Southern Lepidopterists' NEWS

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

Vol. 45 NO. 4 **December, 2023**

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

ASTERACEAE, ASTER FAMILY

Drummond's Aster, *Symphyotrichum drummondii* – larval food for Pearl Crescent, (*Phyciodes tharos*).

Legend for the 3 Photos of Bryan Reynolds: Drummond's Aster, *Symphyotrichum drummondii*, Purcell City Lake, Purcell, McClain County, Oklahoma, 6 October 2022

Bryan Reynolds' article "OKLAHOMA BUTTERFLY LARVAL FOOD PLANTS *(Part 1)*" starts on page 325.

Jeff Slotten sends in the following information concerning the death of Ben Williams

"Our long time member from Connecticut Ben Williams died a few months ago. Ben was truly a great guy. He was about 88 years old. He only collected moths and mostly arctiidae. He had a relatively small personal collection including specimens from Costa Rica. He never desired to go overboard and collect every lepidoptera species. I don't know much more about him though he was married for years to his wife Nan who died several years ago of cancer. He raised three boys with his wife and has several grandchildren. He loved Connecticut but noticed that the numbers of moths were declining in his area over the years."

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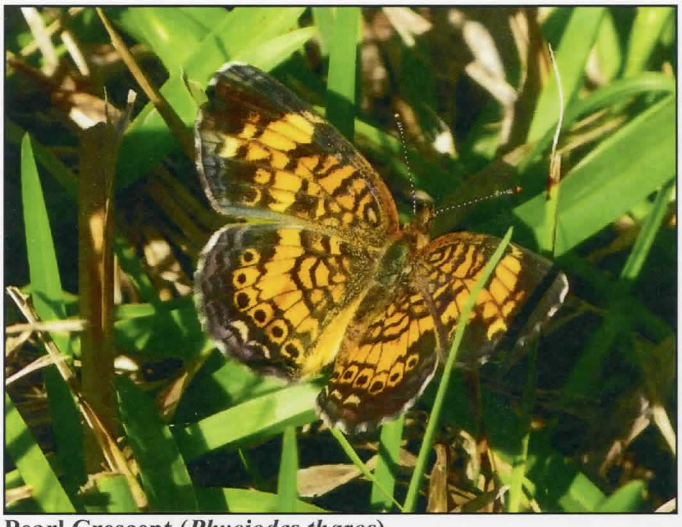
FALL ATTRACTIONS NO. 1 – BATON ROUGE, LOUISIANA

BY GARY NOEL ROSS



Pearl Crescent (*Phyciodes tharos*)

Phaon Crescent (*Phyciodes phaon*)

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Page

"Cover illustrations: 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, 1995)."

PHOTOS – NAPLES FLORIDA
BY
JEFFREY PIPPEN

Orange-barred Sulphur (*Phoebus philea*).
November 6, 2023, Naples, Florida

Barred Yellow (*Eurema daira*),
November 3, 2023, Naples, Florida

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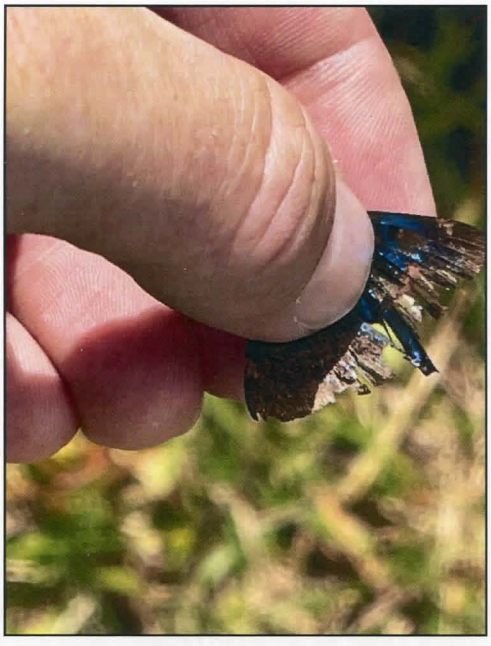
ATLIDES HALESUS
PHOTO BY
DAVID RUPE



David states the following:
Caught and released male *Atlides halesus*
near Nola, Scott County, Arizona,
on October 21, 2023.

AN UPDATE ON *BREPHIDIUM EXILIS* IN THE TAMPA BAY AREA, WITH NOTES ON *CYCLARGUS AMMON* IN THE FLORIDA KEYS (LYCAENIDAE)

BY

JOHN V. CALHOUN AND RON SMITH

Calhoun and Smith (2022) announced the discovery of breeding populations of *Brephidium e. exilis* (western pygmy-blue) in the Tampa Bay area of Florida. Despite the significant coastal impacts of two hurricanes in late 2022, and the near disappearance of the species between November 2022 and March 2023, adults of *B. exilis* were observed by Ron Smith (RS) on 8 April 2023 at Fort De Soto Park (Pinellas Co.). By early August, the butterfly was found at many of the same localities in Pinellas and Manatee counties that were documented in 2022. It was recorded for the first time at Pinellas Point Park in southern Pinellas County on 15 July (C. Gibson), and on 7 August, RS photographed a single adult at E.G. Simmons Conservation Park, Hillsborough County, expanding the known Florida range of *B. exilis* to three counties.

During the winter (dry season) months in this region, *B. exilis* likely continued to breed in small numbers where food plants maintained a sufficient amount of green foliage. With a burst of new growth during the spring and early summer of 2023, adults gradually increased in number and dispersed to recolonize areas that were previously inhabited. As in 2022, numbers peaked in late July-August, but this process was interrupted on 27-28 August, when Hurricane Idalia passed just west of the Tampa Bay area, resulting in damaging storm surges along the Gulf Coast and within Tampa Bay. Following the storm, surveys by RS at Fort De Soto Park failed to turn up any *B. exilis*. Local food plants were severely damaged by seawater inundation. No additional records have been reported from Fort De Soto as of early November 2023. On 1 September, RS confirmed that a small colony of *B. exilis* survived at a locality in southeastern Pinellas County, at the edge of Tampa Bay. Farther north in Pinellas County, John Calhoun (JC) did not observe any adults along the Dunedin Causeway one week after the storm, despite the presence of food plants in some areas. It was assumed that high winds had removed adults from the plants, but early stages survived. This was confirmed by JC on 11 September and 10 October when additional broods of *B. exilis* were flying. The butterflies were also photographed farther west along the Dunedin Causeway on 17 September (L. Childress).

Until recently, *B. exilis* was found in Florida only in association with sea blite (*Suaeda linearis*) and crested saltbush (*Atriplex pentandra*), particularly in salt flats and along disturbed shorelines (Calhoun and Smith 2022). Shoreline seapurslane (*Sesuvium portulacastrum*) is a known food plant of *B. exilis* elsewhere in its range, yet we did not observe oviposition on this plant in the Tampa Bay area in 2022. On 11 September 2023, JC observed several *B. exilis* flying around extensive patches of seapurslane along the Dunedin Causeway. Although sea blite and saltbush were still present after Hurricane Idalia, the butterflies were concentrated around seapurslane. Upon closer inspection, several females were seen depositing single eggs on the small, developing leaves of these plants (Fig. 1). Returning to that locality on 10 October, adults of *B.*

Fig. 1. Female *B. e. exilis* ovipositing on shoreline seapurslane, 11 September 2023, Dunedin Causeway, Pinellas Co., Florida (J. Calhoun).

exilis were observed only around the few lingering saltbushes. The reason for such shifts in food plant preference is unclear. Seapurslane is a sprawling plant that grows only a few inches above the sand, possibly offering greater protection to adults and early stages from gusty winds.

First recorded in Alabama in 2018, no additional *B. exilis* were documented in that state until 2023 (Calhoun and Smith 2022, ABAC 2023). A single female was photographed at Fort Morgan (Baldwin Co.) on 7 October, and another female was photographed ovipositing on shoreline seapurslane on 28 October at Dauphin Island (Mobile Co.) (both H. Horne). On 29-30 October, at least a dozen *B. exilis* were observed at Lightning Point, Bayou La Batre (Mobile Co.), with females ovipositing on abundant sea blite (H. Horne and P. Russo pers. comm.) (Fig. 2). These records suggest that *B. exilis* probably establishes temporary populations in the Florida Panhandle. This butterfly is very easy to overlook due to its diminutive size and localized habitat, which is not generally productive for butterflies. Targeted surveys should be conducted in the western panhandle where sea blite and shoreline seapurslane grow in abundance, especially later in the season.

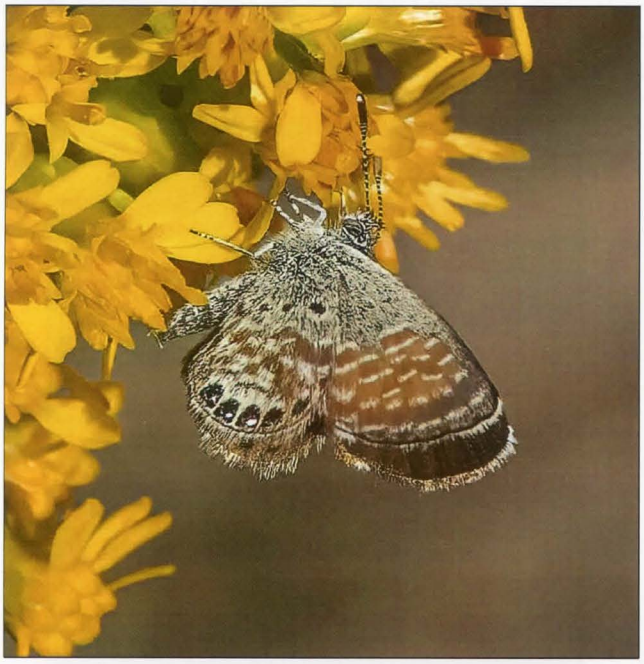


Fig. 2. Male *B. e. exilis* nectaring on seaside goldenrod (*Solidago sempervirens*), 29 October 2023, Bayou La Batre, Mobile Co., Alabama (P. Russo).

Cyclargus ammon. The residency status of *B. exilis* in Florida may be similar to that of another small species of blue, *Cyclargus ammon* (Lucas) (nickerbean blue), which was thought to have become established on Big Pine Key (Monroe Co.) sometime around 1997 (Krizek 1998, Krizek 1999, Glassberg 1999, Calhoun 2000, Calhoun et al. 2002). However, two older specimens (Fig. 3) were discovered by Matthews et al. (2018) in the

Figs. 3. Historical specimens of *C. ammon* from Florida with original labels (MGCL). Top: male, 28 June 1973, Key West, Monroe Co. (Leg. R. A. Anderson). Bottom: male, 4 April 1984, Big Pine Key, Monroe Co. (Leg. T. W. Kral).

collection of the McGuire Center for Lepidoptera and Biodiversity (Florida Museum of Natural History; MGCL). Both males, one was collected by R. A. Anderson on 28 June 1973 on Key West (Monroe Co.), and the other was captured by T. Kral on 4 April 1984 on Big Pine Key. These records suggest that *C. ammon* is at least a sporadic resident of the Keys. The specimen from 1984, first mentioned by Beck (1985), was long believed to be the first from Florida. It was donated to the former Allyn Museum of Entomology in 1984 (T. Kral pers.comm.), but was inadvertently misplaced, leading to speculation that it was lost or misidentified (Minno and Emmel 1993, Calhoun et al. 2002).

Adults of *C. ammon* may occasionally arrive in the Keys with tropical weather systems moving north from Cuba, where the species is widespread. Exploiting several native tree legumes as food plants, *C. ammon* became locally common on Big Pine Key in the early 2000s, and it was recorded on nearby Bahia Honda Key in 2003 (Calhoun et al. 2002, Fine 2003, Daniels et al. 2006). It was predicted that *C. ammon* would become permanently established in the Keys (Glassberg et al. 2000), but the population declined after 2005, probably due to the effects of four hurricanes that passed near the Lower Keys that year. In particular, Hurricane Wilma

produced the highest recorded storm surge in the Keys since 1965 (Kasper 2007). Several other species of butterflies were also impacted (Cannon 2006, Salvato and Salvato 2007). After 2005, there were few if any Florida records of *C. ammon* until 2009, when it was recorded twice, several weeks apart, at the same locality on Big Pine Key (IBWG 2011). Thought to be extirpated after 2009 (Minno 2011), a single male was photographed on Big Pine Key on 10 April 2013 (S. Kolterman) (Fig. 4). Subsequent butterfly surveys in the Keys did not encounter *C. ammon*, and Matthews et al. (2018) were unaware of any later records. In addition, there are no records of *C. ammon* among the 5,445 Florida Keys butterfly observations that were documented between 11 April 2013 and 31 October 2023 by 1,044 individual observers on iNaturalist (2023). This total includes 682 butterfly records from Big Pine Key and Bahia Honda Key, which were submitted by 198 observers. Likewise, no valid records of *C. ammon* after 2009 are included in the online databases of Butterflies and Moths of North America (BAMONA) (Lotts and Naberhaus 2023), eButterfly (2023), GBIF (2023), or NABA (2023). If *C. ammon* still occurs in Florida, it must be extremely rare.

Like *C. ammon* in the Keys, the Tampa Bay population of *B. exilis* occurs beyond the species' primary range, making it particularly vulnerable to extirpation. The most serious threats to *B. exilis* in Florida are freezing temperatures, hurricanes, sea level rise, and coastal development.

Acknowledgments. We thank Chad Anderson, Howard Horne, Tom Kral, Patsy Russo, Mark Salvato, and Collin Stempien for sharing information. Debbie Matthews kindly provided images of specimens, and Susan Kolterman and Patsy Russo granted permission to reproduce their photos.

Fig. 4. Male *C. ammon*, 11 April 2013, Big Pine Key, Monroe Co., Florida (S. Kolterman). The last known Florida record of this species.

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(John V. Calhoun; E-mail: bretcal1@verizon.net)

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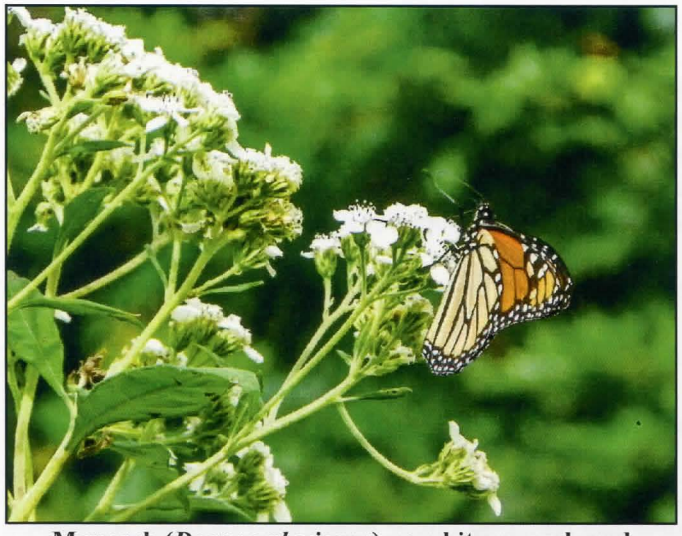
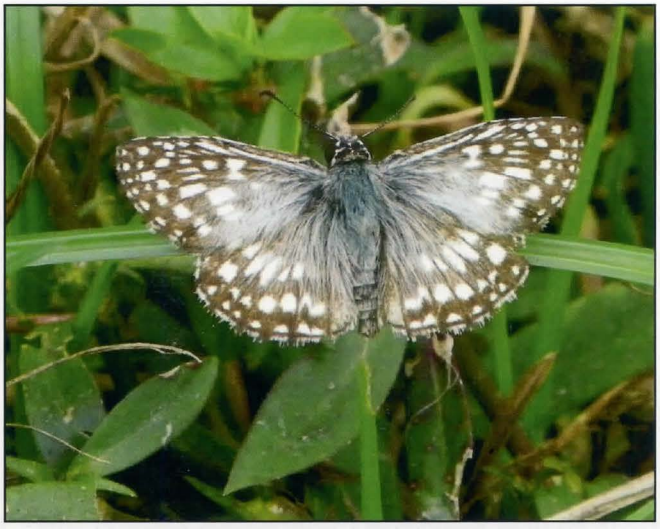
FALL ATTRACTIONS NO. 2 – BATON ROUGE, LOUISIANA
BY GARY NOEL ROSS



Monarch (*Danaus plexippus*) on white crownbeard (*Verbisina virginica*)



Tropical Checkered Skipper (*Pyrgus oileus*)

BRIEF NOTE: A NEW STATE BUTTERFLY RECORD FOR ALABAMA

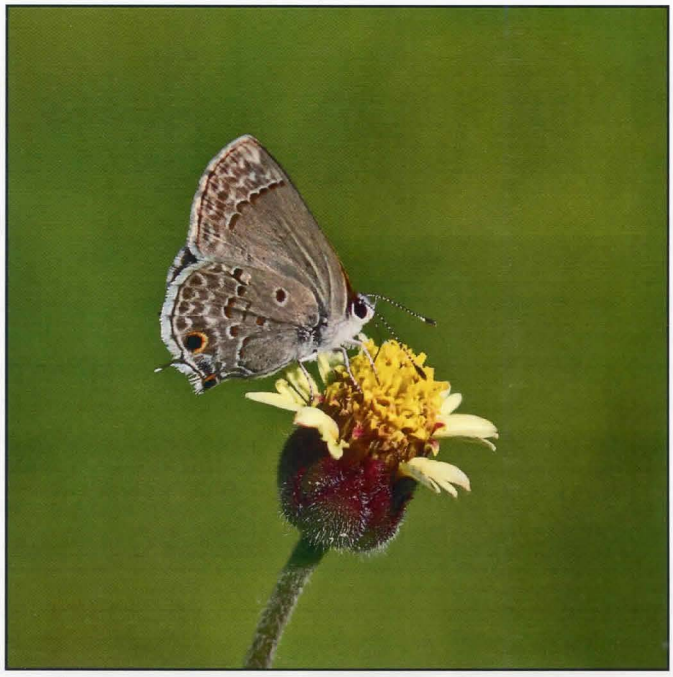
BY

STEVE KROTZER AND MARY JANE KROTZER

On Saturday, October 21, 2023, the senior author was surveying for moth caterpillars on vegetation around the ponds of the Alabama Aquatic Biodiversity Center located in Perry County, Alabama. While walking near one of the ponds, he saw a small, grayish colored butterfly nectaring on Blue Mistflower (*Conoclinium coelestinum*). When the butterfly flew from one flower to the next, the flight was typical of a hairstreak species, but the specimen was too small for a Gray Hairstreak. As the senior author moved closer to photograph the specimen with his cell phone, he recognized the butterfly as a Mallow Scrub-Hairstreak (*Strymon istapa*), which had not previously been recorded from Alabama. The specimen was photographed several times before it flew away. The senior author returned to the patch of Mistflower several times over the next hour in an attempt to relocate the butterfly, but it was not seen again. On Sunday, October 22, 2023, the authors returned to the site and surveyed for several additional hours, paying special attention to patches of Mistflower and other potential nectar plants, but were unable to relocate the specimen.

Mallow Scrub-Hairstreak (*Strymon istapa*) from Perry County, Alabama on 21 October 2023

In the United States, Mallow Scrub-Hairstreaks are known from southern Florida and from southern Texas, New Mexico, Arizona, and California (Glassberg, 2017). They are also found in Mexico through Central America and southward to Brazil and on the islands in the Caribbean (BAMONA, 2023). There are two recognized subspecies: *Strymon istapa istapa*, which consists of southwestern populations, and *Strymon istapa modesta*; which consists of southern Florida populations.



***Strymon istapa istapa* from Hidalgo County, Texas on 19 November 2021**

***Strymon istapa modesta* from Monroe County, Florida on 8 February 2023**

As can be seen in the photos, the individual seen in Perry County, Alabama was not worn and still had its tails intact, indicating that it had probably recently eclosed at or near the location where it was seen and photographed. This individual appears to have the characters of the southwestern *S. istapa istapa* subspecies. These characters include shorter tails and a large black spot with a yellow-orange crescent on the hindwing as compared with the southern Florida subspecies (*S. istapa modesta*), which has longer tails and a tricolored spot (orange, red, and black).

Based upon the freshness of the individual seen in Perry County, the similarities of the individual to the southwestern subspecies, and the distance between the Perry County location and known populations of Mallow Scrub-Hairstreaks, the authors hypothesize that the individual seen on October 21, 2023 could have been the offspring of an individual that was transported and displaced by Hurricane Idalia, which made landfall in the Big Bend area of Florida on August 30, 2023 with a diameter of roughly 350 miles and bands extending even further outward. Hurricane Idalia formed in the Caribbean Sea near the Yucatan Peninsula and then moved across the Gulf of Mexico. Hurricanes have been shown to transport both birds and insects (Van Den Broeke, 2022); in fact, several American Flamingos originally banded in the Yucatan Peninsula have been documented as being transported by Hurricane Idalia to sites as far north as Pennsylvania (Carr, 2023). Three American Flamingos ended up in a farm pond in Hale County, Alabama, which is the county immediately west of Perry County.

A female Mallow Scrub-Hairstreak transported to the Perry County, Alabama site could have previously copulated with a male and stored the spermatophore from the male with the sperm remaining viable within the female for several months (Cech and Tudor, 2005). Mallow Scrub-Hairstreaks use members of the Mallow family as hostplants, including those in the genus *Sida* (Fanpetals) (BAMONA, 2023). The authors have previously found *Sida rhombifolia* growing abundantly at the Perry County site and believe that this plant could have served as hostplant for any caterpillar(s) that resulted from a displaced adult female. Alternatively, an egg or caterpillar could have been transported to the site on a nursery plant grown within the known range of the species. It should be noted that the Alabama Aquatic Biodiversity Center is currently only culturing species of snails and mussels native to the southeastern US, and they would have no reason to be transporting plants that could serve as the potential hostplant for the Mallow Scrub-Hairstreak to the site.

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(Steve Krotzer – E-Mail: rskrotze(@gmail.com, Mary Jane Krotzer – E-mail: mjkrotzer@gmail.com)

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BUTTERFLY CATERPILLARS: ALL PHOTOS ARE BY STEVE KROTZER AND DESIGN BY MARY JANE KROTZER

(Steve Krotzer – E-Mail: rskrotze(@gmail.com, Mary Jane Krotzer – E-mail: mjkrotzer@gmail.com)

THE WANDERING CATERPILLAR CHALLENGE

BY

MARC C. MINNO

Last instar butterfly caterpillars sometimes pupate on their larval host plants but most prefer to wander away to complete their metamorphosis. Chewed leaves, frass, silk trails or nests can be signs for predators that prey may be nearby.

How far a caterpillar may wander from its host plant before pupating is not well documented. I have frequently seen chrysalids on the exterior walls of houses as well as on window and door frames. I have also heard from gardeners about caterpillars pupating on clay flower pots or tires of their car or in their garage or drowning in a swimming pool.

Last fall I sowed some seeds of bronze-leaved fennel (*Foeniculum vulgare* Mill.) in a rock garden at my son's house in northwestern Gainesville, Florida. I collected the seeds from a garden in Tallahassee. Cultivars such as 'Purpureum', 'Rubrum', and 'Nigra' are some bronze-leaved fennel selections. Several fennel plants grew from the seeds and began to flower the following summer.

On July 2, 2023 I found two last instar Black Swallowtail (*Papilio polyxenes asterius* Stoll, 1782) larvae on one of the fennel plants (Figure 1). No other Black Swallowtail hosts were present in the yard. On July 4 one of the larvae had tied up to pupate on the side of the house approximately 39 feet from the larval host plant in the garden and about one foot above the ground surface. The next day a brown pupa was present. Around 10:00 am on July 16, 2023 an adult female Black Swallowtail was perched with wings closed over the back just above the pupal exuvium. It flew away as I approached.

Fig. 1. One of the Black Swallowtail larvae that wandered 39 feet from host plant to pupation spot.

My challenge for you is to find an example of a prepupal butterfly or moth caterpillar that wandered greater than 39 feet (about 12 meters) to form a pupa. How far will they go?

(Marc C. Minno, E-mail: marccminno@gmail.com)

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ADDITIONAL IMAGES OF THE SEMINOLE CRESCENT IN LOUISIANA

BY

GARY NOEL ROSS AND JOHN EDWARD HARTGERINK

In *News of the Lepidopterists' Society* (Winter Issue 2023, Vol. 65, No. 4, pages 172-182, 203, accessible online), we consolidated twenty years of documented sightings of the Seminole crescent (*Anthanassa texana seminole*) in our home state, Louisiana. Because of limited space, we could not include as many photographs as we would have liked. Here we include six "extras." All were taken by the junior author at Bluebonnet Swamp Nature Center within south Baton Rouge. Enjoy!

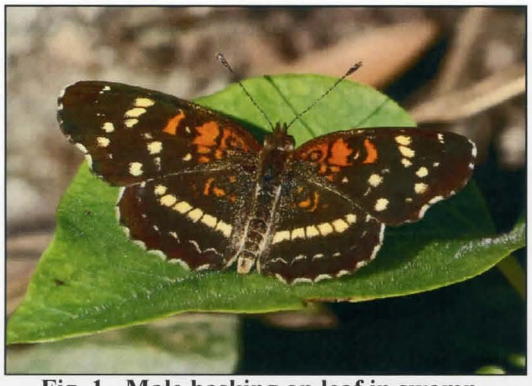

Fig. 1. Male basking on leaf in swamp. October 8, 2023.

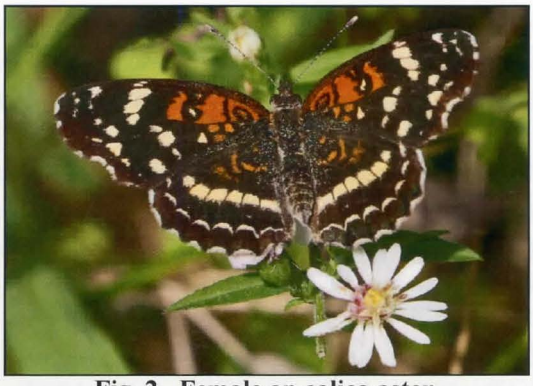

Fig. 2. Female on calico aster (*Symphyotrichum lateriflorum*). November 4, 2022.

Fig. 3. Male on opposite leaf spotflower (*Acmella oppositifolia*). October 26, 2022.

Fig. 4. Male on climbing hempweed (*Mikania scandens*). October 8, 2023.

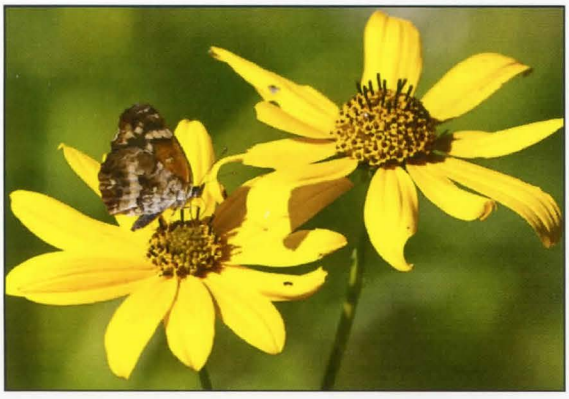

Fig. 5. Male on muck sunflower (*Helianthus simulans*). November 7, 2022.

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Fig. 6. Female ovipositing on looseflower water-willow (*Justicia lanceolata*). April 27, 2006.

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(Gary Noel Ross, E-Mail: GNRoss40@yahoo.com)
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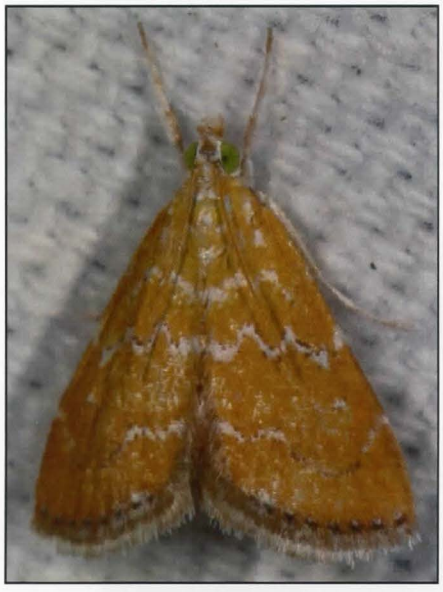
NEW MOTHS OBSERVED AT TRINITY RIVER NATIONAL WILDLIFE REFUGE (AUGUST 1 – OCTOBER 31, 2023) WITH 2 EXCEPTIONS

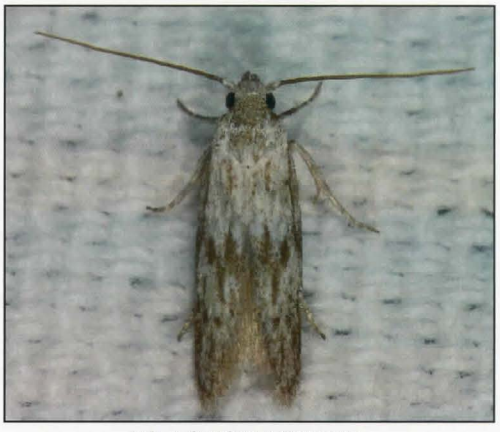
BY
STUART MARCUS



CRAMBIDAE
Xanthophya psychicalis
(Xanthophya Moth)
←

CRAMBIDAE
***Pyrausta rubricalis* (Variable Reddish Pyrausta)**
→

EREBIDAE
Cisthene tenuifascia
(Thin-banded Lichen Moth)
←



BLASTOBASIDAE
Calosima albapenella

NOCTOIDAE
Lacinipolia erecta
←

NOTODONTIDAE
Schizura ipomaeae
(Morning-glory Prominent)

TORTRICIDAE *Aethesoides* sp. [This moth was sent to Hugh Mcguinness from one that I (Stuart) collected in May 2023. It was dissected and shown to be *Aethesoides*, which is new for the United States. It is found in Mexico though.]

TORTRICIDAE *Aethes matheri* (This moth was observed prior to these dates but was confirmed by Hugh Mcguinness through dissection in October.)

