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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/)

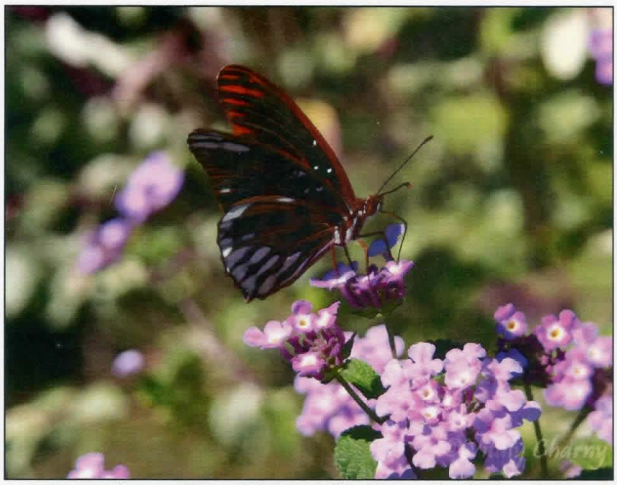
J. BARRY LOMBARDINI: EDITOR

ABERRATIONS IN ALABAMA BUTTERFLIES

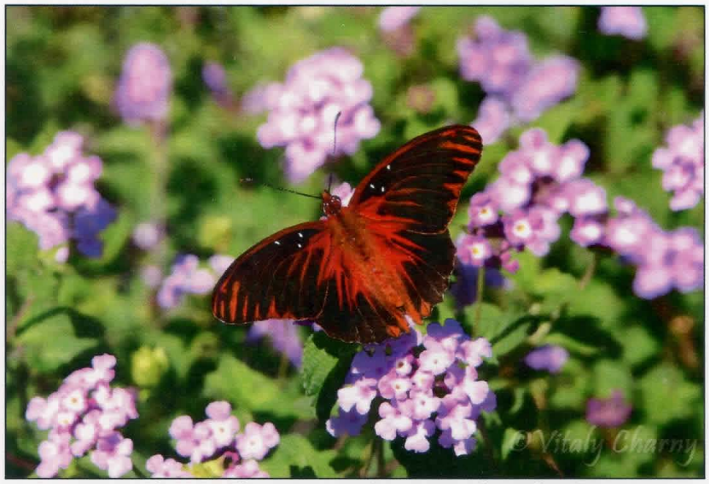
BY

VITALY CHARNY

Magisto cymela, Paint Rock River East, Jackson County, Alabama (May 12, 2001)



***Agraulis vanillae*, Huntsville Botanical Garden, Madison County, Alabama (October 21, 2007)**



***Agraulis vanillae*, Huntsville Botanical Garden, Madison County, Alabama (October 21, 2007)**

***Papilio glaucus*, Perry Lakes Park, Perry County, Alabama (August 23, 2015)**

***Limenitis arthemis*, Oakmulgee Wildlife Management Area, Bibb County, Alabama (May 18, 2013)**

***Erynnis juvenalis*, Oakmulgee Wildlife Management Area, Bibb County, Alabama (March 30, 2013)**

***Phyciodes tharos*, Cane Creek Canyon Nature Preserve, Colbert County, Alabama (May 27, 2012)**

***Phyciodes tharos*, Forever Wild Sipsey River Tract, Tuscaloosa County, Alabama (September 14, 2012)**

***Phyciodes tharos*, Forever Wild Sipsey River Tract, Tuscaloosa County, Alabama (September 14, 2012)**

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

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MANY THANKS TO THE FOLLOWING DONORS WHO CONTRIBUTED TO THE SL SOCIETY

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WELCOME TO OUR NEW MEMBER

Royal Tyler
Pro Pest and Lawn
4726 East Texas, suite 150
Bossier City, Louisiana 71111

ANTILLEAN DAGGERWING IN THE FLORIDA KEYS

BY

DAVID CZAPLAK AND JOHN V. CALHOUN

On 23-24 February 2017, the senior author visited the Key West Tropical Forest and Botanical Garden on Stock Island, Monroe County, Florida. On both days he observed and photographed a worn female Antillean daggerwing, *Marpesia e. eleuchea* (Fig. 1), which is common on Cuba and the Isle of Pines (Hernández 2004, Barro et al. 2011).

Fig. 1. Female *Marpesia e. eleuchea*, 23 February 2017, Stock Island, Monroe County, Florida (D. Czaplak). Inset shows the forewing of a female *M. petreus*. Arrows denote differences in the shape of the postdiscal line.

This species is similar to the ruddy daggerwing, *Marpesia petreus*, but is somewhat smaller, paler orange, and the forewing apex is less pronounced. The most obvious difference is the postdiscal line on the forewing, which is straight in *M. petreus*, but is undulating and bends inward before reaching the costal margin in *M. e. eleuchea* (Fig. 1). The subspecies *M. e. eleuchea* is somewhat less heavily marked than the Bahaman subspecies, *M. e. bahamensis* (Smith et al. 1994).

The butterfly observed on Stock Island remained in a small area called the "Blue Butterfly Garden," feeding frequently on buttonsage, *Lantana involucrata*, a tall flowering shrub with small blossoms. At other times it favored the shadier woods just beyond the buttonsage. The butterfly was quite worn, missing the lower portions of the hindwings, and the outer margins of the forewings were tattered. It was photographed using a Canon 300mm lens, as it did not allow close approach. A few *M. petreus* were also present.

Only two previous records of *M. e. eleuchea* are known from Florida. A single male was collected on Sugarloaf Key, Monroe County, on 14 October 1973 (Anderson 1974), and a female was photographed on Stock Island on 27 January 2005 (Reese 2007). This species may occur more frequently in Florida, but is overlooked or confused with *M. petreus*.

We thank Marc C. Minno for helpful information.

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Anderson, R. A., 1973. *J. Lepid. Soc.* 28:354-358.

Barro, A., R. Núñez, & J. Larramendi, 2011. *Lepidópteros de Cuba*. UPC Print, Vasa, Finland. 230 pp.

Hernández, L. R., 2004. *Field guide of Cuban –West Indian butterflies*. Ediluz, Maracaibo, Venezuela. 269+[20] pp., 31 pls.

Reese, M., 2007. Hot Scenes. Amer. Butterflies 15:56-57.

Smith, D. S., L. D. Miller & J. Y. Miller, 1994. *The butterflies of the West Indies and South Florida*. Oxford Univ. Pr., New York, New York. viii+264 pp., 32 pls.

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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)."

2018 SLS SUMMER FIELD MEETING – JULY 6 - 8, CHEROKEE NATIONAL FOREST, TENNESSEE

BY

JOHN HYATT

The 2018 Southern Leps Midsummer Field Meeting is just around the corner!

First of all, allow me to apologize for my total and utter inability to proofread text. The article in the March, 2018, SLS News announcing this upcoming field trip had the date wrong in the very first sentence. **The meeting will begin on Friday, July 6, and continue until Sunday, July 8 — not July 8–10 as stated in the original article.** The dates elsewhere in the March article were all correct.

Full details of the field trip plans were given in the March issue, so I will not repeat much here. But I do want to ask that members planning to attend let me know a couple of weeks ahead of time, in order to facilitate planning. Either an e-mail to jkshyatt@centurylink.net or a phone call to (423) 279-0827 would be appreciated.

I have arranged a group rate of $55/night for single rooms at the Erwin, Tennessee, Super 8 Motel if we reserve as many as 5 rooms. If you plan to stay at the Super 8, their phone number for reservations is (423)743-0200. Tell them you're with the "*Hyatt group*" in order to get the discount rate.

After an unusually cool winter and long, wet, cold spring, the Unaka Mountains in the Cherokee National Forest are bursting with new growth and moths are flying everywhere. Butterflies are extremely scarce this spring (we had a good flight for a few days in early April, followed by two nights of hard freeze and two weeks of cold rain, after which very few butterflies seem to be flying), but perhaps the summer brood will make up for the poor spring flight.

I look forward to seeing a good group at my house Friday afternoon, July 6, for a cookout, followed by a weekend of successful and enjoyable collecting and photography. All necessary addresses, phone numbers, and driving directions were given on page 17 of the March, 2018, SLS News. Feel free to contact me if you need more information.

In the Unaka Mountains near Erwin, Tennessee (Photo by Charles Foster).

MAKING MICRO LEPIDOPTERA POINTS THAT WORK

BY

F. MATTHEW BLAINE

Back in 1973 I started to collect Lepidoptera seriously. Years before that, as a young boy, I made many small insect collections in cigar boxes or in photographic paper boxes. These early collections eventually were turned to dust by Dermestid beetles. After 1973 things were different. I discovered PDB and constructed some homemade Schmidt Boxes.

I had purchased a new bug killing machine to rid my yard of mosquitoes. It was a bug zapper which consisted of a UV tube light surrounded by electrified wires. When a mosquito was attracted to the light it was electrocuted by the wires that it touched when it approached the bulb. It dawned on me that this would be an excellent way to catch moths. I only had to remove the electrocution wires and add baffles! Everything else including the ballast, wiring, lamp hanger, UV bulb, and bulb holder was already in place. The next day our local mosquitoes breathed a sigh of relief as I modified the bug zapper by (after unplugging it), removing the electrifying wire screen around the UV bulb and replacing it with three baffles. I made the baffles from a gallon milk jug (Fig. 1). I had an old plastic bucket to which I added a funnel made from heavy duty aluminum foil and I was in business. I began collecting moths which included many micro moths.

Fig. 1. Late iteration of UV Bug Zapper converted to moth trap with 4 clear plastic vanes and ropes to hang plastic bucket with funnel underneath.

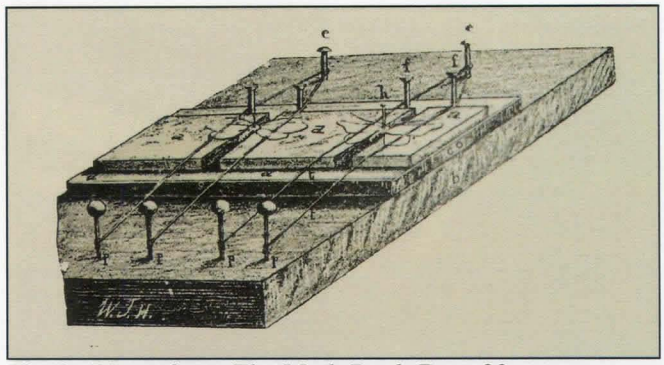

Fig. 2. Photo from *The Moth Book*, Page 20.

My next problem was learning how to prepare a micro moth. I had constructed spreading boards for butterflies and large moths but nothing for the micros. I had purchased a Dover reprint of W. J. Holland's Moth Book and I found in Chapter 2 page 20 a description and image of how to construct the special spreading board necessary to prepare the minute micro moths (Fig. 2). It consisted of a wood base topped with a thin sheet of cork. Small pieces of glass were then attached to the cork using Shellac as an adhesive (a). The glass was cut into small squares and left with a space between each in which the body of a micro lepidoptera would fit. The wings would be placed on the glass and spread. To hold the wings in place threads were stretched over the wings and attached on each side to pins driven into the cork/wood base on opposite sides. It is necessary to maintain tension on the thread that holds the wings in place. One is required to tie the thread tightly to the pins while maintaining the tension. I actually made this contraption and attempted to spread micro lepidoptera on it. I found for one person it was extremely difficult if not impossible. I modified the design by removing the glass squares (mine were made from microscope slides which I found very difficult to cut). I then replaced it with some expanded polyethylene foam. I cut groves in the foam and used glassine paper with pins to hold the spread wings in place. I drilled a hole in each grove to accommodate a 000 insect pin thus eliminating the use of a minuten. This was awkward but it worked. I found the whole process much less appealing than simply spreading larger moths and butterflies. As a result I spent more time on larger moths and butterflies spreading fewer of the smaller moths over the next years. However I continued to be very interested in micro moths and read as much as I could about them.

Move forward 44 years. I attended the first Microlepidoptera meeting in Denver, Colorado. There I saw the impressive setup that Todd Gilligan had made

(Fig. 3). He told me that he used .15 minutens to make his points and the same for most of his pinning. I picked up a lot of interesting ideas at that meeting which I have used and elaborated on to satisfy my personal needs.

Fig. 3. Todd Gilligan's beautiful micro moth strips with points using .15 minutens.

I found that .15 points were too delicate for me to use. They had a tendency to bend when I attempted to pierce my card stock points. I made some with .20 minutens which worked a little better but were still very delicate for me to handle. I did more research and found some suggestions of using #00 entomological pins cut down for making pinning points. I found that these worked but that the stainless steel ones still had a tendency to back out of the pinning foam. I experimented with 000 pins and 0 pins also. Eventually I found that 00 enamel insect pins cut down to approximately 10mm in length worked the best to make pinning points for me. The enamel gave them a little more bite or friction which kept them pinned in the foam where I put them. I also found that they can be reused more times than the ones that I made with stainless steel minutens.

As I made the 00 points I discovered that it was quite difficult to cut a tempered pin. I used wire cutters which often did not cut completely through the pin. I also discovered that holding each pin and clipping it to the proper length was difficult and time consuming. Eventually I found that tin shears worked well and that pinning the 00 in a scrap of polyethylene foam makes the work much easier.

I pinned one hundred 00 enamel insect pins in a scrap of foam that I purchased from BioQuip to put in the bottom of my Cornell Drawers. When I cut the foam to fit the bottom of the drawer I have two small scrap pieces left. I use one length to hold 100 pins by pushing the pins through the foam on a hard surface that stops the pin from going further (Figs. 4-12). I then hold the strip in a deep trash can to catch the tops of the pins as they fly off while cutting. I use a pair of tin sheers and work my way along the top of the foam cutting the pin tops off a half inch or so as I go. I can bend the foam strip to make it easier to cut. After cutting I leave the approximate 10mm point ends in the foam. I take one at a time out with tweezers pressing it into the wide end of my point on a small block of soft balsa wood. I either cut the points from card stock with scissors or with a point punch. The points that I have produced with the 00 enameled insect pins have worked extremely well for me and seem to hold up after repeated usage. I have now used them for thousands of micros over the past few years and find them superior to the ones that I made with minutens.

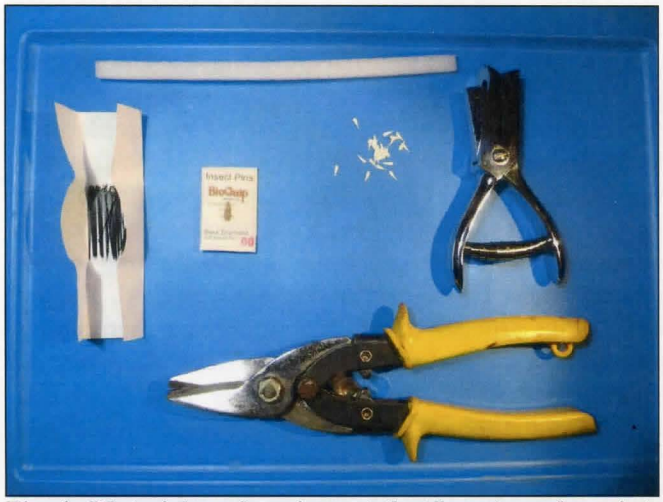

Fig. 4. Materials and equipment that I use to make points for micro moths.

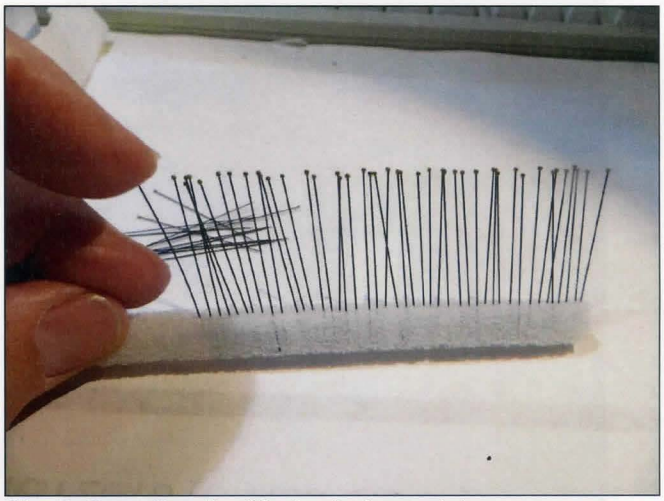

Fig. 5. Inserting the 00 pins in foam strip.

Fig. 6. One hundred 00 pins with shears.

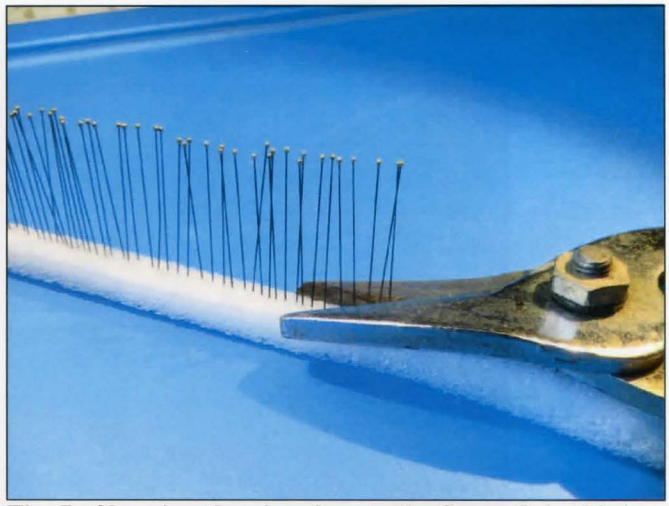

Fig. 7. Shearing the pins close to the foam. I do this in a deep trash can to eliminate the tops of the pins from flying on the floor.

Fig. 8. All 00 pins sheared off at approximately 10mm ready for pinning into points.

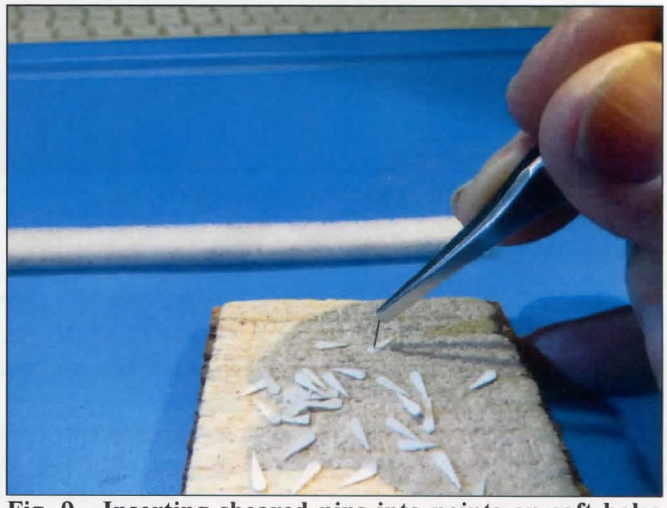

Fig. 9. Inserting sheared pins into points on soft balsa block.

Fig. 10. Storage box used to keep completed points ready for use when the box is filled. Plastic box has soft foam bottom glued in.

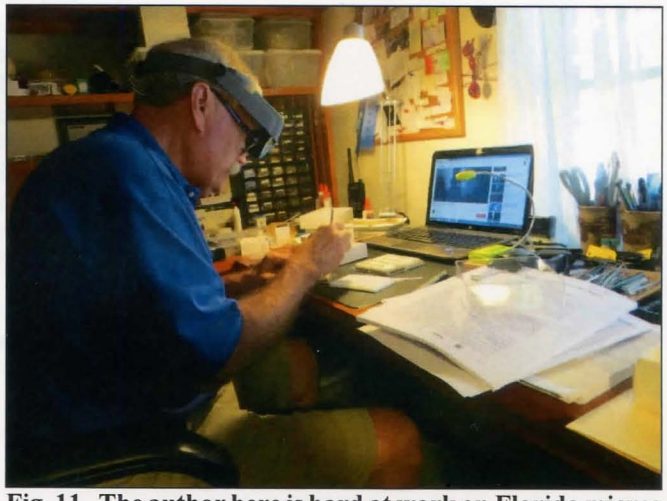

Fig. 11. The author here is hard at work on Florida micros using 00 points with excellent results.

