Southern Lepidopterists' NEWS

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

J. BARRY LOMBARDINI: EDITOR

SATYRIUM CALANUS FALACER (GODART [1824]) (LEPIDOPTERA: LYCAENIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

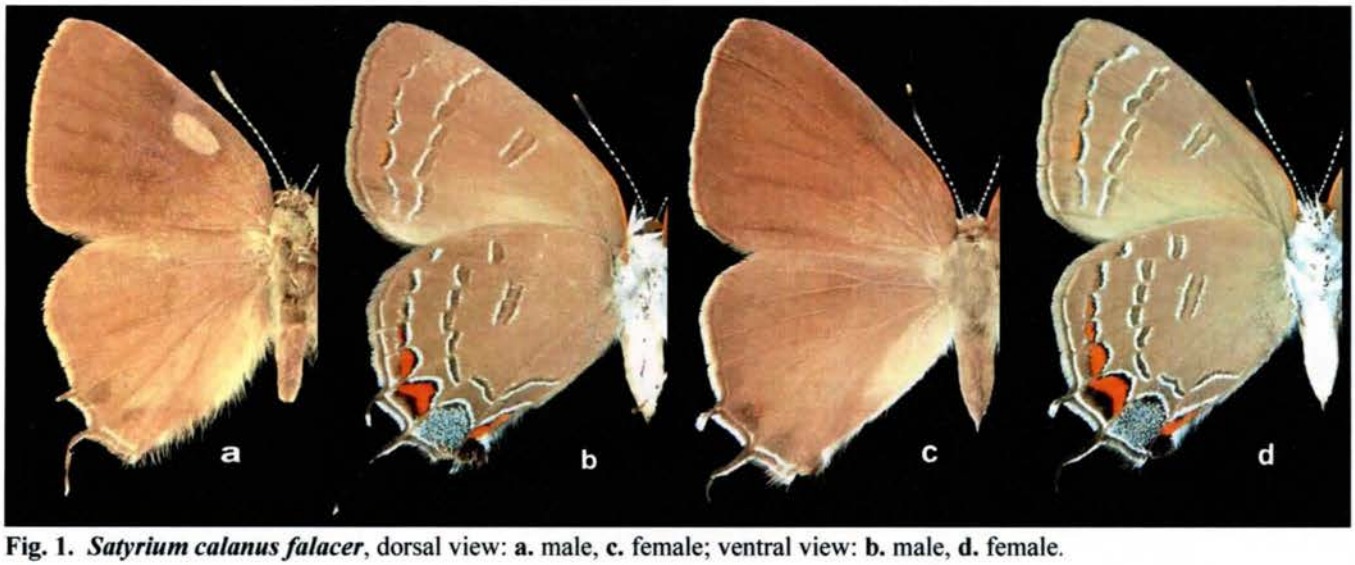

Fig. 1. ***Satyrium calanus falacer***, dorsal view: **a.** male, **c.** female; ventral view: **b.** male, **d.** female.

Satyrium calanus (Hübner) (Fig. 1) was first reported in Louisiana by Lambremont & Ross (1965) who reported a light trap specimen captured on May 8, 1962, and five subsequent specimens all from East Baton Rouge Parish. This species was not mentioned by Jung (1950) for the New Orleans area. During 1973, Brou (1974) reported 15 specimens of ***Satyrium calanus falacer*** (Godart) collected at light traps in St. John the Baptist Parish.

The type locality for ***falacer*** is near Philadelphia, Pennsylvania. Heppner (2003) stated the range of ***falacer*** to be eastern North America: Nova Scotia to Florida and Manitoba to Texas with the flight period April to June. Howe (1975) states ***falacer*** occurs from southeastern Canada to Florida and Texas and lacks an orange spot on the upper

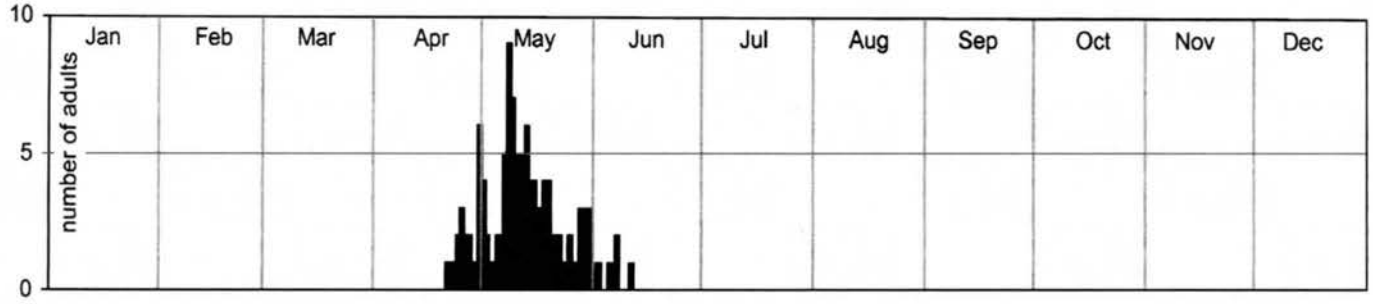

Fig. 2. Adult ***Satyrium c. falacer*** captured in Louisiana. n = 110.

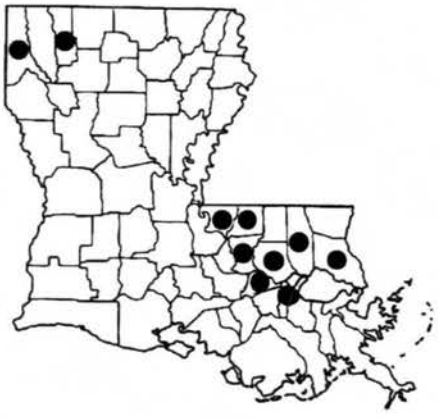

Fig. 3. Parish records for ***Satyrium c. falacer*** by this author.

side of the hindwing.

In Louisiana, ***falacer*** appears to have a single annual brood peaking about three weeks earlier than the similar looking ***Satyrium kingi*** (Klots & Clench) which Brou (2008) reported on. All of the 110 specimens in my sample (Fig. 2) were captured in UV light traps. The parish records are illustrated in Fig. 3.

Literature Cited

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

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SLS DUES - TIME AGAIN - UNFORTUNATELY

DEAR MEMBERS PLEASE CHECK YOUR MAILING LABEL FOR THE *"YEAR"*. IF IT IS 2008 OR LESS YOUR 2009 MEMBERSHIP *DUES ARE DUE*.

PLEASE SEND CHECK TO:

JEFF SLOTTEN
5421 NW 69TH Lane
Gainesville, FL 32653

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NEW MEMBERS

The Society welcomes the following new members:

Ferrell C. Marks, Jr.
Janice G. Marks
5901 Brierdale Ave
Memphis, TN 38120-2307

Chris A. Young
311 Breezy Point Loop
Port St. Lucie, FL 34986

David M. Wright
124 Heartwood Drive
Lansdale, PA 19446

Paula Cannon
2661 Central Ave
Big Pine Key, FL 33043

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ADVENTURES WITH "TOM" DOOLEY: A REMEMBRANCE

The following notice appeared in the Metamorphosis section of the Autumn/Winter 2008-2009 *News of the Lepidopterists' Society*, page 89:

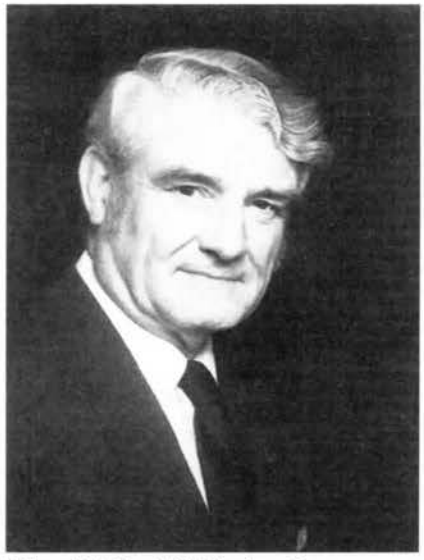
> **Dooley, A. S. "Tom," Jr.** of Satellite Beach, Florida, on 10 August 2008, at the age of 87. Tom first joined the Society in 1979, and became a life member in 1982. Tom loved the challenge of collecting and the camaraderie of the Lepidopterists' Society. He and his wife of 32 years, Pat, attended many of the Society's annual meetings across the country, and in the 1980s and 1990s they traveled to South and Central America on many collecting trips, often in conjunction with those meetings. Tom had been in poor health the last eight years and died peacefully at home. He is survived by his wife, four children, three stepchildren and seven grandchildren. [information from Pat Dooley]

Tom was also a member of the Southern Lepidopterists' Society from the early 1980's through 1995. Although we had fallen out of touch for nearly a decade now, reading the above death notice brought back to me many memories of a warm friendship and the numerous collecting adventures we shared for more than a decade.

I first met Albert S. Dooley (whom I knew as Tom from the very beginning) and his wife Pat in Ecuador in June 1980. We were among the 80 or so participants in the first of the Emmel / Holbrook - organized lepidopterists' expeditions to the American tropics. Along with my friend and roommate on that trip, Abner Towers (deceased), there was an almost immediate bonding with the Dooleys, and the four of us hiked, explored and collected together for the two weeks, as we moved from Limoncocha, in the Napo River lowlands in eastern Ecuador westward to locations in Banos, Puyo and elsewhere. The trip was an eye-opening experience and a fantastic beginning: there would be many more expeditions to tropical wonderlands in the years ahead and many new and often lasting friendships made.

Tom, Pat and I were reunited in June of the following year, when we participated, with a much smaller group this time, in an Emmel-led week long collecting foray to the central Dominican Republic, in the town of Jarabacoa, encountering substantially distinct flora and fauna on the Caribbean island than we had in Ecuador, but no less rewarding. It was during that week that Tom and I reflected on the previous year's collecting in Ecuador, and we decided to go back, but, rather than spending half the time moving from one location to another and only a day or two of collecting at each place, we wanted to stay in one location, as we were doing in Jarabacoa. We organized a small group of just 8 or 9 people, and in December 1981 returned to Ecuador for ten days, making our headquarters the resort, Tinalandia, near Santo Domingo de los Colorados, in the western province of Pichincha. The location was spectacular, but the wet season weather conspired to make the butterfly collecting less than ideal. The moth collectors, which didn't include Tom or me at the time, had outstanding success – all the rain, fog and 100% humidity brought the moths out in swarms!

In June 1983, Tom, Pat and I again joined forces, this time in another Tom Emmel-organized expedition, to Tingo Maria, Peru, in which trip we had great weather, great habitat, and we added many new species in large numbers to our boxes. Curiously, the incident I remember most in that trip was one which, in part, I don't remember at all. Tingo Maria is in an area of the country where much of the coca is grown. We were told that the local field workers chew the coca leaves. It gives them a mild *"high"* and helps them stay comfortable working all day under the bright equatorial sun. As we collected along the edge of a field of waist-high coca plants, Tom and I gave in to our curiosity and decided to test the validity of what we had been told. I chewed one leaf after another; nothing happened. Finally I spit out the cud and thought no more



"Tom" Albert S. Dooley Jr.
(7 April 1921 - 10 August 2008)

about it. After several hours in the field, it was time to return to the hotel for dinner. At the roadside, where we waited for the van to pick us up, was a refreshment stand, and Tom offered to buy me a beer. *"Sure. Thanks!"* I drank the bottle of beer, and within a few minutes became quite groggy, and . . . . The next thing I knew, I was in bed in my room at the hotel, many hours later. Tom had helped lift me into the van and up to the room. That was the beginning and end of my career as a *"drug addict."* Tom promised not to report me to my department head at Georgia State University or to my students.

In 1984, academic commitments prevented me from joining any of the Emmel/Holbrook trips. I had agreed to teach a summer course in art history, my professional field, specifically a seminar in Spanish painting. This involved a three-week "crash survey" in the classroom followed by another three-week field trip to Spain, including a whirlwind tour of Madrid, Seville, Barcelona and the other cities with museums and churches housing paintings by the masters. Each of the ten students had to pay his or her own airfare, hotel and other expenses. The university, of course, paid my salary for teaching the course, but not the travel costs. For my expenses to be covered, the travel agent (Giovanni Holbrook) required the group to have at least fifteen participants. But, even including me and two students' spouses, we had only thirteen. The Dooleys came to the rescue! Tom and I brought along small collapsible nets, and during the one free day the students had for shopping and sightseeing on their own, we were off swinging our nets at the butterflies that crossed our paths in the hills just north of Barcelona.

Tom was born in Lynchburg, Virginia on 7 April, 1921. His education included two years at North Georgia College, Dahlonega, the University of Tennessee, Chattanooga, where he earned his B.S. degree, and Florida State University, where he took his M.S. and completed all-but-the-dissertation for the Ph.D. Tom served in the U.S. Marine Corps for 21 years, during World War II and the Korean War, with tours of duty in Middle Eastern countries and a detachment on the first sailing of the U.S. Battleship Franklin D. Roosevelt in 1942-43. Following his retirement from military service Tom taught courses in sociology and anthropology at Brevard Community College for 18 years, and in an adjunct capacity at Rollins College for some ten years. In addition to his passion for lepidoptera, Tom's interests included history, archaeology, music – everything from big band, country to opera – and above all, he loved to travel. Over his long lifetime, Tom visited much of Europe, parts of Asia, Canada, and the American West, the history and culture of which was an especially strong pursuit. And of course, the lepidoptera-focused trips of the 1980's and 1990's gave him the opportunity to experience and explore the natural richness of Central and South America and the Caribbean.

Arguably the high point of my friendship with Tom Dooley was the month-long collecting trip to Mexico the two of us took in his RV in June and July, 1986. The large, older vehicle ran on regular leaded gas, which was still available in Mexico and quite cheap, and we ate and slept in the RV, which kept the costs very manageable. We drove nearly all of eastern Mexico, from the U.S. border almost to the Guatemalan border, on roads that ranged from good to poor to virtually non-existent, we barely squeezed through some very narrow alleys and bridges, and we struggled to creep up some very steep hills. Miraculously we had very few mechanical problems. Every day we collected and drove, either until nearly nightfall or until we were exhausted . . . or both. Being in such constantly close proximity for a month was surely a test of our compatibility and friendship, and obviously we passed. Tom was very easy to get along with. His amiable, warm, laid-back manner and total unpretentiousness made him an excellent traveling companion. There was also another side to Tom, a strong discipline and preoccupation with order and detail. He insisted that we always remove our shoes or boots when returning to the RV from any venture in the field, and the inside of the vehicle had to be clean and tidy at all times, including a going over with the vacuum cleaner every morning before starting out (my responsibility). Tom was, after all, a retired marine, so his military discipline was to be expected. Among the several thousand specimens each of us collected and brought back from the trip was an unidentifiable skipper taken at Monte Alban, near Oaxaca. I kept the bug, and subsequently donated it to the Florida State Collection of Arthropods, now in the McGuire Center collection. It turned out to be the first-ever-collected individual of a new species, eventually described and named *Zobera oaxaquena* Steinhauser. Sadly Tom never knew about it. In all, the trip was a huge success, and both of us would have gladly repeated it, I'm sure, if we had the chance. My only regret was that, with our exclusive focus on collecting butterflies from dawn to

dusk every day, we completely neglected to take advantage of the opportunity to collect moths, and never even considered hanging a light and sheet outside the RV when we turned in.

In the years following our Mexican excursion, Tom and Pat visited me in Atlanta and I visited them in Satellite Beach several times, and we attended meetings of the Lepidopterists' Society and Southern Lepidopterists' Society, and collected locally. In December 1990, Tom and I joined Tom Emmel, George Austin and company for two intensive weeks of collecting in western Brazil, at the Fazenda Rancho Grande, in the state of Rondonia, at that time still in the early stages of exploration by lepidopterists and documentation of the myriad species found there. Again it was a memorable experience, with many species collected that were new to us, and with quite a few participants neither of us had met before. As it turned out, it would be our final expedition to the tropics together. In the summer of 1991, Tom and I drove to Tucson (in my car this time) to attend the Lepidopterists' Society's annual meeting there, and to take part in several pre- and post-meeting field trips to some of the well-known southeastern Arizona hot spots for collecting, Madera Canyon, Garden Canyon, the White Mountains, *etc.*

We remained in phone contact and by mail for the next half dozen years or so, but in several of our phone conversations it began to be evident that Tom was beginning to experience some memory loss. In 1996, I was invited to a party in celebration of Tom's 75th birthday, but I was unable to travel to Satellite Beach, as I was right in the middle of the logistics of my retirement, moving out of my office at the university, *etc.* I have always regretted that I never made the proper effort to bid an appropriate good-bye to a dear friend and long-time collecting colleague.

