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J. BARRY LOMBARDINI: EDITOR

A NEW US RECORD FOR THE TROPICAL FRUIT - PIERCING MOTH *EUDOCIMA SERPENTIFERA* (WALKER, [1858])

BY

VERNON ANTOINE BROU JR.

A single specimen of the large noctuidae moth ***Eudocima serpentifera*** (Walker) (**Fig. 1**) was captured in an ultra-violet light trap at sec.24T6SR12E, 4.2 mi NE of Abita Springs, Louisiana, on October 25, 2006.

Fig. 1. ***Eudocima serpentifera*** (Walker), a: dorsal view, b. ventral view.

This female appears to be the first reported record for this tropical species in the United States. The type locality of ***serpentifera*** is the Dominican Republic and Brazil. ***E. serpentifera*** is significantly larger (wing length: 52 mm) than the other known occasional tropical migrant ***Eudocima apta*** (Walker, [1858]) (wing length: 45 mm) (**Fig. 2**).

I previously reported on ***apta*** (**Fig. 2**) under the name ***materna*** (Brou, 1994), recording two males and one female specimen taken at ultraviolet light traps at the same Abita Springs, Louisiana, study site. Subsequently, I have taken a fourth specimen, a male of ***apta*** on March 31, 2000, captured at Red Dirt National Wildlife Refuge, Kisatchie National Forest, Natchitoches Parish, Louisiana.

Numerous species of adult ***Eudocima*** are listed as pests of various fruit species worldwide. Davis *et al.* (2005) reported adult ***Eudocima fullonia*** Clerck, to feed on economically important fruits as citrus, apple, pear, stone fruits, grape, melon, mango, tomato, papaya, pineapple, and strawberry. ***E. fullonia*** is a pest species recorded from Africa, Asia, Oceania, and the Indo-Australian region, including Hawaii and Australia. Davis *et al.* (2005) reported larvae of ***fullonia*** to feed on foliage of plants in the families Menispermaceae and Fabaceae. Zilli and Hogenes (2002) stated ***Eudocima phalonia*** (Linnaeus, 1763) comb. n. must be used for the species currently known as ***Eudocima fullonia*** (Clerck, [1764]) relegated to synonymy.

There appears to be eight species of ***Eudocima*** Billberg in the new world: ***Eudocima anguina*** (Schaus), TL [type locality]: Costa Rica; ***Eudocima apta*** (Walker), TL: Brazil; ***Eudocima collusoria*** (Cramer), TL: Surinam; ***Eudocima colubra*** (Schaus), TL: Costa Rica; ***Eudocima memorans*** (Walker), TL: West Coast of Americas (probably Ecuador); ***Eudocima procus*** (Cramer), TL: Surinam; ***Eudocima serpentifera*** (Walker) TL: Dominican Republic and Brazil; ***Eudocima toddi*** (Zayas) TL: Cuba. This is quite contrasting to the seven ***Eudocima*** species reported to occur in northeastern Queensland alone. Davis *et al.* (2005) make note of one specimen of ***Eudocima procus*** (Cramer) intercepted in Miami on chrysanthemum originating from Colombia. I question the validity of this determination as I will note later in this article. To the New World ***Eudocima*** species we can add the Palearctic species, ***Eudocima tyrannus*** (Guenée), a specimen captured and released in 2001 from Buldir Island, Aleutian Islands, Alaska, which was reported and illustrated by Kruse (2002).

Walker's (1858) original description of ***Ophideres serpentifera*** is: *"Ferruginous-brown. Abdomen luteous. Forewings with a purplish bloom, with several undulating dark bands, and with a blackish and more complete regular submarginal band; two blackish marks near the base, and a blackish discal patch; the latter is near the interior side of the reniform spot, which is ferruginous, oblong and well defined, and emits a branch in front, a large ferruginous patch by the interior angle; exterior border not denticulated; interior border excavated. Hindwings bright luteous, brown at the base; a somewhat abbreviated serpentine discal black band, and a black border which is abbreviated hindward, and end opposite the band..."*

Eudocima serpentifera (Walker, [1858]) is well illustrated by Druce, 1890, in Godman and Salvin, *"Biologia Central-Americana"* (plate 31, figure 14) and also in Seitz, 1919-1944, *"Die Grosse Schmetterlinge der Erde"* (plate 88, figure a). In Seitz the figure *"a"* represents a row on the plate and there are two specimens (two sexes) in each row. The two figures of ***serpentifera*** were identified incorrectly in Seitz as ***Eudocima procus*** (Cramer, 1777) (Martin Honey, personal communication).

Plate 88, figure b has two pictures of ***apta*** (Walker) and these were identified incorrectly by Seitz as ***serpentifera***. The left specimen is a male and is an excellent match for my (**Fig. 2a**) below and the right image of the female matches my (**Fig. 2b**) below as ***apta***. This misidentification of ***serpentifera, apta***, and ***procus*** in Seitz has led to much

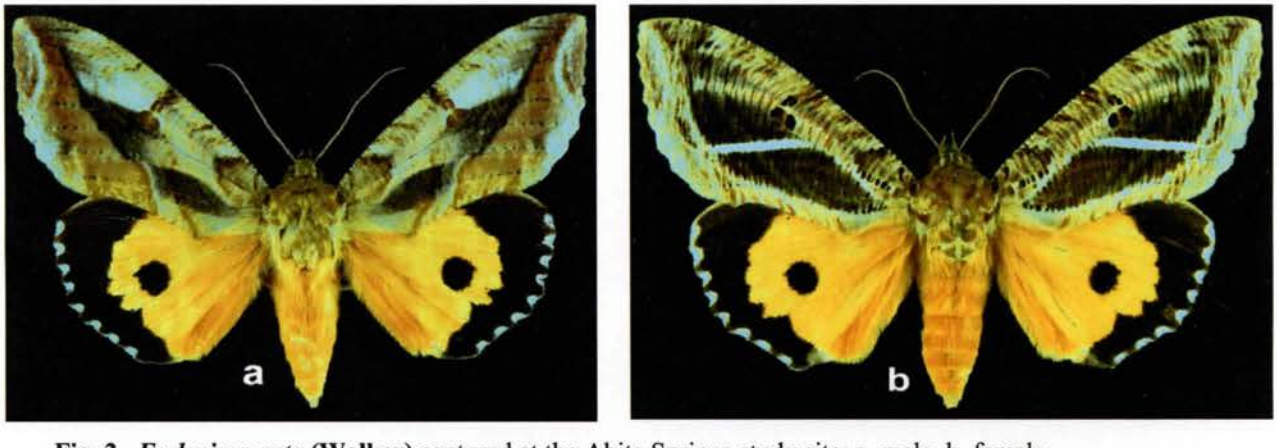

Fig. 2. ***Eudocima apta*** **(Walker)** captured at the Abita Springs study site: a. male, b. female.

confusion in the identification of these species.

Eudocima materna (Linnaeus) TL: ***"Indiis"*** is now regarded as an exclusively Old World species and the New World species is now known as ***Eudocima apta*** (Walker), including all past US records reported as ***materna*** (L.) (Zilli and Hogenes 2002). In the past, ***materna*** was considered to be a pantropical species but these recent findings show that ***materna***, described from India, is not the same as the New World species called ***apta***.

Eudocima apta (Walker, [1858]) = ***Eudocima materna*** of authors, not Linnaeus, 1767. Previous authors have incorrectly listed ***apta*** as a synonym of ***materna***. ***Eudocima materna*** (Linnaeus, 1767) is not a synonym of ***apta***, but is its Old World counterpart. A simple visual comparison of Old World ***materna*** (L.) and New World ***apta*** (Walker) reveals the obvious differences of the two species in both sexes. Zilli and Hogenes (2002) report *"**Eudocima apta** (Walker,[1858]) sp. rev. is considered a distinct species from **Eudocima materna** (Linnaeus, 1767)"* and they also report genitalic differences between the two species, most notably in the bursa.

In their revisionary work on the genus ***Eudocima*** Billberg, Zilli and Hogenes (2002) described four new species of ***Eudocima***, three from the Philippines and one from New Guinea. These authors basically followed Poole's listing (1989). These authors state *"not all species could be studied in detail, noticeably those from Madagascar and some American taxa"*. Though, these author's did give a detailed description concerning the confusion of ***materna*** *vs.* ***apta***, and discuss how European workers have long considered the two species to be distinct, but this view was not accepted by recent American workers Franclemont & Todd (1983) and Poole (1989), who listed ***apta*** as a synonym of ***materna***. They also discuss the visual and genitalic differences of these two species. One fact which appears to have caused

Eudocima Billberg, species according to Zilli & Hogenes:

anguina (Schaus, 1911)
apta (Walker,[1858])
aurantia (Moore, 1877)
bathyglypta (A.E. Prout, 1928)
behouneki Zilli & Hogenes, 2002
boseae (Saalmuller, 1880)
cajeta (Cramer, 1775)
cocalus (Cramer, 1777)
collusoria (Cramer, 1777)
colubra (Schaus, 1911)
discrepans (Walker, [1858])
divitiosa (Walker, 1869)
euryzona (Hampson, 1926)
formosa (Griveaud & Viette, [1962])
homaena (Hübner, [1823])
hypermnestra (Stoll, 1780)
imperator (Boisduval, 1833)
iridescens (T.P. Lucas, 1894)
jordani (Holland, 1900)
kinabaluensis (Feige, 1976)
kuehni (Pagenstecher, 1886)
materna (Linnaeus, 1767)
mazzeii Zilli & Hogenes, 2002
memorans (Walker, [1858])
mionopastea (Hampson, 1926)
muscigera (Butler, 1881)
nigricilia (A.E. Prout, 1924)
okurai (Okano, 1964)
paulii (Robinson, 1968)
phalonia (Linnaeus, 1763)
procus (Cramer, 1777)
prolai Zilli & Hogenes, 2002
salaminia (Cramer, 1777)
serpentifera (Walker, [1858])
sikhimensis (Butler, 1895)
smaragdipicta (Walker, [1858])
splendida (Yoshimoto, 1999)
srivijayana (Banziger, 1985)
toddi (Zayas, 1965)
treadawayi Zilli & Hogenes, 2002
tyrannus (Guenée, 1852)

confusion among members of this genus is the sexual dimorphism in many of the species. Zilli and Hogenes (2002) discuss throughout their investigation the discrepancies of authors and literature, including those concerning the species ***apta, materna*** and ***serpentifera*** highlighted in this article. Though these authors did not fully investigate and address all members of the genus, their investigation will greatly aid to the knowledge of this most interesting genus of large and colorful moths and most certainly form a basis for future workers.

Acknowledgments

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DUES CHANGES - MEMBERS PLEASE TAKE NOTICE

Members please note that the 2007 dues for the SLS newsletter has increased to $20.00 for regular members and $15.00 for students. The reasons for this are obviously the increased cost of printing and postage. The increases were discussed at the June 2006 Gainesville meeting and voted on at that time. [Please see the minutes printed in Volume 28 NO. 2 - Irving Finkelstein's minutes of the business meeting.] For those of you who have already paid your dues for 2007 and beyond, you will be grandfathered. Foresight has been kind to you and saved you a few dollars. New Membership categories are:

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

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FIELD TRIP TO GOETHE STATE FOREST - MARCH 16, 2007

A field trip to Goethe State Forest (Florida) is planned for Saturday March 17, 2007. We will be obtaining collecting passes for daytime and nighttime collecting. This area has been poorly collected by lepidopterists, mainly because it's so remote. However, there are a few small restaurants now about 20 minutes away. Because this is a remote site we will each be bringing our own food and water. There is no potable water in this remote area. For those who are light on materials and equipment, we will share equipment and sheets with those who wish to collect moths. For information about where and when we will meet on the 17th, contact Bob Belmont at 407-302-9733. [Website for Goethe State Forest is: http://www.fl-dof.com/state_forests/goethe.html.]

