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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

SOME PHOTOGRAPHS OF INTERESTING MOTHS FROM CHATHAM CO., NORTH CAROLINA

BY

PARKER BACKSTROM



Samea baccatalis
(Sept. 26, Oct. 1, 2013)



Sphingicampa bisecta
(Sept. 5, 2013)



Paonias astylus
(Sept. 10, 2013)



Anomis privata
(Sept. 5, 27, 2013)



Agnorisma bollii
(Oct. 11, 14, 16, 17, 2013)



Syngamia florella
(Oct. 23, 2013)

THANK YOU!!!

As my term as Chairman concludes this month, I would like to extend my sincere thanks to the board and other members who have been especially supportive over the past two years. We have had two well attended annual meetings. Both meetings, in particular the last (held in conjunction with the Annual Meeting of the Lepidopterists' Society), were a great success due to the planning and efforts of many people, especially Jackie Miller. We have continued to participate in the annual Butterflyfest at the Florida Museum of Natural History, with our very popular and interactive caterpillar exhibit. This is full team effort, from the caterpillar hunters to the witty and informative public interface by masters like Tom Neal. With the help of our webmaster, Dave Morgan, archives of all our newsletters are now searchable on our website with a Google toolbar. We are now also reaching out to younger generations through social media, thanks to Lary Reeves. Please check us out and "Like" us on Facebook, to receive shared postings on Lepidoptera events, photos, and interesting tidbits. And as always, I'm especially grateful to our editor, Barry Lombardini, for his continued work in the production of our fine newsletter. I have enjoyed serving as your Chairman, and hope you will join me in welcoming and supporting our incoming chairman, Charlie Covell.

– Deborah Matthews, McGuire Center for Lepidoptera and Biodiversity

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MANY THANKS TO THE FOLLOWING MEMBER WHO DONATED TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY THIS QUARTER

Lawrence Hribar

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The Southern Lepidopterists' Society

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The Southern Lepidopterists' Society is open to anyone with an interest in the Lepidoptera of the southern region of the United States. Annual membership dues:

Regular	\$20.00
Student	\$15.00
Sustaining	\$30.00
Contributor	\$50.00
Benefactor	\$70.00

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

Information about the Society may be obtained from the Membership Coordinator or the Society Website: www.southernlepsoc.org/

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COINS OF CANADA DEPICTING BUTTERFLIES⁽¹⁾

Fig. 1. 2013 Canadian coin (25 cent); Purple Coneflower & Eastern Tailed Blue Butterfly.



Fig. 2. 2013 Canadian coin (50 cent); Canadian Tiger Swallowtail (*Papilio canadensis*) feeding on a dandelion (*Taraxacum officinale*).

In 2013 Canada minted a series (3) of coins depicting butterflies. Fig. 1 shows the 25 cent coin with the Eastern Tailed Blue and a Purple Coneflower (*Echinacea purpurea*). The Canadian artist is Maurice Gervais. The obverse shows the portrait of Her Majesty Queen Elizabeth II. The artist is Susanna Blunt. The composition of the coin is Copper-nickel (no silver content)(diameter is 3.5 cm); 17,500 coins were minted.

Fig. 2. Shows a 50 cent coin with the Canadian Tiger Swallowtail (*Papilio canadensis*) taking nectar from a dandelion (*Taraxacum officinale*). The Canadian artist is Celia Godkin. The coin is silver-plated copper (diameter is 4.2 cm). The reverse side is the same as the 25 cent coin. 20,000 coins have been minted.

The third coin in the series (not shown) has a value of 20 dollars (99.99% silver, diameter is 4 cm, 10,000 minted). The art work is basically the same as the coin shown in Fig. 2.

Sources

- 1) Royal Canadian Mint: <http://www.mint.ca/store/coin/50cent-silver-plated-coin-butterflies-of-canada-canadian-tiger-swallow-tail-2013-prod1680008>

Dear SLS Members:

It has been quite a while since I have asked anybody for advice on the quality of the Newsletter. There is always room for improvement and I would certainly welcome some comments as to what the membership would like to see in their newsletter.

Slightly changing the subject, everybody who gets out in the field must have some experiences that they relate to their friends and family. Give these adventures some thought and perhaps they would also be of interest to the SLS members. A photograph(s), a few words and you have a story. Drop me a line.

Barry Lombardini, The Editor

MOONBEAMS IN THE FOREST: SPEYERIA DIANA AT A WEST VIRGINIA ENCLAVE

BY
ROBERT DIRIG AND AKITO Y. KAWAHARA



Image adapted
from *Hiawatha,
A Summer Idyll*
(sheet music), by
Neil Moret,
published by
Schott & Co. in
London, and
printed in Ger-
many, undated
(ca. 1895-1900).

THE MYSTIQUE OF DIANA

"The legendary quality ... [of] the female Diana Fritillary ... [has] made this particular butterfly quite possibly the favorite of eastern U. S. collectors," wrote Charles Covell (1991), in a delightful essay on Diana, published in *The Kentucky Lepidopterist*.

He continued: "[H]ere...was a perfectly fresh female Diana — the first I had ever seen close up. With her wings...outspread against the red clay, she was a vision of butterfly perfection."

The mystique of *Speyeria diana* has developed over 234 years. Diana is among the largest and most beautiful butterflies of eastern North America, and its striking sexual dimorphism is unique among the fritillaries (and butterflies) of this region (Figs. 1-2). The female's dark color has been interpreted as mimicking the Pipevine Swallowtail (*Battus philenor*), a poisonous model for an extensive mimicry complex. Diana is a rather elusive and mysterious woodland species with a reputation for rarity. All of these contribute to its celebrity.

This butterfly is named for DIANA, an ancient Italian goddess of the moon (Fig. 3), who was later identified with the Greek deity ARTEMIS. Like Artemis, Diana also was goddess of the forest and of hunting, and was described as a virginal feminine ideal, modest and pure in thought and deed. She was the twin sister of APOLLO, god of the sun, archery, prophecy, and music. It is a fine coincidence that the name Diana has proved to be so appropriate for this elegant, retiring woodland nymph that loves the shade and moisture of deep ravines, and lays her eggs near violets, which also symbolized modesty in the Victorian Era's "language of flowers."

Pieter Cramer (1779), who first described this butterfly from a male specimen caught at Jamestown, Virginia, as a "dazzling nymph" with mother-of-pearl spots in the shape of half-moons edging the hindwing venter (Figs. 4a & 4b), unwittingly added further subtlety to the name, since he did not know of the female's night-sky coloring.

Nearly half a century later, Thomas Say (1824) published

American Entomology, the earliest "field guide" to North American insects, which included a remarkably informative account of Diana, and illustrated the male (Fig. 5). It is odd that this species was included in Say's book, which only treated a few butterflies. Its appearance therein undoubtedly encouraged interest in Diana.

Despite this early start, the female Diana was not associated with males and described until 1864, then illustrated in color a few years later, by William Henry Edwards (1864, 1868-1872) in his magnificent *Butterflies of North America* (Fig. 6). An early reminiscence by W. J. Holland (1883) reported a female Diana taken between 1861 and 1863 in Salem, North Carolina; but young Holland did not discover its identity until many years later, and his "black beauty" — which he liked to think was the first female ever collected — was "an unsightly wreck, a wingless, worm-eaten body on a pin" when it was restored to him in the early 1880s. Female specimens of Diana had not yet made their way to the Natural History Museum in London in the 1860s, according to Holland (1898); and Edwards (1864) stated that males were "the rarest of all the butterflies in our collections." The female's departure in coloring from the male, and others of the genus, was a great surprise, and remains a marvel today.

The invention of technology to reproduce color photographs allowed a much wider profile for Diana. Holland (1898:127-128), in his classic *Butterfly Book*, repeated the account of his first boyhood adventure with Diana, and illustrated both sexes on Plate IX (Fig. 7a). Six years later, John Henry Comstock & Anna Botsford Comstock (1904) issued their useful, beautifully illustrated guide *How To Know the Butterflies*, which also featured a fine color photograph of Diana (Fig. 7b).

Dr. Lehmann (1907), writing about fritillaries in Adalbert Seitz's multi-volume work on the world's *Macrolepidoptera*, characterized Diana as "the largest and most magnificent," among all the American fritillaries. The splendid color plate that accompanied this account (Seitz 1924) stimulated further interest in this unusual butterfly (Fig. 8).

Modern field guides, like Jeffrey Glassberg's (1999) *Butterflies through Binoculars: The East*, and Jim Brock & Kenn Kaufman's (2003) *Butterflies of North America*, illustrated Diana with photographs from life. Although they make less of a fuss over Diana, there is a continuing

sense that this is a very special butterfly. In Japan, where butterfly collecting has become an established national pastime (Kawahara 2007, Kawahara & Oreck 2009), Diana is one of the most charismatic American species.

A male Diana has been used as the mascot for The Society of Kentucky Lepidopterists, appearing on their seal and newsletter logo (Fig. 9). And a design inspired by male and female adults adorned a special T-shirt commissioned for the 51st Annual Meeting of the Lepidopterists' Society, held in Winston-Salem, North Carolina, in 2000 (Fig. 10).

FINDING DIANA

We had both known of Diana since our youth, and had read that it flew from late June through September, with males preceding females in emergence. Akito visited the east edge of Babcock State Park, north of Beckley in Lafayette County, West Virginia, on 14 July 2000, to seek Diana, and found abundant fresh males.

Travelling to and from the 51st Lepidopterists' Society meeting on 27 and 31 July 2000, we stopped to observe and photograph the butterflies again, finding the first females; then came back on 2-3 September 2000 to study them once more. Bob returned on 28-29 April 2001 to examine violets in the habitat, and searched large violet patches for larvae and pupae on 17-19 June 2001.

As two outside observers with primary field loci in northeastern North America and Japan, it was exciting to visit a new ecological situation and study a new butterfly. Below we summarize our field observations of Diana's behavior, nectar sources, habitat, potential larval foodplants, life history, and association with the Pipevine Swallowtail mimicry complex.

Adults were locally conspicuous on roadside flowers, but in low density. Males have a bright orange and black "Halloween" coloring above (Figs. 2, 17), but are paler, rusty brown beneath (Fig. 11). Females are basally black above with an iridescent jade green overgloss (Fig. 15, *left*), and have pale blue hindwing margins, and rows of white spots on the forewing edge (Figs. 1, 18-19, 36-37). Ventrally, females resemble the males, but are darker. A weakly silvered central band that separates differently colored areas produces the impression of a three-dimensional surface, with the darker hindwing margin seeming to be farther behind when the butterfly rests quietly, especially in shade (Figs. 12; 13, *bottom*). Modern flash photography revealed shadows of dorsal patterns we usually cannot see in the cell on the female Diana's forewing, resembling those of *Speyeria cybele* or *S. aphrodite* (Fig. 14, *arrow*).

Diana specimens at the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania, included a bright

blue, *Morpho*-like form of the female (Fig. 15, *right*). We also noticed cobalt blue accents at the dorsal hindwing angle near the costa in males (Fig. 15, *arrow and inset*). George Rawson (1968) found isoxanthopterin pigments in Diana males and females on the head, body, and wings. This pteridine pigment fluoresces bright blue-violet, and probably produces these dazzling effects. Ventrals of the *Morpho*-like female form are also much bluer than the usual form (Fig. 13, *top and bottom, respectively*).

BEHAVIOR

Most of the Dianas we encountered were **nectaring**. In July, they (and many other butterflies) were most often seen on Common Milkweeds (*Asclepias syriaca*, Apocynaceae, Fig. 2), which lined the road at the edge of the forest for hundreds of feet. We could often spot Dianas while driving by in the car. Adults also took nectar at Wild Bergamot (*Monarda fistulosa*, Lamiaceae) and Bull Thistle (*Cirsium vulgare*, Asteraceae) in late July. Edwards (1864) recorded "ironweed" as a favorite flower of Diana in August. New York Ironweed (*Vernonia noveboracensis*, Asteraceae) grew along the road at our site, but we were not there during August, and did not see Dianas nectaring on it. Later-flying females visited Hollow Joe Pye Weed (*Eutrochium fistulosum*, Asteraceae, Fig. 16) and especially Field Thistles (*C. discolor*, also Asteraceae, Figs. 1, 36-37, 42) in early September. We did not find this butterfly to be "*an exceedingly alert and wary species*," as characterized by Edwards (1868-1872: [65]); they were rather insouciant at flowers, unless approached swiftly and too closely. In September, a female posed widespread, allowing us very close approaches for several minutes (Figs. 1, 36-37; 42, *arrow*).

All of the nectar plants we observed had large platforms of pink or lavender flowers. Feeding females quickly move over the inflorescences, probing rapidly, holding their wings open at a 90°-180° angle. Males usually rest at flowers with their wings less widely spread, but open them fully when **puddling** (Fig. 17).

When not feeding, adults (especially females) **rested on foliage** along forest margins (Figs. 18-19). Both sexes flew 15-20 ft. up into nearby trees when alarmed, and hid; then returned to nectar ca. 30 minutes later. We observed females as early as 11:25 a.m. and both sexes as late as 7:30 p.m. (E.D.T.) in July 2000. When disturbed, a female that was nectaring on sunlit thistles in September flew up, circled the clearing, and resettled on a semi-shaded thistle closer to the woodland border to continue her feeding.

DISTRIBUTION AND HABITAT

We found Dianas in two places in this part of West Virginia. A map of Diana's **distribution** on the

"Butterflies and Moths of North America" website [<http://www.butterfliesandmoths.org/species/Speyeria-diana>] shows its known occurrences in the Southeast and lower Midwest. The major locus of this butterfly is in the southern Appalachians, with another center in the Ozarks (Ross 2012). Some historical populations are now extirpated or considerably reduced.

In West Virginia, **Diana's habitats** were sunny edges and openings along forest borders with dappled shade and abundant wildflowers. These woodlands fringe narrow winding roadways near deep, cool ravines with streams flowing in the bottom. One lushly vegetated lane that topped a steep incline where Dianas flew (Fig. 20) was a beacon of light when viewed from inside the forest (Fig. 21). These woodlands are composed of northern trees like American Beech (*Fagus grandifolia*, Fagaceae), Black Birch (*Betula lenta*, Betulaceae), Sugar Maple (*Acer saccharum*, Aceraceae), Hemlock (*Tsuga canadensis*, Pinaceae), and Witch Hazel (*Hamamelis virginiana*, Hamamelidaceae), mixed with southern species like Sourwood (*Oxydendrum arboreum*, Ericaceae), Hercules' Club (*Aralia spinosa*, Araliaceae), Tuliptree (*Liriodendron tulipifera*, Magnoliaceae), and Tupelo (*Nyssa sylvatica*, Nyssaceae).

It was very instructive to return at the end of April, when the deciduous trees were not yet in leaf, revealing landforms that had been masked by rank herbage the previous summer. Figs. 22-23 contrast April 2001 and summer 2000 views of the same stream channel at the base of a steep glen. Plant phenology at our Diana site was about one week behind that at Ithaca, New York, both in April and June 2001, suggesting how cool these habitats are. This is likely due to elevation (2400-2600 ft.); deep shade from steep slopes and thick forest cover, including evergreens; and constant evaporation from the adjacent brook.

LARVAL FOODPLANTS

Diana larvae feed on violets (*Viola* spp., Violaceae). We found violet leaves throughout the woods and valleys in summer. Bob found eight species of blooming violets in the same places in late April 2001. Many more violet plants were evident in the woods and wet bottomlands in mid-June that year, sometimes in nearly solid mats covering 75% or more of the ground surface in damper spots. The commonest was Marsh Blue Violet (*Viola cucullata*, Fig. 24) in the wettest areas, with leafy mats of Sweet White Violet (*V. blanda*, Fig. 25, with inset) abundant in the woods. Arrow-leaved Violet (*V. sagittata*, Fig. 26), Halberd-leaved Yellow Violet (*V. hastata*, Fig. 27), Long-spurred Violet (*V. rostrata*, Fig. 28), Early Blue Violet (*V. palmata*), and Southern Wood Violet (*V. hirsutula*) were occasional in drier uplands, and Lance-leaved White Violet (*V. lanceolata*) grew in a sunlit mossy seep. Any of these

could serve as Diana's foodplants. Specimens of each were deposited at the Bailey Hortorium Herbarium at Cornell University, with a few duplicates at the West Virginia University Herbarium in Morgantown.

LIFE HISTORY

Diana's life history is well known, thanks to the meticulous early research of William Henry Edwards (1868-1872, 1884), who published a full account and beautiful illustrations of all the stages in his *Butterflies of North America* (Figs. 6, 29).

The conical eggs (Fig. 29, *enlarged, top center*) are laid on or near violets on the forest floor, and are tiny for such a large butterfly, having a honeycombed surface. Although ivory when newly laid, they quickly turn bright yellow, then plum, and finally to the brown color of dead leaves. Each female can produce many hundreds of eggs. These hatch in 15-20 days, and the first instar larvae hibernate, feeding on violets in spring, and maturing by mid- to late-June.

Larvae are black (Fig. 29, *left*), with six longitudinal rows of tubercles that arise from scarlet bases, and are armed with radiating black bristles. As the larvae mature, two long tubercles point forward over the head. Diana's caterpillars feed at night and hide in dark places during the day, where their sooty color conceals them. They take about three months to mature. After six instars, a dark brown chrysalis forms (Fig. 29, *right*) that produces an adult in 24 days. There is one brood per year. The large number of eggs laid by females must offset high larval losses during the winter.

Using a flashlight after dark on 18 June 2001, Bob inspected beds of violets in the stream courses and woodlands where Dianas flew the previous summer, but found no active *Speyeria* larvae. John G. Franclemont (*pers. com.*, 1967) described laying wooden shingles in large violet patches in western New York, then finding fully grown *Speyeria* larvae resting beneath them the next day; but this technique did not work with 12×18 inch cardboards from a plant press that were placed throughout violet patches at our West Virginia site.

DOES DIANA MIMIC *BATTUS PHILENOR*?

We observed the Pipevine Swallowtail mimicry complex (Scott 1986: 71-76) in operation in West Virginia in spring and summer. Bob encountered it at the Fork Creek Wildlife Management Area near Nellis, Boone County, in mid-May 1998 (Fig. 39), where three species of swallowtails (Pipevine, Tiger, and Spicebush) and Red-spotted Purples were **puddling in large assemblies, behaving the same way in the same habitat at the same time**. After reading about Batesian and Mullerian mimicry systems for over 30 years, this prompted the

immediate reaction "It really works!" But this vernal congregation did not include Diana, due to asynchrony of their summer flight — and because female Dianas are not known to puddle. We had the same response to the **summer nectaring community** of model and mimics in Lafayette County: Seeing Pipevine, Black, dark female Tiger, and Spicebush Swallowtails and female Dianas *flying and nectaring together on the same flowers in the same habitat* was very convincing. Red-spotted Purples were also present throughout, at times puddling with the swallowtails, or feeding at dung (Fig. 33).

Dorsal wing surfaces of the **Pipevine Swallowtail** (*Battus philenor*), the poisonous model of this system, are reflective blue-green to steel-blue in males (Figs. 30-31). (Females have duller blue hindwing reflectance, matte brown forewings, and bolder white submarginal spots above.) The wing venters of both sexes are boldly patterned with bright orange, black, and white on a reflective blue-green and matte black ground, with vivid white spots emphasized on the sooty body (Fig. 32). This combination of colors and pattern is believed to alert potential predators to its poisonous nature, and teach them avoidance after an experience or two. *B. philenor* often continue to beat their wings while nectaring and puddling, which may present a constant blur of the warning signature that would not be fully visible if they rested widespread. Pipevine Swallowtails derive their noxious quality from the pipevines (*Endodeca serpentaria* and *Aristolochia* spp., Aristolochiaceae) that their larvae eat.

The following catalogue of apparent Pipevine Swallowtail mimics highlights the mimetic features of each:

Female and male **Black Swallowtails** (*Papilio polyxenes asterius*) have a ventral pattern that closely resembles *philenor*, but the darker and bluer females are more like it above. Some of their umbellifer foodplants (Apiaceae) are toxic to vertebrates, others not. Adults developing from poisonous hosts are likely *Mullerian mimics*, while those feeding on non-toxic umbellifers are *automimics* (looking like noxious individuals of their own species). Young larvae resemble bird droppings, but older instars are warningly colored. A cryptic sibling species, the **Missouri Woodland Swallowtail** (*P. joanae*) of the Ozarks (Heitzman & Heitzman 1987), has the same mimetic signature. A warningly colored form of its mature caterpillar has the blue tinge of *philenor*. This narrowly endemic butterfly is likely another member of this complex.

The **Tiger Swallowtail group** (including *P. glaucus* and *P. appalachensis*, with the northern *P. canadensis* barely entering *philenor*'s range, and having rare dark females) has black-banded yellow males, with mostly dark

females in the South, coincident with the model's range (Glassberg 2012: 11). Females are considered to be *Batesian mimics*. Young larvae look like bird droppings, and mature ones like green snakes. A measure of protection may be imparted by their cherry foodplants (*Prunus* spp., Rosaceae), which contain cyanide compounds that can kill grazing livestock when wilted, suggesting that some individuals may be *Mullerian mimics*.

The **Spicebush Swallowtail** (*P. troilus*) has the most perfect ventral wing match to *philenor*. Females are bluer than males on the dorsal hindwings, but there is also an infrequently seen blue male form. It is not known if the aromatic foodplants [usually Sassafras (*Sassafras albidum*) or Spicebush, (*Lindera benzoin*), Lauraceae] make larvae distasteful. *P. troilus* is probably a *Batesian mimic* of *philenor*. Young larvae mimic bird droppings, and older ones look like a green snake, complete with large eyespots; an orange, forked, foul-smelling "tongue" (the *osmeteria*); and orange and blue warning spots. They hide within a pendent, rolled-leaf nest, where they suddenly confront foraging predators like a Jack-in-the-box.

