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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

A MESSAGE FROM THE NEW SLS CHAIRMAN

BY

LANCE DURDEN

Having grown up in England light trapping moths and recording butterflies from a young age, I am pleased of course, to be SLS Chairman for 2020-2021. Although I was born near Manchester, U.K., I grew up about 12 miles west of Greater London, mostly in the small town of Hampton. I recall breeding caterpillars and keeping other live insects in jam jars in the shed at the back of our garden when I was five or six. Fortunately, my hobby was fostered by the expansive tracts of mostly natural forests and heaths of nearby Bushy Park (formerly one of Henry VIII's Royal deer parks for his exclusive hunting privileges). Diurnal burnet moths (Zygaenidae) and most of the butterfly species found in southern England were well represented in the Park. Another advantage of living in Hampton was that Eric Classey (1916-2008) (of E. W. Classey, Entomological Bookseller fame) lived on the other side of town. In addition to being a bookseller and publisher, he was an accomplished entomologist and ran a mercury vapor moth trap in his back garden on most of the warmer nights of the year. Moth light traps in the U.K. are live traps and, at his invitation, I would often ride my bicycle to his house together with one or two other budding local entomologists, to sort through the egg trays from his trap to identify and release moths. Eric Classey was very generous in other ways as well and gave me several books on Lepidoptera. His house/business was a mecca

Fig. 1. Lance Durden with a free-ranging, eastern grey kangaroo (*Macropus giganteus*) on the campus of the University of the Sunshine Coast in Queensland, Australia, December 2018. (Photograph by Dayana Barker, University of Queensland).

for entomologists from around the world and I met several of them in my early teens. Unfortunately, I can't remember all of them but I do recall meeting pyraloid specialist Eugene Munroe (1919-2008) from Canada who was visiting to provide input for the embryonic (at that time) "*Moths of North America*" publication project.

When I was 16, my father, an engineer, accepted a position in Nashville, Tennessee, and most of our family emigrated to the USA. I quickly made my own mercury vapor (live) moth trap in Tennessee and started trapping moths and even spread and identified a few specimens. However, a 1968 reprinting of W. J. Holland's, "*The Moth Book*" was all I could easily locate as an identification source, and many specimens remained unidentified. Growing up in Britain, where most insect groups, especially Lepidoptera, have more than one identification guide that cover all species ever recorded from the British Isles, this was frustrating for me. So I left some pinned moths in Nashville and returned to England to finish my education although I visited Nashville each summer where I continued recording moths (and some butterflies).

I earned a B.Sc. and then a Ph.D., both in Zoology, from the University of London (Royal Holloway College). Partly because I could identify lice, fleas, ticks and parasitic mites, my emphasis for both degrees was medical and veterinary entomology, the discipline for which I am still best known. I specialize in systematics and biodiversity of sucking lice, fleas and ticks and associated vector-borne diseases. However, I teach General Entomology (in addition to Medical and Veterinary Entomology) and I spend a lot of time working on Lepidoptera as well.

After completing my Ph.D. in England, I returned to the USA to a Research Associate position at Vanderbilt University School of Medicine, followed by a postdoctoral position at the Smithsonian Institution (Department of Entomology) and then a position as an Arbovirologist at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRID) at Fort Detrick in Frederick, Maryland. Later, I accepted a position as a Curator with the U.S. National Tick Collection (USNTC) at Georgia Southern University (GSU) (the Collection is on long term enhancement loan from the Smithsonian Institution). Although I still work closely with the USNTC, I switched to a mostly teaching position in the Department of Biology at GSU in 2003. This change gave me the opportunity to also become Curator of the departmental insect collection which has grown from a few cabinets and drawers stored in closets to a good regional collection maintained in a modern, dedicated facility.

During my time at the Smithsonian Institution, I worked with Robert Traub (1916-1996), the foremost authority on fleas and flea-borne diseases who ever lived. Bob was a storehouse of all kinds of entomological knowledge and was nominated for a Nobel prize for his work on scrub typhus (tsutsugamushi fever). He was also acquainted with Karl Jordan (1861-1959) and visited him in England several times just after World War II to discuss flea systematics. Bob referred to Karl Jordan as a great Siphonapterist which may be of interest to some SLS members since Lepidopterists typically consider Karl Jordan to have been a great Lepidopterist. He was both, of course. The Karl Jordan Medal is

Fig. 2. Lance Durden in a coastal Georgia (USA) wetland looking for marsh skippers, August 2019. (Photograph by Jeff Slotten).

typically bestowed annually on an accomplished Lepidopterist by The Lepidopterists' Society. However, because of my background, I see Karl Jordan as both a Siphonapterist and a Lepidopterist – he was also a renowned Coleopterist and a Hemiptera specialist. As an aside to this story, one of Bob Traub's Professors at the City College of New York was Alexander B. Klots (1903-1989) of "*A field guide to the butterflies of North America, east of the Great Plains*" fame. Bob stated once that the two of them co-authored a paper on butterflies but I have never been able to locate it.

My interest in Lepidoptera, especially moths, was re-kindled in 1984 when Charlie Covell's *Field Guide to Moths of Eastern North America* was first published. Suddenly, I could identify many of the pinned moths I

had accumulated from Tennessee and some other eastern states. The next advance for me was James Adams' Georgia Lepidoptera website which enabled me to identify most of the rarer species I had collected as well. I contacted James after this revelation (for me) and we now go in the field together chasing moths, mostly in Georgia, but we have also joined forces in some other states such as Arizona. Moth Photographers Group images combined with the above mentioned sources, now enable me and others to identify almost any moth collected in the southeastern U.S., of course. However, there are still surprises such as atypical specimens or the occasional undescribed species and I am grateful to James Adams and others such as Brian Scholtens, Debbie Matthews and Jim Hayden who have always been willing to help with tricky specimens.

As an entomologist/acarologist, I have been fortunate to have visited many parts of the world through collaborative international grants or to teach identification workshops (for lice or ticks, etc.). During these trips, I always ensure there is enough time for me to study the local Lepidoptera fauna. This has worked quite well and my hosts have always accommodated these requests. As a result, I feel privileged to have studied Lepidoptera on all Continents on which they breed (i.e., all Continents except Antarctica).

To come full circle to some extent, I recently visited a friend from my early teenage years in England. Back then, we both visited Eric Classey's garden to help sort and record the moths in his trap before we made our own traps and set them in various places such as the New Forest in southern England. Last year, my friend renovated his moth trap from all those years ago and together we recorded moths again in his garden in southern England. Despite these highly fulfilling activities in other parts of the world, I have spent most of my Lepidoptera time studying the moth fauna of the southeastern United States, the area encompassed by SLS.

I look forward to working with many of you over the next two years and I hope to meet more of you at the joint Lepidopterists' Society/SLS/ATL meeting in Cullhowee, North Carolina this June. I am grateful to previous or current SLS officers for all they do for the Society including (listed alphabetically) James Adams, Matthew Blaine, Charlie Covell, John Douglass, David Fine, Laura Gaudette, Riley Gott, John Hyatt, Barry Lombardini, Debbie Matthews, Jackie Miller, Steve Mix, Marc Minno, Dave Morgan, Brian Scholtens, Jeff Slotten, Peter Van Zandt, and Charlie Watson (with apologies to anybody I may have omitted).

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

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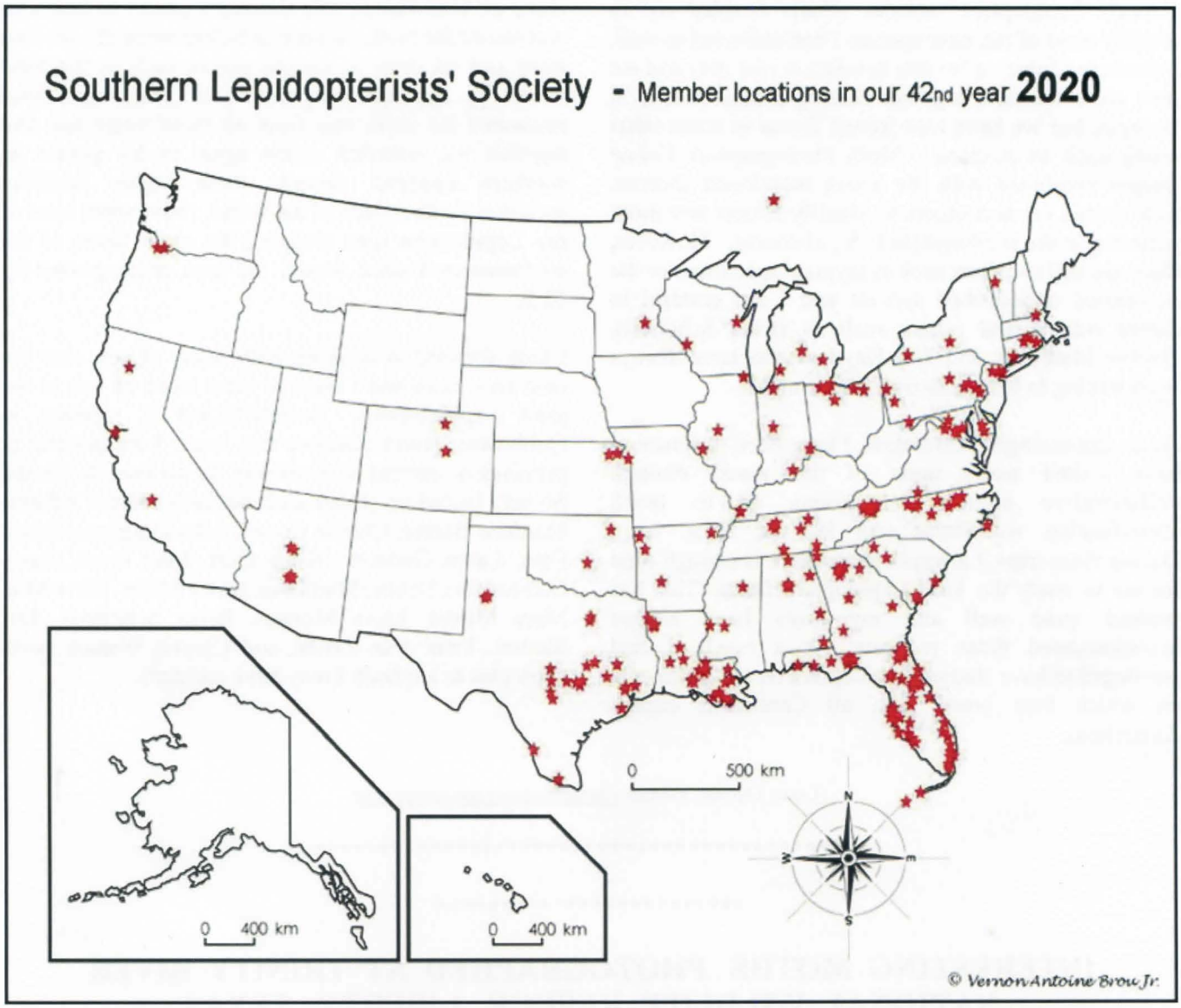
INTERESTING MOTHS PHOTOGRAPHED AT TRINITY RIVER NATIONAL WILDLIFE REFUGE, LIBERTY, TEXAS

BY

STUART MARCUS

Frumenta nundinella **(November 19, 2019)**

Ypsolopha unicipunctella **(December 14, 2019)**



Many thanks to Vernon A. Brou Jr. for identifying the locations of our

Southern Lepidopterists' Society Members

in the various States of the United States.

Note: The red "Star" above the United States indicates that one SLS member lives in Ontario, Canada.

"Star" indicates the location of Ontario.

This is the only SLS member that lives outside of the United States.

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A newsletter, Southern Lepidopterists' News, is published four times annually.

Website: www.southernlepsoc.org/

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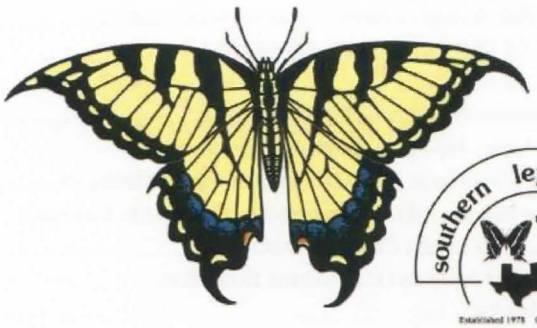
"Cover illustration: First known drawing of a North American butterfly from the Modern Age: Eastern Tiger Swallowtail *(Papilio glaucus)* by John White, North Carolina, 1587 (original design by J.V. Calhoun, 1996)."



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Please mail application and check to:

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A professionally bound full color newsletter. The News of the Lepidopterists' Society is published four times annually. Now in our 42nd year - 2020.

STENOMA EXARATA (ZELLER, 1854) (LEPIDOPTERA: DEPRESSARIIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. [1] AND DEBORAH L. MATTHEWS [2]

Stenoma exarata (Zeller, 1854) is a moth in the family Depressariidae. It was originally described as ***Cryptolechia exarata*** Zeller, 1854. This specimen (Fig. 1) was captured June 22, 2017, at the Abita Entomological Study Site, St. Tammany Parish, Louisiana, USA, in an automatic-capture ultraviolet light trap. It appears this species is a new record for the United States. The original description is in German (Fig. 2). Earlier ***exarata*** was reportedly found in Costa Rica, Mexico, Guatemala, Venezuela, French Guiana and Brazil (Fig. 3).

Fig. 1. ***Stenoma exarata*** male captured near Abita Springs, St. Tammany Parish, Louisiana, USA.

23. Exarata *n. sp.*
(Fig. 19.)

Palporum articulo secundo fusco, terminali albo; pedibus et abdomine vitellinis, hoc in dorso ex basi fusco; alis ant. elongatis obtusis luteo-fuscis, macula costae mediae parva chalybea. (♂.)

Von der Grösse der Indecora, mit schmalern Vorderflügeln. Rückenschild hell graubraun, am Vorderrande der Schulterdecke sowie am Kopf bräunlich-weissgrau. Fühler von Hinterleibslänge, pubescirend dicht gefranzt, gelbbräunlich, unten gegen die Wurzel weisslich; Wurzelglied weisslich, am Rücken graubräunlich. Taster so lang wie Kopf und Rückenschild zusammen, stark gekrümmt; 2tes Glied zusammengedrückt, gelbbraun, innen heller, besonders gegen die Wurzel; Endglied etwas kürzer, weisslich. Rüssel dick, gelbweisslich beschuppt. Beine hell dottergelb; nur die vordern sind auf der Lichtseite des Schenkels lehmbraun, auf dem Rücken der Schiene und am ganzen Fuss braun. Hinterleib hell dottergelb, auf dem Rücken von der Wurzel aus gelbbraun, was sich nach hinten verschmälert und auf dem 3ten und 4ten Ringe je einen Mittelfleck bildet, worauf der Rest des Leibes rein bleibt.

Vorderflügel fast 7‴ lang, ziemlich gestreckt; Vorderrand ziemlich stark convex, an den ersten $\frac{2}{3}$ aufgekrümmt; Spitze stumpf und fast abgerundet, Hinterrand convex. Grund lehmigbraun, etwas schimmernd, gegen die Wurzel etwas heller, besonders am Vorderrande. In der Mittelzelle geht eine eingedrückte, auf der Querader erweiterte, vertiefte Längslinie, die sowie die stark eingedrückte Falte durch dunkleres Gelbbraun noch mehr hervorgehoben wird. An der Mitte des Vorderrandes hängt ein dunkel violettblaues, länglich-rundes Fleckchen.

Hinterflügel am Hinterrande vor der Spitze sanft eingedrückt, hellbraun, gegen die Wurzel lichter.

Unterseite hell graubraun, mit deutlichen Adern; Hinterflügel heller, im Mittelraum ins Weissliche und etwas opalisirend.

Vaterland: Nord-Brasilien bei Cametá. (Ein schönes Männchen im Königl. Museum.)

Fig. 2. Original description of ***Cryptolechia exarata*** Zeller, 1854.

66. **Stenoma exarata** Z.

Cryptolechia exarata Z. Linn. Ent. 9 378–9 sp. 23 Pf. 3 · 19 (1854)[1]; Wkr. Cat. Lp. BM. 29 713–4 sp. 32 (1864)[2]. *Cryptolechia* (3. *Cryptolechia* Z.—a) *exarata* Z. Hor. Soc. Ent Ross. 13 260 sp. 41 (1877)[3].

Type ♂ (*Cameta*) Mus. Berol.

Hab. AMERICA, C–S. Central America—MEXICO: VERA CRUZ: Orizaba, IX. 1907 (*R. Müller*)—GUATEMALA: BAJA VERA PAZ: San Gerónimo, 2800 ft., 1879 (*G. C. Champion*): GUATEMALA: Guatemala City, at electric light (*J. Rodriguez*): RETALHULEU: Las Mercedes, 3000 ft., IX–X. 1880 (*G. C. Champion*)—COSTA RICA: Candelaria Mts. (*C. A. Underwood*); San José, 4000 ft., X. 1906 (*W. Schaus*). South America—VENEZUELA: Aroa, 1895 (*W. Schaus*)—FRENCH GUIANA: Cayenne, II. 1904 (*W. Schaus*)—Brazil [1–3]: AMAZONS[2]: Ega (*H. W. Bates*)[2]; Villa Nova (*H. W. Bates*)[2]: PARA [1–3]: Santarem (*H. W. Bates*)[2]; Cameta[1].

Fig. 3. ***Stenoma exarata*** Zeller in Biologia Centrali-Americana.

Miller et al. (2010) also recorded five males and nine females of this species at two locations in Honduras, elevations there of about 319 feet, the other 5,307 feet. Additional specimens exist in the collections of the Mississippi Entomological Museum (MEM) and were taken in the country of Panama. It is worthy to note that this unexpected and unique Louisiana specimen was captured coinciding with the passing of Tropical Storm Cindy.

T.S. Cindy developed in the northwestern Caribbean Sea near the Yucatán Peninsula in mid-June 2017. On June 22, 2017, Cindy traveled northward and crossed the coastline of Louisiana.

The following are pertinent abbreviated excerpts from Wikipedia: Cindy was designated as a potential tropical cyclone by the National Hurricane Center on June 19, organizing into a tropical storm. Cindy had sustained winds of only 60 mph (95 km/h) on June21. The storm made landfall in southwestern Louisiana on June 22. Coastal areas

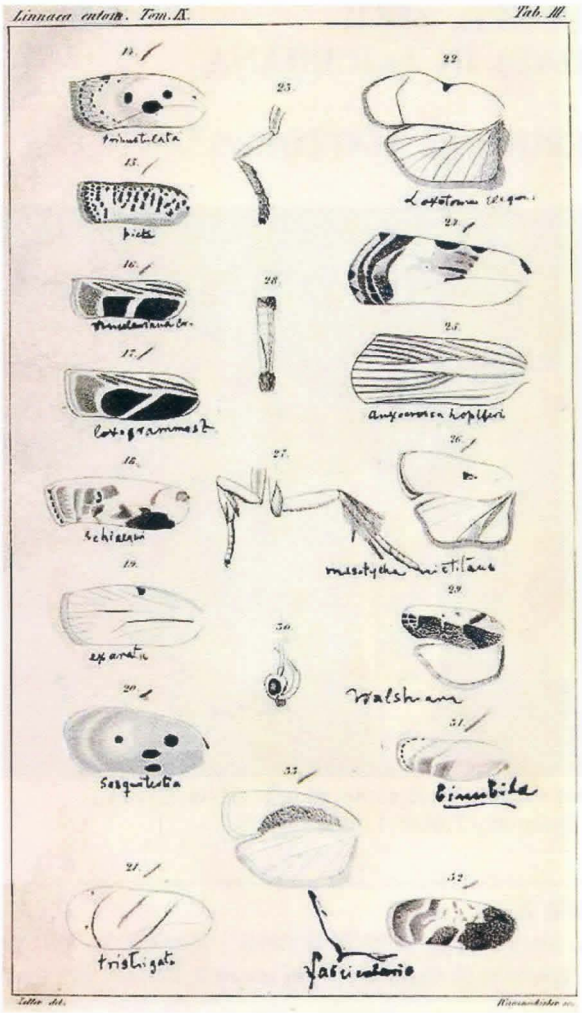

Fig. 4. Linnaea Ento. vol. 9, tab. 3, No. 19 wing markings of ***Cryptolechia exarata*** Zeller.

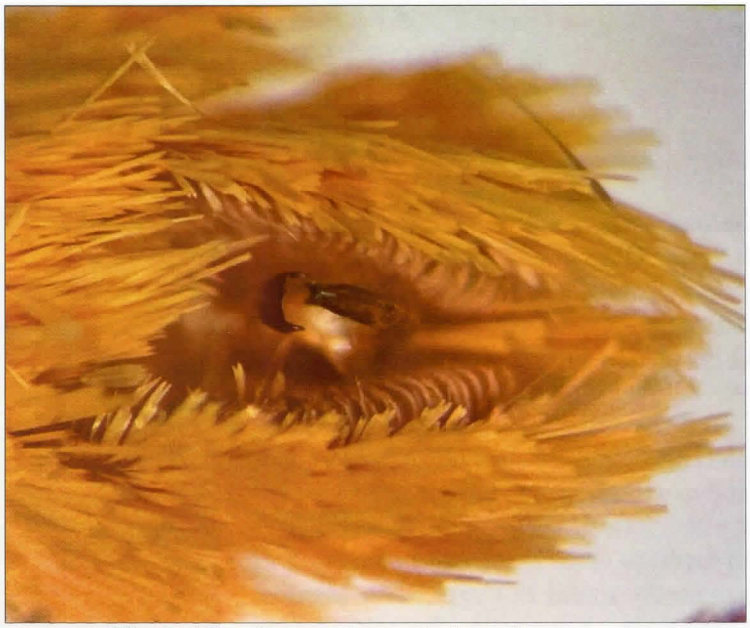

Fig. 5. Non-dissected ventral view of uncus and gnathos of male from Honduras.

to the east of the point of landfall received heavy rainfall over southeastern Louisiana, Mississippi, Alabama and western Florida Panhandle areas. The storm and its remnants spawned 18 tornadoes throughout the eastern US and caused 25 million dollars in damages. Also two human fatalities were attributed to the storm.

We reproduced the plate illustrated in the original description of ***exarata*** confirming the unique wing maculation (Fig. 4). Additionally, we provide a non-dissected view of the uncus and gnathos of a male from Honduras (Fig. 5). We thank Richard L. Brown (MEM) for additional records.

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PARALLELIA BISTRIARIS HÜBNER, 1818 (LEPIDOPTERA: EREBIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

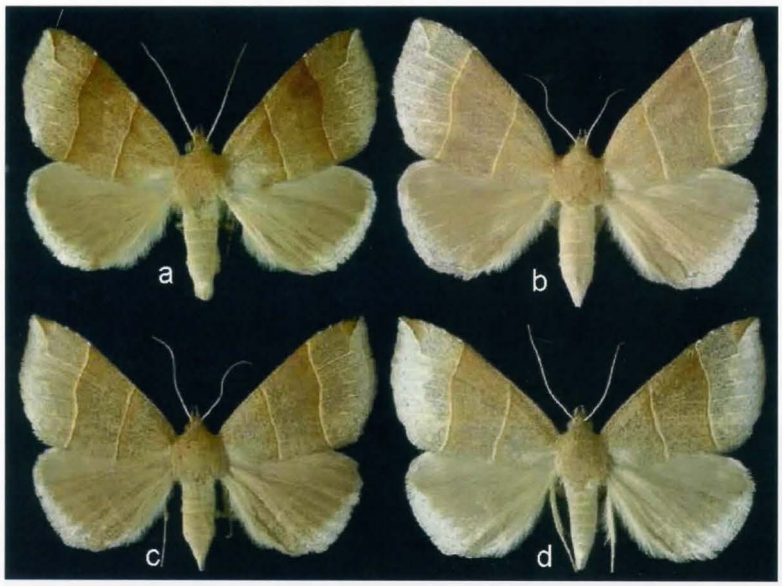

Fig. 1. ***Parallelia bistriaris*** morphotypes: males (a,c), females (b,d).

The very abundant and widespread moth ***Parallelia bistriaris*** Hübner (Fig. 1) occurs throughout the eastern half of the USA and also along the southeastern border of Canada.

Holland (1903) stated ***bistriaris*** occurs from Nova Scotia to Florida, and west ward to the Rocky Mountains.

Forbes (1954) stated ***bistriaris*** occurs commonly from Nova Scotia and Laurentians, Quebec to Wisconsin and Colorado, south to Florida. This author stated (adults) of this species occurs (in New York State) from late May to early August in presumably two broods, and the larval foodplant including both (red and white) maples.

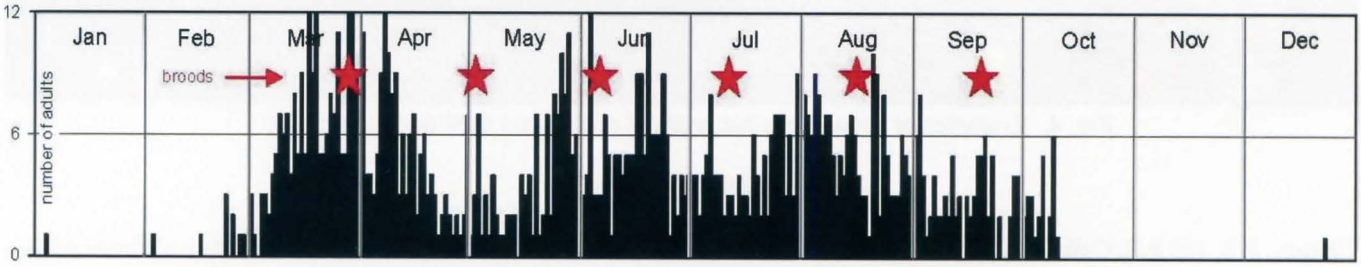

Fig. 2. Adult ***Parallelia bistriaris*** captured in Louisiana. n = 1,052

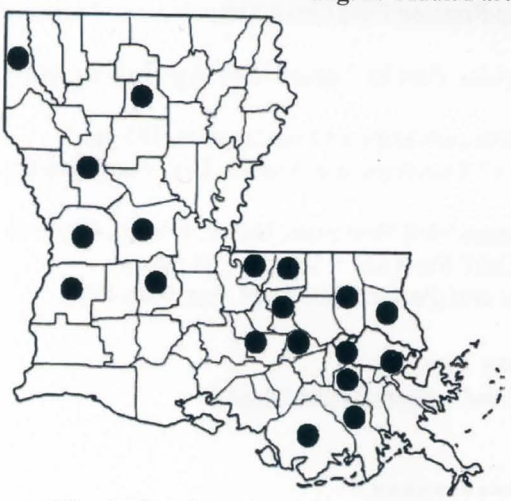

Fig. 3. Confirmed parish records for ***Parallelia bistriaris***.

Chapin and Callahan (1967) listed ***bistriaris*** to occur in Louisiana (Baton Rouge area) in the months May, August, and September.

Rockburne and Lafontaine (1976) reported ***bistriaris*** from southern Ontario to ...Quebec, adults in June, and reared on red maple.

Covell (1984) listed ***bistriaris*** to be common from Nova Scotia to Florida and west to Minnesota, Kansas and Texas in the months April to September and the larval foodplants to include yellow birch, red and white maples, and black walnut.

Heitzman and Heitzman (1987) did not include ***bistriaris*** for the State of Missouri.

Heppner (2003) listed the range for ***bistriaris*** to include Nova Scotia to Florida, and Wisconsin to Colorado and Texas, and adults February to August in Florida. This author also added the larval foodplant black walnut, ***Juglans nigra*** along with maples.

Powell and Opler (2009) did not cover ***bistriaris*** despite it's documented occurrence in some western states.

P. bistriaris is abundant in automatic-capture ultraviolet light traps, automatic-capture fermenting fruit bait traps, and numerous thousands of adults not logged on phenogram (Fig. 2) were attracted to commercial sesiidae

semiochemical lures of many different identities in automatic-capture sesiid traps as bycatch (Fig. 4). All of these differently designed traps operated 365-366 days per year for the past four to five decades. The identities of the sesiidae semiochemical lures* which attracted adult ***bistriaris*** are: Scentry brand L103, (1:1) Scentry L103:squash vine borer, (1:1) Scentry L103:grape root borer, (1:1) Scentry L103:Scentry ***Synanthedon fatifera***, (1:1) Scentry L103:Scentry ***Synanthedon rubrofascia***, (1:1) Scentry L103:Scentry dogwood borer, (1:1) Scentry lesser peachtree borer:Scentry ***Synanthedon bibionipennis***, (1:1) Scentry lesser peachtree borer:Scentry ***Synanthedon rubrofascia***, Scentry western poplar, (1:1) Scentry western poplar:Scentry sequoiae pitch moth, Pherobio ***Sesia sinengensis***, Scentry grape root borer, (1:1) Scentry grape root borer:Scentry ***Synanthedon bibionipennis***, (1:1) Scentry grape root borer:Scentry squash vine borer, Scentry squash vine borer, Scentry ***Synanthedon fatifera***, Scentry ***Synanthedon viburni***, and Scentry lesser peachtree borer.

Within Louisiana, ***bistriaris*** has six annual broods, the initial brood peaking at the end of March with all subsequent broods at about 35-day intervals (Fig. 2). These numerous broods further illustrate why this species is so very common, adults taken mid-February through mid-October.

The parish records for logged adult ***bistriaris*** taken in this study are illustrated in Fig. 3.

* The semiochemical lure name designations used are listed as labeled and identified by the various commercial manufacturers.

Fig. 4. Examples of a few of the hundreds of sesiid traps used during this study.