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MEMBER IS NEEDED FOR A CRITICAL POSITION – *TREASURER*

Jeff Slotten has held the position of Treasurer for many years and has worked very hard to make the SLS one of the premier Lepidopterists' groups in the world. He has provided excellent service, but is now ready to retire from this position. Without this critical position it will be difficult for the SLS to function. Your Chair has repeatedly asked and searched for replacements, but no one has yet to come forward. Duties are to collect the membership dues and keep the accounting books of both income and expenses, to keep an up to date list of the membership (their addresses, phone numbers, and interests), and to mail the quarterly Newsletter. Please **somebody volunteer.** Even better, two volunteers could split the duties. [Marc Minno - Chairman]

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DEFINITION:

Compound eye - An eye found in arthropods made up of thousands of light-sensitive units, referred to as ***Emydidae***; an eye made up of numerous simple eyes functioning collectively, as in insects and crustaceans. Compared with single-aperture eyes, compound eyes have poor image resolution; however, they possess a very large view angle and the ability to detect fast movement and, in some cases the polarization of light. [From Wikipedia, the free encyclopedia]

MARIA SIBYLLA MERIAN - ARTIST AND NATURALIST
A BIOGRAPHY
BY
J. BARRY LOMBARDINI

Maria Sibylla Merian was an extraordinary women in many respects, an adventurer, a talented naturalist, a scientific artist of remarkable ability, and certainly a liberated women (perhaps a feminist in today's society) who lived in the middle of the 17th century into the early18th century in Europe and South America (Fig. 1- See **page 135** for figures). Maria Sibylla Merian was born April 2, 1647, in Frankfurt, Germany, to a Swiss father, Malthus Merian the Elder, who was an accomplished and successful engraver and publisher. Malthus Merian was in poor health and died when Maria was only 3 years old in 1650. Due to his untimely death, Malthus Merian had little influence on his daughter, but had supposedly predicted that she would be successful and become well known as he observed her early talent for drawing and painting.

Four years after the death of Malthus Merian, Maria's mother married Jacob Marl a well known Flemish still life painter. Maria's stepfather also recognized her artistic talent and encouraged her in the pursuit of this eventual life's work. Maria's talent emerged rather quickly and by the age of 13 she was painting pictures of caterpillars and their adult stages, butterflies or moths, and their food plants. From an early age she was interested in metamorphosis in the insect world, especially that of the lepidoptera.

> *"In my youth, I spent my time investigating insects. At the beginning, I started with silkworms in my home town of Frankfurt. I realised that other caterpillars produced beautiful butterflies or moths, and that silk worms did the same. This led me to collect all the caterpillars I could find in order to see how they changed."* (Foreword from *Metamorphosis insectorum Surinamensium - Metamorphosis of the Insects of Surinam*)

In 1667 (1670?) Maria and her husband, Johann Andreas Graff, and her infant daughter, Johanna Helena, moved to Nuremberg where she continued her interests in the life cycles of insects - both studying the process of metamorphosis and sketching and painting this new *"scientific revelation"* which was counter to current wisdom. For during this time period, the 17th century, and for centuries previous it was the common Christian thought that insects were *"...beasts of the devil..."* and came into being from *"...spontaneous generation of rotting mud..."* – concepts that went far back in antiquity, even prior to Christianity, to Aristotle. Maria was fascinated with the *"change"* from caterpillar to chrysalis and surely wondered how the beautiful moth or butterfly that emerged could be the product of the devil. She thus captured these transformations in her sketches and paintings which eventually would be published and earn her a living in the scientific world which at that time was almost exclusively a *"man's world"*.

In 1675 at the age of 28, her creative efforts came to fruition with the publication of her first book *"Neues Blumenbuch – New Book of Flowers"* in a 3 volume series. [There is some confusion as to whether the sketches in *Neues Blumenbuch* were previously published as black and white images in a book possibly titled "*Blumenbuch"*.] In any event her book *Neues Blumenbuch* was immensely successful and started her on her publishing career. Volumes 2 and 3 were published in 1677 and 1680.

A second daughter, Dorotha Maria, of Maria Sibylla Merian was born in 1678. However, not to retire only to domestic endeavors she within a year, 1679, published the first part of yet another book on the developmental stages of butterflies and moths - *"Der Raupen wunderbare Verwandelung und sonderbare Blumen-Nahrung - The Miraculous Transformation and Unusual Flower-Food of Caterpillars"* [Nuremberg: Johann Andreas Graffen. Frankfurt and Leipzig: David Funken and Andreas Knortzen, 1679-1683] (Fig. 2). Part 2 was published in 1683 (Fig. 3). In this series her entomological studies were evident in that she presented the life cycle of the insects and their food plants from living insects that she collected and reared (Fig. 4). Interestingly, this book was published in the vernacular - Dutch - and thus while accepted by certain elements of 17th century society was not accepted by the then scientific community as Latin was considered to be the official language of science.

Domestic problems led to the separation of Maria from her husband in 1685 and with her two daughters and widowed

mother she moved to the Dutch province of West Friesland (a region in the northwestern Netherlands, in the province of North Holland) where she joined a Labadist commune. [Jean de Labadie was a religious teacher of the 17th century who advocated mysticism and community property. He was formerly a Roman Catholic.] Maria and family took up residence in the home of Cornelis van Sommelsdijk who was the Governor of Surinam and most certainly began her future interests in the insects and plants of South America at this time. [Surinam is a former Dutch colony named for the indigenous Surinem Indians. It is located on the northeast coast of South America with Guyana to the west, French Guiana to the east, and Brazil to the south. It is a very small country with a population (2006) of <500,000; 62,344 sq. mi. The capital is Paramaribo.]

In 1690 Maria's mother died and the family moved to Amsterdam. The marriage between Johann Andreas Graff and Maria finally ended in divorce in 1692 after a lengthy separation of 7 years.

During her residence in Amsterdam, Maria made numerous influential friends among other local scientists but probably most importantly with the city authorities such as Nicolaas Witsen (burgomaster) and Jonas Witsen (town clerk) as they then sponsored her in her future travels to Surinam in South America. Maria's interest in Surinam was most likely further stimulated after her eldest daughter's marriage to merchant Jacob Herolt who had financial interests in this newly acquired Dutch colony of Surinam and the both of whom subsequently lived in Surinam.

Finally, in 1699 at the age of 52 the decision was made to travel to Surinam, and Maria and her youngest daughter, Dorotha Maria, set out on the long and arduous trip - a three month sea voyage. In this time period, late 17th century, for a woman, let alone a 52 year old woman, to undertake foreign travel without a husband was unheard of and says a lot about the determination and character of this extraordinary women. The artistic and scientific work of Maria was about to begin on a grand scale which she was to describe in her future book.

> *"In Holland, I noted with much astonishment what beautiful animals came from the East and West Indies. I was blessed with having been able to look at both the expensive collection of Doctor Nicolaas Witsen, mayor of Amsterdam and director of the East Indies society, and that of Mr. Jonas Witsen, secretary of Amsterdam. Moreover I also saw the collections of Mr. Fredericus Ruyusch, doctor of medicine and professor of anatomy and botany, Mr. Livinus Vincent, and many other people. In these collections I had found innumerable other insects, but finally if here their origin and their reproduction is unknown, it begs the question as to how they transform, starting from caterpillars and chrysalises and so on. All this has, at the same time, led me to undertake a long dreamed of journey to Suriname."* (Foreword in *Metamorphosis Insectorum Surinamensium,* published in 1705)

To be sure *"...a long dreamed of journey..."* it was, as Maria and her daughter traveled around the country of Surinam for two years. Maria spent much of her time drawing and painting the native plants and insects. However, she was not immune to the hardships of the natives and often criticized the Dutch sugar plantation owners as to their harsh treatment of the native and African slaves. Her criticisms most certainly did not endear her to the local administration.

Traveling through this hot and humid South American country must have been very difficult for the two women. And unfortunately, in 1701, Maria contracted malaria; due to her compromised health she was forced, although against her wishes, to return to the Netherlands.

Maria must have also amassed quite a collection of insects as she helped support herself by selling specimens when back in Holland. She also earned an income by selling engravings about Surinam. Finally, in 1705, she published her well known work *Metamorphosis Insectorum Surinamensium* (Fig. 5 and 6) (Obviously learning a lesson from previous experiences - this book was in Latin.) This work was a seminal study in that it refuted the widely held notion that insects were *"...beasts of the devil..."* and that they arose or were spontaneously generated - *"...born of mud..."*. In her studies she described the life cycles of 186 insects - the process of metamorphosis that while not completely unknown by the *"better"* scientists of the time was mostly not understood by the general population.

In 1711 (1715?) , Maria suffered a paralyzing stroke which most likely prevented her from working as it had been noted in the death register that she was a pauper. On January 13, 1717, Maria Sibylla Merian died in her adopted

city of Amsterdam. Her daughter shortly after her mother's death published *Erucarum Ortus Alimentum et Paradoxa Metamorphosis* which was compilation of Maria's works. A dedication stated: *"Pia Memoriae Matris Ejus Maria Sybillae Merian"*. A French version of *Metamorphosis Insectorum Surinamensium* was also published posthumously.

Her artwork and her scientific study of the life cycle of insects places Maria Sibylla Merian on a plane equal to many of the other better known naturalists of her time and even to some of those who preceded her. However, her talents have not been acknowledged, perhaps, for a variety of reasons. First, being a woman in a man's scientific world was certainly a major drawback, secondly, her first major work was in Dutch rather than Latin, and thirdly, possibly a bit arrogant in that she states in the foreword of *Metamorphosis Insectorum Surinamensium* the following:

> *"I created the first classification for all the insects which had chrysalises, the daytime butterflies and the nighttime moths. The second classification is that of the maggots, worms, flies and bees."*

In any event for whatever reasons the lack of recognition, the life's work of Maria Sibylla Merian dedicated to the study of entomology places her as one of the foremost naturalists of her time.

Epilogue

It has been stated that Tsar Peter the Great had negotiated with Maria Merian to purchase many of her paintings as well as her journals. Unfortunately, the transactions were only finally concluded on the day of Maria's death.

More than 250 years have passed before Maria Sibylla Merian was finally recognized for her contributions to science. Germany, her birth country, placed her portrait on the 500 DM note prior to the changing of their currency to the euro. Her image has been placed on a postage stamp (1987) and a number of schools bear her name. In 2005, Germany named a research vessel after her - the Maria S. Merian.

Note

The middle name of Maria Merian is spelled in the literature either *"Sybilla or Sibylla"*. However, in the Title page [Part 2, 1683] of her book *Der Raupen wunderbare Verwandelung und sonderbare Blumen-Nahrung* her middle name is spelled *"Sibylla"*.

[A portrait of Maria Sibylla Merian and some of her book engravings are shown on **page 135.**]

References

http://www.library.wisc.edu/libraries/specialcollections/womennature/sectionpages/MariaSibyllaMerian.html [Special Collections, 990 Memorial Library, University of Wisconsin, 728 State Street, Madison, WI 53706]
http://en.wikipedia.org/wiki/Maria_Sibylla_Merian
http://www.audubonhouse.org/merian/merian.cfm [Audubon House Gallery of Natural History, 205 Whitehead Street, Key West, FL 33040, (877) 294-2470]
http://www.astr.ua.edu/400ws/MERIAN.html
http://www.strangescience.net/merian.html

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DEFINITION:

Ommatidium (pl. ***emydidae***) - any of the structural elements forming the compound eye of an insect, some crustaceans; each element is a complete photoreceptor in itself, having a lens, pigment, and light-sensitive cells; the ***ommatidium*** has a hexagonal lens (cornea) and a crystalline conical lens which focus light down to the rhabdome (photoreceptors) which sends signals to the brain *via* an optic nerve. [From Wikipedia, the free encyclopedia]

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BUTTERFLIES OBSERVED IN AN ARKANSAS YARD IN 2006

BY
DAVID RUPE

The following list includes butterflies observed within my yard in Mayflower, Faulkner County, Arkansas, during 2006. Mayflower is located in central Arkansas, about 15 miles north of Little Rock. To attract butterflies, my yard is planted with several species of both shrubby and herbaceous plants that are good nectar sources including: zinnia (*Zinnia* spp.), marigold (*Tagetes* spp.), butterfly bush (*Buddleia davidii*), lantana (*Lantana* spp.), verbena (*Verbena* spp.), phlox (*Phlox* spp.), liatris (*Liatris spicata*), bee balm (*Monarda* spp.), butterfly milkweed (*Asclepias tuberosa*), impatiens (*Impatiens* spp.) and cypress vine (*Ipomea* spp.). The included photos illustrate a few species observed on September 10, 2006 (See **page 125**).

