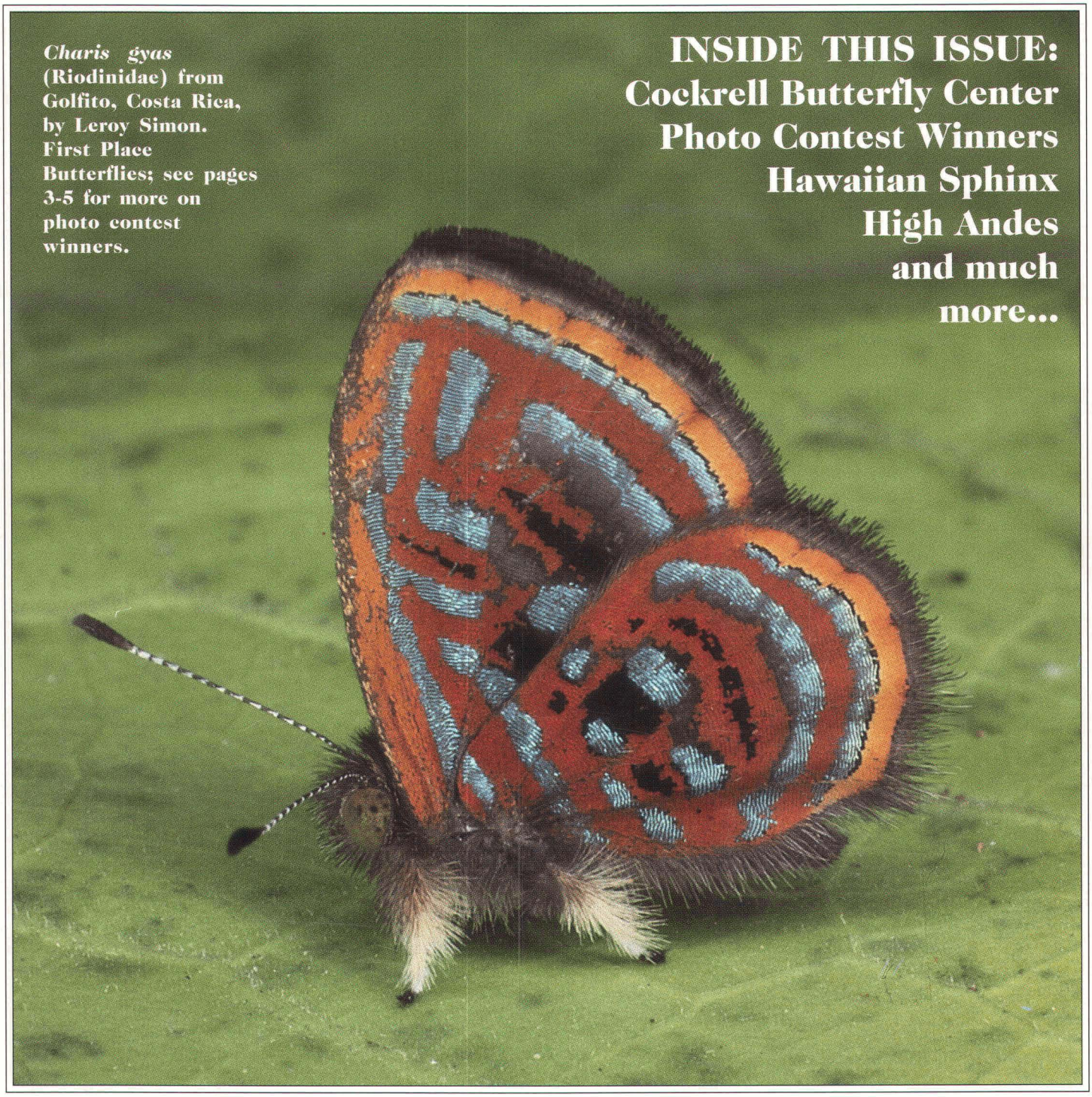
News of The Lepidopterists' Society

Volume 38, Number 1 January 1996



Charis gyas (Riodinidae) from Golfito, Costa Rica, by Leroy Simon. First Place Butterflies; see pages 3-5 for more on photo contest winners.

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News of the Lepidopterists' Society

Volume 38, Number 1 **January 1996**

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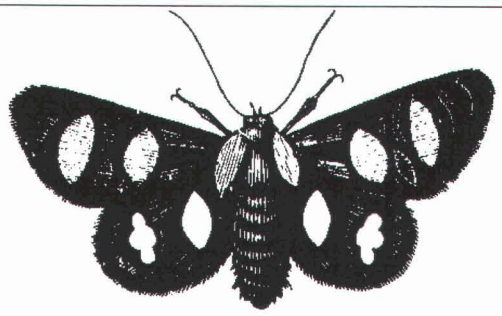


Editors' Note

We're looking forward to seeing you at the Lepidopterists' Society's 49th Annual Meeting in Texas, June 14-17, 1996. Our first feature article by Nancy Greig is about the Cockrell Butterfly Center at the Houston Museum of Natural Science.

Thanks so much for continuing to send in your articles and comments! The *Adventures* section is receiving enthusiastic response. We still want your articles on backyard butterflies and moths, and your funny quips, poems, and stories.

Good news: Charlie Covell will continue his *Wingtips* column if he gets some help from you, so send in your discoveries and advice.

Dr. William D. Winter, Jr. sent suggestions for organizing the *Marketplace*, which we have followed. We hope it makes it easier for you to use. Dave has also determined the proper volume number for this year's News. Adding volume and issue numbers to the News will make articles a lot easier to cite. His formula is:

Calendar year minus 58 is News volume number.

Corrections to the News of the Lepidopterists' Society

Apologies to Ken Davenport for misspelling *Clodius parnassian* on pages 91 and 92 of his article, *Are There Parnassians in the Greenhorn Mountains?* in News of the Lepidopterists' Society #4 (1995).

On page 80 in News of the Lepidopterists' Society #4 (1995), the 49th Annual Meeting in Houston, Texas was listed as being planned for June 21-23. The actual date will be June 14-17.

One line of our summary of a USFWS news release on John W. Kemner was inaccurate. We must have been projecting our own feelings of paranoia into the article! On page 95 of News of the Lepidopterists' Society #4 (1995), the last sentence of the 3rd paragraph should not say "Like the U.S., Mexico prohibits collecting without a permit." Take out "Like the U.S.," and it will be accurate. Jackie Miller pointed this error out to us after she was barraged with messages from worried Lep collectors. She says, "With the increased regulations governing the appropriate use and transport of wildlife, it may appear that permits are required for collecting or any activity regarding wildlife; this is not always the case. It is not illegal to collect in your own yard, provided that an endangered or threatened species is not involved.

National Parks do require permits, as do some National Forests. Please check with the parks and forest personnel well in advance of your arrival and obtain the appropriate permits. If none are required, please obtain a written note stating that this is the case. In addition, please check with your state wildlife agency with respect to collecting insects or any state that you plan to visit and collect. Some states do not have wildlife regulations concerning insects. Remember that federal and state regulations are subject to change. Please re-check with agencies prior to the initiation of any field trip. Plan ahead, and then you will have a rewarding collecting experience." Many apologies for the anxiety caused to all lepidopterists by the error, and to Jackie in particular. Thanks to Jackie Miller for helping us set the record straight on-line and in the News.

The Lepidopterists' Society

The object of the Lepidopterists' Society, which was formed in May 1947 and formally constituted in December 1950, is "to promote the science of lepidopterology in all its branches...to issue a periodical 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 secure cooperation in all measures" directed towards these aims.

See inside back cover for additional Society information.

Annual Photo Contest

by Jacqueline Y. Miller, Associate Curator, Allyn Museum of Entomology, 3621 Bay Shore Road, Sarasota, FL 34234

1995 Winners

The winners of the Annual Photographic Competition for 1995 were Leroy Simon of Leesburg, Florida, and Kirby Wolfe of Escondido, California.

Moths

First Place: *Hyperchiria orodina,* Diamantino, Brazil by Leroy Simon.

Second Place: Geometridae (undetermined) near Neily, Costa Rica by Leroy Simon.

Third Place: *Sysphinx molina* (Mexico) by Kirby Wolfe.

Butterflies

First Place: *Charis gyas* (Riodinidae) Golfito, Costa Rica, by Leroy Simon.

Second Place: *Pteronymia* (Ithomiidae), Ecazu, Costa Rica, by Leroy Simon.

Third Place: *Taygetis thamyra* (Satyridae), Ecazu, Costa Rica, by Leroy Simon.

Life History

First Place: *Othorene verana*, last instar, Mexico, by Leroy Simon.

Second Place: *Eupackardia calleta*, Arizona, by Kirby Wolfe.

Third Place: *Eacles imperialis*, 4th instar, Marion County, Florida, by Leroy Simon

Best in show: *Othorene verana*, last instar, Mexico, by Leroy Simon.

All of the photos by Leroy Simon were taken with a Nikon camera, 90-180 zoom lens, sometimes with a flash.

1996 Photo Contest

The Education Committee of the Lepidopterists' Society invites you to enter this year's Annual Photo Contest. Cash prizes will be awarded in three categories: (A) Life History - Butterflies and Moths on larval hostplant, (B)Adults - Butterflies and Moths in native (original, endemic) habitat, and (C) Adults - Butterflies and Moths, head or portrait view. There will be three prizes awarded in each category: First Prize, $75, Second Prize, $50, and Third Prize, $25. The Best of Show will receive a separate award. All entries will be judged by a three to five member jury, and the awards will be selected based on composition, balance, clarity and compliance with the rules.

Contest Rules

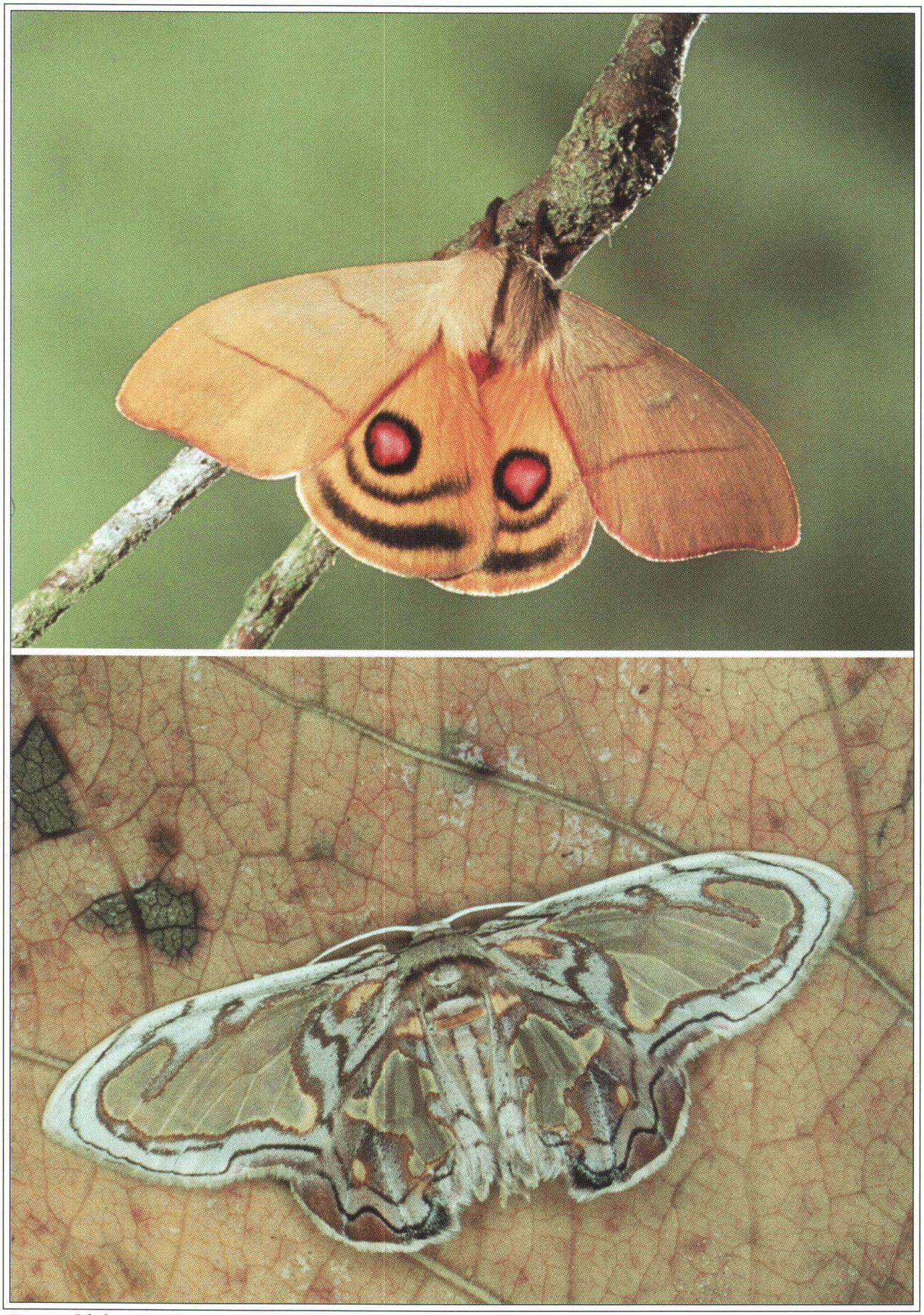
- Submit up to four entries in each category.
- All subjects must be live specimens and photographs must be taken in natural (original) habitats
- Only 8" x 10" color prints on 11" x 14" mounts with white matte will be acceptable
- Each entry must have a completed entry form placed on the back of each photo and a separate completed entry form to be placed adjacent to the photo once judging has been completed. Entry forms may be obtained by contacting Jackie Miller.
- Entry fee of $5.00 US currency for each category to accompany entries along with a postage paid envelope for return of photographs.
- Only members who are in good standing in the Lepidopterists' Society are eligible.
- Deadline for submission is 1 May 1996.

Winning photographs in each category will be featured in the January 1997 News, and selected entries will be on display during the 1996 Annual Meeting of the Lepidopterists' Society. All entries must be received on or before 1 May 1996 and should be sent to the Education Committee, c/o Dr. Jacqueline Y. Miller, Allyn Museum of Entomology/ Florida Museum of Natural History, 3621 Bay Shore Road, Sarasota, FL 34234

1996 Annual Photo Contest Entry Information

Contact Jackie Miller to get a copy of the official entry form. Entries must include the title of the print of sequence, caption information, and any camera or photographic comments.

Top left: ***Othorene verana*****, last instar, Mexico, by Leroy Simon, Best of Show and First Place, Life History. Top center,** ***Pteronymia*** **(Ithomiidae), Ecazu, Costa Rica, by Leroy Simon, Second Place, Butterflies. Top right,** ***Taygetis thamyra*** **(Satyridae), Ecazu, Costa Rica, by Leroy Simon, Third Place, Butterflies. Center right:** ***Sysphinx molina*** **(Mexico) by Kirby Wolfe, Third Place, Moths. Bottom right:** ***Eupackardia calleta*****, Arizona, by Kirby Wolfe, Second Place, Life History. Bottom left:** ***Eacles imperialis*****, 4th instar, Marion County, Florida, by Leroy Simon, Third Place, Life History.**



Top: ***Hyperchiria orodina*****, Diamantino, Brazil by Leroy Simon, First Place, Moths. Bottom: Geometridae (undetermined) near Neily, Costa Rica by Leroy Simon, Second Place, Moths.**

Challenge Grant for the Karl Jordan Medal

by Charles V. Covell Jr., Dept. of Biology, University of Louisville, Louisville, KY 40292-0001, Telephone: (502) 852-6771 (office), (502) 852-0725 (FAX), (502) 456-6122 (home), e-mail: cvcove01@ulkyvm.louisville.edu

Remember that the deadline to match the challenge grant offered by Dr. J. Benjamin Ziegler to provide an endowment for the Karl Jordan Medal is 1 March. For further details, see page 86 of News of the Lepidopterists' Society #4 (1995). Special thanks to everyone who has contributed to this worthy fund. But we still need your assistance. Help support this effort to recognize outstanding lepidopterological research. Act today!