TORTRICIDAE
Aethes baloghi

(Stuart Marcus, E-Mail: stuart.marcus13@gmail.com)

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RFI: DOES *EUDESMIA MENEA (DRURY, 1782)* [EREBIDAE: ARCTIINAE: CISTHENINI] OCCUR IN NORTH AMERICA NORTH OF MEXICO?

The basis for inclusion of the lichen moth *Eudesmia menea* in the North American fauna seems tenuous. Some online venues list *E. menea* in the United States (e.g., Moth Photographers' Group, BugGuide) but show no U.S. records. iNaturalist has no U.S. observations of *E. menea*, the nearest to the U.S. being several records in central Tamaulipas, Mexico. All of the barcoded records of "*Eudesmia menea*" on the BOLD website from Arizona, New Mexico, and Texas are readily identifiable as typical *E. arida*, the expected species in that region. Other online resources (e.g, Wikipedia) include Florida within the U.S. range of the genus. At present, I can find *no valid records* of true *Eudesmia menea* in the U.S. (e.g. AZ, NM, TX, or FL) on BugGuide, iNaturalist, MPG, BOLD, SCAN, or GBIF.

I'm trying to track down the basis for including *Eudesmia menea* in the moth fauna of North America north of Mexico, especially with respect to any of the purported Florida occurrences. Please contact me, Chuck Sexton, at the email address listed below, or on iNaturalist (@gcwarbler) with any relevant information or questions about this inquiry.

(Chuck Sexton, E-Mail: gcwarbler@austin.rr.com)

OKLAHOMA BUTTERFLY LARVAL FOOD PLANTS

PART 1

BY
BRYAN REYNOLDS

As many SLS members know, I've been on a quest to photograph all of the butterfly species that have been documented in my home state of Oklahoma. This project started in the fall of 2005, and I'm still working hard to complete the list of now 202 species. During this time, I've learned a lot, especially about larval food plant association. This is really good to know in order to spot and photograph as many butterfly species as possible as well as finding opportunities to photograph immatures, ovipositing behavior, etc. And since I'm a generalist nature and wildlife photographer (I photograph everything from mosquitoes to mountains), for some time now, I've also been trying to get good photos of as many butterfly larval food plants as I can. As part of this, I'm also collaborating with a plant expert at the University of Oklahoma to do a book on Oklahoma wildflowers (roughly 400 species). This particular project has been going for three seasons, and I'll need at least two more to complete our targets. As I was reviewing my completed wildflower list for this book project, I realized how many of them (along with all the other non-flowering plants I've photographed) were butterfly larval food plants. So, I thought I'd share with SLS members all of the Oklahoma butterfly larval food plants I've photographed thus far. (I've used multiple references and resources to compile a list of butterfly larval food plants for Oklahoma and it's virtually impossible to list them all here. I also realize my list is probably not all inclusive and that some plant names have change due to recent taxonomy changes. Also, many plants have multiple common names, and in that case, I tried to pick the most commonly used one)

FABACEAE, PEA FAMILY

Atlantic Pigeonwings, *Clitoria mariana* – larval food for Silver-spotted Skipper, (*Epargyreus clarus*), and Zarucco Duskywing, (*Gesta zarucco*).

Atlantic pigeonwings, *Clitoria mariana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 25 August 2017

Atlantic pigeonwings, *Clitoria mariana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 21 August 2023

POACEAE, GRASS FAMILY

Big Bluestem, *Andropogon gerardii* – larval food for Cobweb Skipper, (*Hesperia metea*), Arogos Skipper, (*Atrytone arogos*), Delaware Skipper, (*Anatrytone logan*), Dusted Skipper, (*Atrytonopsis hianna*), and Common Wood-Nymph, (*Cercyonis pegala*).

Big Bluestem, *Andropogon gerardii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 26 August 2023

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Big Bluestem, *Andropogon gerardii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 26 August 2023

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Big Bluestem, *Andropogon gerardii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 28 August 2023

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Big Bluestem, *Andropogon gerardii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 28 August 2023

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Bushy Bluestem, *Andropogon glomeratus* – larval food for Cobweb Skipper, (*Hesperia metea*).

Bushy Bluestem, *Andropogon glomeratus*, in winter, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 16 January 2020

JUGLANDACEAE, WALNUT FAMILY

Black Hickory, *Carya texana* – larval food for Banded Hairstreak, (*Satyrium calanus*), and Hickory Hairstreak, (*Satyrium caryaevorus*).

Black Hickory, *Carya texana*, leaves emerging in spring, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 5 April 2013

Black Hickory, *Carya texana*, leaves emerging in spring, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 5 April 2013

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Black Hickory, *Carya texana*, leaves emerging in spring, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 5 April 2013

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APOCYNACEAE, DOGBANE FAMILY

Antelope Horns, *Asclepias asperula* – larval food for Monarch, (*Danaus plexippus*), and Queen, (*Danaus gilippus*).

Antelope Horns, *Asclepias asperula*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 10 May 2023

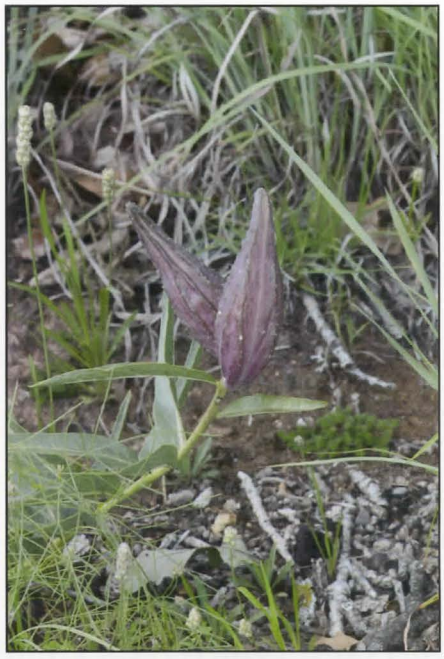
Antelope Horns, *Asclepias asperula*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 24 April 2020

Antelope Horns, *Asclepias asperula*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 10 May 2023

Antelope Horns, *Asclepias asperula*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 26 April 2020

Antelope Horns, *Asclepias asperula*, Black Mesa State Park, Cimarron County, Oklahoma, 22 May 2013

Antelope horns, *Asclepias asperula*, with fruit, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 6 June 2023



ASPARAGACEAE, ASPARAGUS FAMILY

Arkansas Yucca, *Yucca arkansana* – larval food for Yucca Giant-Skipper, (*Megathymus yuccae*).

Arkansas Yucca, *Yucca arkansana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 3 May 2020

Arkansas Yucca, *Yucca arkansana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 7 May 2020

Arkansas Yucca, *Yucca* Wildlife Management Area, Love County, Oklahoma, 3 May 2021

Arkansas Yucca, *Yucca arkansana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 7 May 2020

Arkansas Yucca, *Yucca arkansana*, Hickory Creek Wildlife Area, Love County, Oklahoma, 3 May 2021

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Arkansas Yucca, *Yucca arkansana*, Lexington Wildlife Management Area, Cleveland County Oklahoma, 17 May 2021

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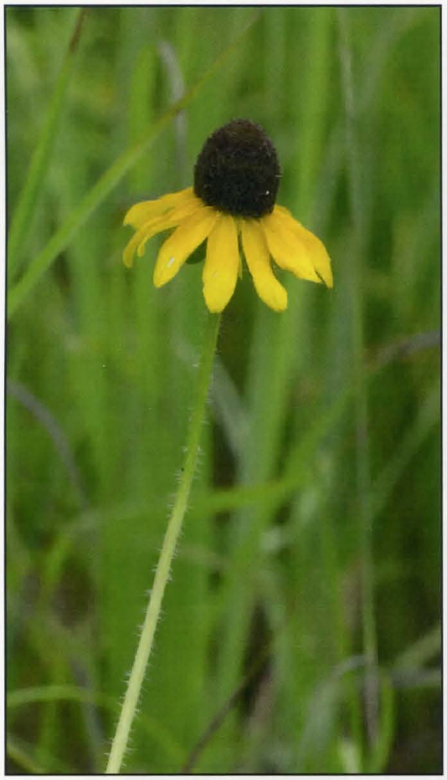
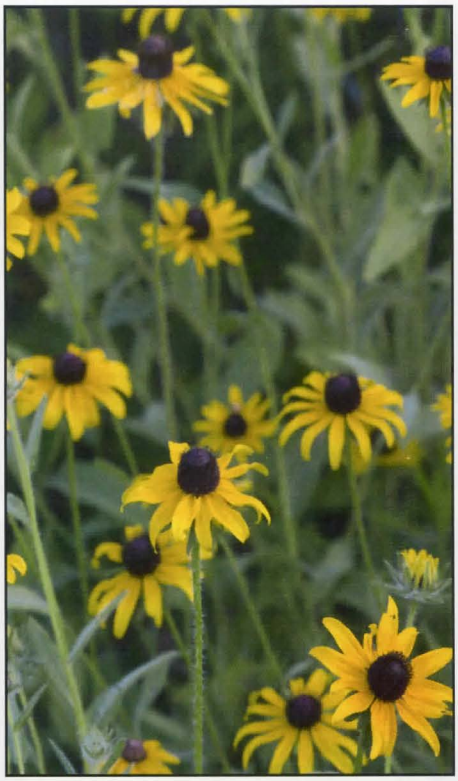
ASTERACEAE, ASTER FAMILY

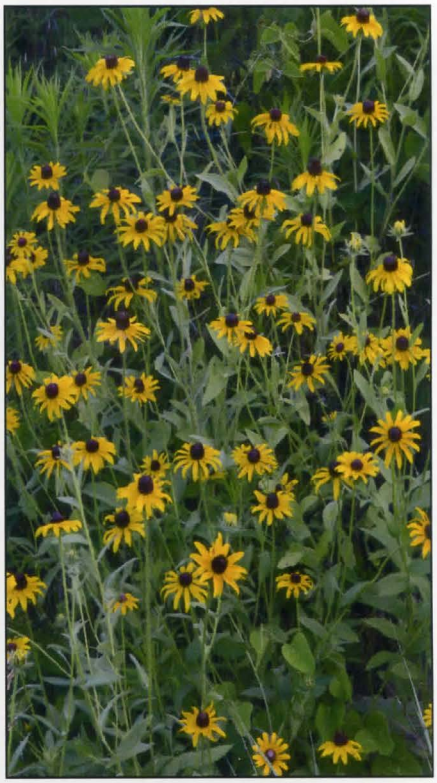
Black-eyed Susan, *Rudbeckia hirta* – larval food for Silvery Checkerspot, (*Chlosyne nycteis*).



Black-eyed Susan, *Rudbeckia hirta*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 10 July 2021



Black-eyed Susan, *Rudbeckia hirta*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 21 June 2016

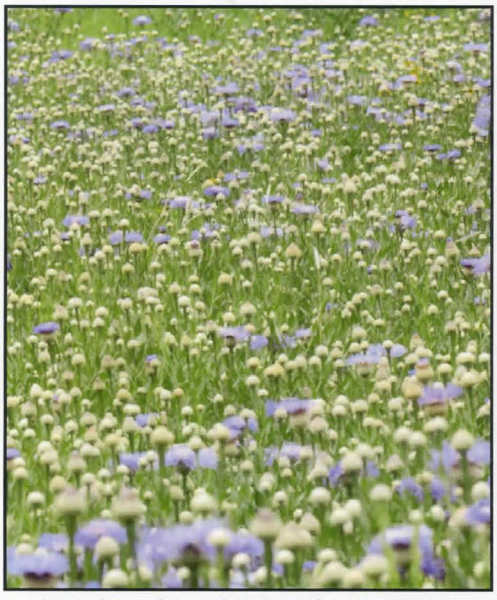


Black-eyed Susan, *Rudbeckia hirta*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 21 June 2016

Blue Mistflower, *Conoclinium coelestinum* – larval food for Bordered Patch, (*Chlosyne lacinia*).

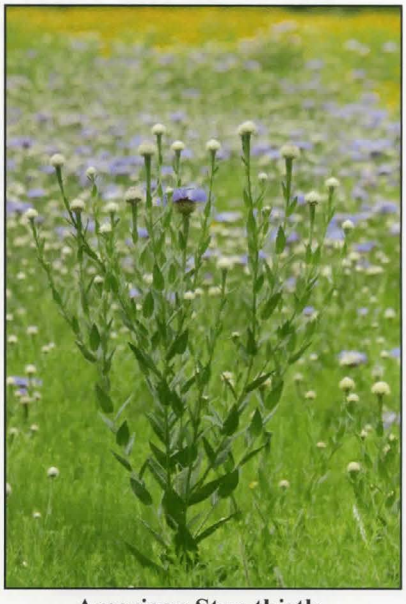
Blue Mistflower, *Conoclinium coelestinum*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 26 September 2020

American Starthistle, *Plectocephalus americanus* – larval food for Painted Lady, (*Vanessa cardui*).



American Star-thistle, *Plectocephalus americanus*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 13 June 2023

American Star-thistle, *Plectocephalus americanus*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 2 June 2023



American Star-thistle, *Plectocephalus americanus*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 13 June 2023

American Star-thistle, *Plectocephalus americanus*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 13 June 2023

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American Star-thistle, *Plectocephalus americanus*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 2 June 2023

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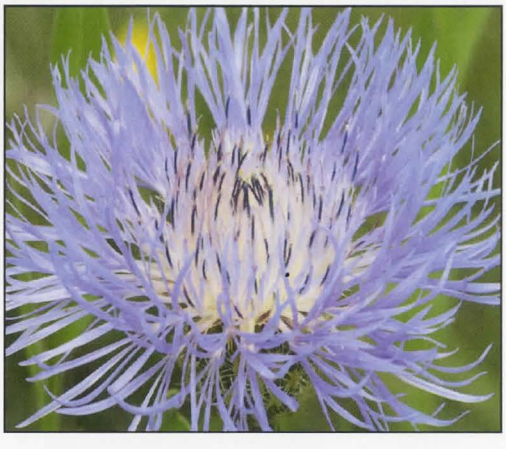

VIOLACEAE, VIOLET FAMILY

Bird's-foot Violet, *Viola pedata* – larval food for Variegated Fritillary, (*Euptoieta claudia*), Diana Fritillary, (*Argynnis diana*), Great Spangled Fritillary, (*Argynnis cybele*), and Regal Fritillary, (*Argynnis idalia*).

Bird's-foot Violet, *Viola pedata*, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 4 April 2013

Bird's-foot Violet, *Viola pedata*, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 4 April 2013

Bird's-foot Violet, *Viola pedata*, McGee Creek Wildlife Management Area, Atoka County, Oklahoma, 4 April 2013

Bird's-foot Violet, *Viola pedata*, Beech Creek, Ouachita National Forest, Le Flore County, Oklahoma, 31 March 2021

Bird's-foot Violet, *Viola pedata*, Cedar Lake, Ouachita National Forest, Le Flore County, Oklahoma, 1 April 2021

Bird's-foot Violet, *Viola pedata*, Cedar Lake, Ouachita National Forest, Le Flore County, Oklahoma, 1 April 2021

Common Blue Violet, *Viola sororia* – larval food for Variegated Fritillary, (*Euptoieta claudia*), Diana Fritillary, (*Argynnis diana*), Great Spangled Fritillary, (*Argynnis cybele*), and Regal Fritillary, (*Argynnis idalia*).

Common Blue Violet, *Viola sororia*, near Lexington Wildlife Management Area, Cleveland County, Oklahoma, 12 March 2020

Common Blue Violet, *Viola sororia*, near Lexington Wildlife Management Area, Cleveland County, Oklahoma, 27 March 2020

Common Blue Violet, *Viola sororia*, near Lexington Wildlife Management Area, Cleveland County, Oklahoma, 19 March 2021

Common Blue Violet, *Viola sororia*, Little River National Wildlife Refuge, McCurtain County, Oklahoma, 22 March 2021

Common Blue Violet, *Viola sororia*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 8 April 2023

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Common Blue Violet, *Viola sororia*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 8 April 2023

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CONVOLVULACEAE, MORNING - GLORY FAMILY

Field Bindweed, *Convolvulus arvensis* – larval food for Painted Cresent, (*Phyciodes picta*).

Field Bindweed, *Convolvulus arvensis*, near Lexington, Cleveland County, Oklahoma, 6 July 2023

Field Bindweed, *Convolvulus arvensis*, near Lexington, Cleveland County, Oklahoma, 14 July 2023

LINACEAE, FLAX FAMILY

Grooved Yellow Flax, *Linum sulcatum* – larval food for Variegated Fritillary, (*Euptoieta claudia*)

Grooved Yellow Flax, *Linum sulcatum*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 4 June 2023

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Grooved Yellow Flax, *Linum sulcatum*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 4 June 2023

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Grooved Yellow Flax, *Linum sulcatum*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 23 June 2020

BRASSICACEAE, MUSTARD FAMILY

Bog Yellowcress, *Rorippa palustris* – larval food for Cabbage White, (*Pieris rapae*)

Bog Yellowcress, *Rorippa palustris*, Purcell City Lake, Purcell, McClain County, Oklahoma, 9 April 2023

Bog Yellowcress, *Rorippa palustris*, Purcell City Lake, Purcell, McClain County, Oklahoma, 9 April 2023

CHENOPODIACEAE, GOOSEFOOT FAMILY

Lamsquarters, *Chenopodium album* – larval food for Hayhurst's Scallopwing, (*Staphylus hayhurstii*), Common Sootywing, (*Pholisora catullus*), Western Pygmy-Blue, (*Brephidium exilis*), and Painted Lady, (*Vanessa cardui*)

Lambsquarters, *Chenopodium album*, near Lexington wildlife Management Area, Cleveland County, Oklahoma, 13 August 2021

CUPRESSACEAE, CYPRESS FAMILY

Eastern Red Cedar, *Juniperus virginiana* – larval food for Juniper Hairstreak, (*Callophrys gryneus*)

Eastern Red Cedar, *Juniperus virginiana*, with fruit, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 1 September 2022

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Eastern Red Cedar, *Juniperus virginiana*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 16 January 2022

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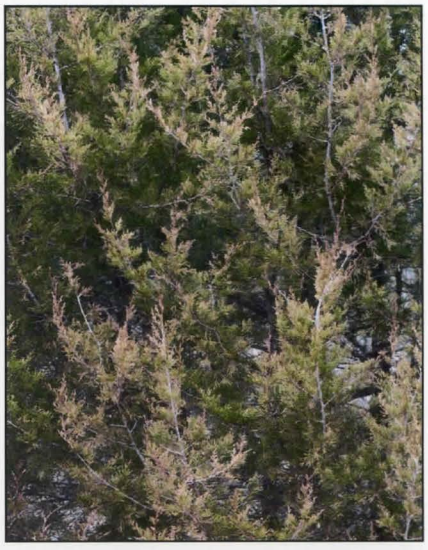

OROBANCHACEAE, BROOM-RAPE FAMILY

Entireleaf Indian Paintbrush, *Castilleja indivisa* – larval food for Common Buckeye (*Junonia coenia*)

Entireleaf Indian Paint brush, *Castilleja indivisa*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 6 April 2020

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Entireleaf Indian Paintbrush, *Castilleja indivisa*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 11 May 2023

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Entireleaf Indian Paintbrush *Castilleja indivisa*, Purcell City Lake, Purcell, McClain County, Oklahoma, 30 April 2023

MALVACEAE, MALLOW FAMILY

Copper Globemallow, *Sphaeralcea angustifolia* – larval food for Common Checkered-skipper, (*Burnsius communis*), Gray Hairstreak, (*Strymon melinus*,) and Painted Lady, (*Vanessa cardui*)

Copper Globemallow, *Sphaeralcea angustifolia*, Black Mesa State Park, Cimarron County, Oklahoma, 1 October 2013

Light Poppymallow, *Callirhoe alcaeoides* – larval food for common Checkered-skipper, (*Burnsius communis*)

Light Poppymallow, *Callirhoe alcaeoides*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 14 May 2023

Light Poppymallow, *Callirhoe alcaeoides*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 17 May 2021

Light Poppymallow, *Callirhoe alcaeoides*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 17 May 2021

OLEACEAE, OLIVE FAMILY

Green Ash, *Fraxinus pennsylvanica* – larva food for Eastern Tiger Swallowtail, (*Ptrerous glaucus*), and Two-tailed Swallowtail (*Pterourus multicaudata*)

Green Ash, *Fraxinus pennshlvanica*, flowers and leaves opening in spring, near Lexington Wildlife Management Area, Cleveland County, Oklahoma, 12 April 2020

SALICACEAE, BLACK WILLOW FAMILY

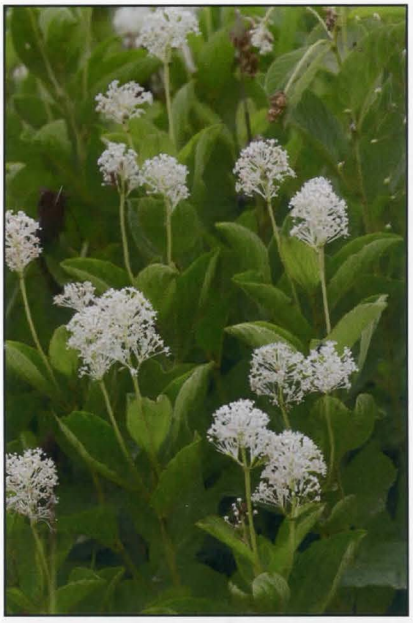
Black Willow, *Salix nigra* – larval food for Dreamy Duskywing, (*Erynnis icelus*), Easter Tiger Swallowtail, (*Pterourus glaucus*), Red-spotted Purple, (*Limenitis arthemis astyanax*), Viceroy, (*Limenitis archippus*), Mourning Cloak, (*Nymphalis antiopa*)

Black Willow, *Salix nigra*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 7 August 2021

RHAMNACEAE, BUCKHORN FAMILY

New Jersey Tea, *Ceanothus americanus* – larval food for Mottled Duskywing (*Gesta martialis*), and Summer Azure, (*Celastrina neglecta*)

New Jersey Tea, *Ceanothus ameriacanus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 4 June 2023



New Jersey Tea, *Ceanothus ameriacanus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 4 June 2023

ROSACEAE, ROSE FAMILY

Plum, *Prunus* sp. – larval food for Eastern Tiger Swallowtail, (*Pterourus glaucus*), Two-tailed Swallowtail, (*Pterourus multicaudata*), Coral Hairstreak, (*Satyrium titus*), and Striped Hairstreak, (*Satyrium liparops*)

Plum, *Prunus* sp., Lexington Wildlife Management Area, Cleveland County, Oklahoma, 2 April 2014

Plum, *Prunus* sp., Lexington Wildlife Management Area, Cleveland County, Oklahoma, 2 April 2014

Plum, *Prunus* sp., Lexington Wildlfe Management Area, Cleveland County, Oklahoma, 2 April 2014

Plum, *Prunus* sp., Lexington Wildlfe Management Area, Cleveland County, Oklahoma, 2 April 2014

Cherry, *Prunus* sp., J.T. Nickel Family Nature and Wildlife Preserve, Cherokee County, Oklahoma, 11 April 2014

Chickasaw Plum, *Prunus angustifolia*, fruit, Norman, Cleveland County, Oklahoma, 9 August 2023

Chickasaw Plum, *Prunus angustifolia*, fruit, Norman, Cleveland County, Oklahoma, 9 August 2023

Chickasaw Plum, *Prunus angustifolia*, fruit, Norman, Cleveland County, Oklahoma, 9 August 2023

ACANTHACEAE, ACANTHUS FAMILY

Prairie Petunia, *Ruellia humilis* – larval food for Common Buckeye, (*Junonia coenia*)

Prairie Petunia, *Ruellia humilis*, Wichita Mountains National Wildlife Refuge, Comanche County, Oklahoma, 13 June 2023 ←

Prairie Petunia, *Ruellia humilis*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 5 June 2020 →

Prairie Petunia, *Ruellia humilis*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 26 June 2023

Prairie Petunia, *Ruellia humilis*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 5 June 2020

EUPHORBIACEAE, SPURGE FAMILY

Prairie Tea, *Croton monanthogynus* – larval food for Gray Hairstreak, (*Strymon melinus*) and Goatweed Leafwing, (*Anaea andria*)

Prairie Tea, *Croton monanthogynus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 1 August 2020

APIACEAE, CARROT FAMILY

Nuttall's Prairie Parsley, *Polytaenia nuttallii* – larval food for Black Swallowtail, (*Papilio polyxenes*)

Nuttall's Prairie Parsley, *Polyaenia nuttallii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 2 May 2023 ←

Nuttall's Prairie Parsley, *Polyaenia nuttallii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 2 May 2023

Nuttall's Prairie Parsley, *Polyaenia nuttallii*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 2 May 2023 ← →

POLYGONACEAE, BUCKWHEAT FAMILY

Curly Dock, *Rumex Crispus* – larval food for American Copper, (*Lycaena phloeas*), Gray Copper, (*Lycaena dione*), Bronze Copper, (*Lycaena hyllus*), Purplish Copper, (*Lycaena helloides*), and Gray Hairstreak, (*Strymon melinus*)

Curly Dock, *Rumex crisus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 27 June 2023 ←

Curly Dock, *Rumex crisus*, Lexington Wildlife Management Area, Cleveland County, Oklahoma, 27 May 2023 →

PASSIFLORACEAE, PASSION-FLOWER FAMILY

Purple Passionflower, *Passiflora incarnata* – larval food for Gulf Fritillary, (*Dione incarnata*), and Variegated Fritillary, (*Eutoieta claudia*)

**Purple Passionflower, *Passiflora incarnata*,
Lexington Wildlife Management Area,
Cleveland County, Oklahoma,
22 June 2023**
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**Purple Passionflower, *Passiflora incarnata*,
Purcell City Lake, Purcell,
McClain County, Oklahoma,
13 July 2023**
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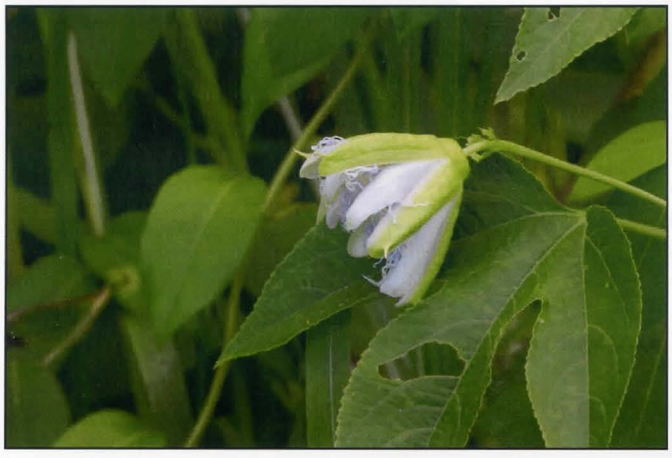

**Purple Passionflower, *Passiflora incarnata*,
Purcell City Lake, Purcell,
McClain County, Oklahoma,
10 July 2023**
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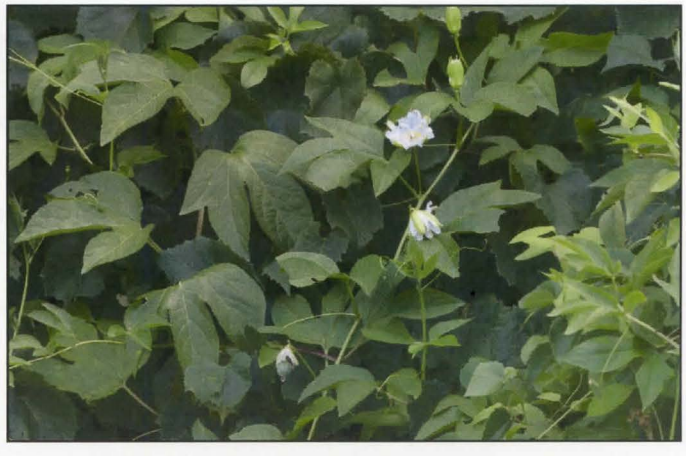
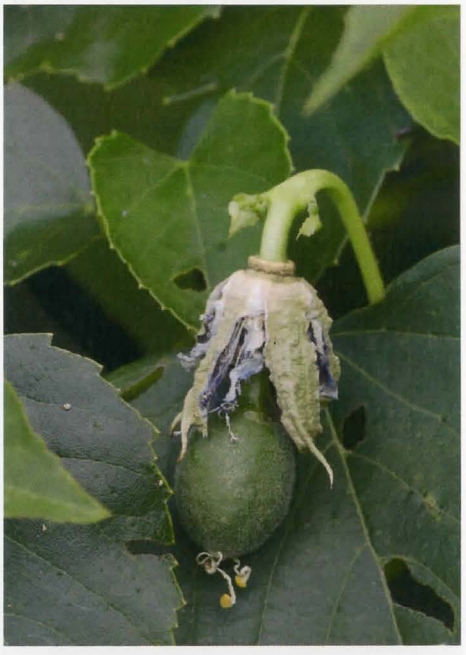


**Purple Passionflower, *Passiflora incarnata*,
Purcell City Lake, Purcell,
McClain County, Oklahoma,
10 July 2023**
→

Purple Passionflower, *Passiflora incarnata*, fruit, Purcell City Lake, Purcell, McClain County, Oklahoma, 21 July 2023

Purple Passionflower, *Passiflora incarnata*, fruit, Purcell City Lake, Purcell, McClain County, Oklahoma, 21 July 2023 ➜

Purple Passionflower, *Passiflora incarnata*, fruit, Purcell City Lake, Purcell, McClain County, Oklahoma, 21 July 2023



Purple Passionflower, *Passiflora incarnata*, fruit, Purcell City Lake, Purcell, McClain County, Oklahoma, 21 July 2023 ➜

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

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THE RESILIENCY OF BUTTERFLIES AFTER A HURRICANE AND FLOODING SLEEPING TURTLES NORTH, SARASOTA COUNTY, FLORIDA PART 4

BY
SCOTT D. ANDERSON

We are now deep into autumn. Through October, I've completed 28 of 32 field trips in Sleeping Turtles North to replicate my counts and refresh my data from 2020. The numbers of butterflies found this year continue to be significantly less than in the past and it appears that it will be some time before numbers are restored. Since Hurricane Ian impacted this preserve last September and October, the numbers of individuals counted have diminished by 40%. When will they return? Will they return? Those questions can be answered in future studies in following years. For now, it is clear, the storm and the flood that followed had a large impact on the butterfly population in this location and it is slow to recover.