The resplendent **Red-spotted Purple** (*Limenitis arthemis astyanax*) most closely matches *philenor* in dorsal reflectance, color, and wing shape (except lack of hindwing "tails"), and has a similarly colored warning signature (Figs. 33-35). Its larval hosts are cherries (see above) and willows (*Salix* spp., Salicaceae) that may impart poisons or distastefulness. Salicylic acid from willows may cause a sour, aspirin-like taste. If so, adults could be weak *Mullerian mimics* of the model. The larvae and pupae resemble bird droppings. This Purple's scientific name derives from ARTEMIS, the ancient Greek goddess who was equivalent to DIANA, providing another cultural nuance in the Diana Fritillary's story.

When describing the female **Diana Fritillary**, William Henry Edwards (1864: 432), wrote: "*I first saw a single male [Diana] ... near the banks of the Great Kanawha River, in West Virginia. Two days afterwards, in the same vicinity, I came suddenly upon a large black and blue butterfly, feeding so quietly as to allow me to stand near it some seconds and watch its motions. It seemed to be a species of Limenitis, so much did it resemble L. ursula [now called astyanax] in color and markings. But in taking it, I saw it was an Argynnis [now Speyeria] female, and the pattern of the underside left no doubt of its affinity to [the] Diana male.*" Twenty-five years later, Samuel Hubbard Scudder (1889: 1802) declared that female Dianas mimicked Red-spotted Purples!

Their dorsals are similar (compare Figs. 33-34 with 36-37), but female Dianas lack bold white spots on the body or any orange or scarlet markings. Both butterflies have

a rusty ground color beneath (Figs. 12, 13 *bottom*, & 35). Diana's similarity to *astyanax* extends to behavior: Females *occupy the same forest-edge habitat, nectar at tall flowers* (as do female *astyanax* — Fig. 35), and *perch high on foliage in the same attitudes* (compare Figs. 18 & 38). Akito's immediate comment on seeing adult Dianas was that the males behave like Fritillaries (*Speyeria*) and the females like Purples (*Limenitis*). Adult female Dianas have a weak resemblance to *philenor*; but their dark, spiny, red-spotted larvae closely resemble this poisonous swallowtail's caterpillars in size and gestalt (Fig. 29; Wagner 2005: 77, 125). Female Dianas may indeed mimic the Red-spotted Purple, while their larvae mimic *philenor*'s caterpillars, in an interesting twist on *Batesian mimicry*.

Two diurnal saturniid moths may also mimic *philenor*. Male **Prometheas** (*Callosamia promethea*) fly from mid-afternoon until early evening, while their females call. These large dark moths appear at the same seasons as the Spicebush Swallowtail, feed on the same trees (especially Sassafras), and are similar to *troilus* in size and general color. Perhaps they actually are only incidental *Batesian mimics* of *philenor* by mimicking *troilus*?

The similar, slightly larger dark males of the **Calleta Silkmoth** (*Eupackardia calleta*) of Texas, New Mexico, Arizona, and northern Mexico (Tuskes *et al.* 1996) fly to calling females in the morning, and have coral-red stripes around the thorax, contrasting white wing markings, and subtle blue areas on the forewing margin and apex. Sides of the females' abdomens are also red with black spots. Michael M. Collins (*pers. com.*, 2001; 2007: 42-45, plates 5-7) suggested that Calleta may be another marginal member of this *Batesian* complex.

What about the blue-and-black female form of another North American fritillary that historically occurred (through 1938) at 7500 ft. in the Huachuca Mountains north of Tucson, Arizona, and still lives in Chihuahua, Mexico (Holland 1947; Glassberg 2001: 236; Stewart *et al.* 2001:128-129)? This is **subspecies coerulescens** [described by Holland in 1900; see Holland (1947) for a color photograph of his female type] of the **Nokomis Fritillary** (*Speyeria nokomis*, named by Edwards in 1862). In addition to the continuing participation of these two lepidopterists in Diana's story, here is another lunar motif, since Nokomis was "Daughter of the Moon" in Henry Wadsworth Longfellow's famous poem *The Song of Hiawatha*. A female specimen of *coerulescens* in the Cornell University Insect Collection (Fig. 40, *bottom*, from Mexico) shows a faint sky-blue color on the dorsal hindwing margin, and the butterfly is otherwise quite dark. David V. McCorkle (*pers. com.*, 2001) reported mistaking a flying female *coerulescens* for

philenor. This fritillary may be another extralimital *Batesian* component of a mostly eastern North American mimicry complex. Its females are very similar to female Dianas, although smaller and dorsally darker.

Oblivious to human musings about her role in this fascinating microcosm of large, dark butterflies that puddle and take nectar together in the Southeast and Ozarks, Diana serenely guards the fringes of her forest — while her dusky offspring revel with violets under the light of the Moon.

ACKNOWLEDGEMENTS

These people kindly allowed us to read and photograph rare early literature in their care: Marty Schlabach, Entomology Library, Cornell University (Figs. 6, 8, 29), John Rawlins, Carnegie Museum of Natural History [CMNH] (Figs. 5-6, & 29), and the late John G. Franclemont (Figs. 4a-4b). Photographs of Diana specimens (Figs. 13 & 15) were made at CMNH (courtesy of Rawlins) and of the Nokomis Fritillary at the Cornell University Insect Collection (Fig. 40), courtesy of E. R. Hoebeke and J. K. Liebherr. Melissa A. Luckow (Bailey Hortorium, Cornell University) provided a precise English translation of Cramer's original French description of *Speyeria diana*. Plant identifications and herbarium access were facilitated by Donna Ford-Werntz and Lee B. Kass at the WVU Herbarium in Morgantown, West Virginia; and Anna Stalter, Peter Fraissinet, and Kevin C. Nixon at the Bailey Hortorium Herbarium at Cornell. Sherry Vance (Bailey Hortorium) assisted with images of literature. Following our talk at the 2001 Lepidopterists' Society meeting in Corvallis, Oregon (Dirig & Kawahara 2001), helpful insights were offered by Michael M. Collins, David V. McCorkle, and Carla M. Penz. Figs. 1-2, 12, 16, 18, 37, and 42 by Akito Y. Kawahara; Figs. 4-11, 13-15, 17, 19-28, 30-36, and 38-41 by Robert Dirig. Figs. 9-10 are of cultural images as credited, for illustrative purposes only. Fig. 3 is of a statue in the Louvre (*ex Ackermann & Gisler 1981ff.*). Steven Daniel, Carolyn Klass, and Charles R. Smith read a draft of this article and made valuable suggestions.

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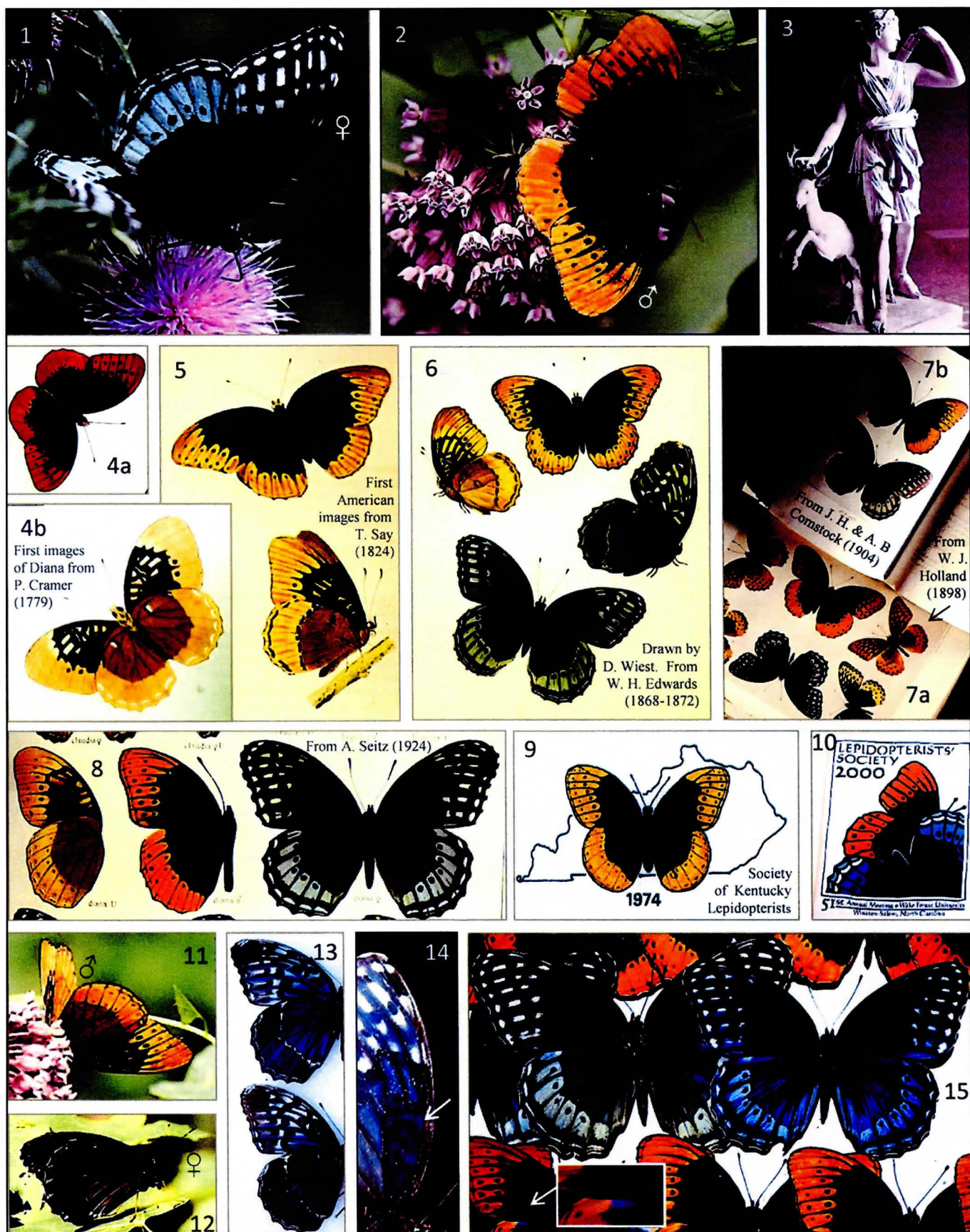
(Robert Dirig, Plant Pathology Herbarium, Cornell University, Ithaca, NY 14853.

E-mail: red2@cornell.edu [Fig. 42]

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E-mail: kawahara@flmnh.ufl.edu [Fig. 41])

[Photographs on the next 3 pages accompany the article "Moonbeams in the Forest: *Speyeria diana* at a West Virginia Enclave" by Robert Dirig and Akito Y. Kawahara.]



Speyeria diana at a West Virginia Enclave I: Adults (1-2), the goddess Diana (3), images from historical literature (4-8), designs from Diana (9-10), venters (11-13), and wing characteristics (14-15). Please see the text for details.



Speyeria diana at a West Virginia Enclave II: Nectaring (16), puddling (17), female resting in foliage at forest border (18-19), habitat views (20-23), violet species (24-28), and early life stages (29). Please see the text for details. [Figs. 1-2, 12, 16, 18, 37, & 42 copyright © 2013 by Akito Y. Kawahara. Figs. 11, 13-15, 17, 19-28, 30-36, & 38-41 copyright © by Robert Dirig.]



Speyeria diana at a West Virginia Enclave III: Pipevine Swallowtail (model for mimicry complex) dorsals and venter (30-32). Red-spotted Purple (mimic) dorsals and venter (33-35). Female Diana dorsals (36-37). Red-spotted Purple perched high on foliage at forest border (38). A spring assembly of puddling Pipevine, Tiger, and Spicebush Swallowtails (39). Nokomis Fritillary ssp. *coerulescens*, another possible mimic (40). Akito Kawahara (41) and Robert Dirig (42) at our West Virginia site in 2000. Figs. 34-35 from Cape May, New Jersey; all other outdoor images are from West Virginia. Please see the text for additional details.

THE SECOND CONFIRMED RECORD OF *EUDOCIMA SERPENTIFERA* (WALKER, [1858]) (LEPIDOPTERA: EREBIDAE) IN THE UNITED STATES

BY

CHRIS A. PAGUE AND VERNON ANTOINE BROU JR.

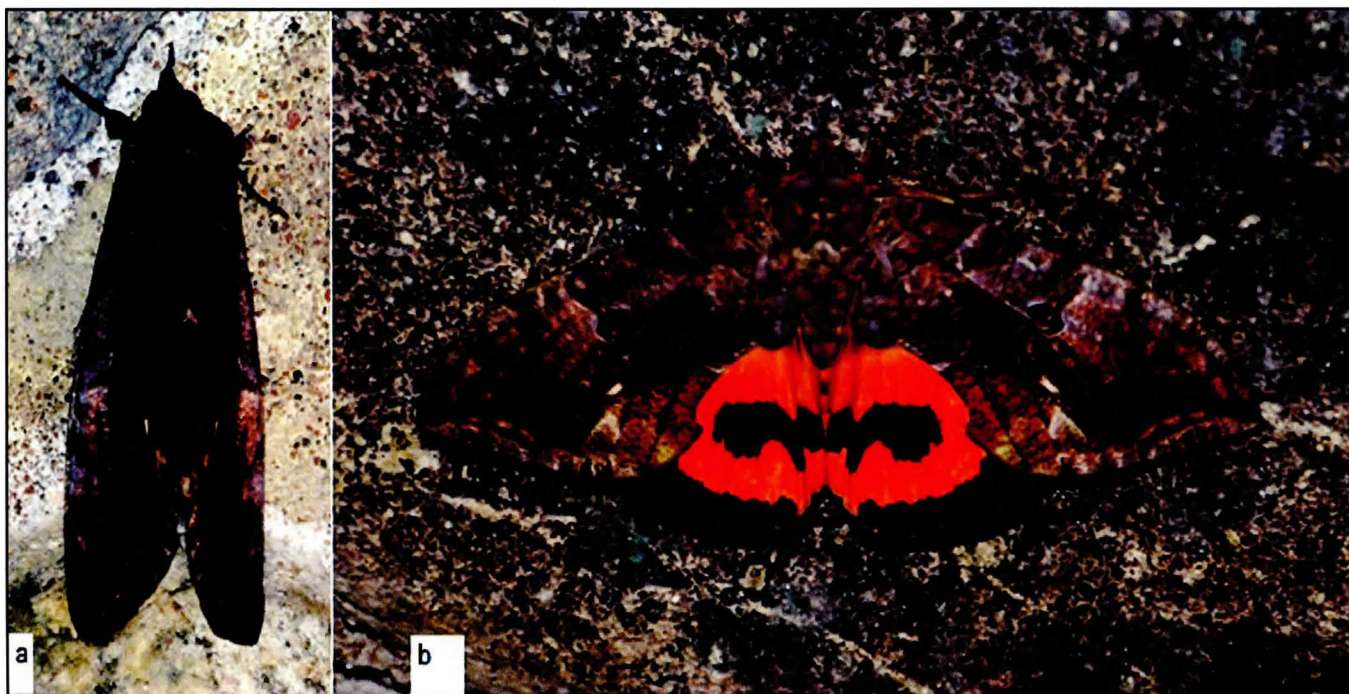


Fig. 1. *Eudocima serpentifera* (Walker) female, a. wings closed, b. wings open.

The second documented United States record of the moth *Eudocima serpentifera* (Walker) (Fig. 1) occurred on September 13, 2013 ~ 20:000 hr MDT; it was observed under a porch light at the Medano Zapata Ranch/Inn, Alamosa County, Colorado, UTM: 13 S 0447679 4167443 (lat./long. N 37°39'10.96" W 105°35'36.21", Elev. 2,368m, (1.2 air miles SSW of the junction of Colorado Rd 150 X County Road Lane 6). The moth was photographed on the 13th. The following day on September 14, the moth was in the same spot and was collected at that time.

The senior author observed what appeared to be a second individual at an adjacent cabin on the morning of the 15th, and still another specimen observed flying from a street light pole at approximately 0715 MDT that same day.

The immediate habitat surrounding this historic and operating inn includes many large narrow-leaved cottonwoods mixed with parking lots, lodges, cabins, and other buildings. The property is owned by The Nature Conservancy. The specimen will be deposited at the C. P. Gillette Museum of Arthropod Diversity, Colorado State University, Fort Collins Colorado.

The first documented U.S. specimen of *serpentifera*, also a female, was reported by Brou (2006) in southeast Louisiana, captured at ultraviolet light on October 25, 2006.

We thank Paul Opler for the species identification and kind assistance in this matter.

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(Chris A. Pague, The Nature Conservancy Colorado, 2424 Spruce Street, Boulder, Colorado, 80302 USA
Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana, 70420 USA)

METRIA AMELLA (GUENÉE, 1852) (LEPIDOPTERA: EREBIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.



Fig. 1. Phenotype variations in Louisiana of *M. amella* (a-d) males, (e-n) females.

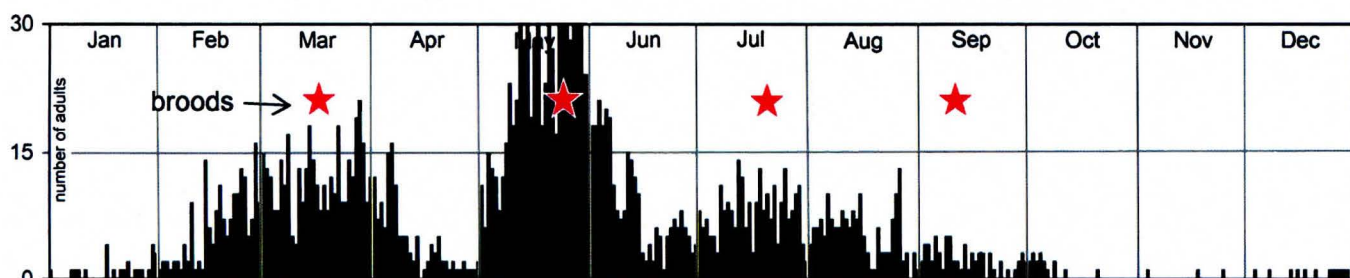


Fig. 2. *Metria amella* captured at sec.24T6SR12E, 4.2 mi. NE Abita Springs, Louisiana. n = 2,255

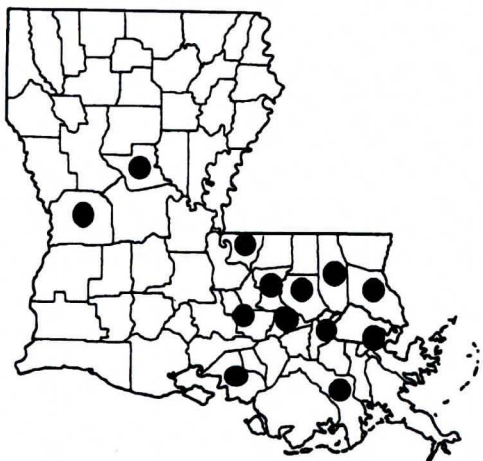


Fig. 3. Parish records by this author.

The moth *Metria amella* (Guenée, 1852) (Fig. 1) is fairly common in Louisiana. This species was previously reported for Louisiana by Chapin and Callahan (1967).

The upper wing maculation can be quite variable as illustrated in (Fig. 1). Adults can be encountered just about any day of the year as illustrated in Fig. 2. Most of my documented records are from southeast portion of the state (Fig. 3). There are four annual broods, the initial brood peaks at mid-March, brood two peaks about the third week of May with remaining broods peaking at about 65-day intervals. Nearly half of the adult annual population in this study is represented in the second brood peaking in late May.

In this study, most adult *amella* were captured in ultraviolet light traps, though occasional specimens were taken using fermenting fruit bait traps.

Literature Cited

Chapin, J.B. and P.S. Callahan, 1967. A list of the Noctuidae (Lepidoptera, Insecta) collected in the vicinity of Baton Rouge, Louisiana. *Proc. La. Acad. Sci.* 30: 39-48.

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

JAN VAN KESSEL, THE SENIOR

Jan van Kessel, a Flemish painter, was born in Antwerp, Belgium, in 1626.⁽¹⁾ The works of van Kessel were "...small-scale, brightly colored, and minutely detailed paintings on panel or copper." His paintings "...were highly regarded by connoisseurs and princely collectors. Van Kessel is most renowned for his depictions of flowers, insects, and animals, both living and dead..." "He also painted shells, armor, and still lifes of fruit bouquets, and garlands."⁽²⁾ Van Kessel "...worked from nature and used scientific texts as sources in order to achieve his high standard for attention to detail".⁽³⁾

Van Kessel's son, with the same name, was also a painter and thus the father is referenced as "The Senior".

Van Kessel died in Antwerp in 1679.

Sources

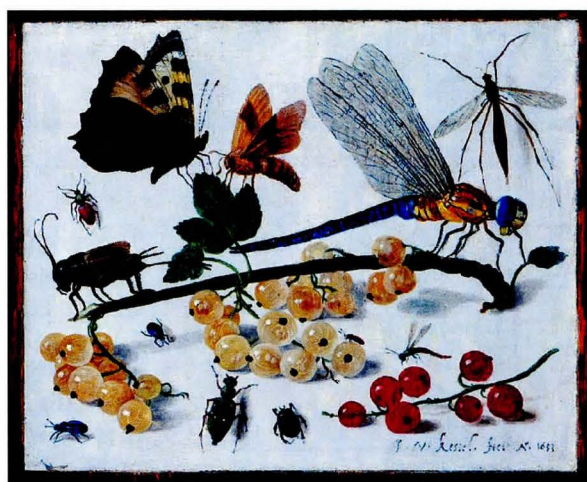
- 1) Jan van Kessel, senior. http://en.wikipedia.org/wiki/Jan_van_Kessel_senior
2. National Gallery of Art. http://www.nga.gov/content/ngaweb/collection/artist-info.5484.html#artist-info.5484.html?artistId=5484&pageNumber=1&_suid=1381936633213100032849526574837972
3. http://www.war.com/masters/k/kessel-jan_van.html



Jan van Kessel in Cornelis de Bie's *Het Gulden Cabinet* (1662)



1653, oil on copper



1653, oil on copper

BROWN - BANDED SKIPPER (*TIMOCHARES RUPTIFASCIATA*) LIFE HISTORY

BY
BERRY NALL

The eggs of this study came from a potted plant. A Brown-banded Skipper found the Barbados Cherry (*Malpighia glabra*) sitting on my porch and left four eggs. I was fortunate to find them and get a picture before the last one turned from white to yellow.

