Southern Lepidopterists' NEWS

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

Vol. 37 NO. 1 **March 31, 2015**

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

J. BARRY LOMBARDINI: EDITOR

THE SMALL PYRALID *DUPONCHELIA FOVEALIS* ZELLER, 1847, ANOTHER UNITED STATES EXOTIC INTRODUCTION

BY

VERNON ANTOINE BROU JR.

Fig. 1. ***Duponchelia fovealis*** Zeller

On October 20, 2014, I captured a small pyralid ***Duponchelia fovealis*** Zeller, (Fig.1) in a light trap near Abita Springs, Louisiana, USA, the *Abita Springs entomological study site. This moth is noted to be an exotic greenhouse invasive, aka pepper moth. A review of the current literature indicates the first record of ***fovealis*** in the US was in 2004 in California and in 2005 in Canada.

This species occurs in both freshwater and saltwater marshlands of southern Europe, especially Spain, France, and Portugal, and the areas surrounding the Mediterranean Sea, Syria and Algeria, Malta, Italy, the Canary Islands, Africa, and the Middle East.

In 2010, ***fovealis*** was reported from these states as well: Alabama, Arizona, Colorado, Florida, Georgia, Mississippi, North Carolina, Oklahoma, Oregon, South Carolina, Texas, and Washington. So this Louisiana record has ***fovealis*** occurring in all the coastal states from North Carolina to Florida and west to Texas. Surely many more states will be added as time progresses. Since I have been running 5-7 light traps at this one location, every night for the past 33 years, I was saying to myself, how could I have missed this species in the past? Now I know why, it is a relatively new invasive. Much of the US literature available on

fovealis is from 2010, until now. There are actually numerous dozens of published articles about this rapidly spreading pest species.

This specimen represents a new state record for Louisiana.

***Abita Springs entomological study site:** sec. 24,T6S, R12E, 4.2 miles northeast of Abita Springs, Louisiana.

Literature Cited

Duponchelia fovealis on the UF / IFAS Featured Creatures Web site
http://en.wikipedia.org/wiki/Duponchelia_fovealis

(Vernon Antoine Brou Jr., 74320 Jack Loyd Road, Abita Springs, Louisiana, 70420, USA)

****

****

****

MANY THANKS TO THE FOLLOWING DONORS FOR CONTRIBUTING TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY

Charlie Covell (Benefactor+)
Vernon Brou (Contributor)
David Wagner (Sustaining)
Lawrence Hribar (Sustaining)
MaryAnn Friedman (Sustaining)
Rosalyn Payne (Sustaining)
Tom Emmel (Benefactor)
Debbie Lott (Sustaining)
Joe Riddlebarger (Sustaining)
Mary Anne Poor (Contributor)
Eric Anderson (Sustaining)
Paul Opler (Sustaining)
Jeff Trahan (Sustaining)
Bill Lindemann (Sustaining)
Larry Gall (Benefactor+)
Dean & Sally Jue (Contributor)
Ed Knudson (Benefactor+)
Marc Minno (Benefactor+)
Kilian Roever (Contributor)
Mark Simon (Benefactor+)
Scott Wehrly Contributor)
Robert Biro (Sustaining)
Joann Kargas (Sustaining)
James Snyder (Sustaining)
Frances Weldon (Contributor)
David Auth (Contributor)
James Adams (Sustaining)
Parker Backstrom (Sustaining)
Jeff Belth (Sustaining)
Pierre Howard (Sustaining)
Jon Turner (Beneficiary)
Bill Russell (Contributor)
Steve Hall (Sustaining)
Robert Patterson (Benefactor)
Hugh C. Wyatt (Sustaining)
Bob Belmont (Benefactor+)
Robert Allen (Sustaining)
Floyd & June Preston (Benefactor+)
Mark DeGrove (Sustaining)
Gary N. Ross (Benefactor+)
Gary Goss (Contributor)
Buck & Linda Cooper (Contributor)
Rosemary Seidler (Contributor)
Dave Patton (Contributor)
Robert Dirig (Benefactor+)
David Iftner (Sustaining)
Charles Bordelon (Benefactor+)
Hank Leibee (Contributor)
John Peacock (Sustaining)
Frank Rutkowski (Sustaining)
Bo Sullivan (Sustaining)
Ben Williams (Contributor)
Nell Ahl (Sustaining)
James Monroe (Sustaining)
John Snyder (Sustaining)
David Auth (Contributor)
Peter Van Zandt (Sustaining)
Steve Bransky (Sustaining)
Mack Shotts (Benefactor+)
Brian Scholtens (Sustaining)
Jackie Miller (Benefactor)
Sara Bright (Sustaining)

INDEX

****

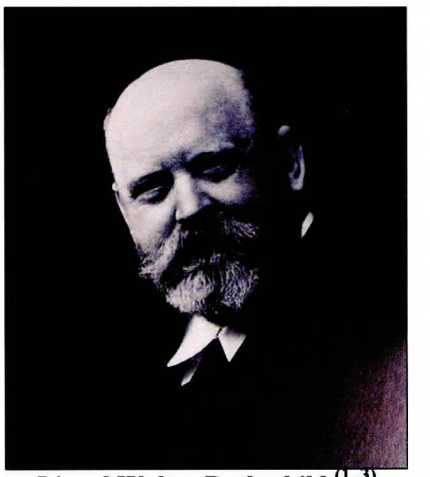
****

****

****

2ND BARON LIONEL WALTER ROTHSCHILD [1]
A SHORT BIOGRAPHY

Walter Rothschild was born in London on February 8, 1868, to Nathan Mayer Rothschild (1st Baron Rothschild) and Emma Louise von Rothschild (a cousin). [1] [Walter's great great-grandfather, Mayer Amschel Rothschild (1744-1812), was the founder of the extremely powerful European financial empire. Mayer Amschel Rothschild is considered to be the creator of the banking industry introducing *"concepts such as diversification rapid communication, confidentiality and high volume"*. [4]]



Lionel Walter Rothschild [1, 3]
February 8 1868 - August 2, 1937

As a young child Walter Rothschild was considered to have rather delicate health and was home schooled. At a very early age he already had a vision for his future in that he wanted to study nature and he started this career by collecting a variety of insects. While his interests as a young man remained in the field of zoology he, because of family pressure, worked in London in the family bank for almost 20 years (1889-1908). However, due to his lack of interest in financial matters his parents, well realizing his unhappiness, financed a zoological museum for him. Rothschild studied zoology at Magdalene College in Cambridge where this interest in birds and butterflies was amplified. [1] Because of the immense fortunes of his parents and their desire to secure him a future they fostered his interests by funding his travels to Europe and Africa collecting both birds and butterflies for his museum. Health debilities eventually restricted his travels. But again due to his parents wealth, he was able to employ numerous individuals who were professional collectors, taxidermists, and scientists to collect, curate and scientifically describe the specimens in his vast collections of not only birds and butterflies but numerous other animals that he had in his museum. [1]

Walter Rothschild riding a Giant Tortoise [1, 3]

Walter Rothschild's accomplishments in the fields of entomology and ornithology were immense in that he and his staff collected the following: *"...300,000 bird skins, 200,000 bird eggs, 2,250,000 butterflies, and 30,000 beetles..."*. [1] In order to increase his zoological holdings for his museum he also collected thousands of other animals, including mammals, reptiles and fish. [1]

In terms of his contributions to the literature Walter Rothschild's name is in the scientific nomenclature of *"...153 insects, 58 birds, 17 mammals, three fish, three spiders, two reptiles, one millipede, and one worm..."* [1]

His museum housed the largest natural history collection amassed at that time in the world. The museum was open to the public. In 1932 most of his bird collection was sold to the American Museum of Natural History due to his legal problems and upon his death in 1937 he willed all the specimens (birds and all others) in his museum to the British Museum in London. [1]

Note: Lionel Walter Rothschild has the title of Baron which he inherited from his father Nathan Mayer Rothschild (1840 - 1915) who was 1st Baron Rothschild. [1, 2] The title Baron is the lowest rank in the British peerage (member of the nobility in Britain or Ireland). The order of nobility rank from highest to lowest is: Duke, Marquess/Marquis, Earl, Viscount, and Baron. [5]

References

1) http://en.wikipedia.org/wiki/Walter_Rothschild_2nd_Baron_Rothschild
2) http://en.wikipedia.org/wiki/Nathan_Rothschild_1st_Baron_Rothschild
3) {{PD-US}} published in the US before 1923 and public domain in the US
4) http://www.businessinsider.com/the-early-rothschilds-built-a-fortune-2012-12
5) http://www.edwardianpromeanade.com/resources/titles-and-orders-of- precedence/

MY EXPERIENCES WITH BUTTERFLY IMAGERY IN CONTEMPORARY INDIGENOUS CULTURES. PART 1: MESOAMERICA

BY

GARY NOEL ROSS

My graduate research in the Department of Entomology, Louisiana State University (1962-1967), was conducted in the Sierra de los Tuxtlas. Commonly referred to as "Los Tuxtlas," the sierra is an isolated volcanic range rising from the Gulf coast of southeastern Veracruz, Mexico, just north of the Isthmus of Tehuantepec. For my initial visit in 1962, I had teamed up with Robert F. Andrle, a doctoral student in the Department of Geography (LSU) who was researching the biogeography of the area. During October of that year, Robert and I were investigating the poorly known area identified as Volcán Santa Marta. There we happened upon an American family, John and Royce Lind, who were living among the Sierra Popoluca (Popoluca de la Sierra), a small indigenous culture centered on the pine-clad ridges radiating down the leeward flanks of the dormant volcano.

The Linds were associated with the Summer Institute of Linguistics (SIL, currently identified as SIL International) and Wycliffe Bible Translators (WBT). John and Royce and their four children had entered the village in 1961 in order to study the unwritten Popoluca language and eventually to translate much of the Bible from Spanish into the native dialect. (SIL-WBT personnel also act as de facto medics in their host cultures.) The Linds occupied a simple adobe residence in the village of Ocotal Chico ("Little Piney Ridge"). Because of the family's gracious hospitality, Robert and I had the exceptional opportunity for several days to investigate the previously unrecorded pine ecosystem of the Sierra. But equally important was my introduction to an indigenous culture. That initial contact initiated what would become my lifelong passion for ethnobiology, specifically how indigenous peoples relate to butterflies.

Most of my entomological research from my graduate and post-graduate days has been published in scientific and popular commercial periodicals (for specific citations see REFERENCES in Ross 2010a, b, c). Much of my later ethnobiological work in Oaxaca, Mexico, with natural dyes and handwoven textiles—some of which incorporate butterfly images from pre-conquest Aztec culture—has been documented as well (see REFERENCES in Ross, 2012a, b). But I have purposefully avoided discussing a major but highly personal period of my ethnobiological work, namely the mid to late 1970s. I now have the candor to reflect on and share that hiatus. Here is my candid story.

After completing my schooling, I began employment in the Department of Biological Sciences at Southern University, Baton Rouge. During vacation periods I often traveled to Mexico to visit with the Linds, the family that had hosted me while in Los Tuxtlas. At this period, the Linds were still in Mexico but were splitting their time between SIL-WBT centers in Mexico City and Mitla, Oaxaca. During my periodic visits, I became acquainted with numerous personnel who were working in many of Mexico's small and isolated indigenous cultures recorded as having no written languages. Often the linguists-missionaries would bring from the field samples of handicrafts—especially baskets and other reed/grass articles, pottery, and cotton/wool weavings of clothing and accessory items. The intent was to market the items to generate badly needed cash for the artisans that were living in insular communities. Already endowed with a propensity for collecting butterflies, I could not resist purchasing many of these handicrafts, especially those featuring butterfly designs.

Summer 1972. Now financially solvent, I designed and contracted to build my first residence—a place to not only live but that would be an imaginative de facto mini-museum to showcase my ever-increasing collections.

But then my world was turned upside down. April 11, 1975. At the age of 35, I was diagnosed with a second occurrence of cancer. (Previously, in February 1970, I had been diagnosed with a deadly form of cancer known as a seminoma. My treatment involved surgery followed by massive cobalt radiation. Following treatment I remained free of symptoms for the ensuing years.) The biopsy in 1975 indicated embryonal carcinoma, another potentially deadly form of tumor with no relationship to a seminoma—and therefore, another primary tumor. Over the next few days I underwent two surgeries: orchiectomy and a radical lymph node dissection of the dorsal abdomen. After, I began chemotherapy, a regiment that was to consist of five-day treatments every three months for two years. (NOTE: Today treatments for seminoma and embryonal carcinoma are very successful with a survival rate of nearly 100%. However, in the 1970s, my prognosis was grim, very grim indeed.)

The side effects of the chemotherapy were so severe that I became despondent, depressed. In response, I decided in late summer that I would discontinue further treatments. Needless to say, this decision was not greeted well by my physicians or by my family (mother/father). I shared this decision with John and Royce Lind—who were stationed in Mitla, Oaxaca. The Lind's response: "Why don't you join us here in Mitla. Because Oaxaca is the folk art capital of Mexico, why don't you come stay with us and enjoy what you love most—Mexican butterflies and handicrafts."

My response was equally direct: YES! After being granted medical leave from my teaching position for the entire 1975 fall semester, and against the wishes of all concerned, I bordered a plane to Mexico to spend what I and others assumed were my "End of Days."

That decision was fortuitous—in truth, the most important I have ever made. First and foremost, I did NOT die! Additionally, the connections I made with SIL-WBT personnel during my five month residence at Mitla between August 1975 and January 1976, and again during the summer of 1978 rekindled my love for ethnobiology in indigenous cultures.

Let me explain.

Oaxaca is the most mountainous of Mexico's 31 states and federal district. This rugged topography, as with that of New Guinea, has led to the isolation and diversification of indigenous peoples. As a result, Oaxaca lays claim to Mexico's most numerous political

MAF airplane fueling for flight into isolated mountain village. Gary on right (1975). Mitla, Oaxaca, Mexico.

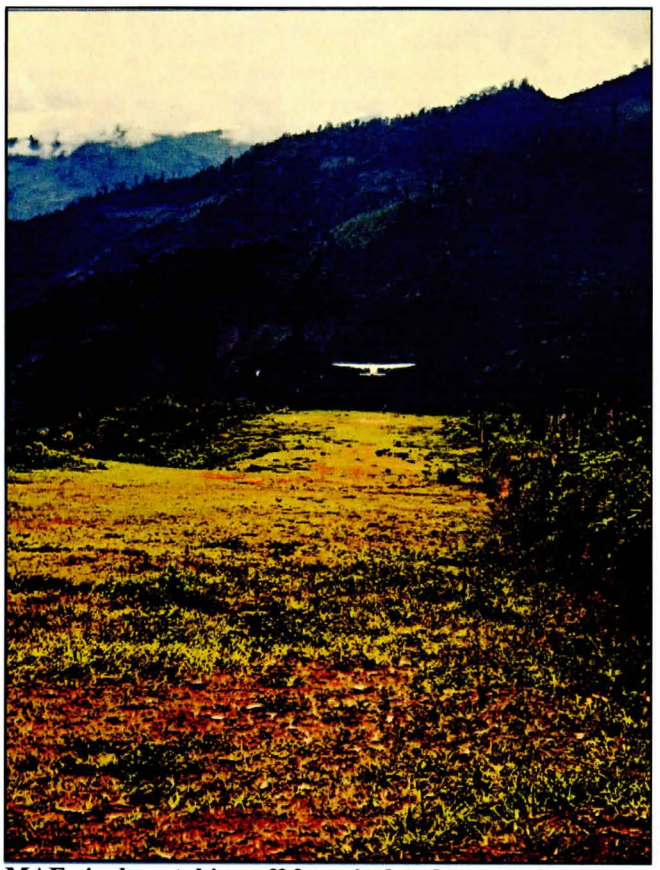
divisions and to a whopping number of diverse cultures and languages. Even though the vast majority of the state is mountainous, the central sector is a broad mile-high plateau that fostered the development of two robust pre-conquest cultures: Zapotec and Mixtec. Several of the ancient ceremonial centers—Monte Albán, Mitla, Yagul, Zaachila, for example—are now popular national archeological zones. Later, from colonial times to the present, the plateau has experienced the development of two Spanish-Zapotec dominated metropolitan centers: Oaxaca City (capital of the state), and Mitla (a town built around a partially restored archeological site of the same name and of Zapotec and Mixtec heritage).

MAF helicopter landing in mountain village (1975). Oaxaca, Mexico. MIXTEC.

The SIL-WBT center at Mitla was founded to accommodate missionaries entering and returning from isolated field sites. Mission Aviation Fellowship (MAF), a Christian-based, non-profit, worldwide organization that provides transportation for mission-based groups and colleagues, maintained at Mitla a single-engine aircraft (CESSNA 170 series) and a small helicopter to access those cultures that were too isolated to be reached by road. Over my five-month tenure, I was able to visit with many linguists working throughout much of central and southern Mexico. Additionally, the center provided support personnel as well as supplies and equipment for translators involved in off-site linguistic work. And because John Lind was the acting "Field Coordinator" for the center, I had an easy introduction to those field workers who might be interested in sharing their experiences with me about wildlife and the handiwork of their individual cultures. Those conversations proved pivotal for my interests. Additionally, many of the linguists actually offered to host me in their respective villages for a short period of time. Without second thought, I jumped at every opportunity.

To summarize those experiences of 1975-1976, 1978, let me begin by stating that I was able to gather ethnobiological information on no less than 16 indigenous cultures: Aztec, Chinantec, Cora, Cuicatec, Huave, Huichole, Mayo, Mazahua, Mixe, Mixtec, Otomi, Popoluca, Seri, Trique, Zapotec and several subcultures of Maya in Yucatan and Chiapas. The dialogues proved insightful. I learned, for instance, that these cultures while today only mere shadows of their former selves, still resound collectively with a specter of butterfly worship. By that I mean a belief that living butterflies connect the physical world to the spiritual

realm by transporting the human spirit from the physical world to the blissful afterlife—metaphorically, but in some cases, literally as well. Many ancient artifacts

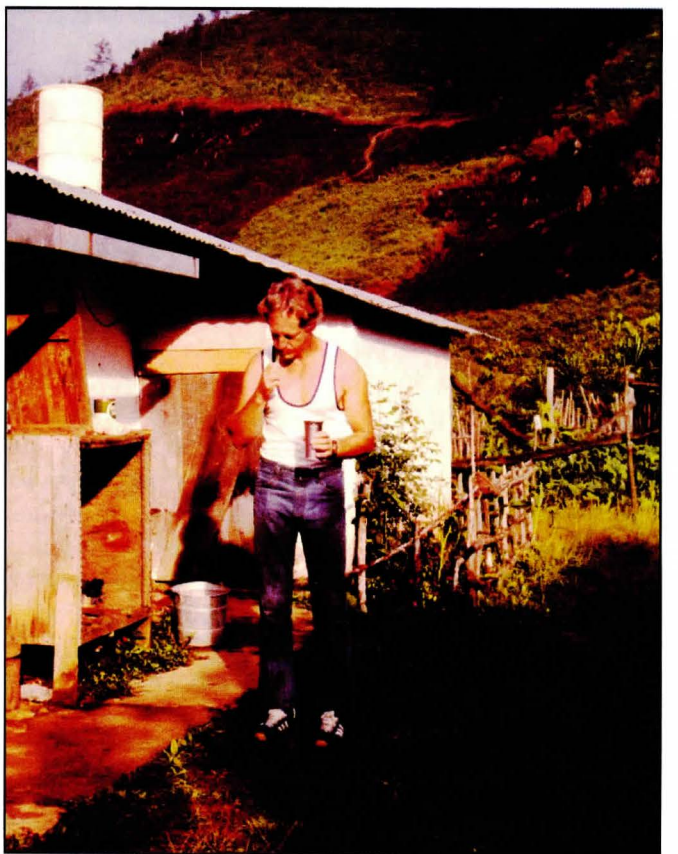


MAF airplane taking off from isolated mountain village (1978). Oaxaca, Mexico. CHINANTEC.

depict visages of a composite of butterfly-human: a butterfly body and wings with a human head (sometimes hands as well). [There was a dark twist to this ancient scenario: Deities sometimes were malevolent. Images were often rendered stark, frightening. For appeasement, periodic gifts such as food, drink, and precious stones and metals had to be offered. In some circumstances, though, human sacrifice and blood letting were required. Still today, gifts are frequently offered to spirits of the dead who return as butterflies on *Dia de Muertos* (Day of the Dead)—November 1-2. Fortunately, the more severe practices were abandoned centuries ago.]

Shortly after getting settled into a comfortable cottage at SIL-WBT headquarters on a hillside on the outskirts of Mitla, I began my education into Oaxacan folk arts. First, I visited major markets in Mitla, Tlacolula, and Oaxaca City. Because these sites were located on paved roads, I could travel by local bus, taxi, and hitch rides in private vehicles owned by local SIL-WBT personnel. In Oaxaca City several families (mainly women and their children) from the Trique culture (centered in Oaxaca's western mountains in the municipality of Tlaxiaco) set up displays each day in the main square (*zócolo*). There the women, who were clothed in their vibrant traditional dress, demonstrated their adept weaving on the backstrap or "stick" loom (a one-person weaving device dating back to the pre-conquest era). The loom derives its name because one end is strapped to the waist or buttock of the sitting weaver while the opposite end is attached to a stable support, say a post or tree; the implements are actual dried sticks. The Trique women often were accompanied by their husbands and children. The aura created by the presence of the Trique families was a prime attraction for tourists. But because the Trique women understood little or no Spanish, they had to rely on their more savvy bilingual husbands and older children to negotiate any sales of merchandise—primarily light-weight ponchos and small swaths of cloth for wall display. I spent many hours on many days sitting on a bench surrounded by a kaleidoscope of colors in order to soak up the ambience of the unique and intimate transcultural and trans-dimensional experiences occurring before my eyes.