An Easy Way To Join The *Societas Europaea Lepidopterologica*

The *Societas Europaea Lepidopterologica* is the European lepidopterists' society, founded as an international organization in 1977. It has an international meeting (congress) every two years (next one is May, 1996, in Spain), publishes a *News* and scientific quarterly, Nota Lepidopterologica, much like the Journal of the Lepidopterists' Society. This is in various languages including English, and with an English abstract, if not entirely in English. Dues are 55 DM (Deutschmarks) for the first year, and 50 DM a year thereafter. The cost of having a draft made in DM can be saved by sending dues to the North American agent in dollars. He then combines payments and sends one check to the Treasurer, Manfred Sommerer in Germany. Membership is open to all, and is a good way to establish contact with amateur and professional lepidopterists in other parts of the world. If interested in membership, please contact the agent, Charles V. Covell Jr.

Note For Zone 1 Season Summary Submissions

from Kenelm Philip, Zone 1 Coordinator, Season Summary, e-mail: fnkwp@aurora.alaska.edu

I would like to request that any people planning late submissions of reports to Zone 1 of the Season Summary cast their reports in the pre-1995 format (normally lists of species for localities for a range of dates). There are some special circumstances with Zone 1 that make such a format more useful for the original report—and such data are also more appropriate for use with the Alaska Lepidoptera Survey (ALS). Because of the ALS, late reports are happily accepted, even if the data should not make the Season Summary. I will transfer the data into the new format myself before passing them on to the Season Summary Editor.

Wingtips May Re-Commence

Charlie Covell, who wrote the "Wingtips" and "The Spreading Board" column in past issues of the News, is willing to contribute some more, if he hears from the membership. From you he needs hints, tips, information, experiences, and other useful material on any subject of interest to lepidopterists. He uses your input to write the Wingtips column. Contact him at the following address: Charles V. Covell Jr., Department of Biology, University of Louisville, Louisville, KY 40292-0001, Telephone: (502) 852-6771 (office), (502) 852-0725(home); FAX: (502) 456-6122, e-mail: cvcove01@ulkyvm.louisville.edu

Letter to the Editors ✍

Dear Editors:

The Endangered Species Act, like all regulatory approaches, does little to achieve its stated objectives and much to empower bureaucracies. Land owners likely to experience a diminution of their investments are wont to deem the mere presence of rare species a bane.

The gutting of the Endangered Species Act is not the death knell of our natural diversity, but rather a trumpet call for incentive-based, market-oriented approaches to the problem. We should be giving tax credits, stipends, and other incentives to individuals and institutions who preserve natural habitats and foster rare species, not sending in thugs to threaten, arrest, harass, or confiscate property in the name of unenforceable laws.

Lepidopteran conservation, because of the relative ease at which food plants can be sown, roadsides left unmowed, and spraying programs limited to absolute necessity, can be the flagship in these endeavors. Zoos, parks, and arboretums can display exotic specimens in their greenhouses. Shopping malls with extensive indoor flower beds and sky roofs might consider the esoteric benefits of brilliantly-hued butterflies fluttering about the airy, sunlit spaces overhead. Such an attraction lends itself to publicity opportunities.

The living things that share our planet with us, especially the exotic or beautiful, are more likely to be appreciated (and thus protected) when they become a familiar and welcoming sight rather than mere curiosities from some far-off place. The birdwing butterflies of Borneo, for example, extraordinary though they are, mean less to me than the monarch butterfly fluttering in a local field; the latter being a constant in an otherwise hectic and changing lifetime.

Paul Manton
10 Flower Street
Hicksville, NY 11801

Lepidopterists' Society Meetings

49th Annual Meeting To Be Held in Houston, Texas

The next Annual Meeting of the Lepidopterists' Society will be held on Thursday, Friday, Saturday, and Sunday the 13, 14, 15 and 16th of June, 1996, at the Houston Museum of Natural Science in Houston, Texas. The Cockrell Butterfly Center is hosting the meeting, and will be featured in the January issue of the News of the Lepidopterists' Society. All conference talks, presentations, and the Saturday night banquet will be held at the Houston Museum of Natural Science.

Registration will commence on Thursday evening, June 13, with a reception, and will continue through Sunday (noonish), June 16, 1996. There will be a Friday night picnic and a Saturday night banquet in addition to the 2.5 days of talks. Field trips may be held both before and after the conference (perhaps on or before Thursday, and on or after Sunday afternoon).

Lodging is available at the Wyndham Warwick Hotel, the official hotel for the meeting. It is located one block from the museum at 5701 Main Street. The Lepidopterists' Society's special rate is $85 per room (2 double beds, up to 4 people; rollaway beds are available for $15). The hotel can be reached at (713)526-1991, and mention that you are coming for the Lepidopterists' Society Conference for the special rate. Parking in the hotel's garage is $6.50 ($10.50 for valet parking).

For cheaper rates, but less ideal location, room reservations can be made with the Holiday Inn Medical Center (6701 S Main Street) and the Harvey Suites Hotel (6800 S Main). Double rooms at the Holiday Inn are $65.00, with $10.00 for a cot; a double at the Harvey Suites is $68.00. The Harvey Suites also has double rooms with a kitchenette for $72.00. Parking at both places is free (as far as we know). These hotels are about 1 mile from the museum. Reservations for either hotel can be made through the Holiday Inn, at (713)797-1110.

The Houston Museum of Natural Science's location is ideal—in central Houston, adjacent to the Fine Arts and Contemporary Arts museums, Rice University, and Hermann Park. Hermann Park contains the Houston Zoo, Miller Outdoor Theater, and a garden center, reflecting pool, etc. We will probably have our picnic there or at the Houston Arboretum. Montrose Street running north of the museum has plenty of restaurants within less than a mile from the museum.

For more information on the meeting and how to register, contact Nancy Greig or John Watts:

Nancy Greig
Director, Cockrell Butterfly Center
Tel: 713-639-4678
ngreig@hmns.mus.tx.us

John Watts
Entomologist, Cockrell Butterfly Center
Tel: 713-639-4750
jwatts@hmns.mus.tx.us

Mailing address and FAX for both are the same:

Houston Museum of Natural Science
One Hermann Circle Drive
Houston, TX 77030-1799
FAX: 713-523-4125

50th Anniversary Meeting

A World Congress of Lepidopterists 9-13 July 1997

The 50th Annual Meeting of the Lepidopterists' Society will be held 9-13 July 1997 (Wednesday through Sunday) at Yale University, in New Haven, Connecticut USA. The hosts for the meeting will be the Entomology Division of the Peabody Museum of Natural History, and the Connecticut Butterfly Association. There are several workshops on lepidopteran topics being organized at present, as well as invited symposia/talks, a poster session, exhibits, a banquet and barbecue, field trips and butterfly counts, and other assorted festivities.

More details about the 1997 Anniversary Meeting will be distributed as soon as they become settled. The News of the Lepidopterists' Society and several online discussion lists will carry these announcements (the latter include the newsgroup sci.bio.entomology.lepidoptera, and the LEPS-L listserver located at yalevm.cis.yale.edu).

For advance program information, including queries about submission of abstracts and symposium participation, contact:

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Louisville, Kentucky USA 40292
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email: cvcove01@ulkyvm.louisville.edu

For advance questions about local arrangements, contact:

Larry Gall
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Peabody Museum, Yale University
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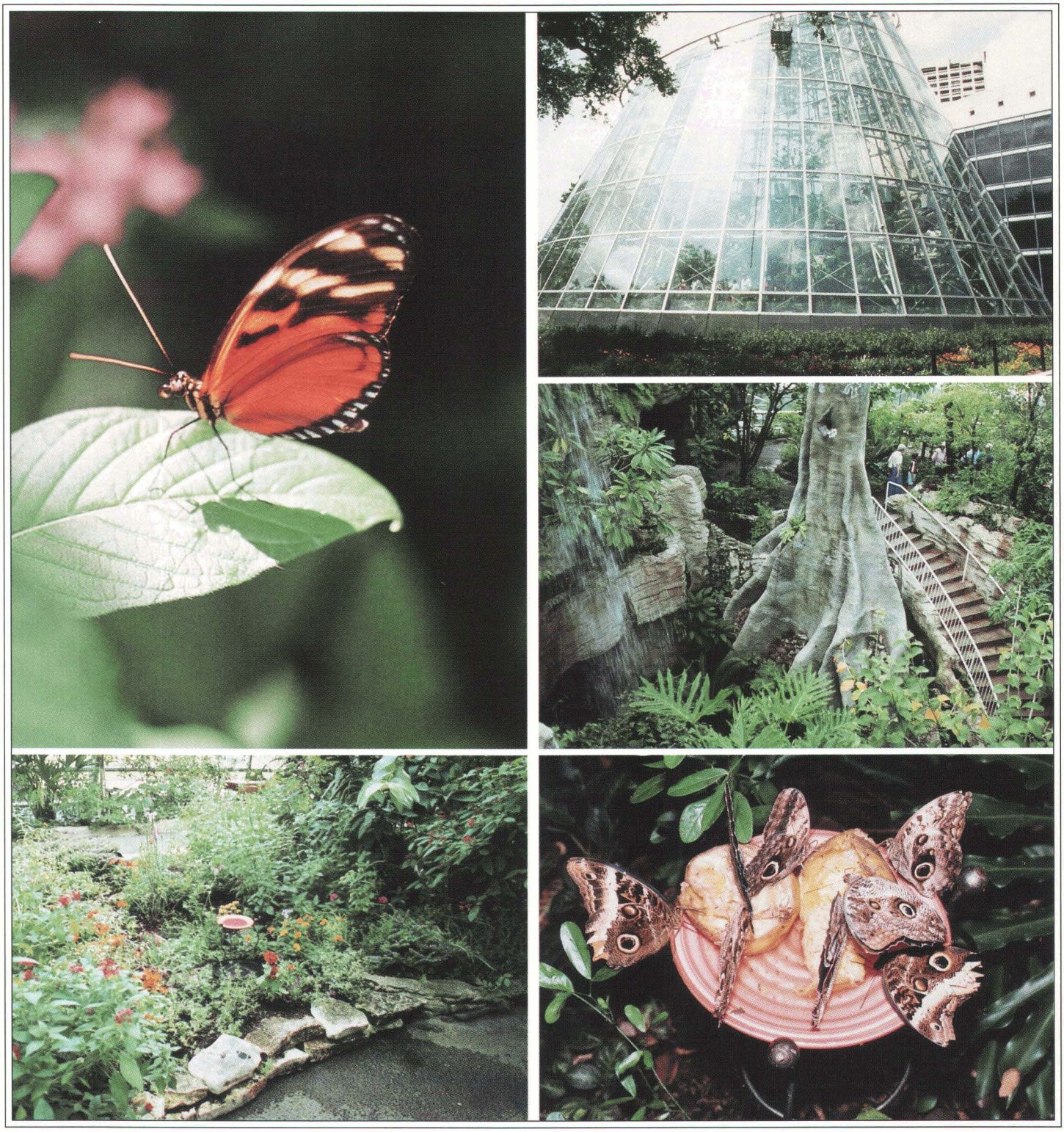

Cockrell Butterfly Center, Houston, Texas. Top left: A butterfly in the genus *Heliconius* from Central America can be seen close-up at the Butterfly Center. Top right: glass exterior of the building. Center right: The stream and huge, buttressed "tree" (not real, but a cleverly disguised air vent), that visitors pass by on their way to the main level where most of the butterfly activity occurs. Bottom right: owl butterflies (*Caligo* spp.) are attracted to fruit station at the Center. Bottom left: view of flowers planted for nectaring butterflies.

Cockrell Butterfly Center

by Nancy Greig, Ph.D., Director, Cockrell Butterfly Center at the Houston Museum of Natural Science, One Hermann Circle Drive, Houston, TX 77030-1799 Telephone 713-639-4678, FAX 713-523-4125, e-mail ngreig@hmns.mus.tx.us

The 1996 annual meeting of the Lepidopterists' Society will be held in Houston, Texas, hosted by the Cockrell Butterfly Center. The Center opened July 1, 1994, a new permanent exhibit at the Houston Museum of Natural Science, and the museum's first exhibit featuring live animals and plants. There are about eight other live butterfly displays in the USA of about the same scope as the Cockrell Center, including Butterfly World in Ft. Lauderdale, Florida, Callaway Gardens in Pine Mountain, Georgia, and several others. Some of these are listed in *Where are the butterfly gardens?* (see page —, Publications of the Lepidopterists' Society), although several have opened in the past two years.

All of these live butterfly exhibits work on the same general principle. They provide an "interactive" visitor experience by allowing people to wander among free-flying butterflies and to see up close these beautiful, non-threatening insects behaving in a relatively natural manner. Because butterflies are so cherished and "user-friendly," they can serve as ambassadors for the rest of the insect world, most members of which are despised or feared. These popular displays are a great educational tool and a good way to turn people on to nature in general.

Originally conceived of as a simple enclosed butterfly garden, the Cockrell project swelled in scope during the planning stages, to become a whole rainforest exhibit, incorporating elaborate rock-work, water features, authentic vegetation, and small displays of other animals. Construction was complicated, and involved several Houston firms (architecture, plumbing, and heating and cooling), as well as national enterprises such as the Larson Company (interior rock-work and waterworks), McCaren Designs (interior landscaping), Mee Fog systems (mist and fog features), and Wild Sanctuary (a natural sounds outfit).

The completed Cockrell Butterfly Center is a 70-foot tall, truncated cone built of glass and steel. Its theme is a Central American rainforest, and as such it is built around a replica of a *cenote* — a limestone sinkhole. Some *cenotes* were used as sacrificial wells by the ancient Maya of Central America. A 40-foot waterfall cascading into the *cenote* provides a dramatic centerpiece. Visitors enter through a cave-like opening on the lower level, walk up stairs past a stream and a huge buttressed tree (not real, but a cleverly disguised air vent), and onto the main level where most of the butterfly activity occurs. Paths wander through patches of rainforest vegetation interspersed with more meadow-like areas planted with various flowering plants (nectar sources). An elaborate sound system playing recorded animal sounds from Costa Rican rainforest, fog emitters providing both humidity and "atmosphere", and small exhibits of other rainforest animals scattered through the center all add verisimilitude to the physical environment. Temperature and humidity are maintained at levels appropriate to a rainforest (and optimal for the butterflies): 78 to 80°F, with a drop of about 5 to 8 degrees at night, and about 80% relative humidity. The tropical vegetation flourishes in this environment, as do several ant species and a plethora of plant pests (only biological control is used). In addition to New World palms, various trees, epiphytes, and lianas, the plant collection includes economic species such as fruit trees, medicinal plants, etc.

Another stairway leads to the third level, where a balcony overlooks the center. Three "hatcheries" (perhaps better called "emergeries") are set in the back wall of the third level, between replicas of carvings from Mayan temples. Here people can observe many different chrysalides and occasionally have the chance to see a butterfly emerge.

From the third level, one exits from the live exhibit directly into the 3,000 square foot Brown Hall of Entomology. Here photographs, text, about 2,000 specimens (mostly showy tropical butterflies, moths, and beetles) and other props are used to present various aspects of insect biology and taxonomy. The insects on exhibit are from a collection of about 100,000 specimens, obtained by the museum from a private individual (Mike Whitley) in 1988. Whitley bought most of his specimens from dealers rather than collecting them himself. However, he did a beautiful job of mounting the specimens, and while not a good research collection, the Whitley collection is excellent for education and display purposes.

Between one and two thousand individual butterflies are maintained in the live exhibit. Most are imported from butterfly farms in Central and South America, others from Asia and the southern USA. Permits from both the US Departments of Agriculture and Fish and Wildlife Service are required: our permit list from the USDA currently includes about 150 different species, both exotic and native. Some of the most successful and showy species in the Center are the heliconiines; danaines such as *Danaus* and *Idea; Caligo* and *Morpho* species; swallowtails including *Parides* and *Graphium*; and fruit-feeding nymphalines such as *Hamadryas* and *Catonephele.* In addition to the imported butterflies, Butterfly Center staff raise from 500 to 1,000 butterflies a month on site. Native species that pose no escape risk are reared in greenhouses located on the top floor of the museum's parking garage; exotic species are reared in containers behind the scenes in the Center itself.