The caterpillars emerged on September 25. There seemed to be a significant change of appearance at almost every instar. However, in after the third instar there was one constant: I could swear there was a Batman logo on the head of each caterpillar! The logo style which reminds me of the third instar is below; another is pasted onto the first 6-X-2010 photo for comparison. The similarity is remarkable when the caterpillar is viewed with the naked eye.



The first caterpillars pupated about three weeks after they merged from the egg; the last one took about a week longer. Each adult emerged about a week after it pupated.

White-patched Skippers also use Barbados Cherry as a host plant; their eggs and larvae are similar in size to those of Brown-banded Skippers. To identify an egg, look at the yellow stage, preferably with a magnifying glass or magnified picture: if the yellow color appears uniform, then it is White-patched; Brown-banded Skipper eggs are blotchy, as can be seen in the pictures on this page. First-instars of White-patched are a brighter yellow than those of Brown-banded Skippers; in later instars the head should make identification straightforward. Also, the mature Brown-banded Skipper has orange spots in the yellow dorsal body stripes, whereas the orange is lacking in the White-patched Skipper larvae that I have raised. The chrysalis of the White-patched Skipper has large eyespots with white centers, while the eyespots of the Brown-banded Skipper are smaller and brown-centered.



Fresh egg left; older, right, 22-IX-2010.



Same eggs, 23-IX-2010.



Recently emerged 25-IX-2010.



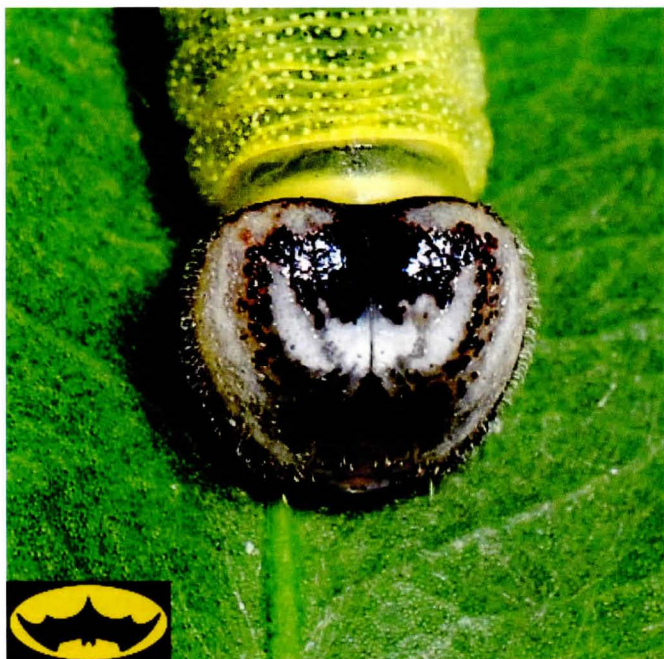
About to molt, 28-IX-2010.



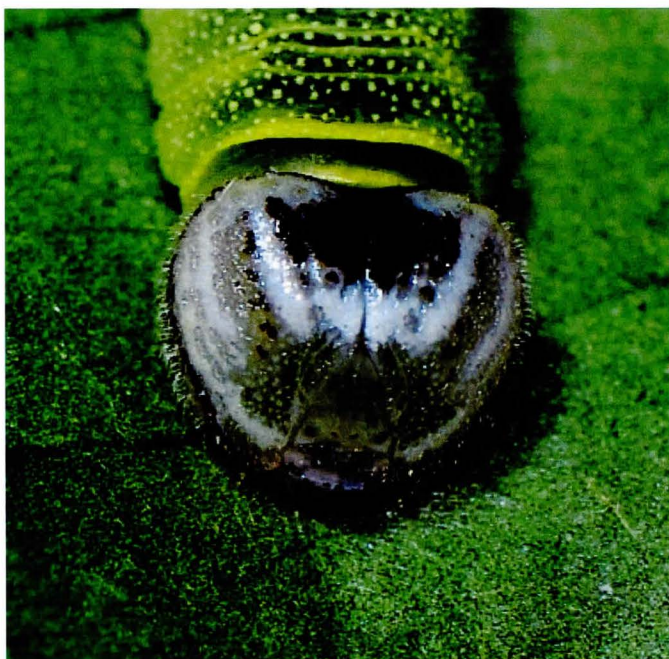
Second instar, head now black, 29-IX-2010.



Third (or fourth?) Instar, head now with pattern, 3-X-2010.



On this caterpillar, the center white pattern, and the black pattern just below it, each resemble an inverted Batman logo, 6-X-2010.



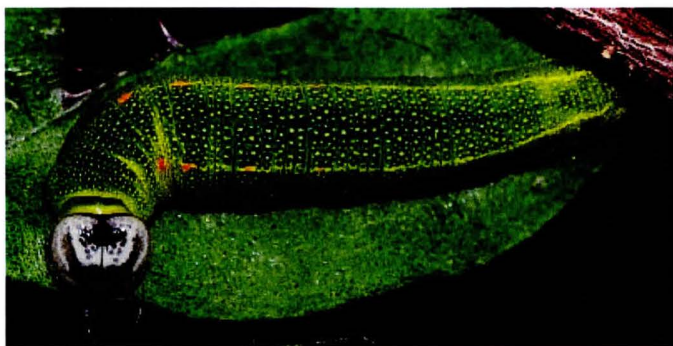
A second caterpillar on the same date as above has the white logo, but a green facial pattern, 6-X-2010. This caterpillar is pictured in the next 3 photos.



Preceding caterpillar, body shot, 6-X-2010.



9-X-2010.



Mature caterpillar, 13-X-2010.



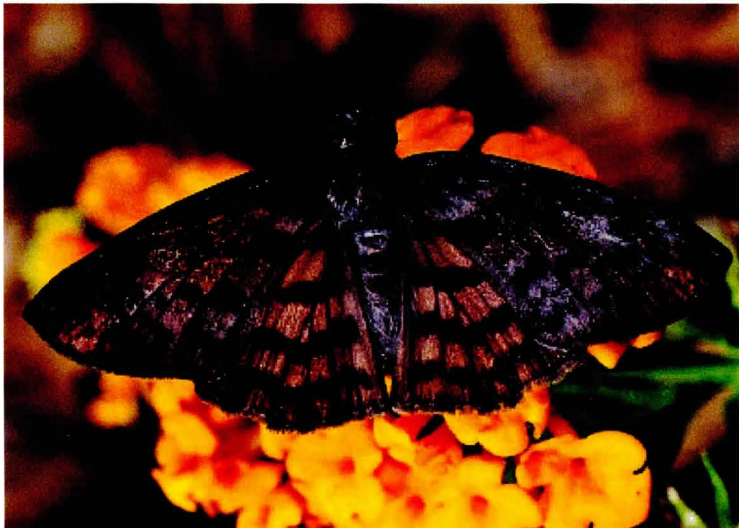
Chrysalis, 14-X-2010.



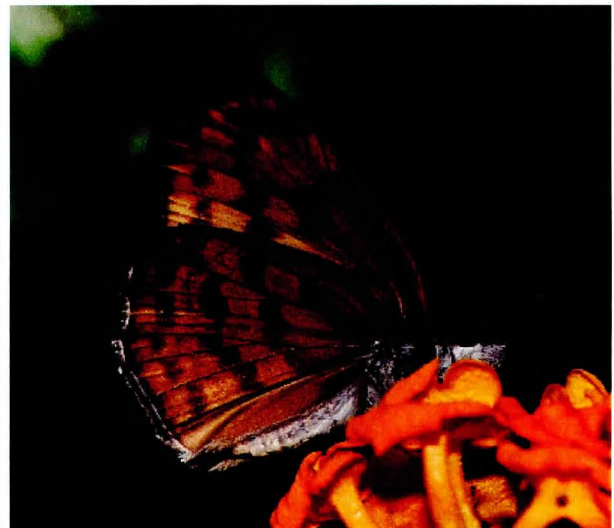
Eyes appear pink, indicating adult will emerge in a day or two, 21-X-2010.

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Brown-banded Skipper. The original publication can be seen at: http://leps.thenalls.net/content2.php?ref=Species/Pyrginae/ruptifasciata/life/ruptifasciata_life.htm

Mr. Nalls website "*Berry's Butterfly Photos*" can be viewed at <http://leps.thenalls.net/> His contact E-mail is lb@thenalls.net



Fresh Brown-banded Skipper, dorsal, 28-X-2010 (from different chrysalis than above).



Fresh Brown-banded Skipper, ventral, 28-X-2010.

NEW SPECIES NAMED AFTER AND HONORING THOMAS SAY

Thomas Say ⁽¹⁾ an important American naturalist born in 1787 described over 1000 new species of beetles and over 400 species of insects. For his contributions to science his fellow biologists named the following 5 species ⁽²⁾ after him.

Dyspanopeus (Neopanope) sayi (Smith 1869) - a mud crab

Lanceola sayana (Bovallius, 1885) - an amphipod

Sayornis saya (Bonaparte, 1825) - a tyrant flycatcher

Appalachina sayana (Pilsbry 1906) - a land snail

Pituophis catenifer sayi - a bullsnake

Sources

1) *Southern Lepidopterists' News*, Volume 35 NO.3 (2013), pg. 148.

2) Wikipedia: http://en.wikipedia.org/wiki/Thomas_Say

**TO TELL THE TRUTH:
WILL THE REAL AROGOS SKIPPER PLEASE STAND UP
BY
CRAIG W. MARKS**

The Arogos Skipper (*Atrytone arogos*) is listed from Louisiana based upon a small number of records in the extreme eastern portion of the State. Lambremont (1954) first reported it based on a single specimen caught in St. Tammany Parish on September 8, 1950. Gayle Strickland found it in a large colony within the same parish on August 12, 1970. The habitat was described as open pine flatland just north of Lake Pontchartrain. He noted that as many as four could be found feeding on a single flower. Via personal conversations with Strickland, he reported also seeing this skipper at Tickfaw State Park in Livingston Parish in August during the early 2000's.

As I had not yet seen this unique skipper, I moved it to the top of my "wish list" in 2011. Unfortunately, the area in St. Tammany Parish described by Strickland is now much more urban than in 1970, and I was unable to find suitable habitat to search. In August of 2011, I searched Tickfaw State Park on two occasions without any success. On August 17, 2011, as I was walking in an area near the section of the park identified by Strickland, I saw a largish, bright orange skipper on a thistle bloom. With no personal experience and, therefore, no notion of its size, my initial thought was that I had found an Arogos Skipper. Unfortunately, it turned out to be a Delaware Skipper. Despite several searches at Tickfaw in 2011 for this skipper, I did not find it.

I would defend my mistaken identification of a Delaware Skipper for an Arogos Skipper by noting that at one time they were grouped in the same subfamily. Specifically, and as an example, Klots (1951) listed the Delaware Skipper as *Atrytone logan*, but that skipper was reclassified from the genus *Atrytone* to the neotropical genus *Anatrytone*. The move of *logan* from *Atrytone* to *Anatrytone* was presented by Burns (1994). Essentially, he left *arogos* in the former genus and moved *logan* to the latter.

Cech and Tudor (2005) referred to the Arogos Skipper as an "unusual skipper" and "little studied until recently," noting it to be, "one of several grass skippers with disjunct ranges in the East and Midwest," representing different subspecies. They described the nominate eastern form as larger and less yellow than the prairie race, *A. a. iowa*. The males are smaller, "with pointier, more triangular shaped wings." The females have a "straight dark, stigma-like line" of the middle of the

upper dorsal wing. Ventrally, this skipper is orange/tan-orange.

In a recent US Forest Service publication by Schweitzer, Minno and Wagner (2011), the authors reported that the populations along the Gulf Coast should be included within the nominate subspecies, *A. a. arogos*, although they noted some specimens from central MS were identified as the prairie race. They indicate that, "a variant is known from eastern Louisiana, southern Mississippi, southern Alabama and the western Florida Panhandle. They also describe the prairie race as possessing a narrower dark border.

They report that while the prairie race of this skipper can be locally numerous, the eastern subspecies "has declined greatly throughout its eastern range." It may be extirpated from Georgia, North Carolina, South Carolina and Virginia in the southeast. They reported that the Gulf Coast ecotype has had the most occurrences in the recent past (to include Louisiana, Mississippi, Alabama and Florida), but that Hurricane Katrina struck this region in August of 2005, during the latter season flight period, and it was still unknown what impact that storm had on that population.

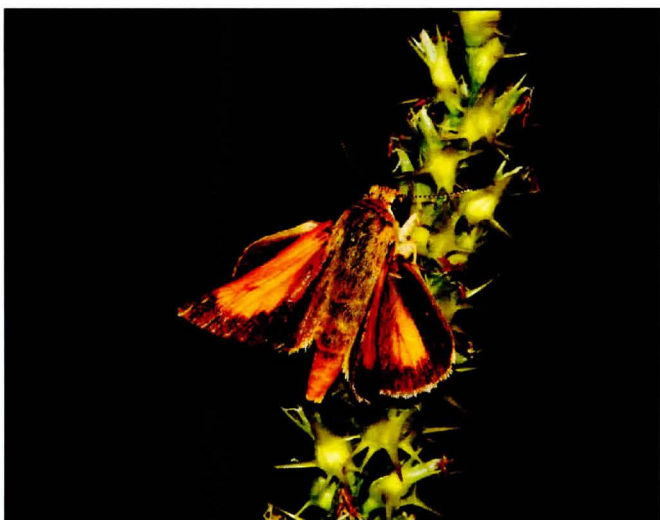
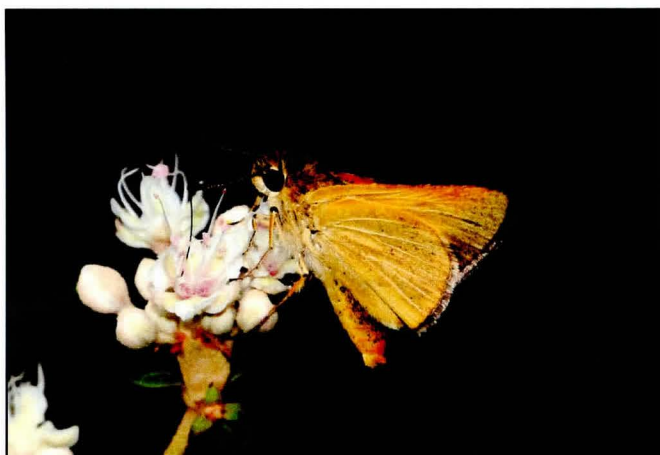
Marc and Maria Minno (2006) reported that from 1994 – 1998, the US Fish and Wildlife Service (USFWS) funded surveys to find populations of this skipper in the eastern portion of its range. "Widely scattered colonies were found in New Jersey, North Carolina, South Carolina, Florida and Mississippi. The three regions where the butterfly was most abundant included the New Jersey pine barrens, peninsular Florida and southeastern Mississippi. From 2001-03, the Minnos were funded by the USFWS to search for the skipper in the southeastern US. That search included eastern Louisiana and southern Mississippi.

As a result of their search, the Minnos identified five different populations that differ in adult phenotypes, host plant and habitat. They referenced *A. a. arogos* as the population that formerly existed from southern South Carolina to southern Florida, but now is limited to peninsular Florida. They noted that unlike other races, the females are nearly black on the uppersides of the forewings. On the males, the veins in the yellow patch on the uppersides of the forewings are partly outlined in black.

In terms of its life history, in the Gulf Coast region there are three broods, mid-April into May, June through July and August to mid-September, most common during the latter period. Across the Midwest, the reported larval foodplants are Gama Grass (*Tripsacum doctyloides*), Big Bluestem (*Andropogon gerardi*) and Little Bluestem (*Schizachyrium scoparium*). In the east, panic grass (*Panicum* ssp.) was referenced as used. The Minnos reported that in Florida, it feeds on toothache grass (*Ctenium aromaticum*). In the Florida Panhandle, it has also been found to oviposit on broomsedge bluestem (*A. virginicus*) and possibly *Sorghastrum secundum*.

Cech and Tudor (2005) described the habitat as seasonally wet pine savannas, among other types. Within the US Forest Service publication, it was reported as occurring in pine savannas and dry prairies. "Pitcher-plants are almost always present, except in peninsular Florida."

Not to be deterred by my initial lack of success, I continued my efforts to locate this skipper by gathering additional "first hand" information. One invaluable source was Mary Ann Friedman with whom I had



Figs. 1 & 2. Arogos Skipper, Florida Panhandle
(by Mary Ann Friedman)



Fig. 3. Arogos Skipper, Florida Panhandle
(by Mary Ann Friedman)

corresponded in the past via e-mail. She was also kind enough to send me pictures (see Figs. 1-3). Within her e-mails, she reported, this skipper flew in mid-August in two different types of habitat. The first was similar to my experience, areas with pitcher plants bogs where *Balduina uniflora* was present, primarily moist habitat with toothache grass and plants "that liked wet feet like *liatris*".

The second habitat she described was a totally different habitat of Scrub oak and pine flatwoods where she saw it in larger concentrations. In that habitat, she reported this skipper seemed to like Buckwheat as a nectar source. "Sometimes there would be three or four Arogos at one time on one Buck-wheat plant," similar to Strickland's observations. Another of her comments was that if found, they like tallish flowers in the open, including *liatris*. She further reported witnessing females lay eggs on the common grass, *Andropogon virginicus*. Also, during caterpillar searches with Dr. Minno, they found larvae and shelters on Lopsided Indian Grass. Finally, she reported that although she had seen them perch on Toothache grass, she had never seen a female oviposit on it.

My research next discovered that the Mathers (1958) had reported this skipper from central and southern Mississippi, more common in the south along the Gulf Coast. Those records were in June and then August to September. Against this backdrop, on August 4, 2012, I visited Crosby Arboretum in Picayune, Mississippi. I had been there once, about ten years before, and knew it contained a pitcher plant bog (the location turned out to have two). It was my hope to find Georgia Satyr (present in small numbers on the earlier trip). I had also been told I could find Little Metalmarks there. Finally, with the open pine savannah and bog, I wondered if I might find Arogos Skippers.

This location is four miles beyond the Louisiana (St. Tammany Parish) border, in Pearl River County, near the

Gulf Coast. It has two separate areas, each of which encompassed a pitcher plant bog. It rained buckets the night before and there was standing water in multiple places. I arrived at 9:00 and saw only a lonely female Tropical Checkered-skipper in the first hour. I began to see multiple *Neamathla* Skippers, and on my second walk through the larger pitcher plant bog, on a *liatris* subspecies blooming near a boardwalk, I saw a small golden skipper that turned out to be my first Arogos Skipper. Over the next hour and a half, I saw a total of five. I thought I saw two females, but they turned out to be male Tawny-edged Skippers. Other than the first one, the rest, all males, were perched on tall yellow flowers from the coreopsis family. Other skippers flying with it were Tawny-edged Skippers, Whirlabouts, *Neamathla* Skippers and a single Southern Broken-dash.

On August 24, while driving back to Louisiana from Mobile, I took a ten mile detour up I-59 to return to the Crosby Arboretum. This time, after corresponding with Ricky Patterson about appropriate flight times, I was hoping to locate Dotted Skippers. From 12:30 to around 3:15, while I saw many skippers, I did not see any Dotted skippers. There were many *Neamathla* Skippers and a good number of Tawny-edged Skippers, which on this day I again initially mistook for Arogos Skippers. At around 2:45, I did, in fact see a male Arogos sitting on a tall coreopsis flower. Over the next half hour, I saw two, possible three more, including my first female. I ended the day with seventeen species, including four Twin-spotted Skippers. My search ended abruptly when the skies opened and it began to rain like water poured out of a boot.

After researching locations possessing pitcher plant bogs in the Florida Parishes, on August 10, 2013, I spent several hours at Abita Creek Flatwood Preserve in St. Tammany Parish, maybe 20 miles, as a crow flies, from Crosby. Within 10 minutes of arriving, I had seen five

Arogos, all males, perched on tall yellow flowers (possibly honeycomb aster, see Fig. 4) in the pitcher plant bog section of the preserve, just like I had witnessed at Crosby in 2012. I ended up seeing thirty, with a ratio of about three or four males to each female. While some of the females were found flying down in the grass, others were perched up on the tall yellow flowers like the males.

Again, like I experienced at Crosby, the Arogos Skippers were flying with Tawny-edged Skippers, Whirlabouts, Southern Broken-dashes, and a single *Neamathla* Skipper. New to the mix were, Delaware Skippers. As a final note, unlike Strickland's observations, the males seemed to stake out a flower as their own. In fact, one male spent the entire 2.5 hours I was there perched on the same flower. Any time another skipper, be it another Arogos or a different species, landed on a flower already occupied by this species, the original occupant would leave.

Referring back to the article by the Minnos (2006), while they did not discuss whether the colonies in southern Mississippi were of the same race as those they described in southern Florida or of another race, those that I found near Picayune, Mississippi, and near Abita Springs, Louisiana, matched their description closely.