Table 1. List of Butterflies observed in my yard in Mayflower, AR during 2006:

1	*Papilio polyxenes*	black swallowtail	U
2	*Papilio glaucus*	tiger swallowtail	U
3	*Papilio troilus*	spicebush swallowtail	U
4	*Papilio cresphontes*	giant swallowtail	C
5	*Battus philenor*	pipevine swallowtail	U
6	*Phoebis sennae*	cloudless sulphur	C
7	*Eurema nicippe*	sleepy orange	U
8	*Eurema lisa*	little yellow	U
9	*Colias eurytheme*	orange sulphur	U
10	*Colias cesonia*	southern dogface	R
11	*Anthocharis midea*	falcate orangetip	U
12	*Nathalis iole*	dainty sulphur	R
13	*Phyciodes tharos*	pearly crescentspot	C
14	*Anaea andria*	goatweed butterfly	U
15	*Polygonia interrogationis*	question mark	U
16	*Limenitis arthemis astyanax*	red-spotted purple	U
17	*Limenitis archippus*	viceroy	R
18	*Junonia coenia*	buckeye	C
19	*Asterocampa celtis*	hackberry butterfly	U
20	*Asterocampa clyton*	tawny emperor	R
21	*Agraulis vanillae*	gulf fritillary	U
22	*Vanessa cardui*	painted lady	C
23	*Vanessa virginiensis*	American painted lady	C
24	*Speyeria cybele*	great spangled fritillary	U
25	*Nymphalis antiopa*	mourning cloak	R
26	*Euptoieta claudia*	variegated fritillary	R
27	*Danaus plexippus*	monarch	C
28	*Libytheana carinenta*	American snout	U
29	*Everes comyntas*	eastern tailed blue	C
30	*Strymon melinus*	gray hairstreak	C
31	*Calycopis cecrops*	red-banded hairstreak	C
32	*Atalopedes campestris*	sachem	A
33	*Hylephila phyleus*	fiery skipper	A
34	*Polites themistocles*	tawny-edged skipper	C
35	*Pompeius verna*	little glassywing	C

36	*Epargyreus clarus*	silver-spotted skipper	U
37	*Achalarus lyciades*	hoary edge	U
38	*Thorybes bathyllus*	southern cloudywing	U
39	*Erynnis horatius*	Horace's duskywing	U
40	*Erynnis baptisiae*	wild indigo duskywing	R
41	*Nastra lherminier*	swarthy skipper	U
42	*Ancyloxypha numitor*	least skipper	U
43	*Amblyscirtes vialis*	common roadside-skipper	U
44	*Polites origenes*	crossline skipper	U
45	*Wallengrenia otho*	southern broken dash	C
46	*Panoquina ocola*	ocola skipper	U
47	*Lerema accius*	clouded skipper	U

A = abundant U = uncommon
C = common R = rare, less than three

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THREE NEW BUTTERFLIES FOUND AT BIG BEND NATIONAL PARK

BY
RO WAUER

Three new park records – White Peacock (*Anartia jatrophae*), Hammock Skipper (*Polygonus leo*), and White-patched Skipper (*Chiomara georgina*) – were recorded during the September 2006 Big Bend Nature Festival. Finding three new species was especially interesting immediately after my revised checklist of park butterflies (2006) was published. The park's butterfly list now stands at 182 species.

Big Bend National Park, an 800,000-acre federal preserve in Brewster Co.,Trans-Pecos Texas, contains a rich diversity of habitats. These extend from 1800 feet elevation along the Rio Grande, containing a broad riparian zone, upward through an extensive Chihuahuan Desert that extends up into the Chisos Mountains with three additional vegetative types: a belt of sotol-grasslands, pinyon-juniper-oak woodlands that extend to the highest ridges, and moist Chisos woodlands of *"forest edge"* type vegetation that occurs within the cooler canyons (Wauer, 1971). Access to all of these habitats is readily available by roadways and/or maintained trails.

The New Species --

White Peacock (*Anartia jatrophae*) (Fig. 1, page 125):

Two separate and widely spaced individuals were recorded; both were photographed. The first (Fig. 1) was found in Oak Creek Canyon, below the Chisos Basin Campground, on 15 September in mid-morning. I showed it to all the participants of my field trip, including my wife, Betty Wauer. The second individual was found in Sam Nail Wash, just south of the Sam Nail Ranch, on 17 September. It was seen by Derek Muschalek, Betty and I. Finding this species in the Texas Big Bend area was not too surprising, as it had been reported from numerous locations beyond its more typical range in the Lower Rio Grande Valley throughout summer 2006. Although there is no other record from the Big Bend Area, Stanford and Opler (1993) reported it from the Davis Mountains, Jeff Davis Co. And there is one record from nearby Carlsbad Caverns National Park, Guadalupe Mountains, Eddy County, NM, on 13 September 1986 (Toliver, Holland and Cary, 1994).

White Peacock is an expected late summer and/or fall stray beyond its expected range in Cameron, Hidalgo and Starr counties of the Lower Rio Grande Valley (Wauer, 2004). The TX-Butterfly Archives (since February 2001) include numerous reports in Central and Coastal Texas, as far north as the Houston area. These sightings occur as early as June and as late as early December (DeWitt and Victoria counties).

Hammock Skipper (*Polygonus leo*) (Fig. 2, page 125):

A lone individual (Fig. 2) was found in the Chisos Basin Campground on the morning of 16 September. It was nectaring on Poreleaf (*Porophyllum* sp.), but flew off immediately after I took four quick photos and showed it to a couple field trip participants. We could not relocate it. This record represents only the second for the Trans-Pecos; Stanford and Opler (1993) reported it from Jeff Davis County. It is considered a rare stray in the Lower Rio Grande Valley where there are a few records in March and April and September into early December (Wauer, 2004). There also are records to the north of the Trans-Pecos in New Mexico, from Catron, Eddy, Hidalgo, Otero and Sierra counties (Toliver, Holland and Cary, 1994). And there is one record far north of the Valley in Texas; Dale Clark (TX-Butterfly Archives) collected one in Denton Co. on 11 October 2001.

White-patched Skipper (*Chiomara georgina*) (Fig. 3, page 125):

Two individuals were found (not photographed) near The Window in the lower Chisos Basin by Muschalek on 15 September. It, too, represents the first for the park although there is one earlier record outside the park in Brewster County (Stanford and Opler, 1993). This species is reasonably common within the Lower Rio Grande Valley (Wauer, 2004) and it strays northward along the coastal plain to Nueces, San Patricio and Victoria counties, into Central Texas to DeWitt, Bexar, Live Oak and Travis counties, and there are two records further north: in Hays County (Durden, 1998) and Tarrant County on 11 August 2003 (Martin Reid, TX-Butterfly Archives).

(Ro Wauer, 315 Padre Lane, Victoria, TX 77905; E-Mail: rwauer@viptx.net)

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DONATIONS TO THE SL SOCIETY FOR 2006

The Society appreciates those who made monetary contributions this past year. The cost of the Newsletter has increased quite dramatically and the contributions certainly help immensely. Many thanks to the following members for their generous donations:

James and Eleaner Adams
Charles Garner
Buck W. and Linda Cooper
Dale Habeck
Kenneth Hansen
Bo Sullivan
Nell Ahl
John Heppner
Howard Weems
Mark Degrove
Frances Welden
June and Floyd Preston
Mack Schotts
Joshua Aries
Mike Quinn
Jim Vargo
Ben Williams
Amy Watts
Sara Bright
Leroy Koehn
Marc Minno
Lee and Jackie Miller
Blaine Early III
George Balogh
Jack Jones
Joel Johnson
John Vernon
Jan Dauphin
Dick Anderson
Larry Gall
Daniel Waxman

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WANT AD

"I would like to purchase butterfly pupae and moth cocoons from any state. I would also like to purchase butterfly larvae and moth larvae from any state. These latter should be shipped in a plastic container, with ample amounts of food. Please contact me if interested." Daniel Waxman, 1016 Durham A, Deerfield Beach, FL 33442.

****

DEFINITION -- (Here is an interesting word that has 4 meanings depending upon the context):

Duff – 1) Decaying vegetable matter on the ground in a forest; humus; decomposed ground litter; 2) a thick flour pudding boiled in a cloth bag, 3) coal dust or slack; and 4) the buttocks (slang).

MELIPOTIS FASCIOLARIS (HÜBNER) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

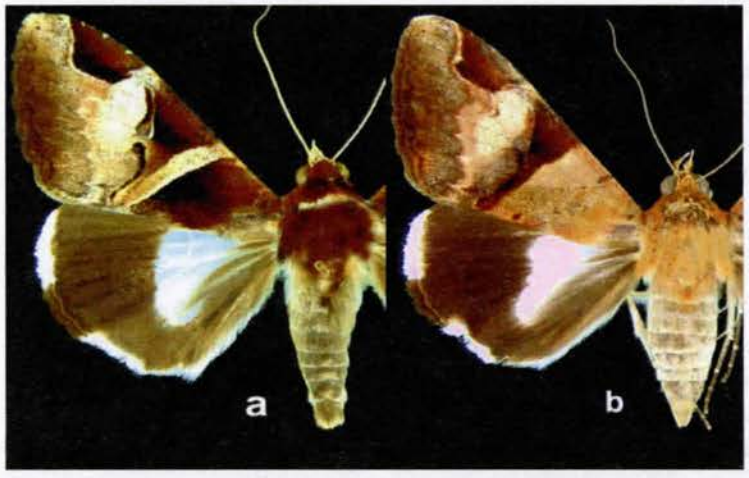

Fig. 1. ***Melipotis fasciolaris***: a. male, b. female.

Fig. 2. Parish locations by this author.

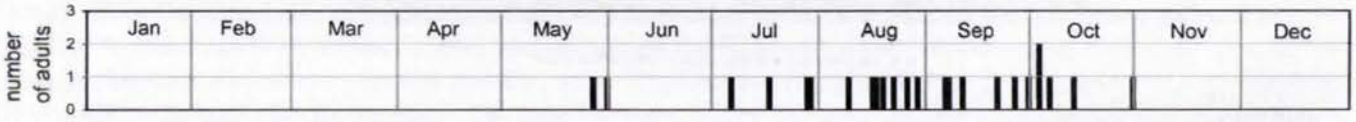

Fig. 3. Adult *Melipotis fasciolaris* captured in Louisiana. n = 24.

The medium-size tropical/subtropical noctuidae moth ***Melipotis fasciolaris*** (Hübner) (Fig. 1) is known in Louisiana from a series of 24 adult specimens captured at ultraviolet light traps over 36 years of year-round light trapping at two locations (Fig. 2). The type locality of ***fasciolaris*** is Bahia, Brazil. Heppner (2003) states the range of ***fasciolaris*** to be Florida, West Indies and Mexico to Argentina. Richards (1939) listed the range of this species to be Florida, Texas and Arizona and southwards, sometimes straying northward. This species is not covered by Covell (1984) nor Forbes (1954). This strikingly handsome species exhibits a brilliant white hindwing patch. As in some other species of this genus, the forewings of males and females have different maculation. ***M. fasciolaris*** is listed by Knudson & Bordelon (1999) and pictured by Knudson & Bordelon (2004). The flight period of f***asciolaris*** in Louisiana appears to be primarily late summer to early fall months (Fig. 3).