The Data

Total butterfly species January-October, 2020: 46
Total butterfly species January-October, 2023: 40

Total butterfly individuals January-October, 2020: 4,532
Total butterfly individuals January-October, 2023: 2,799

The reduction of species is not so significant but the number of individuals is drastically reduced.

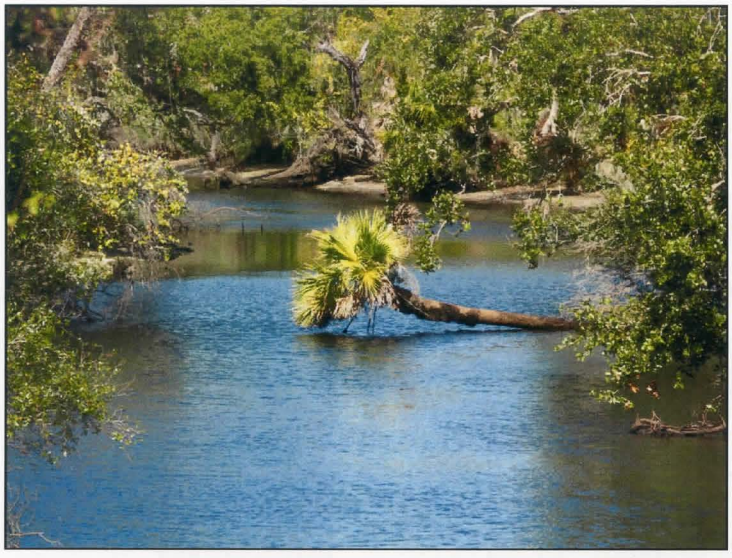
Most notably absent are two species that were commonly found in the past - the Pipevine Swallowtail and the Zebra Heliconian (our state butterfly). Both stand at zero sightings and the year is almost over.

For the Top 10 most common butterflies found in 2020, here are the revised full year-to-date and last 3 months results:

Species - January thru October	2020	2023	Result
Dainty Sulphur	1358	1005	Down
Ceraunus Blue	898	352	Down
Barred Yellow	405	119	Down
Phaon Crescent	349	169	Down
Fiery Skipper	218	157	Down
Little Yellow	166	28	Down
Horace's Duskywing	153	226	Up
White Peacock	147	87	Down
Tropical Checkered-Skipper	139	59	Down
Common Buckeye	104	32	Down

Species - August thru October	2020	2023	Result
Barred Yellow	185	35	Down
Fiery Skipper	109	23	Down
Phaon Crescent	91	58	Down
White Peacock	48	19	Down
Whirlabout	41	4	Down
Horace's Duskywing	32	74	Up
Ceraunus Blue	25	28	Up
Little Yellow	16	3	Down
Pearl Crescent	10	0	Down
Common Buckeye	9	15	Up

Once I complete my final field trips in November and December, 2 in each month, I will summarize my full year findings. Those findings will be published in Southern Lepidopterist News.

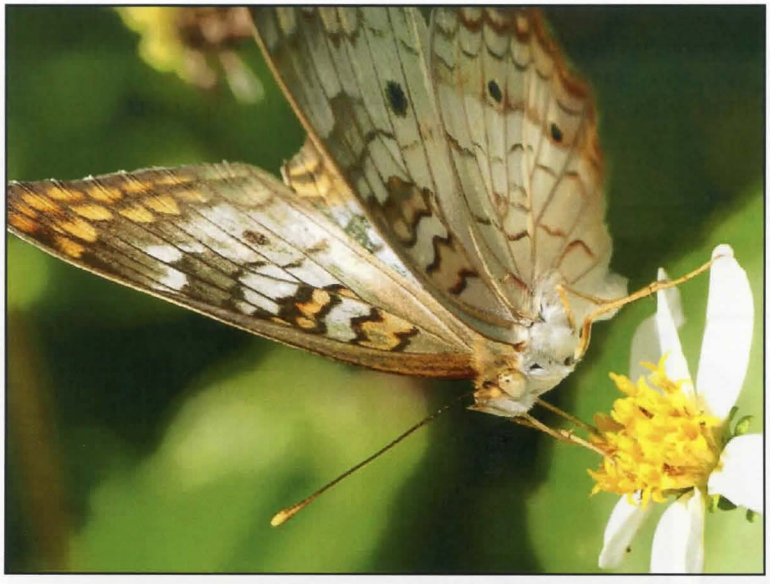


Just over a year since Hurricane Ian and the extensive flooding which impacted so many species of butterflies, it's nice to see the water level way down this year. ←

The Sleepy Orange is not a common butterfly in Sleeping Turtles North but they have made a small presence known this fall. →

This is one of the few open areas in Sleeping Turtles North. Normally, this area would be quite disturbed having been mowed on a regular basis. Mowing has not occurred since the hurricane last year and the number of individual butterflies in this area is way down.

Long-tailed Skippers are not usually present in large numbers but are regularly found especially in autumn. Fortunately, their numbers are stable when comparing counts before and after the hurricane and flood.



White Peacock numbers have been tracking about half of what is expected based on past data.

(Scott Anderson, E-Mail: scottdanderson53@gmail.com)

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PLEASE WELCOME — THE NEW MEMBER TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY

Lukas Keras
5 Mills St.
Westport, CT 06880

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FALL ATTRACTIONS NO. 3 – AVERY ISLAND, LOUISIANA
BY GARY NOEL ROSS

American lotus (*Nelumbo lutea*) post-bloom. Avery Island in background fog

Roadside with goldenrod (*Solidago sp.*) and eastern baccharis (*Baccharis halimifolia*) Avery Island, LA.

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SYNANTHEDON SAPYGAEFORMIS (WALKER, 1856) (LEPIDOPTERA: SESIIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

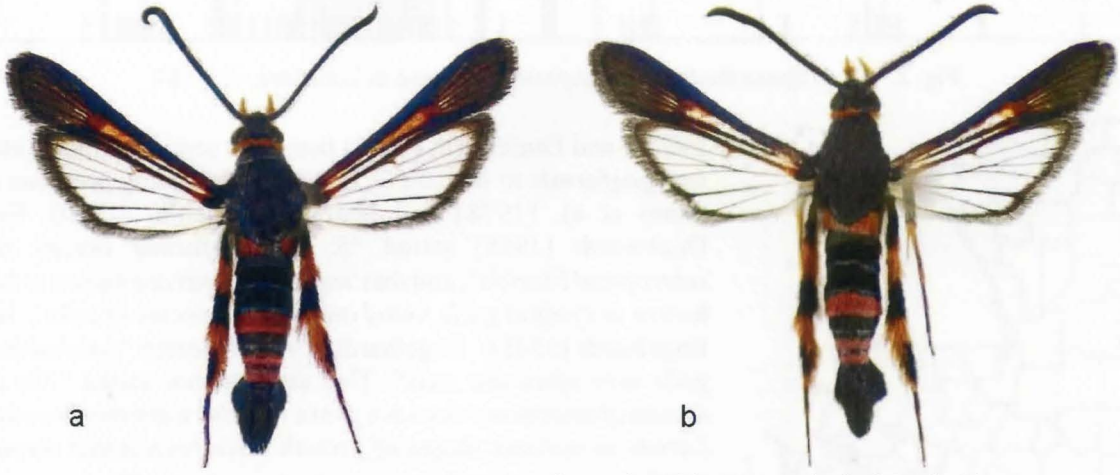

Fig. 1. ***Synanthedon sapygaeformis*** males at the Abita Entomological Study Site.
a. August 7- 2023, **b.** August 3-2023.

The tiny blue-black and red clearwing moth ***Synanthedon sapygaeformis*** (Walker)(Fig. 1) was first captured in Louisiana in a semiochemical lure trap at **The Abita Entomological Study Site*, St. Tammany Parish, on November 5, 2016. We collected continuously at this same location 24 hours each and every day and night for about 35 years prior to 2016. Additionally hundreds of other insect traps of numerous types and purposes were operated as well at this location. Since 2016, numerous hundreds of additional males of this small in size clearwing species have been captured in semiochemical lure traps, at this same location. This species was not previously reported to occur in the state of Louisiana.

Capture of ***S. sapygaeformis*** is surprising, as over decades at this location **AESS* we annually operated as many as 184 sesiid semiochemical lure traps, 7-8 high-wattage light traps, up to 8 fermenting fruit bait traps, one malaise trap and hundreds of other insect traps 24 hours day/night, since 1969 across Louisiana statewide, and none were encountered anywhere in the state prior to 2016. This is an excellent example of a species newly entering a geographical area where none were known or recorded previously.

During the past 54 years across Louisiana, we captured ~400,000 adult clearwing moths (~60 species). Of those we captured ~100,000 adults (~30 different species) in numerous high-wattage automatic capture ultraviolet light traps, though more than 99% of the 100,000 adults taken in UV light traps were a single species ***Synanthedon acerni*** (Clemens). Wild adult ***S. acerni*** have been captured every day of the calendar year January 1 to December 31 in Louisiana and a phenogram based upon a small sample size of wild adults was illustrated (Brou, 1997). Fewer than 50 adults ***S. acerni*** have actually been captured in Louisiana using the semiochemicals: Scentry L-103, Scentry ***Synanthedon scitula***, and (1:1) Scentry ***Synanthedon fatifera*** : Scentry L-103), despite using thousands of lures of hundreds of different lure identities and combinations of these lures 24-hours daily over 45 years in automatic-capture lure traps.

Some clearwing moth species were captured using: flight interceptor malaise traps, fermenting fruit bait traps, rarely using hand netting, and the greatest amount in automatic-capture lure traps using semiochemicals of many different identities, and untold combinations of commercially available semiochemical lures from across the world, as well as dozens of special ordered formulations. Though only 187 adults of ***S. sapygaeformis*** are illustrated on our phenogram (Fig. 2), we captured hundreds of additional wild adult male specimens for which specific dates of capture were not logged (during specimen retrieval trapping periods of multi-days or multi-weeks). No females of ***S. sapygaeformis*** were captured during this study.

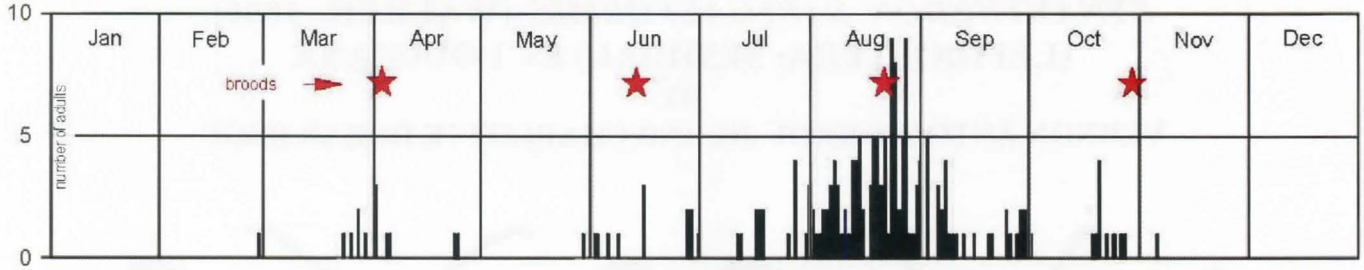

Fig. 2. Adult ***Synanthedon sapygaeformis*** captured in Louisiana. n = 187

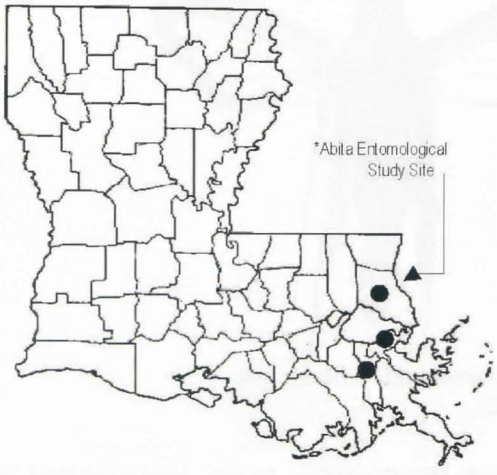

Fig. 3. Parish records in Louisiana for ***Synanthedon sapygaeformis.***

Eichlin and Duckworth (1988) listed the semiochemicals attracting ***S. sapygaeformis*** to include. Z,Z-ODDA, following previous reports by Sharp et al. (1978) and Sharp and Eichlin (1979). Eichlin and Duckworth (1988) stated "***S. sapygaeformis*** *occurs throughout subtropical Florida*", and that '***sapygaeformis*** *are known to be inquiline borers in cynipid galls found on various species of oaks'*, referencing Engelhardt (1946). Engelhardt (1946) reported "*coinhabitants in the galls very often are ants*". This same author stated "*The prolonged season of emergence does not prove that there are two broods annually. Larvae in various stages of growth have been noted throughout the year*".

Brown and Snow (1986) reported taking ***S. sapygaeformis*** using (Z, Z)-3, 13-Octadecadienyl acetate. Brown and Mizell (1993) anecdotally stated the distribution of ***S. sapygaeformis*** includes *'only the Florida peninsula... in one or two broods flying February to December'*, but provided no proof. These authors also mentioned this species is an inquiline borer in oak galls, and some (adults) captures have pale pink, white, yellow, or orange in place of the red abdominal banding. Based upon the small sample-size (Fig. 2) in Louisiana ***S. sapygaeformis*** flies from the end of February to early November in what appears to be four annual broods, the initial brood peaking about April 1, brood two peaking mid-June, and brood three peaking late August, brood four peaking early November, all at approximately 70-day intervals. This annual brood depiction is similar to that illustrated on the phenogram of ***Synanthedon decipiens***, also *'known to be an inquiline borer in cynipid galls found on various species of oaks'* Engelhardt (1946), which occurs in three annual broods in Louisiana. These two species in all probability are competing for the same gall hosts, and this new competition may account for the great reduction of ***S. decipiens*** as the population of ***S. sapygaeformis*** has conversely increased at the **AESS.*

Beutenmüller (1901) reported ***S. sapygaeformis*** occurs in the state of Florida. Engelhardt (1946) reported "*In sapygaeformis segments 4, 5, and 6 are concolorous, whereas in (variety)* ***floridensis*** *segments 4 and 6 are red and segment 5 is black. Intermediate color forms are not lacking... One unique female ... lacks all the red abdominal bands above but has segment 4 banded with red beneath and segments 2 and 3 red at the sides*". One Louisiana adult male ***S. sapygaeformis*** exhibited yellow dorsal abdominal bands with red wings.

Knudson and Bordelon (2010) reported ***S. sapygaeformis*** from only three counties in extreme southeast Texas, (*Fort Bend, Harris, and Jefferson*). Solomon (1995) reported ***S. sapygaeformis*** occurs in southern Georgia and Florida. We have confirmed ***S. sapygaeformis*** from a coastal location in the state of Mississippi. The currently confirmed Louisiana parish records are illustrated in Fig. 3.

Semiochemical lures/methods attracting ***S. sapygaeformis*** in this Louisiana study included: **1.** Scentry L-103, **2.** Scentry ***Synanthedon bibionipennis*** (Boisduval), **3.** Scentry ***Synanthedon sequoiae*** (Edw.), **4.** Scentry ***Synanthedon pictipes*** (G & R), **5.** Scentry ***Synanthedon scitula*** (Harris), **6.** Scentry ***Synanthedon exitiosa*** Say, **7.** Scentry ***Synanthedon fatifera*** Hodges, **8.** (1:1) Scentry L-103 : Scentry ***Vitacea polistiformis***(Harris), **9.** (1:1) ***Synanthedon sequoiae*** : ***Paranthrene robiniae*** (Edw.), **10.** (1:1) Scentry L103 : Scentry ***Synanthedon bibionipennis***, **11.** (3:4) Scentry L103 : Scentry ***Synanthedon viburni*** Engelhardt, **12.** also in high-wattage automatic-capture ultraviolet light traps.

The identities of the Scentry brand semiochemicals (lures) used in this study were dispensed in either laminated polymeric dispensers (= hollow fiber tape) and/or infused upon rubber septa.

*Scentry brand **L103** a 'generic' lure attractive to numerous dozens of North American clearwing moth species (Z,Z)-3,13-Octadecadienyl acetate; (E,Z)-3,13-Octadecadienyl acetate, identified as a mixture of Straight Chain Lepidopteran Pheromones - (SCLP), often dispensed in laminated polymeric tape.*

*Scentry brand **Synanthedon scitula** 100% (Z, Z)-3, 13-Octadecadienyl acetate, 3-cis-13-cis-Octadecadienyl acetate, often dispensed in laminated polymeric tape.*

*Scentry brand **Synanthedon bibionipennis** (L903) specific composition not available, identified as a mixture of Straight Chain Lepidopteran Pheromones - (SCLP), dispensed on rubber septa or in laminated polymeric tape.*

*Scentry brand **Synanthedon pictipes** (L304) 100% (E,Z)-3,13-Octadecadienyl acetate (=3-trans-13-cis-Octadecadienyl acetate (3E,13Z)-Octadecadien-1-yl acetate), often dispensed in laminated polymeric tape.*

*Scentry brand **Synanthedon fatifera** (L980) specific composition not available, identified as a mixture of Straight Chain Lepidopteran Pheromones - (SCLP), often dispensed on rubber septa.*

*Scentry brand **Synanthedon virburni** (L997) specific composition not available, identified as a mixture of Straight Chain Lepidopteran Pheromones -(SCLP), often dispensed on rubber septa.*

*Scentry brand **Vitacea polistiformis** (Harris), (L905) grape root borer lure -100% (E,Z)-2, 13-Octadecadienyl acetate=(2E,13Z)-Octadecadienyl acetate, often dispensed on rubber septa.*

*Scentry brand **Synanthedon sequoiae** (Edwards), (L302) sequoiae pitch moth -100% (3Z,13Z)-3,13-Octadecadien-1-yl acetate, often dispensed on rubber septa.*

*Scentry brand **Synanthedon exitiosa** -Mixture-Straight Chain Lepidopteran Pheromones (SCLP), two semiochemicals Z3, Z13-Octadecadien-1-yl acetate, and E3, Z13-Octadecadien-1-yl acetate, often dispensed on rubber septa or in laminated polymeric tape.*

Some years we special ordered Scentry clearwing moth lures with 50-100 mg. boluses of specific identity semiochemicals per lure, and for 45 years as a rule we always used a minimum of 2-4 standard dosage commercial lures or more per trap year-round in all our hundreds of traps. Some lures used were also dispensed in small polyethylene vials and bolus dosages often required utilizing much larger size rubber septa or even plugs. Lures utilized in all of our decades of clearwing moth field work, including this study were of several semiochemical brands, manufacturers and retail suppliers including: Alpha Scents, Great Lakes IPM, Pherobase, Pherobio, Scentry, Scenturian, Trece, and a few were custom ordered in North America, Austria, China, Holland, Japan, and others from abroad. The majority of these lures did not attract ***Synanthedon sapygaeformis*** in our study. Additionally we experimented over several years with twist-tie dispensers as typically utilized for mating disruption (Isomate dispensers) loaded with as much 50 mg boluses of Dogwood borer (***Synanthedon scitula***) mating disruption semiochemicals per twist-tie. These high-dosage mating disruption dispensers did attract and captured low quantities of several species of clearwing moths in our automatic-capture lure traps, but not ***S. sapygaeformis***. Collecting occurred non-stop regardless of extremes of temperatures, rains, storms, hurricanes or any adverse weather conditions. No insect traps of any type were turned off or discontinued for any reasons 24-hours daily for 54 years (1969-2023).

Regarding our use of semiochemical lures over 48 contiguous years, the clearwing moth traps always operated with semiochemical lures in Louisiana over 52 weeks annually. Lures were initially replaced after each year into traps in January-February (winter weather conditions), and typically remained untouched for about 12 months. After one year some lures were again used for additional years in the field, some for an additional one, two or three years, and occasionally longer. Some of our traps with lures untouched for four years (35,000 continuous exposed hours) actually captured occasional clearwing moths in the fourth year. For example, lures used during 2015 were

reused by specific identities e.g., ten (2015) ***S. pictipes*** lures were zip-tied together and placed into a single clearwing moth trap operating during 2016 and perhaps again in 2017 or longer. This same practice occurred yearly for other used lures throughout the past half century in Louisiana. Our long term mission and purpose was to discover any and all clearwing moths existing within the state of Louisiana, not necessarily targeting particular species. Our annual semiochemical lure trap inventory was ~250+ units and additional traps were swapped, replaced or newly fabricated at irregular intervals as needed due to damage by animals, high winds and falling trees and limbs.

Both ***S. sapygaeformis*** and ***Synanthedon decipiens*** (Hy. Edwards) are known to be inquiline borers in cynipid galls on various oaks (Engelhardt, 1946) (Fig. 5a). Interestingly with the arrival of, and population increases of ***sapygaeformis*** at the *AESS; conversely the long existing populations of ***S. decipiens*** at this location has fallen to near zero in 2023. We have not investigated this matter further. Also, Heinrich (1920) mentioned that ***S. decipiens*** is an inquiline borer in woody Cynipid galls on white oaks. Interestingly at the AESS, the majority of mature white oaks were destroyed as a result of Hurricane Katrina in 2005. In their species account on ***S. decipiens***, Eichlin and Duckworth misstated Heinrich's publication date as 1921.

Engelhardt (1946) indicated the ***S. sapygaeformis*** has one annual brood. Eichlin and Duckworth (1988) stated ***S. sapygaeformis*** "*Adults apparently have an extended emergence period lasting from February to December with peak emergences in March and April (Sharp et al., 1978; Sharp and Eichlin, 1979)*". Despite these anecdotal statements, no actual phenology proofs were provided by these authors. Also, correcting Eichlin and Duckworth (1988), Sharp et al. (1978) reported ***S. sapygaeformis*** adults occur January to December in Florida. The TYPE of ***S. sapygaeformis*** is reportedly located in the British Museum (Museum of Natural History, London) (Walker, 1856). All past author's phenology statements concerning ***S. sapygaeformis*** are incorrect as adults occur similarly throughout the year in Louisiana and clearly there are four annual broods (Fig. 2), not one 12-month long extended brood as stated by Eichlin and Duckworth (1988).

Lait and Hebert (2018) stated "***S. sapygaeformis***, *may represent a northern extension of a Meso-American species, or it may be endemic to the extreme south-east of the United States*". In their study "***S. sapygaeformis*** *exhibited much higher variability than other southern sesiid species despite limited structure, possibly reflecting an older population*". It is unclear what they meant by both '*variability*' and '*limited structure*'. Beutenmüller (1897) reported the moth had been taken several times on oak trees but its relationship with gall wasps was not known at that time.

We briefly elucidate regarding the use of semiochemical lures and traps for our surveys on clearwing moths. Our first indoctrination to this fascinating subject of '*pheromones*' occurred around 1964 upon reading an article about trail pheromones used by ants (Wilson, 1963). The commercial use of bucket traps and lures has evolved over the past half century subsequent to the first clearwing moth lures developed in the early 1970s by the U.S. Department of Agriculture. Historically labeled with the catch-all term '*pheromones*', today these '*pheromone lures*' are partitioned into the current semiochemical subgroups characterized as: attractants, lures, pheromones, kairomones, allomones, and synomones, and today can be dispensed in quantities of (picograms, nanograms, micrograms, milligrams, or grams).

The commercial bucket trap itself has some inherent deficiencies for alternate uses as needed for our research goals. These bucket traps were manufactured in numerous countries over the past half century, e.g. the '*Unitrap*' (Fig. 4c) earlier on by International Pheromone Systems, Wirral, United Kingdom, and the poorly designed '*Multi-pher 1*' manufactured by Le Groupe Biocontrôle, Ste-Foy, Québec, aka "top hat trap". The '*Unitrap*' was subsequently copied to the exact measurements by manufacturers in many other countries. The '*Unitrap*' usually has an internal downward projecting lid protuberance to accommodate the attachment of a single small-size rubber septa lure and also has a downward projecting larger capacity lure basket. These commercial traps were not designed for capturing good quality specimens, but functioning rather as a monitoring tool used by growers and farmers to assess timing of implementing needed pest control measures. On a positive note, '*Unitrap*' bucket traps with our enhanced accoutrements mentioned in this publication which were first used 40 years ago are still in continuous field use today. All of the 12 flimsy inferior-designed *Multi-pher 1* traps broke apart in less than 3-5 years of field use and were discarded. In recent decades we self-designed and self-fabricated hundreds of clearwing moth traps that worked exceptionally well using discarded inverted 2-liter plastic beverage bottles and other cheap plastic plates and assorted plastic food containers. A few of these are illustrated in Fig. 7, and how to fabricate a simple self-made lure trap is illustrated in Fig. 8. The cost of self-fabricating these traps is equivalent to purchasing commercial traps.

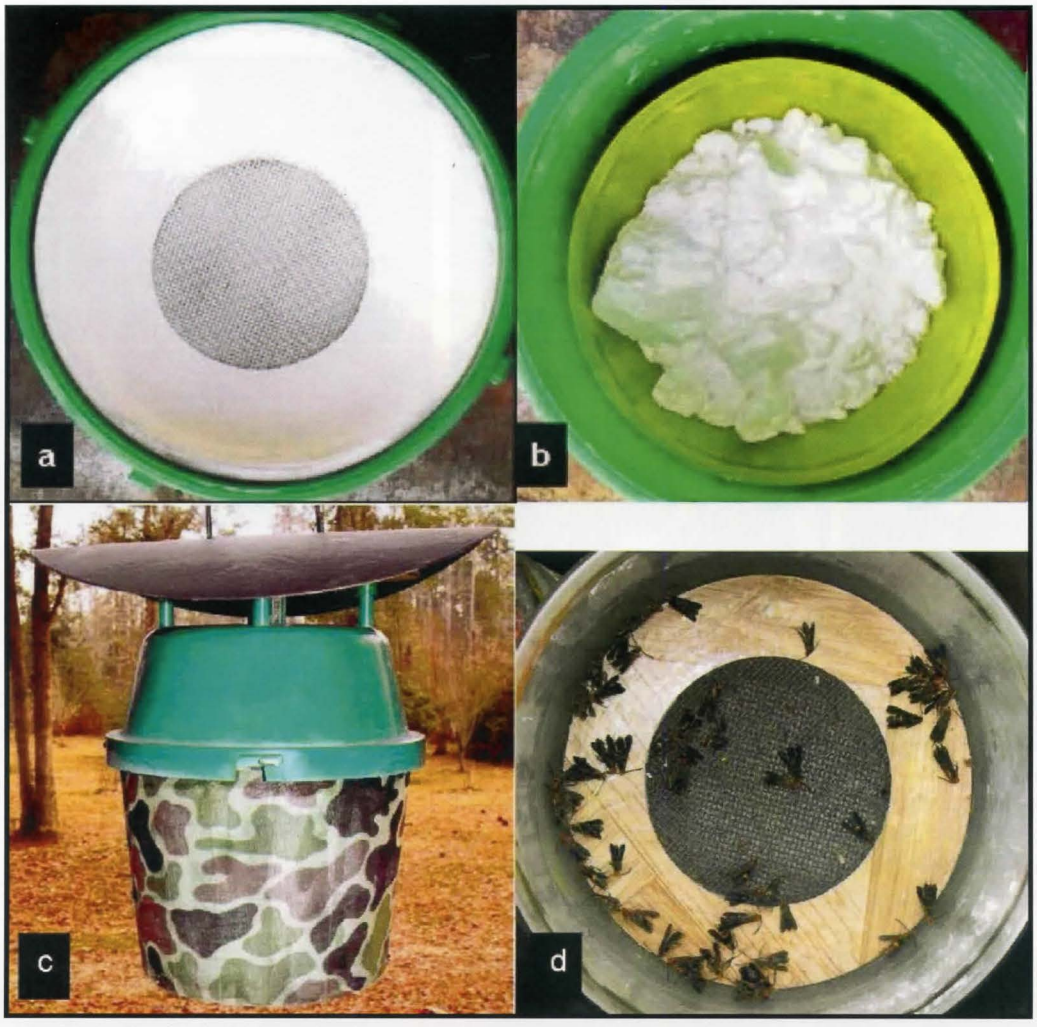

Fig 4. Revised 'Unitrap' bucket trap with **a.** screened bottom basket insert, **b.** container of sodium cyanide briquettes/granules below basket insert, **c.** ready for field placement with added accoutrements, including larger rain/sun/heat shield, **d.** dispatched captured clearwing moths in basket insert.

The traps we envisioned from the very start were based upon the concept of a small portable bucket trap. We initially took the same commercial '*Unitrap*' and redesigned it (Fig. 4) with a fabricated screened bottom basket insert to sit above a dispatching container of sodium cyanide briquettes/granules, holding the moth captures away from the deleterious effects of direct contact with the killing agent. This design resulted in the very slow release of hydrogen cyanide gas through hygroscopic interaction with the natural moisture occurring in the air, thus dispatching the moths within seconds of entering so that the captures are accumulated in pristine condition for retrieval daily, weekly, etc. Next we addressed the considerable ingress of rainwater via the bucket lid areas through capillary action at the insertion point of the center lure basket into the lid and similarly at the insertion point of the rudimentary cap onto the lure basket. Further we addressed the most important matter of constant direct sunlight upon the lures themselves, which causes tremendous degradation of the lure's semiochemicals due to rapid evaporation, sometimes within just a few days of direct exposure to the sun. The water ingress was somewhat remedied with the use of 'rope caulking' and the added 'broadly covering lid', and the direct sunlight was remedied by the same much larger size lid covering the entire trap, and further by limiting trap placement where sunlight is never able to radiate at any time upon any part of the trap and especially upon the lures. This proved to be somewhat difficult in field use as the angle of the sun shifts daily throughout the year, thus requiring moving of the trap among vegetation to other hidden shaded areas over days, weeks and months. Because the volume of vegetation increases continually throughout the year, bright colored flagging tape is attached to each trap to later assist in locating the often moved traps.

