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

J. BARRY LOMBARDINI: EDITOR

NEW MOTH OBSERVED AT TRINITY RIVER NATIONAL WILDLIFE REFUGE (MAY 1 – JULY 31, 2024)

BY

STUART J. MARCUS Stuart.marcus13@gmail.com

NOCTUIDAE, *Cirrhophanus pretiosa*

Cirrhophanus is a genus of moths of the family Noctuidae. The genus was erected by Augustus Radcliffe Grote in 1872." [1]

In this reference *Cirrhophanus pretiiossa* is listed as being present in "Kansas, Texas, Oklahoma, South Dakota and Arkansas". [1]

"*Cirrhophanus pretiosa* is a moth of the family Noctuidae first described by Herbert Knowles Morrison in 1875." In this reference "It is found in North America, including Texas, Oklahoma, and Florida." [2]

"It was considered a synonym of *Cirrhophanus triangulifer* for some time, but was elevated from synonymy by Robert W. Poole in 1995. [2]

1) http://en.wikipedia.org/wiki/Cirrhophanus

2) http://en.wikipedia.org/wiki/Cirrhophanus_pretiosa

ANNOUNCEMENT:
RECENT SUPPLEMENT TO
THE SOUTHERN LEPIDOPTERISTS' NEWS

Hugo L. Kons, Jr., 2024, **"Migrants, Strays, Recent Colonizations, and Newly Recorded Lepidoptera Species from Outagamie County, Wisconsin, and Adjacent Areas",** Southern Lepidopterists' News, Vol. 46 Supplemental Issue.

Available online at <www.lepidopterabiodiversity.com/CL/SLNVol46/SLNVol46.htm>.

NOTE from the Editor and J. Douglass:
We are very pleased to announce that Hugo Kons has recently completed a far-reaching study of the distributional dynamics of eastern U.S. moths. Twenty-five hard copies are being distributed to archival libraries, research centers, and collaborators involved in related studies.

The study employs exhaustive **quantitative phenology** in characterizing the composition of an entire fauna, in unprecedented detail. Although the report is written from Hugo's home-base and lifelong collecting locale in the Great Lakes Region (Appleton, WI), he draws extensively [and incomparably] upon his decades of dedicated study of the Lepidoptera of the **U.S. Southeast**. Hugo's description of the study is as follows.

The report covers a portion of my results comparing the Lepidoptera fauna of Outagamie County, Wisconsin, in 1989-1996 versus 2016-2022. It documents an increase in diversity and abundance of southern strays and migrants in the latter surveys. It shows that new colonizations are comprised predominantly of southern species moving their ranges north, while Palearctic species have expanded their ranges in the Nearctic. The study also provides evidence of a Lepidoptera faunal-change gradient inside the Transition Zone, and treats selected species complexes in eastern Wisconsin. The report contains 69 color plates, illustrating 457 Wisconsin Lepidoptera species.

Fig. 1. Outagamie Co., Wisconsin

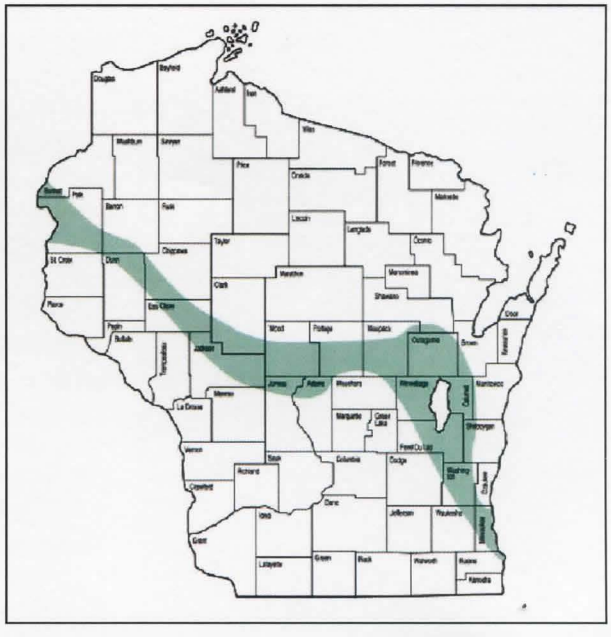

Fig. 2. Historic characterization of Tension Zone (adapted from Curtis 1959)

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"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, 1996)."

The Southern Lepidopterists' Society

OFFICERS

David Fine: Chairman
4110 NW 12th Street
Arcadia, FL 34266-5554
E-Mail: david@keysmoths.com

Jeffrey R. Slotten: Treasurer
5421 NW 69th Lane
Gainesville, FL 32653
Tel. (904) 699-3478
E-Mail: jslotten@bellsouth.net

Laura Gaudette: Secretary
1721 NE 75th Street
Gainesville, FL 32641
E-Mail: gaudettelaura@gmail.com

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

Lance Durden: Member-at-Large Department of Biology
Georgia Southern University
P.O. Box 8042
Statesboro, GA 30458
E-Mail: ldurden@georgiasouthern.edu

Riley Gott: Member-at-Large
1 9495 NE 73rd Terrace Rd
Citra, FL 32113
Tel. (419) 685-3875
E-Mail: rgott.95@gmail.com

Steve M. Mix: Member-at-Large
P.O. Box 2236
Beaufort, SC 29901-2236
E-Mail: citheroniaregalis@hotmail.com

Dave Morgan: Website Manager
3162 Johnson Ferry Rd.
Suite 260-446
Marietta, GA 30062
E-Mail: mrdavemorgan@hotmail.com

J. Barry Lombardini: Editor
3507 41st Street
Lubbock, Texas 79413
Tel. (806) 470 1584
E-Mail: jbarry.lombardini@ttuhsc.edu

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ORANGE HAMMOCK WILDLIFE MANAGEMENT AREA SARASOTA COUNTY, FLORIDA

BY

SCOTT ANDERSON

In May of 2020, the Florida Department of Environmental Protection purchased the Orange Hammock Ranch in North Port, Florida for $19.5 million from what are called Florida Forever Funds. This was done with a significant contribution from the Conservation Foundation of the Gulf Coast which raised $1.5 million from community-based donations. Simply stated, the Conservation Foundation saves land, they protect wild places to preserve clean water, save habitat for plants and animals; they save beautiful natural places for people to enjoy. So far, they have saved almost 20,000 acres in Southwest Florida - forever!

In December 2023, after the property was opened to the public, at the invitation of the Conservation Foundation, I joined a small group of "artists" as a photographer and visited Orange Hammock. I took photos and, of course, did a very preliminary butterfly count, but I was walking alone and couldn't cover much ground. It can be cold in December, even in Florida, so conditions for finding butterflies were not ideal. Yet, there were a number of butterflies and of note, I identified 7 Least Skippers which are generally hard to find here in Sarasota County.

Traveling around a wilderness area in Florida, especially when the road is wet and muddy, requires a special ride. In this case, our swamp buggy was perfect for the day. (Photo by Sarah Denison)

The day was warm with temperatures ranging from 80 to 91°F. A very prolonged drought had just given way to summer rains and it turned out to be less than optimal for finding butterflies. By the end of our visit, we had identified 14 species and 40 individuals with an Aaron's Skipper being the most notable. For this area, they are very few and far between. Species found included: Delaware Skipper (6), Giant Swallowtail (2), Horaces's Duskywing (1), Southern Broken-Dash (3), Zebra Swallowtail (2), Black Swallowtail (1), Common Buckeye (3), Three-Spotted Skipper (1), Palmetto Skipper (1), Gray Hairstreak (2), Southern Skipperling (3), Whirlabout (13), Aaron's Skipper (1), Tawny-Edged Skipper (1).

I was impressed with the beauty of the property and knew it would be worth exploring during warmer months. A short conversation at the end of the visit with both a rep from the Conservation Foundation and the area's land manager, was enough to get the ball rolling. The first ever butterfly count for Orange Hammock was scheduled for July.

Our count took place on July 2, 2024. We were fortunate to be joined by Sarah Denison of the Conservation Foundation and by Hunter Folmar, the land manager and a Florida wildlife conservation biologist; and three other butterfly enthusiasts. To give us significant access to the area, Hunter drove us around a sizable section of Orange Hammock in a swamp buggy, which was key since the area had just recently become wet after the start of summer rains.

Aaron's Skipprs are hard to find in this part of SW Florida. (Photo by Brice Claypoole)

Despite a lower number of butterflies than expected, which can most likely be attributed to the severe drought during the months before our outing, the trip was successful in creating a first ever baseline of data. Subsequent trips, which we hope to do at least annually, will give us a more complete picture about butterfly populations in the area. We were after data and it's data we got. We also spent time among new friends who all share a commitment to wild beautiful places, and more specifically, to butterflies.

In a wetland where we were hoping to find Least Skippers, we found this Southern Skipperling instead. (Photo by Brice Claypoole)

←

The Conservation Foundation has permanently saved almost 20,000 acres forever in southwest Florida. The best way to save wildlife, including butterflies, is to save habitat. Sarah Denison from the Foundation holds the map to show the good work that has been accomplished.

→

Gray Hairstreak. (Photo by Brice Claypoole)

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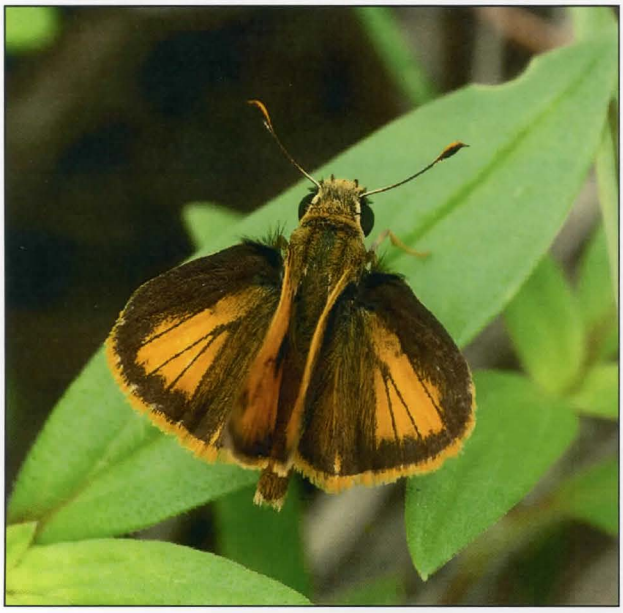
Our group often fanned out to try and cover more ground. (Photo by Sarah Denison)

The sun was just coming up as we gathered for a day of counting butterflies. A long gravel road led us to our meeting point. (Photo by Scott Anderson)

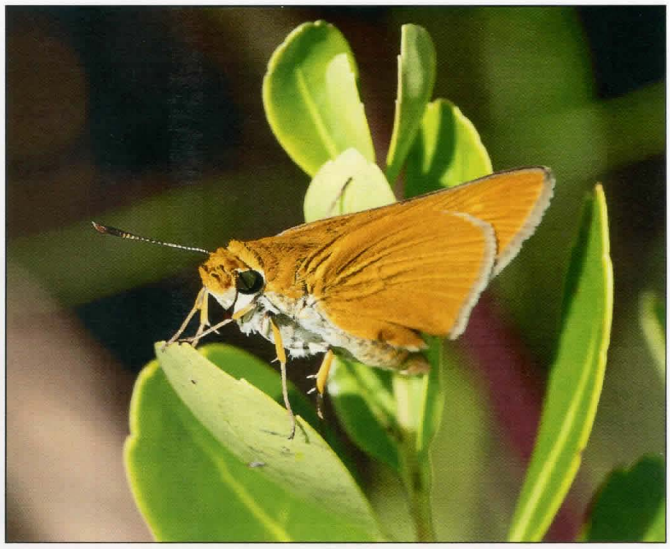


Whirlabout. (Photo by Scott Berglund) ←

Delaware Skipper (Photo by Scott Anderson) →

The Southern Skipperling loves most grassy areas and that is where we found this one. (Photo by Scott Berglund)

Southern Broken-Dash. (Photo by Scott Berglund)



The Palmetto Skipper is a butterfly common to parts of Florida but not so much around Sarasota County. We felt lucky to find this one.
(Photos by Scott Berglund)

Though our drought was extensive at the end of winter and into spring, a few weeks of rain made traveling in the area a challenge.
(Photo by Scott Anderson)

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

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BLUFF, UTAH SEPTEMBER 22, 2023

BY
KELLY RICHERS

In the southeast corner of the state of Utah, the town of Bluff is tucked along the banks of the San Juan River. For anyone looking at the area via Google Maps, it is located in a decidedly bleak looking area. In the fall, however, it is a mecca for studying and collecting moths that are somewhat rare in collections.

This being the case, Dave Wikle and I decided in late September last year to visit Bluff and then Greer, Arizona, on a two night driving trip. This proved to be a big success, and though it involved a great deal of driving over somewhat uninteresting landscape, the moth collecting was exceptional.

Bluff itself is not very big. In fact, it is very small. Actually, and with the exception of the Lunar Eclipse that made it a center of attraction last year, few people would intentionally visit. However, with the assistance of Chuck Harp and Dave Wikle, there were several areas that were noted as having exceptional potential for various species of moths.

The first area is known as Sand Island. It is sand, but as far as I can ascertain it is not an island. It is, however a low area that probably floods when the San Juan River overflows, (becoming an island?) and contains an assortment of riparian habitat plants. It is located just southeast of the town and is used for picnicking and camping. When Dave and I were there we loked for a location away from people, which took a small amount of searching. We were able to locate this kind of spot at the far end of the dirt road and set several traps. At least two were mine, and Dave set one or two also. Since we set some 13 traps that night in various locations, the numbers are a hazy memory.

Sand Island trap location: This area is where Dave Wikle and I set traps. It is on the far right side of the area, since the left side has many campers and picnickers

Sand Island from the Ridge: Sand Island lies below a high ridge in the valley cut by the San Juan River

***Schinia sanrafaeli*: Rarely caught, only one, in Sand Island trap**

We then drove to the airstrip. The airstrip is located west of town about three miles, and there is a single north-south road that leads to it. There is more sand, but this is a higher elevation away from the river, so it is considerably drier. Dunes are evident, also, so *Copablepharon* would be one genus I would expect to find. I set another two traps along this road.

Even further west, another mile or so, the road (Hwy 163) crosses Butler Wash. On the western side of this, coming out of the gulch, there is, on the north side, a historical marker for Hobbs Wash. There is a road there that has a closed gate, but through the wonder of Dave Wikle, he opened the gate, which the sign states is allowed, and we drove through onto the dirt, very unimproved "road" that leads north. This dirt road connects to an old paved, deteriorating road that runs west into what is known as Coxcomb. About a mile of exploring brought us to a slight arroyo, where we decided to spend the night. We backtracked and set another four traps along this road, then set up a mercury vapor light with a sheet. We set the remaining traps above and below our vehicles.

Dave Wikle at Coxcomb 6 miles west of Bluff: This area is cut by arroyos that are difficult to see unless right among them

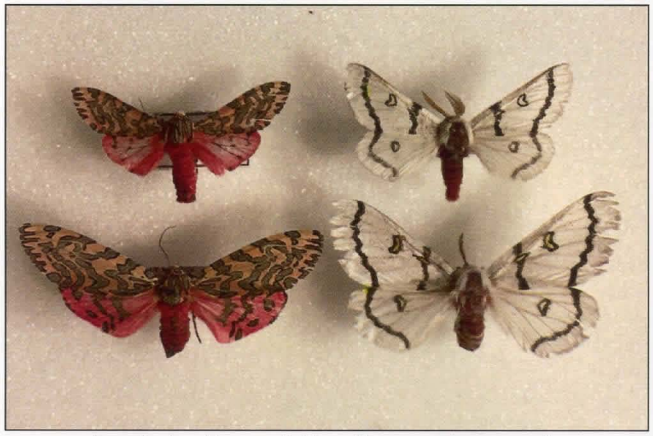
Trap at Coxcomb: We set at least four traps in this area

Sheet and MV light at Coxcomb: Set on an unused pavement in a narrow shallow valley

Throughout the night we sampled the sheet, sleeping in relatively short shifts. In the desert environment, moths tend to visit lights in waves, depending on temperature drops, which seem to plateau throughout the night at different levels.

In the morning, we attempted to pick up all the traps and head off to Greer. This proved to be more difficult than expected, and there might be a trap along the road at Coxcomb to this day that I forgot. At any rate I only had nine traps when we wearily pulled into Springerfield many hours later.

Although the moths weren't sorted at that time due to travel rushing around, the supposition that there would be many *Copablepharon* was borne out. There were also many fall *Euxoa*. Many are species not seen in many other locales. A more complete list is attached.



***Arachnis citra* and *Hemileuca neumogeni*: taken at night**

***Catocala juncture*: scattered in all locations**

The number of species of moths was larger than expected for such a xeric area, and there were many that I still haven't identified. What is provided here is a selection of the more identifiable moths taken at Bluff.

The temperatures were in the 80 degree range and we avoided the many rain squalls through which we passed going south that day. We were fortunate in our collecting, as the wind was bearable. It can be a barrier also there to collecting.

Several of the species caught were new to my collection, and much more common than elsewhere. Many of these ranges extend across the desert areas of the west but are found in much lower numbers. This is an excellent area to visit for moth collecting or photography under the right conditions.

***Sympistis* species:**
***Sympistis buchis* (2),**
***Sympistis occata* (2),**
***Sympistis jocelynae* (2)**

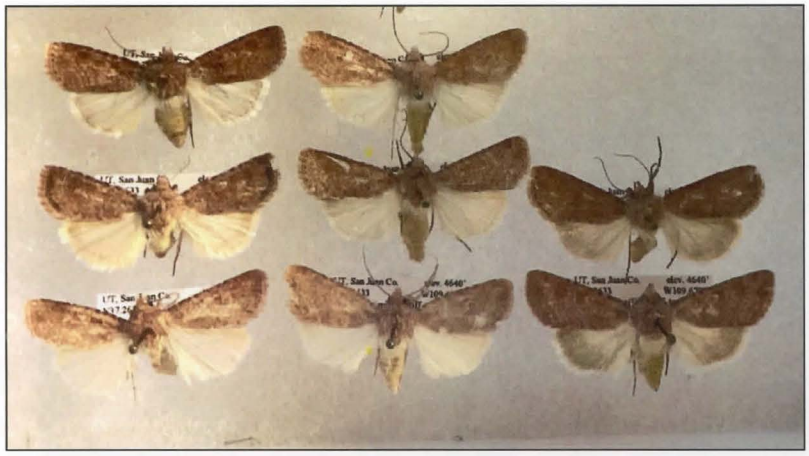
Mixed moths: Left to Right top row:

***Lycomorpha splendens*,**
***Pseudanarta crocea*,**
***Pseudanarta* singular.**

Bottom row:

***Pelochrista ridingsana* (2),**
***Tarache toddi* (2)**

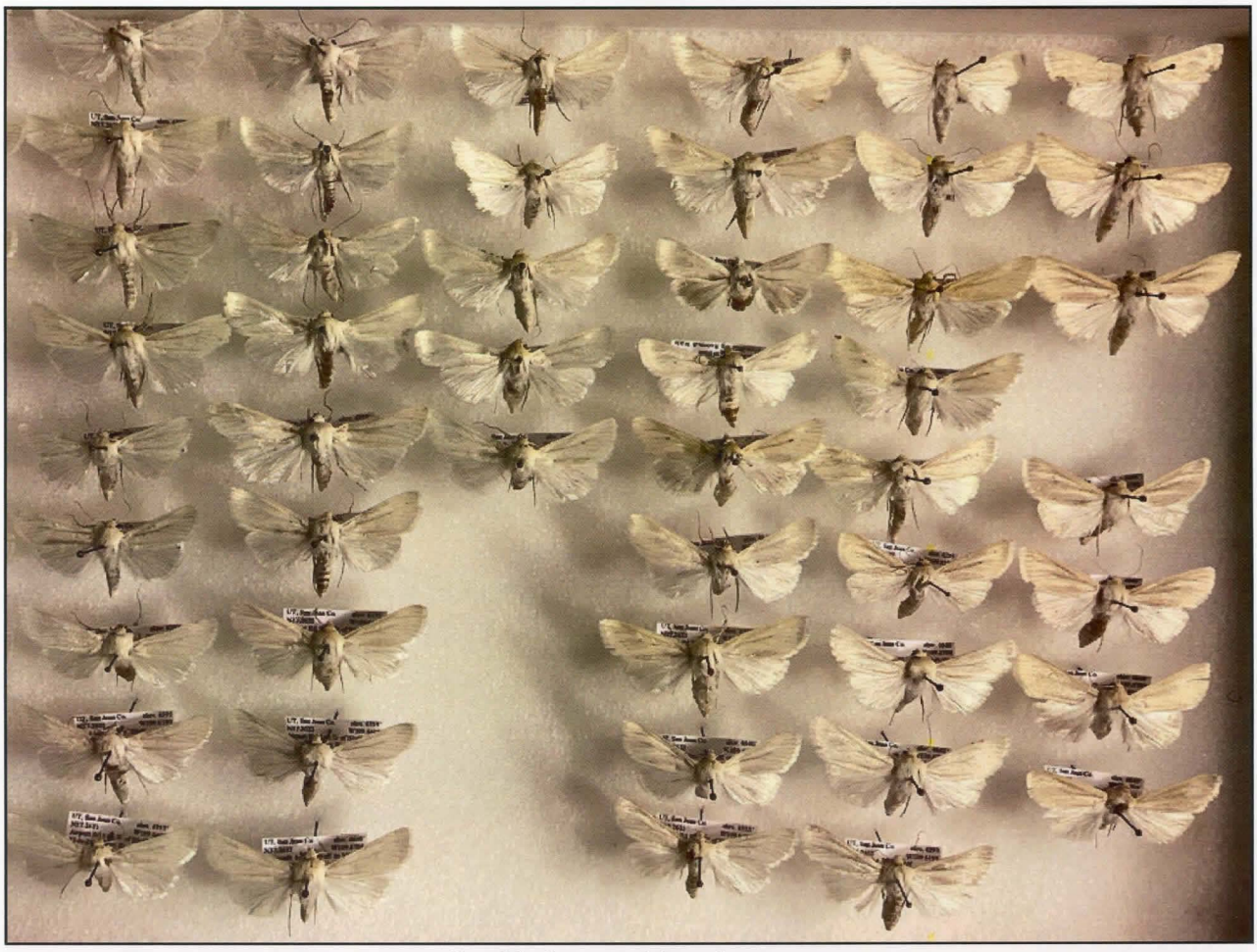
Euxoa niveilinea



Euxoa misturata

Euxoa* and *Copablepharon*: Left to right, *Euxoa citricolor, Euxoa tronellus, Copablepharon grandis, Copablepharon viridisparsa gilvum.

Difficult to tell the *Euxoa* apart, difficult to tell the *Copablepharon* apart



Copablepharon spiritum lutescens

Bluff, Utah

MONA	Genus	Species	M Spread	F Spread
385	Acrolophus	variabilis	1	
3006	Eucosma	bucephaloides	5	
3011	Eucosma	crambitana	6	
3014	Pelochrista	ridingsanan	2	
3025	Pelochrista	optimana	1	1
3083	Pelochrista	invicta	1	
31322	Pelochrista	sepiana	1	
31325	Pellochrista	navajoensis	1	
3141	Pellochrista	canana	1	
4912	Evergestis	obliqualis	6	1
4996	Loxostege	indentalis	4	

MONA	Genus	Species	M Spread	F Spread
6368	Digrammia	atrofasciata		2
6372	Digrammia	pictipennata	6	3
6387	Digrammia	aliceata	7	1
6420	Fernaldella	fimetaria	1	
6498	Glaucina	golgolata	15	8
7059	Synchlora	frondaria	1	
7065	Synchlora	bistriaria		1
7078	Xerochlora	viridipallens		1

MONA	Genus	Species	M Spread	F Spread
7738	Hemileuca	neumoegeni	10	1

MONA	Genus	Species	M Spread	F Spread
8070	Cisthene	angelus	1	
8086	Lycomorpha	splendens	8	6
81511	Arachnis	citra	11	7
83341	Idia	occidentalis	3	
8639	Drasteria	howlandii	4	
8712	Zale	termina	7	
8829	Catocala	junctura	7	
9154	Tarache	sedata	1	
9156	Tarache	axendra	5	
91591	Tarache	toddi	3	
9161	Acontia	cretata	1	
9163	Acontia	coquillettii	1	
9605	Pseudanarta	crocea	15	6
9607	Pseudanarta	cingula	5	
1009.3	Sympistis	jocelynae	2	
10101	Sympistis	occata	12	10
10102.2	Sympistis	buchis	28	5
10144	Sympistis	ibapahensis	1	
10166	Stylopoda	modestedlla	2	
1019.2	Cucullia	dorsalis	3	1
10382	Lacinipolia	stenotis	17	5
10426	Trichocerapoda	strigata	9	4
10546	Tricopolia	curtica	1	
10572	Ulolonche	dilecta	2	
10641	Agrotis	vetusta	1	1
10643	Eucoptocnemis	dollii	5	
1065	Agrotis	venerabilis	2	
1066.1	Agrotis	antica	1	
10681	Copablepharon	grandis	19	8
10687.c	Copablepharon	viridisparsa gilvum	12	4
10693.1a	Copablepharon	spiritum lutescens	32	9
10766	Euxoa	misturata	12	5
10767	Euxoa	melana	4	
10774	Euxoa	mitis	4	2

10809	Euxoa	catenula	7	2
10831	Euxoa	niveilinea	30	23
10839	Euxoa	cicatricosa	4	
10840	Euxoa	recula	7	1
10841	Euxoa	citricolor	13	3
10842	Euxoa	tronellus	19	1
10892.1	Protogygia	postera	3	1
11024	Abagrotis	nefascia	1	
11068	Helicoverpa	zea	2	
11107.1	Schinia	sanrafaeli	1	
11501	Schinia	acutilinea	4	4
11180	Schinia	agentifascia	3	3
11181	Schinia	albafascia	1	2
11184	Schinia	walsinghami	6	2
11188	Schinia	unimacula	5	
			412	132

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(E-Mail: kerichers74@gmail.com)

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DEGREASING LEPIDOPTERA SPECIMENS

BY

J. B. HEPPNER

McGuire Center for Lepidoptera and Biodiversity,
Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611, USA
jheppner@flmnh.ufl.edu

Specimens of lepidopterans, mostly moths, often become 'greasy' on the body, mainly the abdomen. The body fats and oils of pinned specimens exude to the external shell over time and dull the original body coloration; sometimes this extends even onto the wings as well. This bane of insect collections has been a problem since collections were first assembled centuries ago, but can easily be resolved now with a chemical degreasing bath. Some past remedies for degreasing have been discussed in several papers (Bollow, 1949; Covell, 1976; Cretschmar,1950), and summarized by Oldroyd (1958) and Winter (2000). A simple degreasing technique can be noted here as used at McGuire Center, especially for Lepidoptera.