Irving L. Finkelstein

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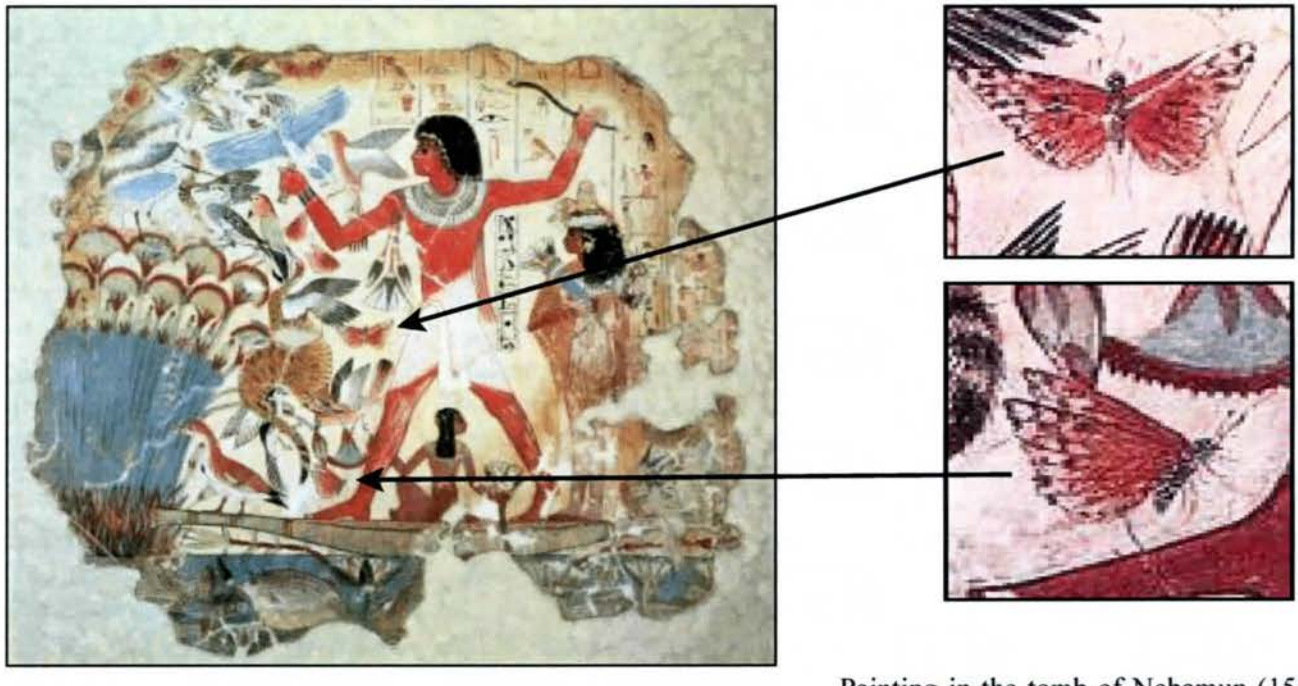
BUTTERFLIES IN ANCIENT EGYPTIAN ART



Painting in the tomb of Nebamun (1550 – 1295 BC) [1]. The butterflies seen in the drawing are thought to be a representative of *Danaus chrysippus* [2]. Nebamun was a nobleman, from near the town of Thebes, who lived approximately 1400 BC [3].

Sources

1) http://en.easyart.com/canvas-prints/Egyptian-Art/Wall-painting-from-the-tomb-chapel-of-Nebamun,-Thebes-300079.html
2) http://www.swan.ac.uk/egypt/infosheetgen/butterflies_in_ancient_egypt.htm\
3) http://www.ancientegypt.co.uk/life/explore/main.html

A 2008 REPORT OF ILLEGAL INSECT COLLECTING BY VISITORS IN INDIA

BY
VERNON ANTOINE BROU JR.

Two Czech nationals, Petr Svacha and Emil Kucera were arrested for illegally collecting rare insects in Singhalila National Park, violating Indian wildlife laws near Darjeeling, India on June 22, 2008, and were been granted *'interim'* bail till August 12 by the court of the Chief Judicial Magistrate, UK Nandi. This type of bail can be withdrawn easily without any hearing. However, the prosecution requested the court to set several conditions to prevent them from leaving India. Complicating the matter was that at the same time there was an ongoing strike of lawyers in Darjeeling. About 500 live and preserved insects, and arachnids, mostly Coleoptera, were seized from their hotel room in Shrikhola near Darjeeling.

A butterfly listed under Schedule I of the Indian Wildlife (Protection) Act, identified as ***Delias sanaca*** (Moore, 1857), a day-flying butterfly of black, yellow and white coloration was among the collected specimens sent to the Zoological Survey of India (ZSI). Initially, the prosecution requested denial of bail of the two individuals on grounds that the accused could possibly jump bail to avoid the proceedings against them. Saurabh Sharma, Wildlife Trust of India (WTI) advocate, who is assisting the prosecution said, *"We were hoping that they would not be granted bail. Alternatively, if granted, we had pleaded for a 'conditional' bail to prevent them from escaping."* They were warned not to interfere in the investigations against them.

Consequently, the court set several conditions on the bail to restrict movement of the two foreigners. The accused had to deposit their passports with the Inquiry Officer and could not leave the Darjeeling Sub-division without court approval and were ordered to report to the Police Inspector In-charge of Darjeeling Sadar, twice-a-week. Additionally, the accused were each required to obtain surety bonds in the amount of 3500 Rupees = ($72.00 USD).

At the time of their arrest, the two individuals stated that they were collecting insects for research purposes and were unaware of the Indian laws. However, investigation revealed that Kucera, a forester, was involved in the trade of insects. They were also found to have violated other administrative procedures, as required by the local laws. Utpal Kumar Nag, ADFO, Wildlife Division-1, who had led the arrest, said, *"This is just an interim bail and they have been confined to Darjeeling, so the case would not be compromised."*

In a preliminary report; most of the insects had not yet been identified to species level, however, the authorities in ZSI suspected that the collection has certain species listed under Schedule I and Schedule II Part II. The case has been quite highly publicized because of the profiles of the accused. The news reports stated this was a good thing, because if this had not happened, they could have easily camouflaged themselves among other foreign tourists and escaped to Nepal through the porous borders. But, because of the publicity, escape attempts may prove to be more difficult as they are easily identifiable now.

The two Czech citizens, Emil Kucera, 52, and Petr Svacha, 51, now referred to as scientist, later appeared in court and were denied bail. Svacha is reportedly a senior scientist at the Institute of Entomology of the Academy of Sciences of the Czech Republic (ASCR) and the managing editor of the European Journal of Entomology, while Kucera is a forester. The accused were employing pressure tactics and threatening to go on a hunger strike, if not granted bail. The India authorities were concerned that the high profile of the accused and the powerful lobbying in their favor, combined with lack of support for the prosecutors, may bear unjust results.

Authorities stated they had copies of internet postings by Svacha that revealed their intentions of offering to sell the butterflies for a specified price. Authorities said they were not as ignorant as they claimed. Among their possessions was also a flash drive containing a map of the Singalllia National Park where they were collecting insects and butterflies in eastern India and a Global Positioning Device, a high resolution camera and chemical preservatives. The pair, who deny the charges, have received support from the international scientific community and a petition with more than 500 signatures demanding their release has been presented to the Indian Prime Minister.

This case garnered much debate in the Czech Republic and in India, with the locals stating that

previously a similar case involved the Japanese and now it was the Europeans repeating these atrocities. The Czechs countering that the scientist were being held as political hostages and that bureaucracy in India is exceedingly horrible, and that the area in which the collecting was occurring was not within the confines of the National Park as the authorities originally stated. It appears the bottom line issue for India's authorities was that the two individuals did not bother to obtain the proper permits for collecting. Part of the evidence presented was the website of Emil Kucera offering to provide for sale Palearctic Coleoptera from areas of China and India.

On September 8, 2008, Chief Judicial Magistrate (CJM) of Darjeeling, announced them guilty of violating both the Indian Wildlife Protection ACT, 1972, as well as the Biological Diversity Act, 2002. This was the first instance of anyone being convicted of biopiracy under the Biological Diversity Act. Emil Kucera was sentenced to three years imprisonment along with a fine and Petr Svacha, was let off with a fine of 20,000 Rupees = ($410.00 USD).

Kucera was on bail, pending his appeal on grounds that he was a foreigner and had no one to appeal his case locally. Apparently in October 2008, Kucera jumped bail according to newspaper accounts and fled India. During the course of the trial, a scientist from ZSI had testified that a Schedule II Part II beetle species *Cucujus bicolor*, had been identified from t he collection of hundreds of illegally taken specimens.

"This was not the first known case of illegal collection of butterflies and other insects in India, including the high altitude varieties of the trans-Himalayan region." In a previous case, a German national claiming to be a scientist was found collecting rare insects in India. In still another related story, a group of French students arrested in July last year were caught with ultraviolet lamps and bedsheets. Since 1972, the government of India has managed to get only eight convictions under the Wildlife Act. Seven of these convictions ranged between four and five years and one for six years, but no violator has been given the maximum prescribed seven-year sentence. Most of these cases involved mammals.

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JAMES' CHALLENGE TO THE SLS MEMBERSHIP

James Adams ponied up $60 dollars in 2008 for articles on the *"Dangers of Lepping"* and *"First Encounters"*. The Society and your Editor thank James for this very generous "challenge". However, he offered up to $100 ($10 each for 10 articles) - so the Society fell $40 dollars short. James' challenge continues for 2009. Members - rise up in outrage and write such articles so that our Society will receive our just rewards.

In this issue, according to my calculations (and James always has the right to challenge my calculations) there are 4 articles that rise to the occasion or more importantly to the "challenge":

1. Dangers of Lepping: The One Billy Goat Gruff by Paulette Haywood Ogard and Photography by Sara Bright (page 15),
2. My Scariest Moment in the Field by Gary Noel Ross (page 16),
3. Finding *Cath* by Paul Smith (page 23), and
4. A 2008 Report of Illegal Insect Collecting by Visitors in India by Vernon A. Brou Jr. (page 7).

Now James, the stickler that he is, may challenge #4, the report on illegal collecting in India. But what could be more dangerous than be thrown in jail and fined over a few butterflies and other insects?

Good work and many thanks to all those members (and non-members) who have written these articles last year and beginning this year! - The Editor

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A VERACRUZ BUTTERFLY ADVENTURE

BY
RO WAUER

The Darwin Trail was slick from recent rains, so we were forced to walk much slower than normal as we carefully followed the narrow rocky path through the lush tropical greenery. The overcast sky added to the dim light that existed within the dense undergrowth. Even the birdlife, it seemed, was on hold, although an occasional call note was evident somewhere above. A Zebra Heliconian lifted off from a perch as we passed, and an Isabella's Heliconian fluttered away through the mist. We had a distant view of a clearwing off to our right. Then suddenly Eric discovered a much smaller dark brown butterfly perched on a green leaf at knee-height that I had walked right by. We immediately zeroed in to identify this little bug. But it took us several minutes before we could see the rusty underside with two black eyespots and the turquoise band across the partially opened upperside. A Turquoise Eyed-Metalmark (*Mesosemia gemina*), a new species for all four of us.

And so it went all during our Veracruz butterfly adventure. From October 20 to October 30, 2008, we visited ten sites in Veracruz, including the Darwin Trail, within the Los Tuxtlas Biosphere Reserve just north of Catemaco. This was an area Betty and I had visited years earlier when our target species were the abundant birds, but now we were there to find and photograph butterflies. And in spite of the rainy weather we recorded eighty-eight species that day, most of which, like the Turquoise Eyed-Metalmark, were lifers. Additional life bugs in the Tuxtlas included Black-edged Calephelis (*Calephelis velutina*), Hewitson's Metalmark (*Nymphidium onaeum*), Turquoise Emperor (*Doxocopa laurentia cherubina*), Small Beauty (*Colobura d. dirce*), Northern Eyed-Skipper (*Cyclosemia anastomosis*), Suffused Saliana (*Saliana fusta*), Inculta Skipper (*Anthoptus inculta*), and Alumna Skipper (*Cymaenes alumna*).

We realized early-on how confusing butterfly common names were to be. Our most helpful field guide was Jeffrey Glassberg's *"A Swift Guide to the Butterflies of Mexico and Central America"* (2007), but so many of those common names differed from names we previously had known and also those utilized in the *"Interactive Listing of Mexican Butterflies"* (www.mariposasmexicanas.com/Bfly_Names.htm). Therefore, common names utilized in this article follow the Interactive Listing.

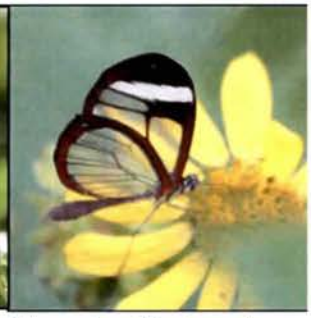
Our small party of Betty and I, along with Eric and Sally Finkelstein, stayed in Catemaco at the Hotel Los Arcos while butterflying the Los Tuxtlas area. We attempted to butterfly the cloud forest near Ruiz Cortines, above San Andres Tuxtlas, but the heavy clouds and cool temperatures put a damper on that site. We did eat two very good fish dinners at the tiny Bienveneto Restaurant in Ruiz Cortines, and we had a good variety of butterflies along the lower entrance road. Highlight species there included Disturbed Tigerwing (*Mechanitis polymnia lycidice*), Klug's Clearwing (*Dircenna klugii*), Lamplight Actinote (*Actinote ozomene nox*), Mexican Heliconian (*Helinocius hortense*), Orange Mapwing (*Hypanartia lethe*), Falcate Prepona (*Archaeoprepona phaedra aelia*), White-banded Satyr (*Pareuptychia m. metaleuca*), Spined Silverdrop (*Epargyreus spina*), White-edged Longtail (*Urbanus a. albimargo*), Small-spotted Pellicia (*Pellicia ephora*), Common and Tanned Blue-Skippers (*Quadrus cerialis* and *Q. lugubris*), Canna Skipper (*Quinta cannae*), and Huastecan Skipper (*Dicinea decinea huasteca*). We did not find a White Morpho (*Morpho p. polyphemus*) that occurs in the area. Also of interest was the Mexican Dartwhites (*Catasticta nimbice ochracea*) found nectaring along the roadsides at Ruiz Cortines that looked at first sight like small swallowtails; quite different than more northern Mexican Dartwhites.