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NEW AND SUPPLEMENTAL RECORDS OF LOUISIANA BUTTERFLIES

BY

CRAIG W. MARKS

Since my book, *Butterflies of Louisiana, A Guide to Identification and Location*, was published in early 2018, the number of reported butterfly species in Louisiana has increased by two, to 156, with the latest addition occurring in June, 2019 [See my article in the *Southern Lepidopterist's News*, Vol. 41 No. 4 (2019), reporting on the discovery of two Bell's Roadside Skippers at Kisatchie NF in Natchitoches Parish].

The other new species added to Louisiana's fauna, a Mercurial Skipper, was photographed in E. Baton Rouge Parish on 6/07/18, and was somewhat of a surprise. A single specimen was reported to BAMONA by John Hartgerink with three pictures, taken at BREC's Bluebonnet Swamp Nature Center while feeding on buttonbush. The report was accepted by BAMONA as a stray. The photographs are available for review on BAMONA as sighting #1177883.

The Mercurial Skipper, *Protiedes mercurius*, is a large skipper, approximately equal in size to the Silver-spotted Skipper. It is best characterized by a golden head and thorax. Wauer (2004) described it as a rare stray from Mexico into the Rio Grande Valley, with records in April and October, primarily seen in gardens. On the BAMONA website, there was a September 3, 2016, record from the Austin Texas area, and an older, undated record from the Texas City/Galveston area. iNaturalist had pictures of a stray that reached the Dallas region in late May 2017.

Smith, Miller and Miller (1994) described this skipper as a native of the Greater Antilles (common in Cuba and the Dominican Republic), "said to stray occasionally into South Florida," but they knew of no verified records. Glassberg (2000) stated there has been a "few" reports from Florida. BAMONA had one sighting from Alachua County (near Gainesville), without date. Gerberg & Arnett (1989) reported two sightings.

I did some research and found it has been reported once from Alabama, a single specimen photographed by Michelle Miklik at Cane Creek Garden, Anniston, Calhoun Co., Alabama (the northeastern portion of that State), on June 26, 2017. That sighting was just after a significant tropical storm had traversed the state of Alabama, and it was speculated that individual might have been blown in ahead of this storm.

Of interest, Bordelon and Knudson (2002) noted this species, "has been observed or collected a few times in the valley (referring to the Rio Grande Valley), north to coastal Louisiana." Glassberg (1999) also noted reports from Louisiana.

One of the efforts I endeavored to include in my book was a composite report on what butterflies/skippers had been seen in which parishes. Therefore, I included within that book, for each species, a state map that reflected in which parishes that species has been reported. I have recently learned that one of the parish records for the Appalachian Brown species is incorrect.

Specifically, I discussed an on-going colony located in Indian Bayou WMA which I reported as in St. Martin Parish. Based on GPS coordinates, it turns out that Ap Brown colony is actually in St. Landry Parish. I had assumed the entirety of the Indian Bayou annual NABA count circle was in northern St. Martin Parish; however, extreme southeastern St. Landry's "foot" juts into the count circle. The Oxbow trail where that colony exists is found within that "foot."

Since my book was submitted for publication, additional parish records have come to my attention, some very old, others brand new. For example, while doing some supplemental research on Arogos Skippers in LA, I found old records (1961) for that skipper on a website for the Yale Museum. I started doing some digging and also found several records for other species. I also discovered that there was a link on The Lepidopterists Society's webpage to past Season Summaries, back to 1960. A review of those old summaries also uncovered additional old records.

I also conducted a supplemental search of the BAMONA website and discovered a few new records from 2018 and 2019. I had recently learned of another online source, iNaturalist, and my search of that source discovered a significant number of new parish records, primarily, but not exclusively, from 2018 and 2019. Finally, a supplemental check of Bugguide revealed one new parish record and one interesting 2006 report about Orange-barred Sulphurs in East Baton Rouge Parish.

Additionally, while Rosemary Seidler had previously contributed numerous records that are referenced in my book, it turned out that she had additional records, primarily involving more common butterflies, about which I was not aware. She has been kind enough to provide me all of her records which are now reflected in the data below.

As a result of the data I presented in my book, interest in compiling and reporting parish records has increased around the State. Several people who had helped by contributing records reflected in that book have continued to contribute additional, new records. These include Jeff Trahan, Dave Patton, Brad Moon and Philip Wallace. Other individuals, after seeing the some of the parish "gaps", initiated efforts to fill in some of those gaps in their particular regions. These include Sarah Pearce and Jonathan Clark.

The vast majority of these new parish records were to be expected although there were a few of interest. Lawanda Smith Mobley submitted to BAMONA a ventral photograph that was accepted as a Barred Yellow. As I noted in my book, I previously had not found any reliable reports of this species west of the Mississippi River. The location was in the Catahoula Butterfly Garden in Kisatchie NF (Grant Parish) so the habitat is similar to that in which the Barred Yellow is found in the Florida Parishes (dry, piney woods). The photo does, in fact, appear to represent that species rather than an alba form Little Yellow. Jonathan Clark subsequently confirmed that species was present in Grant Parish in August of 2019, as well as to the immediate north in Winn Parish and the immediate east in LaSalle Parish.

Some occasional strays have reappeared within the State. Dorantes Longtails were found in Orleans (sans the long tails) and E. Baton Rouge Parishes. White-striped Longtails were present at Peveto Woods in Cameron Parish for about a three week period. A couple of Queens were reported in the east (E. Baton Rouge Parish) and the south (Iberia Parish).

Previously reported colonies of three lesser recorded butterflies appear to persist. Specifically, Kevin Cunningham reported White Peacocks still at Grand Isle. Cabbage Whites were again seen at several locations in Washington Parish. The two Appalachian Brown colonies in St. Landry and St. Mary Parishes continue to produce regular sightings, and a new location in E. Baton Rouge was reported. A few other lesser recorded species (King's Hairstreaks, Hayhust Scallopwings and Common Sootywings) were reported in new locations with King's seen in several new locations.

As part of the data reported in my book, I attempted to identify in which month(s) each species had been recorded so as to give an idea of that species' fight time. Therefore, in this article I have not only included new parish records, but I have also included new time records, such as new and interesting early and/or late sightings/reports as well as new month records. Finally, I have reported some of the more rare or unusual sightings that either I have witnessed or that others have reported to the Louisiana listserv or directly to me.

Supplemental records:

Silver-spotted Skipper (*Epargyreus clarus*)

a) Madison Parish (Tensas NWR), 7/15/15, Jeff Trahan (with picture).

White-striped Longtail (*Chioides catillus*)

a) Cameron Parish (Peveto Woods), mid through late September 2017, for three weekends in a row, D. Patton and P. Wallace (not a new parish record but still notable for this occasional migrant into LA);

b) W. Baton Rouge Parish (Port Arthur area), 7/18/12, reported to BAMONA (with two photos).

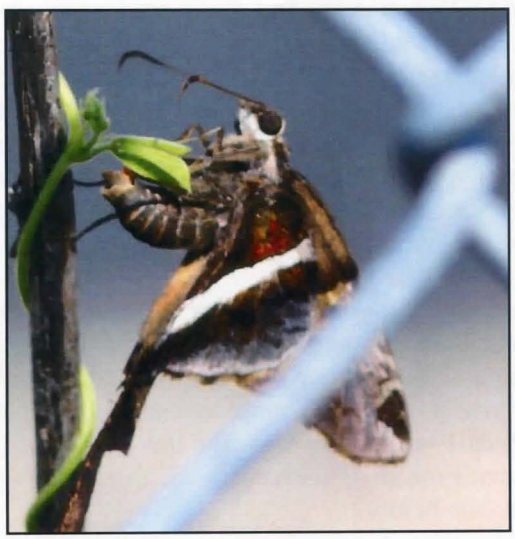

Photo by P. Wallace

Long-tailed Skipper (*Urbanus proteus*)

a) Acadia Parish (near Church Point), 8/01/18, reported to iNaturalist (with photo);
b) Catahoula Parish (Sisily Island Hills WMA), 8/19/19, reported by Jonathan Clark (with photo);
c) Iberia Parish (Avery Island), 1/07/19 reported by Gary Ross – Not a new parish record but first record for January, earliest sighting of which I am aware;
d) Jefferson Davis Parish (near Lacassine), 12/23/18, reported by Robbie Maxwell to iNaturalist (with photo);
e) Lafourche Parish (along Hwy 1 between Galliano and Golden Meadow), 6/10/19, reported to BAMONA (with photo);
f) Livingston Parish (near Springfield), 9/08/18, reported by Roy Abadie to iNaturalist (with photo);
g) St. James Parish (along LA 3125 north of Hester), 11/26/10, reported to BAMONA (with photo);
h) St. John the Baptist Parish (LaPlace), 11/26/17, Rosemary Seidler (with picture);
i) Vernon Parish (Allen Acres), 7/29/17, C. Marks (eight recorded during 2017 NABA Count).

Dorantes Longtail (*Urbanus dorantes*)

a) Orleans Parish (City Park), 9/30/17, reported by Benjamin Schwartz to iNaturalist (with photo, the specimen has no tails but does appear to be this species);
b) E. Baton Rouge Parish (Independence Park), 10/09/18, reported to iNaturalist (with four photos). Not a new parish record, but most recent sighting of this species in LA.

Hoary Edge (*Achalarus lyciades*)

a) Avoyelles Parish (Spring Bayou WMA), 4/09/19, reported by Joshua Lincoln to iNaturalist (with photo);
b) LaSalle Parish, early September, Jonathan Clark (with picture on LA listserv).

Hayhurst's Scallopwing (*Staphylus hayhurstii*)

a) Caddo Parish (Royal Hills), early June, Royal Tyler (w/ pictures), not a new parish record but a new location for this skipper which is rare in the region;
b) Lafayette Parish, 9/15/14, D. Patton (with picture);
c) St. Landry Parish (Indian Bayou WMA), 5/19/18, reported by Brad Moon to iNaturalist (with photo). As noted in next entry, seen during 2018 Indian Bayou NABA Count, to include the extreme southeastern "foot" of St. Landry Parish. Not a new parish record, but a new location;
d) St. Mary Parish (Indian Bayou WMA), 5/19/18, C. Marks and others – 77 counted during the 2018 Indian Bayou NABA Count, not a new parish record, but the most, by far, ever recorded at this WMA.

Sleepy Duskywing (*Erynnis brizo*)

a) Vernon Parish (Kisatchie NF) 4/09/19, Sarah Pearce (with picture of dorsal and ventral sides).

Juvenal's Duskywing (*Erynnis juvenalis*)

a) Allen Parish (CC Road Savanna Preserve), 3/14/17, Jeff Trahan (with photo on BAMONA);
b) Avoyelles Parish (Spring Bayou State WMA), 4/09/19, reported by Joshua Lincoln to iNaturalist (with photo);
c) Evangeline Parish (LA Arboretum), 8/09/18, reported by Joshua Lincoln to iNaturalist (with photo, lower wing ventral spots are visible);
d) Iberia Parish (Avery Island), (3/19-24/19), Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey;
e) LaSalle Parish (Jena), 2/23/17, Jonathan Clark (submitted to BAMONA with picture);
f) Union Parish (Hartwood Natural Area), 3/20/18, reported by Kelly Ouchley to iNaturalist (with photo);
g) Vernon Parish (Kisatchie NF), 3/17/19, reported by Brad Moon to iNaturalist (with photos of two separate specimens);
h) Winn Parish (Kisatchie NF), 3/20/17, Jeff Trahan (with photo on BAMONA).

Horace's Duskywing (*Erynnis horatius*)

a) Iberia Parish (Avery Island Jungle Garden), 5/18/18, reported by Mr. Dupuis to iNaturalist (with photo);

b) Jefferson Davis Parish (near Iowa), 7/08/18, reported by Robby Maxwell to iNaturalist (with photo);
c) Madison Parish, Tensas River NWR), 7/15/15, Jeff Trahan (with photo on BAMONA);
d) Ouachita Parish (Monroe area), 9/01/18, reported by J. Tuttle to iNaturalist (with photo); Also reported on 7/13/16, again in Monroe area.

Zarucco Duskywing (*Erynnis zarucco*)
a) Iberia Parish (Avery Island), 7/11-15/18, Gary Ross. Specimen was netted to confirm. Reported in SLS News as part of Gary's Avery Island butterfly survey;
b) LaSalle Parish (Catahoula NWR), 7/20/19, C. Marks (two specimens taken), three counted during the 2019 Catahoula NWR NABA Count.

Funereal Duskywing (*Erynnis funeralis*)
a) Calcasieu Parish (Lake Charles), 7/16/18, reported by JFJ Lanier to iNaturalist (with photo).

Wild Indigo Duskywing (*Erynnis baptisiae*)
a) Vernon Parish (Kisatchie NF- Cooter's Bog), 6/15/19, Dave Patton (with photo) – not a new parish record but confirmation that this rarely reported species is still present at this location.

Common Checkered-Skipper (*Pyrgus communis*)
a) Lafourche Parish, 4/26/82, P. Brand (contained in Ohio State U. collection);
b) Vermilion Parish (Kaplan), 9/19/08, Larry Allain (submitted to BugGuide w/ picture).

Common Sootywing (*Pholisora catullus*)
a) Washington Parish (near Pine), 8/09/18, reported by Brad Moon to iNaturalist (with photo). Not a new parish record, but a new location for this uncommon species.

Swarthy Skipper (*Nastra lherminier*)
a) Calcasieu Parish (Persimmon Gully), 3/14/17, Jeff Trahan (reported with pictures to BAMONA); also reported in this parish (with no date or location) by Heitzman and Howe in TLS 1961 Season Summary;
b) Cameron Parish (Lacassine NWR), 10/29/17 Rosemary Seidler (with picture);
c) Grant Parish (Kisatchie NF), 5/181/9, Jonathan Clark (with pictures of two individuals);
d) LaSalle Parish (Catahoula NWR), 6/16/18, Jonathan Clark (with pictures, during the 2018 annual NABA Count);
e) Washington Parish (Dean Lee State Forest), 4/15/18, reported by Matt Brady to iNaturalist (with photo).

Clouded Skipper (*Lerema accius*)
a) Ascension Parish (Sorrento), 3/09/19, reported by Oscar Johnson to iNaturalist (with photo);
b) Avoyelles Parish, 9/27/06. R. Seidler (sighting);
c) Calcasieu Parish (Sam Houston Jones SP), 4.07/19, reported by Irvin Louque to iNaturalist (with photo);
d) Jefferson Davis Parish (near Iowa), 10/19/18, reported by Robbie Maxwell to iNaturalist (with photo);
e) Ouachita Parish (ULM campus), 9/01/13, reported by Matthew Herron to iNaturalist (with photo);
f) St. James Parish, 5/10/06, R. Seidler (sighting).

Least Skipper (*Ancyloxypha numitor*)
a) Ascension parish (near Sorrento), 3/09/19, reported by Oscar Johnson to iNaturalist (with photo);
b) Avoyelles Parish (Spring Bayou State WMA), 4/09/19, reported by Joshua Lincoln to iNaturalist (with photo);
c) Calcasieu Parish (Lake Charles), 7/13/1989, Steve Williams – reported in TLS 1989 Season Summary;
d) Catahoula Parish (Catahoula NWR), 10/06/17, Jonathan Clark (picture);
e) Madison Parish (Tensas River NWR), 7/15/15, Jeff Trahan (with photo on BAMONA).

Southern Skipperling (*Copaeodes minima*)

a) Acadia Parish (near Church Point), 11/20/17, reported to iNaturalist (with photo);
b) Calcasieu Parish (Cox Road), 11/25/17, reported by Brad Moon to iNaturalist (with photo);
c) Jefferson Davis Parish (rice field in southern portion of parish, west of Lake Arthur), 6/13/17, reported to BAMONA (with two photos);
d) Lafayette Parish, 8/15/13, Dave Patton (with picture).

Fiery Skipper (*Hylephila phyleus*)

a) Avoyelles Parish, 9/27/06, R. Seidler (sighting);
b) Ouachita Parish (Monroe), 7/09/16, reported by J. Tuttle to iNaturalist (with photo);
c) Plaquemines Parish, 9/26/06, R. Seidler (sighting).

Meske's Skipper (*Hesperia meskei*)

a) Vernon Parish (Kisatchie NF), 9/21/1991, reported by Charles Bordelon in TLS 1991 Season Summary. This is not a new parish record but certainly pre-dates Dave Patton's sighting of that species at Dove Field as reported in my book. It is also the first record for September. At Dove Field, two, possibly three, specimens were reported (with photos) by Brad Moon on 6/03/19. Moon and C. Marks returned to the same area on 6/15/19 and found two fresh males (with photos).

Sachem (*Atalopedes campestris*)

a) Iberia Parish (Avery Island), (4/11-13/18 & 5/30-6/1/18), Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey;
b) Red River Parish (Red River NWR, Yates Unit), 10/21/18, reported by Chris Merritt to iNaturalist (with photo);
c) Vernon Parish (Kisatchie NF), 5/30/13, Jeff Trahan.

Tawny-edged Skipper (*Polites themistocles*)

a) St. Charles Parish (Boutte), 5/22/61, H. Wilhelm – part of the Yale Museum collection;
b) Vernon Parish (Cooter's Bog), 10/07/17, Dave Patton (picture).

Whirlabout (*Polites vibex*)

a) Avoyelles Parish (near Bunkie), 8/04/00, Ray Stanford - submitted to BAMONA;
b) Calcasieu Parish (no location indicated), no date, Heitzman and Howe - reported in TLS 1961 Season Summary;
c) Livingston Parish (Denham Springs), 10/07/18, reported to iNaturalist (with photo);
d) St. Landry Parish (Thistlethwaite WMA), 8/04/00, Ray Stanford – submitted to BAMONA.

Southern Broken-Dash (*Wallengrenia otho*)

a) Cameron Parish (Lacassine NWR), 10/12/18, reported by Phillip Wallace to and accepted by BAMONA (with two photos of dorsal side only);
a) E. Baton Rouge Parish, 6/22/15, Ken Bosso - submitted to BAMONA (with photo).

Little Glassywing (*Pompeius verna*)

a) Catahoula Parish (Sisily Island Hills WMA), 6/02/12, Jeff Trahan (with photo on BAMONA);
b) LaSalle Parish (near Jena), 7/20/19, C. Marks (two photographed, one netted to confirm identification), two recorded during 2019 Catahoula NWR NABA Count;
c) Vernon Parish (Allen Acres), 7/27/19, C. Marks and others (with photos) recorded during 2019 Allen Acres NABA Count;
d) Washington Parish (Monroe Creek Road at Camp Branch bridge), 9/21/19, Phillip Wallace (with picture).

Arogos Skipper (*Atrytone arogos*)

a) St. Charles Parish (Boutte), 5/22/61, H. Wilhelm – part of the Yale Museum collection (with pictures).

Delaware Skipper (*Anatrytone logan*)

a) Ascension Parish (Maurepas Swamp WMA), 9/30/18, reported by Van Ramsen to iNaturalist (with photo);
b) Iberville Parish (Sherburne WMA, South Farm), 8/12/18, reported by Oscar Johnson to iNaturalist (with photo);
c) Jefferson Parish (Harahan), 9/01/1944, Charles Remington - part of the Yale Museum collection (with pictures) – identification changed by Dr. L. Gall at that Museum from initial diagnosis of Byssus Skipper;
d) St. Mary Parish (Bayou Teche NWR), 4/28/18 C. Marks – not a parish record but the first record for April. Second April record on 4/27/19 was in Iberia Parish (Avery Island) by C. Marks;
e) Vernon Parish (Dove Field), 7/27/19, C. Marks (a male, netted to verify id) – recorded as part of 2019 Allen Acres NABA Count.

Broad-winged Skipper (*Poanes viator*)

a) Iberville Parish (Sherburne WMA), 8/26/18, reported by Eamon Corbett to iNaturalist (with photo);
b) Tangipahoa Parish (Joyce WMA), 8/31/10 (not submitted until January 7, 2018), reported by Hans Holbrook to iNaturalist (with photo).

Yehl Skipper (*Poanes yehl*)

a) Red River Parish (along Hwy 71 north of Edgefield), 6/09/09, Jeff Trahan (with photo);
a) Vernon Parish (Fullerton Lake), 10/07/17, Dave Patton (with picture).

Photo by D. Patton

Aaron's Skipper (*Poanes aaroni*)

a) Cameron Parish, last weekend of April 2018, Dave Patton – not a new parish record but first record for April. A second April record was on 4/26/19 by Brad Moon at Sabine NWR;
b) Iberia Parish (Avery Island), 10/17-21/18, Gary Ross – reported to SLS News as part of Gary's Avery Island butterfly survey;
c) Vermilion Parish (Freshwater City), 10/27/18, C. Marks – not a new parish record, but a late season sighting.

Palatka Skipper (*Euphyes pilatka*)

a) Iberia Parish (Avery Island), 9/16-23/18, 10/17-21/18 & 10/29-30/18, Gary Ross – reported to SLS News as part of Gary's Avery Island butterfly survey (an old record previously existed for this location so not a new parish record but these sightings do confirm the continued presence of that species at Avery Island).

Bay Skipper (*Euphyes bayensis*)

a) Vermilion Parish (Freshwater City), 10/27/18, C. Marks – not a new parish record, but a late season sighting.

Dukes' Skipper (*Euphyes dukesi*)

a) Iberia Parish (Avery Island), 10/17-21/18, Gary Ross – reported to SLS News as part of Gary's Avery Island butterfly survey;

b) St. Martin Parish (Oxbow Unit in Indian Bayou WMA), 7/30/18, Dave Patton – not a new parish record, but six were seen, indicating the colony in the unit remains viable; also seen at this location on 10/26/18 by Philip Wallace, a late season sighting;

c) Vermilion Parish (Palmetto Island SP), 10/04/18 and 9/13/19, Philip Wallace (picture).

Photo by P. Wallace

Dun Skipper (*Euphyes vestris*)

a) Iberia Parish (Avery Island), 11/29/18, Gary Ross – reported to SLS News as part of Gary's Avery island butterfly survey (not a new parish record but his sighting is the latest season sighting of which I am aware and the first record for November);

b) LaSalle Parish (Zimmer Creek Road near Jena), 5/15/19, Jonathan Clark (with two pictures);

c) St. James Parish (along LA 3125 north of Hester), 8/27/11, reported to and accepted by BAMONA (with two photos – the photos are dorsal shots and I have questions as to whether the specimen is actually a Clouded Skipper. For that reason, I have not included this record on the map for this species.);

d) Vermilion Parish (near Lyons Point), 10/04/17, Phillip Wallace (with photo on BAMONA).

Dusted Skipper (*Atrytonopsis hianna*)

a) Avoylelles Parish (Spring Bayou WMA), 4/09/19, reported by Joshua Lincoln to iNaturalist (with photo, mis-identified as a Pepper & Salt Roadside Skipper);

b) Vernon Parish (Dove Field), 4/09/19, Sarah Pearce – not a new parish record, but only second sighting of this species at this location (with picture).

Lace-winged Roadside-Skipper (*Amblyscirtes aesculapius*)

a) Grant Parish (National Catahoula Wildlife Management Preserve), 7/27/19, Jonathan Clark (with picture);

b) Washington Parish (at Thomas Creek), 8/09/18 reported by Phillip Wallace (with pictures).

Common Roadside-Skipper (*Amblyscirtes vialis*)

a) Caddo Parish (Greenwood), 3/07/92, Steve Williams – reported in TLS 1992 Season Summary

b) Richland Parish (reported as "on I-20), 6/13/94, Steve Williams – reported in TLS 1994 Season Summary (only the second June sighting).

Dusky Roadside-Skipper (*Amblyscirtes alternata*)

a) St. Charles Parish (Boutte), 5/22/61, H. Wilhelm – part of the Yale Museum collection.

Twin-spot Skipper (*Oligoria maculata*)

a) Allen Parish (CC Road Savannah Preserve), 5/28/18, C. Marks – not a new parish record but a new location (two seen with pictures);

b) Calcasieu Parish (no location indicated), no date, Heitzman and Howe (reported in 1961 TLS Season Summary;
c) Iberia Parish (Avery Island), 10/17-21/18, Gary Ross – reported in SLS News as part of Gary's survey of the butterfly fauna of Avery Island. Not a new parish record, but a new location for this skipper;
d) Jefferson Parish (Jean Lafitte National Historic Park), 8/25/10 (not submitted until January 5, 2018), reported by Hans Holbrook to iNaturalist (with photo);
e) St. Mary Parish (Bayou Teche NWR) 4/28/18 C. Marks – not a new parish record, but first record for April;
f) Vermilion Parish (Russ Rd near Kaplan), 9/19/17, Philip Wallace (pictures on LA listserv).

Brazilian Skipper (*Calpodes ethlius*)
a) Beauregard Parish (Dry Creek), 6/08/18, reported to iNaturalist (with photo), Another sighting in that parish (near DeRidder) was reported on 5/23/19 by Adrianne Edwards (with photo);
b) Livingston Parish (near Walker), 10/22/16, reported by Whitney Grant to and accepted by BAMONA (with photo of a caterpillar);
c) St. Bernard Parish (Chalmette Battlefield), 11/26/17, Rosemary Seidler (with picture);
d) Vermilion Parish (Abbeville), 9/29/16, Phillip Wallace (with photo on BAMONA).

Salt Marsh Skipper (*Panoquina panoquin*)
a) Iberia Parish (Avery Island), (7/11-15/18), Gary Ross – reported in SLS News as part of Gary's survey of the butterfly fauna of Avery Island (sightings);
b) St. Bernard Parish (Breton NWR, Chandeleur Islands), 5/17/19, reported by Oscar Johnson to iNaturalist (with photo). Not a new parish record but first reported sighting there since 1970's.

Obscure Skipper (*Panoquina panoquinoides*)
a) Plaquemines Parish (Chandeleur Islands), 8/01/1970, Gayle Strickland - reported in TLS 1970 Season Summary;
b) St. John the Baptist Parish (Maurepas Swamp WMA, 8/21/12 (not submitted until January 4, 2018), reported by Hans Holbrook to iNaturalist (with photo). The specimen in the picture is suggested to be an Ocola Skipper, but the short wings and spot pattern on the ventral lower wing indicate to me it is this species. Rosemary Seidler and Jeff Trahan both feel it might be an Ocola. Given their impressions, and the fact that the location would not be consistent for this species, I have not included this record on the map for this species.

Ocola Skipper (*Panoquina ocola*)
a) Avoyelles Parish (near Bunkie), 8/04/00, Ray Stanford (submitted to BAMONA);
b) Catahoula Parish (Little River Rec Area), 11/06/18, Jonathan Clark (with picture);
c) LaSalle Parish, early September 2018, Jonathan Clark (photo posted on LA listserv);
d) Red River Parish (Red River NWR, Yates Unit), 9/04/16, reported by Royal Tyler to iNaturalist (with photo);
f) St. James Parish (along LA 3125 north of Hester), 10/29/06, reported to BAMONA (with photo).

Pipevine Swallowtail (*Battus philenor*)
a) Red River Parish (Bayou Pierre unit - Yates Tract), early Apr, mid-Apr, mid-June and late Oct sighting, Rosemary Seidler, (communicated by e-mail);
b) Madison Parish (Tensas River NWR), 3/24/19, reported by Charles Paxton to iNaturalist (with photo). Matt Brady also reported a sighting on 6/03/18 at the same NWR (with photo);
c) W. Carroll Parish (Poverty Point State Commemorative Area), 6/13/94, Steve Williams – reported in 1994 TLS Season Summary.

Zebra Swallowtail (*Eurytides marcellus*)
a) E. Baton Rouge Parish (Bluebonnet Swamp), G. Ross mentions colony in his article about Seminole Crescent, and Cindy/John Hartgerink confirm pictures taken;

b) St. Mary Parish (Indian Bayou WMA), 5/19/18, recorded by R. Seidler during the 2018 NABA Count – not a new parish record, but only the second time this species has been seen at this location;
c) Vernon Parish (Allen Acres), 9/17 and 9/27/19, reported on Allen Acres facebook page with pictures (not a new parish record but extremely late season sightings);
d) W. Carroll Parish (Poverty Point World Heritage Site), 3/26/18, reported to iNaturalist (with photo).

Black Swallowtail (*Papilio polyxenes*)
a) Catahoula Parish (Harrisonburg Rec Area), 3/17/18, Jonathan Clark (with photo on BAMONA).

Eastern Tiger Swallowtail (*Papilio glaucus*)
a) Ascension Parish (Hwy 22 near Sorrento), 11/28/05, Rosemary Seidler (sight record, the latest date of which I am aware for this species);
b) Vermilion Parish (Pecan Island), 6/14/71, Thomas Manley – taken from the Yale Museum website.

Spicebush Swallowtail (*Papilio troilus*)
a) Ascension Parish (Gonzales area), 2/17/19, reported by Kate Weinell to iNaturalist (with photo);
b) Livingston Parish, 8/03/2000, Ray Stanford - sighting submitted to TLS);
c) Richland Parish (location reported as "on I-20"), 6/13/1994, Steve Williams - reported in TLS 1994 Season Summary;
d) W. Carroll Parish (Poverty Point State Commemorative Area), 6/13/94, Steve Williams – reported in 1994 TLS Season Summary.

Palamedes Swallowtail (*Papilio palamedes*)
a) Acadia Parish (no location indicated), 10/04/91, Steve Williams - reported in TLS 1991 Season Summary;
b) Calcasieu Parish (no location given), 10/04/91, Steve Williams - reported in TLS 1991 Season Summary;
c) Jeff Davis Parish (no location given), 10/04/91, Steve Williams – reported in TLS 1991 Season Summary.

Giant Swallowtail (*Papilio cresphontes*)
a) Ascension Parish (Gonzales area), 8/19/18, reported by Kate Weinell to iNaturalist (with photo);
b) St. James Parish (near Lutcher), 8/27/18, reported by Celeste Louque to iNaturalist (with photo);
c) Vermilion Parish (Abbeville), 7/06/17, Phillip Wallace (with photos on BAMONA).