A simple degreasing method is an overnight specimen bath in xylene (also called xylol). A small glass stentor jar with a glass lid is used for small specimens (a larger jar will be needed to degrease very large specimens, large enough so the wings fit inside the walls of the jar). Xylene is added to fill the jar and the entire specimen is immersed into this bath. Since xylene is devoid of any water, set specimens will retain the wings set, so there is no re-setting needed after the xylene bath. A specimen is immersed into the xylene bath with the pin (but labels removed), mostly in an upside-down position so the entire body is within the xylene; the insect pin usually being shorter above the specimen than the bath height in small stentors, so upside-down allows the body to be fully immersed (the longer end of the pin usually is below the specimen body). If the stentor jar is high enough then the specimen can be placed upright in the bath and into a pinning base (plastic foam or balsa wood) at the bottom of the jar.

An overnight xylene bath should remove all the body oils and fats that have made the specimen 'greasy' and subsequent air drying after removal from the bath will make the body colors of the specimen look again as when it was alive and freshly captured. An important advantage in using xylene involves its high volatility, thus during its rapid evaporation as a specimen is dried out, the scales and fine hairs will be fluffed out to resume their original shape and form, and not matted down. At McGuire Center this technique has been used especially on Cossidae and Sesiidae moths, and other groups with larvae that are borers and with adults that often become greasy after capture and specimen preparation (e.g., olethreutine Tortricidae, some pyralids, Hepialidae, etc.). Even some saturniids (e.g., cecropia moths) can become greasy if freshly emerged specimens are captured, so a wide jar (or lidded tray) will work for the xylene bath. After some years, many such specimens are prone to become 'greasy' and loose their body coloration, so a degreasing bath is needed to restore original colors. If many specimens are to be treated, the xylene bath can accommodate until it becomes yellow with dissolved fats, and then fresh xylene needs to be used.

Degreasing can be accomplished at an early stage in specimen preservation, with a fresh specimen after capture, by the use of the critical point drying method (Cohen, 1974). This method works excellently for soft-bodied insects and other animals, and also preserves the original colors of their bodies after drying, in addition to drying and hardening the shell of the bodies by vacuum dehydration; and for Lepidoptera it has been used especially to preserve the colors of larvae as in life (Dominick, 1972). However, this is a cumbersome process for simple specimen degreasing of prepared specimens, and requires sophisticated and expensive equipment.

Some have used hexane as the 'bath' solvent, but hexane has been found to remove yellow colors from Sesiidae, so is not recommended for degreasing specimens. Xylene can be obtained from chemical supply firms, or perhaps in small amounts with the help of a local college chemistry lab. Another chemical that can be used in lieu of xylene, and with similar results, is Coleman lantern fuel, or 'white gas' (petroleum naptha) (called 'Coleman gas' in Canada; L. Handfield, pers. comm.), and available at any camping supplier (Covell, 1976), but is less volatile than xylene. Other problems with white gas involve the impurities and petroleum oils it contains, while highly purified xylene has few contaminants that could leave some residue on specimens.

Both xylene and white gas are toxic and need to only be used in a well-ventilated room or outdoors. One possible negative result from such degreasing baths may involve some degradation of the DNA content of a specimen, in terms of future DNA analysis from such specimens, but such effects are not actually known of.

Other chemicals that have been used for degreasing specimens, including benzene, carbon tetrachloride, trichloroethane, and trichloroethylene, are not recommended due to their higher toxicity, flammability, or residue contaminants (Winter, 2000), and lack the higher volatility needed to fluff the scales again during drying that xylene has.

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GLENURUS GRATUS (SAY)(NEUROPTERA: MYRMELEONTIDAE) IN LOUISIANA

BY

[1]Vernon Antoine Brou Jr., [2]Charlotte Dozar Brou, and [3]Victoria Bayless

[1,2]74320 Jack Loyd Road, Abita Springs, Louisiana, 70420 USA E-mail: vabrou@bellsouth.net

[3]Louisiana State University, Dept. of Entomology, LSB-404, Baton Rouge, LA 70803-1710 USA

E-mail: vbayless@agcenter.lsu.edu

Fig. 1. Adult ***Glenurus gratus*** (Say) captured at the Abita Entomological Study Site, 4.2 miles northeast of Abita Springs, St. Tammany Parish, Louisiana, USA.

The large ant-lion species ***Glenurus gratus*** (Say) (Fig. 1) was captured as bycatch just about every year over the past 42 years at the *Abita Entomological Study Site, St. Tammany Parish, Louisiana (Fig 2). Adults of this large resplendent species were mostly attracted to, and collected using five to seven high-wattage automatic-capture ultraviolet light traps. Documentation here appears to be the first specifically for Louisiana.

Over the past 55 years, ***G. gratus*** and several additional smaller in size species of ant-lions were also captured by us using uv light traps in varying habitats across the entire state of Louisiana from southern beaches bordering the Gulf of Mexico to the northern forested areas (Fig. 2). The larvae of some species of ant-lions are commonly referred to as '*doodlebugs*'which produce a funnel-shaped void in loose, dry and sandy areas. These funnel-shaped areas are pitfall traps with the ant-lion larvae laying in wait under the loose sand at the bottom of the funnl apex. ***G. gratus*** larvae are found in rain protected tree holes on the trunks of large trees, especially on ***Quercus virginiana*** Mill., and not found on the ground as other '*doodlebugs* (Miller and Stange, 2006). Stange (2000) reported ***G. gratus*** from the states of Florida, Indiana, Kentucky, Mississippi, Missouri, New Jersey, Ohio and Tennessee. Stange (1980) reported *"Florida has the richest ant-lion fauna in the eastern United States with 22 species in 9 genera".* Miller and Stange (2006) reported 22 species of ant-lions in nine genera occurring in the state of Florida, including ***G. gratus***.

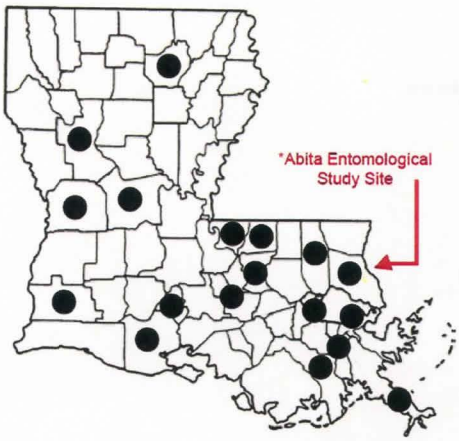

Fig. 2. Adults of ***Glenurus gratus*** captured in Louisiana.

The Louisiana parish records in this study for adult ***G. gratus*** are illustrated in Fig. 2. Within Louisiana adults of ***G. gratus*** appear to have at least one annual brood peaking around the first week of June, with a few adults trailing into the month of September, or perhaps these August-September adults represents a second brood (Fig. 3).

Stange's (1980) publication centered on antlions in Florida with identifications of genera, based upon adult characteristics. This author noted some helpful morphological characteristics of both males and females. Stange stated the males of most species have a peculiar and unique organ at the base of the hindwing, the *'pilula axillaris'*. The tube-like abdomens are similar in both sexes of antlions, although normally longer in the males, and with the first sternite reduced.

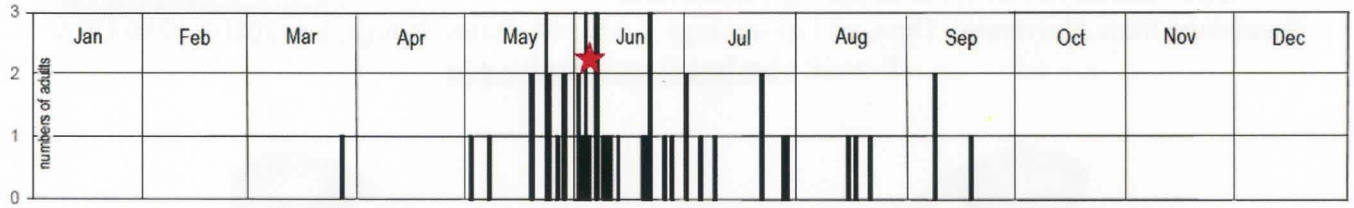

Fig. 3. Adult ***Glenurus gratus*** captured in Louisiana. n = 51

The Louisiana State Arthropod Museum (LSAM) has eight adults of ***G. gratus*** captured e.g., by hand or attracted to porch lights, and data from those have been incorporated here as well. Although our sample population of adults is only n = 51, these specimens document encounters over the past half century.

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

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AUTOMATIC INSECT COLLECTION CHAMBERS – A BRIEF HOW TOO – PICTORIAL

BY

VERNON A. BROU JR. AND CHARLOTTE DOZAR BROU

This pictorial illustrates our stationary automatic light trap wooden collecting chambers we designed, fabricated, and operated successively and continuously 365-366 days for each of the past (55 years) 1969 to 2024. We illustrate our successful design with annotated explanations and photographs of actual collecting chambers used in field work across the state of Louisiana.

Cover image:
A few of ~500 insect traps we have designed, fabricated and used between 1969 and 2024. More than 90% of the total traps involved the use of automatic-capture collection chambers using NaCn.

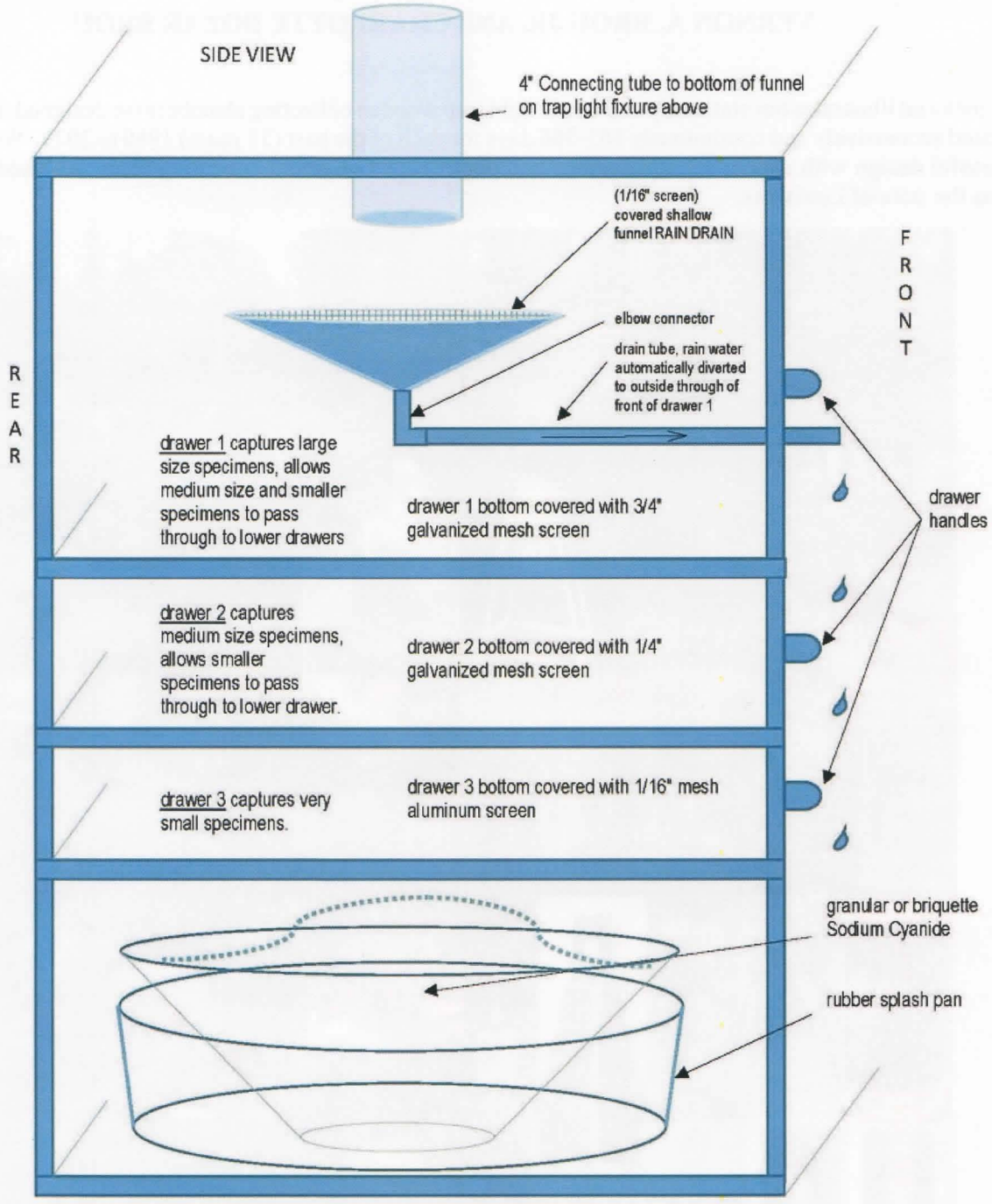

Fig. 1. Side-view **3-drawer automatic light trap wooden collecting chamber** designed and fabricated in 1969, and this basic concept has operated successively and continuously 365-366 days for each of the past 55 years to 1969 to 2024.

Fig. 2. Front view. Newly fabricated 3-drawer automatic light trap wooden collecting chamber. This basic concept trap chamber operated successively for each of the past 55 years.

Fig. 3. Front view. Beginning of fabrication for 4-drawer automatic light trap wooden collecting chamber. This basic concept trap chamber operated successively and continuously 365-366 days for each of the past 55 years.

Fig. 4. Side view from above. Newly fabricated 4-drawer automatic light trap wooden chamber designed in 1969. This basic concept trap operated successively and continuously 365-366 days for each of the past 55 years.

Fig. 5. Upper view. 4-drawer Newly fabricated automatic light trap wooden collecting chamber illustrates first upper of 4-drawer collection chamber pulled out to reveal rain drain and drain tube exiting out to front of drawer. This basic concept wooden collecting chamber operated for the past (55 years) 1969 to 2024 across Louisiana.

Fig. 6. 4-drawer automatic light trap wooden collecting chamber operating in the field across Louisiana.

Fig. 7. The same concept *'gravity based automatic light trap wooden collecting chamber'* can be applied to many other types of insect traps as we illustrate here **a.** lid removed from automatic collection chamber where insects are guided upwards into killing chamber via inverted funnel on fermenting fruit-based bait traps and NaCn or KCn are the dispatching agents, **b.** example of gravity based clearwing moth traps where lures are placed inside of upper entrance area and moths are gravity fed into the collecting chamber below using NaCn or KCn as the dispatching agents, **c.** captured moths inside of collecting chamber.

Fig. 8. Examples of some of the safety - related warning labels we have used over the decades.

Since our traps operated using potentially hazardous chemicals and biological materials, we have illustrated a few examples of the personal computer generated labels which we affixed to all of our insect traps (Fig. 8). These varying messages descriptive stickers are easily created to conform to any sizes needed using any of numerous commonly available software programs e.g., Microsoft Word, Excel, Publisher and others. Labels can be prepared singly and placed in aggregate upon paper, paper-thin rubber or vinyl waterproof sheets having adhesive backings so that numerous individual labels can be printed upon each 8 ½" X 11" sheet.

We thank Ricky Patterson for most helpful comments and recommendations.

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

PONOMETIA BRUCHI (BREYER, 1931) (NOCTUIDAE, ACONTIINAE) IN ARIZONA, LOUISIANA, MISSISSIPPI AND TEXAS

BY

Vernon Antoine Brou Jr., Charlotte Dozar Brou, 74320 Jack Loyd Road, Abita Springs, Louisiana, 70420
E-mail: vabrou@bellsouth.net
Rick Kergosien, 116 Buena Vista, Long Beach, Mississippi 39560 E-mail: madhouse116@yahoo.com
Lars G. Crabo, Adjunct faculty, Washington State University, Pullman, Washington, USA.,
E-mail: *lcrabo@nwrads.com*
Stephen R. Nanz, Moth Photographers Group at Mississippi State University, Mississippi State, MS 39762,
E-mail: steve.nanz.mpg@gmail.com

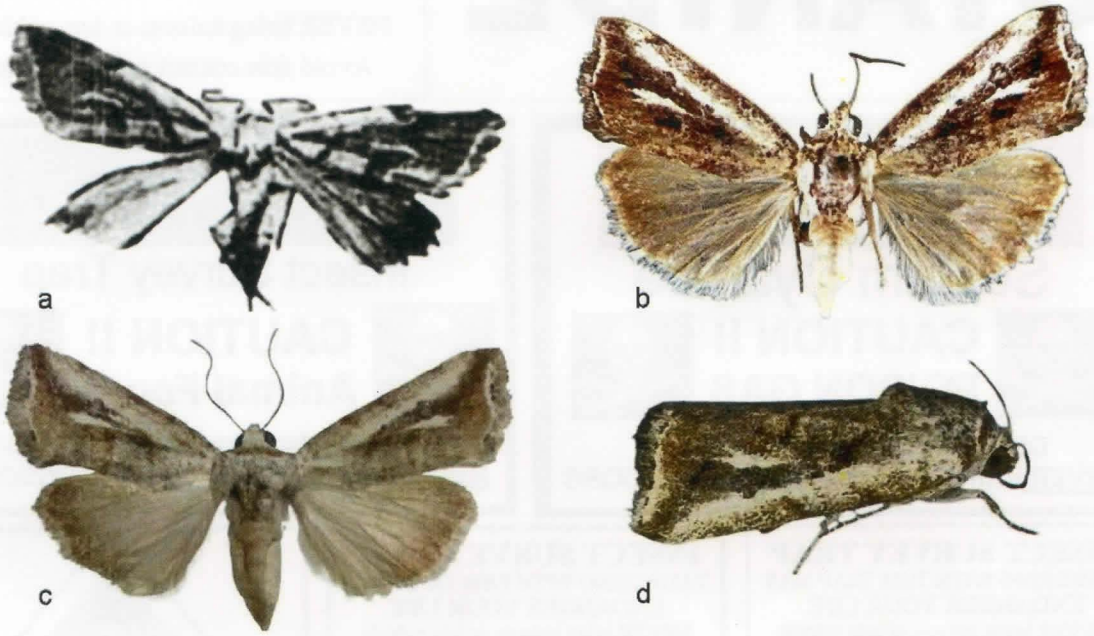

Fig. 1. ***Ponometia bruchi*** (Breyer). **a.**♀ TYPE 10-1-1929 La Paz (province of Córdoba), Argentina, from original description, **b.** ♀ May13-1995 at the *Abita Entomological Study Site* (AESS): sec. 24, T6S, Range 12 East, 4.2 miles northeast of Abita Springs, St. Tammany Parish, Louisiana, **c.**♀ May 10-2024, Long Beach Mississippi, **d.** ♀ Live adult photographed May 27-2020 at Lake Jackson, Brazoria County, Texas, USA.

Thirty-four species of the genus ***Ponometia*** Herrich-Schäffer (Noctuidae, Acontiinae) are recorded in North America north of Mexico (Pohl & Nanz 2023). In this species account we add an additional species to the fauna of the United States of America (hereafter US), a rarely encountered moth only known from four observations in four different states. Currently known U.S. records of this species, ***Ponometia bruchi*** (Breyer), are illustrated in Figs. 1b–d and 2b.

The first known record of ***P. bruchi*** for the US was a single female (Fig. 1b) captured 29 years ago in a self-designed automatic-capture mercury vapor light trap on May 13, 1995 at the **Abita Entomological Study Site* in S.E. Louisiana. No other specimens were encountered over 42 years of operating 5-7 automatic-capture high-wattage mercury vapor light traps and around 500 other automatic-capture insect traps at this same location 24-hours daily, non-stop, nor encountered anywhere else in Louisiana over the past 55 years. The Abita Springs site is recognized worldwide as the most intensely studied location with respect to its insect fauna in North America.

A male ***P. bruchi*** was captured at Brown Canyon in the Baboquivari Mountains, Pima County, Arizona, in 2011 by L.C. (Fig. 2b). This specimen was barcoded, and the results are a match with ***P. bruchi*** on the BOLD Barcodes of Life website (July 2024). As of 2024, there are just over 50 ***P. bruchi*** specimens on that site, one from Jalisco,

Mexico and the remainder from Costa Rica. The Arizona record validated via DNA the presence of ***P. btuchi*** in the US, but this record has been a source of confusion because the incorrect photograph was associated with its DNA sample. This image (Fig. 2a) is a specimen of ***Heliocheilus toralis*** (Grote) lacking any usual pink markings on the forewing, also from Brown Canyon collected several years earlier than the barcoded ***P. bruchi***. The ***H. toralis*** specimen was submitted at the same time as the ***P. bruchi*** sample and species names are now correctly associated with the proper images. Its barcode is a concordant match for ***H. toralis***.

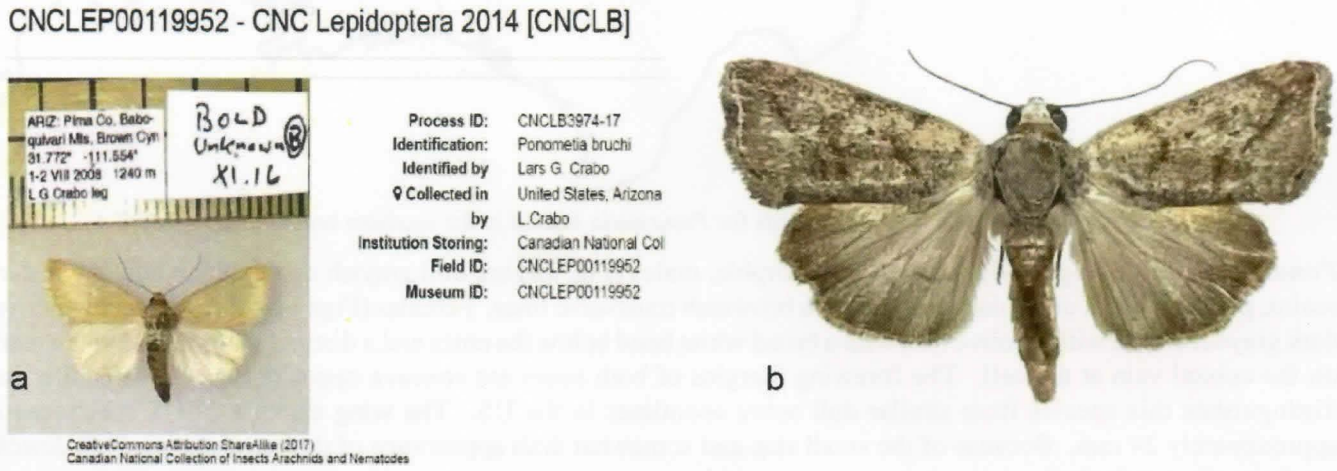

Fig. 2. ***Ponometia bruchi*** (Breyer) from Arizona, USA. **a.** The image incorrectly associated with sample CNCLEP00119952 | BOLDSYSTEMS, as it appeared originally. See discussion in text. **b**. Actual barcoded ***P. bruchi*** specimen captured by Lars G. Crabo in Brown Canyon, Pima County, Arizona, wing expanse 23.5 mm, sample CNCLEP00119952.