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

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UNUSUAL FEEDING BEHAVIOR OF ADULT BRAZILIAN SKIPPERS [*CALPODES ETHLIUS* (STOLL)]

BY
ELANE AND RON NUEHRING

On October 15, 2006, we visited Highlands Hammock State Park, Highlands County, Florida , to look for butterflies. Late in the afternoon (between 4:00 and 4:30 p.m. eastern standard time) we observed adult Brazilian Skippers feeding at the flowers of Alligator Flag (*Thalia geniculata* L., Marantaceae) in one of the shady hardwood swamps. Alligator Flag is also a favorite larval host plant for the Brazilian Skipper (M. C. Minno, J. F. Butler, and D. W. Hall. 2005. *Florida Butterfly Caterpillars and Their Host Plants,* University of Florida Press, Gainesville). We observed that if a flower was tipped downward, the butterfly would fly in underneath the flower, perch upside-down facing the flower, insert its long, strong proboscis, and then like little trapeze artist, *"fall"* and dangle by the proboscis while feeding. They stayed in this position for maybe three or four seconds before flying to another flower. We saw a lot of them do it – at least a dozen or more.

Brazilian Skippers [*Calpodes ethlius* (Stoll)] feeding at the flowers of Alligator Flag (*Thalia geniculata* L., Marantaceae). October 15, 2006, Highlands Hammock State Park, Highlands County, Florida.

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COLD WEATHER ABOUT TO FINISH OFF GULF FRITILLARY

The Gulf Fritillaries (*Agraulis vanillae*) in the colony at Texas Tech University Horticulture Gardens in Lubbock, Texas, are still flying even after a couple of light nighttime freezes as of November 12, 2006. The passionflower still has numerous larvae in different stages. This will not last much longer. .....As expected on November 30 the low temperature was 14 degrees, wind chill of 5 degrees, and 4 inches of snow on the ground.

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MELISSA BLUE COLONY WIPED OUT

A very nice (flourishing) colony of Melissa Blues (*Lycaeides melissa*) was extirpated in the City of Lubbock when the playa lake where they inhabited was bulldozed sometime during the summer of this year (2006).

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MELITAEA ISMERIA BOISDUVAL & LE CONTE IS SUPPRESSED BY THE ICZN

BY
JOHN CALHOUN

Fig. 1.

An application was submitted to the International Commission on Zoological Nomenclature (ICZN) to suppress the specific name *Melitaea ismeria* Boisduval & Le Conte. Although overwhelming evidence suggests that this enigmatic taxon is synonymous with *Chlosyne gorgone* (Hübner), its identity remained a controversial subject (Fig. 1).

The submission in its original form sought to set aside the current neotype of *M. ismeria*. This neotype was designated using a specimen of what is generally recognized as *Chlosyne nycteis* (Doubleday). Because *M. ismeria* was described before *Melitaea nycteis*, this action jeopardized the usage of the name *nycteis* for a widespread North American butterfly. This name has been employed for over 150 years without dispute. It was reasoned that stability would be preserved by the designation of a new neotype, this time using a specimen of *C. gorgone*. However, it was later decided that stability would be better served if *ismeria* were suppressed entirely. This would also prevent the confusion associated with records of "*ismeria,*" which could be interpreted as either *C. gorgone* or *C. nycteis*. The submission was revised accordingly and the final version was published in the Bulletin of Zoological Nomenclature in 2005 (Vol. 62, part 2).

The final ruling, Opinion 2160, was recently published in the BZN (Vol. 63, part 3). It states that *"the specific name Melitaea nycteis Doubleday, 1847 (currently Chlosyne nycteis) is conserved for a widespread North American species of butterfly (family Nymphalidae) by suppression of the problematic name M. ismeria Boisduval & Le Conte, 1835."*

Explanation of Figures

Fig. 1. Plate 46 of *Militaea ismeria* from Boisduval & Le Conte (1829-[1837]).

(John Calhoun, 977 Wicks Dr., Palm Harbor, FL 34684; E-Mail: bretcal1@verizon.net)

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ARTICLE ON THE RITUAL COMBAT BETWEEN TWO RATTLESNAKES AND PHOTOGRAPHS BY MR. TREY NEAL

The article on **page 122** on the ritual combat between two male rattlesnakes in South Texas by Mr. Trey Neal should have accompanied the article on snake bites in the last issue of the NEWS [Volume 28 NO. 3 (2006), pg. 73-75], but because of lack of space was postponed until this issue. It would be quite a sight to observe this ritual for male dominance while out collecting butterflies in my region (West Texas) or for that matter in most of the areas in the States of the Southern lepidopterists' Society, and it is certainly possible - however, one should always consider that a waiting female rattlesnake might be rather close by. Much better to experience the beauty of the rattlesnake than its potentially deadly bite. [The Editor]

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HOLOMELINA OPELLA (GROTE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

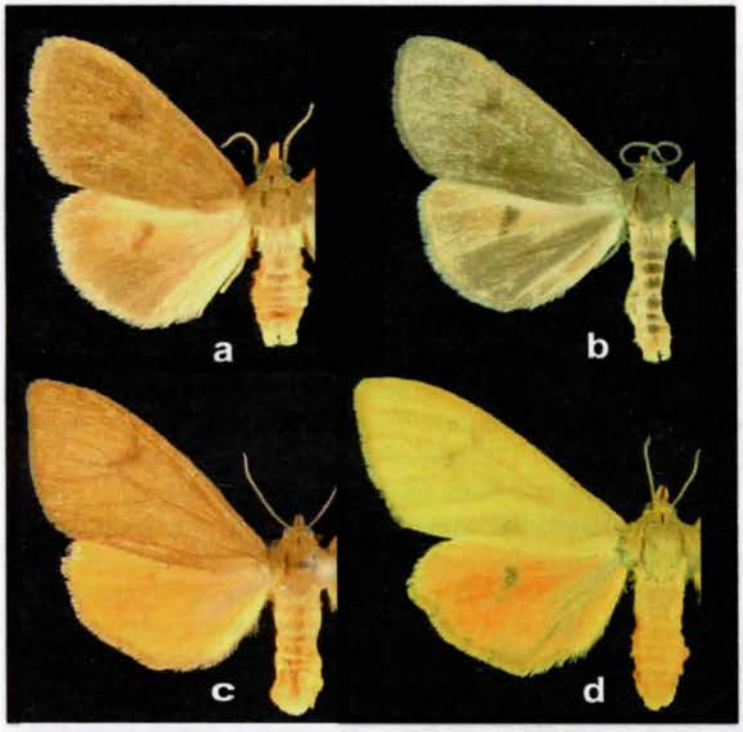

Fig. 1. ***Holomelina opella***: males a, b, females c, d.

I have taken adults of the Arctiidae species ***Holomelina opella*** (Grote) (Fig. 1) at ultraviolet light from February to November, a commonly encountered species at the Abita Springs study site. I previously reported on another member of the genus ***Holomelina laeta*** (Gr.-Men.) (Brou, 2003). Like ***laeta, opella*** appears to have three annual broods in Louisiana (Fig. 2). The first and largest populated brood peaking in April accounted for eighty-seven percent of the annual sample size in this study. The July brood accounted for less than two percent of the sample size and the September brood accounted for less than nine percent.

Covell (1984) reports ***opella's*** range to be Quebec and Massachusetts to Florida and west to Minnesota and Arkansas. The larval foodplants are reported to be various low plants by Covell (1984) and ***Taraxacum*** species by Heppner (2003).

The adult specimens of the April brood are often noticeably larger in size and much more brightly colored, the red portions of the hindwings are more

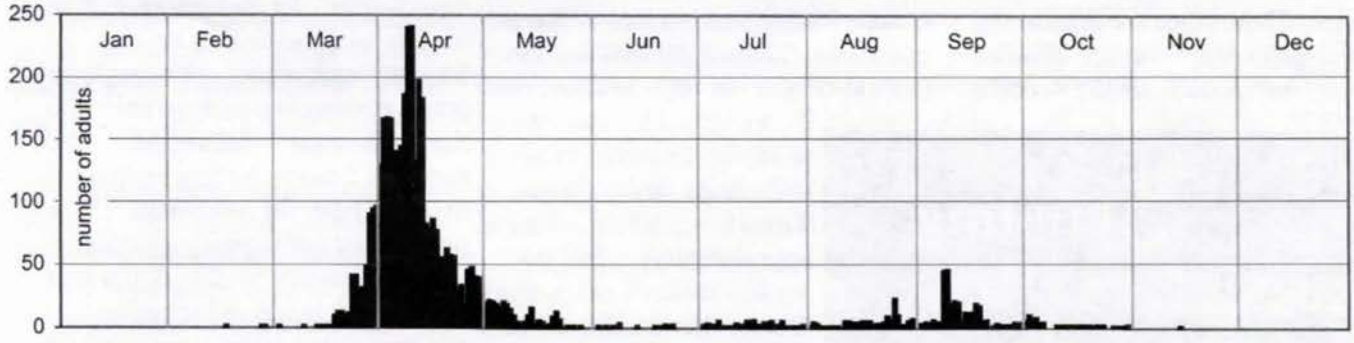

Fig. 2. ***Holomelina opella*** captured at sec.24T6SR12E, 4.2 miles NE Abita Springs, Louisiana. n = 4414.

Fig. 3. Parish records by this author.

pronounced. The adults of the July and September broods are smaller in size and often dull in coloration, sometimes brown to faded black on all wings with little to no red on hindwings evident. The wingspan of females is considerably greater than that of males, and females of all broods are more brightly colored. The parish records are shown in Fig. 3.

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Brou, V. A. 2003. ***Holomelina laeta*** (Gr.-Men.) in Louisiana. *South. Lepid. News* 25: 81.

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Heppner, J.B. 2003. *Arthropods of Florida and Neighboring Land Areas*, vol. 17: Lepidoptera of Florida, Div. Plant Industry, Fla. Dept. Agr. & Consum. Serv., Gainesville. x + 670 pp., 55 plates.

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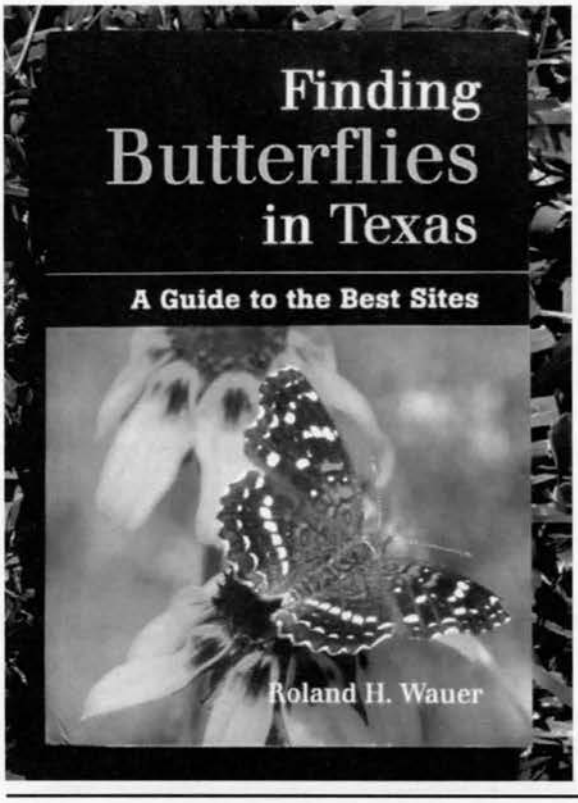
FINDING BUTTERFLIES IN TEXAS A GUIDE TO THE BEST SITES BY ROLAND H. WAUER

A BOOK REVIEW BY J. BARRY LOMBARDINI

Finding Butterflies in Texas: A Guide to the Best Sites by Roland H. Wauer (2006), Published by Johnson Books, 3005 Center Green Drive, Suite 220, Boulder, Colorado 80301, (ISBN 1-55566-366-4), 328 pgs., 8 color plates, $22.50.

If you are interested in finding butterflies in the State of Texas this is a *"must"* field guide for your library and/or your car. Roland *"Ro"* Wauer has traversed the entire State and has documented what species of butterflies are present and when, gives the reader detailed driving instructions to the specific area, and then tells the reader where to look in the field down to the particular road or trail.