Checkered White (*Pontia protodice*)
a) Avoyelles Parish (Lake Ophelia NWR), 9/27/06, Rosemary Seidler (with photo on BAMONA);
b) Catahoula Parish (north of Jonesville on LA 124), 10/26/18, Jonathan Clark (with picture);
c) Natchitoches Parish (Kisatchie NF) 6/23/18, C. Marks – not a new parish record but a recent record for a relatively scarce species (a large female was netted and identified during 2018 NABA Count);
d) Vermilion Parish (Pecan Island), 7/14/71, Thomas Manley – taken form the Yale Museum website.

Cabbage White (*Pieris rapae*)
a) Caddo Parish (Greenwood), 3/07/92, Steve Williams - reported in TLS 1992 Season Summary;
b) Jefferson Parish (Metairie), 5/31/18, reported to iNaturalist (with photo);
c) St. Tammany Parish (location given as E. Pearl River), 6/10/89, Frank Fischer and Francis Walden - reported in TLS 1989 Season Summary. (This is not a new parish record but is still note-worthy given the few records for this species in LA;
d) Washington Parish (within about 6 miles of location where Dave Patton recorded this uncommon, at least in LA, species, as previously reported in my book), 5/04/18, Philip Wallace. (Dave, who was with the group that day, reported via e-mail of seeing whites at "several locations" that day). Two more were seen in same area on 6/21/18 by the same group.

Great Southern White (*Ascia monuste*)
a) Calcasieu Parish (north of Lake Charles), 5/07/17, reported by Barbara Morris to iNaturalist (with photo).

Clouded Sulphur (*Colias philodice*)

a) LaSalle Parish (Dewey Wells WMA), 12/25/15, Jonathan Clark (with ventral photo). Also, reported by Rosemary Seidler on 2/17/15 in Kisatchie NF (with ventral photo). Both sightings accepted by BAMONA as this species.

Orange Sulphur (*Colias eurytheme*)

a) St. Mary Parish (Franklin), 11/1933, H.A. Jaynes – taken from the Yale Museum website.

Southern Dogface (*Zerene cesonia*)

a) Avoyelles Parish (at Simmesport), 7/17/18, submitted to BAMONA, Sighting #1170917 (with picture);

b) Grant Parish (Kisatchie NF), 10/11/14, by Rosemary Seidler – submitted to Bugguide (with picture);

c) LaSalle Parish (Catahoula National Wildlife Preserve at Willow Lake), Jonathan Clark reported this sulphur to be "very common" during the fall of 2019. Not a new parish record, but of note as this species is typically seen in fewer numbers.

Orange-barred Sulphur (*Phoebis philea*)

a) East Baton Rouge) 2006, by Gayle Strickland – submitted to Bugguide. Not a new parish record but of interest. First sighting in January. Regular sightings in the Strickland's yard from March-September with over 60 actually reared;

b) Iberia Parish (Avery Island), 9/16-23/18, Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey.

Barred Yellow (*Eurema daira*)

a) Grant Parish (Catahoula Butterfly Garden in Kisatchie NF), 7/22/17, Lawanda Smith Mobley (with ventral picture). Accepted by BAMONA. Jonathan Clark confirmed the presence of this species in Grant Parish on 7/27 & 8/09/19 in the Catahoula National Wildlife Preserve, photographing several specimens. He also photographed a winter form specimen in that Preserve on 11/05/19. I believe these are the first confirmed reports of this species in LA, west of the Mississippi River;

b) Jefferson Parish (no location given), 3/06/1975, Ray Stanford reported in TLS 1975 Season Summary;

c) LaSalle Parish (near White Sulphur Springs), 8/13/19, Jonathan Clark (with several pictures);

d) Winn Parish (Catahoula National Wildlife Preserve), 8/09/19, Jonathan Clark (with several pictures).

Photo by J. Clark

Little Yellow (*Pyrisitia lisa*)

a) St. James Parish (along LA 3125 near Lutcher), 9/30/06, submitted with photo to and accepted by BAMONA.

Sleepy Orange (*Abaeis nicippe*)

a) Bienville Parish (Near Lucky), 9/18/18, reported to iNaturalist (with photo);
b) Catahoula Parish (Sisily Island Hills WMA), 6/30/19 and again on 8/19/19, reported by Jonathan Clark (with photo).

Dainty Sulphur (*Nathalis iole*)

a) LaSalle Parish (Jena, Catahoula National Wildlife Preserve HQ and Willow Lake unit), Jonathan Clark reported this Sulphur as being more common during the fall of 2019 than in previous years. Not a new parish record but notable as this Sulphur is typically seen rarely in this area;
b) Webster Parish (Lake Bistineau St Pk), 10/03/15, Rosemary Seidler - submitted to BAMONA and confirmed by photo. Also, in same parish (Couchwood Rd), Rosemary Seidler, 11/11/05 (sight record).

Harvester (*Feniseca tarquinius*)

a) Catahoula Parish (Sicily Island Hills WMA), 4/21/19 (more than one) Jonathan Clark (with several pictures);
b) Lafayette Parish (City of Lafayette), 8/23/14, Dave Patton – also first record for August (with picture);
c) Rapides Parish (Castor Plunge Rd area of Kisatchie NF), 3/10/19, reported by Brad Moon (with picture). Also, on 8/04/18, 4/11/19 and 6/12/19 by Brad, Dave Patton and Phillip Wallace in same general area of Kisatchie (again, with pictures). Not a parish record but multiple sightings suggestive of a healthy colony. On 6/12/19, three different Harvesters were seen ovipositing on a branch covered with wooly aphids.

Photo by J. Clark

Great Purple Hairstreak (*Atlides halesus*)

a) Calcasieu Parish (near Lake Charles), 4/29/19, reported by Barbara Morris to iNaturalist (with photo).

Juniper Hairstreak (*Callophrys gryneus*)

a) Lasalle Parish (near Jena), 7/24/17, Jonathan Clarks (with two photos on BAMONA). Not only a new parish record, but one of only a very few July records;
b) Vernon Parish (Allen Acres), 7/27/19, C. Marks and others (with photos) recorded during the 2019 Allen Acres NABA Count. Not a new parish record, but another late July/third brood record.

Eastern Pine Elfin (*Callophrys niphon*)

a) LaSalle Parish (Zimmer Creek Rd NW of Jena), 3/31/18, Jonathan Clark (with picture). Also, Jonathan photographed another, also near Jena, on 5/12/19 (on BAMONA).

Oak Hairstreak (*Satyrium favonius*)

a) Caddo Parish (Eddie Jones SP), 4/22/12, Jeff Trahan (with picture);

b) Lafayette Parish (Acadiana Park), 4/01/18, Dave Patton – not a new parish record but an early record by about 2 weeks (w/picture);
c) Livingston Parish (Denham Springs), 5/24/18, reported to iNaturalist (with photo);
d) Natchitoches Parish (Kisatchie NF), 5/14/19, Ricky Patterson – not a new parish record but only second record from parish and location (specimens taken).

Banded Hairstreak (*Satyrium calanus*)
a) Catahoula Parish (Sicily Island Hills WMA), 5/07/19, Jonathan Clark (with pictures of two Individuals);
b) Evangeline Parish (Louisiana Arboretum), 5/18/19, C. Marks – three males dogfighting in afternoon sun along upper trail (specimens taken);
c) Natchitoches Parish (Kisatchie NF), 6/23/18, C. Marks – not a new parish record but an extremely late record for this species (specimen netted to confirm identity).

King's Hairstreak (*Satyrium kingi*)
a) LaSalle Parish (near Jena), 6/16/18, Brad Moon – recorded as part of 2018 NABA Catahoula NWR Count (with picture);
b) Rapides Parish (Kisatchie Unit, FR 249), 6/08/18), Brad Moon – not a new parish record, but a new colony (with pictures);
c) Vernon Parish (Kisatchie NF, north of Fullerton Lake), 5/26/19, by Brad Moon (with photos, six specimens – not a new parish record but a new colony. A return visit on 6/15/19 yielded eight sightings, indicative of a healthy colony.

Photo by B. Moon

Striped Hairsteak (*Satyrium liparops*)
a) Rapides Parish (Kisatchie NF – Woolworth area), 6/12/19, Brad Moon (with photo). Not a new parish record, but sightings of this species are few and far between.

Red-banded Hairstreak (*Calycopis cecrops*)
a) E. Carroll Parish (Bayou Macon WMA), 7/29/03, Rosemay Seidler (with photo);
b) St. Bernard Parish (no location given), 4/11/37 & 10/12/36, F. Arnhold – taken from Yale Museum website.

Dusky-blue Groundstreak (*Calycopis isobeon*)
a) Vernon Parish (Clearcreek WMA), 10/10/18, Phillip Wallace - picture submitted and accepted by BAMONA).

Gray Hairstreak (*Strymon melinus*)
a) Calcasieu Parish (Lake Charles area), 6/13/18, 7/06/18 & 7/08/18, reported to iNaturalist (with photos);
b) Plaquemine Parish (Grand River), 10/02/36, Francis Arnhold – taken from Yale Museum website;
c) St. James Parish (near Gramacy), 5/10/06, Rosemary Seidler (sighting).

Mallow Scrub-Hairstreak (*Strymon istapa*)

a) Vernon Parish (Dove Field), 10/21/18, Philip Wallace and Brad Moon (both had pictures).

White M Hairstreak (*Parrhasius m-album*)

a) Calcasieu Parish (Tuten Park), 6/06/17, reported Irvin Louque to iNaturalist (with photo);
b) Catahoula Parish (Sisily Island Hills WMA), 7/26/19, Jonathan Clark (with picture);
c) Lafayette Parish (within City of Lafayette), 6/30 & 7/01/18, Dave Patton (with pictures). Also, C. Marks reported seeing multiple specimens of this species at a different location within the City of Lafayette (seven were seen on 6/30, all fresh males, and then three on 7/01 at same location). Not new parish records but still noteworthy for this not often reported hairstreak;
d) Livingston Parish (near Denham Springs), 3/31/19, reported to iNaturalist (with photo);
e) St. Mary Parish (Indian Bayou WMA), 5/19/18, C. Marks – not a new parish record, but only the second time this species has been seen at this location.

Eastern Tailed-Blue (*Cupido comyntas*)

a) St. Martin Parish (Indian Bayou WMA), 10/15/17, reported by Brad Moon to iNaturalist (with photo).

Summer Azure (*Celastrina neglecta*)

a) Evangeline Parish (Louisiana Arboretum), 5/18/19, C. Marks (specimens taken);
b) Grant Parish (near Colfax outside of Kisatchie NF), 6/03/18, submitted to BAMONA, Sighting #1165141 (with picture).

Ceranus Blue (*Hemiargus ceraunus*)

a) Vernon Parish (Fort Polk), 9/28/17, Sarah Pearce (Biologist at Fort Polk) (with picture verification).

Reakirt's Blue (*Echinargus isola*)

a) Red River Parish (Kisatchie NF near Grand Bayou Reservoir), 5/21/09 but not reported to iNaturalist until February 2015, by James Beck (with 3 photos).

Little Metalmark (*Calephelis virginiensis*)

a) Allen Parish (West Bay WMA), 8/31/19, reported by Phillip Wallace (with photos). Not a new parish record, but first record for this location;
b) Beauregard Parish (near DeQuincy), 9/19/16, reported by Matthias Hofmann to iNaturalist (with photo). Not a new parish record but first for that parish since Cajun Prairie survey;
c) E. Baton Rouge Parish (Waddell Wildlife Refuge), 10/14/18, reported by Ryan Lefleur to iNaturalist (with 2 photos of a caterpillar). Not a new parish record, but first in parish since the early 1970's. Also, a new location.

Photo by P. Wallace

American Snout (*Libytheana carinenta*)

a) Calcasieu Parish (at Lake Charles airport), 5/10/19, reported by James Doucet to iNaturalist (with photo);
b) Iberia Parish (Avery Island), 1/28/19, Gary Ross – multiple seen and reported in SLS News as part of Gary's Avery Island butterfly survey (not a new parish record, but an extremely early sighting);
c) Plaquemine Parish (Lake Hermitage Rd), 9/25/06, Rosemary Seidler (with photo on BAMONA);
d) W. Carroll Parish (Poverty Point World Heritage Site), 5/24/19, Ed Rothwell (three photos on BAMONA).

Monarch (*Danaus plexippus*)

a) Concordia Parish, 10/11/16, reported by Jody Shugart to iNaturalist (with photo);
b) Union Parish (Heartwood Natural Area), 4/17/18, reported by Kelly Ouchley to iNaturalist (with photo);
c) Vermilion Parish (Freshwater City), 10/27/18, C. Marks – 50+ seen taking nectar at various blooming wildflowers (not a new parish record but a high number seen at one location).

Queen (*Danaus gilippus*)

a) Beauregard Parish (Edith area), 9/13/16, reported by Matthias Hofmann to iNaturalist (with photo);
b) Claiborne Parish (Corney Lake), 11/03/12, Rosemary Seidler (with photo on BAMONA);
c) E. Baton Rouge Parish (in Woodland Ridge area), 10/01/17, Ken Bosso (with photo on BAMONA);
d) Iberia Parish (south of Hwy 90 near Lydia), 9/16/17, submitted with photo to and accepted by BAMONA;
e) Morehouse Parish (Horseshoe Lake), 6/06/12, submitted with two photos to and accepted by BAMONA;
f) St. Bernard Parish (Chalmette), 10/16/44, C. Remington – taken from Yale Museum website.

Gulf Fritillary (*Agraulis vanillae*)

a) Assumption Parish (near Pierre Part), 11/23/17, Rosemary Seidler (with picture);
b) St. John the Baptist Parish (Ruddock), 8/23/42, C. Remington – taken from the Yale Museum website.

Zebra Heliconian (*Heliconius charithonia*)

a) Lafayette Parish, (City of Lafayette), 12/02/03, submitted by Dave Patton with photo to BAMONA. Not a new parish record, but actually this sighting pre-dates the sighting for this parish referenced in my book. Patton also noted that here were other sightings around Lafayette during this time frame.

Variegated Fritillary (*Euptoieta claudia*)

a) Iberia Parish (south of Hwy 90 near Lydia), 9/17/17, submitted with photo to and accepted by BAMONA;
b) Livingston Parish (Rose Mound), 5/07/18, reported by Jamie Braud to iNaturalist (with photo);
c) Union Parish (D'Arbonne NWR), 10/09/18, reported by Kimmie Paxton to iNaturalist (with photo).

Silvery Checkerspot (*Chlosyne nycteis*)

a) Iberia Parish (Avery Island), 10/17-21/18, Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey;
b) LaSalle Parish (near Jena), 6/18/18, C. Marks – sighted during the 2018 Catahoula NWR NABA Count. During the 2019 NABA Count, 52 were recorded.

Phaon Crescent (*Phyciodes phaon*)

a) Allen Parish (near Reeves), 3/06/16, Rosemary Seidler (with two photos on BAMONA);
b) Madison Parish (Tensas Rivr NWR), 7/15/15, Jeff Trahan (with photo on BAMONA);
c) St. Bernard Parish (Chalmette), 10/16/44, C. Remington – taken from the Yale Museum website;

d) St. James Parish (along LA 3125 near Lutcher), 9/10/06, submitted with two photos to and accepted by BAMONA;
e) Union Parish (Farmerville), 10/09/18, reported by Kimmie Paxton to iNaturalist (with photo).

Pearl Crescent (*Phyciodes tharos*)
a) Plaquemines Parish, 9/26/06, Rosemary Seidler (sighting), also (Braithwaite), 11/26/17, Rosemary Seidler (with picture);
b) St. Bernard (St. Bernard St Pk), 11/22/17 (with picture); Plaquemines.

Texan Crescent (*Anthanassa texana*)
a) St. Charles Parish (Norco), 11/04-5/44, C. Remington – taken from the Yale Museum website;
b) St. Martin Parish (Indian Bayou WMA), 10/26/18, Phillip Wallace – not a new parish record but a late season sighting (with photos).

Common Buckeye (*Junonia coenia*)
a) W. Carroll Parish (Poverty Point World Heritage Site), 5/01/19, submitted by Ed Rothwell with photo to BAMONA.

White Peacock (*Anartia jatrophae*)
a) Jefferson Parish (Grand Isle campground), 10/29/18, Kevin Cunningham – not a new parish record by indication that colony is still present (with picture).

Question Mark (*Polygonia interrogationis*)
a) Vermilion Parish (Palmetto SP), 3/02/14, reported to iNaturalist (with photo).

Eastern Comma (*Polygonia comma*)
a) Concordia Parish (Bayou Cocodrie NWR), 8/25/18, reported by Hubert Matthews to iNaturalist (with photo);
b) Lafayette Parish (Acadiana Park), 3/14/15, Dave Patton - I had this record reported in the text of my book but not reflected on that species' state map;
c) Union Parish (Heartwood Natural Area), 3/18/18, reported by Kelly Ouchley to iNaturalist (with photo).

Red Admiral (*Vanessa atalanta*)
a) Calcasieu Parish (Sam Houston Jones SP & Tuten Park), 3/23/19 & 3/19/18 respectively, reported by Irvin Louque to iNaturalist (with photos);
b) Concordia Parish (Red River State WMA), 3/04/18, reported to iNaturalist (with photo);
c) Union Parish (Heartwood Natural Area), 10/08/11, reported by Kelly Ouchley to iNaturalist (with photo).

Painted Lady (*Vanessa cardui*)
a) Allen Parish (at Elizabeth), 11/11/17, reported by Laura Clark to iNaturalist (with photo);
b) Assumption Parish (near Pierre Part), 11/23/17, Rosemary Seidler (with picture);
c) Concordia Parish (near Milestone Forks), 11/20/16, reported by Hubert Matthews to iNaturalist (with photo);
d) Grant Parish (Catahoula National Wildlife Preserve), 8/09/19, Jonathan Clark (with picture);
e) Livingston Parish (near South Haven), 8/10/18, submitted to BAMONA, Sighting #1177883 (with picture).

American Lady (*Vanessa virginiensis*)
a) W. Carroll Parish (Poverty Point World Heritage Site, 5/21/19, submitted by Ed Rothwell with photo to BAMONA.

'Astyanax' Red-spotted Purple (*Limenitis arthemis astyanax*)
a) Iberville Parish (Sherburne WMA, South Farm), 8/12/18, reported by Oscar Johnson to iNaturalist (with photo);
b) Lafourche Parish (near Thibodeaux), 7/06/18, reported to iNaturalist (with photo);

c) Madison Parish (Tensas River NWR), two sighting there, 8/11/18 & 8/25/18, reported to iNaturalist, the second by Charles Paxton (with photos).

Viceroy (*Limenitis archippus*)

a) Plaquemine Parish (Belle Chasse), 5/23/61, Herman Wilhelm – taken from the Yale Museum website;
b) Washington Parish, three sightings: 7/15/17, 8/18/18 & 4/06/19, reported to iNaturalist (with photos).

Goatweed Leafwing (*Anaea andria*)

a) Livingston Parish (near Denham Springs), 4/07/19, reported to BAMONA as Sighting #1201996 (with picture).

Hackberry Emperor (*Asterocampa celtis*)

a) Iberville Parish (Sherburne WMA, South Farm, 8/12/18, reported by Oscar Johnson to iNaturalist (with photo);
b) Madison Parish (Tensas River NWR), 8/25/18, reported by Charles Paxton to iNaturalist (with photo).

Tawny Emperor (*Asterocampa clyton*)

a) Acadia Parish (near Church Point), 7/28/18, reported to iNaturalist (with photo);
b) Calcasieu Parish (Perkins Ferry Park), 4/29/19, reported by Irvin Louque to iNaturalist (with photo);
c) Concordia Parish (Bayou Cocodrie NWR), 9/29/18, reported by Hubert Matthews to iNaturalist (with photo);
d) Iberville Parish (Whiskey Bay Road), 5/10/06, Rosemary Seidler (sighting);
e) Jefferson Davis Parish (near Iowa), 8/26/18, reported by Robby Maxwell to iNaturalist (with photo);
f) Lafourche Parish (at Dufrene Ponds), 7/08/13, reported to iNaturalist (with photo);
g) LaSalle Parish (hardwood bottoms of Catahoula NWR), 7/26/18, Jonathan Clark (with picture);
h) Madison Parish (Tensas River NWR), 10/03/17, Jeff Trahan (with photo on BAMONA);
i) Natchitoches Parish (City of Natchitoches), 7/16/14, submitted by Chris Blox with photo on BAMONA;
j) Red River Parish (Red River NWR, Yates Tract), 5/23/19, Jeff Trahan (with Pictures).

Southern Pearly Eye (*Enodia portlandia*)

a) Avoyelles Parish (Spring Bayou State WMA), 4/10/19, reported by Joshua Lincoln to iNaturalist (with photo);
b) Grant Parish (Kisatchie NF), 10/03/17, Jeff Trahan (with photo on BAMONA). Also reported by Jonathan Clark at the Catahoula National Wildlife Preserve on 11/05/19 (with picture);
c) LaSalle Parish (Jena), 9/23/18 and 10/13/19, Jonathan Clark (with pictures);
d) St. Bernard Parish (no location given), 6/13/37, F. Arnhold – taken from Yale Museum website;
e) St. Mary Parish (no location given), 8/07/33, F. Arnhold – taken from Yale Museum website.

Creole Pearly Eye (*Enodia creola*)

a) Catahoula Parish (Sicily Island Hills WMA), 5/07/19, Jonathan Clark – with pictures of a male and female. (Submitted to and accepted by BAMONA). Also seen by Jonathan at this location on 9/29/19 (with pictures);
b) Iberia Parish (Avery Island), 8/21-26/18, Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey;
c) Livingston Parish (Tickfaw St Pk), 6/28/18, C. Marks - ten+ mostly fresh males seen along Pine/Harwood trail in open deciduous bottoms with cane (not a new parish record, but verification that previously known colony still exists);
d) W. Baton Rouge Parish (reported as "near Ramah"), 9/04/1993, Steve Williams, reported in TLS 1993 Season Summary.

Photo by J. Clark

Appalachian Brown (*Satyrodes appalachia*)

a) E. Baton Rouge Parish (Hooper Road Park), 4/06/19, reported by Oscar Johnson to iNaturalist (with 3 photos);

b) St. Landry Parish (Oxbow Unit in Indian Bayou WMA), 7/30/18, Dave Patton – not a new parish record, but eleven Browns at this known location indicate the colony is still active (with pictures);

c) St. Mary Parish (Bayou Teche NWR), 4/28/18 CWM – not a new parish record, but first record for April.

Gemmed Satyr (*Cyllopsis gemma*)

a) Grant Parish (National Catahoula Wildlife Management Preserve), 7/27/19, Jonathan Clark (with picture).

Carolina Satyr (*Hermeuptychia sosybius*)

a) Iberville Parish (near Bayou Paul), 3/18/19, reported by Michelle McLinden to iNaturalist (with photo);

b) Madison Parish (Tensas River NWR), 8/11/18, reported to iNaturalist (with photo).

Georgia Satyr (*Neonympha areolatus*)

a) Allen Parish (CC Road Savanna Preserve), 5/28/18, C. Marks – seven recorded (not a new parish record but a new location for this habitat-specific species;

b) Natchitoches Parish (Kisatchie NF at Woodcock Bog), 5/18/16, Brad Moon – not a new parish record but first records for Kisatchie NF in over ten years (with photo).

Photo by B. Moon

Little Wood Satyr (*Megisto cymela*)

a) Iberia Parish (Avery Island), (3/19-24/19), Gary Ross – reported in SLS News as part of Gary's Avery Island butterfly survey;

b) Livingston Parish (north of Denham Springs), 3/19/19, reported to iNaturalist (with photo).

Common Wood Nymph (*Cercyonis pegala*)

a) Grant Parish (National Catahoula Wildlife Management Preserve), 7/27/19, Jonathan Clark (with picture);

b) St. Martin Parish (Indian Bayou WMA), 5/19/18, Rosemary Seidler, seen during the 2018 NABA Count. Rosemary indicated she plainly saw the yellow eye patches. No photo and further searches of the area were negative;

c) Vernon Parish (Kisatchie NF at Cooter's Bog), 6/15/19, sightings of 28 specimens by Brad Moon, Dave Patton and C. Marks. Not a new parish records, but the most LA sightings in one day of which I am aware. Individuals also seen at Fullerton Lake and Dove Field.

I now consider nine species reported as part of Louisiana's fauna as extremely rare, and/or accidentally introduced. This list includes the Mercurial Skipper, Polydamus Swallowtail, Florida White, White Angled Sulphur, Lyside Sulphur, Cassius Blue, Marine Blue, Diana, Bordered Patch and Milbert's Tortoiseshell. With the exception of the Marine Blue (seen a total of three times) and the Florida White (seen twice), all others have been reported only one time within the state. The Appalachian Brown clearly is established in a couple of parishes, and it appears the Cabbage butterfly is a resident in Washington Parish at this time. So, I now consider another seven species as periodic strays, some of which occasionally appear to colonize within the state only to later disappear. These species include the White-striped Longtail, Large Orange Sulphur, Orange-barred Sulphur, Mexican Yellow, Mallow Scrub-hairstreak, Zebra Longwing, White Peacock and Common Mestra. Frankly, an argument can be made that the White Peacock colony on Grand Isle is sufficiently established to consider that species as permanent.

The remaining 130 species appear to be permanent residents of the State to some degree or another. Of the species about which I expressed concern about their continued presence in this State (the Yucca Giant-Skipper, the Gorgone Checkerspot and the Cobweb Skipper), there have been no new records.

The updated numbers for species reported in each parish is as follows:

ACA	Acadia Parish (44)
ALL	Allen Parish (55)
ASC	Ascension Parish (25)
ASS	Assumption Parish (13)
AVO	Avoyelles Parish (51)
BEAU	Beauregard Parish (52)
BIEN	Bienville Parish (56)
BOS	Bossier Parish (87)
CAD	Caddo Parish (109)
CALC	Calcasieu Parish (56)
CALD	Caldwell Parish (49)
CAM	Cameron Parish (75)
CAT	Catahoula Parish (72)
CLA	Claiborne Parish (70)
CON	Concordia Parish (42)
DES	DeSoto Parish (79)
EBR	East Baton Rouge Parish (94)
ECA	East Carroll Parish (21)
EFE	East Feliciana Parish (87)
EVA	Evangeline Parish (61)
FRA	Franklin Parish (13)
GRA	Grant Parish (84)
IBE	Iberia Parish (63)
IBV	Iberville Parish (45)
JAC	Jackson Parish (33)
JEF	Jefferson Parish (71)
JFD	Jefferson Davis Parish (42)
LAFA	Lafayette Parish (77)
LAFO	Lafourche Parish (51)
LAS	LaSalle Parish (67)
LIN	Lincoln Parish (40)
LIV	Livingston Parish (60)
MAD	Madison Parish (39)
MOR	Morehouse Parish (32)
NAT	Natchitoches Parish (105)
ORL	Orleans Parish (81)
OUA	Ouachita Parish (39)
PLA	Plaquemines Parish (26)
PCP	Pointe Coupee Parish (38)
RAP	Rapides Parish (95)
RDR	Red River Parish (49)
RIC	Richland Parish (25)
SAB	Sabine Parish (87)
SBN	St. Bernard Parish (26)
SCH	St. Charles Parish (55)
SHE	St. Helena Parish (65)
SJA	St. James Parish (24)
SJB	St. John the Baptist Parish (52)
SLA	St. Landry Parish (83)
SMA	St. Mary Parish (52)
SMN	St. Martin Parish (62)
STA	St. Tammany Parish (110)

TAN	Tangipahoa Parish (85)
TEN	Tensas Parish (27)
TER	Terrebonne Parish (65)
UNI	Union Parish (34)
VER	Vernon Parish (89)
VRM	Vermilion Parish (55)
WAS	Washington Parish (52)
WBR	West Baton Rouge Parish (34)
WCA	West Carroll Parish (28)
WEB	Webster Parish (57)
WFE	West Feliciana Parish (95)
WIN	Winn Parish (62)

Even with these new records, some parishes remain badly underreported, as evidenced by comparing their numbers with those of nearby parishes. Richland, East Carroll, St. James, Ascension, Assumption, and Franklin have 25 or fewer species recorded within them. Eight others still have fewer than 35 recorded species. Only 3 parishes, St. Tammany, Caddo, and Natchitoches, have over 100 species recorded, 110, 109, and 105 respectively. Three more parishes have 90 or more reported, W. Feliciana (95), Rapides (95) and East Baton Rouge (94).

Again, despite these new records, no butterfly or skipper has been reported from all 64 parishes to date. The swallowtails, the sulphurs, and the brushfoots seem to be the most reported families. The species reported in the most parishes are now the ubiquitous Pearl Crescent and Little Yellow (63). Right behind is the Cloudless Sulphur, reported in 62 parishes. If someone can spot a Pearl Crescent in St. James Parish, a Cloudless Sulphur in Union and East Carroll Parishes, and/or a Little Yellow in West Carroll Parishes, every parish would be represented for those respective species.

Based on this supplemental data, the top two spread-winged skippers continue to be Horace's Duskywings and Silver-spotted Skippers, in 52 and 50 parishes respectively. The most-reported grass skippers are the Fiery Skipper and the Clouded Skipper, both found in 55 parishes. Other notable grass skippers were the Least Skipper (49), and the Southern Skipperling (48). The Pipevine Swallowtail (60) and E. Tiger Swallowtail (59) were the top-recorded swallowtails. For the whites, the Checkered White (37) has shown up in the most parishes, but I continue in my belief that the Great Southern White (24) is the most common white in the state.