Another very productive site with exceptional butterflies was the Finca Hilde El Mirador near Totutla, a 4,500 hectare private coffee plantation/preserve containing good native forest. We had made overnight reservations with owner/manager Jorge Muller (jorgecucsi@hotmail.com), and Jorge turned out to be a superb host. He not only served as our guide to the best butterfly sites, but his personality and excellent meals made our brief stay at El Mirador a marvelous experience. Perhaps, our best butterfly there was an Imperial Arcas (*Arcas cypria*), a gorgeous green, gold and black hairstreak. We also had super views of Jethy's Mimic-White (*Enartia jethys*), Meton Hairstreak (*Rekoa meton*), Cloaked Scintillant (*Detritivora barnesi*), Bumblebee Metalmark (*Baeotis zonata*), Banner Metalmark (*Thisbe*

Aguna, Long-tailed (Cerro Gordo)

Banner, Variable (Quiahuiztlan)

Arcas, Imperial (El Mirador)



Clearwing, Darkened Rusty (El Mirador)

Blue-Skipper, Common (Los Tuxtlas)

Blue-Skipper, Tanned (El Mirador)

Crescent, Orange-patched (Chavarrillo)

Clearwing, Salvin's (El Mirador)

Crescent, Nebulosa (El Mirador) (Image by Betty Wauer)

Checkerspot, Erodyle (Texolo Falls)

Dartwhite, Mexican, upperside (Ruiz Cortines)

Dartwhite, Mexican, underside (Ruiz Cortines)

Banded-Skipper, Two-spotted (El Mirador)

Calephelis, Black-edged (Cerro Gordo)

Clearwing, Klug's (Los Tuxtlas)

Eyed-Metalmark, Turquoise, Darwin Tr. (Los Tuxtlas)

This plate of photographs (page 10) and the following plates on pages 12 and 13 accompany Ro Wauer's article ("A Veracruz Butterfly Adventure") on pages 9 - 13.

lycorias), Salvin's Clearwing (*Episcada salvinia*), White-spotted Greta (*Greta a. annette*), Darkened Rusty Clearwing (*Greta morgane oto*), Banded Longwing (*Dryadula phaetusa*), Aliphera Longwing (*Eueides aliphera gracilis*), East-Mexican and Blue-frosted Banners (*Catonephele mexicana* & *C. numilia esite*), Orange and Red Crackers (*Hamadryas fornax fornacalia* and *H. amphinome mexicana*), Circumducta Satyr (*Pedaliodes circumducta*), Tawny Mottled-Skipper (*Codatractus bryaxis*), Two-spotted Banded-Skipper (*Autochton bipunctatus*), Red-studded Skipper (*Noctuana stator*), Mexican Sandy-Skipper (*Zopytrion sandace*), and Bottom-spotted Skipper (*Papias distys*). We recorded 120 species during the day and half stay at El Mirador, and the single most common species was Anna's Eighty-eight (*Diaethria anna salvadorensis*). At a couple sites on the roadway we found hundreds of Anna's Eighty-eights feeding on fallen fruit, and as I walked down the roadway they swirled around me like cottonwood seeds.

We also spent a couple hours at nearby Colonia Barrios, a separate and lower property owned by Jorge, where we added four trip butterflies: Yojoa Scrub-Hairstreak (*Strymon yojoa*), Asine Longtail (*Polythrix asine*), Plain Yellow-haired Pyramid-Skipper (*Cogia cajeta eluina*), and Many-banded Skipper (*Timochares t. trifasciata*).

Another choice butterfly site was Chavarrillo, an area south of Jalapa that we visited one afternoon and again the next morning. We found the best butterflies along a railroad track by searching the adjacent flowering shrubs and vines. Some of the specialties recorded there included Tiger Mimic-White (*Dismorphia amphione praxinoe*), Sky-blue Hairstreak (*Pseudolycaena doma*), Pearly Hairstreak (*Theritas theocritus*), Burnt-chocolate Hairstreak (*Theclopsis mycan*), Leilia's Clearwing (*Ithomia leilia*), both Blomfild's and Karwinski's Beauties (*Smyrna blomfilda datis* & *S. karwinskii*), Simple Checkerspot (*Chlosyne h. hippodrome*), Orange-patched Crescent (*Anthanassa drusilla lelex*), Tiger Leafwing (*Consul fabius cecrops*), and Gold-washed Skipper (*Vinius t. tryhana*).

We had located a nice clean hotel at Xico (Hotel Coyopolan) that provided us with a central location for visits to Chavarrillo as well as a wooded area above a soccer field at Estanzuela, Cerro Gordo, and the Texolo Waterfall. The Estanzuela site produced several trip specialties including De la Maza's Mimic-White (*Enantia m. mazai*), Rayed Sister (*Adelphia lycorias melanthe*), Confused Satyr (*Cissia confusa*), Gold-tufted Skipper (*Typhedanus ampyx*), Dardarina Skipperling (*Dardarina dardaris*), Freeman's Skipper (*Vinpeius tinga*), Flag Skipper (*Moeris striga stroma*), Bell's Skipper (*Saturnus reticulata obscurus*), and Band-spotted Skipper (*Xeniades chalestra pteras*). We thank Jim Brock for suggesting this readily accessible site.

The Cerro Gordo site included a long lane that passed through fields and then dropped into a rather extensive canyon. Although our late afternoon visit did not allow us to walk beyond the first mile and into the deep canyon, we were able to add nine butterflies along the lane not found elsewhere: Broad-banded Swallowtail (*Heraclides astyalus pallas*), Black-bordered Crescent (*Tegosa anieta luka*), Hewitson's and Long-tailed Agunas (*Aguna aurunce hypozonius* and *A. metophis*), Melon Mottled-Skipper (*Codatractus melon*), Bell's Scallopwing (*Staphylus iguala*), our only Erichson's White-Skipper (*Heliopyrgus d. domicella*) of the trip, East-Mexican Acacia Skipper (*Cogia hippalus hiska*), and Megalops Skipper (*Cynea megalops*). This site has tremendous potential, and a full day for walking into the canyon would undoubtedly produce super results.

We visited Texolo Waterfall late one afternoon, so we spent less than two hours there. But we did record five species not found elsewhere on our trip: Costa-spotted Mimic-White (*Enantia a. albania*), Black Hairstreak (*Ocaria ocrisia*), Erodyle Checkerspot (*Chlosyne erodyle*), Brown Crescent (*Anthanassa atronia*), and Spot-banded Longtail (*Urbanus pronta*). This site would have much more to offer at a different time of day with more available time.

I had learned long ago during my birding years that some of the best, less impacted habitats in Mexico occur around archeological sites, and we found that this also held true for butterflies. We visited three of these protected areas: Tajin, south of Poza Rica, and Quiahuiztlan and Zempoala, just north of Cardel, the famous Veracruz Hawk Watch site. Although rain severely hindered our butterfly-watching at Tazin, the surrounding habitat looked well worth an extensive visit. Tazin, occupied from A.D. 100 to 1100, covered about two square miles and contained a series of temples and eleven ball courts. During its peak occupation Tazin contained about 3,000 residents.

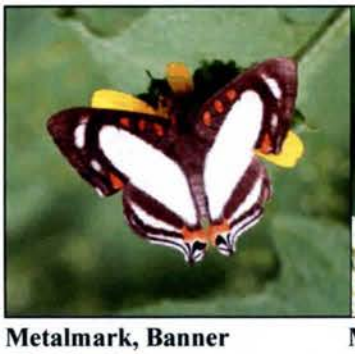
(Text continued on page 14)

Flasher, Frosted
(El Mirador)

Greta, White-spotted
(El Mirador)

Longtail, Mexican
(Quiahuiztlan)

Sandy-Skipper, Mexican
(El Mirador)

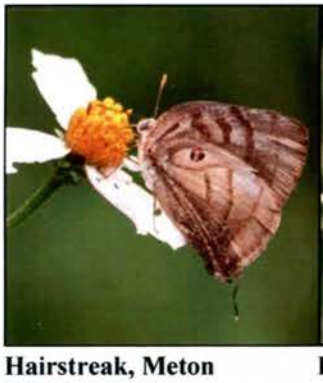


Metalmark, Banner
(El Mirador)

Mapwing, Orange
(Los Tuxtlas)
(Image by Betty Wauer)

Metalmark, Bumblebee
(El Mirador)

Heliconian, Mexican
(Los Tuxtlas)



Hairstreak, Meton
(El Mirador)

Hairstreak, Pearly
(Chavarrillo)

Eyed-Skipper, Northern
(Los Tuxtlas)

Longwing, Aliphere
(El Mirador)

Saliana, Suffused
(Los Tuxtlas)

Mimic-White,
Costa-spotted, male
(Texolo Falls)

Mimic-White, Jethy's,
male (El Mirador)
(Image by Betty Wauer)

Mottled-Skipper, Melon
(Cerro Gordo)

Satyr, White-banded (Los Tuxtlas)

Satyr, Circumducta (El Mirador)

Satyr, Thamyra (El Mirador)

Pyramid-Skipper, Plain Yellow-haired (Colonial Barrios)

Satyr, White-banded, upperside (Los Tuxtlas)

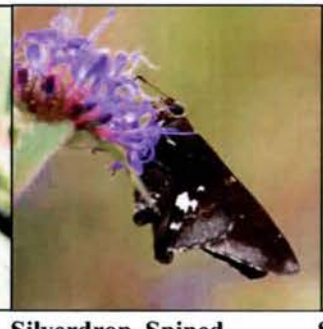
Skipper, Gold-tufted (Estanzuela)

Skipper, Bell's (Estanzuela)

Skipper, Bottom-spotted (El Mirador)

Skipperling, Dardarina (Estanzuela)

Skipper, Flag (Estanzuela)



Silverdrop, Spined (Tuxtla)

Skipper, Red-studded (El Mirador)

White, Golden (Zempoala)

Tigerwing, Disturbed (Los Tuxtlas)

Skipper, Canna (Ruiz Cortines)

Our two-hour visit to Quiahuiztlan, in late afternoon, did provide a few trip butterflies. Of note were Red-spotted Hairstreak (*Tmolus echion echiolus*), Carousing Anteros (*Anteros carausius*), Variable Banner (*Bolboneura s. sylphis*), and Mexican Longtail (*Polythrix mexicanus*). More time at this site also would be most worthwhile. Although today's archeological site covers a reasonable small acreage, it was built on a ridge above the coastal plain with defensive works modified by high terrace walls. It also contains at least a dozen cemeteries that consist of small mausoleums in the form of miniature temples.

A few days later we spent four hours at the nearby site of Zempoala. Highlight butterflies there included Golden White (*Melete polyhymnia florinda*), our only Ruddy Daggerwing (*Marpesia petreus*) of the trip, Emerald Aguna (*Aguna claxon*), Plain Longtail (*Urbanus simplicus*), Common Anastrus (*Anastrus s. sempiternus*), and Mexican Mellana (*Quasimellana mexicana*). The historical significance of Zempoala is that it was the very first Mesoamerican city seen by the invading Spaniards who were warmly received by a ruler that they affectionately called *"the Fat Cacique."* Zempoala was a huge urban center of 80,000 to 120,000 residents, and actually had a water system that furnished fresh water to each house.

Veracruz not only contains a rich biological diversity, but an amazing history that blends together with the natural resources so that one can enjoy both at the same time. And many of the state's special natural and cultural features are readily accessible. Between Tuxpan and Catemaco is a smorgasbord of sites where one can truly appreciate that diversity.

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

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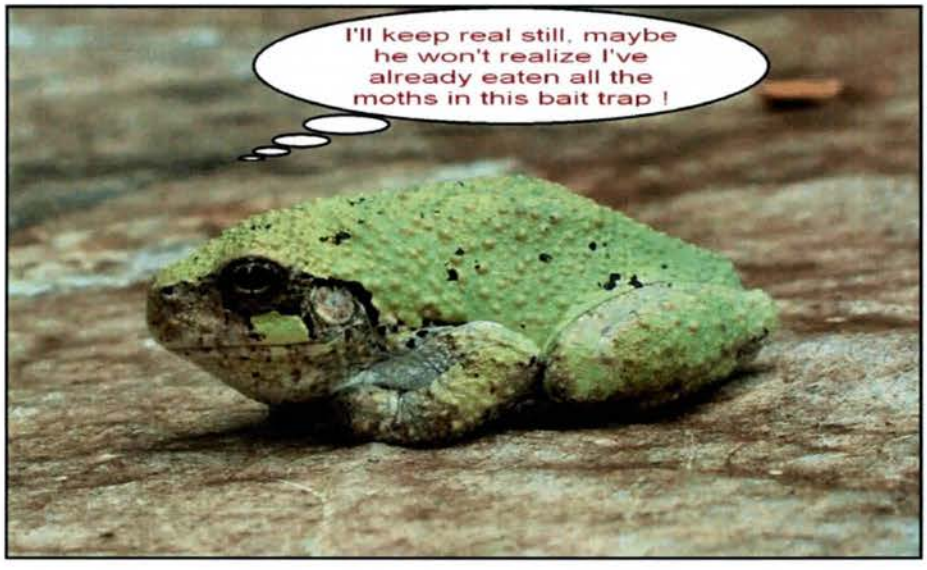

Vernon Brou's best friend and neighbor at Abita Springs, Louisiana. Both share the same collecting site - one wonders who, either "THE TOAD" or "THE VERNON", have the best success?

[Photograph sent in by V. A. Brou Jr.]

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DONATIONS TO THE SOUTHERN LEPIDOPTERISTS' SOCIETY

Many, many thanks to the following individuals who contributed extra this year to the SL Society:

James Adams
Eleanor Adams
Ferrell & Janice Marks, Jr. (Sustaining)
Hugh Wyatt (Sustaining)
John Vernon (Sustaining)
Kelly Richers (Sustaining)
John Snyder (Sustaining)
Bruce Dixon (Sustaining)
Joann Kargas (Benefactor)
Marc Minno (Contributor)
Byrum & Linda Cooper (Sustaining)

****

DANGERS OF LEPPING: THE ONE BILLY GOAT GRUFF

BY
PAULETTE HAYWOOD OGARD
PHOTOGRAPHY BY SARA BRIGHT

Male Checkered White (*Pontia protodice*)

Female Checkered White

Checkered White chrysalid

Rattlesnakes, water moccasins, copperheads, swarming bees, wild pigs, and a few wild *"bubbas"*. . . but one of the scariest creatures I ever encountered while lepping was a love-sick billy goat in north Alabama.

In 1999, as part of an on-going project to chronicle the life histories of southeastern butterflies and their host plants, Sara Bright and I were searching for Checkered Whites *(Pontia protodice)*. While we have often found them to be common in south Florida, locating these vagabonds in Alabama is a different story. Ten years ago, the only Checkered White we had ever seen in our own state was captured in a spider web and quite dead. So it was exciting that Howard Grisham had noticed a few on his property and graciously allowed us to search for butterflies and caterpillars. The pasture we entered was picture-perfect habitat. The scrubby vegetation was low and sparse but amply dotted with small nectar flowers and clumps of weedy Virginia Peppergrass *(Lepidium virginiensis)*, a favorite host plant. Howard had seen Checkered Whites flying there only a few days earlier, so things couldn't have looked better. Except for the goat. The very *large* goat. Relegated to the pasture a few weeks earlier to separate him from his flock of nannies, he was most unhappy and determined to vent his frustration on the two goat-clueless lepidopterists who invaded his territory.

Checkered White larva on Virginia Peppergrass

At first we thought he was merely inquisitive. But as we combed the large pasture for glimpses of white butterflies, we realized he was stalking us. Periodically the smell of goat musk would almost overwhelm, and he'd be right behind us (with a glint in his eye). Things were not going well with the search either. It was mid-September and so hot and dry that hardly anything was flying, including Checkered Whites. Finally we decided to separate in order to cover more territory. Moments later, at Sara's warning shout, I turned to see that the amorous goat was pawing the ground, lowering his head – and then he charged, determined to take me down. As I stood frozen in my tracks, in true best friend fashion, Sara stepped between us and gave a mighty swing with her tripod and camera. The startled goat swerved at the very last instant, leaving tripod, camera, (and Sara) intact. Apparently he reassessed the situation, and decided that I wasn't worth the risk of bodily harm, because he disgustedly walked away and did not bother us again.

The Checkered White portion of the story also has a happy ending. Hot, thirsty, and smelling of goat, we finally left the pasture in defeat. Down the road, we stopped at a fast-food restaurant, planning to cool off with cold drinks. In one of life's little ironies, three Checkered Whites fluttered among the peppergrass in an abandoned lot beside Taco Bell's paved parking spaces. They were cooperative photo candidates, and we were able to add a nice check mark in our overall project.

So, if you ever happen to travel through large, scrubby meadows near Huntsville, Alabama, take a long, hard look at white butterflies – *Pontia protodice* may be in the bunch. But whatever you do, keep an eye out for goats.

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MY SCARIEST MOMENT IN THE FIELD
BY
GARY NOEL ROSS

Snakes are not on my list of favorite animals. Here's my problem: Some species are venomous, and therefore can pose a real danger to me when I am alone conducting fieldwork with butterflies. Upping the ante, my life-long home in southern Louisiana has no less than six venomous species, *e.g.*, cottonmouth, copperhead, coral, and three species of rattlesnake. Understandably, I have considered snakes a lifelong bane.

As native Louisianians, my parents were not enamored with snakes either. As a teenager, my mother insisted that I always dress to safeguard myself from a possible snakebite whenever I took to excursions in fields and woods. My standard field attire, for instance, included loose-fitting heavy trousers (no shorts), long-sleeved shirt, and calf length, lace-up leather boots (I would tuck my trousers into the boots to curtail bloodsucking ticks and chigger mites from gaining access to my skin). Additionally, I carried a commercially available *"snake-bite kit"* that consisted of a string tourniquet, small lancet, and rubber suction cups for first-aid treatment in case of being bitten. But although I did encounter a sizable number of poisonous snakes (usually a cottonmouth) over my teenage years, I never had a *"close encounter."* Luck, I guess.

My penchant for butterflies, particularly those kaleidoscopic species found in the tropics, continued into my college years. So, when I began my graduate studies in the summer of 1962 at the age of 22, and was offered the chance to conduct research in southern Mexico, I jumped at the opportunity. I would attempt to survey the butterfly fauna of the Sierra de los Tuxtlas (*"Los Tuxtlas"*), an isolated, poorly known volcanic range in southeastern Veracruz that still contained virgin stands of tropical rainforest. My initial phase of research involved a six-month residency in a rented house on the shore of picturesque Lake Catemaco in the heart of Los Tuxtlas. My Mexican neighbors were quick to warn me of a common local snake with a reputation for being able to cause death to a human within minutes of being bitten. This reviled serpent was known as *sorda* (*"deaf one"*). The name, I was told, refers to the snake's tendency to remain motionless when approached. (By contrast, most venomous snakes alert an intruder by hissing, opening their mouths, vibrating their tails, or flicking their tongues.) The snake was so terrifying that its name was spoken always in muted tones, as if very vocalization would bestow future bad luck.

***Bothrops atrox* (photograph by Mr. Al Coritz) [1]**

And there was more. While netting butterflies in a small shaded orange/coffee orchard across the road from my residence, I met an older gentleman. Juan, who moved with a decided right-legged limp, was casually picking ripe oranges. While sharing one of his treats with me, Juan recounted that he had been bitten decades earlier in his same orchard by a small *sorda.* Because he had been able to secure medical attention quickly from a local physician and because the snake was a juvenile, the bite proved non-lethal. *"But as you can see,"* Juan's

narration continued, *"I can't use this leg."* Juan then pulled up his right pant, revealing a terribly disfigured appendage. All muscle tissue had atrophied leaving only discolored skin covering bone. After a few seconds of silent reflection, Juan said softly: *"I do fine with only one leg."* I mused: If tables were turned, could I exhibit such resolution?

By consulting my traveling library of references, I learned that the *sorda* is scientifically known as fer-de-lance (*Bothrops atrox*), a ground-dwelling pit viper found throughout the American tropics, and related to the bushmaster and rattlesnake. The name fer-de-lance is of French derivation and means *"lance head,"* referring to the characteristic arrow-shaped head of most vipers. Other common names include *barba amarilla* (Spanish, referring to the pale yellow chin color of adults) and nauyaca (Nahuatl, literally *"four tips,"* referring to the two nostrils and the two sensory pits below the eyes). As with all pit vipers, the fer-de-lance has vertical eye pupils. Individuals are heavy-bodied, commonly attain lengths of 5-6 feet, and can deliver 129-342 mgs. of venom in a single bite (50-62 mg. is usually lethal to a human). Body color is basically grayish brown highlighted with large triangular blotches of black, brown, tan, and cream, a coloration that renders the vipers camouflaged within ground litter. Snakes haunt both forests and disturbed areas such as coffee, banana, and sugarcane plantations and cornfields, feeding mainly on small rodents, birds, and amphibians. The serpents are easily agitated, striking rapidly and repeatedly. Venom, potent and quick acting, targets blood and muscle tissue. *B. atrox* is responsible for more human deaths than any other reptile throughout Central and South America, a reputation due largely to the snakes' tendency to seek prey in agricultural venues. All in all, herpetologists consider the fer-de-lance to be the most perilous of all snakes in the Western hemisphere.

The *sorda* became my new arch villain. Night after night, the specter of this serpent became the stuff of many a nightmare. Meanwhile, I reduced my anxiety during butterfly forays by continuing with my teenage dress protocal, even though such duds were uncomfortable in the hot syrupy days below the Tropic of Cancer. As an added precaution, while in the field I made it a point to walk only 15-20 feet at any given time before pausing to take stock of the ground ahead of me. That procedure served me well, that is, except for one occasion, which now four decades later, I am able to retrieve from my aging archive of memories with heart-thumping clarity.

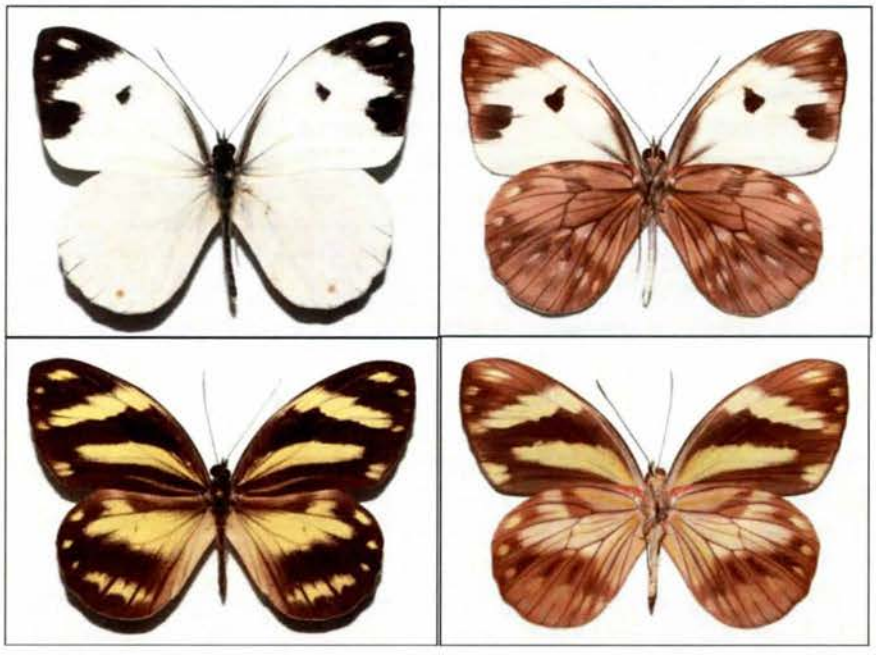
This flashback takes me to late August 1962, not long after my arrival in Los Tuxtlas. The bulk of the lands surrounding the lake and bordering roadsides had been deforested to establish pastures and milpas. These open, conveniently accessible areas usually were ablaze with sun-loving flowering plants. And as we all know, flowers promise butterflies! From an academic vantage point, however, real *"prizes"* in the tropics are found in less disturbed environments such as secondary and virgin forests. Such shadowy habitats, though, are usually difficult to approach. Los Tuxtlas proved no exception. That said, there was one sizable swath of pristine forest covering several ridges and hillocks just north of the lake and accessible from a pitted dirt road connecting Catemaco to the Gulf of Mexico.

And so on a morning with little hint of clouds (August was the middle of the rainy season), I hitched a ride in the back of an open truck transporting beverages. I chose as my drop-off point a roadside pasture associated with the tiny hamlet of Dos Amates. The pasture, approximately 15-20 acres in area and fenced with barbed wire, was nestled in a small pocket of land surrounded by ridges and hillocks. The pasture had been cleared in typical slash/burn fashion probably the prior year. Since the surrounding slopes were relatively steep, the forest there had been left undisturbed.

This *"Forest Primeval"* was my target. But first I had to navigate the intervening pasture; and that posed a potential problem. Seems as if rural cattle do not take to any stranger overdressed and carrying a butterfly net. The response of the bovines — bulls in particular — was always aggressive curiosity. To avoid confrontation, I had to be innovative. I learned that if I lingered outside the fence for 30 minutes or so, and then ease under the fence, I would not spook the animals. By slowly inching my way along the perimeter rather than attempting to cross the pasture directly, I usually could safely reach points beyond.

So it was on this singular August morning. The forest — technically, *"Semi-Evergreen Seasonal Forest"* — seemed intact, perhaps even virgin. Vegetation was stratified and taxonomically diverse, including a fair sampling of tall, buttressed trees that pierced the high canopy. Trunks and limbs of most trees were heavily carpeted in sprays of bromeliads and orchids, many in bloom. *"Tarzanesque"* lianas dangled and looped throughout the greenery. Diminutive palms and ferns bearing delicate, feathery fronds latticed the ground but

were sufficiently spaced so as not to impede my walking despite the rocky topography and absence of trails. Curiously, the brown leaf-litter entertained a goodly number of small toads that hopped whimsically to avoid my advancing steps.



Vivardi White (*Pieriballia v. viardi*): top row, male dorsal (A3595), male ventral (A3594) (12-XI-88, Xilitla, SLP); bottom row, female dorsal (A3592), female ventral (A3593) (4-VII-88, Xilitla, SLP) (Photographs by Kim Davis and Mike Stangeland) [(2)]

Butterfly diversity was good, too, including such exotic showstoppers as clearwinged ithomiids, longwinged heliconians; there was even an occasional cameo by a metallic blue morpho (*Morpho helenor montezuma*). Yet what trumped this paradisiacal tableau was a medium-sized butterfly colored more or less like a zebra longwing (*Heliconius charithonia*), common in peninsular Florida and southern Texas. I had observed such an individual only on one other occasion, and regrettably, I had failed to net it. Here, however, the butterfly was common, flying slowly close to ground level. After netting a few specimens, I learned that all were females and members of the family Pieridae (sulphurs/whites). To my delight, other butterflies — forewings white with black borders, hindwings basically white — were descending to the ground within a shaft of sunlight filtering through a gap in the canopy. Once near ground level, the *"whites"* began pursuing the darker, striped individuals in typical courtship behavior. I netted one, two, and ultimately six individuals. All possessed male genitalia and sported the same underwing pattern found on the darker females. I knew I was dealing with a dimorphic species of pierid. (I later determined this to be *Pieriballia viardi,* a shade-loving species in which females are involved in a mimicry complex with *H. charithonia* and the ithomiid *Aeria pacifica* — both present on site.) With no time constraint, packing lunch and water, and still no prospect of rain, I idled in the joy of the moment.

But all good things must come to an end, and as corollary, all Edens must have their serpent. Now enter the dark side.

To begin, I was perhaps only a hundred yards or so up a slope. I was standing, removing a specimen from my net. Then, I heard a dull but distinct THUMP near my feet. Looking down, I saw nothing. I concluded that one of the toads so common in the area had bumped into one of my boots while attempting to clear my path. Therefore I returned to the business at hand. Another THUMP! Again I cast my eyes to the ground, and again I saw nothing. Perchance, my gaze moved onto a fern frond arched to the ground only about 15 inches from my feet. Without changing stance, I tilted my head slightly to better view what might be concealed beneath the frond. There, transfixed on my legs was a 3-4 foot long serpent coiled, its upper body elevated in a characteristic *"S"* striking pose. The snake gave no hint of motion or sound. Its head was large and arrow-shaped; eye pupils were slit-like; jaws were yellow; and body color was dark, highlighted with diamond-shaped blotches. I was face to face with my worst nightmare: **FER-DE-LANCE! BARBA AMARILLA! NAUYACA! SORDA!**

In parallel, I grasped that those two previous *"thumps"* were patently the sounds of the snake striking one of my boots. I froze as the classic signs of abject freight — dilated eyes, rocketing blood pressure, beads of cold sweat on forehead, and uncontrollable body tremors — overwhelmed my body. One thought looped through my mind: *"Do something NOW! NOW! NOW!"* But with an ill-tempered *"Satan"* sinisterly recoiled for a third attack, what could I do?

Thank God for instinct! With eyes riveted on the snake, I tensed every muscle in my body, bent my legs slightly, and jumped backward as forcefully and rapidly as possible. Simultaneously, the *sorda* launched. Because of the increased distance, however, the snake missed me. With this third strike thwarted, I paused to take stock of my situation. Surprisingly, I felt no burning sensation emanating from either leg — at least not yet. So, I began running lickety-split downhill toward forest edge. (I now realize that was a dangerous decision because I could have stumbled and hurt myself, or worse, stepped on another snake enjoying a banquet of toads. But I was panicking, not thinking at all.) Even the cattle in the pasture didn't slow me down. Only when I reached the road did I stop for my second wind. I still was experiencing no telltale signs of envenomization. Nevertheless, I sank into the dirt on the edge of the road in order to check my boots. I could discern two sets of pinhole-like injection sites practically side-by-side barely below the collar on the outer side of my right boot. A stain as if from a previous rivulet of fluid (venom perhaps?) was visible beneath the pricks. Not satisfied, I removed the boot to check my leg. Mercifully, no marks! I concluded that more than likely, I had been at the maximum limit of striking range so that the fangs barely contacted my tough boot. Just an inch or two closer and the outcome could have been very different — perhaps even tragic.

I remained in Los Tuxtlas for my originally allotted time. I had no additional encounters with a *"deaf one."* But NEVER did I return to the patch of forest that had proven to be both my metaphoric Eden and Hell.

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Sources

1) Photograph of *Bothrops atrox* by Al Coritz: Dearly Beautiful Zoological, LLC < http://deadlybeautiful.smugmug.com/> (E-Mail: deadlybeautiful@comcaSt.net)
2) Photographs of the Vivardi White (*Pieriballia v. viardi*) by Kim Davis and Mike Stangeland: Butterflies of America <http://butterfliesofamerica.com/> <http://butterfliesofamerica.com/pieriballia_v_viardi_specimens.htm>

[Thanks go to Mr. Al Coritz for allowing the Southern Lepidopterists' Society to use his photograph of *Bothrops atrox*. Also thanks go to Kim Davis and Mike Stangeland for the use of their photographs of the Vivardi White - The Editor.]

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Wild Indigo Duskywing (*Erynnis baptisiae*) photographed in Ro Wauer's yard (30 Jan. 2008).

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NEW MOON DATES FOR 2009

January 26	July 22
February 25	August 20
March 26	September 18
April 25	October 18
May 24	November 16
June 22	December 18

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DEFINITIONS:

Bifid - branching into two parts by a cleft [sometimes equal as in the end of a snake's tongue]; split in two; forked.

Arcuate - curved; in the form of an arc; having the form of a bow.

Source: http://www.thefreedictionary.com/arcuate

CUCULLIA CONVEXIPENNIS GROTE & ROBINSON, 1868 (LEPIDOPTERA: NOCTUIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

Fig. 1. ***Cucullia convexipennis***: **a**. male, **b**. female. n = 6.

In Louisiana, the rarely encountered moth ***Cucullia convexipennis*** Grote & Robinson (Fig. 1) has been captured on six occasions (Fig. 2) in two parishes (Fig. 3). It is apparent from the five-month date span of collected adults that there is at least two broods of ***convexipennis*** occurring in Louisiana.

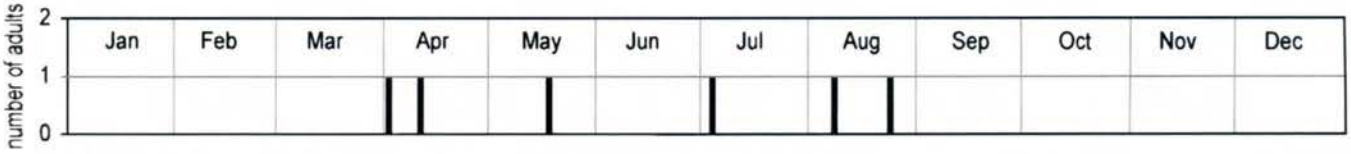

Fig. 2. Adult ***Cucullia convexipennis*** captured in Louisiana. n = 6.

Fig. 3. Parish records for ***C. convexipennis***.