A female ***P. bruchi*** was attracted to LED light and photographed in Texas (Fig. 1d) by Monica Krancevic on May 27, 2020 in Lake Jackson, Brazoria County. More recently, another female ***P. bruchi*** was collected in Long Beach, Mississippi (Fig. 1c) by RK in a self-designed LED UV light trap May of 2024.

The taxonomic history of ***P. bruchi*** is somewhat confusing. It is reviewed here in order to confirm that this is the appropriate name of this newly reported U.S. moth. This species originally described as ***Eugraphia bruchi*** Breyer was illustrated in the original description (Fig. 1a). Todd (1966) transferred ***E. bruchi*** to the genus ***Tarachidia*** Hampson. He placed ***T. bruchi*** as a junior subjective synonym of ***Tarachidia albisecta*** Hampson, stating that he had examined the ***E. bruchi*** type. Although he does not explicitly state that he also examined the type of ***T. albisecta***, this it is implied by the statement that he came to this realization "during recent studies of mine at the British Museum" where the type of ***T. albisecta*** is deposited. Lafontaine and Poole (2010) revised Acontiinae based on morphological and genetic characters, significantly decreasing the number of recognized genera. ***Ponometia*** is characterized by bilaterally symmetrical or nearly symmetrical valves, and the vesica has one or two long diverticula, each with a longitudinally-ridged apical cornutus, and a comb-like row of small cornuti on the apical vesica segment. In the Acontiinae Appendix: checklist both ***E. bruchi*** and ***T. albisecta*** are reassigned to the genus ***Ponometia*** , and both are listed as valid species, with the notation that neither of these species are known from the United States or Canada. This differs from Todd's opinion (1966) who transferred ***E. bruchi*** to the genus ***Tarachidia*** treating ***T. bruchi*** as a synonym of ***Tarachidia albisecta*** Hampson.

Tarachidia albisecta Hampson is illustrated in Hampson (1910). It is similar to males of ***P. bruchi*** Bryer on BOLD, including the Arizona specimen, but is described as female in the original description. We examined the ***Tarachidia albisecta*** type specimen from a photograph and confirmed it is distinct from ***Eugraphia bruchi***. The ***T. albisecta*** type is indeed female, and is therefore amply different from females of ***P. bruchi*** (described below). In addition, it differs in wing shape and maculation from males of ***P. bruchi***. Its forewing margin is straight opposite the cell rather than convex, and the postmedial area is dark brown on the trailing half of the wing unlike those of any ***P. bruchi*** specimens examined by us. Although we have not examined the type of ***E. bruchi***, its illustration closely

matches females of the US specimens depicted in this article and Central American specimens identified as ***E. bruchi*** on BOLD. Therefore, we see no reason to doubt that this is the correct name of this new record US moth species.

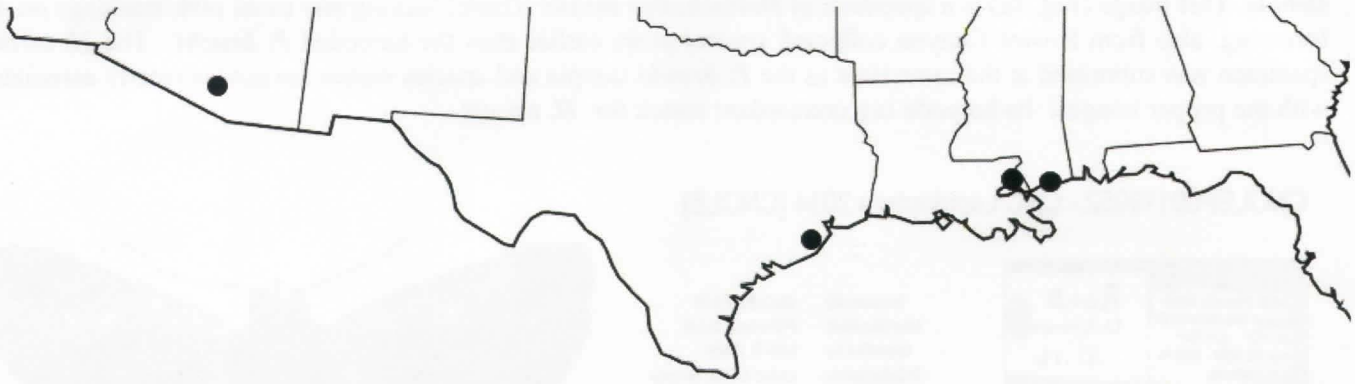

Fig. 3. Known county and Parish records for ***Ponometia bruchi*** in the southern border areas o f U.S.A.

Ponometia bruchi (Fig. 1a-d) is sexually dimorphic, males (Fig. 2b) are dull grayish ochre with a dusting of dark scales, punctate black orbicular spot, and dark brownish transverse lines. Females (Figs 1 b–d) are more distinctive, dark grayish brown with an olive tint, with a broad white band below the costa and a distinct longitudinal white mark on the cubital vein at the cell. The forewing margins of both sexes are concave opposite the cell, a feature that distinguishes this species from similar dull ochre acontiines in the US. The wing expanse of US specimens is approximately 24 mm. Because of the small size and somewhat drab appearance of this species, surely ***T. bruchi*** can be easily overlooked.

The three ***P. bruchi*** from states near the Gulf of Mexico are females. They were photographed or collected during the month of May. The Arizona specimen is a male collected during late July. This migrant species apparently has a large geographic distribution from Argentina to the southern US -Mexico border. The early stages are unknown. A dot map illustrates the four border locations in the USA (Fig. 3).

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

Acknowledgements

We thank Monica Krancevic and Robert Poole for images and most helpful information. Bruce Walsh organized the Brown Canyon moth survey during which ***P. bruchi*** was collected by LGC. Chris Schmidt and Don Lafontaine at the Canadian Nation Collection kindly submitted the barcode sample of this specimen to BOLD for barcoding. Chris Schmidt kindly shared a photograph of the type of ***Tarachidia albisecta*** Hampson (Natural History Museum, London).

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A SPECIMEN OF *ANCYLIS VIRIDIDORSANA* (TORTRICIDAE: OLETHREUTINAE) FROM LONG KEY, MONROE COUNTY, FLORIDA

BY

LAWRENCE J. HRIBAR

On 21 May 2024, a single specimen of *Ancylis viridiidorsana* (Möschler) was collected in a dry ice-baited light trap set on Long Key, Monroe County, Florida (Fig. 1). The specimen has been deposited into the Carnegie Museum of Natural History, Pittsburgh, PA. The genus *Ancylis* Hübner is in the family Tortricidae, the leafroller moths. Heppner (2003) lists eight species of *Ancylis* in Florida, including one agricultural pest, the strawberry leafroller, *Ancylis comptana* Frölich.

Fig. 1. *Ancylis viridiidorsana* (Möschler), FL, Monroe Co., Long Key State Park, residences, 21 May 2024, A. Loftus, coll. A, as collected; B, spread.

Little has been written about *A. viridiidorsana*. Möschler (1891) described the species from Puerto Rico, and its presence there was noted by other authors (Gundlach 1891; Walsingham 1891, 1897). Pohl and Nanz (2023) report that this species has been established in the Florida Keys "for decades" but was never reported in the literature. The species also occurs in Homestead in southern Miami-Dade County, FL (Florida State Collection of Arthropods personnel, personal communication). According to the website Keysmoths.com, *A. viridiidorsana* has been collected from Big Pine Key and No Name Key in March, April, and June. This specimen fills the apparent gap in seasonal distribution.

The reportage of a single specimen from another island in a chain may in and of itself be trivial but it is illustrative from the standpoint of documentation of fauna, monitoring of exotic or introduced organisms, and use of bycatch. In this case, *A. viridiidorsana* was present, but unreported, in southern Florida for many years. At this point, it is probably impossible to determine when and where this species first arrived in Florida. As I explained elsewhere, examination of bycatch from any trapping program will undoubtedly yield specimens and data that are potentially useful to other workers (Hribar 2020).

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(E-mail: lhribar@keysmosquito.org)

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Anise Swallowtail (*Papilio zelicaon*)

Anise Swallowtail emerged on july 17, 2024, in the garden of Hank Leibee. He states that: "*This the first one in several years. I let it fly free. What a beauty*!" Hank lives in San Leandro, California.

Good to hear from Hank (roommate from our old college days)
J. Barry Lombardini

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LIFE HISTORY PLATES OF GEOGRAPHICALLY RESTRICTED SOUTHEASTERN BUTTERFLIES

BY
MARY JANE KROTZER
AND
STEVE KROTZER

In previous issues (Vol. 44, Nos. 2 & 3) of the SLS News, the authors created a series of life history plates intended to provide an overview of the life cycles of southeastern butterflies of the six recognized families of the Superfamily Papilionoidea (Butterflies and Skippers). Here we present additional life history plates of eight species that are either restricted to Florida and/or Texas or that are primarily found along the southeastern coast of the United States but may expand their range northward during their flight season.

The eight species are:

Great Southern White, *Ascia monuste*, from the subfamily **Pierinae** (Whites) of the family **Pieridae**;

Boisduval's Yellow, *Eurema boisduvaliana*, from the subfamily **Coliadinae** (Sulphurs) of the family **Pieridae**;

Atala, *Eumaeus atala*, from the subfamily **Theclinae** (Hairstreaks) of the family **Lycaenidae**;

Red-bordered Metalmark, *Caria ino*, from the subfamily **Riodininae** (Metalmarks) of the family **Riodinidae;**

Zebra Heliconian, *Heliconius charithonia*, from the subfamily **Heliconiinae** (Heliconians) of the family **Nymphalidae**;

Common Mestra, *Mestra amymone*, from the subfamily **Limenitidinae** (Admirals and Relatives) of the family **Nymphalidae**;

Queen, *Danaus gilippus*, from the subfamily **Danainae** (Monarchs) of the family **Nymphalidae**; and

Hammock Skipper, *Polygonus leo*, from the subfamily **Pyrginae** (Spread-wing Skippers) of the family **Hesperiidae**.

(Continue to next page)

Figure 1. Great Southern White, *Ascia monuste*, Taylor and Monroe counties, FL and Cameron County, TX; Hostplants: Limber Caper, *Cynophalla flexuosa* and Saltwort, *Batis maritima*

Figure 2. Boisduval's Yellow, *Eurema boisduvaliana*, Cameron County, TX; Hostplants: Sennas, Senna spp.

Figure 3. Atala, *Eumaeus atala*, Broward, Miami-Dade, and Palm Beach counties, FL; Hostplant: Coontie, *Zamia integrifolia*

Figure 4. Red-bordered Metalmark, *Caria ino*, Cameron and Hidalgo counties, TX; Hostplant: Spiny Hackberry, *Celtis ehrenbergiana*

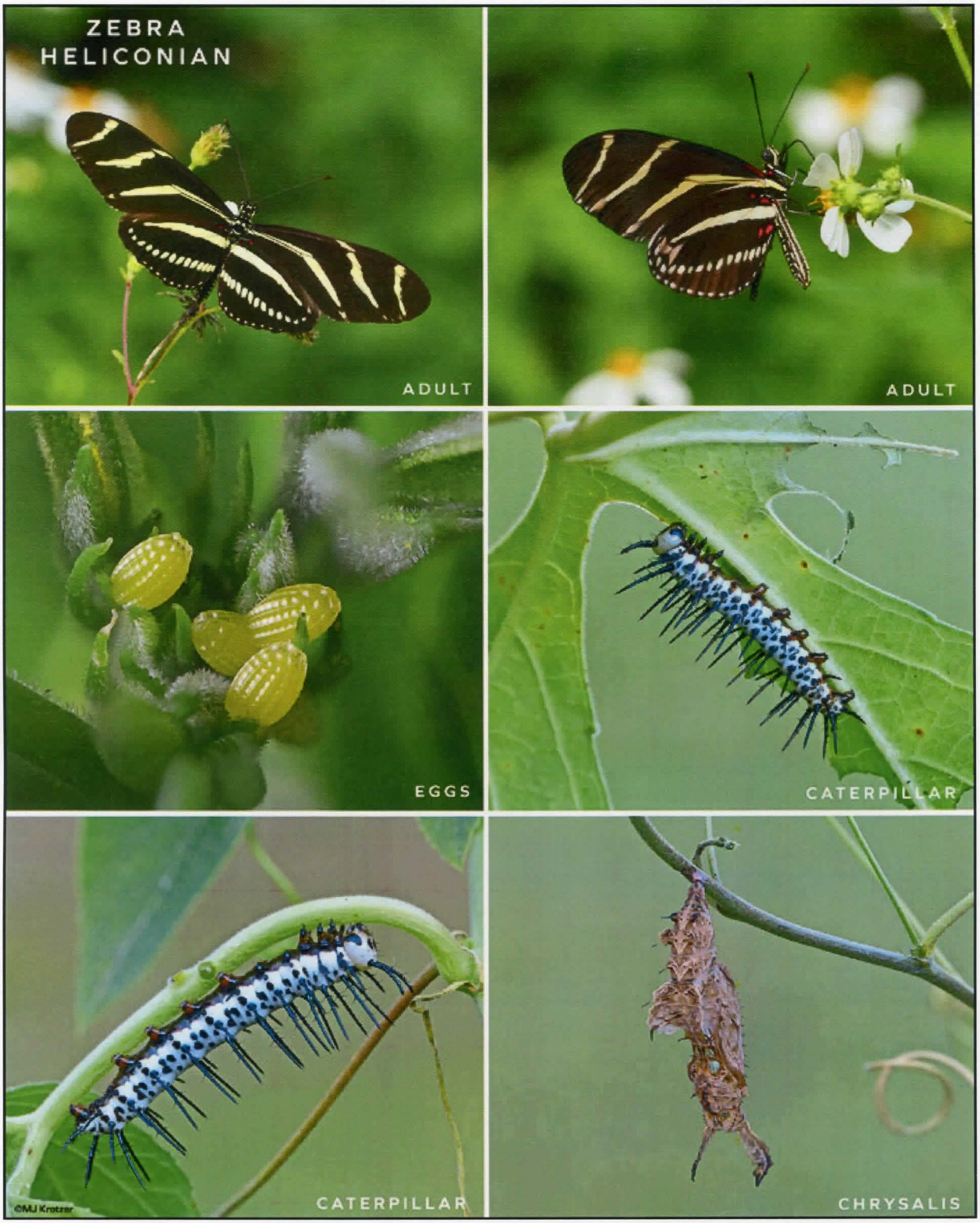

Figure 5. Zebra Heliconian, *Heliconius charithonia*, Baldwin County, AL and Duval County, FL; Hostplants: Passionflowers, *Passiflora* spp.

Figure 6. Common Mestra, *Mestra amymone*, Hidalgo and Starr counties, TX; Hostplants: Noseburns, *Tragia* spp.

Figure 7. Queen, *Danaus gilippus*, Baldwin County, AL and Palm Beach and Taylor counties, FL; Hostplant: Milkweeds, *Asclepias* spp.

Figure 8. Hammock Skipper, *Polygonus leo*, Monroe County, FL; Hostplants: Jamaican Dogwood, *Piscidia piscipula* and other legumes

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MATT BLAINE'S MESSAGE

I am attaching a couple photos that I took of the area beyond my garden in Laurel, Delaware, on July 23, 2024 (morning ~9.00 am). You will see the problem. There are 0 butterflies! I have planted more flowers than usual but for the last 3 years we have seen almost no butterflies on this date. It is shocking as before covid we would have hundreds every day. We have a similar problem in Florida (My Wife and I live both in Delaware and Florida).

July 23 (~9:00 am)

I went out for a few minutes later (same day ~9:15 am) and there was one butterfly out.

July 23 (~9:15 am)

I was out the afternoon of **August 11**, 2024, and noticed all of the Butterflies and was glad to see them back.

September 3, 2024 — even better news. We finally are seeing more butterflies since I took these photographs, but still much fewer than in the past.

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TAYLOR RIDGE *CATOCALA* (WALKER COUNTY, GEORGIA)

By
Robert J. Borth

I first heard of the Taylor Ridge area of northwest Georgia from James Adams in 2021. At that time, James, Lance Durden, Jeff Slotten and I were surveying Alligator Creek WMA for Lepidoptera, especially *Catocala grisatra*. I became intensely interested when James indicated he had found multiple specimens of the equally rare *C. miranda* along the Armuchee Ridges of Walker County.

Taylor Ridge, named for a Cherokee Indian chieftain, is approximately 40 miles (64km) in length within the Chattahoochee National Forest. Located at the southern foothills of the Appalachians, Taylor Ridge is covered by extremely rich forests. Not surprisingly these forests support a very diverse Lepidoptera fauna. James guided Lukas Keras in 2023 when Lukas took a female *C. miranda* for eggs on 27 June near Taylor's Ridge and both Lukas and Larry Gall were eventually able to rear larvae to adults on northern native, *Crataegus pedicillata*. The allure was so great that by 2024 I decided I had to explore Taylor Ridge for myself.

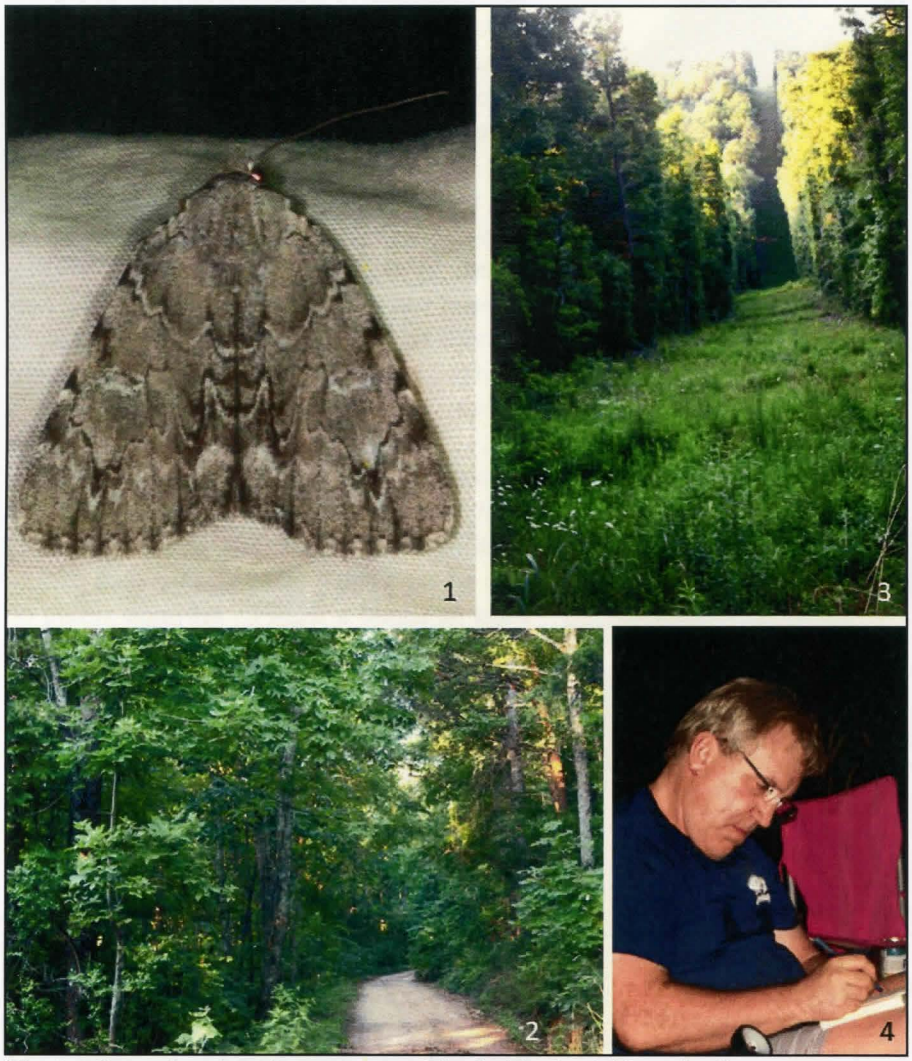

Fig. 1. ***Catocala miranda.***
Fig. 2. Taylor Ridge private drive.
Fig. 3. Taylor Ridge pipeline cut.
Fig. 4. James Adams listing ***Catocala.***

I called fellow active Southern Lepidopterist Ricky Patterson, who is a retired engineer and avid *Catocala* collector, to join me for a 12-14, June 2024 expedition to Taylor Ridge. Ricky's knowledge and friendly sense of humor had made him an ideal collecting companion on previous *Catocala* searches and together we looked forward to visiting James Adams on his turf.

I arrived early enough on 12 June to survey the surrounding area and began checking out the gravel roads winding up and down the ridge. I became somewhat disoriented on Mountain View Road and a quick internet search revealed that I was in the immediate vicinity of the crumbling ruins of Corpsewood Manor. Apparently, this area of Taylor Ridge is also known as devil worshippers' mountain due to the Manor compound built atop the ridge. In 1982 the Manor became a gruesome murder scene where satanic statues, whips, chains, blood and human skulls were found in what was known as the Chicken House. The grisly murders that took place there in the third floor Pink pleasure Room included one victim, Dr. Scudder, who like me was from Milwaukee, Wisconsin. This was hardly the introduction I had expected knowing that I would be spending nights alone on the ridge with only a net and my overly fertile imagination.

My mood improved considerably when Ricky arrived at our motel in Trion. Soon James graciously agreed to meet us to point out his primary collecting area on the ridge. Collecting was along a semi-private gravel road leading up to the home of James' acquaintance who kindly provided permission. Up along that road I was able to set up my 400-watt MV light sheet at a great vantage above a pipeline cut. Ricky put two light traps higher up the hill and a couple light traps below and across the road. I generally use bait to attract *Catocala* but prior experience in the Appalachians and dissuasion from James dampened my enthusiasm for baiting. James was right and despite using traps baited with enticing fermenting bananas we attracted only a few common *Catocala* to bait over the three nights.

Weather was excellent with temperatures reaching the low nineties during the day dropping to the upper sixties during the night. The moon phase was 34% on 12 June increasing to 53% three nights later by 14 June and the moon set early between 1 and 2 am. Notwithstanding these perfect conditions I remained a bit skeptical that *C. miranda* would actually show up. I was doubtful because this species is generally very rare and an intensive search failed to find any *Crataegus* foodplants known to be used by the larvae. Instead, the forest was dominated by hickories, oaks and blueberries which are used by other *Catocala* species.

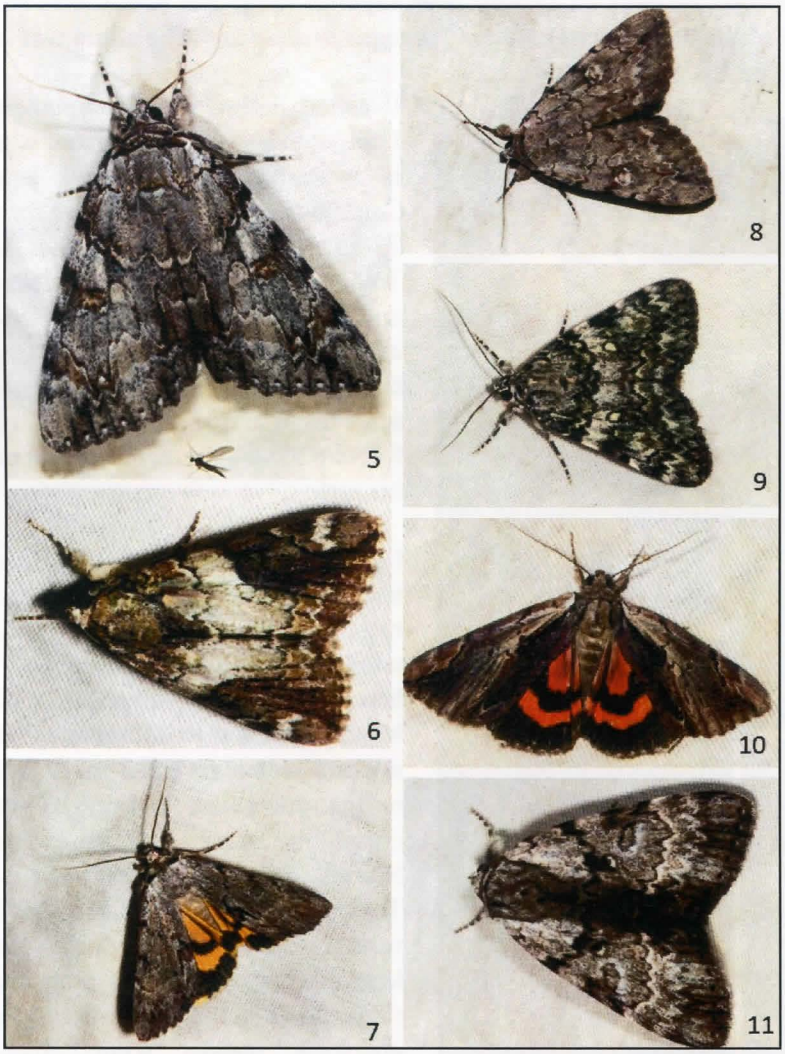

Fig. 5. ***Catocala dejecta.*** **Fig. 6.** ***Catocala micronympha.***
Fig. 7. ***Catocala sordida.*** **Fig. 8.** ***Catocala judith.***
Fig. 9. ***Catocala lineella.*** **Fig. 10.** ***Catocala ultronia.***
Fig. 11. ***Catocala andromedae.***

After witnessing a dizzying array of insects throughout the night at 4:17 am a *C. miranda* showed up at the sheet. This unassuming gray, diminutive *Catocala* species could still make me tremble with excitement and it remained flighty refusing to land on the sheet. I felt a great sense of relief when I jarred it before it could disappear back out into the night. That it was actually here and we weren't too early in the season could only be an omen of more good things to come. In fact, at 5:09 am a *C. amestris* showed up at the sheet. James has only recorded a few *C. amestris* over the years as the foodplant *Amorpha* is not evident in the vicinity.