As previously noted, before actually seeing Arogos Skippers, "up close and personal," looking at pictures of these two skippers in various field guides I had perceived a similarity between Delaware and Arogos Skippers, so much so that I mistook one of the former for the latter. In fact, at least in this area of their world, the differences between to two outweigh the similarities. Size is the primary difference, but their coloring and wing shape are also distinct. Ventrally, Delawares are a brighter shade of tan with some orange, and their profile is noticeably longer, with the forewing extending beyond the leading edge of the hindwing while in the Arogos, the two wings are even. There are dorsal differences as well, but these are not as easily seen in the field.

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Fig. 4. Abita Creek, St. Tammany Parish (August 10, 2013)

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

OLDEST PINNED ENTOMOLOGICAL SPECIMEN STILL ON ITS ORIGINAL PIN ^(1, 2)



Illustration from John Curtis' *British Entomology Volume 5* ⁽¹⁾

A specimen of *Pontia daplidice*, the Bath White, has been dubbed the oldest pinned insect specimen that is still on the original pin. This specimen dates to 1702 and is housed in the Hope Entomological Collection in the Oxford University Museum of Natural History in Oxford, UK. ⁽²⁾ It was collected near Gamlingay, Cambridgeshire, in May of the year 1702.

It was originally named after William Vernon as "*Vernon's Half Mourner*" who collected this insect in the 17th century. The name was changed to the "*Bath White*" around 1795 when a picture of "...it appeared on a piece of embroidery..." owned by a young woman from Bath, a city approximately 97 miles west of London. ⁽²⁾



"The Bath White"
"*Pontia daplidice*"
Linnaeus 1756, Family Pieridae. Photographed by Mr. Debashish Joardar at Tinchuley Village, Dt Darjeeling, West Bengal, India, on 16 April 2006 at 0845hrs. Photo kindly donated by Mr. Debashish Joardar to be placed on Wikipedia commons. ⁽³⁾

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**FASCINATED LEPIDOPTERA VISITORS TO VERNON AND
CHARLOTTE BROU AT ABITA SPRINGS, LOUISIANA**

**BY
VERNON ANTOINE BROU JR.**



October 13, 2013 (L to R): Kevin Cunningham, Louie Woods, Cory Woods visiting Vernon and Charlotte Brou.



Louie Woods, lepidopterist in training - reacting to seeing *Attacus atlas* moths for the first time.



October 13, 2013 (L to R): Cory Woods, lepidopterist in training- Louie Woods, Vernon A. Brou Jr. and Kevin Cunningham.



Research collection of Louisiana Lepidoptera established by Vernon and Charlotte Brou.

ALABAMA ARGILLACEA (HÜBNER, 1823) (LEPIDOPTERA: EREBIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

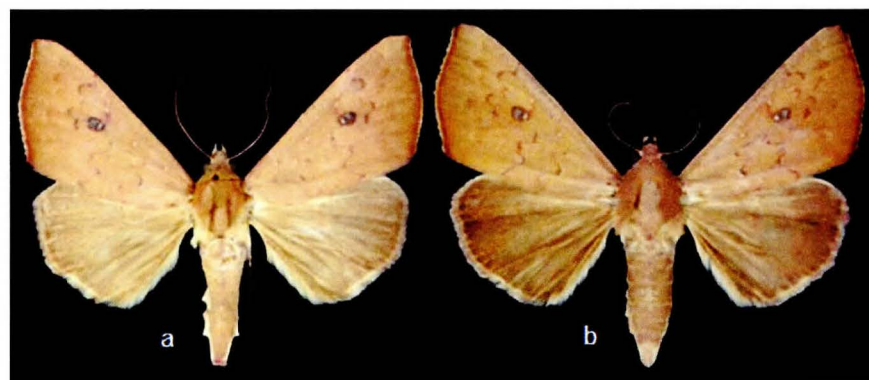


Fig. 1. *Alabama argillacea*: a. male, b. female.

The medium size moth *Alabama argillacea* (Hübner) (Fig. 1) was once very common in Louisiana. The larvae of this moth was considered North America's most significant cotton pest. A migratory species commonly referred to as the "cotton leafworm" was recorded on numerous occasions in past literature to have completely destroyed entire fields of planted cotton.

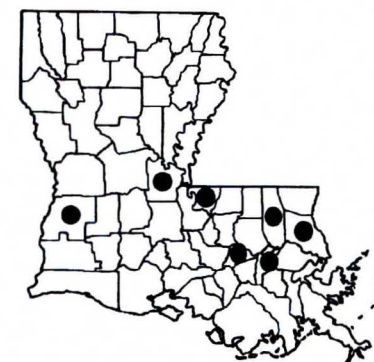


Fig. 2. Parish records for *A. argillacea*.

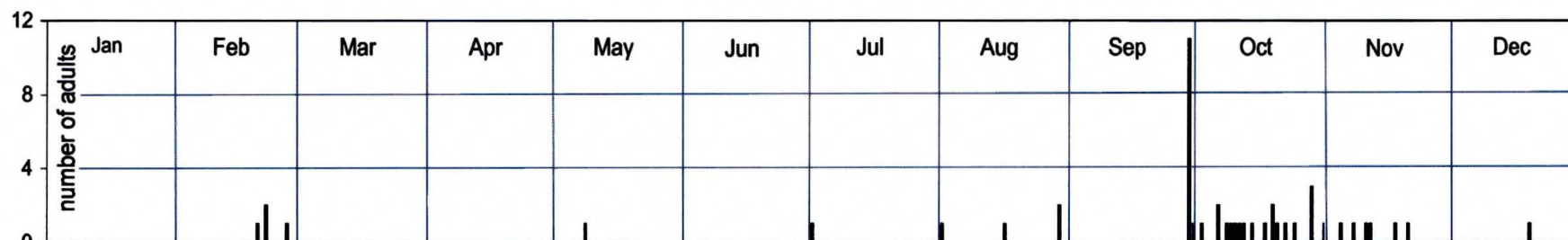


Fig. 3. Adult *A. argillacea* captured in Louisiana. n = 48

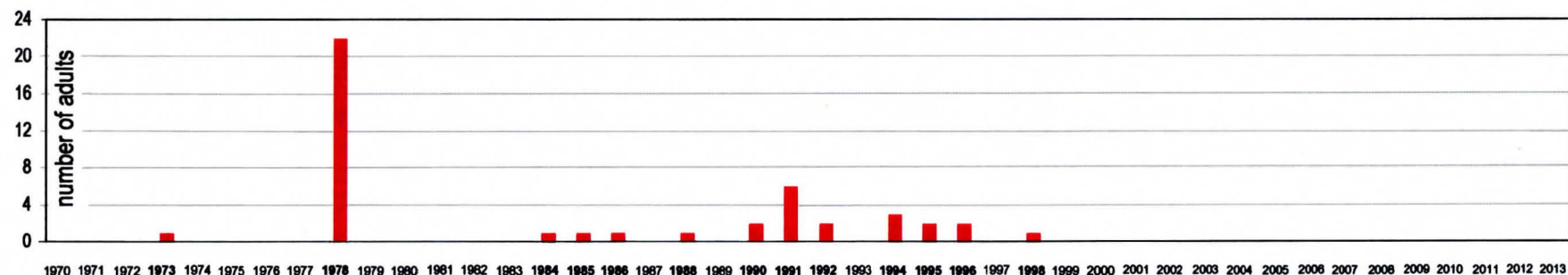


Fig. 4. Number of adults by year of *A. argillacea* in the collection of Vernon Antoine Brou Jr. n = 45

Adults of this species, like many other migratory species entering into Louisiana occurred in large numbers in the fall months with the peak population appearing during the month of October (Fig. 3).

Several years ago, I was asked by Dave Wagner to provide information concerning *argillacea* in Louisiana for a research project he was doing on this species (Wagner, 2009). It appears the species has not been seen in recent years over much of the US. This is also true in Louisiana. I hadn't paid much attention to the fact that I had not captured any adults for about eleven years back then. At that time, I had only retained a small representative series of 45 specimens in my personal research collection, though I captured hundreds to thousands of this pest in ultraviolet light traps and also donated hundreds of spread adults to museums and private collectors over the years. I provided an illustration for Wagner back then of the 45 specimens by year, beginning with 1970. I present here an updated version of that same bar-graph, though now 5 more years have elapsed still without any further captures of adult *argillacea* (Fig. 4).

To clarify the extent of my lepidoptera surveillance, I began light trapping in the late summer of 1969 in Louisiana, and continued to do so every night of every year to present day (November, 2013) regardless of temperature or weather conditions. The only exception to this continuous light trap collecting occurred during the entire month of September, 2005, following the massive destruction caused by Hurricane Katrina. Some other entomological traps not requiring electricity as fruit bait traps and dozens each of sesiid pheromone traps and beetle traps operated throughout September of 2005. Adult *argillacea* were not captured using any methods except ultraviolet light traps.

The parish records are illustrated in Fig. 2.

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DEFINITIONS:

Holometabolous⁽¹⁾ - This term refers to insects that have 4 stages in their transformation from egg to adult, i.e., embryo, larva, pupa, and imago.

Aurelia⁽²⁾, **Nympha**^(1,3) - These terms are synonyms for 'chrysalis'.

Pharate⁽¹⁾ - The term used to describe the adult insect inside the exoskeleton of the pupa.

Exuviae^(4,5) (**Exuvia** = singular; note: **exuvium** is an incorrect singular form of the word) - the remains of the empty pupal exoskeleton. The layers of skin or cuticle that are shed by animals during ecdysis. [ecdysis = molting⁽⁶⁾]

Sources:

1. <http://en.wikipedia.org/wiki/Pupa#Chrysalis>
2. <http://en.wikipedia.org/wiki/Aurelia>
3. <http://en.wikipedia.org/wiki/Nympha>
4. <http://en.wikipedia.org/wiki/Exuvia>
5. <http://www.thefreedictionary.com/exuviae>
6. <http://www.thefreedictionary.com/edysis>

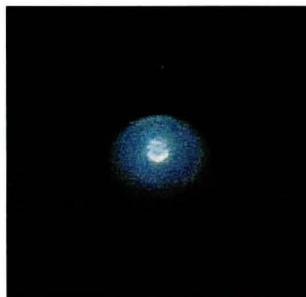
SOUTHERN SKIPPERLING (*COPAEODES MINIMUS*) LIFE HISTORY

BY

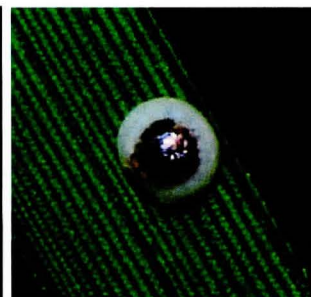
BERRY NALL

One morning I was with Dan Hardy and another member of Austin Butterfly Forum in a field of Bermuda grass, *Cynodon spp.* We watched several Southern Skipperlings and soon realized that several were ovipositing. When trying to locate tiny butterfly eggs in a field of grass, it is a great help to have several sets of eyes on a skipper! As we followed one particular female around, a pattern became apparent. After she had deposited an egg on the underside of a blade of grass, she would then fly a little ways and rest. A few moments later, she would spread her wings to catch the sun. Then she would fly off to lay another egg. The wing-spreading always preceded egg-laying.

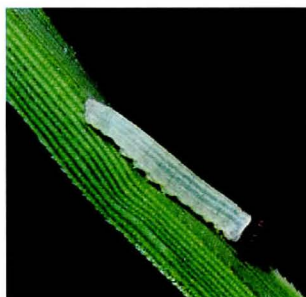
Four of the eggs we gathered were viable, and I was able to raise two caterpillars to adulthood. The eggs took only 4 days to eclose. The caterpillars changed very little throughout the various instars. The featured caterpillar pupated on August 25 (27 days after eclosing) and the adult emerged on September 1, which was 35 days after the egg was deposited. The other caterpillar took four days longer to pupate and emerge.



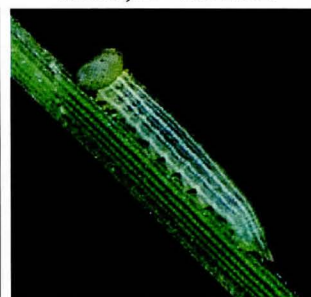
Fresh egg, 26-VII-2010



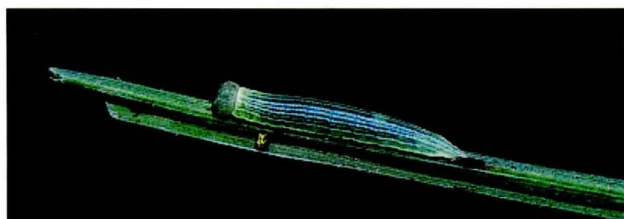
Pre-emergent, head visible, 29-VII-2010



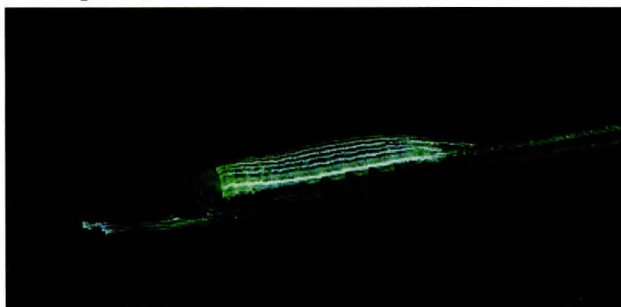
Recently emerged caterpillar, 30-VII-2010



New instar, green head, 4-VIII-2010



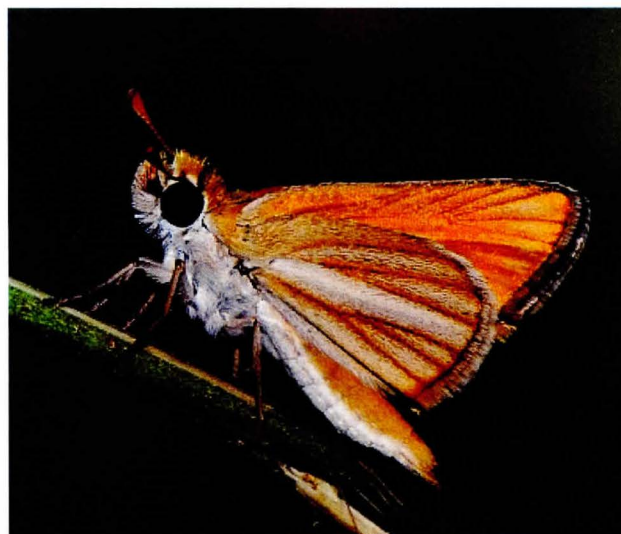
9-VIII-2010



16-VIII-2010



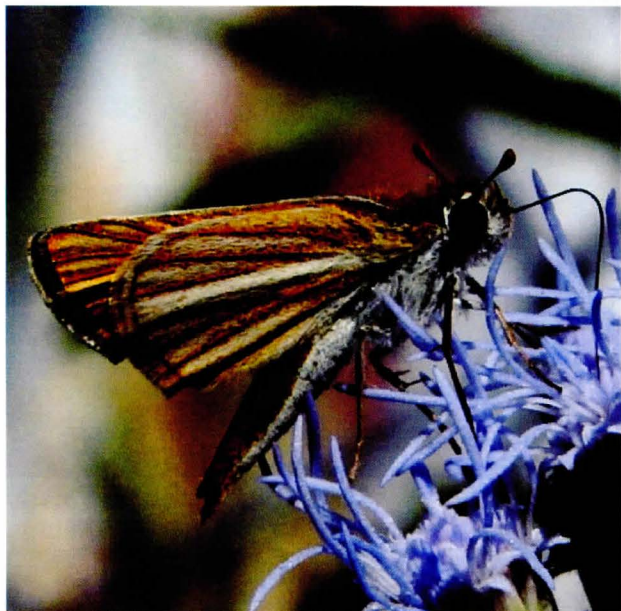
Mature caterpillar, 21-VIII-2010



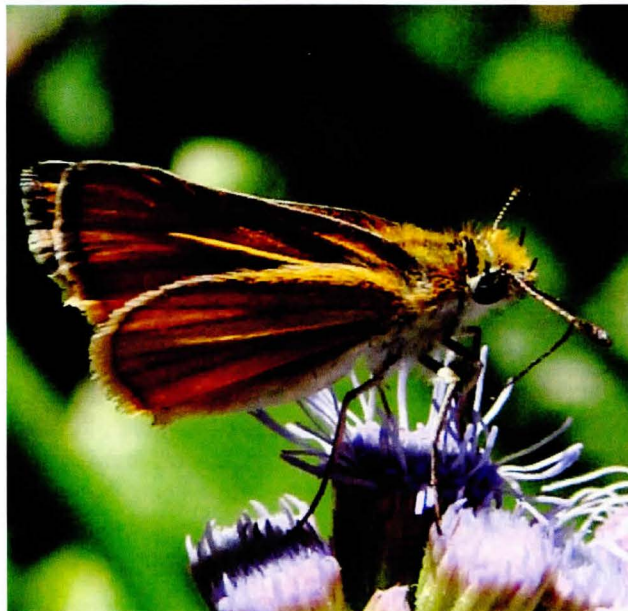
Fresh Southern Skipperling, 1-IX-2010



Chrysalis, 25-VIII-2010



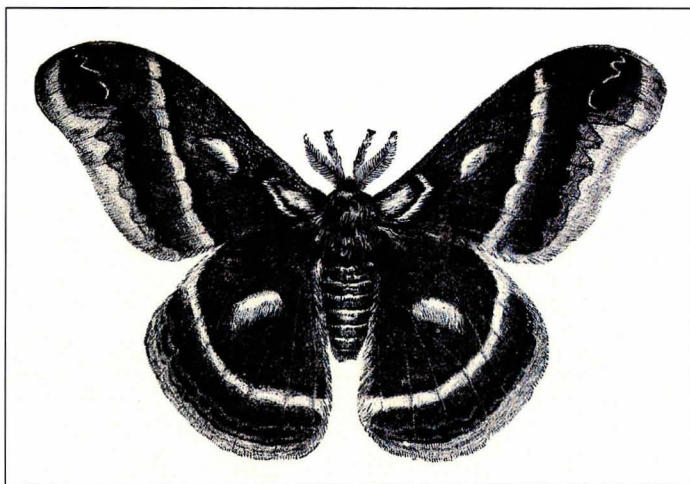
Falcon Heights, TX, 27-X-2007
(different specimen than in the life history)



Falcon Heights, TX, 16-XI-2008
(different specimen than in the life history)

The SL Society and the Editor thank Mr. Berry Nall for allowing us to reprint his life history of the Southern Skipperling. The original publication can be seen at: http://leps.thenalls.net/content2.php?ref=Species/Hesperia/minimus/life/minimus_life.htm

Mr. Nalls website "*Berry's Butterfly Photos*" can be viewed at <http://leps.thenalls.net/> His contact E-mail is lb@thenalls.net



"Two rough brown oval cocoons, spun (with one flat surface fastened lengthwise to a branch) by the large green caterpillar of the *Attacus cecropia* moth, were brought in, and lying side by side looked as nearly alike as possible. From one of them, on March 1st, as if to show his appreciation of spring, the fine Cecropian stole out which is now in the glass before me. The other cocoon, from eagerness to see what promise it gave of a mate, was carefully cut at one end; when lo, an empty chrysalis within! Even with a microscope no place of exit was to be discerned. But his cast-off dress was in the tomb, and it was evident he had, with more skill and silence.....gone off *without* his "tent" to enjoy the freedom he could not have had, had he been born in prison." Pgs. 70-71.

The Attacus Cecropia Moth

"On July 8, 1889, I received a box with a large number of the eggs from a friend in New Jersey, all of which came out (several having hatched by the way). One peculiarity I noticed at the start with them all—they do not eat the egg upon leaving it, but just enough to allow their escape. They began at once to eat the lilac,— and the pear,—as well as the currant-leaves which were given them." Pg. 75.

Julia P. Ballard, 1890. *Among the Moths and Butterflies*. G. P. Putman's Sons, New York, The Knickerbocker Press.