The Houston Museum of Natural Science is located in Hermann Park in central Houston, adjacent to Rice University, Miller Outdoor Theater, the Houston Zoo, and medical centers. A

(Continued on page 10)

Notes and Observations

New Food Plants for *Eumaeus atala* in Florida

by Roger L. Hammer, 17360 Avocado Drive, Homestead, Fl 33030

The lycaenid butterfly *Eumaeus atala* Poey occurs in southern Florida, the Bahamas, Cuba (including the Isle of Youth) and on the small island of Cayman Brac about 200 km south of Cuba (Miller and Steinhauser, 1992). Although some authors separate the Florida population as a distinct subspecies, *Eumaeus atala florida* Röber, recent studies have failed to identify any appreciative differences between the four geographical atala populations when collected in adequately long series (Smith, Miller & Miller, 1994).

Throughout it's range, the atala hairstreak utilizes a native cycad, *Zamia pumila*, as larval food. As with the butterfly, there is considerable disagreement about the taxonomic status of the different geographical populations of this cycad. The early Florida botanist, John Kunkel Small, named four different species of *Zamia* from Florida, and other authors described a number of species from the West Indies, citing leaflet size, venation, and other morphological differences. Recent studies either recognize only one Florida and West Indies species (Eckenwalder, 1980; Walters, 1991), or six distinct species (Stevenson, 1987). The upcoming publication, The Flora of Florida, spearheaded by Fairchild Tropical Garden in Miami, will follow the conservative approach and list only a single species, *Zamia pumila*.

Fairchild Tropical Garden (FTG) maintains a large collection of cycads from around the world. In October 1980, the author was influential in establishing a population of atala hairstreaks in FTG (much to the dismay of the superintendendent and groundskeepers!). Larvae were reared from an atala population found on Virginia Key (Dade County) in November 1979 and, eleven months later, 46 larvae were placed on plants of *Zamia pumila* growing in a remote area of FTG. Once established, the adult female atalas not only took advantage of the extensive plantings of *Z. pumila*, they utilized other cycads as well. One species in particular is *Zamia fischeri,* native to Mexico. This species commonly hosts atala larvae at FTG, and is utilized even when young, succulent growth on nearby plants of *Z. pumila* is available. The coarse-leaved *Zamia furfuracea* and *Z. loddigesii* have also been seen by the author supporting atala larvae at FTG. Interestingly, *Z. loddigesii* is the larval host plant of the White-rim Cycad hairstreak, *Eumaeus minijas*, in Mexico. In addition to the author's observations, Chuck Hubbuch, Curator of Palms and Cycads at FTG, reports atala larvae *on Zamia fairchildiana, Z. pygmaea, Z. skinneri*, and *Z. vazquessii* as well, and feels that atalas will utilize any *Zamia* species if given the opportunity.

Other interesting atala host plant records from FTG include two South African cycads, *Encephalartos villosus* (a primary host at FTG) and *E. hildebrandtii*, along with the Australian *Macrozamia lucida* (also a primary host) and *Cycas cairnsiana.* Chuck Hubbuch (personal communication) reports that, to date, no atala larvae have been observed on *Ceratozamia*, native to Mexico, nor *Microcycas* from Cuba. Although captive atala larvae were reared in the late 1800s on *Cycas revoluta* (native to China and Japan), by J. Gundlach in Cuba, the use of other cycads by *Eumaeus atala* has not yet been fully documented. Fairchild Tropical Garden offers the perfect living classroom.

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Smith, David Spencer, Lee D. Miller, and Jacqueline Y. Miller. 1994. The Butterflies of the West Indies and South Florida. Oxford University Press. 107-108.

Stevenson, D.W. 1987. *Again the West Indian zamias.* Fairchild Tropical Garden Bulletin 42:23-27.

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Cockrell Butterfly Center

(Continued from page 9)

privately owned, non-profit institution formed in 1909, the museum has grown tremendously over the past several years, from a sleepy little institution with a few dusty exhibits to the fourth most visited museum in the nation. Today the museum includes a planetarium, an off-site observatory, IMAX theater, a number of permanent exhibits (gems and minerals, paleontology, culture of Southwest Native Americans, chemistry, oil and gas formation and exploration, Texas and Serengeti natural history, and the Butterfly Center) and numerous temporary exhibits. Attendance in 1994 topped 2.5 million visitors, 550,000 of which were school children on field trips. Over 600,000 of these visitors went through the Butterfly Center (a separate venue from the other museum exhibits).

We look forward to hosting the 1995 Annual Meeting of the Lepidopterists' Society! Information about hotels, field trip opportunities, registration, hotels, etc. can be found on page 7 of this issue.

Notes and Observations

Aggregations of Pipevine Swallowtail Pupae (*Battus philenor*: Papilionidae) Found in California

by Mr. Leslie V. Smith, 966 43rd Avenue, Sacramento California 95831

In Goethe Park, Rancho Cordova, Sacramento County, California, above the eastern banks of the historic American River, is a meadow that was once a sand and gravel pit produced by a gold digging operation. Eight hundred meters north of the meadow is a roadsign. In July of 1984, I discovered 64 pupae of the pipevine swallowtail, *Battus philenor* (L.), along the lower edge of a brown painted roadside sign. Occasional revisitation of the site turned up no more pupae on the sign.

However, on June 6, 1992, I found additional aggregations of pipevine swallowtail pupae in the vicinity of the meadow. On the eastern rim of the gravel pit there are three large red gum trees (*Eucalyptus camaldulensis* Dehn, Myrtaceae) overlooking the meadow. On the trunk of the central red gum tree, I found about 160 brown pupae of the pipevine swallowtail. The aggregation was 7 to 9 m above the ground, in the shape of a dumbell, on the west side of the tree trunk. The pupae were organized in vertical lines of maybe eight to ten per column. In early August, the red gum trees went into apparent dormancy, and their bark was shed. The pupae fell with the bark onto the ground, and most of the swallowtails died.

North of these three red gums trees, another aggregation of pupae was found on the same day. About 4 m above the ground, again on the west side of the tree, I found approximately 40 brown pupae. This tree was also a red gum, but had many stems, rather than a single trunk. Most of the pupae were found on the largest stem of this tree, but a few individuals were scattered around on other sides of smaller stems. Very few pupae were found on nearby vegetation.

About 200 m west of the coppiced red gum is a native pine, *Pinus sabiniana* Dougl., 7 m high and about 30 years old. I also found 11 more brown pupae on the trunk and limbs of this conifer that day.

On May 17, 1994, 2 years later, more pupal aggregations were found. Half-way up the east slope of the gravel pit, a smaller *Eucalyptus camaldulensis* was found with 25 brown, 2 green, and 1 blackish pupae. These were scattered around the leafy lower branches of the tree. Later, on 27 December 1994, a few more pupae were found on this tree.

No larvae or pupae could be found on the three original red gum trees on 17 May 1994, but pupal shells, probably from 1993, were still attached to the trunk. However, on December 27, 1994, many pupae were found on the original trees.

Sims and Shapiro (1983 and personal communication) found 300 *B. philenor* pupae on the concrete supports of a freeway overpass in Bidwell Park in Chico, near Vacaville, California, during 1974-5. These authors stated that populations of pipevine swallowtails in different habitats are heterogeneous in pupation site selection. They speculate that temperature, photoperiod, color, texture, and substrate width can all interact to influence the selection of a pupation site. In another study, West and Hazel (1979) found pipevile swallowtail pupae on exposed surfaces such as tree trunks or cliffs, well off the ground in Virginia.

Are there characters in red gum foliage and/ or bark that attract pipevine swallowtail larvae to them?

Literature Cited

Sims, S.R. and A.M. Shapiro. 1983. Pupal color dimorphism in California *Battus philenor*: pupation sites environmental control, and diapause linkage. Ecological Entomology 8:95-104.

West, D.A. and Hazel, W.N. 1979. Natural pupation sites of swallowtail butterflies (Lepidoptera: Papilioninae): *Papilio polyxenes* Fabr., *P. glaucus* L. and *Battus philenor* (L.). Ecological Entomology 4:327-392.

Occurrence of *Hemiargus ceraunus* (Lycaenidae) at Incandescent Light

by Thomas S. Williams, 702 67th Street West, Bradenton, Florida 34209

Butterflies have been infrequently recorded at light. This article lists a blue for the first time attracted to light. Opler (1992) made no mention of any blue or any butterfly species at all being attracted to lights. Brou (1974) listed 28 species of butterflies taken in light traps in Louisiana, but recorded no blues.

On 6 August 1995, I observed a male *Hemiargus ceraunus antibubastus* Hubner at an incandescent light. The time was 0500 hours, and the location was Sarasota, Florida. This butterfly remained there until daybreak at approximately 1700 hours, when it flew away.

Literature Cited

Brou, V.A. 1974. Butterflies taken in light traps. Journal of the Lepidopterists' Society 28:331.

Opler, Paul A. 1992. A field guide to eastern butterflies. Houghton Mifflin Co., Boston, MA. Xvii + 396 pp.

To Net or Not To Net? A "Butterflier's" Conundrum

by John H. Acorn, 132 Walsh Crescent, Edmonton, Alberta, Canada, T5T 5L7, Telephone and FAX: (403)486-2390

When I was six years old, my father took me on a nature walk, led by one of the local pioneers in environmental education. Along the way I found an insect I didn't recognize. The leader didn't know what it was, gave me some transparently fluffy account of how important it was to the forest, and told me to let it go— but I slipped it in my pocket instead. I wanted to know something about it, and letting it go would not have helped me at all. The leader's methods might work to turn out "normal" citizens with "respectful" attitudes toward nature, but they are no way to educate a naturalist. Kids, especially, learn by doing things, and by direct contact with things.

I went on to become a junior insect collector (a normal if uncommon thing to do in those days), and I now have an M.Sc. in entomology. I must admit, I no longer collect when I can identify insects in the field (mind you, I work in nature television now, not research), but I would have quickly lost my enthusiasm had I not gone through a period where I could catch and examine the creatures that fascinated me so much without being told that my approach to nature was uncaring. I knew that I cared more than anyone else around me.

These days, I am an active proponent of butterfly watching. I am the author of one of only three butterfly watching guides published in North America (*Butterflies of Alberta*, 1993, Lone Pine Publishing, Edmonton.), and each summer I teach groups of people how to identify and interpret the behavior of butterflies at a distance, and each time I do so there are a few kids (and sometimes a few adults) who bring their nets. When this happens, I remember that nature walk. Should I let them make physical contact with the butterflies?

There are some in the butterfly watching movement who would turn these people away, or ask them to put the nets aside. On the contrary, I first show the net-wielders how to approach butterflies with binoculars. I admonish them to hold back and try a new approach while the group admires a nectaring butterfly. But when that mystery brush-foot goes charging by, with no intent of stopping and no identification possible, I let the netters off their leash.

Once the butterfly is captured, I demonstrate gentle handling, identify the butterfly, and release it unharmed. Most butterflies engage in a brief burst of escape behavior, and then return to life as usual. If you watch, you can see it happen.

It is important to remember that not everyone with an interest in butterflies possesses a pair of binoculars. Among those who do, not everyone can use them easily, especially at close distances or on quickly-accelerating butterflies. Not all binoculars are suited for butterfly watching, either: many will not focus closer than about 12 feet, while others (traditional porro prism models, the most common and economical design) have widely separated objective lenses which do not permit overlap of the left and right visual fields at close range, owing to parallax. A minimum investment for a pair of butterfly binoculars might be $100, while even a commercially produced net costs a fraction of that.

Butterfly watchers point out that the study of birds was originally conducted with a shotgun and a scalpel, before Roger Tory Peterson sent us all out with binoculars and field guides. A few decades later, it seems time for butterfly enthusiasts to follow suit. But a shotgun blast has a rather permanent effect, and field ornithology was not the only consumptive act going on in the great outdoors. What about angling? Like butterflies, fish are first caught, then killed. There is a decision point between these two acts. Recently, fishing has been swept by a catch-and-release ethic, partly for moral reasons, but mostly because we are perceived to be running out of fish. Meanwhile, fishing itself is more popular than ever.

Interestingly, a fisheries biologist friend tells me that the scientific literature shows quite clearly that barbed hooks kill fewer fish than barbless ones, and that the great majority of anglers and fisheries managers have refused to accept this finding. As our behavior toward living things changes, rational thought is not always a major player.

Is catch-and-release a legitimate option for "butterfliers" as well? It is difficult to imagine why not. A soft net will not harm a butterfly, and neither will a gentle grip on the sides of the thorax, or the leading edges of the folded front wings. With a bit of practice, the techniques can be mastered by all but the clumsiest among us, and they are clearly less dangerous to our quarry than the hooks used by fishermen (among whom a 5-10% hooking mortality is considered acceptable, if not commendable). If safe butterfly handling wasn't possible, the innumerable studies performed by lepidopterists on marked individuals would not be possible, either.

Let's return to the birding analogy. Amateur bird banders catch, hold, identify, and band vast numbers of birds each year, without harm to the birds or to the public image of birders. Yes, the use of mist nets is regulated, but the fact remains that bird banding is a useful, accepted, and common activity.

Stop for a moment to consider our society's typical interactions with butterflies. We see them flit past in the garden. We see them in art and in craft, some of which is made from the bodies of butterflies themselves. We see them pinned in museums. We also splatter them on our windshields, and assault their larvae with such varied weapons as pesticides and lawn mowers. All of this is normal, everyday fare. Butterfly life is appreciated here in North America, but it is also cheap.

Now consider the experience of people interested in insects. (I get the feeling that some "butterfliers" have forgotten that these creatures are insects.) To entomologists, a collection is a very familiar thing, while the idea that you can identify *any* group of insects at a distance is a novelty. Among amateur naturalists, it stands to reason that butterfliers will eventually be joined by tiger beetlers, dragonfliers, ladybirders (yes, most of these are identifiable at a distance, and I am currently working on guides to the species in my area), and any other group with a "field guide" to their quarry that actually works in the field. It might be useful for the watchers to anticipate this.

Unlike butterflies, not all insects can be identified with binoculars. A good number of dragonflies (and yes, some butterflies) absolutely require examination with a hand lens for identification. Among other groups, as the animal becomes smaller, the need for a handlens becomes more and more frequent. Will the emerging fashion deny non-collecting naturalists access to these groups by insisting now that catch-and-release is in bad form? Of course not. Are these organisms less important than butterflies, or less worthy of our attention? Of course not.

All of this is not to say that nets are a requirement for butterfly enthusiasts. If they don't want to carry a net, they certainly don't have to. It's an option, like a spotting scope. Some people are embarrassed to be seen with a net, and for them I have some sympathy. On the other hand, these days I host a television series called "Acorn, The Nature Nut," (a light-hearted, family-oriented portrayal of

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(Continued from page 12)

naturalist activities), and I often use a net on-camera when dealing with insect subjects. In Canada alone, as many as 100,000 people watch each episode. So far, not a single complaint has come in, and I feel proud when people recognize me in my field gear. I portray the act of netting in a tongue-in-cheek way, often as a pseudo-martial art. It is fun, and I always try to convey concern for the creatures I capture, mixed with a casual shrugging-off of the awkwardness of carrying a net.

Jeffrey Glassberg, President of the North American Butterfly Association (NABA), tells me that fear of being seen with a net is, in his experience, "a strong barrier to more people championing the cause of butterflies." In fact, an earlier draft of this article was rejected on principle by NABA's flagship publication "American Butterflies," which apparently does not permit as much as a discussion of any technique other than watching at a distance. Fortunately for the science of entomology, and rational naturalists everywhere, a tiny group like NABA will never change the values of an entire society. Butterfly nets are available in any toy store. You can make them at home. They are legal. However, recognizing and building on the values that already exist in society is the reason butterfly watching has enjoyed such successful beginnings.

