 (1 observed flying north, following utility right of way).

Everes comyntas – Floyd County: Hope Road near Blue Ridge Parkway, 4/23/2019 (2 collected).

Celastrina neglecta – Loudoun County: Leesburg, Veteran's Memorial Park, 4/10/2019. One female of the ventrally-patched spring form collected ("form *lucia*" of authors), very rare in this area and generally undocumented.

Boloria bellona – Carroll County: local roads near Blue Ridge Parkway, 4/23/2019 (1 observed). Floyd County: Hope Road near Blue Ridge Parkway, 4/23/2019 (2 observed).

Phyciodes tharos (black antenna club males confirmed) – Carroll County: local roads near Blue Ridge Parkway, 4/23/2019 (1 collected); Route 640 near Blue Ridge Parkway, 4/23/2019 (1 observed). Fauquier County: George Thompson WMA near Markham, 5/16/2019 (8 worn males confirmed by net - but see next entry). Floyd County: Blue Ridge Parkway, Mabry Mill, 4/23/2019 (1 observed).

Phyciodes cocyta species group (orange antenna club males confirmed) – Fauquier County: George Thompson WMA near Markham, 5/16/2019 (4 fresh males confirmed by net). Colony has now expanded from Lake Thompson to Blue Mountain summit.

Polygonia comma – Loudoun County: Leesburg, 4/18/2019 (male observed nectaring on *Syringa vulgaris* (Common Lilac)). Patrick County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed).

Polygonia interrogationis – Fauquier County: George Thompson WMA near Markham, 5/16/2019 (1 worn, aged summer form female observed. Too early to be the second local generation, which would be fresh rather than worn. Might be a migrant from the south.)

Vanessa virginiensis – Floyd County: local roads near Blue Ridge Parkway, 4/23/2019 (1 female observed searching for host plant). Patrick County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed).

Epargyreus clarus – Floyd County: local roads near Blue Ridge Parkway, 4/23/2019 (1 observed, 1 collected). Patrick County: local roads near Blue Ridge Parkway, 4/23/2019 (2 observed).

Telegonus cellus – Fauquier County: George Thompson WMA near Markham, 5/16/2019 (one male observed at exact spot where one was observed several years ago – eluded capture).

Erynnis juvenalis – Carroll County: Blue Ridge Parkway, Pipers Gap, 4/23/2019 (1 observed); Route 640 near Blue Ridge Parkway, 4/23/2019 (1 observed). Fauquier County: George Thompson WMA, 5/16/2019 (8 very worn males still flying). FLOYD county record: Route 605 near Blue Ridge Parkway, 4/23/2019 (1 collected); Hope Road near Blue Ridge Parkway, 4/23/2019 (8 observed/collected). Patrick County: local roads near Blue Ridge Parkway, 4/23/2019 (3 observed/collected).

Erynnis brizo – FLOYD county record: Hope Road near Blue Ridge Parkway, 4/23/2019 (1 collected).

Erynnis icelus – Carroll County: Route 640 near Blue Ridge Parkway, 4/23/2019 (1 observed). FLOYD county record: Hope Road near Blue Ridge Parkway, 4/23/2019 (1 collected).

Erynnis baptisiae – Loudoun County: Leesburg, 5/8/2019 (female ovipositing extensively on both *Baptisia australis* and *Lupinus perennis* in same flowerbed).

Amblyscirtes vialis – PATRICK county record: local roads near Blue Ridge Parkway, 4/23/2019 (1 collected).

Moths [all reports H. Pavulaan except where noted].

Ctenoplusia oxygramma – James City COUNTY record: near Williamsburg, "summer 2018" (photo posted to 'Only Butterflies' Facebook group, Victoria McWhorter).

Butterfly transect, Leesburg, VA.
Location: Veterans Memorial Park, access road.
Habitat: dirt road through forest near Potomac River
Observer: Harry Pavulaan

Dates: March 24 - May 15, 2019

Transect was initiated Jan. 1, with goal of recording winter species on warm days. First butterflies were recorded on March 24. Observations were repeated on several dates throughout study period, but only when time allowed, and weather was satisfactory for observations (rainy days were omitted for obvious reasons). Spreadsheet shows sunny dates in yellow, partly cloudy dates in pale yellow, cloudy dates as gray.

Notes: *Celastrina neglecta* females oviposited, and larvae developed on *Viburnum prunifolium*. Repeated experiment placed first instar larvae on *Cornus florida*, which proved again to be toxic to young *neglecta* larvae. Fresh male of second brood (summer form) of *neglecta* first observed on May 15. *Celastrina ladon* female observed ovipositing on *Cornus florida*. *Neographium marcellus* females ovipositing only on very young *Asimina triloba* trees, shorter than 2 feet tall. *Everes comyntas* ovipositing on *Trifolium repens*.

SPECIES	March 24	March 27	March 28	April 3	April 4	April 6	April 8	April 9	April 10	April 11	April 13	April 16	April 17	April 24	April 30	May 1	May 7	May 10	May 15
weather	64°	55°	64°	70°	64°	64°	77°	67°	67°	61°	75°	57°	60°	73°	80°	61°	77°	68°	73°
Polygonia comma	6			1	1		2		1		1	3	2		4		1		2
Celastrina neglecta		1	1	15	7	62	20	4	36	1	7	13	12		1				1
Parhassius m-album					1							2							1
Pieris rapae						1	3	3	4		4	12	7	4	5	1			
Anthocharis midea							1	1	4		1	3	1						
Erynnis juvenalis								1				3	1	4	4		1	1	1
Polygonia interrogationis									1			2	1		1				1
Pterourus glaucus									1			1			1				
Neographium marcellus									1	1	6	3	2	5	39	2	5	5	3
Incisalia henrici									1										
Colias eurytheme									1										
Nymphalis antiopa											1								
Colias philodice												1							
Celastrina ladon												1	1						
Papilio troilus													1						2
Everes comyntas														3	8		5	3	3
Phoebis sennae															1				
Phyciodes tharos																	3	1	1
Polites peckius																	1		1
Poanes zabulon																	3	5	7
Limenitis arthemis astyanax																			2
Epargyreus clarus																			1

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