The top two hairstreaks remain the Gray Hairstreak (56) and the Red-banded Hairstreak (56), and the top two blues also remain the Eastern Tailed-Blue (40) and the Summer Azure (22). For the brushfoots, aside from the Pearl Crescent, the Gulf Fritillary (59) and the Common Buckeye (59) are the next most reported species. The Monarch is now reported in 59 parishes. Other notables included the American Snout (52), the American Lady (52), the Red Admiral (52), the Viceroy (56), and the Question Mark (53). The most reported satyr/wood nymph is the Carolina Satyr, in 59 parishes.

After adding these supplemental records to the previous records reflected in my book, 30 and 49 species have been reported in the months of January and February, respectively, probably the coldest months of the year. By March, the total number of species reported increased to 84. April records have jumped up to 116 species with May's total now 9 less at 107. June records increased to 116, tying it with April as the month with the most species recorded. As the heat and humidity of July and August reduce activity, the number of species dropped slightly to 108 and 109, respectively. September numbers (110) now exceed August, and October's total is only 4 species fewer at 106. By November, while it is still possible to find many butterflies present in large numbers (such as Buckeyes, Gulf Fritillaries, and Ocola Skippers), the total number of species dropped to 84. The total number of species reported in December was 38.

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MOTHS FROM THE YARD OF MONICA KRANCEVIC
LAKE JACKSON, TEXAS

***Tripudia* [*balteata*?] Perplexingly odd. Dorsal and lateral views, 20-December-2019**
[Collected specimen if anyone is interested in dissecting or barcoding?]

***Tripudia* [*balteata*?] Another odd one. Dorsal and lateral views, 27-December-2019**

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MYTHIMNA UNIPUNCTA (HAWORTH, 1809) (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

Fig. 1. ***Mythimna unipuncta*** morphotypes: all captured near Abita Springs, Louisiana **a-h**. males. **j-n.** females. Dates of capture: **a.** 11-15-1990, **b.** 12-13-2016, **c.** 1-11-2016, **d.** 6-16-2017, **e.** 7-21-2017, **f.** 8-29-2017, **g.** 11-3-2017, **h.** 11-10-2017, **j.** 1-10-2017, **k.** 1-19-2017, **m.** 6-6-2017, **n.** 12-17-2017

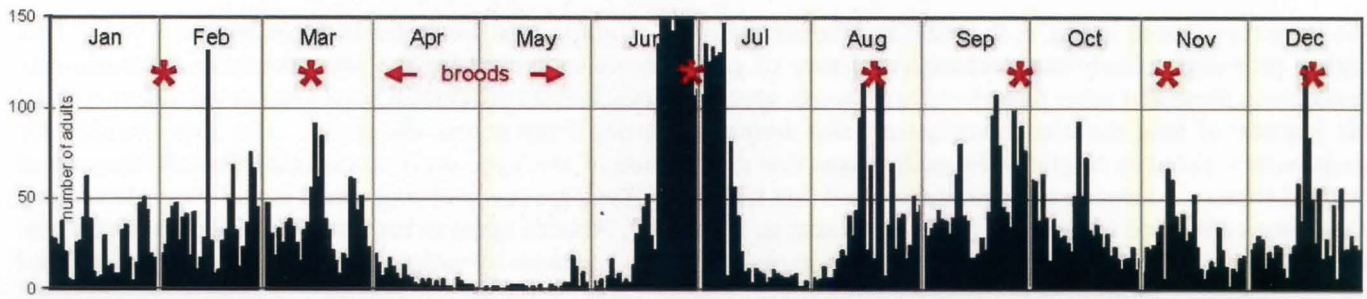

Fig. 2. Adult ***M. unipuncta*** captured at sec.24T6SR12E, 4.2 mi NE of Abita Springs, Louisiana. n = 17,823

There is a vast amount of publications available concerning the well known and ubiquitous agricultural pest moth ***Mythimna unipuncta*** (Haworth) (Fig. 1). This species occurs over most of the entire continent of North America (US and Canada), except Arctic areas. It is also invasive to Europe and elsewhere (Hawaii, South America, Mediterranean, East Africa, the Middle East, and Central Asia, Japan, CIE map # 231 (Hill, 1983). This species has been reported in the Middle East since the 1960's. We searched in vein for factual information concerning the number of annual broods, but when phenology claims were made, statements like this were typical, e.g., "*There are several generations a year. Development ends with cold weather in November*" (Knutson, 2008). As is the case with much of the information available among scientific literature concerning phenology of lepidoptera species, the vast majority of claims are simply anecdotal assumptions, with little to no actual proof. We could not locate factual published proof in the manner presented here concerning number of broods in North America. There are several published studies of rearing ***unipuncta*** under contrived laboratory conditions. Within Louisiana, ***unipuncta*** has seven naturally occurring wild annual broods, the initial brood peaking late January, the second peaking 41 days later. The third and most populated brood, peaking late June, then the remaining four broods all peaking at 41-day intervals (Fig. 2). The third and consistently largest brood (June/July), accounted for 57% of the plenary year-round brood populations sampled in this study. The phenology depiction in Fig. 2 for ***unipuncta*** is somewhat unusual than shown for most Louisiana lepidoptera species. More often, the portion on this phenogram illustrating annual broods, (occurring June through December) usually occurs preliminary and uninterrupted throughout the calendar year without a void, than as depicted in Fig. 2.

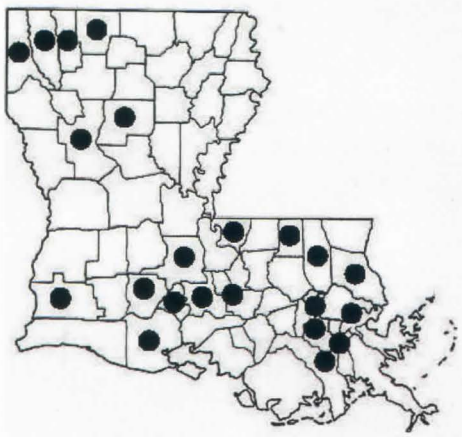

Fig. 3. Parish records for ***Mythimna unipuncta.***

We previously reported concerning a very similar phenology picture of another species of moth, ***Panthea furcilla australis*** Anweiler with epitomizing, and analogous, atypical brood characteristics (a void) occurring in Louisiana (Brou, 2012). In the case of ***australis*** there was a long dearth of adults (similarly about two months) on the wing, occurring between the fourth and fifth, of ten annual broods; the remaining peaking at 29-day intervals in southeast Louisiana.

Capinera (2015) stated ***Pseudaletia*** (= ***Mythimna***) ***unipuncta*** has five to six annual broods in southern states (USA), and that a complete generation requires 30 to 50 days+, though this information is apparently not from his own research. Our data, collected under natural field conditions in Louisiana, indicate seven annual broods at 40-day intervals (Fig. 2), and are generally in line with what Capinera reported for both intervals between broods, and very close to the numbers of generations (annual broods). Oliver and Chapin (1981) anecdotally stated without proof that there are three to four annual generations of ***unipuncta*** in Louisiana.

The larvae of ***unipuncta*** are commonly referred to as the '*true armyworms*', a major agricultural pest in North America. Turner (1918) stated of specimens captured in a light trap study "*of the 424 females of '**Cirphis unipuncta**' dissected, 80 per cent were gravid, the eggs ranging in number from 107 to 773*". Powell and Opler (2009) stated ***unipuncta*** adults fly from March to November in the south, and April to October in the north. Obviously, these dubious statements are woefully inaccurate, as the adults are on the wing just about every day of the year in Louisiana, including well populated broods peaking in December and February (Fig. 2). The Louisiana parish records are illustrated in Fig. 3.

We have reproduced in Fig. 4, the male and female genitalia of ***unipuncta*** illustrated by Franclemont (1951). This author provided a fairly comprehensive history of publications and reviewed the prior taxonomical treatments concerning these and other pan-global armyworm species. Franclemont provided a somewhat detailed summary of his journey of long duration investigating this ***unipuncta*** group from across the globe. The Type locality for ***unipuncta*** is listed as Anglia D. Francillon, and that the location of the Type specimen is in the 'British Museum of Natural History'. Later Franclemont surmised that Haworth's Type specimen of ***unipuncta*** actually may have been a specimen collected in Georgia, (USA), and sent to Francillon, Abbot's agent in England. Franclemont stated that ***unipuncta*** has been described numerous times in past scientific literature by various workers. He further remarked the illustration of ***unipuncta*** in Hollands Moth Book (1903), "plate 23, fig. 40 is excellent". Franclemont instituted several taxonomical 'new combinations', as well as describing several newly recognized species. One of these new species is the similar looking ***Mythimna sequax*** Franclemont, 1951 (Fig. 6), Type male from Jalapa, Mexico Type No. 60996. Physical description synopsized as "*Forewingpale tawny, very heavily flecked with blackish, the postmedial line indicated by a double series of dots; a dark oblique shade from the apex to vein 5, not always*

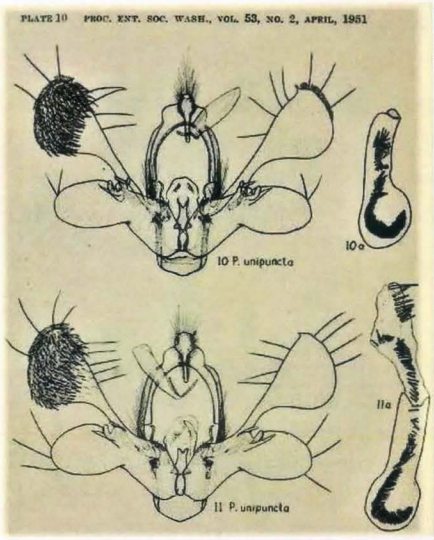

Fig. 4. Genitalia illustrations of ***Mythimna unipuncta*** by Franclemont

conspicuous reniform and orbicular pale, but inconspicuous, on either side of it, but not always so. Hindwing white with slight infuscation, most pronounced near the outer margin; the veins very dark and contrasting".

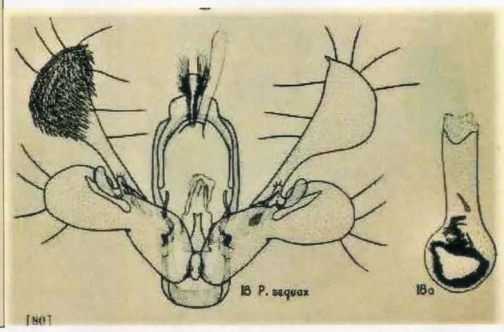

Fig. 5. Genitalia illustrations of ***Mythimna sequax*** by Franclemont

We have reproduced in Fig. 5, the illustrated male and female genitalia of ***sequax*** by (Franclemont, 1951). This species has been reported in recent years from Florida (Dickel, 1991), Texas, and other states. Franclemont stated ***sequax*** occurs commonly in the tropics of both Americas, "*it ranges from Cuba and Mexico City, Mexico, south to the southern part of Uruguay and northern Argentina*", and in size equal to or larger than typical ***unipuncta***.

Turgeon and McNeil (1982) studied the calling behavior of the armyworm ***Pseudaletia unipuncta***.

Previously, ***unipuncta*** was reported to occur in Louisiana by Merkl & Pfrimmer (1955), Pfrimmer (1957), Glick (1965), Chapin and Callahan (1967) and Oliver and Chapin (1981). We thank Jeremy N. McNeil for commenting upon our manuscript.

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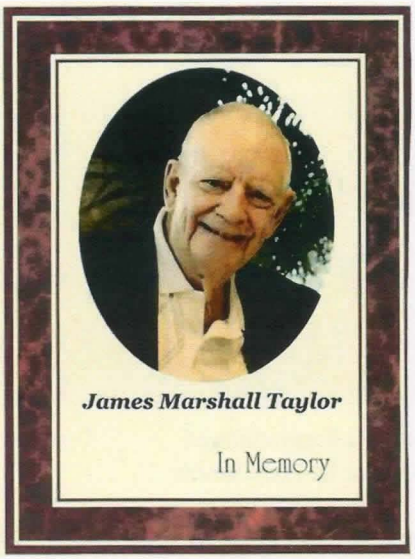
JAMES MARSHALL TAYLOR

December 13, 1929 - June 18, 2019



James Marshall Taylor, 89, of Savannah passed away June 18, 2019 under the care of Hospice, at home. Jim was born in Morganfield, Kentucky on December 13, 1929 to James Mansfield Taylor and Hester Louise Taylor (née Marshall). He attended public schools in Morganfield, Sturgis, and Louisville, Kentucky. After high school, he worked at construction jobs and as a surveyor.

He was drafted in April, 1951, and after basic training at Fort Knox was assigned to Headquarters Battery, 68th Antiaircraft Group, Fort Richardson Alaska. Upon discharge he went to work for the Louisville and Nashville Railroads where he became statistician in 1956 working there until 1963. He received a BS in Commerce and an MBA from the University of Louisville during this period. Jim met Pauline Kasper at the L & N in 1956 and they were married in 1959. In 1963 Jim accepted a position as statistician at Savannah Sugar Refining Company which would later become Savannah Foods. He occupied several positions before retiring as Senior Vice-President in 1992.

Afterglow

I'd like the memory of me
to be a happy one.
I'd like to leave an afterglow
of smiles when day is gone.
I'd like to leave an echo whispering
softly down the ways.
Of happy times, and laughing times,
and bright and sunny days.
I'd like the tears of those who
grieve to dry before the sun.
Of happy memories that I leave
when life is done.

After retirement he became passionate about an old interest, the collection and taxonomy of insects, particularly moths. He was a member of the Lepidopterists' Society, The Southern Lepidopterists' Society, and the Kentucky Society of Lepidopterists, serving several terms as president of the latter body. His collection of more than 3,000 specimens is housed at the McGuire Center, Florida Museum of Natural History, Gainesville.

Jim was a lover of nature, logic, music, literature, poetry, golf, and terrible jokes. He believed there was no situation which could not be improved upon by the recitation of an Ogden Nash poem and felt free to express that belief for anyone within earshot. Jim and Pauline traveled for many years with Elderhostel, always in pursuit of insects, knowledge and camaraderie with fellow Lepidopterists. When not traveling, they played golf at local courses, eventually moving to The Landings in 1982. Jim shot four holes-in-one in his lifetime, the most significant of which occurred at the Ailsa Championship Course, Turnberry, Scotland.

Jim is survived by his wife of 60 years, Pauline Kasper Taylor, sons, Chris Taylor (Sandi) of Savannah and Tim Taylor (Cindy) of Roswell, Georgia, five grandchildren: Ian Taylor (Amber) of Oklahoma City, Oklahoma; Lauren Taylor of Albany, Georgia; Marissa Taylor of Charlotte, North Carolina; Logan Taylor of Oklahoma City, Oklahoma; and Sam Taylor of Tulsa, Oklahoma.

Known to his grandchildren as "Pop", he was a voracious reader and for many years would shop for the perfect book for each family member's birthday and Christmas, painstakingly wrapping each one with perfect 90-degree corners and equitable amounts of Scotch tape. His influence is evident by his grandchildren's love of books, nature, science, and terrible, terrible jokes.

Many thanks to Dr. Robert Brown and Hospice of Savannah. A memorial service was held at 11:00 a.m., Friday, June 21, 2019, at Fox and Weeks Funeral Directors, Hodgson Chapel. The family received friends from 10:00 a.m. until 11:00 a.m. prior to the service. Donations can be made to Hospice of Savannah, Wounded Warriors or the Salvation Army.

THE UNIVERSITY OF DELAWARE INSECT COLLECTION

BY

F. MATTHEW BLAINE

For some time I have wanted to visit The University of Delaware Insect Collection. I knew that they had one because back in the 1970s I met one of the southern extension agents, Derby Walker, who had mentioned that there was a collection "back on campus". He was kind enough to give me bags of dead moths that had been captured at their Georgetown, Delaware Agriculture Experimental Station. At the station they continuously operate a UV trap in the growing season. The trap is used to monitor insect populations capable of damaging crops. Back then I had an Insect Club at the school where I taught. I used the bags of dead moths to supply my student club members with insects to work with.

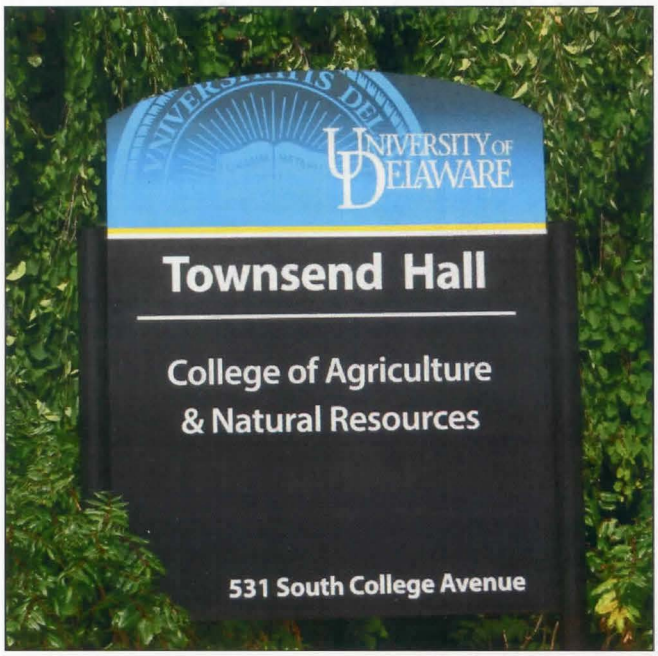


Fig. 1.

I Googled the UD Entomology Department to find out who to contact and then sent an e mail requesting a visit. Almost immediately, I received a reply from Charles Bartlett Ph.D. telling me that he could fit me in his schedule for a visit sometime in the following few weeks and that for instance July 31 would be a good day. It was a good day for me also. We set an appointment time of 10:30 A.M. for our meeting. A 10:30 meeting gave me a couple of hours to drive from the south end of our state to the north end where The University is located. A couple of hours is adequate due to the small size of Delaware.

Dr. Bartlett gave me detailed directions on how to get to Townsend Hall where his office and the collection are located. He also gave suggestions as to where to park to avoid a ticket from Campus Security. We took his advice and after parking in a safe spot we arrived (Fig. 1). There were no students on campus attending classes while we were there so we were able to make our way up through the building to his office easily. We

Fig. 2. Dr. Bartlett and the author

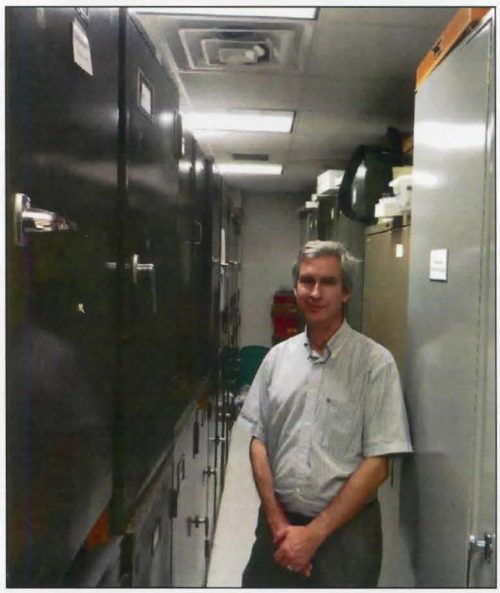


Fig. 3. Dr. Bartlett in the collection

met (Fig. 2). We found Dr. Bartlett to be very friendly and interesting to talk to. He explained that the insect collection was a Reference Collection. It included a collection of Delaware Lepidoptera (Fig. 3) that had been collected and donated to The University by Frank Morton Jones (1869-1962). He was a Delaware

Fig. 4. Part of the Jones Delaware Lepidoptera collection

resident who had a keen interest in entomology and biological science for most of his life. He was born in Wilmington, Delaware, and specialized in Lepidoptera (McDermott, 1963)(Figs. 4 - 6).

Like most early insect collections in the United States, the University of Delaware collection was initiated to aid farmers with improving their crops. It began when Entomology became part of the curriculum. In 1886 the first class dealing with Entomology was offered, "Insects Injurious to Vegetation". The class was taught by Dr. Frederick D. Chester, professor of Geology and Agriculture. A teaching collection was kept for the class (Bartlett, 2019).

A couple of years later in 1888 the Delaware Agricultural Station Experiment Station (part of the college) was begun. It was provided with "a cabinet case for the preservation of insects." The cabinet was kept in the office/laboratory for Horticulture and Entomology. Over the years the study of Entomology grew and a department was established in 1925. The collection of Delaware insects was added to over the years and in 1957 consisted of 90,000 pinned specimens, 40,000 liquid specimens, and 5,000 slide specimens. This number included two thousand specimens donated by Frank Morton Jones. Jones' donation included 850 Lepidoptera specimens including mostly Northeastern U.S with representatives of known Delaware species. Currently there are approximately 350,000 pinned specimens in the collection (Bartlett 2019).

Fig. 5. Delaware Lepidoptera Jones collection

University collections often center around one or more faculty member's interests. Over the years as faculty members come and go, these collections often gain strength in a variety of areas. The University of Delaware collection is strong in Delaware aquatic insects, lower Diptera, and Hemiptera (Figs. 7, 8). Just as collection strengths depend on faculty interests, so does the preservation and continuation of the collections. The collection at The University of Delaware is fortunate to have Dr. Bartlett who values the importance of their collection and actively works to improve and preserve it.

Fig. 6. Delaware Lepidoptera Jones collection

Fig. 7. Hemiptera

Fig. 8. Hemiptera

CREDITS

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McDermott, Frank A., 1963. Obituary, *Entomological News* 74: pp 29-37.

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Scholarship Chairman
Astronaut Trail Shell Club
Member At Large
Southern Lepidoptera Society

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MOTHS FROM THE YARD OF MONICA KRANCEVIC
LAKE JACKSON, TEXAS

***Mouralia tinctoides*, 01-August-2019, nicely marked; only one I've had at lights which is odd given the proximity of a large patch of one of its larval host plants, *Tradescantia zebrina*. Uncommon in numbers or uncommon at lights?**

***Tradescantia zebrina*, one of the larval host plants for *M. tinctoides*.**

***Melanchroia chephise* (White-tipped Black), abundant this autumn/early winter; many nectaring on *Eriobotrya japonica* (Loquat), 14-December-2019.**

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AN UNKNOWN NOCTUID FROM THE CHIRICAHUA MOUNTAINS (COCHISE COUNTY, ARIZONA)

BY

HUGO L. KONS JR. & ROBERT J. BORTH

In a recent article about Lepidoptera collected and photographed from Sunny Flat Campground in the Chiricahua Mountains (Cochise County, Arizona) we illustrated a noctuid species that we did not recognize (Kons and Borth 2018a, Fig. 7, lower right corner). We collected at least five specimens on 24 June 2018, including one at a MV sheet and four in a UV trap. The oak forest, oak savanna, and rocky wash habitats and locations of our lights were shown in Kons and Borth (2018a, Fig. 1).

Subsequently we dissected and photographed the male genitalia of this species (Fig. 1). For the same specimen we also obtained a mitochondrial DNA sequence from the 5' region of the gene cytochrome oxidase subunit I (COI 5') from Paul Hebert's BOLD (Barcode of Life Systems) lab at the University of Guelph. The COI 5' DNA sequence is as follows:

TACATTATATTTTATTTTTGGAATTTGAGCAGG
AATAGTAGGAACTTCATTAAGATTATTAATTC
GAGCTGAATTAGGAAATCCCGGATCTTTAATT
GGAGATGATCAAATTTATAATACTATTGTAAC
AGCTCACGCTTTTATTATAATTTTTTTTATAGT
AATACCTATTATAATTGGTGGATTTGGTAATT
GATTAGTTCCTTTAATATTAGGAGCTCCTGAT
ATAGCCTTTCCTCGAATAAATAATATAAGTTT
TTGACTCCTACCCCCATCATTAACTTTATTAAT
TTCGAGAAGAATTGTAGAAAATGGAGCAGGA
ACAGGATGAACAGTTTATCCCCCACTTTCATC
CAATATTGCCCATGGTGGAAGATCAGTTGATT
TAGCCATCTTTTCCCTTCATTTAGCGGGAATTT
CATCAATTTTAGGAGCAATTAATTTTATTACT
ACAATTATTAATATACGATTAAATAATTTATC
TTTTGATCAAATACCTTTATTTGTTTGAGCTGT
AGGAATTACAGCATTTTTATTACTATTATCTTT
ACCTGTTTTAGCAGGAGCTATTACCATATTAT
TAACTGATCGTAATTTAAATACATCCTTTTTTG
ACCCTGCCGGAGGAGGAGATCCTATTTTATAT
CAACATTTATTT

We submitted this sequence to the BOLD Systems Identification Engine at http://bold systems.org/index.php/IDS_OpenIdEngine, with "All Barcode Records on BOLD" selected. As of 31 January 2020, the most similar sequences were *Grotella* species, including *Grotella harveyi* (95.41 % match) and *G. septempunctata* (95.41% match). Among the top 99 matches (95.41-94.19% match) are a variety of trifine and quadrifine noctuid genera from various different subfamilies, including: *Amastus* (Arctiinae), *Chalcopasta* (Stiriinae), *Chrysoecia* (Stiriinae), *Chytolita* (Noctuinae), *Emarginea* (Noctuinae), *Eulithosia* (Stiriinae), *Grotella* (Stiriinae), *Lacinipolia* (Noctuinae), *Lascoria* (Herminiinae), *Lineostriastiria* (Stiriinae), *Palthis* (Herminiinae), *Plagiomimicus* (Stiriinae), *Stiria* (Stiriinae), and *Turuptiana* (Arctiinae).

The unknown species is a poor match morphologically to any of these genera. While many of the closest matches are Stiriinae genera (sensu Poole (1995)) the unknown species does not belong to this subfamily. Poole (1995) states the spination and general shape of the vesica are major synapomorphies for the Stiriinae (in addition to a larval character). The unknown species lacks spines on the vesica (Fig. 1) and the vesica is not the characteristic Stiriinae shape shown in Poole (1995). The male genitalic structure differs from any genus for which we are familiar with the male genitalia. However, the combination of general characteristics present is found in various primitive quadrifine noctuid genera, including some of unknown or uncertain subfamily placement (one example is *Prosoparia*). These characteristics include simple valvae lacking claspers; a simple, elongate vesica without diverticula; the ductus ejaculatorius opening located at the posterior apex of the everted vesica; and a simple uncus.

There are many widespread tropical species that occasionally wander into the southern United States, especially in the Lower Rio Grande Valley of South Texas and Southeastern Arizona. These species can sometimes be matched with COI 5' sequences, as the BOLD database contains extensive material from Costa Rica and the Yucatan Peninsula of Mexico. For example, this was recently the case for a specimen of *Toxonprucha scitior* that we collected in the Texas Hill Country (Kons and Borth 2018b). The absence of any sequence matches in the BOLD database raises the possibility that the unknown Arizona species may be a resident species with a localized distribution, as opposed to a stray or ephemeral migrant of a widespread tropical species.

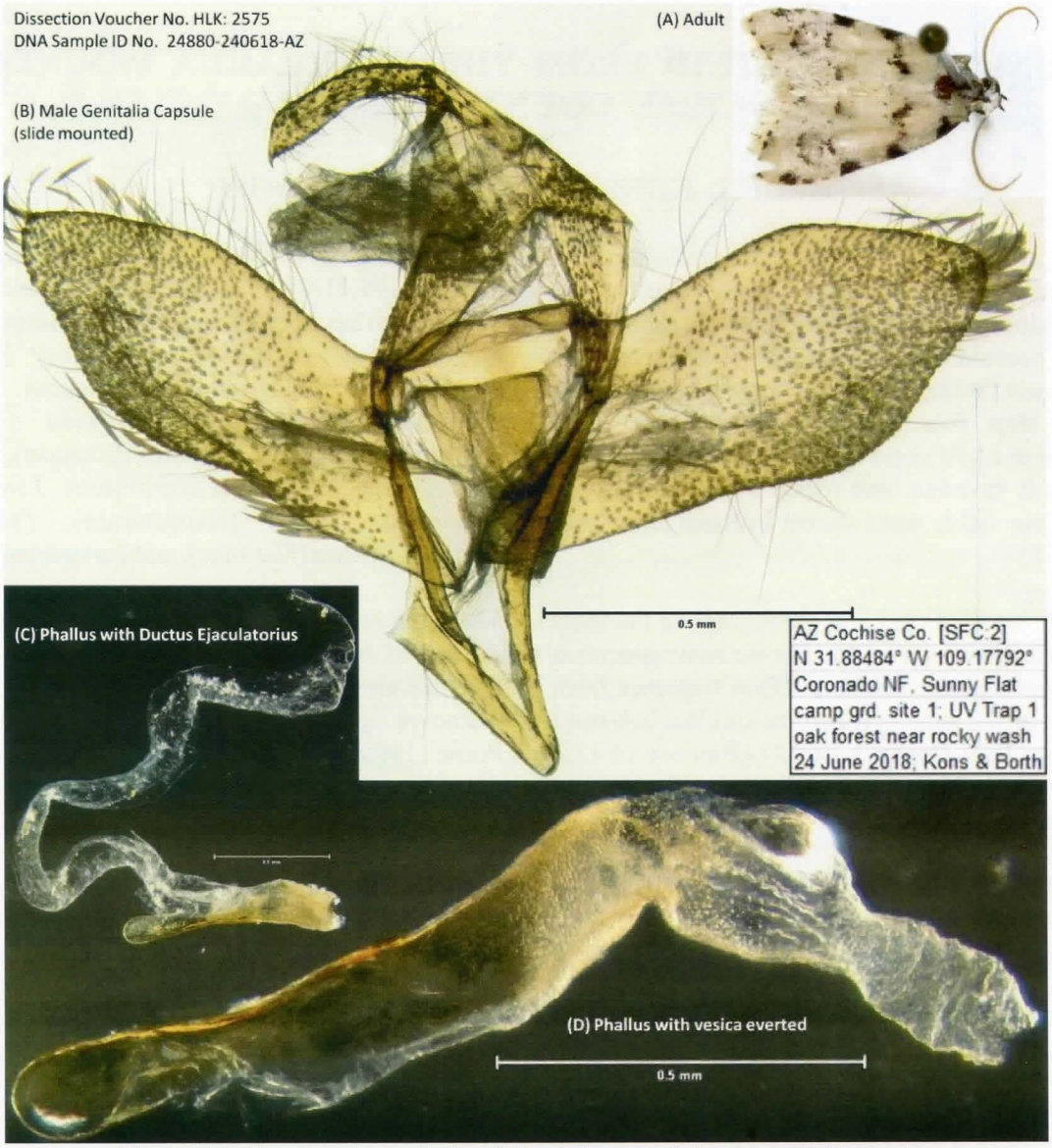

Fig. 1. Adult and male genitalia of the unknown Arizona noctuid species.