The rationale behind butterfly watching is clear. Our society has always looked askance at its stereotype of the butterfly collector, that odd (and usually male) figure who pursues such delicate beauty only to kill and impale it, and then claims nothing more, or less, than an objective, scientific motive for the act. Collectors rightly point out that their activities are a negligible threat to all but the most tiny and localized of butterfly populations, and that they are increasing our knowledge in a way that would not be possible without the killing jars and the spreading boards. Still, however, they are snuffing the life out of individual butterflies, and individual butterflies are things of beauty. Few non-entomologists can completely forgive such an act.

As attitudes in our society change, I hope that lepidopterists of all persuasions will remember the usefulness of catch-and-release, as one technique among many for butterfly studies in the field. Netting is a recognized option on Fourth of July Counts. It does no harm to butterfly populations nor to individual butterflies, and whether or not it does harm to your image, and the image of butterfly appreciation in general, seems to be determined primarily by who you are, where you live, and how you are used to interacting with nature.

It would be a mistake for lepidopterists to underestimate the potential popularity of butterfly watching, and another mistake to position butterfly watching so far outside the experience of both everyday people and everyday entomologists that only the purest of the purists are made to feel welcome in the pursuit of butterflies. Butterflies need friends— lots of friends— and to gain many friends one must be prepared to welcome the differences among people. The heyday of the amateur collector may be over, but the net, however "nerdy" it may seem to some, is also a symbol of innocent abandon to the chase for those ephemeral flutterings we all know and love. In my opinion, it is time for lepidopterists to open a dialogue with the "butterfliers," and remind them of these things.

A Spring Collecting Adventure

Part One: How To Identify Moths Before They Hit Your Windshield While Driving 50 mph On a Cold Night

by Leroy C. Koehn, 207 Quail Trail, Greenwood, MS 38930-7315, Telephone (601)455-5498

In early April of 1986, Denny Currutt, Vince Lucas, and I left my home in Huntsburg, Ohio, late on a warm spring Tuesday afternoon, on a collecting adventure to the east coast of North Carolina and Virginia. I managed to drive all night, and we arrived at about 9:00 am at a collecting area about 20 miles east of Supply, North Carolina, on State Route 211.

We were aware, prior to our departure, that a rapidly moving cold front would pass through the area on Wednesday afternoon. We collected *Amblyscirtes carolina, A. reversa,* and *A. alternata* before the clouds of the cold front arrived and ended our collecting around 1:00 p.m. Due to a scheduling conflict, I had to be in Suffolk, Virginia, on Thursday morning, to pick up a collecting permit from the Great Dismal Swamp Wildlife Refuge, which I would use later in the year. We left the Supply area, and headed north on I-95.

After driving all night and collecting all day, I was extremely tired, and climbed into the back of Vince's van to sleep on our journey up I-95. I awoke as we exited I-95 at Emporia, Virginia. I noticed the Planter's Bank sign, which indicated the time and temperature: 7:30 p.m., and a chilly 38 degrees. Denny was driving as we headed east on US 58 toward Suffolk, and I laid back down to try and sleep again.

Denny and Vince were talking when I heard Vince say that an *Automeris io* that had just struck the windshield. As we continued on, they began to identify more moths that began to appear, and they attempted to explain this flight of moths in the cold weather. My curiosity was raised, and I climbed into the front of the van to observe the flight of cold weather moths. Sure enough, there they were, one after the other, a small noctuid here, a large *Eemics* ssp. here, then a larger noctuid. Moths everywhere on such a cold night. I joined the debate of this unusual phenomena. We rolled the window down and determined that it was in fact very cold outside. We even considered finding a place to stop and set up our lights and collect some of these hardy individuals. A slow, cold drizzle began to fall, but failed to deter the moths as they continued to bang off our windshield.

As we continued on our journey, I stared into the darkness ahead, when I noticed the tail lights of a tractor-trailer some distance in front of us. As we closed the distance between the truck, the moths became more profuse. Dozens at a time would appear in our headlights, and careened off our windshield. As we neared the rear of the trailer, I read the logo on the back of it in large red letters. "Gnwaltney Chicken Farms".....The identification of the moths and the explanation to this cold weather phenomena became perfectly clear to me.....CHICKEN FEATHERS.....!!!!!!!!

BOOKS

All advertisements and announcements must be 100 words or less. Contact Boyce Drummond, Marc Minno, or Jackie Miller for in-depth book reviews (1,000 words).

New Book On Nabokov's Lepidoptera

by Robert Dirig, Bailey Hortorium Herbarium, 462 Mann Library, Cornell University, Ithaca, NY 14853, e-mail: red2@cornell.edu

The recent book Les Papillons De Nabokov [LITTERAE ZOOLOGICAE, Actes du Musee cantonal de Zoologie, Lausanne, vol. 1, 1993] is a major new reference on Vladimir Nabokov's work with Lepidoptera. It may be obtained from Musee Zoologique, Place Riponne 6, Case postale 448, CH-1000 Lausanne 17, Switzerland. United States persons may send US$27.00 (surface mail delivery) or US$35.00 (air mail delivery) by check or by transfer to the bank account below:

Account Nr. F9-358,587.0
"Astacologie"
Swiss Bank Corporation
1006 Lausanne/Ouchy.

(I made a check payable exactly as written, all four lines.) Payment by credit card is NOT possible. I sent an order for air mail delivery and received the book 11 days later.

The book is paperback, with French and English text (not both, i.e., sections in French are not repeated in English translation, and vice-versa). It contains a brief biography of Nabokov, with photos, a list of his fiction, scientific publications, and published correspondence, and an annotated multilingual checklist ("English-Latin-French/ German/ Italian/ Spanish") of Nabokov's Lepidoptera by Dieter E. Zimmer. This is a "comprehensive index to all real and imagined butterflies and moths found in Nabokov's English writings, including the letters, the scientific articles and the interviews, ... and makes it possible to trace any particular insect through his writings." There is also a catalogue of Nabokov's Lepidoptera specimens deposited at the Musee cantonal de Zoologie a Lausanne, compiled by Michel Sartori. This new book is an invaluable adjunct to Joann Karges' 1985 book Nabokov's Lepidoptera: Genres And Genera (Ardis, Ann Arbor), and may be of interest to many Nabokov scholars and translators, and to lepidopterists interested in Nabokov's work.

Alberta Butterflies

from Gerald Hilchie, e-mail: gerald.hilchie@UAlberta.CA

Just published by the Provincial Museum of Alberta, Edmonton, Alberta, Canada: Alberta Butterflies. Written by C.D. Bird, G.J. Hilchie, N.G. Kondla, E.M. Pike and F.A.H. Sperling, 1995. 350 pages, covering all the species found in Alberta, with color keys for identification, dot maps of distributions, history of butterfly collectors in Alberta. Over 180 species and subspecies included, with over 850 color photographs and extensive bibliography. Large format, (8 1/2 x 11"), hard cover. Over 20 years in the making. Copies available from Federation of Alberta Naturalists, Box 1472, Edmonton, Alberta, CANADA T5J 2N5. Canadian orders, Cdn$44.95 plus 7% Gst, plus $3.00 shipping. Orders outside of Canada, US$44.95 plus $3.00 shipping.

Forthcoming Book: The Butterflies of Morocco, Algeria and Tunisia

by John Tennent, 18 Stafford Terrace, Kensington, London W8 7BH England

The first comprehensive work on the butterflies of the Maghreb since Oberthür's *Études de Lépidoptèrologie comparée* (published in parts at the turn of the century, now completely out of date and unobtainable). The area is of great zoogeographical interest and supports a number of endemic butterflies found nowhere else. The author has considerable field experience in many parts of the world, and has spent five years working full-time on this project. Both sexes of all 175 taxa in the region are illustrated life size, full color, on 33 plates (1,500 specimens). Hill House Publishers. May be available by June 1996; contact John Tennent at the above address.

New Books From E. W. Classey, Ltd.

Among the newly published Lepidoptera books available from E.W. Classey Ltd., are D'Abrera, Butterflies of the World - Neotropical Region Part VII (this volume completes the series), and Carcasson's African Butterflies. The first of the three volumes of Saturniidae Mundi is due for publication January 1996. We have recently purchased several large entomological libraries which include rare illustrated works on Lepidoptera. Catalogue available on request. Please let us have a list of book wants. E.W. Classey Ltd. Oxford House, Marlborough Street, Faringdon, Oxon SN7 7DR, England, FAX 0144 1367 244 800, Telephone: 0144 1367 244 700.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary, a history of the development of nomenclature since the 18th century, and of the Commission, has been published: *Towards Stability in the Names of Animals — A History of the International Commission on Zoological Nomenclature 1895-1995* (ISBN 0 85301 005 6). 104 pp., 250 x 174 mm, 18 full-page illustrations. The main text was written by R.V. Melville (former Secretary of the Commission), and has been completed and updated following his death. Order from ICZN, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, UK L30 or $50 (including surface postage); members L20 or $35. Payment should accompany orders.

BOOKS

All advertisements and announcements must be 100 words or less. Contact Boyce Drummond, Marc Minno, or Jackie Miller for in-depth book reviews (1,000 words).

Biodiversity in the Netherlands

E.J. van Nieukerken & A.J. van Loon (eds). 1995. Biodiversiteit in Nederland. Nationaal Natuurhistorisch Museum Leiden, KNNV Uitgeverij. 208 pp., hard cover, 24.6 x 16.8 cm. ISBN 90-73239-42-7. Price NLG 57.50 (about US$35) excluding postage. Order from KNNV publishers, Oudegracht 237, NL-3511 NK Utrecht, Netherlands. FAX: +31-30-368907. In Dutch, but with an extensive summary. Indexes for taxonomic names and for authors. Most important for foreign readers: chapters on Botanic Biodiversity by R. van der Meijden *et al.*, Zoologic Diversity by P. Koomen *et al.* The last chapter contains a number of species in the Netherlands, information on the world totals, references to recent keys for NW Europe, information on environment, and changes in species composition in The Netherlands.

Peterson Field Guide to Eastern Butterflies In Second Printing

by Paul Opler and Vichai Malikul

The second printing of the Peterson Field Guide to Eastern Butterflies by Paul Opler and Vichai Malikul has just been printed. Errors of fact, typographical errors, and inadvertent omissions are corrected in the second printing. You can tell if a particular book is from the second printing by examining the page after the title page. On the bottom of the page under "Printed in the United States of America" there is a series of numbers. This series reads VB 10 9 8 7 6 5 4 3 2. The absence of a 1 indicates the second printing.

The Wild Silk Moths of North America:

A Natural History of the Saturniidae of the United States and Canada

by Paul M. Tuskes, James P. Tuttle, and Michael M. Collins

The Saturniidae are among the largest, showiest moths in North America. This comprehensive work covers the life history and taxonomy of 100 species and subspecies. Adults and larvae of all species are illustrated in 30 color plates, with behavior, distribution, and behavior illustrated in 22 line drawings, 38 distribution maps and overlays, and 19 photographs. More than a natural history guide, this book includes chapters on population biology, life history strategies, disease, parasitoids, and silk moths in human culture. A Comstock Book/ Cornell Series In Arthropod Biology. January 1996, 264 pp., 8 1/2 x 11 inches, cloth bound. ISBN 0-8014-3130-1 Order from Cornell University Press Services, P.O. Box 6525, Ithaca, NY 14851-6525, Telephone (800)666-2211, FAX (800)688-2877 ($75.00/ L 58.50)

New Publication:
Annotated and Illustrated Catalog of the Lepidoptera SATURNIIDAE of Central and Western Africa

This work which includes comments on the species of the other parts of Continental Africa, is part of what is planned to be an 8-volume set. Volume 1 is dedicated to the beginning of the Subfamily LUDIINAE, 69 species or subspecies of the Genus *Orthogonioptilum*. The text is in French. This first volume is 165 pages with 13 color plates, including type specimens illustrated for the first time, original drawings of male genitalia, and a distribution map of each species. American or Canadian orders, send 450 Francs Français, including postage by priority mail, in the following currencies: US$90.00, Cda$120.00, to:

Philippe F. Darge
21 Grande Rue
F.21490 Clenay
FRANCE

Books And Literature For Sale

Scudder, Smith, Guenée, Denton, Walker, Maynard, Howe, Clarke, Fabre, Weeks, and others. Many high quality volumes about butterflies and moths are available. Send self-addressed, stamped (55¢) #10 envelope to Eric H. Metzler, 1241 Kildale Sq. N., Columbus, Ohio 43219-1306.

Florida Butterfly Books and Noctuid Catalog For Sale

For Sale: Florida Butterflies by Eugene J. Gerberg and Ross Arnett. $11.95. Butterflies of the Florida Keys by Marc C. Minno and Thomas C. Emmel. $18.85. These first two publications have color plates of most of the Florida species. Lepidopterorum Catalogus (Noctuidae) by Poole, 3 Volumes. $75.00. Please send order and check to American Biological Supply Company, 2405 NW 66th Court, Gainesville, FL 32653. Send stamped, self-addressed envelope for list of available new and used publications on Lepidoptera.

Books On Butterflies Just Published And For Sale

Die Tagfalter der Türkei (Butterflies of Turkey) by Hesselbart, Oorshot, & Wagener, 2,200 pages, 234 color plates depicting 11,180 butterflies, three hardback volumes. One of the most important works on Palaearctic butterflies ever published. Text in German. In stock for immediate supply at $585.00. *Il genere* Battus (The genus *Battus*) by Pacheli & Pariset. 162 pages, 27 plates (16 in color). Text in Italian. In stock for immediate supply at $65.00. Europe's leading mail order booksellers specialized in insect books. Ordering and payment are easy. Mail or FAX your order, or ask for a free copy of our 64 page catalog. Apollo Books, Kirkeby Sand 19, DK-5771 Stenstrup, Denmark, FAX: 45 62 26 37 80.

The Marketplace

Livestock

To exchange: Butterflies and moths from Spain with those from other countries. Pupae of *St. panda, O. baetica, P. trifolii*, Papilionidae from Spain, etc. Please contact Manuel Carrasco Gonzalez/ BDA. Andalucia/ Bloque, 5-5^0 C/ 11540 Sanlucar de Barrameda/ Cadiz, SPAIN.

For sale or exchange: Cocoons and pupae of *Callosamia angulifera, Papilio glaucus glaucus, Automeris io.* Reared papered specimens of *Erora laeia, Papilio brevicauda brevicauda, Papilio zelicaon nitra, Papilio bairdi bairdi, Papilio bairdi brucei, Papilio zelicaon coloro, Antheraea polyphemus oculea, Hyalophora columbia, Eupackardia calleta, Callosamia securifera*, and others. Interested in ova, pupae of Lycaenidae, Saturnidae, *Papilio* of North America only. Please send self-addressed, stamped envelope to Frank Bodnar, 1201 Ridge Road, Apollo, PA 15613 (412)478-3824.

For sale or trade, *Catocala* ova: *C. unijuga, C. briseis, C. mira, C. luciana, C. minuta, C. innubens, C. ultronia, C. cerogama, C. ilia, C. meskei, C. relicta, C. amatrix, C. amestris, C. cara, C. piatrix, C. judith, C. obscura, C. palaeogama, C. retecta, C. amica.* Please send self-addressed, stamped envelope to Jim Mouw, 245 Sarah Avenue, Iowa Falls, IA 50126.

Cocoons of first generation *Actias luna, Antheraea polyphemus, Callosamia promethea, Callosamia angulifera, Samia cynthia, Samia rivini.* These will emerge mid-July to mid-August to start a final cycle to winter diapause. Additional species may also be available. Please send self-addressed, stamped envelope for price list, or call (908)439-2462 to reserve. Will buy or exchange in small quantities. Some wintered cocoons still available. Don Oehlke, c/o Post Office, Pottersville, NJ 07979

Cocoons of *Hyalophora cecropia* and *Antheraea polyphemus* for sale. Also, chrysalides of *Papilio polyxenes* and papered specimens of both *Hyalophora cecropia* and *Actias luna*. Send self-addressed stamped envelope to Ronald Aaron Royer, R.D. 4 Box 2295, Lebanon, PA 17042-9433, or phone (717)867-1021.