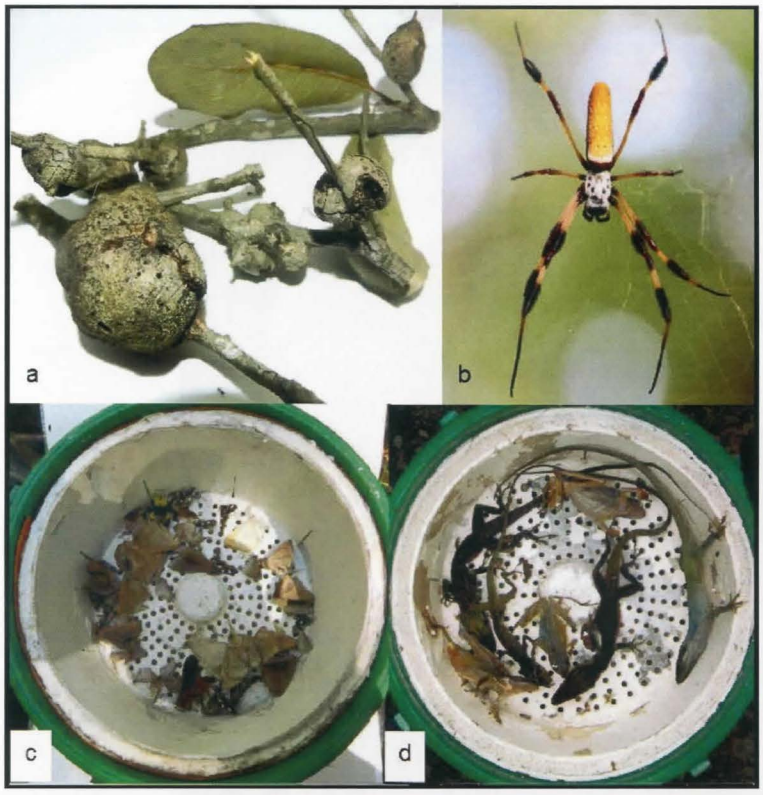

Fig. 5. a. cynipid galls on oak at the AESS, **b.** the Golden silk spider ***Trichonephila clavipes***, **c.** bycatch of about 40 lepidoptera and several hymenoptera in a clearwing moth trap without any clearwing moths, **d.** bycatch of pests (lizards and frogs) in clearwing moth trap without any remaining captured insects of any type.

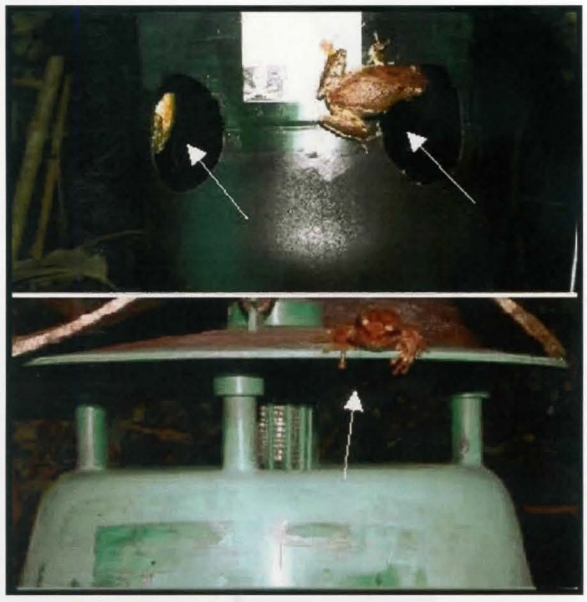

Fig. 6a. Frogs eating clearwing moths coming to self-designed semiochemical lure trap and *'Unitrap'* semiochemical lure trap at the AESS.

Fig. 6b. Toad and frog eating clearwing moths coming to *'Unitrap'* semiochemical lure traps at the AESS.

Examples of some of the semiochemical lure traps used during 2023 at the AESS are illustrated in Fig. 7.

Fig. 7. 30 of 46 semiochemical lure traps which were operated during 2023 at the AESS. Lures used in 2023 included: Scentry L-103, Scentry ***Synanthedon fatifera***, Scentry ***Synanthedon pictipes***, Scentry ***Synanthedon bibionipennis*** and Pherobio ***Paranthrene tabaniformis***. Bright color flagging tape is used to subsequently locate traps hidden amongst dense vegetation.

We must mention pest control measures implemented concerning obstacles to operating insect traps of any kind in heavily wooded areas. During the months with hotter temperatures in Louisiana (May-September) we are plagued by certain pests e.g. the largest orb-weaver species indigenous to the United States, the Golden silk spider ***Trichonephila clavipes*** (Linnaeus, 1767) (Fig. 5b), which places huge webs generally two to 20 feet above ground, each as much as two to ten feet or more across open areas between tree branches, nooks and crannies, occurring in high density populations by the hundreds or more per acre. And to a lesser extent another smaller orb-weaver ***Gasteracantha cancriformis*** (Linnaeus, 1758) is annoying to our research activities. While running our traps daily, we permanently removed as many of these superabundant spiders and their huge webs from locations along flyways bordering and near our trap locations. We did not attempt to determine how many clearwing moths were victims of these abundant spiders. We ourselves were hindered by huge numbers of spiders and their webs when attempting to navigate to our trap lines daily as webs often occurred as perpetual vertical walls one behind the next as close as one, two or three feet between webs, and when removed are usually quickly reconstructed daily by new arrivals.

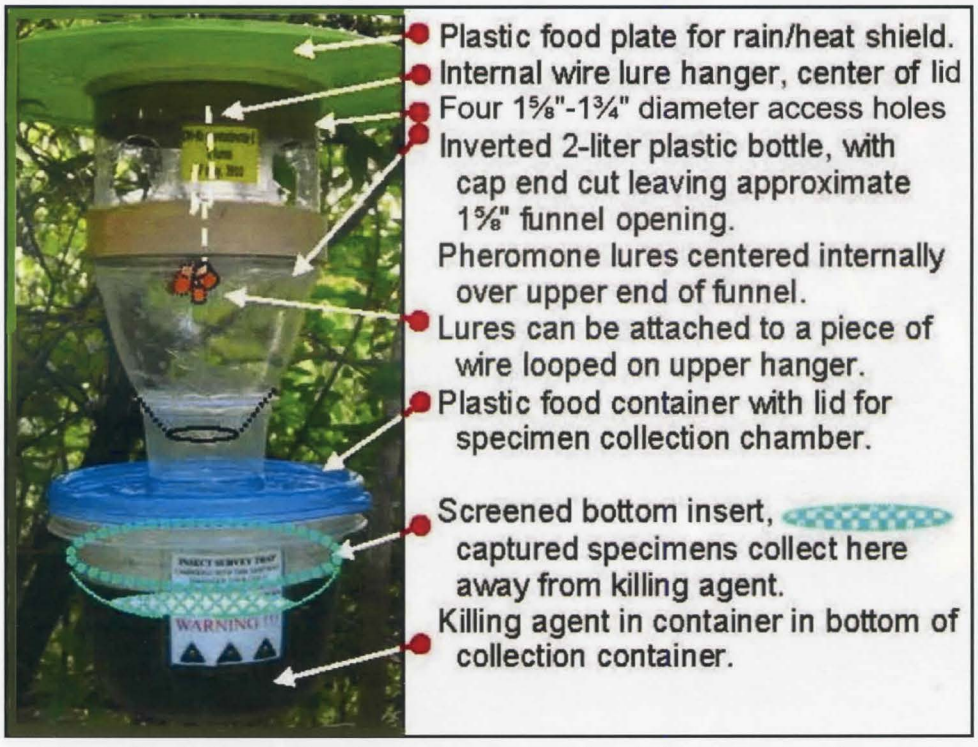

Fig. 8. Illustration and description of a simple self-made lure trap using discarded 2-liter plastic bottles, plastic food plates and plastic food containers.

Also, frequently captured in our insect traps of all types, especially in the clearwing moth traps were adults of the super abundant paper wasp ***Polistes annularis*** (Linnaeus, 1763). Sometimes, five to ten or more adults could be found daily in a single clearwing moth trap. These were not the only wasps/bees found in our clearwing moth traps, on occasion as many as 40 specimens of various insects, spiders, including lepidoptera larvae could be found in a single clearwing moth trap hanging among vegetation and containing semiochemical lures of various clearwing species, on occasion without even a single clearwing moth captured (Fig. 5c). Other extremely damaging pest frequenting our clearwing moth traps included toads, frogs and lizards (Fig. 5d), which would eventually fall into the trap internal basket with captured moths eaten before the pest themselves succumbed to the killing agent. Despite running our traps daily as many as three frogs could be found sitting at the trap entrances, or internally within the funnel areas for hours and days, thus becoming reptilian-amphibian feeding stations (Fig. 6). All live reptiles and amphibians were permanently removed when found, repeated relocating of live pests was an exercise in futility. Often the same relocated pests were found on the same or neighboring traps the very next day. Similarly our clearwing moth traps were a casualty of the ravages of rats, mice, gray foxes, gray squirrels, flying squirrels, and occasionally scorpions. Our clearwing moth traps were occasionally destroyed by cattle attempting to access the sodium in the killing agent, and other unknown animals chewed open a few of the plastic *Unitraps*.

Note. We list the Texas clearwing moth publication by Knudson and Bordelon with a date of ~2010. These authors self-published and privately printed more than a dozen volumes concerning the various families of Lepidoptera

occurring in the state of Texas, and other non-Texas areas in North America. These became tomes of Knudson & Bordelon's (2000-2011) self-published Texas Lepidoptera Survey - Houston, Texas, and subsequently evolved into various magnum opuses of the Atlas of Texas Moths. These authors created via personal computers non-permanent, non-dated, perpetually and haphazardly revised versions of their Lepidoptera publications. These were distributed through word of mouth among fellow lepidopterists over ~15 years. The authors collected a fee to cover printing, collating and preparation cost. Most, if not all of these publications have no publication dates, because they were continually revising their ephemeral manuscripts which were usually printed only when someone ordered the particular volumes. My undated copy of the Texas Lepidoptera Atlas: Vol VII: Sesioidea was printed and furnished to me around 2010, though earlier undated versions of this same titled volume were listed by these authors as early as 2002. Brou (2019a) reported being in possession of many, if not all digital files concerning Knudson and Bordelon's research of lepidoptera on ~97 DVDs/CDs. Some copies of these digital manuscripts and images of Texas Lepidoptera were created using non-identifiable long defunct specific software used during the infancy of personal computers. Consequently some of this data is not accessible using current 64-bit personal computer operating systems and software which most often do not allow the use of antiquated 16-bit and 32-bit software programs on current personal computer systems.

Unfortunately, Knudson and Bordelon relied upon Tom Eichlin for their clearwing moth identifications. Consequently there are an undetermined number of specimen misidentifications among the ~60 or so clearwing moth species Knudson and Bordelon listed and pictured in the Texas Lepidoptera Atlas: Vol VII: Sesioidea. None of the 60 Texas clearwing moth species were identified for Knudson and Bordelon as either new or undescribed species following (Eichlin and Duckworth, 1988) similar clearwing moths treatments in Moths of North America, where no new species were identified nor described in MONA. Eichlin and Duckworth (1988) erred by carelessly ignoring the earlier treatments of North American clearwing moths by major workers: Beutenmüller (1901) and Engelhardt (1946), thus creating voids and mass taxonomical confusion among 15 or more decades of North American clearwing moths literature.

Vernon and Charlotte Brou similarly have captured ~60 or so species of clearwing moths in the state of Louisiana, but about 50% of the species found in each state are not reciprocally found in the other. Of the ~60 species documented for Louisiana, about 25 are new species currently undescribed in scientific literature, and 12 of the 25 were misidentified by Eichlin for (Brou and Brou) in the early 1980s, 1990s and 2000s. Half of the new Louisiana species were evaluated for DNA and have no matching DNA profiles for any known species.

**Abita Springs Entomological Study Site: sec.24,T6S,R12E, 4.2 miles northeast of Abita Springs, St. Tammany Parish, Louisiana USA.*

We thank James Hansel of Great Lakes IPM for assistance in providing thousands of clearwing moth lures over many decades, and David Epstein for providing loaded '*Isomate*' Dogwood borer mating disruption dispensers, F. Matthew Blaine, the late Charles W. Bordelon, the late Thomas D. Eichlin, Amy Wing LeGaux, Richard M. Gillmore, Benjamin Gregory, Rick Kergosien, the late Edward C. Knudson, Zachary Lemann, Hideshi Naka, Franz Pühringer, William H. Taft, Royal Tyler, and to Ricky Patterson for many years of field assistance and helpful editorial comments, and numerous others.

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FALL ATTRACTIONS NO. 4 – AVERY ISLAND, LOUISIANA
BY GARY NOEL ROSS

Pawpaw (*Asimia triloba*)

Pawpaw (close-up)

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EUCLEA NANINA DYAR, 1899 (LEPIDOPTERA: LIMACODIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR. AND CHARLOTTE DOZAR BROU

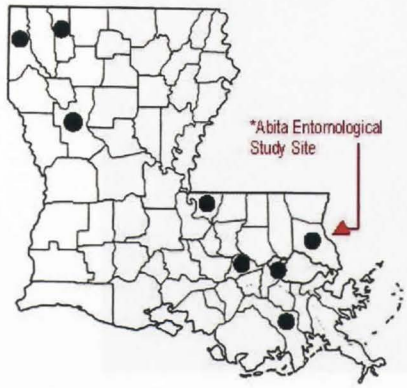
Fig. 1. ***Euclea nanina*** phenotypes: males a-b, females c-d, (all from *AESS, St. Tammany Parish). **a.** August 21, 1986, **b.** May 17, 2000, **c.** May 7, 1987, **d.** May 14, 1984.

The small mahogany-colored moth ***Euclea nanina*** Dyar (Fig. 1) is one of a handful of species in the genus ***Euclea***, Hübner. Covell (1984) did not address ***E. nanina***. Heppner (1995) stated there are 25 species of urticating caterpillars in Florida, but did not mention ***E. nanina***. Heppner (2003) reported ***E. nanina*** from South Carolina to Florida and Arkansas to Texas, and in Florida flying from January to June and August to December. Heitzman and Heitzman (1987) did not address ***E. nanina*** in Missouri, nor Powell and Opler (2009), nor Profant et al (2010). This species is newly reported for the state of Louisiana.

Fig. 2. Adult ***Euclea nanina*** captured in Louisiana. n = 79

Within Louisiana we have captured at least 25 species of moths which have urticating larvae. Earlier we published species accounts on 11 of these, including one other similar looking species ***Euclea delphinii*** (Boisduval) (Brou, 2022). Unlike ***E. delphinii*** which has four annual broods, ***E. nanina*** has only two annual broods (Fig. 2). In Louisiana, based on a small documented sample of the numerous hundreds of adults we captured, ***E. nanina*** mid-April through early September in two annual broods, the first brood peaking the second week of May and the second brood peaking the second week of August. Red stars indicate annual brood peaks. The majority of the adults included in the phenogram (Fig. 2) were captured at the *AESS. The parish records are illustrated in Fig. 3. We thank Ricky Patterson for critique of this species account.

***Abita Entomological Study Site** (AESS): *sec.24,T6S,R12E, 4.2 miles northeast of Abita Springs, Louisiana USA.*



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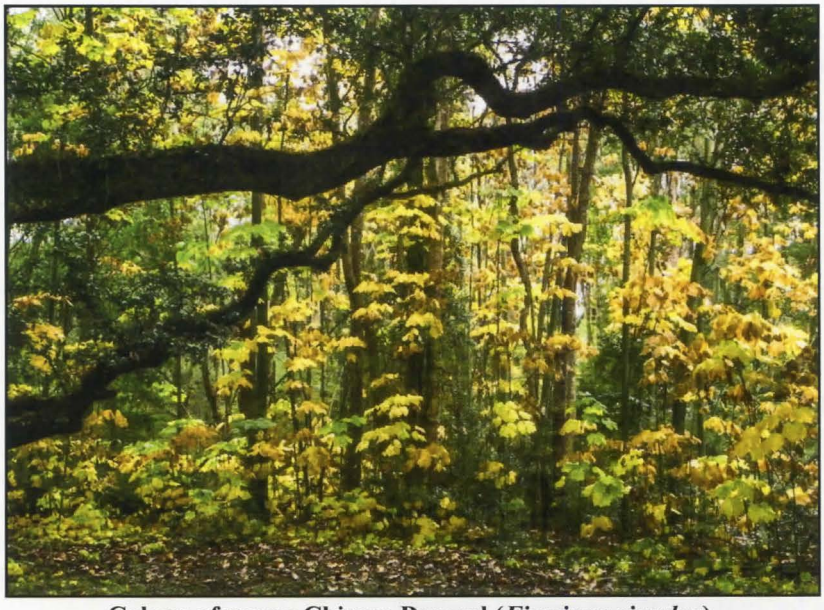
FALL ATTRACTIONS NO. 5 + 6 – AVERY ISLAND AND BATON ROUGE, LOUISIANA

BY GARY NOEL ROSS



Colony of young Chinese Parasol (*Firmiana simplex*)
Avery Island, LA

Crape Myrtle (*Lagerstroemia indica* hybrid) Baton Rouge, Louisiana

ARIZONA IN JULY: MUCH MORE THAN WAS EXPECTED

BY
CRAIG W. MARKS

I have, on several occasions in the past, written about searching for butterflies on my "Top Ten Wanted List." I first addressed my list in 2011 (Vol. 33, No. 3) in conjunction with my efforts to find/see Harris' Checkerspots (*Chlosyne harrisii*) in New York State. Although I didn't find Harris' Checkers on that trip, I ultimately did find them in Minnesota (Vol. 39, No. 3). Other's checked off that list and about which I've written include Gillette's Checkerspots (*Euphydryas gillettii*) (Vol. 41, No. 1), Macon's Arctics (*Oeneis macounii*) (Vol. 43, No. 1), Alberta Arctics (*O. alberta*) (Vol. 43, No. 3) and Red-disced Alpines (*Erebia discoidalis*) (Vol. 44, No. 3).

One of the butterflies on my list way back in 2011, and which has remained on that list ever since, was the Pine Satyr (*Paramacera xicaque allyni* vs. *P. allyni*). That satyr is essentially a Mexican butterfly that enters the U.S. only in the Chiricahua and Huachuca Mountains, more so in the former than the latter, flying primarily in late June into July. It has remained on my list this long because I typically scheduled my trips into Arizona in early August or later, after the monsoon season has started.

An Arizona specialty (only recorded in Cochise County), also known as Allyn's Satyr, the Pine Satyr was not described until 1972 (by Lee Miller). Miller, as well as some earlier references, considered it to be a separate species while others have characterized it as a subspecies of the Mexican *P. xicaque*. Pelhan listed it as a subspecies but, most recently, genomics studies have suggested this satyr is a separate species from *xicaque*.

Its typical habitat has been described as "Oak and conifer forest," "spruce and fir forests" and "pine and fir forests," at 8000 ft elevtion, sometimes descending down cooler ravines to 6000 to 6500 ft. It is single brooded with records from May 29 to August 13, but flying primarily in mid-summer. Several references describe its bouncy flight as from ground level up into the trees. All seem to agree it does not feed at flowers but will come to damp soil. Brock and Kaufman mentioned that, "males perch on tall shrubs or ferns in clearings to await females." Grasses are suspected to be the larval foodplant.

Pelhan identified the type locatlity as Barfoot Park. When I questioned Kilian Roever, my go-to-guy for Arizona, he recommended Barfoot Park and Rustlers Park, suggesting that at the former location I look around the concrete pads in the trees. I checked the BAMONA and iNaturalist websites and found that both "parks" had several recent sightings. I had my target locations.

Barfoot Park, located in Cochise County, is within the Chiricahuan Wilderness which, in turn, is part of the "Sky Island" region. It encompasses 680 acres, managed by the U.S. Forest Service, and is above 8000 feet in elevation. A birder website describes the two "parks" as follows:

"Rustler Park and Barfoot Park are high-elevation sites in the Chiricahua Mountains, accessible seasonally by graded dirt roads. Note that in this area "park" means "meadow;" the areas could be called Rustler Meadow and Barfoot Meadow.... The Rustler Park area is accessible from Portal (via Portal Road) and from Chiricahua National Monument via Pinery Canyon Road. Both roads are steep and winding, not suitable for longer vehicles or trailers, but generally okay for sedans after the snow melts and the roads have been graded. ...

Barfoot Park is located north of Rustler Park. (I would note the two "parks" are about 2 miles apart) ... From Onion Saddle, drive south 1.6 miles to a fork in the road. Turn right (toward Barfoot Park) and drive about 0.6 miles to the top of a steep hill. Most drivers will stop here, but others continue down the steep hill. The road ends (another 0.4 miles) at the bottom edge of Barfoot Meadow. Barfoot Meadow is watered by Barfoot Spring."

I flew into Tucson on 7/08/23. After renting a vehicle, I drove the short distance to Box Canyon, south of Tucson. My reason for going there was to possibly see an admitted longshot, an Elf (*Microtia elva*), but during the 30-45 minutes I was there I didn't see a single butterfly. It was extremely hot and dry, and, as it was still before noon (Arizona time), I decided to drive the short distance to Madera Canyon. At Madera, I worked the lower canyon (the Madera picnic area) where there was a steady stream of flowing water. I ended up seeing numerous butterflies, including Arizona Metalmarks

(*Calephelis arizonensis*), Nabokov Satyrs (*Cyllopsis pyracmon*), Bronze Roadside Skippers and one Large Roadside Skipper. But butterflies weren't the most colorful things on the wing. At Santa Rita Lodge, there were numerous Broad-billed Hummingbirds (*Cynanthus latirostris*), flashing blue and green. Also, cruising up and down the stream were several bright orange dragonflies, which I believe were Flame Skimmers (*Libellula saturate*).

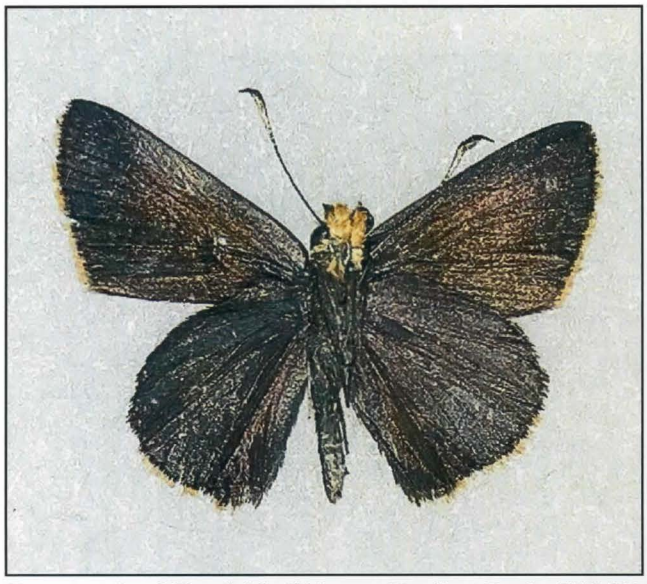
Broad-billed Hummingbird and Flame Skimmer, both in Madera Canyon, 7/08/23

On Sunday, the 9th, I drove to Incinerator Ridge on Mount Lemmon, hoping to see some Black Checkerspots (*Thessalia cyneas*). I'll come back to that location later in this article.

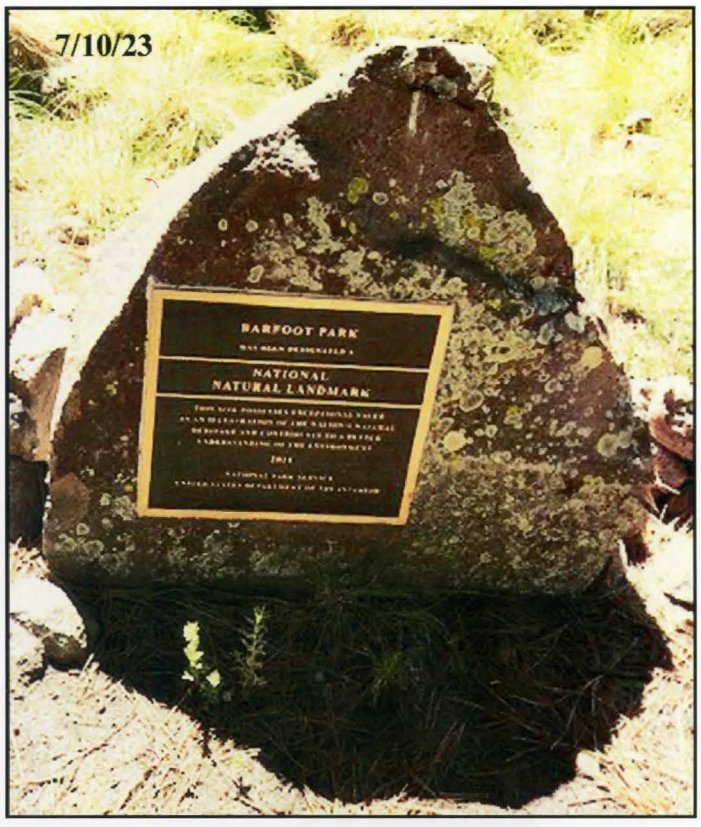
The trip up to Barfoot Park on Monday, the 10th, was unique. I had stayed in Willcox the night before and left early as my GPS advised it was about a two-hour trip. The first part was easy, on paved highways through desert lowlands. Once I turned onto FR 42 (Pinery Canyon Road), the rest of the way was dirt road. The lower section into Coronado NF was relatively flat and in good condition; however, the last 12 miles or so was a different story.

I had been forewarned about that road, so I had rented a Toyota Highlander with high clearance, and I am so thankful that I did. Once I started the climb up to Barfoot Park, the road became a series of sharp, and sometimes blind, switchbacks and steep drop-offs. To make matters even more stressful, the road itself became much rougher with fair sized rocks to be dodged. After what seemed like an eternity, I made it to the "Y" in the road and took the right fork to Barfoot Park (the left fork goes to Rustler's Park).

After about a half mile, I came to an area that was for parking. My GPS told me to park there and walk the rest of the way, so I did. I later realized I could have driven all the way down, but for reasons I will explain, I'm glad I didn't. Specifically, as I walked down the road, I saw a dark skipper land in front of me. My initial impression was an Orange-headed Roadside Skipper *(A. phylace)*, a species I had never seen before. I saw four more on the road as I continued down to the park. I was advised by a young birder that drove up about an hour after I had arrived, the skippers were actually Orange-edged Roadside Skippers (*A. fimbriata*) (see photo next page), another species I had never seen before. I eventually saw two or three dozen, on the road, at mud and at yellow composite flowers with a yellow center (my belief is they were in the daisy family but possibly coreopsis) that were growing in multiple places.



Orange-edged Roadside Skipper, Barfoot Park, 7/10/23



Barfoot Park is essentially an open meadow in the surrounding pine forest, about the size of a football field. Facing the meadow from where I parked, the road down is on the right side of that meadow. Beyond the road, in the trees on the opposite side, are 3 or 4 concrete pads with picnic tables, used for camping. The road continues past the meadow, down a slight grade into an area with more picnic tables.

Left side of Barfoot Park, 7/10/23

Barfoot Park, left center, 7/10/23

Barfoot Park, left center, 7/10/23

Barfoot Park, right side, 7/10/23

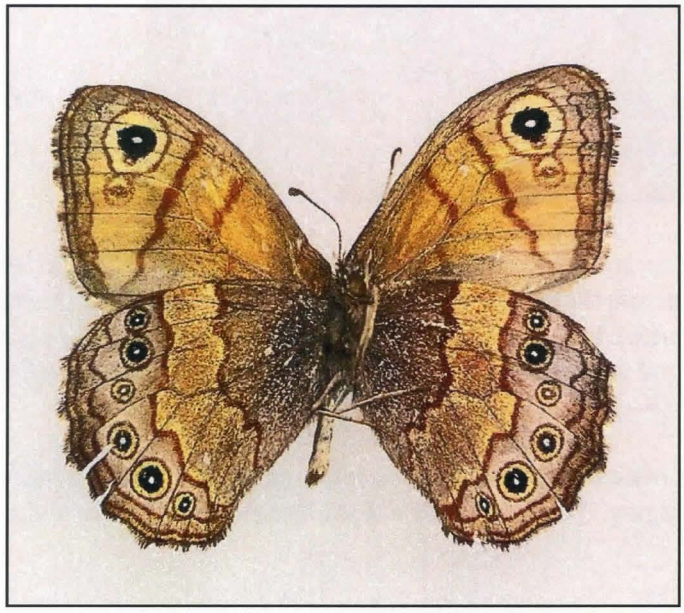
Across the meadow, opposite the road, was a small brick spring house (shown in the background of the 2nd and 3rd photos above), in front of which was a seep. I first walked across the meadow to that spring house. A small but steady trickle of water flowed downhill from that seep along the outer edge of the meadow's right side (from the prospective of the photographs above). There was significantly taller and greener grass, sedges and other plants growing in the moisture provided by that trickle of water.

At the spring house, I saw some movement on the ground behind that building which turned out to be a large, gray squirrel. Despite my presence, it stayed on the ground, foraging. I believe it was a Rock Squirrel (*Otospermophilus variegatus*), the first one I recall ever seeing.

Barfoot Park, 7/10/23

I left the spring house and walked along the edge of the area through which the water was trickling (I use that word intentionally because to my eyes the water was moving regularly but flowing weakly). As I re-approached the road (back on the other side of the meadow) there were several patches of the yellow composite flowers I referenced earlier. Each flower head had at least one, sometimes several butterflies/skippers nectaring, including Azures (*Celastrina sp.*), Marine Blues *(Leptotes marina*), Orange-edged Roadside Skippers, Taxiles Skippers (*Poanes taxiles*), Pearl Crescents (*Phyciodes tharos*), a couple of Queens (*Danaus gillippus*), and a Painted Lady (*Vanessa cardui*). I also saw a Gold-banded Skipper (*Autochton cellus*) in this area. The trickle of water crossed the road and created a puddle with numerous skippers and Azures at the mud.