ACRONICTA LOBELIAE GUENÉE, 1852 (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

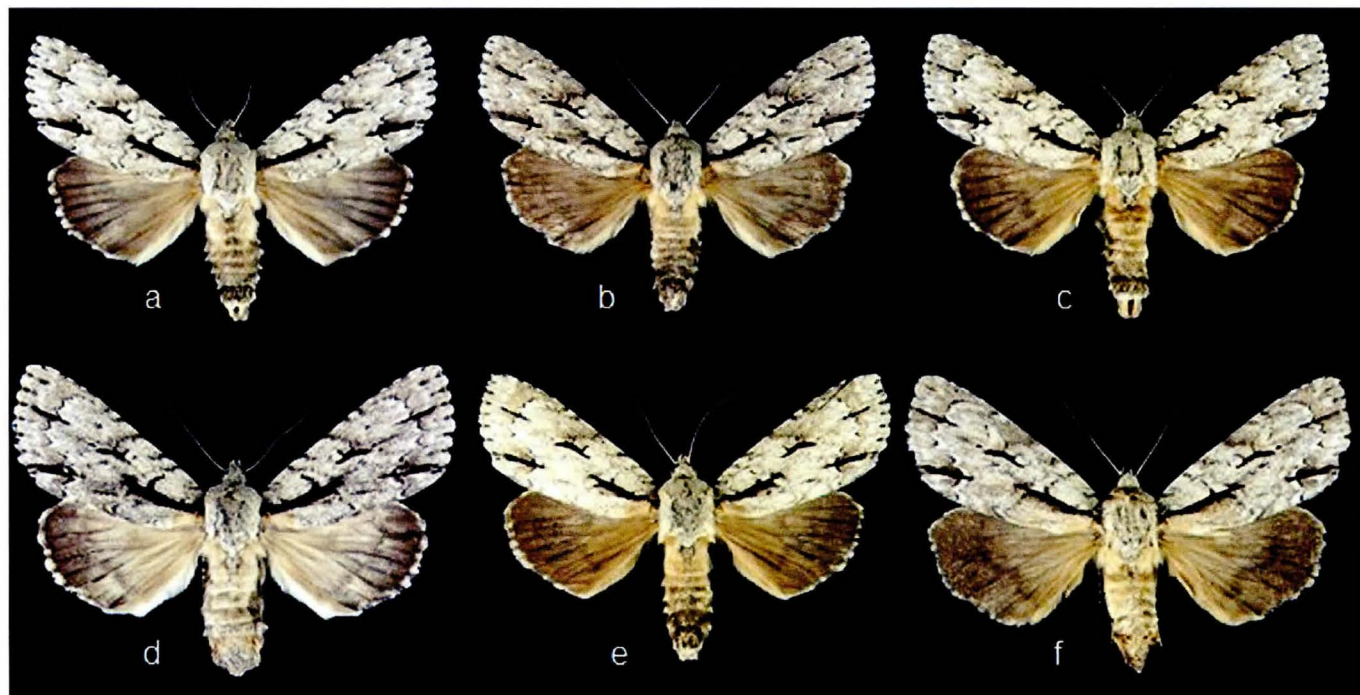


Fig. 1. *Acronicta lobeliae* phenotype variations: (a-c) males, (d-f) females

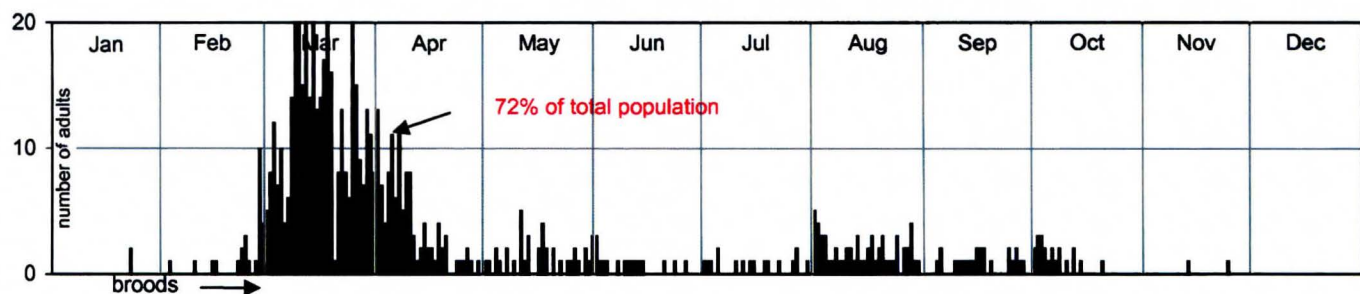


Fig. 2. Adult *Acronicta lobeliae* captured in Louisiana. n = 712

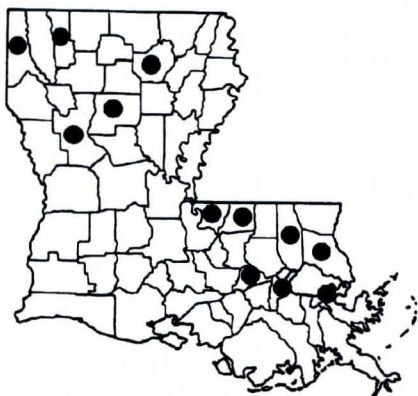


Fig. 3. Parish records for *A. lobeliae*.

for approximately 75% of the total annual population. *Acronicta lobeliae* also has five annual broods and a unique configuration of four minimally populated broods with the first brood being the largest populated, accounting in this sample for approximately 72% of the total annual population.

The noctuid moth *Acronicta lobeliae* Guenée (Fig. 1) is one of about 30 species of the genus which I have recorded for Louisiana. *A. lobeliae* is the second largest in size of the genus known to occur within the state. This species was first documented in Louisiana by Smith and Dyar (1898) and later by Chapin and Callahan (1967).

A. lobeliae is fairly common across the state in what appears to be five annual broods, the first peaking mid March, the second peaking mid-May, and remaining broods at approximately six week intervals (Fig. 2). The adult records, all captured at ultraviolet light are illustrated in Figs. 2 and 3.

Brou (2010) reported on *Acronicta americana* (Harris), another species which has five annual broods and a unique configuration of four minimally populated broods with the fifth brood being the largest populated, accounting

Mountains, with dates March through August, and specifically mentions (adults) in April for Louisiana. Heitzman and Heitzman (1987) mention taking 41 species of *Acronicta* in Missouri, but provide no comprehensive listing of them, only illustrating two species, neither of which are *lobeliae*. Covell (2004) states *lobeliae* occurs April through August in two or more broods. Heppner (2003) included Nova Scotia to the range and dates January and September.

Within Louisiana, I have captured *lobeliae* in all months January through November (Fig. 2). The initial brood peaking mid-March and brood two peaking near mid-May, with subsequent broods at approximate 44-day intervals. *A. lobeliae* has been recorded from 12 parishes within Louisiana (Fig. 3).

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DEFINITION:

Aide mémoire mimicry ⁽¹⁾ - This is a unique method of protection by stalked animals that can “remind” predators of a previous encounter that was unpleasant and thus they will be wary of attacking their current potential victim. Thus the aggressor has recall of a ‘disagreeable experience’ or recall of “...a revolting encounter” ⁽²⁾ and avoids the attack.

This term was coined by Miriam Rothschild for presentation at the Mimicry Colloquium in Paris in 1981. The organizers of the Colloquium decided that all papers must be presented in French and thus the term *Aide mémoire mimicry*. A shortened English translation would be “recall mimicry”. ⁽²⁾

Sources:

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2. Sourakov, A. Fierce faces of Florida Tigers: moths mimicking spiders. *News of the Lepidopterists' Society*. Vol. 55, NO.2, 2013.

RAPHIA ABRUPTA GROTE (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.



Fig. 1. *Raphia abrupta*, Louisiana phenotype variations: males (a-h), females (j-r).

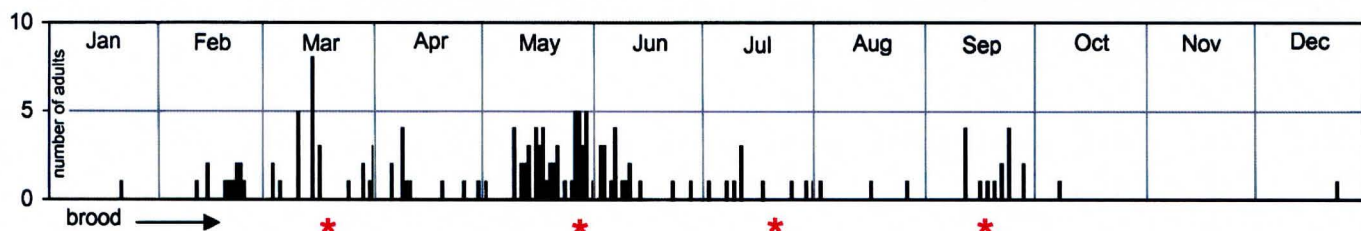


Fig. 2. Adult *Raphia abrupta* captured in Louisiana. n = 149

The noctuid moth *Raphia abrupta* Grote (Fig. 1) was previously reported in Louisiana by Chapin and Callahan (1967). This species is usually encountered as singletons and never in large numbers at ultraviolet light. *R. abrupta* can be quite variable in maculation and in wingspan, some examples of which are illustrated in Fig. 1.

I have taken *abrupta* in all months except November, though this species appears to have four broods, the initial brood peaking mid-March and the second brood peaking the end of May, with subsequent broods peaking at approximate 57-day intervals (Fig. 2).

Lafontaine and Schmidt (2010) lists six species for the genus *Raphia*. Regarding *abrupta*, these authors state "We tentatively retain *R. abrupta* as a species distinct from *Raphia frater* Grote. Despite the lack of differences in morphology and DNA barcodes, there appears to be no clinal or local variation in phenotypes between the two taxa, with *R. abrupta* occurring from New Jersey to northern Kentucky and Kansas southward, and *R. frater* to the north."

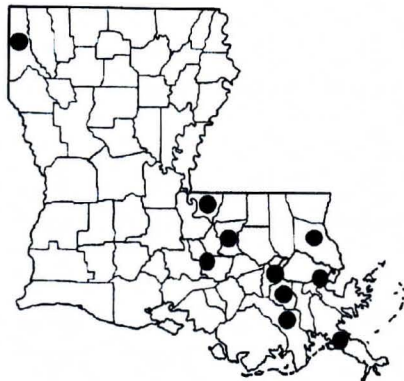


Fig. 3. Parish records for
Raphia abrupta.

I have recorded *abrupta* in 10 of Louisiana's 64 parishes (Fig. 3).

Covell (2005) states *abrupta* has two broods southward, and is uncommon to locally common.

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

CARL SPITZWEG: A SHORT BIOGRAPHY ⁽¹⁾



Carl Spitzweg
(February 5, 1808 - September 23, 1885).

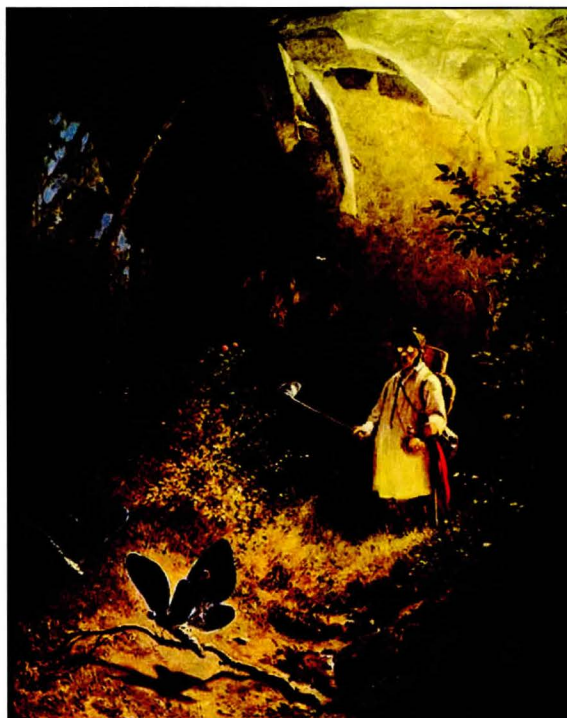
Carl Spitzweg was born in Bavaria, Germany, in the Unterpfaffenhofen part of the city of Germering ⁽²⁾ on February 5, 1808. He was trained as a pharmacist but after recovering from a serious illness he became interested in painting which he pursued for the remaining of his life. In 1833 at the age of 25, he became independent upon receiving an inheritance and thus was able to work as an artist, his true labor of love, without financial worries.

In the 1930's 54 of Spitzweg's paintings were copied by a by a man named Toni from the town of Traunstein ⁽³⁾, a town in the south-eastern part of Bavaria. These copies were at the time of painting not criminal forgeries but other individuals not quite as honest removed Toni's

signature on these Spitzweg's paintings. Toni had signed the copies "after Spitzweg" which was deleted. Also the paintings were manipulated in order to age them and then they were sold as originals. The swindlers were arrested and sentenced to 10 years in prison.

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- 1) http://en.wikipedia.org/wiki/Carl_Spitzweg
- 2) <http://en.wikipedia.org/wiki/Germering>
- 3) <http://en.wikipedia.org/wiki/Traunstein>



The Butterfly Hunter
(Der Schmetterlingsjäger) (1840)



"Autumn Collage" a composite of fall-colored leaves of crape myrtles. Sent in by Gary N. Ross.

SPRING BUTTERFLIES AT MERRITT ISLAND, BREVARD COUNTY, FLORIDA

BY

MARC C. MINNO

With Earth's climate warming and sea levels rising, barrier islands are likely to experience dramatic changes in future decades, especially from extreme events such as tropical storms and hurricanes. Yet very little is known about the lepidopteran fauna of barrier islands in the southeastern U.S. (Minno, 2012). There is a lot of uncertainty about how rising sea levels will affect Lepidoptera, but rare species of butterflies are already disappearing from Florida, especially in the Keys and southern Florida, and even common species such as the Palamedes Swallowtail may be in trouble from Laurel Wilt disease (Schweitzer *et al.*, 2011).

Merritt Island is part of the Atlantic coastal ecosystem of central Florida. The western side of the island has extensive areas of salt marshes and some areas with mangroves. Other natural communities represented include pine flatwoods, coastal hammock, scrub, beach dunes, freshwater marshes, and swamps. The island has a dune and swale topography that is easily seen on aerial photographs. These linear features consist of bands of wetlands in the swales and dry upland vegetation on the adjacent dunes.

In the past, areas of natural upland vegetation on the island were converted to citrus groves and more recently into facilities for the Kennedy Space Center complex. The vegetation of the Merritt Island National Wildlife Refuge is actively managed and many areas are being restored through the use of prescribed fire, hydrological restoration, invasive plant control, and other activities. The invasive exotic shrub, Brazilian Pepper (*Schinus terebinthifolius*), has been especially difficult to control.

On March 10, 2013, I searched for butterflies at Merritt Island National Wildlife Refuge from 11:00 am till 3:00 pm, mostly along Black Point Wildlife Drive. The weather was sunny to partly cloudy, warm, and breezy. I found seven species of skippers, two swallowtails, three pierids, one lycaenid, and six nymphalids on my one day visit for a total of 18 species. Great Southern Whites, Salt Marsh Skippers, and Gulf Fritillaries were the most abundant species. Many butterflies were attracted to flowering Purple Thistles (*Cirsium horridulum*) growing along the roadsides.

More surveys for butterflies and moths are needed on barrier islands in order to document the fauna currently present, but funding for such research has been very limited. Much can be accomplished via partnerships between organizations such as the Southern Lepidopterists' Society that has expertise to conduct surveys through field meetings and Bioblitz type workshops and host agencies such as State Parks, National Parks, National Wildlife Refuges, and National Seashores that can provide support.

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Table 1. Butterflies observed along Black Point Drive at Merritt Island National Wildlife Refuge, Brevard County, Florida, on March 10, 2013.

Hesperiidae: Eudaminae (Broadwing Skippers)

Thorybes pylades (Northern Cloudywing), 3 adults visiting *Cirsium horridulum*.

Hesperiidae: Hesperinae (Grass Skippers)

Polites vibex (Whirlabout Skipper), 4 adults all visiting *Cirsium horridulum*

Wallengrenia otho (Southern Broken-Dash), 4 adults all visiting *Cirsium horridulum*

Atalopedes campestris huron (Sachem), 4 adults all visiting *Cirsium horridulum*

Euphyes pilatka pilatka (Palatka Skipper), 5 adults all visiting *Cirsium horridulum*

Oligoria maculata (Twin-spot Skipper), 7 adults all visiting *Cirsium horridulum*

Panoquina panoquin (Salt Marsh Skipper), 31 adults mostly visiting *Cirsium horridulum* and a few at *Bidens alba*.

Papilionidae: Papilioninae (Swallowtails)

Papilio polyxenes asterius, Black Swallowtail, 1 adult

Pterourus palamedes, Palamedes Swallowtail, 1 adult at *Cirsium horridulum*

Pieridae: Pierinae (Whites)

Ascia monuste phileta, Great Southern White, 195 adults, visiting *Cirsium horridulum* and *Bidens alba*.

Pieridae: Coliadinae (Sulphurs)

Phoebis sennae eubule, Cloudless Sulphur, 5 adults, visiting *Cirsium horridulum*

Lycaenidae: Polyommatae (Blues)

Brephidium pseudofea, Eastern Pygmy Blue, 5, *Erigeron quercifolia*

Nymphalidae: Danainae (Milkweed Butterflies)

Danaus gilippus berenice, Queen, 2 adults, visiting *Bidens alba* and *Gaillardia pulchella*.

Nymphalidae: Heliconiinae (Passionflower Butterflies)

Agraulis vanillae nigror, Gulf Fritillary, 21 adults, some at *Cirsium horridulum*

Heliconius charithonia tuckerorum, Zebra Heliconian, 1 adult visiting *Bidens alba*

Nymphalidae: Nymphalinae (Brush-footed Butterflies)

Junonia evarete, Mangrove Buckeye, 1 adult

Anartia jatrophae guantanamo, White Peacock, 1 adult visiting *Bidens alba*

Nymphalidae: Limenitidinae (Admirals)

Limenitis archippus floridensis, Viceroy, 1 adult



Fig. 1. Skipper butterflies observed at Merritt Island National Wildlife Refuge on March 10, 2013: a) *Thorybes pylades*, b) female *Euphyes pilatka pilatka*, c) male *Euphyes pilatka pilatka*, d) *Oligoria maculata*, e) *Panoquina panoquin*, f) *Polites vibex*, g) *Wallengrenia otho*.

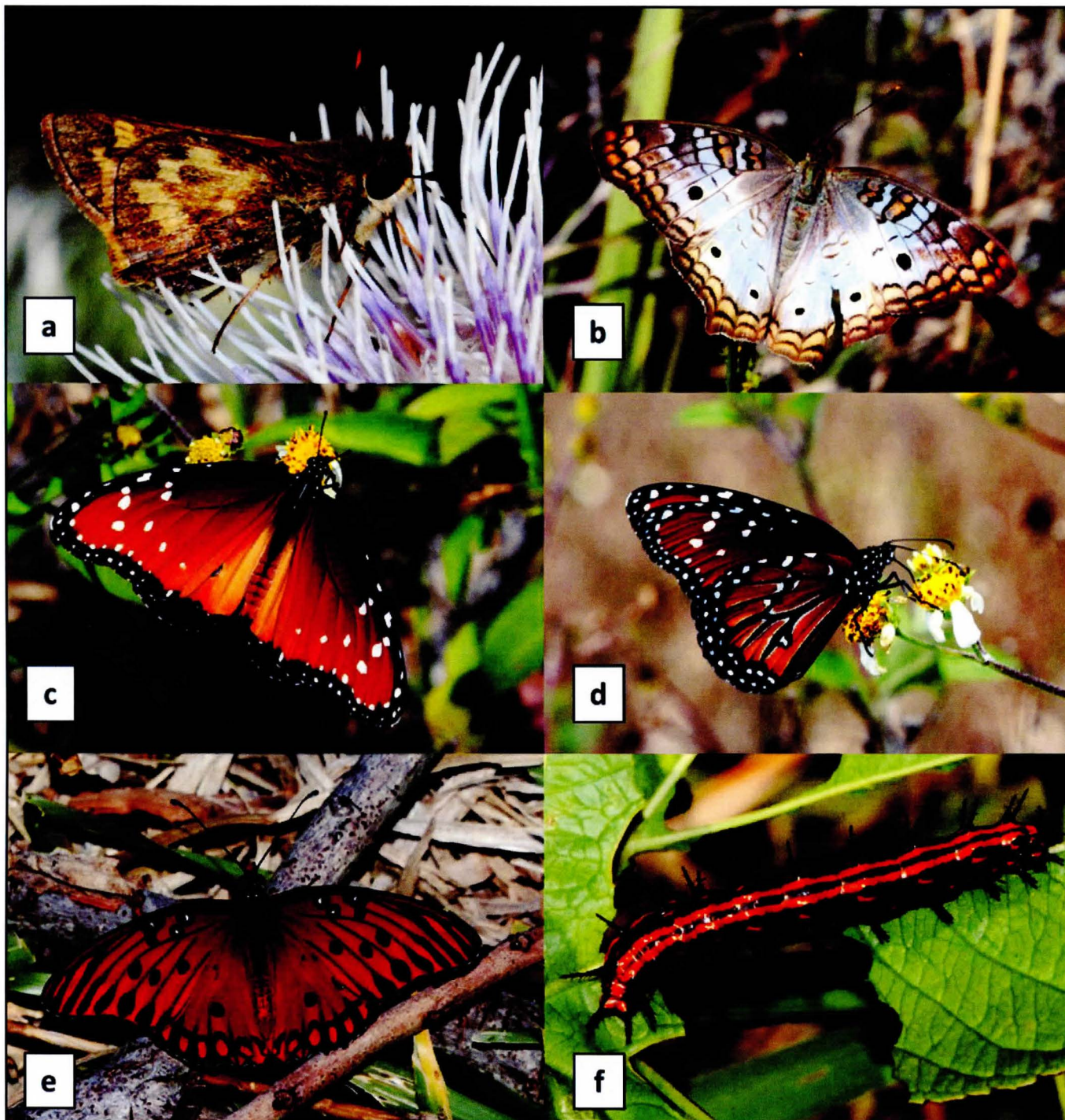


Fig. 2. Butterflies observed at Merritt Island National Wildlife Refuge on March 10, 2013: a) *Atalopedes campestris* *huron*, b) *Anartia jatrophae* *guantanamo*, c) *Danaus gilippus* *berenice*, d) same individual, e) *Agraulis vanillae* *nigrior*, f) last instar larva of *Agraulis vanillae* *nigrior*.