By sunrise Ricky returned to the sheet to his light traps sitting above the sheet on the pipeline cut, down below and on the other side of the road. Upon opening each of four traps he found a fresh *C. miranda* sitting on top of the catch. This confirmed my impression based on prior experience that *C. miranda* is generally a late flier, usually between 3:00 and 5:30 am. We had collected a record five *C. miranda* on our first night!

The second night was better at the sheet with one *C. miranda* coming in early and one late. Unfortunately, none showed up in the light traps. The reverse occurred on the third night when three *C. miranda* showed up in the traps but none were found at the sheet. The third night at the sheet was still very enjoyable as James and daughter Sam joined us on the ridge after we visited James' most impressive collection in Dalton. Our trip had exceeded all expectations. We had collected 13 species of *Catocala*, which was still a fraction of the 47 *Catocala* species collected over the years by James at Taylor Ridge. The possibility of over 50 species, shown in Table 1, leads me to believe that Taylor Ridge or another more northern Appalachian site may be the world's most diverse *Catocala* locality.

Table 1. Taylor Ridge Catocala

	Adams List	No. observed 12-14.vi.2024
1	*alabamae*	
2	*amestris*	1
3	*amica*	2-10
4	*andromedae*	over 10
5	*angusi*	
6	*carissima*	
7	*cerogama*	
8	*clintonii*	
9	*coccinata*	2-10
10	*connubialis*	
11	*dejecta*	2-10
12	*epione*	over 10
13	*flebilis*	
14	*gracilis*	
15	*grynea*	
16	*habilis*	
17	*illecta*	
18	*ilia*	2-10
19	*innubens*	
20	*insolabilis*	1
21	*judith*	2-10
22	*lacrymosa*	
23	*lineella*	
24	*luctuosa*	
25	*maestosa*	
26	*micronympha*	over 10
27	*minuta*	
28	*mira*	
29	*miranda*	2-10
30	*nebulosa*	
31	*neogama*	
32	nr. *residua*- wf	
33	*obscura*	
34	*palaeogama*	
35	*piatrix*	
36	*pretiosa*	
37	*residua*	
38	*retecta*	
39	*robinsonii*	
40	*sappho*	
41	*serena*	
42	*similis*	
43	*sordida*	over 10
44	*ulalume*	
45	*ultronia*	2-10
46	*umbrosa*	2-10
47	*vidua*	

from nearby Rocky Face Ridge
cara
subnata
potential addl. species
amatrix
blandula
consors
crataegi
marmorata
muliercula
praeclara

Based on this experience I have a few recommendations. Be prepared to use a variety of methods for attracting *Catocala*. In this case bait was a bust but lights worked well. The necessity to have redundancy of equipment is critical. When my Honda generator inexplicably failed reliable Ricky was there with a backup. When Ricky's chair failed he found a backup bait pail to sit on at the sheet. Buy new clean sheets every few years – the moths don't care but to save yourself abuse from companions. The Waffle House serves good food fast and at least one good buffet is a must when burning calories in the field. Take precautions to avoid chigger bites as temperatures at this time are ideal for them as well as for moths.

One nagging question remained. Does *C. miranda* use *Crataegus spathulata*, which is known from Walker County, as its foodplant at Taylor Ridge? It does feed on *Crataegus spathulata* in Florida and throughout much of its range. Hugo Kons Jr. and I have taken a few *C. miranda* near Blacksburg, Virginia outside the USDA range of *Crataegus spathulata* but we did see other *Crataegus* in the vicinity. There are other county records of *C. miranda* from Georgia, Mississippi, Tennessee, West Virginia, Ohio and Pennsylvania outside the range of *C. spathulata*.

We cannot explain why we found ten *C. miranda* in three days but none of us have seen any *Crataegus* at all in the area. I have found many hardy *C. mira* larvae feeding with a few *C. miranda* larvae on *Crataegus spathulata* elsewhere, however both James and Lukas have recorded only a single *C. mira* from Taylor Ridge. In fact, James has observed only a very few other *Crataegus*-feeding *Catocala* over many years of collecting at Taylor Ridge. A possible explanation is that *C. miranda* is feeding below and hilltopping to our position near the top of the ridge. However, James had even recorded three *C. miranda* at his back porch light where no *Crataegus* is present. More study, including looking for *Crataegus* when it's in blossom and much more visible, will be needed to understand the significant presence of *C. miranda* in northwest Georgia. To solve this mystery I would recommend going to Taylor Ridge in the Spring when larvae are present but feel free to skip Mountain View Road and Corpsewood Manor.

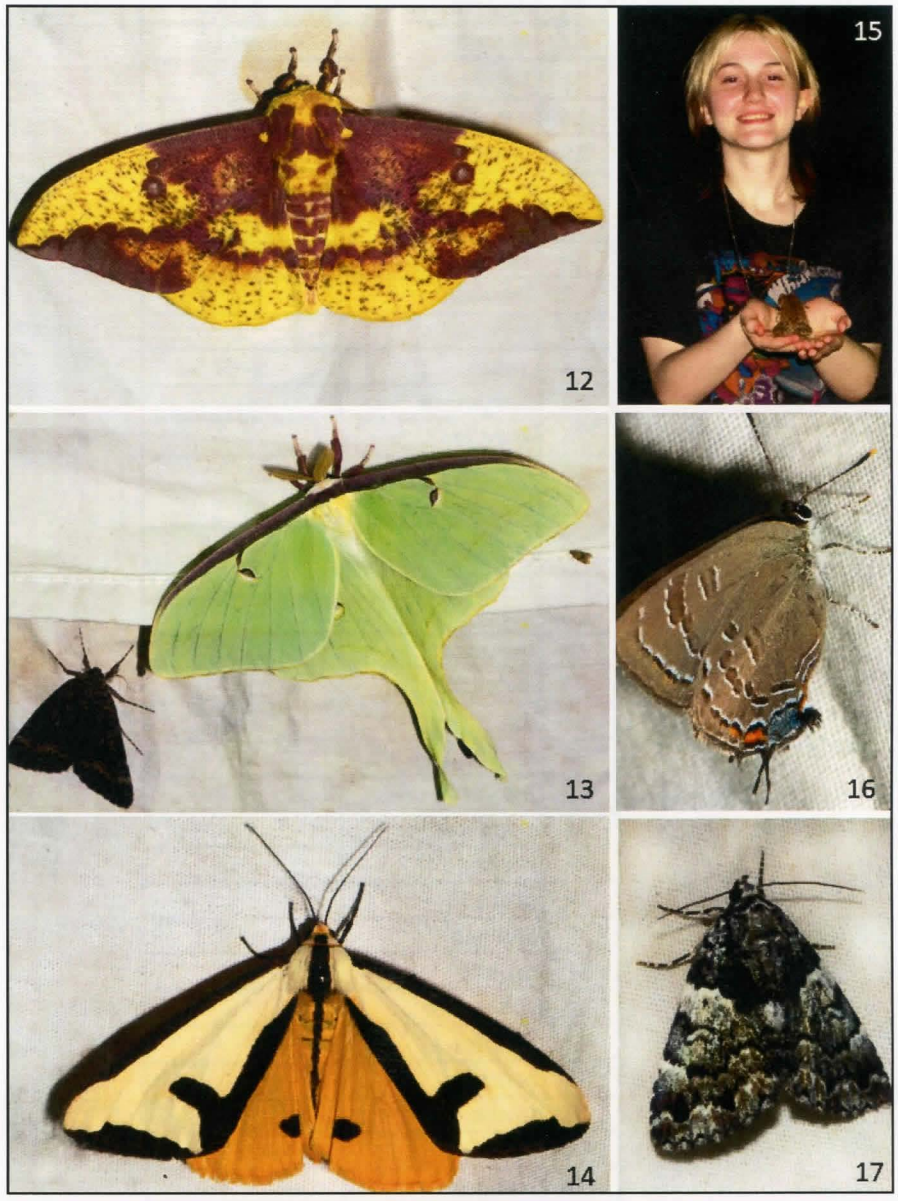

Fig. 12. ***Eacles imperalis.***
Fig. 13. ***Actias luna*** **(behind,** ***C. epione*****).**
Fig. 14. ***Haploa clymene.***
Fig. 15. Sam with hungry toad.
Fig. 16. ***Satyrium falacer.***
Fig. 17. ***Allotria elonympha.***

(Robert Borth, E-mail: bobborth@sbcglobal.net)

VENTRAL HINDWING COLOR PATTERN VARIATION IN THE GIANT SWALLOWTAIL *HERACLIDES CRESPHONTES* (CRAMER, 1777) (LEPIDOPTERA: PAPILIONIDAE)

BY

MARC C. MINNO

INTRODUCTION

Being one of the largest butterflies in North America, the Giant Swallowtail is an iconic species. Although the Giant Swallowtail has been shown in numerous books and field guides since Cramer's published hand-colored illustrations, variation in its color pattern has been given little attention. Much of the discussion has centered on differences between the Giant Swallowtail and the closely similar Thoas Swallowtail, *Heraclides thoas* (Linnaeus, 1771).

Shiraiwa *et al.* (2014) examined the biology, morphology, color pattern, and genetic sequences of Giant Swallowtails from throughout its extensive range and found a cryptic species which they named the Western Giant Swallowtail, *Heraclides rumiko*. This taxon occurs in the southwestern USA southward into Panama. *Heraclides cresphontes* occurs throughout eastern and midwestern North America from southern Canada to the Gulf coast and Florida Keys. The two species overlap in central Texas (Shiraiwa *et al.*, 2014).

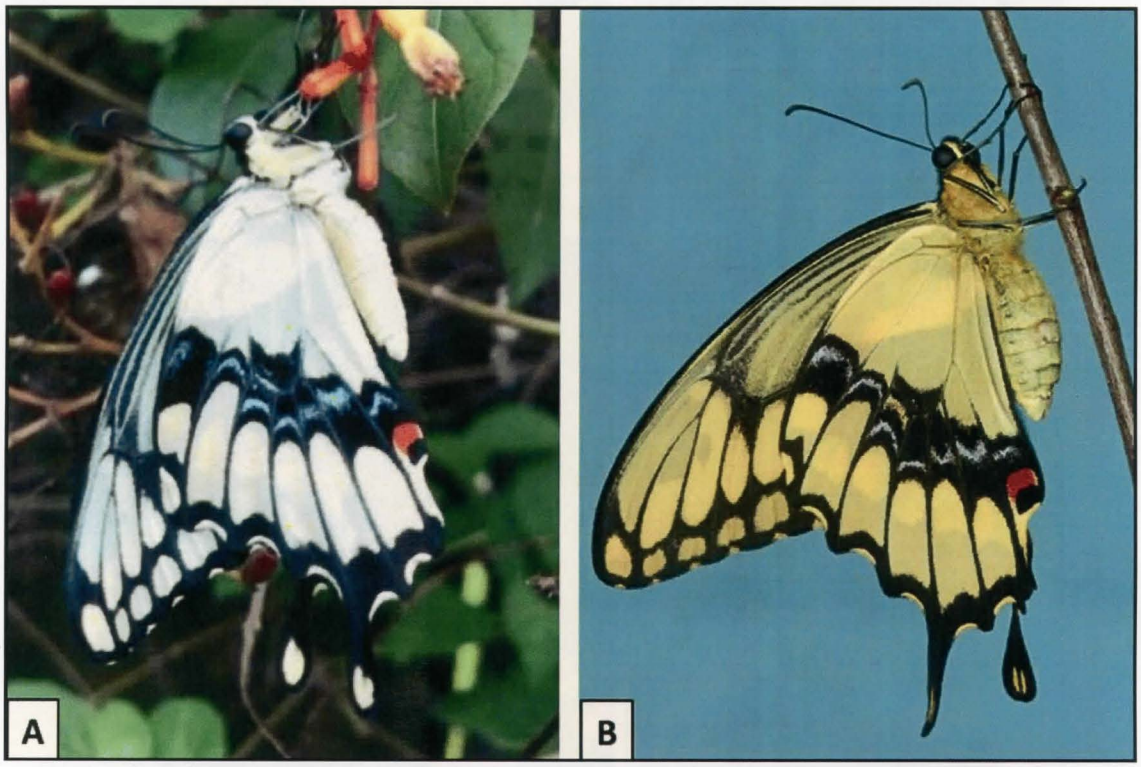

Fig. 1. *Heraclides cresphontes* variants from Ms. Jeanne Farnsworth's garden in Boca Raton, Florida. A) Whitish ground color, no reddish patch (photo by J. Farnesworth). B) Yellow ground color, no reddish patch (photo by MC Minno).

The Giant Swallowtail is a frequent visitor to my garden in Gainesville, Florida and I've seen many individuals in the field throughout the state. However, I was astonished in August 2020 when I saw an image of a newly emerged Giant Swallowtail found by Jeanne Farnsworth in her garden in southern Palm Beach County, Florida. This individual had whitish undersides and lacked a reddish patch near the middle of the hindwing (Fig. 1 A).

Other butterfly enthusiasts in Broward County also found *H. cresphontes* adults with reduced or absent reddish patches. Could there be another cryptic swallowtail species in southern Florida?

RESULTS

Ms. Farnsworth continued to rear a number of Giant Swallowtails adults from larvae collected on Wild Lime, *Zanthoxylum fagara* (L.) Sargent, trees in her garden and the resulting adults showed a wide range of variation (Fig. 2). In January 2021 I visited Ms. Farnsworth and photographed Giant Swallowtails from her garden.

Fig. 2. Range of variation seen on adult *Heraclides cresphontes* reared from wild caterpillars on *Zanthoxylum fagara* in Ms. Jeanne Farnsworth's garden in western Boca Raton, Florida. Note the decreasing number of cells with reddish bases: A) 3, B) 2, C) 1, and D) 0. Photos by J. Farnesworth.

Since some of the south Florida swallowtails resembled *H. rumiko*, I asked Dr. David Wagner at the University of Connecticut to sequence the cytochrome C oxidase I (COI) mitochondrial DNA barcode of a specimen without the reddish patch. The specimen is shown in Figure 2B. The specimen was processed and its data uploaded to the Barcode of Life Data System (BOLD) database. On February 10, 2022 I received an email from Dr. Wagner stating: (your specimen) "is nearly identical to many specimens that have been sequenced from across the US and Ontario. At least from the barcoding gene there is no evidence believing this form is anything evolutionarily distinct".

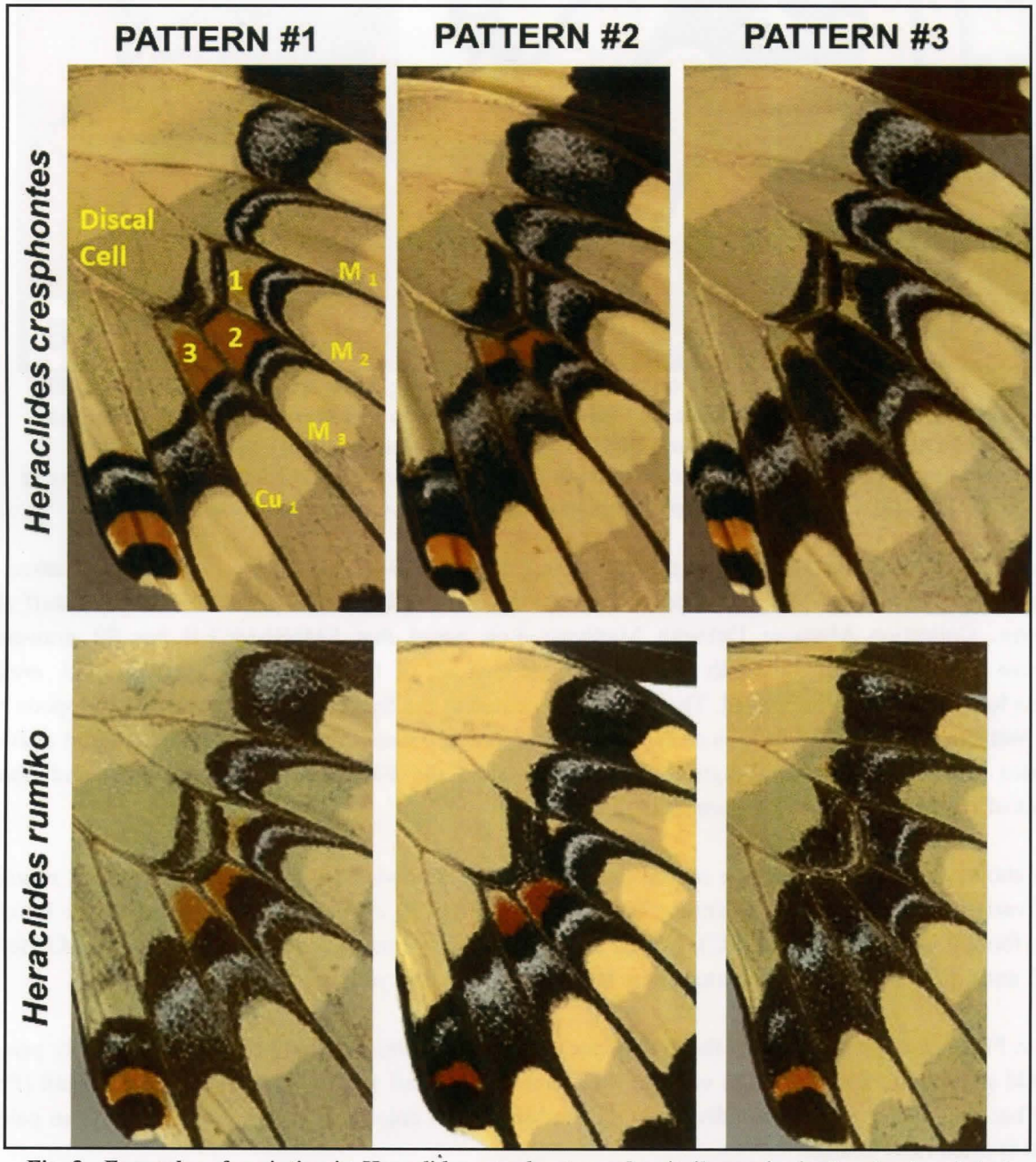

Fig. 3. Examples of variation in *Heraclides cresphontes* and a similar series in the closely related *Heraclides rumiko*. Numbers in yellow indicate areas that may be reddish as discussed in the text. Images are from the Butterflies of America website.

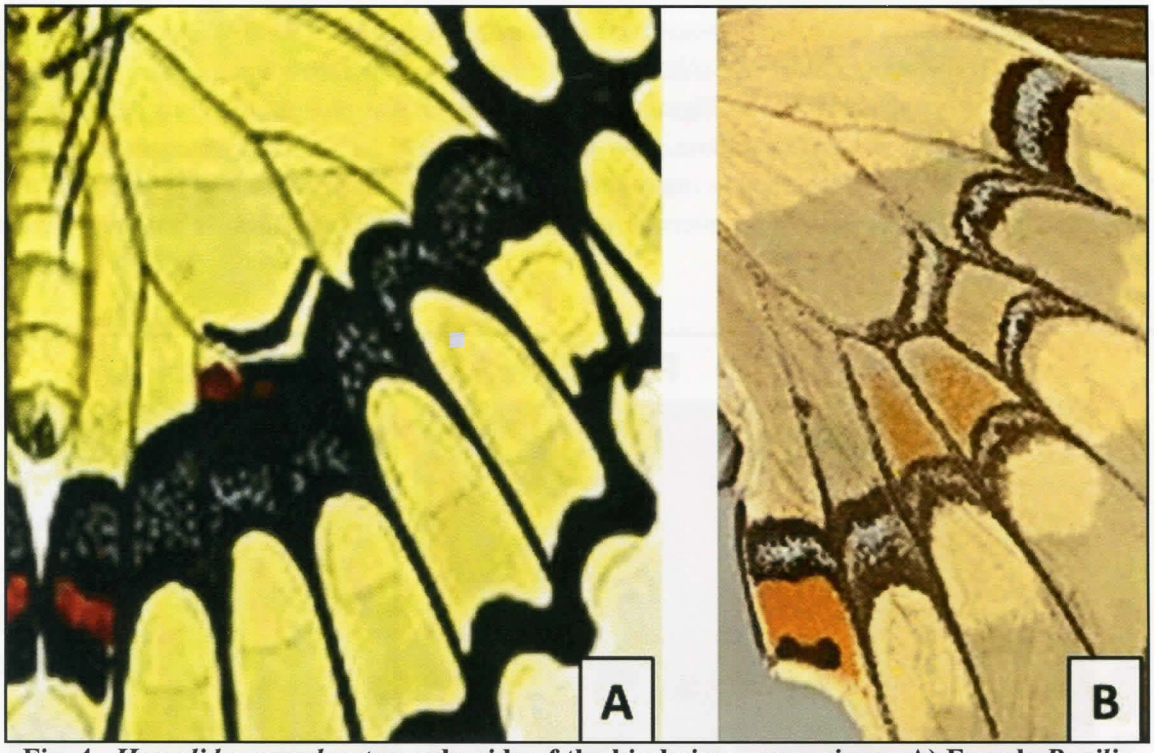

Fig. 4. *Heraclides cresphontes* underside of the hindwing comparison. A) Female *Papilio cresphontes* illustration shown on Plate 165, Figure A in Cramer (1777) (copy from the Cornell University collection, digitized version available online), specimen origin uncertain. B) Male neotype specimen from Brooklyn, New York designated by Shiraiwa *et al.* (2014) (images available at the Butterflies of America website).

I was not able to work further on this project during the COVID-19 pandemic, but recently I asked Florida Museum of Natural History-McGuire Center for Lepidoptera and Biodiversity (FMNH-MCLB) staff about *H. cresphontes*. Collection Manager Deborah Matthews Lott noted that FMNH-MCLB has 22 drawers of *H. cresphontes* specimens. Curator Keith Willmont stated that all of the current FMNH-MCLB *H. cresphontes* specimens have been digitally imaged. The images are posted at the Symbiota Collections of Arthropods Network (SCAN) website. I also found images of *H. cresphontes* and *H. rumiko* museum specimens posted at Butterflies of America website. On Friday August 23, 2024 I visited the FMNH-MCLB to examine and photograph specimens of *H. cresphontes* and *H. rumiko* in the collection.

Figure 3 shows some of the variation on the underside of the hindwing of *H. cresphontes* and *H. rumiko*. The range of variation in both species is similar, but more extreme in *H. cresphontes*. I focused on the basal area of cell M1 (formed by veins M1 and M2), of cell M2 (formed by veins M2 and M3), and of cell M3 (formed by veins M3 and Cu1). These Areas of Interest are labeled 1, 2, and 3 in yellow script on Figure 4.

As seen in Fig. 1, the ground color of the undersides of *H. cresphontes* may be whitish, but is usually pale yellow. In the field some butterfly enthusiasts confuse the Giant Swallowtail for the Easter Tiger Swallowtail (*Pterourus glaucus*) because of the yellowish undersides. The reddish patch color also varies considerably from pale orange to red but is often rusty-orange.

Having compared specimens and images from throughout the range of *H. cresphontes*, I found that the ground color of Area of Interest 1 is usually pale yellow but it may be mixed with reddish scales or as seen in Fig. 2A it may be mostly reddish with yellow along the veins. The ground color of Area of Interest 2 and 3 is usually reddish, often with some yellow at the base or along the veins. On specimens where the reddish patch is

reduced or absent, the inner black border of the medial band is expanded toward the base. Specimens with a reduced or absent reddish patch occur through much of the range of *H. cresphontes* but especially in the south. I did not see any with a reduced or absent reddish patch from the northeastern USA.