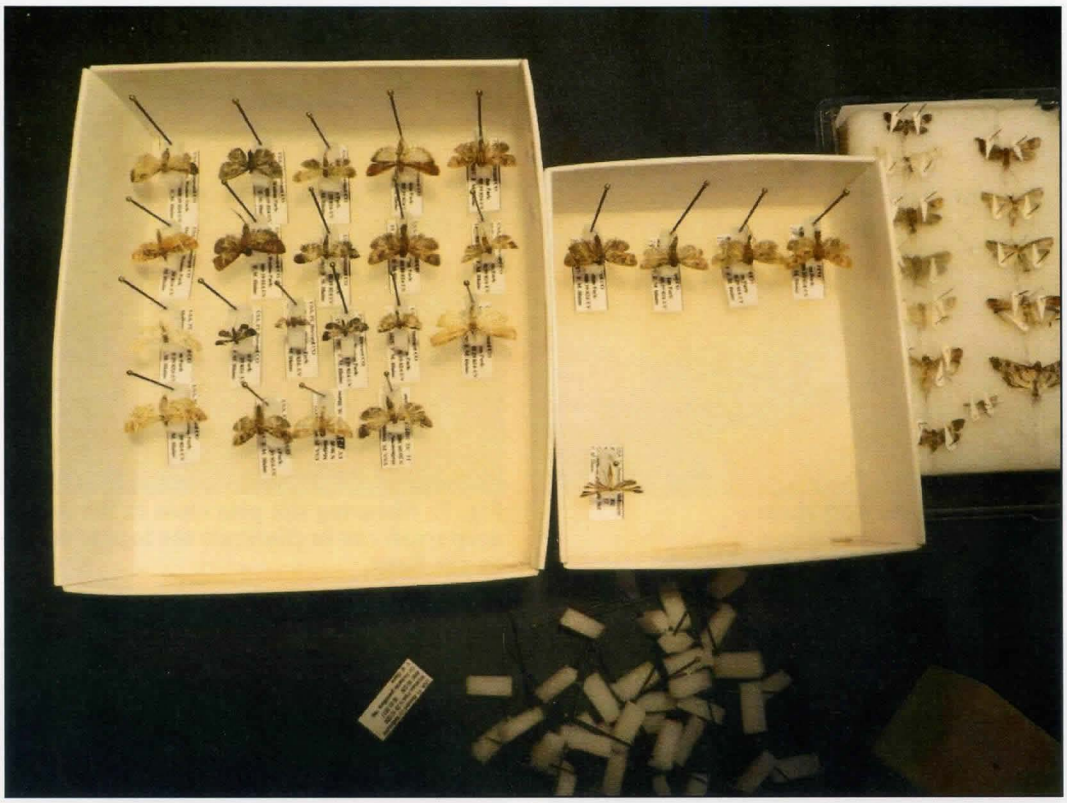

Fig. 12. The finished product.

Credits

Blaine, Dona W., photo #11, Editorial recommendations, and 50 years of companionship.
Blaine, F. Matthew, photos 1-12 excluding 11.
Gilligan, Todd M., Conversation at Micro Lepidoptera Meeting #1.
Holland, W. J., *THE MOTH BOOK, A Guide to the Moths of North America*, Dover Publications, Copyright 1968. Page 20.

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SCHINIA ULTIMA (STRECKER, 1876) IN LOUISIANA

BY

RICKY PATTERSON

Fig. 1. ***Schina ultima*** ♂

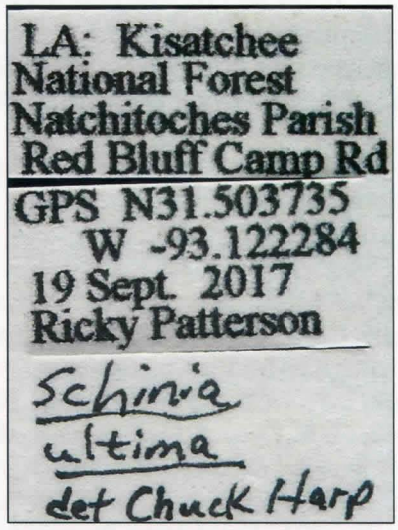

Fig. 2. ***Schinia ultima*** labels

Fig. 3. ***Schinia arcigera*** ♂

The small and obscure flower moth ***Schinia ultima*** (Strecker) was originally described from Texas (Type locality). Recently, a single male specimen of this flower moth (Figs. 1 and 2) was collected September 19, 2017, in an ultraviolet light trap by the author at the Longleaf Vista area in Kisatchie National Forest, Natchitoches Parish, Louisiana. The habitat at this location is longleaf pine forest, maintained as open understory by frequent controlled burns by the US Forest Service. Also, several out of control wildfires have also occurred in these same areas over the past many decades. This wilderness area occasionally yields specimens that are normally found farther west into Texas and even from Mexico.

Despite light trapping across this general area for 35 years by Vernon Brou and/or the author, this specimen of ***Schinia ultima*** represents the first documented record of this species within Louisiana. Hardwick (1996) listed the range of ***ultima*** to include "southern Kansas southward through Oklahoma and western Arkansas to southern Texas". The range map on the website 'Moth Photographers Group' (MPG) shows a record for ***ultima*** in Louisiana at approximately the multi-decade Abita Springs study site of Vernon Brou. Brou stated (pers. comm.) "dot locations for more than 1,000 species on MPG at Abita Springs, St. Tammany Parish, Louisiana, were improperly placed there by the site's webmaster". Brou indicated he is unaware of any records of this moth occurring in Louisiana other than the record discussed here. Chuck Harp stated (personal communication) that he too, has no previous records of ***ultima*** from Louisiana, but that the hostplant (***Heterotheca subaxillaris*** (Lamarck) Britton and Rusby) grows in sandy waste areas of the state. It should be mentioned that by looking at a large sample of several thousands of phenotype variations of adult ***Schinia arcigera*** (Fig. 3) from Louisiana, some variably marked specimens of this species could be confused with ***ultima***, without careful examination. Brou (2003) previously reported ***arcigera*** for Louisiana, including Natchitoches Parish.

It is important to note that Hardwick (1978) stated concerning ***Schinia ultima***, *"Strecker (1876, p. 122). The original description of* ***ultima*** *was evidently based upon a single specimen taken in Texas by Boll. There are two specimens labelled as 'original type' in the Strecker Collection, but both specimens bear the number '71' rather than the '49'*

indicated in the original description and both specimens differ from the original description in several details. I do not consider either specimen to represent the holotype, and the latter must be presumed lost."

The nearest east Texas records to Louisiana reflected in the Butterflies and Moths of North America website are near Beaumont, Texas, and another near Nacogdoches, Texas (not to be confused with Natchitoches, Louisiana). Based on the information presented here, this capture of ***Schinia ultima*** in northwest Louisiana appears to be an eastward range extension for this species, although not a totally unexpected occurrence. This species was not addressed by Covell (1984), nor Powell and Opler (2009).

I thank Chuck Harp for confirming the identification of this specimen, and Vernon A. Brou Jr. for helpful suggestions.

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Brou Jr., V.A., 2003. Schinia arcigera in Louisiana. *South. Lepid. News* 25: 120.

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

Hardwick, D.F., 1978. An analysis of the Heliothidine Types (Noctuidae) of Herman Strecker with Lectotype designations.

Hardwick, D.F., 996. *A Monograph to the New World Heliothentinae (Lepidoptera: Noctuidae).* Centre for Land and Biological Resources Research, Agriculture Canada, Ottawa, Canada, 1996.

Powell, J. A. and Opler, P. A., 2009. *Moths of Western North America.* University of California Press, 2009.

Strecker, H., 1876. *Lepidoptera, Rhopaloceres and Heteroceres indigenous and exotic.* Number 13. Reading, Pa. P. 109-124.

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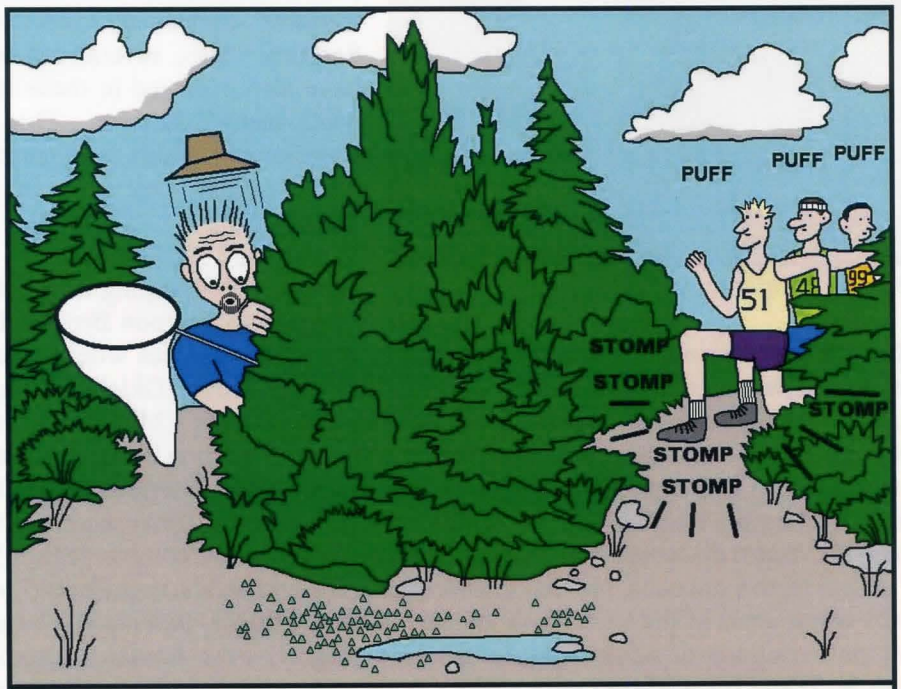


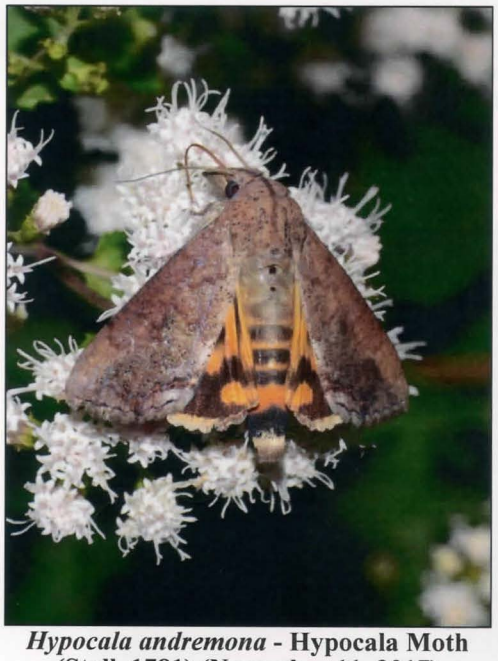
"Collectors' Corner" (by Harry Pavulaan)

MOTHS RESTING / NECTARING ON SHRUBBY BONESET (*AGERATINA HAVANENSIS*)

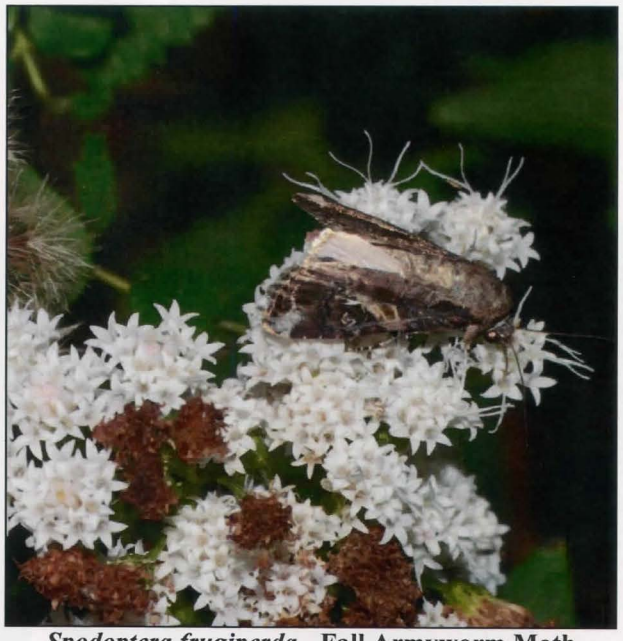
BY
DELMAR CAIN

Finding moths to photograph does not always require a bright light and a sheet. If you live where plants are blooming, try using a flashlight to find moths resting or nectaring on the plants in the dark. The flashlight also aids in focusing on the subject.

All the following moths were resting / nectaring in the early evening on Shrubby boneset (*Ageratina havanensis*) on property where my wife, Ann, and I live about 10 miles northeast of Boerne, Texas. The small acreage on which my wife and I reside was part of an Art and Conversation program at the Cibolo Nature Center in Boerne, which required us to name our property. We named the area Cavewater, since the water in Spring Creek (except in a substantial rainfall) which runs through our property comes primarily from a cave on the adjoining acreage.



Hypocala andremona **- Hypocala Moth (Stoll, 1781) (November 11, 2017)**



Spodoptera frugiperda **- Fall Armyworm Moth (Smith, 1797)(November 10, 2017)**

Melanochroia chephise **- White-tipped Black Moth (Cramer, 1782) (November 11, 2017)**

Pyrausta onythesalis **(Walker, 1859) (November 11, 2017)**

Cyclophora nanaria **(Walker, 1861) (November 11, 2017)**

Pilocrocis ramentalis **- Scraped Pilocrocis Moth (Lederer, 1863) (November 11, 2017)**

Pleuroprucha insulsaria **- Common Tan Wave Moth (Guenée [1858]) (November 11, 2017)**

Eubaphe unicolor **(Robinson, 1869) (November 14, 2017)**

(Delmar Cain, E-Mail: dlc1942@gvtc.com)

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OIKETICUS ABBOTII GROTE, 1880 (LEPIDOPTERA: PSYCHIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

Fig. 1. ***Oiketicus abbotii*** Grote, male.

The large bagworm moth ***Oiketicus abbotii*** Grote (Fig. 1) is a fairly common species in Louisiana. There are no appreciable variations in appearance among tens of thousands of adult males captured over the past 60 years by this author, in this state. The antennae are black, and partially bipectinate, broad at base, and abruptly narrowing in width from middle of antennae to the apex. The dorsum of the head, thorax and abdomen are also black (fuscous) in color. The forewings and hindwings of males exhibit diffuse sketchy areas of medium compacted black scales within most areas. The areas encompassed by the borders of somewhat triangular discal cell near the center of the forewings and beyond have the most dense accumulation of black scales. The borders on both forewing discal cells are delineated by an absence of scales along veins, and are especially pronounced and broadest along the terminal edge. Females are wingless.

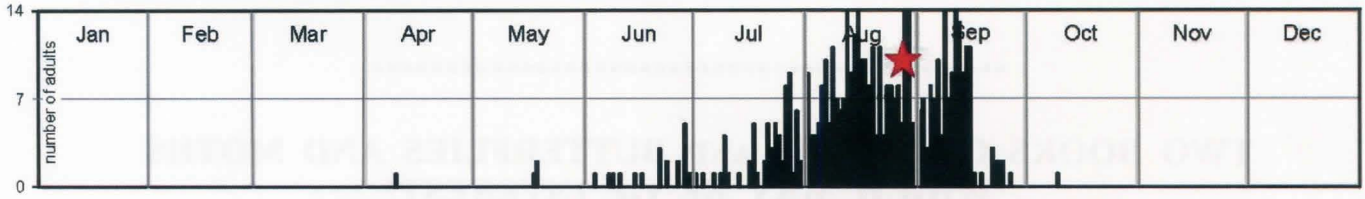

Fig. 2. Adult ***Oiketicus abbotii*** captured in Louisiana. n = 517

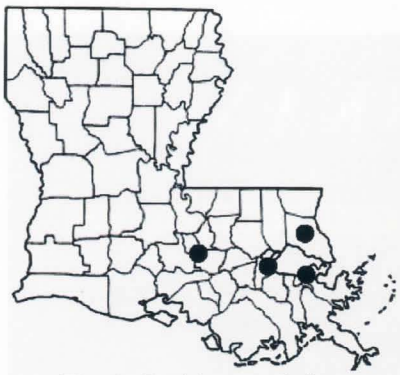

Fig. 3. Parish records for ***O. abbotii***

Within Louisiana, ***abbotii*** appears to have one annual brood peaking in late August, with records of adults in this study occurring during the months of April to October. This phenogram is a multi-year composite representing dates of capture over a brief time interval (Fig. 2). Over the past 49 years, adult males were captured using portable and stationary light traps, utilizing combinations of mercury vapor blacklights, reflector sunlamps, fluorescent blacklights (BL), and fluorescent blacklight blue (BLB) lamps.

The venter of the head, thorax, legs, and abdomen of ***abbotii*** are black (fuscous) in color, and unremarkable. Davis (1964) listed the geographical distribution of ***abbotii*** to include "a great part of the Atlantic Plain from North Carolina to Texas". The Type locality of ***abbotii*** is documented simply as the state of Texas, and the Type specimen is located in the U.S. National Museum.

Davis (1964) addressed the bagworm moths of the Western Hemisphere in a comprehensive and remarkable preliminary revision of the family Psychidae, and treated 13 species in the genus ***Oiketicus*** Guilding, (1827) occurring in the New World. Davis illustrated ***abbotti***, and examined 109 males, three females, and 238 cases located at the U.S. National Museum and the American Museum of Natural History, from the states of Virginia, South Carolina, Florida, Georgia, Louisiana, and Texas. Covell (1984) and Powell and Opler (2009) did not mention this species.

Knudson & Bordelon (1999) listed four members of the genus to occur in the state of Texas: ***Oiketicus toumeyi*** Jones, ***Oiketicus townsendi townsendi*** Towns., ***Oiketicus townsendi dendrokomos*** Jones, and ***Oiketicus abbotii*** Grt.

Heppner (2003) addressed two species of the subfamily *Oiketicinae*. This same author listed the range of ***abbotii*** to include: Delaware to Florida, Louisiana, Texas, and Mexico and listed the dates (adults) on record to include

February to May, and August to September. Heppner also provided a large list of at least 52 different recorded host plants: species of trees, shrubs, and others. Brou (2017) reported on the second large bagworm species of the subfamily *Oiketicinae* occurring in Louisiana, ***Thyridopteryx ephemeraeformis*** (Haworth,1803).

Previously, Davis (1964) listed specimens of ***abbotii*** from Orleans Parish in Louisiana with dates from late May to early July. In this study, currently confirmed parish records in Louisiana are illustrated in Fig. 3.

I thank Don R. Davis for commenting upon, and providing helpful comments concerning this study.

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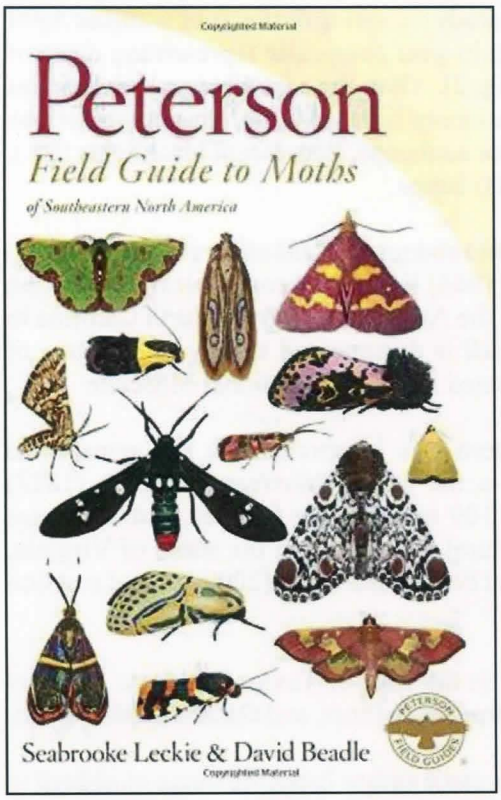
TWO BOOKS ON MOTHS AND BUTTERFLIES AND MOTHS WHICH MAY BE OF INTEREST!



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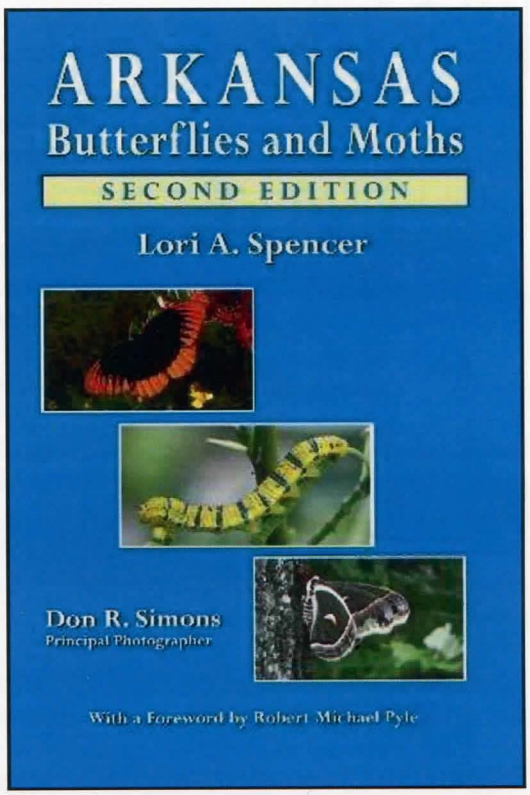

THE GENUS *STRATEGUS* KIRBY (COLEOPTERA: SCARABAEIDAE: DYNASTINAE) IN LOUISIANA

BY

JUNSUK KIM AND VERNON ANTOINE BROU JR.

The dynastine scarab beetle genus ***Strategus*** Kirby (Coleoptera: Scarabaeidae: Dynastinae) contains 33 extant species, with only six species currently known to occur in the United States (Endrödi 1985, Ratcliffe 1976, Ratcliffe and Cave 2017). Among these six, ***Strategus aloeus*** (Linnaeus) and ***Strategus mormon*** Burmeister were previously documented to occur in Louisiana (Ratcliffe and Cave, 2017). ***Strategus antaeus*** (Drury), first reported in Louisiana by Ratcliffe and Cave (2017) were based upon adults captured by the senior author. To these three species we add one additional species occurring in Louisiana, ***Strategus splendens*** (Palisot de Beauvois), and provide dates of adult captures, and currently known localities (parish records ex label data) for all four members of the genus in Louisiana.