Covell (1984) lists the range for ***convexipennis*** to include: Nova Scotia to South Carolina and west to Manitoba and Missouri.

Poole (1994) revised the subfamily Cuculliinae Herrich-Schaffer. This subfamily is now consisting almost exclusively of the genus ***Cucullia*** Schrank according to Poole. Poole listed the range of ***convexipennis*** to include: *"northern and eastern United States and Canada as far west as Wisconsin, as far south as North Carolina, and as far north as Nova Scotia"*. Poole indicated that most specimens have been collected in the months May to September.

This species was not included by Chapin & Callahan (1967) for the state of Louisiana, nor by Heitzman & Heitzman (1987) for the state of Missouri, nor by Knudson & Bordelon (1999) in their checklist of Texas Lepidoptera, nor by Heppner (2003) for the state of Florida.

Rockburne & Lafontaine (1976) lists ***convexipennis*** from southern and eastern Ontario with collection dates from late July and August. Wagner (2005) illustrated the beautiful and remarkably colored yellow, red, black, and white larva and listed the foodplants to include flowers of aster and goldenrod.

These six Louisiana specimens of ***convexipennis***, captured in the years (1979-1986), represent a significant range extension southward to near the Gulf of Mexico from the previously published literature records discussed here. I thank Robert Poole for confirming the identity of these Louisiana specimens.

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DASYCHIRA DOMINICKARIA FERGUSON, 1978 (LEPIDOPTERA: LYMANTRIIDAE) IN LOUISIANA

BY

VERNON ANTOINE BROU JR.

Fig. 1. ***D. dominickaria*** phenotypes: males (**a, b**), females (**c, d**).

The moth ***Dasychira dominickaria*** Ferguson (Fig. 1) was described in 1978, holotype male (wild collected) and allotype female (reared *ex ova*), specimens from McClellanville, Charleston County, South Carolina. A lengthy paratype series included 58 males (29 reared) and 28 females (14 reared) from South Carolina, Florida, Louisiana and Texas.

This species was not covered by Covell (1984). Heppner (2003) lists the range of ***dominickaria*** to include: South Carolina to Florida and Kentucky to Texas, with dates including the months: April - May and July and September. Knudson and Bordelon (1999) lists ***dominickaria*** in their checklist of Texas lepidoptera.

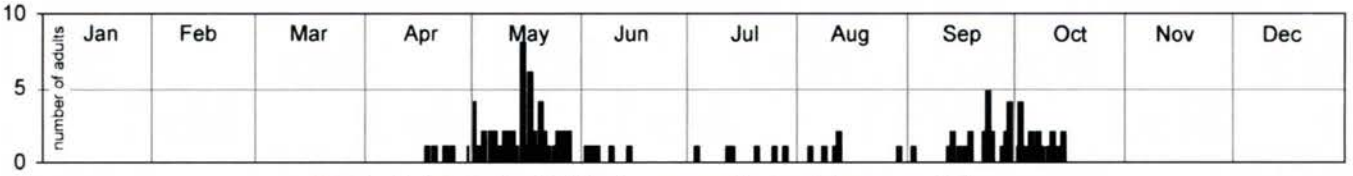

Fig. 2. Adult ***D. dominickaria*** captured in Louisiana. n = 123.

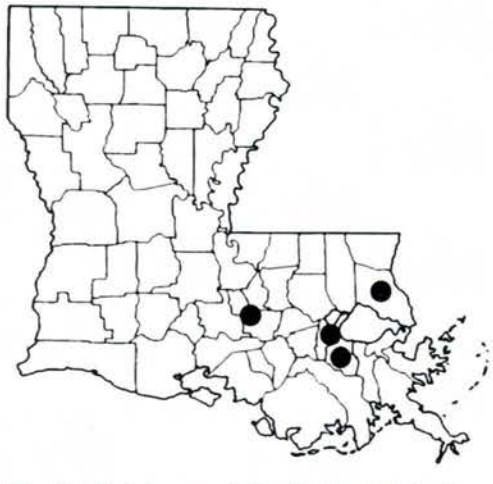

Fig. 3. Parish records for ***D. dominickaria***.

I have captured numerous hundreds of ***dominickaria*** in ultraviolet light traps over the past 39 years in four parishes of southeast Louisiana (Fig. 3). I have documented the flight period of ***dominickaria*** in Louisiana based on the specimens before me at this writing (Fig. 2), illustrating the obvious three well separated broods (peaking at approximate 67-day intervals). The life history of ***dominickaria*** was first described by Douglas Ferguson and Richard Dominick, who reared it on cypress (***Taxodium distichum***) and unsuccessfully experimented with various other plants. Ferguson (1978) stated *"this moth is rare in collections, and only a few have turned up from other areas"*. Ferguson listed the then known distribution of ***dominickaria*** to include: South Carolina, Florida, Louisiana, and Texas. The Louisiana paratype specimens listed in the original description were based on one male and one female, collected by me in 1972 and 1973.

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BUTTERFLY DESIGNS FEATURED IN ZUNI ART EXHIBIT AT McGUIRE CENTER

BY

GARY NOEL ROSS

The McGuire Center for Lepidoptera and Biodiversity (Florida Museum of Natural History, University of Florida, Gainesville) is currently featuring an exhibit titled *"Butterflies and Moths in Contemporary Zuni Art."* Zuni are Native Americans living in Zuni Pueblo, which is located in the picturesque high desert of northwestern New Mexico. There are 85 pieces on display in the *"Hall of Culture and Science."* All objects highlight the role of lepidoptera in the belief system and art of contemporary Zuni culture. Objects include kachinas (doll-like representations of deities), fetishes (small carvings of animals that have spiritual powers), paintings by award-winning artist and spiritual leader Edward Lewis, jewelry, and miscellaneous crafts. All are on loan from my personal collection secured during my stay in Zuni Pueblo in the summer of 2006. The exhibit, the first of its kind, was originally scheduled to run only for one year, ending in December 2008. However, because the public has responded so positively to the exhibit, administrators have extended the run time through December 2009. (NOTE: The museum is open every day except Thanksgiving and Christmas. See: www.flmnh.ufl.edu/exhibits.)

Thanks to Jeff Gage and Mary Warrick for the photographs of the Zuni Art (Florida Museum of Natural History, Gainesville, FL)

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MEMBERS PLEASE NOTICE: There are no Reports from State coordinators in this issue. This is not a permanet change in the newsletter but the omission was due to space constraints. I anticipate a *"healthy"* number of reports in the June issue of the NEWS. [The Editor]

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FINDING *CATH*

BY
PAUL SMITH

For most people interested in zoology the finding of a new and unknown species must rank among the most exciting of discoveries that they can hope to make. Rediscovering a long lost species must be a close second. Think for a moment about the excitement that would be caused by capturing a living, breathing Tasmanian Wolf, the thrill of observing an elusive male Pink-headed Duck making his way through a dense Burmese swamp or the headlines that you would generate by being the first person to clap eyes on a Steller´s Sea Cow in more than two hundred and fifty years. Well, here in Paraguay something similar happened to me and my companions, it just so happens that I am interested in butterflies!

Catharisa cerina **(Rancho Laguna Blanca, Departamento San Pedro, Paraguay)**

Catharisa cerina **(Rancho Laguna Blanca, Departamento San Pedro, Paraguay)**

Catharisa cerina Jordan 1911….. No? Not ringing any bells? Well I admit it's not exactly the Coelacanth is it, but in terms of known specimens and available biological data it far outstrips the pug-faced prehistoric fish in its *"rareness"*. So what is it? How did you find it? I hear (or imagine!) you asking as you sit on the edge of your seat. Well here it is, the story of the rediscovery of *Catharisa cerina,* an attractive Emperor Moth (Saturniidae) that hardly anybody has ever even heard of!

Date 12 October 2006. Location Rancho Laguna Blanca, Departamento San Pedro, in the cerrado belt of northeastern Paraguay. I am leading a birding tour that is chugging along nicely. Flushed with the success of adding a new species to the Paraguay bird list the previous day (it was a Common Tern, hardly earth-shattering but never recorded before in Paraguay!), and I am up early with a spring in my step and ready for the day´s observations. Making my way across to the vehicle there is a bright yellow Saturniid that I have never seen before which sat quietly on the windscreen. I remove it gently to some vegetation, take a few snaps and vow to find out what it is as soon as the tour is over. Yep, that's it! The long and short of it - my tale of rediscovery didn't involve long expeditions into unchartered territory, battles with hostile natives or remarkable diligence and patience in tracking down my target. It was pure luck!!

So in an attempt to pad this article out a bit let me give you a bit of background on this beautiful moth and try to make you understand just why this is a significant discovery regardless of the fortuitous nature in which it was made. *Catharisa cerina* might not trip off your tongue in the same way that the Moa, the Dodo or the Quagga does, but at least by the end of this article you´ll know as much about this species as anybody else in the world does!

All known specimens of *Catharisa cerina* are female – let´s call her *Cath* for short to avoid using up my word allocation with unnecessary repetition! Nobody knows what a male looks like, except for *Cath* herself of course and at this stage our entire knowledge of the species comes from 5 museum specimens collected a long time ago

plus the individual that chose my windscreen as its resting place. In fact, until very recently only three specimens, all lacking any collection data were known, all labelled *"Paraguay"* and leading to the conclusion that the species was endemic to the country. Then a recent paper by Racheli (2005) brought to the world's attention two further specimens in the Staatliches Museum für Naturkunde, Stuttgart, Germany, which, despite barely legible handwritten specimen labels, were apparently collected in Misiones, Argentina, in June 1930. Again the provenance of these specimens is confused, not only by the dodgy penmanship on the specimen labels, but also by the fact that they are labeled Provincia Corrientes, but the localities mentioned are apparently in Provincia Misiones. Mmmmmm!

In summary we know next to nothing about *Cath*'s range. Laguna Blanca is the first confirmed location for the species in Paraguay, other sites in the country are currently unknown. It also apparently occurs in northern Argentina, maybe in Corrientes, maybe in Misiones, maybe in both, and then there are about 400km of grey area between San Pedro and northern Argentina where the species may or may not occur. The Argentinean specimens were collected in mid-June, whilst the only phenological data available for Paraguay is from Laguna Blanca in mid-October at the opposite end of the year. Might it be pushing it a little given the limited data to estimate at least two flight times during the year?

As you can see distribution and date wise things are still far from being resolved. Let's try something that is a little bit easier to draw conclusions from. What colour is *Cath*? According to Jordan who described the species the ground colour is *"uniformly greenish chrome yellow"*. I guess I'm not alone in being a little bit confused by what colour that is supposed to be, in fact it sounds distinctly like three different colours to me! Lemaire (2002 pl.114) included an illustration of the paratype of *Cath* that had a yellow ground colour, and pinned down the tone of the species by omitting the *"greenish"* and the *"chrome"* in his written description. Racheli (2005), however, noted that the Stuttgart specimens both featured a *"light green ground colour which is different to the paratype"*. For what it's worth the Laguna Blanca *Cath*, as you can see from the accompanying photographs, shows not a hint of green or chrome and sits firmly in the Lemaire yellow camp. It is possibly important to note that the Laguna Blanca individual is the only actual record of a living individual. So where does that leave us? Are we dealing with a species that shows individual variation with some individuals being yellowish and some tending towards greenish? Or is the greenish hue possibly an artifact of specimen preservation? I don't know, but somebody should find out!

What about habitat preference then? You won't be surprised to learn that things are no clearer there either. The lack of specimen data and precise localities throws a bit of a spanner in the works when trying to draw conclusions from the existing specimens. Besides Paraguay and northern Argentina are both very different places habitat wise to what they were in the early 20th Century. Based only on the Laguna Blanca specimen it would be tempting to write *"Habitat: Car windscreens"* – but what conclusions can we begin to draw from this single individual?

The habitat at Laguna Blanca is essentially a mosaic of cerrado with areas of heavily degraded Atlantic Forest patches. Cerrado itself, is difficult to define to the uninitiated. In layman's terms it is the South American savanna, but that would do the complexity of the vegetational communities of the cerrado a great disservice. In fact cerrado itself can be split into several *"sub-habitats"*: *Campo limpio cerrado* (clean field) being open grassy fields without bushes, *Sensu strictu cerrado* being low bushy fields without grass, *Cerradón* being dry cerrado forest and *Campo sucio cerrado* (dirty field) being a mixture of grass, bushes and trees. Confused? Well suffice to say that cerrado is an extremely important and threatened habitat whatever form it takes and that any given area of cerrado usually consists of a patchwork of all four *"sub-habitats"* resulting in localized animal and plant populations within the biome. Cerrado grows on loose sandy soils which drain quickly and despite looking brown and miserable for much of the year it blooms suddenly following periods of heavy rain, converting it into one of the most beautiful spectacles of colour in the Neotropics. Now the crucial information – over 65% of the plant species found in the cerrado are endemic to it (*i.e.,* they occur nowhere else) and the habitat is currently the fastest disappearing in the Neotropics. The other major habitat at Laguna Blanca is the humid subtropical Atlantic Forest, officially one of the five most threatened habitats on earth. Now *Cath*'s decision to sit on my windscreen and the fact that the car was parked essentially equidistant between cerrado and a patch of Atlantic Forest means that we can't really be sure where she came from! We can, however, be sure that whichever habitat she has chosen it is under imminent conservation threat, and given the rarity of specimens we might therefore conclude that *Cath* herself is worthy of conservation concern. There is no cerrado in northern Argentina but there is (or

Campo sucio cerrado (Laguna Blanca)

Campo limpio cerrado (foreground), cerradón (background)

Campo sucio cerrado (Laguna Blanca)

Sensu strictu cerrado (2008)

was!) Atlantic Forest. We need to be careful, however, as in parts of Provincia Corrientes and Misiones the Atlantic Forest forms a natural mosaic with a type of grassland not too far removed from cerrado – the Mesopotamian Grasslands. Maybe then we are taking a risk on trying to pin the habitat preference of the species down to one or other habitat type – after all there is (or was!) lots of Atlantic Forest in Paraguay and northern Argentina and there aren't lots of *Caths*! Maybe the species has a far more specialized habitat preference which confines it to the interface of humid forest and natural grassland rather than specifically to either one or the other? This might help explain its rarity and its apparently localised distribution, and would make it even more threatened by habitat destruction. Again, we can't be sure!

Needless to say if we can't make precise conclusions about the habitat, distribution or even the colour of the thing, then we are some way short of being able to effectively conserve it. We know nothing of its reproduction or host plants, or even what a male looks like! Captive breeding is hampered by the fact that we will struggle to make educated guesses as to how best to do so given that the species is currently classified in a monotypic genus with no apparent close relatives. Additionally, specimens are so rare and valuable that few entomologists would be prepared to risk damaging them by attempting to breed them.

For now *Cath*'s future is up in the air. It could be another 80 years before another one shows up and we are no closer to understanding her now than we were when Jordan first described her in 1911. Meanwhile the habitat in which she makes her home is coming under increasing pressure as habitat destruction continues unchecked. What a shame it would be if this beautiful moth followed the Dodo, Moa, Quagga and the rest into oblivion and nobody even noticed!

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ACKNOWLEDGEMENTS

Thanks to Hugo del Castillo, Kirti Chaudhurri and Richard Smith who accompanied me in the field during this trip. Special thanks to Ulf Drechsel who put the name to Cath's face! Thanks also to Barry Lombardini for making me actually sit down and write this!

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COLLECTING AND OBSERVING BUTTERFLIES IN THE LONGORIA WILDLIFE MANAGEMENT AREA OF SOUTH TEXAS

BY

FLOYD & JUNE PRESTON AND MIKE RICKARD

The Lower Rio Grande Valley (LRGV) is a unique and fascinating ecosystem. It is an area of contrasts and surprises. Approximately 70 species of butterflies new to the US have been recorded there in the last 40 years, with over 20 of those occurring in the last decade (1). The Valley ecotourism media widely report the total number of recorded species to be 300, and various published checklists give a number ranging from 284 to 314, with issues of documentation and/or identification accounting for the variances. The LRGV thus provides a unique opportunity within the US to see a great many species in a short visit – an opportunity that is increasingly limited. With its remaining ecosystems under constant threat, the area demonstrates the need for active collaboration between governmental agencies, conservation organizations, and private citizens, and provides examples of what can be accomplished when this exists. It also provides far too many examples of the loss that occurs when such collaboration is lacking.

Biologically, the area is referred to as the Tamaulipan Brushland (2) or the Rio Grande River Delta (3). The Delta covers most of the area of Cameron, Willacy, and Hidalgo counties. The Lower Rio Grande Valley (LRGV) covers these three counties but includes Starr and Zapata counties and extends 165 miles east from San Ygnacio to the Gulf of Mexico. When the first Spanish explorers crossed the area in the late 1600's, the area was a true thorn forest with a taller, mesic forest along the river (2). Since the 1920's, however, over 95% of the original brushland has been cleared and converted to agricultural and urban use. With the rich soil, long growing season, and subtropical climate leading to rapid agricultural expansion, the LRGV is considered to be one of the most intensively cultivated areas in the US (2, p.17-18). The area has undergone substantial population growth as well. Consequently, there are few remaining tracts of native brushland and these are currently maintained by multifaceted conservation efforts described above.

The climate is semi-arid and subtropical. The rainfall norm is 27 inches annually, but rainfall can be highly erratic both seasonally and annually. The period of this study has seen these annual totals met, on average, but with the rainfall concentrated and 7-8 months of the year below norm (NOAA National Climatic Data Center). Much of the annual rainfall has come from the 9 named tropical weather systems making landfall within a 200-mile radius of Brownsville in the last 10 years (NOAA, *ibid.*), and even rain occurring north or south of the LRGV has been beneficial to butterflies. Winters have generally been warm and dry. Temperatures average 50°F in January to 86°F in July (2, p. 5).

The Las Palomas Wildlife Management Area (WMA) is in the Mid Delta thorn forest, with some units in the Mid-Valley Riparian Woodland (4, p.7). The Units currently in the Las Palomas WMA are the Arroyo Colorado (600 acres), Anacua (220 acres), Baird (122 acres), Carricitos (118 acres), Chapote (228 acres), Ebony (220 acres), Frederick (35 acres), Longoria (200 acres), Taormina (705 acres), and Tucker (175 acres). These properties were purchased with and are operated with hunter-generated funds. Not all units are open to the general public and access permits are required. The properties are hunted, although hunters are seldom encountered. They are usually present in early morning or late afternoon, which are fortunately not optimal periods for butterflies. The authors have collected in several of the Units but found that the Longoria Unit has the best combination of available butterfly habitat and ease of access when in the Unit. Some Units are heavy thorn forest, others are open, recently fallow fields. Restoration of native habitat from cropland in the LRGV began with the Longoria Unit in the late 1950's. The woody species, Texas ebony (*Pithecellobium ebano*), Anacua (*Ehretia anacua*), Huisache (*Acacia farnesiana*), Granjeno or Spiny Hackberry (*Celtis pallida*) and Brazil *(Condalia hookeri)* were planted from seedlings dug by hand from native brush areas. This is a labor intensive but effective method of restoration. All above plants except Anacua are spiny. Within three years, there were White-winged doves nesting in the restored area at a density of 40 pair per acre. The area has continued to be hunted for White-winged doves but it has been enhanced with relatively well-maintained trails. The Unit is located about 4 miles north of Santa Rosa on Texas 506 or about 6 miles southwest of Sebastian along Texas 506. The Unit is on both sides of Texas 506. The portion on the east side of Texas 506 has a paved walkway loop that is handicapped accessible and has a wooden gazebo at its southeast corner. Currently, the primary butterfly nectar sources are Crucita

(Figures on page 27 and 28 accompany present article. Text of article continues on page 28.)

***Danaus eresimus*, Falcon State Park, 16 Oct. 2008. This is a characteristic species at Longoria, recently more common than in earlier years.**

***Strymon istapa*, Falcon Heights Baptist Church, 16 Oct. 2008. Consistently one of the commonest hairstreaks at Longoria.**

***Anartia jatrophe luteipicta*, Edinburg Wetlands, 17 Oct. 2008. A typical South Texas species, relatively common in recent years.**

***Dryas julia moderata*, Bentsen State Park, 17 Oct. 2008. One of the signature Valley species, often common in the fall.**

***Chiomara georgina*, Bentsen State Park, 17 Oct. 2008. A regular but rare Valley specialty, was generally common in 2008.**

***Heliopyrgus domicella*, Rancho Lomitas, 18 Oct. 2008. Generally uncommon in Valley, taken only twice at Longoria.**

***Doxocopa laure*, NABA Butterfly Park, 17 Oct. 2008. A gorgeous butterfly, especially the male. Scarce at Longoria despite the abundance of Hackberry trees, its larval host plant.**

***Pyrisitia proterpia*, NABA Butterfly Park, 17 Oct. 2008. This tropical species was seen in only three years at Longoria, but one year exceedingly abundant.**

***Anthanassa texana*, Rancho Lomitas, 18 Oct. 2008. A beautiful species considered common in the Valley but seen only once at Longoria.**

***Chiodes albofasciatus*, Bentsen State Park, 17 Oct. 2008. A consistently seen, and attractive, species at Longoria.**

***Calephelis perditalis*, Longoria WMA, 20 Oct. 2008. This is a common species at Longoria, its LPH is *Eupatoreum*, which is abundant.**

***Heliopyrgus sublinea*, Longoria WMA, 20 Oct. 2008. An uncommon species first recorded from the US by Ben Basham in 2004, and first found in Cameron Co. in 2007 at Longoria by June Preston, and again there in 2008.**

[Images of butterflies shown on page 27 were photographed by Linda Williams. Images on page 28 were photographed by Mike Rickard]

***Adelpha fessonia*, Resaca de la Palma SP, 6 Nov. 2008. A specialty species normally regular but uncommon, in 2008 it was especially common in Cameron Co.**

***Eantis tamenund*, Longoria WMA, 31 Oct. 2008. A signature species for Longoria WMA, consistently common.**

***Strymon rufofusca*, NABA Butterfly Park, 13 Nov. 2008. This nice hairstreak has become more common in recent yars and was found at Longoria in 2008.**

***Lasaia sula*, Resaca de la Palma SP, 6 Nov. 2008. One of the most attractive Valley species, regularly seen in Cameron Co.**

***Phocides polybius*, Estero Llano Grande SP, 4 Oct. 2008. An often photographed Valley specialty, widespread due to the frequent yard planting of guava trees - its LHP.**

***Chiodes zilpa*, Estero Llano Grande SP, 21 Oct. 2008. Another very attractive specialty species that was common in 2008.**

(*Eupatorium odoratum*), Blue Boneset (*Eupatorium azureum*), Texas Lantana or Calico Bush (*Lantana horrida*), Desert Lantana (*Lantana macropoda*), Frostweed (*Verbesina microptera*), Balloon Vine (*Cardiospermus sp.*), Gumweed (*Grindella sp.*), Catclaw (*Mimosa sp.*), and Wild Olive (*Cordia boissieri*). There are other flowering plants in the spring and early summer. Floyd and June Preston first collected at Longoria in 1999 and continuously thereafter, but primarily in October and early November. Rickard began making visits in the fall of 2008. This survey is therefore not a complete coverage of this interesting area for an entire year, but Rickard, now resident in the area, plans monthly visits for 2009. The periods collected and level of effort are shown in Table 1 (page 29). In this table, no distinction was made between species caught and observed. One would infer from the table that the number of species recorded is proportional to the level of effort. This is partly true but there are significant yearly differences. The years 2003, 2005, 2007, and 2008, for example, were outstanding for butterflies across the entire Valley, in terms of new US records and fresh documentation of historical records (1).

In the early years of visiting Longoria, the intent was not to make an exhaustive survey of the Unit, although detailed records were kept of what was caught and what was seen. The primary objectives were to develop a synoptic collection of specimens from the Unit for the insect collection at the University of Texas, Pan American, at Edinburg, Texas, and to give additional specimens to Texas A. & M. University, College Station, Texas, and to the McGuire Center for Lepidoptera and Biodiversity, Gainesville, Florida. Annual reports of what was collected,

where the specimens were deposited, and what species were observed were sent to Steve Benn, of the Las Palomas WMA that includes the Longoria Unit.

The 113 species recorded in Table 2 (pages 30-31) for Longoria contrasts with the some 300 species reported for the entire LRGV. However, perhaps a third of those numbers represent extremely scarce/one-time species, and on a short visit, one can hope to see at best half the remaining 200, depending on the season. Rickard has knowledge of over 200 species reported for the LRGV in 2008, for example, but that number represents numerous collectors and observers, and months of intensive field time! Rarely did anyone record 100+ species in a single day. Of the 113 species listed, 44 were recorded fewer than 4 times.

For those who have not collected in a semitropical/tropical environment, a visit to south Texas can be a fascinating and eye opening adventure. For those wishing only to observe and photograph butterflies, there are ample sites at the various World Birding Centers in the state parks and elsewhere, butterfly gardens at several inns and RV Parks, and at the conservation areas maintained by Audubon, The Nature Conservancy, NABA, and various private groups. For those who wish to observe butterflies or collect at Longoria under permit conditions, they should contact Steve Benn at Texas Parks & Wildlife Dept., 154 B, Lakeview Drive, Weslaco, TX 78596. First time visitors are encouraged to get both the Bordelon and Knudson book from the authors (4), and *Finding Butterflies in Texas* (5). More experienced visitors will find the Glassberg (6) and Garwood/Lehman (7) books especially helpful in identifying LRGV *"specialty"* species that are primarily Mexican in origin. The plant book by Richardson (3) is particularly helpful because it includes trees, shrubs and wild flowers, and includes detailed keys to identification.

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Table 1: Periods Collected and Level of Effort

Year	Dates	Days	Average Hrs/Day	Species
1999	Oct. 17-21	3	2:10	36
2000	Feb. 29, Nov. 6	2	0:50	12
2001	Oct. 18, 25	2	1:30	34
2002	Oct. 3-24	7	1:45	44
2003	Oct. 8-Nov. 22	18	2:20	69
2004	Sep. 29-Oct. 28	13	2:20	50
2005	Oct. 10-25	5	2:00	33
2006	Oct. 8-21	7	2:30	59
2007	Oct. 13-20	3	2:15	38
2008	Oct. 9-27	7	2:30	59

Table 2: Species and Years Collected or Observed. X = Captured, spread and donated one or more specimens at Longoria in given year; S = Sighted at least one specimen. When S appears none of the species was collected.

SPECIES	99	00	01	02	03	04	05	06	07	08
Nyctelius nyctelius					X	X			X	
Panoquina ocola	X		X		X	X	S	S	X	X
Panoquina hecebolus					X					
Panoquina lucas					X	X	X			X
Lerodea eufala			X	X	X	X	X	X	S	X
Lerodea arabus		X	X		X			X		
Amblyscirtes nysa								X		
Amblyscirtes celia							X			
Atalopedes campestris			S	X	S	X		X		X
Wallengrenia otho clavus					X		X	X		X
Polites vibex praeceps	S		S	S	X	X	S	X	X	X
Hylephila phyleus	X		S	S	S	X	S	X	X	X
Copaeodes minimus					X			X		
Lerema accius			S	X	S	X	S	X	X	X
Cymaenes trebius					X					X
Nastra julia			X	X		X				
Pholisora catullus				X			X	X		
Heliopyrgus domicella					X					X
Heliopyrgus sublinea									X	X
Heliopetes laviana		X	S	X	X	X	X	X	X	X
Heliopetes macaira	X		S	X	X	X	X	X	X	X
Pyrgus communis/albescens			S	S	X			X	S	X
Pyrgus oileus				S	X			X	X	X
Pyrgus philetas		X			S					X
Erynnis funeralis	X			S	X			S		X
Chiomara georgina				X	X	X	X			
Timochares ruptifasciatus					X				X	
Eantis tamenund	X		S	S	X	X	S	X	X	X
Bolla brennus	X									
Cogia calchus			X					X		
Astraptes fulgerator azul					X	X				X
Urbanus proteus	X				X	X				X
Urbanus dorantes				X	X			X	S	X
Urbanus procne					X	X		X	X	X
Urbanus teleus					X	X		X	S	X
Chiodes albofasciatus	X			S	X	X		X	X	X
Chiodes zilpa					X				X	X
Phocides polybius lilea								X		
Battus philenor	X		X	S	S	X		X		X
Papilio cresphontes	S	X	X	X	X	X	S	X	S	X
Papilio ornythion								X		
Papilio anchisiades idaeus						X				
Glutophrissa drusilla neumoegenii						X				
Pontia protodice								X		
Ganyra josephina josepha					X	S				
Ascia monuste	X		X	S	X	X		X	S	X
Colias eurytheme						X				
Zerene cesonia	X			S	X	X		X		X
Phoebis sennae marcellina	X		X	S	X	X		X	S	X
Phoebis agarithe	X				X	X	X	X	X	X
Kricogonia lyside	X	S	S	X	S	X	S	X	S	X
Pyrisitia proterpia					X			X		X
Pyrisitia lisa	X	S	S	X	X	X	X	X	S	X
Pyrisitia nise nelphe					X					
Abaeis nicippe								X		

SPECIES	99	00	01	02	03	04	05	06	07	08
Nathalis iole			X	X			X	X		
Caria ino melicerta	X		X	X	X	X	X	X		X
Lasaia sula peninsularis	X		X	X	X				X	X
Calephelis nemesis australis				X	X	X	X			X
Calephelis perditalis	X				X		X	X		X
Chlorostrymon simaethis sarita	X				X	X		X	X	X
Ministrymon clytie	X			X	X					
Calycopis isobeon					X					
Strymon melinus			X	X	S	X	X	X		X
Strymon rufofusca										X
Strymon istapa				X	X	X	X	X	X	X
Strymon bazochii						X				
Brephidium exilis				S	S			S		
Zizula cyna								X		
Hemiargus ceraunus astenidas		S	X	X	S	X	X	X		
Libytheana carinenta larvata	X	S	S	S	X	S	S	X		X
Anaea aidea	X				X		X			X
Asterocampa leilia									X	
Asterocampa clyton louisa					X		X		S	X
Doxocopa laure									X	
Mestra amymone			X	S	X	X	X	X	S	X
Anartia jatrophe luteipicta	X			S		X	X	X	X	X
Vanessa atalanta rubria	X				S			S		X
Vanessa virginiensis	X				X			X		
Vanessa cardui	X		S		X	X				
Junonia coenia	X			X	X	S		S	S	X
Junonia evarete					X					
Chlosyne lacinia adjutrix		X		X	S	X	X	X		X
Anthanassa texana					S					
Anthanassa tulcis										X
Phyciodes tharos	X			S						
Phyciodes phaon		X	X		S			S		X
Phyciodes graphica								S		
Texola elada ulrica								S		
Euptoieta claudia	X		X	X				X		
Euptoieta hegesia meridiania	X		X	X	X		X	S		
Heliconius charithonia vasquezae				S	X					X
Dryas iulia moderata				S						
Agraulis vanillae incarnata	X	S	S	X	X	X	S	X	S	X
Danaus plexippus	X		S		S	S		S	S	S
Danaus gilippus thersippus	X	S	S	S	X	X	S	X	S	X
Danaus eresimus montezuma	X			X	X	X	S	X	X	X

Additional Species Known to Occur at Longoria WMA.
Source: Mike Rickard, 2008, Except As Noted.

Gorgythion begga pyralina (Benton Basham, 2006)
Staphylus mazans
Papilio polyxenes asterius
Anteos maerula
Anteos clorinde
Atlides halesus corcorani
Strymon bebrycia
Echinargus isola
Asterocampa celtis antonia
Mycelia ethusa
Adelpha fessonia (Benton Basham)
Siproeta stelenes biplagiata
Marpesia petreus
Hermeuptychia hermes
Cyllopis gemma freemani (Benton Basham)

(Floyd & June Preston, 832 Sunset Dr., Lawrence, KS 66044; Mike Rickard,411 Virgo, Mission, TX 78572)

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SYNOPSIS OF RECENT AND OLDER USA RECORD BUTTERFLIES FROM THE LOWER RIO GRANDE VALLEY OF TEXAS

BY

ED KNUDSON & MIKE RICKARD

Introduction

There has been great interest and publicity surrounding new USA record butterflies found in the Lower Rio Grande Valley of Texas in the current decade, with several suggested causes of this phenomenon. Speculation has been raised that this is an effect of global warming, or unassociated climatic regimes. The number of new USA records from this area may also be a result of the proliferation of butterfly gardens during this decade, and a third explanation could be the increased numbers of butterfly enthusiasts in the region. Undoubtedly, all of these factors are significant. Since many new USA record butterflies were also reported from the Lower Rio Grande Valley during the recent decade of 1967-1976, it is of interest to compare that 10-year period with the current one.

The first section of this paper will describe and analyze these two periods and discuss the similarities and/or differences that may have prevailed. The second section provides a complete list of all new USA butterfly records from 1967 through 2008 known to the authors. The list includes the collector and published source of the record where available. An accompanying plate illustrates some of the species/subspecies listed.

The "Modern Era" 1999-2008

The climate of the region has been mild, with a few brief episodes of below freezing conditions during the winter. Most cold fronts now take a more southeast to easterly path than in earlier years, leading to warm, dry winters. Rainfall was below average at the start of the decade, but has been mostly above average the past 6 years. However, the annual rainfall totals can be misleading, as precipitation has generally been concentrated from July through October, with little significant rainfall in the remaining months. Furthermore, much of this rainfall has been a result of tropical systems. During this decade, 9 named tropical weather systems have made landfall within 120 miles of Brownsville, all from mid-July to early September. Several of these systems brought heavy rain not just to the LRGV, but more importantly for butterflies at least, to northern Mexico.

The development of butterfly gardens began in 1999 at the Audubon Sabal Palm Sanctuary, where a garden was built that would become the prototype for future gardens at other locations. This type of garden includes professionally cultivated beds of flowering plants, separated by walkways. Most species planted are native to Texas but locally widespread exotics that are proven attractors are also found. They generally include a number of well-known larval host plants as well. Similar gardens were developed at Santa Ana and Laguna Atascosa National Wildlife Refuges, and a small garden was installed at Bentsen State Park by volunteers. The World Birding Center came into existence in 2004, building larger gardens at Bentsen State Park, Edinburg Wetlands Preserve, Estero Llano Grande State Park, Falcon State Park, Old Hidalgo Pumphouse, and smaller gardens at other locations. Additional gardens were developed at Frontera Audubon Preserve and Valley Nature Center in Weslaco, and NABA International Butterfly Park in Mission. Collecting is prohibited in these gardens, except by special permit.

Although the Valley has for many years been known for its influx of *"winter Texans"*, in more recent years this group has included an increasing number of butterfly enthusiasts, in part due to the spread of organizations such as the North American Butterfly Association (NABA) and Xerces Society. Others have been drawn to butterflies from the birding community. As a result, there is now a modest-sized but dedicated group of butterfly watchers and photographers, many of whom are year-round residents, that frequent these butterfly gardens on a daily basis. Some of these bridge the gap between collecting and observing, recognizing the importance of documenting certain new records with voucher specimens. Since 1996, the city of Mission has hosted the Texas Butterfly Festival each October at the start of the prolific *"Fall Season"* for butterflies, which lasts through December. The festival has served as a focal point for many of those visiting south Texas in search of butterflies.

There is an equally dedicated group of butterfly collectors that visit the LRGV, mostly during this same Oct-Dec period. Few are residents, and many come from other states and countries. Some are involved in scientific

research on butterflies, while others simply enjoy collecting, though the information that they contribute is valuable. Since the butterfly gardens are mostly restricted to observing, collectors have focused on seeking and exploring undeveloped areas. These areas have become increasingly hard to find, due to the continued industrial and residential development in the region and to limitation of access by risks associated with illegal immigration, drug smuggling, gang violence, and attendant law enforcement concerns. Prime locations of this type include fall blooming stands of flowers, chiefly *Eupatorium sp.* (Crucita). Additionally, in the past 15 years much native habitat in the Valley has been seriously degraded by exotic, invasive grasses – Buffelgrass in Starr Co., and Guineagrass in Cameron and Hidalgo Cos. - which have replaced the native low vegetation in most areas. Despite the loss of habitat and/or access, the collecting community has recorded a number of scarce or new species. Individuals from both the observing and collecting groups have done outstanding work in documenting the life history of many species.

The "Historical Era" 1967-1976

This era began in late 1967 with Hurricane Beulah. This was an unprecedented storm which struck Brownsville and came through the entire lower valley with over 20" of rainfall in some areas. Severe flooding occurred throughout the region. Normally dry resacas were filled and water persisted in some of them for the next 7-8 years. The senior author arrived in Texas in 1974 to find water in many resacas in Bentsen State Park and flowers covering the ground in many areas. In total, however, this earlier decade saw landfall from only 7 named tropical systems, and those were concentrated into 5 of the years. On the other hand, it was a period of widespread afternoon seabreeze showers daily, in summer and fall. Cold fronts brought additional rain and cooler temperatures, with light freezes often occurring by November. Thus there was more of a normal *"winter"* season, with wetter conditions prevailing into spring, and this often led to interesting species being found in March and April. These conditions ended in 1976, with a rather severe freeze, which killed many of the tall *Washingtonia* palms that lined nearly every road in the valley.

The LRGV was a very different place then, with less than 1/3 of the present population. Agriculture dominated the scene much more than in the present time, with numerous citrus groves as well as sugar cane and truck farms. There were no butterfly gardens at this time. Bentsen State Park, Falcon State Park, and Santa Ana and Laguna Atascosa Wildlife refuges were the only major preserves in the area, and permits for these were not difficult to obtain. Many undeveloped areas existed where excellent habitat could be accessed with little difficulty, even near downtown population centers such as McAllen and Pharr. Starr County was mainly ranchland, with far less development and population than today. Illegal immigration and smuggling were certainly present at this time, but with little of the violence, crime, and resulting attention from law enforcement, that prevails today.

At this time, there was a group of butterfly (and moth) collectors, mainly from the Houston and San Antonio area, who visited the valley frequently especially in the summer and fall. Many are still active today, though only a few continue to collect in the area. Mention must be made of the pioneers of these lepidopterists. Roy O. Kendall (dec.) was foremost of these, and served as mentor and role model to so many who followed. H. Avery Freeman (dec.) did landmark work in the region during the preceding three decades, with some two dozen USA records, but had by the 1960's concentrated his activities in Mexico. Andre Blanchard (dec.) also spent much time in the Valley, although exclusively in the pursuit of moths.

Discussion

The following list summarizes 40 new USA record butterflies from 1967-1976, 6 records from the interim period 1977-1998, and 23 records from 1999-2008. It appears that the local climate regimes during the years 1967-2008 were favorable in the beginning and ending decades, and unfavorable in the interim years, for the distribution and temporary establishment of Mexican butterflies in the lower Rio Grande Valley of Texas. The beginning and ending decades were marked by above normal precipitation, albeit with the differences cited above, while the middle decades were drier, often with drought conditions, and more prevalent hard freezes (Neck, 1976,1978).

Three-fourths of the species first found during the 1967-1976 decade reappeared during the 1999-2008 decade, which seems to support the climatic hypothesis. Whether or not the phenomenon of global warming is having any effect is questionable at this point. According to some predictions, further warming could have a devastating effect on south Texas and northern Mexico, with much of this area becoming desert and the coastal area inundated

by the Gulf of Mexico.

The existence of many butterfly gardens and increased numbers of skilled observers in the modern period is undoubtedly in part responsible for the continued new discoveries, and reappearance of older records, but implies that the numbers during the last decade should have been greater, approximating the historical period. However, there is a diminishing returns effect at work, in that of a finite number of Mexican species with the potential to stray across the border, the number to be discovered will decline with each discovery. Current knowledge indicates that some 50-100 Mexican species as yet unrecorded in the USA are all that can be reasonably expected to stray into south Texas. The benefits of the butterfly gardens and increased observers are offset by the very real factor of continued habitat destruction, and habitat degradation by invasive exotics, on both sides of the border. This has the most deleterious effect on those species that breed on the native plants most affected by these changes, while other species that breed on introduced, exotic flora may have an advantage (Neck, 1996).

Nonetheless, amazing new records have appeared, especially during the past 5 years. Some of these, particularly the Ithomiines, have been questioned as to their status as bona-fide strays or accidentals (Pelham, 2008). If these were accidentals, it is hard to imagine how isolated records of three different species could happen, but due to the huge volume of incoming trucks from Mexico, it is also possible that butterflies may arrive as *"stowaways"*. For now, we prefer to consider these to be unusual strays. One Ithomiines species ***Dircenna klugii*** (Geyer) was apparently resident in the valley up to a century ago (Kendall & McGuire, 1984). Although they may seem delicate, Ithomiines are actually very *"tough"* butterflies, as anyone who has ever *"pinched"* one, only to have it fly away unharmed, can attest. They are long lived as adults, partly due to chemical protection from predators. Many species, including the ones reported, are highly attracted to some of the types of flowers that are commonly planted in butterfly gardens, not only for nectar, but also to obtain essential alkaloids, needed for reproduction. Dispersal abilities are noted by DeVries (1987).

It needs to be kept in mind that the butterfly gardens primarily provide a nectar source, and as such become a focal point between the butterflies and the various parties interested in them. They do not create the butterflies themselves. As species continue to stray or establish temporary residence in the LRGV, what is clear is the highly-developed dispersal ability of butterflies, and our need for greater knowledge and understanding of this ability. Although many species may seem sedentary and highly localized in habitat preference, all have the ability to disperse over relatively long distances, given the proper local conditions. This dispersal is probably in response to local weather conditions, degradation or destruction of habitat, overpopulation, or parasitic abundance. Anyone who has ever been to the Valley in the late fall cannot fail to notice the frequent strong south winds that tend to occur prior to the advance of frontal systems. It is therefore anticipated that further new USA records will appear in the near future, given the appropriate climatic conditions. In such cases, the importance of obtaining voucher specimens, where permitted, cannot be overstated. Many of these species may not be identifiable from photos alone. DNA bar coding has evolved to the point that it is possible to not only determine the species definitively, but also to determine where it came from in some cases.

List of New Records

NOTE:

(n) indicates footnotes.

* before the species name indicates that this is the only known record, including subsequent days or years. The name of the new species will be followed by the name of the FIRST person, known to have either collected or photographed the individual, and the locality and date. The records given here include only those species or subspecies found ***first*** in the USA in Cameron, Hidalgo, and Starr counties of south Texas. Some of these records are verifications of older undocumented records. Sight records undocumented by photos, and certain other undocumented records, are not included here.

(p) after the locality data indicates that the individual was photographed and not collected. The publisher(s) of the record will follow this and will be fully cited at the end of this article.

It is possible that certain new records and some publications are unknown to the authors.

Abbreviations

UNM. = United States National Museum of Natural History
AMAH = American Museum of Natural History

NCR = National Wildlife Refuge
SP = State Park
NABA IAP = North American Butterfly Association International Butterfly Park

1967-1975

HESPERIIDAE

Epargyreus exadeus cruza Evans. McGuire, 18-X-73, McAllen. McGuire & Rickard (1976)
Aguna metophis (Latreille). Rickard, 6-IX-69, Bentsen SP. McGuire & Rickard (1976)
Aguna claxon Evans. Tilden, 21-X-70, Santa Ana NCR. Tilden (1971)
****Urbanus belli*** (Hayward). Collector unknown, 23-VI-68, Brownsville (in AMAH). Warren (1997)
Urbanus simplicius (Stoll). Rickard, 13-IV-74, Bentsen SP. Rickard (1977)
(1) ****Urbanus pronus*** Evans. Rickard, 19-X-69, Madero. Mcguire & Rickard, (1976); Kendall & McGuire, (1984)
Urbanus esmeraldus Butler. McGuire, 18-VIII-72, McAllen. McGuire & Rickard (1976)
****Astraptes egregius*** Butler. McGuire, 18-VIII-72, McAllen. McGuire & Rickard (1976)
Astraptes alardus latia Evans. Rickard, 16-VI-73, Bentsen SP. McGuire & Rickard (1976)
Thessia jalapus (Plotz). McGuire, 31-VII-72, Sullivan City. McGuire & Rickard (1976)
Polythrix mexicanus (H. A. Freeman). Heitzman, 28-VI-68, Bentsen SP. Heitzman & Heitzman (1972)
****Bolla brennus*** (Godm. & Salv.). Tilden, 21-X-70, Santa Ana NCR. Tilden (1971)
Bolla clytius (Godm. & Salv.). McGuire, 18-X-73, Abrams. McGuire & Rickard (1976)
Sostrata nordica Evans. Rickard, 26-X-73, Bentsen SP. McGuire & Rickard (1976)
Arteurotia tractipennis (Butl. & Druce). Nadine McGuire, 2-IX-72, Mission. Kendall & McGuire, (1984)
****Pellicia dimidiata*** Herr.-Schaf. Vernon, 25-X-75, Bentsen SP. Kendall & McGuire,(1984)
Heliopetes arsalte (L.). McGuire, 20-X-73, Boca Chica. McGuire & Rickard (1976)
(2) ***Piruna penaea*** (Dyar). McGuire, 20-X-73, Sullivan City. McGuire & Rickard (1976)
Corticea corticea (Plotz). Rickard, 4-XI-73, Madero. McGuire & Rickard (1976)
****Synapte salenus*** Mabille. Doyle, 27-VIII-68, Santa Ana NCR. Kendall (1970)
Rhinthon osca (Plotz). Rickard, 20-X-73, Mission. McGuire & Rickard (1976)
Conga chydaea (Butler). McGuire, 15-VII-72, Bentsen SP. McGuire & Rickard (1976)
Vettius fantasos (Stoll). Knudson, 24-X-75, Penitas. Kendall & McGuire, (1984)
Lerema liris Evans. Kendall, 28-IX-68, Santa Ana NCR. Kendall (1970)

PAPILIONIDAE

****Papilio garamas abderus*** Hopffer. Bryan Findley, (early XI-67), San Benito. Bordelon & Knudson, (2000)

LYCAENIDAE

(3) ***Strephonota tephraeus*** (Geyer). Carr, IX-72, Bentsen SP (in UNM.). Bordelon & Knudson (2000)
Ocaria ocrisia Hew. Kendall, 11-XI-68, Santa Ana NCR. Kendall (1970)
Rekoa palegon (Stoll). Kendall, 9-XI-68, Santa Ana NCR. Kendall (1970)
(4) ***Allosmaitia strophius*** (Godart). Kendall, 11-XI-68, Santa Ana NCR. Kendall (1970)
Cyanophrys herodotus (Fab.). McGuire, 22-V-72, Bentsen SP. Kendall & McGuire (1984)
Strymon albata sedecia (Hew.). Rickard, 9-XI-68 , Santa Ana NCR. Kendall (1972)

PIERIDAE

(5) ****Enantia albania*** (H. Bates). McGuire, 3-IX-72, Bentsen SP. Kendall (1974)

NYMPHALIDAE

****Libytheana motya*** (Hbn.). Heitzman, 27-VI-69, Brownsville (Boca Chica). Heitzman & Heitzman (1972)
(6) ***Anthanassa argentea*** (Godm. & Salv.). Sullivan, 19-III-76, Relampago. Chuah & Cushing (1995)
Chlosyne rosita browni Bauer. Kendall & Tilden, 24-X-70, Santa Ana NCR. Kendall (1972)
Chlosyne melitaeoides (C. & R. Felder). McGuire, 20-X-73, Starr Co. Kendall & McGuire (1984)
****Chlosyne eumeda*** (Godm. & Salv.). McGuire, 22-X-74, 6 mi. w. Sullivan City, Starr Co. Bordelon & Knudson (2007)
Epiphile adrasta Hew. Rickard, 22-X-73, Santa Ana NCR. McGuire & Rickard (1974); Kendall & McGuire (1984)
Hamadryas guatemalena marmarice (Fruhst.). Hedges, 18-VIII-74, Bentsen SP. Kendall & McGuire (1984)
****Hamadryas amphinome mexicana*** (Lucas). McGuire, 3-IX-72, Bentsen SP. Kendall (1974)

1999-2008

HESPERIIDAE

Phocides belus Godm. & Salv. Hanson, 13-IV-03, Bentsen SP (p). Hanson *et al.* (2003)
(14) ***Urbanus evona*** Evans. Hanson & Quintanilla, 6-XII-03, NABA IAP (p)
Anastrus sempiternus (Butl. & Druce). Bordelon. 29-X-02, Rio Grande City. Bordelon & Knudson (2003)
Achylodes pallida (R. Felder). Hanson, 23-X-03,Mercedes (p). Warren *et al.* (2003)
Antigonus erosus (Hübner). Knudson, 17-X-04, Mission. Bordelon & Knudson (2004)
Noctuana stator (Godm. & Salv.). Stewart, 23-X-99, Santa Ana NCR (p). Knudson (2002)
Heliopyrgus sublinea (Schaus.). Basham & Rathjen, 23-X-04,Santa Ana NCR (p). Basham. *et al.* (2005)

PAPILIONIDAE

Mimoides phaon (Boisduval). Reid,23-X-08, Santa Ana NCR (p). Reid (2008).

PIERIDAE

Itaballia demophile centralis Joicey & Talbot. Glassberg, 7-XII-04, NABA IAP(p). Dauphin *et al.* (2005)
Pieriballia viardi (Boisduval). Booker, 6-XII-05,Bentsen SP (p). Bordelon & Knudson (2006)
Melete lycimnia isandra (Boisduval). J. & D. Dauphin, 20-XI-04, Mission. Dauphin *et al.* (2005)

LYCAENIDAE

(7) ***Ziegleria guzanta*** (Schaus). Hanson, 27-I-04, Mission. Warren, *et al.* (2004)
(8) ***Ziegleria syllis*** (Godm. & Salv.). Rickard ,31-XII-08, Mission.
(9) ***Strymon serapio*** (Godm. & Salv.). Rickard, 29-XII-08, Estero Llano Grande SP (p)
(10) ***Rekoa stagira*** (Hew.). Quintanilla, 28-XII-03, NABA IAP (p)

NYMPHALIDAE

(11) ***Greta morgane oto*** (Hew.). Emmitt, 8-XII-04, Bentsen SP (p). Dauphin *et al.* (2005)
(11)***Pteronymia cotytto*** (Guerin-Meneville). J. Dauphin, 7-XII-05, NABA IAP (p). Bordelon & Knudson (2006)
(11) ***Melinaea lilis imitata*** Bates. Hanson, 27-XII-08, Old Hidalgo Pumphouse (p)
Dynamine postverta mexicana d'Almeida. Fuller, 3-XII-05, NABA IAP (p). Bordelon & Knudson (2006)
Tenemis laothoe hondurensis Fruhst. Grishin, 28-XI-04, Penitas. Grishin (2005)
Hamadryas glauconome glauconome (Bates). Bordelon, 8-XI-08,Rio Grande City. Bordelon & Knudson (in press)
Archaeoprepona demophon centralis (Fruhst.). Fuller, 17-XI-07, NABA IAP (p). Bordelon (2008)
Memphis forreri (Godm. & Salv.). Nall, 17-XI-07, Falcon Heights (p). Bordelon (2008)

Interim records 1977-1998

PIERIDAE

Eurema albula (Cramer). Cushing, 13-XI-93, Roma. Chuah & Cushing (1995)
Leptophobia aripa elodia (Boisduval). Kral, 20-X-88, Santa Ana NCR

RIODINIDAE

Emesis tenedia (Feld.). Swengel, 8-X-87, Sta. Margarita Ranch (p). Swengel (1988)

NYMPHALIDAE

Limenitis archippus hoffmanni Chermock. Bordelon, 7-VI-77, Bentsen SP. Bordelon & Knudson (2000)
(12) ***Adelpha basiloides*** (Bates). Hidalgo Co., first date and coll. unknown. Neck (1996)
(13) ***Smyrna blomfildia datis*** (Fruhst.). Hackett, 3-XII-78, Weslaco. Kendall & McGuire (1984)

Footnotes

(1) Originally reported as *Urbanus pronta* Evans.
(2) Originally reported as *Piruna mictosticta* (Godman).
(3) Originally reported as *Siderus tephraeus* Geyer. The first record was never published.

(4) Originally reported as *Allosmiatia pion* (Godm. & Salv.).
(5) Originally reported as *Enantia melite* (L.).
(6) The older record was not known to Chuah & Cushing (1995).
(7) An older unpublished record, Durden, 27-X-91, Val Verde Co., TX, Langtry, was cited by Warren *et al.* (2004). Note that the similar *Electrostrymon hugon* (Godart) and *E. joya* (Dognin), have been reported from Texas in the older literature as *E. endymion* (Fabr.), which is a extralimital; *E. sangala* (Hew.), *E. cyphara* (Hew.), which are synonyms of *hugon* and *E.* canus (Druce), which is a synonym of *joya*.
(8) This determination is tentative, pending DNA.
(9) Previous records of this taxon from the Big Bend area of west Texas, refer to a new or different species, related to *Strymon serapio*.
(10) Several photographs have been attributed to this species and the photo from the record listed above looks most promising, but conclusive determination requires a clear male upperside photo or a specimen. Note that *Rekoa marius* (Lucas) has been previously reported from Texas in the older literature as *(Rekoa) spurina* (Hew.), which is a synonym, or as *(Rekoa) zebina* (Hew.) as misidentification of *R. marius*. All three species can be identified from a clear upperside photo of a fresh male forewing, but females require dissection or DNA.
(11) These three Ithomiines have been omitted from the most recent North American Checklist as *"accidentals"*. See discussion above.
(12) The first US record of this species is unpublished, specifics unknown. Neck (1996) lists this, but an illustrated photo was identified as *Adelpha fessonia*. This same photo was also used in Pyle, 1981), also as a representation of *A. fessonia*. This photo was attributed to Harry Darrow by both authors, but we have not been able to find out where this photo was taken.
(13) Old records from Brownsville, TX, of *Smyrna karwinskii* Geyer probably refer to this species, but no specimens are extant. See discussion in Kendall & McGuire (1984).
(14) Several photos are attributed to this species. Some, including the photo from the record listed above, are probably correct, but not conclusive, as there are several other species that are very similar, including some forms of *U. proteus* (L.).

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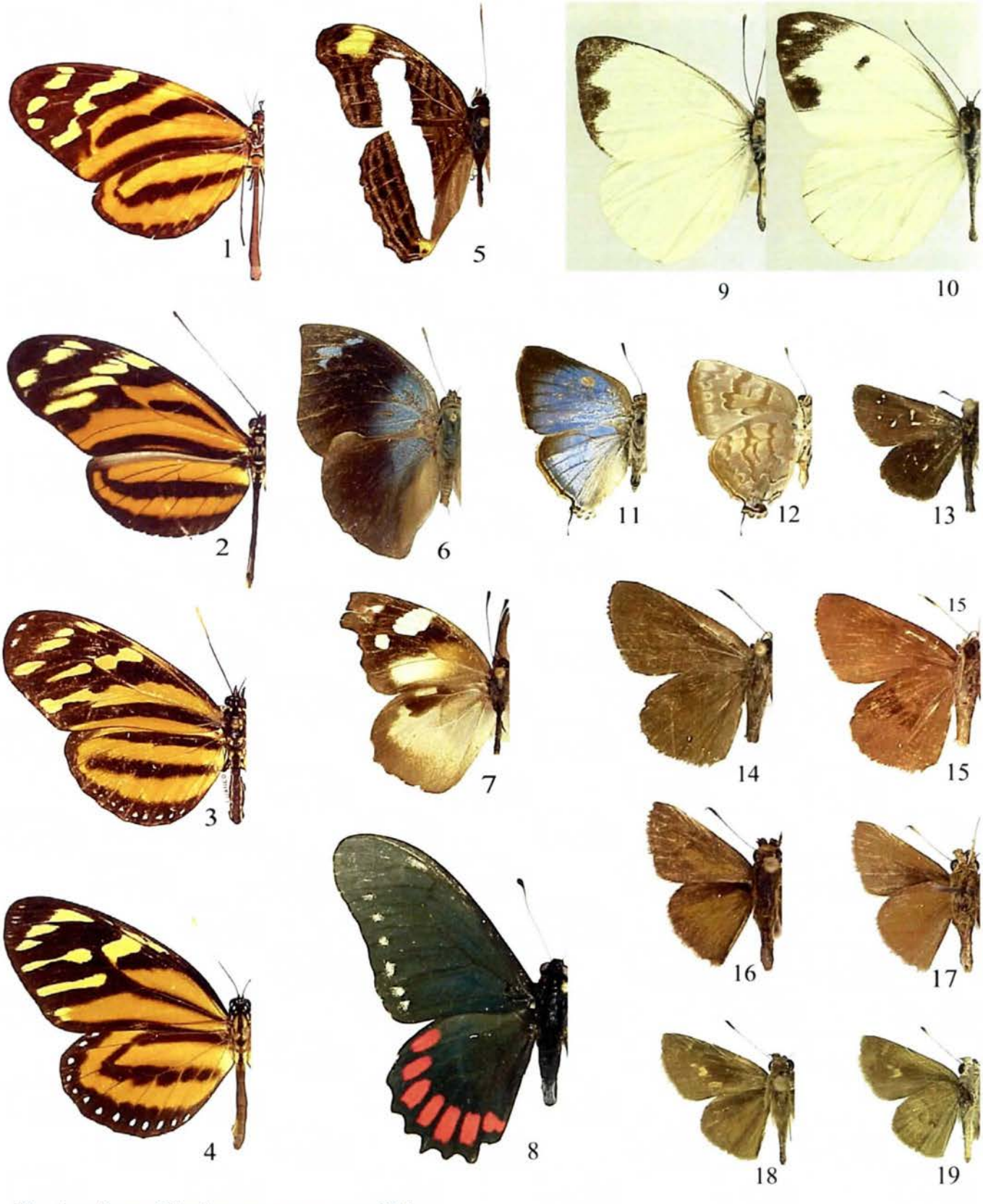
Explanation of Plate

1. *Melinaea lilis imitata* Bates, female. Mexico: Chiapas, San Jeronimo, 13-VII-79, leg. C. Cook.
2. *Heliconius ismenius telchinia* Doubleday, male. Mexico: San Luis Potosi, Cd.Valles, 13-X-76, leg. E. Knudson.
3. *Euiedes isabella eva* (Fabr.), female. TX: San Patricio Co., Mathis, 20-IV-68, leg. M. Rickard.
4. *Lycorea halia atergatis* Doubleday, male. Mexico, San Luis Potosi, Cd. Valles. 13-X-76, leg. E. Knudson. (The above 4 butterflies are shown together for comparison. *M. lilis* is one of the largest *Ithomiines* and closely resembles *H. ismenius*, which has not yet been recorded from the USA. The antennae of *M. lilis* are shorter and the wing pattern is different. The remaining 2 species differ in having subterminal white spots on the dorsal hindwing, as well as in wing patterns.)
5. *Adelpha basiloides* H. Bates, male. TX: Starr Co., Fronton, 13-XI-93, leg. C. Bordelon. This may be the first USA voucher specimen.
6. *Memphis forreri* (Godman & Salvin), male. Mexico, Tamaulipas, Cd. Mante, 13-X-76, leg. E. Knudson. The first Texas male of this species was collected by Bordelon, 17-II-09, in Mission, TX.
7. *Libytheana motya* (Hübner), male. Mexico, Yucatan, Isla Mujeres, 18-VIII-87.
8. *Mimoides phaon* (Boisduval), male. El Salvador, Santa Ana, reared, V-08. Red spotted forms and green spotted forms occur together in Mexico (in both sexes).
9. *Leptophobia aripa elodia* (Boisduval), female. Mexico, Chiapas, San Jeronimo, 20-IX-79, leg. C. Cook. The faint, dark markings on the wings are stains, not part of the maculation.
10. *Pieriballia viardi* (Boisduval), male. Mexico, Tamaulipas, Galeana Canyon 12-X-76, leg. E. Knudson.
11. *Rekoa palegon* (Cramer), male. Mexico, Quintana Roo, X-Can, 14-VII-74.
12. Same, underside.
13. *Piruna penaea* Dyar, male. Mexico, Michoacan, Cupatiinia, 26-VIII-97.
14. *Synapte salenus* (Mabille), female. Mexico, Chiapas, San Jeronimo, 16-VI-75, leg. C. Cook.
15. Same, underside. This species is slightly larger and darker than *Synapte pecta* Evans, and differs in genitalia.
16. *Corticea corticea* (Plotz), male. TX: Hidalgo Co., Santa Ana NCR, 30-XI-81, leg. E. Knudson.
17. Same, underside.
18. *Callimormus saturnus* (Herrich-Schaffer), male. Mexico, Tamaulipas, Cd. Mante, 13-X-76, leg. E. Knudson. This species was attributed to Texas by Evans, but no specimens have been located.
19. Same, underside.

(Ed Knudson, 8517 Burkhart Rd. Houston, TX 77055; Mike Rickard, 411 Virgo, Mission, TX 78572)

[Note: Photographs of butterflies accompanying this article are on page 39.]

SYNOPSIS OF NEW USA RECORDS FROM THE LOWER RIO GRANDE VALLEY, TEXAS



[Explanations of the images are on page 38.]

SCHIZURA BADIA (PACKARD, 1864) (LEPIDOPTERA: NOTODONTIDAE) IN LOUISIANA

BY
VERNON ANTOINE BROU JR.

Fig. 1. ***Schizura badia*** (Packard): **a.** male, **b.** female.

The notodontid moth ***Schizura badia*** (Packard) (Fig. 1) has been captured in Louisiana only at two locations despite 39 years of extensive year-round light trapping in surrounding parishes and throughout the state. I have found ***badia*** fairly common at the Abita Springs study site, recording 730 specimens over numerous years (Fig. 2).

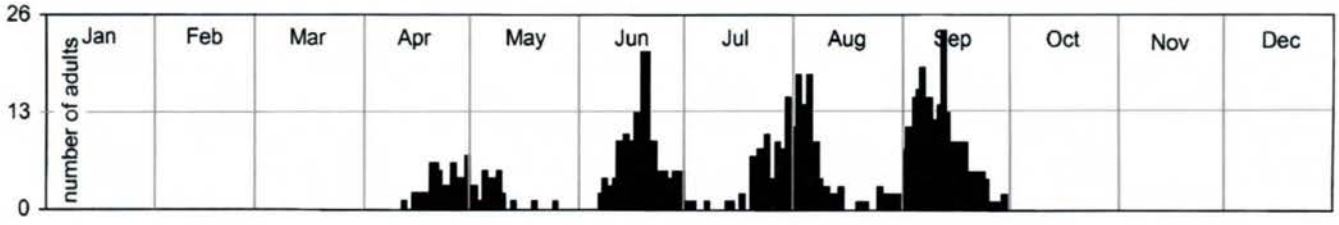


Fig. 2. Adult ***Schizura badia*** captured at sec.24T6SR12E, 4.2 mi. NE of Abita Springs, Louisiana. n = 730.

Fig. 3. Parish records for ***S. badia***.

In Louisiana, the small in size (wingspan +/- 30 mm) ***badia*** adult has four well differentiated annual broods, first brood peaking last week of April, second peaking about June 19, with subsequent broods at about 42-day intervals (Fig. 2). The parish records are illustrated in Fig. 3.

Packard (1895) listed the foodplant of ***badia*** to be a ***Viburnum*** species. Two species of ***Viburnum*** occur quite commonly at the Abita Springs, study site. Packard also listed the known geographical distribution in 1895 to include: Illinois, Massachusetts, New Jersey, New York, and Maine.

Covell (1984) reported ***badia*** is local and uncommon throughout eastern North America and occurring May through September. Heppner (2003) listed that the range of ***badia*** in eastern North America includes: Nova Scotia to Florida and Manitoba to Texas. Knudson and Bordelon (1999) list ***badia*** in their checklist of Texas lepidoptera.

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