DISCUSSION

There seems to be tremendous variation in the color pattern on the underside of the hindwing in *H. cresphontes*. Perhaps that is why it has been so poorly described in the literature. Figure 4 compares one of Cramer's (1777) illustrations of *H. cresphontes* and the neotype designated by Shiraiwa *et al.* (2014). The latter authors made efforts to find Cramer's specimens but were not successful. Chainey (2005) gives an account of Pieter Cramer and what may have happened to his collection after he died. Cramer (1777) included illustrations of a female (upperside and underside) on Plate CLXV Figure A and a male (upperside) on Plate CLXVI, Figure B. Shiraiwa *et al.* (2014) selected the latter illustration as the lectotype for *Papilio cresphontes* Cramer, 1777. They also selected a male neotype specimen from Brooklyn based on Cramer's text and a note on one of the original drawings mentioning New York. The underside of the neotype bears little resemblance to Cramer's illustration of the female ventral side (Fig. 4A), which has a reduced reddish patch. The illustrated female is perhaps an individual from the south (Cramer also mentions South Carolina in his text).

Why is there so much variation in the ventral hindwing pattern of *H. cresphontes* and of what importance is the reddish patch? All of the closest relatives of *H. cresphontes* have similar color patterns that include a central reddish patch – (*H. melonius* Rothschild & Jordan, 1906), *H. thoas*, *H. oviedo* (Gundlach, 1899), *H. paeon* (Boisduval, 1836), and *H. homothoas* (Rothschild & Jordan, 1906) (Tyler *et al.* 1994). So the reddish patch would seem to be important in this lineage.

To me, specimens of any of these species without the reddish patch seem odd, unusual, or perhaps could even be another species. I found a specimen without the reddish patch in the Florida State Collection of Arthropods (now at FMNH-MCLB) collected by Howard C. Weems, Jr. on Stock Island, Florida, Monroe County on September 5, 1961. Dr. Weems identified it as *Papilio thoas* (his determination label is attached to the specimen) most likely because it looked so different from typical *H. cresphontes* in lacking the reddish patch. This specimen was cited by Charles Kimball, Jr. (1965) in his account of *H. cresphontes*, the only specific specimen mentioned under the Giant Swallowtail, perhaps to correct Dr. Weems misidentification of this odd individual.

If humans are confused by the variation, how do the butterflies deal with it? Perhaps the reddish patch is not so important, but simply persists because it is part of the genetics of the *H. cresphontes* group. Or perhaps the reddish patch was more important in the past, but the selective pressure to keep it has changed or become more lax. More studies are needed to help determine the cause of the variation in *H. cresphontes*.

ACKNOWLEDGEMENTS

Many thanks to Wayne Barnes, Cynthia Chambers, Barbara DeWitt, Jeanne Farnsworth, Mona Johnston, Sandy Koi, Amy Rielly, and Melissa Lackey for their notes, photos, and help with this project.

David Wagner graciously offered to sequence one of the odd Giant Swallowtails from south Florida and his results were very helpful to understanding the variation. Thank you so much Dr. Wagner!

I also greatly appreciate the help of Deborah Matthews Lott, Andrei Sourakov, Keith Willmott, and Marcella Diaz Zamora with the Florida Museum of Natural History, McGuire Center for Lepidoptera and Biodiversity for information about the museum's Giant Swallowtail specimens and access to the collection.

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

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ON THE OREGON TRAIL

BY

Craig W. Marks

Due to health issues, I spent late February, and all of March, April and May of 2024 in the back room of my house watching through the windows those few butterflies that chanced to appear in my backyard. Before those health issues developed, I had done my usual research for my annual summer butterfly trip, this year focusing on SW Oregon. Specifically, past NABA Count results for the Cascade-Siskiyou National Monument and Siskiyou Crest counts had reflected good chances to see several "lifer" butterflies, including Great Arctics (included on my top ten wanted list), Pacific Fritillaries, Western Sulphurs, Great Coppers, California Crescents and Leanira Checkerspots. Other potential butterflies included Snowberry Checkerspots Gray Marbles and Lorquin's Admirals (both seen only once before).

In the late fall of 2023, I had reached out to the organizer of those counts, Dianne Keller, who immediately responded, inviting myself, Bob Harden and Annette Parker to join her group for the Cascade-Siskiyou National Monument Count in the third week on June. Bob, who has joined me on trips to Big Bend Texas, Wisconsin (twice), Minnesota, Colorado (twice) and New Mexico, had committed to go before my health issues arose. Annette, the botanist in our NABA count group, adjusted her summer schedule so she could attend as well. While there was some initial question about whether I would be able to travel, I had never been to Oregon and was determined to make the trip. Fortunately, I was recovered sufficiently by our departure date, June 18, to make the trip.

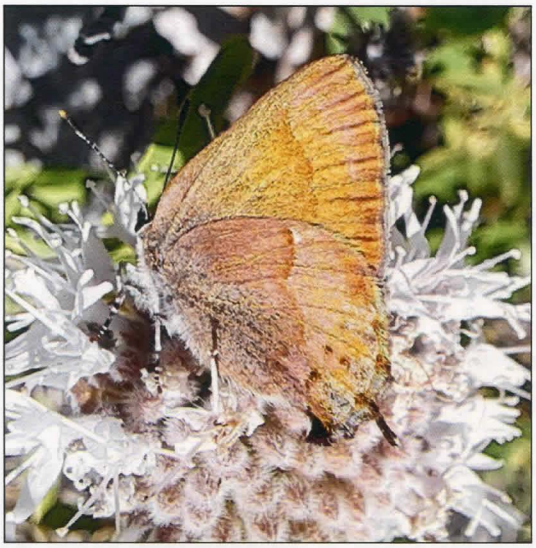
The Cascade-Siskiyou National Monument Count is held inside of that National Monument, about 15 miles out of Ashland OR. Rather than waste either time or space describing the location, I would refer the reader to Dianne's recent excellent article about both the location and the count in NABA's American Butterfly magazine (Fall 2023). We ended up spending three glorious days (including the count on Saturday, the 20th) moving around CSNM.

Mt. Shasta from Bunny Flats (Photo by CWM)

After shopping for the cheapest airfare, Annette and I flew into Redding CA on the 18th. Bob, using airlines mileage points that required that he fly directly into Medford OR, did not join us until the evening of the 19th. Renting a

vehicle with all wheel drive and high clearance (on Dianne's recommendation), on the morning of the 19th, Annette and I drove north from Redding to Medford where we had found cheaper lodging than in Ashland. While in route, we spent several hours at Mount Shasta, north of Redding, before continuing on to Oregon.

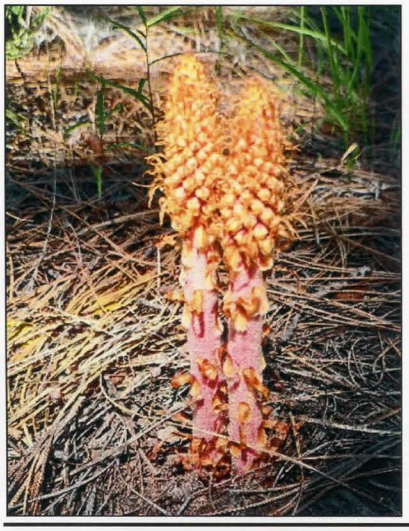
We had a great day at Mount Shasta. First, it was so nice to get away from Louisiana's heat and humidity. While warm, the weather at Mount Shasta was comfortable, and we saw about 26 species of butterflies, including numerous Lorquin's Admirals and California Tortoiseshells. At the main campground Nelson's Hairstreaks, a subspecies of the Cedar Hairstreak, were in abundance, primarily feeding on Mountain Coyote Mint. The mint scent was noticeable whenever we disturbed the flowers. There were also a couple that feed on mistle-toe, Thicket Hairstreaks and a Johnson's Hairstreak; two elfins, W. Pine Elfins and Brown Elfins and two checkerspots, Variable and Northern Checkerspots, all feeding at those same flowers.



Nelson's Hairstreak at Mountain Coyote Mint (Photo by A. Parker)

While I have seen eastern Juniper Hairstreaks and western Siva Hairstreaks, the Nelson's Hairstreaks were a new subspecies for me. Johnson's Hairstreak (*Callophrys johnson*) is a larger hairstreak that is almost identical ventrally to the Thicket Hairstreak but is chocolate brown dorsally. It has a more restricted range compared to the Thicket Hairstreak and is found in Washington and Oregon into California. The Johnson's Hairstreak was a lifer.

In the afternoon, we pulled off the main road that ascends the mountain and walked into the pine woods along a dirt road. The temperature was cool in the shade of the pines, and the sounds of the few birds singing combined with the soft breeze through the pine trees was so soothing. In the shade beneath some pines I saw three strange tan, somewhat mushroom looking plants. Beckoning Annette to identify the plants, she was quite excited, telling me they were Woodland Pinedrops (*Pterospora andromedea*, see photo).



Woodland Pinedrop (Photo by A. Parker)

Shortly thereafter, a Great Arctic flew up and landed literally at our feet. As I have reported in the past, I have a ten "most wanted list" of butterflies that I hope to eventually see, and accordingly, plan each summer to try and find one or more. The last few years I've been focusing on arctics, alpines and satyrs. This year's candidate was the Great Arctic (*Oeneis nevadensis*).

Great Arctics, aka Nevada Arctic, are a large arctic, larger than Chryxus or Alberta Arctics. Its range is essentially along the Pacific Coast from Washington south into California. It appears to take two years to mature/eclose but is recorded in all years. Dianna's count reports reflect significantly higher sightings during even numbered years. The larval foodplants are identified as "various grasses." Contrary to its "arctic" name, its preferred habitat includes lower elevation forest openings, dirt roads and pine clearings. I saw a second at Mount Shasta at the campground water pump. Little did I know how common it would be at CSNM.

Great Arctic (Photo by B. Harden)

The other highlight of the day was a Gray Marble (*Anthocharis lanceolata*). While I had previously seen one in April 2019 at Limestone Canyon in CA, that had been a quick flyby. The one at Mount Shasta, seen within minutes of the first Great Arctic, was floating in a wooded glen, similar to the way Falcate Orangetips fly. The Gray Marble is not really a marble at all, but an orange-less orangetip. Its wing shape actually closely resembles the Falcate Orangetip, and its coloring is very similar to a female Falcate. Ranging from extreme southwestern Oregon south into much of California, it had been regularly sighted during the CSNM Count so I knew to be on the lookout for it, but, as with the Great Arctic, I was not anticipating seeing it in the kind of numbers that we did at CSNM.

Gray Marble (Photo by B. Harden)

Annette and I met Bob the next morning, Thursday the 20th, at our motel in Medford and headed for CSNM. Arriving at the information station before 10:00, we turned on to East Lake Hyatt Road. Less than a mile up that road we came upon an open grassy area along the road about 50 yards long and 25 yards deep. There I saw a couple of small fritillaries flying. To Annette's chagrin, I stopped in our lane of travel and jumped out to investigate. They were, as I had hoped, Pacific Fritillaries, another lifer for me.

Pacific Fritillaries, aka Western Meadow Fritillaries (*Boloria epithore*) are lesser fritillaries. Dorsally, they are similar to the greater fritillaries of the region but ventrally lack the silver spots that the greater frits possess, replaced by a random pattern of purple and russet markings. They range from Washington through Oregon into California, along the coast, flying in clearings and roadsides through wooded areas.

Pacific fritillary (Photo by B. Harden)

Over approximately 30 minutes, we found several Pacific Fritillaries, Great Arctics, Gray Marbles, Hoffman's Checkerspots and one Snowberry Checkerspot in that one small opening in the woods. Snowberry Checkerspots (*Euphydryas colon*) are considered by some to be a separate species and by others to be a subspecies of *E. chalcedona*. For example, while Pelham and Pyle consider them separate species, NABA does not. Described as the area's blackest checkerspot, its larval foodplants are snowberries which Annette identified as present in that location.

Snowberry Checkerspot (Photo by B. Harden)

The Great Arctics were abundant throughout the day; actually, throughout all three days at CSNM). I estimate we saw more than 20 each day. Their flight and behavior reminded me of Macoun's Arctics (seen in Wisconsin in 2020, see SLS Newsletter Vol. 43 No. 1) with a gliding, floppy flight, moving around within open areas in the trees, often perching on a log, branch or stick with its wings partially open. On several occasions I saw one dash after a California Tortoiseshell or a Lorquin's Admiral, only to return to its initial perch.

Jumping ahead for a moment, at the end of the count day, Saturday, my group stopped in Tub Springs Wayside picnic area to tally up our results. There in the dappled sunlight, a male Great Arctic and a Mourning Cloak battled back and forth for dominance of a stump in the sun, chasing after each other repeatedly (see photo below). The Great Arctic typically seemed to return to the stump first while the Mourning Cloak circled. The Mourning Cloak finally gave up and flew away. While sitting there watching this show, a Sara Orangetip floated up to our table, turned and flew away, the only one I saw during the trip.

Great Arctic and Mourning Cloak (Photos by D. Myers)

Further down that road on Thursday we came upon a large open area that had undergone some grading. Up a hill was a water tank that was leaking water down a dirt road, creating a large muddy spot that attracted several blues, greater fritillaries, checkerspots and skippers. In that area, Clodius Parnassians were abundant, feeding at Narrowleaf mule-ears. Also feeding at those flowers were an Anise Swallowtail, several Painted Ladies and another Snowberry Checkerspot.

Across the road was an area filled with a low growing, small white flower visited by numerous Mylitta Crescents, Lilac-bordered Coppers and a Gorgon Copper (*Lycaena gorgon*). Another lifer for me, Gorgons are a larger copper with a range that extends throughout California into extreme southwestern Oregon. Similar ventrally to Great Coppers (more to come on that species), they are distinguishable dorsally by a bright purplish-orange coloring. We ended up seeing 33 species that day.

On Friday, the 21st, Dianne offered to be our guide around CSNM, and we met her at the information center around 9:30. Before lunch we walked/drove down Jenny Creek Road which descends alongside a beautiful running brook and along which we saw more Clodius Parnassians, Gray Marbles, Hoffman's and Snowberry Checkerspots, Pacific Fritillaries and Great Arctics. We also saw numerous Western Sulphurs (*Colias occidentalis*), another lifer for me. Westerns are a bright yellow sulphur that has, as its name implies, a western, albeit scattered range. Usually distinguishable from Common/Clouded Sulphurs by the lack of "eurytheme" spots on the ventral hindwing, it flies along wooded roadsides, streamsides and open glades.

Along that road we recorded three species of coppers, Purplish, Lilac-bordered and Great Coppers (*Lycaena xanthoides*), another a lifer for me. Some sources lump this copper, *L. editha* and *L. dione* together as subspecies of *editha*; however, the majority now treat them as three separate species. This copper and the Gray Copper (*dione*) are similar in size and appearance but do not occupy the same range. The Great Copper's range is restricted to the extreme west coast, extending north into western Oregon. It is very close in appearance ventrally to the Gorgon Copper but is a distinguishing gray color dorsally.

In the afternoon, Dianne took us to a field where Mardon Skippers (*Polites mardon*) were known to fly, and they were, in fact, present. We saw several, most of which appeared to be males. Dianne and Annette saw a mating pair. Considered a species of concern, Mardons are a small, mostly gray (at this location) grass skipper. The host plants are listed as various fescue grasses, oatgrasses and sedges. They fly in pine forest openings and grazed meadows (this location had both habitats). This was another lifer for me, and, by the end of the day, we had seen 32 species and a rather loudly complaining Sandhill Crane.

Mardon Skippers (Photo by B. Harden)

Saturday, the count day, I was teamed with Dana Ross and David Meyers, two very pleasant and knowledgeable individuals. I had a great day! I'm not sure exactly what portions of CSNM we covered, but it was primarily at lower elevations and included the leaking tank/muddy road my group had discovered Thursday. Overall, the count team I was on recorded 51 species. I personally counted 38 species, including 18 Western Sulphurs, 23 Great Arctics and 54 Clodius Parnassians (the parnassians were mostly in the area of the leaking tank). I also saw 2 more Great Coppers. The only lifer that day was a field full of Lindsey Skippers. During the count, Bob photographed a Phoebus Parnassian at Boccard Point and Annette photographed a Western Cloudywing at Hobart Bluff.

Lindsey Skippers (*Hesperia linseyi*) are a largish, "branded" grass skipper, bright orange above with a distinctly visible spot pattern on the lower ventral wing, yellowish on the makes, white on the females. Its range just reaches into southwestern Oregon from California. Virtually all of the 14 I counted were nectaring at flowers, primarily at Narrowleaf Mule-ears as identified by David.

Lindsey Skipper (Photo by B. Harden)

On Sunday, the 23rd, Dianne and Barbara offered to guide us around Mt. Ashland. That area is also covered in Dianne's excellent afore-referenced article so, again, I will defer discussion of the location to her article. I netted the first butterfly we saw, a marble, at some bathrooms on the main road up the mountain, which was initially thought to be a Large Marble, but Barbara thought was a Pearly Marble (*Euchloe hyantis*) (see photo). As I understand, the differences between the two are quite subtle in this region with the Pearly Marble reported to be smaller with a "pearly" sheen/bright white appearance the Large Marble lacks. I netted several others to try and determine what we were seeing. Unable to make the differentiation myself, I submitted pictures of several specimens to Dana Ross who identified several as *hyantis*, another lifer for me.

Pearly Marble (Photo by A. Parker)

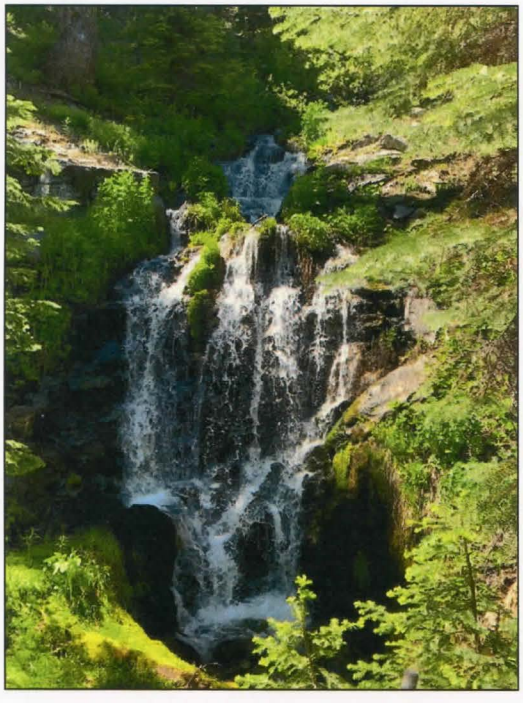
We moved up the mountain, stopping at several seeps along that main road. I had only seen one Arrowhead Blue before (in Colorado about 20 years ago), and Barbara showed me two more. Dianne netted a Pacific Dotted Blue (*Euphilotes enoptes*) for us to inspect. Considered by some to be a Dotted Blue subspecies, others, such as Pyle/Labar, list it as a separate species. Dianne also netted a Sierra Nevada Blue *(Agriades podace*), once considered a subspecies of the Arctic Blue but now listed by some as a separate species. Both qualify as a subspecies lifer or a species lifer for me, as the applicable case may be.

Sierra Nevada Blue (Photo by A. Parker)

At one of the higher stops (a little over 7000 feet in elevation), we encountered several patches of snow. I couldn't pass up the opportunity to throw a snowball at Bob. Alas, the arm is not what it used to be, and the wet missile landed at his feet. In the immediate area, I saw several Sheridan's Hairstreaks and a couple of Summit Blues (*E. glaucon*), considered by some of the older references to be a subspecies of *E. battoides* and by others as a separate species. It was another lifer species or subspecies, as the case may be.

From left to right, CWM, Annette and Bob with Mt Ashland at 7532 feet behind us

Further up the road at a spot Dianne identified as Sternitsky Slope there was a granite outcrop with sedum growing. I netted an elfin perched on a bush below the sedum. After numerous pictures and close inspection, the consensus was that it was not a Moss's Elfin, but a Brown Elfin. From there we moved back down to a lower location on a side road where Dianne and Barbara led us to a wonderful waterfall. It was here that I saw my last Great Arctic of the trip. Also flying here were another California Sister and our first Red Admiral of the trip. On the way off the mountain, we stopped at the ski resort, got ice cream and saw a fresh Milbert's Tortoiseshell, the only one seen on the trip.



Waterfall on Mt Ashland (Photo by CWM)

On our last day, we traveled to Eight Dollar Mountain near Selma OR, about an hour drive from Medford. We went there upon recommendations that we might see some different species and the presence of a California Pitcher Plant (*Darlington californica*) bog. We found the pitcher plant bog at the base of the road up the mountain. The pitcher plants were in bloom (see photo) and we saw a couple of greater fritillaries and one California Crescent.

California Pitcher Plant bog by CWM

The California Crescent (*Phyciodes orseis*) is a large crescent, similar in appearance dorsally to the Field Crescent and ventrally to the Mylitta Crescent, and it is that combination that makes it distinguishable. It has a very limited range which includes extreme southwestern Oregon, portions of the Sierra Nevada Mtns and near San Francisco. We ended up seeing a large colony further up the road at a hillside seep. It was another lifer for me.

California Crescent (Photo by B. Harden)

At the parking area under the bridge at the Illinois River, we found a couple of showy milkweed plants (*Asclepias speciosa*) in bloom with both California and Sylvan Hairstreaks present. Bob also found a Pacific Clubtail (*Phanogomphus kurilis*) at that location. Just before reaching that bridge, we stopped at a designated botanical area maintained by frequent burns which was alive with Great Basin Wood-nymph and one Van Duzee's Cicada (*Tibicinoides vanduzeei*).

Pacific Clubtail (Photo by B. Harden)

Van Duzee's Cicada (Photo by A. Parker)

At a second seep, we saw Rural (*Ochilodes gricola*) and Sonora Skippers (*Polites s*onora), both lifers for me. The Rural Skipper's range "barely" extends into southern Oregon. The Sonora Skipper is reported to be a rather common skipper in the region. We also saw another Gorgon Copper, an Anise Swallowtail and a California Sister. Our last stop up the road was at a beautiful, shaded spot with running water on both sides of the road. There were several species flying, including a Silver-spotted Skipper, another Snowberry Checkerspot and a Woodland Skipper. We ended up seeing 27 species that day.

Over the six days, our group recorded 79 species. I had 18 lifer species and/or subspecies, an incredible number far exceeding my expectations. We saw two different parnassians (Clodius and Phoebus), three swallowtails (Anise, Two-tailed and W. Tiger), only two sulphurs (Orange and Western), seven whites (Margined, Western, Cabbage, Large Marble, Pearly Marble, Gray Marble and Sara Orangetip), four species of coppers (Gorgon, Great, Lilac-bordered and Purplish), ten species of elfins and hairstreaks (Brown, W. Pine, Thicket, Johnson's, Nelson's, Sheridan's, Hedgerow, Gray, California and Sylvan) and 8 species of blues (Echo, Greenish, W. Tailed, Silvery, Arrowhead, Glaucon/Summit, Sierra Nevada and Pacific Dotted).

For the brushfoots, we saw four different greater fritillary species (Hydaspe, Callippe, Zerene and Great Basin), four species/subspecies of checkerspots (Northern, Hoffman's, Variable and Snowberry), three species of crescents (Field, Mylitta and California), three tortoise shells (Mourning Cloak, California and Milbert's), and three wood nymphs (Common, Great Basin and Small). In addition to the butterflies, Annette identified five different species of orchids about which she was thrilled: California lady's slipper (*Cypripedium californicum*), Stream orchid (*Epipactis gigantea*), Flat spurred piperia (*Plantanthera transversa*), White bog orchid (*Platanthera dilatata*) and Phantom orchid (*Cephalanthera austiniae*).

The trip was a complete success for all three of us. The weather was optimal each day, somewhat warm in the afternoons but nothing like we were used to experiencing in Arkansas and Louisiana. The scenery was breath-taking. There were so many new butterflies, as well as other cool insects and plants. Our hosts, Dianne, Barbara, Dana and David, could not have been more amenable, and we would like to again thank them for all they did to make this trip so successful. In fact, I believe it is the consensus of the three of us that we will return next year in early July to participate in Dianne's Siskiyou Crest count. I've already begun compiling my wish list.