From these market experiences, I soon learned the origins of specific crafts. Villages included: San Bartolo de Coyotepec—noted for black clay pottery and other ceramics, especially those of Doña Rosa de Nieto and her son Don Valente Nieto; San Juan Guelavía—noted for baskets and cane-woven items; Santa María Atzompa—noted for green-glazed ceramics and the non-



Gary (brushing teeth) in isolated mountain village (1978). Oaxaca, Mexico. CHINANTEC.

glazed whimsical ceramics of Teodora Blanco Núñez; Santo Tomás Jalieza—noted for wool *cinturones* (belts)

woven on small backstrap looms; and Teotitlán del Valle. In this last village, which is located just off the Pan-American Highway between Oaxaca City and Mitla, several master weavers specialize in reproducing images of pre-conquest artifacts such as mural paintings in temples, stone carvings associated with temples, paintings on ceramics, and designs from ceramic stamps used to emboss small surfaces. Many of these ancient images are of butterflies. Admired since pre-conquest times for their acumen with production of natural dyes and textiles, the Zapotecs of Teotitlán del Valle continue

SIL-WBT missionary/translator in isolated mountain village examining local weavings for quality and to advise Gary (1978). Oaxaca, Mexico. CHINANTEC.

to this day as master weavers in wool on the European four-poster loom introduced by post-conquest Catholic missionaries. Many of these beautiful textiles are so creative and so well-crafted that their reputation has soared to international fame. (See Ross 2012a, b in REFERENCES.)

All extant communities on the Oaxacan plateau are Zapotec. However, each is dominated by a unique dialect, and each has a distinct word for butterfly. If villages were accessible by a good road, I eventually was able to visit. Later, I set my goals on more out-of-the-way places that my SIL-WBT friends had invited me. My travel included flights by MAF, rides in the backs of commercial supply trucks, and rides in private four-wheel drive vehicles accompanying SIL-WBT personnel. All experiences were educational, exhilarating—a fairytale come true. But some of the flights were downright spine-tingling. For instance, virtually each time we approached a mountain village in the plane, we had to circle at a low elevation several times in order to frighten away grazing livestock from the short runway (the grassy track usually ended abruptly at a precipitous drop-off). The helicopter flights were especially scary, too, because the bottom of the aircraft was see-through plastic—giving one a bird's eye view of everything below. Although I did at times become a bit queasy, I never experienced full motion sickness. Another bonus was that all flights were without mishap!

My unorthodox entrance into these isolated indigenous cultures created quite a stir for the locals. Of course, everyone asked: "Why are you here?" And once told that I was interested in butterflies, I often was regarded as a shaman (witch doctor) or at the very least, someone with mystical powers. At first this created some hostility. But my SIL-WBT hosts quickly dispelled that by claiming that I was collecting butterflies to share their beauty with my family and friends "across the big waters" (you have to realize that the concepts of scientific study and museum collections were totally unknown within these cultures). Within short time, most folks began to feel comfortable around me. At this point, they were eager to share their experiences about butterflies (through, of course, translations by my SIL-WBT hosts). I quickly learned that while most of these current cultures still revere butterflies for their beauty and as the repository of departed souls, butterfly worship has been significantly downgraded to occasional expressions of artistic, stylized butterfly forms to adorn utilitarian objects such as ceramics (cooking pottery, ceremonial urns, platters, statuary), baskets and hats, and

Zócolo with traditional backstrap weavers demonstrating their craft (1975). Oaxaca City, Oaxaca, Mexico. TRIQUE.

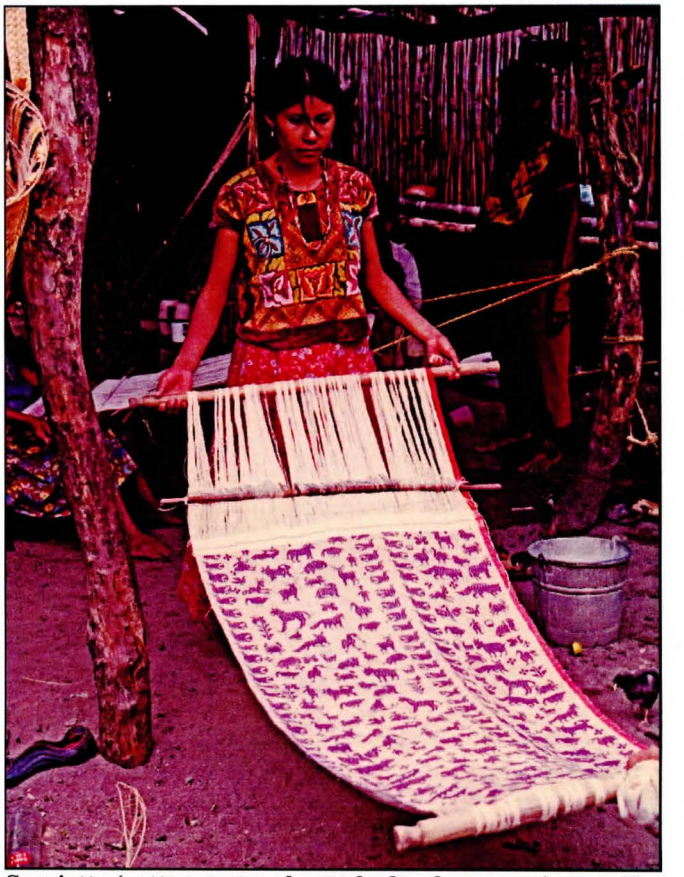
textiles such as blouses (*huipiles*), skirts (*bordes*), shawls (*rebosos*), belts/sashes (*fajas/cinturones*), blankets (*serapes*), jackets (*ponchos*), pants (*pantalones*), carrying bags (*morrales/bolsas*) napkins, wrappings for food/valuable possessions (*serviettes*), musical instruments, children's toys (wood, ceramic), masks, gourds, wooden culinary utensils, and miscellaneous types of cloth for wrapping items to be blessed.

But purchasing examples of original handcrafted items from people who previously had never marketed anything to anyone, presented a new challenge to the

Basket (palm) from market in Oaxaca City, Oaxaca, Mexico. AZTEC.

Serviette (cotton natural purple dye from marine snail). San Mateo de Mar, Oaxaca, Mexico. HUAVE.

artist: What to charge? To complicate matters further, I decided to collect examples of uncompleted cloth still on the backstrap looms. And that meant that I wished to purchase all the "sticks" that constituted the loom. Now I faced another dilemma. Turns out some of these implements were antiques and favorite weaving utensils, ergo, in Western parlance, cherished family heirlooms. But with time, my linguist hosts and I were able to convince a number of weavers that the money that ensued from the sale was sufficient to cover the cost and time of crafting a new loom. And so, after hours of discussions, I usually was able to complete a transaction involving unfinished cloths on their fully operational looms.

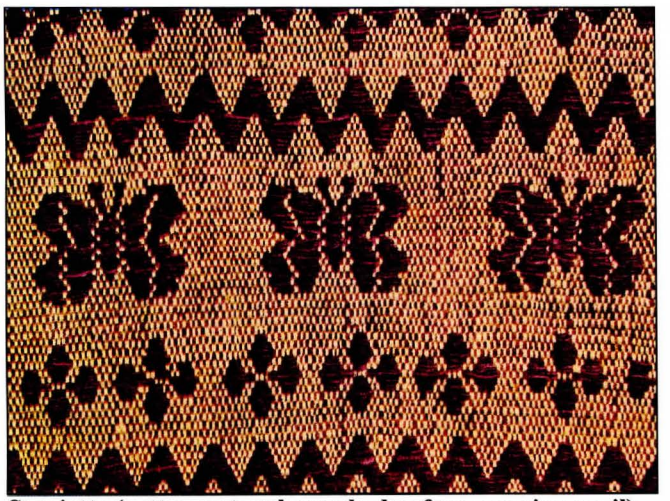


Serviette (cotton, natural purple dye from marine snail), unfinished on backstrap loom (1975). San Mateo de Mar, Oaxaca, Mexico. HUAVE.

To my regret, however, butterfly images as well as images of any flora and fauna were not common in spite of the fact that virtually all villagers were aware of the mystical symbolism of the insect. I attribute this scarcity due to the fact that images of nature usually feature an abundance of arcs or curves. By contrast, angles that dominate geometric designs are far easier to create on any loom. And so, geometric designs dominate the majority of weavings. Nevertheless, some complex floral and faunal designs can be found. Common figures include flowers, birds (including the two-headed eagle), deer, monkeys, lizards, and even domestic animals—pretty much anything that occurs in the home environment. From my observations, I conclude that of all the cultures in Oaxaca that I visited, the Huave of San Mateo del Mar on the mild Pacific Coast of the Isthmus of Tehuantepec have a particular flair for incorporating insect designs (including butterflies) in their colorful cotton-based textiles. The Huaves favor the color purple since the dye is derived from a local Pacific marine snail (Muricidae). Often the depictions are highly stylized, in caricature, parody. I offer the following as a plausible explanation: Because the Huave inhabit a coastal area in a tropical environment, their homeland is extraordinarily rich in butterflies, especially of the family Pieridae (sulphurs and whites). By contrast, nearly all other cultures in Oaxaca occupy mountainous terrains that are

less rich in conspicuous butterflies. I suggest, therefore, that the natural abundance of butterflies in Huave communities has played an important role in the artistic expressions of the culture. [NOTE: Those readers who follow the popular television series "Survivor," which aired in Fall 2010, Spring 2011, and Fall 2014, will recall

Serviette (cotton natural purple dye from marine snail). San Mateo de Mar, Oaxaca, Mexico. HUAVE.



Serviette (cotton natural purple dye from marine snail). San Mateo de Mar, Oaxaca, Mexico. HUAVE.

that almost every scene in which the camera captured background vegetation, myriad butterflies—particularly pierids—could be seen fluttering about. Turns out that these three seasons of the series were filmed on the Pacific coast of Nicaragua near San Juan Del Sur, an ecological region not too distant and not too dissimilar from that of the Pacific coast of Oaxaca and the Huave homeland.] Today I view my collection of looms as my most prized acquisitions from the period. Upon my death, all will be donated to the McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, Gainesville.

That said, what about actual butterflies? Because my visits to most villages involved transportation via small aircraft carrying cargo for an SIL-WBT family, my personal supplies had to be very limited—in fact, each item had to be individually weighed to make sure the maximum carrying capacity of the aircraft was not exceeded. Furthermore, because my primary goal was the collection of textiles, in most cases I had to forgo transporting my butterfly collecting equipment. As a result, I collected relatively few specimens—approximately one hundred—and photographed even fewer (remember, the photo equipment of the era) during my five-month residency in Oaxaca. These specimens were papered, dried, and later mounted upon my return to the U.S. I did, though, demonstrate my expertise in entomology with the children of my host families. Each day, for example, I conducted short informal classes, and when the weather was fair, I organized field walks of discovery for the missionary children. And because my hosts were able to translate my comments into the dialect of the culture, the locals often participated in the walks. Given that I could recognize most conspicuous butterflies (at least to family and/or genus), I usually was able to attach some name to each. (I was surprised to learn that in a few instances, the villagers had specific local names for several species.)

In 1978 I had regained most of my weight, strength, and resistance to microbes (during my earlier trip to Oaxaca I was plagued with bouts of gastrointestinal infections

Serviette (cotton). San Mateo de Mar. Oaxaca, Mexico. HUAVE.

with fevers that were likely brought on by my compromised immune system due to recent chemotherapy). This sparked my plans for another trip south. The result was a summer-long road trip in my camper pickup through Mexico and into Guatemala. My intent was to collect only textiles—no butterflies. My target areas were the highlands in the Mexican state of Chiapas and finally central Guatemala, the principal homelands of the ancient and current Maya. My SIL-WBT friends had given me the names of several associates who were working in the region and who would be delighted to host me.

In Chiapas, I headquartered in San Cristóbal de las Casas, a picturesque colonial town situated in a small valley at an elevation of 7,200 feet (2,200 meters) in the state's central highlands. The town is the cultural capital of the state whereas Tuxtla Gutiérrez, at the much lower

Tourist shops marketing traditional Maya clothing and crafts (1976). San Cristóbal de las Casas, Chiapas, Mexico.

Butterflies (clay, fired with wood). Amatenango del Valle, Ciapas, Mexico. MAYA.

elevation of 1,713 feet (522 meters) and closer to the Mexican border, serves as the political capital. San Cristóbal is the market town for the numerous distinct villages surrounding the town. Every day except Sunday is market day. Beginning at dawn, the cool morning air began to buzz with the sounds of dozens of people milling about and setting up their stalls to sell their produce—everything from raw vegetables, live animals, raw meat, meals cooked on the spot, to hand-crafted items—especially textile and leather products. The distinctive subcultures of the Maya (Tzeltal and Tzotzil, for example) who lived in nearby Tenejapa, Chamula, Huixtán, and Zinacantán were especially visible because of their distinctive dress.

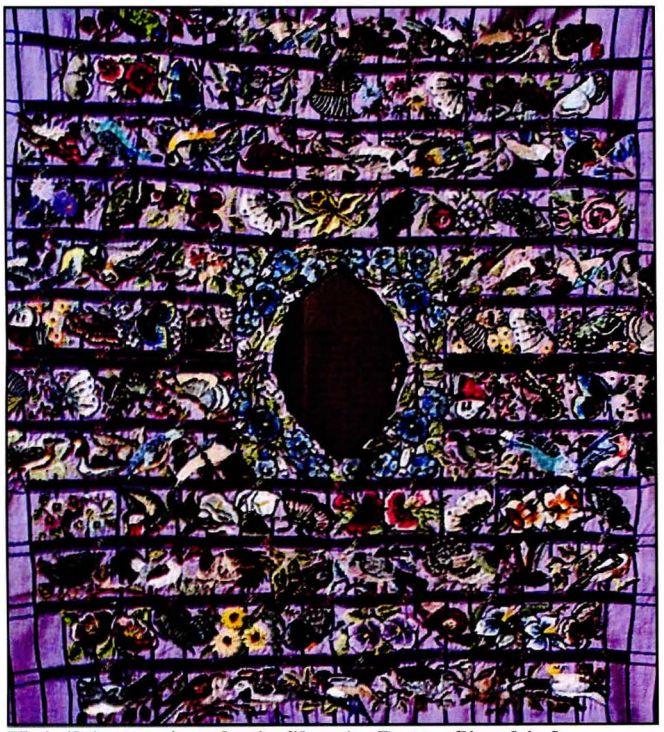
In 1978 tourism in the highlands of Chiapas was limited to San Cristóbal. But because of my SIL-WBT connections, I was able to travel safely into a number of villages. My mode of transportation was basically rural buses and the backs of supply trucks. These visits allowed me to secure a good sample of textiles still in

Young woman in traditional dress (1976). Tenejapa, Chiapas, Mexico. MAYA.

the process of being woven. A few of these even featured butterfly motifs. Within the city I visited *Casa Na Bolom*, a Mayan name meaning ("Place of the Jaguar"). The original structure was the former home of Frans Blom and Gertrude Duby Blom, early archeologists, journalists, and photographers in the region. Today the structure is a museum devoted to the culture of the Maya. There I delved into that world—both past and present. [As an aside, the name *Na Bolom* was my inspiration for identifying my home in Baton Rouge with the Maya term *Na-Pepen* ("Place of the Butterflies").]

Following a lengthy stay in Chiapas, I continued my journey into Guatemala and the world of the Maya. My excursions took me to Huehuetenango (in the highlands of western Guatemala), Sololá (a market-town on a mountainside overlooking picturesque Lago Atitilán), San Tomás Chichicastenango (a highland village noted for its ancient Mayan rituals and a marketplace for virtually all types of produce and handicrafts from the numerous surrounding mountain villages), and Tikal (a massive Mayan archeological zone in the rainforests of El Petén). Later, I headquartered in Guatemala City to visit museums and to ferret out local experts on textiles. To my surprise, I was able to meet with a German

Gary (middle) with two new traditionally dressed friends (1978). Todos Santos, Guatemala. MAYA.



Huipil (cotton/synthetic fibers). Butterflies, birds, flowers. Santiago Atitlán, Guatemala. MAYA.

Huipil (cotton/synthetic fibers). Butterflies, birds, flowers. Santiago Atitlán, Guatemala. MAYA.

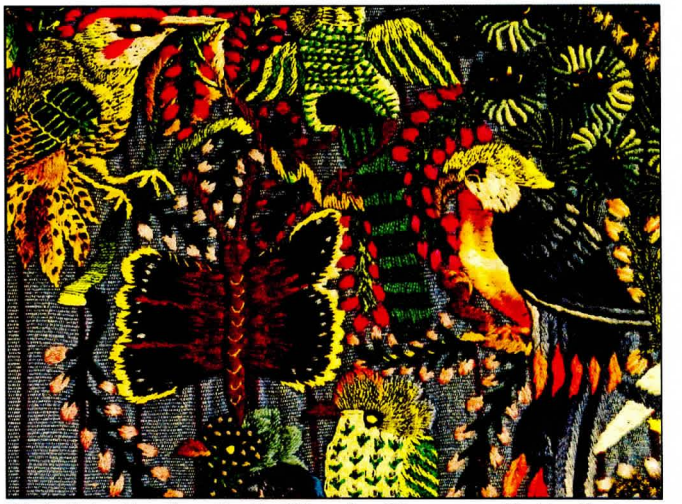
expatriate who was willing to sell me several items from his treasure trove of antique textiles—a blessing for me.

My conclusion? The Maya have always venerated the butterfly—unequivocally. The butterfly image—highly stylized or easily recognizable—is common in both artifacts and contemporary arts and crafts. (Oddly, two common, large species with conspicuous underwing eyespots—*Morpho* and *Caligo*—are not depicted.) And while the most habitual image in artwork throughout Guatemala is the Quetzal (a spectacular bird of the highland mountain forests that lends its name to the national logo and the unit of currency), the butterfly figure is also very common—most often in textiles and frequently in combination with images of flowers and birds. This, I think, is not coincidental. Specifically, the Maya civilization at its peak was historically centralized in tropical lowlands such as the Yucatán Peninsula of Mexico, El Petén of Guatemala, Belize, and western Honduras. As with coastal Oaxaca, these areas are rich in colorful flowers and wildlife, particularly, birds, and insects. And so, like the Huave of Oaxaca, the Maya utilized nature in their immediate environment as inspiration for creating their original art and crafts for daily life. Those historic patterns are honored to this day regardless of where the Maya make their home. At any rate, that is my hypothesis.

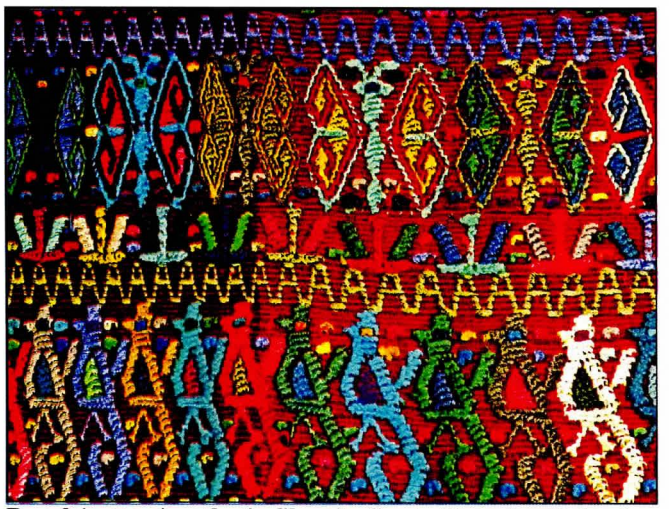
[Following 1978 I revisited Oaxaca and Chiapas: principally in 1980, 1982, 1983, and Guatemala: 1980, 1984, and as recently as 2006. My primary goal was to collect textiles, many of which feature butterfly motifs. I must note here, too, that one of the currently most popular handicrafts from Oaxaca is termed *alebrijes.* These are small woodcarvings of animals—including butterflies—and plants that are elaborately painted to provide a whimsical appearance. This original art form is new, dating back to only about 1980 with the Manuel Jimenez family living in a suburb of Oaxaca City. Such creations, of course, were unknown to me during my early visits.]

Today the world is a very different place. Many of what in my professional salad days were small out-of-the-way villages barely known to the outside world have now entered the twenty-first century with modern amenities (including access to the Internet) and an appeal to the burgeoning tourist trade. Many of the fine hand-crafted articles that were so emblematic and historically telltale for each culture are no longer crafted, or if so, are now of lesser quality because they are targeted for the commercial market—including naïve tourists searching for souvenirs. Of course, modernization and technological advances within such previously isolated cultures have had their rewards. But as I reflect on my experiences now decades in the past, I wane nostalgic for that bygone charisma. My time in such exotic,

Huipil (cotton/synthetic fibers), antique. Close-up of collar with butterflies and birds. Santa Catarina Palopó, Guatemala. MAYA.



Huipil (cotton/synthetic fibers). Close-up. Butterfly is probably a depiction of Mourning Cloak (*Nymphalis antiopa*). Santiago Atitlán, Guatemala. MAYA.