Acknowledgments

Daniel Young provided use of an Auto-Montage imaging system at the University of Wisconsin–Madison Department of Entomology. Gerry Goth provided a place to stay at the Swamp Lovers Preserve during our imaging research at UW-Madison.

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Kons, Hugo L. Jr. & Robert J. Borth, 2018b. *Toxonprucha scitior* (Walker) and *Toxonprucha perpusilla* (Walker) (Lepidoptera: Noctuidae: Erebinae) in Texas. *Southern Lepidopterists' News* 40(4): 301-306.

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(Hugo Kons Jr., E-Mail: hkonsjr@yahoo.com)

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BUTTERFLY CALENDAR PHOTOS

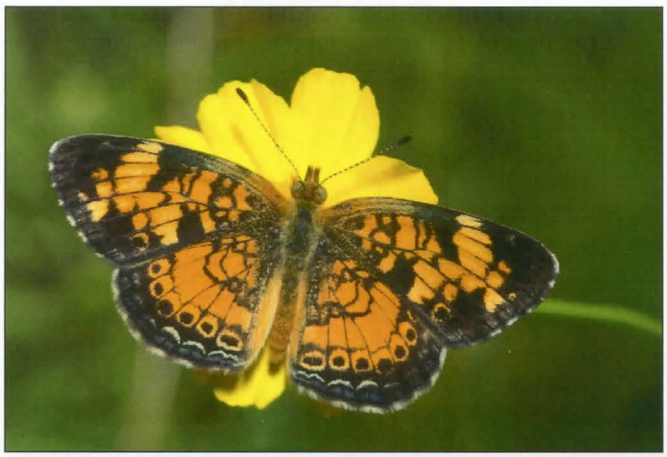
BY

BRYAN E. REYNOLDS

At the beginning of January, 2020, I was contacted regarding the possible use of my photography for a butterfly calendar. They wanted to see some examples, so I searched my files and pulled 80 of my top shots. Besides technically good photos, the other criteria were clean backgrounds, fresh individuals, no skippers, and where possible, the subject nectaring from a flower (although this was not set in stone). Below are half of the selection of photos I submitted. The other half will be in the next issue of the news.

Henry's Elfin, *Callophrys henrici*, one mile south of Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 31 March 2013

Dainty Sulphur, *Nathalis iole*, on fleabane, *Erigeron sp.*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 2 June 2013



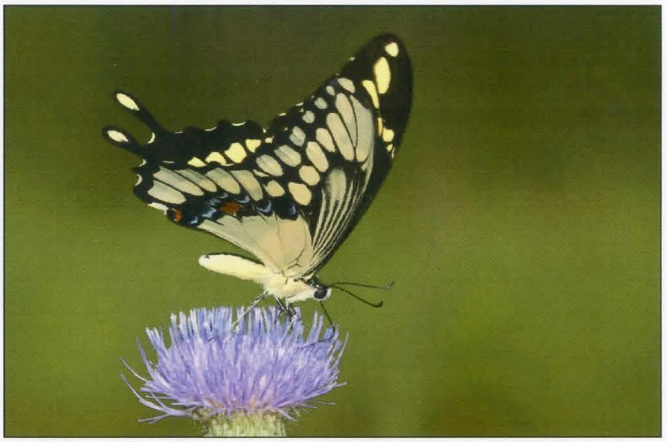
Pearl Crescent, *Phyciodes tharos*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 2 June 2013

Goatweed Leafwing, *Anaea andria*, Oka'Yanahli Preserve, Johnston County, Oklahoma, on 5 July 2013 .

Monarch, *Danaus plexippus*, male, on buttonbush, *Cephalanthus occidentalis*, Oka'Yanahli Preserve, Johnston County, Oklahoma, on 6 July 2013

Checkered White, *Pontia protodice*, on blanket flower, *Gaillardia sp.*, Sandia Mountain Natural History Center, Sandia Mountains, Cibola National Forest, Bernalillo County, New Mexico, on 8 August 2013

Spalding's Blue, *Euphilotes spaldingi*, on redroot buckwheat, *Eriogonum racemosum*, Sandia Mountain Natural History Center, Sandia Mountains, Cibola National Forest, Bernalillo Co., New Mexico, on 8 August 2013



Giant Swallowtail, *Papilio cresphontes*, on thistle, *Cirsium sp.*, Pontotoc Ridge Preserve, Pontotoc County, Oklahoma, on 25 August 2013

Gulf Fritillary, *Agraulis vanillae*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 3 September 2013

Fatal Metalmark, *Calephelis nemesis*, female, Frontera Audubon, Weslaco, Hidalgo County, Texas, on 4 November 2013

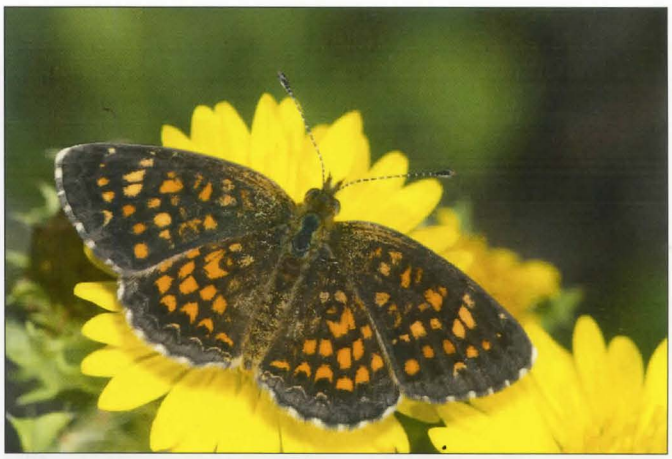
Large Orange Sulphur, *Phoebis agarithe*, male on Turk's cap, *Malvaviscus drummondii*, Frontera Audubon, Weslaco, Hidalgo County, Texas, on 4 November 2013

Mallow Scrub-Hairstreak, *Strymon istapa*, male on coral vine, *Antigonon leptopus*, Weslaco, Hidalgo County, Texas, on 5 November 2013

Dusky-blue Groundstreak, *Calycopis isobeon*, on coral vine, *Antigonon leptopus*, Weslaco, Hidalgo County, Texas, on 5 November 2013

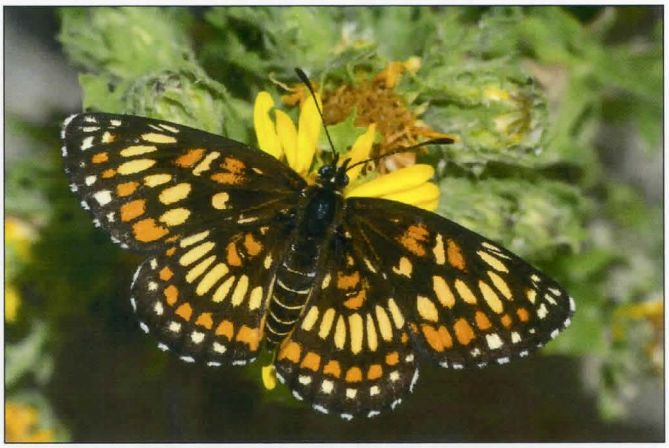
Red-bordered Pixie, *Melanis pixe*, on mist flower, *Conoclinium sp.*, Estero Llano Grande State Park, Hidalgo County, Texas, on 6 November 2013

Blue Metalmark, *Lasaia sula*, male, Resaca De La Palma State Park, Cameron County, Texas, on 8 November 2013



Vesta Crescent, *Phyciodes graphica*, male on camphor daisy, *Rayjacksonia phyllocephala*, smiley ball at Loma Alta, Cameron County, Texas, on 8 November 2013

Theona Checkerspot, *Chlosyne theona*, female on camphor daisy, *Rayjacksonia phyllocephala*, smiley ball at Loma Alta, Cameron County, Texas, on 8 November 2013



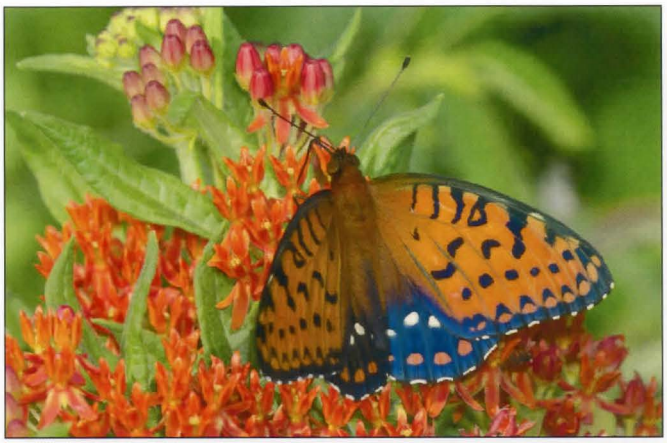
Theona Checkerspot, *Chlosyne theona*, female on camphor daisy, *Rayjacksonia phyllocephala*, smiley ball at Loma Alta, Cameron County, Texas, on 8 November 2013

Silvery Blue, *Glaucopsyche lygdamus*, male on spring beauty, *Claytonia virginica*, Beech Creek, Ouachita National Forest, Le Flore County, Oklahoma, on 10 April 2014

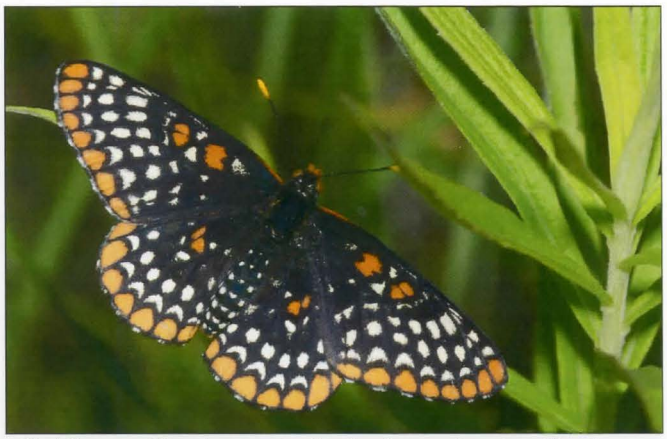
Eastern Tiger Swallowtail, *Papilio glaucus*, male on redbud, *Cercis canadensis*, Beech Creek, Ouachita National Forest, Le Flore County, Oklahoma, on 10 April 2014

Common Buckeyes, *Junonia coenia*, mated pair, J.T. Nickel Family Nature and Wildlife Preserve, Cherokee County, Oklahoma, on 28 May 2014

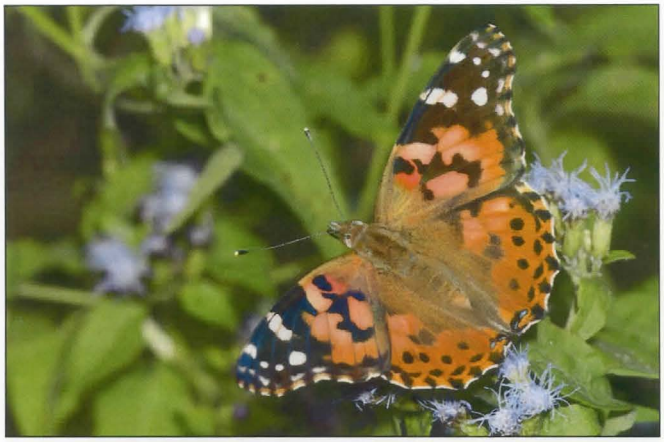
Question Mark, *Polygonia interrogationis*, Roaring River State Park, Barry County, Missouri, on 14 June 2014



Regal Fritillary, *Speyeria idalia*, on orange milkweed, *Asclepias tuberosa*, Prairie State Park, Barton County, Missouri, on 17 June 2014



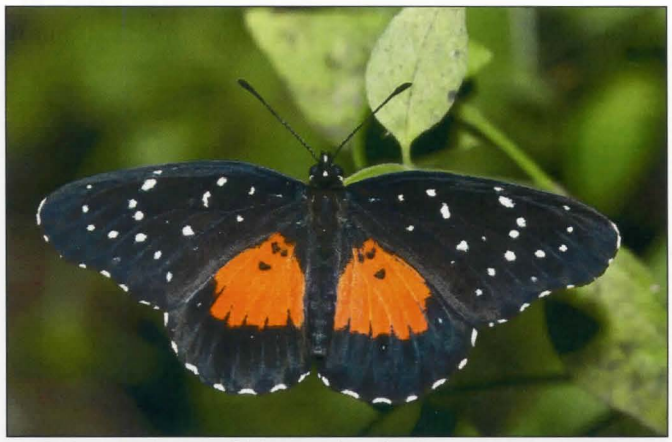
Baltimore Checkerspot, *Euphydryas phaeton*, Puchyan Prairie State Natural Area, Green Lake County, Wisconsin, on 1 July 2014



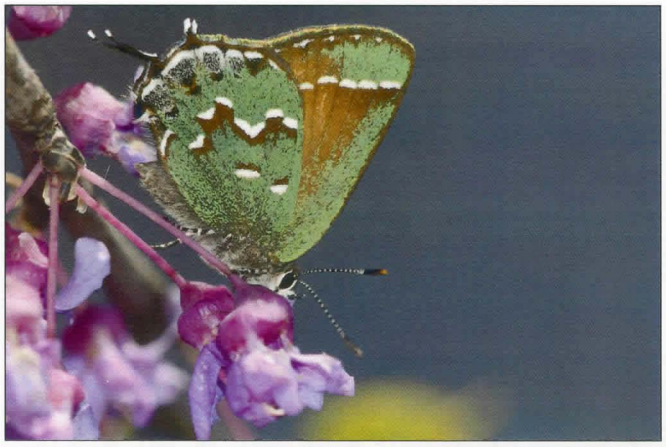
Painted Lady, *Vanessa cardui*, on mist flower, *Conoclinium sp.*, Estero Llano Grande State Park, Hidalgo County, Texas, on 29 October 2014

Rounded Metalmark, *Calephelis perditalis*, Resaca De La Palma State Park, Cameron County, Texas, on 31 October 2014

Silver-banded Hairstreak, *Chlorostrymon simaethis*, on mist flower, *Conoclinium sp.*, Resaca De La Palma State Park, Cameron County, Texas, on 31 October 2014

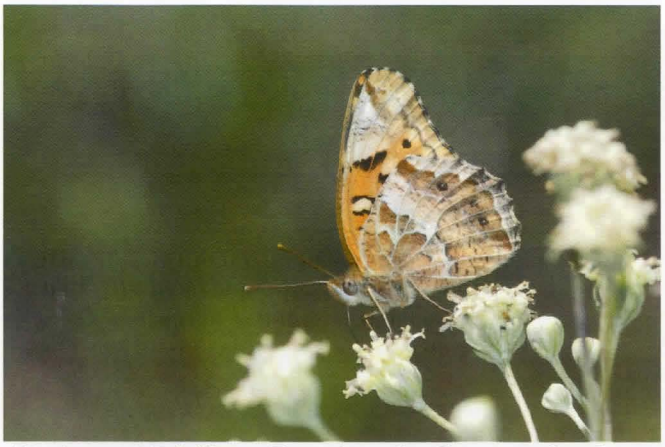


Crimson Patch, *Chlosyne janais*, Frontera Audubon, Weslaco, Hidalgo County, Texas, on 1 November 2014



Juniper Hairstreak, *Callophrys gryneus*, on redbud, *Cercis canadensis*, one mile south of Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 31 March 2017

Juniper Hairstreak, *Callophrys gryneus*, Hondo Canyon, South Crest Trail, Sandia Mountains, Cibola National Forest, Bernalillo County, New Mexico, on 12 April 2017



Variegated Fritillary, *Euptoieta claudia*, nectaring from Chalk Hill hymenopappus, *Hymenopappus tenuifolius*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 2 May 2017

"Northern" Oak Hairstreak, *Satyrium favonius*, on meadow garlic, *Allium canadense*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 21 May 2017

Reakirt's Blue, *Echinargus isola*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 28 May 2017

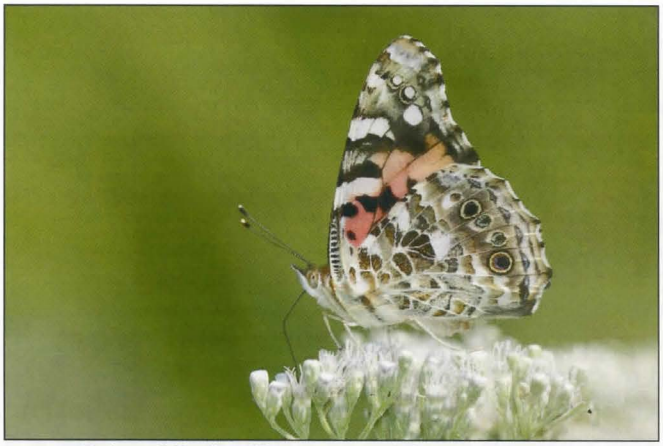
Marine Blue, *Leptotes marina*, female ovipositing, Otero Canyon trailhead, Cibola National Forest, Bernalillo County, New Mexico, on 2 June 2017

Western Pine Elfin, *Callophrys eryphon*, on dandelion, *Taraxacum officinale*, near Clear Creek Campground, Santa Fe National Forest, Sandoval County, New Mexico, on 4 June 2017

Western Pine Elfin, *Callophrys eryphon*, on trailing fleabane, *Erigeron flagellaris*, Forest Service road 604, near Fenton Lake, Santa Fe National Forest, Sandoval County, New Mexico, on 5 June 2017

Juniper Hairstreak, *Callophrys gryneus*, on Apache plume, *Fallugia paradoxa*, Hondo Canyon, South Crest Trail, Sandia Mountains, Cibola National Forest, Bernalillo County, New Mexico, on 6 June 2017

Red-banded Hairstreak, *Calycopis cecrops*, on white sweet clover, *Melilotus albus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 12 June 2017



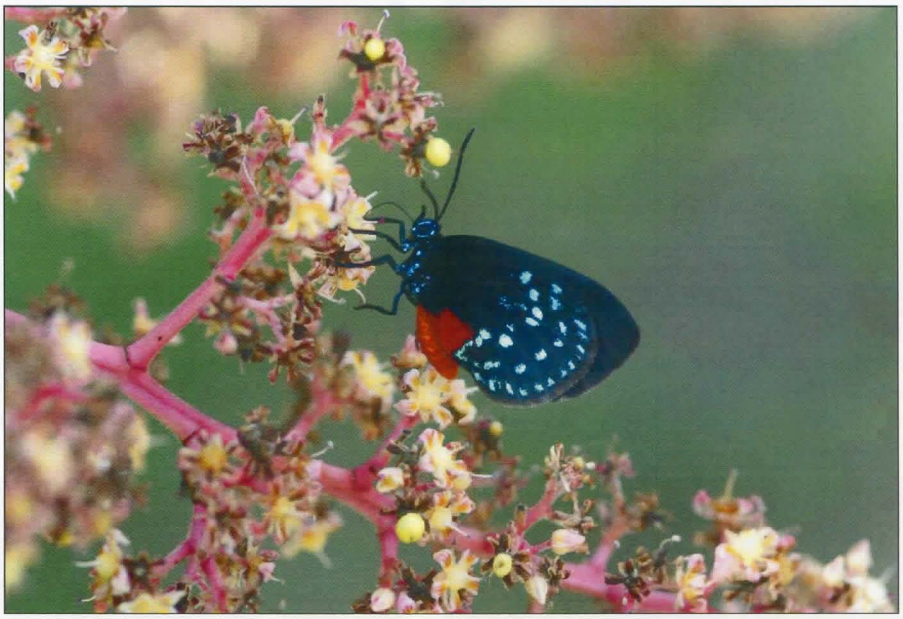
Painted Lady, *Vanessa cardui*, nectaring on late-flowering thoroughwort, *Conoclinium serotinum*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 7 September 2017

Red-spotted Purple, *Limenitis arthemis astyanax*, mud-puddling, Lexington Wildlife Management Area, Cleveland County, Oklahoma, on 9 September 2017

(Bryan Reynolds, E-Mail: nature_photo_man@hotmail. com)

A BEAUTIFUL PEST OR?

BY
ROBERT BEIRIGER



***Eumaeus atala* feeds on Coontie Palm and after awhile nothing is left but roots. They are a very boom or bust type species where they eat everything in the area and then move on to another area.**

PEST
OR?

Mangos bloom in south Florida from December through February. They are pollinated by mainly flies and wasps. Over the past 10 year, only one butterfly has been seen visiting these flowers, *Eumaeus atala*. Visits to mango flowers may be due to lack of other suitable nectar sources during the "winter" in south Florida. Whether *E. atala* has any effect on pollination success of mango is unknown.

(Robert Beiriger, E-Mail: robert.beiriger@att.net)

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NEW MOTHS OF NORTH AMERICA FASCICLE 25. 4
NOCTUOIDEA NOCTUIDAE (PART)
Pantheinae, Raphiinae, Balsinae and Acronictinae

The Wedge Entomological Research Foundation is pleased to announce the publication of a new Moths of North America Fascicle. Fascicle 25.4, NOCTUOIDEA NOCTUIDAE (Part) including Pantheinae, Raphiinae, Balsinae and Acronictinae will be shipped at the end of February. This volume is available for a short period of time at a reduced introductory price. Orders may be e-mailed to Kelly Richers for direct shipment at email: kerichers@wuesd.org or mailed to Kelly Richers at 9417 Carvalho Court, Backersfield, CA 93311. Details are available in the following pages.

The Moths of North America

Fascicle 25.4

NOCTUOIDEA NOCTUIDAE (Part)

Pantheinae, Raphiinae, Balsinae, Acronictinae

B. CHRISTIAN SCHMIDT
GARY G. ANWEILER

Color and monochrome photographs, plates, and maps by
JOCELYN D. GILL

479 pages, 130 species accounts, 31 colored plates, 44 monochrome plates. Hardbound.
ISBN 978-0-9796633-4-5.

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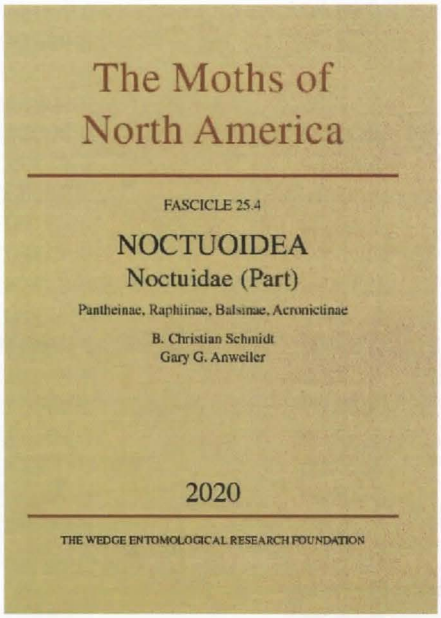
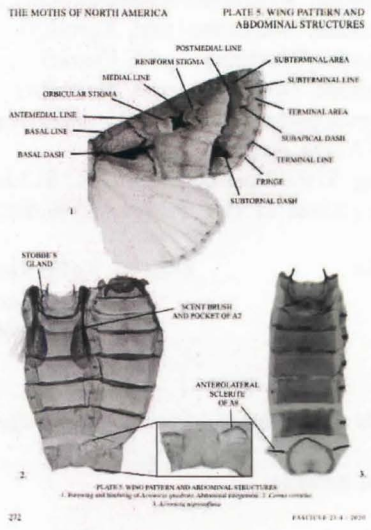


The New World Noctuidae of the subfamilies Pantheinae (10 genera, 34 species), Raphiinae (1 genus, 1 species), Balsinae (1 genus, 3 species), and Acronictinae (5 genera, 92 species) are revised. With the exception of the Neotropical Pantheinae genera *Lichnoptera* Herrich-Schäffer, *Gaujonia* Dognin, and *Bathyra* Walker, 130 species are treated, 102 of which occur in the United States and/or Canada, 26 are restricted to Mexico and/or Central America, one Eurasian species that could occur in Alaska/Yukon, and one European species that has been introduced as a biological control agent. Four new genera are described, *Arctioptera* Anweiler and Schmidt (Type species: *Charadra cavillator* Morrison), *Neopanthea* Anweiler and Schmidt (Type species: *Panthea apanthea* Anweiler), *Characasia* Anweiler and Schmidt (type species: *Charadra nigracreta* Edwards), and *Semixanthia* Anweiler and Schmidt (type species: *Charadra franclemonti* Anweiler and Schmidt). Two new subgenera of the genus *Acronicta* Ochsenheimer are proposed: *Magnicosta* (type species: *Anytus atristrigatus* Smith) and *Dossena* (type species: *Microcetia retardata* Walker). Sixteen new species are described: *Panthea grande* Anweiler and Schmidt, *Semixanthia baja* Schmidt and Anweiler, *Charadra sonorensis* Anweiler and Schmidt, *Charadra insperata* Anweiler and Schmidt, *Charadra landolti* Anweiler and Schmidt, *Charadra ochrea* Anweiler and Schmidt, *Chloromycta vulcanica* Schmidt and Anweiler, *Acronicta nigrosuffusa* Schmidt and Anweiler, *Acronicta vermiforma* Schmidt and Anweiler, *Acronicta wiklei* Schmidt and Anweiler, *Acronicta immodica* Schmidt and Anweiler, *Acronicta cryptica* Schmidt and Anweiler, *Acronicta magnirena* Schmidt and Anweiler, *Acronicta texana* Schmidt and Anweiler, *Acronicta mexicana* Schmidt and Anweiler, and *Acronicta maya* Schmidt and Anweiler. *Acronicta vinnula floridensis* Schmidt and Anweiler is described as a new subspecies. Six neotypes and 18 lectotypes are designated, and eleven species are subsumed into synonymy. Two species are raised from synonymy. Genitalia, dot range maps, and adults are illustrated, the latter in color. Color larval photographs for 77 species are also provided.



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ZALE LUNATA (DRURY, 1773) (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

Fig. 1. ***Zale lunata*** phenotype variations: (a - o) males, (p - z) females (all St. Tammany Parish, Louisiana).

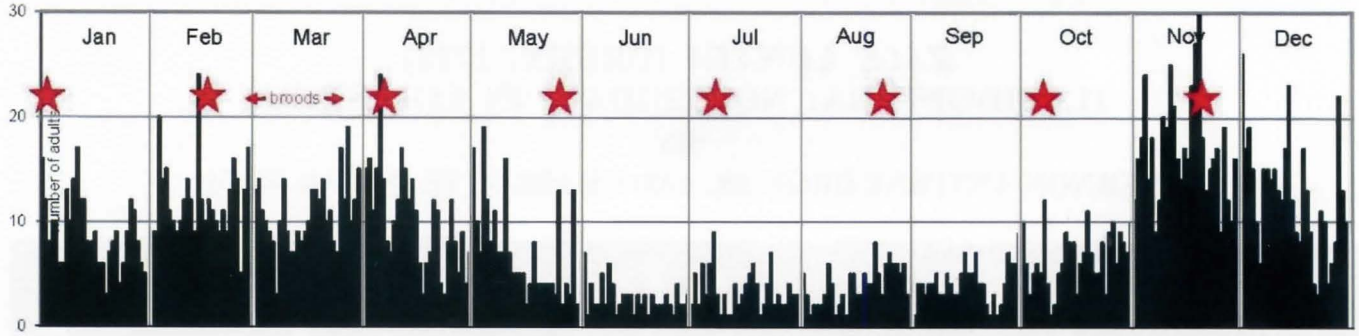

Fig. 2. Adult ***Zale lunata*** captured in Louisiana. n = 3,014

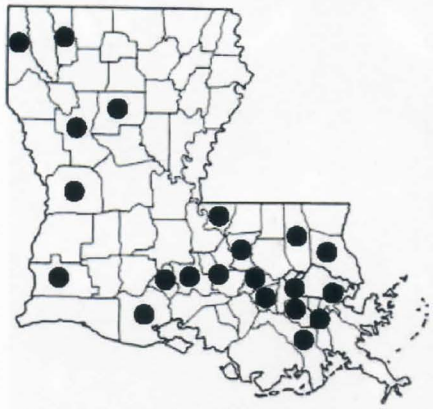

Fig. 3. Louisiana Parish records for ***Zale lunata.***

Adults of the abundantly populated noctuid moth ***Zale lunata*** (Drury, 1773) (Fig. 1) were frequently observed and captured in Louisiana using automatic capture ultra-violet light traps, also automatic-capture fermenting fruit bait traps, and quite often as bycatch attracted to various semiochemical sesiid lures in automatic-capture sesiid traps. Sesiid lures which often attracted ***lunata*** are specifically identified as Scentry brand lesser peach tree borer, Scentry western poplar borer, Scenturian brand western poplar X 10, Scentry *Synanthedon viburni*, Scentry *Synanthedon scitula*, Scentry *Paranthrene asilipennis*, Pherobio brand *Sesia sinengensis*, and combination lures (1:1) Scentry squash vine borer: Scentry L103, (1:1) Scentry *Synanthedon scitula*: Scentry L103, (1:1) Scentry lesser peach tree borer:Scentry *Synanthedon bibionipennis*, and (1:1) Scentry Sequoia pitch moth:Scentry western poplar.