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Craig Marks, E-Mail: cmarks@landcost.com

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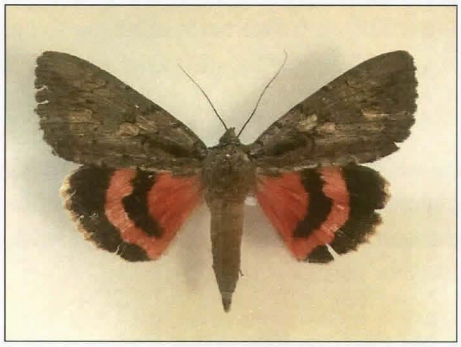
THE SWEETHEART UNDERWING (*CATOCALA AMATRIX*)



"Catocala amatrix, the sweetheart underwing, is of the family Erebidae. Species can be found from Nova Scotia, south through Connecticut to Florida and west through Texas and Oklahoma to Arizona and north to Montana, Minnesota, and Ontario." [1]

"Underwing moths most often pose with their forewings held together over the back, hiding the boldly-colored underwings". [2]

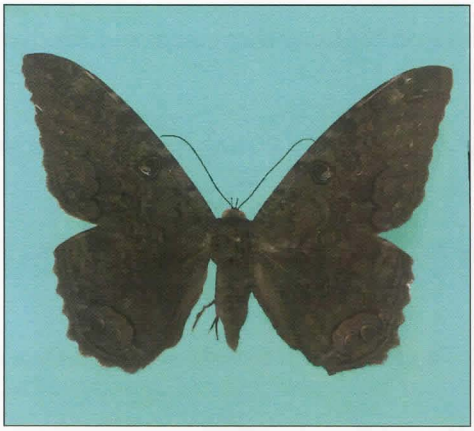
"The fanciful common names of moths in this genus (Sweetheart, darling, newlywed, the girlfriend, et al.) apparently stems from the fact that Carl Linnaeus himself named some of his earliest species in a female-loved-one/marriage theme, which later species authors continued." [2].

Thanks to James Adams who identified this moth for me – J. Barry Lombardini

1] https://en.wikipedia.org/wiki/Catocala_amatrix
2] https://www.cirusimage.com/moths_sweetheart_underwing/

BLACK WITCH *ASCALAPHA ODORATA*

The Black Witch *Ascalapha odorata* is fairly common in West Texas. Three Black Witchs were caught in bait traps (banana) in my garden in July of 2024 but not in good condition and thus not shown. Photos of the 2 Black Witchs (male and female) shown below were caught in West Texas in earlier years.



Male

Female

Wikipedia Artcle: "The black witch is considered a harbinger of death in Mexican and Caribbean folklore. In many cultures, one of these moths flying into the house is considered bad luck: e.g., in Mexico, when there is sickness in a house and this moth enters, it is believed the sick person will die, though a variation on this theme (in the lower Rio Grande Valley, Texas) is that death only occurs if the moth flies in and visits all four corners of one's house (in Mesoamerica, from the pre-Hispanic era until the present time, moths have been associated with death and the number four). In some parts of Mexico, people joke that if one flies over someone's head, the person will lose his hair.

In Jamaica, under the name duppy bat, the black witch is seen as the embodiment of a lost soul or a soul not at rest. In Jamaican English, the word duppy is associated with malevolent spirits returning to inflict harm upon the living [4] and bat refers to anything other than a bird that flies. [5][6] The word "duppy" (also: "duppie") is also used in other West Indian countries, generally meaning "ghost".

In Brazil it is called "mariposa-bruxa", "mariposa-negra", "bruxa-negra", and "bruxa", and it is also believed that when a moth of this type enters the house it can bring some "bad omen", signaling the death of a resident. In the Ecuadorian highlands they are called Tandacuchi and in Peru Taparacuy or Taparaco. These countries share the belief that if this moth, a messenger of death, appears in your home, someone will die very soon. [7]

In Hawaii, black witch mythology, though associated with death, has a happier note in that if a loved one has just died, the moth is an embodiment of the person's soul returning to say goodbye. In the Bahamas, where they are locally known as money moths or money bats, the legend is that if they land on you, you will come into money, and similarly, in South Texas, if a black witch lands above your door and stays there for a while, you will supposedly win the lottery. [8]

In Paraguay and Argentina, this insect is mostly known as "ura",[9] and there is a popular belief that this moth urinates and leaves worms on the skin of people and animals.[10] However, the insect that lays eggs in the skin and whose larvae become embedded in the flesh is the colmoyote or screwworm (*Dermatobia hominis*).[11]

In Spanish, the black witch is known as "mariposa de la muerte" (Mexico and Costa Rica),[12] "pirpinto de la yeta" (Argentina), "tara bruja" (Venezuela) or simply "mariposa negra" (Colombia); in Nahuatl (Mexico) it is "Miquipapalotl" or "Tepanpapalotl" (miqui = death, black + papalotl = moth); in Quechua (Perù) it is "Taparaco"; in Mayan (Yucatán) it is "X-mahan-nah" (mahan = to borrow + nah = house).[13] Other names for the moth include the papillion-devil, la sorcière noire, the mourning moth or the sorrow moth."

Numbers in brackets [ ] are references in the Wikipedia article: https://en.wikipedia.org/wiki/Ascalapha_odorata

BEANS BEANS THE MAGICAL FRUIT — KIND OF

BY
DAVID FINE

In June of 2023, the discovery of Sea Grape as the larval host plant of the Amethyst Hairstreak (***Chlorostrymon maesites***) was pleasantly shocking but as soon as the sea grape trees went out of bloom, so disappeared the adult amethyst hairstreaks for the year. Finding 11 colonies of ***C. maesites*** within a few miles of my house in Coconut Creek, Florida, provided a project of discovery and significance that I could execute in short amounts of time, such as on my lunch breaks or on the way to and from normal life activities. There are several questions that were left unanswered last year however and I was anxious to follow up on the project this year. Such questions were;

1. Once sea grape trees go out of bloom in July, do these colonies switch host plants? If so, which plants are they using? Many of these sea grape trees that contain the hairstreaks from late April through July are in urban areas with no discernable other host options nearby.
2. Why did I have such a hard time getting females to lay eggs in captivity last year? I did get eggs but they were few and far between. I put sea grape flower buds into the container with the females for egg laying.

Green Bean seeds placed in 4 oz cups with 5 *Chlorostrymon maesites* larvae in each cup

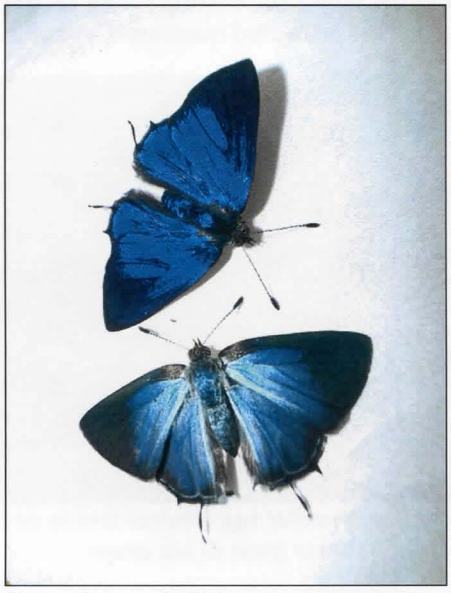
In May of 2024 I picked up right where I left off the previous year and found 6 full grown ***C. maesites*** larvae accidentally while swinging at hairstreaks taking nectar from blooms of the seagrape. I was also able to collect several fresh female ***C. maesites*** on the wing which I kept for egg laying in captivity. This year would prove much more successful with obtaining eggs than was last year. This year, I decided to place very new flower buds into the container with the female butterflies. Last year the flower bud stalks were more developed and almost ready to open. This year the flower bud stalks were super new and tiny and the small flower buds were just beginning to develop into little 'bumps' on the stalk. This made all the difference in the world. The female ***C. maesites*** much prefer the newest young flower stalks to lay eggs on. This answered question number 2.

***Chlorostrymon maesites* egg clusters laid in developing flower buds of sea grape**

Question number 1 – was still a mystery however. I was unable to discover what colonies of ***Chlorostrymon maesites*** do after the sea grape trees go out of bloom. I was unable to discover other host plant associations in the area in late July and August. In fact, I ran into several problems that hindered my project in 2024. First of all, my old BioQuip tropics net with the screw on 2' extensions started to show its age. I purchased the extension net some 25 years ago and it has served me well but with this increased activity that I have put the machine screws through over the past 2 summers in this ***Chlorostrymon maesites*** project proved to be a bit much for them. Using a fully extended net with upwards of 10 – 2' sections swinging at hairstreaks 'perched 25-30' in mature sea grape trees began to wear out the screws and one by one, they started to strip. I believe I am down to only 5 extension pieces. I have tried to switch to the snap

on extensions that are available from other vendors but they lack the stability required to swing the net once you get to a 16-20 foot length. I am currently seeking other options for the upcoming spring. If anyone has any ideas, please advise.

Chlorostrymon maesites **chrysalis**



Pair of reared *Chlorostrymon maesites* - larvae fed on green beans

Another challenge I had was that my friend that lived in the apartment with the "tree of life" where I discovered the ***Chlorostrymon maesites*** on sea grape the previous year is moving out of that complex which will make explaining myself very awkward in the future. They also decided to trim the tree and cut away all of the low branches making it almost impossible for me to reach the blooms with a net. Because of the staircase and my friends approval for me to be on the property, this was without a doubt the easiest way for me to obtain ***Chlorostrymon maesites***. I will need to focus on other sites for follow up research.

I did make a pleasant and unexpected discovery this year however. I had a family vacation planned to north Florida at the end of June which put me out of reach of sea grape tree blooms needed to feed hungry caterpillars for over a week. The blooms also do not last long enough on cuttings in the refrigerator. This left me with a problem. I had over 50 eggs that the female ***Chlorostrymon maesites*** females laid for me as well as 6 large caterpillars that needed fresh food each day. I thought about trying to train a friend of mine to care for them but caring for the tiny larval hatches would be too tedious for someone who is unfamiliar with the process.

I remembered back in the late 1990's I had reared several species of hairstreaks and blues by feeding the caterpillars green beans. If I recall correctly, I successfully reared Gray Hairstreaks (***Strymon melinus***), Mallow Scrub Hairstreaks (***Strymon istapa***), Fulvous Hairstreaks (***Electrostrymon angelia***), Nickerbean Blues (***Cyclargus ammon***) and Caribbean Blues (***Hemmiargus ceraunus***) all on pods of green beans that I purchased at a local grocery store. I decided to try and see if the ***Chlorostrymon maesites*** larvae would take green beans and I would take care of them myself.

The wild larvae that I caught immediately switched over to the seeds of the green beans when introduced to them. They pupated within a few days and became very healthy adults. One of the larvae that I found began to grow exponentially larger than the other ***C. maeistes*** that I found. I began to suspect that it was a gray hairstreak larva. This turned out to be a correct assumption. The large caterpillar that I found on the sea grape was indeed a gray hairstreak confirming that ***Strymon melinus*** uses sea grape as a larval host plant as well. The other 5 larvae went through and emerged into beautiful ***Chlorostrymon maesites*** adults.

The young hatchlings did not fare so well unfortunately. While on our trip to north Florida, the ***C. maesites*** eggs began to hatch. I went to a super market and bought some green beans at a Publix in Dunnellon Florida. All of the larvae began feeding immediately on the green bean seeds. I placed 5 hatches in a 4 ounce cup with seeds from the green bean pods. I had 10 cups of 5 larvae within a few days. The challenge came after 24-36 hours of feeding. Many of the larvae stopped feeding and died withing a few days. I had 8 larvae make it through to final instar and 5 of them pupate. I did get 2 adults to emerge but had 3 pupae die.

I'm not sure what the problem was with the green beans. It could be that the young larvae need something different from their food that the green beans did not provide. Or it could very well be a pesticide problem. The 6 hairstreak larvae that I found in the wild did very well on the green beans feeding like they've never eaten before and burrowing through the green been seeds quickly and with ferocity. The green beans seemed to

Dead *Chlorostrymon maesites* hatches

Dead final instar *Chlorostrymon maesites* larva

serve them very well. I did buy those green beans from a different store in Broward County which leads me to believe it could be as simple as a pesticide issue. I will try organically grown green beans in 2025 and see if it makes a difference.

I also saw some wild color changes in the larvae. I had everything from a simple green larva like one would find in the wild to a deep brick red coloration to a mottled reddish brown and green color. In conclusion, I was pleased with the results of the summer even though I had a die-off on my larvae, I have hope that they will be able to be reared on organic green beans. Next year I plan, first of all, on staying home in the month of June to properly conduct this project and second of all, attempting o rear ***Chlorostrymon maesites*** larvae both on flowers of larval host plant as well as organically grown green beans. I also plan on trying to rear them on flowers of other plants that may be blooming once the sea grape trees go out of bloom.

Two color forms of *Chlorostrymon maesites* larvae fed on green beans

Green final instar larva *Chlorostrymon maesites* fed on green beans

Two large *Chlorostrymon maesites* larvae happily feeding on green beans

Red form *Chlorostrymon maesites* larva feeding on green beans

Chlorostrymon maesites **eggs in clusters on developing sea grape flower buds**

Full grown *Strymon melinus* larva (top) and full grown *Chlorostrymon maesites* larva (bottom)

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

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WELCOME TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY

Connie A. Nagele
3737 Ashley Ct.
Naples, Florida 341116

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2024 – A GOOD YEAR FOR LYSIDE SULPHURS IN THE UPPER KEYS

BY

DAVID FINE

In the 37 years that I have spent hunting the butterflies of South Florida, very few species have evaded me. The Lyside Sulphur (**Kricogonia lyside**) has been one of them! I believe I have seen them floating around ornamentally planted lignum vitae trees planted along US-1 in the Northern Florida Keys but I have never confirmed a sighting until this year. While this species can be abundant in Mexico and into Texas, the populations that exist in the Florida Keys are very seasonal and very sporadic leaving much to be discovered. It is thought that they simply show up in the Florida Keys during their annual migratory behaviors as a species and are only temporary Sunshine State residents utilizing lignum vitae (***Guaiacum sanctum***) as a larval host plant for a generation or two, then to disappear for months or even years at a time.

Left side (reared *Kricogonia lyside* from larvae collected on Islamorada Florida, July 17th, 2024 top/male - bottom/female) Right side (Pair of *Kricogonia lyside* collected in Southern Texas in September 1999 - top/male - bottom/female)

This July, my family and a few friends took a trip to Islamorada, mainly for fishing, snorkeling and relaxing. We visited Founders Park in Islamorada on July 17th to go swimming on the sand beach and grill some Picana (Brazilian style sirloin tip steak) by one of the pavilions with some friends. On our way into the park, we passed by a large lignum vitae tree in the roundabout and I slammed on the breaks because I couldn't believe what I saw. There were dozens of lyside sulphurs circling the tree and landing on the bougainvillea bushes nearby. I dropped the family off at the beach and walked over with my phone camera and snapped some pictures and videos of the phenomenon. (You can see the video on my KEYS MOTHS YouTube channel) This would mark the very first time I would ever confirm a sighting of this species in Florida. In the span of 20 minutes, I saw dozens of adults as well as locating eggs and small larvae feeding on the flowers and new leaves of the lignum vitae trees.

One thing that I noticed was that one of the adult male butterflies that I photographed had a black line on the base of the forewing. It has been my understanding that the supposed Florida subspecies of this butterfly lacks the black banding but as these photos clearly indicate, there were individuals present with the black line.

While I was extremely satisfied that I finally was able to photograph this species, I did really want to rear the larvae through and see the freshly emerged specimens of the Lyside sulphur for myself so upon exiting Founders Park, I began looking for other lignum vitae trees in public areas where I might be able to obtain eggs and larvae. It did not take long. Only a few hundred yards from our hotel room in Islamorada, there was a very mature lignum vitae tree on the side of the road. While I did not see many butterflies, I did find eggs and larvae and was able to take some home to complete the life cycle.

***Kricogonia lyside* female taking nectar from lignum vitae (larval host plant) - Islamorada, FL July 17th, 2024**

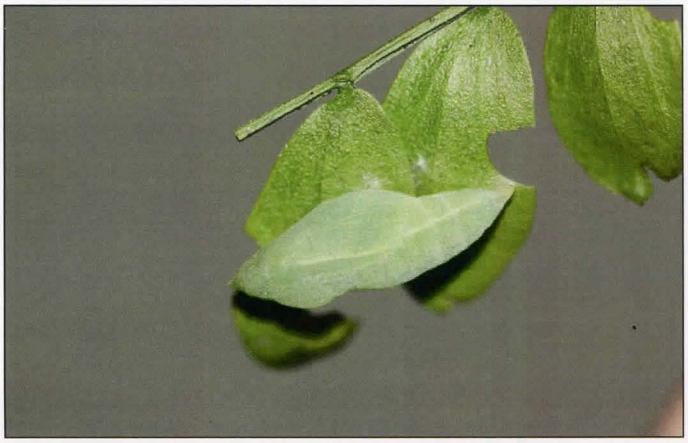
I have had a lignum vitae tree growing in my front yard now for 15 years with the hopes of one day completing this life cycle. I was hoping that my tree would have new growth on it to feed the caterpillars what they needed. When I got home, I was pleased to see that my tree had plenty of new leaves and I was able to rear 5 specimens of the lyside sulphur butterfly. I got 3 males and two females. None of the males that I reared in captivity had the black line on the forewing like the specimens in my collection that I found while in South Texas some 2 decades ago.

Young *Kricogonia lyside* larva feeding on flower of lignum vitae

Egg of *Kricogonia lyside* on young leaf of lignum vitae

Chrysalis of *Kricogonia lyside* pre-emerge

Freshly emerged female *Kricogonia lyside*



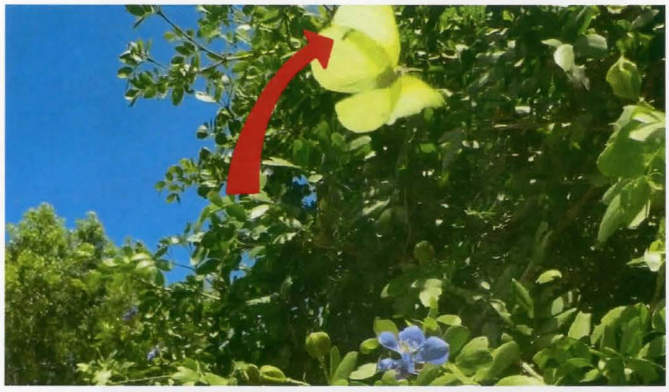
Chrysalis of *Kricogonia lyside*

Freshly emerged adult *Kricogonia lyside*

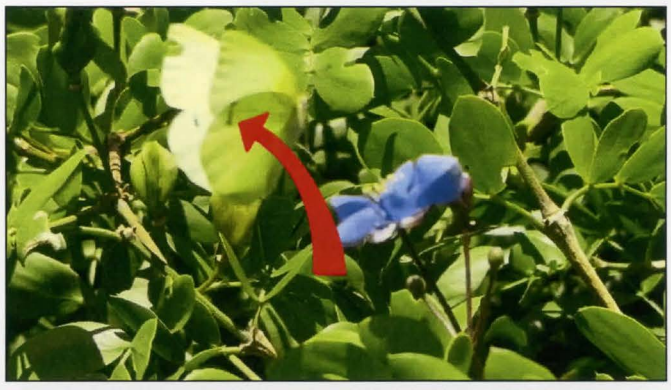
First instar larva of *Kricogonia lyside* on leaves of lignum vitae

Final instar larva of *Kricogonia lyside* feeding on blooms of lignum vitae

Female *Kricogonia lyside* emerged with wings open

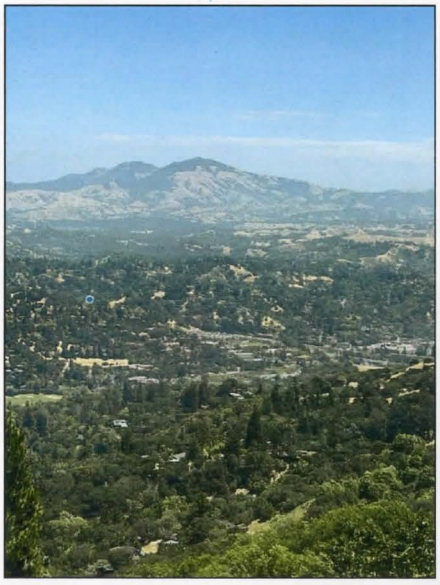


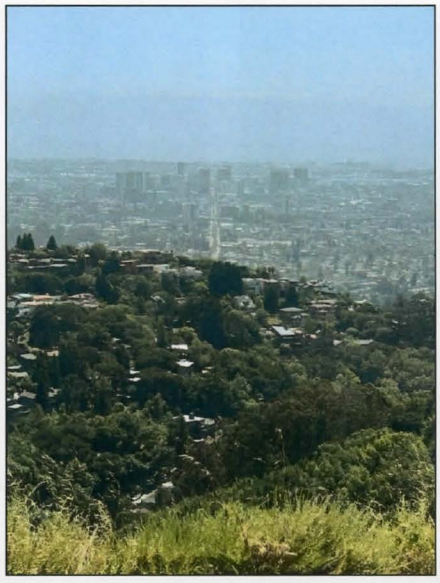
***Kricogonia lyside* male with black band on the hind wing - Islamorada, FL, July 17th, 2024**

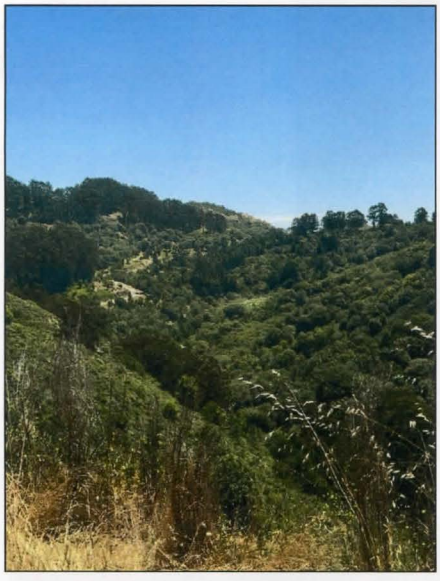


***Kricogonia lyside* male with black band on the hind wing - Islamorada,, FL, July 17th, 2024**

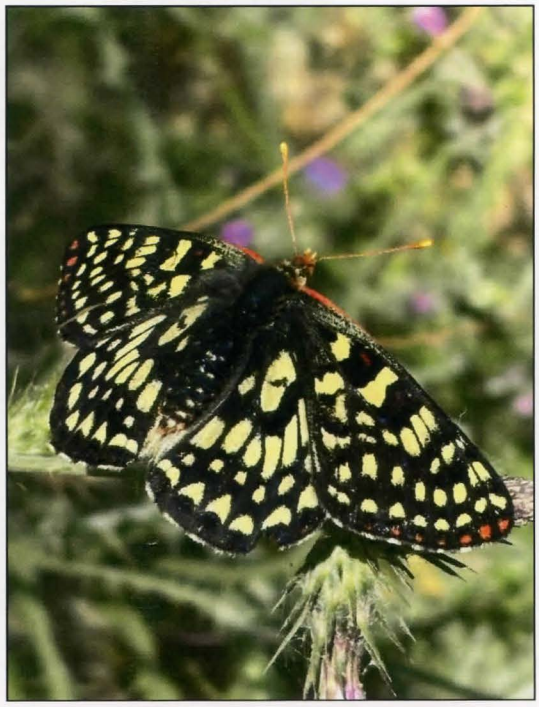
(David Fine, E-Mail: davidf@calvaryftl.org)







These 4 photos on the top were taken on June 9, 2024, near Panoramic Hill. The top left photo shows Orinda, CA. The middle and right photos show a view of Oakland, CA (only a bit of fog — Ha!).



These 2 photos (left and right) were taken on June 9, 2024, on Panoramic Hill in Berkeley, CA. In the photo on the left – when no fog – one might get a clear view of Oakland, CA.

All photos were taken and information given by Richard Lombardini

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HOST PLANTS OF *ARGYROSTROTIS ANILIS* (DRURY, 1773) (LEPIDOPTERA: EREBIDAE: EREBINAE)

BY

MARC C. MINNO

The Short-Lined Chocolate, *Argyrostrotis anilis*, is a locally common moth in northern Florida. The Moth Photographers Group website has a distribution map showing a wide range for this species from Texas to Florida and northward into southern Canada.

The adults flush easily from vegetation near the ground during the day. I have sometimes confused adults of it and other similar *Argyrostrotis* species in flight for Erynnis species. However, upon landing the adults flex their wings a few times then settle down with the wings over the back as in Figure 1.

Although Kimball (1965) and Covell (1984) stated "reported on *Sabatia*" and Heppner (2003) listed *Sabatia* as a larval food plant, Wagner et al. (2011) note that the larvae feed on plums, crabapples, and hawthorns in the Rosaceae. The Moths of North Dakota website lists *Prunus americana* Marsh as a host.

The University of Florida Natural Area Teaching Lab (NATL) is an undeveloped, mostly forested, area adjacent to the Entomology Department. It is used by students to collect and study insects (https://natl.ifas.ufl.edu/). This area has man-made wetlands including cypress swamp, freshwater marsh, and a pond all augmented by stormwater as well as old field, longleaf pine sandhill, and mesic hammock upland habitats.