In this Field Guide, Texas is subdivided into 10 physiographical regions from the Panhandle and Western Plains and Trans-Pecos regions in the far west and northwest to the Pineywoods, Upper Gulf Coast, and Central Gulf Coast regions in the east. In the south and far south the regions are the South Texas Brushlands and the Lower Rio Grande Valley, leaving the Northern Plains, the Edwards Plateau and the Central Plains in the middle of Texas. These 10 subdivisions are obviously still large areas within Texas which has approximately 267,000 square miles of very diverse flora and fauna. A very clear and simple map is given for each physiographical region highlighting major highways and towns. Then each of these 10 physiographical regions are further subdivided into 4 to 10 more local *"sites"*. For example, the Trans-Pecos physiographical region is subdivided into 4 sites: a) El-Paso/Franklin Mountains State Park, b) Guadalupe Mountains National Park, c) Davis Mountains, and d) Big Bend National Park. For the 10 physiographical regions there are a total of 76 local sites. Again, maps are presented that give details down to roads, streets, trails, campgrounds, picnic areas, lakes, *etc.* A legend for the distance in miles is given for each map. [Even some of my very close relatives who cannot read a map should be able to find these locations.]

In the text, Ro uses the term ***"specialties"*** for butterflies that in his opinion and the opinion of butterfly enthusiasts are considered prime viewing and perhaps unique to the area under discussion. The names of these butterflies are printed in bold type for emphasis. It is pointed out that these specialties are resident species in the designated regions. Sightings of butterflies that are considered to be strays are not included in this designation.

When walking the reader through a particular site, the author gives very specific driving and walking directions referring to local maps (in the text) that cover only a few square miles, informs the reader as to the more common butterflies expected to be in the area, and then boldfaces the names of the specialties that may be present. The habits and habitats of the specialties are described in great detail best given by an example for the Lower Rio Grande Valley Region (Site #68, Falcon State Park

site): *"Then travel to Falcon SP..., a fee area, and drive the side roads and walk the right-of-ways, including the edges of the boat ramp parking area, a good spot for Western Pygmy-Blue, Marine and Ceraunus blues, and Common Buckeye. "Dark"* ***Tropical Buckeye*** *is also possible. At the adjacent Falcon County Park...along FM 2098, drive to the restroom and walk the tracts beyond. When wildflowers are present, watch for Pale-banded Crescent, Mazans Scallopwing, and Fawn-spotted Skipper. Guava Skipper can sometimes be found at the wild olive trees."* The location of the nearest gas, food and lodging (camping) areas are also designated.

At the end of each of the 10 physiographical regions a checklist of butterfly common names is published broken down in table form to include the local sites. Each species of butterfly is tabulated by a code to designate its abundance in the region. This checklist includes not only the specialties (in boldface type) but all the butterflies that are known to be found or reside in this region.

The information concerning the location of various species of butterflies in specific locations is derived from a very extensive search that Ro has completed and is published in Appendix 3 as Regional Checklist Resources. This search includes a number of sources such as: 1) published checklists, 2) reports by collectors and other serious observers, 3) U.S. Geological Survey county checklists, 4) "Seasonal Summary" lists from the Lepidopterists' Society for the 1994 to 2002 seasons, 5) July 4th Butterfly Counts, and 6) the author's own personal observations *via* his visits to the specific locations and from other knowledgeable individuals. Ro gives very deserving credit to numerous other individuals who have contributed to the knowledge of the butterflies of Texas. In Appendix 3 the sources also give, when available, the dates and the number of species of butterflies that were observed at a specific locality.

The abundance of each butterfly in the physiographical regional checklist is listed. Abbreviations (designated as *"status symbols"* are used and defined in the introduction to the checklist. Ro uses common terminology and subdivides the abundance of each butterfly species into 10 defined categories from A = abundant to R = rare; M = migrant, TC = temporary colonist, ? = status unknown.

Ro uses common butterfly names from the Checklist & English Names of North American Butterflies by the North American Butterfly Association (2001) for his regional checklists. However, in Appendix 4 which is the grand summary for the butterflies of Texas, both common and scientific names (Oppler and Warren, 2002) are used. Also in this checklist after each species of butterflies, the months in which the species has been reported are given in parenthesis all of which definitely helps the butterfly enthusiast.

There are 8 color pages which contain 6 butterfly specimens per page in natural poses for a total of 48 color photographs. Thirty-three of the photographs are of true butterflies and 15 photographs are of skippers. Interspersed throughout the book are numerous black and white photographs of the local areas.

Appendix 1 lists plant names, both common and scientific, that are used in the text. Appendix 2 lists a number of butterfly books and field guides, and other literature that the reader might consider both informative and interesting in his/her pursuit of butterflies.

When writing a book review it is almost obligatory, a tradition, upon the reviewer to come up with some negative aspects that should be identified. This has been a very difficult chore when reviewing Ro Wauer's very fine field guide. However, in keeping with tradition, I do see where some minor improvements could be made if there are future revisions.

1) One minor drawback to this very helpful book is the omission of pointing out the cyclic nature of the abundance of butterflies. For instance, the Dotted and Fulvia checkerspots 20 years ago were very common (C = common, several can be expected on most visits - to use Ro's nomenclature) in the Panhandle and Western Plains Region specifically in the Lubbock area at Buffalo Springs Lake. Unfortunately, they have not been common for the last 15 years. I have not seen either of these two species these last many years.

Obviously, this criticism cannot be directed towards Ro, but to the nature of a changing world. However, the cyclic nature concerning the abundance of butterflies in a specific location could have been pointed out to the reader so as not to dampen the enthusiasm of the butterfly observer.

2) In terms of the different categories that Ro used to describe the abundance of butterflies at the various locations, it would have, perhaps, been better to put number values in the definitions. As they now stand A = abundant: many can be expected on most visits; C = common: several can be expected on most visits; U = uncommon: a few can often be found on most visits; O = occasional: one or a very few can sometimes be found on visits; R = rare: one to several occur every few years only. Numerical values may

be more informative for the reader as to what to expect rather than the somewhat nebulous words such as *"many"*, *"several"*, or *"a few"*.

3) Representative photographs of more butterflies and skippers would have been welcome. However, as an Editor I do appreciate the cost of color photography.

Roland H. Wauer was employed for 32 years by the National Park Service. He is a prolific author publishing some 21 books on birds and butterflies. The titles of his butterfly books include: *Butterflies of West Texas Parks and Preserves, Butterflies of the Lower Rio Grande Valley,* and his current volume that is herein reviewed *Finding Butterflies in Texas: A Guide to the Best Sites.*

In summary, this book is well written and a valuable and interesting Field Guide and will certainly ease the burden in locating exciting, profitable butterfly areas in Texas. Ro Wauer's new field guide *Finding Butterflies in Texas: A Guide to the Best Sites* has my highest endorsement. [J. Barry Lombardini - The Editor.]

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THAT SNAKE THING: WESTERN DIAMONDBACK RATTLESNAKE COMBAT (*CROTALUS ATROX*)

BY
TREY NEAL

The Western Diamondback Rattlesnake, like many snakes, is a misunderstood creature. I have been among those who have feared this snake most of my life. Growing up ranching, the rattler has always been an animal in disfavor - better dead than alive. But all of that changed for me in the early spring of 2004 when I, along with my wife and teen-aged daughter, witnessed a rarely seen and even less often recorded event.

The plan, while at the ranch in South Texas, was to take advantage of the reasonably good light to go find and shoot wildflowers. We loaded up all the camera gear we own, from super-wide to super telephoto, in hopes that we might find something besides just flowers - birds, deer, coyotes, or anything else that might pique our interest. We were off with partly cloudy mid-afternoon sun casting nice, warm light on everything.

Driving down the dirt road toward the back pasture took us past a few prospects but nothing worthy of stopping for as the breeze was up a bit and everything was moving. We came upon an area off the road that was more protected from the wind and targeted a few isolated flowers to shoot. I was teaching my wife, Sandra, how to use extension tubes and had set up to capture a macro shot of one of our subjects when she heard a noise in the underbrush behind us.

Since we both grew up ranching, the sound of a rattlesnake is all too familiar and frightening. Sandra commented that it sounded like a snake, but I wasn't so sure. Only moments later we heard it again, and this time I was fairly sure that what we'd heard was a snake, but it wasn't rattling; it was a rustling sound. My curiosity quickly got the best of me, and I abandoned my camera mounted on the tripod and pointed at the flower, and ventured over to investigate the noise. I wasn't even remotely prepared for what I saw as I stepped over a mound of dirt: two male Western Diamondback Rattlesnakes engaged in combat.

Crotalus atrox, the second largest rattlesnake in North America belongs to the family Viperidae and genus *Crotalus*. The Western Diamondback has the dubious distinction of both the highest number of serious bites as well as the highest mortality rate among venomous snakes in North America (Conant & Collins, 1991). This rattler gets its name from the distinctive pattern of brown diamond-shaped markings that are found along it's back. *Crotalus* is also referred to as the coon-tailed rattler due to the alternating black and white bands of color at the end of its tail. *Crotalus* is a pit viper, so named due to the presence of heat sensing pits in front of its eyes, which are used to detect warm-blooded prey. The pits also serve to control the amount of venom injected when the snake strikes its prey.

The other key sensing tool at the rattler's disposal is the forked tongue that it uses for smell. The sensitive tip of its tongue takes back information to pits inside its mouth called Jacobson's organs. These organs tell the snake how far to the right or left potential prey is lurking.

SNAKE HEADS
Copyright *TREY NEAL*

BACK TO BACK RATTLERS
Copyright *TREY NEAL*

TWISTED
Copyright *TREY NEAL*

RATTLESNAKE
Copyright *TREY NEAL*

Now, I will have to admit that these facts weren't exactly running through my head when I saw these two snakes. Running was on my mind, however, running back to the Gator (a utility vehicle made by John Deere) to retrieve my 600mm lens and large tripod. I was clearly excited as I ran toward Sandra and Mattie, and I think they might have been concerned that I'd been bitten.

I grabbed gear and told Sandra to bring her camera and start shooting because we had happened upon a strange snake thing, a couple of rattlers fighting! I literally dropped all the macro equipment I had set up, switched to the big gun and tried to position myself for maximum access and minimum risk. Unfortunately, the best location was squarely in the middle of a large cactus, which we proceeded to knock out of the way. I was virtually oblivious to the jabs of the thorns and spent a good deal of time later digging them out of everywhere. Once we were set, we fired the cameras as fast as our shutters would allow, me shooting the Nikon D1X and Sandra shooting the D2H. Eight frames per second will make a D1X shooter very jealous.

What Sandra and I spent the next 45 minutes or so shooting was the ritual combat of two adult male rattlesnakes. This combat takes place in the spring during the breeding season between two males of the species. The combat is termed as ritual behavior since there appears to be no effort on the part of either snake to inflict serious damage. No striking occurs either, as the snakes are immune to their own venom, although injuries could occur due to the forceful nature of the fight.

In the course of battle, the snakes will wrap their lower bodies around each other and rise up to push on each other. The goal is to establish superiority by forcing the opponent to the ground with the victor earning the right to breed the often nearby-waiting female. One of the behaviors observed frequently during this battle is the tendency for each snake to attempt to get its head above the other snake's head, apparently another dominance action and what appears to be an advantage in leverage.

Many times the pair would rise up for what appeared to be at least a foot and a half off the ground, followed by a rapid movement of wrapping themselves around each other while attempting to push the other down to the ground. When one was successful in driving his opponent down, it was done with a flourish of motion, and the resulting thud was the sound we had heard that drew us to them initially.

During the course of this battle, the snakes ranged over about five square yards in relatively open area, but often near or on top of prickly pear bushes. One of the snakes was observed to have thorns sticking out of its head, the result of the aggressive slamming around while near the prickly pear.