This study compiles records for 686 adult specimens of ***Strategus*** captured or documented within the state of Louisiana in the private collections of the authors, colleagues, the Louisiana State Arthropod Museum (LSAM), and previously published reports. Adults housed at LSAM were examined and confirmed personally by the senior author, based upon Ratcliffe (1976). Details concerning nomenclature changes, identifications, and life histories of these species are found in Ratcliffe (1976) and Ratcliffe and Cave (2017).

Strategus aloeus (Linnaeus, 1758) (Images 1a, b, c, and d).

Ratcliffe (1976) stated ***aloeus*** is the species most widely distributed and is commonly found from the southern United States through Central America to central Brazil and Bolivia. The earliest reference we were able to locate for ***Strategus*** reported within Louisiana was by Schufeldt (1884), who stated many ***aloeus*** larvae were taken under old logs and boards in New Orleans in early spring of 1883. This current century-long compilation of 619 adult specimens from Louisiana originated from the collections of: Vernon A. Brou Jr., Junsuk Kim, Ricky Patterson, Elisabeth Pigott, and LSAM. Specimen label dates ranged from 1915 to 2018. The peak adult flight period in Louisiana occurs in late June-early July, and adults have been taken January through October (**Fig. 1**). The confirmed records and numbers of specimens found included the following parishes: Beauregard (17), Caddo (1), East Baton Rouge (44), East Feliciana (2), Evangeline (6), Franklin (10), Iberville (2), Jefferson Davis (1), Livingston (3), Natchitoches (24), Plaquemines (3), Pointe Coupee (1), Rapides (17), St. John the Baptist (9), St. Landry (4), St. Martin (1), St. Tammany (468), Tangipahoa (2), Vermilion (1), West Baton Rouge (1), West Feliciana (2), and with additional verified records not delineated here from Orleans, and St. James (**Fig. 3**).

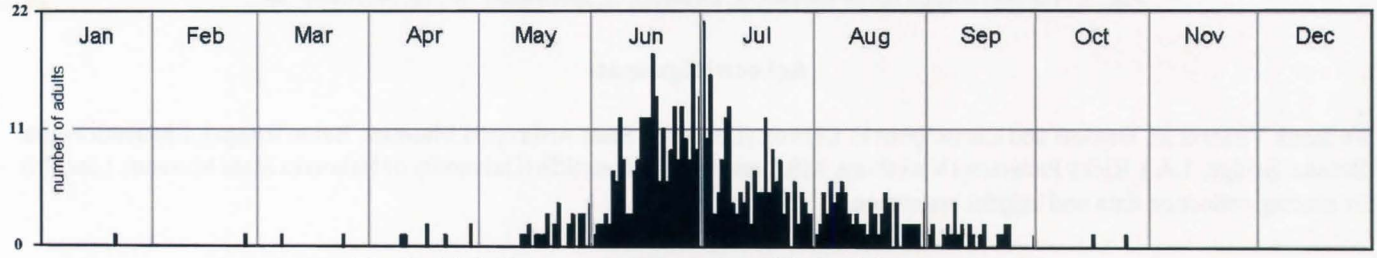

Fig. 1. Adult ***Strategus aloeus*** captured in Louisiana. n = 615

Strategus antaeus (Drury, 1773) (Images 2a, b, c, and d).

Ratcliffe (1976) stated the range of ***antaeus*** to include the eastern United States, west to Oklahoma and Texas, with no mention of records for the state of Louisiana. Ratcliffe and Cave (2017) first reported ***antaeus*** in Louisiana based upon a series of specimens previously captured in Natchitoches Parish by the senior author. We list here 63 verified specimens from the following sources: collections of Vernon A. Brou Jr., Junsuk Kim, Ricky Patterson, and the LSAM. Specimen dates ranged from 1939 to 2017. The peak adult flight period in Louisiana occurs from the last week of May to the first week of June, and adults have been taken from May into September (**Fig. 2**). The confirmed records and numbers of specimens found include the following parishes: Acadia (1), Natchitoches (59), Rapides (1), St. Tammany (1), and Tangipahoa (1) (**Fig. 3**).

Strategus splendens (Palisot de Beauvois, 1809) (Image 3).

Ratcliffe (1976) stated ***splendens*** is found in the southeastern USA. We list a single record, a male from the collection of LSAM, dated 10 June 1958, East Baton Rouge parish. The parish record is illustrated in Figure 3. This species is newly reported for the state of Louisiana.

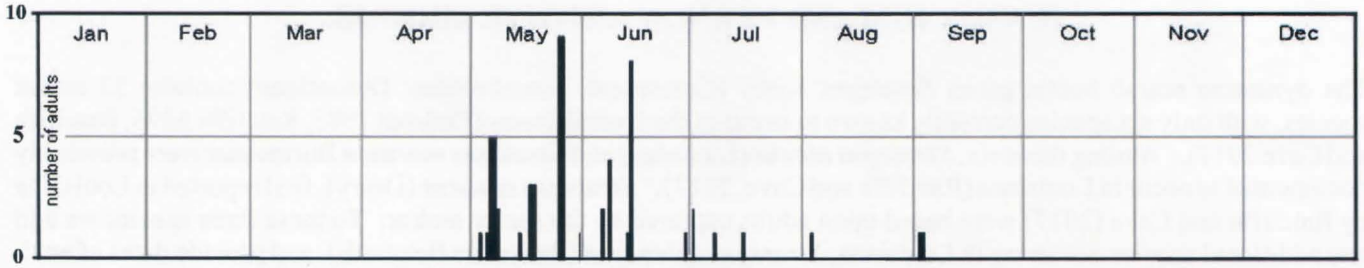

Fig. 2. Adult ***Strategus antaeus*** captured in Louisiana. n = 63

Strategus mormon Burmeister, 1847 (Image 4).

Ratcliffe (1976) stated ***mormon*** is found in southcentral USA. Ratcliffe and Cave (2017) listed records of three adults from Morehouse Parish, Louisiana. Ratcliffe stated these three specimens were old records without data, except for the parish designation (pers. comm.). These Louisiana specimens could not be located. The parish record is illustrated in Figure 3.

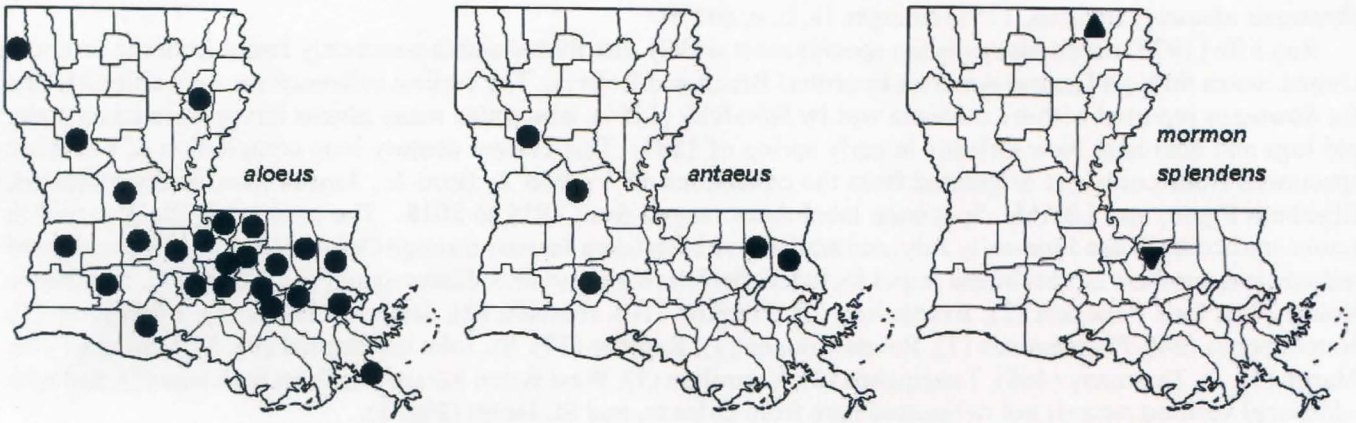

Fig. 3. Parish records for ***S. aloeus, S. antaeus, S. splendens*** ▼, ***S. mormon*** ▲.

Acknowledgements

We thank Victoria M. Bayless and Christopher E. Carlton (Louisiana State Arthropod Museum, Baton Rouge), Elisabeth Pigott (Breaux Bridge, LA.), Ricky Patterson (Vicksburg, MS.), and Brett C. Ratcliffe (University of Nebraska State Museum, Lincoln) for sharing collection data and helpful assistance.

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[Article continued on next pages.]

1a. *Strategus aloeus* male, lateral view (Natchitoches Parish).

1b. *Strategus aloeus* male, dorsolateral view (Natchitoches Parish).

1c. *Strategus aloeus* female, lateral view (Rapides Parish).

Images — The Genus ***Strategus*** Kirby in Louisiana — Kim and Brou

1d. ***Strategus aloeus*** female, dorsolateral view (Rapides Parish).

2a. ***Strategus antaeus*** male, lateral view (Natchitoches Parish).

2b. ***Strategus antaeus*** male, dorsolateral view (Natchitoches Parish).

Images --- The Genus ***Strategus*** Kirby in Louisiana --- Kim and Brou

2c. ***Strategus antaeus*** female, lateral view (Natchitoches Parish).

2d. ***Strategus antaeus*** female, dorsolateral view (Natchitoches Parish).

3. ***Strategus splendens*** male, lateral view. (left elytron missing) (East Baton Rouge Parish).

Images — The Genus ***Strategus*** Kirby in Louisiana — Kim and Brou

4. *Strategus mormon*, male, dorsal view (Reno County, Kansas). Courtesy B. C. Ratcliffe, University of Nebraska State Museum.

Images — The Genus ***Strategus*** Kirby in Louisiana — Kim and Brou

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KNOCKING THE COBWEBS OFF

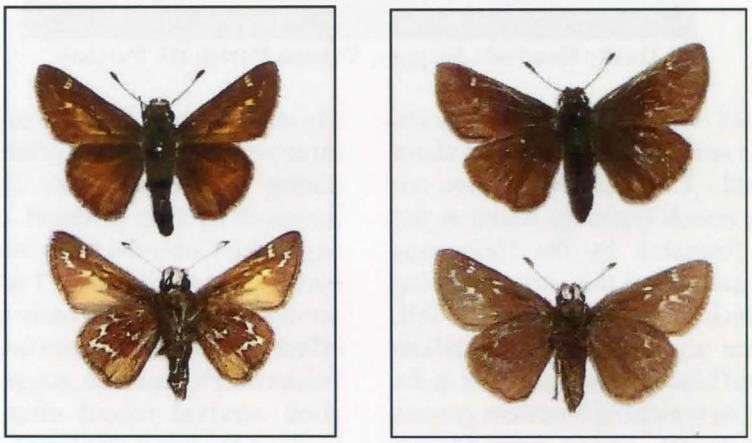
BY

CRAIG W. MARKS

Of the 154 species of butterflies and skippers that have been reported in Louisiana, I have personally seen 153. I had to go to Texas to see Yucca Giant-skippers (*Megathymus yuccae*), to Oklahoma to find Leonard's (*Hesperia leonardus*) and Dotted Skippers (*Hesperia attalus*)(Marks #1) and to Arkansas to study Dianas (*Speyeria diana*) and Byssus Skippers (*Problema byssus*)(Marks #s 2 & 3), in each instance because I had been unable to find those species in Louisiana. That leaves only one species left, Cobweb Skippers (*Hesperia metea*).

The Cobweb Skipper is a small skipper that is restricted in host plants, habitat and flight period. In its southern range, it only flies in early spring, late March into early April. Cech and Tudor described the habitat as dry or successional pine barrens, pine-oak savannas, open scrub, and burn sites. To the east, It has been occasionally reported in Mississippi, taken in late March to late April, generally rare and scattered (Mather). It was also reported from southwest Arkansas in Miller County (which is directly across the state line from Caddo Parish)(Bess), and in the piney woods region of northeast Texas (Wauer).

In Louisiana, the skipper was listed in 2005 as a species of conservation concern, and then later removed from the list in 2013. First reported within the State by Gayle Strickland, he found it in late March,1969, in St. Helena Parish. He reported a dozen caught between March 24 and April 8, a few miles east of Greensburg in habitat identified as long-leaf pine-scrub hills (the area is no longer open pine woods). Strickland described this skipper as extremely dark with the males only showing, "a trace of yellow adjacent to the stigma." The females were reported to be, "featureless except for small white spots on the forewing beneath." Kilian Roever verbally reported finding this skipper in mid-March the following year, in the Kisatchie National Forest Unit in Natchitoches Parish. I am unaware of any records for Louisiana since the '70's.



Male and female, St. Helena Parish, March 24, 1969 (from the collection of G. Strickland)

Roever reported verbally that this skipper occurs in the same areas as Dusted Skippers (*Atrytonpsis hianna*) where its foodplant grows in dry, open pine woodlands, but about seven to ten days earlier. He described them as much more wary than Dusted Skippers (which are wary themselves). Shapiro had similar comments re his experiences with this skipper in Pennsylvania. Roever also advised that it was attracted to blackberry blooms and white clover. It is colonial. The males stake out territories on dirt roads. Its flight is reported to be weak with the males perching on or near the ground. On the East Coast, it is reported to use Little Bluestem and Big Bluestem. Roever reported to me that it also used broomsedge.

I started my search for this little brown skipper in Kisatchie NF, visiting the specific spots identified by Roever without luck, possibly because the road in question, now known as the Scenic By-Way, has since been straightened and paved. Each spring, starting in mid-March, I, along with Jeff and Jean Trahan and Rosemary Seidler, searched multiple areas within that Unit where we had noted appreciable quantities of little bluestem. The search has extended over nine years, and while every year we found colonies of Dusted Skippers (Marks #4), no Cobwebs have been found.

I also drove to St. Helena Parish in the Greensburg area. As I noted above, the habitat at the specific spot where Strickland and Roever had found Cobwebs had changed

and was not accessible. I checked out Hutchinson WMA just east of Greensburg twice, both times in late March. I found some bluestem growing but very few skippers flying and no Cobwebs. On each of those occasions, I drove east to Sandy Hollow WMA in neighboring Tangipahoa Parish. I found good populations of Dusky Roadside Skippers (*Ablyscirtes alternata*) but no Cobwebs.

We extended our search to the Kisatchie Units in Rapides, Winn and Vernon Parishes in March of 2016 and 2017, searching likely locations such as the Wild Azalea Seep Area, Kieffer Prairie, Drake's Bog and Dove Field. We saw a lot of butterflies, including several Frosted Elfins (*Callophrys irus*) in Winn Parish and Dusky and Pepper & Salt Roadside Skippers (*A. hegon*) in Rapides and Vernon Parishes, without seeing any Cobwebs. After attending the annual meeting of the LA Native Plant Society, I learned of two possible locations under the management of The Nature Conservancy, Persimmon Gully in Calcasieu Parish and CC Road Savanna Preserve in Allen Parish. Our group secured permission to go on the properties and did so in late March, 2017. We saw a lot of nice leps and odes, but, again, no Cobwebs.

Dusky Roadside Skipper, Vernon Parish (D. Patton)

In order to better understand why this skipper appears to be so rare in the locations searched, more details about its life history are required. The caterpillar, when not feeding, rests in a silken pouch typically found at the base of the foodplant. Research by the Heitzmans indicate later instars tunnel below the surface during periods of aestivation during late summer into fall. Overwintering takes place above ground in a silken chamber constructed of leaf blades pulled together in the center of the grass clumps so typical of bluestem grasses during winter (see also Scott). Opler reported that pupation occurs in early spring in the ground debris around the foodplant.

The units of the Kisatchie National Forest referenced in this article are all subject to regularly prescribed burning. According to the USDA National Forest website for Kisatchie NF:

> "Fire has been integrated into the landscape of the Kisatchie. **Maintenance of this desirable condition requires continuous treatment due to rapid regrowth of fuels in our productive climate and soils. Repeated burning is necessary to replicate natural conditions of 'fire regimes'** and to protect the considerable investment in prescribed burning over the years. Fire has been integrated into the landscape of the Kisatchie" (emphasis added).

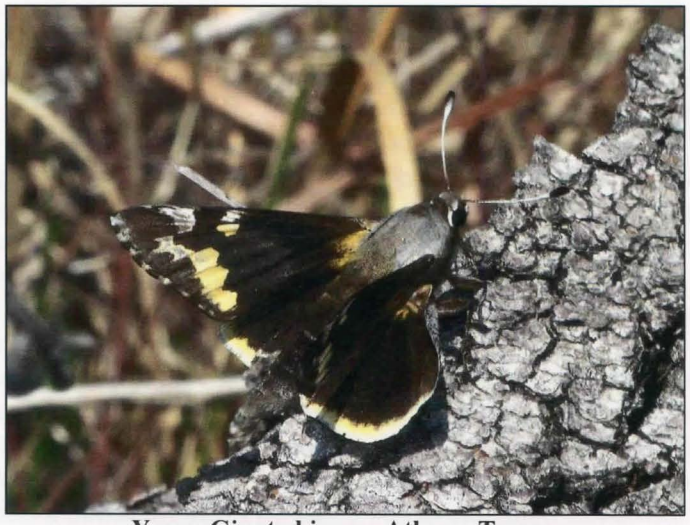
My experience is that this burning occurs at least every three years, if not more often. This burning is typically during the winter, after December and into April. Research by Ann Swengel, conducted in the Midwest, suggested Cobwebs were more impacted by prescribed burning than wildfires. I wonder if burning so often, during late winter and early spring, is having an adverse effect by killing overwintering larvae and pupae. Schweitzer's research suggested that Cobwebs had a good survival record after cool, fast moving fires. Perhaps the Kisatchie burns have been too hot to allow for Cobweb Skipper caterpillar and pupae survival.

But then how can that be reconciled with the presence of Dusted Skippers in the Natchitoches and Vernon Parish Units? The Heitzmans concluded that pupation of Dusted Skippers as much as three inches above the ground made them more susceptible to mowing. Further, Shapiro noted that Dusted Skippers "wander" more than Cobwebs, giving them a better ability to re-colonize.

In 2016, I decided that apparently I would need to travel out of state if I wanted to see a live Cobweb Skipper. I had been communicating with Jason Cole from the Dallas area, after meeting him at Lexington WMA in Oklahoma, and exchanging information about butterflies I wanted to see that might be in his area of Texas with

information about butterflies he wanted to see in Louisiana. As a result of these discussions, he suggested a location near Athens, Texas, where I might find both Cobweb Skippers and Yucca Giant-skippers (which I had not yet seen at that time).

We made the drive on March 22, 2016. The weather started cool, but eventually warmed into the mid-70s with much sun; however, it was extremely windy. We ultimately saw at least 6 Yucca Giant-skippers, all of which appeared to be males. There may have been more, but it was difficult to track what was new and what might have already been counted. These giant-skippers are quite distinctive in flight, flying at about head height with the white patches on their forewing visible as they fly. The males were basking in the sun, mostly in areas out of the wind. When flushed, they would dash off, flying long circles before returning to virtually the same perch as previously used. On several occasions, they would fly away in one direction, only to return a short time later from the opposite direction.



Yucca Giant-skipper, Athens, Texas, March 22, 2016 (J. Trahan)

We saw 21 species, including Frosted Elfins and a Juniper Hairstreak (*Callophrys gryneus*), but no Cobweb Skippers. In fact, we saw no grass skippers, although there were numerous spread-wing skippers on the wing. There was a lot of broomsedge at the Athens location. There also was false garlic, dewberry and purple verbena blooming so we all felt that if the Cobwebs were on the wing, we should have seen them. Jason later indicated that based on what we did see, he felt we were too early for the Cobwebs.

My most recent out-of-state effort to find Cobweb Skippers was in March 2018. While putting together my book on Louisiana's butterflies, I had asked for Cobweb pictures from some of my butterflier friends in Arkansas. Tom Lewis was kind enough to send me some, taken at Bell's Slough. With that location in mind, I went to the Arkansas butterfly listserv and did some research. What I discovered was that Herschel Raney had entered numerous posts documenting his sightings of that skipper, giving specific dates and locations within Bell's Slough.