Panel (cotton/synthetic fibers). Santa Catarina Palopó, Guatemala. MAYA.

Panel (cotton/synthetic fibers), antique. Santa Catarina Palopó, Guatemala. MAYA.

Panel (coton/synthetic fibers). San Antonio Palopó, Guatemala. MAYA.

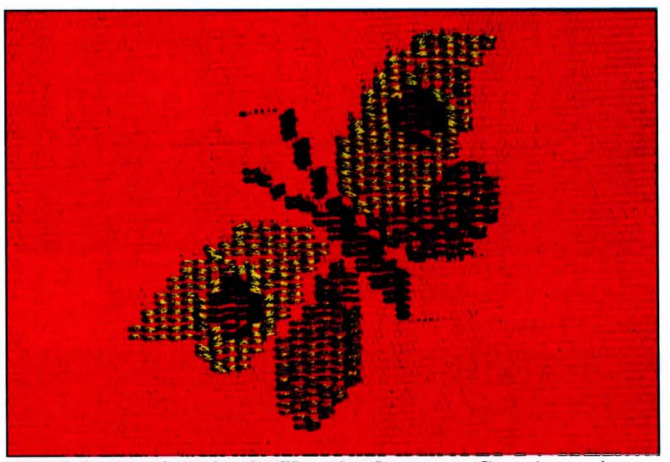
Panel (coton/synthetic fibers). San Antonio Aguas Caliente, Guatemala. MAYA.

provincial settlements provided me with unique research opportunities and a chance to rediscover my psyche, which in turn, most likely facilitated the physical healing of my body. (As an aside, to this day I have had no reoccurrence of my cancers of 1970 and 1975.)

But putting my self-centeredness aside, there is something else. I hope that my early visitations with peoples—most of whom previously had limited contact with outsiders—inspired some degree of cross-cultural understanding that proved beneficial and that is still extant. I know I have I have a deepened, visceral respect for the "Family of Man," or to quote from a popular 2006 advertisement by THE DOW CHEMICAL COMPANY—"The Human Element."

NOTE ABOUT PHOTOGRAPHS: My images of outdoor activities were digitized from original 35 mm Kodachrome 25, 64, and Ektachrome 100 transparencies. Images of artwork were made with a digital camera (Pentax X70, 12 megapixel).

Panel (cotton/synthetic fibers). San Antonio Aguas Caliente, Guatemala. MAYA.

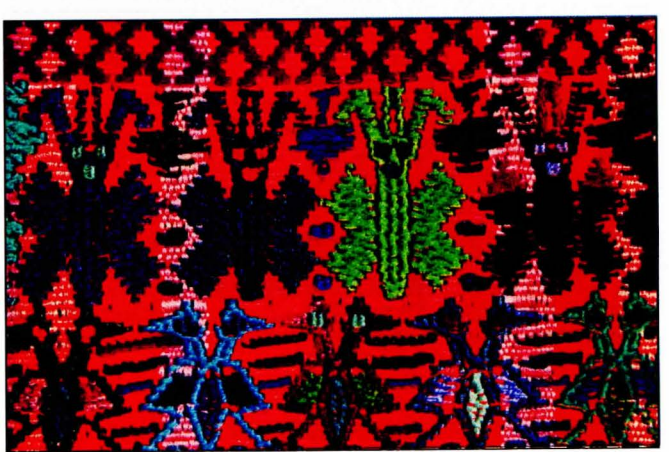


Panel (cotton/synthetic fibers), close-up. San Antonio Aguas Caliente, Guatemala. MAYA.

Panel (cotton/synthetic fibers), close-up. San Antonio Aguas Caliente, Guatemala. MAYA.

Panel (cotton/silk fibers), antique. Almolonga, Guatemala. MAYA.

Sash (cotton/synthetic fibers), close-up. Santa Catarina Palopó, Guatemala. MAYA.



Sash (cotton/synthetic fibers). Santa Catarina Palopó, Guatemala. MAYA.

Logo (tiles) in brick wall of Gary's estate. *Na-Pepen* is Maya for "Place of the Butterflies" and "Casa de las Mariposas." Central figure is of a pre-Columbian Aztec butterfly image on a clay stamp. Baton Rouge, Louisiana.

REFERENCES

Beutelspracher, C.F., 1988. *Las Mariposas entre los Antiguos Mexicanos. Fondo de Cultura Economica.* Tezontle. Mexico, D.F. Mexico. 103 pages.

Cordry, D. and D., 1968. *Mexican Indian Costumes.* University of Texas Press, The Texas Pan American Series. Austin, TX. 373 pages.

Manos-Jones, M., 2000. *The Spirit of Butterflies: Myth, Magic, and Art.* Harry N. Abrams, New York, NY. 144 pages.

Morris, W.F., Jr., 1987. *Living Maya.* Harry N. Abrams, Inc. New York, NY. 224 pages.

Nazari, V., 2014. Chasing Butterflies in Medieval Europe. *Journal of the Lepidopterists' Society*, Vol. 68(4):223-231.

Pettersen, C.L., 1976. *Maya of Guatemala: Life and Dress.* Ixcbel Textile Museum, Guatemala City, Guatemala. 274 pages.

Ross, G.N., 2010a. Caterpillars, Ants and Populuca (sic) Indians: An Adventure in Remote Mexico. *News of the Lepidopterists' Society,* Vol. 52(1): 34-41, 44.

Ross, G.N., 2010b. Corrections please! In: The Mailbag… Letters to the Editor. *News of the Lepidopterists' Society* Vol. 52(2): 69, 72.

Ross, G.N., 2010c. Living with the Popoluca: Another Adventure in Remote Mexico. *News of the Lepidopterists' Society,* Vol. 52(4):118-127.

Ross, G.N., 2012a. Threads of Tradition: The Butterfly Motif in Mexico's Zapotec Tapestries. *News of the Lepidopterists' Society,* Vol. 54(3): 98-103.

Ross, G.N., 2012b. Zapotec Butterfly Tapestries: A Legacy of Pre-Columbian Mythology. *Southern Lepidopterists' News,* Vol. 34(4): 197-214.

Whitecotton, J.W., 1977. *The Zapotecs: Princes, Priests, and Peasants.* University of Oklahoma Press, The Civilization of the American Indian Series. Norman, OK. 338 pages.

(Gary Noel Ross, 6095 Stratford Ave., Baton Rouge, LA 70808, USA; E-Mail: gnross40@yahoo.com)

****

****

Dear SLS Members:

Spring is upon us and hopefully the snow and ice will eventually go away. This obviously means that many of us will be out in the field doing what we enjoy, whether collecting or photographing or just observing the lepidoptera in nature. This then brings up my request. Please consider writing an article, long or short, or photographing what you find interesting during your travels observing butterflies and moths. I always need material for our newsletter. Best wishes, and many thanks . The Editor.

CHAIRMAN'S REFLECTIONS: ON REGIONAL LEPIDOPTERISTS' SOCIETIES

Shortly after its founding in 1947 a number of West Coast members of the Lepidopterists' Society began meeting informally in the field each year. The group had no newsletter, and no real organization. Different active field lepidopterists have stepped up to organize and gather people together in different localities for fellowship and the enhancement of collections of specimens and data. They called themselves the "Pacific Slope Section" of the Lepidopterists' Society. Information from participants have been used in both taxonomic and faunistic publications over the years. Furthermore, an award for outstanding contributions to West Coast lepidopterology was established in honor of Dr. John Comstock, the devoted mentor at the Los Angeles County Museum of many California lepidopterists - some of whom have gone on to become professional scientists and major contributors to our knowledge of butterflies and moths. Many of our noted amateur and professional lepidopterists are proud and worthy recipients of the Comstock Award, which is usually bestowed every other year at Society annual meetings, alternating with the Karl Jordan Medal.

While field trips have long been a major part of annual meetings of the Lepidopterists' Society, those meetings last only a long weekend per year, and sometimes are in locations where amateurs cannot afford to go. As the West Coast lepidopterists knew, additional organized field trips were desirable. Also, steady focus on the fauna of a particular state or region has been needed, often for preparation of books on the butterflies and moths of those states or regions. Groups both large and small, formal and informal, have existed where "two or three are gathered together" to share the joys of entomology.

In 1971 I tried to enumerate aspects of our passion ("The Perfect Hobby", *News* of the Lepid. Soc. 1971: 5-6). Focusing on amateur interests, part of my argument was that fellowship with other lepidopterists, maybe a touch of friendly competition, and working toward a goal such as a state checklist/faunistic study gives a sense of contributing to science. Other advantages are vigorous exercise, the thrill of the hunt, enjoyment of the outdoors in general, pleasures of travel near and far, and the beauty of specimens well prepared. While I entered this field as a collector, there are equally satisfying non-collecting aspects one can enjoy, such as rearing, photographing, writing and describing new taxa, and just watching and recording identifications. Even collecting Lepidoptera on stamps and postal history is a rewarding variation on the theme.

The Lepidopterists Society was founded by Charles L. Remington and Harry K. Clench in May 1947 to "Promote the scientifically sound and progressive study of Lepidoptera by (1) publishing a periodical on Lepidoptera, and (2) facilitating ***the exchange of specimens and notes by both the professional worker and the amateur in the field.***" The blending of the amateur's passion for collecting, rearing, photographing, listing and other aspects with the professional's facilities, knowledge and research efforts has been expressed mainly by mentoring. In addition to providing records and material that the professionals often have limited time to amass, the amateur has the sense of being a "citizen scientist" and learning what professional mentors can teach. The professional usually works with a large research collection at a museum or university, providing both the means for learning and the chance to contribute. A "home base" for the amateur. Added to that there are local clubs and societies, none of them exactly the same. Some entomological clubs have strong lepidopterist constituencies, and can build on this blend of like-minded individuals - from young beginners to retired professors and curators. I'll mention a few examples: the Cambridge Entomological Club, Museum of Comparative Zoology, Harvard University (founded in 1874); the Entomological Society of Washington (D.C.) at the U.S. National Museum (1884); the Lorquin Entomological Society at the Los Angeles County Museum (1913); and the Michigan Entomological Society (1954). Current societies devoted specifically to North American Lepidoptera include: The Society of Kentucky Lepidopterists (1974), the Utah Lepidopterists (1976), The Ohio Lepidopterists, The Southern Lepidopterists' Society (1978), the High Country Lepidopterists, the North American Butterfly Association (1992), and the Butterfly Society of Virginia (1992).

While each society is different in numerous ways, all are based on a common interest in either insects in general or Lepidoptera in particular. The subject of regional clubs being branches of the Lepidopterists' Society has been discussed on occasion, none have felt that such an official connection is needed. However the regional clubs and the "Lep. Soc" have provided new members for each other, and there seems to be no advantage to either for a formal connection.

I have been a member of the Lepidopterists' Society since 1951, and was led to it by my first mentor, Mr. William D. Field at the U.S. National Museum. It has been my favorite organization, and the other societies I have joined over the years have provided additional opportunities for field work, fellowship, discovery, publication outlet, and the feeling of belonging. All organizations depend on volunteers to do the chores, acting as officers (especially editor and treasurer!). Some serve for many years; others for short terms. We are lucky in the Southern Lepidopterists' Society to have had the initial leadership of Dave Baggett and many colleagues - especially our long-serving Treasurer Jeff Slotten and our devoted Editor, Barry Lombardini. Many thanks to all of you who have served our thriving organization as officers and board members during the past 36 years!

It's an honor to serve as your Chairman! Good health this year, and happy hunting.

- Cheers, Charlie

****

****

TRIPUDIA PARAPLESIA POGUE, 2009 (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA, ANOTHER NEW UNITED STATES RECORD

BY

VERNON ANTOINE BROU JR.

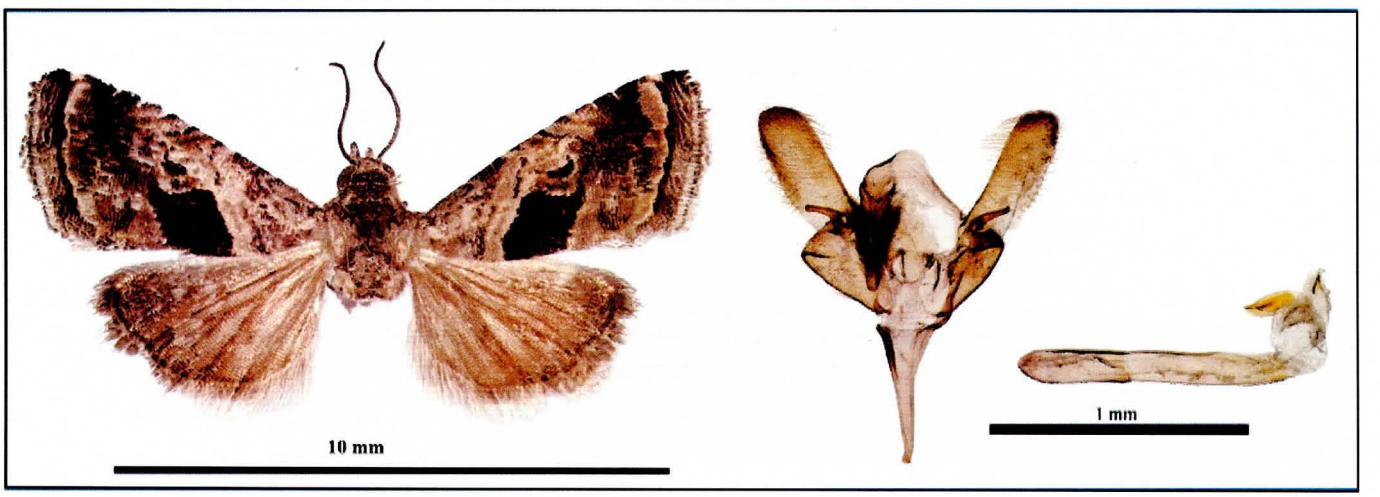


Fig. 1. ***Tripudia paraplesia*** male.

Fig. 2. ***Tripudia paraplesia*** male genitalia.

The noctuid moth ***Tripudia paraplesia*** Pogue was described from eastern Mexico (Pogue, 2009). The specimen in Fig. 1 was captured in Louisiana, Ascension Parish, Prairieville, April 24, 1974. It is distinguishable from ***Tripudia quadrifera*** (Zeller) and ***Tripudia rectangula*** Pogue only by genital characters (Fig. 2) (Lafontaine and Schmidt, 2013). These same authors (Lafontaine and Schmidt, 2013) included ***paraplesia*** to the check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. Voucher in Canadian National Collection, CNC genitalia slide #16,554. This specimen represents a new record for the state of Louisiana and the United States.

I thank Don Lafontaine for assistance in distinguishing this species among numerous specimens of this genus in my collection of Louisiana lepidoptera, and providing the images illustrated in this publication.

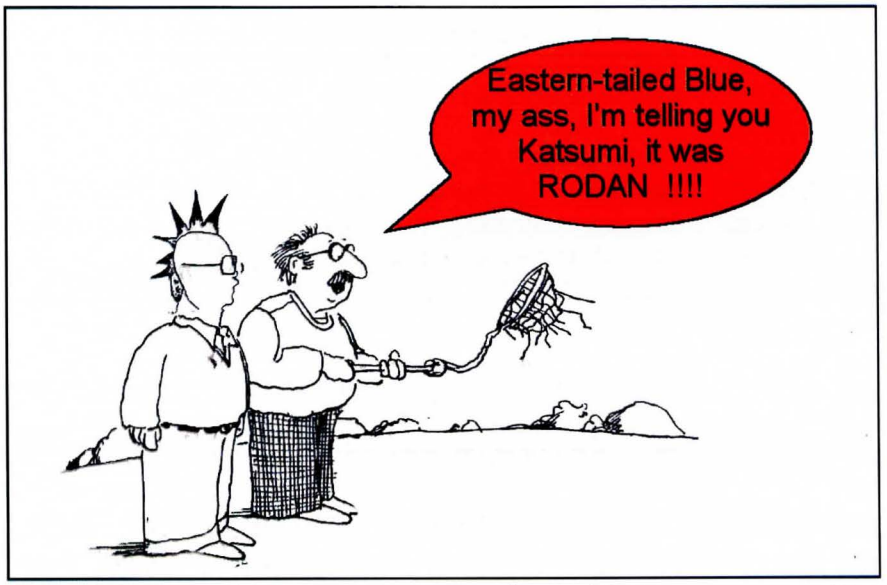
Literature Cited

Lafontaine, J.D., and Schmidt, B.C., (2013). Additions and corrections to the checklist of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. In: Schmidt BC, Lafontaine JD (Eds). Contributions to the systematics of New World macro-moths IV. *ZooKeys* 264: 227–236. doi: 10.3897/zookeys. 264.4443

Pogue, M.G., 2009. A review of the Tripudia quadrifera (Zeller) (Lepidoptera: Noctuidae) species complex. *Proceedings of the Entomological Society of Washington* 111: 68-97.

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

Vernon sends in the following cartoon.



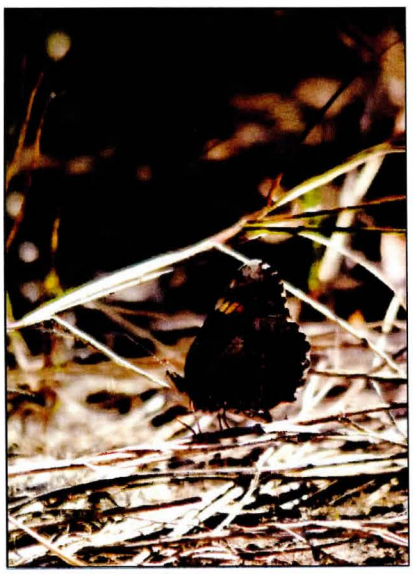
Meanwhile, near the Japanese mining village of Kitamatsu, something traveling faster than the speed of sound is found flying in the sky.

****

****

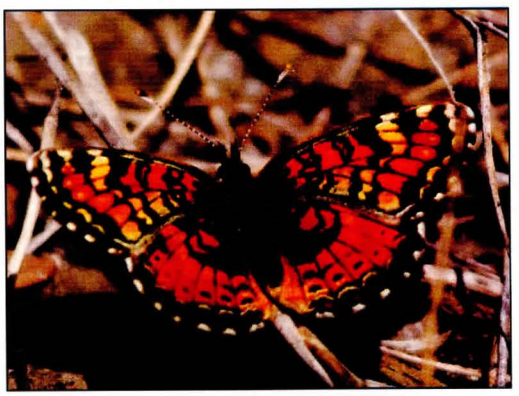
****

ABERRANT WINTER FORM OF *PHYCIODES PHAON*



Phyciodes phaon

Charlie Covell sends in these two images of an aberrant winter form of *Phyciodes phaon.* The photographs were taken by Barbara Woodmansee on February 15, 2015. Data: Merritt Island National Wildlife Refuge (Titusville, Florida).



Phyciodes phaon

****

****

POLYGONIA COMMA (HARRIS, 1842) (LEPIDOPTERA, NYMPHALIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

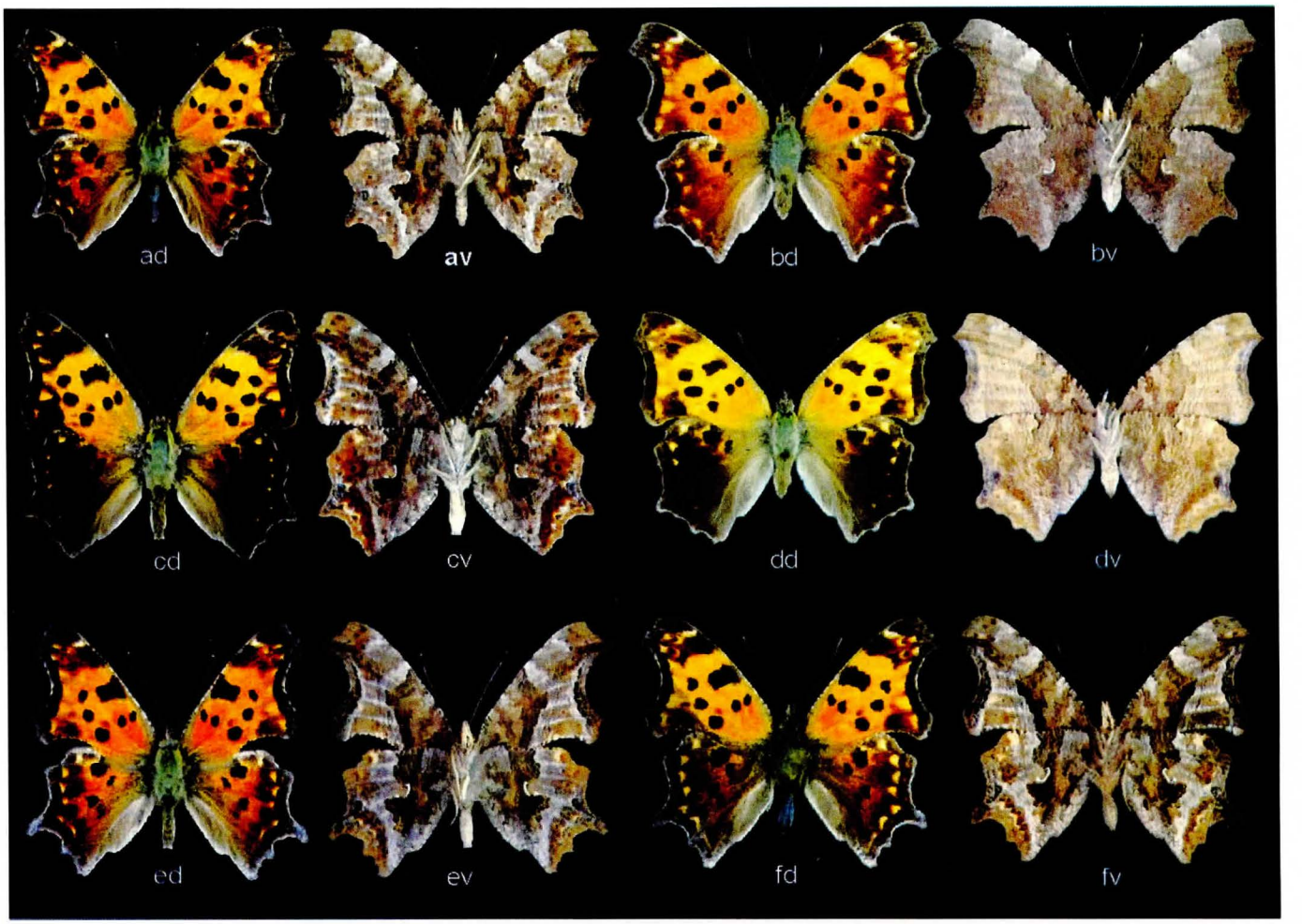


Fig. 1. ***Polygonia comma***: (all St. Tammany Parish, Abita Springs) *Abita entomological study site. **ad.** male dorsal, **av.** ventral, March 4, 2000; **bd**. female dorsal, **bv.** ventral, March 6, 1988; **cd.** male dorsal, **cv.** male ventral, July 6, 1996; **dd.** female dorsal, **dv.** female ventral, July 2, 1985; **ed.** male dorsal, **ev.** male ventral, November 16, 1995; **fd.** female dorsal, **fv.** female, November 11, 1986.