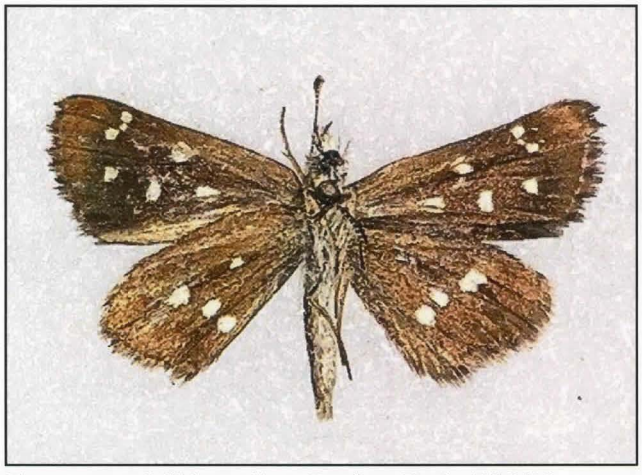
Across the road, below the last concrete pad, there was a profusion of knee-high ferns growing. It was here that I saw 4 of the 6 Pine Satyrs found that day, all of which I believe were males. In those four instances, the satyrs were perched on a fern. Once disturbed, they flew up to about head height, but didn't really fly away (all except one that did evacuate the area, not to be seen again). Unlike the satyrs that are found in Louisiana, the Pine Satyrs did not scuttle away, low to the ground, weaving in and out of the vegetation. Instead, they continued to fly above the vegetation at about shoulder to head height.



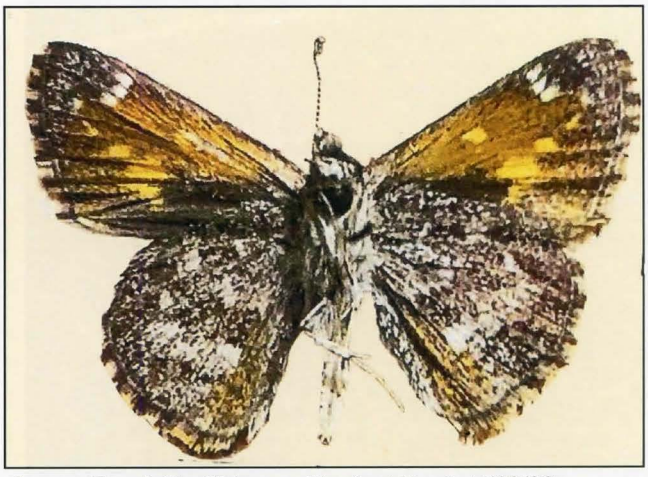
Pine Satyr, Barfoot Park, 7/10/23

The last Pine Satyr I saw was out in the meadow. It popped up in front of me and flew to the other side of the seep. I was not able to relocate it. The other one I saw away from the ferns was perched on a bush alongside the road, maybe 25 feet from the area with the ferns.

In that same area I found a Four-spotted Skipperling nectaring (*Piruna polingi*) at one of the yellow flowers. About an hour later, I saw a second, also on one of those yellow flowers, further down the road, away from the meadow. I also noticed a different skipper, in the area of ferns and on the yellow flowers, a Cassus Roadside Skipper (*A. cassus*). I ended up seeing three of them. Both were new species to me.



Four-spotted Skipperling, Barfoot Park, 7/10/23



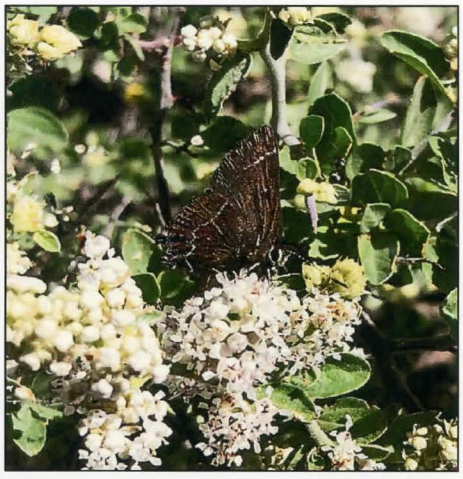
Cassus Roadside Skipper, Barfoot Park, 7/10/23

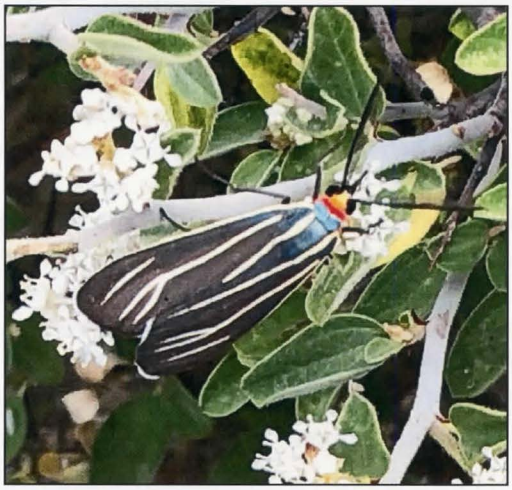
At about 1:30ish, it clouded up and began to sprinkle on me. As I walked back up the road to my vehicle, it rained a little harder but never turned into a downpour. Once back at my vehicle, I ate lunch while the rain subsided. I decided to drive over to Rustlers Park, but when I got there it was raining hard. I waited a bit, but the rain never really stopped so I decided to head back to Willcox before the roads became too muddy. Fortunately, as I drove back down, the rain reduced to only a sprinkle and I had no problems on the descent.

One of the other species on my "top ten list" back in 2011 was the Early Hairstreak (*Erora laeta*), a mostly eastern/southeastern species with reported sightings that appear both rare and random. I had never really made a concentrated effort to search for that species, primarily because I couldn't figure out where to look. Although not on my designated "wanted" list, the Early Hairstreak's western look-a-like, the Arizona Hairstreak (*Erora quaderna*), was another species that I had serious reservations about ever seeing. As with the Pine Satyr, its primary flight time was outside of when I usually traveled to Arizona. My one effort, at Garden Canyon in the fall, had failed. Other than that location (which has become much less easily accessed in recent years), I didn't know where to look.

As stated, I went to Incinerator Ridge on 7/09, looking for Black Checkerspots. Incinerator Ridge, located north of Tucson on Mt. Lemmon, is accessible via Incinerator Ridge Road, located just past mile marker 19 on the Mt. Lemmon Highway. That trail, at above 8000 ft in elevation, runs along a tree-lined ridge. The trail can be extremely rough and steep in places.

The hillside below the trail (again, which runs along the top of the ridge) was covered with ceanothus in full bloom. The blooms were covered with great numbers of Azures and Marine Blues, as well as lesser numbers of Nais Metalmarks (*Apodemia nais*), Painted Ladies, Texas Crescents (*Phyciodes texana*), Thicket Hairstreaks (*Callophrys spinetorum*), Gray Hairstreaks (*Strymon melinus*), and even a Border Patch (*Chlosyne lacinia*). Other insects on the ceanothus included Veined Ctenucha Moths (*Ctenucha venosa*), Net-winged Beetles (*Calopteron terminale*), Tarantula Hawks *(Pompilidae)* and a Robber fly/Tarantula Hawk mimic, *Wyliea mydas*.





Nais Metalmark, Thicket Hairstreak and veined Ctenucha Moth, Incinerator Ridge, 7/11/23

I had not been there long when I saw a small green hairstreak. My first thought was one of the Callophrys species, but upon closer inspection I realized I was looking at my first Arizona Hairstreak. It turned out there were many flying below the trail, all on the ceanothus, one of its larval food plants.

Arizona Hairstreak, dorsal and ventral, Incinerator Ridge, 7/09/23

In 1980, L. Miller addressed the *Erora laeta* group as follows:

"The *Erora laeta* group comprises three "look alike" species distributed in parts of the United States, Mexico, and Guatemala. They are slate-gray (males) to black with median blue markings (females) on the upper surface; on the under surface they are conspicuously scaled with blue-green, especially the hindwings, with overlying brick-red spots or chevrons. All share genitalic similarities in both sexes. … most specimens can be determined within the group by their locality labels."

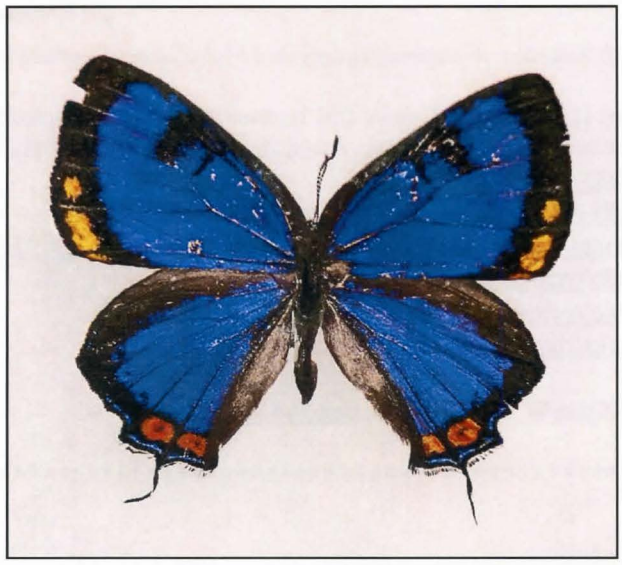
Some sources suggest *quaderna* is a subspecies of *laeta*, distinguished by range (they do not overlap). For example, Scott considers *laeta* to be the rarer eastern subspecies with *quaderna* to be the more common "sw US" subspecies. In contrast, Pelhan has listed the two as separate species. Opler/Wright stated the "evidence is not conclusive."

The Arizona Hairstreak is reported to occur in "higher mountain ranges from the Mogollon Rim to Mexico," in heavily wooded oak woodlands and canyons at elevations between 4500 and 8000 ft. Records indicate It is on the wing from March to August over several broods, much more prevalent in the spring. A tailless hairstreak, the male is largely gray dorsally while the female is a striking blue dorsally, except the apex of the upper wing which is black. The references indicate that the adults feed at ceanothus blooms (as well as at willow flowers), and the caterpillars feed on ceanothus flowers, among other things, including oaks. They also are reported to come to mud. The males are said to perch in hilltop trees, conduct similar to *laeta*.

The majority of those seen on the 9th were showing signs of wear, suggesting they had been on the wing for a while. Also, the vast majority were males. As an aside, I returned to Incinerator Ridge on the 11th (still looking for Black Checkerspots, again without success), and only saw 3 or 4 Arizona Hairstreaks, a significant reduction in numbers a mere two days later.

While I was at Incinerator Ridge on the 9th and while taking the photo of the Thicket Hairstreak pictured above, I was about 25 yards below the main trail when I heard voices nearby. They turned out to be two local butterfliers, Ken Kertell and Soren Scott, who, ironically, were looking for Thicket Hairstreaks. As we visited, Ken commented they earlier had seen some Colorado Hairstreaks *(Hypaurotis cryalus*). As I had not seen that species in over 20 years, I asked where. Fifteen minutes later, after a somewhat strenuous climb, Ken had led me to a narrow section of trail dominated by Netleaf Oak (*Quercus rugosa*). Almost immediately he flushed one by tapping on the oaks adjacent to the trail. A few minutes later Soren flushed a second one.

The Colorado Hairstreak is a denizen of oak woodlands, primarily located in Arizona above 5500 ft in elevation.



Colorado Hairstreak, Incinerator ridge. 7/09/23

A large hairstreak, equal in size to a Great Purple Hairstreak, its dorsal wings are primarily bright purple (NOTE: some sources point out the coloring looks blue in pictures) with black trim on the outer wings containing red spots. Primarily associated with Gambel Oaks, other oaks are suspected as alternate larval foodplants (such as Netleaf Oak?). It does not come to flowers but is reported to feed at oak gall exudates. In fact, Ken related to me that at times he has witnessed males "licking" oak acorns. Reported as active at dusk, during my one previous experience with this hairstreak in Colorado, I found several in late afternoon along an oak treeline facing an open meadow. All seen were perched on the outer branch tips which extended toward the meadow. Records in Arizona extend from late May into October, with the main brood appearing in mid-summer, but the late fall records are suggestive of a partial second brood.

My four days in Arizona were up after my second trip up to Incinerator Ridge, and it was time to leave Arizona's extreme (but "dry") heat and return to Louisiana's extreme (and extremely humid) heat. I'm already planning next year's trip. Oregon is one of the six remaining states I have never visited, so I'm looking in that direction because two of the current butterflies on my ten most wanted list, the Great Arctic (*O. nevadensis*) and Old World/Oregon Swallowtails (*Papilio machaon oregonia*), can be found there. Others that I would like to see include Great Coppers (*Lycaena xanthoides*), Leanira Checkerspots (*Chlosyne leanira*) and Pacific Fritillaries (*Boloria epithore*).

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

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FALL ATTRACTIONS NO. 7 – BATON ISLAND, LOUISIANA
BY GARY NOEL ROSS

Crape Myrtle (*Lagerstromia indica* hybrid) – Close up

Crape Myrtle (*Lagerstroemia indica* hybird - Fallen leaves beneath tree

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NEW *EUDARCIA* SPECIES IN FLORIDA: BEAUTIFUL MICRO MOTHS NEEDING FURTHER STUDY AND COLLECTING

BY

JAMES E. HAYDEN, MEGAN X. NEAL, ROBERT A. BELMONT AND LUKE S. SMITH

Invasive moths continue to show up in Florida. One interesting moth that has been recently collected in Florida is an undetermined species of the genus *Eudarcia* Clemens (Meessiidae). We wrote this article to raise questions and point out interesting things about it, to solicit help searching for larvae and collecting more moths, and to encourage a bit of dissection.

In late May 2022, Luke Smith photographed unusual micromoths in Gainesville (Fig. 2). This past spring, he and Bob Belmont observed them again at their houses, attracted to light. Seeing a growing number of mystery moths on iNaturalist led to Luke's activity with the McGuire Center, and it created the opportunity for him to contribute specimens, photos, and data. He showed photographs to Jim Hayden, who was puzzled and asked him to collect specimens. The moths have wings about 3 mm long, and they are brown with sharply contrasting white transverse lines (Fig. 1). There are also photographs on BugGuide from Collier-Seminole State Park (March 2022), Lake Kissimmee State Park (February 2022), and as early as 2014 from the same park (https://bugguide.net/node/view/1641913/bgimage). On BugGuide, Aaron Hunt organized the photos under Tineoidea – Enigmatic species – "Red and white FL" (https://bugguide.net/node/view/2204066). Jim subsequently found a specimen collected in Homestead in 2016 in the McGuire Center's unsorted microlepidoptera, so this species has evidently been in Florida since at least the mid-2010s.

The moths have rough-haired heads and bristles on the labial palps, like tineoids and adeloids. As it happened, Bob and Luke's specimens are all females. The presence of an ostium bursae (the defining character of ditrysian Lepidoptera; Fig. 8: a) ruled out Adeloidea. Making a wing slide and reading Forbes (1923) pointed to *Eudarcia* Clemens, because this genus uniquely has forewing Rs_1 and Rs_2 stalked (Fig. 4). Although most *Eudarcia* species are drab gray and brown, many have white lines. Other characters also fit, such as two whorls of scales on each antennal segment (Fig. 5; most tineids have one whorl). Megan photographed the slides with a Leica DM6 B compound microscope with a DMC6200 camera at the McGuire Center. Images are accessible at http://specifyportal.flmnh. ufl.edu/leps/.

Eudarcia moths are rather unusual. We highlight some of the issues.

More than one species?

After identifying the species in Gainesville, Jim compared it to specimens that had been collected in a Malaise trap on Big Pine Key in 2019, hereafter called "*Eudarcia* sp. 1" (Fig. 3). Their wings were worn from alcohol, but some were perceptibly brown with white lines. Jim had dissected a couple when he received the trap contents, but at the time, he found the morphology so perplexing that he vacillated between Tineidae and Gracillariidae and eventually gave up. Looking again with hindsight, the venation is the same as the Gainesville specimens, and the males have abdominal glands that are a unique diagnostic character for *Eudarcia* (Fig. 12: g; Robinson and Nielsen 1993). However, the female genitalia of those from Big Pine Key differ slightly. Both have an enlarged, strongly sclerotized seventh segment (Figs. 10, 11), but its shape is different; the antrum also seems different (Figs. 8, 9: a). Finding a male specimen of the population on Peninsular Florida, which we call "*Eudarcia* sp. 2," might corroborate that they are different species, and having more females of Species 1 could determine whether the differences are consistent.

They are related to *Protodarcia argyrophaea* Forbes, 1931, described from Puerto Rico. Loren Jones at the Cornell University Insect Collection kindly sent photographs of a female type specimen. Like the others, the maculation is brown with sharply defined white lines, and the seventh abdominal segment is enlarged. The course of the lines of the type and as illustrated in Forbes (1931) differs in some ways from Species 1 and 2. The shape of the seventh segment of *P. argyrophaea* is obscured by the folded abdomen in the dissection. Thus, preliminary information suggests three species: *Protodarcia argyrophaea* in Puerto Rico, Species 1 on Big Pine Key, and Species 2 in Peninsular Florida. We need more material for thorough comparison: males of Sp. 2, better specimens of Sp. 1, and anything of *P. argyrophaea*.

Fig. 1. ***Eudarcia*** **sp. 2 (Gainesville, FL, 2023; scale = 1 mm); 2.** ***Eudarcia*** **sp. 2 (Gainesville, FL, 2022, credit: Luke S. Smith); 3.** ***Eudarcia*** **sp. 1 (Big Pine Key, FL; scale = 1 mm); 4. Forewing of Sp. 2 (stalked Rs1 and Rs2 indicated, MGCL slide 6688); 5. Head of Sp. 1 (mp: maxillary palpi); 6. Ventral abdomen of Sp. 1 (abd: abdominal segments 1 to 8; v: valvae of genitalia); 7. Male genitalia of Sp. 1 (MGCL slide 5585); 8. Female genitalia of Sp. 2 (MGCL slide 6762; a: antrum); 9. Detail of antrum bursae and 8th abdominal segment of Sp. 1 (MGCL slide 6761); 10. Female abdomen of Sp. 2 (MGCL slide 6762; a7: seventh abdominal segment); 11. Seventh abdominal segment of Sp. 1; 12. Second abdominal segment of Sp. 1 (MGCL slide 5585; g: pleural gland; s2c: heart-shaped anterior half of sternum 2; s2l: small tongue-shaped sclerite anterior of sternum 2); 13. Larval case of** ***Eudarcia richardsoni*** **(Walsingham) on alga-covered stone, coast of Dorset, UK (credit: M. Parsons / Butterfly Conservation, reproduced with permission); 14.** ***Eudarcia hedemanni*** **(Rebel), reared female specimen and larval case with pupal exuvia protruded (Staatliches Museum für Naturkunde Stuttgart).**

In addition, at least one small, gray, probably undescribed species of *Eudarcia* occurs in Florida. We have dissected one specimen collected in the Lower Keys (FL, Monroe Co., Cudjoe Key, CAPS UVL trap 2-IV-2019, J. Farnum, MGCL slide 6755) (not figured), and Aaron Hunt has determined a few photographs on BugGuide from Florida as a *Eudarcia* species.

Genera and genitalia

Eudarcia Clemens, 1860 currently includes fourteen junior synonyms, including *Meessia* Hofmann, 1898 and *Protodarcia* Forbes, 1931 (Robinson and Nielsen 1993, Gaedike 2015). Most of the described species are in the Old World; "*Protodarcia*" is a Caribbean lineage. Davis (1994) signaled his intention to exclude *P. argyrophaea* from *Protodarcia*, claiming that it "eventually will be assigned to a new genus." Until further study, we call the new species *Eudarcia*, because they have all the diagnostic characters of *Eudarcia* as described by Robinson and Nielsen (1993) and Regier et al. (2014).

Perhaps the most remarkable thing about the new species is that the males—at least of Species 1—have proportionally the longest genitalic valvae that we have ever seen in a moth, comprising half the length of the abdomen (Figs 6, 7: abd, v). Typical *Eudarcia* species have valvae of normal length for a moth. It would seem that the elongate, robust seventh segment of the females (Figs 10, 11) is adapted to be squeezed by the long valvae. Because all three species have a long seventh segment, we predict that *P. argyrophaea* and Species 2 have long valvae like Species 1.

Family level and higher

Eudarcia is now classified in its own family, Meessiidae Căpuşe. Molecular analyses show that *Eudarcia* diverged before all other tineoids, including clothes moths and bagworms, so Meesiidae *sensu stricto* was raised to family rank by Regier et al. (2014). Therefore, in the big picture, *Eudarcia* is very special because it may be the sister-group to the entire rest of the Ditrysia, which is 98% of all lepidopteran species diversity. It is like *Orussus* Latreille as the sister-group of all parasitoid wasps, or *Amborella* Baill. as sister to all other flowering plants.

When Jim first read Regier et al. (2014), he dismissed the results as "DNA gone wild." Now with real specimens in hand, we are taking a second look at the morphology. *Eudarcia* has several structures that are unusual for Tineoidea. Indeed, Forbes (1923) may not have been quite so far off the mark when he placed *Eudarcia* in Incurvariidae, which is just outside of the Ditrysia.

Regier et al. (2014) describe Meessiidae with several interesting characters, including "each flagellomere covered with two annuli of appressed scales" (most tineoids have one) and "maxillary palpus elongate, five-segmented and folded, occasionally with one to two additional segments in *Eudarcia*." The new species have these and more. The extra segments of the maxillary palps may be unique in Lepidoptera (Fig. 5: mp). Known *Eudarcia* larvae have long setae and an anal comb (Sakai and Saigusa 1999; Regier et al. 2014). Some of these odd characters could be uniquely derived after long evolutionary isolation, and others could be explained as being primitive. Robinson (1988) suggested that the two whorls of scales on each antennal segment were primitive. Another possibly primitive character is the shape of the furcasternum, a branched structure inside the thorax. Davis (1986: 51) made intriguing observations about its shape in *Eudarcia*.

A third character worth looking at is the division of abdominal sternum 2. Many micro-moths just outside of the Ditrysia have the anterior margin of sternum 2 divided off as one or two separate sclerites. Their homology with the rest of sternum 2 is indicated by muscle attachments (Kristensen and Nielsen 1980). These sclerites have been lost in Tineoidea and other Ditrysia. However, *Eudarcia* species have a small, tongue-shaped sclerite anterior of sternum 2, as pointed out by Robinson and Nielsen (1993) (Figs 10, 12: s2l), and the heart-shaped anterior half of sternum 2 is detached (s2c). Deciding whether or not the sclerites are really primitive remnants will require dissection of freshly collected specimens with the muscle tissue treated with a fixative.

On the other hand, *Eudarcia* could very well belong in Tineoidea. The tongue is short and uncoiled, and the ovipositor is long and telescopic, like typical tineids such as clothes moths and plaster bagworms. The question needs more study.

Collecting

We need more specimens to describe the species, to compare with other *Eudarcia* species, to lend to other experts, to dissect musculature, and for phylogenetic analysis. We have not yet found the larvae, and the phenology and full distribution are not known. If you are interested in searching, photographing, and collecting, or if you find any, please contact Jim or Bob.

Eudarcia moths are not strongly phototropic, and it was lucky to collect them at light. They are more commonly collected by sweeping over vegetation at dawn and dusk (Budashkin and Bidzilya 2018). Malaise traps may be useful, as Species 1 was caught in one, but a trap with a dry head should be used. The distance to Big Pine Key is a problem for most collectors, but Malaise traps can be checked every week or two.

Budashkin and Bidzilya (2018) advise the best way to obtain *Eudarcia* moths is to rear caterpillars collected in the field. Larvae of *Eudarcia* feed on crustose lichens and algae on rocks in dry habitats, especially sandstone and limestone (Fig. 13) (Gaedike 2015; Budashkin and Bidzilya 2018). The larvae make cases of sand grains and lichen-frass, and they are about as long as the moth's total wingspan (Fig. 14), about 7 or 8 mm long. The cases are like those of plaster bagworms (*Phereoeca* Hinton and Bradley) but with wider, flat ends, the openings facing downward. The caterpillars have an anal comb, so they probably flick their droppings away. Gaedike (2015) states host records on various unicellular algae (*Chlorella*, *Chlorococcus*, and *Desmococcus* species) and lichens in the genera *Aspidicilia*, *Caloplaca*, *Lepraria*, and *Verrucaria*. Therefore, we ask people to look for the larval cases on rocks and old house walls that have lichens or green algae. Species 1 was collected in pine rockland (Fig. 15) where the ground was covered with limestone. Some of these lichen genera do not occur in Florida or are more common on bark; *Caloplaca citrina* would be most often found on rocks and bricks (Laurel Kaminsky, UF, pers. comm.). Luke collected his specimens in a residential neighborhood of Gainesville. Collection records of European species (Gaedike 2015) suggest that most *Eudarcia* are univoltine, flying in mid- to late spring. We have thus far observed the new species in Florida flying only in the spring.

Fig. 15. Habitat of *Eudarcia* sp. 1: Big Pine Key, Key Deer National Wildlife Refuge, Manillo Trail off Key Deer Boulevard.

Bob's house is at the margin of Split Rock Conservation Area a few miles west of the University of Florida campus. It is named for a large outcrop of limestone that overlies a spring. The large, deeply cracked rock is richly covered with fungi and hepatophytes, so it should be a good habitat. We have not yet found *Eudarcia* cases on the rock, despite searching (Fig. 16), although we did find larvae of other insects feeding on the fungus and a lot of frass, presumably from other caterpillars. If the moths are univoltine and the caterpillars grow slowly, the cases could be microscopically small for much of the year—they should be more visible in early spring. To flush adult *Eudarcia* moths from crevices in rock, Robinson and Nielsen (1993) recommend using a bee smoker full of cardboard soaked in potassium nitrate, effectively a smoke bomb.

Fig. 16. The Split Rock of Split Rock Conservation Area, Gainesville, Florida, with Bob Belmont searching for caterpillars.

These species represent an unusual Caribbean lineage of *Eudarcia* that should be included in future phylogenetic analyses. Joe Martinez (UF McGuire Center) advises that more than one specimen will be needed to get enough genomic DNA from such small moths.

We suspect that Species 2 is new to peninsular Florida, because if it were native, it should have been observed before 2014. There has been nearly continuous effort to collect micro-moths for the FSCA since the 1970s. Digital cameras with macro lenses have been available for many years, and the moths have such striking wing patterns that they should have been noticed before. On the other hand, Species 1 on Big Pine Key could very well be native, because the Lower Keys have seen less collecting effort for microlepidoptera. If the moths originated from elsewhere, they probably came from the Greater Antilles. *"Protodarcia" argyrophaea* was described from Puerto Rico, so there may be a group of related species distributed in Cuba, Hispaniola and so forth. Lepidopterists in the Caribbean region should photograph moths and try to collect larvae.

Online platforms such as iNaturalist and BugGuide can facilitate this activity by enabling more people to contribute to the discovery process. Recruitment of observers through iNaturalist could produce much more knowledge about enigmatic species like these moths.

However, some adjustments could make the data more accessible to members of the community. Currently, the policy of iNaturalist is to create species profiles only for described species. This is a barrier against sharing information, because records left at higher ranks are much more difficult to locate and organize. Overcoming these barriers may be the key in sourcing additional specimens of *Eudarcia* sp. 2 or future enigmatic species being researched. The geography and phenology of these species pending description can be viewed easily, informing additional data collection efforts, and identifying potential users that may be willing to collect, or host researchers to collect.

Acknowledgments

This article pays tribute to the centennial of William Forbes's 1923 magnum opus on Eastern Nearctic micromoths, to this day the only guide with keys from order down to genera. Aaron Hunt created the page for "Enigmatic red & white FL" on BugGuide after Luke's requests for help, and he matched them with the observations of other, earlier photos. Jake Farnum (USDA) and Scott Weihman (USDA) collected the specimens on Big Pine Key and Homestead. Hossein Rajaei let Jim examine reared specimens of European *Eudarcia* at the Staatliches Museum für Naturkunde Stuttgart (SMNS). Loren Jones and Jason Dombroskie (CUIC) corresponded about the type material of *P. argyrophaea*. Riley Gott (UF), Julieta Brambila (USDA), and Paul Skelley (DPI) gave many comments that greatly improved the article. We thank the City of Gainesville Parks, Recreation, and Cultural Affairs Department for permitting Bob's survey of the Split Rock Conservation Area. This article was supported by the Florida Department of Agriculture and Consumer Services – Division of Plant Industry.

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REARING NOTES – DIFFERENT COLOR FORMS OF *EUMORPHA FASCIATUS* LARVAE

BY

DAVID FINE

In the summer months in south Florida along canal banks in urban areas of Palm Beach, Broward and Dade counties, you will find *Ludwigia*, primrose willow growing 2-4 feet tall having beautiful yellow flowers on them. This is the host plant for the banded sphinx moth; *Eumorpha fasciatus*. It is actually fairly easy to find larvae of this species as they leave plenty of evidence of their presence; especially once they reach the end of 4th instar.

I've always admired the color variations of the larvae of this species. They are most typically found with a plain green coloration that provides excellent camouflage while resting in the middle of a primrose willow bush. Seventy-eighty percent of the larvae that I've found in the wild have had this color. There are several other color forms that appear less commonly. Some larvae have a bright yellow color and some have a brick red color. There is yet another color form that has been the most commonly encountered alternative color form. It has a black base with yellow and red stripes with red pro-legs and a red head. This color pattern is quite striking and breaks the mold of the mat single coloration of the other color forms. I've always wondered why the different color forms would appear. It does not appear to have anything to do with any sort of sexual dimorphism nor does it have anything to do with temperature or time of year or even different host plants. All of these factors can cause larvae of other species to take on different color forms.

Fig. 1. Food deprived larva of *Eumorpha fasciatus* that turned red in subsequent instar

Fig. 2. I really had my "hands full" feeding all of these sphinx caterpillars

Fig. 3. Black, red and yellow color form of larva better camouflaged on reddish brown stems of plant that have been stripped of leaves

I have noticed that larvae that I've been rearing on cuttings would change colors in between instars. For instance, I have had many larvae in 2nd or 3rd instar that were found in the wild as green larvae, molt into a reddish or dark color form in 4th or 5th instar. This drastic color change in between instars has been quite dramatic and has peaked my interest as to 'why.'