WANTED: Several Papilio glaucus canadensis diapausing pupae, will consider either small or large quantities. Also desired, P. cresphontes pupae from a population whose host is only common prickly-ash (*Zanthoxylum americanum*). Buy only. Please contact Matthew Jason Carll, 15 Duncaster Wood, Granby, CT 06035, or call (203)653-4452.

For sale: Cocoons of *Actias luna, Automeris io,* and *Callosamia promethea.* Send self-addressed, stamped envelope to Larry J. Kopp, R.D.#1, Box 30, Klingerstown, PA 17941-9718.

The Entomological Livestock Group sends monthly lists of sales, wants, and exchange in live insects, including butterflies and moths. Subscriptions and inquiries should be sent to John Green, Secretary, 11 Rock Gardens, Aldershot, Hampshire GU11 3AD England, Telephone (01252)29 308.

Seeds and Plants

Will trade the following butterfly host plant seeds for very colorful beetles, worldwide, with data: *Passiflora incarnata, Foeniculum vulgare, Plumbago, Asclepias curassavica, Malva parviflora, Urtica holosericea, Gnaphalium, Plantago lanceolata*, Chinese elm (in winter), and *Nasturtium*. Bob Wuttken, 9506 National Boulevard, Palms, CA 90034-2820. Will exchange European Lepidoptera for overwintering cocoons, pupae, and ova of any North American lepidopteran, especially Saturniidae and Sphingidae. Please write, stating details of species required in exchange. Mark Pickup, 43 Dean Street, Derby, DE22 3PS, ENGLAND.

Specimens

I would like to exchange my Japanese butterflies for various world butterflies. Contact me:

Haruo Mizutani/ 1-1 Kagiyanishi-machi/ Gifu City, Gifu 500/ JAPAN

For Sale: Butterflies from California and Arizona. Excellent condition, with data. Over 90 species. Send self-addressed, stamped envelope or $1.00 for postage outside of the United States, for free list. Robert Wuttken, 9506 National Boulevard, Palms, California 90034-2820.

Lepidoptera from many countries: Papua New Guinea, Indonesia, Malaysia, Thailand, India, China, Colombia, Brazil, Peru, Argentina, former USSR, etc. Papilionidae, including *Parnassius, Delias, Charaxes*, etc. Free price list. Contact David Hall, 6 Rule Street,

Marketplace Policy

The purpose of The Marketplace in the News of the Lepidopterists' Society is 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 woker and the amateur in the field,..." Therefore, the Editors will print notices which seem to meet the above criteria, without quoting prices, except for those of publications or lists. No mention may be made in any notice in the Newsletter 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. Let the buyer beware and be aware.

Only members in good standing may place ads. When submitting an ad for the Marketplace, let us know which issues you want it published in. All ads must be renewed before the November 15th deadline in order to be included in the next year's Issue #1. Advertisements must be under 100 words in length, or will be edited to such. Send ads to the Editors of the News. Make your product more marketable by including the full scientific binomial in your

Cambridge Park, N.S.W. 2747, AUSTRALIA]\

Fine quality butterflies, moths and beetles from around the world. Species for the specialist and other areas. All imported and exported with correct documentation. Many CITES listed species with permits provided. Send $1.00 for lists. Ken Thorne, P.O. Box 684, Lambeth, Ontario, Canada, NOL 1SO, telephone (519)652-6696, FAX (519)652-6259.

Butterfly Ranching Project: 437 Species of Mexican Butterflies Available Legally. Montes Azules is participating in a butterfly ranching project in Chiapas, Mexico. Species of Papilionidae, Pieridae, Nymphalidae, Libytheidae, Lycaenidae, and Hesperiidae, all in A-1 condition and accompanied by basic scientific information, are available. Project sanctioned by Mexican governmental agencies. Copies of permits provided with all orders. Currently the only legal butterfly ranching project in Mexico, thus, the only legal means of obtaining the species of this region. None of these species is listed under CITES or the U.S. Endangered Species Act. Contact John Stark at Montes Azules, Camino Real a Xochimilco #60, Tepepan, Xochimilco 16020 Mexico D.F. Telephone: 52-5-420-5959, FAX: 52-5-420-5942, e-mail: bfly@sar.net

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Equipment

For sale: Bait traps in local and tropical forms. Can be adapted for moths. Contact William G. Ward, 1474 Melbourne Drive Southeast, Girard, OH 44420-1332, or telephone (216)539-5374.

For sale: Light traps, 12 volt DC or 110 volt AC with 15 watt or 8 watt blacklights. The traps are portable and easy to use. Rain drains and beetle screens protect specimens from damage. For a free brochure and price list, contact Leroy C. Koehn, 207 Quail Trail, Greenwood, MS 38930-7315, Telephone (601)455-5498.

For sale: Custom made light fixtures for permanent and/or stationary light traps. Stainless steel design; mercury vapor, sunlamp, blacklight and blacklight dark; together or any combination; electrical control with photo-cells and/or timers. Includes plans for enclosures with rain drains and sorting trays. For more information, contact Leroy C. Koehn, 207 Quail Trail, Greenwood, MS 38930-7315, Telephone (601)455-5498.

Catalogs

New Illustrated Lepidoptera Catalog! Many unusual species from Neotropical, African, and Indo-Australian regions. Many bred or ranched specimens offered. Transworld Butterfly Company has been serving lepidopterists worldwide since 1976. Send $1.00 (cash or stamps) for illustrated catalog to: Transworld Butterfly Company, Apartado 6951, 1000L San Jose, COSTA RICA, Central America.

Audio/Visual

Prize-Winning Film Available as Videocassette: Strategy For Survival: Behavioral Ecology of the Monarch Butterfly by Lincoln P. Brower, 1977 (30 minutes, color, 16 mm, optical sound track). The film's theme is the dynamic nature of the behavioral and ecological interactions characteristic of life. In unfolding scenes that combine great artistic beauty with rigorous scientific integrity, the extraordinary biological saga of the monarch butterfly is shown in California, Massachusetts, Florida, Mexico, and in laboratory experiments. Completely original film includes time lapse, slow motion, and animated sequences. Rent film from Audio Visual Services, Penn State University, University Park, PA 16802 (Film #32460). Purchase videocassettes ($35.00) from Lincoln P. Brower, 9615 SW 43rd Terrace, Gainesville, FL 32608.

Two New Videos from Audubon: With more than 500 butterfly species in North America, how can anyone keep track of them all? Audubon Society's Butterflies for Beginners is a good place to start. This 50 minute video introduces you to butterfly biology, and gives a closeup look at 33 of the most common and wide-ranging North American butterflies. Beautiful live footage of each species in its natural habitat is accompanied by descriptions of distinguishing features, life history, and interesting behaviors. Maps show winter and summer ranges. Special attention is given to caterpillars, food plants and brood months, to make it easy to follow the entire life-cycle of butterflies you're most likely to find in your backyard. $19.95 VHS. ✿ ✿ ✿ ✿ ✿ ✿ As birdfeeders are to birdwatchers, so are gardens to butterfly enthusiasts. Many butterflies are drawn to a single flower or plant for feeding and reproducing. With the proper design, your garden can be a beacon, attracting the most beautiful butterflies, and even relatively rare species, to your back yard. Audubon Society's Butterfly Gardening is a comprehensive video introduction to 25 of the best commercially-available butterfly attracting plants in North America. Each featured plant has a range map, a description of proper growing conditions, cultivation tips, and a listing of the butterflies that favor it. $24.95 VHS

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advertisement for Lepidoptera and plants.

The Lepidopterists' Society and the Editors take no responsibility whatsoever for the integrity and legality of any advertiser. Any disputes arising from such notices must be resolved by the parties involved, outside of the structure of the Society. Aggrieved members may request information from the Secretary regarding steps whiefh s/he 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 PPQAPHUS, Hyatsville, Maryland, regarding U.S. Department of Agriculture or other permits required for transport of live Lepidoptera. Buyers must take the responsibility for being aware that many countries have laws resticting 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, as the shipping of agricultural weeds across borders is often restricted.

Membership Update #4

11/16/95

Includes all changes received by 16 November 1995

by Julian Donahue, Assistant Secretary of the Lepidopterists' Society, c/o Natural History Museum, 900 Exposition Boulevard, Los Angeles, California 90007-4057, Telephone: 213-744-3364, FAX: 213-746-2999, e-mail: Bugbooks@aol.com

DID YOU FORGET ABOUT YOUR MEMBERSHIP RENEWAL?
WE DIDN'T!
164 MEMBERS & SUBSCRIBERS IN ARREARS FOR 1995
(but who did pay for 1994) as of 14 November 1995

Abraham, Jacob (M.D.)
Adonizio, Anthony C.
Alfaro Velazquez, Jose A
Allen, Daniel W.
Andersen, Erik Wm.
Anderson, Erle
Arnold, Austin
Asbrey, Roderick
Babbe, Nancy L.
Baechel, Charles W.
Ballenger, C.E., III
Balletbo, Pere Ribas
Barrette, David W.
Beck, Andrew F.
Beck, Barbara Hardin (Dr.)
Bell, Elizabeth A.
Berlin, Gordon D.
Best, David T.
Bodnar, Edward J., Jr.
Bodnar, Paul
Bollino, Maurizio (M.D.)
Bowker, Bob
Brink, Peter
Broek, G. ten
Capps, Dan
Cervello Puig, Josep Miquel
Cherubini, Paul
Chong, Kuen
Chou, Teh-Wei
Cook, David
Cukurova University
Culver, Eugene B.
Daly, Sharyn E.
De Rosa, Dave E.
Dingus, Eve
Dobel, Robert
Edwards, Robert
Ekin, Robert J.
Emerson, Heather
Essig, Ken
Evanoff, Andrew C.
Faietti, Giuseppina
Fernandez, Sharyn
Gaddis, Laina
Garraway, Eric (Dr.)
Gatschet, Tim (M.D.)
Glanz, Irene
Gordon, Isabel
Guppy, Cris
Hall, Angela
Hall, Stephen P.
Hansen, Lars Ove
Haribal, Meena (Dr.)
Harpel, William
Harte, Charles R.
Hartling, Aaron
Hashash, Youssef
Haynes, Brittany
Heath, Doss
Herbin, Daniel
Hessler, John
Hirzel, Ronald F., Jr.
Hodges, Vye
Holl, Karen (Dr.)
Holtsmark, E.B. (Mr.)
Hosko, Mary Ann
Humbert, Ron
Ivy, Bill
Jenkins, Carol
Kasnetz, Heath
Katano, Hitoshi
Kohsaka, Hiroshi
Koralishn, Stephen
Korbelik, Brian L.
Krick, Philip (President)
Lamond, Bill
Lamp, Russell
Lasky, Ron
LeMoine, Christian
Levasseur, Julian J., Jr.
Lewis, Kim S. (Mr.)
Lloyd, Brian
Logan, Harriett R.
Lynn, Ann T.
Marcangelo, Judie
Martin, Julie Ann
McBrien, Marcia Mary
McDermott, James
McGiffen, Kathryn C.
McHugh, Kevin
Miller, Hettie
Mitchell, Gary L.
Moghaddam, Nazareh A.
Mori, James R.
Morrell, Glenn S.
Morris, Michael Wayne
Mrozinski, Kris
Muise, Gregory D.
Naderi, Alireza
Nazary, Wazrik
Neil, Kenneth A. (Dr.)
Nelson, Ralph
Newfrock, Richard A.
Nichols, Barry
Nieszporek, Jacques
Norden, Pete
Nordin, Phillip D.
Nova Scotia Museum
Nuttall, Carolanne
Nykodym, Nick (Dr.)
Ohshima, Shin-ichi
Painter, George R.
Panzer, Ron
Parker, Otis
Peacock, Bob
Pedersen, Torbjorn
Peterson, Dwight Thomas
Peterson, Richard D., II
Peterson, Robin
Phelps, Robert W.
Pitkanen, Juhani
Pollock, David D.
Pollock, David M.
Pratt, Clive Shaun
Prchal, Steven J.
Reed, Harry F., III
Riggs, Keith
Robert, John H.
Rocha, Tom
Rohrkaste, Tom
Rossetti, Mark
Savage, Patrick J.
Scheuerell, Clare
Serage, Dee
Shimonoya, Toyokazu
Spencer, Douglas R.
Spotts, Connie
Stark County District Library
Surowiec, Mark E.
Swales, John M.
Tamminen, Joanna
Tapp, Bruce
Tehrani, Morteza Delshad
Teper, Richard J.
Tewksbury, Thomas R.
Thrash, Ron M.
Toner, Irving J.
Toot, James
Trophia, Samuel J.
Turrent, Rafael
Unger, Steven E.
Van Houten, Jeanne
Vascik, Michael Lawrence
Ward, Joseph P.
Washington State University
Watson, Felicity
Weast, Robert
Weiss, Janet
Wenger, Remo
White-Nissenbaum, Kathlene
Wilson, Sandra
Wostbrock, Sharon
Wray, Daniel E. (Rev.)
Zniewski, Timm

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

ALLEN, ROBERT P.: One Tower Lane, #2119, Mount Angel, OR 97362-2012.

ANASTASSIU, HRISTOS: 1518 Gilbert Court #F18, Ann Arbor, MI 48105.

AQUADO MARTIN, LUIS OSCAR: Apartado 498, 47001 Valladolid, SPAIN.

BALCAZAR L., MANUEL A.: 365 Maguire Village #6, Gainesville, FL 32603-2015.

BENYAMINI, DUBI: 91 Levona Str., Bet Arye, D.N. Modiin 71947, ISRAEL.

CALHOUN, JOHN V.: 977 Wicks Drive, Palm Harbor, FL 34684.

CAMPBELL, ROSEMARY: 210 Larch Row, Wenham, MA 01984-1634.

DEITCHER, KENNETH A. (M.D.): 79 Harris Avenue, Albany, NY 12208-3018.

DUNLAP, CARLOS L., Jr.: 465 Schneider Ranch Road, McArthur, CA 96056-8714.

ENSOR, PATTI: Rural Route 03, Box 118, Davenport, WA 99122.

FINKELSTEIN, JORDAN W. (Dr.): Route 3, Box 900, Port Matilda, PA 16870-9506.

FOWLER, VANCE G., Jr.: 3102 Calab Court, Hillsborough, NC 27278-7121.

FUKUOHJI, REN: Nishimachi 1 Chome, Higashikawa Cho, Kamikawa Gun, Hokkaido 071-14, JAPAN.

GARMAN, CAROLYN: 2595 Lewis Court, Lakewood, CO 80215-1350.

HAMER-PINERO, RORY: 49559 Hwy 1065, Tickfaw, LA 70466.

HAYASHI, JOE: 2417 Beechwood Avenue, San Jose, CA 95128-2930

HELM, MEREDITH: Route 3, Box 341, Farmville, VA 23901.

HILCHIE, GERALD J.: Dept. of Biological Sciences, University of Alberta, Edmonton, Alberta T6G 2E9, CANADA.

HSU, YU-FENG (Frank): Dept. of Biology, National Changhua University of Education, Changhua, TAIWAN 50058, REPUBLIC OF CHINA.

HUDSON, MICHAEL: P.O. Box 120, Wau, Morobe Province, PAPUA NEW GUINEA.

LANE, JOHN: 420 8th Avenue, Santa Cruz, CA 95062-3914.

LYON, STEPHEN MAXWELL: 369 Hilltop Drive #F, King Of Prussia, PA 19406-3340.

McCULLOUGH, JEAN: 1112 Sanctuary Road, Naples, FL 33964.

OPLER, Dr. PAUL A.: Midcontinent Ecological Science Center, 4512 McMurry Avenue, Fort Collins, CO 80525-3400, Telephone: (970)226-9409, FAX: (970)226-9230, e-mail: Paul_Opler@nbs.gov

ORTENBURGER, THOMAS W.: 2595 Lewis Court, Lakewood, CO 80215-1350.

PECHAN, GARY: P.O. Box 385009, Bloomington, MN 55438.

PROBST, HELMUT (Dr. Med.): Landsberger Strasse 31, D-86938 Schondorf, GERMANY.