Within Louisiana, there are eight annual broods of ***lunata*** occurring at approximate 43-day intervals as depicted using a composite multi-year significant study sample, phenogram (Fig. 2). During this study adults were captured just about any day of the year January 1 to December 31. The parish records in Louisiana are illustrated in Fig. 3. The authors have used an insect trap inventory of 450-500 units of numerous types, purposes and designs. Three examples of the types of traps mentioned in this study are illustrated in Fig. 4.

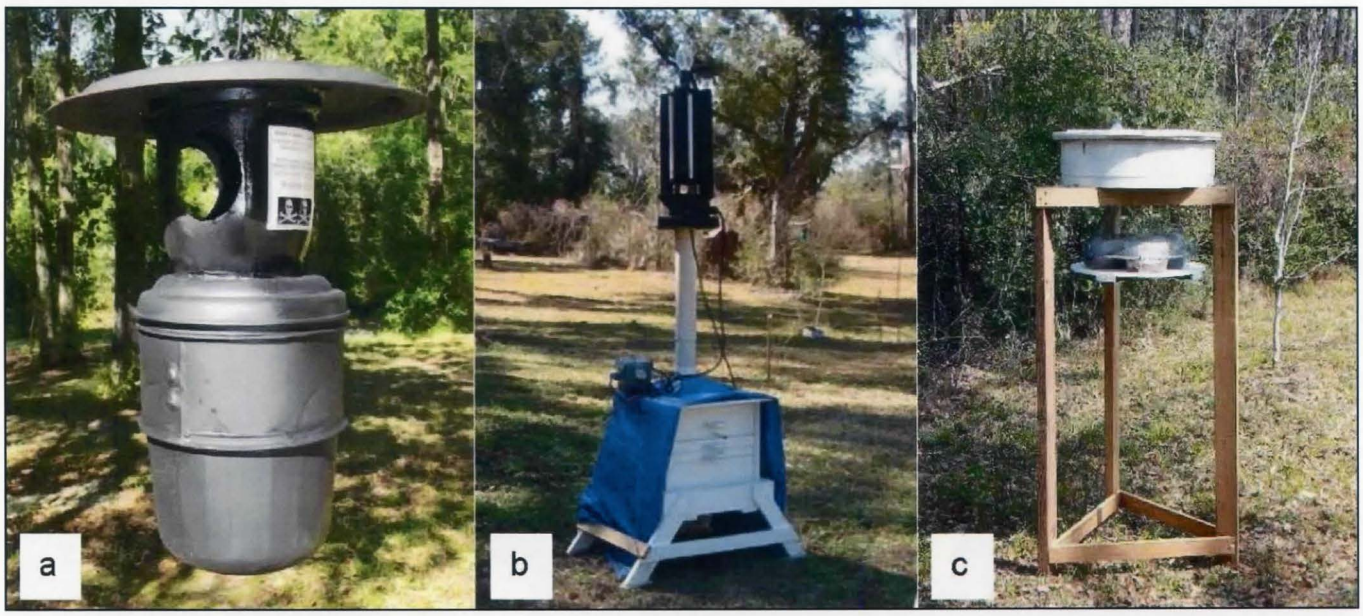

Fig. 4. Automatic self-capture traps: **a.** semiochemical lure trap, **b.** light trap, **c.** fermenting fruit bait trap.

Covell (1984) illustrated single specimens of both male and female ***lunata***. This same author stated ***lunata*** was "the largest and usually most common of the 20 ***Zale*** species in our area" and "common throughout our area March-November"... Surprisingly, Holland (1903) mentions only one species of the genus, ***Zale horrida*** Hübner, 1818; which was previous addressed by Brou (2008). Brou demonstrated ***horrida*** has five annual broods in Louisiana. Forbes (1954) stated of ***lunata*** "chief flight August to early October" (*assumed to be in state*

of New York), and also the baseless anecdotal statement "possibly two or more broods southward". We point out that the phenology of ***lunata*** in Louisiana (Fig. 2) demonstrates that broods of this species are abundantly populated during the cooler months of the year (November through April), and are poorly represented during the warmer and hotter months (June through September).

Rockburne and Lafontaine (1976) listed ***lunata*** for Ontario and Quebec, adults occurring late August to early October. Heitzman and Heitzman (1987) illustrated single specimens of both male and female ***lunata*** and stated this species is very common with records in all months except January (in Missouri). Heppner (2003) stated the range in North America of ***lunata*** occurs Quebec to Florida, Manitoba to California and Mexico. Heppner listed adults flying January to December in Florida.

Within Louisiana, ***lunata*** was previously reported by Chapin and Callahan (1967) for the Baton Rouge area.

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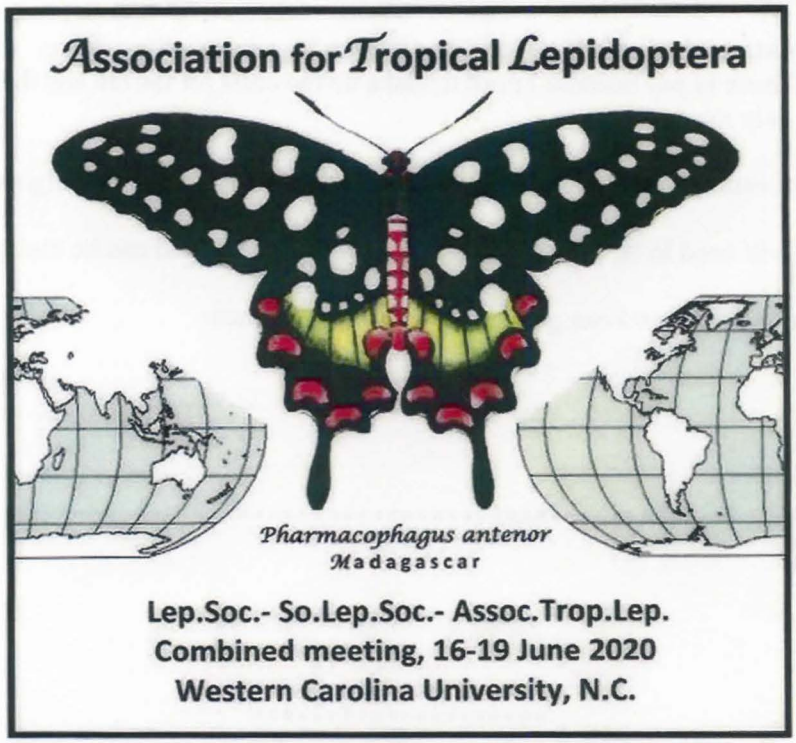

The Lepidopterists' Society, Pacific Slope Section 2020 Annual Meeting, May 8-10, White Mountain Research Center, Owens Valley Station Bishop, California

Kelly Richers, organizer. 9417 Carvalho Court, Bakersfield CA 93311; (661) 201-7357; kerichers@wuesd.org

The 2020 meeting of the Pacific Slope Section of the Lepidopterists' Society will be held at the Owens Valley Station of the White Mountain Research Center, University of California, Los Angeles, located at 3000 East Line Street, Bishop, CA 93514 Tel: (760) 873-4344. The meeting will be for amateurs and professionals, with presentations desired for Friday evening and Saturday.

This is a rare opportunity to hold a meeting in a desirable location within reach of numerous lepidopterists, whether one is interested in photography, collecting or just getting to some of the best scenery California has to offer.

The meeting will be from noon, May 8th to noon May 10th, Friday-Sunday, with meals included in the price per person. Friday evening will be devoted to informal presentations while Saturday will be more formal presentations as time and the number of presentations permit.

It is anticipated that there will be room and board space for 30 persons at the actual facility, and nearby Bishop has much more in the way of formal (but more expensive) motel and hotel overnight accommodations. There will be a room for presentations and lab space available for detail work.

Costs:

Room and board, per person per night are $55, plus five dollars for me for postage for stuff being mailed and printed to make a per person price of **$115.00 per person** for the meeting.

If you are NOT staying on site you still have to pay because they do not separate out meals from the boarding part…

If you are staying in a camper on site you still have to pay because they do not separate out meals from the boarding part…

Therefore, **the cost, no matter what you do, is $115 per person if you are eating there.** If you are not eating there or staying there, you still have to pay because I need to make up the costs for the lab and the meeting room, and this is the only way you can help me do that.

If you are staying and not eating there, you still have to pay but only $60 for the two nights.

Got all that? A release will need to be completed also, which is attached and can be mailed in or brought.

Please reply to me before April 15 so I can get numbers together for them.

Thanks, Kelly

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Travel Instructions — Owens Valley Station, Bishop, California:

Bishop, CA is on the east side of the Sierra Nevada in the Owens Valley, not far from the Nevada state line. Most visitors travel here by car via US 395. Bus service (Reno-Bishop bus service) may be available from Los Angeles, to the south, and Reno, to the north. The nearest major airports are in Reno, NV, Las Vegas, NV, and Los Angeles, CA. There are also small airports in the towns of Mammoth Lakes, Ridgecrest, and Bishop, but commercial service to these airports is not always available. Note that highways crossing the Sierra Nevada (for example State Route 120 over Tioga Pass from Yosemite) are usually closed in winter/spring, and that US Highway 395 may experience winter snow conditions north of Bishop.

Driving to Owens Valley Station From Bishop. The street address of the OVS is 3000 E. Line Street. From Main Street in Bishop (US 395) turn east on Line St. and drive for almost 6 km (note that the street name changes to Poleta Rd.). Shortly after crossing the Owens River bridge the OVS will be visible on the south side of the road. (see Bishop aerial photo/map). Please note that the Google Maps location for WMRS may be incorrect: we are 6 km EAST of Main St., not west as shown on the map.

From California:

Access to Owens Valley from both northern and southern California is via US highway 395. At the junction of highway 395 and California highway 168 at Big Pine, drive east on highway 168 into the White Mountains. About 21 km from 395 at Westgard Pass, turn north (left) onto the White Mountain Road and follow the instructions below for the station you wish to visit. The White Mountain Road is paved and its intersection with highway 168 is marked with a sign.

Bishop area Motels:

AMERICA'S BEST VALUE INN
192 Short Street
Bishop, California 93514
760-873-4912

BEST WESTERN BISHOP LODGE
1025 N Main Street
Bishop, California 93514
760-873-3543

BIG PINE RESORT COTTAGES
505 South Main Street
Big Pine, California 93513
760-938-2922

BISHOP CREEK LODGE
2100 South Lake Road
Bishop, California 93514
760-873-4484

BISHOP DAYS INN
724 W Line Street
Bishop, California 93514
760-872-1095

BISHOP ELMS MOTEL
233 E Elm Street
Bishop, California 93514
760-873-8118

BISHOP VILLAGE MOTEL
286 W Elm Street
Bishop, California 93514
760-872-8155

BLUE SKYE DOWNTOWN GETAWAY
431 E. South St.
Bishop, California 93514

CARDINAL VILLAGE RESORT
321 Cardinal Road
Bishop, California 93514
760-873-4789

CIELO HOTEL
651 North Main Street
Bishop, California 93514
760-873-6380

CLIMBERS CRASHPAD & HOMESTAY
692 Grove St.
Bishop, California 93514

COMFORT INN
805 N Main Street
Bishop, California 93514
760-873-4284

COMFORTABLE ROOM DOWNTOWN
262 Sneden St.
Bishop, California 93514

CONVICT LAKE RESORT AND RESTAURANT
2000 Convict Lake Rd
Mammoth Lakes, California 93546
760-934-3800

CREEKSIDE INN
725 N Main St
Bishop, California 93514
760-872-3044

DELIGHTFUL EASTSIDE HOME
474 Short St.
Bishop, California 93514

DOWNTOWN – TRAILS OUT YOUR DOOR
386 Hanby Ave.
Bishop, California 93514

DOWNTOWN VACATION HOME
808 Crosby St.
Bishop, California 93514

EASTERN SIERRA OBSERVATORY
Poleta Mine
Bishop, California 93514
760-387-3005

EASTSIDE GUESTHOUSE & BIVY
777 North Main Street
Bishop, California 93514
(760) 784-7077

EL RANCHO MOTEL
274 Lagoon Street
Bishop, California 93514
760-872-9251

HOLIDAY INN EXPRESS & SUITES
636 North Main Street
Bishop, California 93514
760-872-2423

HOME STREET STUDIOS
176 Home Street
Bishop, California 93514

KEOUGH'S HOT SPRINGS RESORT
800 Keough Hot Springs Rd
Bishop, California 93514
760-872-4670

MOTEL 6
1005 N Main Street
Bishop, California 93514
760-873-8426

MOUNTAIN VIEW MOTEL
730 West Line Street
Bishop, California 93514
760-873-4242

PARCHERS RESORT
5001 South Lake Rd
Bishop, California 93514
760-873-4177

PHOENIX HOUSE
237A May St.
Bishop, California 93514

RED ROOF INN BISHOP
150 E Elm Street
Bishop, California 93545
760-873-3564

ROCK CREEK LAKES RESORT
1 Upper Rock Creek Rd
Bishop, California 93514
760-935-4311

ROCK CREEK LODGE
Address:
85 Rock Creek Rd

SIERRA NEVADA BASECAMP
787 Rome Dr.
Bishop, California 93514

SUPER 8 MOTEL
535 South Main Street
Bishop, California 93514
760-872-1386

THE HOSTEL CALIFORNIA
213 Academy Avenue
Bishop, California 93514
760-399-6316

THUNDERBIRD MOTEL
190 West Pine Street
Bishop, California 93514
760-873-4215

TOWN HOUSE MOTEL
625 N Main Street
Bishop, California 93514

TRAVELODGE
155 E Elm Street
Bishop, California 93514
760-872-1771

TREES MOTEL
796 W Line Street
Bishop, California 93514
760-873-6391

VAGABOND INN
1030 N Main Street
Bishop, California 93514
760-873-6351

SPRING BUTTERFLIES - A GARDEN INVITATION: KNOW YOUR WEEDS AND WHAT EATS THEM

BY
LINDA BARBER AULD, NOLA BUGLADY

Here in New Orleans the early Spring-like weather is prompting folks to get out in the garden and tidy up winter's dead sticks. New weeds sprout with each season and two are very necessary to resist pulling because they are the caterpillar hosts for the American Painted Lady and the Red Admiral. During winter when blooming flowers are scarce, these two butterfly species that overwinter as adults, have adapted to use alternative nectar sources that we would find surprising such as dung, minerals in dirt, tree sap from bird-pecked holes, or yummy squashed frog in the middle of the road. However, the caterpillars are more picky eaters and depend on specific plants as their hosts. The old saying, "Plant it and they will come" really does work but in this case, it's "Don't pull these weeds and butterflies will use them". During my last visit to Allen Acres, Charles Allen confirmed this when he remarked, "See all of those Long-tailed Skippers flying around? They are here because of you! I quit pulling up the Desmodium when you told me it was their caterpillar host so they have established a thriving, robust colony."

Cudweed, *Gnapthalium*

The American Painted Lady butterfly hunts for the Cudweed (*Gnapthalium*) plants that have developed a flower bud at the top of the stalk then lays a single egg. Once the caterpillar hatches, it creates a woven chamber as its penthouse where it spends the day. At night it wanders down to the basal leaves to feed then returns to its safe haven. The pupa mimics a dead leaf but also sports shiny metallic coloration that send a message to predators that it tastes bad.

The Red Admiral butterfly seeks out Pellitory (*Parietaria judaica*) to lay its eggs. The freshly hatched caterpillar neatly sews two leaves together for its shelter then weaves a larger chamber as it grows and goes through its life cycle. Some species of caterpillars wander from their host plant while picking a location to pupate but the Red Admiral pupa can be found inside its safe chamber home.

The male butterfly always searches out the host plant to stake out his territory then chases off any other competing males because he knows that the female, sooner or later, will show up to lay eggs. Once she enters the scene, activity bursts into courting, flirting, mating, then egg laying and caterpillars chomping begins. You will miss out experiencing all of this without the presence of the caterpillar host plant. You would perhaps see a few hungry adult butterflies visit while collecting sustenance from blooming flowers but not the higher level of activity that host plants provide.

Mature Pellitory growth **Young Pellitory sprouts**

At a recent symposium at Baton Rouge Hilltop Arboretum, Doug Tallamy (author of books *Bringing Nature Home and Nature's Best Hope*) inspired a large group of LA Master Gardeners by presenting the pressing message that time is of the essence to enhance your gardens with specially selected native plants to help support wildlife. With daily habitat destruction, increased spiraling diversity, and shrinking green spaces, it is more important than ever that we take action as private land owners to join the bandwagon.

The American Painted Lady Life Cycle

The Red Admiral Butterfly Life Cycle

(Linda Auld, E-Mail: thisauldhouse@bellsouth.net)

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ISCADIA APERTA WALKER, 1857 (LEPIDOPTERA: NOLIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

Fig. 1. ***Iscadia aperta*** from Abita Springs, March 1, 2001 St. Tammany Parish, Louisiana.

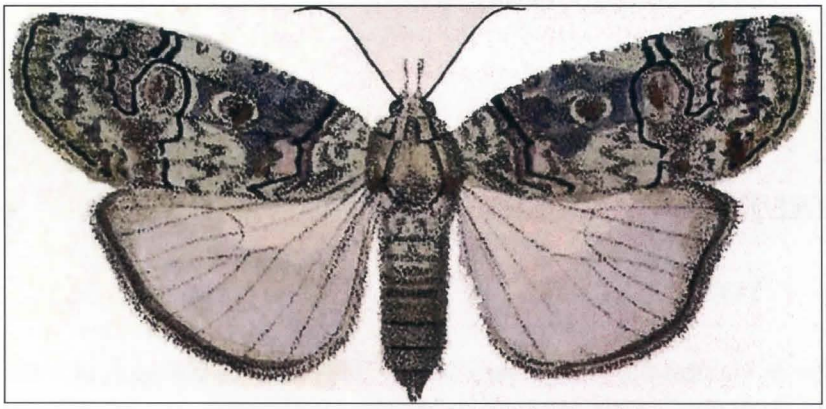

Fig. 2. ***Iscadia aperta*** pictured in Biologia Centrali-Americana by Druce (1891-1900) from Jalapa, Mexico.

1. ISCADIA APERTA.

Mas. *Cana; antennæ luteæ; alæ anticæ ex parte subglaucescentes, lineis quatuor angustis nigris, 1a basali, 2a interiore, 3a furcata, furca exteriore lineaque 4a connexis, linea submarginali albida angulosa, linea marginali nigra, orbiculari ex parte cervina, reniformi nigro pupillata; posticæ albæ, semihyalinæ, fusco ex parte marginatæ.*

Male. Hoary. Antennæ luteous. Fore wings slightly and partly glaucous, with four slender black transverse lines; first line basal; second interior; third divided in front of the reniform spot, the inner branch extending to the interior border, the outer branch extending to a little beyond half the breadth of the wings, where it turns outward and joins the fourth, which is very irregular, and approaches very close to the second on the costa; submarginal line whitish, angulose marginal dots forming an uninterrupted black line; orbicular spot partly fawn-colour, very much smaller than the reniform, which has a black centre. Hind wings white, semihyaline, partly and slightly bordered with brown. Length of the body 6 lines; of the wings 16 lines.

a. St. Domingo. From Mr. Tweedie's collection.

Fig. 3. Original description of ***Iscadia aperta*** male, Walker, 1857.

The Nolid moth ***Iscadia aperta Walker*** is only rarely encountered in the U.S. The few known records are from the southern border areas in Arizona and in west Texas. The specimen in Fig. 1 was captured on March 1-2001 in an automatic-capture ultraviolet light trap near Abita Springs, St. Tammany Parish, Louisiana, USA.

This large species ***aperta*** was described from St. Domingo, on the Caribbean Island of Hispaniola. In Fig 2 is the specimen illustrated in Biologia Centali-Ameriicana from (Jalapa) Xalapa, Veracruz, Mexico.

We have provided the original description of the male by Walker (1857) (Fig. 3).

Powell and Opler (2009) addressed this species using less than 50 words. These same authors stated the genus has 42 species, but only ***aperta*** occurs in the U.S. These same authors state ***aperta*** occurs from March to September in southeast Arizona.

Only one species ***Iscadia aperta*** is listed by Lafontaine and Schmidt (2013). Miller et al (2012) reports ***aperta*** from Honduras.

This species was not covered by Covell (1984), nor by Franclemont in Forbes (1960), nor by Heppner (2003). Currently in the McGuire Center, Gainesville, Florida, there are 10 adults from Brewster and Terrell Counties in Texas, two adults from Santa Cruz County, Arizona, one from San Luis Potosí Mexico captured by E.C. Knudson in 1976, and one adult from Atlántida Department, Honduras. There are four adult specimens of ***aperta*** in the Mississippi Entomological Museum collected in the country of Panama.

We thank Debbie Matthews Lott for summarizing the McGuire Center records, and also Richard L. Brown For providing the records from Panama.

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

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OXYDIA VESULIA (CRAMER) PHOTO
BY
TOM NEAL

Did see my first *Oxydia vesulia* (Cramer) here in Gainesville (18/January/2020). This moth is common in south Florida and tropical America and may be one of those species whose range is extending northward. Will have to see if any more show up.

***Oxydia vesulia* (Cramer)**

MALACHITE (*SIPROETA STELENES*) LIFE HISTORY

BY
BERRY NALL

I captured a female Malachite at bait, and placed her in my small greenhouse. Potted Green Shrimp Plant (*Ruellia blechum*) and Runyon's Violet Wild Petunia (*Ruellia nudiflora*) were offered as potential hosts. Green Shrimp Plant is used by a commercial breeder I know, while the Wild Petunia is one of the Malachite's reported hosts. It was over a week later that the first eggs appeared on the Green Shrimp plant. Interestingly, the first egg I found was empty even though it seemed to have an intact shell. Over a period of days the female placed a number of eggs on that plant, and then she moved on to place a few more on the Wild Petunia.

Egg, 19-X-2016

Recently hatched, 22-X-2016

I brought in 3 eggs to observe; two hatched. The first and older caterpillar is the one pictured to the right. As can be seen from the picture taken on 26-X-2016, this caterpillar had "horns" on its head in the second instar. The second caterpillar did not develop horns until its third instar. From that point on, the development of the caterpillars was the same, resulting in the younger one apparently having six instars compared to the older caterpillar's five. I found this puzzling, because in my experience, at least, caterpillars of the same species and especially the same brood generally have the same number of molts (unless they go into diapause or some similar stress produces an extra molt). While writing this in November, 2016, I looked for literature describing others' observations, but I did not find any detailing the typical number of instars that Malachite larvae have.

First instar, 23-X-2016

Second instar, 26-X-2016

The caterpillars were challenging to photograph because they were so dark. Once the spines appeared, more red was added during each instar until they were entirely red in the last instar. They were brightest immediately after a molt (as in the case of the face pictured above), and then they gradually darkened as the caterpillar drew near to its next stage of development.

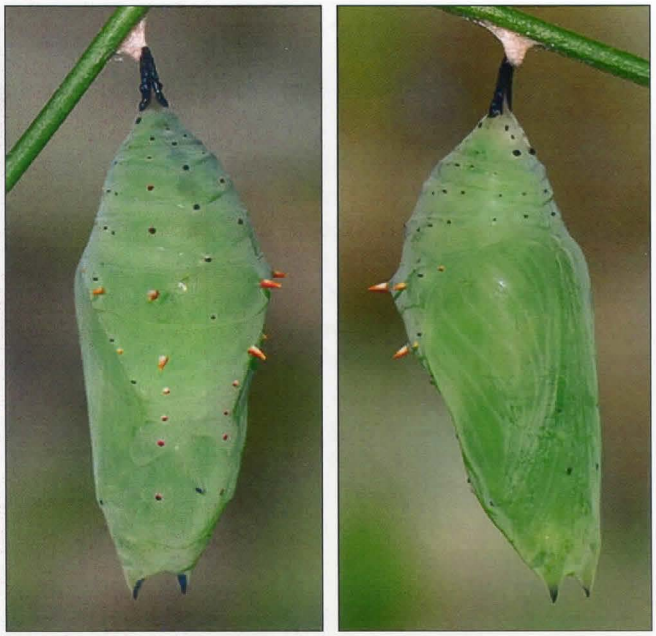
Third instar, 27-X-2016

The egg of the study caterpillar was laid on October 19 or perhaps the previous day. The adult emerged from its chrysalis on November 18, so the journey from egg to adult took 30 days. Its emergence coincided with the arrival of a windy cold front, so I delayed release of the butterfly until November 20.

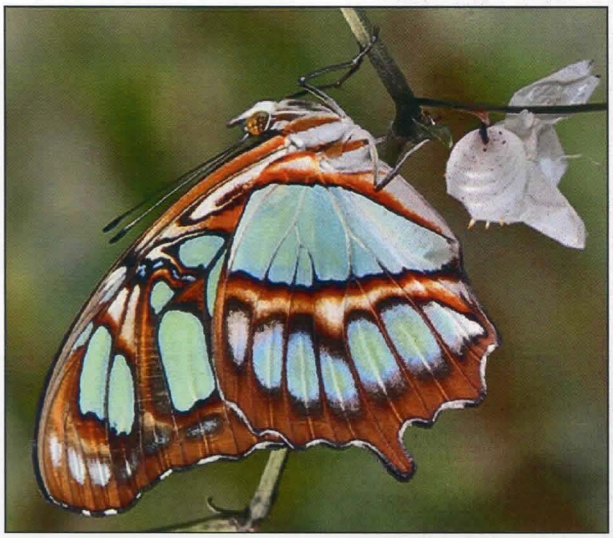
Face of Malachite

Fourth instar, 31-X-2016

Fifth instar, 7-XI-2016



Front and rear views of chrysalis, 9-XI-2016



Recently-emerged adult Malachite, ventral view, 18-XI-2016

Fresh adult Malachite, dorsal view, 20-XI-2016

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Malachite (*Siproeta stelenes*) in the SLS NEWS. The original publication on the internet is listed: http://leps.thenalls.net/content2.php?ref=Species/Nymphalidae/stelenes/life/stelenes_life.php

Mr. Nall's contact e-mail is lb@the_nalls.net

[Berry Nall, P.O. Box 22, Falcon Heights, Texas 78545]

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THE MOTH PHOTOGRAPHERS GROUP FOUNDATION

BY

STEVE NANZ

Greetings members of the Southern Lepidopterists' Society. I was recently asked if I might be interested in submitting an update on the Moth Photographers Group (MPG) website with respect to our plans for future growth. As many of you may be aware, we created the Moth Photographers Group Foundation, a 501(c)(3) organization, last year. At the 2018 Annual Meeting of the Lepidopterists' Society, we held an MPG workshop. After much discussion during the question- and -answer session which followed, it became apparent that a significant upgrade to the MPG website would be desirable, and it was suggested by supporters that we consider forming a charitable nonprofit in order to raise funds. We have yet to solicit potential contributors as we are still in the planning stages. A preliminary plan should be in place in the coming months at which time we will make an announcement at MPG with a link to our proposal. We hope that those of you who find value in our website will consider making donations.

To better understand our plans for the future, I thought it might be helpful to provide a little background. On November 4th, 2004, Bob Patterson, then an amateur nature photographer who had just started his "retirement hobby" the prior year, launched MPG. At that time there were no comprehensive online moth resources for enthusiasts and professionals. BugGuide.net had launched just the previous year and had very few species covered, largely because most people had extremely limited access to identification resources. It would be another four years before the launch of iNaturalist.org. Folks largely depended on Covell's *"Field Guide to the Eastern Moths"* and a handful of websites which covered only specific families or locations. With the help and encouragement of his new friends in the mothing community, Bob created the MPG website to fill the void for eastern moths and over time for all of North America north of Mexico. In the beginning, MPG web pages were all generated from HTML code manually inputted by Bob. In this manner, he created all the plates and species pages with thousands of images contributed by supporters, a true labor of love and a remarkable achievement. In 2005 Richard Brown invited MPG to enter into a partnership with the Mississippi Entomological Museum at Mississippi State University to help defray the cost of website hosting and maintenance. Mississippi State has been MPG's home ever since. In 2008, with the contribution of Mike Boone's professional services, the website was converted to a database system. Bob added many thousands more images aided by the efficiencies afforded by the upgrade.

Leading up to 2014, as declining health and years of work had taken their toll, Bob pulled back from his daily activity on MPG. At Bob's request, I came on board in late 2016. I would soon learn that, as advanced as it was in 2008, the editing tools were devilishly difficult to use by current standards. I knew even then that an overhaul would be needed if we ever wanted to attract volunteers. There was no online form for uploading new images. All images had to be given coded file names and would then be uploaded to specific folders depending on the contributor and image type. Then links would be manually added to the database.

At our 2018 workshop there was much discussion about mapping data and identification issues. Users, especially amateurs, are often left with the impression that if it's on MPG, it must be valid. But like most other websites, MPG has many errors. Monica Krancevic has volunteered since 2017 to work on mapping. Of the 500,000+ old records, at least 95% have minimal information that can't be easily verified due to limits in the database. In addition there remain many outdated entries from BOLD, the Lep Society's Season Summary and BugGuide. She is now working to update the citizen science data, pull more info from journal articles and omit records that can't be verified. It's not a quick process as more precise geographical coordinates need to be included, and additional fields added to more fully record and verify data. Additionally, there is now no way for users to access the mapping data much less do custom searches of sightings. Image identification information is likewise unavailable. The general search tool is based on Google's search tool which can generate unexpected results, and custom searches are also unavailable. With the next version of MPG, we hope to resolve all these issues and provide the user with a more user-friendly experience. We also intend to create an MPG forum to discuss identifications, possible errors, website improvements, suggested additions, taxonomic changes, and potential new species.

MPG is the only moth website covering all species for all of North America north of Mexico which lays out images of both live and pinned specimens in plates which can be easily browsed. For over a decade, MPG has been the 'go to' website for both amateurs and professionals. With the next iteration of MPG, we hope to enhance the user experience and encourage user involvement.

I would like to thank the Southern Lepidopterists' Society and its members for its support of MPG and for the opportunity to let us present our vision.

Moth Photographers Group
Steve Nanz, Editor
Monica Krancevic, Mapping
Jane and John Balaban, Larva plates

Moth Photographers Group Foundation, Board of Directors:
Steve Nanz, President
Richard L. Brown, Vice-President
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J. Donald Lafontaine
Robert Patterson

Tortyra slossonia **(photo by Steve Nanz)**

Haploa clymene **(photo by Steve Nanz)**

Synanthedon acerrubri **(photo by Steve Nanz)**

CLYTIE MINISTREAK (*MINISTRYMON CLYTIE*) LIFE HISTORY

BY
BERRY NALL

Clytie Ministreaks make regular appearances in my south Texas yard, and under the right conditions the population explodes. During such times, in the late afternoon heat it is not uncommon to find dozens resting on the foliage of low-growing shrubs, or even in the grass. I suppose the plants provide humidity and/or cooling, although I've never read anything on the subject.

Despite the frequent abundance of this species, getting a life history study proved quite a challenge. I have never found a caterpillar. Years ago I confined adults with Mesquite, as I understood it to be a host, but I never obtained any eggs. During this study, I offered Screwbean Mesquite, *Prosopis reptans*. However, no eggs were deposited on, nor did the caterpillars show interest in, that plant. (It is unclear whether that was due to the conditionsx of the time, or to the general unacceptability of the plant as a host.) On top of this, I was misled by the otherwise excellent guide of Brock and Kaufman, as the male and female photos appear to be reversed. In my neophyte years, I may have put a good bit of effort into trying to get eggs from males!

A couple of years previous to this study, Mike Rickard shared a photograph of a female ovipositing on Huisache (*Acacia farnesiana*). This was the plant that was used for the present study. [Side note: In preparing this study, I found *Pithecellobiums* mentioned as a host plant. That genus might only suggest Guamachil, the Red-bordered Pixie host. However, the reference was printed at a time when Texas Ebony was also considered a Pithecellobium. It has since been moved to *Chloroleucon*. Still, Ebonies might be tested if a host is needed.]

Once I saw Mike's picture, I had a new potential host I was anxious to try - but we had a drought of Clyties. Finally, the butterflies returned in good numbers in the spring of 2016. I confined a female with Huisache. One evening I spent 20 minutes watching her repeatedly go through the motions of laying eggs, but I was disgusted to never see any eggs. However, the next day, when I took out the branches and inspected them, I was delighted to see her efforts had not

Egg, 27-IV-2016

Neonate, 28-IV-2016

First instar, 29-IV-2016

Second instar, 1-V-2016

Third instar, 5-V-2016

Fourth instar, 11-V-2016

Pupa, 15-V-2016

Fresh adult Clytie Ministreak, 21-V-2016

been in vain. The eggs were simply too small and too close to the color of the branches for me to see them through the container walls. Most eggs were deposited on stems that were still green, but not tender; they were placed at nodes where there was some fresh growth.

The young caterpillars preferred tender and fresh leaves. I did not observe actual molts of the early instars, so I am basing the instars of the photo essay to the right on appearance and the assumption that the larvae experienced four instars as is typical of hairstreaks. I reared at least a dozen, and, as is my habit, I tried to photograph each adult upon release. However, I was only successful twice: I was able to induce most to momentarily rest quietly on a leaf or flower after I removed the holding vial, but before I could position the camera the fresh butterfly would fly off. Nothing came easy with this species!

The eggs were deposited on April 25, 2016. The caterpillars started emerging just 3 days later. Several pupated on May 12, and the first six adults emerged on May 21.

Caterpillars of Ceraunus Blue also use Huisache, and can be easily confused for Clytie Ministreak larvae. Both species are highly variable in color, occasionally adding yellow or red to the green base. If there is color along the back (dorsum), Clyties have two distinct rows, while Ceraunus have essentially one central stripe. Under a hand lens or in a good photo, it can be seen that Clytie setae are golden brown, while Ceraunus setae are buff. Also, the Blues tend to eat flowers, while the Ministreaks generally eat leaves.

++++++++++++++

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Clytie Ministreak (*Ministrymon clytie*) in the SLS NEWS. The original publication on the internet is listed:

http://leps.thenalls.net/content2.php?ref=Species/Theclinae/clytie/life/clytie_life.php

Mr. Nall's website "Berry's Butterfly Photos" can be viewed at:
http://leps.thenalls.net/content.php?ref=life.php

26-XII-2008 winter form. NABA Park (TX).

[Berry Nall, P.O. Box 22, Falcon Heights, Texas 78545; E-mail: lb@the nalls.net.]

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TREASURER'S REPORT: 1/JANUARY/2019 – 31/DECEMBER/2019

As of 31/December/ 2019: There are 168 paid members and two complimentary issues sent out quarterly (Library of Congress and Library at Division of Plant Industry in Gainesville, Florida).

Beginning Bank Balance with SunTrust of Gainesville as of **1/January/2019: $13,606.81**

Ending Balance as of **31/December/2019: $13,214.68**

Credits: Includes member dues and donations, collections from meetings and sales of old newsletters: $10,435.18

Withdrawals and Fees: $10,827.31

Printing Newsletters:
- Vol. 40 #4: $1772.11
- Vol. 41 #1: $1917.44
- Vol. 41 #2: $1828.97
- Vol. 41 #3: $1959.45

Postage for Newsletters:
- Vol. 40 #4: $ 457.52
- Vol. 41 #1: $ 495.00
- Vol. 41 #2: $ 521.30
- Vol. 41 #3: $ 321.15

Supplies (clasped mailing envelopes): $97.97

Meeting expenses (2019 meeting in Statesboro, Georgia SLS/ATL): $292.95

Abbot Award Postage (sent award to Harry Pavulaan in Virginia): $13.40

Check 707: $1000.00 set aside for deposit into a CD account

Bank Fees: $0

Newsletter costs include printer cartridges for Editor Barry Lombardini's home printer and supplies.

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TREASURER'S REPORT: 1/JANUARY/2020 – 31/JANUARY/2020

As of 31/January/2020: There are 168 paid members and two complimentary issues sent out quarterly (Library of Congress and Library at Division of Plant Industry in Gainesville, Florida).

Beginning Bank Balance with SunTrust of Gainesville as of **1/January/2020: $13,214.68**

Ending Balance as of **31/January/2020: $12,314.72**

Investment Account of at least $58,000 held at SunTrust in Tampa, Florida, as a gift from the estate of Irving L. Finkelstein (Final details are not yet available).

Credits: Includes member dues and donations, collections from meetings and sales of old newsletters: $1405.00

Withdrawals and Fees: $2304.96

Printing Newsletter:
Vol. 41 #4: $1814.58

Postage for Newsletter:
Vol. 41 #4: $ 453.75

Supplies (clasped mailing envelopes): $36.63
Bank Fees: $0
Newsletter costs include printer cartridges for Editor Barry Lombardini's home printer and supplies.

Dues are currently:

Student Membership:	$15.00
Regular Membership:	$30.00
Sustaining Membership;	$35.00
Contributor Membership:	$55.00
Benefactor Membership:	$75.00
Publication Fund (donations) open ended	
Life Membership:	$1200

Marc Minno has continued to update the membership list.
Barry Lombardini has continued to do an excellent job as editor of the Southern Lepidopterists' Society News.
Due to the generosity of several members we can continue to produce excellent newsletters and not incur a deficit.

Respectfully submitted,

Jeffrey R. Slotten, Treasurer

FLORIDA LEPIDOPTERA BIODIVERSITY AND PHENOLOGY

BY

J. B. HEPPNER

The present synopsis of Florida Lepidoptera diversity and species phenologies is a condensed version of an earlier report (Heppner, 2013), which also included a table listing all species by region and month of occurrence. Herein, only the main distributional data and phenological analyses are given. Graph 1 (page 73) shows the combined distributions and months of occurrence of all the species in Florida. The distributional graph shows the total species counts for each region. The phenological graph (2) shows the months of the year and how many species have been recorded each month. Graphs 3 and 4 are for some particular groups: leafminers and butterflies.

As noted in the revised Florida Lepidoptera catalog (Heppner, 2003) and updated Florida checklist (Heppner, 2011), Florida can be divided into 8 regions (some even more subdivided), as first used by Kimball (1965). While the majority of Florida lepidopterans can be found throughout most of the central region of the state, some species are only known from the far western panhandle of Florida, in the Pensacola area (Region 1), while others are known only from the Florida Keys (Region 8), or only the Lower Keys (Region 8B). Other species have variations of these distributions, as for example in southern Florida (Regions 4-6), or only northern Florida (Region 1-2). Of course, some species are known throughout the state (Regions 1-8), but most wide-ranging species, which also go further northwards beyond Florida, tend to be restricted north of the Keys (thus, Regions 1-6 or 1-7, or even only 1-3) (See Map, Fig. 1).

It should be cautioned that the data in the graphs are still highly incomplete. Many species may well be active as adults during added months of the year, or in additional regions of the state: the data given simply reflect our current knowledge based on available specimens. Many areas of Florida remain inadequately surveyed and for too few months during the year. Also, note that months of occurrence are as recorded statewide for those species widely distributed. Thus, in the northern part of such a range the months of occurrence may not be as many for such species as in the southern part of their range: this would not apply to species, for example, only occurring in the Florida Keys, since this is a more restricted range whereby all months would be valid for many of those species.

Most collections in Florida have been haphazardly made during the past 150 years, whenever some collector had free time, which usually meant vacation periods. Thus, records tend to be from summer months when more persons have vacation time in the United States, and also winter months at popular winter vacation sites in southern Florida. We have little detailed collection data based on daily collections from a single site and relatively few resident collectors were in the state in early years. The only site in Florida with long-term, almost nightly, sampling of moths has been in Gainesville (Alachua Co.), with the light traps the FSCA regularly sampled for local moths for 42 years, from 1953 to 1995, however retention was as alcohol samples and few specimens were mounted each night for study and as pinned vouchers. The Gainesville sampling site is a small patch of typical north Florida oak hammock, with pines and palmettos, next to the University of Florida forest reserve behind the present DPI building. Consequently, this sampling also is incomplete and not tabulated other than what has been included in the Florida catalogs (Heppner, 2003; Kimball, 1965).

Kimball (1965) included records in his Florida catalog he had obtained from museum collections and from the moth collections made by persons he employed for this task over several years: at Oneco (Manatee Co.) by Paula Dillman from 1953-54, at Key Largo (Monroe Co.) by Mrs. S. Kemp from 1965-75, and at Pensacola (Escambia Co.) by Shirley M. Hills from 1961-69. Kimball himself also collected moths extensively from 1946-80 at Siesta Key (Sarasota Co.), but only during the late autumn to early spring months. Light traps were also run in part for Kimball, by H. O. Hilton from 1963-88 at Ocean City (Okaloosa Co.), by E. G. Kelsheimer from 1955-66 at Bradenton (Manatee Co.), by W. B. Tappan from 1960-63 at Quincy (Gadsden Co.), and by D. O. Wolfenbarger from 1958-59 at Homestead (Dade Co). All the records Kimball obtained from these activities — at Pensacola, Ocean City, Quincy, Bradenton, Oneco, Siesta Key, Homestead, and Key Largo — were not published on except what he reported in his Florida catalog (Kimball, 1965). Unpublished updates and corrections to his catalog were sent by him to the FSCA until 1981, and these data were included in the revised Florida catalog (Heppner, 2003).

In Florida, the only other longer samples have been by Terhune S. Dickel who has done long-term samplings, almost nightly in Homestead (Dade Co.) from 1971-96, and since 1997 in Anthony (Marion Co.), but the phenology involved for each species has not yet

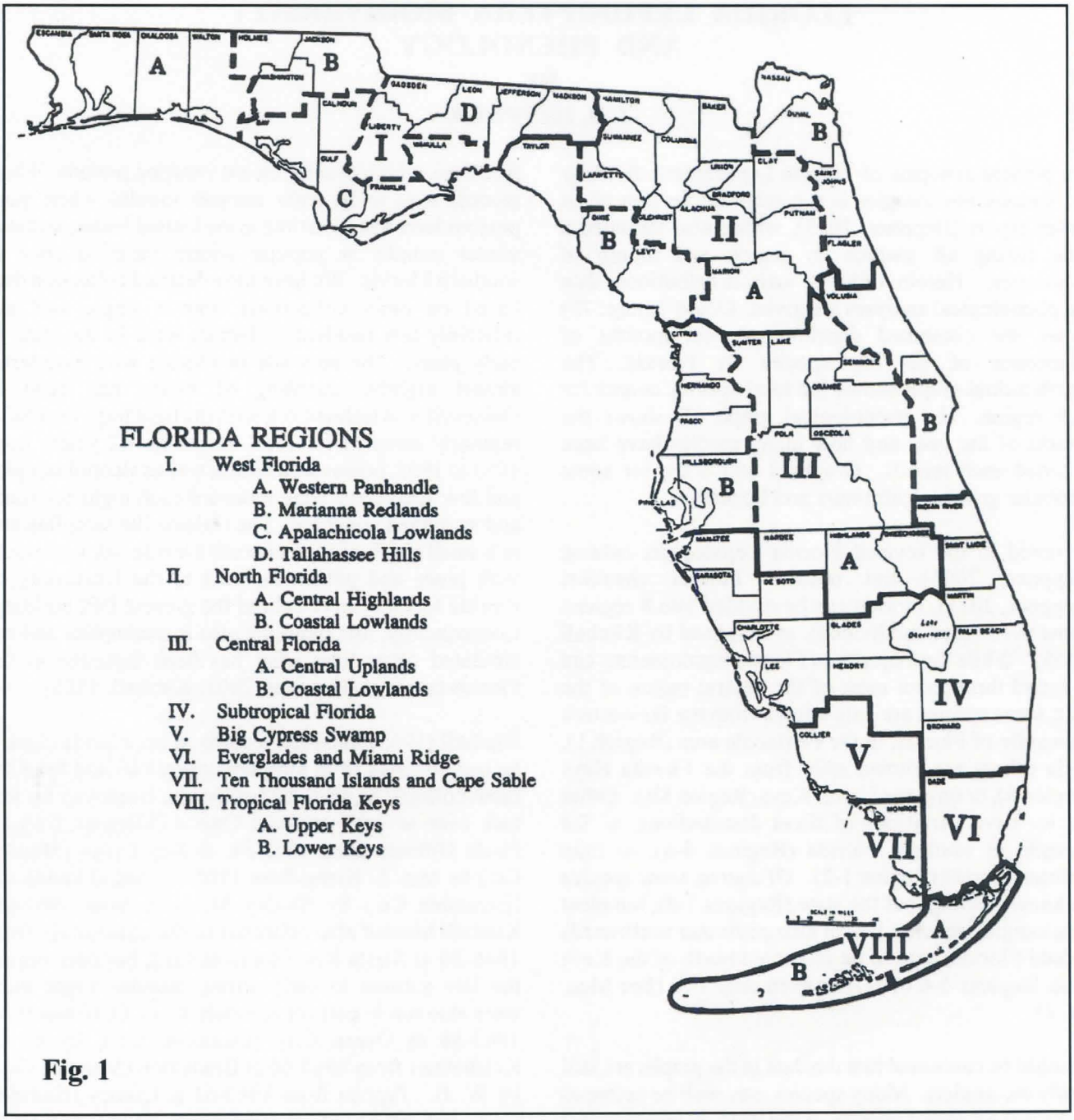


Fig. 1. Map of Florida showing regional divisions as used in the data table for Florida Lepidoptera (after Heppner, 2003).

been documented. S. W. Frost during the years 1958-75 did insect sampling for periods of several months each year at Archbold Biological Station (Highlands Co.), mostly during the winter months, and these records yielded some phenology data for moths which he organized and published on (Frost, 1962, 1963, 1964, 1966, 1969, 1973, 1975). Likewise, Minno (1992a,b) expanded on the work of Frost at Archbold Biological Station and included the butterflies as well. Profant (1991) did a survey of moths near Orlando, at Blue Springs (Seminole Co.), which includes some phenology data and a species list. Some survey studies on butterflies have been done in Florida which have phenology data, like that of Leston et al. (1982) for Lignum Vitae Key, in the Florida Keys (Monroe Co.), and by Lenczewski (1980) for Everglades National Park. For about four years until 2009, the late George Austin of the McGuire Center staff also made nightly catches of moths near Paynes Prairie by Gainesville, but these records are not fully organized yet. My own Florida surveys have included extended samplings at the Welaka Reserve by Welaka (Putnam Co.), during 1986, formerly a University of Florida forest reserve on the St. Johns River; and in other years at the university's Austin Cary Forest Reserve, near Waldo (Alachua Co.), besides sampling in Gainesville. Additionally, many other

collectors have sampled erratically throughout the state over the years, especially since 1950. Many Florida specimens remain in collections unidentified, especially among Gelechioidea from southern Florida, so many more species will be added to the Florida list as these are identified or described as new species.

For species especially in Region 1A, in the Pensacola (Escambia Co.) area of Florida, ranges usually include areas at least as far west as southern Louisiana and southeastern Texas (Heppner, 2014). Consequently, the extended collections for the past 47 years, since 1973, by Vernon A. Brou, Jr., of Abita Springs, Louisiana, have provided phenology data also applicable to Florida lepidopterans. As members of SLS know, Brou has written extensively on various species from his surveys, in over 200 papers since 2000 alone, while a more detailed phenological analysis was done earlier for the family Sphingidae (Brou and Brou, 1997).

FLORIDA LEPIDOPTERA BIODIVERSITY

Florida Lepidoptera biodiversity is tabulated in Table 1 (next page) by superfamily (Heppner, 2003, 2011), comparing the totals also to regional biodiversity data for Texas (Knudson and Bordelon, 1999), Mexico (Heppner, 2004), Taiwan (Heppner, 1912a,b; Heppner and Inoue, 1992), and Sulawesi (Indonesia) (Heppner, 1989; Vane-Wright and de Jong, 2003). Graph 1 (page 73) shows the regional diversity of Florida Lepidoptera, among the 8 regions used in the Florida catalogs (Heppner, 2003; Kimball, 1965).

As shown in the bar graph (Graph 1), the biodiversity of Florida Lepidoptera is highest in the northwestern region of Florida, Region 1 (see map, Fig. 1) which includes what is called the panhandle of Florida (Heppner, 2014). Somewhat less so is the region of northern Florida, Region 2 (Heppner, 2015). In central Florida, Region 3 and Region 4, the biodiversity is further reduced (Heppner, 2016, 2020a). Southern Florida has considerably less diversity of lepidopterans than in the north, an indication of the fewer plant species in this region as well, so Regions 6-8 have much less diversity of Lepidoptera species, yet there are more endemics and the integration of the Caribbean fauna (Heppner, 2020b,c). The overall species numbers are fewer in southernmost Florida, but a very different species composition than in northern Florida, although many species remain unnamed among the tropical groups present in southern Florida (Heppner, 2020c).

Florida has less than a third of known North American species and only 60% of what is found in Texas which also has some tropical groups in southernmost Texas, yet the Florida fauna has many more tropical species than any other region of North America, particularly in the region of Miami and the Florida Keys. Thus, while the species total for Florida is much less than Texas, the composition is very different due to the intrusion of the many Caribbean species into southernmost Florida. Northern Florida, contrarily, retains many species intruding from the northern states which have their southern limits in northern Florida (Heppner, 2015). Likewise, western Florida has some species that have their eastern limits in western Florida (Heppner, 2014). Texas, however, has many more western species entering in West Texas, including desert species from northern Mexico, and also has the Rocky Mountain elements entering in the higher mountains of western Texas; thus, a very different composition than Florida and consequently also more speciose.

With Florida at 58,664 sq. mi. for 3,035 species compared to Texas at 266,807 sq. mi. for 4,933 species, Florida is only 22% the size of Texas and the Lepidoptera fauna of Florida is only 62% that of Texas. However, by land area Florida is actually 2.8 times more diverse than the much larger area of Texas, when one divides the total land areas by the species known for each state (Texas at 54.1 sq. mi. per species and Florida more concentrated at 19.3 sq. mi. per species) (54.1 divided by 19.3 = 2.8). Yet, both states in comparison remain greatly under-counted in species diversity, since all regions clearly have many more species yet to be named; this is particularly true among the microlepidoptera, such as the leafminers (Gracillariidae and other families) and Gelechioidea, where many new species remain unnamed, others undiscovered. Undoubtedly, several hundred gelechioids remain unnamed both in Texas and Florida, for example, and in Florida most being part of the Caribbean fauna that gets into southernmost Florida.

FLORIDA LEPIDOPTERA PHENOLOGY

In Florida, the Lepidoptera in general have a peak flight period coinciding with the months just before the rainy season begins in June, thus April for leafminers and May for moths and butterflies in general. This can be seen in Graph 2 for the overall data, Graph 3 for leafminers, and Graph 4 for butterflies. Note that butterflies have a secondary peak in August-September, while leafminers and all Florida Lepidoptera have a secondary rise in species active during September.

In the tropical areas of Florida, Regions 6-8, Miami and the Florida Keys, the phenology for adult activity differs from the rest of the state inasmuch as more species are active much of the year: there remain peaks for the pre-rainy season period and autumn, but the early peak is also extended longer, from March to May, while there is only a very slight autumn peak in October (Graph 5). Note that species still differ in their flight periods, so not all species will be found every month.

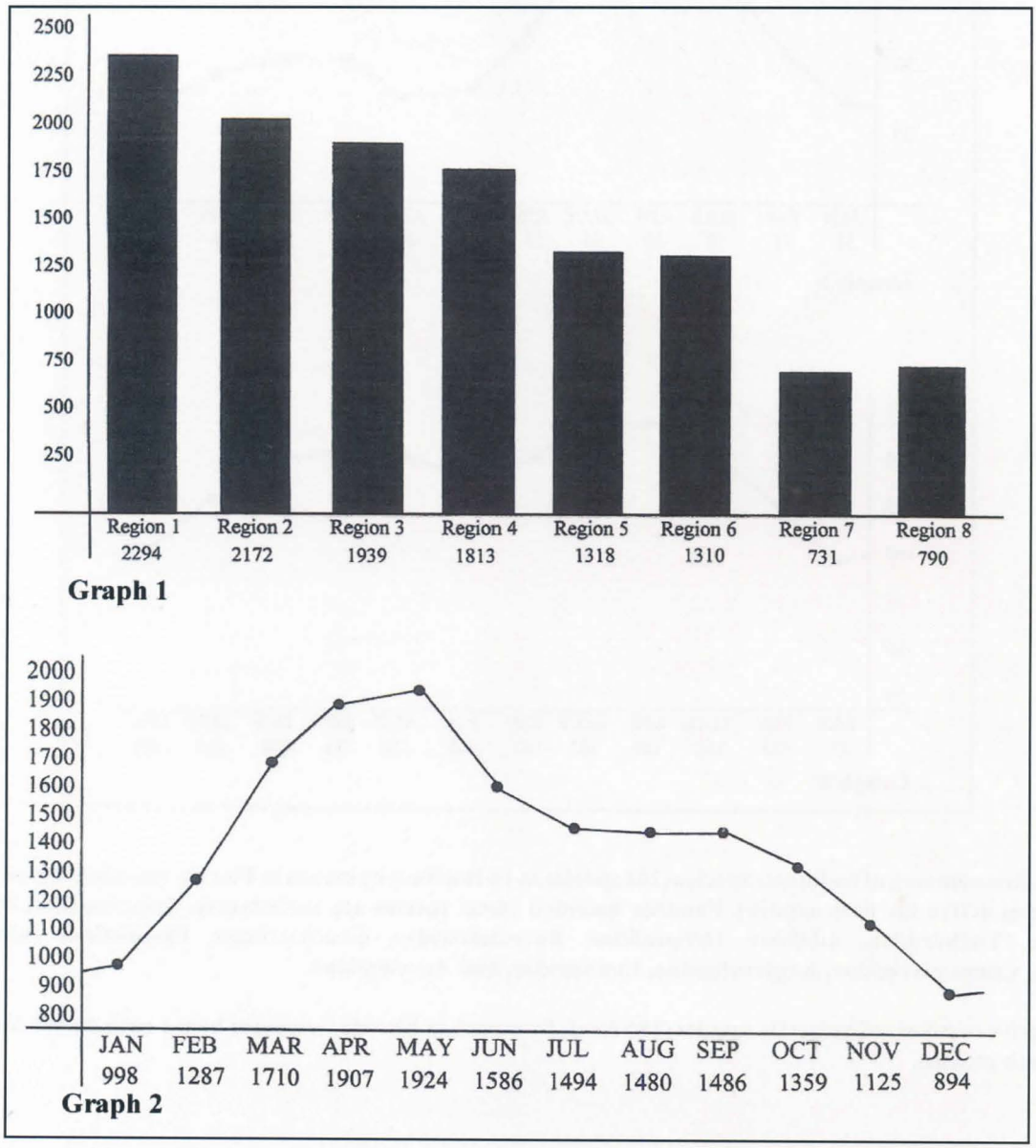
The least active months for Lepidoptera adults in Florida in general are January and December (Graph 2). For leafminers, there are few species with active adults most of the year except during March to June, with a peak in April and May (Graph 3). Up to 100 butterfly species are active any month of the year in Florida, with peaks in May and August-September (Graph 4): there is a decided reduction in active species during July, with the least numbers flying in December and January.

Table 1. Lepidoptera Biodiversity in Selected Regions (by superfamily), comparing the fauna in Florida with those of Texas, North America (USA and Canada), Mexico, Taiwan, and Sulawesi (Indonesia).

	Florida[1]	Texas[2]	US/Canada[3]	Mexico[4]	Taiwan[5]	Sulawesi[6]
Micropterigoidea	—	—	3	—	10	?
Agathiphagoidea	—	—	—	—	—	—
Heterobathmioidea	—	—	—	—	—	—
Eriocranioidea	2	3	16	?	1	—
Lophocornoidea	—	—	—	—	—	—
Neopseustoidea	—	—	—	—	1	—
Mnesarchaeoidea	—	—	—	—	—	—
Hepialoidea	—	?	21	15	14	?
Andesianoidea	—	—	—	—	—	—
Nepticuloidea	27	23	140	?	6	?
Tischerioidea	8	19	9	1	—	—
Palaephatoidea	—	—	—	—	—	—
Incurvarioidea	9	24	88	16	16	1
Tineoidea	149	204	585	147	114	181
Gelechioidea	306	515	1,751	396	291	218
Copromorphoidea	8	10	28	6	9	8
Yponomeutoidea	40	54	212	35	58	16
Immoidea	—	—	—	2	10	10
Pyraloidea	621	754	1,425	1,375	621	557
Pterophoroidea	31	49	147	43	33	18
Sesioidea	52	69	170	117	60	13
Zygaenoidea	12	25	43	127	57	1
Cossoidea	34	49	99	154	62	49
Castnioidea	—	—	—	14	—	?
Tortricoidea	286	368	1,255	495	251	125
Calliduloidea	—	—	—	—	4	1
Uranioidea	9	6	10	30	27	20
Geometroidea	263	499	1,420	2,508	793	208
Papilionoidea	190	512	770	1,808	401	557
Drepanoidea	3	4	21	2	73	13
Bombycoidea	31	68	114	341	65	17
Sphingoidea	70	88	125	201	87	14
Noctuoidea	884	1,590	3,693	6,550	1,579	801
TOTALS	**3,035**	**4,933**	**12,144**	**14,383**	**4,643**	**2,832**
Estimated Faunas	3,300	5,600	14,000	22,440	5,450	3,700

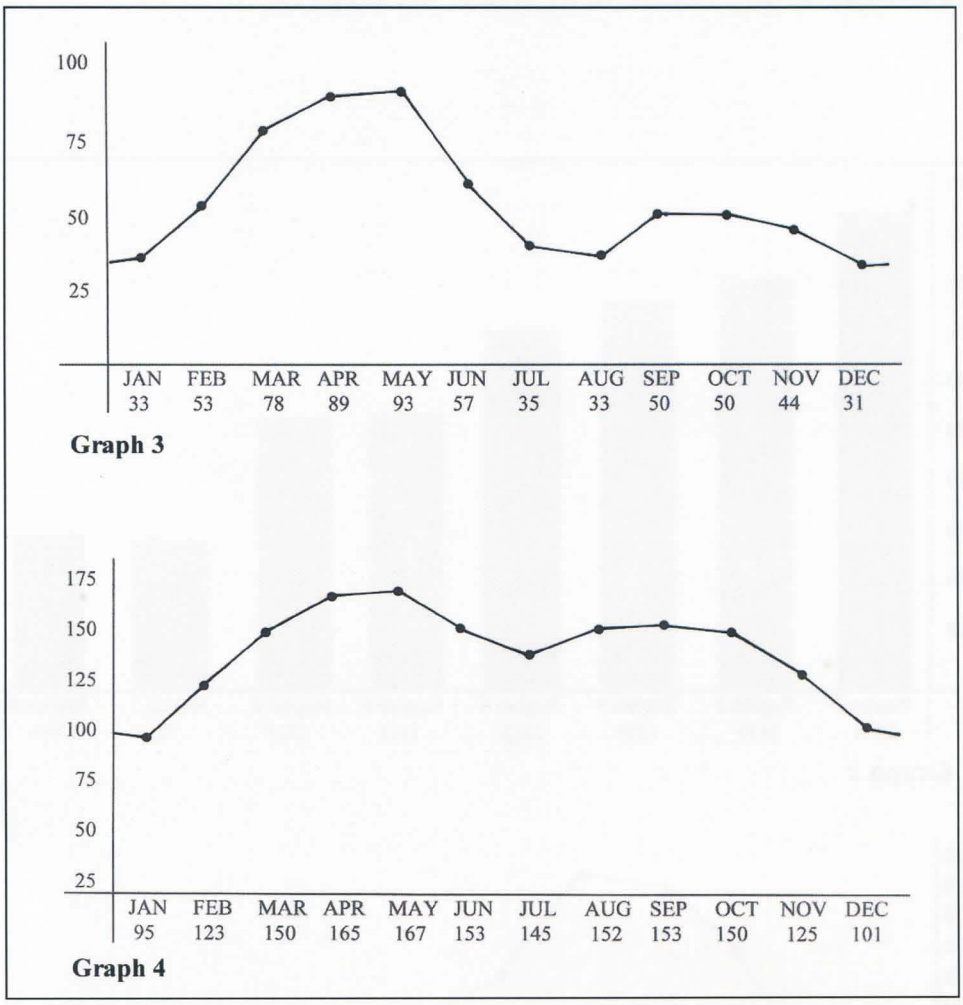
NOTE: the totals for Table 1 above are updated to 2016 for Florida, to 1999 for Texas, but remain incomplete for the many new species of tropical regions of Mexico, Sulawesi, and Taiwan (note the many undescribed species in each region indicated by the estimated totals). Totals for Bombycoidea, Sphingoidea , and butterflies (Papilionoidea) are fairly accurate. Note that superfamily Tineoidea above includes Schreckensteinoidea, while Pyraloidea includes Hyblaeoidea and Thyridoidea. Totals in the table are from the following sources: 1) Florida, after Heppner (2003, 2011, 2013, 2014, 2015, 2016, plus additions); 2) Texas, after Knudson and Bordelon (1999), but the Texas total is corrected to 4,933 (only 4,895 counted in their book); 3) North America (USA and Canada), after Heppner (1991, 1998), updated to 2010; 4) Mexico, after Heppner (2004); 5) Taiwan, after Heppner (2012a,b), and Heppner and Inoue (1992); 6) Sulawesi (Indonesia), after Heppner (1989), and Vane-Wright and de Jong (2003) for butterflies (data pertains only to northernmost Sulawesi).

All these results are generalized for the state. Activity will differ somewhat between extreme southern Florida (Graph 5) and far northern and northwestern Florida (which is more like Graph 2).



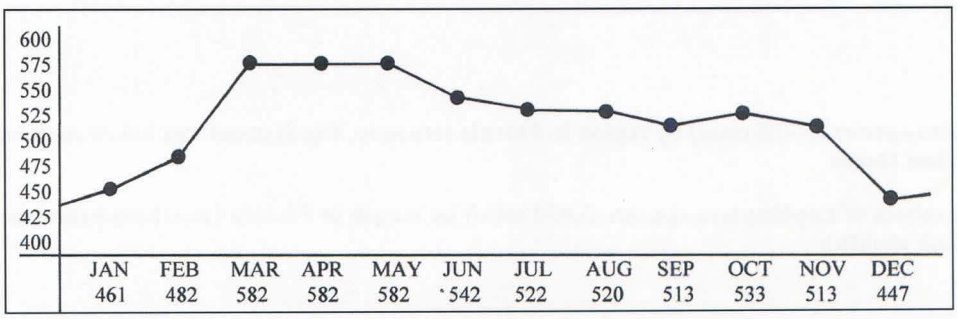
Graph 1. Lepidoptera species (3,035 total) by region in Florida (see map, Fig.1) (numbers below each region are the total species known to occur there).

Graph 2. Active numbers of Lepidoptera species (3,035 total) by month in Florida (numbers below each month are the species active for each month).



Graph 3. Active numbers of leafminer species (201 species in 14 families) by month in Florida (numbers below each month are the species active for each month). Families included (most species are leafminers): Eriocraniidae, Nepticulidae, Opostegidae, Tischeriidae, Adelidae, Heliozelidae, Bucculatricidae, Gracillariidae, Elachistidae (sensu stricto), Momphidae, Cosmopterigidae, Argyresthiidae, Lyonetiidae, and Acrolepiidae.

Graph 4. Active numbers of butterfly species (190 total) by month in Florida (numbers below each month are the species active for each month).



Graph 5. Active numbers of species (790 total) by month in southernmost Florida (numbers below each month are the species active for each monh).

ACKNOWLEDGMENTS

Specimens examined are mostly from the Florida State Collection of Arthropods (FSCA), Division of Plant Industry (DPI), Florida Dept. of Agriculture and Consumer Services, Gainesville, Florida, and McGuire Center for Lepidoptera and Biodiversity (MGCL), Florida Museum of Natural History, University of Florida, Gainesville, Florida, all now housed at McGuire Center. Other data are in part from literature records, recorded already in the recent Florida catalog and updates (Heppner, 2003, 2011, 2013).

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(McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida,
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DONATIONS TO THE SL SOCIETY

Sustaining	Contributor	Benefactor
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Ricky Patterson	*Ben Williams*	*Floyd Preston*
Lawrence Hribar	*John Hyatt*	*Gary Ross*
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Gerald Burnett		*Larry Gall*
Debbie Matthews Lott		
Eric Anderson		
Rosemary Seidler		

WELCOME TO OUR NEW MEMBER

Phillip Wallace
205 N. Main Street
Abbeville, Louisiana 70510

SEARCHING THE LEPIDOPTERISTS' SOCIETY SEASON SUMMARY ON SCAN

BY

BRIAN SCHOLTENS AND JEFF PIPPEN

The Season Summary coordinators, Brian Scholtens and Jeff Pippen, want to thank everyone who made our first effort at producing the Season Summary a success. We particularly thank all the Zone Coordinators, who put up with lots of instructions about how to format and submit records, and who all successfully sent records so that we could produce the summary.

Part of what we are now doing as a society is contributing all our Season Summary records to SCAN (Symbiota Collections of Arthropods Network), a larger effort to assemble and make available occurrence records of insects and other arthropods to the greater scientific community and the public in general. Each year we now upload all of the submitted Season Summary records to this site. In addition, several years of back records are also hosted here, and we hope to continue adding past years as that is possible.

Now that our Season Summary is available online, we thought it best to provide a simple set of instructions about how to use the SCAN database to search our available records. This process is easy, but not immediately obvious when you start exploring the site. To get started you can go directly to the SCAN site using the link below, or you can access the site through the Lepidopterists' Society webpage using the link under Season Summary. Then just follow the set of instructions below to access, search and download any data from the Season Summary. The first two instructions set up the search feature to search only the Lepidopterists' Society records. If you would like to include other databases, you can select them in addition to our database. Have fun and explore a bit. There are lots of interesting datasets on the site, including quite a few from major and minor collections as well as some important personal collections. Have fun exploring our data and those in the other databases.

Go to: https://scan-bugs.org/portal/collections/index.php

1) Click on Select/Deselect All to deselect all databases
2) Scroll to near the bottom of the list and select Lepidopterists' Society Season Summary
3) Go back to the top and click on Search
4) Choose whatever criteria you would like and tell to complete search
5) Records will be displayed
6) Click on the icon in the upper right if you would like to download records
7) Click on appropriate choices – this will download comma separated or tab separated data, which can be compressed or not
8) Click Download Data

(Brian Scholtlens, E-Mail: scholtensb@cofc.edu)

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DUES SCHEDULE FOR 2020

BY

JOHN F. DOUGLASS

The calendar in effect for payment of annual membership dues in the Society is as follows. Dues notices will be sent out with the **December issue** of the NEWS each year. The deadline for payment of dues is **January 31.** The **cut-off date** for receipt of annual dues is **July 31**, taking account of the 6-month grace period prescribed in the SLS Constitution.

Fees are still astonishingly low, at $30 for Regular and $15 for Student membership. For members who may have fallen out of touch: Please don't risk being dropped as a member at summer's-end in 2020! A wonderful opportunity to reconnect with your lep colleagues and friends will occur in Appalachia in mid-June at the **Combined Annual Meeting** of the Lepidopterists' Society, the SLS, and the Association for Tropical Lepidoptera. The event will be held at **Western Carolina University** in Cullowhee (WSW of Asheville), North Carolina, on **June 16-19, 2020** (registration will be at <www.lepsoc.org>).

Please send your SLS dues to:

Jeffrey R. Slotten, Treasurer
5421 NW 69th Lane
Gainesville, FL 32653

Western Carolina University, Cullowhee, North Carolina.

REPORTS OF STATE COORDINATORS

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

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

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

Species recorded by by C. V. Covell Jr. in Gainesville, Alachua Co., Florida, December 1, 2019, to February 15, 2020. Numbers seemed to recover to about normal for the area after a slow spring flight in 2019.

Heliconius charithonia, Dec. 9, 10, Jan. 3, 6, 9, 17, 24
Hylephila phyleus, Dec. 10
Phoebis sennae, Dec. 10, 26, Jan 5, 7, 11, Feb. 13
Eurema daira, Dec. 10
Pieris rapae or *Pontia protodice*, Dec. 10
Junonia coenia, Dec. 10
Danaus plexippus, Dec. 10, 28, Feb, 4

2020
Pyrisitia lisa, Jan. 2, 18
Vanessa atalanta, Jan. 2, Feb. 6
Urbanus proteus, Jan. 5
Leptotes cassius, Jan. 9, 10
Libytheana carinenta, Jan. 11

Dates of first records of butterflies at Covell residence, 207 NE 9th Ave., Gainesville, FL 2019:

1. *Phoebis sennae* Jan. 2, flying in yard
2. *Abeis nicippe* Feb. 28, at end of driveway
3. *Libytheana carinenta* Mar. 14, in holly and Viburnum trees
4. *Junonia coenia* Mar. 14, in Viburnum tree
5. *Atllides halesus* Mar. 22, in old holly tree
6. *Parhassius m-album* Mar. 28, in Viburnum tree
7. *Danaus plexippus* Apr. 10, in our driveway
8. *Heliconius charithonia* Apr. 11, in our back yard
9. *Agraulis vanillae* Apr. 27, in our back yard
10. *Erynnis horatius* Apr. 29, near our back door
11. *Papilio glaucus* July 9, on Pentas
12. *Leptotes cassius* July 20, flying in back yard
13. *Heraclides cresphontes* July 29, flying by our driveway
14. *Papilio troilus* Aug. 8, flying in our driveway
15. *Urbanus proteus* Aug. 30, in back yard
16. *Papilio palamedes* Aug. 30, on Pentas in back yard

Moth: *Lycia ypsilon*, Geometridae, Feb. 3, 2020, at home

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Jeff Slotten sent the following report for the State of Florida. Moth records for January and February in my backyard, Blues Creek, Gainesville, light trap:

January 27, 2020
1 *Feralia major* fresh condition
1 male *Actias luna*

February 2nd, 2020
1 male *Actias luna*
1 male *Dahana atripennis*
1 male *Ceratonyx satanaria*

February 7th, 2020
2 Actias *luna males*
1 *Telea Polyphemus* male

February 9th, 2020
1 female *Phoberia atomaris*

February 15th, 2020
1 female *Telea polyphemus*
2 male *Syntomeida epilais*
3 male *Ecpantheria scribonia*
2 male *Acronicta afflicta*

February 26th, 2020
1 male *Isoparce cupressi*
1 male *Acronicta afflicta*
1 male *Deidamia inscriptum*

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

James sends in the following report – All records are mine (James Adams). The winter has been quite cool with little opportunity to do much collecting:

Calhoun, Gordon Co., 346 Sunset Drive (home of JKA): **NOCTUIDAE:** *Feralia major*, Dec. 23 (one day earlier than earliest NW GA record); *Lithophane viridipallens* (several, several dates); *L. laceyi*, Feb. 3 (2nd NW GA record).

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

Michael sends in the following report:

PARISH RECORD: TERREBONNE PARISH, LOUISIANA
Pseudosphinx tetrio FEMALE
Collected: 130 Equity Blvd, Houma, Louisiana
December 2019

Submitted by Trenton Evers, Houma, Louisiana
Identified by Vernon A. Brou Jr., Abita Springs, Louisiana.

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

North Carolina: Harry LeGrand, 1109 Nichols Drive Raleigh, NC 27605, E-Mail: hlegrandjr@gmail.com

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

Brian sends in the following comment and South Carolina records:

Although the reports stop at Christmas, we have had butterflies all winter on the coastal plain, and several in the upstate also. A very mild winter has kept *Phoebis sennae, Agraulis vanillae, Junonia coenia*, and others flying on and off.

Butterflies:

Richland Co., SC, Congaree NP, Bates Trail & Bates Ferry Trail, 11 Nov 2019, Dave & Marty Kastner

Pieridae: *Phoebis sennae*
Abaeis nicippe
Pyrisitia lisa
Nymphalidae: *Agraulis vanilla*
Phyciodes tharos
Vanessa sp.
Vanessa atalanta
Polygonia sp.
Junonia coenia
Cyllopsis gemma
Hermeuptychia sosybius
Hesperiidae: *Urbanus proteus*
Burnsius albescens
Hylephila phyleus

Euphyes vestris
Lerema accius
Panoquina ocola

Charleston Co., SC, Fort Moultrie, 29 Nov 2019, Dennis & Donna Forsythe
Nymphalidae: *Agraulis vanillae*
Junonia coenia
Vanessa cardui
Danaus plexippus
Hesperiidae: *Hylephila phyleus*

Richland Co., SC, Blythewood, 24 Dec 2019, Dave & Marty Kastner
Nymphalidae: *Agraulis vanillae*

Spartanburg Co., SC, Inman, 25 Dec 2019, Doug Allen
Nymphalidae: *Junonia coenia*

Charleston Co., SC, Fort Lamar Heritage Preserve, 26 Dec 2019, Dennis Forsythe
Nymphalidae: *Danaus plexippus*

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

Texas: Terry Doyle, 13310 Bar C Drive, San Antonio, TX 782253, E-Mail: tdoyls335@yahoo.com
Stuart Marcus, P.O. Box 463 Liberty, TX 77575, E-Mail: stuartmarcus13@gmail.com

Terry sends in the following report and comment:

Eurema boisduvaliana, (1) male, fresh, 10 Dec 2019, Alamo Ranch Shopping Center parking lot, sw corner of S.H. 1604 and S.H. 471 (Culebra Rd.), San Antonio, Bexar Co., TX. Sight record, Joseph F. Doyle.

Unusual stray. Not a county record by any account, but notable in respect to being only species of what was once among 10-15 semi-tropical stray species that I recorded at my home most years from October to December. All absent since fall of 2018. Habitat destruction and drought have evidently taken a toll.

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Moths for Trinity River National Wildlife Refuge
Liberty County, Texas

November 1, 2019, through January 31, 2020

Stuart J. Marcus
Stuart.marcus13@gmail.com

The following moths were seen at least once during the month indicated on sheets using black and mercury vapor lights at Trinity River National Wildlife Refuge.

ATTEVIDAE
Atteva aurea Nov, Dec

CRAMBIDAE
Anageshna primordialis Nov
Argyria lacteella Nov
Cnaphalocrocis trapezalis Nov
Crambus satrapellus Nov
Diacaloime adipdes Jan
Elophila tinealis Nov, Dec
Elophila obliteralis Nov, Jan
Euchromius ocelleus Dec
Herpetogramma phaeopteralis Nov, Dec, Jan
Hymenia perspectalis Nov, Dec, Jan
Microcrambus biguttellus Nov
Nomophila nearctica Nov, Dec
Oenobotys vinotinctalis Nov
Parapediasia teterrella Nov
Parapoynx allionealis Nov, Jan
Pyrausta acrionalis Nov
Pyrausta tyralis Nov, Dec
Samea ecclesialis Nov, Dec
Samea multiplicalis Nov, Dec
Spoladea recurvalis Dec

Udea rubigalis Dec, Jan
Urola nivalis Nov, Dec

EREBIDAE
Anticarsia gemmatalis Nov
Caenurgia chloropha Nov, Dec, Jan
Caenurgina erechtea Dec
Catocala maestosa Nov
Doryodes sp. Jan
Estigmene acrea Jan
Hypena scabra Nov, Dec, Jan
Hyphantria cunea Dec, Jan
Idia aemula Jan
Mocis marcida Nov, Jan
Orgyia leucostigma Nov, Dec
Palthis asopialis Nov, Dec
Schrankia macula Dec
Tetanolita floridana Dec, Jan
Tetanolita mynesalis Nov
Zale lunata Nov

GELECHIIDAE
Anacampsis fullonella Jan
Aristotelia rubidella Nov
Arogalea cristifasciella Jan
Chionodes discoocellella Nov, Dec
Dichomeris offula Dec
Frumenta nundinella Nov
Helcystogramma chambersella Dec
Mesophleps adustipennis Jan

GEOMETRIDAE

Cleora sublunaria Jan
Digrammia gnophssaria Jan
Eupithecia confusaria Nov, Dec, Jan
Eusarca confusaria Nov
Idaea tacturata Nov
Iridopsis defectaria Dec
Leptostales laevitaria Dec
Leptostales pannaria Dec, Jan
Lobocleta ossularia Nov, Dec, Jan
Macaria aequiferaria Jan
Nemoria elfa Nov
Nemoria lixaria Jan
Orthonama obstipata Dec
Phigalia denticulate Jan
Pleuroprucha insulsaria Nov, Dec
Psamatodes abydata Nov
Rindgea nigricomma Nov
Scopula compensata Jan
Tornos scolopacinaria Dec, Jan

GRACILLARIIDAE
Caloptilia stigmatella Jan
Caloptilia triadicae Nov, Dec

LASIOCAMPIDAE
Artace cribrarius Nov, Dec

LIMACODIDAE
Euclea delphinii Nov

NOCTUIDAE
Acronicta oblinita Jan
Agrotis ipsilon Dec
Argyrogramma verruca Nov
Bagisara repanda Nov
Charadra deridens Jan
Chrysodeixis includens Nov, Jan
Condica mobilis Dec
Condica sutor Nov
Elaphria chalcedonia Nov, Dec
Feralia major Jan
Galgula partita Nov, Dec, Jan
Leucania incognita Nov, Dec, Jan
Metaxaglaea viatical Dec, Jan
Micrathetis triplex Nov
Mythimna unipuncta Nov, Dec, Jan
Ozarba nebula Nov
Psaphida rolandi Jan
Rachiplusia ou Jan
Spodoptera eridania Dec
Spodoptera ornithogalli Dec, Jan

NOLIDAE
Afrida ydatodes Nov, Jan

PLUTELLIDAE
Plutella xylostella Nov, Dec, Jan

PTEROPHORIDAE
Adaina ambrosiae Jan
Emmelina monodactyla Dec
Lioptilodes albistriolatus Nov, Dec, Jan
Pselnophorus belfragei Nov, Dec

PYRALIDAE
Ephestia kuehniella Jan
Ephestiodes gilvescentella Dec
Galasa nigrinodis Nov
Hypsopygia binodulalis Nov
Hypsopygia nostralis Nov
Laetilia coccidivora Nov, Jan
Macrorrhinia endonephele Dec, Jan
Moodna ostrinella Nov
Penthesilea sacculalis Dec
Phycitodes reliquellum Jan
Tallula atrifascialis Nov, Dec
Tampa dimediatella Nov

SATURNIIDAE
Actias luna Jan

SPHINGIDAE
Enyo lugubris Nov, Dec, Jan

TINEIDAE
Homostinea curviliniella Dec

TORTRICIDAE
Aethes angulatana Dec
Ancylis comptana Nov
Bactra furfurana Jan
Chimoptesis gerulae Jan
Chimoptesis pennsylvaniana Jan
Chionodes discoocellella Jan
Clepsis peritana Nov, Dec, Jan
Coelostathma placidana Jan
Crocidosema plebejana Nov, Dec, Jan
Cydia caryana Nov
Cydia latiferreana Nov
Endothenia hebesana Jan
Epiblema otiosana Nov
Eugnosta bimaculana Nov
Platynota flavedana Jan
Platynota idaeusalis Nov, Dec, Jan
Platynota rostrana Jan
Rhopobota finitimana Nov
Platphalonidia felix Nov, Dec, Jan
Sparganothis sulfureana Dec

YPSOLOPHIDAE
Ypsolopha unicipunctella Dec


***Feralia major* (January 6, 2020)**


***Doryodes sp.* (January 26, 2020)**

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Moth records from Chuck Sexton, March - December 2019.

All the records listed below are documented with photographs on iNaturalist.org. I made a field trip to south and west Texas in March-April 2019 and did some mothing in several locations. Most other records are from a bioblitz in Mills County in October 2019 or from my home in Austin (Travis Co.). Records are listed alphabetically by COUNTY, family, genus, and species. Based on a review of iNaturalist, MPG, BG, and SCAN records, all represent new county records unless otherwise annotated.

BREWSTER CO., Big Bend NP

Crambidae	*Noctueliopsis bububattalis*	7 Apr 2019	Rare
Crambidae	*Noctueliopsis palmalis*	7 Apr 2019	Rare
Crambidae	*Noctueliopsis puertalis*	6 Apr 2019	
Crambidae	*Petrophila jaliscalis*	6 Apr 2019	
Erebidae	*Toxonprucha excavata*	7 Apr 2019	Needs confirmation
Gelechiidae	*Agnippe prunifoliella*	6 Apr 2019	
Gelechiidae	*Battaristis consinnusella*	6 Apr 2019	
Geometridae	*Glena interpunctata*	7 Apr 2019	
Noctuidae	*Tripudia quadrifera*	6 Apr 2019	Rare in W. Texas
Prodixidae	*Tegeticula* sp.	7 Apr 2019	Rarely documented
Pyralidae	*Laetilia dilatifasciella*	7 Apr 2019	Needs confirmation
Pyralidae	*Peoria johnstoni*	7 Apr 2019	
Pyralidae	*Phycitodes mucidella*	7 Apr 2019	Needs confirmation
Tortricidae	*Ofatulena duodecimstriata*	6 Apr 2019	

DIMMIT CO., Catarina

Geometridae	*Chlorospilates bicoloraria*	1 Apr 2019	
Geometridae	*Iridopsis defectaria*	1 Apr 2019	

GILLESPIE CO., Fredericksburg

Depressariidae	*Ethmia hagenella*	8 Apr 2019	

GONZALES CO., Palmetto SP

Geometridae	*Eutrapela clemataria*	31 Mar 2019	Rare
Noctuidae	*Schinia jaguarina*	31 Mar 2019	
Sphingidae	*Deidamia inscriptum*	31 Mar 2019	

HAYS CO., near Wimberley

Tortricidae	*Epiblemma abruptana*	4 May 2019	

MILLS CO., Timberlake Biological Station

(Bioblitz's at this ranch in May and October were organized by Dr. Russell Pfau of Tarleton State University. These efforts added hundreds of Lepidoptera records for Mills County, an area which had previously been understudied. A handful of the more significant records from the October effort are listed here; all are new Mills County records.)

Crambidae	*Lamprosema victoriae*	4 Oct 2019	
Crambidae	*Petrophila heppneri*	4 Oct 2019	
Crambidae	*Samea baccatalis*	4 Oct 2019	
Crambidae	*Surattha indentella* (= *Prionopteryx indentella*)	4 Oct 2019	
Erebidae	*Cisthene picta*	4 Oct 2019	
Erebidae	*Ommatochila mundula*	4 Oct 2019	
Erebidae	*Toxonprucha volucris*	4 Oct 2019	
Eutellidae	*Paectes abrostoloides*	5 Oct 2019	
Gelechiidae	*Agnippe prunifoliella*	4 Oct 2019	
Geometridae	*Erastria decrepitaria*	6 Oct 2019	N-most record?
Noctuidae	*Elaphria festivoides*	4 Oct 2019	
Noctuidae	*Lacinipolia erecta*	4 Oct 2019	
Noctuidae	*Metaponpneumata rogenhoferi*	4 Oct 2019	
Noctuidae	*Orthodes furtiva*	4 Oct 2019	
Noctuidae	*Ponometia libedis*	4 Oct 2019	
Noctuidae	*Ponometia phecolisca*	4 Oct 2019	
Noctuidae	*Spragueia jaguaralis*	5 Oct 2019	
Pyralidae	*Tacoma feriella*	4 Oct 2019	
Tortricidae	*Eugnosta bimaculana*	4 Oct 2019	

PRESIDIO CO., Big Bend Ranch SP

Cossidae	*Comadia albistriga*	2-3 Apr 2019	
Crambidae	*Noctueliopsis bububattalis*	2 Apr 2019	
Erebidae	*Melipotis novanda*	2 Apr 2019	
Erebidae	*Phytometra obliqualis*	2 Apr 2019	
Gelechiidae	*Eudactylota iobapta*	3 Apr 2019	
Gelechiidae	*Filatima albilorella*	3 Apr 2019	
Geometridae	*Anavitrinella atristrigaria*	2-3 Apr 2019	
Geometridae	*Digrammia decorata*	2 Apr 2019	
Geometridae	*Digrammia delectata*	2 Apr 2019	
Geometridae	*Philtraea paucimaculata*	3 Apr 2019	
Geometridae	*Pterospoda nigrescens*	2-3 Apr 2019	
Noctuidae	*"Oxycnemis" gracillinea*	2-3 Apr 2019	
Noctuidae	*Oxycnemis grandimacula*	2 Apr 2019	Needs confirmation
Noctuidae	*Sympistis atricolaris*	2 Apr 2019	
Noctuidae	*Tripudia flavofasciata*	2 Apr 2019	
Pyralidae	*Peoria johnstoni*	3 Apr 2019	
Pyralidae	*Sosipatra rileyella*	3 Apr 2019	
Tineidae	*Dyotopasta yumaella*	2 Apr 2019	
Tortricidae	*Pelochrista mirosignata*	2 Apr 2019	
Tortricidae	*Rudenia leguminana*	2 Apr 2019	

TRAVIS CO., Austin			
Crambidae	*Helvibotys helvialis*	17 May 2019	
Dryadaulidae	*Dryadaula terpsichorella*	28 Apr 2019	
Geometridae	*Erannis tiliaria*	6 Dec 2019	S-most record?
Noctuidae	*Acronicta morula*	31 May 2019	
Noctuidae	*Ulolonche culea*	22 May 2019	
Pyralidae	*Ancylostomia stercorea*	12 Apr 2019	
Pyralidae	*Dioryctria caesirufella*	22 Aug 2019	2nd Travis Co. rec.
Pyralidae	*Stylopalpia scobiella*	22 Aug 2019	2nd Travis Co. rec.
Tortricidae	*Cydia gallaesaliciana*	26 Apr 2019	2nd Travis Co. rec.
ZAPATA CO., San Ygnacio			
Crambidae	*Nomophila nearctica*	1 Apr 2019	

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Moth records from Greg Lasley (via Chuck Sexton), June - November 2019.

These records were obtained during an extended residence at Los Madrones Ranch in western Travis County. This part of the county has rarely been sampled, thus providing several new and rare county records. All records are documented with photographs on iNaturalist.org.

TRAVIS CO., Los Madrones Ranch			
Erebidae	*Apantesis parthenice*	21 Oct 2019	Rare
Erebidae	*Focillidia texana*	6 Oct 2019	Rare
Geometridae	*Leptostales laevitaria*	3 Sep 2019	
Lasiocampidae	*Gloveria sphingiformis*	2 Sep 2019	2nd Travis Co. rec.
Noctuidae	*Acopa carina*	18 Oct 2019	
Noctuidae	*Eviridemas minima*	23 Sep 2019	
Noctuidae	*Lineostriastira biundulalis*	26 Sep 2019	
Noctuidae	*Metaponpneumata rogenhoferi*	2 Sep 2019	Rare
Noctuidae	*Schinia sanguinea*	19 Sep 2019	
Tortricide	*Pelochrista matutina*	18 Jun 2019	Abt 4th Travis rec.

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

Harry sends in the following 2019 fall report for Virginia:

Autumn temperatures dropped dramatically commencing early November, effectively putting an end to the butterfly season in northern Virginia. Snow arrived in the form of several light snowfalls in early December, yet our Pierids did not fail to put on a final showing at year's end during the mini heat wave.

Butterflies [all HP reports are H. Pavulaan, others as noted]. County and state records show county in all-caps.

Colias eurytheme – Loudoun Co.: Leesburg, Ida Lee Town Park, 12/26/2019 (small, pale male observed; 55°F air temp.), 12/27/2019 (2 observed in flight; 53°F air temp.), 1/12/2020 (small male observed; 70°F air temp.).

Phoebis sennae – Bedford Co.: Forest, New London Tech Trails, 12/24/2019 (male photographed by Nora Cox, posted to 'Butterflies of the Eastern United States' Facebook group).

Polygonia comma – Loudoun Co.: Leesburg, Ida Lee Town Park, 1/12/2020; 70°F air temp.).

Junonia coenia – Loudoun Co.: Leesburg, 12/28/2019 (male form rosa net/released; photo posted to 'Butterflies of the Eastern United States' Facebook group. Air temp. 64°F).

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The Southern Lepidopterists' News is published four times annually. Membership dues are $30.00 annually. The organization is open to anyone, especially those with an interest in the Lepidoptera of the southern United States. Information about the Society may be obtained from Marc Minno, Membership Coordinator, 600 NW 34 Terrace, Gainesville, FL 32607, E-Mail: mminno@bellsouth.net, and dues may be sent to Jeffrey R. Slotten, Treasurer, 5421 NW 69th Lane, Gainesville, FL 32653.

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SOUTHERN LEPIDOPTERISTS' SOCIETY
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