The *butterfly* ***Polygonia comma*** (Harris) Fig. 1, is not often encountered in large numbers. For that matter, it has been my experience using fermenting fruit bait traps in Louisiana to capture ~1,000 ***Polygonia*** specimens and only one being ***comma***, while the remainder are ***Polygonia interragationis*** (Fabricius).

It appears both ***comma*** and ***interragationis*** were first reported for Louisiana by von Reizenstein (1863) under the names Vanessa ***argenteum*** Kirby and ***Vanessa c-aureum*** Linnaeus, though these names have been attributed to several similar appearing different nymphalid species as well.

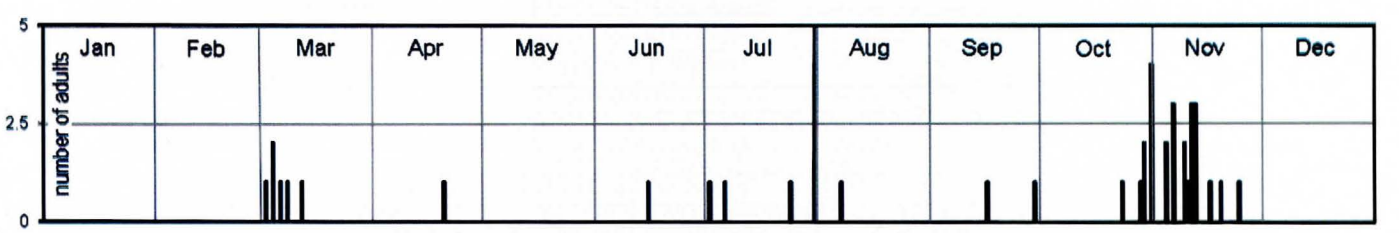


Fig. 2. Adult ***Polygonia comma*** captured in Louisiana. n = 44

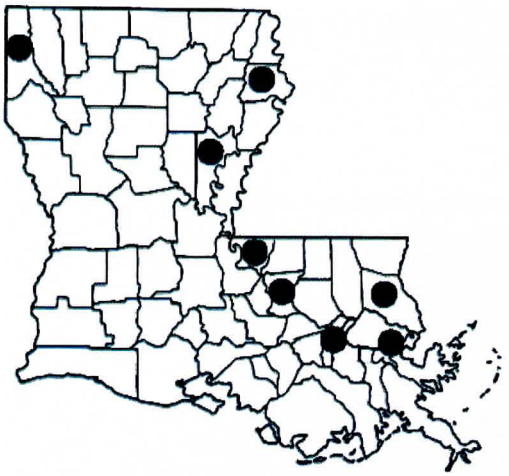


Fig. 3. Parish records for ***P. comma***.

Subsequent literature on butterflies in Louisiana revealing no records for ***comma*** were recorded by Lambremont (1954), Ross and Lambremont (1963), Mather (1966), and Brou (1974). In 1965, Lambremont and Ross recorded three specimens of ***comma***.

Brock and Kaufman (2003) reported ***comma*** flies spring to fall, in two (annual) broods. These authors remark summer individuals have almost entirely black hindwings, yet they claim this species flies spring to fall and only has two broods. To which brood do these black hindwing specimens belong. Clearly they did not fully understand what they were stating. They further confused the matter by illustrating two specimens of only a summer form and a winter form of ***comma***, ignoring the spring form altogether.

These dark hindwing specimens are illustrated in my Fig. 1 male **cd** and female **dd**, and are only from the second annual brood. In Louisiana, there are three annual broods of ***P. comma***, the first occurring March-April, the second occurring late June-early August, and the third occurring October-November. In Fig. 1 the pair in the upper row, male **ad** and female **bd** represent specimens from the first annual (spring) brood, the pair in the middle row male **cd** and female **dd** represent the second (summer) brood, and the third row male **ed** and female **fd** represent the third (fall) brood.

I made no special effort to find and collect ***comma***, and the 44 specimens of Fig. 2 that I have in my research collection are the good quality specimens captured in the past 45 years using fermenting fruit bait traps, hand netting, and ultraviolet light traps.

The parish records are illustrated in Fig. 3.

Literature Cited

Brock, J. P. & K. Kaufman, 2003. *Kaufman Field Guide to Butterflies of North America.* Houghton Mifflin Co., New York. 392 pp.

Brou, Vernon A., 1974. Butterflies taken in light traps. *Jour. Lepid. Soc.* 28:331.

Lambremont, E. N., 1954. The butterflies and skippers of Louisiana. *Tulane Studies Zool.* 1:125-164.

Lambremont, E. N. and G.N. Ross, 1965. New state records and annotated field data for Louisiana butterflies and skippers. *Jour. Lepid. Soc.* 19: 47-52.

Mather, Bryant, 1966 . Louisiana butterflies. *Jour. Lepid. Soc.*, 20: 102.

Ross, G.N. & E.L. Lambremont, 1963. An Annotated Supplement to the State List of Louisiana Butterflies and Skippers. *Jour. Lepid. Soc.* 17:148-158.

von Reizenstein, Ludwig, 1863. *Catalogue of the Lepidoptera of New Orleans and its vicinity.* Isaac T. Hinton. New Orleans, 8pp.

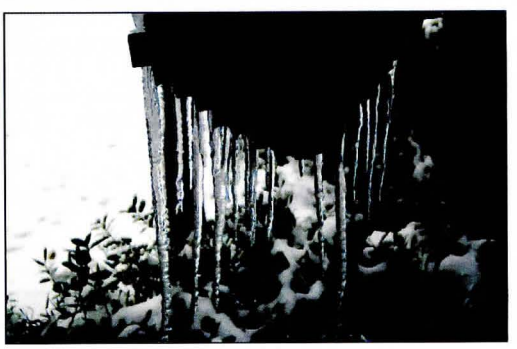
(Vernon Antoine Brou Jr. 74320 Jack Loyd Road, Abita Springs, Louisiana 70420; E-mail: vabrou@bellsouth.net)

****

****

TIRED OF THE COLD WEATHER !!

March 2, 2015,
Lubbock, Texas



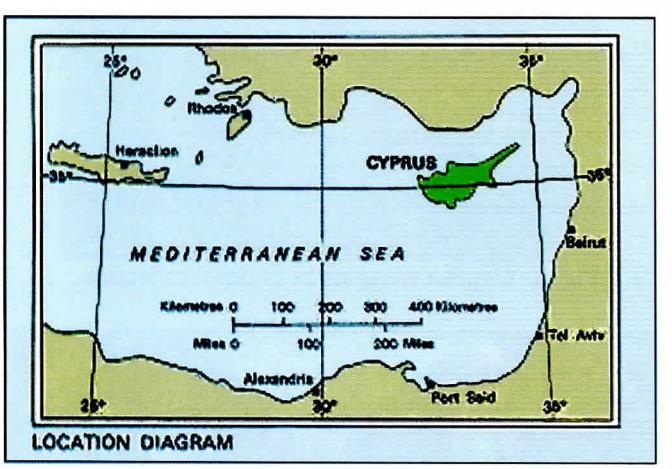
COLLECTING FARTHER EAST ON THE 35TH PARALLEL

BY
JOHN A. HYATT

Latitude 35°N runs through a lot of collecting ground familiar to members of the Southern Lepidopterists. Passing through the Outer Banks and Charlotte, NC, the line goes near Chattanooga, forms the border between Tennessee and Alabama, and touches Muskogee, Oklahoma. Further west it intersects Albuquerque and Flagstaff, and goes on through the mountains of California.

But if you head *east* from the Outer Banks, you'll have to travel a long distance to find hospitable collecting ground. After crossing the Atlantic, 35°N hits land a bit northeast of Fez in Morocco, passes through Algeria and Tunisia, emerges into the Mediterranean Sea, and eventually strikes Syria before passing into Iraq. Doubtless home to a lot of interesting leps, but not comfortable places for your average southern collector to swing a net these days! But there is one good place along the thirty-fifth parallel…

Sixty-six miles before striking Syria, our latitude line goes through the center of the eastern Mediterranean island of Cyprus, about 45 miles south of the Turkish coast. In the early fall of 2007 I traveled to the Republic of Cyprus on business, and naturally my wife and I added a few vacation days to the trip and I packed a net and some envelopes.



LOCATION DIAGRAM

A former British Crown Colony, the island is Greek-speaking but English is commonly used. Cyprus has a typical eastern Mediterranean climate -- hot, dry summers and mild, moist winters. Elevation reaches 6400' in the forested Troodos mountains, but most of the island looks decidely arid.

A bit of research a few months before my departure led me to an excellent website on the butterflies of Cyprus maintained by a well-known British lepidopterist, Mr. Eddie John [1]. When contacted by e-mail, Eddie generously provided hints on obtaining a Cyprus collecting permit (said to be probably unnecessary but nevertheless good to have) and contact information for a couple of Cypriot collectors, Aristos Aristophanous and Christodoulos Makris. Mr. Makris is the author of a truly beautiful and extremely useful book on Cypriot butterflies [2], which I obtained before leaving.

Study of Makris' book and John's website disclosed that Cyprus is home to 53 butterfly species, including three endemic species (*Hipparchia cypriaca, Maniola cypricola*, and *Glaucopsyche paphos*) and three endemic subspecies (*Zerynthia cerisyi cypria, Hipparchia syriaca cypriaca*, and *Chazara brisius larnacana*). The butterfly fauna of the island comprises a large number of typically European species such as *Pieris rapae, Papilio machaon, Gonepteryx cleopatra*, and *Lycaena phleas*, with an admixture of middle eastern butterflies *(Zerynthia cerisyi, Cigaritis acamas, Chilades galba, Hipparchia syriaca, etc.*) and species with African affinities *(Charaxes jasius, Azanus jesous, Danaus chrysippus, Zizeeria karsandra, etc.*) – altogether an enticing mix for a collector with an interest in palearctic leps. Unfortunately Makris' phenology data indicated that my trip, in early October, would be very late for many of the island's species, and hopeless for the lovely endemics *Glaucopsyche paphos* and *Zerynthia cerisyi cypria*.

By the time our departure date came up I had obtained a collecting permit (a document so laden with highly official seals, stamps, and signatures that it's almost a pity I never was asked to produce it!) and arranged to meet with both Aristos and Christodoulos for a day's collecting. Unfortunately the limitations of air travel meant that taking moth-collecting gear and bait would be impossible. Anything I brought home would have to be netted.

As it turned out, our hosts on Cyprus filled my non-working hours with so much eating, drinking, conversation, and sightseeing that collecting time was more limited than I had expected. Flowers were abundant in the capital city of Nicosia, and I saw (generally from a moving car) *Gonepteryx cleopatra, Colias crocea*, and some unidentified blues and skippers. A weekend stay in our hosts' country cottage in the small village of Anoyira provided my first captures – the endemic satyr *Maniola cypricola*, a few *Leptotes pyrithous*, and some *P. rapae* identical to those

anywhere on the 35th parallel. Several times in the village I observed *Papilio machaon* flying fast, high, and out of reach.

Travelling around the island quickly disclosed that the place is positively littered with ancient ruins, both Greek and Roman. Apparently Cyprus was a choice posting for Roman officials, and mosaic floors and broken columns from their seaside villas are everywhere (Figs. 1 and 2). Despite the late-season aridity, a few weeds were flowering among the ruins and butterflies, principally blues like *Plebejus icarus* (Fig. 3) and *Lampides boeticus* and the skipper *Carcharodus alceae* were present.

Fig 1. Seaside ruins at Kourion, Cyprus.

Fig. 2. Roman ruins at Paphos.

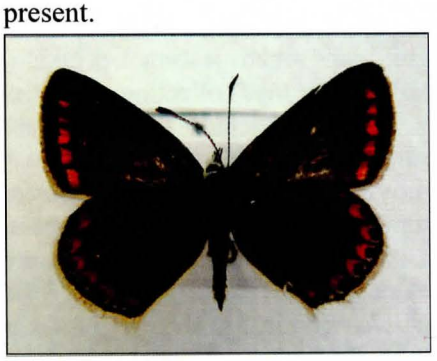


Fig. 3. Female *Plebejus icarus*.

It rapidly became clear that any serious collecting was going to require getting up to higher and moister elevations. The species available in the lowlands at this time of year were few. Fortunately my prearranged meeting with Aristos Aristophanous and Christodoulos Makris made this possible. Christodoulos took time to show me his collection. Having published his Cyprus butterfly book, he no longer collects Lepidoptera but is concentrating on Hymenoptera. Figs. 4 - 6 show some of his material.

Fig. 4. Cypriot noctuids in Makris' collection. *Catocala promissa* on left.

Fig. 5. Cypriot noctuids in Makris' collection.

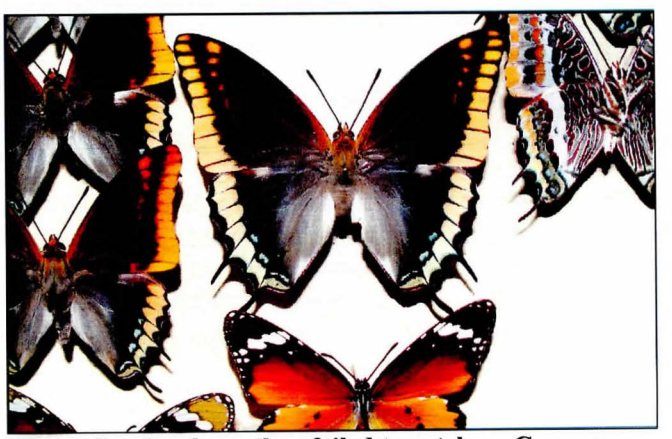


Fig. 6. Species the author failed to catch on Cyprus: *Charaxes jasius* (top) and *Danaus chrysippus*.

We drove into the mountains and spent a day collecting (Fig. 7). Butterflies were not abundant in this first week of October, but nice things could still be found. *Argynnis ipandora* was nectaring on thistle (Fig. 8), albeit in worn condition. *Colias croceus* (Fig. 9) was fresher, and a good series was taken.

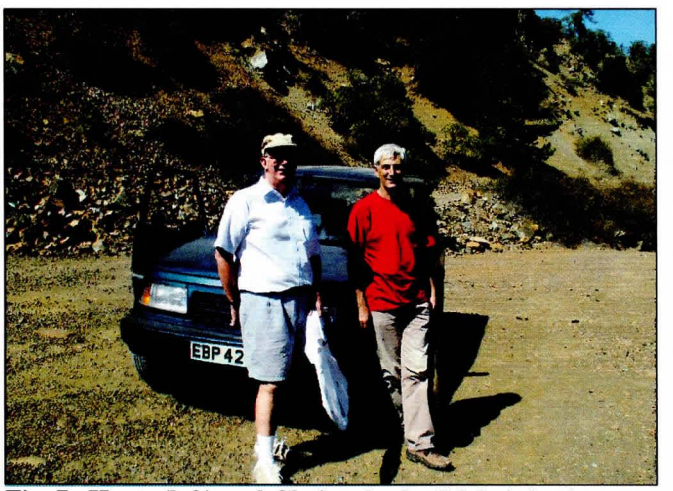


Fig. 7. Hyatt (left) and Christodoulos Makris in the Troodos mountains.

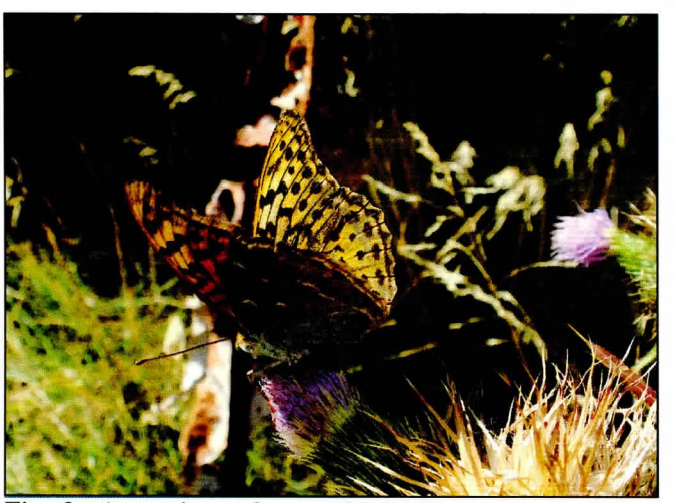


Fig. 8. *Argynnis pandora* on thistle, Troodos mountains, Oct. 5, 2008.

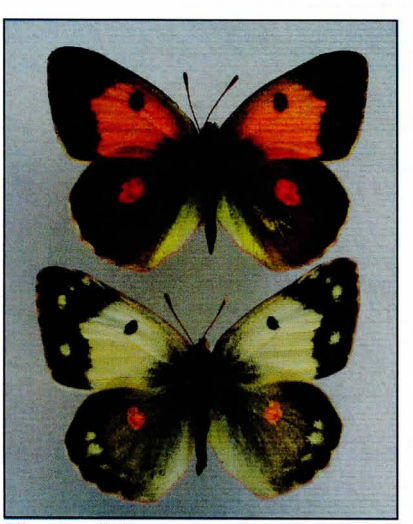


Fig. 9. *Colias croceus* pair, Troodos mountains, Oct. 5, 2008.

The mountains proved so pleasant that we found a small resort hotel in the town of Troodos and spent a couple of days there. Trails through the surrounding open forest made for good hiking and collecting. Satyrs made up the bulk of my catch; at least 4 species were taken around the base of one tree (Fig. 10). I was able to get nice series of the endemic *Hipparchia cypriensis* (Fig. 11) and *H. syriaca cypriaca* (Fig. 12), and a couple of the less common *Chazara briseis larnacana* (Fig. 13). The Pierid *Pontia edusa* was fairly frequent in the hills, as were the familiar *Vanessa atalanta, V. cardui*, and *Pieris rapae*.

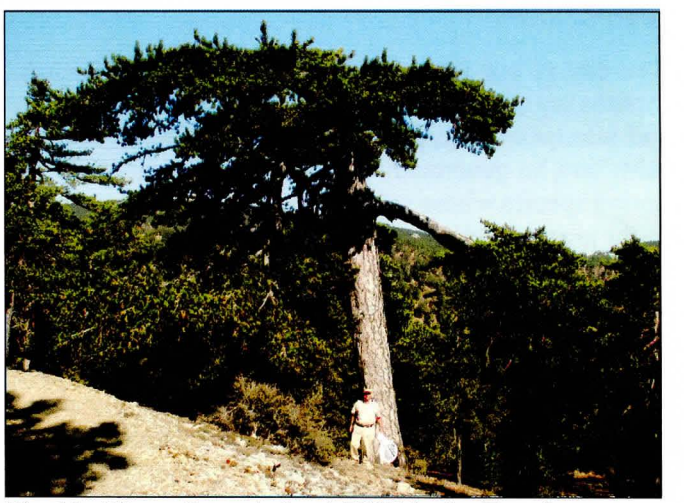


Fig. 10. The author at about 5000' in the Troodos mountains, Cyprus. Habitat for several endemic satyrs.

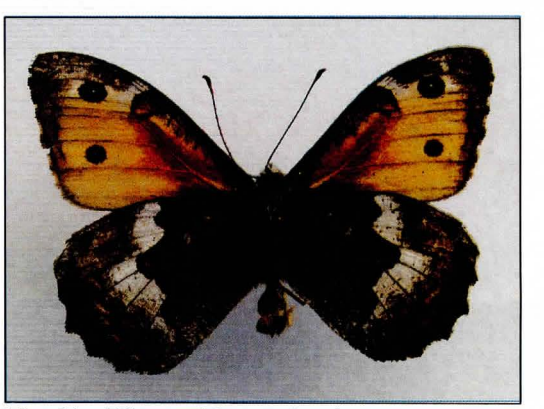


Fig. 11. *Hipparchia cypriensis.*

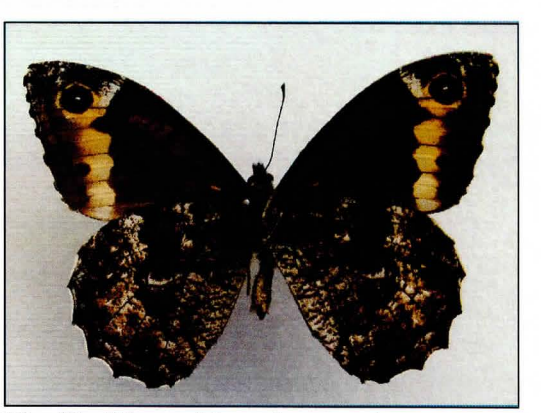


Fig. 12. *Hipparchia syriaca cypriaca.*

Fig. 13. ***Chazara briseis larnacana.***

The day of our late-afternoon departure from Cyprus, Aristos suggested we meet in the morning to collect near the international airport at Larnaka. We met about 9 AM, and he generously gave me specimens of all the spring species whose season I had missed. We travelled to the grassy fields surrounding the Larnaka salt flats just west of the airport. It was hard to imagine a less-promising collecting area at first glance (Fig. 14), but Aristos knew what to look for and I very quickly netted a good series of pairs of the lovely Lycaenid, *Lycaena thersamon* (Fig. 15). The blues *Leptotes pirithous* and *Plebejus icarus* were also flying here, and a single worn female of *Hyponephele lupina cypriaca* – a very unexpected catch this late in the season.

Fig. 14. The author (left) and Aristos Aristophanous at the Larnaka salt flats.

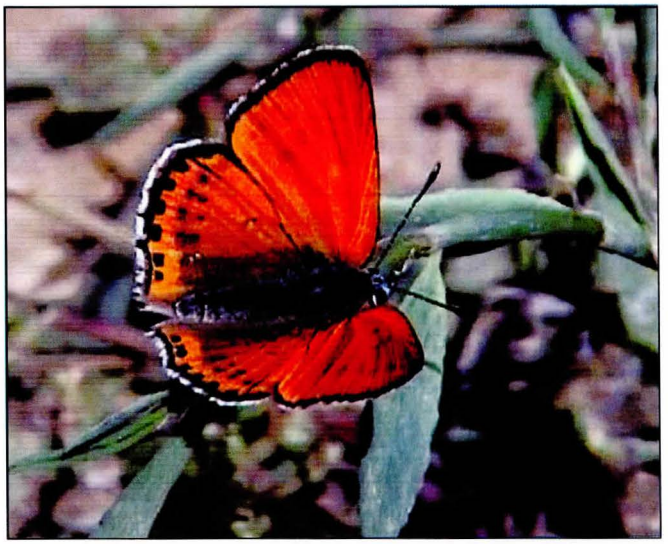


Fig. 15. ***Lycaena thersamon*****, Larnaka, Cyprus.**

By the time we boarded the plane I had collected 19 butterfly species on Cyprus, and had been given specimens of another 20 species. All in all it was a lovely experience. Wandering down a trail in the Troodos mountains I had taken cabbage butteflies, red admirals, painted ladies, sulfurs that could almost pass for *eurytheme*, and things that looked a lot like North American *Speyerias*. Then, stopping for a bit under a *Cedrus* tree I would catch three or four satyrs that didn't even remotely resemble anything found on 35°N in the US. Further on one might catch a glimpse of a fast-flying *Charaxes jasius*. Altogether a fascinating, almost jolting experience -- It was hard to realize where I was when the butterflies took turns looking North American, Middle Eastern, and African!

This trip worked out so well that I definitely recommend that anyone, when faced with a trip to a new area, contact a collector or two in that region and take along a net. It doesn't require a lot of spare time to find some fascinating insects, if you have local information as a guide.

References

1. **Eddie John, F.L.S., F. R. E. S.,** www.butterfliesofcyprus.co.uk
2. **Christodoulos Makris,** Butterflies of Cyprus. Bank of Cyprus Cultural Foundation, Nicosia 2003. ISBN 9963-42-815-0.

(John A. Hyatt, 233 Park Ridge Court, Kingsport, TN 37664; jkshyatt@centurylink.net)

****

****

****

PROTOGRAPHIUM MARCELLUS (CRAMER) (LEPIDOPTERA: PAPILIONIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

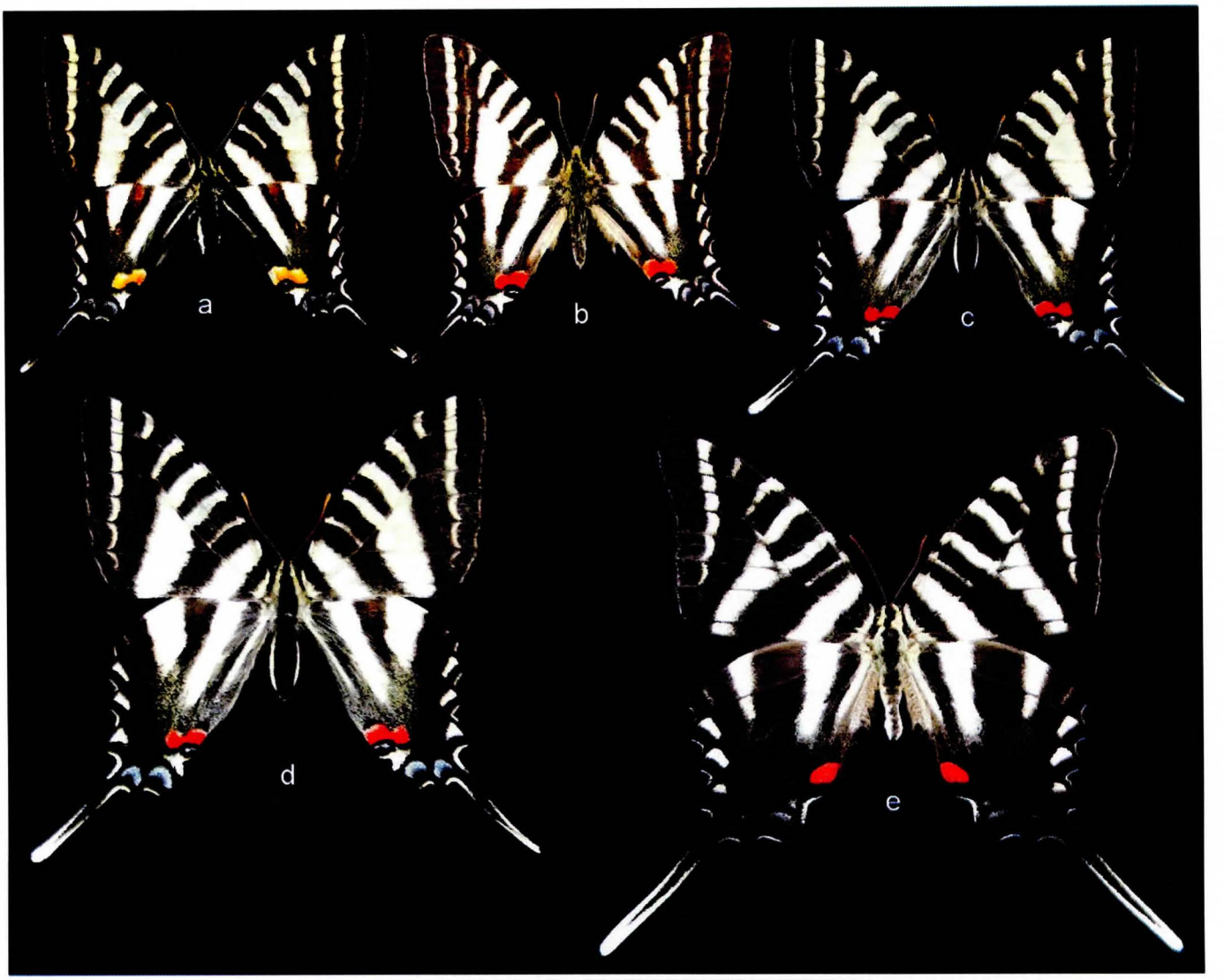


Fig. 1. Seasonal phenotypes of ***Protographium marcellus*** (Cramer) in Louisiana: a. winter form female, b. winter form male, c. spring form male, d. summer form female, e. fall form male.

The well known *Zebra Swallowtail* butterfly ***Protographium*** marcellus (Cramer) (Fig. 1) has previously been listed under several other generic names: ***Papilio, Graphium, Iphiclides,*** and most recently ***Eurytides.*** ***P. marcellus*** can be found in much of the eastern United States and into southeast Canada. The latest publication addressing this species taxonomically is Erich Bauer and Thomas Frankenbach Keltern (2002) in Edwin Möhn (2002).

In Louisiana, adults of ***marcellus*** can be found on warmer sunny days beginning in January, though the initial brood peaks in March - April and additional broods continue till the end of the year, occasional adults into December. Adults of the initial winter brood are the smallest in size, with each successive brood increasing in size to the largest, the fall brood. Also illustrated in (Fig. 2) are two larvae and a pupa. The larvae are usually found on the undersides of leaves on immature, low growing (2'-4') in height, ***Asimina triloba*** (L.) Dunal, pawpaw plants.

P. marcellus was first reported in Louisiana by von Reizenstein (1863) under the name ***Papilio ajax*** (Linn.). The parish records by Lambremont (1954), Ross & Lambremont (1963), and this author are illustrated in Fig. 3.

Fig. 2. Larvae and pupa of ***P. marcellus***.

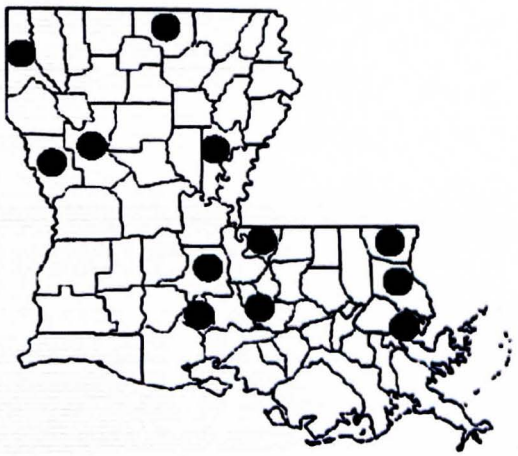


Fig. 3. Parish records for ***P. marcellus***.

Literature Cited

Edwin Möhn, 2002. *Schmetterlinge der Erde, Butterflies of the world* Part XIIII (14), Papilionidae VIII: Baronia, Euryades, Protographium, Neographium, Eurytides. Edited by **Erich Bauer** and **Thomas Frankenbach Keltern**: Goecke & Evers; Canterbury: Hillside Books.

Lambremont, E. N., 1954. *The butterflies and skippers of Louisiana.* Tulane Studies Zool. 1:125-164.

Ross, G.N. & E.L. Lambremont, 1963. An Annotated Supplement to the State List of Louisiana Butterflies and Skippers. *Jour. Lepid. Soc.* 17:148-158.

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

****

****

****

WELCOME TO OUR NEW MEMBERS

Judith Klykken
2561 58th St. No.
Largo, FL 33710

David Wagner
University of Connecticut
75 North Eagleville Rd, Rm 312
Storrs, CT 06268

Dennis Currutt
7533 Mulberry Rd
Chesterland, OH 44026

Dale Clark
1732 S. Hampton Road
Glen Heights, TX 75154

John T. MacRoy
1278 Kamery Rd
Olean, NY 14760

Candy Sarikonda
7010 Hickory Ridge Rd
Sylvania, OH 43560

Steve Johnson
1068 Reagan Street
Sunbury, PA 17801

Cory Woods
103 Gaudet Drive
Bourg, LA 70343

Gerald Burnett
233 Gray Road
LaCenter, KY 42056

M. Alma Solis
Smithsonian Inst.
P.O. Box 37012
Washington, DC

Dallas Dowhower
428 N. 6th Avenue
Lebanon, PA 17046

FABRICATING A STATIONARY FRUIT-BAIT INSECT TRAP WITH AUTOMATIC COLLECTING CHAMBER

BY

VERNON ANTOINE BROU JR.

Fig. 1. Stationary insect collection traps with attached collection chamber.

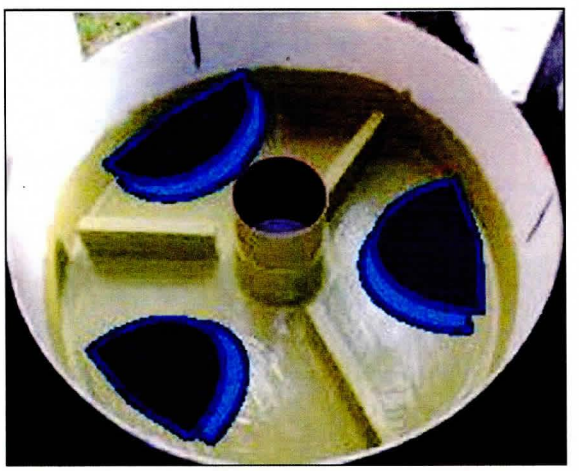


Fig. 2. Internal view of plastic ring with plywood bottom and blue insecticide holders.

Brou (1992) published instructions on how to fabricate a fruit-bait trap which captured live insect specimens. The inherent problem utilizing screen enclosed live-capture insect traps is that the captured target specimens are subject to immediate and constant predation by wasps, hornets, lizards, frogs, birds, squirrels, raccoons, opossums, and foxes. Over the past three decades I have designed, fabricated, and operated several dozens of stationary insect traps with some sort of enclosed collecting chamber for capturing moths, in particular Sphingidae, Catocala, Sesiidae, and also butterflies. These traps with collection chambers had one major drawback in that they were not very portable and were bulky and heavy as well. Efforts to lighten the weight or downsize the traps and attached collection chambers also resulted in lessening the performance and the amount of captures of the device.

Brou and Brou (2008) first illustrated a bait trap with collection chamber on a stationary platform and that design has remained the best performing one we have used (Fig. 1). Necessary for the successful operation of this long term stationary trap design is the use of a potent insecticide or dispatching agent, *e.g.*, cyanide, being the optimum chemical used by entomologist for centuries.

Fabrication of this collection chamber begins with the cutting of a 8" high x ~ 24" diameter ring from a plastic 50--55 gallon container (Fig. 2). Insert into the plastic ring, a circular piece of ¾" thick treated plywood of a diameter to fit tightly along the bottom edge of the ring. Fasten this plywood bottom using 1 ¼" stainless steel screws every 1" along the outside circumference of the plastic rim's lower edge. Fasten three internal wood specimen tray supports (2 ½' x 7") to bottom as illustrated in Fig. 2. Cut center hole in plywood bottom and permanently fasten 4" diameter pvc sleeve. Insert 4" x 4" diameter pvc pipe to upper end of sleeve.

Using ¼" thickness plywood, cut a circular internal specimen tray (Fig. 3a, b), the diameter should measure ½" less than internal diameter of the plastic ring, so that it can spin freely with 1/4" of space between the plywood ring and the internal surface of the plastic drum. In this same piece of 1/4" plywood, cut out three circular or oblong shaped openings as illustrated in Fig. 3a, b. Attach a layer of aluminum window screen to cover the openings on the bottom side of the internal specimen tray. Repeat this action, this time by covering the window screen on the bottom with

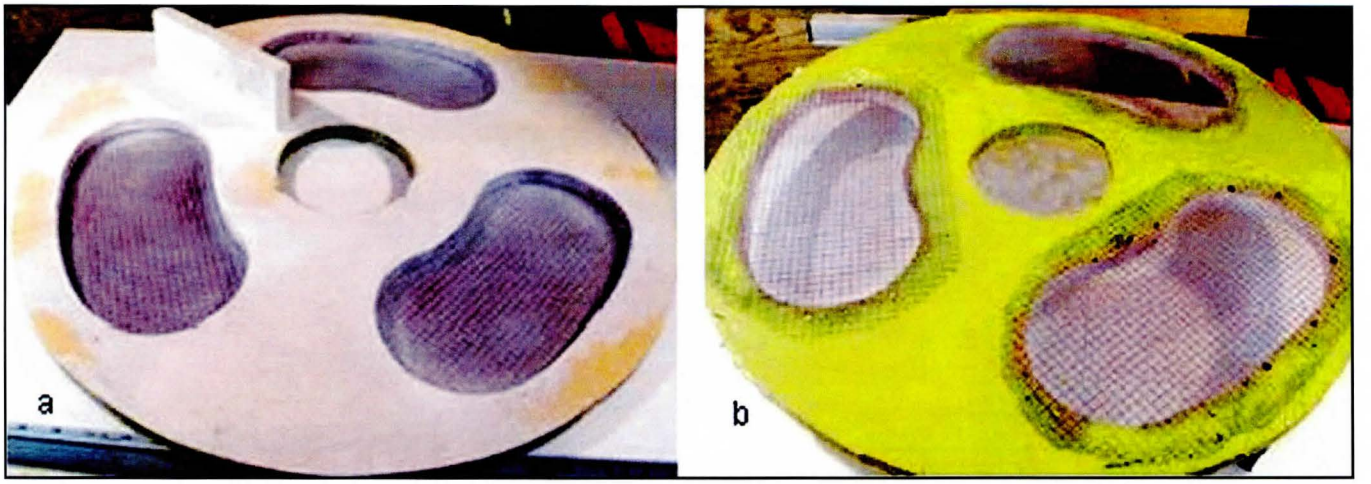


Fig. 3. Screened internal specimen tray: a. Upper side with handle, b. Under side with screen applied.

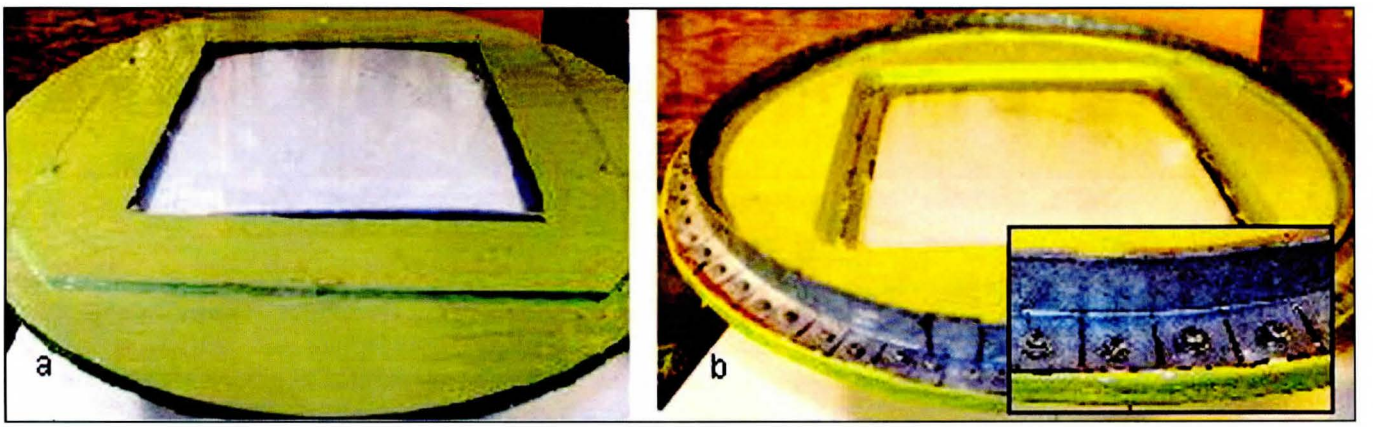


Fig. 4: a. Finished top of lid, b. Finished underside of lid.

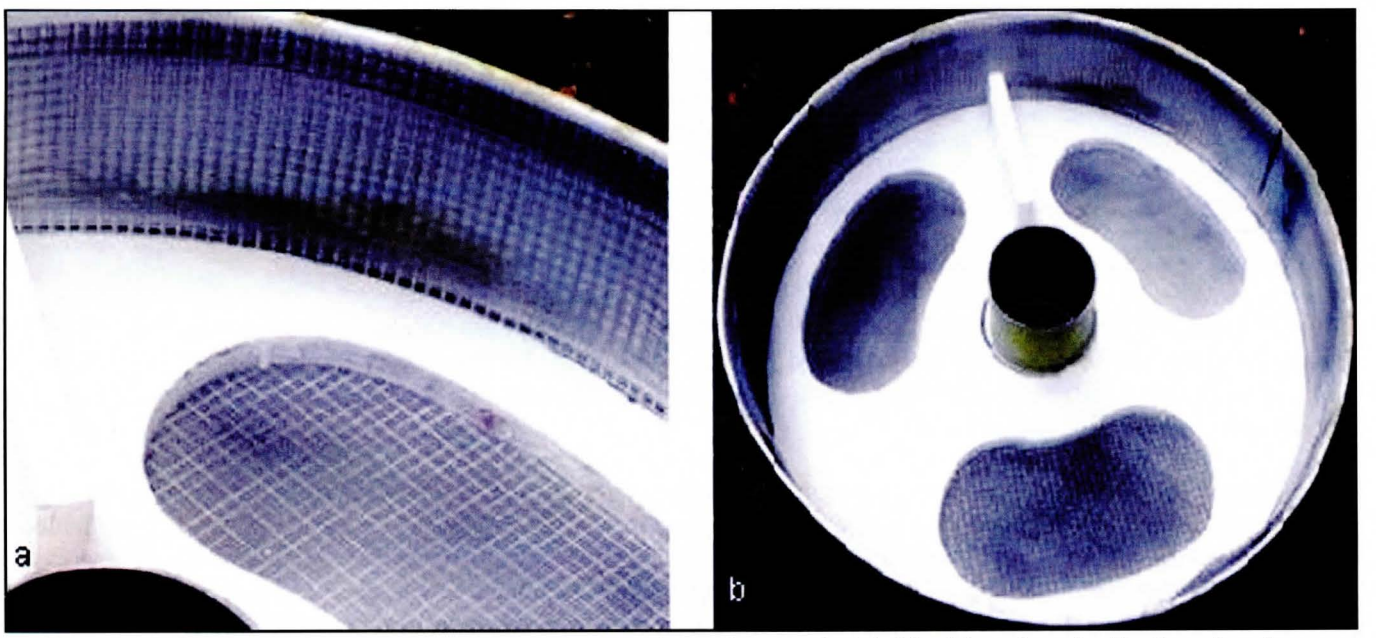


Fig. 5: a. ¼" Mesh hardware cloth attached to tray circumference, b. Finished interior of collection chamber.

a layer of ¼" mesh hardware cloth for support.