One of the fascinating things about the action was even though we were only about 12 to 15 yards away from the combatants, they never seemed to notice us - at least there was no apparent reaction to our presence. We were close enough to the action that we could hear them breathe when they would retreat. There was one moment when I thought maybe they had determined that there were intruders into their private war. Were they considering whether to investigate the two big *"eyes"*, our telephotos, that were pointing their way? Both of us were sure to keep checking to be certain our escape path was clear, and we were prepared to move away at a second's notice.

It didn't take too long for both of us to realize that shooting at the maximum frame rate was quickly depleting our stash of CF cards. Mattie was wonderful help, shuttling back and forth from the vehicle for lenses, cards, and anything else we could think of that we needed. It was soon apparent that we would run out of storage before this battle came to an end. Once we exhausted our supply of cards, we decided to leave the snakes to their still ongoing fight and headed back to the house to download and burn CDs. We realized we had captured a rarely recorded event and had to be certain not to risk losing any of the 900 or so captures.

One of the lasting impressions I take from this experience is the realization that though I had been raised as a cattleman and horseman to truly dislike the rattlesnake, there was never a point during the whole time that I considered the prospect of killing these two snakes - the ingrained response that I would normally have had. As for Sandra - she had the unpleasant experience of being bitten by a rattler a number of years ago, and this experience left her with a few snaky dreams for a few days, but it was still well worth the unique opportunity to see and capture this event in the wild.

[Mr. Trey Neal grew up just south of San Antonio, Texas, where his parents still live and ranch. He is a graduate of Texas Tech University. Mr. Neal has a strong interest in wildlife *"cowboys, horses and a love of all that nature has to offer"* and is a professional photographer specializing in nature, other western images, and sports photography (www.treyneal.com). To see more photographs of the reptiles featured in this article, please go to http://www.shutterfreaks.com/gallery/album118. More information about Mr. Trey Neal and his photography can be found at his website: http://www.natureswildscapes.com/.

My thanks to Mr. Trey Neal for allowing

the Southern Lepidopterists' Society to republish this article which first appeared in the July 2004 issue of NATURESCAPES.NET (http://www.naturescapes.net/072004/tn0704.htm) along with some of his photographs – THE EDITOR.]

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"Butterflies Observed in an Arkansas Yard" - David Rupe

"Butterflies Observed in an Arkansas Yard" - David Rupe

"Butterflies Observed in an Arkansas Yard" - David Rupe

"Butterflies Observed in an Arkansas Yard" - David Rupe

[David Rupe's photographs accompany his article *"Butterflies Observed in an Arkansas Yard"* on **page 113.**]

Fig. 1. White Peacock (*Anartia jatrophae*)

Fig. 3. White-patched Skipper (*Chiomara georgina*)

Fig. 2. Hammock Skipper (*Polygonus leo*)

[Fig. 1 (White Peacock), Fig. 2 (Hammock Skipper), and Fig. 3 (White-patched Skipper) accompany Ro Wauer's article *"Three New Butterflies Found at Big Bend National Park"* on **page 114.**]

WELCOME TO OUR NEWEST MEMBERS

Gary Anweiler
7212-103 Ave.
Edmonton, Alberta, CANADA
T6A OV1

Dan Hyman
5207 N. Woodcrest, CT.
Winter Park, FL 32792

[Note: Jacqueline Kern* and John Kern* are not related.]

Jacqueline Kern*
700 Island Landing Drive
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John Kern*
1145 Red Maple Circle NE
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Scott Meredith
31 Ardor Drive
Orinda, CA 94563

Michael Rich
1909 Slavia Road
Oviedo, FL 32765

Jon D. Turner
2338 Bryson Road
Ardmore, TN 38449

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THE 2007 ANNUAL MEETING - PLAN TO ATTEND

The 2007 Annual Meeting of the Southern Lepidopterists' Society will held together with the Association for Tropical Lepidoptera at the Doyle Conner Building, Florida Department of Agriculture and Consumer Services in Gainesville, Florida, from October 4 - 7. A registration form will be printed in the next issue of the newsletter and will also be e-mailed to members with internet access and posted on the SLS web page. Pre-meeting collecting trips to the Osceola National Forest are planned and Dr. John Heppner is arranging a foreign collecting trip (perhaps to Guatemala) to be held after the meeting. Dr. John Heppner will be handling all of the registration and arrangements for the meeting. You can contact him at:

Dr. John Heppner, Chairman and Executive Director
Association for Tropical Lepidoptera
P.O. Box 141210, Gainesville, FL 32614-1210
(352) 846-2000 ext. 243; troplep@aol.com

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GREAT TAUNTS AND INSULTS FROM A WELL - KNOWN COMEDIAN

"I've had a perfectly wonderful evening. But this wasn't it."

"From the moment I picked up your book until I laid it down, I was convulsed with laughter. Some day I intend reading it."

"I could dance with you until the cows come home. On second thought I'd rather dance with the cows until you come home."

Julius Henry Marx, known as Groucho Marx (October 2, 1890 - August 19, 1977), was an American comedian and a master of the quick wit and insult.

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SLS Members - Please write something for the NEWS so that I can fill this space!!!! (I'll even give you more space than this.)

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****
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MANDUCA JASMINEARUM (GUÉRIN): LIFE HISTORY NOTES FROM FLORIDA

BY
JEFF SLOTTEN

Manduca jasminearum is commonly known as the Ash Sphinx. This moth ranges *"from northern Florida west to Mississippi and Arkansas and perhaps north, but basically east, to New York and Connecticut."* (Hodges, 1971). In Florida, I have found larvae on ***Fraxinus caroliniana*** Mill., ***Fraxinus pennsylvanica*** Marsh, and ***Fraxinus profunda*** (Bush) in swampy habitats. In Levy County and Alachua County, Florida, I have found the larvae very uncommon as compared to another sphingid, ***Ceratomia undulosa*** (Walker), The Waved Sphinx. Eggs of both species can be found on the undersides of the leaves on the above mentioned ash trees and often on the same tree and at the same time, especially in July and August. I have found very few ***jasminearum*** eggs and larvae, but many ***undulosa***. Adults of both species are attracted to ultraviolet lights.

The life history stages are presented in this short paper. I thank Jim Tuttle and Tom Neal for some of the photographs obtained from larvae I have given them to rear. Figure 1 (Photographs on **page 128**) shows the egg which is round and green, very typical of sphingids. Figure 2 shows a very early instar larva, which is green. Note the long horn, reddish in color. Note the feeding damage to the ash leaf. Figure 3 shows a third instar larva. Figure 4 shows a 4th instar larva. Figure 5 shows a 5th and final instar larva. There are seven lateral stripes with the anal stripe boldest. The horn is shorter and closer in color to the rest of the larva as compared to the early instars. Figure 6 shows the pupa as does Figure 7 which also shows the size of the pupa. The significance of the pupa is that it is quite unique. The tongue case is quite short and nearly appressed. As is common to the ***Manduca*** genus, the tongue case is free. This characteristic occurs in only a few other genera (Hodges). Figure 8 shows the beautiful adult with the dark forewing bars. The entire life history from egg to adult occurred within a few months. This particular generation with adults emerging in October from eggs found in early August seems to not overwinter; at least with lab reared larvae. Wild adults are recorded from May through August (Hodges). How many generations are there in Florida? Is there a partial brood following the July, August flight?

Literature Cited

Hodges, Ronald W. 1971. *The Moths of America North of Mexico.* Fascicle 21 SPHINGOIDEA. E.W. Classey Limited and R.B.D. Publications Inc. pp.27-37.

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DEFINITION:

Genetic Swamping - When different species hybridize the less common of the two species can become extinct as a distinct form; genetic material moves from the more common species into the rarer species; this phenomenon occurs in many different animals and is a serious concern among many biologists.

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SOME MORE *"LESSONS FROM A YOGI"*

1. *"The only reason I need these gloves is cause of my hands."*
2. *"We were overwhelming underdogs."*
3. *"Always go to other people's funerals otherwise they won't go to yours."*
4. *"Pair up in threes."*

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Fig. 1. Egg - *M. jasminearum*
(Photograph by Jeff Slotten)

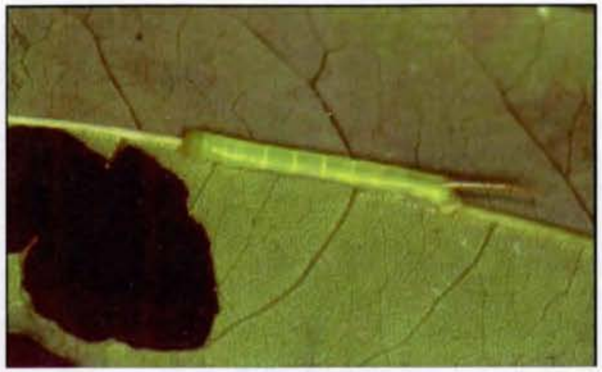
Fig. 2. Early instar larva - *M. jasminearum*
(Photograph by Jeff Slotten)


Fig. 3. Third instar larva - *M. jasminearum*
(Photograph by Tom Neal)


Fig. 4. Fourth instar larva - *M. jasminearum*
(Photograph by Jim Tuttle)


Fig. 5. Fifth instar larva - *M. jasminearum*
(Photograph by Jim Tuttle)


Fig. 6. Pupa - *M. jasminearum*
(Photograph by Tom Neal)


Fig. 7. Pupa -
M. jasminearum
(Photograph by Jeff Slotten)


Fig. 8. Adult - *M. jasminearum*
(Photograph by Jeff Slotten)

[These photographs accompany Jeff Slotten's article on the life history of *Manduca jasminearum* (Guérin) - **page 127.**]

SOUTH TEXAS BUTTERFLY FESTIVAL 2006

BY
ED KNUDSON AND CHARLES BORDELON

This years Butterfly Festival was held in Mission, Texas from October 19-22. For those who are unfamiliar with this annual event, his is how it works: The festival is organized and run by the Mission Chamber of Commerce, with the aid of local enthusiasts drawn largely from the local chapter of NABA. However, NABA does not run the event in any official capacity. Twenty or so group leaders are invited to lead various field trips during and before the festival, and to give presentations during the festival. Before the conclusion of the festival there is a banquet, which is usually held at one of various local operations that specialize in hosting large, usually outdoor events in a scenic setting. During this banquet the keynote speaker will address the gathering. The festival concludes the next afternoon at the EXPO hall at the Mission Convention Center complex. Most of the field trips originate from the EXPO and inside, representatives of various parks, booksellers, and other vendors are set up to receive the attendees. Children's events are also held at the EXPO.

Collecting is not usually permitted on the field trips and prohibited in the festival gardens. However, many collectors attend and host some of the events. There are many places that collectors can go, which are outside the scope of these trips, if they so desire. Some of the places that are included in the field trips are: Bentsen State Park/World Birding Center garden, the largest and most productive in the region, Santa Ana Refuge, Audubon Palm Grove, Valley Nature Center, Frontera Audubon, Edinburg Wetlands Preserve, NABA International Butterfly Park, and various localities in Starr Co. There is also usually a trip to Mexico, before the festival. The blacklighting event (hosted by us), was held this year at La Lomita Mission and Park. Lodging discounts are usually offered to the participants. This year the host hotel was Hawthorne Suites in Mission.

The butterfly festival is really the kickoff to an extended fall season which lasts into early December. At this time many butterfly enthusiasts, birders, and other nature lovers, flock to the valley to the considerable benefit of the local economy. Most of the rare and unusual Lepidoptera that can be found in this area are most likely to be found during this time.

This year there were about 200 registered participants, which was down somewhat from previous years. There were 122 species of butterflies recorded by the field trip leaders which is lower than usual. There was a rainy cold front that passed during the festival, which had been preceded by dry conditions, and this was probably the main reason for lower than expected diversity. Nothing highly unusual or new for the US was found, but conditions improved significantly in the next 3-4 weeks after the festival. The evening banquet was held at El Chaco, which is a ranch-like setting in La Joya, about 8 miles west of Mission. At this place, visitors are brought from the parking lot to the dining pavilion by mule-drawn carts. The presentation by Dave Wagner on caterpillars was highly interesting and delighted even the most jaded among us. This slide presentation was given in very adverse conditions, since the power in La Joya failed before the talk was to start. There was a considerable delay before generators were brought in, but Dave showed his skills as a speaker and completed the talk without benefit of a microphone.