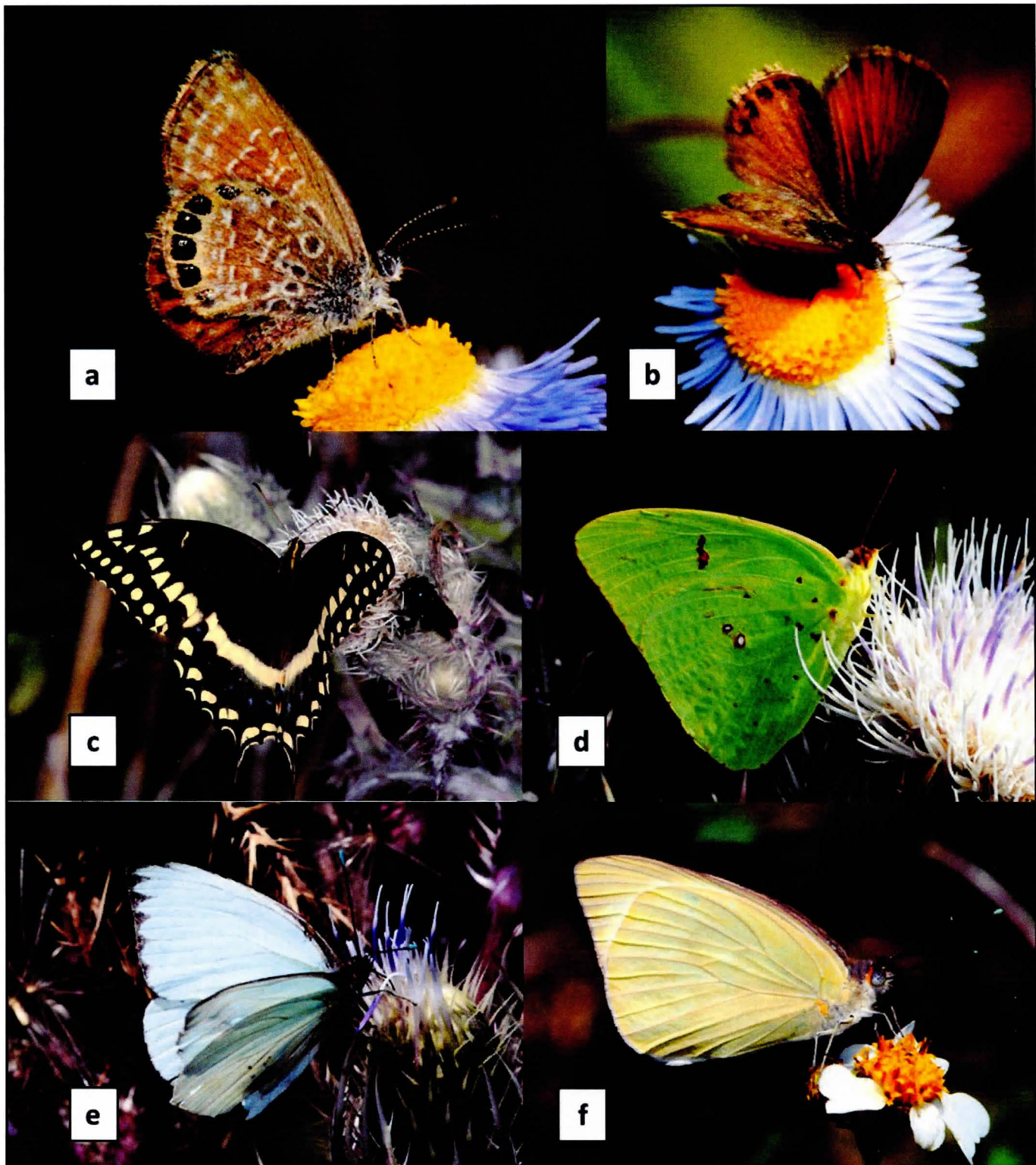


Fig. 3. Butterflies observed at Merritt Island National Wildlife Refuge on March 10, 2013: a) *Brephidium pseudofea*, b) *Brephidium pseudofea*, c) *Pterourus palamedes*, d) *Phoebis sennae eubule*, e) *Ascia monuste*, f) *Ascia monuste*.

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

FLORIDA MUSEUM'S ANNUAL BUTTERFLYFEST BY CHARLIE COVELL

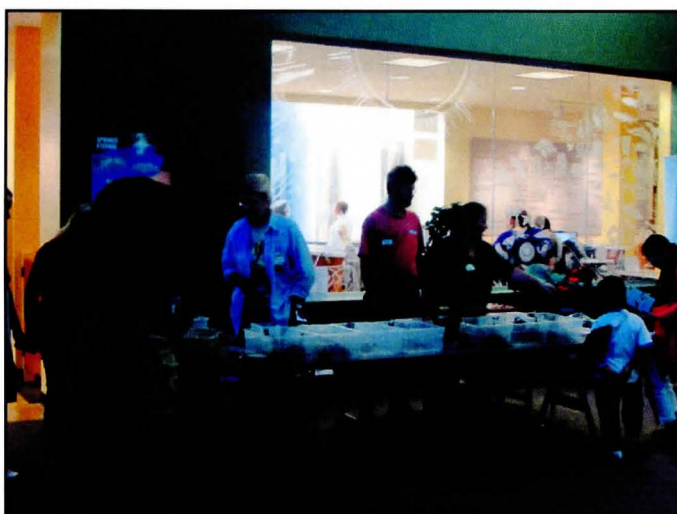
As in the past, SLS was represented well at the annual ButterflyFest held by the Florida Museum of Natural History and the McGuire Center for Lepidoptera and Biodiversity on October 19 - 20, 2013. Our table was very popular, as we had a good number of both live caterpillars and spread specimens of butterflies and moths to show attendees. The following members participated by bringing material in to display, and/or manning the table to explain things and give out pamphlets to the large crowd: Bob Belmont, Jeff Slotten, Tom and Megan Neal, Jackie Miller, Debbie Matthews, Terry Lott, Madison Young, Andy Warren, Jim Hayden, and Charlie Covell. We hope we were able to attract a few new members, as at least two young people showed great interest and knowledge of Lepidoptera and promised to join.



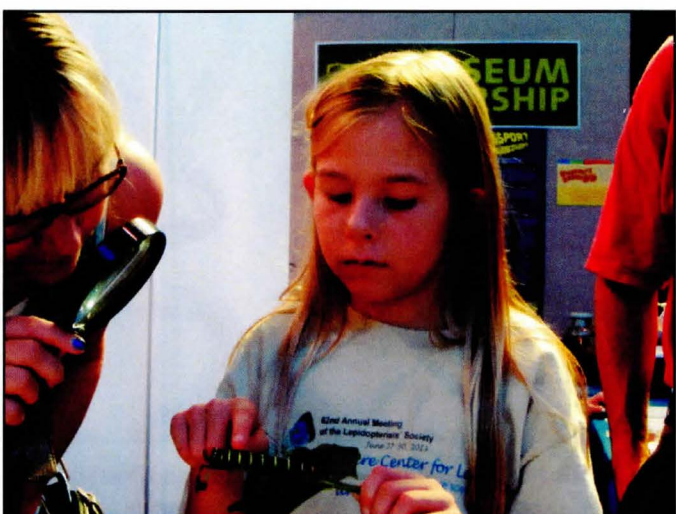
**Charlie Covell showing butterflies at ButterflyFest 2013
(Photo sent by Charlie Covell).**



**Jackie Miller and Charlie Covell in uniform
(Photo sent by Charlie Covell).**



**SLS table at ButterflyFest 2013
(Photo by Charlie Covell).**



**Madison Young with *frangipani* larva
(Photo by Charlie Covell).**



**Unknown visitors to the ButterflyFest 2013
(Photo by Charlie Covell).**



**Jackie Miller (middle) and Debbie Matthews (left)
(Photo by Charlie Covell).**



**Tom and Megan Neal (left)
(Photo by Charlie Covell).**



**Madison Young (right) with caterpillar on her hand at
ButterflyFest 2013 (Photo by Charlie Covell).**



**Madison Young sorting caterpillars on
Heterotheca flowers (Photo by Debbie Matthews).**



**Tom Neal entertains the crowd with a fat papaya sphinx
larva (Photo by Debbie Matthews).**



Andrew Warren (middle), Charlie Covell (right) at ButterflyFest 2013 (Photo by Debbie Matthews).



Jackie Miller and Charlie Covell (left) (Photo by Debbie Matthews).

WHY NOT TRY MOTH COLLECTING?

BY

KELLY RICHERS

Are you a butterfly collector and studier? Do you sometimes feel there must be more to life than studying the same butterflies over and over? After all, there are only somewhere between 679 and 750 species of butterflies in the U.S., about which many repetitive arguments ensue regarding species level designations. None of these arguments produce any specimens new to science or new explorations to find butterflies in most areas that you can get to. Ah, but moths, now, moths are different!

New species of moths are being described on a regular basis, hundreds each year. Discovering one new U.S. butterfly a year is an impossible goal, but personally discovering one undescribed moth is not - I know, as this author has done it. In addition, you get to keep your day job! So, if you are interested in looking toward the "dark side" (ah, yes, a little play on words never hurt) think about collecting and studying moths. It has gotten much easier to do, even for people who do not live in large metropolitan areas with access to major collections (once a huge stumbling block). Let us explore the basics of getting started and the parameters you need to set.

First, you need to get an overview of moths. If you live on the east coast, there are several good moth reference field guides to the more common moths (Peterson Field Guide to the Moths of the Northeastern US, Field Guide to Moths of Eastern North America by Charles V. Covell, Jr. On the west coast there is the Moths of

Western North America by Jerry A. Powell and Paul A. Opler to get you started. Many local area guides now exist in print also. But, let us assume you are blissfully sitting at home and decided, based on this fabulous article, to become a moth collector. What do you do?

Well, you might decide how to catch moths, so you have something to study. You have seen a book or two, you have gone online, you might even have accidentally viewed the Moth Photographers' Group website, which sent your head spinning. It should. Remember those 750 or so butterfly species? Try photographing the 16,000 or so moth species in just the US that are known and putting them on a website. Try staring at them if you have no experience. Then go start drinking heavily. You are now starting to become a moth collector!

But, seriously, where do you go for help? You need an ultraviolet light and a means to power it. You can go the frugal and sensible way and get a battery, but you can also become the Home Improvement version of moth collecting and get a generator. Either way, you only now need a sheet and a way to tie it up to a couple of trees or posts, and the moths will come in to the light. Then you need a poison jar to kill them. You also need dark outside, as this is a night activity, if I forgot to mention that. An ultraviolet light in daylight will not catch moths. There, I said it, if you were wondering.

After this has caught you a few moths, you will need

spreading boards, insect pins, a guide to how to pin them (available in any of the aforementioned books) and a space to leave the spreading board where the cat will not decide it is a play toy. Then you will need an insect drawer or box in which to store your specimens. All this equipment is available from suppliers such as Bioquip, my holy grail of insect supply shopping. One might quail at the possible expense of these items, but actually all but the sheet, light and battery are needed for butterfly collecting anyway, so stop whining and get shopping!

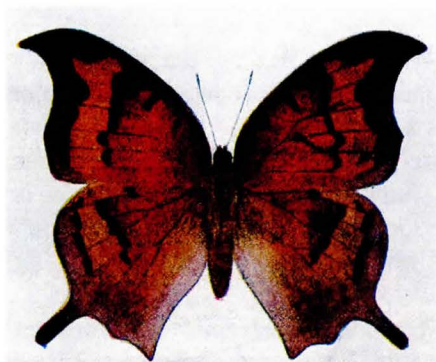
When you unpin your beautiful catches, and look at them, they may all look the same. They probably are not. Moths fall into several large general areas of classification, and you will eventually readily identify most as micromoths (even the ones bigger than a bat), geometrids, Saturn moths, sphinx moths, or noctuid moths. Or, they end up as LBU moths (Little Brown Ugly moths, difficult to determine). Eventually, also, you will probably specialize in one of these groups. However, let us first examine the realities of moth collecting. A moth collection can reach a point usually referred to by the spouse as "totally out of control" very quickly. Therefore it is prudent to delineate how many of each species you will keep and how you will dispose to a museum of the ones you do not keep. For instance, I declared to my wife that I would only keep 8 males and 8 females of each species, which ameliorated her concerns until she picked up on the 17,000 number I "forgot" to tell her. $17,000 \times 8 \times 2 = 272,000$ specimens. See? Very limited, I thought. At about 200 specimens per drawer that is only 1360 Cornell or Cal Academy drawers, or at 12 per cabinet only 113 cabinets. See how easy it would be to get out of control if I didn't limit it?

So, you've got your generalized book, you identified your specimens, and you have a small number to still identify. This is where the learning begins. If you can, with the help of the books or other deranged individuals such as you are becoming, determine to which family the specimens belong, then try the MPG website, and leaf through the plates, looking at the areas where the moths might be occurring using the maps. I suggest a beer or two while doing this to relax yourself. Purchase the Moths of North America fascicles and checklist for the groups you want to study. You just might hit on the moth via the photos and the maps. If not, then it is time to visit a museum or a lepidopterists group for help.

While sharing your tales of woe you will probably meet other moth collectors. You might even meet a collecting buddy who will venture out with you into the darkness of mountain lions, skunks, scorpions and unseen storms. Moth collectors are different from butterfly collectors in many ways. It is kind of like comparing the clean cut Beatles to the Rolling Stones. Moth collectors are the Rolling Stones of Lepidoptera. At national or regional meetings butterfly collectors come out in the morning happy, perky, showered, shaved and sociable, while the moth collectors are dragging in, looking like extras from the Night of the Living Dead movie. And, loving every minute of it!

Then you can get into the world of moths using traps, pheromones, raising larvae and all the other things that make us what we are. So, if you are bored with collecting butterflies, contact one of us moth collectors. We would love to have you join us. New guys have to buy the beer.

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



The Goatweed Emperor, ♀
(from drawings by W. I. Beecroft).

"The adult butterfly is remarkable for the falcate shape of the outer margin of each front wing and the broad tail at the hind outer angle of each hind wing. In the male the upper surface of all the wings is of a dark orange tone, with a rather narrow brown marginal marking. In the female this marginal band is broader and is nearly paralleled by another narrower band a little nearer the body. In bright sunshine there is a distinct purplish red iridescence over practically the whole upper surface. The under side of both wings is of a color to suggest a dead brown leaf, with a purplish iridescence in certain angles of light."

Butterflies Worth Knowing by Clarence M. Weed, Doubleday, Page & Company, 1925, pg. 210.

SIGHTINGS OF TWO SUBTROPICAL PIERID BUTTERFLIES INCREASING IN SOUTH LOUISIANA

BY

GARY NOEL ROSS

For the past several years, I have routinely observed in my Baton Rouge garden two species of butterflies that heretofore were uncommon in this metropolitan area. Both species are in the family Pieridae (Whites and Sulphurs): Great Southern White--*Ascia monuste phileta* (Fabricius) and Orange-barred Sulphur--*Phoebis philea* (Linné). Both species are described as subtropical to tropical in distribution (Glassberg, 1999; Scott, 1986).



Great Southern White (*Ascia monuste*), ♂.
[© Didier Descouens⁽¹⁾]



Great Southern White (*Ascia monuste*), ♀.
Florida: Monroe Co., Big Pine Key (21-XII-1964).
[© 2009 Kim Davis, Mike Stangeland, & Andrew Warren.⁽²⁾]
and capers (Family Capparidaceae); the ornamental capers *Nasturium* and *Cleome* are used, also (Glassberg, 1999; Scott, 1986; personal observations).

In Louisiana, *A. monuste* has been recorded as a coastal resident, for example, the salt marshes of Grand Isle in Jefferson Parish (Ross & Lambremont, 1963). In addition, the species has been noted from scattered locations in slightly more northern locations such as New Orleans, Lafayette and Baton Rouge (Lambremont, 1954; Ross & Lambremont, 1963). At least one stray has been recorded from northern Caddo Parish (Trahan, 2009), a region noted each autumn for experiencing strong and prolonged southwest winds from

eastern and southern Texas, the latter, a subtropical area that is home to many warm-climate species. Also, official "Fourth of July Butterfly Counts" sponsored by the North American Butterfly Association (NABA, 1993-2004) conducted in coastal Cameron Parish in extreme southwestern Louisiana have frequently noted the species, indicating that *A. monuste* probably is a breeding resident there. Host plants recorded for *A. monuste* are saltwort (*Batis maritima*, Family Bataceae), various native and cultivated crucifers (Family Brassicaceae/Cruciferae),

On the other hand, to my knowledge *P. philea* has not been a resident anywhere in the state, but only an occasional vagrant from peninsular Florida or perhaps even southern Texas. Published historic sightings include New Orleans and Allen Parish (Lambremont, 1954) and northwestern Caddo Parish (Trahan, 2009). Host plants for the species include various native herbaceous *Cassia* (Glassberg, 1999) as well as several shrub/small trees commonly grown as ornamentals, e.g., *Cassia alata*, *C. corymbosa*, *C. fistula*, and *C. splendida* (Family Fabaceae, Subfamily Caesalpinioideae) (Scott, 1986; personal observations).

In June 2013 while running errands in south Baton Rouge, I began to observe *A. monuste* flying; all appeared to be fairly fresh males. Each day an individual or two would frequent my personal garden, also. But because my garden lacked any acceptable host plant, the butterflies did not tarry; as such, I never secured a photo. By mid summer, however, I failed to notice any additional individuals although many continued to be sighted in southwest Louisiana, e.g., Cameron Parish and Vermilion Parish, by Craig Marks and Dave Patton. I have observed this same species on several occasions during the summers of the previous three years. Then in late October, Marty Floyd noted a dark female (personal communication) in south Baton Rouge near Louisiana State University.

Since at least 2006, I and several other butterfly paladins have observed Orange-barred Sulphurs (males and females) in south Baton Rouge. At first, sightings were limited to only a few individuals, with late summer being prime time. Females were observed ovipositing on *Cassia alata* and *C. corymbosa*. However, in 2013, I began observing individuals in early June—an indication that some immatures and perhaps even adults must have



Great Southern White (*Ascia monuste*), Dark ♀, Florida:
Miami-Dade Co., Miami (14-VII-1934),
[© Kim Davis, Mike Stangeland, & Andrew Warren. ⁽²⁾]

survived the previous mild winter. The summer of 2013 proved to be not too hot, not too dry, and not too wet—conditions conducive to lush growth of vegetation, including butterfly nectar and host plants. As time progressed, the Orange-barred Sulphur became increasingly common, so much so that individuals outnumbered the usually ubiquitous Cloudless Sulphur (*Phoebis sennae*). I observed adults throughout many neighborhoods and even in downtown Baton Rouge. By late September it was not at all uncommon to notice six to eight individuals flying about my landscape at any given time. On one occasion, I observed three males pursuing one female. Females frequently oviposited on my *C. corymbosa*. During this same period, I visited a friend (Carolyn DeRouen) in Denham Springs (about 10 miles east of the capital city). Carolyn is a consummate horticulturist who maintains extensive personal gardens that feature common butterfly host plants, including *Cassia* trees. Sure enough, adults of *P. philea* were common there; Carolyn even noted that she had on occasion located a caterpillar or two on her *C. corymbosa*. Furthermore, several butterfly enthusiasts (Linda Auld, David Muth, personal communication) reported the species in New Orleans, and Robert Loudon (personal communication) of St. Francisville photographed a female there. Interestingly, the species was not seen in the southwestern part of the state (e.g., Lafayette, Cameron) even though several butterfly surveys were conducted during the summer and fall by Craig Marks and Dave Patton.

The flight of the Orange-barred Sulphur is very frenetic and usually between 15 and 30 feet of the ground. I noted that individuals rarely paused to feed. However, they did occasionally nectar for a brief second on ornamental giant zinnias, Turk's cap (*Malvaviscus arboreus* var. *Drummondii*), and salvia "Lady in Red" (*Salvia coccinea*). In addition, males seemed to show an interest in the yellowing leaves of native black cherry (*Prunus serotina*), and the large glossy leaves of native Southern magnolia (*Magnolia grandiflora*). After the passage of our first mild cold front of the season on October 6, however, I observed no individuals on the cooler days. But once temps returned into the 80 degree range, the species (mainly males) resumed activity. This continued until November 12 when nighttime temps dipped to 32 degrees and again on November 13 when the low was just above freezing at 33. But on November 15 when daytime highs were again in the 70s, butterflies (Orange-barred Sulphur, Gulf Fritillary, and Monarch) were again on the wing, but in lesser numbers. This continued until November 20, after

which time and with additional short-lived cold spells, I observed no additional individuals.



Orange-barred Sulphur (*Phoebis philea*), ♂.
[© Didier Descouens ⁽³⁾]

The Orange-barred Sulphur is easy to distinguish from the Cloudless Sulphur. For example, generally, *P. philea* is slightly larger than *P. sennae* (occasionally a few individuals—probably from poorly nourished larvae—mimic the size of *P. sennae*); males of *P. philea* on the wing appear rich buttery-yellow, not yellow/chartreuse, and females on the wing vary between peach to cream, not light yellow; the flight of *P. philea* is much more erratic ("bouncy") and more sustained; *P. philea* does not visit flowers readily. All in all, the Orange-barred Sulphur in a garden setting is an easily distinguished species.



Orange-barred Sulphur (*Phoebis philea*), ♀.
Florida: University of South Florida campus (20-IX-1972).
[© Kim Davis, Mike Stangeland, & Andrew Warren. ⁽⁴⁾]

As explanation, I offer the following. First, both the Great Southern White and the Orange-barred Sulphur are notable for their

periodic migrations. This alone can easily account for an occasional observation beyond the species' typical breeding range.

Second, because butterfly gardening often combined with butterfly rearing are currently popular in both New Orleans and Baton Rouge, eggs and caterpillars of an occasional stray butterfly can be reared in a protective enclosure. When adults eclose, these are released into the local environment. This "seeding" can establish in relatively short order breeding wild populations of what heretofore were simply occasional vagrants. Then with even modest migration, individuals can easily disperse to surrounding areas where they are observed.

Third, my observations of the Gulf Fritillary (*Agraulis vanillae*) and Zebra Heliconian (*Heliconius charithonia*) (Family Nymphalidae: Subfamily Heliconiinae), both of which utilize various *Passiflora* as host plants, indicate that moderate cold weather per se does not kill larvae of these warm-weather species (Ross, 2008; Ross, 2013). Instead, cold weather causes fresh vegetation to wither. In response, larvae glean whatever sustenance they can from leaf petioles and stems that do not succumb as quickly to the cold. Interestingly, during mild winters this permits some individual larvae to remain alive long into the winter months. In time, though, generally all vegetative parts of the hosts wither; without food, larvae slowly starve to death or in weakened conditions, become easy targets for predators. This same scenario seems to play for adults, too. This is because fall frosts and freezes damage foliage and flowers and most likely slow metabolic processes—including nectar production—of nectar plants. At this time, adult butterflies rarely spend any time at nectar sources, which during warmer months, were favored and routinely visited. With a restricted nutrient input, butterflies slowly dehydrate, become weakened and eventually die or become victims of predators. However, if a winter is particularly mild, I assume that theoretically a smattering of larvae and/or adults could remain alive until the return of spring's warmth and renewed plant growth. (This most likely accounts for the observance of adults of these species in spring or early summer as witnessed during spring 2013.)