For lid, cut plywood circle 2" diameter greater than the diameter of the external ring diameter of the collection chamber. Cut sizeable center opening out of the lid and cover with glass or Plexiglas and seal completely to lid (Fig. 4a). To the underside edge of the lid cut, bend and apply 2" strip of 28-gauge sheet metal as a circular flange in a

manner as illustrated (Fig. 4b). This metal flange surrounds the upper edge of the plastic ring and holds lid in place. A soft gasket (weather stripping) material should be glued to the inside edge of the circular metal flange. In Fig. 5a, ¼" mesh hardware cloth is permanently attached to the outer edge (circumference) of the internal tray. Fig. 5b illustrates the finished interior of the collection chamber tray with handle. Preferably, the wooden underside of the collection chamber (Fig. 6) should be coated with water repellant and further coated with contact adhesive to which a solid piece of pliable plastic also treated with contact cement is permanently applied. The 4" hole is cut in the center of the plastic.

Fig. 6. Underside of collection chamber (ventral view).

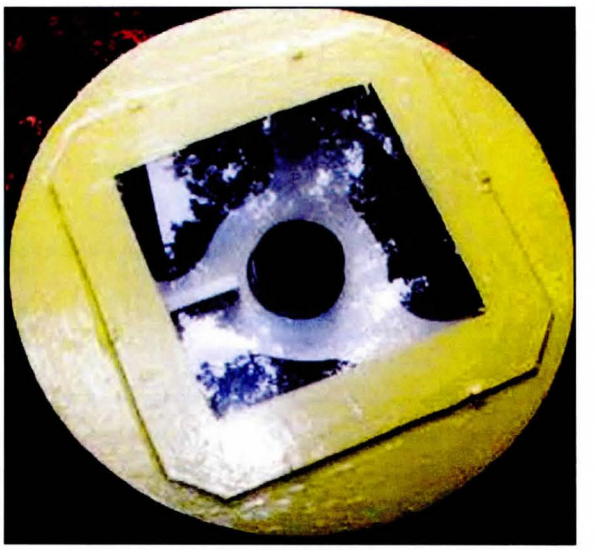


Fig. 7. Completed collection chamber, internal view from above through glass lid.

Fig. 8. View below the collection chamber, illustrating arrangement of bait containers.

Fig. 9. 24-Hour collection results, the collection chamber's glass-covered lid removed.

Fig. 7. illustrates completed collection chamber. To the bottom of the 4" diameter center sleeve (Fig. 8), attach the small end (~4" diameter) of a large vertical cone made of 1/4" hardware cloth. The larger bottom end of the cone should be sized sufficiently wide enough to enclose the bait containers. To support the bait containers, cut a solid circular piece of plywood (~ 1/2" to 3/4" thickness) about 2" larger in diameter than the diameter of the larger bottom end wire ring of the hardware cloth cone. Fig. 9. illustrates typical 24-hour collection results. Create three sturdy hooks (Fig. 10) made from bendable but heavy gauge wire and insert it through the wooden bait container support at three equidistant points as illustrated in Fig. 11. This trap collects insects 24 hours each day.

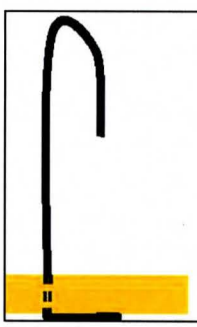


Fig. 10. Hook.

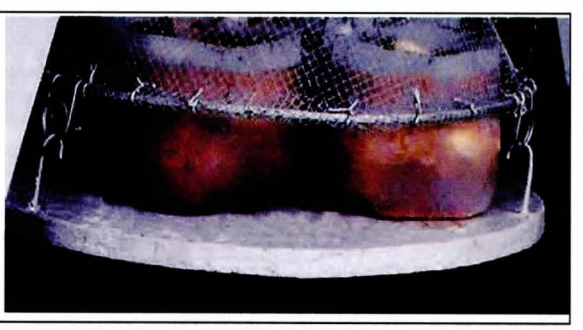


Fig. 11. Arrangement of the three hooks upon the wooden bait container support.

Literature Cited

Brou Jr., V.A., 1992. Extended duty bait trap designed for continual year-round use. *South. Lepid. News* 14:4-6.
Brou Jr., V.A. and C.D. Brou, 2008. Status of Hurricane Gustav (2008) upon collecting in southeast Louisiana. *South. Lepid. News* 30: 105-107.

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

****

****

****

"Irving Finkelstein, long time member of the SLS, and recipient of the 2003 John Abbot award, passed away at home on February 26, 2015. Irving had been battling multiple myeloma for more than six years. Before he passed, Irving asked that donations be made in his name to the International Myeloma Foundation at myeloma.org. He has no immediate surviving relatives. A much more complete obituary will appear in the next issue of the SLS News."

****

****

****

IRVING FINKELSTEIN
June 18, 1936 - February 26, 2015

****

****

****

****

****

BYSSUS SKIPPERS IN SOUTHWESTERN ARKANSAS

BY
CRAIG W. MARKS

The Byssus Skipper has two subspecies in the United States, *Problema byssus byssus* and *P. b. kumskaska*. The former subspecies is found in scattered, local colonies and ranges from the Atlantic Coast region into the Gulf Coast, inhabiting moist/wet areas with tall grass such as marsh edges, grassy streams, wet savannas and lake shores. The host plant in this area has been identified as Eastern Gamma (sometimes spelled as Gama) Grass (*Tripsacum dactyloides*), a tall, thick clumped, broad-leaved grass. Over most of this region this skipper is reported to have two broods, generally running from April or May to June and then August to October.

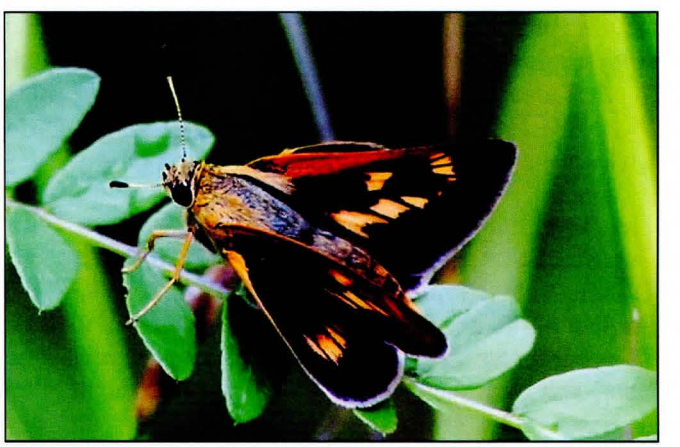
Emmitt (2005) reported the eastern subspecies as rare to uncommon along the coastal plain in North Carolina. Along the eastern Gulf Coast, Harris (1972) reported it as scattered, local and generally rare across the middle and southern portions of Georgia. Howell and Charny (2010) reported three records across north central Alabama with one record along the Gulf Coast. Metzler *et al.* (2005) reported several records from across the middle of Mississippi. Mathers identified the subspecies in Mississippi as *P. b. byssus*. Kevin Cunningham (2011) reported finding a specimen he described as *P. b. byssus* on June 8, 2005, in a slightly disturbed area next to some woods in Morehouse Parish in northeastern Louisiana.

The western subspecies inhabits the Great Plains (Illinois, northwestern Indiana, southeast Iowa, eastern Kansas and Missouri). In this region, it has one brood in June and July. Its preferred habitat is native prairies to include sand prairies and limestone glades and restored prairies, found in scattered, local and sporadic colonies. In addition to Gamma Grass (reported by several sources), Schlicht (2007) suggested indian grass as a possible larval food plant.

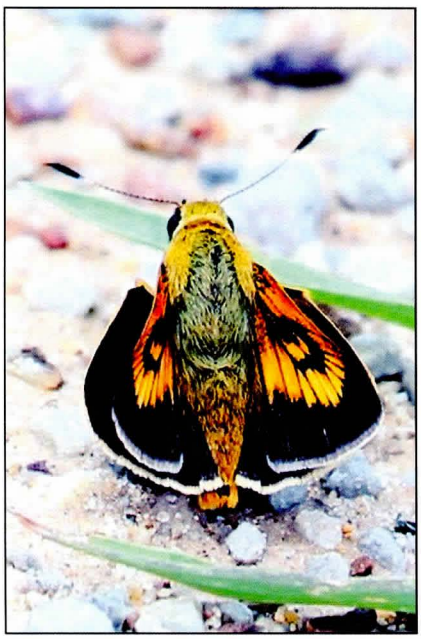
Between these two populations, Opler and Malikul (1984), Kaufman and Brock (2003), Glassberg (1999) and Glassberg (2012) do not reflect that either subspecies extended into Arkansas or Oklahoma (except in the extreme northwest and northeast corners, respectively). Howe (1975) did not mention any records from Arkansas. In contrast, Metzler *et al.* (2005) had records not only from the northwestern corner of Arkansas, but also what appears to be a single record from the center of that state. Spencer (2006) reported it as uncommon to common in the interior highlands of Arkansas, flying from May to September. She described the subspecies within that state as *kumskaka*. Raney (2008) had records from sixteen counties across Arkansas. Byssus Skippers have regularly been reported from Bell Slough in Pulaski County, Petit Jean State Park in Conway County and Mount Magazine in Logan County. Further, it is listed as a member of the butterfly fauna at Red Slough Wildlife Management Area (WMA) near the extreme southeastern Oklahoma border with Arkansas.

According to Cech and Tudor (2005), males are territorial and have a tendency to display in mornings and afternoons. This skipper is reported to be an avid flower visitor and will move away from the larval food plant and display sites to take nectar. Some of the flowers it has been reported to visit include coneflowers (Heitzman, 1996), milkweed (Bouseman, 2006), butterfly bush and pickeralweed (Howell and Charny, 2010).

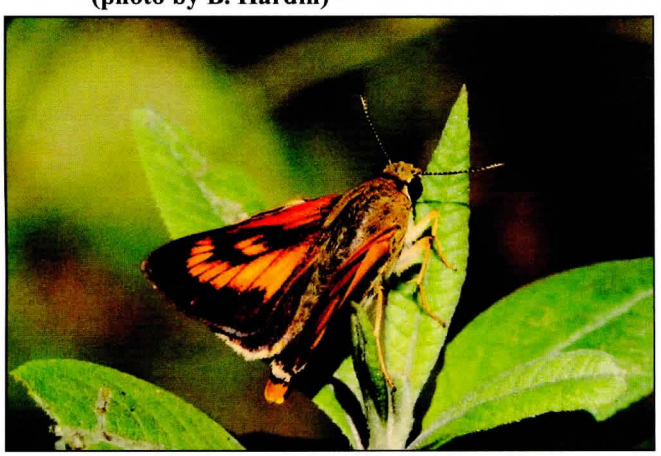
Ventrally, this skipper is bright orange yellow; however, the sexes are dorsally dimorphic. Both possess black borders dorsally, but the males present more orange. The females are larger and darker, approximately the same size as Duke's Skippers and with similar wing shape. The males are smaller and their forewings are more pointed. This skipper might be confused with the Yehl Skipper because, ventrally, in middle of lower wing there is a band of pale marks (sometimes described as a crescent shaped mark) somewhat similar in nature to the marking on the lower ventral wings of Yehl Skippers. Several sources indicate that the female Delaware Skipper is dorsally similar to the male Byssus Skipper. In Arkansas, both sexes of the Byssus are larger than Delaware Skippers (with which it is closely related) and, as previously indicated, typically Byssus Skippers show a lighter patch in the center of the ventral hindwing



Female Byssus Skipper, June 8, 2014 (photo by B. Hardin)



Male Byssus Skipper, June 8, 2014 (photo by B. Hardin)



Byssus Skipper, May 30, 2010, R. Evans/Grandview WMA (photo by J. Trahan).

that Delaware Skippers do not have. All three of these species fly in close proximity to each other at both Rick Evans/ Grandview and Stone Road so identification can be difficult at times.

The first Byssus Skipper I ever saw was part of the 2004 Rick Evans/Grandview NABA Count held on August 28. David Henderson pointed out a female along a fence line near one of the ponds in that unit. At about the same time, I saw a fresh White M Hairstreak so my attention was diverted, and I did not get a good look at the skipper. In later years, we found no other Byssus Skippers in that specific area, but did find a colony of Delaware Skippers. David also reported three other Byssus Skippers during that count, in other areas near the lake. The next year, on June 25, 2005, David reported two more Byssus Skippers at Rick Evans/Grandview.

The next Byssus Skipper I saw was back at Rick Evans/Grandview on May 30, 2010. I was with Jeff Trahan, and we initially thought the skipper was a Yehl Skipper based on the markings on the ventral hindwing. That particular skipper was seen in a moist area with cane, and there can be some difficulty differentiating between male Yehls and Byssus Skippers. Jeff had taken a picture which, upon closer inspection, caused us to change our initial diagnosis and call it a male Byssus Skipper.

Rick Evans/Grandview Prairie WMA is located in rural Hempstead County in Southwest Arkansas near Columbus, Arkansas. Rick Evans/Grandview is owned by the Arkansas Game and Fish Commission and operates as a Conservation Education Center and a Wild Life Management Area. The area is comprised of open prairie, woodlands, savanna, bottomland habitats and non-native grasslands. It represents the most significant example of blackland prairie (which is characterized by a special deep, dark mixture of soil and calcareous deposits) existing for management and restoration in Arkansas.

The next Byssus Skippers I saw were at Stone Road Glade Natural Area, another remnant of blackland prairie owned and managed by the Arkansas Natural Heritage Commission, located in Howard County, Arkansas. The website for the Area advertised that its "open, prairie like glades" supported populations of this skipper. Some of the native grasses present in these types of prairie include big bluestem (*Andropogon gerardii gerardii*), switch grass (*Panicum virgatum*), little bluestem (*Schizachyrium scoparium*), and indian grass (*Sorghastrum nutans*). On June 23, 2012, at about 2:00 pm, I saw a male and a female at buttonbush blooms adjacent to a small creek at the entrance gate to the Stone Road Glade Unit. Two years later, on June 7, 2014, during the first NABA Count at that location, I saw two males, perched on tall grass across the access road from the afore-referenced creek. Both males were seen displaying after 5:00 pm.

The next day, June 8, 2014, I had moved to Rick Evans/Grandview. The day started overcast but still generated a fair number of butterflies until around 11:00 when the rains came. It stormed pretty hard for about 1.5-2 hours, and we had even decided to stop the count and head out as no relief appeared to be in sight. Just as I was getting ready to leave, the rain not only stopped but I could see blue skies to the west so I stayed. The first butterfly I saw was a male Diana sunning in the wet grass. While maybe not as good as some of the past counts, this one still managed to generate a fair number of species (37) and individual butterflies. The highlight was 28 fresh Byssus Skippers, both males and females.

These skippers were in close association with numerous stands (or clumps) of blooming Eastern Gamma Grass (identified by Dr. Charles Allen who has written several books on Louisiana's flora including a book on its grasses). The skippers and stands of grass were in close proximity to some moist woods, but generally were in an open area. The skippers flew low, along the top of the grass and often perched on grass stalks. Later that afternoon, the males perched in the sun on the top of

Byssus Skipper, June 8, 2014, Rick Evans/Grandview WMA (photo by Bob Hardin)

stalks of grass and even on the tops of tree seedlings. Their flight was fast and direct. The females were primarily found down in the middle of clumps of the food plant, perched on individual grass blades. The female's flight was slower and more bouncy as they moved around inside the individual clumps of gamma grass.

Byssus Skipper, June 8, 2014, Rick Evans/Grandview WMA (photo by Bob Hardin)

Gamma Grass, R. Evans/Grandview WMA (photo by C. Marks)

Per Pelham, the Byssus Skipper was first described in 1880 based on specimens taken in Brevard County Florida. Seven years later, *P. b. kumskaka* was described based on specimens taken in Iowa. Other than habitat and number of broods, I've not really seen a detailed description of the differences between *byssus* and *kumskaka*. The survey results from R. Evans/Grandview WMA and Stone Road Glade Nature Area suggest two broods, late May into early June and then late August. Further, while the general habitat at both locations can be described as prairie, the specific locations where this skipper has been found were wet areas with tall grass. So, I wonder if the populations in southwestern Arkansas might represent a blending zone between the eastern and prairie populations.

References

Belth, J. E., 2013. *Butterflies of Indiana.* Indiana University Press, Bloomington and Indianapolis, IN. 323 pp.

Bouseman, J. K., J. G. Sternburg and J. G. Wiker, 2006. *Field Guide to Skipper Butterflies of Illinois.* Illinois Natural History Survey, Champaign, IL. 200 pp.

Brock, Jim P. and Kaufman, Kenn, 2003. *The Kaufman Focus Guide to Butterflies of North America.* Houghton Mifflin Co., 384 pp.

Cech, R., and G. Tudor, 2005. *Butterflies of the East Coast: An Observer's Guide.* Princeton University Press, Princeton, NJ. 345pp.

Cunningham, K., 2011. "A New Louisiana State Record *Problema Byssys Byssus* (W.H. Edwards)," *Southern Lepidopterists' News* 33(4): 149.

Emmitt, Randy, 2005. *Butterflies of the Carolinas and Virginias, Interactive CD,* Metalmark Press.

Glassberg, Jeffrey, 1999. *Butterflies through Binoculars: The East.* Oxford University Press, New York and Oxford. 242 pp.

Glassberg, Jeffrey, 2012. *A Swift Guide to Butterflies of North America.* Sunstreak Books, Inc. China, 415 pp.

Harris, L. Jr., 1972. *Butterflies of Georgia.* University of Oklahoma Press, Norman, OK. 326 pp.

Heitzman, Richard J. and Joan E. Heitzman, 1987, 1996. *Butterflies and Moths of Missouri.*

Howe, William H., 1975. *The Butterflies of North America.* Doubleday and Co., Inc., Garden City, NY, 631 pp.

Howell, M. P. and V. Charny, 2010. *Butterflies of Alabama.* Pearson Learning Solutions. Boston, MA, 509 pp.

Marks, C.W., 2008. "Dianas in Southwest Arkansas at Rick Evans/Grandview Prairie WMA," *Southern Lepidopterists' News* 30(4): 136-140.

Marks, C.W., 2013. "My Wildest Dreams," *Southern Lepidopterists' News* 36(1): 31-34.

Mather, Bryant, 1997. Field Checklist Butterflies of Mississippi. Mississippi Museum of Natural Sciences.

Metsler, E.H., J.A. Shuey, L.A. Ferge, R.A. Henderson and P/Z. Goldstein, 2005. *Contributions to the Understanding of Tallgrass Prairie-Dependent Butterflies and Moths (Lepidoptera) and their Biolgeography in the United States.* The Ohio State University, Printing Services, Columbus, Ohio. 143 pp.

Opler, P.A. and V. Malikul, 1984. *Butterflies East of the Great Plains.* Houghton Mifflin Co., Boston, 486 pp.

Pelham. J.P., 2008. A Catalogue of the Butterflies of the United States and Canada, *The Journal of Research on the Lepidoptera.* Vol. 40, pg. 85.

Raney, Hershel, 2008. *Butterflies of Arkansas.* www.hr-rna.com/RNA/Butterfly%20main.htm.

Schlicht, Dennis, John Downey and Jeff Nekola, 2007. *The Butterflies of Iowa.* U. of Iowa Press, Iowa City, IA. 252 pp.

Spencer, Lori A., 2006. *Arkansas Butterflies and Moths.* University of Arkansas Press, Fayetteville, AR. 300 pgs.

www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelpdrb5163307. pdf (Red Slough Butterfly List)

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

****

****

****

WHERE WOULD A "BIG YEAR" VISIT FOR BUTTERFLIES OR MOTHS GO IN YOUR STATE?

BY

KELLY RICHERS

So, for Christmas last year my wife bought me a copy of "The Big Year" to read, to her everlasting chagrin. For those of you who are not aware, "The Big Year" tells the story of some fanatic birders who get in a competition to see how many different species of birds they can identify within the boundaries of the United States in one calendar year. They have many interesting moments, notably when they realize they are in a competition of which they were originally not aware, and go to many interesting places, among them garbage dumps, remote islands, and many Lepidoptera locations.

Robert Pyle did a butterfly Big Year, sort of, a couple years ago, and of course, I had to bring it up with my wife that I would LOVE to do a moth Big Year. You would think that after 30 years of marriage I would have learned something, but no, I had to bring it up anyway. After her hysterical laughter stopped she eventually determined that such an endeavor was beyond me. "Why?" I foolishly asked, upon which she proceeded to remind me of the time I went camping without tent pegs and couldn't set up the tent, the time I almost got hit by lightning, the time a raccoon scared several years off my life, the flat tire that almost paralleled "Deliverance" in Arizona, and the fact that she thinks I can't even make cold cereal on my own

Such is not true. I once lived for two years on my own, and learned to fry potatoes and onions and blanch green beans for freezing, resulting in many healthy meals and numerous fart jokes over a two year period, mainly due to the potatoes and onions.

Regardless, this led to my IMAGINARY (or so my wife thinks) planning of what such a "Big Year" would look like for a moth collector. There appear to be two areas that would be optimal for starting – south Florida and southern California, for the month of January. Assuming either one, there are several areas that would be "must visit" sites between the two sides of the country. Therefore, we reach the long, convoluted point of this article.

Assuming you are reading this in some state of the contiguous United States, and that, for the purposes of discussion you are south of the Mason Dixon line sort of continued out west, what are the classic locations you would recommend and why, for moth collecting in a Big Year visit? And, what month would be the best for a visit?

I can make some sugggestions regarding the west, which I will list here, in order by the months that they might be visited:

CALIFORNIA

San Gabriel Mountains, San Bernardino Mountains: These have several early flying species that have notable flight patterns as early as January or February. Much of the San Gabriel range has been reclassified as a National something, so collecting there could get problematic, but the San Bernardino Mountains around Barton Flats.

San Bernardino Mountains, California

Also some nice endemics in June, when the butterflies are also out.

Kern River Valley, Kern Canyon: *Annaphila* territory as early as March, with some other day flying species, mostly smaller, which make every day interesting. Spring flying butterflies, including Sonora Blues, fly here also.

Bob's Gap, Pearblossom: March or April desert collecting at its best, day and night. Better than the surrounding areas due to changing habitat and elevations. Unusual stuff not found in other places, here at the edge of the high desert. Some desert butterflies also present this early.

ARIZONA

Wow, lots of areas here, mostly later in the year, end of July or beginning of August for all of these, also again at the end of September.

Hualapai Mountains: Some stuff from further south, also some isolated material that doesn't get to the other "sky islands" but does get some summer rains. Many species from only this area that can be easily collected.

Pena Blanca Campground: One of the all-time best for big AZ material. This can get scary with the border crossings, but I have never had trouble here. Large Saturnids, Sphingids, many unusual moths here. I have been here 4 times and 1/3 is different every time. Go figure.

Pena Blanca, Arizona

Madera Canyon: A classic location mentioned in "The Big Year" for birders as well as Lepidopterists. Two different levels to collect, one at the entrance at the picnic tables, one at the top – some 800 feet elevation difference and different habitat completely. Many species described from here in the early 1960's.

Madera Canyon, Arizona

Box Canyon, Florida Canyon: Sphinx moth heaven, also many butterfly species in the streambed areas. Right close to Madera Canyon but many different species, as this is more desert habitat.

Huachuca Mountains: Carr, Garden, Ash Canyons, and a few others also, including all the way to the border where Copper Canyon is. Many other unusual species that are not found readily in Pena Blanca or even Madera Canyon. This range leads into Mexico, so many species have come from the south to colonize here. Great unusual moths of all sizes, primarily the smaller ones.

Carr Canyon, Arizona

Chiricahua Mountains: Onion Saddle, Cave Creek, Rustler Park, Barfoot Park. These areas are another classic birding location. Cave Creek is the lowest, on the east side at 5000', and then going up there is Onion Saddle at 7600' and Rustler Park at 8400'. Barfoot is equal to Rustler but has fewer visits from Lepidopterists. Great for large species lower down, rare smaller species higher up. Lots of rain in the summer, though, lots of lightning sometimes.

Mount Graham: Further north across the interstate, and a long drive up. However, transition material from northern AZ to southern, and some endemic stuff all of its own. Beautiful and lots of butterflies and dayflying

moths, not to heavily visited but remote.

Rustler Park, Arizona

Greer, Arizona

Greer, Alpine: Locations in Apache County that are famous, and have unfortunately been "discovered" by the local crowd of day visitors and cabin renters. Good locations still there, but getting commercialized these days. Very unusual material, mostly moths and *Speyeria.*

So, that is the extent of what I personally know. Now, there are areas that I consider that should not be missed of which I have been made aware. First, in Texas, there are the Davis Mountains. I do not know any exact location, however. Also, there is east Texas, which has some interesting records, but I have no exact locations there either. Of course the lowest part of Texas has great records, but again I have heard that most of it is private. So, fellow lepsters, here is my question to you:

If someone were to come to your state on a moth "Big Year", where, exactly would you send them? Not a nebulous fuzzy area, but a specific place of which you are aware that has the typical species found in your area. I have been to some great areas – in Mississippi, in Georgia, in North Carolina and in Florida. However, I found these pretty much on my own. Each of you is much more an expert in your state. Let's make a list, from New Mexico, across to Virginia and south, of where you would send someone-say three spots in your state.

If you do this, I will compile these, and who knows, maybe I can do the "Big Year" trip-maybe in stages, after I retire or whatever. After I learn to boil water, also, according to my wife…

****

****

****

QUOTE FROM W. J. HOLLAND

"There are two worlds; the world of sunshine, and the world of the dark. Most of us are more or less familiarly acquainted with the first; very few of us are well acquainted with the latter. Our eyes are well adapted to serve us in the daylight, but they do not serve us well in the dark, and we therefore fail to know, unless we patiently study them, what wonders this world of the dark holds within itself. There are whole armies of living things, which, when we go to sleep begin to awaken; and when we awaken, go to sleep. The eyes of the creatures of the dark are adapted to seeing with less light than our eyes require. The broad daylight dazzles and confounds them. Sunshine has much the same effect upon them that darkness has upon us. Our twilight is their morning; our midnight is their noonday.

(The Moth Book, A Popular Guide to a Knowledge of the Moths of North America; Garden City, New York, Doubleday, Page & Company, 1917; page 77)

****

LAST OF THE BARTRAM'S SCRUB - HAIRSTREAKS (*STRYMON ACIS BARTRAMI*) ON BIG PINE KEY?

BY

MARC C. MINNO

On December 6, 2014, Dr. Mark Whiteside of Key West, Amy Grimm of Big Pine Key, and I searched some of the best pine rockland habitat on Big Pine Key for Bartram's Scrub-Hairstreaks. This butterfly was listed as Endangered on September 11, 2014, under provisions of the Endangered Species Act (U.S. Fish and Wildlife Service 2014). The U.S. Fish and Wildlife Service (USFWS) didn't really want to list any more butterflies in Florida, but agreed to at least evaluate some as part of a settlement agreement with the Center for Biological Diversity that was signed on July 12, 2011. A peer-reviewed list of Florida's rare, threatened, endangered, and species of special concern butterflies has been available for more than 20 years (Minno and Emmel, 1994), but neither USFWS nor the Florida Fish and Wildlife Conservation Commission (FFWCC) have paid any attention to those recommendations. However, under the terms of the settlement with the Center for Biological Diversity, the USFWS agreed to evaluate hundreds of at-risk plants and animals by 2018 and to list those found to be threatened or endangered (http://www.biologicaldiversity.org/programs/biodiversity/species_agreement/).

The major habitat for Bartram's Scrub-Hairstreak in Florida is pine rockland (Fig. 1). This natural community has many tropical species of plants and animals. Pine rockland is a rare ecosystem that occurs on patches of highly eroded limestone. In Florida it is now only found in Miami-Dade and Monroe counties, but historically also occurred in Palm Beach County and perhaps further north along the coast.

Like all pine dominated communities, wild fire is an important element in maintaining the vegetation. The natural frequency of fire in pine rocklands was likely not as great on Big Pine Key as it was on the mainland. However, without at least occasional fire most pine rocklands will eventually change into tropical hammocks dominated by hardwood trees and shrubs.

Bartram's Scrub-Hairstreak colonies occur mostly on public conservation lands such as the National Key Deer Refuge on Big Pine Key, Everglades National Park, and Miami-Dade County preserves. Big Pine Key used to support one of the best populations of Bartram's Scrub-Hairstreaks. The butterfly is very local and not very common in Everglades National Park, despite having the largest tracts (more than 20,000 acres) of pine rockland habitat left. The Miami-Dade County preserves are a patchwork of parcels of various sizes, many being small in size, isolated in urban areas, and overgrown with hardwoods. Two of the largest parcels (Navy Wells and Richmond pineland complex) are the only Miami-Dade preserves known to still have Bartram's Scrub-Hairstreaks.

Fig. 1. Pine rockland habitat on Big Pine Key. Notice the abundance of palms in the understory.

Recently Andy Warren with the Florida Museum of Natural History showed me some small differences in wing pattern that he has observed between the Big Pine Key and mainland populations. Thus Bartram's Scrub-Hairstreaks are not all the same in Florida and we must maintain those genetic lines for the long-term health of the species.

In February I attended a meeting of the Imperiled Butterfly Work Group. This group consists mostly of agency staff with little knowledge of butterflies, land

managers, and a few scientists and butterfly watchers. At that meeting I brought up the concern that Bartram's Scrub-Hairstreak is nearing extinction on Big Pine Key and asked if USFWS or FFWCC had or were working on any emergency plans to save this population. Although these are the agencies that have legal authority to protect threatened and endangered wildlife, staff said that there are no plans for any action involving Bartram's Scrub-Hairstreak at this time. The National Key Deer Refuge recently received a large grant to conduct prescribed fires on Big Pine Key, which could help improve some habitat. However, if not done correctly, prescribed fire could destroy or damage habitat as happened on a tract north of the Blue Hole on Big Pine Key a few years ago. Key Thatch Palm (*Leucothrinax morrisii*) has been proliferating on Big Pine Key in recent years and is very fire tolerant. This species may be allopathic or perhaps it just shades out grasses and forbs, but many upland areas of Big Pine Key are now dominated by this small palm.

Time is of the essence. The Big Pine population of Bartram's Scrub-Hairstreak will soon be extinct and valuable genetic diversity will be lost. To save Bartram's Scrub-Hairstreak on Big Pine Key will take a butterfly ranching operation where eggs will be obtained by confining wild females on potted croton bushes in cages. The eggs can then be reared in captivity to prevent predators and parasitoids from eating them. The resulting adults can then be released back into the wild to bolster the natural population. Success largely depends upon finding a female or two to get started initially.

But back to our monitoring on December 6th. After about five hours of searching, Dr. Whiteside, Amy, and I finally found a male Bartram's Scrub-Hairstreak (Fig. 2). A few days later Amy revisited the site and found a female. These two adults are likely among the last of this species found on Big Pine Key. Until recently, Big Pine Key supported a robust population of Bartram's Scrub-Hairstreak and other pine rockland specialist butterflies. Most of these special butterflies have disappeared from the Keys, including *Euphyes arpa*, *Hesperia meskei pinocayo*, *Oligoria maculata*, *Anaea troglodyte floridalis*, *Cyclargus ammon*, and *Calephelis virginiensis*. Bartram's Scrub-Hairstreak is next in line to disappear. So what happened to these butterflies? Nobody knows, but we must find out in order to save what's left.

Fig. 2. A handsome male Bartram's Scrub-Hairstreak on Big Pine Key sipping nectar from the male flowers of the larval host plant, *Croton linearis*. Males of this butterfly are easily recognized by the white abdomen. This maybe one of the last individuals of Bartram's Scrub-Hairstreak to be seen on Big Pine Key.

Literature Cited

Minno, M. C. and T. C. Emmel, 1994. *Lepidoptera.* Pp. 571-682. In: M. Deyrup and R. Franz (eds.). Rare and Endangered Biota of Florida. Volume Six, Invertebrates. University Press of Florida, Gainesville, Florida. 798 pp.

US Fish and Wildlife Service, 2014. Endangered and Threatened Wildlife and Plants; Endangered Status for the Florida Leafwing and Bartram's Scrub-Hairstreak Butterflies. *Federal Register* 79(155):47222-47244. Available at: http://www.gpo.gov/fdsys/pkg/FR-2014-08-12/pdf/2014-18614.pdf

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

****

****

****

****

*****

**

*

LA MARIPOSA Y EL ÁRBOL DE NARANJAS (THE BUTTERFLY AND THE ORANGE TREE)

BY

JOE RIDDLEBARGER

Although it is well documented that *Papilio cresphontes* (Cramer) has many native food plants in the citrus family (Rutaceae) including the northern pricklyash (*Zanthoxylum americanum* Mill.), Hercules-club (*Zanthoxylum clava-herculis* L.), lime pricklyash (*Zanthoxylm fagara* [L.]Sarg), hoptree (Ptelea *trifoliata* L.), sea torchwood (*Amyris elmifera* L.), Mexican orange (*Choisya dumosa* [Torr.] A. Gray), gasplant (*Dictamnus albus* L.) and white sapote (*Casimiroa edulis* Llave & Lex.), it is also known to favor cultivated citrus trees (University of Florida). The larva of the Giant Swallowtail, well known as the "orange dog" is considered a minor pest by orange growers (University of Florida).

***Papilio cresphontes* (Cramer). Illustration of the original type description from Pieter Cramer's book from 1779. Fig. A** [(1)]

Due to my interest in the exploration and settlement of North America by Spanish explorers I began a search for references to the introduction or growing of cultivated citrus trees found in the citrus industry literature and the records of the early Spanish expeditions and occupations which may have lead to the expansion of the range or the number of individuals of *P. cresphontes.*

What follows is an approximate chronological order of all of the major expeditions and colonization attempts by Spain to extract wealth from North America. When this proved unlikely they attempted to occupy their claimed lands in order to keep out the French and British who were already encroaching along the Gulf of Mexico, at the mouth of the Mississippi and along the eastern seaboard to the north of Florida. Although no mention of citrus is contained in some accounts they have been included to show the timeline of Spain's long history leading up to the settlement of North America and the beginning of the cultivated citrus industry. Future research may require revisions to these accounts. Citrus fruits, seeds or plants could easily be transported and kept fresh during the short sailing distances between the Caribbean Islands or Mexico in route to the North American continent.

Christopher Columbus left seeds with the citizens of the abortive colony of Navidad on his first voyage in 1492, but it is doubtful if they were ever harvested, because those citizens were massacred by the Arawaks (Crobsy, 1972).

On his second voyage in November of 1493 Columbus stopped off at the Canary Islands and picked up citrus seeds including the sweet orange, sour orange, lemon, citron, and probably the lime on his way to Hispaniola (Haiti) (Las Casas, 1520-1559).

Juan Ponce de Leon is credited with the discovery of the North American continent on March 27, 1513, somewhere just north of St. Augustine, Florida, at 30° 8' latitude. Since it was Easter season he named the land *La Florida.* During this voyage Ponce also discovered the Gulf Stream, the Florida Keys and a native group called the Calusa along the west coast of Florida who had gold ornaments. In 1521 with the gold in mind he attempted to establish a colony on the west coast of Florida. Some 200 colonists along with horses, cattle, sheep, goats, agricultural stock and tools were taken on the voyage. It is doubtful that any planting was attempted by the colony due to fighting between the Spaniards and the Calusa. The colonists suffered heavy losses and retreated to their ships. Ponce died of infection from an arrow wound to his thigh shortly after returning to Havana (Turner, 2012). Another account of this attempt claims that they took seeds and cuttings (Gannon, 1996). Although there was no specific mention of citrus it could be assumed that agricultural stock, seeds or cuttings may have included citrus plants or seeds in order to establish orchards.

After the discovery of North America the Spanish claimed and called all of the territory from peninsular Florida to Nova Scotia and the unknown lands to the west *La Florida.*

Citrus trees were first introduced to Central and South America by the Juan de Grijalva expedition between July 12 and July 29, 1518 (Webber, 1967) (Diaz, 1568). The Jesuit missionary and naturalist Jose de Acosta who served in Panama, Peru

and Mexico in the latter part of the sixteenth century asked who had planted the "whole woods and forests of orange trees" (Crosby, 1972).

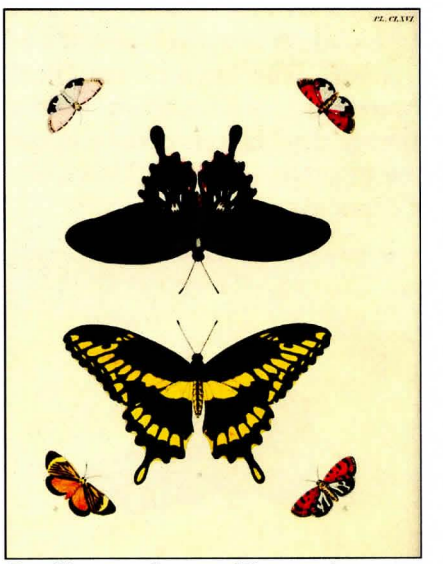
After landing on the Atlantic coast near the Santee River-Winyah Bay area with 600 persons in 1526, Lucas Vazquez de Ayllon moved his colony to Sapelo and St. Catherine's sounds in Georgia on September 29, 1526, due to a lack of food. The colony was abandoned in late October or early November due to Ayllon's death on October 18, 1526. Only half of the party lived to make the return trip and few written records have been found for the occupation period (Gannon, 1996).

The next attempt to establish a colony was in 1528. Lead by Panfilo de Naveaz the ships got lost and landed near John's Pass north of Tampa Bay. After wandering on foot north to Apalachee and on west to Aute the party built boats and attempted to sail to Mexico but were all ship wrecked on the coast of Texas. The only survivors, Alvar Nunez Cabeza de Vaca (Cabeza de Vaca is "The Head of the Cow") and three others after being held as slaves for several years finally escaped their captors only to wander around the southwest as medicine men. They found their way to Mexico in 1536 (Resendez, 2007). Cabeza de Vaca wrote of his epic journey but did not mention citrus in any form being aboard the vessels that transported the failed attempt (Nunez, 1542).

The most well known and documented exploration of *La Florida* set sail from Spain in April of 1538. The Hernando de Soto expedition reached Santiago, Cuba, on June 7 with five ships and 600 men. During their stopover they stocked up on supplies and livestock that included 213 horses and a large number of pigs. There are three eye witness accounts documenting all or parts of the expedition. The most complete narrative was written by a Portuguese known only as "The gentleman from Elvas". During de Soto's move from Santiago to Havana for departure part of the army moved overland and the others in the ships. While moving overland Elvas makes note that "Of the fruits of Spain it (Cuba) has figs and oranges" and further on during the move when they arrived at the city of Sancti Spiritus "It is very pleasant and luxuriant, with many fine orange and citron trees" (Clayton, 1993). The expedition reached Tampa Bay on May 30, 1539, and spent the next four years on a trek that took them through parts of Florida, Alabama, Georgia, South Carolina, North Carolina, Tennessee, Mississippi, Louisiana, Arkansas and Texas. De Soto died on May 21, 1542, most likely of typhoid and was buried in the Mississippi river. The remaining members, who numbered around 300, failed in an attempt to walk to Mexico finally returning to the Mississippi where they built boats which they sailed down the river and on to Mexico (Clayton, 1993). Many of the pigs that accompanied the expedition as a backup source of food and grew in numbers to around 700 at one time escaped to become the wild boar of North America including the renowned Arkansas razorbacks.

The naturalist Oviedo y Valdez who was in Santo Domingo, Haiti, from 1541 to 1525 wrote: "Orange trees from Castile were brought to this island from Hispaniola and they have multiplied so abundantly that now they are past counting". Gomara referred to oranges as having become abundant in Central America in 1554 (Webber, 1967). Acosta found oranges, lemons, limes and citrons in abundance in the West Indies in 1590 (Grimston, 1604). Citrus trees were introduced to Brazil by the Portuguese around 1540 on the island of Cananea and the mainland (Garcia, 1540). The Jesuits arrived in Bahia, Brazil, in 1549 and "The grounds surrounding their residences were soon transformed into beautiful orchards, which included many citrus trees" (Torrend, 1937). "Before the Spanish conquered Peru it is certain one saw neither oranges, citrons, sour or sweet which grow in Spain. But one can say in truth that all these fruits and many others grow there today in abundance" (Garcilasco, 1604).

Departing from Mexico on June 11, 1559, Don Tristan de Luna y Arellano with thirteen ships, 200 foot soldiers, 200 cavalrymen, 240 horses, 100 craftsmen, 100 Mexican warriors and about 900 colonists



***Papilio cresphontes* (Cramer). Illustration of the original type description from Pieter Cramer's book from 1779. Fig. B [1]**

entered Pensacola Bay on 14 August. On September 19 a hurricane destroyed all but 3 ships including the one that contained most of their food supplies. Based on information from the De Soto expedition de Luna moved most of his party north to look for food in the villages along the Alabama River. Not much was found but de Luna had sent two ships to Havana after the hurricane hit for food and they arrived in time to stave off the inevitable for a short time. By April 1561 de Luna was relieved of

command, the colony began to fall apart and those who remained deserted and eventually returned to Mexico or sailed with the new commander Angel de Villafane around Florida and up the east coast as far north as Cape Lookout, North Carolina, before returning to Havana (Gannon, 1996).