Cobweb Skipper, Bell's Slough, April 2, 2006 (T. Lewis)

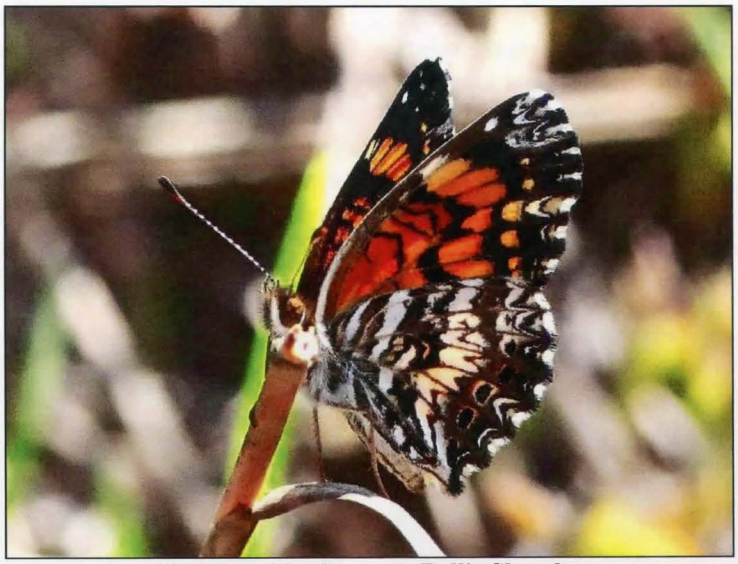
Bell Slough Wildlife Management Area is a 2,040-acre tract of land located 18 miles north of Little Rock near Mayflower, Arkansas. It is operated by the Arkansas Game and Fish Commission. It is a mix of moist-soil wetlands, bottomland hardwood forest, prairie, and upland hardwood and pine forest. The wetlands are managed as a waterfowl resting area. Herschel's records at Bell's Slough were from March 20 to April 18. For example, on March 28, 2006, he reported over 10 seen, although, admittedly, the bulk of his sightings were during the first two weeks of April.

Jeff Trahan and I drove into Arkansas on March 30, 2018, to look not only for Cobwebs but also for Yucca Giant-skippers. Our plan was to also go to Lake Catherine with hopes of seeing Olympia Marbles (*Euchloe olympia*) and Silvery Blues (*Glaucopsyche lygdamus*). With the assistance of Herschel Raney and Bob Hardin, we planned on visiting a couple of locations within Bell's Slough Friday morning and then drive to Lake Catherine in the afternoon.

The daybroke clear with blue skies. We met Bob at the Mayflower exit, and he took us straight to the spot where Herschel had seen Cobwebs in past years. The specific spot he took us was an old quarry. Little bluestem was present on the hillsides. While the temps were in the 50's during the morning, there were actually a lot of butterflies on the wing, including Falcate Orangetips (*Anthocharis midea*) and Juvenal's Duskywings (*Erynnis juvenalis*). There were also a lot of flowers in bloom, including verbena, false garlic and spring beauty. I walked to the top of the quarry and found an area in the sun along a cliff's edge. There, the little blue stem was thick with both purple verbena and wild garlic in bloom. I felt sure that if Cobwebs were on the wing, that was the right spot, but I did not see even one grass skipper.

The second spot was five minutes down the road. As promised, there were yucca plants as well as little blue stem present. Despite vigilant effort, we saw neither Cobweb Skippers nor Yucca Giant-skippers. Jeff did get a picture of a Gorgone Checkerspot (*Chlosyne gorgone*), and Bob and I saw a White M Hairstreak (*Parrhasius m-album*).

Convinced the Cobweb Skippers were simply not yet on the wing, we left Bob and headed back south, exiting at Malvern toward Lake Catherine. Climbing to the table top (a climb which gets harder every time I make it), we walked that ridge twice. By this time, the temps were in the low 60's and, again, there were butterflies on the wing. As at Bell's Slough, there were many of the same species of flowers available. Both Jeff and I saw what we suspected may have been a marble, but neither could be confirmed. Running out of time, we walked down to the waterfall, looking for Silvery Blues without success. We saw one heavily marked azure at the waterfall. Jeff got a picture and we will send it to an azure expert for identification.



Gorgone Checkerspot, Bell's Slough, March 29, 2018 (J. Trahan)

As with the rest of the eastern U.S., the weather in the Little Rock area for the first two weeks of April was unseasonable wet and cold. Bob Hardin visited the Bell's Slough site a couple of times after our visit and saw no Cobwebs although he did report seeing Dusted Skippers. Notwithstanding the lack of Cobwebs this year, I still feel Bell's Slough is my best bet to find/see that skipper. Our new plan for next year is to wait for Bob or Herschel to report that the Cobwebs are on the wing, and Jeff and I will then get there ASAP.

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

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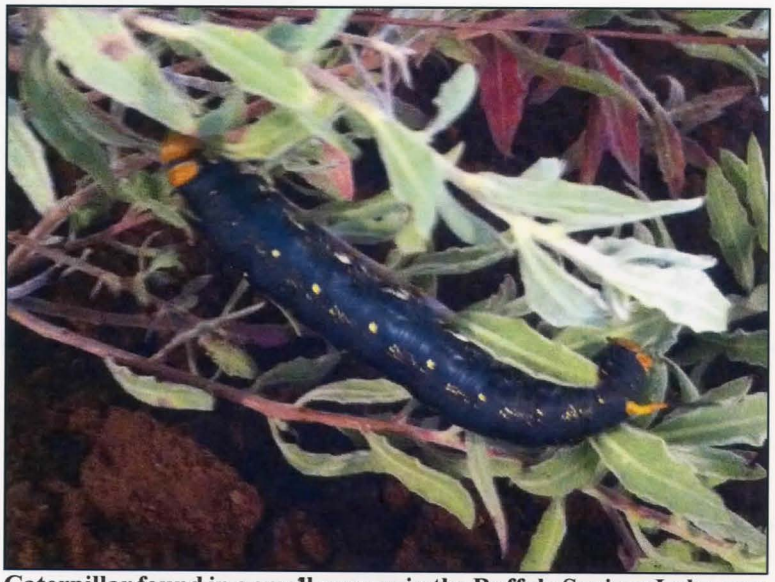
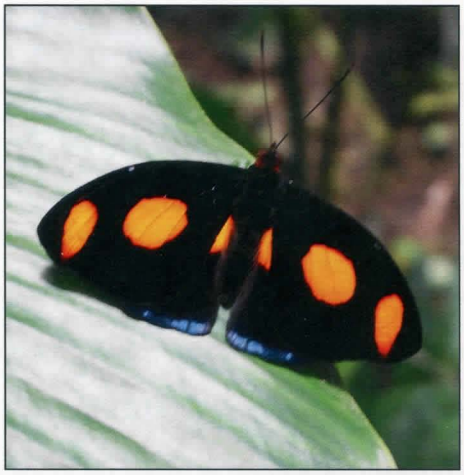


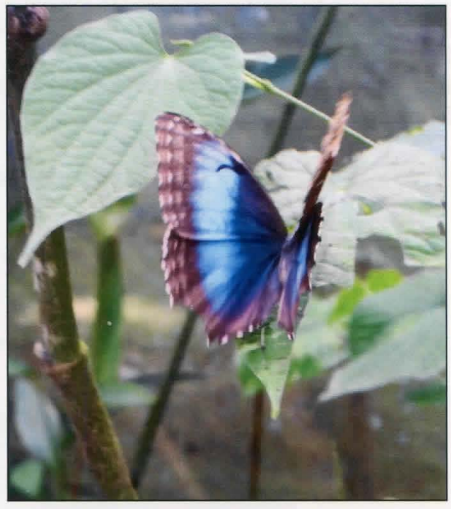
Caterpillar found in a small canyon in the Buffalo Springs Lake area (~5 miles west of Lubbock, Texas) on October 12, 2017. Possible adult is White Lined Sphinx (*Hyles lineata*). Caterpillar is ready to pupate and did on October 14, 2017. However as of May 2018 caterpillar has not hatched (and I assume that it probably won't). [JB Lombardini]

PHOTOGRAPHS FROM THE GAMBOA RAINFOREST PRESERVE, PANAMA

BY

MICHAEL P. BLANTON





I asked Mike to take more photographs while he was in Panama (February, 2018). His comment was *"...butterflies don't stay still long enough to photograph"*. [The Editor]

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NOTE (INFORMATION):

Great Lakes IPM has been purchased by Trécé, Adair (Oklahoma being their new headquarters). Trécé is a well-known manufacturer of semichemical (pheromone) lures and related equipment. Great Lakes has in the past offered Trécé products for many decades. Great Lakes IPM will continue to operate under their name for the time being.

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MOTH PHOTOGRAPHERS GROUP UPDATE

BY
STEVE NANZ

I fondly recall those early days, when I first started photographing moths, spending hours comparing my images to those on the Moth Photographers Group website and the joy I felt upon making an identification. In 2016 I retired from my day job and joined the MPG ranks. These last two years have been exciting and extremely fulfilling. It's a privilege to now be working on the other side helping to advance this remarkable resource. Both professionals and amateurs have been exceedingly generous with their support and time. It seemed as though the relevance of MPG had begun to slip since Bob Patterson, MPG's founder, had stepped away from daily activity. I think we've turned the corner and I see MPG as continuing to play an integral role in the mothing community.

Taxonomy. MPG originally used the1983 MONA or "Hodges" Checklist that included 11,279 species with numbers from 1-11233. Current MPG taxonomy reflects the Pohl *et. al.* Lepidoptera of North America North of Mexico (2016) provisional checklist. The new list removed nearly 850 invalid names and added some 2,330 new species which brings the total to 12,766.

The 1983 Checklist largely reflected the phylogeny as it was understood at that time. With each passing year it became less useful for organizing species phylogenetically. Bob Patterson conceived of a supplementary system which could be modified as taxonomic changes dictated. The new phylogenetic sequence numbering system was first implemented in the Lafontaine & Schmidt (2010) Noctuoidea Checklist. Pohl *et al.* (2016) expanded the system to include all of North America, north of Mexico.

In MPG the "Hodges" numbers remain static (with some exceptions) while the newly included phylogenetic sequence numbers are subject to modification as new taxonomic changes dictate. Users now have the option of browsing the plates using the current phylogenetic sequence number in addition to the traditional "Hodges" numbers.

Collection Specimens and Live Adults. Jim Vargo and Jim Troubridge are once again making big contributions to the pinned specimen plates. Together they have added over 500 new images. Some are improvements over current images but most are of species for which no images previously existed on MPG. Over 30 new contributors have joined in the last year, many from southwest, helping to fill in geographic gaps. We've added hundreds of new images of live adults and continue to correct mis-placed live images.

Caterpillars - Larva, Pupa, Ova. Due to a website glitch, the Caterpillars Library had not been updated in some time. Last summer the issues were resolved and consequently Jane and John Balaban, who curate the collection and are long time editors at Bug Guide.net, are back in action. There are now 1,440 species pages with images of caterpillars, up 25% since the last report in 2012.

Genitalia Library. A year ago, there were just under 800 images in the Genitalia Library covering about 500 species. Those numbers have climbed to 1,130 images covering 840 species from veteran contributor Tony Thomas (300+ images) and new contributor JoAnne Russo (50+ images). Another important contribution has come from Cliff Ferris who is in the process of creating an online genitalia plate series for all of Eupitheciini, an extremely difficult group with many species identifiable by dissection only. Links to his work are available on the MPG website. I highly recommend browsing the genitalia images, many of which I consider to be works of art.

Distribution Maps. In 2010 MPG initiated the distribution map project. Little work had been done in recent years until very recently when Monica Krancevic joined the MPG team. Monica now curates this project. She has updated much of the mapping to reflect recent taxonomic changes. Addressing the long list of error corrections submitted by contributors over the years is an on-going process, a process made easier with Paul Dennehy's assistance.

We are not currently soliciting new personal mapping data, but we do appreciate corrections to make the existing maps more accurate. Send corrections to Monica at MPG.MKrancevic@gmail.com.

The focus now is to update mapping with recent BOLD, museum, BugGuide and iNaturalist submissions that offer more precision of dates and geo-locations than MPG used in the past. Although collection data from journal articles would be invaluable, hand copying a large number of collection points is both laborious as well as error prone. We are attempting to hand copy from journals mapping points for new species if we're notified of them.

We're also discussing how best to improve the data collection system and to make the background data available to users. Both Greg Pohl and Hugh McGuinness have offered thoughtful suggestions for data collection, and we certainly welcome input from anyone interested in shaping the future of MPG's mapping information.

Miscellaneous. The backlog of reported corrections on the MPG Facebook page is nearly caught up. There are currently under 30 corrections pending, down from over 200 a year ago.

References

Hodges, R.W. et al. (editors), 1983. *Checklist of the Lepidoptera of America north of Mexico.* E.W. Classey, London, UK, and the Wedge Entomological Research Foundation. 282 pp.

Pohl, G.R., B. Patterson, J. Pelham, 2016. *Annotated Taxonomic Checklist of the Lepidoptera of North America, North of Mexico.* Working paper published online by the authors at ResearchGate.net. 766 pp.

(Steve Nanz, E-Mail: steve@stevenanz.com)

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CITY NATURE CHALLENGE
BY
MONICA KRANCEVIC

City Nature Challenge 2018: April 27-April 30: The City Nature Challenge began as a "competition" between San Francisco and Los Angeles that encouraged metropolitan-area folks to find and document flora and fauna in the area. In 2018 the CNC, sponsored by the Natural History Museum of Los Angeles County and the California Academy of Sciences, was an international effort with 69 areas participating, even including Palmer Station, Antarctica. https://www.inaturalist.org/projects/city-nature-challenge-2018

Of the 3,739 insects IDed to species rank, 1,495 were *Lepidoptera*.

Although definitely not "southern", a goal for US lepsters in future CNCs or "bioblitzes" is **Hong Kong's 476 species**, twice the number of second place Austin, Texas. San Francisco Bay Area led the world in total observations, total species and total observers, but were only 4th in *Lepidoptera* with 113 species.

The breakdown for southern US participating areas that had more than 10 species shows only species-level IDs. Many more languished at higher orders. *Caveat lector* - not all of the observers' species-level IDs could be vetted in the allowed time.

Metro Area	Observations	Taxa IDed to Species	Observers
Austin, TX	1,115	232	192
Dallas-Fort Worth, TX	1,615	227	175
Houston, TX	623	219	155
Lower Rio Grande Valley, TX	344	106	64
San Antonio, TX	192	50	51
Southwest Louisiana, LA	52	35	13
Miami, FL	76	32	24
Cabarrus County, NC	70	26	29
Richmond, VA	20	17	6
Nashville, TN	16	13	8

(Monica Krancevic, E-Mail: mmk77566@gmail.com)

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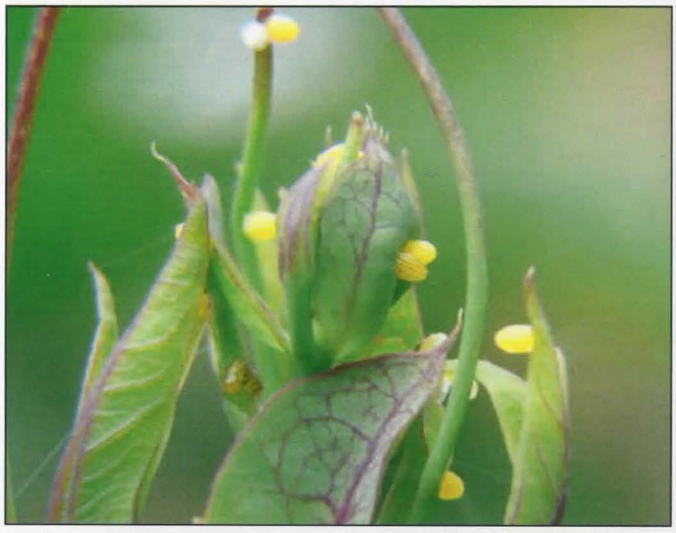
ZEBRA HELICONIAN (*HELICONIUS CHARITHONIA*) LIFE HISTORY

BY
BERRY NALL

These Zebra Heliconian eggs were laid on, and the caterpillars raised on, *Passiflora x atropurpurea*.



Eggs and a recently hatched caterpillar (16-IX-2007)

Caterpillars being raised, day 1 (16-IX-2007)

18-IX-2007

17-IX-2007

21-IX-2007

25-IX-2007

23-IX-2007

First caterpillar just before pupating (26-IX-2007)

Second caterpillar just before pupating (26-IX-2007)

Pupa, side view (27-IX-2007)

Pupa, front view (29-IX-2007)

[Note numerous silver spots]

One of the recently emerged adults (4-X-2007)

Falcon Heights, TX (20-X-2007)
(http://leps.thenalls.net/speciesnum.php?lep=60)

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Zebra Heliconian (*Heliconius charithonia*) in the SLS NEWS. The original publication on the internet is listed: http://leps. thenalls.net /content2.php?ref=Species/Heliconiinae /charithonia/life/charithonia_life.htm

Mr. Nall's website *"Berry's Butterfly photos"* can be viewed at http://leps.the nalls.net/ His contact e-mail is lb@the nalls.net

[Note: caterpillars were all raised at Mr. Nall's home in Falcon Heights, Texas.]

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FOUR-SPOTTED SAILOR (*DYNAMINE POSTVERTA*) LIFE HISTORY

BY
BERRY NALL

In June, 2015, I confined a female Four-spotted Sailor in a netted container with *Tragia glanduligera* (Noseburn) and *Dalechampia scandens*. When no eggs were produced after two days, I began to occasionally mist the container. The following day oviposition began. It is reasonable to suppose, but not certain, that the misting helped. Virtually all of the eggs were placed on *Dalechampia*, but I did find 3 on Noseburn.

Egg

Neonate

Summer of 2015 was not a good year for caterpillars in this area: a pathogen of some type (perhaps viral) seemed to be affecting most species I observed, whether they were in natural conditions or reared in captivity. I took the utmost care with the Sailor larvae, but even so most eventually died. Particularly disappointing was the loss of the three that hatched on Noseburn. They began feeding, but they all died in the first instar (apparently of the disease), so I was not able to determine if the plant was a viable host.

First instar

On *Dalechampia,* the caterpillars fed both on leaves and flower parts. Those that fed on flower tissue grew faster and appeared to have a higher survival rate than those that fed on leaves.

Eight caterpillars made it to the final instar. One died while pupating. After five days, the first two pupae turned color, but the adults did not emerge. Therefore, I began misting the chrysalises heavily; I also added a potted plant to the container to keep the humidity high. Eventually the 5 remaining adults did emerge: 4 females and one male.

Second instar

Face of Four-spotted Sailor

Third instar

The female was confined on June 19; eggs began appearing on June 22, and hatching began on June 25. Five instars were observed. Pupation began July 5, and adults appeared from July 12-14. The entire cycle took approximately 3 and one-half weeks.

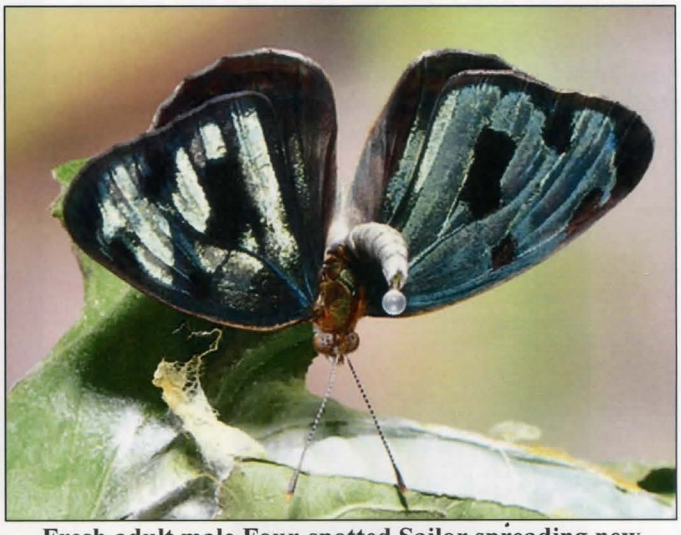
Fouth instar

Fifth instar

Fifth instar with brown markings (just molted)

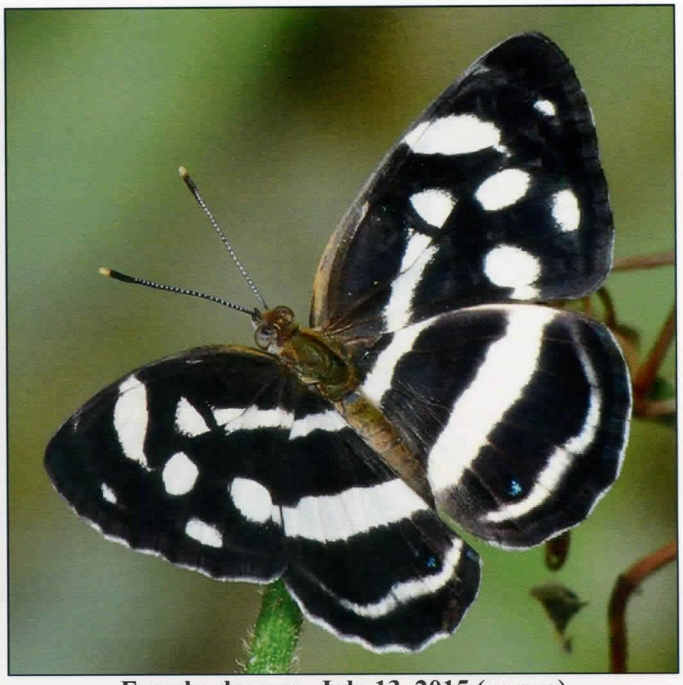
Chrysalis

Fresh adult male Four-spotted Sailor, ventrum, July 12, 2015



Fresh adult male Four-spotted Sailor spreading new wings, dorsum, July 12, 2015

Male, dorsum, July 12, 2015 (ex ova)
©Berry Nall or as stated



Female, dorsum, July 13, 2015 (ex ova)
©Berry Nall or as stated

Thanks to Berry Nall for letting the Southern Lepidopterists' Society re-publish his Life History of the Four-spotted Sailor (*Dynamine postverta*).