SBLENDORIO, DANIEL C.: 9 Point O'Woods Drive, Middletown, NJ 07748-2820.

SHAFFER, JACK R.: 256 Porter Road, Fayetteville, GA 30215-3008.

TEHRANI, MORTEZA DELSHAD [formerly listed under last name Delshad]: 1st Floor, No. 14, Line 3, Darayi Complex, end of Kamaly Blvd., Pooinak, Tehran, IRAN.

TUCKER, JAMES R.: 8224 Green Acres Lane, Redding, CA 96002-4351.

WEISS, LISA: 6650 Farrell Lane, Vacaville, CA 95688.

WILLAN, LENARD S.: 147 Woronora Crescent, Como West, Sydney 2226, N.S.W., AUSTRALIA.

WOOD, VICKI: 1915 NW Liberty Avenue, Lawton, OK 73507-5030.

Welcome New Members!

New and Reinstated Members
(NOT included in 1994 Membership Directory; all in U.S.A. unless noted otherwise)

BRAUN, MICHAEL P.: 604 Blackpatch Drive, Springfield, TN 37172-9801.

CATLING, PAUL: 8 Scrivens Drive, R.R. #3, Metcalve, Ontario K0A 2P0 CANADA.

CHO, SOOWON: Center for Agricultural Biotechnology, University of Maryland, College Park, MD 20742

CROLLA, JEFFREY P.: 366 Bronson Avenue, #6, Ottawa, Ontario K1R 6J4, CANADA.

CUMMINGS, GARY D.: Rural Route 01, Box 9, New Berlin, NY 13411.

ETTMAN, JAMES K.: Rural Route 03, Box 336, Morrilton, AR 71220.

EGEE, MARJORIE: 11 Rivers End West, Claymont, DE 19703.

FAGUA, GIOVANNY: Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Apartado 7495, Santafe de Bogota D.C., COLOMBIA.

FALLOW, DAVE: 30 North 6th Street, Madison, WI 53704.

FOLEY, PATRICK (Dr.): 1300 Union Drive, Davis, CA 95616.

GORBACHEV, PETR: Prosveschenia str. 81-22, Sochi A-341, 354341 RUSSIA.

GORODENSKI, STANLEY A.: 1530 West Wescott Drive, Phoenix, AZ 85027.

HANSEN, DOUGLAS G.: 10839 Charbono Point, San Diego, CA 92131.

HECK, MARY L.: 1202 Hyatts Road, Delaware, OH 43015.

HEPPERLE, AMADA: 425 Almond Street, Waterloo, IA 50703-3847.

HEPPERLE, DONALD: 425 Almond Street, Waterloo, 50703-3847.

KOHNEN, PAUL D.: 1142 Academy Street, Scranton, PA 18504.

KOVACS, JOSEPH D.: 2245 East 33rd Street, Lorain, OH 44055.

McCLANAHAN, E. THOMAS: 605 East 69th Street, Kansas City, MO 64131.

McFARLAND, PAUL: 12424 East 36th, Tulsa, OK 74146.

NEWIRTH, MICHAEL: 1210 Cabots Drive, Auburn, GA 30203.

POLEGA, TIM: 2824 South US 33, Niles, MI 49120.

POOLER, JUDY: 17374 Hwy 62, Macquoketa, IA 52060.

RICE, KEN: 1490 SW 71 Court, Miami, FL 33144-5439.

ROMACK, HOWARD, Jr.: Irish Lane, Cambridge, NY 12816.

ROSAASEN, EMILY: 2116 South 14th Street, Moorhead, MN 56560.

ROUNTREE, DOROTHY B. (Ph.D.): Dept. of Biology, University of Louisville, Louisville, KY 40292.

RYSULA, DUSAN: 50-21 39 Place, #4B, Sunnyside, NY 11104.

SARGENT, THEODORE D. (Dr.): Dept. of Biology, University of Massachusetts, Amherst, MA 010023.

SCHMIDT, ELLEN: 720 Bryn Mawr, Springfield, IL 62703.

STONE, JAMES B.: P.O. Box 107, St. Albans, WV 25177-4051

TRIONE, HENRY F.: 950 Madelyne Court, Santa Rosa, CA 95409.

WILLIAMS, VIOLET: Rural Route 01, Box 195E, Henryetta, OK 74437-9712.

WILLIS, G.W. (M.D.): 62 Verde Street, Kenner, LA 70065-1029.

Preston's Celebrate 50th Anniversary

by Kathy Preston, 1613 Reunion Circle, Carrollton, TX 75007 (214)245-1678

Floyd Wayne Preston and June Daus Preston of Lawrence, Kansas, were married on July 8, 1945 in West Los Angeles, California. They celebrated their 50th Anniversary on Saturday, September 23, 1995 in Lawrence, Kansas.

Mr. Preston is retired after 36 years as a Professor of Petroleum Engineering at the University of Kansas in Lawrence. He was a consultant for foreign countries; a Fulbright Professor in Trinidad, West Indies for a year, and a consultant to the Venezuelan government and to Libya. He is a past president of the Lepidopterists' Society, and has been president of several local butterfly societies in Lawrence. He took his butterfly net with him on his honeymoon 50 years ago, and has enjoyed collecting butterflies with his wife ever since.

Mrs. Preston is active in church activities at both the conference and association levels. She is a 48-year member of the Beta Sigma Phi Sorority. She has been active in the Green Thumb Garden Club in Lawrence for over 25 years. She was editor of the News of the Lepidopterists' Society for 9 years.

Since Floyd's retirement, the Preston's spend six to eight months per year touring the country, collecting butterflies together.

Their children are Bruce Preston of Ft. Collins, Colorado and his wife, Linda; Hal Preston of Carrollton, Texas, and his wife, Kathy; Donald Preston of Seattle, Washington, and his wife, Bobbie, and Steven Preston of Harleysville, Pennsylvania, and his wife, Sonia. They have 6 grandchildren and one great-grandchild! The Prestons are pictured on page 25.

"Lost" Members
(publications returned, "temporarily away" or "moved, left no address")
MICHAEL A. QUINN, College Station, Texas
AMY WOLF, Davis, California.

Kentucky Lepidopterists Meet

by Charles V. Covell Jr., Department of Biology, University of Louisville, Louisville, KY 40292-0001 Telephone (502) 852-6771 (office), (502) 852-0725 (FAX), (502) 456-6122 (home), e-mail: cvcove01@ulkyvm.louisville.edu

The 22nd Annual Meeting of the Society of Kentucky Lepidopterists was held in Louisville, KY on Nov. 10-11, 1995. Friday night was the annual potluck party at the home of Jay, Marianne & Jessica Hutti.

After supper we saw an excellent video, just recently released by Michael Godfrey, called *Beginner's Video Guide to Eastern Butterflies*. Saturday morning was informal viewing of the Lepidoptera collections of the University of Louisville, and those of members. The business meeting at 1:00 P.M. was chaired by President James K. Adams.

Officers for 1996 are: President, James Taylor of Savannah, Georgia; Secretary, John Enz (newly established separation from Treasurer), Treasurer, Charles V. Covell Jr.; Editor of *Kentucky Lepidopterist*, Barry S. Nichols; Field Trip Coordinator, Paul Florence; board member at large, Jessica Hutti. Ideas for next year and improvements in the Constitution were covered.

The program featured Dr. Lawrence Gall, Peabody Museum, Yale University, on the Underwing Moth fascicle project of Moths of America North of Mexico. It was well illustrated with slides. Other talks were on butterfly conservation activities in Indiana by Dr. John Shuey; Mimicry and crypsis in Lepidoptera by Dr. James K. Adams; and slides from the backyard butterfly garden by Charlie Covell. Eric H. Metzler showed slides of genitalia photographs he has been experimenting with. He aims to solve the problems of expense and lack of help in illustrating these detailed structures for publication.

In all, 35 lepidopterists were present at the meeting. A door prize drawing preceded dinner together at a nearby restaurant. Those attending represented Georgia, Ohio, Michigan, Wisconsin, Missouri, Indiana, and Kansas, as well as Kentucky and Connecticut.

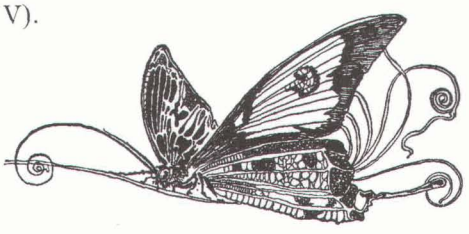
by Julian P. Donahue, Assistant Secretary, Lepidopterists' Society, c/o Natural History Museum, 900 Exposition Boulevard, Los Angeles, California 90007-4057, Telephone: 213-744-3364, FAX: 213-746-2999, e-mail: Bugbooks@aol.com

R. G. Rosenstiel

The Society was recently informed of the death of R.G. ROSENSTIEL (Department of Entomology, Oregon State University, Corvallis), a member since 1988.

Nils August Westerland IV

(29 Jan. 1906-26 May 1995), an early associate of John Adams Comstock and Lloyd M. Martin, and a major contributor of Lepidoptera and other insect specimens to the Natural History Museum of Los Angeles County (LACM) for more than half a century. At his retirement home, in the pine forest of the west shore of Lake Tahoe in California's Sierra Nevada, he operated a black light every night of the collecting season for nearly 20 years. Each year he collected, field-pinned, labeled, and donated to LACM several thousand moth specimens from his back porch, supplemented with a few diurnal species he obtained during his daily walks. The tens of thousands of moths he collected from Ward Creek constitutes one of the largest long-term, year-round, single-site general moth collections ever made in North America; the collection is biased only against leaf-miners and species not attracted to light. Nils was a collector and benefactor; although he maintained no personal collection, he was a member of the Society from 1989 to 1993. He is survived by his wife Florence and his son Nick (Nils V).



John Heinrich Remembered

submitted by Jeffrey Slotten, 5421 NW 69th Lane, Gainesville, Florida 32653

Fellow lepidopterist and friend, John (Jack) Heinrich, passed on to the next stage of existence on Saturday, January 7, 1995, from his home, after a long battle with cancer. He was 72 years young.

John Charles Heinrich was born to Presbyterian missionary parents in Pittsburgh in 1922. His life and work spanned three continents: India, Africa, and America. He was educated at Stony Brook Preparatory School on Long Island, Oberlin College, Yale Divinity School, and Cornell University.

Upon graduation from college, John enlisted in the Infantry, and became a lieutenant after training at Fort Benning, Georgia. He fought in the Battle of the Bulge, and was awarded a Bronze Star for meritorious action.

John and his wife, Bobbie, worked in Africa as missionaries for the Congregational Church from 1951 to 1970. Upon their return, they took teaching jobs in Rockland County, and he became an adjunct teacher in Social Studies for Syracuse University.

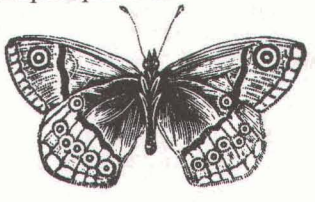
In 1981, John retired and moved to Alva with his wife and two other Quaker families from Rockland County, New York. In Alva, he established an organic garden and citrus orchard, and co-founded, with his wife, the Lee County Coalition for Peace, the forerunner of the Environmental and Peace Education Center, and became active in the Unitarian Universalist Church of Fort Myers.

John Heinrich's influence in the life of former US Ambassador Andrew Young is featured in the latter's recent autobiography, "A Way Out of No Way."

Mr. Heinrich's lifelong hobbies were coin and stamp collecting, and the study of butterflies and moths. His butterfly collection is housed at the Nature Center in Fort Myers, to which his moth collection will also be donated. He gave talks at many area schools on how to establish butterfly gardens, and was active in the Alva Garden Club. He was also a member of the Southern (U.S.) Lepidopterists' Society, the National Veterans for Peace organization, as well as many environmental groups. He collected butterflies extensively during the 11 years he and his wife lived in Zimbabwe (the former "Southern Rhodesia"), and at the end of that time, in 1964, he sold the whole collection to the University for $400.

John Heinrich is survived by his wife, Bobbie, of Alva; son, David Heinrich of Wesley Hills, NY; son, Dr. Geoffrey Heinrich of Zimbabwe, Africa; daughter, Heidi Heinrich Walsh, of Alva; sister Kay McNall of Penn State; sister Martha Nelson of Cincinnati; and sister, Jean Schreiner of Pittsburgh. Memorial services were held at 2:30 p.m., Thursday, January 12, at the Unitarian Universalist Church of Fort Meyers, Florida. Donations may be made in his memory to the Heinrich Fund, at the Environmental and Peace Education Center, 12713-3 McGregor Boulevard, Fort Myers, FL 33919.

John will be missed but not forgotten. At the time of his death, John was working hard at compiling a list of all Lee County, Florida moths. John was a good friend and a very generous person. His contributions to the study of Lepidoptera are appreciated.



The Crisis in Entomology

James A. Scott, 60 Estes Street, Lakewood, Colorado 80226-1254, Telephone (303)233-4568

Editors' Note: Dr. Scott sent us a copy of a 15-page letter he has written to various legislators. It includes an explanation of "The Crisis in Entomology," as it relates to existing U.S. laws, butterfly collection, and butterfly conservation. It includes sections on differences between deer and insects, collecting and butterfly extinction, development and habitat loss as a cause of extinction, reasons for collecting, government harassment of entomologists, collecting bans and permitting, the Lacey Act, the Endangered Species Act, government competency to regulate entomology, Recovery Plans and insect transplanting, fixing the Endangered Species Act as applied to insects, habitat preservation, taxonomy, a new national law for study, commerce, conservation, and collection of insects, and dead insect deregulation. We regret that we are unable to print such an extensive commentary at this time, in spite of its value. Contact Dr. Scott at the above address for a copy.

Psyche-ic Revelation

by Mr. Leslie V. Smith

Years ago my predisposition to manic depression was made manifest. I took up the study of butterflies. In 1964 I discovered an aggregation of monarchs in Richmond, California and an aggregation of *Battus philenor* pupae in Rancho Cordova in 1992. Recently I found *Pieris rapae* "puddling" on the wet flower bed soil mix across the street. Then it came to me: *These assemblies of butterflies are for group therapy!* And I ought to know!

Bonanza King Mine Canyon

(Continued from page 23)

phenomenon occurred in the U.S. with a Nearctic butterfly species, under current laws FWS would undoubtedly have declared the species endangered. FWS would probably then have claimed, after subsequently monitoring its progress, that the prohibition against collecting was responsible for its survival, and perhaps as proof that collecting had caused the decline.

With regard to the Martin swallowtail, it is a big leap to go from what appears to be anecdotal reports (and, thereby, of questionable reliability) that collection pressures have at times been intense (this is a strong word but what does it actually mean?) to apparently concluding that collecting will endanger the species. I personally feel that the authority, if it actually exists, of FWS to restrict collecting because a "... butterfly *may* become threatened or endangered in the foreseeable future" (emphasis added) should be removed. This power gives FWS a free hand to *over*-regulate and go beyond the intent of the law.

Like many lepidopterists, I do not wish to cause the extinction of a species. However, the only long term solution to the problem of species endangerment is not oppressive laws that take away our freedoms, but instead the regulation of a non-Lepidoptera species population, that of *Homo sapiens*. World overpopulation has already resulted in significant habitat destruction and the potential for macro-climatic changes. The latter has the potential for being the most ominous threat to the survival of existing species. Unless *this* population is brought under control and reduced in numbers all endangered species laws and enforcement, no matter how well intentioned, will ultimately fail.

Although the Endangered Species Act can be applauded for its good intentions, it misses the mark completely. The real problem is human habitat destruction, and this cannot be resolved by simply setting aside a small tract of land and enforcing strict laws. Further, recent research results from independent population geneticists (Science, October 6, 1995, pp. 31-32) indicate the effective population size necessary to maintain the evolutionary viability of a population is in the 5,000 to 10,000 range, not the 500 randomly mating individuals that have been the basis of modern day efforts to protect a species. The implications of the research results are that in the long run, current recovery efforts will fail due to the accumulation of genetic damage, and to 'mutational meltdown.'