The orange dogs finally get a taste of the orange tree with the establishment of St. Augustine, Florida, and Santa Elena, South Carolina.

After learning of the French settlement called Fort Caroline built by Rene de Laudonniere on the mouth of the St. Johns River near present Jacksonville, Spain's King Philip II signed a contract with Pedro Menendez de Aviles bestowing on him the titles of civil and military governor for two lifetimes, exemptions from taxes, slaves, and a twenty-five square league land grant if he took 500 soldiers and built two cities in *La Florida*. Menendez arrived at the site which would become St. Augustine in September of 1565, marched north where he took the fort and slaughtered the remaining force at the inlet south of St. Augustine. To this day that place and the river has borne the name Matanzas, "place of slaughters" (Lyon, 1991). The first reference to the planting of oranges in Florida was in a written statement dated April 2, 1579, by Pedro Menendez Marquez the nephew of the founder of St. Augustine to the Audiencia of Santo Domingo: "There are beginning to be many of the fruits of Spain, such as figs, pomegranates, oranges, grapes in great quantity" (Menendez, 1579). Citrus trees were probably planted at the missions established by Pedro Menendez de Aviles. Between 1565 and 1705 about 100 missions sites were occupied at different times from South Carolina south to below St. Augustine and westward across Florida as far as Marianna (Hann, 1991).

Pedro Menendez de Aviles planned to make his home in the second city on a site that he selected on Paris Island, South Carolina. Menendez laid out Santa Elena and Fort San Salvador in April 1566. In July Captain Juan Pardo and 250 men arrived at Santa Elena to find it in a state of mutiny with little or no food. Menendez sent Pardo on two expeditions (December 1, 1566, to March 7, 1567, and September 1, 1567, to March 2, 1568) into the interior in search of a road to the Spanish silver mines of Zacatecas, Mexico. Geography was not their best subject as they headed out to the northwest on both expeditions reaching as far into the interior as Tennessee (Hudson, 1990). Santa Elena failed but the first reference to the planting of oranges in North America was documented by one of the former residents named Bartolome Martinez in a letter to the King dated at Havana, February 17, 1577, he stated: "And what may be truthfully told to your Majesty is that in Santa Elena I planted with my own hands grape vines, pomegranate trees, orange and fig trees; wheat, barley, onions and garlic" (Martinez, 1577). Martinez was a resident of Santa Elena until 1576 (Webber, 1967).

From the trees cultivated by the Spaniards, Indians carried fruits to their villages and scattered the seeds widely as they ate the oranges (Jackson, 1999).

Two centuries after the founding of St. Augustine wild citrus trees were found growing in various parts of Florida from the seeds dropped by Indians. Oranges were illegally traded by the Spanish of St. Augustine to the English as far away as New York up to the 1730s when Englishmen began to cultivate and market them too (Webber, 1967).

The orange proved so well adapted and flourished so well as a naturalized tree, escaped from cultivation, that William Bartram in his exploration of Florida in 1772-74 found great areas covered by wild trees (Jackson, 1999).

When Spain ceded Florida to England for the period of 1763 to 1784 the commercial orange business began and when Florida was again ceded by Spain only this time to the United States in 1821 oranges were planted along the St. Johns River and its tributaries (Jackson, 1999).

By 1707 oranges were being grown around Arizona missions and in California by 1739 (Webber, 1972).

Two hundred and one years after orange trees were planted in Santa Elena *P. Cresphontes* was described by Pieter Cramer (1777) with the type locality as "New York, South Carolina and Jamaica" (Miller, 1981). A watercolor illustration by John Abbot of *P. cresphontes* is included in the collection at the Hargrett Rare Book Collection and Manuscript Library, University of Georgia, along with his notes that state "Feeds on Xanthoxylum Clava sterenus (*Zanthoxylum clava-herculis*), and the orange tree. It frequents in, and in the neighborhood of Savannah, but is not met with a few miles inland" (Abbot, 1820-1825). The cultivation of orange trees was probably responsible for the occurrence of this butterfly "in the neighborhood of Savannah" (Calhoun, 2007).

The Spanish exploration of North America was fueled by the hopes of finding populations willing to give up their vast treasures of gold and silver without much resistance as had been the case in both Mexico and Peru. They assumed that the interior of North America was the place to look for treasure based on their past experiences (Hudson,

1990). No naturalists were included in their explorations as they had little interest in the flora or fauna beyond food sources. The two accounts that contain any references to the plants and animals in North America do not include any observations of arthropods [Clayton, 1993) (Rangel) (Canete)].

The range of *P. cresphontes* covers parts of North, Central and South America. Recent studies have shown that the larva may be capable of adapting to endure cold temperatures on the northern periphery of its range (Finkbeiner, 2011) but the tropical zones allow for a continuous population to exist and may provide fresh stock for the areas to the north. Although unintentional the Spanish settlements of the seventeenth century provided the basis for the cultivated citrus industry that provides millions of trees that help to support this population.

References

Abbot, John, 1820-1825. Moths of Georgia. Information obtained from Calhoun, John V. 2007. The Butterfly Drawings of John Abbot in The Hargrett Rare Book Collection and Manuscript Library, University of Georgia. *Journal of The Lepidopterists' Society* 61(3), 2007, 125-137.

Clayton, Lawrence, Vernon James Knight Jr., Edward C. Moore, 1993. The De Soto Chronicles, The Expedition of Hernando de Soto to North America in 1539-1543. The University of Alabama Press. Volumes I and II. Elvas, A Gentleman from. 1557. Portuguese Edition. Reclacam Verdaderia. The True Relations of the Hardships Suffered by Governor Hernando de Soto. New York Public Library. Rengal, Rodrigo (De Sotos' secretary) original date unknown. Published in 1851 by Gonzolo Fernandez de Oveido's Historia general y natural de las Indias. Canete, Fray Sebastian de, date unknown. The Canete fragment: Another Narrative of Hernando de Soto. Found in the papers of Pedro Menendez de Aviles.

Crosby Jr., Alfred W., 1972. *The Columbian Exchange, Biological and Cultural Consequences of 1492.* Greenwood Press.

Diaz, Bernal del Castillo, 1568. *The True History of the Conquest of New Spain.*

Finkbeiner, Susan D., Robert D. Reed, Robert Dirig, John E. Losey, 2011. The Role of Environmental Factors in the Northeastern Range Expansion of *Papilio Cresphontes* Cramer (Papilionidae). *Journal of the Lepidopterists' Society* 65(2), 2011. 119-125.

Garcia, Rudolpho, 1540. *História gerai do Barzil.*

Garcilasco de la Vega The Inca, 1604. *La Florida.* Lisbon

Gannon, Michael, 1996. *The New History of Florida.* University Press of Florida.

Grimston, Edward, 1604. *English translation of Historia natural y morsl de las Indias.* Hokluyt Society, London 1880 Vol. 1.

Henderson, Ann L. and Gary R. Mormino, 1991. *Spanish Pathways in Florida.* Pineapple Press. Pedro Menendez de Aviles, Eugene Lyon. p 98. Father Juan de Paiva Spanish Friar of Colonial Florida, John H. Hann. p 140.

Hudson, Charles, 1990. *The Juan Pardo Expeditions. Exploration of the Carolinas and Tennessee,* 1566-1558. University of Alabama Press, Tuscaloosa.

Jackson, Larry K. and Frederick S. Davies, 1999. *Citrus Growing in Florida,* Fourth Edition. University Press of Florida, Gainesville, FL.

Las Casas, Bartolome, 1520-1559 *Historia de las Indias.*

Martinez, Bartolome al Rey, *La Habana,* 17 febrero de 1577.

Menendez, Pedro marques, 1579. *La Audiencia de Santo Domingo,* San Agustin, 2 abril 1597.

Miller, Lee D. and F. Martin Brown, 1981. *A Catalogue/Checklist of the Butterflies of America North of Mexico.* The Lepidopterists' Society, Memoir No. 2.

Nunez Cabeza de Vaca, Alvar, 1542. *La Relacion.* New York Public Library.

Resendez, Andres, 2007. *A Land So Strange, The Epic Journey of Cabeza de Vaca.* Basic Books.

Torrend, Fra Camillo, 1937. *S. J. of the Colegio Antonio Vieira,* Bahia, Brazil.

Turner, Samuel P., 2012. *The Caribbean World of Ponce de Leon and his Discovery of Florida.* Herrera, Antonio 1935. Historia General de la Hechos de los Castellanos en las Islas y Tierrafirme del Mar Oceano. Tomo III, La academia de la Historia, Madrid.

University of Florida, entnemdept.ufl.edu/creatures/citus/giantswallowtail

Weber, David J., 1992. *The Spanish Frontier in North America.* Yale University Press.

Webber, Herbert John, 1967. *History and Development of the Citrus Industry.* University of California Division of Agricultural Sciences.

(1) DE UITLANDSCHE KAPELLEN VOORKOMENDE IN DE DRIE WAERELD-DEELEN ASIA, AFRICA EN AMERICA BY EEN VERZAMELD EN BESCHREEVEN DOOR DEN HEER PIERTER CRAMER.
Volume 2, 1779: Plate CLXV Figure A, Plate CLXVI Figure B.

****

NEW BOOK: "*EUCOSMA* HÜBNER OF THE CONTIGUOUS UNITED STATES AND CANADA (LEPIDOPTERA: TORTRICIDAE: EUCOSMINI)"

BY

DONALD J. WRIGHT AND TODD M. GILLIGAN

The Wedge Entomological Research Foundation proudly announces publication of its newest book: "*Eucosma* Hübner of the Contiguous United States and Canada (Lepidoptera: Tortricidae: Eucosmini)" by Donald J. Wright and Todd M. Gilligan. The book will be published in mid-April 2015. The retail price is $90.00, however, the Wedge Entomological Research Foundation is offering an early-bird-special discounted price of $80.00 (plus shipping and handling) for all orders received by 1 August 2015. Please go the Foundation's website www.wedgefoundation.org or contact Eric H. Metzler, Managing Director, metzlere@msu.edu for details on ordering books from the Foundation. Several of your favorite retailers of entomology books will also have copies available. Do not forget 1 August 2015 for the discounted price.

The book, ISBN 978-0-933003-16-3, is 256 pages, 30 colored plates, 49 monochrome plates hardbound with dust jacket, and 8.75" x 11.25" approximate dimensions. The contents include 133 species accounts. *Eucosma* Hübner is one of the largest genera in the Tortricidae, with more than 230 described species. It achieves its greatest species richness in the Nearctic, where members of the genus can be found in nearly every habitat, from the dunes of the Gulf Coast to the barren summits of the Rocky Mountains. This volume is the first comprehensive treatment of North American *Eucosma* to be published in more than 90 years. One hundred and thirty-three species are reviewed from the contiguous United States and Canada. Nine new species are described, nine new synonymies are proposed, 21 lectotypes are designated, and several unresolved species complexes are discussed. Diagnostic morphological features useful in species identification are emphasized and illustrated with 450 color adult images and 629 detailed genitalia drawings.

"This is a meticulously researched and beautifully illustrated guide to the moths of the tortricid genus *Eucosma* that occur in the lower 48 states and Canada. Taxonomic and nomenclatural problems are resolved, and details are provided to assist in the identification of all species. It is a must-have for those interested in the tortricid fauna of North America." John Brown, Systematic Entomology Laboratory, USDA-ARS, Smithsonian Institution.

Sent in by Eric Metzler.

****

****

****

REPORTS OF STATE COORDINATORS

Alabama: C. Howard Grisham, 573 Ohatchee Road, Huntsville, AL 35811, E-Mail: chgrisham@Comcast.net

Arkansas: Mack Shotts, 514 W. Main Street, Paragould, AR 72450, E-Mail: cshotts@grnco.net

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

Charlie sends in the following Florida field report, first quarter 2015:

In Gainesville and much of northern Florida the first three months have been chilly and wet overall. In Gainesville I have recorded only common species: *Agraulis vanillae* (Jan. 1), *Phoebus sennae* (Jan. 4, Feb. 8, 22), *Junonia coenia* (Jan. 6), *Leptotes cassius* (Jan. 6) and *Heliconius charithonia (Jan. 6).*

Barbara Woodmansee reported on a Feb. 22 visit to the Lower Suwannee NWR, Levy Co., where she saw the following butterflies: *Erynnis juvenalis, Lerema accius, Phoebus sennae, Phoebus philea, Abaeis nicippe, Pyrisitia*

lisa, Calycopis cecrops, Callophrys grynea sweadneri, Phyciodes phaon, Polygonia interrogationis (?) ovipositing on elm leaves, *Hermeuptychia sosybius* complex, *Heliconius charithonia, Danaus plexippus and Danaus gilippus.*

Again, fellow members please answer my plea for contributions of Florida butterflies and moths!

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

The contributors include James Adams (JKA or no notation), Irving Finkelstein (ILF), John Hyatt (JH) and Lance Durden (LD). Other contributors are spelled out with the appropriate records. Most records presented here represent new or interesting records (range extensions, unusual dates, uncommon species, county records, *etc.*), or more complete lists for new locations/new times of year. All known new STATE and COUNTY records are indicated, and all dates listed below are 2015 unless otherwise specified.

Carbondale, I-75 exit 326, Whitfield Co.:
NOCTUIDAE: *Psaphida grandis*, Jan. 26 (EARLY); *Feralia major*, Feb. 2, Feb. 18; *Lithophane grotei*, Jan. 16; *Lithophane unimoda*, Feb. 18.

Sapelo Island, McIntosh Co.:
June 25, 2014, LD & JH:
ACROLOPHIDAE: *Acrolophus propinquus*. **LIMACODIDAE**: *Apoda rectilinea, Euclea nanina*. **CRAMBIDAE**: *Diacme phyllisalis*. **PYRALIDAE**: *Dioryctria disclusa*. **GEOMETRIDAE**: *Speranza varadaria, Scopula umbilicata*. **SPHINGIDAE**: *Dolba hyloeus*. **NOCTUIDAE**: *Spodoptera latifascia*.
Sept. 14, 2012, LD:
TORTRICIDAE: *Phaneta argutipunctata*. **CRAMBIDAE**: *Hellula rogatalis, Glaphyria sesquistrialis*. **NOTODONTIDAE**: *Schizura apicalis* (COUNTY, first GA record since 2002). **EREBIDAE**: *Idia majoralis*.
Jan. 10, 2013, LD:
NOCTUIDAE: *Leucania subpunctata*.
April 12, 2013, LD:
CRAMBIDAE: *Eoparagyractis irroratalis*. **PYRALIDAE**: *Elasmopalpus lignosellus*. **GEOMETRIDAE**: *Nemoria saturiba, Scopula compensata*.
June 14, 2013, LD:
CRAMBIDAE: *Chrysendeton medicinalis, Diatraea evanescens*. **GEOMETRIDAE**: *Macaria aequiferaria*. **NOCTUIDAE**: *Elaphria versicolor, Condica vecors*.
August 14, 2013, LD:
GEOMETRIDAE: *Idaea obfusaria*. **NOCTUIDAE**: *Ogdoconta cinereola*.
August 22, 2014, LD:
MEGALOPYGIDAE: *Lagoa crispata*. **GEOMETRIDAE**: *Macaria bisignata*. **NOTODONTIDAE**: *Datana drexelii, D. robusta*. **EREBIDAE**: *Haploa clymene, Renia nemoralis*.
Oct. 13, 2014, LD:
LIMACODIDAE: *Isochaetes beutenmuelleri*. **GEOMETRIDAE**: *Idaea pervertipennis*. **NOCTUIDAE**: *Nedra ramosula*.
Nov. 24, 2014, LD:
GEOMETRIDAE: *Leptostales pannaria*. **NOCTUIDAE**: *Metaxaglaea australis*.

Brian Scholtens Sapelo Island records, new for the island (and some for GEORGIA):
GRACILLARIIDAE: *Caloptilia triadicae, Phyllonorycter kearfottella*. **OECOPHORIDAE**: *Martyringa xeraula*. **COLEOPHORIDAE**: *Holocera immaculella* (GA record?). **GELECHIIDAE**: *Pseudotelphusa quercinigracella, Gnorimoschema triocellella* (GA record?), *Scrobiopalpula sacculicola* (GA record?), *Dichomeris glenni*. **TORTRICIDAE**: *Olethreutes concinnana* (GA record?), *Rhyacionia busckana, Eucosma cocana, Chimoptesis gerulae, Cydia anaranjada, Gymnandrosoma punctidiscanum, Pseudogalleria inimicella, Argyrotaenia quercifoliana, Choristoneura rosaceana, Choristoneura pinus, Archips semiferanus, Sparganothis azulispecca*. **LIMACODIDAE**: *Lithacodes gracea, Euclea delphinii*. **CRAMBIDAE**: *Helvibotys helvialis, Lineodes integra, Diasemiopsis leodocusalis, Herpetogramma fluctuosalis, Marasmia cochrusalis, Lipocosma sicalis, Eudonia strigalis, Crambus praefectellus*. **PYRALIDAE**: *Galasa nigrinodis, Clydonopteron sacculana, Galleria mellonella, Tulsa finitella, Palatka nymphaeella, Homeosoma deceptorum, Laetilia myersella, Baphala pallid, Coenochroa bipunctella, Peoria floridella* (GA record?), *Peoria gemmatella* (GA record?), *Aglossa oculalis* (GA record?), *Pselnophorus*

belfragei. **MIMMALONIDAE**: *Cicinnus melsheimeri*. **LASIOCAMPIDAE**: *Artace cribaria, Phyllodesma americana*. **EREBIDAE**: *Arugisa lutea, Pseudoanthracia coracias, Argyrostrotis quadrifilaris, Crambidia lithosioides, Virbia fergusoni, Dahana atripennis*. **EUTELIIDAE**: *Marathyssa inficita*. **NOLIDAE**: *Garella nilotica*. **NOCTUIDAE**: *Enigmogramma basigera, Psaphida rolandi, Heliocheilus lupatus, Elaphria fuscimacula, Metaxaglaea violacea, Anicla lubricans*.

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

Steve sends some comments. "No one else had anything to report so I am including some fairly mundane records of winter moths from around my house - nothing at all of any great interest. I've also attached a photo of *Metaxaglaea inulta*, which is at least a nice looking moth. I hope we get something more interesting in the spring (if it ever arrives)".

The following macro-moths were recorded by Steve Hall at his house in Chapel Hill, Orange County. The house is situated on a north-facing slope about a quarter mile uphill from the nearest perennial stream. Due to presence of diabase, soils at the house are somewhat more basic than is typical of the Piedmont, supporting basophilic species such as Redbud, Hop Hornbeam, and White Ash along with more typical species such as White Oak, Southern Red Oak, Red Maple, Mockernut Hickory, Beech, Eastern Red Cedar, Loblolly Pine, Shortleaf Pine, and Virginia Pine. Observations were made on warm nights – above 50 at sundown – throughout the winter. A combination of banana/beer bait and a sheet with a 15 w UV light was used for sampling, with some records also made at porch lights. None of the species are new to the area or especially noteworthy. *Hypena scabra*, however, is impressive at least for its omnipresence, found in all months of the year in North Carolina – including commonly in the winter – and in nearly all habitats, ranging from the barrier islands to the top of Mt. Mitchell.

GEOMETRIDAE:
Alsophila pometaria 24, 28 Dec.; 4, 11, 20, 15 Jan. (sheet, porch light)
Iridopsis defectaria 1 Dec. (sheet)
Phigalia denticulata 11 Jan. (porch light)
Paleacrita vernata 20 Jan.; 8 Feb. (sheet)
Eupithecia miserulata 5, 12, 13 Nov. (bait, sheet)

EREBIDAE:
Idia americalis 5 Nov. (sheet)
Idia aemula 5, 11, 12, 24 Nov. (bait, sheet)
Hypena scabra 5, 17, 30 Nov.; 24, 28 Dec.; 4 Jan.; 9 Feb. (bait, sheet)

NOCTUIDAE:
Elaphria chalcedonia 12 Nov. (bait, sheet)
Galgula partita 24 Nov. (sheet)
Lithophane patefacta 11, 12, 17 Nov. (bait)
Lithophane grotei 20 Jan. (bait)
Eupsilia vinulenta 28, 29 Dec.; 4, 9 Jan. (bait, sheet)
Eupsilia cirripalea 20, 25 Jan. (bait)
Sericaglaea signata 5, 6, 17 Nov.; 24 Dec. (bait, sheet)
Metaxaglaea inulta 5 Nov. (bait, sheet)
Epiglaea decliva 12, 17 Nov. (bait, sheet)
Chaetaglaea sericea 5, 12 Nov. (bait)
Sunira bicolorago 5, 10, 11, 12, 17, 30 Nov.; 15, 17, 24, 28 Dec. (bait)
Mythimna unipuncta 6, 10 Nov. (bait)
Agrotis ipsilon 5, 12, 30 Nov.; 1 Dec. (bait, sheet)
Anicla infecta 11, 12 Nov.; 1 Dec. (bait, sheet)
Peridroma saucia 5 Nov. (sheet)

Metaxaglaea inulta

Agnorisma badinodis 5, 11, 12 Nov. (bait, sheet)
Xestia elimata 24 Nov. (sheet)

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

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

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

Virginia: Harry Pavulaan, P.O. Box 1124, Herndon VA 20172, E-Mail: pavulaan@aol.com

****

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

****

SOUTHERN LEPIDOPTERISTS' SOCIETY
c/o J. BARRY LOMBARDINI, THE EDITOR
3507 41st Street
Lubbock, Texas 79413