After the festival, the real fun began. In early November several rare *Chlosyne* sp. showed up in the Mission area. *Chlosyne melitaeoides*, which has not been seen in the valley since the 1970's was found at several localities, and at least three specimens were collected in the Penitas area. At least half a dozen individuals were recorded, mostly very fresh. A few *C. rosita* also showed up in the same area and two were collected. This also has not been seen in south Texas for decades. *C. endeis, C. janias*, and *C. lacinia* (abundant) were also present, as well as *C. definita* (mostly near Kingsville). Other interesting nymphalids that were found in early to late November included: *Epiphile adrasta* [one, in a bait trap at Weslaco (Bordelon)], *Smyrna blomfildia, Anartia fatima, Hamadryas feronia, Marpesia petreus, Adelpha fessonia,* and *Memphis glycerium* (Roma, Sassine). Only one, or a few of these were found. *Anartia jatrophae* was abundant, including an interesting melanistic specimen collected by John Tveten. *Myscelia ethusa* was also quite common at bait in several localities. Most of the usual pierids were found; the best being *Aphrissa statira*, (Knudson) and *Eurema daira* (Bordelon). Lycaenids were down from previous years, the best find being *Rekoa marius* at Bentsen State Park. Riodinids also were not very abundant. Several *Melanis pixe* were found, mainly at Penitas. Among the Hesperiids, the best probably was

Astraptes anaphus, photographed at Bentsen State Park. *Phocides polybius lilea* was very common this year. The most unusual skipper records were *Heliopyrgus sublinea* (Brooks Co. Rest Area) and *Heliopetes arsalte* (Live Oak Co.). These were collected by Jack Carter. This is the first USA voucher specimen for *H. sublinea.*

As for moths, perhaps the most interesting find was *Pseudosphinx tetrio*. One adult specimen was found at South Padre Island and many larvae were found near Weslaco on Frangipani. These were reared by Van Buskirk. Three additional specimens of the arctiid, *Agaraea semivitrea* were collected by Knudson (two at Estero Llano Grande State Park, near Weslaco, October 16, and one in Mission on November 18). This was previously found by Knudson & Tveten in 2005. An article on this is in preparation.

Several day-flying moths were present in good numbers, especially the geometrid, *Melanchroia chephise*. This was abundant in the valley and found as far north as El Campo, TX., where Bordelon observed thousands between there and Victoria, TX. These moths also invaded the Texas Hill Country and several were found as far north as Dallas. Another geometrid, *Heterusia atalantata*, was found by Bordelon (3 specimens,) near Weslaco.

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TREASURER'S REPORT FOR 2006 AS OF NOVEMBER 30, 2006

Beginning Balance as of 01/01/2006: $2697.13 from Suntrust Bank Statement.
Ending Balance as of 11/30/2006: $2839.59 from Suntrust Bank Statement.

Deposits and Credits: $3351.70 (includes a $16 service charge refund) = membership dues and donations.

Withdrawals and Debits: $3209.24 (includes a $6 correction fee for incorrect deposit):

a) Newsletter Expenses: Vol. 27 No. 4, Postage: $474.50, Printing: $805.96 = **$1280.46**.
b) Newsletter Expenses: Vol. 28 No. 1, Postage: $111.81, Printing: $362.46 = **$474.27**.
c) Deposit Correction Fee **$6.00**.
d) Newsletter Expenses: Vol. 28, No. 2, Postage: $216.70, Printing: $408.11 = **$624.81**.
e) Newsletter Expenses: Vol. 28, No. 3, Postage: $221.58 + $29.06 (Clasped Mailing Envelopes) = $250.64, Printing: $456.41 = **$706.87**.

We collected **$3178.70** in annual dues and contributions so far this year.
We spent **$3086.41** for postage and printing of 4 newsletters.

Last year we spent an average of **$645.88** per newsletter. There were 4 newsletters = **$2583.52.** This year we spent an average of **$771.60** per newsletter. There were 4 newsletters = **$3086.41**.

Our membership is 167. If each member paid dues on time we would bring in $15 x 167 = $2505.00. This year 149 members have paid their dues.

If not for donations or members who paid at the sustaining or contributing level, we could be in debt. If we increased the dues to $20 we would bring in $20 x 167 = $3340.00.

If we increased the dues to $18 we would bring in $18 x 167 = $3006.00. Presently we are bringing in $15 x 167 = $2505.00.

We could either reduce the newsletter size or increase the dues. We have chosen to increase the dues to $20/year for 4 newsletters.

Respectfully submitted,

Jeff Slotten, Treasurer

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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 report which is a continuation of his report printed in the September (2006) issue. In the previous report he listed 21 species of butterflies from his yard and in the present report he adds 4 more species starting with #22:

22. *Panoquina ocola*	September 30, on *Lantana* in front yard
23. *Papilio palamedes*	October 8, flying over house in front
24. *Lerema accius*	October 12, flying and lit in front lawn
25. *Eurema nicippe*	October 17, flying in back yard

Charlie states -- *"That is 25 species for the whole year in our yard. Below are a few other selected records"*:

September 23. Drove to Oviedo, Florda, for a butterfly festival at Lukas Nursery - the largest retail nursery in FL. There I saw lots of *B. polydamus*, plus *H. cresphontes, P. sennae, P. philea, Anartia jatrophae, A. vanillae, H. charithonia, P. sennae*, and *D. plexippus*. We put out blacklights at Miles Park and recorded *Enyo lugubris* and *Darapsa myron* (Sphingidae); *Acronicta brumosa, Thioptera nigrofimbria, P. hebraeicum* (Noctuidae); *Synchlora sp.*, and *Leptostales pannaria* (Geometridae).

September 28. In our yard (Gainesville) I saw *P. sennae*, a female *P. philia* (possibly ovipositing on *Cassia* I just bought), and *A. vanillae*.

October 4. Gainesville: I saw *H. phyleus, H. cresphontes, P. sennae* and numerous *A. vanillae* on the golf course. Behind McGuire Hall I saw *U. proteus, P. ocola, A. vanillae, H. charithonia* and *D. plexippus*.

October 17. Behind the McGuire Center I saw *U. proteus, U. dorantes, P. ocola, P. sennae, J. coenia, Anartia jatrophae* and *A. vanillae*. In our yard at home I saw *U. proteus, B. polydamas* (on *Pentas*), *P. glaucus, P. sennae* (3 on *Pentas*), *Eurema nicippe, H. charithonia, A. vanillae*, and *D. plexippus*.

October 22. Went to Cedar Key, Levy Co. and saw several *P. sennae* and *A. vanillae* along Rt. 24 along the way, and in Cedar Key, Levy Co. At home in Gainesville I saw more *U. proteus, P. ocola, P. sennae* and *A. vanillae*.

November 30. Today in our yard (Gainesville) I saw *B. polydamas* on *Lantana*, and *P. sennae* and *D. plexippus*.

December 6. Gainesville: I saw several *P. sennae* and an *A. vanillae*.

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

Underwing records were down this year, both in the summer and fall, but there were a few good species recorded. On the other hand, it was a very good year for the November flying Buckmoth, *Hemileuca maia*, and also a banner year for the fall flying large gray geometrid *Cymatophora approximaria*. Abbreviations are as follows: James Adams (JA or no notation), Eleaner Adams (ERA), Irving Finkelstein (IF), Jeff Slotten (JS). Other contributors names 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 records for newly investigated areas. Known County and State records are indicated. All dates listed below are 2006 unless otherwise specified. There were several nice new northern moth STATE records from trips to the higher elevations of N. GA, and a few more southern STATE records during a trip to the coastal plain over Labor Day weekend.

Calhoun, Gordon Co.:
EREBIDAE: *Catocala angusi*,, Sept. 4; *C. ulalume* (2), Sept. 9. **NOCTUIDAE**: *Enigmogramma basigera*, June 29 (EARLY); *Papaipema marginidens,* Oct. 17; *Agnorisma bollii*, Oct. 26 (several). **GEOMETRIDAE**: *Exelis pyrolaria*, several, late June-early July; *Heterophleps triguttaria*, July 1 (COUNTY).

Carbondale, Whitfield Co.:
ARCTIIDAE: *Gramma Virgo*, Sept. 21 & 25. **EREBIDAE**: *Hypocala andremona*, Sept. 21 (third for COUNTY), *Catocala robinsoni*, Oct.10, *C. carrissima*, Oct. 11. **NOCTUIDAE**: *Anathix ralla*, Sept. 27 & Oct. 2 (first in several years); *Agnorisma bollii*, Oct. 23. **GEOMETRIDAE**: *Cymatophora approximaria*, Oct. 8 - 15, *Apodrepanulatrix liberaria,* Oct. 11 (**COUNTY**).

Crest of Rocky Face Ridgeline along Dug Gap Battle Rd., just SW of Dalton, Whitfield Co., Oct. 18-19:
EREBIDAE: *Zanclognatha jacchusalis*. **NOCTUIDAE**: *Papaipema cataphracta, P. nebris*. **GEOMETRIDAE**: *Cymatophora approximaria* (**COUNTY**).

Taylor's Ridge, Walker Co., 5 mi W of Villanow, JA and IF:
NYMPHALIDAE: *Cyllopsis gemma* (obviously a confused individual), Nov. 11. **SATURNIIDAE**: *Hemileuca maia* (abundant!), Nov. 11, 2006. **NOCTUIDAE**: *Metaxaglaea semitaria*, Nov. 11; *Xestia youngii*, Nov. 11. **GEOMETRIDAE**: *Cymatophora approximaria* (**COUNTY**), Oct. 5. **TORTRICIDAE**: *Epinotia septemberana* (**COUNTY**), Nov. 11, 2006.

5 miles ESE of Fairmount, NE corner of Bartow Co., Salacoa Rd. at Salacoa Creek, Oct. 21, JA, IF, and JS:
NOCTUIDAE: *Papaipema cataphracta, P. cerrusata*, "*Oligia*" *mactata*, *Agnorisma bolli*. **GEOMETRIDAE**: *Cymatophora approximaria*.

Jasper, Pickens Co., October 12, JA & IF:
EREBIDAE: *Catocala maestosa*. **GEOMETRIDAE**: *Cymatophora approximaria, Campaea perlata* (LATE).

Dahlonega, Lumpkin Co., October 12, JA & IF:
NOCTUIDAE: *Argyrogramma verrucae, Papaipema marginidens*. **THYATIRIDAE**: *Pseudothyatira cymatophoroides* (LATE). **GEOMETRIDAE**: *Cymatophora approximaria, Campaea perlata* (LATE).

Cooper's Creek Recreational Area, Union/Fannin Co. Line, N. of Hwy. 60, Oct. 12, JA & IF:
NYMPHALIDAE: *Speyeria diana* (six females clustered together), one taken and survived to October 18 (no eggs laid).

Atlanta, Fulton Co. (IF's house):
EREBIDAE: *Catocala piatrix*, Sept. 21.

Waycross, Ware Co., IF and ERA, Sept. 1-2, 2006:
NOCTUIDAE: *Spodoptera latifascia* (**COUNTY**).

Griffin Ridge WMA, Long Co., 3 mi. SW of Ludowici, Sept. 2-3, 2006, with IF and ERA:
EREBIDAE: *Ommatochila mundula* (**STATE**).

Ohoopee Dunes Tract 4 (the Covena Tract) 9 miles SW. of Swainsboro, S of Hwy. 56, W of Stage Coach Rd., Emanuel Co., Sept. 3-4, (JA, ERA, IF, JS):
COLEOPHORIDAE: *Coleophora spissicornis* (abundant).

Skidaway Island, Chatham Co., Sept. 23, 2006, Russ Wigh:
NYMPHALIDAE: *Heliconius charitonius*.

Bond Swamp, Reid Station Rd., Twiggs Co., Oct 1 and Oct 3, Jerry and Rose Payne:
HESPERIIDAE: Yehl Skippers (*Poanes yehl*; 3), Lace-winged Roadside-Skipper (*Amblyscirtes aesculapius*), *Pyrgus oileus,* Twin Spot Skipper (*Oligoria maculata*), Swarthy Skipper (*Nastra lherminier*). **PIERIDAE**: Checkered White (*Pontia protodice*). **NYMPHALIDAE**: Southern Pearly-eyes (*Enodia portlandia*; 4).

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

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

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

Only a few moths records were submitted this fall. Bruce Sorrie reported finding a black witch (*Ascalapha odora*) in his woodpile at Whispering Pines, Moore County. Steve Hall collected two *Papaipema baptisiae* from a site straddling the Orange and Durham County line (**COUNTY** records for both).

The following selected butterfly records were submitted by Harry Legrand. Place names refer to counties unless otherwise stated, and records are not new county reports unless indicated. WC = Will Cook, HL = Harry LeGrand, JP = Jeff Pippen, TW = Ted Wilcox.

The fall season was a poor one for northbound migrants, and species such as *Eurema lisa* and *Urbanus proteus* were in much reduced numbers this year. Numbers of all *Vanessa* species were very low this fall, for uncertain reasons. However, numbers of *Danaus plexippus* were the best in fall in the past few years.

Records are from September - November 2006.

PIERIDAE:

Pontia protodice, arguably the most strongly declining species in the state, the only fall season report was of two females seen at a known site south of Raleigh in Wake on October 21 (HL).

RIODINIDAE:

Calephelis virginiensis, this species is losing flatwoods/savanna habitat, but where such habitat still occurs, it can be quite common, as evidenced by John Fussell's finding of 25 individuals at a newly-discovered savanna in Croatan NF in Carteret on September 7.

NYMPHALIDAE:

Agraulis vanillae, rare for the northern Piedmont. One was seen by Jim Nottke at his farm in Forsyth on September 3.

Heliconius charithonius, this rare stray was seen by a neighbor of Bob Cavanaugh in the town of Beaufort in Carteret, during the second week of September.

Speyeria cybele, one seen in high-elevation Yancey on November 29 by Nancy and Bob Baldwin was remarkably late.

Anartia jatrophae, surprisingly there were two reports of this very rare stray. Bob Cavanaugh netted one in Carteret on September 3, and even more unusual was the first *"inland"* record for the state at Lake Landing in Hyde **(COUNTY)**, where photographed on October 21 by Ricky Davis.

HESPERIIDAE:

Hesperia leonardus, in the mountain region TW noted singles in Ashe in the Fleetwood vicinity on September 9 and 16. In the Piedmont, one was seen by Parker Backstrom in Chatham at a known site on September 24, whereas HL found two individuals at a new roadside site in Randolph on October 10. Most Piedmont populations are found along wooded roadsides where there is a phone line clearing next to the road that contains good-sized stands of *Aster grandiflorus* and/or *Liatris* spp. for nectaring.

Problema byssus, rare away from the southeastern coastal counties, one was seen by HL at Sandhills Game Land (first record there?) in Scotland on September 3, six seen by JP and John Dole in a powerline clearing in Harnett **(COUNTY)** on September 3, and one seen by HL at Pondberry Bay Preserve in Sampson on September 10.

Poanes aaroni aaroni, one of the better state counts was 14 tallied by HL, JP, and WC at Alligator River NWR in southern Dare on Septemer 16.

Calpodes ethlius, disappointingly, the only report for the season was of two adults seen by Bob Cavanaugh in Carteret on October 21.

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Ed reports the following:

Unlike the past 3-4 years, nothing has turned up this year in Texas, that would be a new US record, except for one pyralid moth that was collected (first by Charles Bordelon), in Santa Cruz Co., AZ, and was later found to have been collected once in Texas, by Andre Blanchard in Brownsville, December 1975. This is *Eurrhyparodes splendens*, which has never been reported from the US. It is similar to *Eurrhyparodes lygdamis*, but twice as large and more colorful.

Returning from the same Arizona trip, Bordelon & Knudson spent 2 days in Terlingua, Brewster Co.,TX on 8,9 September, collecting there and in nearby Big Bend Ranch State Park (Presidio Co.). Two state moth records were found, including *Schinia albofascia* (Terlingua), and *Xanthostege planalis* (Terlingua and Big Bend Ranch). The small notodontid, *Praeschausia zapata*, was abundant at both places, having been collected once in Big Bend NP, about 20 years previously.

Next came 2 trips to the lower Rio Grande Valley, October 15-23 (including the South Texas Butterfly Festival), and November 14-26. Between Bordelon, Knudson, Sassine, Boscoe, & the Dauphins, about 130 butterfly species were found. By far the best was *Chlosyne melitaeoides*, which appeared briefly from about November 5-12 at various locations in Hidalgo Co. Perhaps half a dozen individuals were photographed or collected. This species was last seen in the valley about 30 years ago. A few other interesting butterflies were found by Bordelon on November 15-17 at Weslaco and Mission: *Timochares ruptifasciatus, Eurema daira, Epiphile adrasta, Hamadryas februa, Anartia fatima*, and *Biblis hyperia*, but these were mostly singletons. In general, the more *"exotic"* butterfly species were few and far between.

Three specimens of the Arctiid moth, *Agaraea semivitrea*, were collected by Knudson at Estero Llano Grande SP, near Weslaco on October 18, and in Mission on November 18. This was previously collected by Knudson and John Tveten, last year in Hidalgo Co., TX. One female of *Schinia blanca* was collected by Bordelon at San Manuel, Hidalgo Co., TX on 23 October.

At the Audubon Palm Grove, on October 16, Bordelon & Knudson found mostly mature larvae of at least 4 species of Sphingids feeding on *Ampelopsis arborea*. Of these only one, *Enyo lugubris*, has so far emerged from the pupa. The others are believed to be *Eumorpha satellitia, Darapsa myron*, and *Amphion floridensis*. Another sphingid, *Pseudosphinx tetrio* was found to be feeding on Fragipani in the mid-valley area and a series was reared by Van Burkirk. Several larvae and adults of *Pachylia ficus* were also found in Cameron and Hidalgo Counties.

The day-flying geometrid, *Melanchroia chephise*, was found to be abundant throughout November, in the valley and along the Texas coast as far north as El Campo. Thousands were seen migrating to the NW towards the Texas Hill Country and several were found in the Dallas area. Other migrants this year included the butterflies, *Anartia jatrophae* and *Chlosyne theona*, which appeared much further north than usual. Other diurnal moth species such as *Heterusia atalantata*, and *Phaelosia saucia*, were present in the valley, but not nearly as common.

Battus polydamas has continued to be locally common in parts of Harris Co., TX., and also appeared in Beaumont. This swallowtail probably occurs wherever there are well established *Aristolochia* vines. *Phoebis philea* also continued to be abundant in the Houston-Beaumont area. Populations exploded eastward across Louisiana in a mass migration. This phenomenon has not been seen since the 1950's or 1960's. However, recent near-freezing temperatures may have ended this, at least temporarily.

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Fig. 1. Maria Sibylla Merian in old age (Painted by Maler de Bâle) [From Wikipedia, the free encyclopedia]

Fig. 2. Title Page [Part 1, 1679] *Der Raupen wunderbare Verwandelung und sonderbare Blumen-Nahrung* [By courtesy of the Department of Special Collections, Memorial Library, University of Wisconsin - Madison]

Fig. 3. Title Page [Part 2, 1683] *Der Raupen wunderbare Verwandelung und sonderbare Blumen-Nahrung* [By courtesy of the Department of Special Collections, Memorial Library, University of Wisconsin - Madison]

Fig. 4. Plate 26 [Part 1, 1679] *Der Raupen wunderbare Verwandelung und sonderbare Blumen-Nahrung* [By courtesy of the Department of Special Collections, Memorial Library, University of Wisconsin - Madison]

Fig. 5: Great Owlet Moth - *Metamorphosis Insectorum Surinamensium* [Audubon House Gallery of Natural History ($400.00)]

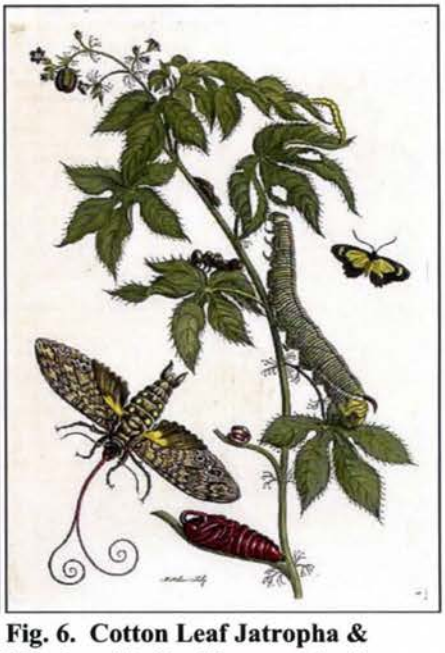

Fig. 6. Cotton Leaf Jatropha & Mimicry Moth - *Metamorphosis Insectorum Surinamensium* [Audubon House Gallery of Natural History ($400.00)]

[Photographs accompany the biography of Maria Sibylla Merian on **page 110.**]

GRAMMA VIRGO (L.) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

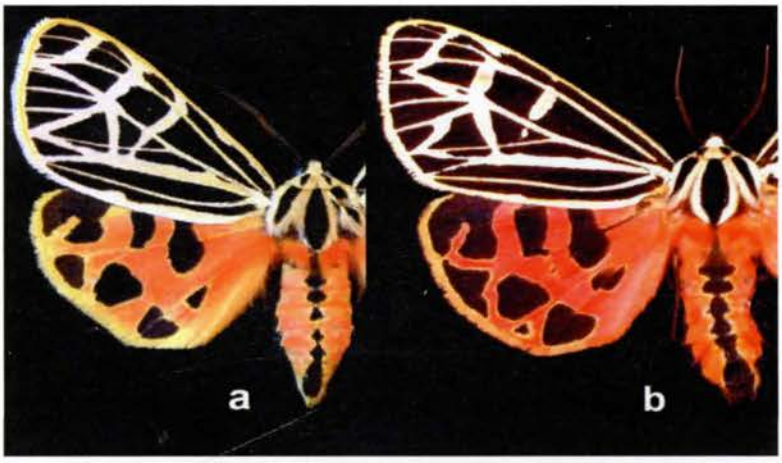

Fig. 1. ***Grammia virgo*** (L.): a. male, b. female.

Fig. 2. Parish records by this author.

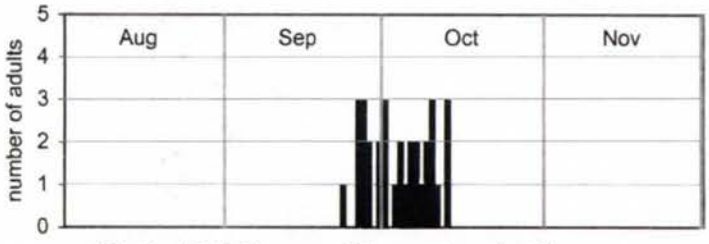

Fig. 3. Adult ***Gramma Virgo*** captured at the Abita Springs study site. n = 32.

The much sought after, large in size and rarely encountered Arctiidae species ***Gramma virgo*** (L.) (Fig.1) is known in Louisiana from a series of 30 males and 2 females captured at sec.24T6SR12E, 4.2 mi NE of Abita Springs, Louisiana (Fig. 2) over the past 24 years of continuous year-round light trapping at this location. This species is reported by Heppner (2003) to occur over much of the United States: Nova Scotia to Florida and Manitoba to Colorado and Texas. In Louisiana, ***virgo*** appears to have a single annual brood late September to early October (Fig. 3). Covell (1984) reported ***virgo*** is rare in the deep south. As in some other Arctiidae species which have red hindwings, yellow hindwing forms also occur in this species, though none were encountered in this study. Female ***virgo*** exhibit more intense red coloration than in males.

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