Finally, with the climate warming, the Gulf Coast is experiencing winters that are milder than in the historic past. I think it reasonable to presume, therefore, that these more moderate winters are facilitating the colonization of more typically warm-loving plants and animals (including butterflies such as *Ascia monuste* and *Phoebis philea*) that would not have been able to survive in the historic past. Of course, a severe winter during any year would most likely prove disastrous to any recent colonists. Only time will tell.

[NOTE: Another pierid, the Large Orange Sulphur (*Phoebis agarithe*), a species in which females are sometimes confused in flight with those of *P. philea*, is also known to be a regular migrant; it has been recorded on occasion from Louisiana (Lambremont, 1954; Trahan, 2009). However, the migrations of *P. agarithe* are less widespread than those of *P. philea*, the latter having been recorded from practically the entire eastern U.S. as far north as Wisconsin and along the East Coast as far north as Maine and even into Nova Scotia, Canada. Nonetheless, *P. agarithe* is a good candidate for future colonization in Louisiana as many of its hosts, e.g., Family Fabaceae (Glassberg, 1999; Scott, 1986) are already resident. Then, too, substantiated observations on another subtropical migratory species—the White Peacock (*Anartia jatrophae*) (Family Nymphalidae: Subfamily Nymphalinae), a common resident in south Texas and south Florida—are becoming increasingly common in southeast Louisiana. The species' host plants, e.g., Families of herb Acanthaceae, Lamiaceae/Labiatae, Scrophulariaceae (mainly *Bacopa*), and Verbenaceae are already present (Glassberg, 1999; Scott, 1986); other writers will report on this later.]

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Sources

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http://en.wikipedia.org/wiki/Ascia_monuste
- 2) http://butterfliesofamerica.com/ascia_monuste_phileta_specimens2.htm
- 3) Attribution-Share Alike 3.0 Unported license. Owner of copyright: Didier Descouens (4 November 2011); <http://creativecommons.org/licenses/by-sa/3.0/deed.en> http://en.wikipedia.org/wiki/Phoebis_philea
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[Mr. Didier Descouens is thanked for allowing his photographs of the Great Southern White (♂) and the Orange-barred Sulphur (♂) posted on the Web to be re-published according to the "Creative Commons Attribution-Share Alike 3.0 Unported license". Kim Davis, Mike Stangeland, & Andrew Warren are also thanked for the use of their photographs of the Great Southern White (♀), the dark form (♀) of the Great Southern White, and the Orange-barred Sulphur (♀).]

(Gary N. Ross, E-mail: gnross40@yahoo.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

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

Charlie sends in the following Florida report - Sept. - Nov. 2013.

Covell's Gainesville, Alachua Co., records (*A. vanillae* and *H. charithonia* omitted, as seen almost daily):

Urbanus proteus, Oct. 11, 17, 25, Nov. 6, 9, 11, 25

Urbanus dorantes, Oct. 10, 14, Nov. 25

Lerema accius, Oct. 17, 26, 27, Nov. 3

Calpodus ethlius, Oct. 24

Panoquina ocola, Sept. 2, Nov. 11

Battus polydamas, Sept. 2, 5, 7, 11, 25, Oct. 1

Papilio troilus, Sept. 7, 26

Papilio palamedes, Sept. 13

Heraclides cressphontes, Sept. 2, 5, 7, 25, Oct. 1, 3

Phoebis sennae, Sept. 2, 5, 7, 11, 26, Oct. 10, 11, 14, 22, 25, Nov. 11, 23, 29

Phoebis philea, Sept. 7, 23 (larva on *Cassia* pupated today, emerged Oct. 3), Nov. 23

Pyrisitia lisa, Oct. 11, Nov. 23

Eurema daira, Sept. 11,

Abaeis nicippe, Sept. 5, Oct. 14, Nov. 23

Leptotes cassius, Nov. 14, 25, 29

Fenesica tarquinius, Oct. 28 (Craig Segebarth; photographed)

Limenitis archippus, Oct. 16

Junonia coenia, Oct. 11, Nov. 23

Anartia jatrophae, Oct. 7, Nov. 8

Danaus plexippus, Sept. 7, 11, 26, Oct. 7, 27, 30, Nov. 3 (larvae), 9, 11, 14, 19, 23, 25, 29

Danaus gilippus, Sept. 24, Nov. 6 (larvae)

Butterflies in the Covell yard at 207 NE 9th Ave., Gainesville, FL, with first dates of sighting (2013):

1. *Leptotes cassius*

Jan. 1, flying in back yard

2. *Phoebis sennae*

Jan. 12, nectaring on Pentas in back yard

3. <i>Agraulus vanillae</i>	Jan. 12, nectaring on Pentas in back yard
4. <i>Vanessa atalanta</i>	March 10, flying and lighting in back yard
5. <i>Calycopis cecrops</i>	March 10, lit on leaf next to tool shed
6. <i>Papilio glaucus</i>	March 17, flying in front yard
7. <i>Heracles cressphontes</i>	March 17, flying in front yard
8. <i>Atlides halesus</i>	March 17, nectaring in viburnum tree
9. <i>Libythea carinenta</i>	March 24, in holly tree
10. <i>Danaus plexippus</i>	March 24, nectaring on Mexican sunflower
11. <i>Vanessa virginiensis</i>	March 30, perched in Viburnum tree
12. <i>Parhassius m-album</i>	April 2, in Viburnum tree
13. <i>Heliconius charithonia</i>	April 13, flying in the back yard
14. <i>Erynnis horatius</i>	May 17, on lantana blossoms in back yard
15. <i>Hylephila phyleus</i>	May 25, on lantana blossoms
16. <i>Papilio palamedes</i>	June 21, flying in the back yard
17. <i>Strymon melinus</i>	July 7, on Pentas blossoms
18. <i>Pontia protodice</i>	July 14, on Pentas blossoms
19. <i>Urbanus proteus</i>	July 23, on Lantana blossoms
20. <i>Battus polydamas</i>	July 25, on Pentas
21. <i>Papilio polyxenes asterius</i>	July 25, on Pentas
22. <i>Papilio troilus</i>	July 25, on Pentas and Lantana
23. <i>Panoquina ocola</i>	July 25, on Lantana
24. <i>Urbanus dorantes</i>	July 25, on Lantana
25. <i>Epargareus clarus</i>	July 25, on Lantana
26. <i>Atalopedes campestris</i>	July 27, on Lantana
27. <i>Eurytides marcellus</i>	July 28, on Lantana
28. <i>Limenitis arthemis astyanax</i>	Aug. 3, flying in back yard
29. <i>Euphyes vestris metacomet</i>	Aug. 3, on Lantana
30. <i>Phoebis philea</i>	Aug. 13, flying in back yard
31. <i>Danaus gilippus</i>	Sept. 24, across NE 9 th Ave. from house
32. <i>Calpodus ethlius</i>	Oct. 24, on a white flower, unknown
33. <i>Lerema accius</i>	Oct. 26, on Lantana blossoms

Covell moth records from Gainesville, back door of the McGuire Center: Geometridae: *Idaea tacturata*, Nov. 6; *Cymatophora approximaria*, and *Eupithecia miserulata*, Nov. 8; Noctuidae: *Selenisa sueroides*, Nov. 8.

Barbara Woodmansee reported a good day of butterfly observation and photography at "Dixie Mainline," near the town of Suwannee in Dixie County, Sept. 20 and 21. Kathy Malone was along the second day. They recorded the following:

Horace's and Zarruco Duskywing, Fiery, Ocola, Northern & Southern Broken Dash, Longtail, Tawny-edge, Whirlabout, Eufala, Aaron's, Twin-spot, Byssus, Swarthy, Silver-spotted, Salt Marsh, Least, Clouded, Tropical-checkered, Common Checkered, Dun, Palatka, Little Glassywing, and Sachem skippers. Also Dukes Skipper (6) - we saw them in 3 different spots. Black, Spicebush, Zebra, Palamedes and Eastern Tiger Swallowtails (both yellow and female black forms); Cloudless, Barred Yellow, and Little Yellow sulphurs, Southern Dogface, Dainty Sulphur; Red-banded, gray and Sweadner's Juniper hairstreaks; Common buckeye, White Peacock (lots!), Zebra heliconian, Viceroy, Red-spotted Purple, Pearl and Phaon Crescents, Gulf and Variegated Fritillaries, Queen, and Carolina Satyr.

47 species total.

"*Bidens* were prolific all along the 8 mile road. Vanilla plant is thick in some spots and starting to bloom. Hempweed was blooming well, and Sweadner's likes it. We found one near-perfect Sweadner's hairstreak that had been grabbed by a predatory bug, and so were able to photograph it with wings open from above and below."

James Vargo reported the following from the Keys.

Dagny Johnson Key Largo Hammock Botanical State Park, Monroe Co., Nov. 7:

- 319 *Kearfottia albifasciella* (Kft.) moved to 434.1 Psychidae
- 2067.1 *Chionodes ceryx* (Hodges)
- 2272 *Brachyachma palpigera* (Wlsm.)
- 2701 *Episimus argatana* (Clem.)
- 2857 *Olethreutes devotana* (Kft.)
- 3175 *Epiblema grossbecki* (Heinr.)
- 4933 *Trischistognatha pyrenealis* (Wlk.)
- 5423 *Microcrambus discludellus* (Möschler) (Det. James Hayden)
- 5536 *Neodavisia singularis* (B.&McD.) (Det. James Hayden)
- 5649 *Alpheoides parvulalis* (B.&McD.) New To Florida List
- 5740 *Anegecephalesis arctella* (Rag.)
- 5949 *Laetilia coccidivora* (Comstock)
- 7156 *Scopula umbilicata* (Fab.)

Bahia Honda State Park, Monroe Co., Nov. 8:

- 454 *Oiketicus abbotii* (Grt.)
- 1615 *Walshia miscecolorella* (Cham.)
- 3790 *Eugnosta erigeronana* (Riley)
- 5331 *Mesolia incertella* (Zincken)
- 5560 *Salobrena recurvata* (Möschler)
- 5725 *Fundella pellucens* (Zell.)
- 7106 *Idaea insulensis* (Rindge)
- 7299.1 *Pterocypha* species
- 8578 *Antiblemma filaria* (Sm.)
- 10455 *Leucania scirpicola* (Gn.)

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

The contributors include James Adams (JKA or no notation) and Irving Finkelstein (ILF). Other contributors are spelled out with the appropriate records. Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, *etc.*), or more complete lists for new locations/new times of year. All known new STATE and COUNTY records are indicated, and all dates listed below are 2013 unless otherwise specified.

Carbondale, I-75 exit 326, Whitfield Co.:

LASIOCAMPIDAE: *Tolyte velleda* (female), Oct. 30. **EREBIDAE:** *Selenisa sueroides*, Oct. 7. **NOCTUIDAE:** *Megalographa biloba*, Dec. 5 (LATE). **GEOMETRIDAE:** *Ennomos magnarius*, Sept. 12 (EARLY). **CRAMBIDAE:** *Diaphania nitidalis*, Oct. 7, *Syngamia florella*, Oct. 30.

Crest of Rocky Face Ridgeline, just SW of Dalton, Whitfield Co.:

EREBIDAE: *Grammia parthenice intermedia*, Sept. 23-24 (tiny, like northern *p. parthenice*). **NOCTUIDAE:** *Mesapamea fractillinea*, Sept. 23-24 (several; COUNTY); *Papaipema nebris*, Sept. 23-24; *P. eupatorii* (COUNTY), Oct. 29-30; *P. marginidens*, Oct. 29-30; *P. cataphracta*, Oct. 29-30; *Dichagyris grotei*, Sept. 23-24; *Feltia jaculifera*, Sept. 23-24 (surprisingly uncommon in N GA). **GEOMETRIDAE:** *Eupithecia palpata*, Sept. 23-24. **CRAMBIDAE:** *Diaphania nitidalis*, Oct. 29-30.

Taylor's Ridgeline, 5 mi. W of Villanow, Walker Co., November, JKA, ILF, Patrick Adams, and Bill Russell:

SATURNIIDAE: *Hemileuca maia*, Nov. 10. **LYCAENIDAE:** *Celastrina neglecta* (odd time of year).

Salacoa Rd. at Salacoa Ck., 5 mi ESE of Fairmount, Bartow Co., Oct. 4-5:

NOCTUIDAE: *Argyrogramma verrucae*, *Lithophane* sp. nov. near *innominata*, *Papaipema polymniae*, *P. rutila*, *Phlogophora periculosa*, *Abagrotis magnicupida*.

Monroe County home south of Forsyth, GA, Sept. 15, Terry Johnson:

GEOMETRIDAE: *Scopula compensata* (COUNTY).

Richmond Co., Phinizy Swamp Nature Park, SE of Augusta, Sept. 29, Lois Stacy:

HESPERIIDAE: Tropical Checkered Skipper, *Pyrgus oileus* (COUNTY).

Bulloch Co., Statesboro, Georgia Southern University, Biological Science Building, Oct. 28, Alan Harvey:

NOCTUIDAE: *Meropleon cosmion* (COUNTY).

Dougherty Co., Albany, Larry Gridley:

HESPERIIDAE: Broad-winged Skipper, *Poanes viator*, Sept. 20; **NYMPHALIDAE:** Texan Crescents, *Anthanasia texana*, several, Oct. 14ish.

Sapelo Island, McIntosh Co., John Hyatt:

Sept. 26/27, 2013:

NOCTUIDAE: *Schinia sanguinea* (COUNTY); *Mesapamea fractilinea* (COUNTY, orange morph).

Dec. 1, 2013:

NOCTUIDAE: *Papaipema duovata* (probable STATE).

McIntosh Co., Harris Neck NWR, Oct. 9, Nancy Crosby:

NYMPHALIDAE: White Peacock, *Anartia jatrophae*.

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

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

Ricky sends in the following report for Mississippi:

NOCTUIDAE:

<i>Papaipema n. sp. #4</i>	Warren County: Bovina	11 - October - 1972	LBM
<i>Papaipema n. sp. #4</i>	Lee County: Natchez Trace mile 253.1	27 - September - 2013	RLP
<i>Papaipema n. sp. #5</i>	Warren County: Vicksburg	7 - November - 2013	RLP
<i>Papaipema rutulus</i>	Claiborne County: Grand Gulf	31 - October - 2013	RLP

EREBIDAE:

<i>Catocala illecta</i>	Warren County: Vicksburg	5 - June - 2013	RLP
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Contributors Ricky Patterson (RLP) and from records of Bryant Mather (LBM)

North Carolina: Steve Hall, North Carolina Natural Heritage Program, Div. of Parks & Recreation, 1615 MSC, Raleigh, NC 27699-1615, E-Mail: Stephen.Hall@ncmail.net

Steve states that the following selected butterfly records were submitted by Harry LeGrand. Place names refer to counties unless otherwise indicated, and records are not new county reports unless indicated. Records are all from September through November 2013 (with one exception noted). The fall season finally turned "normal" in September, with temperatures at or slightly above normal, and rainfall thankfully on the light side, providing excellent conditions for observations, as well as for northbound movement of migrants. Dry weather continued for most of the fall, but October was one of the cloudiest on record, and November also turned quite a bit colder than usual. Thus, there were few notable late dates of stragglers. Despite weather after September that was not overly favorable for immigrants to reach the state, there was a notable northbound movement of *Heliconius charithonia* and several other notable strays. After a summer season with hardly any reports of *Vanessa cardui*, *Pyrisitia lisa*, and *Urbanus proteus*, quite a few of each were seen this fall, though in smaller numbers than in many recent years; and, the latter two stayed mainly near the southern half of the coast. However, the *Danaus plexippus* flight was very poor, with few reports, even from the mountains, of double-digits.

PIERIDAE:

Pontia protodice, sadly, the only fall report was from Falls Lake in Durham, where Mike Turner saw one on October 25.

Pyrisitia lisa, this species was scarcely seen in 2013 away from the southern coast; thus, Bob Cavanaugh had a surprising count of about 70 in Craven in Croatan National Forest on September 15.

NYMPHALIDAE:

Heliconius charithonia, the strongest immigration on record into the state took place this fall. Unlike in 2008, when there were a large number of coastal records owing to spread of a colony from Fort Macon State Park in Carteret, this year there was a considerable flurry of records in South Carolina, followed by many North Carolina records, clearly indicating that most or all state reports were of migrants. The first for the fall was noted on September 7 in Wilmington (New Hanover) by Daniel Hueholt, and Jim Parnell saw another in that city on September 13. Paul Hart saw one far inland in Harnett on September 11, as did Judy Garrett in Wake on November 6-7. John Ennis was fortunate to find the species twice – one inland along the Cape Fear River in Bladen (COUNTY) on September 23, and a second in coastal Brunswick on October 17. Most significant perhaps was one seen by Jeff Lewis on October 18 on Roanoke Island in Dare (COUNTY), for the first record for the northern coast. Fortunately, all records except for the Harnett one were documented by photos.

Polygonia faunus smithii, all fall season records came, as expected, from Mount Mitchell State Park in Yancey; the peak tally was of eight individuals on September 11 and 16.

Polygonia progne, this is one of the least often seen species in the state. Thus, it was gratifying that David Campbell attempted to find the species by putting out some bait (i.e., rotten bananas) at a site with considerable amounts of gooseberries (*Ribes* sp.), on October 20. He was well rewarded, by finding a state record count of five adults, at a location in southwestern Ashe (COUNTY).

Hypolimnas misippus, this Old World species, which has a native (?) population in the West Indies, was a great surprise at a yard in Manteo in Dare (COUNTY) on October 13 and 15. Mary Doll identified the male individual, and it was confirmed with photos taken by Mac Basnight. There are two other state records, from Craven (specimen) and Harnett (photos).

Anartia jatrophae, this stray was found twice in the lower Coastal Plain, after an absence of records for several years. Jim Parnell saw one in Columbus (COUNTY) south of Clarkton on September 2, whereas Charlotte Fulcher observed two in the Buxton area of Dare, also on September 2.

Danaus gilippus, this periodic colonist along the southern coast had a modest flight this season. Daniel Hueholt saw eight on September 7 at Fort Fisher in New Hanover, where a few others were found later in the fall. A few were observed farther up the coast in Carteret by Bob Cavanaugh and Ed Dombrowski, and one photographed by Marty Fancy on November 1 in Havelock in Craven was a first recent record for this slightly inland county.

HESPERIIDAE:

Pyrgus albescens, a female *Pyrgus* was carefully studied by Harry LeGrand in a sandy pine flatwoods at Sunset Beach in Brunswick on October 16. It was clearly a *communis/albescens* individual, and he had never seen this genus at this site previously. Presumed *P. communis* colonies are known near the coast from fields and cropland margins, where there are good stands of the mallow (*Sida*) hostplants; no such mallow patches were noted at this flatwoods site. *P. albescens* is thought to be the only species of the pair now in coastal South Carolina and in much of that state's interior (fide Dennis Forsythe and Brian Scholtens). This sighting, only a few miles from the South Carolina border, can only be considered "speculative" or "suggestive". It is hoped that a male or two can be collected in this area in the near future, though the species was confirmed by a male specimen farther up the coast in Carteret in 2006.

Pyrgus oileus, at long last, the state obtained modern records, documented by excellent photos of males of this stray. Though frequently reported in recent years in coastal South Carolina, the only record for the state had been from the mountains (Buncombe) many decades ago, with no data yet available. On October 1, Joe Lafferty photographed a *Pyrgus* at Sunset Beach in Brunswick (COUNTY) that he suspected was this species, and his photos confirmed it indeed as *P. oileus*. After hearing of this record, Bruce Smithson re-checked his photos of *Pyrgus* taken in neighboring New Hanover (COUNTY), and found one of this species taken at Fort Fisher on September 30, 2009. Obviously, the species is being overlooked along the southern coast by local butterflies. But even so, it still must be considered as a very rare stray, though with records expected to increase in upcoming years, as some South Carolina sites apparently represent breeding locales (fide Dennis Forsythe).

Hesperia leonardus, this late-flying species was noted only on just three occasions. In Chatham, two were noted by Richard Stickney on September 18, and five were seen by Gene Schepker on September 27. Gail Lankford saw another in the mountains in Madison on September 24.

Hesperia meskei, Bob Cavanaugh collected a worn female on September 24 in Croatan National Forest in Carteret (COUNTY); this is the easternmost county record in the state, and nearly all recent records are from the Sandhills region much farther to the west.

Problema byssus, one seen by Mike Turner at Rhodes Pond in Cumberland on September 5 was near the northern edge of range of the species, which is slowly moving northward in the state. Two seen by Richard Stickney in Richmond (COUNTY) on September 15 were also notable.

Poanes yehl, a complete shock, and a first record for the mountains, was the finding of three females in the Hot Springs area of Madison (COUNTY) on September 24. Could this be the first record for the entire southern Appalachians? Gail Lankford and Sue Perry documented this record with photos. Only time will tell if this is a breeding site; *Poanes* species aren't thought to be long-distance migrants, so this site definitely needs to be checked in 2014.

Poanes viator, the species is known primarily from coastal marshes, but Will Cook saw one inland at Lake Waccamaw State Park in Columbus (COUNTY) on September 28.

Euphyes berryi, three individuals were seen and photographed by Brian Bockhahn near Lake Phelps in Washington (COUNTY) on September 8. This is an inward range extension by about 30 miles, and it also lies at the northern edge of the species' range. At a known site, John Fussell noted one on September 3 in Croatan National Forest in Craven.