There is no simple solution to the issue of species endangerment. This should be obvious. Human habitat destruction, effective population size, and human overpopulation are all interrelated. I feel we must strongly object to oppressive collecting laws whose actual effect is to take away our freedoms rather than saving a species. In this respect I am surprised at the split in the Society over collecting. I personally feel proponents of species conservation would better accomplish their goal by focusing their efforts on controlling and reducing world overpopulation rather than passing and enforcing collecting laws to protect the Class Insecta when a strong argument can be made, and has been made, that protection of this kind is inappropriate. In this respect I feel that proponents of collecting laws are being hypocritical. Human habitat destruction is the real issue. Rather than being concerned over their own contribution to overpopulation, being critical of the contribution of their own children, and so forth, it is easier to pass laws that restrict the activities of others.

ISSUES

More on the Closure of Bonanza King Mine Canyon To Butterfly Collecting

by J. Benjamin Ziegler, 64 Canoe Brook Parkway, Summit, NJ 07901-1434, Telephone (908)273-2288

I have read, with considerable interest, the recent article by Donald W. Steffeck of the United States Fish and Wildlife Service (USFWS) in the News of the Lepidopterists' Society[1]. The article deals with the rationale of USFWS action in this case, based upon alleged threats to the survival of *Papilio indra martini* (J.F. and T.C. Emmel) as a result of presumed overcollecting.

Prior articles by Sam Sun[2] (*ibid.* 1994(2):45), Bruce Griffin[3] (*ibid.* 1995(1):21) and Jack N. Levy[4] (*ibid.* 1995(3):71-73) dealt with various aspects of this same subject. Sun and Griffin, as experienced field lepidopterists who specialize in this group of swallowtails, took the general position that concerns about potential extirpation or extinction of *P.i. martini* were exaggerated or unwarranted. Levy, who has a special interest in conservation, has reported[4] some data and his opinions relative to estimating the population size and putative threats to survival of *P.i. martini* in the Gilroy Canyon and the Bonanza King Mine Canyon in the Providence Mountains. He reached the "tentative" conclusion that the population has been declining(?) since the mid-1960's to a critically(?) low(?) level, negatively(?) impacted by collecting. He further opined that the survival of "each type of butterfly in the wild" was of greater importance than activities requiring collection of specimens, which he viewed as a potentially serious threat to the existence of some populations, and therefore that in doubtful cases we should "err on the side of caution." Be that as it may, I suggest that his report, taken together with the statements of Sun and Griffin, hardly provided convincing evidence of a credible threat to the survival of *P.i. martini.*

Mr. Steffeck[1] attempted to buttress the case for the existence of such a threat by stating that "[USFWS] solicited information on the population status, distribution, and known threats to the butterfly from several entomologists familiar with the species group, Service biologists, other agency personnel, published literature, as well as butterfly collectors." Interestingly, he drew a distinction between entomologists/ biologists and collectors, whom he finally mentioned last (afterthought?). His failure to cite the names and quoted comments of any of these persons does not permit the body of knowledgeable lepidopterists to form an independent opinion of the value of their testimony. In similar vein, anecdotal allegations to the USFWS by publicly unidentified persons, that this butterfly "was being threatened by illegal collecting on State lands and overcollecting on Bureau[5] lands" carry little weight with the general community of lepidopterists. All of this is unfortunately typical of the arbitrary and subjective approach frequently taken by USFWS to the listing of "species" as Threatened or Endangered under the Endangered Species Act (ESA). The flawed nature of this process was aptly encapsulated by Mattoni,[6] who wrote "Listing the ESB[7] in 1976 was based largely in *intuitive* [my emphasis] information concerning distribution, abundance, and the nature of the threat."

However, another aspect of this case of perhaps still greater significance appears to have been overlooked. The ESA requires all Federal agencies to cooperate with the USFWS in all aspects of the protection of *listed* species, *i.e.,* species which have been officially determined to be threatened or Endangered. On its face, the collaboration between USFWS and the Bureau of Land Management (BLM), in the present instance, would seem to be an example of the application of this mandate. But—USFWS has not, and apparently will not, so *list P.i. martini* in the foreseeable future. How come?

Lepidopterists should be aware that conservationists introduced legislation in a previous session of Congress modifying the ESA to permit the extension of federal protection to species which *may possibly become* threatened or endangered in the foreseeable future; although this innovation (known as "pre-listing") was not approved at that time, it is still contained in the current Senate version of the ESA reauthorization legislation presently scheduled for passage in 1995. Obviously, this would enable the USFWS to fight a delaying action against any legislative attempt to limit its authority to formally list additional species. The present case appears to be a premature and extralegal application of this desired authority by the USFWS. Beyond that, the statutory authority of the BLM to close these public lands to insect collecting is questionable, and requires clarification.

This is not the first example of such unwarranted and intrusive overreaching by agencies of the U.S. Department of the Interior. At 6:00 p.m. on July 6, 1994, I watched a debate in the U.S. Senate on television on C-SPAN-2, concerning the appropriation bill for the Department of the Interior for fiscal 1994-1995. In particular, I noted the participation of Senators Stevens and Murkowski (both R-AK), dealing with ☛

(From page 22)

arbitrary actions taken by the U.S. Forest Service (USFS) in Alaska. Specifically, Senator Stevens objected vigorously to a USFS ban on logging in certain public lands in Alaska on the pretext that this would interfere with the welfare of a certain raptor bird species which had not been listed by the USFWS for protection under the ESA or any other legislation, and was not alleged by anyone to be Threatened or Endangered. Senator Stevens spoke heatedly against such current abuses of the ESA, said that he would oppose reauthorization of the ESA without substantial amendment, and warned his (especially western-state) colleagues of future dangers from maladministration of the ESA. Along the way, he referred to the "spotted owl" controversy as a fraud on the people.

It continues to be of highest importance that the community of lepidopterists unite and take all possible action to defend its legitimate interests. I attempted, without success, to warn lepidopterists in 1976 in the pages of the News of the Lepidopterists' Society, of the dangers from government intrusion looming on the horizon. As the old saying goes: "If you fool me once, shame on you; if you fool me twice, shame on me!"

Footnotes

1. News of the Lepidopterists' Society 1995(3):73-74 and page 70.
2. Sam Sun (News of the Lepidopterists' Society 1994(2):45).
3. Bruce Griffin (News of the Lepidopterists' Society 1995(1):21).
4. Jack N. Levy (News of the Lepidopterists' Society 1995(3):71-73)
5. Bureau of Land Management (BLM)
6. Mattoni, Rudolf H.T. 1990 (1992). The Endangered El Segundo Blue Butterfly. Journal of Research on Lepidoptera 29(4):277-304.
7. El Segundo Blue (*Euphilotes bernardino allyni*), synonymous with *E. battoides allyni* (Shields, 1975).

Still More on Bonanza King Mine Canyon

by Stanley A. Gorodenski, 1530 West Wescott Drive, Phoenix, AZ 85027, Telephone (602)492-0542

I recently rejoined the Society after many years. Through the News I have learned of the adverse extent to which federal agencies and federal and local environmental laws are affecting lepidopterists. These laws did not exist during my previous membership. They concern me greatly because the likelihood of increased regulation threatens to discourage my interests and reasons for getting back into the study of Lepidoptera. In particular, Donald W. Steffeck's response to Bruce Griffin on behalf of the Fish and Wildlife Service, and Dr. Jack N. Levy's 'Perspective' were very disturbing (News of the Lepidopterists' Society, No 3, 1995).

My impression after reading Mr. Steffeck's response is that the factual basis to close Bonanza King Mine Canyon to collecting is questionable. I cannot be certain of this because I have not seen all the material that influenced the decision. However, the response certainly gives this impression. For example, my impression of Mr. Griffin, after reading his article, is that of a collector with considerable experience that has something valuable to say about the impact of collecting on and the endangerment of the Martin swallowtail. Yet, Mr. Griffin's statements are dismissed as being unsubstantiated, but Dr. Levy's results appear to be treated as solid scientific fact to support FWS's action. However, the fact is that Dr. Levy himself admits his conclusions are tentative "...in part because the *validity of assumptions upon which the approach relies merits further testing*"(emphasis added).

Dr. Levy's work is valuable, because it demonstrates the extreme difficulty of coming to sound conclusions concerning the reason(s) for the decline in the population and the impact of collecting. However, I strongly differ with the statement that future monitoring of the Martin butterfly may provide valuable insight into the effects of collecting on other butterfly species. From what I have read, it has never been established that collecting had a substantial effect on the Martin swallowtail (Dr. Levy himself says "*If* collecting had a significant impact ...", emphasis added). So how can it possibly be inferred that, should the population size change over that next few years, it would in some way be related to prior collecting activities? It does not necessarily follow that an increase in population size after protection from collecting is proof that collecting had caused the population decline. However, this appears to be the assumption made. Unless such statements and assumptions are immediately questioned, they will perpetuate and contribute to the increase in unreasonable and over-regulatory laws and enforcement.

Numerical fluctuations of butterflies occur *naturally*, and it is not always known why this happens. One example of a population fluctuation is the study by E.B. Ford on *Melitaea aurinia* ("Ecological Genetics" by E. B. Ford, page 14). A local population of this butterfly had become extremely rare for many years, and in one year it practically disappeared. Ford stated "... in the two succeeding seasons, we could find only two or three specimens by careful search throughout the day ...". A few years later the population increased so greatly that often more than one individual could be caught with a single stroke of the net. The cause of the decline was concluded to be parasitism. Had a similar

(Continued on page 21)

Hawaiian Sphinx

by David V. Boucher, P.O. Box 3601, Lihue, Hawaii 96766, Telephone (808)742-6700

In the spring of 1995, Dean Jamieson, an entomologist with the State of Hawaii, Department of Health, Vector Control Branch, brought to light a true rarity. The fabulous green sphinx of Kaua'i, *Tinostoma smaragdina*, known only from a small number of specimens, had reappeared.

The moth was first described in 1899, and for many years the holotype from Kaua'i, deposited in the British Museum, was the only known example. When Elwood Zimmerman wrote *Insects of Hawaii: Macrolepidoptera* in 1958, no further specimens had yet appeared. This caused him to express some doubt that it was really a Hawaiian insect, especially since nothing even remotely similar had been seen on any other Hawaiian island. In July 1961, a second specimen was finally found, proving that the moth was indeed a distinctive endemic species of the island of Kaua'i.

The striking moth beautiful deep green forewings, each with a post median black spot and black margin. The dark brown-black hindwings have a white fringe (see picture on page 25, center right). The body is the same deep green on the dorsal surface. On the dull brown ventral side, the legs have a startling whitish-gold spot on the tibia, which almost seems to glow (see picture on page 25, top right). The palps are deep purple. The wings are unusually blunt in shape, rather different from the more narrow pointed wings of other sphingids. *Tinostoma* is a distinctive monotypic genus of extremely limited distribution.

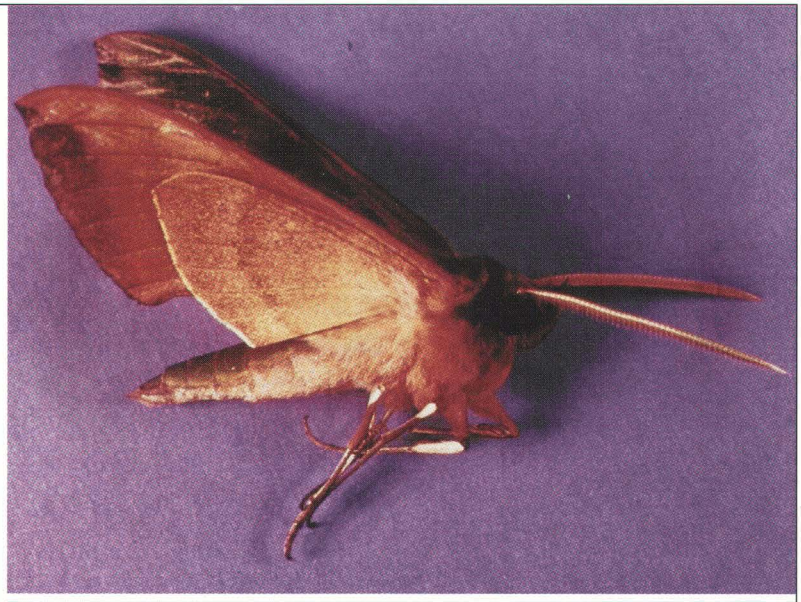
By 1984, a total of 15 specimens had been found. The collection dates of these moths were spread through most of the year, and all came from the mountain forests of the Koke'e region of Kaua'i. In 1992, a female was found a little before Hurricane 'Iniki ravaged the island. This moth laid eggs that hatched, and the larvae were exposed to more than 100 native plants (see Campbell, Clinton, and Laura Ishii. 1995. Proceedings of the Hawaiian Entomological Society, Volume 32, pp. 83-90). Unfortunately, none seemed palatable to them, or perhaps the climatic conditions at sea level were too much for this mountain denizen. At any rate, none survived. It was feared that perhaps the hurricane had wiped out what was evidently a very rare species. The latest specimen (the 17th, a male) proved these fears groundless. It had been damaged by a predator, and could no longer fly well.

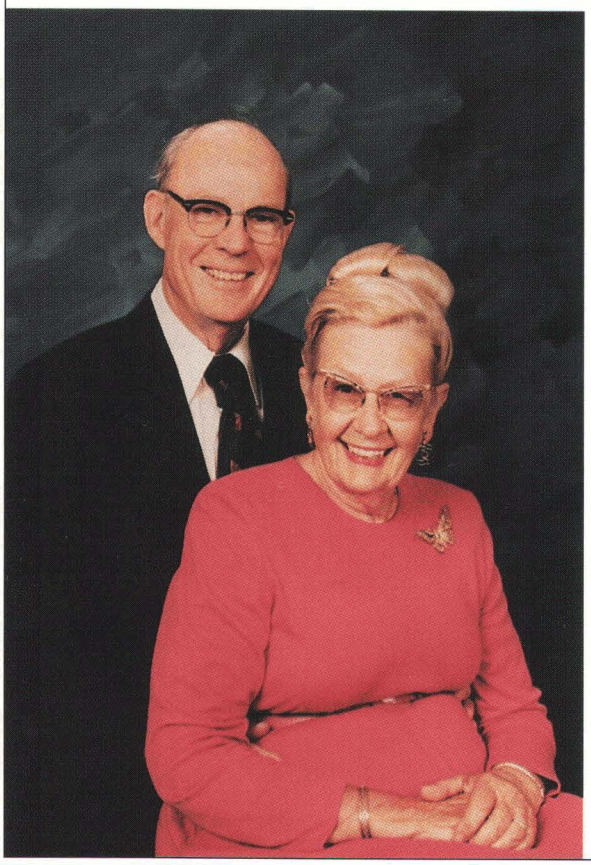
This rarest of large Hawaiian insects also appeared in a most Hawaiian manner. Long before finding the Green Sphinx, Dean Jamieson had hoped to bring environmental awareness and appreciation of the unique Hawaiian flora and fauna to a broad range of people, in his words, "to bring the top of the mountain down to the people of the lowlands using a traditional Hawaiian art form." The Hawaiian quilt was the chosen medium. These quilts are true works of art. Techniques introduced by missionaries 200 years ago have been modified by local men and women to create stylized motifs of nature. The quilts are considered valuable heirlooms, worthy of respect. One does NOT sit on a Hawaiian quilt. Jamieson's idea was to incorporate Hawaiian insects, including butterflies and moths, into the quilting design of his original patterns of native plants. No one, however, would sew his quilt for him. Hawaiian quilts take a great investment of interest, time, and love: "aloha" as the Hawaiians say. Other quilt makers had their own designs to work on, and no "feeling" for a design with "bugs." It became obvious that to bring his quilt into physical reality, it would be necessary for Dean to invest of himself in his design. Laboriously, with hints from his wife and others, he learned to sew the quilting stitches. Jamieson's quilts are 45 inch wall hangings. The Brighamia-Green Sphinx quilt is the fifth in a series. This quilt is based on a stylized rendition of *Brighamia insignis*, a rare endemic lobelioid plant looking something like a bowling pin topped with leaves — and the green sphinx, which he felt might have been a pollinator of the plant (see picture on page 25, upper left).