Berry Nall, Life History, http://leps.thenalls.net/content2.php?ref= Species/Biblidinae/postverta/life/_postverta_life.htm
Berry Nall, Four-spotted sailor Page, http://leps.thenalls.net/speciesnum.php?lep=116

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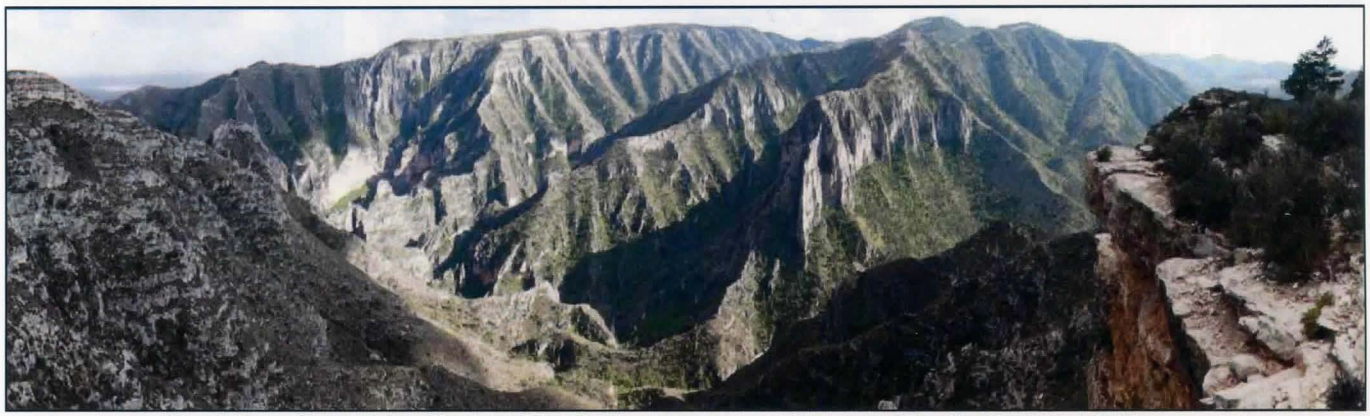

Guadalupe Mountains National Park, Texas: panoramic view of South McKittrick Canyon (Credit: Michael P. Blanton, Ph.D, April 28, 2018).

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LEPIDOPTERA FROM LAKE JACKSON, BRAZORIA COUNTY, TEXAS

BY
MONICA KRANCEVIC

Acrolophus mycetophagus
(Frilly Grass Tubeworm)

Ascia monuste, male
(Great Southern White)

Meskea dyspteraria

Pseudeustrotia indeterminata

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2017 LOWER RIO GRANDE VALLEY PHOTOGRAPHY EXPEDITION, FINAL DAY

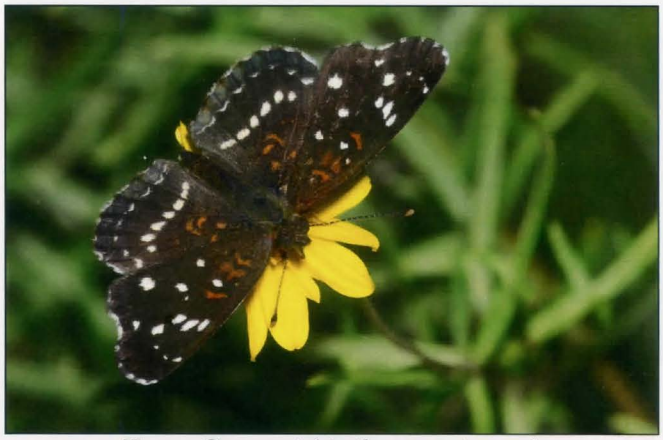
BY

BRYAN E. REYNOLDS

I was up bright and early for the last day of my photography expedition to the Lower Rio Grande Valley in Texas. It was 4 November 2017, and the seventh day of my trip. I was excited because I was heading to Falcon State Park, located in Starr County. I had been there once before on my last visit in 2014, and it was a very productive spot. I was hoping it would be again. The weather was supposed to be in the mid-90's and sunny. Depending on traffic, it could take almost two hours to drive there from my home base in Weslaco. So, I got an early start.

After the hectic drive, especially through McAllen, I checked in at the headquarters and drove straight to the garden. Just like my last trip, it was loaded with blooming mist flower, *Conoclinium* sp., and a bunch of other flowers. Even before I stopped my car, I could see butterflies flitting around throughout the garden. I walked in and was in heaven. No joke, there must have easily been hundreds of butterflies of several species. There was so much going on, I didn't know where to point my camera first. I had to tell myself to slow down and then a bunch of Elada Checkerspots, *Texola elada*, and Texan Crescents, *Anthanassa texana*, caught my eye. So, I started with those. Several of both species were courting, and I got some behavior shots of this. It would turn out to be a day full of courting and mating for several species. Within a very small space, about two square feet, I photographed these two species as well as a Vesta Crescent, *Phyciodes graphica*, Bordered Patch, *Chlosyne lacinia*, and a Common Mestra, *Mestra amymone*. Apparently, I wasn't going to have to move very far on this day. In fact the hardest part, since there were so many butterflies, was they actually interfered with each other and made it difficult to isolate individuals. What a problem to have...too many butterflies?

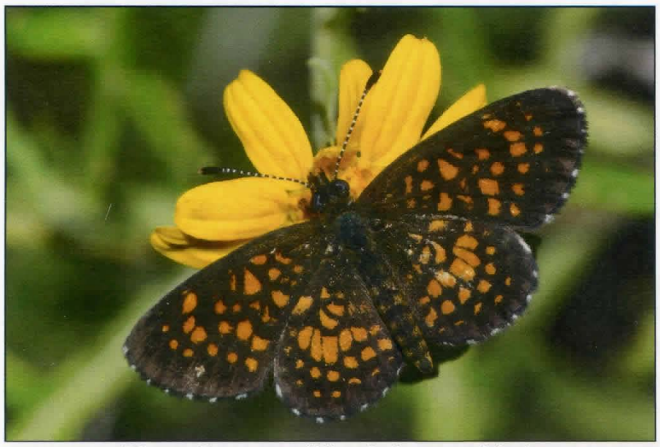
Elada Checkerspot (*Texola elada*)



Texan Crescent (*Anthanassa texana*)

Texan Crescents (*Anthanassa texana*) courting.

Texan Crescent (*Anthanassa texana*)



Vesta Crescent (*Phyciodes graphica*)

Common Mestra (*Mestra amymone*)

For hours, I was alone in the garden and worked the butterflies hard. You might be surprised, in the past I've only seen one Mexican Fritillary, *Euptoieta hegesia*, and I only had a mediocre single old slide photo of it. Three were here today, and I photographed them all. I also got more coverage of a Coyote Cloudywing, *Achalarus toxeus*, and a couple Funereal Duskywings, *Erynnis funeralis*. Like I mentioned, love was in the air and apparently for some males, it didn't matter what species. I saw a Texan Crescent earnestly courting a Phaon Crescent, *Phyciodes phaon*. They never hooked up, though. Then after a bit, a nice human couple popped in.

Mexican Fritillary (*Euptoieta hegesia*)

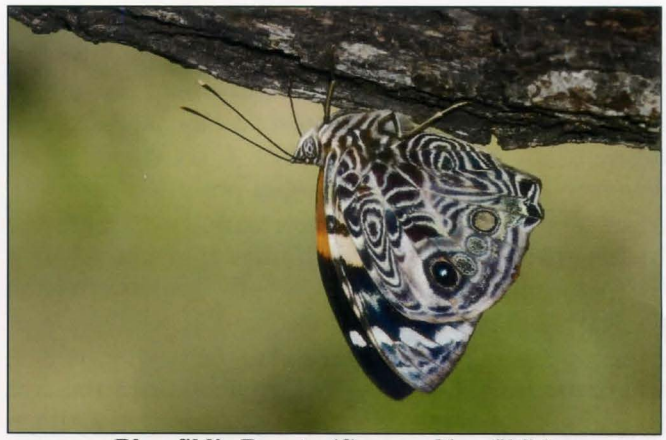
Coyote Cloudywing (*Achalarus toxeus*)

Funereal Duskwing (*Erynnis funeralis*)

Texan Crescent (*Anthanassa texana*) and Phaon Crescent (*Phyciodes phaon*) – courting

I chatted with the couple and we all looked at and photographed butterflies. Then I spotted a very dark Tropical Buckeye, *Junonia evarete*, on mist flower. One pop of my flash, and it took off. I kept walking around to relocate it, but had no success. A few minutes later a gentleman walked into the garden. I glanced at him and he caught my eye. I asked if he had seen any good butterflies and he said he was looking for birds. I ask if those were the things that had feathers, and he chuckled. He was Professor Bruce Beehler, a bird specialist from the Smithsonian Institution, and he walked along with me and asked about the butterflies. After a bit, the couple who was also there photographing, let me know the dark buckeye had returned. So, I went over and started working it. It now seemed to be a little more cooperative. As I was finishing up the buckeye, Bruce, who had walked through the garden and was preparing to exit out the gate, said there was a nice looking species hanging under one of the bait logs. Well, it surely was a nice one, it was a Blomfild's Beauty, *Smyrna blomfildia*, and a fresh one at that! I had to quickly change my camera settings to use fill-flash to expose the butterfly properly, while at the same time, use the natural light exposure for the background. I took many pictures, and then backed off to let a couple more people get photos. I looked at the photos on the back of my camera, and I was happy with the results, but I wanted more. At this point, the other people had gotten all the shots they wanted, and left. So, there I was again, all by myself and with a gorgeous tropical stray to photograph. I went back to work the Blomfild's some more, but now it was at a tough angle under the bait log. So, I very slowly got close and got some face portraits. Then a wasp flew in and flushed it. I lost it as it flew through the trees, but I was hoping it would come back to the bait. Besides, a couple of nice Tropical Leafwings, *Anaea aidea*, were also on the bait log and I was happy to photograph them. They were very cooperative and after some full body shots, I got some wing details, including the identifying bump on the hindwing. Another species was present on the bait that I had somewhat overlooked because of the Blomfild's, and that was a couple Empress Leilias, *Asterocampa leilia*. Just like with the Mexican Fritillary, this was another species that I had never photographed before. So, now that I wasn't busy working the rare one, I was able to get a couple photos of Leilias, both dorsal and ventral shots.

Tropical Buckeye (*Junonia evarete*)



Blomfild's Beauty (*Smyrna blomfildia*)

Tropical Leafwing (*Anaea aidea*)

Tropical Leafwing (*Anaea aidea*)

Empress Leilia (*Asterocampa leilia*)

My rare tropical beauty didn't come back to the bait, so I decided to walk around again scanning through the flowers. There were dozens of Southern Dogfaces, *Zerene cesonia*, and I passed them all up, until I saw a beautiful pink edged one. Then I got some more coverage of mating, courting, and predation of a few common species, including a nice ventral shot of a Fatal Metalmark *Calephelis nemesis*. After about another hour of work, I went back to the bait. There were only the leafwings and Leilias on the one log, but there was a second log a few feet away. On the trunk of the tree where the second bait log was hanging, there was the Blomfild's again. And right next to it was another rarity, a Red Rim, *Biblis hyperia*, was also probing around on the same tree trunk. I couldn't believe it. This one wasn't as pristine as the Blomfild's but it was another new species for me and I worked hard to get both dorsal and ventral shots of it. The Blomfild's was pretty much sitting still, but this Red Rim was bouncing all over the place. But, at least it wouldn't fly far and it always came back to the tree trunk. In fact, the Red Rim actually swooped over the Blomfild's as I was photographing and I got both in the same frame. Then they ended up about a foot away from each other, and I again got a few shots of both together. I was pretty certain I got a bunch of coverage, but I felt like I wanted more, especially of the fresh Blomfild's, so I got very close and made some wing detail photos.

Red Rim (*Biblis hyperia*)

Red Rim (*Biblis hyperia*)

Blomfild's Beauty (*Smyrna blomfildia*) and Red Rim (*Biblis hyperia*)

With all of this excitement, the time was really flying by. I had now been in this single garden for over eight hours and the temps had climbed to 95 degrees. There was very little shade, and I had only taken a 15 minute break to eat a sandwich and drink a Gatorade. But, this was my last day of photography on my trip and I wasn't ready to stop yet. So, a walked around some more and I noticed several Monarchs, *Danaus plexippus*, had popped in, including a mating pair. It looked like they were getting ready to roost for the night, and I wanted to get multiple individuals in the same frame. I found two that were lined up to my film-plane, and would be easy to photograph. I got off one shot and then a Queen, *Danaus gilippus*, landed in between them. I thought that was pretty cool and wondered if any Soldiers were around to join them. As the sun started to hit the horizon, I decided it was time to pack up and head back to Weslaco.

Monarchs - mating pair (*Danaus plexippus*)

Queen (*Danaus gilippus*) - between two Monarchs (*Danaus plexippus*)

By far, this was one of the best days of photography that I've ever had in the LRGV. I shot 878 frames and kept 201. I got really good coverage of three lifers (four if you count the Mexican Fritillary) and I got a lot of great behavior such as courting, mating, predation, and mixed species in one frame. For the entire trip, I took 4721 frames and after editing, kept 1067 for a keeper rate of 23%. I got a few lifers and more coverage of several species that I previously had minimal coverage of. All in all, it was a wonderful trip and I definitely plan on a repeat next year.

(From the office of Bryan E. Reynolds, 18201 Sun Valley Lane, Lexington, OK 73051;
Phone: (405) 527-1043; E-mail: nature_photo_man@hotmail.com)

INTERESTING BUTTERFLY AND MOTH FROM THE LOWER RIO GRANDE VALLEY

BY
MIKE RICKARD

***Conga chydaea*, March 7, 2018, National Butterfly Center, Hidalgo County, Texas. First recorded from the US in 1972-1973, few records since then.**

***Catocala micronympha*, April 26, 2018, Mission, Hidalgo County, Texas. First record for the Lower Rio Grande valley.**

(Mike Rickard, E-Mail: folksinger4@yahoo.com)

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A RARE TROPICAL LONGWING OBSERVED IN CENTRAL TEXAS *HELICONIUS ERATO PETIVERANA* (E. DOUBLEDAY, 1847)

BY

JOSEPH F. DOYLE AND PATTY LESLIE PASZTOR

A fleeting glimpse of a Heliconian butterfly at the south central edge of the Edwards Plateau has provided another example of outlier incursions into the natural laboratory of the Balcones Escarpment from the tropical rainforests of Mexico. It joins a long list of representatives of lepidopteran species probing their northern ecological limits. This sighting is exceptional. All previous U.S. records for this species have been from the lower Rio Grande valley in Texas.

On 2 July 2012, an Erato Longwing was observed by Patty Leslie Pasztor hovering about a *Passiflora lutea* vine near the eastern bank of the San Antonio river near Poth in Wilson County, Texas.

A return visit by Doyle and Pasztor to the location was made on 7 July 2012. It was immediately apparent that the *Passiflora* vines were infested with Gulf Fritillary larvae, *Agraulis vanillae incarnata* (Riley, 1926). There were various instars present that had consumed a high percentage of the new, juvenile leaves. Adult Gulf Fritillary were flying in the locale.

A lengthy search provided one (1) last instar larva of *H. erato*. It was photographed at the site. No eggs, additional larva or chrysalis were found. The larva was collected along with a supply of the larval foodplant and removed to Doyle's home laboratory. The caterpillar pupated on 9 July 2012, after feeding on the *Passiflora*. Unfortunately, an adult did not emerge. After an inspection on 20 July 2012, it was discovered that the pupa was the victim of a parasitoid, as evidenced by an exit hole in the abdomen of the pupa. The larva and pupa (before and after parasitoidal emergence) were photographed for the record.

The overabundance of *A. vanilla* larvae at this location is an element that may cause the scarcity of *H. e. petiverana* in other colonies in its range. Lack of new leaf growth limits a vital portion of the life history cycle by destroying opportunities for oviposition and larval host resources. In total, it may add to the rarity of this species in south and central Texas. Field workers should make note of this in their reports. *P. lutea* is also used by *Heliconius charitonius vasquezae* and *Dryas julia* but none were seen at the San Antonio river site. Zebra and Julia butterfly adults fly together some years in summer and fall at Doyle's home in far western Bexar County, Texas. Larvae of both have been seen occasionally on *P. lutea* vines at Doyle's home. No evidence of *H. erato* has been recorded at that location.

As reported by Pasztor these are some associated plant species in this riparian woodland along the San Antonio River including: box elder (*Acer negundo*), berlandier ash/fresno (*Fraxinus berlandieriana*), eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), sugarberry (*Celtis laevigata*), red mulberry (*Morus rubra*), rough-leaf dogwood (*Cornus drummondii*), hoptree (*Ptelea trifoliata*), Texas persimmon (*Diospyros texana*), pearl milkweed vine (*Matelea reticulata*), greenbriar (*Smilax bona-nox*), chili petín (*Capsicum annuum*), frostweed (*Verbesina virginica*), babyblue eyes (*Nemophila phacelioides*), inland sea oats (*Chasmanthium latifolium*) and virginia wildrye (*Elymus virginicus*). Brasil (*Condalia hookeri*), guayacan (*Guaiacum angustifolium*) and Texas lantana (*Lantana urticoides*) are growing in the adjacent uplands.

The following is a note regarding this discovery and was sent to the TX-BUTTERFLY LISTSERVE by Pasztor and published on 3 July 2012.

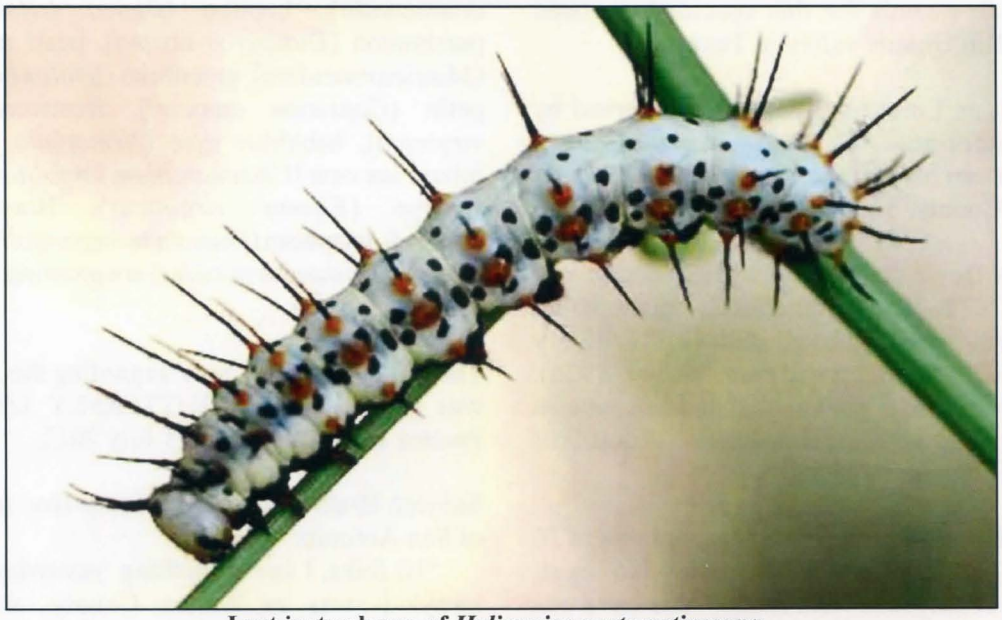
Subject: Erato Heliconian! Forty-five miles southeast of San Antonio:

"Hi folks, I saw something yesterday that blew me away! I was in Wilson County doing a plant survey/list for a landowner near Floresville / Poth, TX, on the San Antonio River.

This is 45 miles southeast of San Antonio. Just as we were leaving the river bottomland area, I saw a large passionflower vine climbing up a tree and had the landowner stop the vehicle. I jumped out and noticed a Gulf Fritillary laying an egg and found one larva on the vine.

We stayed there a minute or so because I also saw several Viceroy butterflies (lots of large black willow trees nearby). We got back in the vehicle to head back and as we were driving away I noticed a narrow-winged black butterfly flashing red/yellow flying around near the top of the tree where the *Passiflora* was growing – about 12 feet up. I yelled stop – rare butterfly! I jumped out (had my binoculars around my neck) and got a good look before it moved away and then chased it around as it sailed high above the veġetation. I tried, but wasn't able to get a photo. I'm certain what I saw was *Heliconius erato*... I've seen them in Tamaulipas, Mexico. It looked fresh – striking colors – the red was brilliant."

Last instar larva of *Heliconius erato petiverana*, collected and photographed by Joseph F. Doyle, 7 July 2012, near Poth, Wilson County, Texas.



Last instar larva of *Heliconius erato petiverana*, collected and photographed by Patty Leslie Pasztor, 7 July 2012, near Poth, Wilson County, Texas.

Deformed pupa of *Heliconius erato petiverana*, 9 July 2012. Photo by Joseph F. Doyle.

Pupa of *Heliconius erato petiverana* with parasitoidal exit hole, 20 July 2012. Photo by Joseph F. Doyle.

(Joseph F. Doyle, E-Mail: tdoyle335@yahoo.com;
Patty Leslie Pasztor, E-Mail: agarita@me.com)

2018 SOUTHERN LEPIDOPTERISTS' SOCIETY/ASSOCIATION FOR TROPICAL LEPIDOPTERA COMBINED ANNUAL MEETING, 14 - 16 SEPTEMBER, GEORGIA SOUTHERN UNIVERSITY, STATESBORO, GEORGIA

BY

LANCE DURDEN

The 2018 SLS/ATL combined annual meeting will be in the Biological Sciences Building at Georgia Southern University in Statesboro, Georgia from Friday through Sunday, 14-16 September, 2018. There is no home football game that weekend and campus parking will be free after 4 pm on the Friday (14 September) and throughout the weekend. The Biological Sciences Building (Fig. 1) is new and has modern facilities.

Fig. 1. Biological Sciences Building at Georgia Southern University; site of the 2018 SLS/ATL annual meeting.

DIRECTIONS TO THE MEETING SITE

From Interstate 16 westbound, take exit 127 (State Highway 67) north towards Statesboro. After ~13 miles, turn left onto Veteran's Memorial Parkway. After ~4 miles, turn right onto Old Register Road. Continue to the end of Old Register Road to the T-junction with Forest Drive (there is no road sign for Forest Drive at the time of writing). Turn right onto Forest Drive. After ~ 50 m, turn left into the Faculty/Staff parking lot and park OR continue another ~100 m to Parking Lot #33 (entrance on right). Walk to Biological Building main entrance (see Fig. 2) to register for the meeting.

From Interstate 16 eastbound, take exit 116 (State Highway 301) north towards Statesboro. After ~13 miles, turn right ontoVeteran's Memorial Parkway. Immediately get in the left lane and take the first left onto Old Register Road. Continue to the end of Old Register Road to the T-junction with Forest Drive (there is no road sign for Forest Drive at the time of writing). Turn right onto Forest Drive. After ~ 50 m, turn left into the Faculty/Staff parking lot and park OR continue another ~100 m to Parking Lot #33 (entrance on right). Walk to Biological Building main entrance (see Fig. 2) to register for the meeting.

HOTELS

Reasonably priced hotels close to the meeting site (see Fig. 2 for approximate locations) include the following:

Springhill Suites by Marriott, 105 Springhill Drive, Statesboro, GA 30458; Phone: (912) 489-0000.

Super 8 by Wyndom, 1 Jameson Ave, Statesboro, GA, 30458; Phone: (912) 225-0403.

Eagle's Nest, 225 Lanier Drive, Statesboro, GA 30458; Phone: (912) 871-2525.

Comfort Inn & Suites, 17870 Georgia Highway 67, Statesboro, GA 30458; Phone: (912) 681-2400.

Hampton Inn, 350 Brampton Ave., Statesboro, GA 30458; Phone: (912) 489-8989.

Studio 6, 126 Rushing Lane, Statesboro, GA 30458; Phone: (912) 681-4663.

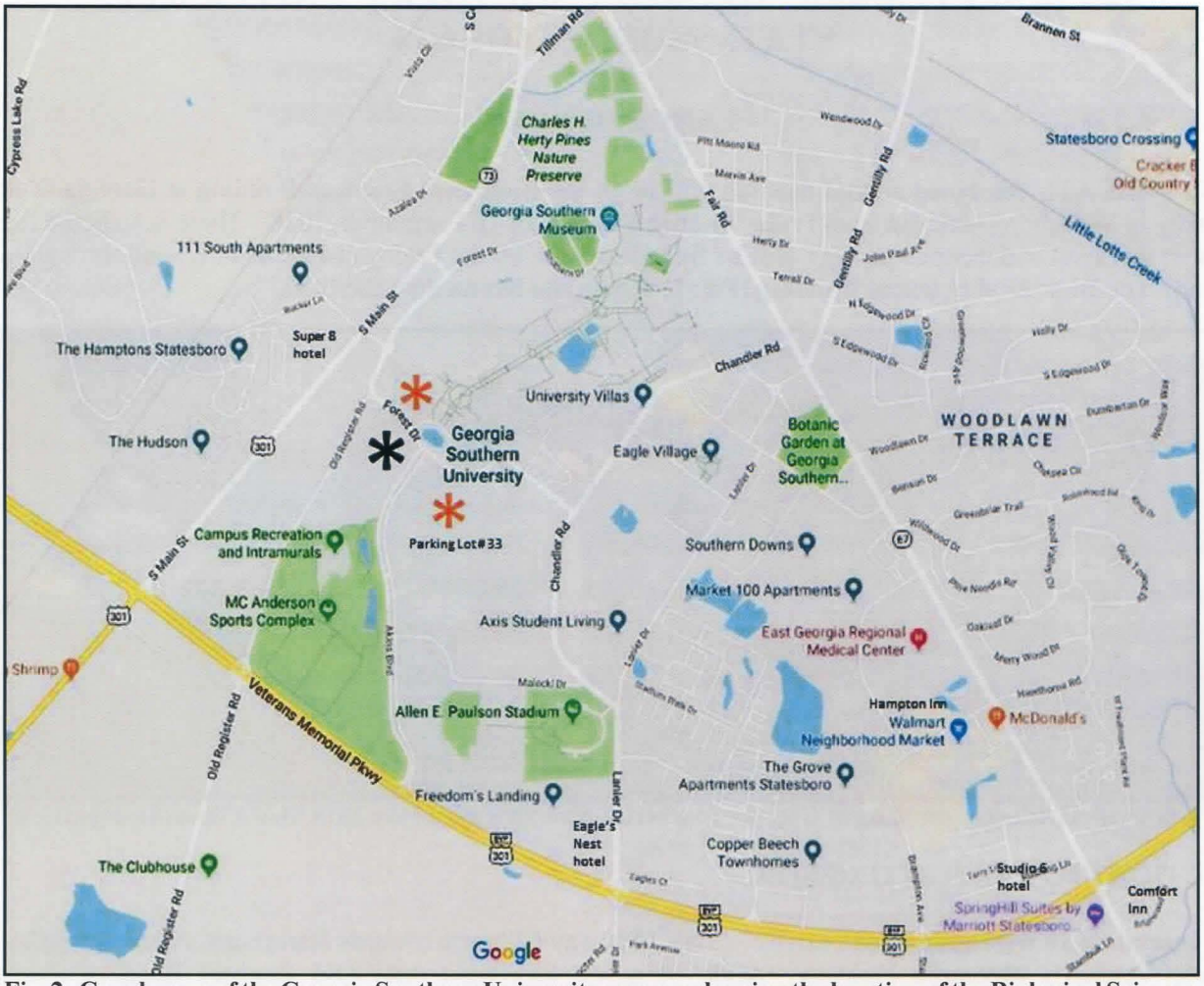


Fig. 2. Google map of the Georgia Southern University campus showing the location of the Biological Sciences Building (large black asterisk), and recommended parking sites (large orange asterisks). Recommended hotel locations are also shown. State highways 67 and 301, the main access routes from Interstate 16 to the south, are also shown.

PARKING

After 4 pm on the Friday (14 September) and throughout the weekend, campus parking will be free. The closest lots to the Biological Sciences Building are off Forest Drive (see map). One is signposted Lot #33; the other (Faculty/Staff) Lot is not numbered. The easiest access to the Biological Sciences building is from Forest Drive. There are also some Visitor parking spaces in Lot #33 that can be used before 4 pm on Friday.

BIOLOGICAL SCIENCES BUILDING (4324 Old Register Road, Statesboro, GA 30458)

The Biological Sciences Building (Fig. 1) is easy to spot from both recommended parking lots. The building stands alone and has glass panels in several sections. DO NOT go to the Natural Sciences building which is on the other side of campus. Enter the main entrance of the Biological Sciences Building into the Foyer/Reception area (with a large screen information system, staircase, etc.). Meeting registration will be in this area. Our meetings will be held in adjacent lecture room 1109.

BANQUET

We will have a group dinner at a local restaurant on the Saturday evening (15 September). Details are currently being finalized.

FIELD TRIPS

A local field trip will be arranged during the day of 14 September. There will be opportunities to set up light sheets in a wooded area of campus until midnight on the Friday night (14 September). Also, James Adams has agreed to lead a field trip to the Ohoopee Dunes area (Hall's Bridge Tract), about 35 miles from Statesboro, and the type locality for *Fernaldella georgiana*, on the same night. There will be native nectar sources around the building so there should be good local butterfly activity during our meeting. Anybody wishing to set up light sheets or light traps should bring their own equipment.

CALL FOR PAPERS

A call for papers will be sent by e-mail to all SLS and ATL members in July.

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

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FOR SALE

LEPTRAPS LLC

After 32 years of operating and owning Leptraps LLC, it is time to retire. I began Leptraps in 1985 and I only sold a few Bait Traps. In 1990 I designed and sold my first Light Traps, I continued to develop and grow the business.

This sale includes all of the product lines, the engineering drawings, inventory, tooling and equipment used to produce the products. A work bench with vise, Drawer Unit, Shelving and a storage cabinet.

I am asking $150,000.00.

Should you be seriously interested, please contact me.

Leroy C. Koehn
3000 Fairway Court
Georgetown, KY 40324

Email: Leptraps@aol.com

Telephone: (502) 542-7091

Website: www.Leptraps.com

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ABERRATIONS OF SOME FLORIDA BUTTERFLIES

BY
MARC C. MINNO

H. David Baggett was a founding member of the Southern Lepidopterists' Society and served as the newsletter editor for many years. Dave collected butterflies and moths at many locations from the Panhandle to the Keys. He gathered a large reference collection that contained many interesting Florida records. In the late 1990s Dave stopped collecting and distributed much of his collection to the Florida State Collection of Arthropods and colleagues. Among the specimens he gave me were aberrations of some common butterflies. Unfortunately, the labels on these specimens only gives the county in which they were collected:

Hermeuptychia sosybius (Fabricius) (Hernando County)
Parrhasius m-album (Boisduval and LeConte) (Hernando County)
Agraulis vanillae nigrior Michener (FL: Marion County)
Eurytides marcellus floridensis (Holland) (FL: Hendry County).

Figure 1 shows the dorsal and ventral sides of these aberrant specimens. I examined the genitalia of the *H. sosybius* (a male) to confirm the identification.

The specimens vary in the wing pattern elements that have been affected. The *H. sosybius* has a pale streak extending from near the base of each wing to near the outher margin. The whitish post medial lines of the undersides of the wings of the *P. m-album* are greatly expanded. The *A. vanillae* is smeared with black. The black lines of the *E. marcellus* are greatly expanded. I plan to donate the specimens to the Florida Museum of Natural History-McGuire Center for Lepidoptera and Biodiversity.

[Continue to next page.]

Figure 1. Upper and lower views of aberrant butterflies from Florida collected by H. David Baggett. *Hermeuptychia sosybius*: A dorsal, B ventral; *Parrhasius m-album*: C dorsal, D ventral; *Agraulis vanillae nigrior*: E dorsal, F ventral; and *Eurytides marcellus floridensis*: G dorsal, H ventral.

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

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TITIAN RAMSAY PEALE (1799 - 1885) — BIOGRAPHY

BY

J. BARRY LOMBARDINI

Titian Ramsay Peale

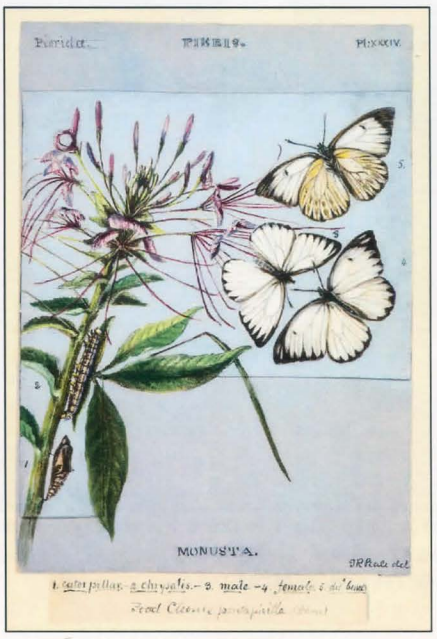
Titian Ramsay Peale is not much remembered primarily because his seminal work on the butterflies of North America was ignored for over 130 years after his death before publication in 2015.

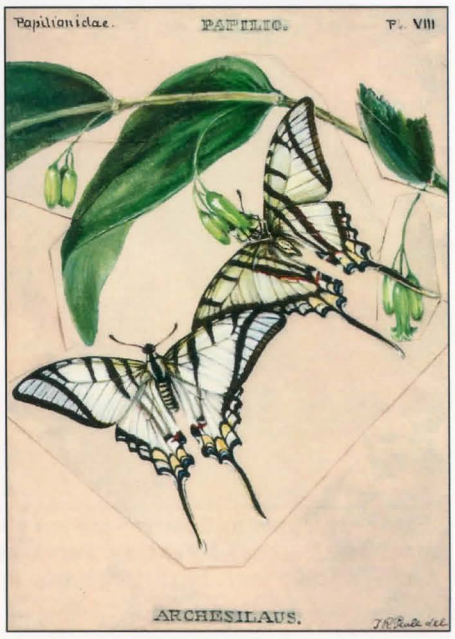
Titian Ramsay Peale was born in 1799 in Philadelphia. His father was the well known artist and naturalist, Charles Willson Peale. Titian Peale showed much artistic talent at an early age for his butterfly and moth illustrations. At the age of 17 his drawings came to the attention of Thomas Say (American entomologist, conchologist, and herpetologist - internationally known naturalist) who published them in his book *American Entomology* (1824-1828).

Peale took part in numerous scientific expeditions which surveyed:

- Florida and Georgia led by Thomas Say and sponsored by the Academy of Natural Sciences (1817),
- The Rocky Mountains in 1819, expedition led by Stephen Harriman Long,
- Florida to draw the birds encountered; his drawings were published in Charles Lucien Bonapart's *American Ornithology* (1825-1833),
- Pacific Ocean, Antarctic Ocean, Atlantic Ocean, North America, South America, Asia, Africa, Australia, Antarctica, Oceania - United States Exploring Expedition (1838 -1842).

Titian Peale died in 1885 and his manuscript "*The Butterflies of North America, Diurnal Lepidoptera: Whence They Come, Where They Go, and What They Do*" never was published in his lifetime. This book took up an enormous amount of his time - like 50 years! The manuscript was donated to the American Museum of Natural History in 1916 (31 years after Peale's death) by family members where it was ignored until finally published in 2015 as "*The Butterflies of North America; Titian Peale's Lost Manuscript*".





Titian Peale endured many hardships and tragedes such as:

- lost 4 years of his scientific research in an 1841 shipwreck,
- insect collections destroyed in a fire ~1841,
- family business (museum) closed due to financial problems (1843),
- wife, son, and daughter died early deaths,
- insufficient finances to publish his book.

Wikipedia, Titian Peale: https://en.wikipedia.org/wiki/Titian_Peale
Hyperallergic: https://hyperallergic.com/235139/the-resurrection-of-a-lost-19th-century-butterfly-manuscript/

RAPID EVOLUTION FAILS TO SAVE BUTTERFLIES FROM EXTINCTION IN FACE OF HUMAN - INDUCED CHANGE

PRESS RELEASE (MAY 9, 2018)
UNIVERSITY OF PLYMOUTH

Fig. 1. Edith's checkerspot (*Euphydryas editha*) (photo by Camille Parmesan)

The evolution of wild species, adapting them to human management practices, can cause localised extinctions when those practices change. And in a new study published in *Nature*, Professors Michael C. Singer and Camille Parmesan have used more than 30 years of research to fully document an example of this process.

They show that a large, isolated population of a North American butterfly evolved complete dependence on an introduced European weed to the point where the continued existence of the butterfly depended on the plant's availability. The insects then became locally extinct when humans effectively eliminated that availability.

The authors, affiliated to the University of Plymouth, the University of Texas at Austin and CNRS Moulis, have spent more than three decades studying changes in the diet of Edith's checkerspot (*Euphydryas editha*) in a spring-fed meadow surrounded by semi-desert sagebrush and pine forest on a family-run ranch in Nevada. The butterfly is closely-related to the British Marsh Fritillary.

Meadow on a Nevada cattle ranch that is the site of a new study in Nature on how wild species react to human-induced change (photo by Camille Parmesan).

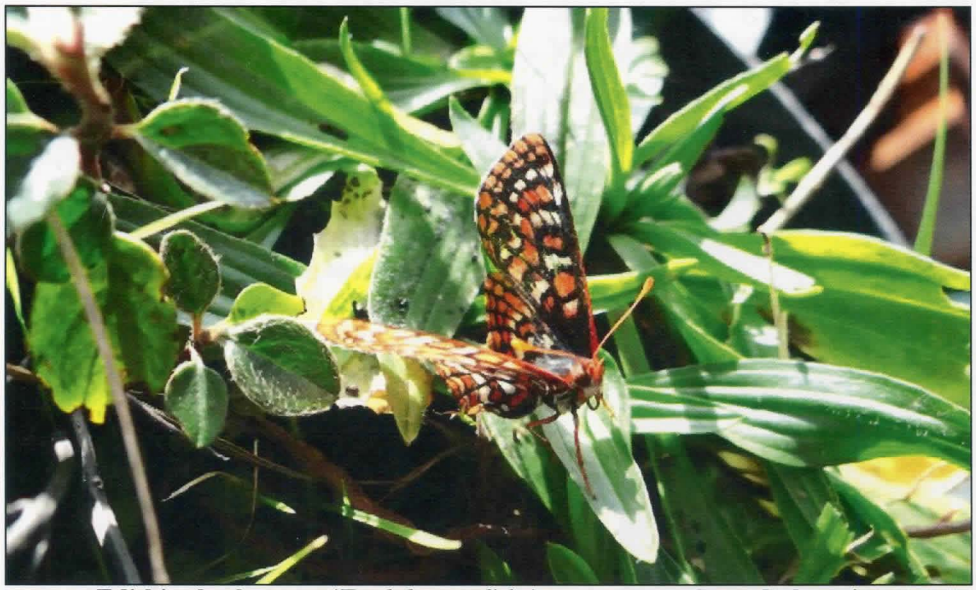
In particular, they assessed the impact of narrow-leaved plantain (*Plantago lanceolata*), which was introduced to the USA in hay brought from Europe and flourished under cattle-grazing, probably arriving in Nevada more than 100 years ago.

As soon as the butterflies encountered the plantain, their caterpillars survived better on it than on their traditional host, Blue-Eyed Mary (*Collinsia parviflora*), causing the adults to evolve preference for laying eggs on the plantain. By the mid-2000s, they were 100% reliant on the plantain and the Collinsia had been abandoned.

However, within three years of the ranch's cattle being removed due to financial pressures, the butterflies became locally extinct as the grasses around their favoured new host were no longer grazed, and the plantains became embedded in those grasses, cooling the micro-environment. The Collinsia was unaffected by removal of cattle, so if the butterflies had not evolved so rapidly in response to the introduction of the plantain, they would most likely have survived.

Around five years after the extinction, Edith's checkerspots recolonized the meadow. Since they were all found feeding on Collinsia, the original host plant, scientists believe these colonists to be a new population, and that the lineage which had called the ranch home for several decades no longer exists.

They say the results are similar to that seen in British species such as the large blue butterfly, which went extinct across southern England as the result of a reduction of grazing by both rabbits and sheep. Once this



Edith's checkerspot (*Euphdryas editha*) on a narrow-leaved plantain (*Plantago lanceolata*) (photo by Michael C. Singer).

process was understood, the butterflies could be successfully re-introduced.

Professor Singer, who has been studying the diet of Edith's checkerspot for more than 50 years and led the current study, said: *"This is a clear example of how humans are able to change habitats faster than rapidly-evolving species can change their behaviour. In this instance, the ranchers created a trap for the insects by providing a wonderful new resource – the trap was set when the insects evolved dependence on that resource, then sprung when the resource was abruptly snatched away. This cannot be not an isolated phenomenon, so unless we become aware of the potential consequences of such actions we will continue to inadvertently cause population extinctions of native species, without recognizing what we are doing. Species-level extinctions are possible when human activities are synchronized across wide areas."*

Professor Parmesan, a lead contributor to the Intergovernmental Panel on Climate Change which was awarded the Nobel Peace Prize in 2007, said the study had potentially wider implications beyond the scope of changes to farming practices.

A mating pari of Edith's checkerspot, which are the focus of a new study showing how wild species can be caught in "eco-evolutionary traps" when humans introduce new resources in the environment and then quickly take them away (photo by Michael C. Singer and Camille Parmesan).

She added: *"Climate warming is another form of anthropogenic change that is occurring faster than past natural changes, and is likely to cause problems for species whose evolution is unable to keep pace. If climate change were natural, it is likely that many wild species would be able to adapt, both through current evolution and through flexible changes in behaviour and life history. But human-driven climate change is occurring at a much faster rate than most past major climatic shifts. Ecologists have long been arguing that this is likely to lead to more extinctions than have happened with past climatic changes and this study supports the arguments that rapid climate change will prove detrimental to biodiversity both in the short and long term."*

The full study by Professors Michael C. Singer and Camille Parmesan is published in Nature, Vol: 557, pgs. 238-241 (2018) (https://www.nature.com/articles/d41586-018-05132-x) – *Lethal trap created by adaptive evolutionary response to an exotic resource*. Also a link to "behind the paper", an essay, *A poison'd chalice tale: butterfly extinction in eco-evolutionary trap,* by Dr. Singer is the following: https://natureecoevocommunity.nature.com/channels/521-behind-the-paper/posts/32973-a-poison-d-chalice-tale-butterfly-extinction-in-eco-evolutionary-trap
Note: The first link has a paywall for the full paper, but the abstract is available as is the News & Views editorial piece which is a nontechnical summary of the results. If more information is needed please contact Michael C. Singer: <michael.singer@plymouth.ac.uk>

Michael C. Singer is an Emeritus Professor in the School of Biological and Marine Sciences at the University of Plymouth, and Professor Emeritus in the Department of Integrative Biology at the University of Texas at Austin.

Camille Parmesan is National Marine Aquarium Chair in the Public Understanding of Oceans and Human Health at the University of Plymouth, and Adjunct Professor in the Department of Geological Sciences at the University of Texas at Austin. Both authors are also affiliated to the Theoretical and Experimental Ecology Station, a joint research centre of CNRS and Paul Sabatier University in Toulouse, France.

About the University of Plymouth

The University of Plymouth is renowned for high quality, internationally-leading education, research and innovation.

With a mission to Advance Knowledge and Transform Lives, Plymouth is a top 50 research university (Research Fortnight Research Power League Table 2014) with clusters of world class research across a wide range of disciplines including marine science and engineering, medicine, robotics and psychology. A twice winner of the Queen's Anniversary Prize for Higher Education, the University of Plymouth continues to grow in stature and reputation.

It has a strong track record for teaching and learning excellence, and has one of the highest numbers of National Teaching Fellows of any UK university. With 21,000 students, and a further 17,000 studying for a Plymouth degree at partner institutions in the UK and around the world, and over 100,000 alumni pursuing their chosen careers globally, it has a growing global presence.

http://www.plymouth.ac.uk

[The Editor of the Southern Lepidopterists' News thanks the University of Plymouth, England, UK, for allowing reproduction of their Press Release (May 9, 2018) about the changes in food source and the effects of rapid evolution and possibility of extinction on the survival of Edith's checkerspot. Thanks to the UT News, The University of Texas at Austin, for the use of the photos (Figs. 1, 2, and 4) by Dr. Camille Parmesan and Dr. Michael C. Singer which were published in their similar topic addressed in the UT Press Release May 9, 2018. The Editor also thanks Dr. Parmesan and Dr. Singer for their assistance in re-publishing this article in which many years of their seminal research was presented.]

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"I just ate the worst tasting BUTTERFLY of all times. Ugh!!!!!!"

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VISITOR TO VERNON AND CHARLOTTE BROU AT THE *ABITA ENTOMOLOGICAL STUDY SITE* - 2018

BY

VERNON ANTOINE BROU JR.

February 7, 2018 - in photo Dr. Tom Emmel (left) is founding director of the McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History, located in Gainesville, Florida, and on (right) is Vernon Brou holding a box of ***Eudocima*** moths just removed from the pinning boards and out of the drying oven. Behind the camera was Marie Emmerson, Senior Director of Development Florida Museum of Natural History, University of Florida. Both visited the research collection of about 400,000 mostly moths of Louisiana. And, we discussed 'bugs' as we went through several hundreds of Cornell drawers. All of us (Tom, Marie, Vernon, and Charlotte) had a great local cuisine lunch where we talked about more bugs and bug trap methods.

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

Note: Very sad to report that Dr. Tom Emmel died in Brazil on May 26, 2018.

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DR. THOMAS CHADBOURNE EMMEL, Ph.D

MAY 8, 1941 - MAY 26, 2018

Dr. Thomas C. Emmel

It is with great sadness that the family of Dr. Thomas C. Emmel announce his passing on Saturday, May 26, 2018, while traveling abroad in Brazil. He was 77 years old.

Tom is lovingly remembered by his brother, John Emmel (Phyllis), his nephew, Travis, and his niece, Alexis. In addition, a multitude of friends, colleagues and former students will forever honor Tom – noted conservationist, naturalist, prolific author and visionary - for his kindness, humor, encyclopedic knowledge and wide-ranging interests. He epitomized the ideal of the professor as educator, mentor, supporter and inspiration.

Born on May 8, 1941, Tom grew up in Los Angeles, California. His parents, Edward and Ardyce Emmel, met on an outing sponsored by the Sierra Club and encouraged an interest in nature, including taking Tom and his brother on many camping trips to all the national parks in the western U.S. Around age eight, at the suggestion of his father, Tom, then younger brother John, began collecting butterflies on all their family trips. This began a lifelong passion they shared. Their mother further encouraged their interest by driving them to entomological society meetings at Los Angeles County Museum of Natural History. His parents, a den mother and scout master, respectively, were very much involved with the scouting program, and the brothers were Cub Scouts, Boy Scouts, and Explorer Scouts, and became Eagle Scouts as well.

When Tom was a high school senior, he was one of 40 winners of the Westinghouse Science Talent Search, for which he won a trip to Washington, D.C. Upon graduating from high school, Tom went with ornithologist L. Irby Davis, for a three month trip to southern Mexico. Tom assisted Mr. Davis in recording bird songs in the early morning and evening, then collected butterflies during the mid-day. He returned to southern California with several thousand specimens – and his lifetime interest in tropical entomology was secured. As it would turn out, some of those specimens were representative of a new species – which in April 2018 was named *Cyllopsis tomemmeli* in his honor.

Tom earned his B.A. at Reed College in 1963. During the summer breaks from college, Tom was a nature counselor at Sanborn Western Camps for Kids, in Colorado. He earned his Ph.D. in Population Biology at Stanford University in 1967, and was a Post-doctoral Fellow in Genetics at the University of Texas from 1967-1968. His unbridled commitment to and support of the University of Florida began in 1968 when he joined its faculty as Assistant Professor of Biological Sciences & Zoology. In 1973, he became an Associate Professor of Zoology and three years later, in 1976, he became a Professor of Zoology. He served as department chairman for Zoology, directed the Department of Zoology Division of Lepidoptera Research from 1980-2003, and directed the UF Boender Endangered Species Laboratory since its inception in 1995.

In 2004, Tom was chosen to be the Founding Director of the Florida Museum's McGuire Center for Lepidoptera and Biodiversity at the University of Florida. The McGuire Center was Tom's vision and concept: A state-of-the-art research and teaching center that focused on Lepidoptera and the biodiversity they represent, and by extension a facility that engaged the public and created awareness of nature's beauty and relevance to our lives. The Center was brought to fruition by the generous support of Dr. and Mrs. William McGuire, lifelong friends and admirers of Tom and his efforts. Under Dr. Emmel's leadership, The McGuire Center for Lepidoptera and Biodiversity has become world-renowned for research on biodiversity, habitat loss, and

Lepidoptera; a major publisher of related scientific studies; a force in public education about our environment and its biodiversity; and the repository for the largest collection of Lepidoptera specimens in the world.

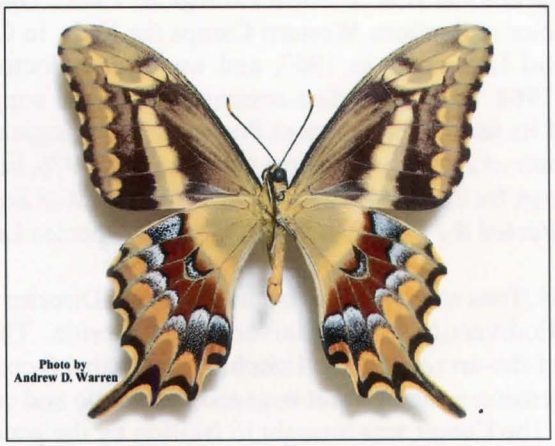
Tom authored more than 400 scientific publications, including 35 books. His many personal research interests included the endangered Schaus Swallowtail population in the Florida Keys; the effects of mosquito control pesticides on non-target wildlife and humans living in south Florida; microevolution, population biology, and ecological genetics of *Cercyonis* butterflies; chromosome evolution and macroevolution in the Lepidoptera; mimicry complexes in *Mechanitis* and *Melinaea* ithomiine butterflies in the Neotropics; biology, life histories, ecology, and conservation of the California butterfly fauna; fossil butterflies; and butterfly diversity in many areas of the world. He worked tirelessly to encourage efforts to promote conservation and natural habitat preservation, such as through the Miami Blue--Save Wild Florida license plate initiative and conservation biology efforts for the overwintering Monarch butterfly sites in Mexico. Throughout his lifetime, Tom mentored countless students - fostering and encouraging their careers in entomology, taxonomy, the study of tropical rainforests, and conservation biology.

Dr. Tom Emmel leaves behind a tremendous and unparalleled legacy. His vision, imagination, and energy in the service of conservation and Lepidoptera will continue to inspire and inform future generations of scientists, as well as the public in general. His life work contributed to making a better world, and the impact will be enduring.

In lieu of flowers, memorial donations in memory of Tom can be made to the Thomas C. Emmel Founding Director's Endowment, which supports collections and research at the Florida Museum's McGuire Center.

***Cyllopsis tomemmeli* (ventral)**

Schaus Swallowtail (dorsal)



Schaus Swallowtail (ventral)

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

CORRECTION: Due to a miss communication Riley Gott was not acknowledged in helping Jeff Slotten with the list of butterflies that appeared on page 76 of the SLS NEWS Volume 40 No. 1 (2017). This list was compiled from the field trip associated with the joint meeting in Florida of the Southern Lepidopterists' Society with the Association for Tropical Lepidoptera on September 22, 2017.

Charlie sends in the following report:

Florida records, January - April, 2018

Winter was long and colder than normal in the Gainesville area. One freeze killed several plants in our yard that had survived all previous winters since 2004. Consequently more tropical species suffered. Here is my list of observations for the period. As in 2009, *Heliconius charithonia* seemed all but wiped out in the Gainesville area. I saw none, but Matt Standridge just reported seeing one on May 1 at his home in Gainesville.

Junonia coenia Jan. 24, March 28, 31, April 4, 7, 25, 27
Phoebis sennae, Jan. 25, Feb. 9, 10, 22, 25, 26, March 11, 18, 29, April 2, 4, 12, 28
Agraulis vanillae, Jan. 31, April 4, 5, 25, 29
Danaus plexippus, Feb. 9, March 1
Calycopis cecrops, Feb. 17, 28
Papilio polyxenes asterius, Feb. 21
Papilio glaucus, Feb. 21, 23, 28, March 7, 10, April 27
Papilio troilus, Feb. 21, 28, March 3, 6, 7
Vanessa virginiensis, Feb. 22
Heraclides cresphontes, Feb. 22, March 11, 29, April 2
Hylephila phyleus, March 7, 10, April 27
Battus philenor, March 7, 10
Polites vibex, March 10
Libytheana carinenta, March 25, 28, 29, April 1
Pontia protodice, March 28, April 4
Papilio palamedes, April 4
Limenitis archippus, April 4
Erynnis horatius, April 25, 27

On Feb. 22 I visited the north part of Paynes Prairie Preserve State Park at the LaChua Trail (Alachua Co.) and saw *Erynnis* sp., *Papilio palamedes, Heraclides cresphontes* and *Phoebis sennae*.

Wings of a recently dead *Actias luna* were found in Gainesville on Feb. 10.

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Barbara Woodmansee submitted the following report:

Triangle Road, near Dixie Mainline Road (< 3 miles from south entrance), Dixie County, FL, Feb. 24, 2018 (Start time: 10:43 - End time: 12:20). Starting weather: partly cloudy, light breeze, 76 degrees; ending weather: mostly clear, light breeze, 80 degrees. Barbara Woodmansee and Ronda Spink, observers:

Horace's Duskywing
Least Skipper
Clouded Skipper
Whirlabout Skipper
Palamedes Swallowtail
Spicebush Swallowtail
Eastern Tiger Swallowtail
Zebra Swallowtail

Cloudless Sulphur
Barred Yellow
Pearl Crescent
Phaon Crescent
Red-banded Hairstreak
Great Purple Hairstreak
Carolina Satyr
Queen

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Here's a brief report from Rick Gillmore of Winter Park, FL:

"Feb 14, 2018: I saw a male Tiger Swallowtail this morning flying through my front yard. It tried to nectar on the large yellow flowers of a blooming tree, but without success. So it flew on. I saw a monarch two hours later in Orlando just flying around."

As always, I urge Florida members and visitors to send in their reports of observations and collected species.

Cheers, Charlie (ccovell@flmnh.ufl.edu)

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

James sends in the following report:

The contributors include James Adams (JKA or no notation), Brian Scholtens (BS), John Hyatt (JH) and Lance Durden (LD). Others are indicated with their records. Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, etc.), or more complete lists for new locations/new times of year. All known new STATE and COUNTY records are indicated, and all dates listed below are 2018 unless otherwise specified.

Rocky Face ridgeline, just W of Dalton at crest of Dug Gap Battle Rd., Whitfield Co.:
May 6-7:
ADELIDAE: *Adela caeruleella*, at lights. **EREBIDAE:** *Metria amella* (2).
May 13-14:
GEOMETRIDAE: *Lytrosis permagnaria* (2). **EREBIDAE:** *Spilosoma latipennis, Metria amella* (3), *Zale undulosa.*
NOCTUIDAE: *Acronicta funeralis, A. fallax* (3), *Apamea vulgaris, Dypterygia rozmani* (5), *Properigianr. costa.*
May 19-20:
GEOMETRIDAE: *Lytrosis permagnaria* (5). **EREBIDAE:** *Metria amella* (3). **NOCTUIDAE:** *Callopistria cordata, Apamea vulgaris, Dypterygia rozmani* (2), *Noctua pronuba.*

Taylor's Ridge 5 mi. W of Villanow, Walker Co.:
April 27-28:
NOCTUIDAE: *Properigia* nr. *costa* (COUNTY; second location in STATE),
May 12-13:
COSSIDAE: *Prionoxystus macmurtrei* (LATE). **GEOMETRIDAE:** *Lytrosis permagnaria.* **EREBIDAE:** *Metria amella* (4). **NOCTUIDAE:** *Tripudia rectangula, Emarginea percara* (COUNTY; northern record), *Properigia tapeta.*

Calhoun, Gordon Co. (JA residence):
ADELIDAE: *Adela caeruleella*, May 5, at lights. **GEOMETRIDAE:** *Lytrosis permagnaria* (COUNTY), May 11.
EREBIDAE: *Metria amella* (2), May 5; (2), May 12.

Metria amella, which I have always considered a moth of the coastal plain, and of which prior to this year I had seen fewer than five in NW GA, has been everywhere I've trapped in multiple numbers, and even on my back porch several times.

Gordon County, Georgia,September 21, 2017, Lisa Kimmerling:
LECITHOCERIDAE: *Scythropiodes issikii.*

Near Helen, Chattahochee Natl. Forest, off Hwy 75, 3 miles N. of junction w. Hwy. 356. Elev. ~1500 ft., White Co.
April 5, BS & LD:

GELECHIIDAE: *Chionodes mediofuscella, Symmetrischema striatella.* **TORTRICIDAE:** *Pseudexentera*, prob. *hodsoni, Argyrotaenia mariana, Platynota idaeusalis.* **GEOMETRIDAE:** *Biston betularia, Anticlea vasiliata, Cladara atroliturata.* **LASIOCAMPIDAE:** *Phyllodesma occidentis.* **NOCTUIDAE:** *Cerastis tenebrifera.*

Rockdale Co., Francis Stiteler:
LYCAENIDAE: *Callophrys henrici*, Mar. 8; *Callophrys niphon*, Mar. 3.

Bibb Co., Mar. 10, Jerry and Rose Payne:
HESPERIIDAE: *Amblyscirtes aesculapius*. This was an early date for us. Very fresh, basking on a trail through a hardwood bottom containing cane (*Arundinaria*).

Buckhead Creek, Jenkins Co., Mar. 3, Debo Boddiford:
NYMPHALIDAE: Texan Crescent (*Anthanassa texana*; 2 - 3, see photo).

Texan Crescent
(*Anthanassa texana*)

Effingham County near Guyton, Sheryl Foote, May 12:
EREBIDAE: *Symtomeida ipomoeae* (COUNTY).

Griffin Ridge WMA, 3 mi. SW Ludowici, Long Co., April 4-5:
COSSIDAE: *Cossula magnifica.* **LIMACODIDAE:** *Prolimacodes badia.* **MIMALLONIDAE:** *Lacosoma chirodota* (including males), *Cicinnus melsheimeri.* **EREBIDAE:** *Nigetia formosalis, Melipotis jucunda* (as abundant as I have ever seen it), *Drasteria graphica, Pseudanthracia coracias, Ptichodis pacalis, Argyrostrotis anilis.* **NOCTUIDAE**: *Acronicta perblanda* (COUNTY; second location in STATE), *Morrisonia triangula* (COUNTY), *Sideridis vindemialis* (4). It was good to see both *D. graphica* and *S. vindemialis* in the area after the prescribed burn a few years back. The area seems to have recovered nicely. And the *Acronicta perblanda* was a nice surprise, though with all the cypress in the area, I suppose it wasn't completely unexpected.

Sapelo Island, McIntosh Co.:
April 5-7, JKA:
LYCAENIDAE: *Callophrys gryneus.* **GEOMETRIDAE:** *Idaea ostentaria* (NEW to island), *Eubaphe meridiana* (NEW to island), *Hypomecis gnopharia, Phigalea titea* (LATE), *Phaeuora qurenaria* (2 females). **EREBIDAE:** *Zale confusa* (second for island). **NOCTUIDAE:** *Megalographa biloba* (NEW to Island), *Alypia wittfeldii, Condica cupentia, Derrima stellata* (see photo), *Morrisonia triangula* (NEW to island).

Derrima stellata

NE of Darien, just off Hwy. 99, McIntosh Co. GA, April 13, Doris Cohrs:
CRAMBIDAE: *Undulambia striatalis* (STATE).

Chickasawhatchee WMA, Dougherty Co., Mar. 10, Larry Gridley:
LYCAENIDAE: *Callophrys henrici* (COUNTY).

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

REPORT (1) ON BUTTERFLIES OBSERVED ON AVERY ISLAND, IBERIA PARISH, LOUISIANA

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

In mid March, I began what I hoped would become a year-long program to survey the butterflies on Avery Island, Iberia Parish, Louisiana (29° 54' 12" North Latitude, 91° 54' 37" West Longitude). Avery Island is not a true island but a salt dome that rises 163 feet above the surrounding coastal marsh. The geographic anomaly is privately owned by The McIlhenny Co. Today, Avery Island is the home of the original *TABASCO® Brand Pepper Sauce, Bird City* (home to a huge egret-heron rookery), *Jungle Gardens* (home to ancient live oak

trees and historically important collections of Asian ornamentals such as azaleas, camellias, bamboos, hollies, wisterias), the Cargill Salt Mine, and an abundance of alligators. Understandably, Avery Island is a notable destination for tourists. My first survey was conducted on March 15, 2018, between 9:00 AM and 3:00 PM, but was restricted to *Jungle Gardens* and grounds of the *TABASCO*® factory. Sky was clear, wind calm, temperature between 70-74 degrees F. Azaleas were in full bloom, camellias were spent although a few plants retained a fresh flower or two, and glossy privet (*Ligustrum lucidum*) was beginning to bloom. Camphor trees (*Cinnamomum camphora*), an invasive exotic, was rampant; seedlings sported new growth, and were obvious in virtually all shaded areas. On the positive side, camphor is a host for *Papilio troilus*. I observed two individuals of *Papilio polyxenes* nectaring on azaleas; other butterflies were either on the wing or nectaring on the glossy privet. The following butterflies were identified:

Pipevine Swallowtail (*Battus philenor*)—2
Black Swallowtail (*Papilio polyxenes*)—12
Giant Swallowtail (*Papilio cresphontes*)—1
Spicebush Swallowtail (*Papilio troilus*)—24
Cloudless Sulphur (*Phoebis sennae*)—6
Red-banded Hairstreak (*Calycopis cecrops*)—1
Phaon Crescent (*Phyciodes phaon*)—4
Question Mark (*Polygonia interrogationis*)—1
Monarch (*Danaus plexippus*)—1

REPORT (2) ON BUTTERFLIES OBSERVED ON AVERY ISLAND, IBERIA PARISH, LOUISIANA

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

On April 11-13, 2018, I revisited Avery Island. Weather was clear to party cloudy, temperature varied from 50-80 degrees F., winds were calm except for strong breezes on April 13. There were fewer butterflies in the gardens—probably because the date was between spring generations and very few plants were in flower except for the Louisiana iris (*Iris gigantacerulea*), yellow flag iris (*Iris pseudacorus*), glossy privet (*Ligustrum lucidum*), and Chinese privet (*Ligustrum sinense*). Because the McIlhenny Co. had recently granted me special permission to sample lands usually not accessible to the public, and because I was graciously escorted to many of the plant "hot spots" by Garrie Landry—the official botanist for the McIlhenny Co.—I was able to check for butterflies in many restricted venues. Three specialized sites were: an extensive grove of paw paw trees (*Asimina triloba*), a recently mowed grassy field of approximately ten acres that is home to a sizable population of green antelopehorn or spider milkweed (*Asclepias viridis*), several large stands of prairie nymphs (*Herbertia lahoe caerulea*), and a large grove of moso bamboo (*Phyllostachys edulis*), the world's tallest timber bamboo. I did not observe any zebra swallowtails (*Eurytides marcellus*) near the paw paw host plant. Although the field with milkweed had been recently mowed, I did locate a mature monarch (*Danaus plexippus*) larva searching on the ground for fresh leaves of milkweed. Within the stand of bamboo, I observed a single southern pearly eye (*Lethe portlandia*). (Prairie nymphs, as with most irises, are pollinated by bees—in this case, honey bees.) Species of butterflies that I documented are listed below:

Jungle Gardens

Spicebush Swallowtail (*Papilio troilus*)—8 (flying in venues with an abundance of camphor)
Gray Hairstreak (*Strymon melinus*)—2 (resting on a leaf of glossy privet)
Carolina Satyr (*Hermeuptychia sosybius*)—8 (flying low to ground near forested venues)
Monarch (*Danaus plexippus*)—6 (flying in open areas)
Red-banded Hairstreak—(*Calycopis cecrops*)—1 (nectaring on glossy privet)
Sachem Skipper (*Atalopedes campestris*)—1 (resting on leaf at edge of Bird City)

TOTAL SPECIES: 6

Sites on private property

Black Swallowtail (*Papilio polyxenes*)—10 (nectaring on bull thistle (*Cirsium vulgae*)
Giant Swallowtail (*Papilio cresphontes*)—2 (same as above)

Spicebush Swallowtail (*Papilio troilus*)—10 (same as above)
Palamedes Swallowtail (*Papilio palamedes*)—1 (same as above)
Gray Hairstreak (*Strymon melinus*)—1 (nectaring on glossy privet)
American Snout (*Libytheana carinenta*)—2 (same as above)2
Phaon Crescent (*Phyciodes phaon*)—2 (flying in a mowed field with host frog fruit (*Phyla nodiflora*)
Red-spotted Purple (*Limenitis arthemis astyanax*)—1 (nectaring on glossy privet)
Southern Pearly Eye (*Enodia portlandia*)—1 (flying in grove of moso bamboo)
Carolina Satyr (*Hermeuptychia sosybius*)—10 (flying in shade near edges of forest)
Monarch (*Danaus plexippus*)—20 (flying or nectaring on bull thistle; in addition, 1 mature larva on *Asclepias viridis*); most adults were worn and emaciated indicating flight from Mexico
Dun Skipper (*Euphyes vestris*)—2 (resting in grassy area near bull thistle)

TOTAL SPECIES: 12

CUMULATIVE TOTAL (both locations over three days): 14

CUMULATIVE TOTAL TO DATE (two reports): 17

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

All records by Ricky Patterson:

6 March 2018, Chickasaw County Wildlife Management Area, Chickasaw county, MS, *Anthocharis midea, Incisalia henrici turneri, Nymphalis antiopa antiopa, Celastrina ladon*

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

Steve send in the following report for North Carolina:

The following selected moth records were submitted to the Moths of North Carolina website over the combined winter and spring periods. Four hundred twenty-two records were submitted between 11 JAN and 13 MAY 2018, representing 255 species and coming from 24 counties. The following people submitted records: Amanda Auxier (AA), Betty Anderson (BA), Bill Arnold (BAR), B. Davies (BD), Becky Elkin (BE), Hunter Phillips (HP), J. A. Anderson (JA), Jim Petranka (JP), Jane Wyche (JW), K. Bischof (KB), Ken Kneidel (KK), Mark Shields (MS), Salman Abdulali (SA), Steve Coggin (SC), Steve Hall (SH), Gary Maness (SM), Vin Stanton (VS), Z. Ambrose (ZB). The 87 species included in this report have relatively few North Carolina records; most come from residential areas and few are likely to be truly rare. Those designated as **STATE** represent new additions to the Moths of North Carolina database, but are not necessarily entirely new to the state.

ERIOCRANIIDAE:
Dyseriocrania griseocapitella: APR 14, Surry, JA; APR 6, Guilford, GM

TINEIDAE:
Monopis crocicapitella: MAR 28, Guilford, GM
Monopis pavlovski: MAY 2, Guilford, GM

ELACHISTIDAE:
Ethmia zelleriella: APR 19, Madison, JP/BE; MAY 2, Madison, JP/BE; MAY 6, Buncombe, VS

OECOPHORIDAE:
Decantha boreasella: APR 14, Pender, AA
Promalactis suzukiella: MAY 3, Guilford, GM; MAY 4, Guilford, GM

GELECHIIDAE:
Coleotechnites quercivorella: MAY 4, Guilford, GM
Dichomeris ligulella: MAY 12, Madison, JP/BE

Dichomeris bilobella: APR 14, Surry, JA

GALACTICIDAE:
Homadaula anisocentra: MAY 5, Guilford, GM

SESIIDAE:
Synanthedon acerni: APR 28, Guilford, GM

TORTRICIDAE:
Retinia virginiana: MAY 2, Madison, JP/BE
Eucopina tocullionana: MAY 12, Madison, JP/BE; MAY 2, Madison, JP/BE; MAY 9, Madison, JP/BE
Proteoteras aesculana: MAR 17, Guilford, GM
Chimoptesis pennsylvaniana: FEB 15, Orange, SH; APR 12, Madison, JP/BE
Ancylis nubeculana: MAY 12, Madison, JP/BE
Ecdytolopha insiticiana: MAY 5, Buncombe, VS; MAY 7, Madison, JP/BE
Acleris schalleriana: FEB 18, Pender, AA
Argyrotaenia velutinana: FEB 23, Pender, AA; FEB 25, Guilford, GM
Argyrotaenia pinatubana: MAR 29, Yancey, KK; APR 13, Madison, JP/BE; APR 14, Madison, JP/BE; APR 19, Madison, JP/BE
Argyrotaenia alisellana: MAY 13, Guilford, GM
Argyrotaenia mariana: APR 22, Madison, JP/BE; MAY 1, Madison, JP/BE; MAY 9, Buncombe, VS
Syndemis afflictana: MAY 10, Madison, JP/BE; MAY 4, Madison, JP/BE
Sparganothis sulfureana: APR 27, Guilford, GM
Platynota idaeusalis: APR 27, Guilford, GM
Platynota semiustana: MAY 7, Guilford, GM (**STATE**)
Coelostathma discopunctana: MAY 12, Madison, JP/BE
Amorbia humerosana: APR 12, Guilford, GM; MAY 7, Madison, JP/BE

CRAMBIDAE:
Dicymolomia julianalis: MAY 4, Guilford, GM
Chalcoela iphitalis: MAY 4, Guilford, GM (**STATE**)
Pyrausta acrionalis: MAY 2, Madison, JP/BE
Geshna cannalis: APR 27, Guilford, GM
Diacme adipaloides: FEB 22, McDowell, KB; FEB 24, Orange, SH
Apogeshna stenialis: APR 10, Pender, AA (**STATE**)
Glyphodes pyloalis: MAY 2, Guilford, GM;
Palpita illibalis: APR 27, Guilford, GM; MAY 8, Madison, JP/BE
Conchylodes ovulalis: MAY 10, Madison, JP/BE
Crambus praefectellus: MAY 2, Guilford, GM
Diatraea lisetta: MAY 5, Guilford, GM

PYRALIDAE:
Pyralis farinalis: MAY 3, Guilford, GM
Hypsopygia binodulalis: MAY 13, Guilford, GM
Epipaschia superatalis: MAY 10, Guilford, GM
Oneida lunulalis: APR 13, Guilford, GM
Sciota subcaesiella: MAY 9, Madison, JP/BE
Sciota virgatella: MAY 8, Madison, JP/BE
Euzophera ostricolorella: MAY 11, Guilford, GM

THYRIDIDAE:
Thyris maculata: MAY 5, Rowan, SC; MAY 9, Madison, VS
Thyris sepulchralis: APR 14, Richmond, SA

PTEROPHORIDAE:
Amblyptilia pica: MAY 11, Madison, JP/BE

GEOMETRIDAE
Orthofidonia flavivenata: MAY 1, Madison, JP/BE.

Paleacrita vernata: JAN 22, Orange, SH; FEB 20, Orange, SH;
Paleacrita merriccata: JAN 11, Gates, JW
Plagodis kuetzingi: MAY 9, Madison, JP/BE
Scopula cacuminaria: APR 5, Pender, AA
Anticlea multiferata: MAY 5, Madison, JP/BE
Eupithecia columbiata: APR 13, Madison, JP/BE
Cladara limitaria: APR 13, Madison, JP/BE; MAY 9, Madison, JP/BE
Cladara anguilineata: FEB 17, Pender, AA
Cladara atroliturata: APR 14, Madison, JP/BE;

LASIOCAMPIDAE:
Phyllodesma americana: APR 22, Madison, JP/BE

SPHINGIDAE:
Sphecodina abbottii: APR 19, Guilford, GM

NOTODONTIDAE:
Nerice bidentata: MAY 10, Madison, JP/BE; MAY 8, Guilford, GM
Furcula borealis: MAY 11, Madison, JP/BE

EREBIDAE:
Apantesis carlotta: MAY 3, Madison, JP/BE
Zanclognatha pedipilalis: MAY 11, Guilford, GM
Hypena abalienalis: APR 10, Guilford, GM
Spargaloma sexpunctata: MAY 13,Guilford, GM
Isogona tenuis: MAY 5, Guilford, GM
Anomis privata: APR 30, Guilford, GM
Zale phaeocapna: MAY 3, Madison, JP/BE

EUTELIIDAE:
Eutelia pulcherrimus: MAY 12, Madison, JP/BE; MAY 7, Madison, JP/BE

NOCTUIDAE:
Leuconycta lepidula: MAY 10, Madison,JP/BE
Psychomorpha epimenis: MAR 28, Madison, VS; APR 18, Buncombe, VS
Mesapamea fractilinea: MAY 10, Madison, JP/BE
Niphonyx segregata: MAY 13, Guilford, GM
Eupsilia morrisoni: FEB 21, McDowell, KB
Feralia major: JAN 14, Pender, AA; FEB 20, Burke, KB
Feralia comstocki: MAY 2, Madison, JP/BE
Psaphida electilis: APR 12, Madison, JP/BE
Psaphida rolandi: MAR 17, Guilford, GM; MAR 31, Guilford, GM
Copivaleria grotei: MAR 31, Guilford, GMAPR 3, Pender, AA
Lacinipolia explicata: MAY 5, Madison, JP/BE
Orthosia garmani: FEB 24, Orange, SH
Himella fidelis: MAR 28, Madison, VS; MAR 29, Guilford, GM; APR 2, Guilford, GM
Achatia distincta: APR 2, Guilford, GM; APR 22, Buncombe, VS; MAY 1, Madison, JP/BE
Cerastis fishii: FEB 19, Pender, AA

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

Brian sends in the following report for South Carolina:

The following butterflies were sighted in March through early May at various locations around SC:

Colleton Co., Walterboro Wildlife Sanctuary, 11 Mar 2018, Richard Stickney: *Papilio glaucus, P. palamedes, Abaeis nicippe, Phoebis sennae, Calycopis cecrops, Cupido comyntas, Libytheana, carinenta, Vanessa virginiensis, Phyciodes tharos, Cyllopsis gemma, Hermeuptychia sosybius, Epargyreus clarus, Erynnis juvenalis, Hylephila phyleus*

Barnwell Co., SW of Barnwell off Poplar Rd., 23 Mar 2018, Sudie Daves Thomas: *Callophrys niphon, Calycopis cecrops, Papilio glaucus*

Greenville Co., Blue Wall Preserve, 30 Mar 2018, Doug Allen: *Papilio glaucus, P. troilus, Anthocharis midea, Callophrys augustinus, Erynnis brizo, Erynnis juvenalis*

Chesterfield Co., Carolina Sandhills NWR, 6 Apr 2018, Sven Halling: *Papilio glaucus, Abaeis nicippe, Callophrys hesseli, Cupido comyntas, Phyciodes tharos, Junonia coenia, Erynnis juvenalis*

Union Co., Sumter NF, 7 Apr 2018, Will Cook: *Battus philenor, Eurytides marcellus, Papilio polyxenes, P. glaucus, P. troilus, Abaeis nicippe, Callophrys gryneus, Phyciodes tharos, Vanessa virginiensis, Lethe anthedon, Erynnis juvenalis, Pyrgus communis/albescens*

Charleston Co., Hyde Park Rd., 8 Apr 2018, Dennis & Donna Forsythe: *Limenitis arthemis astyanax, Phyciodes tharos, Lethe portlandia, Hermeuptychia sosybius, Hermeuptychia intricata, Lerema accius, Poanes zabulon*

Aiken Co., Silver Bluff Audubon Preserve, 13 Apr 2018, John Demko & Lois Stacey: *Megathymus yuccae*

Newberry Co., Sumter NF, Enoree Ranger District, Cromer & Aisas Branch Rds., 13 Apr 2018, Dennis Forsythe: *Papilio glaucus, Battus philenor, Abaeis nicippe, Cupido comyntas, Erynnis juvenalis*

Laurens Co., Sumter NF, Enoree Ranger District, 13 Apr 2018, Dennis Forsythe: *Eurytides marcellus, Battus philenor, Cupido comyntas, Polygonia interrogationis, Hermeuptychia sosybius, Danaus plexippus, Erynnis juvenalis*

Charleston Co., Hyde Park Rd., 14 Apr 2018, Dennis & Donna Forsythe: *Papilio glaucus, P. palamedes, Abaeis nicippe, Phoebis sennae, Cupido comyntas, Vanessa atalanta, Vanessa virginiensis, Phyciodes tharos, Hermeuptychia sosybius, Hermeuptychia intricata, Lethe creola, Epargyreus clarus, Poanes zabulon, Euphyes vestris*

Dorchester Co., Francis Beidler Forest, 18 Apr 2018, Dennis Forsythe: *Papilio glaucus, P. palamedes, Megisto cymela, Poanes zabulon*

York Co., Anne Springs Close Greenway, 25 Apr 2018, Lenny Lampel: *Eurytides marcellus, Epargyreus clarus, Amblyscirtes hegon*

Charelston Co., Francis Marion NF, Halfway Creek Rd. & Steed Creed Rd., 2 May 2018, Brian Scholtens: *Papilio glaucus, P. palamedes, Limenitis arthemis astyanax, Phyciodes tharos, Hermeuptychia sosybius, Polites origenes, Polites vibex*

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

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

Monica Krancevic submits the following report for March 01– May 10, 2018
Lake Jackson, Brazoria County, Texas Private Residence (29.04N, 95.42W)

All observations are posted at: http://www.inaturalist.org/observations/krancmm

NEW at LOCATION

Family	Species	Dates	Comments
Crambidae	*Conchylodes concinnalis*	13-Apr	
Erebidae	*Ommatochila mundula*	17-Mar	
Erebidae	*Catocala umbrosa*	02-May	
Gelechiidae	*Aristotelia corallina*	01-May	
Gelechiidae	*Coleotechnites variiella*	03-May	
Momphidae	*Mompha rufocristatella*	10-Apr	

Noctuidae	*Perigea xanthioides*	24-Mar
Noctuidae	*Leucania linita*	02-Apr
Noctuidae	*Ponometia semiflava*	27-Apr
Noctuidae	*Leuconycta lepidula*	06-May
Noctuidae	*Elaphria versicolor*	06-May
Opostegidae	*Pseudopostega quadristrigella*	25-Mar
Pyralidae	*Pococera maritimalis*	09-Mar
Pyralidae	*Euzophera semifuneralis*	16-Mar
Pyralidae	*Ephestiodes infimella*	19-Mar
Pyralidae	*Dioryctria clarioralis*	21-Mar
Pyralidae	*Pococera militella*	27-Mar
Thyrididae	*Meskea dyspteraria*	18-Apr
Tortricidae	*Epiblema boxcana*	25-Mar
Tortricidae	*Eucosma grindeliana*	01-May

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Stuart Marcus sends this report for February 01 – May 10, 2018
Trinity National Wildlife Refuge, Liberty, Liberty County, TX (30.097N, 94.765W)

New species added to the Refuge between these dates

COUNTY RECORDS

Family	Species	Dates	Comments
Choreutidae	*Prochoreutis inflatella*	20-Apr	
Geometridae	*Hydriomena transfigurata*	08-Mar	ID: ECK
Notodontidae	*Nadata gibbosa*	01-Feb	
Pyralidae	*Pococera humerella*	24-Feb	
Tortricidae	*Rhyacionia rigidana*	15-Feb	ID: ECK
Tortricidae	*Satronia tantilla*	27-Feb	

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Mike Rickard submissions for Mission, Hidalgo Co., TX., for Jan. 1 – May 1, 2018
Abnormally cold Winter months followed by surprising butterfly species normally seen in Fall.

Family	Species	Dates	Comments
Hesperiidae	*Proteides mercurius*	3/4	
Hesperiidae	*Polygonus leo arizonensis*	3/5, 4/12	
Hesperiidae	*Chiodes zilpa*	4/8, 5/1	
Hesperiidae	*Spathilepia clonius*	2/28	
Hesperiidae	*Erynnis juvenalis juvenalis*	2/28	3rd county record
Hesperiidae	*Conga chydaea*	3/7	fewer than 10 US records
Hesperiidae	*Copaeodes aurantiaca*	5/1	
Hesperiidae	*Panoquina evansi*	3/4	
Hesperiidae	*Callimormus saturnus*	3/25	confirms old/hypothetical US records
Papilionidae	*Papilio anchsiades idaeus*	3/28	
Pieridae	*Glutophrissa drusilla tenuis*	3/7	
Pieridae	*Anteos clorinde*	2/27	
Pieridae	*Anteos maerula*	3/20	
Lycaenidae	*Panthiades bathildis*	3/3	5th US record
Nymphalidae	*Doxocopa pavon*	3/4	
Gelechiidae	*Calliprora sexstrigella*	1/7	new to yard
Tortricidae	*Pelochrista matutina*	3/9	new to yard
Epipyropidae	*Fulgoraecia exigua*	5/1	new to yard
Erebidae	*Catocala micronympha*	4/27, 4/30	county record
Noctuidae	*Euxoa serotina*	2/10	new to yard

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

Harry sends in the following 2018 winter/spring report for Virginia:

Butterflies [all reports H. Pavulaan except where noted]. A separate report for Great North Mountain follows below:

Anthocharis midea – Albemarle County: Sugar Hollow, April 14, 2018 (6 observed – Mark Adams).

Mitoura gryneus – Albemarle County: Sugar Hollow, April 14, 2018 (1 observed – Mark Adams).

Parrhasius m-album – Loudoun County: Leesburg, Veterans Memorial Park, Apil 12 & 14, 2018 (1 collected each date, first time seen at site – Harry Pavulaan).

Glaucopsyche lygdamus – Albemarle County: Sugar Hollow, April 14, 2018 (3 observed – MarkAdams).

Celastrina neglecta spring form – Loudoun County: Leesburg, Veterans Memorial Park (all Harry Pavulaan), February 20, 2018 (personal early record collected on 80F winter day following several mild days), March 19, 2018 (second individual seen in 2018, after a month of persistent winter weather), March 29, 2018 (5 confirmed by net), April 10, 2018 (2 observed), April 12, 2018 (16 confirmed by net or sight ID), April 14, 2018 (2 collected), April 26, 2018 (last individuals of the spring brood observed were 2 worn females). Due to repeated return of winter weather after sporadic warm days, these were the ONLY spring dates that *neglecta* was observed in flight at this site.

On April 30, 2018, I conducted my annual 4-hour spring survey of butterflies on the car-accessible north end of the Great North Mountain ridge at approx. 2300' elevation, near Hayfield, in Frederick County. Weather was sunny, cool but with very gusty winds. Progression of spring floral development was approximately 3 weeks behind previous years, with canopy trees still in winter state, with some understory trees just budding. Lowest numbers and species diversity in all years I've studied this site:

— *Papilio glaucus* – 1 observed. As typical for this site - undersized male.
— *Pieris rapae* – 2 observed flying beneath Scrub Oaks, likely to avoid gusty wind.
— *Incisalia augustinus croesioides* – 20+ observed along roadsides wherever Mountain Laurel and Blueberries were present.
— *Celastrina lucia* – 9 collected.
— *Erynnis juvenalis* – 3 observed along roadsides.

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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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