Amblyscirtes reversa, Ed Corey observed one in Washington (COUNTY) on September 8; there have been few recent records for the northern half of the Coastal Plain.

Amblyscirtes vialis, Gene Schepker and others found the species on many occasions at Pilot Mountain State Park in Surry, where previously known. The peak count for this third brood was 7 on September 3, and he found three on the state record late date on September 29.

Lerodea eufala, one photographed by Gene Schepker at a farmyard in Forsyth (COUNTY) on October 29 was a long overdue record for this well-surveyed county. The species is thus likely to be a stray to this part of the Piedmont.

The following selected moth records were submitted by Bo Sullivan. All of these records are from earlier this year but are based on recently obtained results from genetic bar-coding (plus subsequent morphological work).

GEOMETRIDAE:

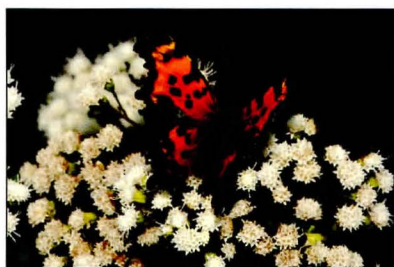
Lytrosis heitzmanorum, five were collected from a site in Rutherford County, June 5,6 (STATE).

Hydriomena exculpata, collected at Mt. Mitchell State Park (with permission) on June 7. This population was originally discovered by Tom Neal, who collected a single specimen from the summit in July 1988. Doug Ferguson (pers. comm., 1997) determined this specimen as *exculpata* – the only one then known from south of New Hampshire in the eastern United States – but thought it looked more like the nominate form from the Pacific Northwest than subspecies *nanata* from the Atlantic Provinces of Canada. The MPG website currently shows sites for this species in the Southern Appalachians, including one in Tennessee.

EREBIDAE:

Bleptina sangamonina – specimens originally identified as *B. inferior* from May, June, and July now all appear to be *sangamonina* based on the bar-coding results.

The following record and two photographs of *Polygonia faunus* (Mount Mitchell State Park, Yancey Co., NC) were submitted by Parker Backstrom.



NYMPHALIDAE:

Polygonia faunus -- September 11, 2013

The following selected moth records (for 2013) and photograph of *Cirrhophanus triangulifer* were submitted by Parker Backstrom, all from Chatham County.

CRAMBIDAE:

Samea baccatalis -- September 26, October 1 (3); photographed
Syngamia florella -- October 23; photographed

DREPANIDAE:

Drepana arcuata -- September 10

GEOMETRIDAE:

Mellilla xanthometata -- September 12

SATURNIIDAE:

Sphingicampa bicolor -- September 5, 9
Sphingicampa bisecta -- September 5 (2 males); photographed

SPHINGIDAE:

Sphinx kalmiae -- September 6 (2), 7
Paonias astylus -- September 10; photographed

NOTODONTIDAE:

Peridea n. sp. nr. ferruginea -- September 1

EREBIDAE:

Anomis privata -- September 5, 27; photographed

NOCTUIDAE:

Agnorisma bollii -- October 11, 14, 16, 17
Cirrhophanus triangulifer -- September 14



Cirrhophanus triangulifer
(Photo by Parker Backstrom)

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

Brian sends in the following South Carolina Summary Report for 2013:

Saluda Co., 2 mi. NW Batesburg-Leeville on Hy 178, 30 May 2013, BG Scholtens

Pieridae: *Pieris rapae* – county record

Chesterfield Co., Juniper Creek and Society Hill Rd., Cheraw SP, 11 Apr 2013, BG Scholtens

Lycanidae: *Celastrina ladon* – county record

Charleston Co., 710 New Market Dr., Mt Pleasant, 16 Sep 2005 & 29 Sep 2008, BG Scholtens

Crambidae: *Diaphania costata* – State and county record – both previously identified as *Palpita kimballi*, reidentified by James Hayden

Fairfield Co., Weir Creek just N of crossing on Banks Weir Rd., 8 Jun 2012, D. Hiltner

Nymphalidae: *Speyeria cybele* – county record

Charleston Co., Battery Landing, 15 Sep 2013, DM Forsythe

Nymphalidae: *Anartia jatrophae* – sight record, part of a large movement this year

York Co., Blackjack Oak HP, 21 Sep 2013, DM Forsythe

Hesperiidae: *Hylephila phyleus* – county record, sight record

Charleston Co., Charles Towne Landing State Historic Site, 16 Oct 2013, DM Forsythe

Nymphalidae: *Dryas iulia* – State and county record, sight record – No nearby butterfly houses contained this species at the time of sighting

Calhoun Co., Congaree Bluffs HP, 14 Sep 2013, DM Forsythe

Lycanidae: *Hemiargus ceraunus* – county record, sight record

Newberry Co., Cromer Rd., Enoree District, Sumter NF, 9 Jul 2013, DM Forsythe

Hesperiidae: *Erynnis zarucco* – county record, sight record

Edgefield Co., Dry Branch Rd. (FS 637), Long Cane District, Sumter NF, 16 May 2013, DM Forsythe

Hesperiidae: *Amblyscirtes hegon* – county record, sight record

Abbeville Co., FS Rd. 505, Long Cane District, Sumter NF, 10 Oct 2013, DM Forsythe & R. Wilson

Hesperiidae: *Panoquina ocola* – county record, sight record

Nymphalidae: *Agraulis vanilla* – county record, sight record

Nymphalidae: *Vanessa virginiensis* – county record, sight record

Saluda Co., FS Rd. 591, Long Cane District, Sumter NF, 30 May 2013, DM Forsythe

Hesperiidae: *Achalarus lyciades* – county record, sight record

Hesperiidae: *Nastra lherminier* – county record, sight record

Hesperiidae: *Polites origenes* – county record, sight record

Hesperiidae: *Wallengrenia otho* – county record, sight record

Orangeburg Co., Indian Bluff Park, 24 Oct 2013, DM Forsythe

Hesperiidae: *Poanes viator* – county record, sight record

Charleston Co., James Island, Wampler Ave., 19 Nov 2013, DM Forsythe

Pieridae: *Ascia monuste* – sight record

Orangeburg Co., Methodist Oaks, 7 Sep 2013, DM Forsythe

Hesperiidae: *Erynnis baptisiae* – county record, sight record

Calhoun Co., Wise Rd. below Ft. Motte towards the river, 14 Sep 2013, DM Forsythe

Hesperiidae: *Problema byssus* – county record, sight record

Greenville Co., Hogback Mt. Rd., 26 Apr 2013, Doug Allen

Lycaenidae: *Mitoura henrici* – county record, photo record

Spartanburg Co., Inman, 10 May 2013, Doug Allen

Tortricidae: *Platynota flavedana* – photo record

Spartanburg Co., Inman, 20 May 2013, Doug Allen

Geometridae: *Xanthotype sospeta*? – photo record, needs dissection for confirmation

Limacodidae: *Tortricidia testacea* – photo record

Spartanburg Co., Inman, 30 May 2013, Doug Allen

Erebidae: *Idia americalis* – photo record

Spartanburg Co., Inman, 31 May 2013, Doug Allen

Crambidae: *Microcrambus elegans* – photo record

Crambidae: *Pyrausta rubricalis* – photo record

Geometridae: *Orthonama obstipata* – photo record

Noctuidae: *Acronicta modica* – photo record

Spartanburg Co., Inman, 1 Jun 2013, Doug Allen

Tortricidae: *Platynota idaeusalis* – photo record

Spartanburg Co., Inman, 4 Jun 2013, Doug Allen

Noctuidae: *Eudryas grata* – photo record

Spartanburg Co., Inman, 13 Jun 2013, Doug Allen

Crambidae: *Parapediasia decorellus* – photo record

Crambidae: *Pyrausta acrionalis* – photo record

Spartanburg Co., Inman, 14 Jun 2013, Doug Allen

Oecophoridae: *Promalactis suzukiella* – photo record

Spartanburg Co., Inman, 22 Jun 2013, Doug Allen

Geometridae: *Eulithis gracilineata* – photo record

Geometridae: *Scopula limboundata* – photo record

Spartanburg Co., Inman, 29 Jun 2013, Doug Allen

Erebidae: *Hypena baltimoralis* – photo record

Spartanburg Co., Inman, 30 Jun 2013, Doug Allen

Limacodidae: *Prolimacodes badia* – photo record

Spartanburg Co., Inman, 22 Jul 2013, Doug Allen, photo records for National Moth Week

Amphisbatidae: *Psilocorsis reflexella*

Crambidae: *Crambus praefectellus*

Crambidae: *Desmia funeralis*

Crambidae: *Diaphania costata* – change in ID

following J. Hayden

Crambidae: *Glaphyria sequistrialis*

Crambidae: *Microcrambus elegans*

Crambidae: *Neohelviotys neohelvialis*

Crambidae: *Nomophila nearctica*

Crambidae: *Palpita magniferalis*

Crambidae: *Parapediasia teterrella*

Crambidae: *Udea rubigalis*

Crambidae: *Urola nivalis*

Erebidae: *Caenurgia chloropha*

Erebidae: *Halysidota tessellaris*

Erebidae: *Hypena scabra*

Erebidae: *Hypsoropha hormos*

Erebidae: *Idia aemula*

Erebidae: <i>Palthis asopialis</i>	Noctuidae: <i>Emarginea percara</i>
Erebidae: <i>Spilosoma virginica</i>	Noctuidae: <i>Marimatha nigrofimbria</i>
Erebidae: <i>Tetanolita mynesalis</i>	Noctuidae: <i>Phosphila miselioides</i>
Geometridae: <i>Anavitrinella pampinaria</i>	Noctuidae: <i>Polygrammate hebraeicum</i>
Geometridae: <i>Eupithecia miserulata</i>	Noctuidae: <i>Spodoptera ornithogalli</i>
Geometridae: <i>Haematopis grataria</i>	Oecophoridae: <i>Inga cretacea</i>
Geometridae: <i>Hypagyrtis unipunctata</i>	Plutellidae: <i>Plutella xylostella</i>
Geometridae: <i>Nemoria lixaria</i>	Pyalidae: <i>Arta statalis</i>
Geometridae: <i>Pleuopruca insulsaria</i>	Pyalidae: <i>Epipaschia superatalis</i>
Geometridae: <i>Probole amicaria</i>	Sphingidae: <i>Paonias myops</i>
Geometridae: <i>Prochoerodes lineola</i>	Tortricidae: <i>Argyrotaenia floridana</i>
Limacodidae: <i>Apoda biguttata</i>	Tortricidae: <i>Cenopsis reticulatana</i>
Limacodidae: <i>Parasa chloris</i>	Tortricidae: <i>Clepsis peritana</i>
Noctuidae: <i>Acrionicta hasta</i>	Tortricidae: <i>Phaenocarpa niveiguttana</i>
Noctuidae: <i>Cerma cerintha</i>	Yponomeutidae: <i>Atteva aurea</i>
Noctuidae: <i>Elaphria grata</i>	Zygaenidae: <i>Harrisina americana</i>

McCormick Co., 384 Power Plant Rd., Clarks Hill, 18 Nov 2013, E. Haskell

Nymphalidae: *Heliconius charithonius* – county record, sight record, in bottomland

McCormick Co., 384 Power Plant Rd., Clarks Hill, 8 Sep 2011, E. Haskell

Nymphalidae: *Lethe creola* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 7 Mar 2012, E. Haskell

Hesperiidae: *Erynnis juvenalis* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 26 Apr 2012, E. Haskell

Lycaenidae: *Satyrus favonius* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 30 Apr 2012, E. Haskell

Lycaenidae: *Satyrus calanus* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 10 May 2012, E. Haskell

Lycaenidae: *Satyrus liparops* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 15 May 2012, E. Haskell

Hesperiidae: *Copaeodes minima* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 9 Oct 2012, E. Haskell

Lycaenidae: *Atlides halesus* – county record, photo record

McCormick Co., 384 Power Plant Rd., Clarks Hill, 17 Jun 2013, E. Haskell

Nymphalidae: *Asterocampa clyton* – county record, photo record

McCormick Co., below dam SC Park, 5 Aug 2013, E. Haskell

Hesperiidae: *Thorybes pylades* – county record, photo record

McCormick Co., below dam SC Park, 23 Oct 2013, E. Haskell

Hesperiidae: *Panoquina ocola* – county record, photo record

McCormick Co., FS Rd. 660E, Long Cane District, Sumter NF, dirt rd. to Sav River boat ramp, 10 Oct 2012, E. Haskell

Nymphalidae: *Anthanassa texana* – county record, photo record

Aiken Co., Silver Bluffs Audubon Sanctuary, 21 Sep 2013, E. Haskell

Hesperiidae: *Pyrgus oileus* – county record, photo record

Papilionidae: *Papilio cressphontes* – county record, photo record

McCormick Co., St. Johns Methodist lease, Lake Thurmond, 14 Aug 2013, E. Haskell

Hesperiidae: *Lerodea eufala* – county record, photo record

McCormick Co., Stevens Creek Trail, 26 Jul 2013, E. Haskell

Nymphalidae: *Lethe creola* – county record, photo record

Greenwood Co., 100 Hickory Lane, Ninety Six, 22 Aug 2010, F. Wilson

Papilionidae: *Papilio cressphontes* – county record, photo record

Greenwood Co., Ninety Six National Historic Site, 12 Jul 2013, F. Wilson

Nymphalidae: *Cercyonis pegala* – county record, photo record

Saluda Co., Blackjack Oak Savannah adjacent to FS Rd 591, Long Cane District, Sumter NF, 13 Oct 2013, F. Wilson

Hesperiidae: *Pyrgus oileus* – county record, photo record

- Greenwood Co., flood plain of Henley Creek, Ninety Six National Historic Site, 29 Oct 2013, F. Wilson
Nymphalidae: *Cyllopsis gemma* – county record, photo record
- Greenwood Co., flood plain of Henley Creek, Ninety Six National Historic Site, 20 Apr 2013, F. Wilson
Pieridae: *Anthocharis midea* – county record
- Greenwood Co., Ninety Six National Historic Site, 25 Jul 2013, F. Wilson
Nymphalidae: *Lethe anhedon* – county record, photo record
- Lancaster Co., 40 Acre Rock HP, 26 Aug 2013, Irvin Pitts
Hesperiidae: *Lerodea eufala* – county record, photo record
Lycaenidae: *Atlides halesus* – county record, photo record
Nymphalidae: *Asterocampa clyton* – county record
- Newberry Co., Brazelman Bridge Rd., 20 Sep 2013, Irvin Pitts
Hesperiidae: *Copaeodes minima* – county record, sight record
- Chesterfield Co., Carolina Sandhills NWR, 25 Aug 2013, Irvin Pitts
Hesperiidae: *Problema byssus* – county record, photo record
- Laurens Co., Enoree ORV area, Sumter NF, 20 Sep 2013, Irvin Pitts
Hesperiidae: *Nastra lherminier* – county record, photo record
- Edgefield Co., Lick Fork Recreation Area, Long Cane District, Sumter NF, 6 Sep 2013, Irvin Pitts
Hesperiidae: *Erynnis zarucco* – county record, photo record
Hesperiidae: *Problema byssus* – county record, photo record
Nymphalidae: *Lethe appalachia* – county record, photo record
- Lexington Co., Shealy's Pond HP, 12 Aug 2013, Irvin Pitts
Lycaenidae: *Mitoura hesseli* – county record, photo record, first record since 1990s
- Lexington Co., Shealy's Pond HP, 4 Sep 2013, Irvin Pitts
Hesperiidae: *Poanes yehl* – county record, photo record
- Orangeburg Co., Albemarle Corp., 7 Sep 2013, Dave & Marty Kastner
Lycaenidae: *Parrhasius m-album* – county record, photo record
- York Co., Blackjack Oak HP, 21 Sep 2013, Dave & Marty Kastner
Hesperiidae: *Problema byssus* – county record, photo record
Nymphalidae: *Lethe appalachia* – county record, photo record
- Richland Co., Blythwood, 27 Oct 2013, Dave & Marty Kastner
Nymphalidae: *Heliconius charithonius* – county record, photo record
- Fairfield Co., Rochelle Creek Rd., Ridgeway, 31 Aug 2013, Dave & Marty Kastner
Hesperiidae: *Copaeodes minima* – county record, photo record
Hesperiidae: *Erynnis baptisiae* – county record, photo record
Hesperiidae: *Oligoria maculate* – county record, photo record
Hesperiidae: *Polites origenes* – county record, photo record
Hesperiidae: *Pompeius verna* – county record, photo record
Hesperiidae: *Problema byssus* – county record, photo record
Hesperiidae: *Thorybes pylades* – county record, photo record
Hesperiidae: *Wallengrenia otho* – county record, photo record
Nymphalidae: *Asterocampa clyton* – county record, photo record
- Aiken Co., North Augusta, 28 Sep 2013, Lois Stacey
Hesperiidae: *Pyrgus oleus* – sight record
Nymphalidae: *Heliconius charithonius* – sight record
- Charleston Co, Kiawah Island, 28 Sep 2013, Nathan Dias
Nymphalidae: *Anartia jatrophae* – sight record
Nymphallidae: *Danaus gilippus* – sight record
Nymphallidae: *Heliconius charithonius* – sight record
Pieridae: *Ascia monuste* – sight record
- McCormick Co., FS Rd. 547, Long Cane District, Sumter NF, 27 Sep 2013, R. Wilson
Hesperiidae: *Poanes yehl* – county record, photo record
- Williamsburg Co., Wee Tee State Forest, 24 Apr 2013, Ray Simpson
Papilionidae: *Eurytides marcellus* – county record
- Chesterfield Co., Oxpen Lake, Carolina Sandhills NWR, 15 Jun 2013, S. Halling
Nymphalidae: *Neonympha helicta* – county record, photo record
- Edgefield Co., 1 mi. SE of Hwy 28 on Steven's Creek, 31 Oct 2013, T. Procter
Nymphalidae: *Heliconius charithonius* – county record, photo record

Richland Co., Congaree NP, visitor house, 30 Sep 2010, Theresa Thom

Crambidae: *Diaphania costata* – county record, originally identified as *Palpita kimballi*, reidentified by James Hayden

Steve Mix sends in the following records for October 23, 2013, Lady's Island, South Carolina (Beaufort County):

H. charitonia, Numerous sitings, best year for Zebra longwing in this area in recent memory.

Hemiargus ceranus, Three small roadside colonies observed; a regular find since Fall 2011.

Leptotes cassius, My first encounter with this species in SC. Numerous individuals observed/photographed in a flowery roadside lot.

Anthanassa texana, Another SC first for me. Three individuals observed/photographed along shallow ditch next to small paved road.

"A great day for me during my eleven mile walkabout!"

Tennessee: John Hyatt, 5336 Foxfire Place, Kingsport, TN 37664, E-Mail: jkshyatt@aol.com

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

Virginia: Harry Pavulaan, 494 Fillmore Street, Herndon, VA 22070, E-Mail: pavulaan@aol.com

Harry sends in the following report for Virginia (all records HP = Harry Pavulaan unless otherwise noted):

PAPILIONIDAE:

Papilio glaucus: Loudoun Co., Leesburg, Banshee Reeks Nature Preserve: 7/14/13 only 11 observed, but on 7/20/13 a mass irruption was in progress with several hundred observed in a single field, all feeding on *Cirsium* flowers, with an unusually large proportion of intermediate yellow/black form females. Irruption passed by 8/26/13 with only one female observed, none thereafter.

PIERIDAE:

Colias eurytheme: Loudoun Co., Leesburg: 12/5/13. One male was observed flying on a lawn area in warm afternoon sunshine, despite several weeks of unusually cold, winter-like weather.

Eurema nicippe: Loudoun Co., Leesburg, site adjacent to Balls Bluff Elementary School apparently devoid of *nicippe* this year for the first time in several years. No immature stages found on *Senna hebecarpa*, indicating some colonies may be temporary in this region.

LYCAENIDAE:

Celastrina ladon: Loudoun Co., Leesburg, Edwards Landing Town Park: 5/10/13, several mature larvae were collected feeding on *Cornus florida* fruits; larvae pupated and are hibernating to produce adults in 2014. Interestingly, sympatric *ladon* and spring form *neglecta* segregated out on different hosts growing together in the same area.

Celastrina neglecta: Loudoun Co., Leesburg, Veterans Memorial Park, Balls Bluff Regional Park and Edwards Landing Town Park: Daily hikes through woodland habitat from late March onward found spring form adults first emerging on 4/5/13. Spring flight lasted until 5/10/13, with one last female observed. Larvae found commonly in early May, feeding on *Viburnum prunifolium* fruits. Larvae were taken into captivity and all produced summer form second brood adults when wild adults emerged. First wild second brood adults emerged 5/28/13 after a week of unsettled weather. In the morning, two adults were observed rising up out of litter beneath host shrubs, wings still soft. By late afternoon, HUNDREDS of immaculate adults irrupted along Potomac River. Naturalized *Ptelea trifoliata* shrubs in bloom attracted swarms of adults through subsequent days. Heavy rain severely impacted this brood after several days but ignited an irruption of memorable proportions on 6/10/13, with THOUSANDS of adults swarming along all woodland trails.

NYMPHALIDAE:

Vanessa cardui: Loudoun Co., Leesburg, 11/10/13 (HP), worn, faded individual casually flying due north through post-peak woodlands along Potomac River bluffs.

The Southern Lepidopterists' News is published four times annually. Membership dues are \$20.00 annually. The organization is open to anyone, especially those with an interest in the Lepidoptera of the southern United States. Information about the Society may be obtained from Marc Minno, Membership Coordinator, 600 NW 34 Terrace, Gainesville, FL 32607, E-Mail: mminno@bellsouth.net, and dues may be sent to Jeffrey R. Slotten, Treasurer, 5421 NW 69th Lane, Gainesville, FL 32653.

SOUTHERN LEPIDOPTERISTS' SOCIETY

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