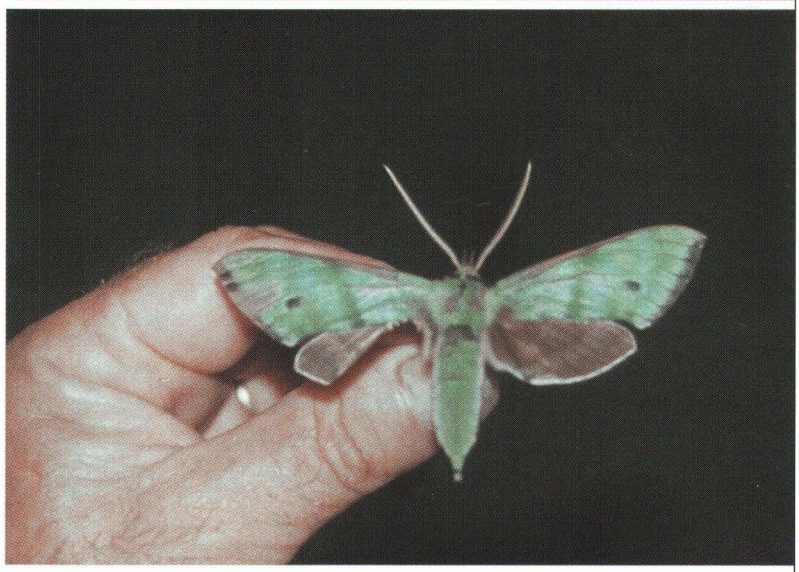
After 13 long months, the *Brighamia*-Green Sphinx quilt was completed, an expression of Dean's aloha for the mountains of Kaua'i. Within 48 hours of finishing the last stitch, he received a phone call which led to his collection of the 17th know specimen of the green sphinx. On the mainland this might be mere coincidence. In Hawaii, such a juxtaposition of events can only be interpreted as a blessing: a fruition of thought and action; a confirmation from the living land that one's deeds are truly "pono" — the way they SHOULD be. This is Hawaiian magic.

Since almost all other specimens of this moth have been taken from Kaua'i, Mr. Jamieson feels strongly that this one should stay on Kaua'i. He plans to house the green sphinx in a suitable exhibit at the Koke'e Museum of Natural History, so that all of Kaua'i and her visitors can have a chance to see the mountain's legacy, this rarest of sphingids.

Page 25, top left, *Brighamia*-Green Sphinx quilt made by Dean Jamieson; top right, *Tinostoma smaragdina*, the Hawaiian sphinx; center right, dorsal view of the Hawaiian sphinx; bottom right, *Eacles imperialis* male (above) and female (below); bottom left, Floyd W. Preston and June D. Preston of Lawrence, Kansas, celebrated their 50th Anniversary on Saturday, September 23, 1995 in Lawrence, Kansas (see page 19).







Gender Specific Markings in *Eacles imperialis*

by Mark D. Schmidt, 8780 Red Lion - Five Points Road, Springboro, OH 45066

Eacles imperialis is not a hobbyist's "beginner" moth for many reasons. The adults tend to flop around when handled, and refuse to hold on to perches when being photographed. They mate briefly, often making it impossible for one to know if a female has successfully mated. They seem to oppose cage mating. Males struggle vigorously to escape from cages, often beating themselves to a useless frazzle and even to death. Larvae are prone to disease. They pupate underground, adding another dimension for the novice to contend with. The pupae are prone to mold and mildew destruction if kept too moist, but are likely to succumb to desiccation if pupation box conditions are too arid.

If these problems aren't enough, the novice may even face a problem with identifying the genders, as well. The moths keep their heads and antennae tucked deeply into the soft yellow fur of the thorax. The distal ends of the antennae in both genders are similar on gross inspection. Only at the proximal base does the male have a flare. As far as body morphology goes, the males and females have stout, similarly contoured bodies. Small females could easily pass for males, and large males for females. Also, the male's claspers are somewhat small and heavily concealed with golden fur. With some experience, ova within the body of the female can be felt with gentle and careful palpation.

Relatively annoyed by the latter problem of difficult gender identification as a beginner, I serendipitously stumbled upon a body marking unique to the male. Two males had emerged on the same day. One was heavily marked with purple and brown. The other was contrastingly light, more like the typical female. On the heavily marked male, I noted how lightly marked the ventral surface of the body was. The lighter marked male was identical on the ventral surface. On it, a large oval purple spot stood out on the ventral side of the eighth abdominal segment. Lo and behold, the other heavily marked male was the same.

A female had emerged several days earlier. Aside from the usual purple colored spiracles found in both sexes, the female lacked the purple abdominal marking. The photograph on page 25 (bottom right) shows a male with the marking (above) and female (below), which lacks it.

Since discovering this marking, which then made gendering *E. imperialis* extremely easy, I have never found a female with the purple spot. I have observed variations, however, in the degree and configuration in the males' markings. Some had very little marking at all. One was observed to have a medially split spot.

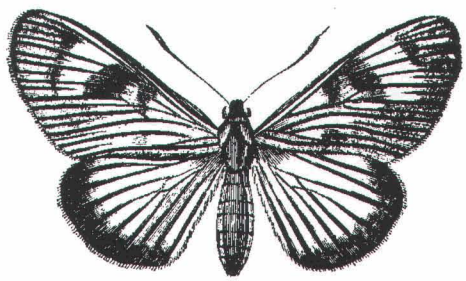
When reviewing the literature available to me, which included Ferguson's *The Moths of America North of Mexico*, Villiard's *Moths and How to Rear Them*, and Gardiner's *A Silkmoth Rearer's Handbook*, I have not found similar mention of this finding. Most identifications deal with wing markings, wing venation, or dissected genitalia. Most gendering references deal with pupal case markings or adult antennae.

Since no mentions were found, it is conceivable that this is only a regional variation. My experience has only been with specimens from west central and southwestern Ohio. I would ask of the membership at large in possession of *E. imperialis* specimens, to flip them over and take note of any ventral abdominal markings. Please note the findings and send them to me. I would like to construct a mapping of this variation, if it is at all confined to a particular region. My address is listed under the title, above.

Incidental observations I have made in other species pertaining to body marking include *Actias luna* and *Hyalophora* spp. The marking in *A. luna*, I believe, is fairly common knowledge. Spring-hatching males and females have a purple line along the side of its abdomen. Most books note that the outer borders of the wings are also purple in spring-hatching *A. luna*, unlike the summer broods, in which the outer wing borders are yellow. The second and sometimes third broods which hatch in the summer have plain white abdomens. This leads me to believe that there is a temperature dependent gene at work. I am not sure what the temperature is, nor the exposure time, necessary to trigger its expression. Perhaps persons in southern Florida could comment, since it is likely *A. luna* is continuously brooded there. I suppose duration of diapause is also a likely factor, since those that overwinter obviously spend more time in diapause.

In both *H. cecropia* and *H. gloveri*, I have noted that as each species is inbred, the black banding on the abdomen becomes diminished. I have had *H. cecropia* without any black at all. I believe it to be a recessive gene, since a wild male will result in wild phenotype offspring. I would be happy to entertain comments from other interested parties.

If no other purpose has been served, I hope these observations have at least been of interest, if not at least some help to the novice lepidopterist.



Oh High Andes - You Were My Ardis Park

by Zsolt Bálint, Department of Zoology, Hungarian Natural History Museum, Budapest VII, Baross utca 13, H-1088, Hungary

Many lepidopterists are simply blind to the vast diversity of Neotropical lowland forests. The richness of the Amazonian fauna is really remarkable. But because of this, most of the high Andean region has remained unexplored, and even the alpha taxonomy and faunistics of the butterflies was not known until very recently. The high Andean fauna was mistakenly believed to be derived primarily from the Holarctic (Descimon 1986).

Three years ago my request for help to obtain Nearctic and Neotropical polyommatines was published in the News of the Lepidopterists' Society. I needed material for my Ph.D. dissertation "Polyommatine fauna of the Oreal biome in the Holarctic and Neotropical Realms: Their diversity and biogeography." I got in contact with some colleagues such as Mr. Dubi Benyamini, Dr. Clifford Ferris, Dr. Kurt Johnson, Dr. John Hyatt, Dr. Gerardo Lamas, Señor Luis Peña, and Dr. Robert Robbins. All offered their most kind help. My correspondence became very tight with Dr. Johnson and Dr. Lamas. The contact with Dr. Johnson resulted in many new publications concerning high Andean polyommatines. Dr. Lamas commented on many of my manuscripts, and passed along a lot of unpublished information concerning types, historical collecting sites, unelaborated material, etc. unknown not only to Europeans, but also to Americans. Mr. Benyamini and Mr. Peña sent me numerous newly-collected, little, delicate, blue butterflies from Chile, which heretofore failed to attract the attention of Lepidopterists. They look like nothing beside a *Morpho*. This year's crowning glory was a grant to go to Peru and to study my polyommatines in their own habitats.

Thanks to the warm welcome and hospitality of Dr. Lamas, I was able to stay in Peru one month, visiting the puna region of the Upper Rio Rimac River (Fig. 1). He also made possible a two week long trip to the high Andes of southern Peru (Fig. 2), where I obtained much new ecological data on the polyommatine genera *Madeleinea* (Fig. 7), *Paralycaeides* (Fig. 10), *Nabokovia,* and *Itylos*. But the most beautiful time was in Cordillera Blanca, where I was able to spend one week in Llanganuco.

Llanganuco is one of the most frequented tourist attractions in the Huascarán National Park, situated in a deep glacier valley at the foot of the second highest peak of the southern hemisphere: Nevado Huacarán, 6,768 m. The butterfly fauna is one of the best explored of the high Andean region (Lamas and Pérez, 1983). Having laboriously obtained the many permits necessary to study butterflies, the little house of the National Park guards offered an ideal base for my daily excursions. In spite of the rainy season, it was nearly always possible to work between 9:30 a.m. and 2:00 p.m. (cf. Shapiro 1983). I could observe the fascinating behavior of four *Penaincisalia* species (Figures 8, 11, and 12), two of them still undescribed, and the very recently described *Madeleinea huascarana* (Bálint and Lamas 1994) and its close relative *M. koa* (Fig. 5).

Nabokov did the first revision of Neotropical polyommatines. The paper dealing with the "Neotropical Plebejinae" (Nabokov 1945) is the best entomological publication from his pen: almost all the genera recognized by him turned out to be natural groups (Johnson *et al.* 1995). I have, in collaboration with either Dr. Johnson or Dr. Lamas, described more than twenty new Latin American polyommatine species. As an honor to Nabokov, for their scientific names we have chosen characters in Nabokov's life or writings.

One of the new *Madeleinea* species (Fig. 7) collected in the Upper Rio Rimac Valley will be named after Ardis Park, the main location in Nabokov's novel, Ada. The name "ardis" is derived partly from "paradise". The Ardis Park was idyllic to the children of Ada Veen (the main character of the romance), as the vast and silent high Andean nature was Paradise, deeply impressing upon me the Creator's love: I, who grew up in the biggest city of central Europe, Budapest.

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Photo Captions, pages 28-29:

Fig. 1. (Top left) Upper region of Río Rímac Valley: Dept. Lima: Quebrada Chinchán, 4,260 m, 4,250 m, 3 February 1995. Habitat of several *Phulias* and *Colias* species, *Itylos titicaca* and *Madeleiena* sp. n. near *cobaltana*.

Fig. 2. (Top right) High Andean puna with *Astragalus* and conifers at the foot of Volcano Sarasara (6,004 m), Dept. Arequipa, 3 km south from Incuyo, 17 February 1995. Habitat of *Madeleinea pacis, Paralycaeides inconspicua, Nabokovia faga, Itylos titicaca, Colias euxanthe,* and *Tatochila xanthodice*.

Fig. 3. (Second row, left) View of the southern part of the Cordillera Blanca Range, Dept. Ancash, in the vicinity of Recuay, 8 February 1995.

Fig. 4. (Second row, right) *Itylos titicaca* male, Dept. Ayacucho, 43 km southeast of Puqio, 3,800 m, 16

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February 1995.
Fig. 5. (Third row, left) *Madeleinea koa*, male, Dept. Ancash, Cordillera Blanca, Quebrada Demanda, 4,000 m, 10 February 1995.
Fig. 6. (Third row, right) *Madeleinea pacis*, male, Dept. Arequipa, 3 km south from Incuyo, 17 February, 1995.
Fig. 7. (Bottom left) *Madeleinea* sp. nov., Dept. Lima, Quebrada Chinchán, 4,260 m, 3 February 1995.
Fig. 8. (Bottom right) *Penaincisalia culminicola*, Dept. Ancash, Llanganuco, 3,850 m, 11 February 1995.
Fig. 9. (Page 29, top left) Cordillera Blanca at the entrance of Quebrada Demanda, 4,000 m, in the habitat of

Madeleinea huascarana and *M. Koa*. 10 February 1995.
Fig. 10. (Page 29, center) *Paralycaeides inconspicua*, male, Dept. Ayacucho, Pampa Galeras, 3,900 m, 23 February 1995.
Fig. 11. (Page 29, top right) *Penaincisalia aurulenta*, female, ovipositing on *Vaccinium*, Laguna Paron, Dept. Ancash, 4,200 m, 9 February 1995.
Fig. 12. (Second row, left) *Penaincisalia* sp. nov., Dept. Ancash, Llanganuco, 3,850 m, 11. February 1995.
Fig. 13. (Second row, right) *Colias euxanthe*, male, Dept. Ayacucho, 3 km south of Incuyo, 3,300 m, 15 February 1995.
Fig. 14. (Bottom left) *Colias erika*, male, Dept. Tacna, Paso de los Vientos, 4,300 m, 19 February 1995.
Fig. 15. (Bottom right) *Junonia vestina*, Dept. Ancash, Llanganuco, 3850 m, 11 February, 1995.

Membership

Membership in the Lepidopterist's Society is open to all people interested in any aspect of Lepidopterology. To become a member, 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 Treasurer Bob Borth, 6926 North Belmont Lane, Fox Point, WI 53217.

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Students must send proof of enrollment. Remittances must be in U.S. dollars, payable to the Lepidopterists' Society. Members receive the Journal (published quarterly) and the News (published quarterly, alternating with the Journal). Supplements to the News include a 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, Michael J. Smith.

Submissions to the News

We welcome submissions! When space becomes limiting, preference is given to articles written for a non-technical but interested audience, illustrated nicely, written succinctly, and under 1,000 words. Please send your article or item to us in one of the following formats (given in order of preference):

1. Article on high-density, DOS-formatted diskette. Formats we can accept include graphics, text, or spreadsheet programs such as the following:
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AmiPro 1.1 to 3.0,
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ASCII
CompuServe GIF,
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You may include graphics on disk, too. We do not have a MacIntosh computer. Please let us know what format(s) your article is in when you send it, and call ahead if in doubt. A good backup to use is ASCII or RTF with a hard copy for italics, etc..
2. Electronically transmitted file in ASCII or other acceptable format (see #1 above) to us via e-mail. Our e-mail address is afn10853@freenet.ufl.edu
3. Typewritten copy, double-spaced (short pieces only, please, not if over 500 words).
4. Handwritten, (very legible, or no guarantee what the outcome will be!).

Submission Deadlines

Mail diskettes, hard copy, and illustrations (slides for a single illustration; prints if you have several to put together on a page) to the News Editors. Material for the following issues should reach the Editors by the following dates:

Issue	Date Due
1 Jan.-March	November 15
2 April-June	February 15
3 July-Sept.	May 15
4 Oct.-Dec.	August 15

Reports for the Season Summary should reach the Zone Coordinator by December 1.

Change of Address? Could You Use Our Mailing List?

Please send permanent changes of address, telephone numbers, areas of interest, or e-mail addresses to Julian P. Donahue, Natural History Museum, 900 Exposition Blvd., Los Angeles, CA 90007-4057. