

# NEWS

OF THE

# LEPIDOPTERISTS' SOCIETY

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# NEWS OF THE LEPIDOPTERISTS' SOCIETY

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The Lepidopterists' Society is a non-profit educational and scientific organization. The object of the Society, which was formed in May 1947 and formally constituted in December 1950, is "to promote internationally the science of lepidopterology in all its branches; to further the scientifically sound and progressive study of Lepidoptera, to issue periodicals and other publications on Lepidoptera; to facilitate the exchange of specimens and ideas by both the professional worker and the amateur in the field; to compile and distribute information to other organizations and individuals for purposes of education and conservation and appreciation of Lepidoptera; and to secure cooperation in all measures" directed towards these aims. (Article II, Constitution of The Lepidopterists' Society.)

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### Front Cover:

*Junonia coenia*, Dallas Co., TX, October 17, 2007. Photo: Dale Clark.

# Sampling Belize Butterflies: An excursion to Doyle's Delight - the high point of the Country

John Shuey and Paul Labus

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*Walking through the mountain forest we come to a small clearing along a ridge top. Butterflies are feeding on the sap running down the trunks of several dead trees. We assume that the opening was created by a recent lightning strike, but our focus is on the butterflies. Sites such as this are rare in the deep forest; too often we get only a momentary glimpse of butterflies as they flit through the dense foliage. This opening offers a window to an insect community rarely seen. These butterflies live high above ground in the forest canopy in one of the most remote areas of the Maya Mountains of Belize.*

*We begin the process of capturing, identifying, and recording several species when something distinctly unfamiliar flies in from the adjacent canopy. Not the **Agrias aedon** that are flying around, dropping into the opening. This one is perched high up where the flashes of dark metallic blue against its brown underside are like nothing we have seen. We think it is a member of the genus **Prepona**, but what species? The only thing to do is wait and see if it will venture down into the range of our nets. After several hours and a few near misses we finally catch one. The speculation is **Prepona deiphile**, a species that ranges from Mexico to Brazil, but this would be the first record in Belize. Confirmation will come later when back in the States it can be spread and identified for certain.*

Here in the United States, we take certain things for granted in the conservation arena. For example, we know what trees, birds and fish occur in each state. More importantly, we know the distribution of most species

and where the best sites for the rarest species are found. This is all thanks to the elaborate network of Heritage Programs in North America, which provides the raw information used by virtually all conservation efforts in the US. Heritage staff, which are usually affiliated with state government or a university, search throughout for the best examples of every habitat type, for new populations of imperiled species, and for those occasional but exciting new discoveries. Most importantly, they document their information in a database that, once combined with data from the entire Heritage network, provides the comprehensive information that underpins the conservation work throughout the country. (Visit [www.NatureServe.org](http://www.NatureServe.org) to see the public portion of this data).

In the tropics, this detailed information is sorely lacking. Most Central American countries have at best, lists of species that are known from within their borders. Conservation strategies are typically based on conserving broad swaths of ecosystems - intact landscapes that have the potential to conserve many if not most of the individual species found in the country. But that still leaves the question hanging: did we miss many species when we cast our broad ecosystem conservation net?

Over the last several years, the two of us have made repeated trips to Belize to develop a better understanding of butterfly distributions. Belize is a small country, less than one fourth the size of my home state, Indiana. Nonetheless it supports almost 1,000 butterfly species, more than the United States and Canada combined. When we started

the project, only half that number of species had been documented for Belize. As we systematically sampled key habitats across the country—especially in the more remote corners of the country—our species list slowly grew. We targeted unusual or poorly known habitats; blazing hot savannas, seemingly vertical mountain terrain, sopping wet rainforest and even waded into coastal salt marshes. In the summer of 2006, we made our first extended effort into the Maya Mountain highlands of southern Belize. These mountains are not all that high nor all that remote, yet entry is exceedingly difficult. Local Mayan guides with pack animals led us on a very rainy two-day trek into the forested mountains, and we set up camp for an extended week of work at 700m altitude. Once the rains finally subsided, we discovered amazing butterflies; species thought to be restricted to small areas in Central Mexico (like *Adelpha milleri* and *A. diazi*) and South American species that were known only as far north as Costa Rica (*Adelpha radiata*). During that trip we found at least 50 butterfly species not previously known from Belize.

After processing those samples, we decided that one more field effort was needed to round out our work. We really wanted to take another look at southern mountains, but weren't too sure we were up for another trek upwards. We were pondering our options when we heard a rumor about a planned expedition in August 2007 to the highest mountain ridge in the country, unofficially referred to as

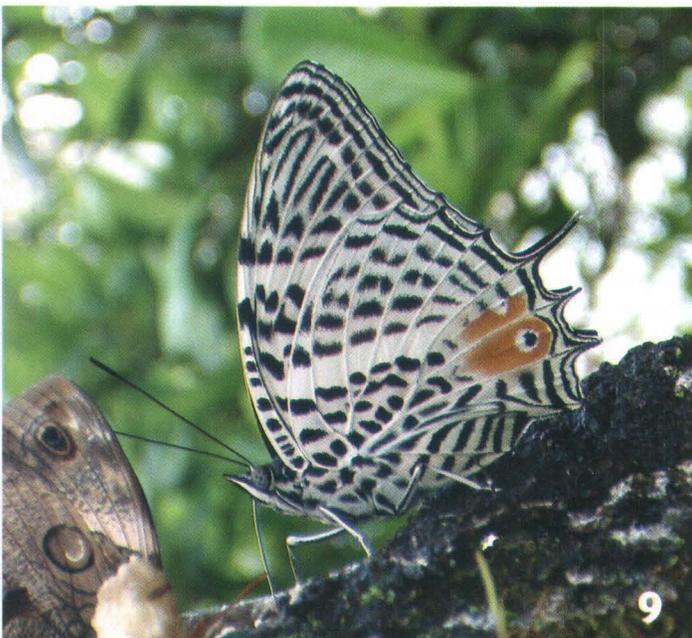
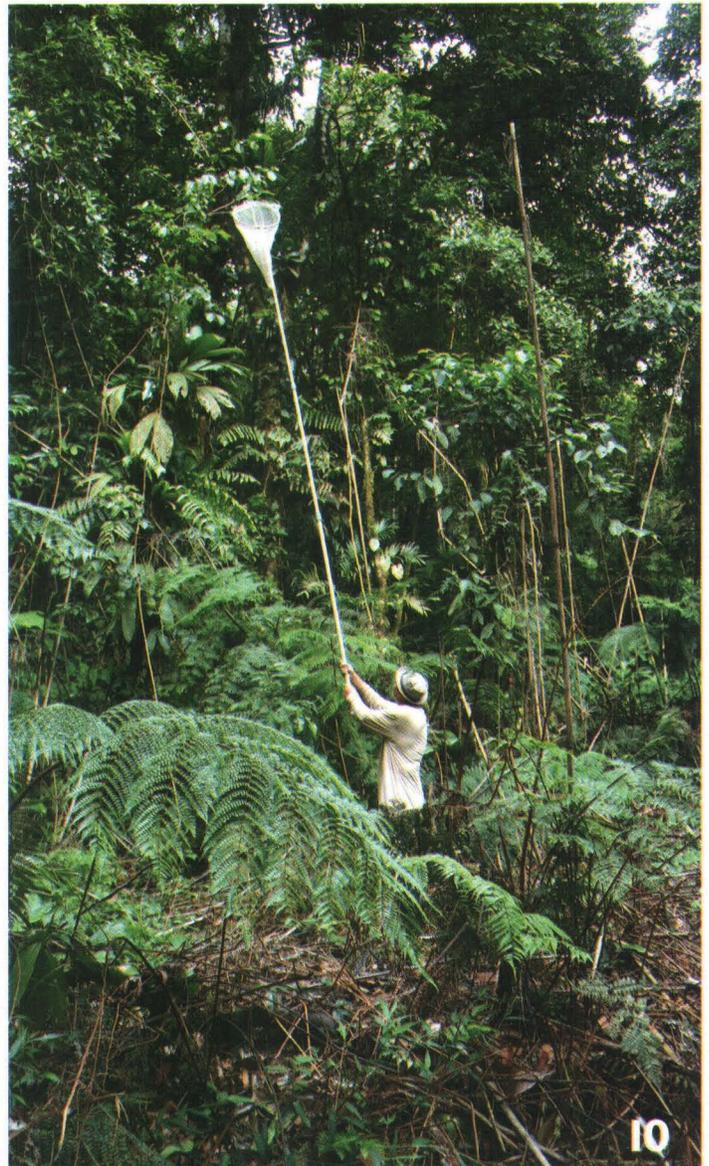
*Continued on pp. 110*

# Sampling Belize Butterflies...



## Delights of Doyle's Delight

1) The landing at Doyle's Delight; 2) Rainforest Camp – southern Maya Mountains; 3) *Ancyluris inca* in the southern Maya Mountains; 4) *Euselasia aurantiaca* in the central Maya Mountains; 5) *Catonephele numilia* and *Diaethria anna* at smeared bait; 6) *Memphis proserpina*; 7) *Prepona dexamenus* 8) John Shuey checking the blacklight – Doyle's Delight; 9) *Baeotus baeotus*; 10) Paul Labus, extension net in hand, collecting at Doyle's Delight.



**Belize Butterflies...***Continued from pp. 107*

Doyle's Delight (named for its resemblance to the prehistoric setting of Arthur Conan Doyle's novel *The Lost World*). At 1,100m altitude, Doyle's Delight is over 300m higher than any habitat we had previously sampled. We had discussed this site with our guides the previous summer, and they flatly told us that they would never hike up there again. Apparently it's not a pleasant hike and pack animals can't make it, meaning you have to carry EVERYTHING on your back, so we had given up on the idea. Luckily the rumor turned out to be true. The expedition was being organized by Sharon Matola, Director of the Belize Zoo, one of the best little zoos in the world. We contacted Sharon immediately and started begging, and evidently our references checked out – we were in.

Sharon had arranged for a small team of experts to look at plants, fungi, birds, reptiles, amphibians, beetles, butterflies and moths. We were in extremely capable company, and our team included Jan Meerman and Peter Kovarik. Jan knows more about the natural history of Belize than just about any other person and is especially knowledgeable on silk moths, sphinx moths and butterflies. Pete, a coleopterist, has helped us in the field for years. Pete uses mostly baited, passive traps, so he has plenty of time to swing a net for leps. Sharon used every connection at her disposal to arrange military transport up the mountain. Specifically, an airlift to Doyle's Delight – our kind of hiking! This was a well-planned effort, with just one unavoidable glitch—the weather.

August is hurricane season, and Hurricane Dean, a category 5 behemoth, was aimed at northern Belize. We placed our faith and fate in the hands of the military, having decided that they probably had better information than we did about where exactly this storm was headed. We all felt pretty confident and comfortable when they decided to take us up on the

18th. After all we were headed to southern Belize and Dean was headed north. But once we were on Doyle's Delight, on our own for the next ten days, things tensed up a bit. On our second night it was obvious that we were under an arm of the storm, with no clue about what to expect. We developed simple shelter plans and evacuation schemes based on our most likely route to the coast. As it turns out, our faith in the military's judgment was well placed. The top wind speed was clocked at only 30 mph (Jan, who carries everything, had a hand-held weather station with him!). Other than a few fallen limbs, fruits and flooded tents, our camp came through unscathed.

Once the weather turned, Doyle's Delight turned out to be everything we had hoped for. Actually the weather was pretty rotten for butterflies. It rained almost every night and often took a few hours to clear in the morning. Because of the altitude, it was often noon by the time things dried out and good species started to fly. Our camp was at the high point, and our group gradually developed a network of newly cut trails that followed ridge lines and valleys outward for a few kilometers. The scenery was spectacular, with overlooks through the mountain tops and hidden waterfalls in the valleys below. The trails became slippery and precarious as we used them in the rain and the vertical terrain made it almost impossible to go off trail.

The vegetation was unusual as well, from palm lined ridges (we suspect that the very flexible palms are the only tall trees that can withstand the winds that whip across the ridge tops) to dense rainforest in the sheltered valleys. Previous expeditions had noted that the high ridges were cloaked with a spectacular, but undescribed species of bamboo that grows over 20 feet tall. To our disappointment, the bamboo had apparently flowered in mass perhaps three months ago, and was now thoroughly dead. It might be decades before this species flowered again, and in order to be described and identified,

a specialist would need to see the flowers. Over a dozen people spent the next eight days looking for live bamboo and amazingly towards the end of the week, Jan stumbled onto exactly one plant, tucked away in a cool ravine, that was still alive and in bloom. The plant had just a few flowers remaining, but that should be enough.

As the days passed and we worked the trails, we began to develop a feel for the butterfly community. Many of the species were similar to those we had seen last year in the mountains just 15 miles or so south of us – *Adelpha milleri* was common here. But a handful of species were new to us, including some that were common at Doyle's Delight. The most common butterfly seen was *Adelpha leucerioides*, another supposed Mexican endemic. *Astrartes creteus* a skipper not previously known from Belize, was fairly common here as well. And perhaps most surprising, a lone *Caerois gerdrudtus* (Morphinae) was found in one of our beetle traps – not known north of Costa Rica where is it a lowland species. We think that there is a small but distinct community of butterflies restricted to the higher altitudes and are not likely to be found elsewhere in the country. Towards the end of the expedition, we had accumulated perhaps 10 species new to the country and many species that are otherwise quite rare in Belize.

As we prepared to leave, the weather threw us yet another curve. Below us a tropical depression was pounding the airbase, and very heavy rainfall was causing flash flooding throughout the country. The weather was fine up top, so we tore down camp and waited, and waited and waited, but with no break in the weather below us. By that afternoon, we had our tents back up, figured out what we still had to eat, and settled in for another night. But the next day, our weather was not looking so great. Although the storm below us had subsided, low clouds made it virtually impossible for the helicopter to approach us. We could hear it circling us on a regular basis, but they were having great difficulty locating us.

But eventually they did pull off half the group, and promised to come back for the rest of us. Hours passed, and we could hear an occasional helicopter in the distance, but the clouds wouldn't break. We began planning for yet another meal of rice and palm hearts (a true delicacy, but man did we will kill a lot of young palm trees) when the radio informed us that they WOULD get us out before nightfall. We were having our doubts but they literally forced the chopper through the clouds to our little

clearing and we made it off the big hill (although some of the biological samples, including many pressed plants lingered for a few days).

Of the 120 sites in Belize we have sampled over the years, Doyle's Delight was certainly the most intriguing. Our distribution data, when combined with all the work completed by Jan Meerman, allows us for the first time to confidently associate many species with restricted habitat types, ecological disturbance, soil types or other factors

that control their distribution. Together, we have over 25,000 discreet records for Belize butterflies. It sounds like a lot, but it's really just a start toward creating the type of information we take for granted here in North America - information that will hopefully allow Belize to chart a future that includes all of its native biota, including its butterfly species.



## The European Common Blue *Polyommatus icarus*: new alien butterfly to Canada and North America

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Ara Sarafian wasn't sure what blue butterfly he was observing in old fields and ditches around where he works at Mirabel Airport north of Montreal, Quebec. An amateur entomologist, he thought it might be a Northern Blue *Lycaeides idas* or possibly a Karner Blue *Lycaeides melissa samuelis*, but neither has ever been recorded from his area and it seemed different from both. After sending images in June, 2007, to the Canadian National Collection of Insects in Ottawa, Don Lafontaine identified it as *Polyommatus icarus*, known in England as the Common Blue, and one of the most widespread of European butterflies.

In light of its origin as a European species and the possible confusion from calling it just the Common Blue here in North America, it has been decided to call it the European Common Blue. This is in keeping with the precedent set by calling the invasive Essex Skipper *Thymelicus lineola* the European Skipper in North America.

Mr. Sarafian had been seeing the butterflies in the area for three years starting in 2005. A number of butterfly

specialists, including Ross Layberry, Chris Schmidt, Diane Lepage, Louis Handfield and Peter Hall, as well as Mr. Sarafian, conducted searches around and out from the Mirabel Airport in 2007 and, by October, the alien butterfly had been seen regularly in a triangular area with an east to west distance of 27 kilometers and a north to south distance of 17 kilometers with Mirabel Airport in the south-central part of the triangle. Some of the sites would have dozens of the butterfly in flight. (See photos pp. 117)

The most likely explanation for the European Common Blue's appearance around the airport was that it arrived in one of its stages, either two or more immatures or a gravid female, in a cargo at the airport and subsequently escaped and was able to successfully reproduce.

In its widespread European locations, it feeds regularly as a larva on a variety of legume plants, particularly Common Bird's-foot-trefoil *Lotus corniculatus*. Many of the major clover and trefoil favorite larval foodplants in Europe are found commonly as alien invasives

along many roadsides in North America. The potential sites for the butterfly are easy to find as all it takes is perusal of roadside patches of the conspicuously yellow Common Bird's-foot-trefoil which blooms into October. Larvae were also found and reared on the trefoil. It appears that there could be as many as three or four generations as butterflies were seen flying from June and then well into October.

It will be very informative to track this new species over time and watch its spread.

When the European Skipper first showed up in London, Ontario, about 1910, there were very few butterfly specialists around to track its expanding distribution. Now it is one of the most common butterflies in North America feeding on Timothy Grass *Phleum pratense* associated with hay field and other grasses. Today, there are many more butterfly enthusiasts who can lend a monitoring hand with the European Common Blue.



**Conservation Matters:**  
**Contributions from the Conservation Committee**

# The Xerces Society: 36 Years of Butterfly Conservation

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and

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In 1971 Robert Michael Pyle, a noted lepidopterist and author, conceived the idea for the Xerces Society while on the British Rail's main line between King's Cross and Huntingdon. He named the Society after the Xerces blue butterfly (*Glaucopsyche xerces*), which was driven extinct by the expansion of San Francisco in the early 1940's. The "X" of Xerces, he imagined, would make a perfect symbol for extinction.

The mission of the Xerces Society is to "protect wildlife through the conservation of invertebrates and their habitat". Since its inception, the Xerces Society has strived to use the best available scientific information to further the conservation of butterflies, moths, and many other insects and invertebrates. Over the past 36 years, the Society has protected many endangered invertebrates, worked with scientists and land managers to understand and manage habitat for these animals, and promoted the idea of conservation at the bottom of the food chain to a public otherwise focused on bald eagles and whales.

A concentration of the Xerces Society's work has been on endangered and threatened Lepidoptera. Many species of Lepidoptera are imperiled or at-risk in the United States and across the world. There are 22 butterflies and 2 moths listed as endangered or threatened under the US Endangered Species Act. Many of these species were listed under the direction of former

Xerces president Paul Opler, who was then working for the US Fish and Wildlife Service. In addition, according to the International Union for Conservation and Nature's Red Book of Swallowtails, 10% of swallowtail butterfly species are considered threatened. Swallowtails are the only group of insects that have been assessed worldwide.

Butterflies become endangered because of the same destructive forces facing many other animals. According to the IUCN, the leading causes of animal endangerment are habitat destruction, displacement by introduced species, and alteration of habitat by chemical pollutants such as pesticides. Many at-risk insects are threatened by more than one of these causes. The book *Precious Heritage; The Status of Biodiversity in the United States* notes that 33 butterflies are imperiled in the US, 97% of which are threatened by habitat loss, 36% by alien species, 24% by pollution, and 30% by over collecting.

To better understand issues relative to North America's most at-risk butterflies, the Xerces Society has produced a *Red List of Pollinator Insects of North America*. (Note: partial funding for this effort came from the Butterfly Conservation Initiative). The *Red List* is the most complete assessment of the status of the continent's at-risk pollinators, as well as the most comprehensive source of

information available on these insects.

Fifty seven butterflies and two moths are included on the list. For each, the Xerces Society has prepared a species profile that distills the current state of knowledge of life history, distribution, threats, and conservation and research needs. Each profile includes discussions of taxonomy and identification, as well as lists of contacts, publications, and relevant websites. Recovery plans for U.S. federally listed Lepidoptera and related documents are also included in each profile.

The *Red List* is available as a CD-ROM, and can also be accessed on-line at the Xerces Society's website ([http://www.xerces.org/Pollinator\\_Red\\_List](http://www.xerces.org/Pollinator_Red_List)). The Society is currently updating the *Red List*, and we invite experts to review current profiles.

The Xerces *Red List* shows that the most imperiled species are those that are highly specialized or restricted to a few small patches of habitat. Prairie obligate butterflies are a prime example; Karner blue (*Lycaeides melissa samuelis*), Laguna Mountain skipper (*Pyrgus ruralis lagunae*), and many other butterfly species require host plants that thrive in intact prairie and meadow systems.

Some species are very specialized. For instance, the plates that cover the shells of tortoises are made of keratin, a protein few scavengers can digest.

*Continued on pp. 114*



1) Taylor's checkerspot butterfly (*Euphydryas editha taylori*) was previously documented at more than seventy sites in British Columbia, Washington, and Oregon. It now occurs at only fourteen sites, most of which contain fewer than fifty individuals. Photo by Dana Ross. 2) (*Ceratophaga vicinella*), whose caterpillar specializes on a diet of dead gopher tortoise shells may be threatened by the loss of gopher tortoise habitat. Photo by Tom Eisner. 3) In the state of Washington, over 95% of the native grassland that Mardon skippers (*Polites mardon*) depend upon has been lost. Photo by Norm Barrett.

## Xerces Society: 36 Years of Butterfly Conservation

*Continued from pp. 112*

However, in Florida there is a rare moth, *Ceratophaga vicinella*, whose caterpillar specializes on a diet of dead gopher tortoise shells. Loss of the gopher tortoise's habitat may threaten this moth species.

Habitat loss is the primary cause of Lepidoptera endangerment. Perhaps the best known case of habitat loss leading to extinction is that of San Francisco, California, a city that now almost entirely covers what was once one of the major coastal dune ecosystems in western North America. Three dune butterflies, which were endemic to this region, are now extinct: *Cercyonis sthenele sthenele*; the Xerces blue (*Glaucopsyche xerces*); and *Plebeius icarioides pheres*. This dramatic decline in butterflies was documented in the article "San Francisco's Vanishing Butterflies" in the 1956 issue of *Lepidopterist's News*. Three other butterflies, Callippe Silverspot (*Speyeria callippe callippe*), San Bruno Elfin (*Callophrys mossi bayensis*), and Mission Blue (*Icaricia icarioides missionensis*), are now limited to the San Bruno Mountains just south of San Francisco, the last remnant of the San Francisco hills ecosystem.

Conversion of natural habitats for agriculture, particularly for planted food and fiber crops (e.g. cotton), is one of the most extensive land uses and, according to Robert Pyle, has resulted in the greatest loss of native insect populations.

The introduction of various exotic organisms, whether intentional or not, has affected native Lepidoptera both directly and indirectly. For example, introduced plants out-compete native plants that serve as hosts for lepidoptera.

Intentional introductions of non-native insects harm many native insect species. Over the past 50 years, non-native insects have been released to control a variety of non-native pest

insects. Although the damage to non-target native insects from these biological controls is rarely documented, some evidence is surfacing that their impact may be significant. For example, the parasitoid fly *Compsilura concinnata*, which was released repeatedly in North America from 1906 to 1986 as a biological control agent against several pests, including the introduced gypsy moth, has been implicated in the declines of four species of giant silk moths (Lepidoptera: Saturniidae) in New England. Another study in Hawaii found that 83% of parasitoids reared from native moths were formerly introduced biological control agents.

Pesticides and other pollutants are implicated in the decline of some Lepidoptera. Lights along streets and highways are implicated in losses of nocturnal insects, particularly large moths. Finally, scientists are beginning to understand the negative impact of climate destabilization (climate change). Climate destabilization will not lead to uniform change across the landscape. Some places will be hotter and dryer while some may be wetter, and in other places the weather may simply be more variable. It may effect plant communities and cause seasonal shifts that put species out of sync with their food sources. Data shows that some butterflies are shifting their range in response to the changing climate. It is also leading to the endangerment of Lepidoptera with specific, narrow habitat requirements. A changing climate is especially detrimental to species that cannot disperse, species like the Uncompahgre fritillary (*Boloria improba acrocneuma*), which is restricted to high mountain slopes in southern Colorado.

While the risks to Lepidoptera are severe, there are steps that one can take to protect these at-risk species. Ultimately, to protect any species one must protect its habitat. The Xerces Society works with land managers, municipalities, federal agencies, and local land owners to protect habitat for the most at-risk species. In Oregon,

Xerces is working to manage and protect two of the largest remaining populations of the Taylor's checkerspot butterfly (*Euphydryas editha taylori*). Taylor's checkerspot was previously documented at more than seventy sites in British Columbia, Washington, and Oregon. In the past 50 years, it has experienced a dramatic decline; it now occurs at only fourteen sites, most of which contain fewer than fifty individuals.

To protect this butterfly, Xerces staff are working with the Benton County Natural Areas and Parks Department, a private landowner, and the Bonneville Power Authority to control invasive weeds while still retaining the native prairie that support this butterfly. The Society is working with a coalition of state, federal, and private scientists and managers to help determine the best methods for managing sites across the range.

Another important factor in the recovery of these at-risk Lepidoptera is research. In order to manage habitat for these species, one must understand their biology, habitat requirements, and ecology. The Society is working with graduate student Loni Beyer and Washington State University professor Cheryl Shultz to understand the life history of the Mardon skipper (*Polites mardon*), a small, tawny-orange butterfly dependent upon native grasslands and mountain meadows. In the state of Washington, over 95% of the native grassland that Mardon skippers depend upon has been lost to agricultural and residential sprawl, and to the encroachment of conifers resulting from fire suppression. The grassland habitat that remains is often degraded by livestock grazing, recreational use, and introduction of exotic species.

In 2006, after several years of surveying for new sites, the Xerces Society embarked on a project to better understand this butterfly and its habitat needs. With funding from the Bureau of Land Management and the Forest Service, Xerces staff studied

skipper populations at sites in Oregon and Washington to identify the host plants utilized by the Mardon skippers. Xerces staff also conducted population censuses and recorded adult nectar usage. Results indicate that Mardon skippers use a wider variety of host plants than previously thought. We then returned to one site to find and study Mardon skipper caterpillars, something that had never been done before. Xerces staff were the first to actually observe these caterpillars in the wild. We are now working with federal agencies to develop a plan to assess the impact of cattle grazing on the Mardon skipper.

The Xerces Society works to empower young people to help us understand important issues related to Lepidoptera conservation. In 1999 the Society initiated the Joan Mosenthal DeWind Award to ensure that the next generation of Lepidoptera conservationists can continue to promote sound science-based conservation. A lifelong lover of butterflies, Joan Mosenthal DeWind was a pioneering member of the Xerces Society. In Joan's memory, her husband Bill DeWind established a student research endowment fund. Each year, the Xerces Society awards small grants to two or three students to support research that will advance the conservation of butterflies or moths. University students throughout the world apply for this award.

To conserve Lepidoptera, the general public, scientists, land managers, and conservationists need to understand the extraordinary value that these organisms provide. The Society works with people to take action to protect, understand, and enjoy these fascinating creatures. In 1990 we worked with the Smithsonian to produce the popular book *Butterfly Gardening*, and have since produced many easy-to-use publications on butterfly conservation. In the early days the Society produced the journal *Atala*, which was designed to include information on insect conservation. In 1987 *Wings* was launched as a full-color magazine. It has become a very popular tool for educating

Xerces' thousands of members, as well as others in the public.

One example of our outreach work is the California Monarch Conservation Campaign, which is managed by longtime Xerces volunteer Mia Monroe. This program provides training to citizen scientist monitors to complete Thanksgiving weekend counts of Monarchs at overwintering sites. This information is being used to track long term trends in population numbers at these sites.

Partnerships are vital to our conservation efforts. The Society works with scientists and land managers across the US on insect conservation issues. One very successful partnership has been with the Oregon Zoo in their efforts to captive rear at-risk butterflies. We are working with the Natural Resource Conservation Service and farmers across the US to promote pollinator conservation, and we believe that butterflies can be an important part of this outreach. The Xerces Society is engaging with other societies to reach out to new audiences. Later this year we will bring an insect conservation symposium to the annual meeting of the Entomological Society of America in San Diego, with the goal of engaging more entomologists in insect conservation.

The Xerces Society's latest campaign to capture the public's imagination will take place throughout 2008. Robert Michael Pyle will be undertaking a historic journey in hopes of finding and positively identifying as many species of butterflies as possible in the United

States and Canada. The culmination of this project will be a book entitled *Swallowtail Seasons: The First Butterfly Big Year*, published by the Houghton Mifflin Company.

While Bob Pyle will be seeking as many species of the nearly 800 recorded in North America north of Mexico, the numbers themselves will be secondary to his in-depth encounters with the butterfly fauna. His efforts will play a role in furthering butterfly conservation work, with the Xerces Society collecting pledge donations based on each species that he positively identifies. All proceeds from this Butterfly-A-Thon will directly benefit Xerces Society projects in rare butterfly conservation. To update Butterfly-A-Thon participants on Bob's progress, he will be sending regular updates from the road, which will be posted as a blog on the Xerces Society website.

The Xerces Society has worked for 36 years for the conservation of butterflies, moths, and other invertebrates. In the coming years, the Xerces Society will continue our efforts to educate the public, policy makers, scientists, and land managers about important issues related to Lepidoptera conservation. We hope to work with the Lepidopterists' Society Conservation Committee and others in the Lepidoptera community to further the goal of conserving Lepidoptera species across the continent.

For more information on Xerces Society programs, publications, and our Butterfly-A-Thon, please visit [www.xerces.org](http://www.xerces.org).

## Get in the Swing of Things with a Society T-Shirt!

High Quality, 100% cotton, generous length, pre-shrunk, proudly displaying a 7-inch (18cm) diameter Lepidopterists' Society logo on the front. Available in four adult sizes (small, medium, large and extra large) in either Papilio glaucus yellow (with black logo) or Melanchroia chephise (navy) blue (with white logo) for only \$10 each, plus postage (\$4 for first shirt, \$2 for each additional shirt within the U.S. or to Canada).

Please indicate quantity, color and size desired and send, along with your check drawn on a U.S. Bank, in U.S. funds, to:

Kelly Richers, Treasurer, The Lepidopterists' Society 9417 Carvalho Court, Bakersfield, CA 93311-1846 U.S.A.

# *Phyciodes pallescens* (R. Felder, 1869), New from Arizona and the USA, with a 50 year follow-up!

Ray E. Stanford

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In mid-September, 1958, Keith C. Hughes and I went on a butterfly expedition to southeastern Arizona, where we had done some collecting the previous year. On 12 September 1958 we collected for several hours about 1 mile west of the town of St. David and the San Pedro River, elevation about 3770', in riparian and roadside habitats, finding such anticipated goodies as *Limenitis archippis obsoleta*, *Junonia nigrosuffusa*, and several specimens of *Phyciodes*. One of these appeared to be a female *P. pulchella* (= *campestris*, *pratensis* of authors), but was small and in a very peculiar habitat for that species. I reported it to the Season Summary, and Richard Bailowitz wrote to me that this was likely a misdetermination, but by then my collection had been moved twice, and the missing papered, fully labeled specimen did not turn up until Kit and I were packing up to move from our home of 40 years in Denver, Colorado, to a retirement community in Medford Oregon, in March 2007! I spread and labeled it, and showed it around at the 2007 Lepidopterists' Society meeting in Bakersfield, California in July. Andy Warren and several others confirmed its identity as *pallescens*, which Andy and I had collected together at the Mazatlan, Sinaloa, Mexico, airport and other localities several years previously.

After having Fred Heath and Kelly Richers take color digital photos of both dorsal and ventral surfaces of this butterfly, I gave it to Jim Brock to be returned to Arizona from whence it had come so long before. I thank these folk for the determinations and photographs, which are shown here (see pp. 117).

In the ensuing 49 years, no individuals of this Mexican species were reported from Arizona or Texas, but there are a few records of "*campestris*" or "*pratensis*" reported from lower elevations of Hidalgo County, New Mexico, in Toliver et al (1996). These should be re-examined in light of our 1958 capture in Arizona, because one or more could prove also to be *P. pallescens*. The species looks very much like *P. pulchella camillus* from the Rocky Mountains, especially the ventral surfaces of females (see Scott, 1994, pp. 83-84), but is smaller, with narrower black margins. The species is not closely related to *P. pulchella*, but is rather in Scott's "Phaon Group" which includes *pallescens*, *phaon* (W.H. Edwards, 1864) and *picta* (W.H. Edwards, 1865). This group he distinguished as being distinct from other groups of *Phyciodes* in 4 genitalic characters, by much paler colors of larval bodies, taller larval head, and by

very weak pupal cones and crests (Scott, 1994, p. 83). The antennal clubs are always orange, and the larval food plants are in different families for the most part.

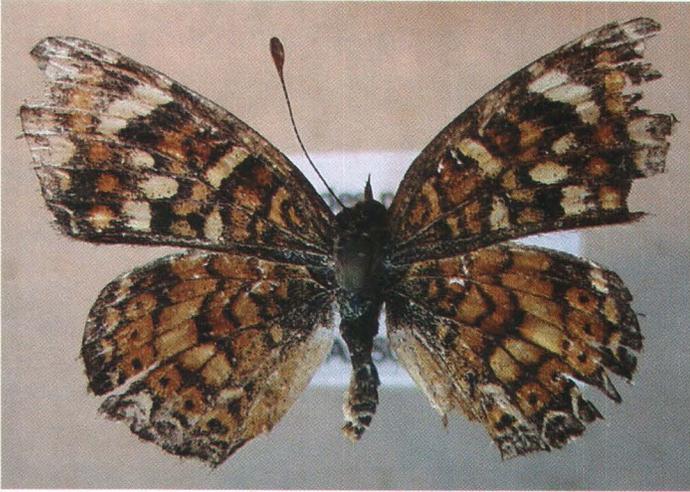
Carlos C. Hoffmann (1940) listed *Phyciodes pallescens* Feld. Verh. Zool.-Bot. Ges. Wien, p. 469 (1869) as known from mainly the Sierra Madre Occidental of Mexico, with records from Sinaloa, Nayarit, Jalisco, Colima, Michoacan, Guerrero, Cuenca del Rio Balsas, Oaxaca, Puebla, Tierra templada del Centro de Veracruz (#276). Scott (1994) added Queretaro, Tamaulipas, San Luis Potosi, and Morelos. Here I can add Cochise County, Arizona; perhaps Hidalgo County, New Mexico, pending re-examination of specimens in NM, and the vicinity of Guaymas, Sonora, Mexico.

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## Exciting Sightings...



**Dorsal and Ventral:** *Phyciodes pallescens*, collected by Ray Stanford, 1 mile west of St. David, Arizona, in riparian habitat, along San Pedro River, 3770' elevation, 12, September 1958.



A male *Polyommatus icarus*, the European Common Blue, near Montreal, Quebec. See article pp. 111. Photo: Peter Hall.



Female *Polyommatus icarus*, basking near Montreal, Quebec. Photo: Peter Hall.



Ventral view, female *Polyommatus icarus*. Photo: Peter Hall



*Erynnis horatius* on Bahia Honda Key. See article pp. 119. Photo: H.L. Salvato

# The Manuscripts of Thaddeus William Harris (1795-1856)

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Thaddeus William Harris (1795-1856) (Fig. 1) worked as a physician and librarian, but he is remembered most for his entomological contributions that include over 100 publications on insects, including Lepidoptera. First appearing in 1841, his seminal book, "A Report on the Insects of Massachusetts, Injurious to Vegetation," was so popular that Harris reprinted it himself in 1842 and revised it in 1852 (Harris 1841, 1842, 1852). After Harris' death, the book was enlarged and republished in 1862 by Charles L. Flint (Harris 1862). The book is still considered to be such a classic of early American entomology that it was reprinted in a paperback edition in 2006 by the University of Michigan Library. More about Harris can be found in biographies by Higginson (1869) and Harris (1882). A forthcoming book (Elliott *in press*) promises a more comprehensive review of Harris' fascinating life.

The surviving manuscripts of T. W. Harris offer valuable insights that are unavailable in published biographies. Harris' library and papers were purchased in 1860 by the philanthropist John P. Cushing (1786-1862) for the Boston Society of Natural History (BSNH). The former BSNH museum evolved into the modern-day Boston Museum of Science. Most of Harris' manuscripts remained with the Museum of Science until 1992, when they were transferred to the Ernst Mayr Library of the Museum of Comparative Zoology, Harvard University. This collection contains thousands of documents, which were assembled and bound into 23 volumes by the BSNH (Scudder 1869a). The remainder of Harris' library was acquired in 1946 by the Allan Hancock Foundation and is

now deposited in the Hancock Library of Biology and Oceanography at the University of Southern California (Johnson 2004). Harris' insect collection, along with several related documents, was transferred in 1841 to the Museum of Comparative Zoology (Darlington 1941). Additional Harris papers are deposited in the Houghton Library (Harvard University), Archives of the Gray Herbarium (Harvard University), and the



Thaddeus W. Harris (1795-1856)

Cambridge Historical Society (Massachusetts). Letters from Harris to other naturalists can also be found in various institutional libraries, such as the American Philosophical Society, Philadelphia. None of these smaller collections of manuscripts, however, rival the significance of the 23 volumes in the Mayr Library. These volumes contain draft manuscripts, indices to entomological publications, lists of specimens that Harris received from other naturalists, miscellaneous notes, draft catalogs of his own insect

collection, and numerous letters from domestic and foreign correspondents. The many letters and other documents that were transcribed by Scudder (1869b) are part of this collection.

I recently had the opportunity to examine some of the volumes in the Mayr Library. It was immediately obvious that much remains to be learned from these documents. For example, I found that Harris made numerous changes to the original manuscript for his 1841 book on injurious insects. This book was based on a report on the insects of Massachusetts, which Harris completed in 1838 for the Governor of the state. Prior to publication, several sections on butterflies were crossed out by Harris who desired to include only those species that were remarkable "for their size, for the peculiarity of their structure and habits, or for the extent of their ravages" (Harris 1841). These deleted passages were later resurrected by C. L. Flint for the 1862 edition of the book. Because Flint used a more ambiguous title, there has been some confusion over the type localities of new butterfly taxa that were included in this edition. The original manuscript for the book, as well as Harris' other records, confirm that these type localities should be restricted to Massachusetts, rather than merely "New England" as suggested by the title that Harris used for the book in 1842 and 1852.

Also among these manuscripts are recurring Latin names that Harris never published. He coined these names primarily to deter descriptions of American insects by European authors. Writing to John E. Le Conte in 1830, Harris declared, "I formed and have adhered to the resolution not to send out of the country an American insect

without a specific name" (American Philosophical Society Library). If Harris could not identify an insect, he created a manuscript name that he subsequently associated with that species. With the intention of publishing them, he employed these names for his own collection and frequently mentioned them in correspondence. Calling them "arbitrary names," Harris noted that they were "known to my friends at home & abroad." He ceased using an "arbitrary name" if he discovered that the given species had already been described. Harris created at least five manuscript names for butterflies. Based on an examination of Harris' manuscripts, Scudder (1876, 1888-1889) introduced a couple of these names into synonymy.

Many more historical treasures await discovery among the manuscripts of Thaddeus W. Harris.

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# An Observation of *Erynnis horatius* on Bahia Honda Key

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Horace's duskywing, *Erynnis horatius* Scudder & Burgess is well distributed throughout the eastern United States (Opler and Krizek 1984). In Florida, *E. horatius* is widespread and abundant, however the species becomes increasing less common towards the southern part of the state. Lenczewski (1980) and Smith et al. (1994) indicated that peninsular southern Florida represents the edge of *E. horatius* distribution in the southeastern United States. In recent years, we have encountered *E. horatius* locally within the Big Cypress and Everglades National Parks, as well along the canals of Miami-Dade County.

On 3 November 2007 we observed and photographed a male *E. horatius* (Fig. 1) within the state park on Bahia Honda Key. To our knowledge this is the first report of *E. horatius* from the Florida Keys. *Erynnis horatius* uses a

variety of oaks as a larval hostplant throughout its range (Minno et al. 2005). While oaks are not known to occur naturally in the lower keys, it is possible some may have been planted as ornamentals on islands surrounding Bahia Honda Key. However, we suspect the *E. horatius* observed on Bahia Honda Key was a stray from the mainland. Hurricane Noel moved northward from the Caribbean into the Atlantic Ocean throughout the week prior to our *E. horatius* observation in the keys. A number of strong wind events from Noel may have aided this *E. horatius* in reaching Bahia Honda Key. Throughout our observation the male *E. horatius* maintained a perch atop a *Caesalpinia bonduc* Roxburgh, the individual was quite territorial frequently taking to the wing to chase nearby butterflies, such as *Leptotes cassius theonus* (Lucas), *Cyclargus*

*thomasi bethunebakeri* Comstock and *Huntington and Agraulis vanillae nigrior* Michener.

## Acknowledgements

The authors thank Lyn Atherton, Marc Minno and John Calhoun for verifying our identification of *Erynnis horatius* and for sharing their insights.

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# The Probable Case for *Apodemia phyciodoides* in New Mexico - A Chihuahuan Comedy (Riodinidae)

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In 1978, I had the ultimate reward of rediscovering our rarest butterfly, *Apodemia phyciodoides* Barnes & Benjamin, previously known only from the type pair taken in 1916 in SE Arizona (Holland and Forbes 1981). (There is no North American butterfly known from just one sex—thus, any butterfly known from just two specimens would at least tie for being the rarest.) Although this butterfly is now widely known from Sonora and Chihuahua in Mexico (Smith 1985), it has never again been seen north of the border. However, I believe it highly likely that the species must at least stray into southern New Mexico in the Playas Valley of Hidalgo Co. The present communication explains this belief, and presents an assembly of amusing but largely unrelated adventures, all of which occurred during the weekend of 25 March 1998.

On this weekend, I collected in extreme NW Chihuahua with a guest who shall remain anonymous, because I do not have his permission to do otherwise. It had been his desire to obtain specimens of *Pieris sisymbrii transversa* R Holland and *Euchloë guaymasensis* Opler, about both of which I had recently written (Holland 1995). Refer to these two Holland articles (1981 and 1995) for maps of the relevant areas and illustrations of *Apodemia phyciodoides*. This subspecies of *P. sisymbrii* (Boisduval) is also illustrated by Opler in his Western Field Guide (Opler 1999)

Let me begin by describing the Playas Valley. This valley extends about 100 miles from Hachita, New Mexico, to Bacerac, Sonora. In New Mexico, it is bounded on the northwest by the Animas Mountains and on the

northeast by the Big Hatchet and Little Hatchet Mountains. In Chihuahua, it is bounded on the southwest by the San Luis Mountains (Sierra San Luis), which extend perhaps five miles into New Mexico. (This five mile extension is where I am almost certain *Apodemia phyciodoides* must occur in New Mexico.) To the southeast the Playas Valley is bounded by the Sierra El Medio. At the south end, the Playas Valley is cut off by a ridge which essentially marks the state line between Chihuahua and Sonora. South of this ridge, the land drops abruptly into the Rio Bavispe Valley and the flora changes rather suddenly to a more mesic habitat. When one stops at the crest of this ridge, it is possible to view the entire Playas Valley spreading straight and almost due north all the way to Hachita.

Mexico Hwy 2 crosses the San Luis Mountains at Puerto San Luis less than two miles south of the International border. The Playas Valley border crossing is called Antelope Wells on the American side and Bernardo on the Mexican side. At the crest of Puerto San Luis, there is a mountain top microwave relay where I have always found marvelous collecting. Of perhaps 40 species I have taken on the Chihuahua slope leading up to this pass only two have not been taken on the Gray Ranch just north of the border in Hidalgo County (Cary, 1994), specifically these are *Stinga morrisoni* Edwards and *Apodemia phyciodoides*.

On the weekend in question, we crossed the Playas Valley border and proceeded to the San Luis Microwave Relay. We quickly took about a dozen *transversa* and headed back down the Chihuahua

side. About half way down, a Mexican 18 wheeler ahead of us ran off the road and vanished from sight over the cliff. My companion, being an MD, but not licensed in Mexico pleaded with me not to stop. Contrary to prevalent stereotyping, driving away from someone in distress is not socially acceptable in Mexico, so I stopped anyway to see what I could do. I was enormously relieved to see the 18 wheeler wrapped around a huge Arizona ponderosa (*Pinus arizonica* Engelman) and the driver crawling out limping badly but obviously not seriously injured. The truck had rolled about 30 feet of the 700 feet to the bottom of the canyon.

This incident delayed us just long enough that we got back to Antelope Wells precisely as the Americans were locking the gate stranding us in Mexico for the night. The safest place we could think of to camp was back at the microwave relay where we were entertained all night by coyote howling. At one point, I started imitating the coyotes and succeeded in scaring the wits out of my companion who in the dark actually thought I was a real coyote coming into our camp.

The next morning, we decided to head down the Playas Valley into Mexico instead of going home. The road south into the Mexican portion of the Playas Valley is not well marked, although I knew it went through since I had previously driven it in the opposite direction. However, not being familiar with the road as one drives from north to south, I suddenly found myself in the middle of an air strip obviously owned and maintained by drug runners who quickly converged on our vehicle. They

demanded to know what we were doing; fortunately, I had a butterfly net in my hand and knew the names of about seven villages immediately down the road that I was headed. Our hosts decided my story was plausible, elected not to shoot us on the spot, and escorted us about a mile back to a fork in the road where the road less traveled continued to the south. They politely but convincingly suggested to us that, in the future, we not look for butterflies in the vicinity of their air strip.

The 26th and the 27th, were spent in relative tranquility collecting around the Bavispe, Sonora and Ejido Pancho Villa, Chihuahua. Probably the most spectacular observation these two days was *Anthocharis thoosa* nr *inghami* Gunder. This observation of *thoosa* is the only one of which I know taken any distance into Mexico. On the afternoon of the 27th, we stopped to collect in a canyon at the bottom of the grade up the Chihuahua side of Puerto San Luis. Here less than two miles from the International border, my companion took one male *Apodemia phyciodoides* and saw at least one more. These records are the basis of my assertion that this species almost certainly occurs in New Mexico as well, at least in the San Luis Mountains. It was far too early in the season for these fresh specimens not to have overwintered in the immediate vicinity of the capture site, thus establishing *phyciodoides* as a breeding resident less than two miles outside of New Mexico.

I desired to camp again that night at the Microwave Relay, but my companion insisted that we head for Guaymas, even if it involved driving all night. I suggested that this was not for the best, but to no avail. About 100 miles into Mexico, my apprehensions were realized. We rounded a sharp curve and were stopped by Mexican *federales* masquerading as *banditos* (or vice versa). We were driving an extremely dilapidated vehicle with an enormous dent in the drivers side door. We were both filthy, disheveled from several nights of camping, and did not look like promising Gringo candidates for doing

in. I told them that we were looking up in the hills for *mariposas*, which in Mexican Spanish can mean either hooker or butterfly, produced a huge net quite large enough to catch a hooker, and I asked them if they wanted to go with us in the morning to look around and catch some *mariposas*. Fortunately they caught the pun, roared with laughter, and gave us leave to proceed to the next village where we spent the night.

Since it still was the month of March, we were not surprised when a major cold front moved in the following morning, pretty much terminating our activities. There follows a list of species observed at the four sites we collected extensively. The list would be much longer even two weeks later into the season (Toliver, Holland and Cary 2001).