Fig. 4. Green color form - not so camouflaged when leaves are stripped off of plant

Fig. 5. Three color forms of *Eumorpha fasciatus* larvae - final instar

Fig. 6. black, yellow and red color form - not so camouflaged on green leaves

In August of 2023, I had a plan to try and find as many larvae of Eumorpha fasciatus as I could in order to get some good video footage of this species for my "Keys Moths" YouTube channel. While hunting for larvae one day on a canal bank by my house, I did not find any caterpillars but I did find about a dozen eggs that were laid on the leaves of the Ludwigia plant. I plucked the eggs and determined to rear the larvae through and show the entire life cycle on video format. During this project, I went out of town for a few days when the newly hatched larvae were in 1st instar. I left them with what I believed would be sufficient food for the 2 days I would be gone. I believe there were more young larvae on the plant than thought there were and I underestimated how much food plant should be placed in the container for them to eat. Upon my return, I found the caterpillars wondering around on the bottom of the container having stripped the plant of all leaves. The larvae had molted into second instar and to my surprise, the larvae had all changed colors upon molting from green to red.

Fig. 7. Egg of *Eumorpha fasciatus*

It then dawned on me that the possible reason for the color change from green to darker forms could be simply due to a lack of available food. These larvae all grew up to be the black, red and yellow striped form in final instar. After keeping the larvae well fed for the remainder of their lives, they never returned back to their green color form. This brings me to my final observation. One day while searching for larvae along a canal bank

I knew there were lots of Ludwigia plants, I found a large number of caterpillars on the plants there. Interestingly though, many of the larvae were in final instar and had decimated the leaves off of the plants that they were feeding on. I would find a Ludwigia plant completely stripped of leaves and only stems were left which told me that there were caterpillars recently present. Upon a quick search, I was able to locate the culprits that defoliated these bushes. They had all turned into the darker color form.

Fig. 8. Ludwigia - Primerose Willow plant that had been stripped of leaves leaving mostly stems and red flower stalks

I theorize that the larvae have a built-in mechanism to help them camouflage in these instances when they are searching for leaves to eat. Being green only helps you when you are resting on green leaves. But if all of the leaves are gone, it is much more advantageous to blend into the color of the stems of the plant rather than the leaves. In this case, the stems of the Ludwigia are reddish brown. This makes total sense now because the dark form caterpillars would camouflage wonderfully with the stems that had no leaves on them. This darker color form would also help them if the larvae had to wonder from the defoliated plant to look for another plant with edible leaves. While walking around in the leaf litter or ground, being bright green would actually draw attention to the caterpillar. Instead, they change color when green host plant leaves are scares in order to blend in with stems and leaf litter.

I was able to successfully rear out more than 30 banded sphinx moths this summer and if you would like to see some of the videos I'm producing on this subject, please search for the "Keys Moths" channel on YouTube and subscribe to my channel!

Fig. 9. *Eumorpha fasciatus* adult - freshly emerged from pupa

Fig. 10. *Eumorpha fasciatus* adult - freshly emerged from pupa

(David Fine, E - mail: davidf@calvaryftl.org)

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Photo sent to SLS NEWS by Debbie Matthews Lott.

LUCIEN HARRIS JR. COLLECTION OF BUTTERFLIES TRANSFERRED TO McGUIRE CENTER

BY
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Author of the well-known Georgia field guide to butterflies, *Butterflies of Georgia* (1972), Lucien Harris, Jr. (1899-1983), amassed a sizeable collection of butterflies (ca. 12,000 specimens) which provided the records for his seminal book. As noted by biographer John Calhoun (2018), the Lucien Harris Jr. Collection is of considerable historical value for studies on southeastern butterflies. In 1970, most of the collection was donated by Harris to Tall Timbers Research Station, near Tallahassee, Florida. Since then the collection has remained there at what mainly is an ecology research station for birds and longleaf pine ecology. This year, 2023, Tall Timbers finally decided to send the Harris butterfly collection to a museum that is involved in butterfly research, thus the collection is now housed in McGuire Center for Lepidoptera and Biodiversity. Small portions of his collection Harris gave to the Fernbank Science Center, Decatur, Georgia, and to the Emory University Museum, Atlanta, Georgia.

Further information on Lucien Harris and his collection can be found among the listed references below; or, contact Dr. Andrei Sourakov, Collections Coordinator, at McGuire Center (asourakov@flmnh.ufl.edu).

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Southern Lepidopterists' Society

Business Meeting , 14 October 2023

David Fine	Brian Scholtens	Daniel Hyman
Jeff Slotten	J.D. Turner	Charlie Covell
Laura Gaudette	Joe Riddlebarger	John V. Calhoun
Lance Durden	Bob Belmont	Richard L. Brown
John V. Calhoun	Marc Minno	Rick Gillmore
David Plotkin	James Adams	James Hayden
Thomas Neal		

Chairman Fine called meeting to order by Chairman Fine at 4:20

Minutes from 2022 Business meeting were previously published in *News* v. 44 NO. 2 (2022) and were available at the meeting for review, with no further discussion.

The SLS Treasurer's Report for 2023 (as of 31 August 2023) was presented by Jeff Slotten, highlighting the following:

- The Treasurer's Report will be submitted for publication in SLS *News.*
- Membership -128 paid and 30 lapsed members.
- Bank Account Summary-Withdrawals and Fees exceeded the Deposits and credits.
- Irving Finkelstein Investment Account–value has dropped due both to the investment climate and withdrawals (approximately $6000 to $7000 to support News expenses.)

Members present discussed options to remedy the budget shortfall. This included a suggestion that a portion of Finkelstein fund be invested in CD for higher rate of return. There were ideas to reduce the expense of the News, included suggestions that a smaller font be used, less white space on pages, omit fillers, liming the number of photos /article as appropriate, reducing the size of photos/ maps/ charts, etc., use a lighter weight paper, limit number of pages/issue, increase membership dues, offer two-tier membership: print vs. e-copy of Newsletter.

It was widely agreed that members enjoy the News and appreciate the commitment and efforts of Editor Lombardini to produce a publication that all look forward to receiving and reading. Chairman Fine will follow-up with editor to get his ideas and suggestions for reducing the cost of the *News*.

It was proposed that the expenses for publishing and distributing Special Issues of the News should be paid for by the author, or other doner, but not from the general budget.

It was noted that the SLS website requires updating, perhaps to include a future version of an e-newsletter, an electronic option for dues payments, social media to appeal especially to younger lepidopterists.

Chairman Fine suggested the possibility of having "vice" positions for Chair, Treasurer, and Editor. There was discussion about why the Treasurer was an appointed, rather than elected, position. At a past meeting, the decision was made to appoint a member with the necessary knowledge and skills, rather than have that person elected from the general membership.

It was discussed that all offices of the Society should have the role specifically defined, and the Constitution then updated to include these duties. In addition, much work has been done by current and previous SLS officers to update and clarify the process and procedures for the election of officers.

Chairman Fine make a mo)on for proposed changes to Cons)tu)on be approved by Board members, all were in favor (7). These changes will be presented in a future ballot to the membership. The majority of **votes received** will be the accepted result.

It was noted that this year's election process is behind schedule. Chairman Fine made a motion to delay the election of officers for the 2024-2026 term; all officers were in favor. A nominating committee will be formed. And ballots sent in the December issue of the *News*.

.Ideas for field trip were discussed. David Fine offered to organize an Bioblitz in South Floridain mid-late May 2024. It was noted that multiple field meetings could be arranged by interested parties.

Ideas for 2024 Annual meeting were presented. It was noted that many members like the Gainesville location, both for SLS and ATL. Further discussions with Debbie Matthews will be in order, as she has done the majority of the organizing for this and past meetings. Several members offering to help with tasks delegated to them. Alternative locations were mentioned with a caveat that many institutions now charge for holding such meetings.

Meeting adjourned at 5:25 pm.

Respectfully submitted,
Laura Gaudette
Secretary, Southern Lepidopterists' Society

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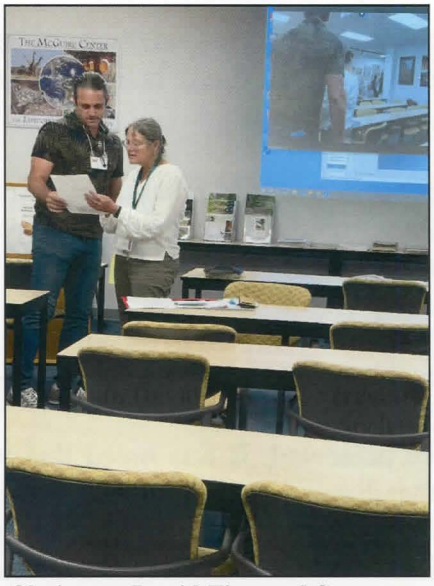
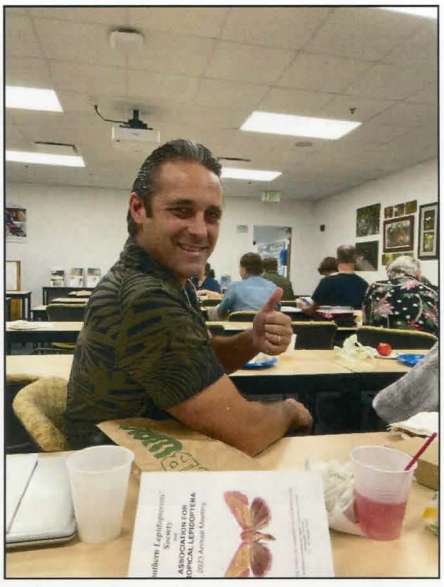
SOUTHERN LEPIDOPTERISTS' SOCIETY 2023 ANNUAL MEETING, MCGUIRE CENTER, GAINESVILLE, FLORIDA, (OCTOBER 13TH – OCTOBER 15TH)

PHOTOS BY JEFFREY SLOTTEN

Here is our 202223 Chairman, David Fine, leading the Southern lepidopterists' Society Meeting.



Chairman David Fine and Secretary of Southern Lepidopterists' Society Laura Gaudette discussing the minutes of the meeting.

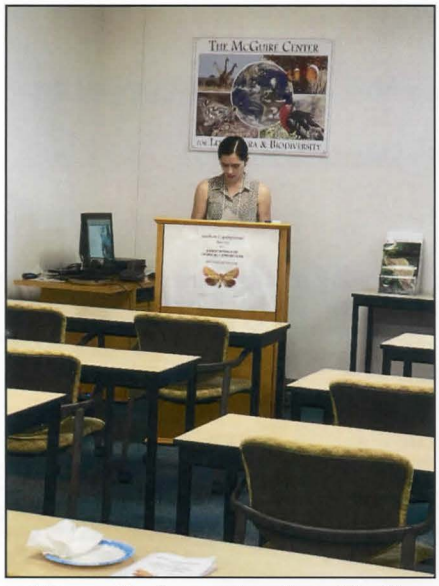


David Fine, Chairman, giving his opinion on how the meeting is progressing.

Rick Gillmore closest to the camera, James Hayden behind him and Laura Gaudette in the background. They are all members of SLS.

James Adams seated, John Calhoun in the background far away left, Lance Durden standing in the left of James Adams and Brian Scholtens standing to the right of James Adams.

Members dining at the Women's Club in Gainesville where we had the banquet for the annual meeting.



Megan Neal, member Tom Neal's daughter, giving her excellent presentation. She is working with member Debbie Mathews Lott.

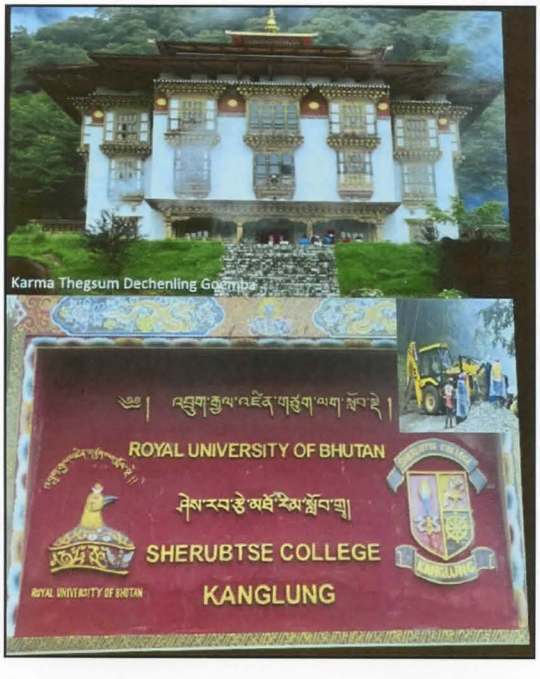
Member Jim Tuttle caught a little bit off guard. He is the author ot two great books. "The Wild Silk Moths of North America" and "The Hawkmoths of North America".

Our keynote speaker, Bill Berthet, giving his presentation on exotic butterflies.

One of Bill Berthet's photos of this butterfly species in Bhutan.

Beautiful butterfly image by Bill Berthet in Bhutan (landlocked country of south-central Asia, located on the eastern ridges of the Himalayas. Historically a remote kingdom).

Photos of an incredibly beautiful butterfly taken by Bill Berthet in Bhutan.



Where keynote speaker Bill Berthet visited on his quest to photograph the rare butterfly fauna of Bhutan. This country is located between India (in the south) and China (in the north).

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:

Stuart Marcus (Stuart.marcus13@gmail.com) sends in this Florida report. The following moths were observed at Bob Belmont's house during the Southern LepSoc meeting, Gainesville, October 13, 2023:

BLASTOBASIDAE
Blastobasis glandulella

COLEOPHORIDAE
Coleophora sp.

COSMOPTERIGIDAE
Euclemensia bassettella

CRAMBIDAE
Argyractis drumalis
Argyria gonogramma
Diacme adipaloides
Diasemiopsis leodocusalis
Elophila gyralis
Elophila obliteralis
Eudonia strigalis
Fissicrambus sp.
Herpetogramma fluctuosalis
Herpetogramma phaeopteralis
Microcrambus elegans
Microcrambus kimballi
Parapoynx diminutalis
Pyrausta phoenicealis
Samea multiplicalis
Syngamia florella

EREBIDAE
Anticarsia gemmatalis
Dasychira meridionalis
Ephyrodes cacata
Hormoschista latipalpis
Idia aemula
Idia rotundalis
Mocis latipes
Plusiodonta compressipalpis

GELECHIIDAE
Mesophleps adustipennis

GEOMETRIDAE
Cyclophora packardi
Disclisioprocta stellata
Idaea scintillularia
Idaea tacturata
Lophosis labeculata
Macaria bicolorata
Pleuroprucha insulsaria
Synchlora frondaria

LASIOCAMPIDAE
Artace cribrarius

NOCTUIDAE
Condica sutor
Elaphria festivoides
Mythimna unipuncta
Schinia trifascia
Spodoptera frugiperda
Spodoptera latifascia
Spodoptera ornithogalli

NOTODONTIDAE
Peridea angulosa

PSYCHIDAE
Cryptothelea gloverii

PTEROPHORIDAE
Stenoptilodes sp.

PYRALIDAE
Eulogia ochrifrontella
Heliades mulleolella
Hypsopygia binodulalis
Phycitodes reliquellum
Ufa rubedinella

SATURNIIDAE
Actias luna

TINEIDAE
Acrolophus heppneri

TORTRICIDAE
Aethes sp.
Cydia latiferreana
Eugnosta sartana
Platynota rostrana
Platynota semiustana
Sparganothoides lentiginosana

Georgia: James K. Adams, 346 Sunset Drive SE, Calhoun, GA 30701; jadams@daltonstate.edu
Check out the GA leps website at: http://www.galeps.org /

James sends in his 4th summary for 2023.

Most records are from James Adams (JA or no notation) and Lance Durden (LD). Other contributors are spelled out with the records. Most records are of first of the year specimens, uncommon species, county records, and records for new locations. Records are from 2023 unless otherwise indicated.

Brasstown Bald, Towns Co.:
Sept. 11-12, LD:
Hairpin on Spur 80 turn near top parking lot:
TORTRICIDAE: ***Phtheochroa birdana*** **(H). GEOMETRIDAE**: *Xanthorhoe packardata*. **EREBIDAE**: *Catocala retecta*. **NOCTUIDAE**: *Anathix ralla, Hyppa contrasta, Lithophane innominata, Xestia normanianus, X. smithii*.
Powerline cut, one mile up Hwy. 80 spur:
GEOMETRIDAE: *Caripeta divisata, Macaria fissinotata, Xanthorhoe lacustrata*. **EREBIDAE**: *Catocala dejecta, Catocala lineella* (LATE), *Catocala ulalume*. **NOCTUIDAE**: *Acronicta spinigera, Anathix ralla, Xestia normanianus, Xestia praevia*.

Taylor's Ridgeline, 5 mi. W of Villanow, Walker Co.:
Sept. 22-23:
GEOMETRIDAE: *Caripeta aretaria*. **EREBIDAE**: *Cisthene kentuckiensis, Catocala robinsonii, C. angusi, C. flebelis* (LATE). **NOCTUIDAE**: *Panthea furcilla* (an odd dark morph; see image), *Papaipema marginidens, Mesapamea fractillinea* (an odd black morph; see image), *Anathix ralla, Dichagyris grotei*.

Panthea furcillla

Mesapamea fractilinea

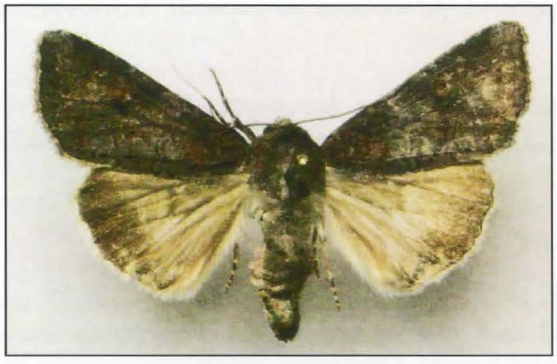
346 Sunset Drive SE (James Adams residence), Calhoun, Gordon Co.:
GEOMETRIDAE: *Erranis tiliaria*, Dec. 3 (first specimen of year). **LASIOCAMPIDAE**: *Tolype notialis*, Nov. 25 (LATE). **NOTODONTIDAE**: *Heterocampa pulverea*, Nov. 16 (LATE).

Adairsville, Gordon Co., 1314 Plainview Rd.:
SATURNIIDAE: *Hemileuca maia*, Nov. 19, 23-24 (see image), 30; Dec. 3 (not seen on Nov. 16; second time recorded from December).

Hemileuca maia

Statesboro, Bulloch Co., LD:
EREBIDAE: *Catocala carrissima* (at bait, Sept. 26). **NOCTUIDAE**: *Mouralia tinctoides* (at bait, Sept. 24).

Canoochee Sandhills WMA, Bulloch, Co.:
Sept. 20-21, LD:
GELECHIIDAE: *Dichomeris aglaia, Stegasta bosqueella.* **CRAMBIDAE**: *Donacaula unipunctellus.* **TORTRICIDAE**: *Pelochrista adamantana.* **PSYCHIDAE**: *Basicladus tracyi.* **APATELODIDAE**: *Olclecostera indistincta.* **GEOMETRIDAE**: *Idaea ostentaria, Scopula timandrata.* **NOTODONTIDAE**: *Hyparpax aurora.* **EREBIDAE**: *Neoplynes eudora, Gabara subnivosella, Gabara* n. sp. (same one as in May), *Phytometra ernestinana.* **NOLIDAE**: *Diphthera festiva, Meganola georgei.* **NOCTUIDAE**: *Bagisara brouana, Schinia lynx, Schinia nubila, Schinia nundina, Schinia petulans, Schinia sanguinea, Schinia saturata, Schinia siren, Schinia sordidus, Schinia trifascia, Sideridis ruisa, Trichordestra beanii* (COUNTY, second record for the STATE; see image).



Trichordestra beanii

Schinia rufipenna

Oct. 6-7, LD and JKA:
NOCTUIDAE: *Schinia rufipenna* (STATE; see image above).

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

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

Ricky sends in the following report:

4 & 5 September 2023, Grand Bay WMA, Jackson county, MS: *Euphyes berryi, Nastra lherminier, Euphyes dion alabamae, Anartia jatrophae guantanamo, Erynnis funeralis, Anatrytone logan logan, Polites otho otho, Doryodes bistrialis,* collected by Ricky Patterson and Drew Hildebrandt.

20 September 2023, Grand Bay WMA, Jackson county, MS: *Schinia gracilienta, Schinia sanguinea(?), Schinia trifascia, Parapamea buffaloensis Dolba hyleus,* collected by Ricky Patterson and Drew Hildebrandt.

4 October 2023, Grand Bay WMA, Jackson county, MS: *Pyrisitia lisa lisa, Panoquina ocola, Urbanus proteus, Hylephila phyleus, Polites vibex vibex, Polites otho otho, Papaipema stenocilis, Cycnia collaris,* collected by Ricky Patterson and Drew Hildebrandt.

4 September 2023, Sandhill Crane WMA, near Fountainebleau, Jackson county, MS: *Atrytone arogos, Polites otho otho, Polites themistocles themistocles,* collected by Ricky Patterson and Drew Hildebrandt.

20 September 2023, Sandhill Crane WMA, near Fountainebleau, Jackson county, MS: *Euphyes arpa, Neonympha areolatus areolatus, Cercyonis pegala pegala,* collected by Ricky Patterson and Drew Hildebrandt.

From photo on iNaturalist by Jasonpike1980, 11 June 2022, Biloxi, Harrison county, MS: *Synanthedon sapygaeformis*, also from Hattiesburg, Forrest county, MS on 11 October 2021 by kaitlin_baudier. These are the first reported for Mississippi, STATE RECORD.

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

FALL BUTTERFLY RECORDS FOR NORTH CAROLINA – 2023

Harry LeGrand

Records are from September to November 10, 2023, except as noted. Names in parentheses are counties; when in bold, a first county record.

The fall season was characterized by many sunny, low-humidity, and warm to hot days, with relatively little rainfall. Thus, butterfliers were able to get afield on most days. There were improved influxes of a few migrant species over what was seen last year – such as Pyrisitia lisa, Vanessa cardui, and Urbanus proteus. However, nary any Calpodes ethlius were noted, as well as a surprising absence of reports for the formerly "advancing-into-the-state" Burnsius oileus. However, there were a handful of notable rare stray species making it to the southern coast, including one as far north as Roanoke Island.

PAPILIONIDAE:

Heraclides cresphontes, in the central Piedmont, where a very rare stray/migrant, Lenny Lampel photographed one in his Concord **(Cabarrus)** yard on September 24. He mentioned that there was an earlier (unpublished) report from this county, made by Staci Clark on July 14.

PIERIDAE:

Pyrisitia lisa, the species was seen over most of the state this fall, but numbers were very low, usually just one or two per report, except at a few southern Coastal Plain locales. Exceptional counts, at least for this year, were 31 at Holly Shelter Game Land (Pender) by John Taggart on September 15; and 32 at the Sandhills Game Land (Richmond) by Will Stuart on October 1.

Pontia protodice, only a few individuals were reported during the season, all in the southern Piedmont: one at Pee Dee refuge (Anson) on October 17 by Will Stuart, and singletons on a few dates in adjacent Union County from October 24 to November 7 by Dennis Kent.

LYCAENIDAE:

Atlides halesus, this season Nick Flanders made several visits to poorly surveyed **Hertford**, along the Virginia border in the northeastern part of the state; he had at least ten first county records, several of which fill in large gaps. He had three individuals of this species on September 8 at Chowan Swamp Game Land.

NYMPHALIDAE:

Danaus gilippus, as expected there were a few reports, all from just the two primary sites at Fort Fisher (New Hanover) and nearby Bald Head Island (Brunswick). Allison Polinski had two each at the latter site on September 11 and three days later; John Taggart had singletons at the first site on September 14 and October 30.

Heliconius charithonia, this rare stray was noted on several occasions again this year. One was in a Southport (Brunswick) yard on September 7, as found by Dan Long. Bob Cavanaugh photographed one in his Newport (Carteret) yard on October 27. Away from the coast was one photographed, probably from a yard, in the Charlotte (Mecklenburg) area on November 7 (iNaturalist photo). Reports far inland like this last one are always head-scratching and likely involve life stages being transported into the area on planted material, in this case on *Passiflora lutea*, visible in the photos and a presumed host plant.

Argynnis diana, an excellent count of 15, all females, was made by Rob Van Epps and Kevin Metcalf in Madison County, on the somewhat late date on September 20.

Polygonia faunus, all records again came from Mount Mitchell State Park (Yancey). Heather Rayburn noted it on four visits, ranging from September 5 to October 13, with a peak of four on the first date.

Vanessa cardui, this fall was a fairly "good" one, as records came from a few dozen counties scattered over most of the state. As with Pyrisitia lisa, essentially all reports were of just one or two individuals.

Anartia jatrophae, remarkably there were five reports of this rare stray in the state this year, as expected all from the southeastern coast. The first was photographed at North Topsail Island (**Onslow**) on September 2 by Hunter Phillips. There were four reports from Fort Fisher (New Hanover): singles found on September 12 by John Fruit, on September 29 by Mike Turner, on October 6 by Erich Hofmann, and two on October 13 by Mike Turner and John Taggart.

Phyciodes incognitus, this poorly known species seems to have a primary brood in spring, with relatively few reports (documented or otherwise) from July and later. However, photos by Sparrel Wood at Butler Mountain (Buncombe) on September 15 are clearly not that of P. tharos, and – for now – seem to be that of P. incognitus. There are no certain state reports later than August, though the original describer of the species, the late Ron Gatrelle, stated that a second brood flies in the state's mountain region into September.

Phyciodes phaon, the once large population in the vicinity of Fort Fisher (New Hanover) has almost completely crashed, for uncertain reasons. However, John Taggart still managed to find single individuals at two parks in the Wilmington area this fall. At the northern edge of the range, Jeff Pippen and others saw a few from Cape Hatteras point north to Oregon Inlet (Dare), including five at the latter site on October 21. This species does seem capable of fairly quickly re-populating areas, at least if its roadside populations of *Phyla nodiflora* are still intact. Also, as the plants and butterflies are often "under foot," these crescents can be easily overlooked if not specifically searching for them.

Lethe portlandia, essentially restricted in the mountains to the southern tier of counties, one photographed (on iNaturalist) in **Haywood** in August by Roxy Mulrooney was quite notable. The expected pearly-eye there is L. anthedon.

Hermeuptychia intricata, this species is not rare in the state's Coastal Plain, but confirmation is needed from photos, if even then. Confirmed new county records were made at **Columbus** at Lake Waccamaw on July 3 (eButterfly photo) and at **Scotland** on September 3 (Nick Flanders). Another was photographed at Croatan National Forest (Carteret) on September 3 by Lori Arent and Harry LeGrand.

Neonympha areolatus, an excellent tally of 35 was made in Croatan National Forest (Craven) on September 3, by Harry LeGrand and Lori Arent.

HESPERIIDAE:

Erynnis funeralis, the most exciting record of the season was the fourth state report of this Southwestern stray. Rachel Veal posted several photos on iNaturalist from Manteo (**Dare)** on November 5; the other records are from the southeastern counties and one from the Piedmont.

Euphyes pilatka, most recent records come from around the inner margins of Pamlico Sound, so four seen by Nick Flanders in central Currituck County was notable on September 17.

Euphyes dukesi, this scarce and local species was noted again in central Currituck County, where Nick Flanders saw five on September 17 and Audrey Whitlock counted six there on September 19.

Problema byssus, a rather good count of five was found by Mike Turner at Rhodes Pond (Cumberland) on September 2. Mark Basinger photographed one in **Wilson** on September 7; this county lies along the northeastern edge of the species' range.

Polites otho, a state record single-day tally (by one!) was the 85 seen at Bodie Island (Dare) on September 4, by Harry LeGrand and party.

Hesperia attalus, the best tally this season was seven, noted by Richard Stickney at the Sandhills Game Land (Scotland) on September 12.

Poanes aaroni, there were multiple records this season, but all from Dare County. Harry LeGrand, Jeff Pippen, Will Cook, and Audrey Whitlock had an excellent count of 10 on a lawn full of blooming *Helenium amarum*, at Bodie Island on September 4; Whitlock still had eight there on September 16. A few were seen on the nearby mainland until September 9, by Lori Arent.

Poanes yehl, there were a handful of notable records this season. Nick Flanders saw three in Chowan Swamp Game Land (**Hertford**) on September 8; and Mark Basinger photographed three in **Wilson** on September 20. Excellent counts were 13 on the Dare County mainland on September 8 (Audrey Whitlock); 45 in Chowan Swamp Game Land on September 20 (Jeff Pippen, Nick Flanders); and a mind-blowing 76 counted on mainland Dare County on September 17 (Audrey Whitlock). The previous state one-day high count, for a species considered uncommon over its range, was "just" 22 individuals.

Poanes viator, often reported along the northern coast this fall, the best count was 19 as found by Audrey Whitlock on September 8, on the Dare County mainland.

Amblyscirtes carolina, this limited-range species seems to have declined considerably in the state in recent years. Thus, a bit of a surprise was two photographed on mainland Dare County by Audrey Whitlock on September 8.

Lerodea eufala, not only was one at the Chowan Swamp Game Land (**Hertford**), as seen by Nick Flanders on October 27, new for the county, but there are no records at all from any adjacent county. This is the first record north of Albemarle Sound since a 1998 report from Currituck County.

Copaeodes minima, providing a first recent record for north of Albemarle Sound was one seen by Jeff Pippen and Nick Flanders at Chowan Swamp Game Land (**Hertford**) on September 20. The species should be considered as a stray north of this body of water. At the western edge of the range in the state, one photographed in Gastonia (Gaston) on October 21 (iNaturalist photo) was the first record in that county since 1936!

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

Brian sends in the following – Records for SLS Summary, November 2023:

John Demko, – Gum Swamp Road, Jackson, Aiken Co., 12 Aug 2023

Papilionidae:
Eurytides marcellus
Pterourus troilus
Pterourus glaucus
Pieridae:
Abaeis nicippe
Phoebis sennae
Lycaenidae:
Calycopis cecrops
Strymon melinus
Nymphalidae:
Chlosyne nycteis
Phyciodes tharos
Anthanassa texana
Polygonia comma
Polygonia interrogationis
Vanessa atalanta
Libytheana carinenta
Liminitis arthemis astyanax
Asterocampa celtis
Danaus plexippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Erynnis horatius
Burnsius albezens
Burnsius oileus
Pompeius verna
Lerema accius
Amblyscirtes aesculapius

Doug Allen, – Hogback Mt., Greenville Co., 17 Aug 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus
Lycaenidae:
Celastrina neglecta
Nymphalidae:
Speyeria cybele
Phyciodes tharos
Hesperiidae:
Epargyreus clarus
Erynnis horatius

Dennis & Donna Forsythe – Fort Lamar, Charleston Co., 21 Aug 2023

Nymphalidae:
Heliconius charithonius

Doug Allen – Hackers Creek, Spartanburg Co., 24 Aug 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus

Nymphalidae:
Phyciodes tharos
Limenitis arthemis astyanax
Hermeuptychia sosybius
Hesperiidae:
Erynnis horatius
Epargyreus clarus
Problema byssus (county record)
Lon zabulon
Panoquina ocola

Doug Allen – Blackstock Battlefield, Union Co., 24 Aug 2023

Papilionidae:
Pterourus glaucus
Pieridae:
Colias eurytheme
Pyrisitia lisa
Nymphalidae:
Chlosyne nycteis
Phyciodes tharos
Lethe creola
Hermeuptychia sosybius
Hesperiidae:
Erynnis horatius
Lon zabulon

Alison Smith, – Hyde Park Rd., Charleston Co., 23 Aug 2023

Papilionidae:
Pterourus palamedes
Pterourus glaucus
Pieridae:
Phoebis sennae
Pyrisitia lisa
Abaeis nicippe
Lycaenidae:
Celastrina neglecta
Nymphalidae:
Dione incarnata
Junonia coenia
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Thorybes bathyllus
Thorybes confusis
Erynnis horatius
Lerema accius
Hylephila phyleus

Dave and Marty Kastner – Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 23 Aug 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus
Pterourus palamedes
Eurytides marcellus
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Strymon melinus
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia interrogationis
Vanessa atalanta
Junonia coenia
Limenitis arthemis astyanax
Limenitis archippus
Asterocampa celtis
Lethe appalachia
Hermeuptychia sp.
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Thorybes bathyllus
Erynnis horatius
Burnsius albezens
Capaeodes minima
Ancyloxypha numitor
Hylephila phyleus
Polites vibex
Euphyes vestris
Lerema accius

Dennis Forsythe and Donna Forsythe – Tillman Sand Ridge HP, Jasper Co., 27 Aug 2023

Papilionidae:
Pterourus glaucus
Eurytides marcellus
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Strymon melinus
Hemiargus ceraunus
Nymphalidae:
Dione incarnata
Phyciodes tharos
Hesperiidae:
Problema byssus
Panoquina ocola

Tom Austin, John Demko, Whit Gibbons, Alison Smith, Debo Boddiford, Bill Twomey, Dave and Marty Kastner, Parker & Joseph Gibbons – Whit Gibbons property, Sally, Orangeburg Co., 27 Aug 2023

Papilionidae:
Pterourus glaucus
Pterourus palamedes
Pterourus troilus
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Strymon melinus
Celastrina neglecta
Nymphalidae:
Dione incarnata
Euptoieta Claudia
Vanessa atalanta
Junonia coenia
Limetitis arthemis astyanax
Lethe appalachia
Lethe portlandia
Lethe creola
Hermeuptychia sosybius
Hermeuptychia intricate
Cyllopsis gemma
Danaus plexippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Erynnis horatius
Burnsius albezens
Ancyloxypha numitor
Polites vibex
Lerema accius
Amblyscirtes aesculapius
Panoquina ocola

Dave and Marty Kastner – Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 1 Sep 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus
Pterourus palamedes
Eurytides marcellus
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Atlides halesus
Strymon melinus
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia comma
Vanessa virginiensis
Vanessa atalanta
Libytheana carinenta
Junonia coenia
Limenitis arthemis astyanax
Asterocampa celtis
Lethe portlandia
Lethe appalachia
Hermeuptychia intricata
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Erynnis horatius
Erynnis zarucco
Burnsius albezens
Ancyloxypha numitor
Hylephila phyleus
Polites vibex
Euphyes vestris
Lon zabulon
Lerema accius
Euphyes dion

Dave and Marty Kastner – Palmetto Trail Wateree Passage and Manchester SF Area, Sumter County, 3 Sep 2023

Papilionidae:
Pterourus glaucus
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Strymon melinus
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Junonia coenia
Limetitis arthemis astyanax
Lethe portlandia
Lethe creola
Lethe appalachia
Hermeuptychia sosybius
Hermeuptychia intricata
Danaus plexippus

Hesperiidae:
Erynnis horatius
Erynnis zarucco
Hylephila phyleus
Euphyes vestris
Lon zabulon
Lerema accius
Amblyscirtes aesculapius

Alison Smith, Bill Twomey, Tom Austin, Liz and Hugh Grant, Dave and Marty Kastner – Santee Delta East, Georgetown Co., 9 Sep 2023

Papilionidae:
Pterourus glaucus
Pterourus troilus
Pterourus palamedes
Papilio polyxenes
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Nymphalidae:
Dione incarnata
Phyciodes tharos
Polygonia interrogationis
Vanessa atalanta
Junonia coenia
Limetitis archippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Thorybes bathyllus
Erynnis horatius
Erynnis zarucco
Nastra lherminier
Polites vibex
Problema bulenta
Lerema accius
Panoquina ocola

Alison Smith, Bill Twomey, Tom Austin, Liz and Hugh Grant, Dave and Marty Kastner – Seven Mile Rd., Charleston Co., 9 Sep 2023

Papilionidae:
Pterourus glaucus
Pterourus palamedes
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Strymon melinus
Nymphalidae:
Dione incarnata
Phyciodes tharos
Junonia coenia
Hesperiidae:
Thorybes bathyllus
Erynnis horatius
Erynnis zarucco
Burnsius albezens
Polites vibex
Polites otho
Lerema accius
Lon zabulon
Amblyscirtes aesculapius
Oligoria maculata

Alison Smith, Bill Twomey, Tom Austin, Liz and Hugh Grant, Dave and Marty Kastner – Steed Creek Rd. & Farewell Corners Rd., Berkeley Co., 9 Sep 2023

Papilionidae:
Pterourus glaucus
Pterourus palamedes
Battus philenor
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calephelis virginiensis
Hemiargus ceraunus
Calycopis cecrops
Strymon melinus
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Junonia coenia
Ceryconis pegala
Neonympha areolata
Hermeuptychia intricata
Danaus plexippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Nastra lherminier
Polites themistocles
Pompeius verna
Euphyes vestris
Poanes viator
Poanes yehl
Panoquina ocola
Oligoria maculata

Alison Smith, Bill Twomey, Jock Stender, Amanda Ford and Dave and Marty Kastner – FS Roads 212 and 212 A, Berkeley Co., 10 Sep 2023

Papilionidae:
Pterourus glaucus
Pterourus palamedes
Papilio polyxenes
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calephelis virginiensis
Celastrina neglecta
Calycopis cecrops
Strymon melinus
Nymphalidae:
Dione incarnata
Phyciodes tharos
Vanessa virginiensis
Junonia coenia
Neonympha areolata
Hermeuptychia sp.
Danaus plexippus
Hesperiidae:
Urbanus proteus
Thorybes bathyllus
Erynnis zarucco
Burnsius albezens
Nastra lherminier
Polites vibex
Polites origenes
Hylephila phyleus
Pompeius verna
Euphyes vestris
Lerema accius
Amblyscirtes aesculapius
Panoquina panoquin
Panoquina ocola
Oligoria maculata

Alison Smith, Bill Twomey, Jock Stender, Amanda Ford and Dave and Marty Kastner – FS Roads 211 and 210, Berkeley Co., 10 Sep 2023

Papilionidae:
Pterourus glaucus
Pterourus palamedes
Pieridae:
Phoebis sennae
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Strymon melinus
Nymphalidae:
Dione incarnata
Phyciodes tharos
Junonia coenia
Hermeuptychia sp.
Danaus plexippus
Hesperiidae:
Urbanus proteus
Thorybes bathyllus
Erynnis zarucco
Polites vibex
Euphyes vestris
Lerema accius
Panoquina ocola
Oligoria maculata

Alison Smith, Dave and Marty Kastner – Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 15 Sep 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus
Pterourus palamedes
Eurytides marcellus
Papilio polyxenes
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Strymon melinus
Hemiargus ceraunus
Celatrina neglecta
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia comma
Vanessa virginiensis
Vanessa atalanta
Junonia coenia
Limenitis arthemis astyanax
Asterocampa celtis
Lethe creola
Lethe appalachia
Hermeuptychia sosybius
Hermeuptychia intricata

Hesperiidae:
Epargyreus clarus

Urbanus proteus
Burnsius albezens
Hylephila phyleus
Polites vibex
Euphyes vestris
Lon zabulon
Lerema accius
Problema byssus

Alison Smith, John Demko and Dave and Marty Kastner – Congaree National Park Seasonal NABA Count, Richland Co., 16 Sep 2023

Papilionidae:
Pterourus palamedes
Pterourus glaucu
Pieridae:
Phoebis sennae
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Strymon melinus
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia interrogationis
Vanessa atalanta
Libytheana carinenta
Junonia coenia
Limenitis arthemis astyanax
Limenitis archippus
Asterocampa clyton
Asterocampa celtis
Lethe portlandia
Lethe creola
Hermeuptychia sosybius
Hermeuptychia intricata
Danaus plexippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Burnsius albezens
Burnsius oileus
Pompeius verna
Ancyloxypha numitor
Hylephila phyleus
Polites vibex
Euphyes vestris
Lerema accius
Lon zabulon
Panoquina ocola

Mike Turner – picnic area off i-95 on US 378, Sumter Co., 24 Sep 2023

Papilionidae:
Pterourus palamedes
Pieridae:
Phoebis sennae
Abaeis nicippe
Lycaenidae:
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Junonia coenia
Limenitis archippus
Hesperiidae:
Epargyreus clarus
Hylephila phyleus
Polites vibex
Lerodea eufala
Panoquina ocola

Mike Turner – Wateree HP & WMA, Richland Co., 24 Sep 2023

Papilionidae:
Pterourus palamedes
Pterourus troilus
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Strymon melinus
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Junonia coenia
Limenitis arthemis astyanax
Lethe portlandia
Lethe creola
Lethe appalachia
Hermeuptychia sosybius
Hesperiidae:
Epargyreus clarus
Erynnis zarucco
Hylephila phyleus
Lerema accius
Panoquina ocola

Tom Austin, Dave & Marty Kastner – Pacolet River HP, Spartanburg Co., 23 Sep 2023

Papilionidae:
Pterourus glaucus
Pieridae:
Phoebis sennae
Lycaenidae:
Strymon melinus
Cupido comyntas
Nymphalidae:
Limenitis arthemis astyanax
Hermeuptychia sosybius
Hermeuptychia intricata
Cyllopsis gemma
Hesperiidae:
Lerema accius

Dave and Marty Kastner – Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 24 Sep 2023

Papilionidae:
Pterourus troilus
Pterourus glaucus
Pterourus palamedes
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Strymon melinus
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia interrogationis
Polygonia comma
Junonia coenia
Limenitis arthemis astyanax
Asterocampa celtis
Asterocampa clyton
Lethe appalachia
Hermeuptychia sosybius
Cyllopsis gemma
Hesperiidae:
Urbanus proteus
Burnsius albezens
Hylephila phyleus
Polites vibex
Euphyes vestris
Lon zabulon
Lerema accius
Amblyscirtes aesculapius
Panoquina ocola

Dave and Marty Kastner for CBS group - Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 8 Oct 2023

Papilionidae:
Pterourus troilus
Pterourus palamedes
Pieridae:
Pontia protodice
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Calycopis cecrops
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Junonia coenia
Limenitis arthemis Astyanax
Limenitis archippus
Lethe creola
Lethe appalachia
Hermeuptychia sosybius
Hermeuptychia intricata
Cyllopsis gemma
Danaus plexippus
Hesperiidae
Urbanus proteus
Burnsius albezens
Ancyloxypha numitor
Lerodea eufala
Hylephila phyleus
Polites vibex
Polites egeremet
Pompeius verna
Euphyes vestris
Lon zabulon
Lerema accius
Panoquina ocola

Dave and Marty Kastner – Wateree River Heritage Preserve and Wildlife ManagementArea, Eastover, Richland County, 10 Oct 2023

Papilionidae:
Pterourus palamedes

Pieridae:
Pontia protodice
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Vanessa virginiensis
Vanessa cardui
Junonia coenia
Limenitis arthemis astyanax
Asterocampa celtis
Lethe creola
Hermeuptychia sosybius
Hermeuptychia intricata
Danaus plexippus
Hesperiidae:
Urbanus proteus
Burnsius albezens
Hylephila phyleus
Euphyes vestris
Lerema accius
Panoquina ocola

Dave and Marty Kastner, Todd Johnston, Scott Wietecha, Ron Ahle, Angela Valvasori – Wateree River Heritage Preserve and Wildlife Management Area, Eastover, Richland County, 21 Oct 2023

Papilionidae:
Pterourus palamedes
Pterourus troilus
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Lycaenidae:
Cupido comyntas
Nymphalidae:
Dione incarnata
Euptoieta claudia
Phyciodes tharos
Polygonia interrogationis
Vanessa virginiensis
Junonia coenia
Lethe portlandia
Hermeuptychia sosybius
Hermeuptychia intricata
Cyllopsis gemma
Danaus plexippus
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Burnsius albezens
Burnsius oileus
Lerodea eufala
Hylephila phyleus
Polites vibex
Euphyes vestris
Lerema accius
Lon zabulon
Panoquina ocola

Dennis Forsythe and Donna Forsythe – Sullivans Island, Charleston Co., 25 Oct 2023

Pieridae:
Phoebis sennae
Pyrisitia lisa
Lycaenidae:
Hemiargus ceraunus
Leptotes cassius
Nymphalidae:
Dione incarnata
Junonia coenia
Danaus plexippus
Hesperiidae:
Urbanus proteus
Erynnis horatius
Erynnis zarucco
Hylephila phyleus
Panoquina ocola

Moth records from Brian Scholtens:

Psychidae:
Basicladus celibatus, Beaufort Co., Spring Island, 13-14 Aug 2021
Depressariidae:
Depressaria cinerocostella, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Gelechiidae:
Aristotelia ivae, Beaufort Co., Spring Island, 13-14 Aug 2021
Coleotechnites australis, Beaufort Co., Spring Island, 13-14 Aug 2021
Coleotechnites variella, Beaufort Co., Spring Island, 13-14 Aug 2021

Dichomeris isa, Beaufort Co., Spring Island, 13-14 Aug 2021
Dichomeris ochripalpella, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Frumenta nundinella, Charleston Co. Santee Coastal Reserve, 15 May 2023
Tortricidae:
Argyrotaenia hodgesi, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Argyrotaenia ivana, Charleston Co., Santee Coastal Reserve, 15 May 2023
Bactra priapeia, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Pyralidae:
Aphomia fulminalis, Beaufort Co., Spring Island, 13-14 Aug 2021
Crambidae:
Argyria rufisignella, Beaufort Co., Spring Island, 14 Aug 2021
Carectocultus dominicki, Charleston Co., Santee Coastal Reserve, 15 May 2023
Diastictis argyralis, Charleston Co., Santee Coastal Reserve, 15 May 2023
Donacaula maximellus, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Glaphyria basiflavalis, Charleston Co., Santee Coastal Reserve, 15 May & 28 Jun 2023
Glapnyria cappsi, Beaufort Co., Spring Island, 13-14 Aug 2021
Haimbachia albescens, Beaufort Co., Spring Island, 13-14 Aug 2021
Haimbachia placidellus, Charleston Co., Santee Coastal Reserve, 15 May 2023
Langessa nomophilalis, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Leptosteges flavicostella, Charleston Co., Santee Coastal Reserve, 15 May 2023
Lipocosma septa, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Microcrambus biguttellus, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Microcrambus kimballi, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Nascia acutellus, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Ostrinia penitalis, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Terastia meticulosalis, Beaufort Co., Spring Island, 13 Aug 2021
Geometridae:
Lytrosis sinuosa, Charleston Co., Santee Coastal Reserve, 15 May 2023
Erebidae:
Macrochilo louisiana, Charleston Co., Santee Coastal Reserve, 28 Jun 2023
Macrochilo santerivalis, Charleston Co., Santee Coastal Reserve, 15 May & 28 Jun 2023
Metallata absumens, Beaufort Co., Spring Island, 13-14 Aug 2021
Sigela rosea, Beaufort Co., Spring Island, 13-14 Aug 2021

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James Adams sends in the following report for South Carolina:

Santee Coastal Reserve, along Santee Gun Club Rd., from entrance to near boat dock, Charleston Co., Oct. 7-8, with Brian Scholtens and Eric LoPresti:
GEOMETRIDAE: *Pleuroprucha asthenaria* (STATE record; see image). **EREBIDAE**: *Dasychira dominickaria*. **NOCTUIDAE**: *Exyra semicrocea* (see image).

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

ATLIDES HALESUS
PHOTO BY
JOHN HYATT

John Hyatt states that he has collected and observed leps since 1975 in the mountains of east Tennessee and in nearby montane Virginia, Kentucky, and North Carolina – but the *Atlides halesus* in this photo is the only one he's ever seen in the southern Appalachians. It appeared on a flowering backyard mint in Kingsport, Tennessee, on August 2, 2023, and stayed around for a couple of hours. John says that his *halesus* photo certainly documents a county record (Sullivan Co., TN)... *halesus* just doesn't fly much in the southern Appalachian mountains.

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CORRECTION: John Hyatt makes the following correction to his State report in the September issue of the SLS NEWS (Volume 45 NO. 3, 2023):

His Tennessee report of the moths collected from: TN, Unicoi Co., Unaka Mtn., ca. 4900', 30-VI-23, leg. G. Kotas should read "collected by **L. Keras** and not G. Kotas". My apology for the error.

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Texas: Terry Doyle, 13310 Bar C Drive, San Antonio, TX 782253, E-Mail: tdoyle335@yahoo.com
Stuart Marcus, P.O. Box 463 Liberty, TX 77575, E-Mail: stuart.marcus13@gmail.com

Terry sends in the following observation: First sighting 29 November 23 for male Buck moth, *Hemileuca piglerii*.

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Moths for Trinity River National Wildlife Refuge
Liberty County, TX
8-1-23 through 10-31-23
Stuart J. Marcus

Stuart states the following moths were seen at least once during the month indicated on sheets using black and mercury vapor lights at Trinity River National Wildlife Refuge. If you would like any photographs or phenology data dating back to 2012, please let me know at stuart.marcus13@gmail.com.

ATTEVIDAE
Atteva aurea Aug, Sept, Oct

AUTOSTICHIDAE
Glyphidocera juniperella Sept
Glyphidocera lactiflosella Aug, Sept

BLASTOBASIDAE
Blastobasis glandulella Aug
Hypatopa punctiferella Aug, Sept, Oct
Pigritia sp. Aug, Sept

BOMBYCIDAE
Apatelodes torrefacta Sept

CARPOSINIDAE
Carposina sp. Aug

COLEOPHORIDAE
Coleophora sp. Sept

COSMOPTERIGIDAE
Euclemensia bassettella Aug, Sept
Triclonella bicoloripennis Aug, Sept, Oct

COSSIDAE
Givira anna Aug

CRAMBIDAE
Achyra bifidalis Sept, Oct
Achyra rantalis Aug, Sept, Oct
Aethiophysa invisalis Aug, Sept, Oct
Anageshna primordialis Aug, Sept
Argyria gonogramma Sept, Oct
Chrysendeton medicinalis Oct
Crambus quinquareatus Aug, Sept
Desmia sp. Aug, Sept, Oct
Diasemiopsis leodocusalis Oct
Diastictis fracturalis Aug, Sept, Oct
Diatraea evanescens Aug
Diatraea lisetta Sept, Oct
Diatraea sp. Sept
Dicymolomia julianalis Aug, Sept, Oct
Donacaula sp. Oct
Elophila gyralis Oct
Elophila obliteralis Sept, Oct
Elophila tinealis Aug, Sept, Oct
Eoreuma densellus Aug, Sept, Oct
Epipagis fenestralis Aug, Oct
Euchromius ocellea Aug, Sept, Oct
Fissicrambus sp. Aug, Sept, Oct
Glaphyria glaphyralis Aug
Glaphyria peremptalis Sept
Glaphyria sesquistrialis Aug, Oct
Herpetogramma bipunctalis Aug, Sept, Oct
Herpetogramma phaeopteralis Aug, Sept, Oct
Hileithia magualis Aug, Oct
Hymenia perspectalis Aug, Sept, Oct
Lamprosema victoriae Oct
Leptosteges parthenialis Sept
Lineodes fontella Sept
Lineodes integra Aug
Lineodes interrupta Oct
Marasmia trapezalis Aug, Sept, Oct
Microcrambus elegans Aug, Oct
Microtheoris ophionalis Aug, Sept
Nomophila nearctica Aug, Sept, Oct
Ostrinia penitalis Sept
Palpita freemanalis Aug
Palpita magniferalis Aug, Sept
Palpita quadristigmalis Aug
Parapediasia teterrellus Aug, Sept, Oct
Parapoynx allionealis Oct
Parapoynx diminutalis Oct
Perispasta caeculalis Aug
Polygrammodes flavidalis Aug
Pyrausta laticlavia Aug, Sept, Oct
Pyrausta rubricalis Sept

Pyrausta tyralis Aug, Sept, Oct
Samea castellalis Aug, Sept, Oct
Samea multiplicalis Sept, Oct
Spoladea recurvalis Aug, Oct
Udea rubigalis Oct
Uresiphita reversalis Aug
Urola nivalis Aug, Sept, Oct
Xanthophysa psychicalis Sept

DEPRESSARIIDAE
Antaeotricha humilis Aug, Sept
Antaeotricha albulella Aug
Antaeotricha leucillana Aug, Sept, Oct
Antaeotricha schlaegeri Sept
Menesta melanella Aug

EREBIDAE
Ablemma brimleyana Oct
Amolita obliqua Aug
Anticarsia gemmatalis Sept, Oct
Bulia sp. Aug
Caenurgia chloropha Aug, Sept
Caenurgina erechtea Oct
Catocala agrippina Aug
Catocala carissima Aug
Catocala maestosa Aug, Oct
Cisseps fulvicollis Aug, Sept
Cisthene packardii Oct
Cisthene plumbea Aug, Sept, Oct
Cisthene tenuifascia Oct
Cisthene unifascia Aug, Oct
Crambidia pallida Aug, Oct
Cutina albopunctella Aug, Sept
Cutina aluticolor Aug
Cutina distincta Aug
Dasychira manto Oct
Dasychira meridionalis Aug
Dasychira tephra Sept
Eublemma minima Oct
Euerythra phasma Oct
Halysidota sp. Aug, Sept, Oct
Hemeroplanis habitalis Oct
Hemeroplanis scopulepes Aug, Sept
Hemeroplanis sp. Oct
Hypena minualis Oct
Hypena scabra Sept
Hypercompe scribonia Sept
Hyphantria cunea Aug, Sept, Oct
Hypoprepia fucosa Aug, Oct
Idia americalis Aug
Lesmone detrahens Aug, Sept
Melipotis indomita Aug
Melipotis jucunda Sept
Metria amella Oct
Nigetia formosalis Oct
Ommatochila mundula Sept
Oruza albocostaliata Aug
Panopoda carneicosta Aug, Sept, Oct
Panopoda rufimargo Aug
Plusiodonta compressipalpis Aug, Sept
Scolecocampa liburna Aug
Spilosoma virginica Oct
Virbia laeta Oct
Zale lunata Sept

EUTELIIDAE
Paectes abrostoloides Aug

GELECHIIDAE
Agnippe prunifoliella Oct
Anacampsis conclusella Complex - 420495.96 Aug
Anacampsis fullonella Aug, Sept, Oct
Arogalea cristifasciella Oct
Aristotelia corallina complex Oct
Aristotelia elegantella Sept
Aristotelia roseosuffusella Aug, Sept
Aristotelia sp. Aug, Oct
Battaristis vittella Aug
Battaristis undescribed - *Battaristis* n. sp. - 420470.96 Sept, Oct
Chionodes dentella Oct
Helcystogramma chambersella Aug, Sept, Oct
Numata bipunctella Aug, Sept, Oct
Polyhymno luteostrigella Aug, Sept, Oct
Stegasta bosqueella Aug, Sept
Untomia albistrigella Aug, Sept, Oct

GEOMETRIDAE
Anavitrinella pampinaria Aug
Chlorochlamys chloroleucaria Aug, Sept
Chloropteryx tepperaria Aug
Digrammia continuata Aug, Oct
Digrammia gnophosaria Aug
Eutrapela clemataria Sept
Frederickia sp. Oct
Hypagyrtis unipunctata Aug, Oct
Idaea celtima Oct
Idaea demissaria Oct
Idaea tacturata Oct
Iridopsis defectaria Aug, Sept, Oct
Leptostales laevitaria Oct
Leptostales pannaria Aug, Sept
Lobocleta ossularia Aug, Sept, Oct
Lophosis labeculata Sept
Macaria aequiferaria Oct
Macaria transitaria Oct
Macaria sp. Aug, Oct
Melanolophia canadaria Aug
Melanolophia sp. Aug
Metarranthis homuraria Aug
Nemoria elfa Aug
Pleuroprucha insulsaria Sept, Oct

Psamatodes abydata Aug, Sept, Oct
Synchlora frondaria Aug
Timandra amaturaria Oct
Tornos sp. Oct

GLYPHIPTERIGIDAE
Drymoana blanchardi Oct
Diploschizia impigritella Aug, Oct

GRACILLARIIDAE
Acrocercops quinquistrigella Sept
Cameraria sp. Aug
Caloptilia rhoifoliella Oct
Caloptilia triadicae Aug, Oct

LASIOCAMPIDAE
Artace cribrarius Aug
Tolype sp. Aug

LIMACODIDAE
Adoneta spinuloides Aug
Apoda biguttata Sept
Apoda y-inversa Aug, Sept, Oct
Euclea delphinii Aug, Sept
Euclea sp. Oct
Isochaetes beutenmuelleri Aug
Monoleuca semifascia Aug
Natada nasoni Aug
Phobetron pithecium Sept
Prolimacodes badia Aug

MEGALOPYGIDAE
Megalopyge opercularis Aug, Sept, Oct

MIMALLONIDAE
Lacosoma chiridota Sept

NOCTUIDAE
Acronicta afflicta Aug
Acronicta impleta Sept
Acronicta insularis Sept
Acronicta morula Aug
Acronicta oblinita Oct
Acronicta ovata Aug
Acronicta rubricoma Aug, Oct
Agrotis ipsilon Oct
Amyna stricta Oct
Anicla infecta Aug
Bagisara repanda Aug
Cerma cerintha Aug
Chrysodeixis includens Aug, Sept
Condica mobilis Sept
Condica sutor Aug, Sept
Condica videns Aug
Crambodes talidiformis Oct
Ctenoplusia oxygramma Oct
Cydosia aurivitta Aug, Sept, Oct
Elaphria chalcedonia Aug, Oct
Galgula partita Aug, Sept, Oct
Helicoverpa zea Aug, Sept, Oct
Lacinipolia erecta Oct
Lacinipolia laudabilis Oct
Leucania incognita Aug, Oct
Marimatha nigrofimbria Aug, Sept
Micrathetis triplex Sept, Oct
Mythimna unipuncta Sept
Ogdoconta cinereola Aug
Ponometia candefacta Sept, Oct
Ponometia erastrioides Aug
Ponometia semiflava Aug, Sept, Oct
Properigea tapeta Oct
Raphia frater Aug, Sept, Oct
Schinia arcigera Oct
Schinia gracilenta Sept, Oct
Schinia nundina Sept, Oct
Schinia rivulosa Sept
Schinia siren Sept, Oct
Schinia trifascia Sept
Schinia ultima Sept
Spodoptera dolichos Aug
Spodoptera eridania Aug
Spodoptera exigua Sept
Spodoptera frugiperda Aug, Sept, Oct
Spodoptera latifascia Sept
Spodoptera ornithogalli Oct
Spragueia guttata Oct
Tarache aprica Aug
Tripudia quadrifera Sept, Oct
Tripudia rectangular Aug, Sept, Oct

NOLIDAE
Afrida ydatodes Aug, Sept, Oct
Baileya acadiana Aug
Garella nilotica Aug, Sept

NOTODONTIDAE
Cecrita guttivitta Aug
Coelodasys unicornis Aug, Oct
Datana integerrima Aug, Sept
Furcula cinerea Oct
Heterocampa obliqua Aug
Ianassa lignicolor Sept, Oct
Lochmaeus bilineata Aug, Sept, Oct
Lochmaeus manteo Aug
Misogada unicolor Aug, Sept
Nadata gibbosa Aug
Nerice bidentata Sept
Oedemasia concinna Aug, Oct
Oedemasia leptinoides Aug, Sept, Oct
Paraeschra georgica Aug
Peridea angulosa Sept, Oct
Rifargia subrotata Aug, Sept
Schizura ipomaeae Sept

OECOPHORIDAE
Inga sparsiciliella Aug, Sept, Oct

PLUTELLIDAE
Plutella xylostella Aug, Sept, Oct

PSYCHIDAE
Cryptothelea gloverii Sept, Oct
Oiketicus abbotii Sept

PTEROPHORIDAE
Adaina ambrosiae Oct
Emmelina monodactyla Oct
Pselnophorus belfragei Aug, Oct
Sphenarches anisodactylus Sept
Stenoptilodes sp. Oct

PYRALIDAE
Acrobasis demotella Oct
Acrobasis exsulella Aug, Sept, Oct
Acrobasis texana Aug
Acrobasis sp. Oct
Adelphia petrella Aug, Sept, Oct
Amyelois transitella Aug
Ancylostomia stercorea Oct
Arta olivalis Aug
Atascosa glareosella Oct
Canarsia ulmiarrosorella Sept
Clydonopteron sacculana Aug
Dioryctria amatella Aug
Dioryctria pygmaeella Aug, Sept
Elasmopalpus lignosella Aug, Sept
Ephestiodes gilvescentella Oct
Eulogia ochrifrontella Aug, Sept
Eurythmia angulella Oct
Homoeosoma electella Aug, Sept, Oct
Hypsopygia binodulalis Aug, Sept
Hypsopygia olinalis Sept, Oct
Laetilia coccidivora Aug
Macrorrhinia endonephele Aug, Sept, Oct
Pococera asperatella Aug, Sept
Pococera maritimalis Aug, Sept, Oct
Salebriaria engeli Aug
Salebriaria sp. Sept
Sciota uvinella Aug, Sept
Tallula atrifascialis Aug
Tampa dimediatella Sept, Oct
Tlascala reductella Aug, Sept, Oct

SATURNIIDAE
Actias luna Aug, Sept
Anisota virginiensis Aug, Sept
Automeris io Aug
Syssphinx bicolor Aug, Sept

SCYTHRIDIDAE
Scythris trivinctella Aug, Oct

SPHINGIDAE
Agrius cingulata Sept
Amorpha juglandis Aug, Sept
Ceratomia undulosa Aug, Sept
Darapsa myron Aug
Enyo lugubris Aug, Sept, Oct
Eumorpha pandorus Aug
Eumorpha fasciatus Aug, Sept
Hyles lineata Oct
Isoparce cupressi Aug
Manduca rustica Sept
Paratrea plebeja Oct
Smerinthus jamaicensis Aug

TINEIDAE
Acrolophus heppneri Sept, Oct
Acrolophus popeanella Aug, Sept, Oct
Acrolophus texanella Aug, Sept
Amydria margoriella Aug
Amydria sp. Sept

TORTRICIDAE
Aethes sp. Aug, Sept
Ancylis comptana Sept
Ancylis platanana Aug
Argyrotaenia hodgesi Aug
Bactra furfurana Oct
Bactra verutana Aug, Sept, Oct
Bactra sp. Oct
Cagiva cephalanthana Sept
Cydia caryana Sept, Oct
Cydia gallaesaliciana July
Cydia latiferreana Aug, Sept, Oct
Endothenia hebesana Aug
Epiblema abruptana Aug, Oct
Epiblema scudderiana Aug
Epiblema strenuana Aug, Sept, Oct
Epiblema undescribed sp. Sept, Oct
Episimus argutana Aug
Eugnosta bimaculana Aug
Eugnosta sartana Sept
Eumarozia malachitana Aug, Sept, Oct
Grapholita packardi Sept
Gretchena bolliana Aug, Sept
Olethreutes sp. Sept
Pelochrista matutina Oct
Platphalonidia magdalenae Oct
Platynota flavedana Aug, Sept, Oct
Platynota idaeusalis Oct
Platynota rostrana Aug, Sept
Rhopobota finitimana Oct
Sonia constrictana Aug, Sept, Oct
Sparganothis distincta Oct
Sparganothis sulfureana Aug, Oct

ZYGAENIDAE
Harrisina americana Sept, Oct

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

Harry sends in the following State Report – 2023 fall report for Virginia:

New County/City records are indicated in all CAPITALS. Several of these records are the first verified (photographic) county records, confirming older unverified (sight) records. The bulk of these records are based on photo submissions to iNaturalist and are listed as "via iNat." I find iNat very useful when it comes to updating statewide checklists, but requires an inordinate amount of time to vet all the countless misidentifications. Many photographers posted photos from previous years, thus a data dump here. Note: I do not accept the fake pseudonyms of contributors to iNaturalist or those who do not post their full names. These will be listed as "anonymous" and they certainly do not get name recognition for their valuable contributions to science. More annoying are all the "obscured" records for common species, that could be county records, thus wasting my time looking at them. This report focuses on the Hesperiidae and two bonus non-Skipper observations. Additional butterfly records to be posted in next issue.

Hesperiidae:

Amblyscirtes aesculapius – WISE Co.: St. Paul, Clinch River State Park, 8/11/2022 (David Gorsline, via iNat). First record in western part of Virginia.

Amblyscirtes hegon – ALBEMARLE Co.: Ragged Mountain Natural Area, 4/16/2020 (Anonymous, via iNat). Alleghany Co.: George Washington National Forest, 4/19/2023 (Ellison Orcutt, via iNat. First verified record for county). BUCKINGHAM Co.: Eldridge Corner, 4/17/2023 (Anonymous, via iNat). CAROLINE Co.: Duncan Wildlife Management Area, 4/17/2020 (Anonymous, via iNat). FLOYD Co: Willis, Buffalo Mountain State Preserve, 7/4/2022 (Derek Miller, via iNat. Odd summer record, possible second brood.). GRAYSON Co.: Jefferson Nat. Forest (Bruce Grimes, via iNat). KING WILLIAM Co.: King William, 5/4/2020 (Kathy Richardson, via iNat). Scott Co.: Jefferson Nat. Forest, 6/26/2023 (Ellison Orcutt, via iNat. First verified record for county).

Amblyscirtes vialis – Alleghany Co.: George Washington National Forest, 4/19/2023 (Ellison Orcutt, via iNat. First verified record for county). AMHERST Co.: near Amherst, 5/9/2021 (Bert Harris, via iNat). BUCKINGHAM Co.: nr. Rosney, 4/16/2023 (Ty Smith, via iNat). Prince Edward Co.: Prince Edward-Gallion State Forest, 4/19/2012 (Allen Belden, via iNat. First verified record for county). Rockingham Co.: Massanutten Ski Resort, 7/15/2013 (Anonymous, via iNat. First verified record for county).

Anatrytone logan – LYNCHBURG City: Daniels Hill, 6/6/2022 (Anonymous, via iNat). NORTHUMBERLAND Co.: nr. Heathsville, 6/13/2023 (Anonymous, via iNat). POWHATAN Co.: nr. Powhatan, 6/14/2023 (Anonymous, via iNat). PRINCE EDWARD Co.: nr. Farmville, 8/14/2023 (Ty Smith, via iNat).

Ancyloxypha numitor – CAMPBELL Co.: Long Island, Long Island Park, 7/2/2020 (Hannah Girgente, via iNat). Dinwiddie Co.: Wilsons, 7/17/2022 (Anonymous, via iNat. First verified record for county). HOPEWELL City: 8/19/2023 (Jackie Donaldson, via iNat). KING AND QUEEN Co.: Cumnor, 8/13/2018 (Joey & Maeve Coker, via iNat). LYNCHBURG City: Hollins Mill Park, 7/10/2021 (Lisa Miller, Marcia Morris, via iNat). MIDDLESEX Co.: Hartfield, 5/3/2023 (Marcia Morris, via iNat). NEWPORT NEWS City: Newport News Park, 10/04/2020 (Ty Smith, via iNat). Scott Co., Jefferson National Forest, Bark Camp Recreation Area, 7/21/2022 (Mel Kelley, via iNat. First verified record for county).

Atalopedes huron – COVINGTON City: 7/22/2022 (Anonymous, via iNat). FALLS CHURCH City: Cherry Hill Park, 8/31/2021 (Izabella Farr, via iNat). FRANKLIN City: 10/6/2022 (Catherine Quayle, via iNat). Highland Co.: Monterey, 9/26/2022 (Sharon Snyder, via iNat. First verified record for county). Matthews Co.: Retz, 8/16/2022 (Anonymous, via iNat. First verified record for county). PETERSBURG City: Legends Park, 4/27/2022 (Anonymous, via iNat). Surry Co.: Bacons Castle, 7/12/2008 (Anonymous, via iNat. First verified record for county).

Atrytonopsis hianna – DICKENSON Co.: Breaks Interstate Park 5/20/2019 (Anonymous, via iNat). LOUISA Co.: Mineral, 5/15/2022 (Kathy Richardson, via iNat). SUSSEX Co.: Waverly, 5/17/2013 (Anonymous, via iNat).

Burnsius communis – BUCKINGHAM Co.: Gilliamsville, 11/4/2022 (Anonymous, via iNat). CHARLOTTESVILLE City.: 10/15/2016 (Anonymous, via iNat). CUMBERLAND Co.: Columbia, 6/19/1022 (Anonymous, via iNat). FLOYD Co., location obscured, 10/2016 (Anonymous, via iNat). Franklin Co.: Callaway, 9/6/2020 (Anonymous, via iNat). GREENSVILLE Co.: Skippers, 6/13/2019 (Anonymous, via iNat). HALIFAX Co.: Halifax, 11/28/2022 (Anonymous, via iNat). HAMPTON City: Hampton University, 3/8/2023 (Aniah Dawkins, via iNat). ISLE OF WIGHT Co.: Smithfield, 10/16/2022 (Anonymous, via iNat). PITTSYLVANIA Co.: Hopewell, 10/22/2022 (Anonymous, via iNat). Poquoson City: Thomas Jefferson Rollins Nature Area, 6/11/2019 (Jill Reid, via iNat. First verified record for city).

Calpodes ethlius – HENRY Co.: Ridgeway, 8/26/22 (Regina Flora, photo of pupa posted to iNaturalist).

Cecropterus bathyllus – AMELIA Co.: Sailor's Creek Battlefield State Park, 8/15/2021 (Ty Smith, via iNat). Bedford Co.: Goode, 8/5/2020 (Allison Ferris, via iNat). GREENE Co.: Greene Community Park, 7/4/2017 (Anonymous, via iNat). HALIFAX Co.: Scottsburg, 4/26/2018 (Allen Belden, via iNat). PRINCE GEORGE Co.: nr. Disputanta, 8/1/2023 (Allen Bryan, via iNat). SUSSEX Co.: Sussex, 8/2/2022 (Allen Bryan, via iNat.

Cecropterus dorantes – CHARLOTTESVILLE City: 10/9/2023 (Scott Clark, via iNat. Identified and "voted" *Urbanus proteus* on Facebook, but the butterfly shows no green highlights.).

Cecropterus pylades pylades – AMELIA Co.: Amelia Wildlife Management Area, 5/2/2022 (Anonymous, via iNat). FLUVANNA Co.: Hardware River Wildlife Management Area, 6/5/2020 (Anonymous, via iNat). HALIFAX Co.: Scottsburg, 5/27/2023 (Anonymous, via iNat). LANCASTER Co.: McNeals Corner, 6/1/2023 (Anonymous, via iNat). LOUISA Co.: Mineral, 5/22/2023 (Anonymous, via iNat). RAPPAHANNOCK Co.: nr. Five Forks, 6/20/2022 (Bert Harris, via iNat). SPOTSYLVANIA Co.: Olive, 6/9/2022 (Anonymous, via iNat).

Cecropterus lyciades – CHARLOTTESVILLE City: University of Virginia, 8/6/2022 (Anonymous, via iNat). GLOUCESTER Co.: nr. Sassafras, 6/10/2019 (Anonymous, via iNat). Hanover Co.: Maidens, 7/21/2021 (J. Christopher Ludwig, via iNat. First verified record for county). ORANGE Co.: Locust Grove, 8/27/2022 (Anonymous, via iNat). PAGE Co.: Shenandoah National Park, 6/1/2022 (Anonymous, via iNat). PITTSYLVANIA Co.: Penhook, 6/22/2020 (Anonymous, via iNat). SPOTSYLVANIA Co.: Partlow, 8/13/2023 (Anonymous, via iNat).

Epargyreus clarus – BRISTOL City: 7/18/2023 (Scott Cave, via iNat). CLIFTON FORGE City: 6/23/2022 (Michele Kahle, via iNat). FRANKLIN City: 10/1/2022 (Catherine Quayle, via iNat). HOPEWELL City: 7/28/2023 (Jackie Donaldson, via iNat). SOUTHAMPTON Co.: nr. Ivor, 4/24/2022 (Anonymous, via iNat). WAYNESBORO City: 9/9/2014 (Eric Jones, via iNat).

Erynnis brizo brizo – STAUNTON City: 4/3/2020 (Anonymous, via iNat). PITTSYLVANIA Co.: April 2023 (Ty Smith, via iNat, location/date obscured due to sensitive site, but confirmed to county). Wise Co.: Jefferson National Forest, 4/2/2023 (Anonymous, via iNat. First verified record for county).

Euphyes dion – ALEXANDRIA City: 9/8/2018 (Forest Botial-Jarvis, via iNat). GLOCESTER Co.: nr. Wan, 6/16/2022 (Anonymous, via iNat).

Euphyes vestris metacomet – Accomack Co.: Wattsville, 7/20/2021 (Nathan Jones, via iNat. First verified record for county). AMELIA Co.: Sailor's Creek State Park, 6/25/2022 (Ty Smith, via iNat). CAROLINE Co.: Mattaponi Wildlife Management Area, 8/18/2021 (Anonymous, via iNat). CHARLOTTE Co.: nr. Drakes Branch, 5/29/2022 (Teresa Mewborn, via iNat). COLONIAL HEIGHTS City: 10/8/2022 (Anonymous, via iNat). FREDERICKSBURG City: 5/26/2023 (David Cox, via iNat). Hampton City: 6/9/2023 (Anonymous, via iNat. First verified record for city). HOPEWELL City: 8/17/2023 (Jackie Donaldson, via iNat). PITTSYLVANIA Co.: Markham, 6/21/2020 (Anonymous, via iNat). RICHMOND Co.: Singerly, 10/3/2023 (Joey Coker, Maeve Coker, via iNat). Surry Co.: Chippokes State Park, 7/12/2008 (Anonymous, via iNat. First verified record for county).

Gesta baptisiae – FALLS CHURCH City: 9/9/2023 (Anonymous, via iNat). Greene Co.: Greene Community Park, 8/10/2017 (Anonymous, via iNat. First verified record for county). HAMPTON City: 9/5/2021 (Anonymous, via iNat). HARRISONBURG City: 9/15/2023 (Anonymous, via iNat). KING AND QUEEN Co.: Dragonville, 8/22/2023 (Joey Coker, Maeve Coker, via iNat). LEXINGTON City: 7/4/2018 (Anonymous, via iNat). MIDDLESEX Co.: Water View, 8/22/2023 (Tom Crockett, via iNat). Wythe Co.: Fort Chiswell, 8/3/2019 (Susan Bert, via iNat. First verified record for county).

Gesta juvenalis juvenalis – ALEXANDRIA City: 6/17/2012 (Matt Muir, via iNat). Alleghany Co.: George Washington National Forest, 4/26/2021 (Anonymous, via iNat. First verified record for county). GREENSVILLE Co.: nr. Emporia, 4/11/2022 (Logan Andrews, via iNat). Isle of Wight Co.: Camptown, 4/15/2018 (Anonymous, via iNat. First verified record for county). Lynchburg City: 6/29/2023 (Ray Snook, via iNat. First verified record for city). NEW KENT Co.: Cumberland Marsh Natural Area Preserve, 3/30/2023 (Anonymous, via iNat). PITTSYLVANIA Co.: Toshes, 4/21/2020 (Anonymous, via iNat). RICHMOND Co.: Rappahannock River Valley National Wildlife Refuge, 4/22/2023 (Anonymous, via iNat). Southampton Co.: nr. Franklin, 3/4/2023 (Allen Bryan, via iNat. First verified record for county).

Gesta horatius – AMELIA Co.: Ford, 7/4/2021 (Ty Smith, via iNat). Augusta Co: nr. Waynesboro, 6/8/2022 (Anonymous, via iNat. First verified record for county). BRISTOL City: 8/23/2022 (Scott Cave, via iNat). FREDERICK Co.: George Washington National Forest, 8/17/2022 (Anonymous, via iNat). Grayson Co.: Fox Creek Horse Camp, 6/3/2023 (Bruce Grimes, via iNat. First verified record for county). HOPEWELL City: 7/11/2023 (Jackie Donaldson, via iNat). KING AND QUEEN Co.: nr. Ino, 7/4/2023 (Joey Coker, Maeve Coker, via iNat). LUNENBURG Co.: Winnie, 6/13/2022 (Anonymous, via iNat). LYNCHBURG City: 6/18/2022 (Anonymous, via iNat). NEW KENT Co.: I-64 eastbound rest area, 6/25/2023 (Anonymous, via iNat). POQUOSON City: 8/2/2019 (Shauna Haymond, via iNat). PRINCE EDWARD Co.: Farmville, 6/25/2022 (Ty Smith, via iNat. First verified record for county). PRINCE GEORGE Co.: Cherry Orchard Bog Natural Area Preserve, 8/20/2023 (Allen Bryan, via iNat). RICHMOND Co.: nr. Warsaw, 8/12/2023 (Joey Coker, Maeve Coker, via iNat). Rockbridge Co: Decatur, 6/29/2023 (Anonymous, via iNat. First verified record for county). STAUNTON City: 6/11/2017 (Anonymous, via iNat).

Hesperia sassacus – Augusta Co.: George Washington National Forest, 6/15/2021 (Allen Belden, via iNat. First verified record for county). Madison Co.: Shenandoah National Park, 5/21/2022 (Bert Harris, via iNat. First verified record for county).

Hylephila phyleus – Bedford Co.: George Washington National Forest, 8/5/2020 (Beth Rothermel, via iNat. First verified record for county). BUCKINGHAM Co.: James River State Park, 10/19/2023 (David Cox, via iNat). CAMPBELL Co.: nr. Lynchburg, 10/4/2023 (Anonymous, via iNat). Danville City: 9/20/2018 (Anonymous, via iNat. First verified record for city). Fairfax City: 8/25/2020 (Jeff Clark, via iNat. First verified record for city). FALLS CHURCH City: 9/5/2019 (Danielle Brigida, via iNat). FRANKLIN City: 10/6/2022 (Catherine Quayle, via iNat). Goochland Co.: Maidens, 9/21/2023 (Grace Croonenberghs, via iNat. First verified record for county). LYNCHBURG City: 10/4/2023 (Anonymous, via iNat). MADISON Co.: Banco, 9/22/2023 (Rebeca Sanchez Burr, via iNat). Powhatan Co.: Powhatan, 10/4/2023 (Anonymous, via iNat. First verified record for county). PRINCE GEORGE Co.: nr. Colonial Heights, 10/15/2023 (Jackie Donaldson, via iNat). Washington Co.: Abingdon, 10/15/2021 (Anonymous, via iNat. First verified record for city).

Lerema accius – BUENA VISTA City: 5/9/2020 (James Fox, via iNat). Danville City: 10/20/2022 (Anonymous, via iNat, First verified record for city). FREDERICKSBURG City: 9/9/2022 (David Cox, via iNat). Goochland Co.: Maidens, 9/20/2023 (Grace Croonenberghs, via iNat. First verified record for county). Halifax Co.: Halifax, 10/4/2023 (Anonymous, via iNat. First verified record for county). HIGHLAND Co.: Highland Wildlife Management Area, 9/20/2023 (Ellison Orcutt, via iNat). HOPEWELL City: 10/11/2023 (Jackie Donaldson, via iNat). MATTHEWS Co., nr. Matthews, 10/30/2022 (Anonymous, via iNat). Northumberland Co.: nr. Avalon, 10/6/2022 (Anonymous, via iNat. First verified record for county). Powhatan Co.: nr. Subletts, 11/4/2022 (Anonymous, via iNat. First verified record for county). PRINCE EDWARD Co.: Farmville, 10/12/2023 (Ty Smith, via iNat). Rockbridge Co.: nr. Oakdale, 8/26/2012 (Dave Wendelken, via iNat. First verified record for county).

Lerodea eufala – JAMES CITY Co.: Jamestown, 9/22/2022; nr. Toano, 10/22/2022 (Deborah Humphries, both photos posted to iNaturalist).

Limochores origenes – BEDFORD Co.: Moneta, 6/17/2022 (Anonymous, via iNat). BRUNSWICK Co.: Lawrenceville, 6/1/2022 (Vickie Bell, via iNat). Carroll Co.: nr. Fries, 7/22/2022 (Mary Tschopp, via iNat. First verified record for county). Goochland Co.: Crozier, 8/27/2022 (Anonymous, via iNat. First verified record for county). Grayson Co.: nr. Troutdale, 7/27/2021 (Cade Campbell, via iNat. First verified record for county). LYNCHBURG City: 6/9/2022 (Anonymous, via iNat). Spotsylvania Co.: Bellvue, 8/10/2019 (David Cox, via iNat. First verified record for county).

Lon hobomok hobomok – Bath Co.: Sandy Gap, 6/12/2015 (James Shelton, via iNat. First verified record for county). GRAYSON Co.: nr. Troutdale, 6/3/2023 (Bruce Grimes, via iNat). HARRISONBURG City: 9/15/2023 (Robert Clarke, via iNat). Scott Co.: Jefferson National Forest, 6/27/2023 (Ellison Orcutt, via iNat. First verified record for county).

Lon zabulon – Alleghany Co.: Callaghan, 8/5/2022 (C. Michael Stinson, via iNat. First verified record for county). AMELIA Co.: Jetersville, 8/25/23019 (Anonymous, via iNat). APPOMATTOX Co.: Holliday Lake State Park, 8/14/2021 (Sujan Henk, via iNat). BEDFORD City: 8/10/2019 (Vickie Bell, via iNat). Carroll Co.: nr. Galax, 8/10/2018 (Cade Campbell, via iNat). Charlotte Co.: Keysville, 5/5/2022 (Donna Fernstrom, via iNat. First verified record for county). COLONIAL HEIGHTS City: 7/21/2023 (Jackie Donaldson, via iNat). DICKERSON Co.: McClure, 5/27/2019 (Anonymous, via iNat). GREENSVILLE Co.: Skippers, 8/22/2023 (Anonymous, via iNat). HOPEWELL City: 8/9/2023 (Jackie Donaldson, via iNat). LYNCHBURG City: 6/10/2022 (Anonymous, via iNat). MIDDLESEX Co.: Locust Hill, 7/26/2023 (Anonymous, via iNat). Newport News City: 7/27/2022 (Anonymous, via iNat). PETERSBURG City: 4/27/2022 (Anonymous, via iNat). PRINCE GEORGE Co.: Petersburg National Battlefield, 6/1/2006 (Ryan Shaw, via iNat). RICHMOND Co.: Rappahannock River Valley National Wildlife Refuge, 7/28/2022 (Katharina Bergdoll, via iNat). Wise Co.: Wise, 4/29/2022 (Julie Dockery, via iNat. First verified record for county).

Nastra lherminier – FLOYD Co.: obscured location, June 2011. Pinned specimen has partially shown label indicating county (Paul Dennehy, via iNat). HALIFAX Co.: Scottsburg, 5/27/2023 (Devin Floyd, via iNat). MADISON Co.: Shenandoah National Park, 8/7/2022 (David Cox, via iNat).

Panoquina ocola – ALEXANDRIA City: 9/21/2019 (Anonymous, via iNat). Goochland Co.: Maidens, 10/23/2023 (Allen Bryan, via iNat. First verified record for county). KING AND QUEEN Co.: Dragonville, 10/4/2023 (Joey Coker, Maeve Coker, via iNat). Newport News City: 9/26/2022 (Anonymous, via iNat). POQUOSON City: 9/6/2020 (Anonymous, via iNat). PRINCE GEORGE Co.: nr. Templeton, 10/1/2023 (Allen Bryan, via iNat). RUSSELL Co.: Castlewood, 10/11/2019 (Myra Rose, via iNat). SMYTH Co.: nr. Adwolfe, 9/23/2022 (Anonymous, via iNat).

Pholisora catullus – HARRISONBURG City: 5/10/2019 (Anonymous, via iNat).

Poanes aaroni – Northumberland Co.: nr. Kilmarnock, 6/1/2023 (Anne Parker, via iNat. First verified record for county).

Poanes viator zizaniae – WILLIAMSBURG City: 8/10/2017 (Melinda Lee, via iNat).

Polites coras coras – MANASSAS City: 7/21/2019 (Shannon McKeon, via iNat). WISE Co.: nr. Big Stone Gap, 8/12/2013 (Skyla Slemp, via iNat).

Polites themistocles themistocles – ALEXANDRIA City: 9/16/2020 (Forest Botial-Jarvis, via iNat). Buckingham Co.: James River State Park, 6/5/2023 (Anonymous, via iNat. First verified record for county). Clarke Co.: State Arboretum of Virginia, 7/28/2022 (Anonymous, via iNat. First verified record for county). Craig Co.: Jefferson National Forest, 6/27/2023 (Kirk Gardner, via iNat. First verified record for county). GLOUCESTER Co.: Beaverdam Park, 6/8/2022 (Anonymous, via iNat). .GOOCHLAND Co.: Goochland, 8/17/2023 (Cindy Haddon Andrews, via iNat). KING WILLIAM Co.: Aylett, 7/30/2020 (Anonymous, via iNat). LANCASTER Co.: Lancaster, 6/1/2023 (Tom Crockett, via iNat). LYNCHBURG City: 6/8/2022 (Anonymous, via iNat). Madison Co.: nr. Pratts, 8/16/2020 (Rebeca Sanchez Burr, via iNat). PRINCE EDWARD Co.: Farmville, 8/21/2023 (Ty Smith, via iNat). PRINCE GEORGE Co.: Prince George, 5/30/2006 (Ryan Shaw, via iNat). Shenandoah Co.: nr. Strasburg, 8/18/2023 (Anonymous, via iNat. First verified record for county). SMYTHE Co: Saltville, 6/6/2022 (Jonathan Irons, via iNat). WASHINGTON Co.: Abingdon, 8/13/2021 (Anonymous, via iNat).

Polites egeremet – AMELIA Co.: Jetersville, 8/20/2019 (Anonymous, via iNat). Hanover Co.: nr. Elmont, 8/25/2023 (Anonymous, via iNat. First verified record for county). Rockbridge Co.: Cold Sulphur Springs Lake, 6/30/2015 (Greg Lasley, via iNat. First verified record for county).

Polites otho otho – AMHERST Co.: nr. Amherst, 6/7/2022 (Anonymous, via iNat). BEDFORD Co.: nr. Moneta, 6/16/2022 (Anonymous, via iNat). FAUQUIER Co.: Airlie, 8/23/2023 (Bert Harris, via iNat). LYNCHBURG City: 6/10/2022 (Anonymous, via iNat). Powhatan Co.: Powhatan State Park, 8/8/2022 (Anonymous, via iNat. First verified record for county).

Staphylus hayhursti – ACCOMACK Co.: Melfa, 7/5/2021 (Ashley Rodeheaver, via iNat). BUCKINGHAM Co.: nr. Axtell, 7/10/2018 (Judy Gallagher, via iNat). Fauquier Co.: Upperville, 8/4/2023 (Anonymous, via iNat. First verified record for county). FLUVANNA Co.: Hardware River Wildlife Management Area, 55/10/2017 (Anonymous, via iNat). FRANKLIN Co.: nr. Wirtz, 8/3/2022 (Anonymous, via iNat). LEE Co.: Cumberland Gap National Historic Park, 7/30/2022 (Anonymous, via iNat. First verified record for county). LOUISA Co.: Louisa, 7/31/2023 (Michelle Lofton, via iNat). LUNENBURG Co.: nr. Kenbridge, 6/10/2023 (Marcia Morris, via iNat).

Thymelicus lineola – BATH Co.: George Washington National Forest, 6/29/2023 (Anonymous, via iNat. First verified record for county).

Urbanus proteus – ORANGE Co.: James Madison's Montpelier Archaeology Lab, 10/18/2006 (Anonymous, via iNat). SCOTT Co.: Dungannon, 8/21/2023 (Mel Kelley, via iNat). WAYNESBORO City: 8/25/2019 (Nora Ayala, via iNat).

Vernia verna – AMELIA Co.: Sailor's Creek Battlefield Historic State Park, 8/15/2021 (Ty Smith, via iNat). AMHERST Co.: nr. Agricola, 8/6/2019 (Anonymous, via iNat). Anonymous, via iNat). Augusta Co.: nr. Verona, 8/22/2021 (Anonymous, via iNat. First verified record for county). Bedford Co.: nr. Stewartsville, 6/24/2023 (Kyle Brinkley, via iNat. First verified record for county). FREDERICKSBURG City: 8/12/2023 (David Cox, via iNat). HENRY Co.: Ridgeway, 6/16/2023 (Regina Flora, via iNat). KING AND QUEEN Co.: nr. Dragonville, 8/22/2023 (Joey Coker, Maeve Coker, via iNat). PETERSBURG City: 6/2/2006 (Ryan Shaw, via iNat). PRINCE GEORGE Co.: nr. Templeton, 9/1/2023 (Allen Bryan, via iNat). Rapahannock Co.: nr. Washington, 7/15/2023 (Bert Harris, via iNat. First verified record for county). RICHMOND Co.: Rappahannock River Valley National Wildlife Refuge, 8/12/2023 (Joey Coker, Maeve Coker, via iNat). Roanoke Co.: nr. Narrows, 7/24/2023 (Anonymous, via iNat. First verified record for county). SALEM City: 8/6/2022 (Anonymous, via iNat). Stafford Co.: nr. Ramoth, 8/13/2023 (Anonymous, via iNat. First verified record for county). Surry Co.: Chippokes State Park, 7/21/2019 (Anonymous, via iNat. First verified record for county). Warren Co.: nr. Front Royal, 8/15/2020 (Jacob Malcom, via iNat. First verified record for county).

Other butterflies:

Celastrina neglecta – Loudoun Co.: Leesburg, late-May/early-June major irruption of thousands in woodlands, swarming on trails (Harry Pavulaan, sighted). These clearly love *Ptelea trifoliata* flowers, which bloom just when *neglecta* emerges.

Aglais io – LOUDOUN Co.: Leesburg, 8/30/2023 (Harry Pavulaan, photograph posted to Virginia Butterflies Facebook group), third Virginia record. Individual observed on Zinnia flowers.

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John Hyatt (jkshyatt@centurylink.net) from Tennessee sends in the following Virginia Moth Records (2023).

Virginia, Washington County; Wolf Run Gorge, Mendota Trail miles 8-10:

Phobetron pithecium July
Adoneta spinuloides July
Dysodia oculatana July
Herpetogramma sphingealis July
Herpetogramma theseusalis July, Aug, Sept
Pyrausta homonymalis May
Habrosyne gloriosa May
Calledapteryx dryopterata June
Stamnodes gibbicostata Oct
Xanthorhoe packardata Oct

Metarranthis hypocraria May
Cepphis armataria May, Aug
Caripeta divisata Aug, Sept
Hypena manalis July
Catocala robinsonii Oct
Acronicta superans Aug
Pyrrhia exprimens May
Papaipema furcata Oct.
Papaipema marginidens Sept, Oct
Papaipema cataphracta Oct
Melanchra adjuncta Aug
Tricholita signata Aug, Oct

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