On August 11, 2024 I visited the NATL. A short way on the north part of the Nature Trail through a mesic hammock, I noticed a Flatwoods Plum (*Prunus umbellata* Elliott) branch with many of the leaves damaged and eaten. Upon closer inspection I found a larva which looked similar to a *Catocala* species, but it did not have any bright color underneath. The larva was missing prolegs on abdominal segment 3. I collected the larva in a small plastic container and fed it *P. umbellata* leaves at home. About a week later it spun a loose cocoon among the plum leaves and pupated. About 10 days later an adult A. anilis emerged. Thus I confirmed that wild plums are host plants for *A. anilis* in Florida.

The pupa is light brown with a bloom of whitish wax and has a pointed cremaster (Fig. 1). Some larval stages and a pupa reared by George Smiley from Chickasaw Plum (*Prunus angustifolia* Marshall) in Harrison County, Texas are posted at BugGuide. The images show the second instar is missing prolegs on abdominal segments 3 and 4, but the prolegs are restored on segment 4 in later instars.

(Continue to next page)

Figure 1. The Short-Lined Chocolate, *Argyrostrotis anilis*. A) Adult reared on Flatwoods Plum (*Prunus umbellata*) in north-central Florida. B) Last instar larva. C) Cocoon and extracted pupal exuvium.

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

FLORIDA REPORTS
BY
MARC C. MINNO

Roger Hammer found a larva of the Gaudy Sphinx (*Eumorpha labruscae*) feeding on the leaves of Possum Grape (*Cissus verticillata*) in his yard in Homestead (Miami-Dade County) on August 7, 2024. He also photographed in his yard a Malachite (*Siproeta stelenes biplagiata*) on August 12, 2024 and a female Florida White (*Glutophrissa drusilla* neumoegenii) on August 14, 2024. It's the first Malachite Roger has seen in his yard since Hurricane Andrew in 1992 and this is also the first report of a Florida White on the Florida mainland in many years.

On September 8, 2024 a Lyside Sulphur (*Kricogonia lyside*) appeared in Roger's yard. He saw it visiting the flowers of Scorpiontail (*Heliotropium angiospermum*) along with scads of other butterflies. It is only the third time Roger has seen a Lyside Sulphur in his yard, although he planted a Lignumvitae (*Guaiacum sanctum*) tree, the larval host plant, in 1985, which is now huge. In past years he would occasionally see Lyside Sulphurs at Castellow Hammock, where he had also planted several Lignumvitae trees.

Photos by Roger Hammer: *Eumorpha labruscae* (left), *Glutophrissa drusilla* (right).

Caribbean Crackers (*Hamadryas februa ferox*) have been showing up in southern Florida as well. On August 9, 2024 Alana Edwards saw a Caribbean Cracker at the Lantana Nature Preserve in Palm Beach County. Susan Kolterman photographed one on Key Largo on August 19, 2024 and another at John Pennecamp Coral Reef State Park on September 3, 2024. She also saw a Bahamian Swallowtail (*Heraclides andraemon andraemon*) (Cuban subspecies) fly by as she was photographing the Caribbean Cracker on September 3rd.

Caribbean Cracker photos taken by Susan Kolterman on August 19, 2024 (left) and September 3, 2024 (right).

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

NEW MOTHS OBSERVED AT TRINITY RIVER NATIONAL WILDLIFE REFUGE

(MAY 1 – JULY 31, 2004

BY

STUART J. MARCUS

GELECHIIDAE:
Dichomeris simpliciella

GELECHIIDAE: *Friseria acaciella*

GEOMETRIDAE: *Macaria bisignata*
(Red-headed newrm)

ELACHISTIDAE:
Haplochrois pipunctella

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

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

Ricky Patterson sends in the following report for Arkansas. All collected or observed by Ricky Patterson unless specified otherwise:

30 June 2024, Rick Evans Grandview Prairie WMA, Hempstead county, AR: *Catocala myristica, Catocala epione, Catocala* new species near *residua, Cercyonis pegala, Enodia anthedon, Zerene cesonia, Phoebis sennae eubule, Speyeria diana arkansana*

1 July 2024, Devil's Den State Park, Washington county, AR: *Catocala andromedae, Catocala flebelis, Catocala ultronia, Catocala dejecta, Amphypira pyramidoides, Chlosyne nycteis nycteis, Synanthedon arkansasensis* (at light and at bait), *Drasteria grandirena, Hypoprepia miniata*

Florida: See Page 251.

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

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 2024 unless otherwise indicated.

Rabun Bald, Rabun Co., Giff Beaton:
CRAMBIDAE: *Scoparia penumbralis*, June 10, 2023 – specific locality: 34.971843 N, 83.305740 W, near the summit of Rabun Bald, 4100'; June 8, 2024 – specific locality: 34.978253 N, 83.303365 W, not far from the trailhead at the bottom, 3685' (see image).

***Scoparia penumbralis* (Photo by Giff Beaton)**

Misty Mountain Cabins, SE of Blairsville, Union Co., June 24-26:
GEOMETRIDAE: *Scopula plantagenaria* (COUNTY), *Hydrelia albifera.*

Brasstown Bald, Towns Co., Spur 180, June 24-26:
Power Line Cut, 3600':
GEOMETRIDAE: *Eugonobapta nivosaria.* **EREBIDAE:** *Catocala blandula, C. connubialis.* **NOCTUIDAE:** *Autographa ampla, Acronicta innotata, Amphipoea americana.*

Hairpin Bend, 4200':

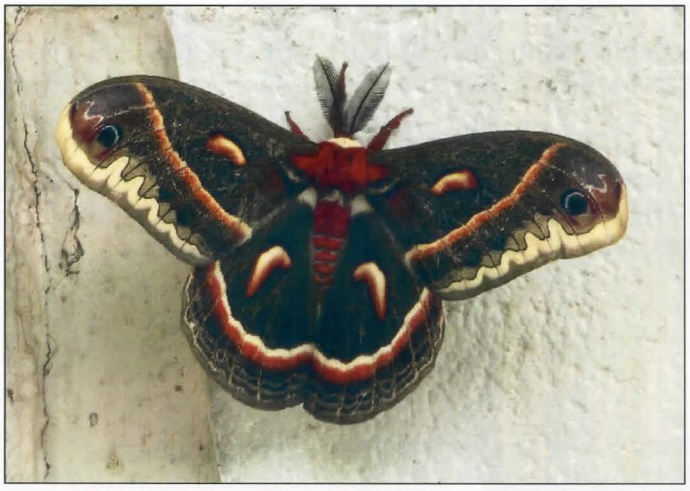
GEOMETRIDAE: *Eulithis explanata, Macaria notata, Eugonobapta nivosaria.* **EREBIDAE:** *Catocala blandula.* **NOCTUIDAE:** *Polia nimbosa, Diarsia jucunda* (STATE)

At top near parking lot, 4300':

GEOMETRIDAE: *Dysstroma hersiliata.* **SPHINGIDAE:** *Ceratomia amyntor, Paonias astylus.* **NOCTUIDAE:** *Diachrysia aeroides, Autgrapha ampla, Amphipoea americana, Hyppa contrasta, Diarsia jucunda.*

Carbondale, exit 326 off I-75, at lights:

SATURNIIDAE: *Hyalophora cecropia*, April 18, Amanda Tyler (see image).



***Hyalophora cecropia* (Photo by Amanda Tyler)**

Crest of Rocky Face ridgeline, just SW of Dalton:

August 11-12:

NOTODONTIDAE: *Hyparpax aurora.* **NOCTUIDAE:** *Acronicta funeralis, A. fallax, Harrisimemna trisignata, an incredible abundance of Spragueia leo, Tripudia rectangula, Cucullia convexipennis, Schinia nundina, Emarginea percara, Properigea* nr. *costa.*

August 26-27:

EREBIDAE: *Catocala sappho* (LATE). **NOCTUIDAE:** *Acronicta funeralis, Callopistria floridensis, Stiria rugifrons, Basilodes pepita, Plagiomimicus pityochromus, Emarginea percara* (most abundant I've ever seen it in northern Georgia), *Schinia grandirena, Magusa divaricata, Xanthopastis regnatrix* (COUNTY; few in the northern part of the state),

Taylor's Ridgeline, 5 mi. W of Villanow, Walker Co.:

June 8-9:

LIMACODIDAE: *Monoleuca semifascia.* **SPHINGIDAE:** *Ceratomia amyntor.* **GEOMETRIDAE:** *Phaeoura quernaria, Selenia kentaria.* **EREBIDAE:** *Dinumma deponens, Catocala amestris.* **NOCTUIDAE:** *Acronicta funeralis, Azenia obtusa, Achatodes zeae, Properigea tapeta.*

June 12-15, with Ricky Patterson and Bob Borth:

SPHINGIDAE: *Manduca jasminearum, Paonias astylus.* **EREBIDAE:** *Dinumma deponens, Catocala amestris, C. miranda.* **NOCTUIDAE:** *Acronicta noctivaga, Emarginea percara, Euplexia benesimilis, Sideridis congermana* (COUNTY, third in STATE; see image).

Sideridis congermana

August 24-25:
EREBIDAE: *Catocala luctuosa, C. ulalume.* **NOCTUIDAE:** *Basilodes pepita, Cirrhophanus triangulifer, Properigea tapeta.*

Calhoun, 346 Sunset Drive SE (James Adams' house), Gordon Co.:
EREBIDAE: *Rusicada privata*, Aug. 20 (COUNTY, third in STATE).

376 Lamar Co. Line Rd., 33.177415, -84.202726, Lamar Co., Roy Morris:
SPHINGIDAE: *Aellopos titan* (COUNTY, very few in STATE), August 9. **NOCTUIDAE:** *Xanthopastis regnatrix* (COUNTY), June 6.

Statesboro, Bulloch Co., LD:
GEOMETRIDAE: *Phrudocentra centrifugaria*, May 31 (COUNTY, second in STATE; see image). **NOCTUIDAE:** *Acronicta betulae*, June 18 (at bait); *Litoprosopus futilis*, June 18.

Phrudocentra centrifugaria **(Photo by Lance Durden)**

Canoochee Sandhills WMA, Bulloch, Co:
June 2-3 LD:
TINEIDAE: *Acrolophus heppneri.* **TORTRICIDAE:** *Pelochrista fraudabilis.* **CRAMIBIDAE:** *Uresephita reversalis, Palpita quadristigmalis, Mesolia incertellus, Prionapteryx achatina.* **MEGALOPYGIDAE:** *Megalopyge lacyi.* **GEOMETRIDAE:** *Glena cognataria, Cyclophora culicaria.* **EREBIDAE:** *Idia gopheri, Gabara subnivosella, Gabara* n. sp., *Oruza albocostaliata, Catocala innubens* (COUNTY), *C. louiseae, C. mira.* **NOLIDAE:** *Nola triquetrana.* **NOCTUIDAE:** *Acronicta betulae.*
June 11-12 LD:
Bald Cypress Wetland, 1.8 mi. S. on Warnell Way from junction w. DeLoach Church Rd.
TINEIDAE: *Acrolophus heppneri.* **PSYCHIDAE:** *Prochalia pygmaea.* **TORTRICIDAE:** *Pelochrista fraudabilis.* **CRAMBIDAE:** *Prionapteryx achatina.* **GEOMETRIDAE:** *Pimaphera sparsaria* (new for WMA).

Deciduous Woods ~80 m S. of Bald Cypress Wetland, 1.8 mi. S. on Warnell Way from junction w. DeLoach Church Rd
TORTRICIDAE: *Pelochrista fraudabilis.* **GEOMETRIDAE:** *Pimaphera sparsaria* (see above), *Cepphis decoloraria* (new for WMA), *Nemoria baggettaria, Idaea ostentaria.* **SPHINGIDAE:** *Amphion floridensis* (at bait, new for WMA), *Specodina abbottii* (at bait, new for WMA). **EREBIDAE:** *Dinumma deponens* (new for WMA), *Catocala louiseae.* **NOCTUIDAE:** *Litoprosopus futilis* (at bait, new for WMA), *Emarginea percara* (new for WMA).

Townsend WMA (North), Long Co., 9 mi. SE of Ludowici:
Sept. 1-2:
SANDHILLS areas: **PSYCHIDAE:** *Basicladus tracyi, Prochalia pygmaea, Cryptothelia gloveri.* **PTEROLONCHIDAE:** *Homaledra heptathalma.* **SESSIIDAE:** *Synanthedon tepperi.* **TORTRICIDAE**

Eucosma quinquemaculana, E. argutipunctana (abundant and widely distributed on the coastal plain, but underreported), *Pseudogalleria inimicella.* **LIMACODIDAE:** *Lithacodes gracea.* **CRAMBIDAE:** *Pyrausta onythesalis.* **PYRALIDAE:** *Lepidomys irrenosa.* **GEOMETRIDAE:** *Idaea retractaría, I. ostentaría.* **LASIOCAMPIDAE:** *Tolype minta.* **NOTODOTIDAE:** *Hetercampa astarte.* **EREBIDAE:** *Drasteria grandirena, Gondysia similis, Zale fictilis.* **NOLIDAE:** *Meganola georgei.* **NOCTUIDAE:** *Deltote bellicula* (COUNTY), *Derrima stellata, Pyrrhia aurnatiago,*

CYPRESS/CANE areas (closer to the river): **PTEROLONCHIDAE:** *Homaledra sabalella*, **CRAMBIDAE:** *Palpita illibalis.* **ZYGAENIDAE:** *Acoloithus falsarius.* **GEOMETRIDAE:** *Iridopsis ephyraria, I. pergracilis, Aethalura intertexta.* **EREBIDAE:** *Macrochilo louisiana, Cutina albopunctella, C. distincta, C. arcuata, C. aluticolor.* **NOCTUIDAE:** *Acronicta betulae, A. vinnula.*

Brunswick, across US17 from the Hofwyl Plantation Historic site, Glynn Co., Mike Chapman:
SESSIIDAE: *Synanthedon geliformis* (COUNTY), July 31 (see image). **EREBIDAE:** *Prosoparia floridana* (COUNTY), July 31 (see image).

Synanthedon geliformis
(Photo by Mike Chapman)

Prosoparia floridana
(Photo by Mike Chapman)

Louisiana: Michael Lockwood, 215 Hialeah Avenue, Houma, LA 70363, E-Mail: mkelock34@hlotmakl.com

Ricky Patterson sends in the following report for Louisiana:

25 May 2024, J. C. 'Sonny' Gilbert WMA, Catahoula Parish, LA: *Catocala mira, Catocala ultronia, Catocala ilia, Catocala gryneus, Catocala epione, Catocala orba, Catocala insolabilis, Catocala innubens, Catocala andromedae, Catocala* AGU (*andromedae* group unknown, see Bulletin of the Peabody Museum of Natural History 58(1):31–46, April 2017), *Catocala coccinata, Eacles imperialis, Actias luna, Automeris io, Dryocampa rubicunda, Apatelodes torrefacta, Nadata gibbosa, Zale horrida, Zale aeruginosa, Paonias myops, Argyrostrotis anilis*

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

All collected or observed by Ricky Patterson unless specified otherwise:

26 March 2024, Natchez Trace Parkway mile 154, Attala county, MS: *Papilio polyxenes asterius, Callophrys niphon niphon, Anthocharis midea*

13 April 2024, Woodall Mtn, near Iuka, Tishomingo county, MS: *Papilio polyxenes asterius, Cupido comyntas comyntas, Cyllopsis gemma*

22 June 2024, Natchez Trace Parkway mile 252.5, Lee county, MS: *Cercyonis pegala alope*

6 August 2024, Natchez Trace Parkway mile 290.4, Prentiss county, MS: *Lethe appalachia appalachia*

22 June 2024, J. P. Coleman State Park, Tishomingo county, MS: *Nadata gibbosa, Norape ovina, Cossula magnifica, Datana angusii, Anisota stigma, Apatelodes torrefacta, Eudryas unio*

6 August 2024, J. P. Coleman State Park, Tishomingo county, MS: *Catocala dejecta, Catocala ilia, Catocala umbrosa, Catocala robinsonii, Catocala* new species near *residua, Eacles imperialis, Automeris io, Lapara coniferarum, Synanthedon (decipiens?), Shizura matheri*

18 & 20 August 2024, Pearl River WMA, Rankin county, MS: *Euphyes dukesi dukesi, Lethe appalachia appalachia, Phyciodes tharos tharos, Limentis archippus watsoni*

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

SUMMER BUTTERFLY RECORDS FOR NORTH CAROLINA – 2024
BY
HARRY LEGRAND

Records are from June through August 2024 unless otherwise indicated. Names in parentheses are counties; when in bold, a first county record. Records from iNaturalist that contain only the submitter's username, but not real name, are included as "unnamed person"; several authors and editors have decided to not give userid names in publications in hopes that they will use their real names in the future, as well as some usernames being quite silly.

This was a summer of great extremes, neither extreme of which seems favorable to butterfly populations. From mid-June to mid-July, the state endured a moderate to severe drought that clearly impacted numbers later on, especially skippers using herbaceous foodplants. From mid-July into around August 10, the state endured a tropical storm and many other heavy showers, with some areas in the Coastal Plain receiving 20" of rain.

Thankfully, there are enough (many dozens of) people submitting butterfly records to the Carolinaleps listserve and photos to iNaturalist to provide quite a few noteworthy records this summer. This number does, however, mask the continued struggle that native grass/sedge skippers have in the state and the Mid-Atlantic states. The immigration of Southern species this summer continued its slow trend of recent years, though there were a few rare strays such as Nathalis iole, Heliconius charithonia, and Anartia jatrophae to keep the interest going.

PAPILIONIDAE:

Heraclides cresphontes, most summer reports were concentrated in just a small area of the Outer Banks in Currituck and northern Dare counties. It seems to be slowly declining elsewhere southward along the coast, though a few were reported as usual from Bald Head Island (Brunswick). Quite a surprise in the Piedmont, where essentially a migrant, was one photographed in Guilford County on August 1 by Kimberly Morrison.

PIERIDAE:

Nathalis iole, the first NC record in a handful of years was a stray photographed at Boone **(Watauga)** on July 27 by Guy McGrane. This individual certainly migrated into the state from the west, as notable immigrations occur frequently up the middle of the continent but do not occur from Florida this far northward.

Pyrisitia lisa, this immigrant appeared in modest numbers by August over much of the state; the most surprising was a mountain tally of 12 at Sandy Mush Game Land (Buncombe) on July 14 by Gail Lankford and Heather Rayburn.

Pontia protodice, the only summer reports were one photographed by Sparrel Wood on August 4 at Butler Mountain Bald (Buncombe), and by Dennis Kent in Union County on July 29, at a site where seen in previous years.

LYCAENIDAE:

Lycaena hypophlaeas, one photographed on August 6 by an unnamed person was a very rare Piedmont record for **Davidson** County. However, nearly all Piedmont sites are very ephemeral and are not consistent to the next year.

Atlides halesus, usually reported as singles, a tally of four made by John Hendrix on June 1 near Bowmore (Hoke) was notable. One photographed in Surry County on August 23 by an unnamed person was at the northern edge of the species' range.

Callophrys hesseli, among the several reports, all from usual locales, a tally of 10 in the Sandhills Game Land (Richmond) on July 14 by John Hendrix and Richard Stickney was excellent.

Satyrium titus, the only summer reports were from the upper Piedmont counties of Surry and Wilkes.

Satyrium favonius, the only summer record was one photographed in Currituck County by Conway Hawn on June 5. However, this species flies in the state mainly from May 10-31, though the rare inland individuals are typically seen in June.

Satyrium kingi, a Carolina Butterfly Society field trip counted six at Weymouth Woods preserve (Moore) on June 1. The group had considerable difficulty in identification of some Satryrium individuals there, as one small population seems to have a combination of kingi and edwardsii characters! One of the few records for the southern mountains was one photographed by Lydia Pultorak in **Haywood** on July 14.

Satyrium liparops, always a great and lucky find, Alina Martin photographed one in Macon County on June 16, and Heather Rayburn and Gail Lankford photographed one in northern Haywood County on June 23. Though this is a species likely of statewide occurrence, these two sites are in the mountains.

Satyrium caryaevorus, an excellent photo was posted to iNaturalist from Buncombe County on June 11 by Emily Stanley; this is one of the few recent state records and certainly among the best documented ever.

Satyrium calanus, there were more reports across the state than usual, but the peak tally at a single site was just four individuals.

Satyrium edwardsii, John Hendrix saw one in Hoke County on June 1; on that same day, the Carolina Butterfly Society counted seven at Weymouth Woods preserve (Moore).

Celastrina neglectamajor, seldom reported from the northern mountains were three seen by Guy McGrane on Three Top Mountain (Ashe) on June 7.

RIODINIDAE:

Calephelis virginiensis, two years ago, an unnamed person photographed several at a far-out-of-range site in Davidson County, in the Piedmont. He/she again found singles there in 2024, the first being on July 21. It is quite a shock that the species has persisted there despite two winter seasons in between!

NYMPHALIDAE:

Danaus gilippus, at its favored locale at Fort Fisher (New Hanover), John Taggart counted five on July 4. Another was photographed in Carteret County on July 30 by an unnamed person; the species is not found annually in this coastal county. One photographed at Bald Head Island (Brunswick) on August 21 by an unnamed person was more expected, as this site is close to Fort Fisher.

Heliconius charithonia, always exciting finds were a near-coastal stray to Craven County on. August 5, as photographed by an unnamed person, and a coastal visitor photographed by Dan Long in his Southport (Brunswick) yard on August 31. He had seen another there a few years earlier, making his yard the "best spot in the state" to find this stray!

Dione incarnata, John Taggart had an excellent count of 57 at the New Hanover County Landfill Revegetation Project on August 26.

Argynnis diana, this species was frequently reported in the mountains and foothills, with a peak daily tally of six, seen by Pete Dixon and Heather Rayburn in Madison County on August 24.

Vanessa cardui, the state had maybe two dozen summer reports, indicating a fairly typical season of being "mostly uncommon"; as usual, nearly all reports were of just one or two individuals.

Anartia jatrophae, a remarkable stray was photographed by Ana Wohlgemuth in **Richmond** County on August 10. It likely was blown this far north and inland by the remnants of Hurricane Debby, which passed through the center of the state on August 8.

Phyciodes incognitus, Harry LeGrand, Audrey Whitlock, and Lori Arent photographed about four individuals in Ashe and Watauga counties on June 11-12. Much more needs to be learned about this species, and whether this was actually the species involved as opposed to P. cocyta, supposed limited just from Virginia northward. A male photographed in Macon County on August 6 by an unnamed person was clearly P. incognitus, in its second brood.

Phycoides phaon, it is hard to be concerned about strong declines along the coast in the Fort Fisher (New Hanover) region where it was formerly abundant, when someone (Mark Shields) can have 12-16 individuals is his yard at Holly Ridge (Onslow) on July 29-30! One must wonder how many other such tight colonies are present coastally in yards?! This species can certainly be impacted by coastal flooding, but it obviously can rebound quickly or survive in places that are not flooded.

Hermeuptychia intricata, a few photographs appeared on iNaturalist of this difficult-to-identify species. Photos were vetted by Tom Austin from **Franklin** County on July 27 (unnamed person), **Anson** County on August 10 (Austin), and Moore County on August 22 (Rene Kimray).

HESPERIIDAE:

Thorybes bathyllus, an excellent single party count of 16 was made by Harry LeGrand, Lori Arent, and Lori White on June 29 in northeastern Durham County.

Telegonus cellus, always exciting is any report away from the usual Madison County site; this season one was photographed in northern Haywood County on June 23 by Heather Rayburn and party, and another was photographed by an unnamed person in the Great Smoky Mountains National Park (Swain) om June 5.

Pholisora catullus, a nice count of five was noted on a Carolina Butterfly Society field trip in northern Scotland County on June 2; the species is rather scarce in the Sandhills region. Photos were posted to iNaturalist for Iredell and Moore counties, as well.

Staphylus hayhurstii, at a semi-regular site, Richard Stickney saw six on August 20 in Yadkin County; the species is quite rare and local, and any reports are valuable. A very rare coastal report was one photographed by Jeff Lewis on the Outer Banks at Corolla (Currituck) on August 31. Another new county record was one photographed in Greene on July 30 by Joshua Emm.

Burnsius communis/albezens, John Taggart observed a good total of 16 at the New Hanover County Landfill Revegetation Project. As this county lies close to South Carolina, these might be B. albezens, which has been collected both northeast (Carteret) and southwest (Brunswick) of this county. One seen by the Carolina Butterfly Society on its Scotland County trip on June 2 is hereby considered as B. albezens owing to the sandy soil habitat and adjacency to South Carolina.

Erynnis martialis, at the state's most consistent current site, Dennis Kent and Will Stuart saw one on June 13 in Rutherford County.