#### Summary of Species Seen

**Mun. Janos, Chih.** canyon on Chih. side of Puerto San Luis, just E of Son. state line, Mex. Hwy 2, 5500', 24&27-iii-98:

*Megathymus yuccae arizonae* Tinkham (2)  
*Anthocharis thoosa* (Scudder) (5 and 3)  
*Nathalis iole* Boisduval  
*Euchloë lotta* Beutenmüller 1 taken  
*Eurema nicippe* (Cramer)  
*Pieris sisymbrii transversa* R Holland (5 taken)  
*Zerene cesonia* (Stoll)  
*Celastrina ladon* (Cramer)  
*Everes comyntas* (Godart)  
*Apodemia phyciodoides* Barnes & Benjamin, 1 taken + 1 more seen (major range fill-in)  
*Emesis zela* Butler (1)  
*Euphydryas chalcedona hermosa* (W G Wright) (common)  
*Nymphalis antiopa* (Linnaeus) (1 seen)  
*Euptoieta claudia* (Cramer)

**Mun. Janos, Chih.** San Luis microwave relay, Mex Hwy 2 at Chih.-Son. state line, 6500', 24&25-iii-98:

*Erynnis brizo burgessi* (Skinner) (common)  
*Erynnis tristis tatus* (W H Edwards) (multiple sightings)

*Euchloë lotta* Beutenmüller (3 seen)  
*Nathalis iole* Boisduval  
*Pieris sisymbrii transversa* R Holland (7 taken; not all pure *transversa*)  
*Euphydryas chalcedona hermosa* (W G Wright) (common)

**Mun. Bavispe, Son.** S of Ejido Poncho Villa (c. 12 mi.) on road to Bavispe, c. 5500', 1.1 mile N of road's crest 26-iii-98:

*Zestusa dorus* (W H Edwards) (abundant)  
*Callophrys gryneus siva* (W H Edwards) (1)  
*Celastrina ladon* (Cramer) (2)

**Mun. Bavispe, Son.** S of Ejido Poncho Villa (c. 17 mi.) on road to Bavispe, c. 4500', 3.6 mile S of road's crest 26-iii-98:

*Pyrgus oileus* (Linnaeus) (2)  
*Pyrgus communis/albescens* (Plötz) (3)  
*Pyrgus philetas* W H Edwards (2)  
*Celotes nessus* (W H Edwards) (common)  
*Copaeodes aurantiacus* (Hewitson) (2)  
*Anthocharis thoosa* ssp (Scudder) (1, major range extension S)  
*Battus philenor* (Linnaeus) (several—also about 10 mi. to the north in Mun. Janos, Chih.)  
*Papilio multicaudatus* W F Kirby (1 seen)  
*Pontia protodice* (Boisduval & Leconte) (common)  
*Everes comyntas* (Godart) (2)  
*Emesis zela* Butler (1)  
*Dymasia dymas* (W H Edwards) (common)  
*Chlosyne lacinia* (Geyer) (several taken)  
*Phyciodes texana texana* (W H Edwards) (common)  
*Anaea andria* Scudder (1)  
*Anaea troglodyta aidea* (Guérin-Méneville) (1)

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*Continued on pp. 127*

# Tree of Life for butterflies makes butterfly relationships accessible at the click of a mouse

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There are many excellent web resources available for butterflies now, covering aspects of nomenclature, distribution, identification, and ecology. Until recently, though, most information about the phylogenetic relationships of butterflies has been embedded in the primary literature or scattered here and there around the web on individual researchers' web pages. This gap has now been filled. A group of lepidopterists, including Felix Sperling, Niklas Wahlberg, Andy Warren and me, has endeavored over the past year or so to summarize published knowledge of butterfly and skipper relationships on a single web site: the Tree of Life Web Project ([www.tolweb.org](http://www.tolweb.org)).

As described on its home page, The NSF-sponsored Tree of Life Web Project "is a collaborative effort of biologists from around the world. On more than 9000 World Wide Web pages, the project provides information about the diversity of organisms on Earth, their evolutionary history (phylogeny), and characteristics." ToLWeb is hosted at the University of Arizona and was initiated by Wayne and David Maddison, and is edited by Katja Schultz.

The pages are organized into a taxonomic hierarchy, and can be navigated by clicking on various blue group names or parts of displayed trees. To navigate to Papilionoidea or Hesperidae from the home page (by clicking on the tiger swallowtail, which is the icon for Arthropoda) takes ten clicks through some names that may not be familiar to many lepidopterists (Hexapoda, Insecta, Pterygota, Neoptera, Endopterygota, Lepidoptera, Neolepidoptera, Ditrysia), but one can

jump to a particular group by adding its name after the backslash in the web address (e. g. ). Names can also be searched from any page. For example, the name "hewitsoni" comes up with 332 hits.

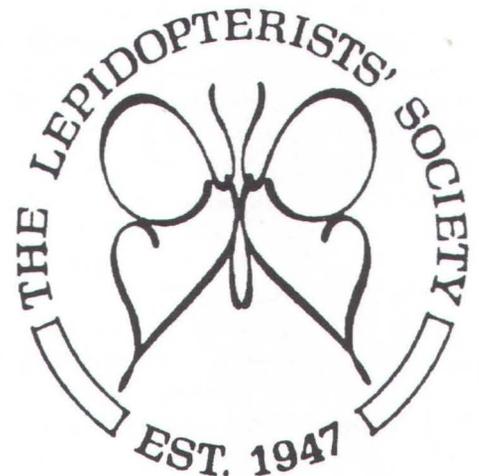
This is a work in progress. Hesperidae, Pieridae, Riodinidae, and Nymphalidae are "complete," while Papilionidae and Lycaenidae are still under construction. By "complete," I mean that we have scoured recent catalogs and faunas to obtain a comprehensive list of species names, and arranged these in accordance with whatever phylogenetic information is available for a given group. In Nymphalidae, there is a good deal of phylogenetic resolution for many groups; less for others. The data are gleaned from both morphological and molecular phylogenetic hypotheses, and even from narrative discussions of relationships. We try to explain the sources of evidence for each hypothesis, and cite the primary literature so viewers can consult them.

This is not the "official" final word on relationships of life - it is only a hypothesis based upon empirical data as they exist and have come to our attention, and a "null hypothesis" for groups still in need of study, based on the hierarchy implied by their classification. The nice thing about web pages is that they can be updated as new evidence becomes available. For example, by the time this is published, I will have added the skipper species *Nesoxeniades pluviasilva* (Burns 2007), which was lately described in Vol. 61(3) of *J. Lep. Soc.* There likely remain many missing names for species described recently,

and some will undoubtedly disagree with our splitting or lumping of a particular group. Probably there is also the occasional error. We would like to hear about any omissions or errors anyone should notice. Please contact the person responsible for the production of the relevant page (more often than not, me).

As the site continues to develop, we will add more content to individual pages, and at some point probably make an effort to tackle intraspecific variation, which thus far has not been addressed. Much of this may be done via the Encyclopedia of Life (<http://eol.org>), a collaborating web-based biodiversity initiative begun in May 2007.

Incidentally, the rest of Lepidoptera are represented in ToLWeb as well, but not very many of the families are fleshed out in the level of detail that the butterflies are at the moment. Those who feel they might have something to offer to the project are welcome to contact the project's administrators (not me) about becoming a scientific contributor for a particular group.



# 2008 Meeting of the Lepidopterists' Society

## Mississippi State University and Mississippi Entomological Museum

### Starkville, MS

### June 24-27, 2008

The Mississippi Entomological Museum (MEM) and Mississippi State University invite you to the 59th Annual Meeting of the Lepidopterists' Society. A block of rooms has been reserved at the Comfort Inn near the Bost Extension Center, the venue for contributed papers, and campus dorm rooms will also be available. A workshop for teachers will begin on June 23, and details of this will be announced later. The Executive Council and Committees will meet on June 24 at the Clay Lyle Entomology Building, where registration will also be open. During this time a day trip to Noxubee National Wildlife Refuge will be held. The MEM in Clay Lyle will be open for visitors on June 24 and throughout the meeting. A reception will be held at 5:00-6:30 PM at the Henry Hunter Alumni Center, a short distance from the Comfort Inn and the Entomology Department, and this will be followed by a night field trip to Osborn Prairie. Registration will continue and the program of contributed papers will begin on June 25 at the Bost Extension Center on the MSU campus. The last session of contributed papers will be given on the morning of June 27 followed by the annual business meeting. A picnic at Noxubee National

Wildlife Refuge (with shuttle service provided) on evening of June 25 will feature BBQ, Blues, and Blacklighting. The banquet will be held at the Henry Hunter Center on June 26. An Associates Program on June 25-26 will include tours of museums, antebellum homes, and other points of interest.

Registration information will be posted and updated on the following websites: Lepidopterists' Society ([www.lepsoc.org](http://www.lepsoc.org)) and MEM (<http://www.msstate.edu/org/mississippiemuseum/>). Reservations for airline travel should be made as early as possible because of the low number of flights connecting with Golden Triangle Regional Airport (GTR). Shuttle service will be provided from GTR and the Tupelo airports to Mississippi State University if flight arrival times are provided. Questions about the program should be addressed to the Program Chair, SangMi Lee ([sl161@entomology.msstate.edu](mailto:sl161@entomology.msstate.edu)). Questions about accommodations should be addressed to Local Arrangements Chair, Barbara Perrigin ([bperrigin@entomology.msstate.edu](mailto:bperrigin@entomology.msstate.edu)) or Richard Brown ([moth@ra.msstate.edu](mailto:moth@ra.msstate.edu)).

## Local Arrangements

**Travel:**

# Registration

**For the 2008 (59th) Meeting of the Lepidopterists' Society  
Mississippi State University and Mississippi Entomological Museum  
Starksville, MS  
June 24 - 27, 2008**

1) Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Initial \_\_\_\_\_  
 2) Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Initial \_\_\_\_\_  
 3) Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Initial \_\_\_\_\_  
 Address \_\_\_\_\_  
 State/Province \_\_\_\_\_ Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
 E-mail \_\_\_\_\_ Phone ( ) \_\_\_\_\_  
 Institution or Affiliation on Name Tag \_\_\_\_\_  
 Staying at hotel? Yes no Name of hotel \_\_\_\_\_  
 Staying at dormitory? Yes or No Single or Double Dates of stay \_\_\_\_\_  
 Shuttle service needed from Tupelo or GTR airport? Circle airport. Arr. time \_\_\_\_\_  
 Campus parking requires a permit to be provided at registration. Will you be driving? Yes No  
 Number of persons \_\_\_\_\_ attending meeting x \$85.00 (\$95.00 after June 1)..... \$ \_\_\_\_\_  
 Number of students \_\_\_\_\_ x 65.00 ( \$75 after June 1 ) .....\$ \_\_\_\_\_  
 Number of Associates making tours on June 25-26 \_\_\_\_\_ x \$50.00.....\$ \_\_\_\_\_  
 BBQ picnic, number of people \_\_\_\_\_ x \$15.00 each .....\$ \_\_\_\_\_  
 Special food requests? \_\_\_\_\_  
 Annual banquet (buffet), number of people \_\_\_\_\_ \$25.00 \$ \_\_\_\_\_  
 Special food requests? \_\_\_\_\_  
 TOTAL..... \$ \_\_\_\_\_

**Make check payable to Department of Entomology and mail with this form to: Barbara Perrigin, Dept of Entomology, Box 9775, Mississippi State, MS 39762** (phone: 662-325-2085; fax: 662-325-8837). For payment by credit card, contact Barbara Perrigin to obtain payment form. Cancellations after June 1 will result in a \$25 cancellation fee; otherwise refunds will be in full if possible.

### Field Trip Registration

Number of individuals attending the day field trip on June 24 to Noxubee N.W.R. \_\_\_\_\_  
 Will transportation on shuttles be needed? Circle Yes or No  
 Number of box lunches requested \_\_\_\_\_ (\$7 each, payable before departure)  
 Number planning to attend the night field trip to Osborn Prairie on June 24. \_\_\_\_\_  
 Will transportation on shuttles be needed? Circle Yes or No

### Liability Release for Field Trips and Associates' Tours

I release the Lepidopterists' Society, Mississippi State University and their employees, and the field trip leaders/tour guides from any liability that may result from my participation in field trips, tours, and shuttle trips associated with the 2008 meeting of the above society at Mississippi State University. I understand that I may be driven in a private, rented, or state owned vehicle and that there are potential hazards on any field trip or tour. I assume all responsibility, personal and financial, for any accidents or other personal injury or loss on any field trip or tour in which I participate (Form must be duplicated and signed for all individuals registering for the meeting or associate tours).

Name (Printed) \_\_\_\_\_  
 Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Witness \_\_\_\_\_ Date \_\_\_\_\_

## Call for Contributed Papers and Posters

2008 Meeting of the Lepidopterists Society

Mississippi State University

24-27 June 2008

Name (s) (if co-authored, underline name of presenter): \_\_\_\_\_

Address (use number for co-authors with different addresses): \_\_\_\_\_

Phone: \_\_\_\_\_ FAX \_\_\_\_\_ EMAIL \_\_\_\_\_

Please check: Poster  or Oral  Presentation.

Are you eligible for student competition? (Circle if) Yes

Powerpoint, video equipment, internet connections will be available. Check if you need the following: Slide projector , overhead transparency projector ; Other audiovisual equipment \_\_\_\_\_

**Title of Presentation:**

**Abstract (limited to 150 words):**

Senior authors are limited to one oral presentation, but are unlimited in number of posters and number of oral presentations as a junior author. Each Contributed Paper is limited to 15 minutes (12 minutes for presentation and three minutes for questions). The deadline is **1 May 2008** for Contributed Papers and Poster submissions. This completed form, including the title and abstract, must be received for each contribution by the deadline for inclusion in the printed program.

Please send a Word or Text file of your title/abstract as an email attachment to SangMi Lee ([microlepi@hotmail.com](mailto:microlepi@hotmail.com)) (note "microlepi" not microlep) or a printed hard copy to: **Dr. SangMi Lee, Mississippi Entomological Museum, Box 9775, Mississippi State, MS 39762 (FAX: 662-325-8837).**

Contributed Papers will be scheduled for June 25-27. All presentations will be made at the Bost Extension Center auditorium. Display boards for posters will be available in a room adjacent to the auditorium on afternoon of June 24, and posters will be on view for duration of meeting.

## Housing, Food, and Recreation:

**Hotels:** Fifty rooms have been blocked for June 23-28 at Comfort Inn (662-324-9595), which is about 400 yards west of the Bost Extension Center and is near to off-campus restaurants. The MSU rate in June, 2008 will be \$104/night. Registrants are responsible for making reservations before the cut-off date of June 7 for the reserved block of rooms and to ask for the Lepidopterists' Society Block. Other hotels include Hampton Inn (662-324-1333; 0.7 mi from Bost; \$81/MSU rate), Holiday Inn Express (662-324-0076; 1.1 mi from Bost; \$84), University Inn (662-323-9550; 0.7 mi from Bost; \$48), and Microtel (662-615-0700; 2.5 mi from Bost; \$64). These other hotels are not connected to MSU by sidewalks along Hwy 12 and are not recommended to those without vehicles. Current rates for these other hotels may increase in 2008. A table of these accommodations with additional details will be available on websites of the Lepidopterists Society and Mississippi Entomological Museum.

**MSU Dormitory:** Newly constructed or renovated dormitories to include private bathrooms, will be available for the meeting, but reservations for a specific dormitory or block of rooms cannot be made until January, 2008. Rates will be \$30/single and \$40/double. Please indicate on the registration form if you want to stay in a dormitory, the number of nights, and whether you want a single or double reserved.

**MSU Butler Guest House:** Ten hotel rooms are available at the rate of \$ 75/night, but none are blocked. The Butler Guest House is located about 300 yards from Bost Extension Center. Reservations should be made directly to the Guest House at 662-325-4140.

**Plymouth Bluff Environmental Center:** Cabins are available at Plymouth Bluff, near Columbus and 25 miles from MSU, at a rates of \$59-\$69/night. Cabins include a microwave-fridge. Cabins cannot be reserved by individuals until two months before the June meeting and will not be available for the weekend of June 27. High quality collecting habitats (oak-hickory woodlands and bottomland forest) habitats are near the cabins. Call 662-241-6214 for reservations.

**Dining:** The MSU cafeteria and the Union Food Court, with five dining establishments, are within a short distance of Bost Extension. Starbucks Coffee cafe is present in the Barnes & Noble Bookstore adjacent to Bost Extension. Several restaurants and nightspots on University Ave. are near Comfort Inn, and a map of these will be available at registration.

**Recreational sports:** The MSU Sanderson Center for recreation sports, a relatively new facility, includes a swimming pool, racquetball courts, gyms, strength and aerobic room, and indoor track. Guest access to the Sanderson Center is available for \$6/daily. More information on the Sanderson Center can be found on the MSU webpage.

## Field Trips:

Field trips are planned for the Noxubee National Wildlife Refuge during the day on Tuesday, June 24 (box lunch provided for \$7). Night field trips will be made to Osborn Prairie, a remnant of the Blackbelt Prairie, on June 24. Night collection will also be an option at Noxubee N.W.R. following the BBQ picnic on June 25.

A wide variety of habitats are present in Mississippi and Alabama for those planning independent collecting before or after the meeting. Information on the Blackbelt Prairie and links to state parks and federal lands can be found on MEM's website under "Mississippi Habitats." The Natchez Trace National Parkway and Gulf Islands National Seashore require permits from the National Park Service, which can be obtained at: <<http://science.nature.nps.gov/research/ac/ResearchIndex>>. Permits for collecting in Mississippi State Parks can be obtained from Joe MacGown ([jmacgown@entomology.msstate.edu](mailto:jmacgown@entomology.msstate.edu); PH: 662-325-9551). These permits require notification of the park manager before collecting (especially at night) and a report on the collections that are made. Logistical support, including recommended collecting sites, maps, and collecting permits for selected other areas, can be provided to individuals who wish to collect in Alabama or Mississippi, prior to or following the meeting by contacting Joe MacGown.

## Associates Program

Associates of Society members will be provided with tours during June 24 and 25 from 8:30 to 4:30. The fee for the two days of tours is \$50.00, which will cover costs for transportation, admission to antebellum homes, and lunch at the MSU cafeteria on June 24. The tour on June 24 will include the Templeton Music Museum, Clock Museum, Cobb Institute of Archeology, and other points of interest on the MSU campus. The tour on June 25 will include the Waverly Plantation [http://www.wpnet.org/waverley\\_mansion.htm](http://www.wpnet.org/waverley_mansion.htm) and ante-bellum homes in Columbus, MS. Associates will be responsible for the meal in Columbus, MS on June 25.

# Rodriquez Ottolengui (1861-1937) – orthodontist, lepidopterist, dental editor and novelist

Mary Miller

science librarian, Charleston County Libraries

Ottolengui was born in Charleston, South Carolina, on March 15, 1861, the second son out of three children born to Daniel Ottolengui, a newspaperman, and Helen Rodriquez, an author. His grandfather, Benjamin Adolph Rodriquez, was a pioneer dentist who played an important part in establishing dentistry in South Carolina.

Rodriquez Ottolengui attended the College of Charleston, but moved to New York City in 1877 to serve an apprenticeship under Dr. J. Albert Kimball. He obtained a master of dental surgery degree from the Regents of the State of New York in 1885. Ottolengui then practiced dentistry in the office of Dr. William A. Atkinson, "dean" of the dental profession. He served another apprenticeship with Dr. Norman Kingsley, who tutored him in treating cleft palates. As Kingsley's protégé, Ottolengui became interested in orthodontics and began writing articles on "regulating" teeth in 1892. He made substantial contributions to pulp canal therapy and cleft palate restoration, and was one of the first dentists to use X-rays in dentistry.

Ottolengui was the author of a dental text, *Methods of Filling Teeth*, a chapter on malocclusion in *Fones's Textbook for Dental Hygienists*, and a collection of dental writings published under the title of "*Table Talks on Dentistry*". He was a dental editor for almost forty years, starting with *Items of Interest*, a periodical, (later *Dental Items of Interest*) in 1896. Ottolengui enlarged it into a journal, inaugurated a department of orthodontics, which he illustrated with drawings of classical figures from mythology. Ottolengui also

published the Proceedings of the American Society of Orthodontists (ASO) from 1901 to 1920, until it was taken over the *International Journal of Orthodontia* (IJO).

An avid reader of detective stories, Ottolengui was a pioneer in forensic dentistry and authored at least five mystery novels. Ellery Queen dubbed Ottolengui, "one of the most neglected authors in the entire history of the detective story." His first book, *An Artist in Crime* (1893), was also published in England, France, Poland, and Germany. Ottolengui's next book, *A Conflict of Evidence* (1893), was followed by *A Modern Wizard* (1894), which was brought to the attention of the Pasteur Institute because of the possibility advanced in the story that some forms of insanity were traceable to microorganisms. He later wrote *The Crime of the Century* (1896) and *Final Proof: Or The Value of Evidence* (1898).

Ottolengui was a charter member of the New York Entomological Society. His interest in a subfamily of noctuid moths, the Plusiinae, led him to become an authority in the United States on this group. In 1902 and 1919 he published works describing North American species of the subfamily, including fourteen new species, illustrating them with his own photographs. The American Museum of Natural History allotted his collection special space and labeled it "The Ottolengui Collection."

Dr. Ottolengui was awarded several honorary doctorates. He was a widower, his wife, May Hall Ottolengui, having died on July 10, 1936. Ottolengui died of a heart ailment and a stroke after a long illness in New York City on July 12, 1937.

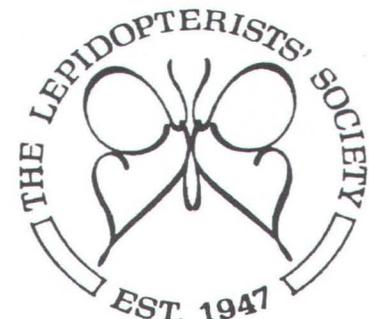
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## *Apodemia phyciodoides* in New Mexico

Continued from pp. 121

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# Mating Yellow Angled-Sulphur Butterflies: A Remarkable Mating Duration

Gerald Einem

Vasco de Gama #180, La Peñita de Jaltemba, Nayarit, México [happy\\_wren@yahoo.ca](mailto:happy_wren@yahoo.ca)

On 8 March 2006 at 10:15h Mountain Time in La Peñita de Jaltemba, Nayarit, México, I observed a pair of mated butterflies as they flew into a dense thicket of palm fronds. I carefully parted the foliage and found a pair of conjoined Yellow Angled-Sulphurs, *Anteos maerula* (Fabricius), a species that ranges from the West Indies and northern México to Peru with records from Arizona, New Mexico, Texas, Nebraska, Mississippi and Florida (Opler 1999). Because of their leaf-like appearance and hidden location I would not have noticed them had I not seen them fly into the palm (see pp. 140).

I examined the mating pair once every half-hour. After alighting in the palm

the butterflies remained "in copula" without any detectable movement for over nine-and-a-half hours, until 19:45h or later. When the pair was observed again that night at 21:15h they had separated and were roosting side by side about 5 cm apart, both with wings closed in a vertical "head up" orientation. At 8:48h the following morning they remained in the same location with the same body posture and orientation, when looked for again at 11:45h they were gone.

Assuming that the duration of mating was typical for this species it was quite remarkable when compared to mating in other butterfly species. For example in the Black Swallowtail (*Papilio*

*polyxenes*) mating lasts an average of 31 to 45 minutes in different populations of this butterfly. It has been reported that mating in butterflies lasts for 15 minutes to 3 hours (most often 30-40 min.) and also that mating lasts longer in large butterflies and in cool weather (Scott 1986). During the mating of the sulphurs the temperature was mild, ranging from 20°C at night to 26°C during the day.

## Literature Cited:

- Opler, P. 1999. A field guide to western butterflies, 2nd ed. Houghton Mifflin Co. Boston & New York. 540pp.  
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## Announcement

# Catalogue of the Butterflies of the United States and Canada

by Jonathan Pelham

This new publication includes an exhaustive synonymic catalogue of all names that have been applied to the butterflies of the United States of America and Canada, through June, 2006. Eight hundred species and 234 genera are included from the region, and extensive lists of excluded species and excluded names are provided. In addition, a complete bibliography to the butterflies of the region is included, together with a subspecies-level checklist and taxonomic index. The synonymic catalogue enumerates names from family to species, and ancillary details are provided for each, including the original description, original combination, type locality, deposition of type(s) when known, and annotations when pertinent to their

placement within the catalogue. Over one hundred pages (of 600 estimated total pages) are dedicated to the bibliography, which is the most complete ever assembled for the region.

This document, representing over 20 years of research by the author, is being published as Volume 40 of the Journal of Research on the Lepidoptera. The contents of this publication have been carefully peer-reviewed by leading authorities in the field (as noted in the acknowledgments). This is perhaps the most inclusive taxonomic catalogue ever published for a regional butterfly fauna, in that the synonymic catalogue, supplemental lists, subspecies-level checklist, index, and complete bibliography are all included together in the same volume.

Projected publication date: between 10 December, 2007 and 10 January, 2008

Cost (= annual subscription to the Journal of Research on the Lepidoptera): US \$25.00 (add US \$7 for shipping in the USA; international buyers will be billed separately for shipping costs, which will vary depending on destination). Make Check or requisition to the order of "Lepidoptera Research Foundation" and mail to: Christine Eliazar, McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, P. O. Box 112710, Gainesville, FL 32611-2710

# Strange Bedfellows: Report of a Red-Spotted Purple (*Limenitis arthemis astyanax*) mating with a Question Mark (*Polygonia interrogationis*)

Jeffrey M. Marcus

Department of Biology, Western Kentucky University, 1906 College Heights Boulevard #11080, Bowling Green KY 42101-1080, [jeffrey.marcus@wku.edu](mailto:jeffrey.marcus@wku.edu)

On August 22, 2007 at 4:43 pm, Monica Thomson, a butterfly gardener in Palmyra, Harrison County, Indiana, observed a red-spotted purple (*Limenitis arthemis astyanax*) mating with a question mark (*Polygonia interrogationis*). The GPS coordinates of the location of the mating were 38.406845 N, 86.095282 W. The mating took place after both individuals had visited her bait feeder, which rested on the ground and contained a mixture of stale beer, brown sugar, molasses, and rotten bananas. She took two digital photos (Figures 1 and 2, pp. 132), and then startled the butterflies, which flew a short distance while still joined at the abdomen. When the animals re-ighted, Thomson took an additional photo of this very unusual pair (Figure 3). The photographer did not recognize just how unusual this mating was at the time, and left the scene to observe other butterflies in her garden and give the odd couple some privacy. She was interested enough by the event to share the photos with me and has given permission to share them with the News of the Lepidopterists' Society. I have examined the photos (including using Adobe Photoshop to look for evidence of manipulation) and questioned Monica Thomson carefully, and I am convinced by the authenticity of these photos.

Based on its coloration and the size of the abdomen, I suspect that the *L. arthemis astyanax* is female, suggesting that the *P. interrogationis* pictured is male. There is not much known about interspecific hybridization in *Polygonia*

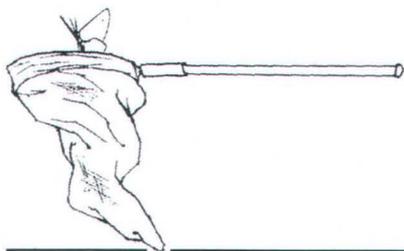
(Family Nymphalidae, tribe Nymphalinae), though hybridization between European populations of *P. comma* has been used to study the genetics of ovoposition behavior on alternate larval host plants (Janz, 1998). In contrast, there have been many studies of hybridization in *Limenitis* (Family Nymphalidae, tribe Limentidinae), including observations of interspecific mating between *Limenitis* species in the wild (Boyd et al., 1999; Covell, 1994; Klots, 1959; Marcus et al., ms.; Platt, Greenfield, 1971; Ritland, 1990; Ruby, 2005). However, mating behavior between butterfly species from different genera is rare and most such events do not result in copulation (Shapiro, 1973). That makes Monica Thomson's photographs between members of two different Nymphalid tribes particularly noteworthy.

Parallel examples do exist. Among the Lepidoptera, perhaps the largest number of intergeneric matings have been documented in the giant silk moths (Carr, 1984; Peigler, 1977; Tuskes et al., 1996). These reports include cases, as reported by Steve Huffman, of the successful hand pairing of male *Hyalophora columbia gloveri* from the tribe Attacini mating with female *Antheraea polyphemus* from the tribe Saturniini (Oehlke, 2007). The ova that are produced by these matings fail to develop. Now that we know that the pairing of *Limenitis arthemis astyanax* and *Polygonia interrogationis* is possible, it will be extremely interesting to determine if such matings result in

ova, and to what extent the ova develop.

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# Mailbag...

28 August 2007

Editor:

I would like to address a problem in our industry. I have worked as a volunteer for over 35 years on my own time, first with the California Academy of Sciences in San Francisco (CAS) and for the past 20 years with the Bohart Museum of Entomology at U. C. Davis (BME). My passion is with curatorial work, and I spread field pinned or papered material at the rate of around 10,000 specimens each year, helping to clear up the backlog most museums have. I take pride as the collection takes on a more useful and organized appearance, and sincerely hope that the BME becomes a regular stop for the specialists currently creating the MONA fascicles.

While working in the CAS over 30 years ago I noticed several large groups of moths were missing, loaned at some point in the past to someone intending to work on those groups. When I began going into the BME I found they too were missing all of the moths in these

very same groups, large genera of 4 to 6 drawers of material. Now, nearly 35 years later, they remain missing and presumably also were borrowed from other major museums. While I recognize the need for the loans if progress is to be made in the taxonomy of these groups, keeping these loans for three or four decades would seem to be inappropriate. The possibility increases for damage, loss, or even a point at which the borrower loses track of the museums from which these specimens came, and simply keeps them. I have spoken with several other lepidopterists who have expressed frustration over not having access to these groups for their own ID needs.

My own private collection of tens of thousands of Lepidoptera has gone to the BME, along with my brother's even larger collection. Numerous other private collections, including the enormous Noctuid collection of W. Bauer and J. Buckett, have been donated to the BME with the desire that the specimens reside there. I am thrilled

when they are put to use by specialists, but returning them in a timely manner and in good condition would seem to be the proper thanks to that museum for so willingly loaning them.

This is not unique to Lepidoptera, as other groups of insects also are missing for these open-ended loans. I know for certain that for at least 2 of these missing groups the research was completed many years ago, but the specimens never returned. The director of the BME can cite instances when loaned material was simply incorporated into the collection where the borrower worked, again, never to be returned. I have to believe that this is a concern for all important entomology museums, and hope that it can be corrected. If not, is it possible the time will come when loans simply will not be allowed?

Jeff Smith  
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## Long Time Member Malcolm Douglas Dies in Peru

*Ron Leuschner*

1900 John Street, Manhattan Beach, California 90266-2608 [Ronleusch@aol.com](mailto:Ronleusch@aol.com)

Malcolm Douglas, a long time Lepidopterists Society member (since 1971), was killed by a fall on November 4, 2007 while on an Association for Tropical Lepidoptera trip to Atalaya, southern Peru (East of Cuzco). Mal was staying at Cock of the Rock Lodge since his interest was butterflies; other group members, including leader John Heppner were at Paradise Lodge for night collecting.

Mal often went into the field early and by himself as was the case here. He

apparently fell from a bridge with a low railing over a deep chasm, and died instantly when he landed on the rocks below. When he failed to show up for dinner that night, a search was initiated and he was found on the jagged rocks below the bridge.

Mal, along with his brother Arthur, were members of the Lorquin Society of the Los Angeles Natural History Museum. Mal made many tropical trips and built a considerable butterfly collection with both Southern

California and Neotropical specimens. He also did a lot of rearing, especially *Speyeria*. Only 10 weeks earlier, he had a successful trip to Panama with this reporter. Mal will certainly be missed by his many friends in California and from tropical trips. We send condolences to his wife Barbara and his brother Arthur. (See photo pp. 128)



# A Communal Roost of Adult *Smyrna karwinskii* in Chiapas, Mexico (Lepidoptera: Nymphalidae: Nymphalinae: Nymphalini)

Andrew D. Warren<sup>1,2</sup> and Armando Luis-Martinez<sup>2</sup>

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<sup>2</sup>Museo de Zoología "Alfonso L. Herrera", Departamento de Biología Evolutiva, Facultad de Ciencias, Universidad Nacional Autónoma de México, Apdo. Postal 70-399, México, DF 04510 México

Diurnal communal roosting behavior is rarely observed in butterflies. Some skipper species that are primarily crepuscular or nocturnal are known to aggregate in caves and under highway culverts during sunny daytime hours. For example, *Celaenorrhinus fritzgaertneri* (Bailey, 1880) was originally described from "an old deserted mine... at a depth of eighty feet" in El Salvador, where "swarms of this butterfly" were found in the "impenetrable darkness of the underground passage" (Bailey 1880). Communal roosts of *C. fritzgaertneri* in Costa Rica were subsequently studied in detail by DeVries et al. (1987). However, reported cases of diurnal communal roosting among butterflies that are primarily active during sunny daytime hours are few indeed, and apparently all such roosts are composed of adults in reproductive diapause (Muyshondt and Muyshondt 1974, Brower et al. 1977, DeVries et al. 1987, Yackel Adams 1999). The most famous example is *Danaus plexippus* L., 1758, whose adult aggregations during winter months in Mexico and California have been widely studied (see Brower et al. 1977, Frey et al. 1992, and references therein).

At the end of William Schaus' (1884) description of the last instar larvae and pupae of *Smyrna karwinskii* Geyer, [1833] and *S. blomfieldia* (Fabricius, 1781), he noted that "This species [*S. blomfieldia*] and *Smyrna karwinskii* are commonly called by the natives "Caseras," owing to the frequency with which they alight on the walls and eaves of the houses." While single

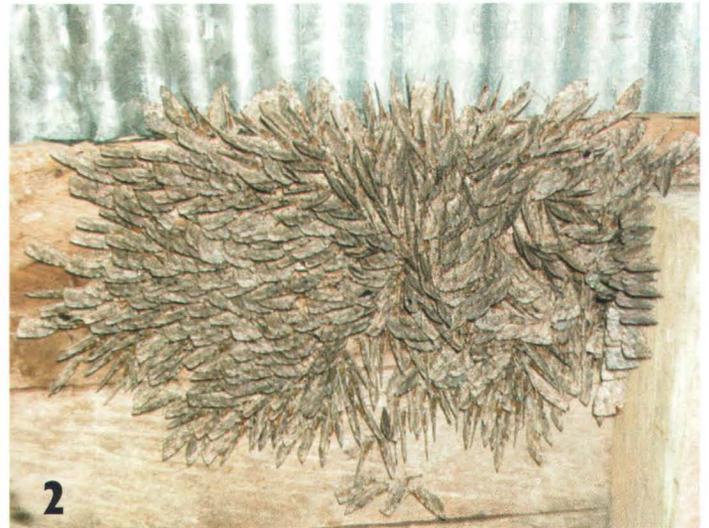
individuals of *S. blomfieldia* can sometimes be found resting on shaded walls and roofs of buildings in tropical and subtropical parts of Mexico (pers. obs.), *S. karwinskii* is known to congregate in large communal roosts of adults. These roosts are located in shaded locations and persist for many months, and apparently consist of adults in reproductive diapause, as noted by Muyshondt and Muyshondt (1974), who studied communal roosts of *Smyrna karwinskii* in El Salvador. Roosts in El Salvador studied by Muyshondt and Muyshondt (1974) consisted of between 10 and 123 individual butterflies, and were found "in cavities of lava walls and tree trunks, and on the underside of concrete slabs" which comprised roofing on cabins. Roosts were observed in January, February, March, April, August, November and December. Muyshondt and Muyshondt (1978) subsequently noted that other investigators had shared observations of similar roosts of *S. karwinskii* in Mexico during the dry season, including Carlos Beutelspacher, and Robert Wind (in Chiapas).

Between March 21<sup>st</sup> and 26<sup>th</sup>, 2007, a group of researchers (ourselves included) from the "Alfonso L. Herrera" Zoology Museum at the National Autonomous University of Mexico (MZFC) studied the butterfly fauna of the EL Triunfo Biosphere Reserve, above Finca Prusia, in the southern part of the Mexican state of Chiapas. Upon our arrival at the base camp (15°39'N 92°48'W) at about 1900m

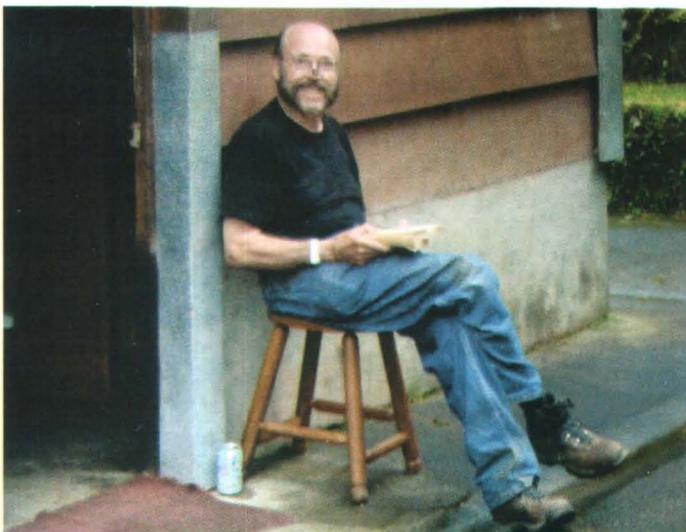
elevation (Fig. 1), after a challenging four-hour hike uphill (all of our gear was hauled to the camp on the backs of mules since no roads lead to the camp), local guides showed us two communal roosts of *Smyrna blomfieldia* which had been present on the underside of the roof of one of the buildings at base camp for several months; one large aggregation of over 300 individuals (Figs. 2-4), and a smaller aggregation, about a meter away, with approximately 100 individuals (not photographed).

These communal roosts of *S. karwinskii* were casually monitored over the course of our stay at El Triunfo. Roosting adults were largely inactive, moving only a few millimeters at a time to adjust their position in the group. Roosts were formed as described by Muyshondt and Muyshondt (1974), with a "nucleus of several individuals with the heads pointing inwards, sometimes so close as to have their upraised antennae almost touching, surrounded by tightly packed rows, forming circles or partial circles of individuals with the heads again pointing inwards, and with antennae touching a member of an inside row." The roosts could be observed close-up, simultaneously by multiple human observers, without alarming the butterflies. Each day, shortly before noon, a variable number of adults would depart from the roosts, and were active at and around the base camp, mostly as solitary adults probing wet ground along the margins of the small river that flows through base camp, but

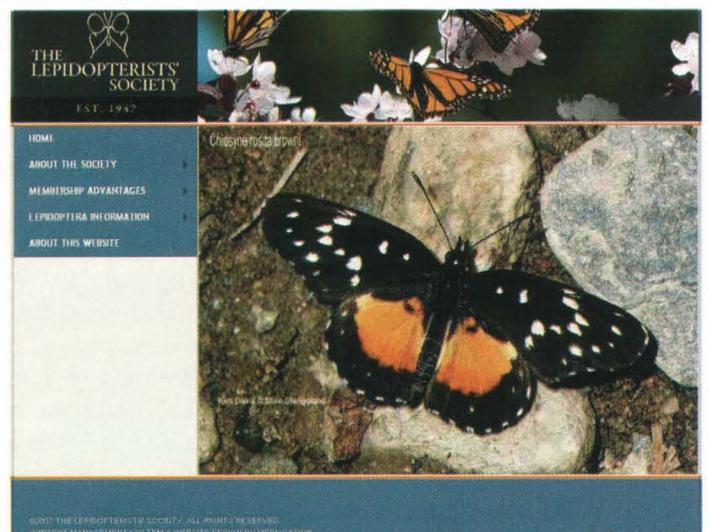
*Continued on pp. 129*



**Fig. 1)** Base camp at El Triunfo Biosphere Reserve, ca. 1900m., Chiapas, Mexico, 26 March 2007. **Fig. 2)** Large communal roost of *Smyrna karwinskii* present at El Triunfo Biosphere Reserve from March 21-26, 2007. **Figs. 3-4)** Close-up images of same large roost of *Smyrna karwinskii* shown in Fig. 3. All photos by Andrew D. Warren.



The late Malcolm Douglas. See article on pp. 126.



The "new look" to the Society's webpage. See article pp. 129.

## A Communal Roost...

*Continued from pp. 127*

individuals were also attracted to rotting fruit placed in aerial traps near the camp. However, the majority of roosting adults appeared to remain inactive each day, since the roosts remained intact and crowded even during mid-day, and since the shape of the roosts remained nearly constant from day to day. The long-term persistence of the roosts, as observed by local guides frequenting the base camp, was evident from the rather thick layer of butterfly excrement that had accumulated below the roosts. While no effort was made to determine the ratio of males to females in the roosts, both sexes were observed to be present in approximately equal numbers, as found by Muysshondt and Muysshondt (1974). Almost all roosting individuals exhibited some wing wear, and a few had severely damaged wings.

According to Jorge Llorente-Bousquets (pers. comm. 2007), several similar communal roosts of *S. karwinskii*, of up to 500 individuals, have been observed during field expeditions by the MZFC over the past 30 years, in the Mexican states of Veracruz, Hidalgo, Nayarit, Guerrero and Oaxaca.

### ACKNOWLEDGMENTS

We thank Jorge Llorente-Bousquets (MZFC) for commenting on an earlier version of this manuscript and for sharing observations on communal roosts of *S. karwinskii* in Mexico, and Isabel Vargas-Fernández (MZFC) for logistical help and encouragement. George T. Austin (McGuire Center, Gainesville) kindly reviewed this manuscript and provided valuable suggestions for its improvement, and helped with the literature search. Funding was provided to ADW by DGAPA-UNAM, and to ALM by DGAPA-IN 212006 and 200505.

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# A New Look for the Society Website

John Snyder

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The Web and Technology Committee of our Society is pleased to announce that the website has undergone a complete renovation and is now available in its new format. Professional designers have provided eye-catching and uncluttered templates for our use and we have filled those templates with useful information about the Society and about Lepidoptera.

Here are some of the new features. As you open the website, you will find that most of the screen is dedicated to a constantly changing slide-show of Lepidoptera: butterflies and moths, matures and immature from all over the world. Many thanks to Society members who have provided these beautiful photos.

Also on the opening page and every other page is a simple menu that

provides entry into a rich assortment of materials for lepidopterists. Major topics are (a) About the Society, (b) Membership Advantages, and (c) Lepidoptera Information. Opening from these are many sub-headings. Just a portion of them, to whet your appetite: history and scope of the Society, officers and committees, recent news, description of Society publications (including a link to our *Journal* archives), descriptions of our annual meetings and registration form for the next one, a very extensive "Frequently Asked Questions" section, an equally extensive set of links to worldwide websites about Lepidoptera, and a "what is it" page for us to help each other identify specimens. Soon to be added will be sections on Lepidoptera conservation and on K-12 educational

materials (for both teachers and students).

A major new feature is an online application for new members or those renewing membership. This allows us to pay Society dues through a secure credit card method. We will also be able to do the same for the annual meeting registration each year.

So, give our new website a test drive. Just point your web browser to [www.lepsoc.org](http://www.lepsoc.org). Of course, we will appreciate any constructive feedback on the usefulness of the website.

(I gratefully acknowledge guidance in this project from other members of the Web and Technology Committee: John Acorn, James Adams, Lawrence Gall, Akito Kawahara, David Lohman, and Todd Stout.)

# The Marketplace

**IMPORTANT NOTICE TO ADVERTISERS:** If the number following your advertisement is "492" then you must renew your advertisement before the next issue! Remember that all revisions are required in writing.

## Books/Videos

200+ RAINFOREST BUTTERFLIES ON FILM! New edition now available on DVD of our 50-minute best-seller "Diversity in the Rainforest" filmed in Peru 1995, with clips of many additional species from our Library. Order through website or direct. Also others in "The World's Butterflies on Film", our ongoing series in VHS (PAL or NTSC) at US\$15 each + freight: species from Brazil, Malaysia, Ghana, Kenya, Philippines, South Texas, Europe. Kenya & Brazil also available in DVD. Contact [johnbanks@cinebutterflies.com](mailto:johnbanks@cinebutterflies.com) - or surf to [Cinebutterflies.com](http://Cinebutterflies.com) - or mail to John Banks, 28 Patshull Road, London NW5 2JY, UK <sup>492</sup>

For Sale: Collection of twelve D'Abrera butterfly books in pristine condition with beautiful dust covers. Titles include: Butterflies of the... Afrotropical

Region (1980); Australian Region (1971); Oriental Region (pt 1, 1982), (pt 2, 1985) (pt 3, 1986); Neotropical Region (pt 1, 1981), (pt 2, 1984), (pt 3, 1987), (pt 4, 1987), (pt 5, 1988), (pt 6, 1994), (pt 7, 1995). For specific information, contact lepidopterist, Eli Berry, at 231-947-1152 or 7012 Henderson Drive, Traverse City, MI 49686. <sup>494</sup>

For Sale: Butterflies of the Australian Region (Vol. 1), Bernard D'Abrera (1977), Lansdowne Press, Melbourne. 415 pp. Extensive color plates and photos. This edition is out of print. This copy is in excellent condition, with marginal discoloration only. \$160.00 plus \$6.95 shipping. Glenn A. Gorelick, 360 Toyon Road, Sierra Madre, CA 91024-1147 email: [butterflyguy44@verizon.net](mailto:butterflyguy44@verizon.net) <sup>492</sup>

For sale: Book by David W. MacDougall A Field Guide to the Karner Blue

Butterfly. 2007. \$8 postpaid in US Send checks to: ECOS, PO Box 9118, Niskayuna, NY 12309. Signed copies available on request, no charge. <sup>493</sup>

Wanted: 1988 *Annotations on the Catalogue of Papilionidae and Pieridae*, 1:4 pp. Ch. Bridges, publisher, 502 W. Main, 120., Urbana, Illinois 61801, USA [Comprises addenda and corrigenda in the section on Atroplanur and relevant libraries] Kent H. Wilson P.O. Box 1097 Edmond, Oklahoma, USA 73083-1097. <sup>493</sup>

## Livestock

Wanted: A culture of the Buckeye butterfly, *Junonia coenia*. Contact: Carlos White, P. O. Box 1535, Shafter, CA 93263 [white.c2@gmail.com](mailto:white.c2@gmail.com) <sup>494</sup>

For Sale: (US only) Cocoons and ova of *Hyalophora cecropia*. Send SASE to: Alan M. Vosefski 3320 Old Kirkwood Drive., Virginia Beach, VA 23452 <sup>492</sup>

The aim of the Marketplace in the *News of the Lepidopterists' Society* is to be consistent with the goals of the Society: "to promote the science of lepidopterology...to facilitate the exchange of specimens and ideas by both the professional worker and the amateur in the field..." Therefore, the Editor will print notices which are deemed to meet the above criteria, *without quoting prices*, except for those of publications or lists.

No mention may be made in any advertisement in the *News* of any species on any federal threatened or endangered species list. For species listed under CITES, advertisers must provide a copy of the export permit from the country of origin to buyers. **Buyers must beware and be aware.**

Only members in good standing may place ads. **All advertisements are accepted, in writing, for two (2) issues unless a single issue is specifically requested.**

**Note: All advertisements must be renewed before the deadline of the third issue following initial placement to remain in place.**

All ads contain a code in the lower right corner (eg. 481, 483) which denote the volume and number of the *News* in which the ad. first appeared. **Renew it Now!**

Advertisements must be under 100 words in length, or **they will be returned for editing.** Ads for Lepidoptera or plants must include full latin binomials for all taxa listed in your advertisement.

**Send all advertisements to the Editor of the News!**

The Lepidopterists' Society and the Editor take no responsibility whatsoever for the integrity and legality of any advertiser or advertisement.

Disputes arising from such notices must be resolved by the parties involved, outside of the structure of The Lepidopterists' Society. Aggrieved members may request information from the Secretary regarding steps which they may take in the event of alleged unsatisfactory business transactions. A member may be expelled from the Society, given adequate indication of dishonest activity.

Buyers, sellers, and traders are advised to contact your state department of agriculture and/or PPQAPHIS, Hyattsville, Maryland, regarding US Department of Agriculture or other permits required for transport of live insects or plants. Buyers are responsible for being aware that many countries have laws restricting the possession, collection, import, and export of some insect and plant species. Plant Traders: Check with USDA and local agencies for permits to transport plants. Shipping of agricultural weeds across borders is often restricted.

Wanted: Contact with someone who knows how I can get artificial hosts for caterpillars out of the normal breeding season, such as Saturniids that emerge during the cold season. Ken Knight 1022 Widdicomb N. W., Grand Rapids, MI 49504 or call 616-459-4598. <sup>493</sup>

For Sale (USA only): Cocoons/ova of *Antheraea polyphemus*, *Callosamia promethea*, *Hyalophora cecropia*, *Paonias myops*. Karl W. Ploran, 110 Route 20, Chester, MA 01011-9642; [karlmir@verizon.net](mailto:karlmir@verizon.net) <sup>493</sup>

### Equipment

**Light Traps:** 12 VDC or 120 VAC with 18 inch vanes (15 & 32 Watt) and 24 inch (40 Watt). Rigid vanes of Stainless Steel, Aluminum, or Plexiglass. Rain Drains and beetle screens to protect specimens from damage. **Collecting Light:** Fluorescent UV 15, 32 & 40 Watt. Units are designed with the ballast enclosed in a weather tight cast aluminum enclosure. Mercury Vapor: 160 & 250 Watt self ballast mercury vapor with medium base mounts. Light weight and ideal for trips out of the country. **Bait Traps:** 15 inch diameter and 36 inches in height with a rain cloth top, nylon coated fiberglass screen, and supported with 3/16 inch steel rings. A plywood platform is suspended with eye bolts and S hooks. Flat bottom has a 3/16 inch thick plastic bottom that will not warp or crack. Bait container is held in place by a retainer. For more information, visit our web site at: [www.leptraps.com](http://www.leptraps.com), or contact Leroy C.

Koehn, Leptraps LLC, 802 South Third Street, Watseka, IL 60970-1607: Tel: 815-515-4060 <sup>493</sup>

For Sale: Bioquip Tropical Net in canvas bag. Reasonable offers accepted. P.F. Milner (828)877-5953 [pamilner@citcom.net](mailto:pamilner@citcom.net) <sup>493</sup>

### Research

#### Research assistance needed - Drepanoidea

We are conducting a molecular phylogenetic analysis of Hook-Tip Moths and relatives (Drepanoidea) in order to understand the evolution of acoustic communication in drepanoid larvae. We are urgently needing live eggs or larvae of any species of Drepanidae (Drepaninae, Cyclidinae, Thyatirinae) or Epicopeiidae, but we are especially interested in obtaining larvae of Thyatirinae. Larval or adult specimens preserved in alcohol will also be appreciated. Tubes containing 100% ethanol will be provided if necessary. A small honorarium may be provided to anyone who can make a substantial contribution to the project. Please contact me (Jayne Yack) for additional questions.

Dr. Jayne Yack (Department of Biology, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario, Canada K1S 5B6, [jyack@connect.carleton.ca](mailto:jyack@connect.carleton.ca))

Akito Kawahara (Department of Entomology, University of Maryland, 4112 Plant Sciences, College Park, MD 20742, [kawahara@umd.edu](mailto:kawahara@umd.edu)) <sup>493</sup>

### Announcement

#### 2008 Meeting of the Pacific Slope Section of the Lepidopterists' Society

The 2008 Pacific Slope Section meeting of the Lepidopterists' Society will be held at Alturas in northeastern California, Modoc County. The meeting will be held from Friday PM, 11 July through Sunday AM, 14 July 2008.

Papers submitted on any aspect of Lepidoptera will be accepted by Dr. Jerry Powell ([powellj@nature.berkeley.edu](mailto:powellj@nature.berkeley.edu)) who is coordinating the presentations for the meeting.

Good collecting and observing of both moths and butterflies should be expected as this area. It is adjacent to the Warner Mountains, near the western edge of the Great Basin and includes the Modoc Plateau. Additional information about the area can be found at [www.alturaschamber.org](http://www.alturaschamber.org) and at [www.fs.fed.us/r5/modoc](http://www.fs.fed.us/r5/modoc).

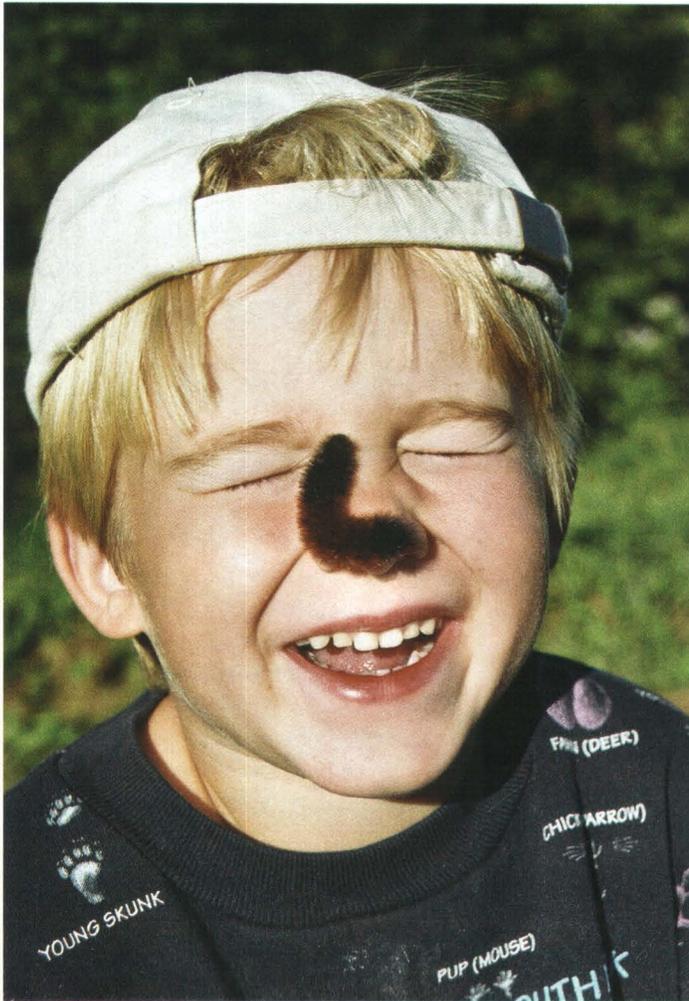
Interested members can contact Laurence Crabtree, P.O. Box 213, Bieber, CA 96009; by phone at 530.294.5366 or email [lcrabtree@fs.fed.us](mailto:lcrabtree@fs.fed.us) or Liam OBrian at [liammial56@yahoo.com](mailto:liammial56@yahoo.com) or by phone at 415.863.1212 for additional meeting information as it emerges.

## International Conference on Iridescent Coloration

The School of Life Sciences at Arizona State University is pleased to announce an integrative 4-day conference on iridescent colors in nature, entitled 'Iridescence: More than Meets the Eye'. This is a graduate student initiated and organized conference that aims to connect diverse groups of researchers to catalyze cross-disciplinary discussions on iridescent coloration in nature, identify new avenues of research, and explore the potential for iridescence to provide novel insights in fields as divergent as materials science, sexual selection and primary science education. We invite you to join us for this exciting event.

Each day of the conference will involve talks from invited speakers (see list below), oral and poster presentations from conference participants, and discussions centered on the four broad topics: Mechanisms and Measurement; Development; Evolution; Education and Outreach.

Conference dates: February 6-9th, 2008. Late registration (\$50 fee) will run from November 17th through February 6th. For more information, please visit our website: <http://sols.asu.edu/rti/frontiers/iridescence> Feel free to contact the conference organizers with any questions at [animalcoloration@gmail.com](mailto:animalcoloration@gmail.com) or contact Lisa Taylor directly at [Lisa.A.Taylor@asu.edu](mailto:Lisa.A.Taylor@asu.edu) or (480) 965-2593.



**Off to the races...**

1) Caterpillar wrangler, Nick Ward, testing the climbing abilities of his entry. 2) Caterpillar races are the heart and soul of the Woolly Worm Festival in Banner Elk, North Carolina. Named one of the top ten fall festivals in North America by the Society of American Travel Writers in 2006, the 30th annual Woolly Worm Festival took place October 20-21, 2007. 3) Seven-foot-four-inch, former NCAA and NBA all-star, Tommy Burleson, the race's official judge and referee, calling out the start of the next heat. All photos by: Jim Morton.

**Strange Pairing: *Limenitis arthemis astyanax* and *Polygonia interrogationis***



Monica Thomson of Palmyra, Indiana, found this strange couple in her butterfly garden. Figures 1 and 2 show them in the spot she originally found them. Startled, they flew away to a nearby location (Fig.3). See article on pp. 129.

# Running of the Woolly Worms

David L. Wagner

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In October of 2007 the Banner Elk Woolly Worm Festival celebrated its 30th annual "Running of the Worms." Some 20,000 people attended this most unlikely event, high in the Blue Ridge Mountains of North Carolina, ostensibly to race last instar *Pyrrharctia isabella* caterpillars up a 42" length of string. Each year between 1200 and 1500 wild-caught caterpillars are entered in the fierce competition to determine the region's top "runner-climber." There is much drama in the 25-worm heats, as early favorites often stall along the string, only to be passed by more persistent challengers. Each race is called as if the participants were thoroughbreds racing down the home stretch of the Kentucky Derby. Once a caterpillar has begun its ascent, their wrangler can blow, shoo, clap, and otherwise entreat their entry to climb, but any direct prodding or touching will result in immediate disqualification. On warm sunny days, winning caterpillars will negotiate the vertical climb in as little as 60 seconds. Two of the festival's more memorable contestants, for name and not deed, have been "Patsy Climb" and "Dale Wormhardt."

The purse for first-round winners is \$25; second-round winners take home \$50. Saturday's third and final heat, with thousands cheering on, nets the champion caterpillar \$1,000. Of course, "a veterinarian is on hand to make sure none of the contestants have been doped up," assures 30-year-event veteran, Roy Krege.

Behind all the frivolity there is purpose: to select the one worm—the prophet caterpillar—that will foretell the severity of the coming winter. Each thoracic and abdominal segment of the champion's trunk will be used to predict the weather over a corresponding one-week span of North Carolina's 13-week winter. Black segments represents weeks of natural snowfall; darkened orange- to chocolate-brown segments correspond to weeks of below-average temperature, often with nighttime temperatures dipping below 20° F; lighter brown to orange segments indicate weeks of average temperature with only dustings of snowfall. At the festival's conclusion, the champion caterpillar is passed to a committee of professional caterpillar readers<sup>1</sup>, who then forecast the weather for the next 13 weeks, segment by segment, beginning at the head and reading rearward. According to the official Woolly Worm Festival website (<http://www.woollyworm.com/>), the Banner Elk champion woolly worm has been "close or completely right 57 percent of the time, and more than half right 82.6 percent of the time...a record of which even professional weather forecasters could be proud!"

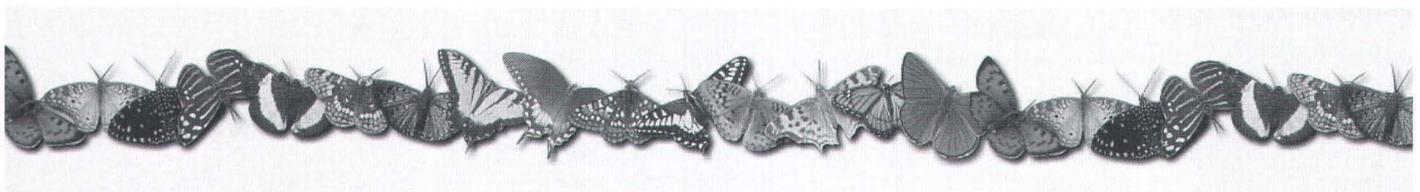
Festival goers come from far and wide to collect caterpillars and compete for the grand prize. While the event is much geared to children and families (some of the woolly worm owners are but knee-high to a grasshopper) caterpillar racers are by all accounts a

diverse lot—it is not unusual to see contestants from across four generations competing in a heat. While most kids prefer to find their own by patrolling roads in and about Banner Elk, late-comers and others that are somewhat entomologically challenged can purchase caterpillars from event vendors pedaling wild-caught and/or homegrown woolly worms. The going price has been fixed by the Chamber of Commerce: \$1 a caterpillar, a veritable fortune to some of the event's younger caterpillar hunters.

While some will argue as to whether the event is grounded more in folklore or meteorology, of one fact there seems to be little disagreement: nowhere in the world are arctiid caterpillars held in greater esteem by so many.

<sup>1</sup>Weather prediction by "reading" woolly worms officially dates to a study by C. Howard Curran of the American Museum of Natural History in New York, Curran correlated the color patterns with weather for the period of 1947 through 1951, and found the woolly worm predictions to be somewhat more accurate than those of some professional meteorologists (Clausen, 1954)

This essay was written for Bill Conner's forthcoming book *"Tiger Moths and Woolly Bears: Behavior, Ecology, and Natural History of the Arctiidae,"* to be published by Oxford University Press.



# Membership Update...

Julian Donahue

This update includes all changes received by 21 November 2007.

## "Lost" Members

(publications returned: "temporarily away," "moved," "left no address," or "addressee unknown"):

**Norris, Dave** (Sandy Hook, CT)

## New and Reinstated Members:

(members who have joined/renewed/ been found/or rescinded their request to be omitted since publication of the 2006 Membership Directory; all in U.S.A. unless noted otherwise)

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**Houck, Douglas L.:** 5250 Dresden Drive NW, Canton, OH 44708-3229.

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**Morehouse, Nathan (Mr.):** School of Life Sciences, Arizona State University, Mail Code 4601, Tempe, AZ 85287-4601.

**Patton, Charles D.:** 2300 Page Harbor Landing, Apt. 201, Virginia Beach, VA 23451-1058.

**Shimba, Tadao (Mr.):** 159 Bridgewood Drive, Battle Creek, MI 49015-4390.

**Stafford, Peary D., Jr.:** 37 Curtiss Road, New Preston, CT 06777-1003.

**White, Carlos:** Insect Lore, 4080 Aloalii Drive, Princeville, HI 96722-5533.

**Wilson, John James:** Dept. of Integrative Biology, University of Guelph, Stone Road East, Guelph, Ontario N1G 2W1, Canada.

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(all U.S.A. unless noted otherwise)

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**Gerard, Walter:** 3181 South Florence Place, Tulsa, OK 74105-2414.

**Gilligan, Todd M.:** 2086 Canada Goose Drive, Loveland, CO 80537-6554.

**Grinter, Chris:** 541 Amber Way, Solvang, CA 93463-2678.

**Kendall, Roy O.:** 454 White Oak Drive, Lake Charles, LA 70611-5612.

**Koehn, Leroy C.:** 802 South 3rd Street, Watseka, IL 60970-1607.

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**Mustelin, Tomas M. (M.D., Ph.D.):** 1554 28th Avenue West, Seattle, WA 98199-4203.

**Neild, Andrew (Mr.):** 8 Old Park Ridings, Grange Park, London N21 2EU, England.

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**Norris, Dave:** 24 Locust Road, Eastham, MA 02642-2453.

**Overton, Michael D.:** P.O. Box 1196, Weslaco, TX 78599-1196.

**Schappert, Phillip J. (Ph.D.):** 2-2523 Sherwood Street, Halifax, Nova Scotia B3L 3G9, Canada.

**Welden, Frances C. (Mrs.):** 7826 Willos Street, New Orleans, LA 70118-4056.

## Lost E-mail Addresses:

(Recent e-mail to the following members were returned undelivered. Please send an e-mail from your current e-mail account to **Julian@Donahue.net**)

**Iveson, Robert J., Jr.**  
**Owen, Wilferd D.**  
**Weast, Robert D.**  
**Williams, Benjamin D., III**



# Metamorphosis...

The Society has learned of the death of the following member. Our condolences to his family.

## Malcolm G. Douglas

of Playa del Rey, California, on 4 November 2007. Mal suffered a fatal fall while on a collecting expedition in Peru. Mal, a member of the Society since 1971, specialized in Speyeria and had perfected rearing techniques for them. He is survived by his wife Barbara and his brother Arthur, a former member of the Society.



# Dainty Sulphur (*Nathalis iole*) in Cape May: A New Jersey State Record

Mike Crewe

*Limosa Holidays, Norfolk, UK* [mike.sturnus@btinternet.com](mailto:mike.sturnus@btinternet.com)

As part of my work as a guide for a UK-based wildlife tour company, I am lucky enough to lead an annual tour to Cape May, New Jersey. Whilst this tour is essentially for bird migration, this location is also a key migration point for butterflies and dragonflies and our attention always turns to these groups too. On September 28th, 2007, I took my group to Cape May Bird Observatory's research and education center at Goshen, Cape May County, primarily to visit the well-established butterfly garden there. During the course of our visit, I noticed a small yellow butterfly flying low to the ground, which settled nearby. I pointed this out to group members as a new species for our trip, assuming it was a Little Yellow (*Eurema lisa*). I had not seen this species for a few years but was aware that it was the only small yellow butterfly likely in the region so wasn't

overly concerned with the finer points of its appearance! This proved to be a big mistake! I took a couple of photographs as I had not photographed Little Yellow before.

It was not until I was back in the UK a few days later that I was labelling up my pictures and realised my mistake. Checking a field guide - merely to get the correct scientific name for my pictures - I quickly realised that the dusky underside to the hindwing was completely wrong for Little Yellow and it was soon apparent that the butterfly was a Dainty Sulphur (*Nathalis iole*) (see photo pp. 140) and thus a new species for New Jersey. Information was immediately sent by email to both CMBO's Goshen Center and to Pat Sutton. As far as I am aware, the individual has sadly so far not been re-found.

I should like to thank Pat Sutton for confirming this state record and initiating an email discussion on the occurrence; also Dennis E. Burnette & Harry LeGrand (NC), Chris Tonkinson (CMBO), Jackie Riley (OH) and Brian Scholtens (TN) for their contributions to the discussion and David Wright for detailed information and discussion on the distribution and movements of this species in North America.

## References

- David Wright, Pat Sutton, and James D. Dowdell (2007). Checklist of Butterflies of Cape May Co., NJ. 7th edition, CMBO, NJ Audubon Society.  
 Jeffrey Glassberg (1999). Butterflies through Binoculars: The East. Oxford University Press, New York.

## A note on *Cyllopsis gemma* larvae

Keith Wolfe

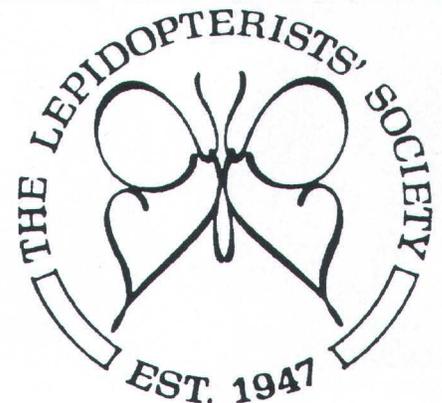
616 Alumrock Drive, Antioch, California 94509-6944

Numerous authors have reported or repeated that (last-instar) larvae of *Cyllopsis gemma* (Nymphalidae, Satyrinae) are green in spring/summer and brown in the fall. Interestingly, the four caterpillars I reared to maturity from ova laid October 9~11, 2005, by females caught near Relampago, Hidalgo County, TX, where this species is said to fly all year, resulted equally in both larval color forms (see photos pp. 140). In captivity, caterpillars readily ate *Stenotaphrum secundatum* (St. Augustine grass) and, prefer-

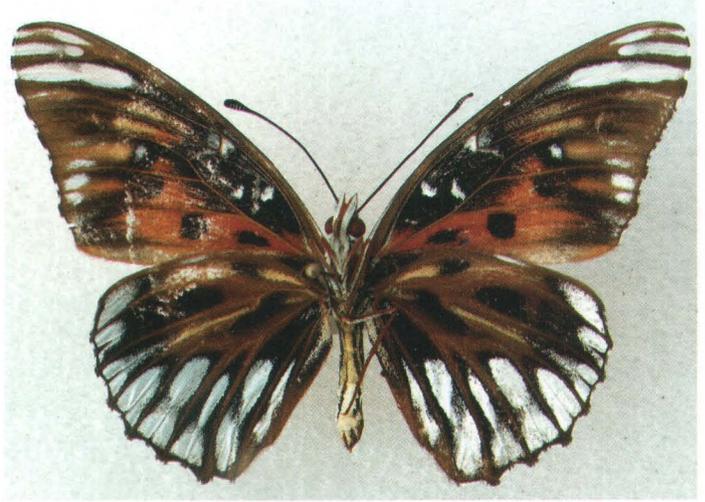
entially, the exotic *Imperata cylindrica* 'Rubra' under warm, humid laboratory conditions similar to their native habitat. Adult butterflies eclosed in December 2005.

Also noteworthy is that the pupae of these four Lower Rio Grande Valley larvae had their pointed head "horns" entirely joined, appearing as one triangular projection. In all published accounts (when mentioned) and illustrations of its early stages I have seen, including on the Internet, *Cyllopsis gemma* chrysalises are said

and/or shown to have two markedly bifurcate (forked) cephalic projections.



**Images and notes from Society Members...**



An aberrant Gulf Fritillary, *Agraulis vanillae*, collected in GA, McIntosh Co., town of Darien, 30 Oct. 2000, leg John Hyatt. The insect is a tad shopworn, having been captured on a lantana flower using a baseball cap.



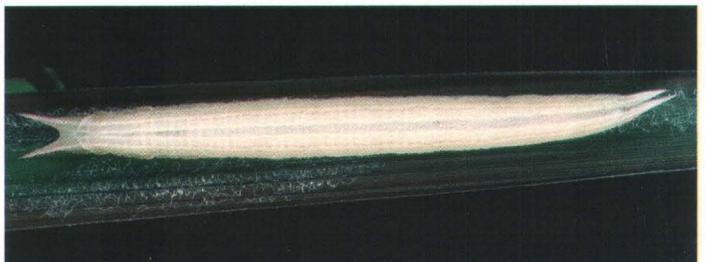
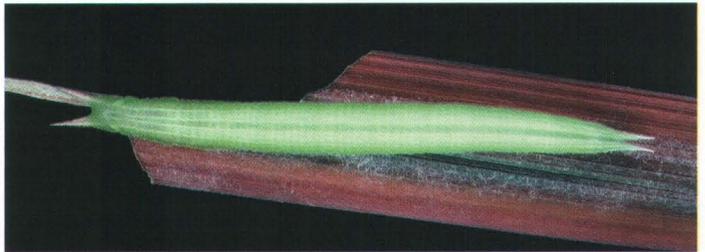
*Xerociris wilsonii* (Grote) (Noctuidae: Agaristinae), male, San Antonio, Texas, reared ex-larva in 2007 by Richard S. Peigler. Specimen now in collection of Andrew D. Warren. Photo by R. Peigler.



Mating Yellow Angled-Sulphur butterflies, *Anteos maerula* (Fabricius). The pair remained "in copula" for over nine-and-a-half hours. See description on page 128 .



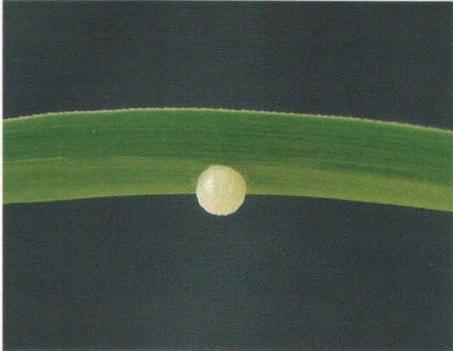
Dainty Sulphur (*Nathalis iole*), photo: Mike Crewe. See pp.139.



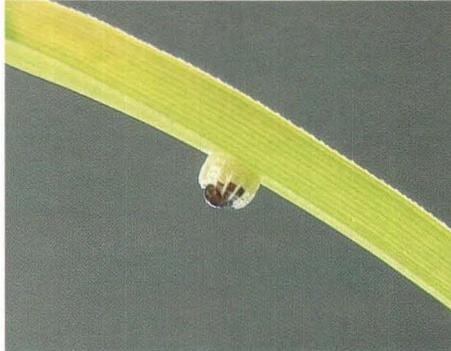
The two color forms of the larvae of *Cyllopsis gemma*. See article on pp. 139.

# Life Cycles: Brown Longtail *Urbanus procne* (Plötz, 1881)

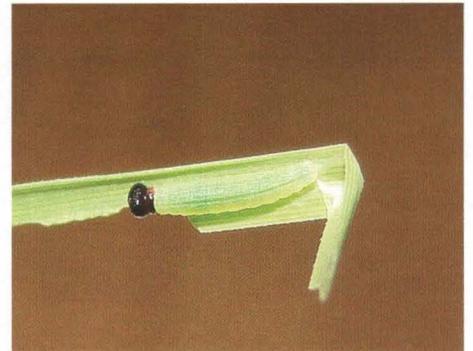
This begins an occasional photo feature focusing on the life histories of a random selection of lepidoptera. All photos on this page were taken by Jan Dauphin ([www.thedauphins.net](http://www.thedauphins.net)), Mission, Texas.



**Day 1** Egg oviposited on Bermuda Grass (*Cynodon dactylon*).



**Day 4** Larva emerging from egg.



**Day 5** One day old and 3.3 mm long.



**Day 8:**



**Day 14:** Preparing to molt.



**Day 15:** 6 mm in length.



**Day 17:** Leaf shelter.



**Day 20:** Outside of leaf shelter; 23 mm.



**Day 23:** 32 mm in length.



**Day 36:** Pupa is seven days old.



**Day 38:** Pupa prior to emergence.



**Day 39:** Adult released, June 22, 2007.

## Membership

The Lepidopterists' Society is open to membership from anyone interested in any aspect of lepidopterology. The only criterion for membership is that you appreciate butterflies or moths! To become a member, please send full dues for the current year, together with your current mailing address and a note about your particular areas of interest in Lepidoptera, to:

Kelly Richers,  
Assistant Treasurer,  
The Lepidopterists' Society  
9417 Carvalho Court  
Bakersfield, CA 93311

### Dues Rate

Active (regular)	\$ 45.00
Affiliate (same address)	10.00
Student	20.00
Sustaining	60.00
Contributor	100.00
Institutional Subscription	60.00
Air Mail Postage for <b>News</b>	15.00

Students must send proof of enrollment. Please add \$ 5.00 to your Student or Active dues if you live outside of the U.S. to cover additional mailing costs. Remittances must be in U.S. dollars, payable to "The Lepidopterists' Society". All members receive the **Journal** and the **News** (each published quarterly). Supplements included in the **News** are the Membership Directory, published in even-numbered years, and the Season Summary, published annually. Additional information on membership and other aspects of the Society can be obtained from the Secretary (see address inside back cover).

## Change of Address?

Please send permanent changes of address, telephone numbers, areas of interest, or e-mail addresses to:

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Los Angeles, CA 90007-4057.  
[Julian@donahue.net](mailto:Julian@donahue.net)

## Our Mailing List?

Contact Julian Donahue for information on mailing list rental.

## Missed or Defective Issue?

Requests for missed or defective issues should be directed to: Ron Leuschner (1900 John Street, Manhattan Beach, CA 90266-2608, (310) 545-9415, [ronleusch@aol.com](mailto:ronleusch@aol.com)). Please be certain that you've really missed an issue by waiting for a subsequent issue to arrive.

## Memoirs

Requests for Memoirs of the Society should be sent to Publications Manager, Ken Bliss (address opposite).

**Submissions of potential new Memoirs** should be sent to:

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Computer Systems Office, Peabody  
Museum of Natural History, P. O. Box  
208118, Yale University, New Haven,  
CT 06520-8118  
[lawrence.gall@yale.edu](mailto:lawrence.gall@yale.edu)

## Journal of the Lepidopterists' Society

Send inquiries to:

Brian G. Scholtens  
(see address opposite)  
[scholtensb@cofc.edu](mailto:scholtensb@cofc.edu)

## Book Reviews

Send book reviews or new book releases for the **Journal** to:

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[pdevries@uno.edu](mailto:pdevries@uno.edu)

*Send book reviews or new book releases for the News to the News Editor.*

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## Submission Guidelines for the News

Submissions are always welcome! Preference is given to articles written for a non-technical but knowledgeable audience, illustrated and succinct (under 1,000 words). Please submit in one of the following formats (in order of preference):

1. Electronically transmitted file and graphics—in some acceptable format—*via* e-mail.

2. Article (and graphics) on diskette, CD or Zip disk in any of the popular formats/platforms. Indicate what format(s) your disk/article/graphics are in, and call or email if in doubt. Include printed hardcopies of both articles and graphics, a copy of the article file in ASCII or RTF (just in case), and alternate graphics formats. Media will be returned on request.

3. Color and B+W graphics should be good quality photos or slides suitable for scanning or—preferably—electronic files in TIFF or JPEG format at least 1200 x 1500 pixels for interior use, 1800 x 2100 for covers. Photos or slides will be returned.

4. Typed copy, double-spaced suitable for scanning and optical character recognition. Original artwork/maps should be line drawings in pen and ink or good, clean photocopies. Color originals are preferred.

## Submission Deadlines

Material for Volume **50** must reach the Editor by the following dates:

Issue	Date Due
1 Spring	Feb. 1, 2008
2 Summer	May 2, 2008
3 Autumn	Aug. 1, 2008
4 Winter	Nov. 7, 2008

Reports for Supplement S1, the Season Summary, must reach the respective Zone Coordinator (see most recent Season Summary for your Zone) by Dec. 15. See inside back cover for Zone Coordinator information.

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(see *WebMaster* opposite)

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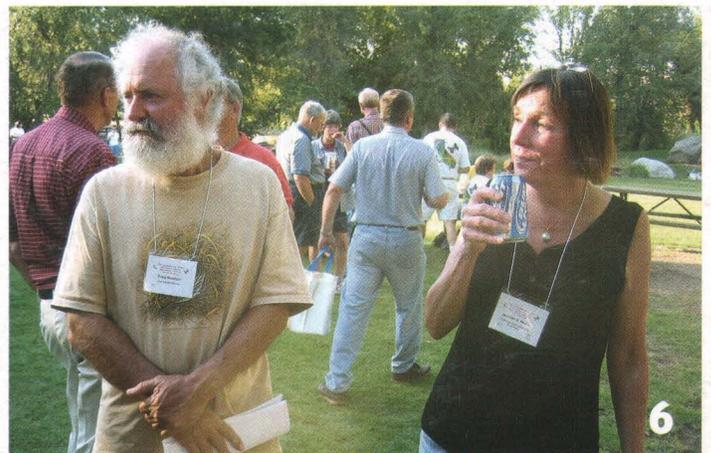
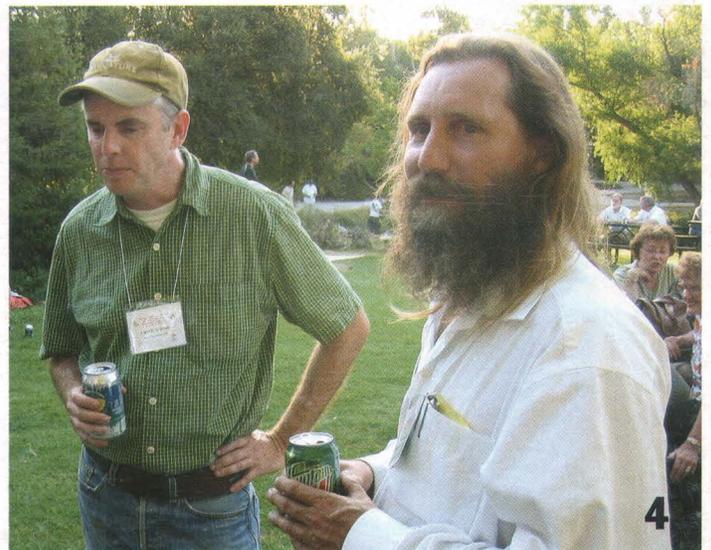
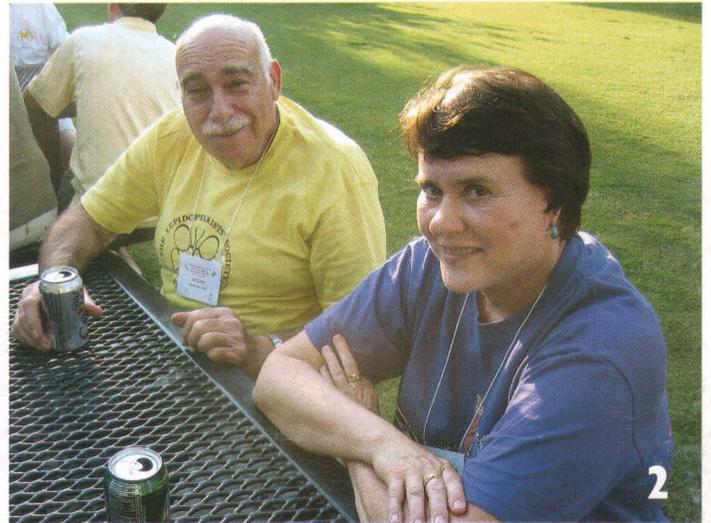
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## 2007 Annual Meeting Photos, Bakersfield, California



1) Floyd Preston, Brian Scholtens, Bob Pyle, Jonathan Pelham; 2) Uri Caspi and Barbara Laudan; 3) John and Laurel Calhoun, Suzette Slocum; 4) Liam O'brien, Ken Osborne; 5) William Miller getting William Winter Sevice Award presented by Willian Connor with Susan Weller receiving for Bill Miller; 6) Craig Rudolf, Jennifer Matos. All photos: Ranger Steve