Erynnis baptisiae, this species is scarce outside the mountains, but this season there were reports of individuals from Lee, Scotland, and Wake counties; in fact, in the last county, two small colonies were found in August by John Connors, Lori Arent, and Harry LeGrand.

Euphyes pilatka, Audrey Whitlock had a nice garden count of 10 at Manns Harbor (Dare) on July 2, which is nearing the end of the first brood. Considerable areas of Sawgrass (*Cladium jamaicense*) are nearby.

Euphyes berryi, the only report for the season was one or two early second brood individuals photographed by Joshua Emm at Alligator River refuge (Dare) on August 28.

Euphyes dion, a westward range extension was one found by Marie Poteat in her Jamestown **(Guilford)** yard on June 6.

Euphyes dukesi, a known colony in Currituck County was carefully covered by Audrey Whitlock and Lori Arent on August 21; they tallied an excellent 24 Dukes'. Whitlock noted a few there on August 13, seemingly around the beginning of the second brood. One was photographed at a small colony site in the Duck (Dare) area on August 19 by an unnamed person. This is a quite rare species in most of its range, but the few locales can contain numerous individuals.

Problema byssus, there were a few reports for the scarce first brood, with the most notable being one somewhat late on July 10 as seen by John Hendrix in Scotland County. Quite early for the second brood was one photographed in Durham County on August 7 by an unnamed person.

Polites vibex, Jimmy Randolph saw one in his yard in Lee County on July 7, a rare record for a county at the north end of its range.

Polites origenes, this species is undergoing a concerning decline, owing to mis-management of powerline clearings, its primary habitat now, at least in some counties.

Polites egeremet, this is another native grass skipper than is showing an alarming decline in most of the state; the only reports away from late August butterfly counts were one seen by Brian Bockhahn in Macon County on July 22 and one photographed on mainland Dare County on August 31 by Jeff Lewis, Audrey Whitlock, and others.

Hesperia attalus, the Carolina Butterfly Society field trip turned up two individuals in Scotland County on June 2, for the only seasonal report. This species and most other Hesperia species must be intentionally sought owing to their scarcity and somewhat remote habitats from man.

Hesperia meskei, the one studied by the Carolina Butterfly Society members at the Sandhills Game Land (Scotland) on June 2 tied the earliest state record! The weak first brood occurs only in June and barely into July.

Hesperia sassacus, Lori Arent and others photographed two at Elk Knob State Park (Watauga) on June 11 for the only summer report.

Poanes aaroni, a state record tally of 25 was made by Harry LeGrand, Lori Arent, Audrey Whitlock, and Jeff Lewis at Alligator River refuge (Dare) on August 31. Joshua Emm found this population three days earlier.

Poanes yehl, the best of the handful of counts was five in Gates County on June 25 by Nick Flanders, and seven in Alligator River refuge (Dare) on August 31 by Harry LeGrand, Audrey Whitlock, and Lori Arent.

Poanes viator, a good count at a garden was 24 tallied at a nursery at Manns Harbor (Dare) on July 2 by Audrey Whitlock. The highest tally was at least 80 at Alligator River refuge (Dare) on August 31 (Audrey Whitlock , Jeff Lewis, et al.).

Atrytonopsis quinteri, there were numerous photos on iNaturalist from Carteret and Onslow counties during the species' second brood, from mid-July into mid-August. Numbers on any visit, however, in this brood are usually in single digits.

Amblyscirtes carolina, a very good count of seven was made by Nick Flanders in Gates County on June 25. Another second brood skipper was seen by Salman Abdulali in Pitt County on June 9. A nice third brood tally was five at Alligator River refuge (Dare) on August 31 by Jeff Lewis et al.

Amblyscirtes reversa, this tough-to-find species was photographed in Carteret County during its second brood, on July 3 by Joshua Emm.

Amblyscirtes hegon, an excellent tally of six was made by Dennis Kent and Will Stuart in Rutherford County on June 13, which may represent the start of a second brood of whatever "new" species this represents. At a site where first individuals start appearing in early or mid-April, a fresh one was photographed there (Madison) on June 17 by Pete Dixon as was another in Transylvania County on June 20 by David Siripoonsup. It seems highly unlikely that these tallies simply represents first brood individuals, as the "species" normally begins its first there in April, and a single brood of an Amblyscirtes species should not last more than two months long. [I feel certain that whatever species these are contains two broods, not just one, as many or most experts are saying.]

Nastra lherminier, as with *Polites origenes*, this is another native grass skipper that is clearly showing concerning declines over the state. Areas of the lower Piedmont and most of the Coastal Plain have been decimated by drought and flooding events over recent years, and the continued mis-management of powerline clearings (by herbiciding nowadays instead of bush-hogging/mowing) adds to these impacts.

Thymelicus lineola, the only report came from a known site at Pond Mountain (Ashe), where Harry LeGrand and others found four on June 12. This non-native species seems to be on the decline in the state, though few people search for it at its known haunts, mostly high elevation pastures and meadows away from the Blue Ridge Parkway.

Copaeodes minima, this species made a noticeable "push" into the northern Piedmont, where typically absent or a scarce stray. Such a stray photographed in **Forsyth** County on August 20 by Alison Northup was farther northwest than ever found in the state. In Raleigh (Wake), where it is a sporadic colonist, Mason Randolph found a few in mid-July, and follow-up tallies later into August recorded as many as an astounding **64** there on August 7 (Lori Arent), by far a record count for this province.

Calpodes ethlius, this species went unreported in 2023, but there were a few records of adults along the northern coast this summer: singles photographed on July 31 at Corolla (Currituck) by an unnamed person and on August 16 at Duck (Dare) by Jeff Lewis. Hopefully, other adults will be reported away from this small area into the fall.

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

Brian sends in the following SOUTH CAROLINA Records for SLS Summary, Aug 2024

Dennis & Donna Forsythe, - Dog Swamp Rd, Francis Marion NF, Berkeley Co., 2 Jun 2024
Papilionidae:
Pterourus glaucus
Pterourus palamedes
Pieridae:
Phoebis sennae
Nymphalidae:
Phyciodes tharos
Lethe portlandia

Neomympha areolate
Hesperiidae:
Problema byssus

Dennis & Donna Forsythe, - Steed Creek Rd, Francis Marion NF, Berkeley Co., 2 Jun 2024
Papilionidae:
Pterourus glaucus
Hesperiidae:
Oligoria maculata

BAMONA sighting, - Hollow Creek S of Kathwood Lakes, Silver Bluff, Aiken Co., 1 Jun 2024
Lycaenidae:
Satyrium edwardsii

Dave and Marty Kastner, - Carolina Sandhills NWR, Chesterfield Co., 3 Jun 2024
Papilionidae:
Pterourus troilus
Pterourus palamedes
Eurytides marcellus
Battus philenor
Pieridae:
Phoebis sennae
Zerene cesonia
Abaeis nicippe
Pyrisitia lisa
Pieris rapae
Lycaenidae:
Satyrium titus
Strymon melinu
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Phyciodes tharos
Euptoieta claudia
Vanessa virginiensis
Vanessa Atalanta
Junonia coenia
Danaus plexippus
Hesperiidae:
Erynnis horatius
Erynnis zarucco
Polites otho

Dave and Marty Kastner, - Wateree River HP and WMA, Eastover, Richland Co., 8 Jun 2024
Papilionidae:
Pterourus troilus
Pterourus palamedes
Pterourus glaucus
Eurytides marcellus
Battus philenor
Papilio polyxenes
Pieridae:
Zerene cesonia
Abaeis nicippe
Pieris rapae

Lycaenidae:
Celastrina neglecta
Cupido comyntas
Nymphalidae:
Phyciodes tharos
Euptoieta claudia
Polygonia comma
Junonia coenia
Limenitis arthemis astyanax
Limenitis archippus
Asterocampa celtis
Hermeuptychia sosybius
Hermeuptychia intricata
Hesperiidae:
Erynnis horatius
Burnsius albezens
Hylephila phyleus
Euphyes vestris
Lerema accius

Dennis & Donna Forsythe, - Palmer Bridge Rd, Francis Marion NF, Charleston Co., 22 Jun 2024
Papilionidae:
Pterourus glaucus
Pterourus palamedes
Battus philenor
Papilio polyxenes
Pieridae:
Pyrisitia lisa
Nymphalidae:
Phyciodes tharos
Limenitis arthemis astyanax
Hesperiidae:
Urbanus proteus
Erynnis horatius
Erynnis funeralis
Amblyscirtes aesculapius
Lerema accius

Dennis & Donna Forsythe, - Mills Branch Rd, Francis Marion NF, Charleston Co., 22 Jun 2024
Papilionidae:
Pterourus glaucus
Pterourus palamedes
Pieridae:
Pyrisitia lisa
Nymphalidae:
Phyciodes tharos
Junonia coenia
Danaus plexippus
Lycaenidae:
Strymon melinus
Hesperiidae:
Erynnis horatius
Lerema accius

Dave and Marty Kastner, - Wateree River HP and WMA, Eastover, Richland Co., 2 Jul 2024

Papilionidae:
- *Pterourus palamedes*
- *Pterourus glaucus*
- *Eurytides marcellus*

Pieridae:
- *Phoebis sennae*
- *Zerene cesonia*
- *Abaeis nicippe*
- *Pieris rapae*

Lycaenidae:
- *Calyopis cecrops*
- *Strymon melinus*
- *Celastrina neglecta*
- *Cupido comyntas*

Nymphalidae:
- *Phyciodes tharos*
- *Euptoieta claudia*
- *Vanessa virginiensis*
- *Vanessa atalanta*
- *Junonia coenia*
- *Limenitis arthemis astyanax*
- *Asterocampa celtis*
- *Lethe appalachia*
- *Hermeuptychia sosybius*

Hesperiidae:
- *Cecropterus lyciades*
- *Erynnis horatius*
- *Burnsius albezens*
- *Hylephila phyleus*
- *Polites vibex*
- *Euphyes vestris*
- *Lerema accius*
- *Lon zabulon*

John Demko, - Silver Bluff Audubon Preserve, Aiken, Aiken Co., 7 Jul 2024

Papilionidae:
- *Pterourus palamedes*
- *Pterourus glaucus*
- *Pterourus troilus*
- *Eurytides marcellus*
- *Papilio polyxenes*

Pieridae:
- *Phoebis sennae*
- *Pyrisitia lisa*
- *Abaeis nicippe*

Lycaenidae:
- *Calyopis cecrops*
- *Strymon melinus*
- *Cupido comyntas*

Nymphalidae:
- *Libytheana carinenta*
- *Phyciodes tharos*
- *Euptoieta claudia*

Vanessa virginiensis
Vanessa atalanta
Junonia coenia
Limenitis arthemis astyanax
Limenitis archippus
Asterocampa celtis
Hermeuptychia sosybius

Hesperiidae:
Epargyreus clarus
Urbanus proteus
Cecropterus lyciades
Cecropterus bathyllus
Erynnis horatius
Burnsius albezens
Hylephila phyleus
Euphyes vestris
Lerema accius
Panoquina ocola

Dennis Forsythe, - Swanson Ave, James Island, Charleston Co., 18 Jul 2024
Hesperiidae:
Cecropterus dorantes
Polites vibex
Hylephila phyleus
Panoquina panoquin

Dennis Kent, - southern part of county, Union Co., 29 Jul 2024
Papilionidae
Pterourus glaucus
Pterourus troilus
Papilio polyxenes
Pieridae
Phoebis sennae
Abaeia nicippe
Pieris rapae
Pontia protodice
Lycaenidae
Cupido comyntas
Nymphaldae:
Euptoieta claudia
Vaness cardui
Junonia coenia
Limnitis arachipppus
Hesperidae
Epargyreus claris
Hylepphila phyleus

Dave & Marty Kastner, Bill Twomey, Scott Wietecha, - Coosawatchie HP/WMA, Hampton Co., 27 Jul 2024
Papilionidae:
Pterourus palamedes
Pterourus glaucus
Pterourus troilus

Pieridae:
Phoebis sennae
Pyrisitia lisa
Abaeis nicippe
Lycaenidae:
Calyopis cecrops
Strymon melinus
Nymphalidae:
Vanessa atalanta
Junonia coenia
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Cecropterus bathyllus
Cecropterus pylades
Cecropterus confusis
Erynnis horatius
Erynnis zarucco
Burnsius albezens
Euphyes vestris
Anatrytone logan – County record

John Demko, Dave & Marty Kastner, Alison Smith, Scott Wietecha, Wade Grassman, et al., - Gum Swamp Rd, Aiken Co., 4 Aug 2024
Papilionidae:
Pterourus palamede
Pterourus glaucus
Pterourus troilus
Eurytides marcellus
Pieriedae:
Phoebis senna
Abaeis nicippe
Lycaenidae:
Celastrina neglecta
Nymphalidae:
Dione incarnata
Chlosyne nycteis
Phyciodes tharos
Anthanassa seminole
Polygonia comma
Polygonia interrogationis
Vanessa atalanta
Libytheana carinenta
Limenitis arthemis astyanax
Limenitis archippus
Asterocampa celtis
Lethe portlandia
Lethe creola
Hermeuptychia sosybius
Cyllopsis gemma
Hesperiidae:
Epargyreus clarus
Urbanus proteus
Erynnis horatius

Erynnis zarucco
Burnsius albezens
Ancyloxypha numitor
Hylephila phyleus
Lon zabulon
Lerema accius
Amblyscirtes aesculapius
Panoquina ocola

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

Moths for Trinity River National Wildlife Refuge
Liberty County, TX
5-1-24 through 7-31-24
Stuart J. Marcus

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 June

AUTOSTICHIDAE
hidocera juniperella July
Glyphidocera lactiflosella June

BLASTOBASIDAE
Blastobasis glandulella May
Hypatopa punctiferella May, June, July

COLEOPHORIDAE
Coleophora cratipennella June
Coleophora sp. May

COSMOPTERIGIDAE
Euclemensia bassettella May
Triclonella bicoloripennis May, July

COSSIDAE
Fania nanus June
Givira anna May, June, July
Givira arbeloides June

CRAMBIDAE
Achyra rantalis May, June, July
Aethiophysa invisalis May, June
Argyria gonogramma June, July
Chrysendeton medicinalis July
Colomychus talis June, July

Crambus agitatellus June
Crambus quinquareatus May, July
Desmia sp. May, June, July
Desmia subdivisalis June
Diastictis fracturalis May, June, July
Diatraea evanescens July
Diatraea lisetta June, July
Dicymolomia julianalis May, June, July
Donacaula sp. June
Elophila gyralis May, June
Elophila obliteralis May, June, July
Elophila tinealis May, July
Eoreuma densellus June
Euchromius ocellea May, July
Fissicrambus sp. July
Glaphyria sesquistrialis June, July
Herpetogramma phaeopteralis June, July
Hileithia magualis May, July
Hymenia perspectalis May, June, July
Lineodes integra May
Marasmia trapezalis June, July
Niphograpta albiguttalis June, July
Nomophila nearctica May, June, July
Oenobotys vinotinctalis June
Ostrinia penitalis May, July
Palpita freemanalis May, June, July
Palpita magniferalis June
Palpita quadristigmalis May, June, July
Parapediasia decorellus July
Parapediasia teterrellus May, June, July
Parapoynx allionealis June
Polygrammodes flavidalis May, June
Pyrausta acrionalis May
Pyrausta laticlavia May, July
Pyrausta pseuderosnealis May
Pyrausta tyralis May, June
Samea baccatalis June, July
Samea castellalis May, June, July
Samea multiplicalis May, June
Spoladea recurvalis May, June, July
Syngamia florella July
Uresiphita reversalis June
Urola nivalis May, June, July
Xubida sp. June

DEPRESSARIIDAE
Antaeotricha leucillana May, June
Antaeotricha schlaegeri May, June, July

ELACHISTIDAE
Haplochrois bipunctella June

EREBIDAE

Ablemma brimleyana May, July
Allotria elonympha May
Apantesis phalerata July
Argyrostrotis anilis June
Bulia deducta May, July
Bleptina caradrinalis May, June
Caenurgia chloropha May, June, July
Caenurgina erechtea May
Catocala agrippina May, June, July
Catocala alabamae May
Catocala amica Complex May, June
Catocala crataegi complex May
Catocala grynea May
Catocala ilia May
Catocala illecta May
Catocala lineella May
Catocala minuta May
Cisseps fulvicollis May, June, July
Cisthene plumbea May, June, July
Cisthene unifascia May
Colobochyla interpuncta June
Crambidia pallida June, July
Cutina albopunctella May, June
Cutina aluticolor May
Cutina distincta May
Dasychira meridionalis May, June, July
Dasychira tephra June, July
Doryodes sp. June
Estigmene acrea May, June
Eubolina impartialis July
Euerythra phasma May, June
Gabara distema July
Halysidota sp. May, June, July
Hemeroplanis scopulepes June
Hypena manalis June
Hypena scabra May
Hypercompe scribonia May, June, July
Hyphantria cunea May, June, July
Hypoprepia fucosa May, July
Hypsoropha hormos May, June
Idia aemula July
Idia americalis May, June, July
Isogona tenuis May, June, July
Ledaea perditalis May
Lesmone detrahens May, July
Macrochilo hypocritalis May
Macrochilo orciferalis May
Melipotis cellaris May, June, July
Melipotis indomita June, July
Metalectra quadrisignata July
Metria amella May, June, July
Mocis marcida May, June, July
Nigetia formosalis June

Orgyia detrita May
Orgyia leucostigma May
Palthis asopialis June
Panopoda carneicosta July
Parallelia bistriaris May
Phyprosopus callitrichoides May
Plusiodonta compressipalpis May, June
Ptichodis vinculum May, June, July
Spiloloma lunilinea May, June, July
Spilosoma virginica May
Tetanolita floridana July
Tetanolita mynesalis May, June, July
Virbia laeta May, June, July
Zale horrida May
Zale lunata May, July
Zanclognatha theralis complex July
Zanclognatha sp. May, June, July

GELECHIIDAE
Aristotelia corallina complex July
Aristotelia sp. May, June
Dichomeris kimballi July
Friseria acaciella June
Polyhymno luteostrigella May, June, July
Stegasta bosqueella July
Untomia albistrigella June

GEOMETRIDAE
Cyclophora nanaria May
Cyclophora packardi June
Digrammia gnophosaria May, July
Euchlaena amoenaria May
Euchlaena obtusaria June
Eulithis diversilineata Complex May
Eupithecia miserulata May
Eutrapela clemataria May, June, July
Haematopis grataria June
Horisme intestinata May
Hypagyrtis unipunctata May
Hypagyrtis sp. June, July
Idaea celtima June
Idaea demissaria May, June
Idaea tacturata July
Iridopsis defectaria May, June, July
Iridopsis pergracilis May
Isturgia dislocaria May
Leptostales pannaria May, June, July
Lobocleta ossularia May, June, July
Lychnosea intermicata May, June
Macaria aequiferaria June
Macaria transitaria May
Macaria sp. May
Mellilla xanthometata May, June, July

Nematocampa resistaria May
Nemoria elfa May
Nepytia semiclusaria May
Patalene olyzonaria July
Pleuroprucha insulsaria June, July
Prochoerodes lineola June, July
Synchlora frondaria June
Tornos scolopacinaria June, July
Tornos sp. May

GLYPHIPTERIGIDAE
Diploschizia impigritella May

GRACILLARIIDAE
Caloptilia rhoifoliella June
Caloptilia triadicae May
Phyllonorycter sp. June

LACTURIDAE
Enaemia pupula May
Enaemia subfervens May, June, July

LASIOCAMPIDAE
Artace cribrarius May, July
Heteropacha rileyana May, June, July
Malacosoma disstria May
Tolype velleda May

LIMACODIDAE
Adoneta spinuloides May, July
Apoda y-inversa May, June, July
Euclea delphinii May, June, July
Euclea sp. July
Monoleuca semifascia May
Phobetron pithecium May

MEGALOPYGIDAE
Megalopyge opercularis May, June

MOMPHIDAE
Mompha albocapitella May
Mompha circumscriptella June

NOCTUIDAE
Acronicta afflicta May, June
Acronicta connecta July
Acronicta impleta May, June, July
Acronicta insularis May, June
Acronicta longa May
Acronicta morula May
Acronicta oblinita May
Acronicta rubricoma July
Acronicta vinnula May, June, July

Anicla infecta May, June, July
Charadra dispulsa May
Chrysodeixis includens July
Condica sutor May, June, July
Condica videns July
Ctenoplusia oxygramma June
Cydosia aurivitta June, July
Elaphria chalcedonia May, June, July
Elaphria nucicolora May, June
Enigmogramma basigera June
Eudryas grata May, June
Eudryas unio July
Galgula partita May, June, July
Helicoverpa zea June, July
Homophoberia apicosa July
Leucania adjuta July
Leucania incognita June, July
Leuconycta lepidula May
Marimatha nigrofimbria May, June, June
Megalographa biloba June
Mythimna unipuncta June
Ogdoconta cinereola May, June, July
Peridroma saucia May, June, July
Phosphila miselioides May, June, July
Ponometia candefacta May, June, July
Ponometia semiflava May
Pseudeustrotia indeterminata May, June, July
Rachiplusia ou May, June
Raphia frater May, June, July
Spodoptera eridania July
Spodoptera frugiperda May, June, July
Spodoptera latifascia June
Spodoptera ornithogalli May, June, July
Spragueia guttata June
Spragueia leo June
Tarache aprica May, June, July
Tripudia quadrifera May
Tripudia rectangular June, July

NOLIDAE
Afrida ydatodes June, July
Baileya acadiana May, June, July
Garella nilotica May, June, July
Nola cereella May, June, July

NOTODONTIDAE
Cecrita guttivitta June
Clostera inclusa June, July
Coelodasys unicornis May, June
Datana integerrima May, June, July
Furcula cinerea May, June
Gluphisia septentrionis June, July
Heterocampa obliqua May

Ianassa lignicolor July
Lochmaeus bilineata June
Lochmaeus manteo May, July
Macrurocampa marthesia July
Nadata gibbosa May, June
Oedemasia leptinoides May, June, July
Paraeschra georgica May, July
Peridea angulosa May, June, July
Rifargia subrotata June
Symmerista sp. June, July

PLUTELLIDAE
Plutella xylostella June

PSYCHIDAE
Cryptothelea sp. May, June

PTEROPHORIDAE
Adaina ambrosiae May, June
Adaina bipunctatus Complex May
Lioptilodes albistriolatus June
Pselnophorus belfragei May, June, July

PYRALIDAE
Acrobasis exsulella July
Acrobasis texana May, July
Acrobasis sp. June, July
Adelphia petrella May, July
Canarsia ulmiarrosorella June
Clydonopteron sacculana June
Dioryctria amatella May
Dioryctria sp. July
Epipaschia superatalis June
Homoeosoma electella June
Hypsopygia binodulalis May, July
Hypsopygia olinalis May, July
Macrorrhinia endonephele May, June, July
Parachma ochracealis July
Pococera asperatella June
Sciota celtidella May, June, June
Sciota uvinella May, June, July
Tlascala reductella May, June, July

SATURNIIDAE
Actias luna May, June, July
Antheraea polyphemus July
Dryocampa rubicunda June
Eacles imperialis June
Syssphinx bicolor July

SCHRECKENSTEINIIDAE
Schreckensteinia erythriella July

SPHINGIDAE
Agrius cingulata June
Amorpha juglandis June, July
Ceratomia undulosa May, June, July
Darapsa myron May, June, July
Dolba hyloeus May, June
Eumorpha fasciatus July
Eumorpha pandorus July
Manduca quinquemaculatus June, July
Manduca rustica May, June, July
Paratrea plebeja May, June, July
Xylophanes tersa May

TINEIDAE
Acrolophus arcanella May, June
Acrolophus heppneri May
Acrolophus mortipennella June
Acrolophus popeanella July

TORTRICIDAE
Aethes seriatana May, June, July
Ancylis comptana May, June
Ancylis divisana June, July
Ancylis platanana May
Argyrotaenia quercifoliana May, June
Bactra furfurana May, June, July
Bactra verutana June, July
Cagiva cephalanthana May
Choristoneura rosaceana May, June, July
Clepsis peritana June
Cochylichroa hospes July
Cydia caryana May
Ecdytolopha mana June
Endothenia hebesana May, June
Episimus argutana May, June
Eucosma radiatana group May
Eumarozia malachitana May, June, July
Goditha bumeliana June
Gretchena bolliana June
Gypsonoma salicicolana 2024
Paralobesia viteana June, July
Platphalonidia magdalenae June
Platynota exasperatana July
Platynota rostrana May, June, July
Platynota semiustana July
Sonia sp. June, July
Sparganothis sulfureana May, July

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

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SOUTHERN LEPIDOPTERISTS' SOCIETY
c/o J. BARRY LOMBARDINI, EDITOR
3507 41st Street
Lubbock, Texas 79413
Phone: (806) 470 1584
E-Mail: jbarry.lombardini@ttuhsc.edu

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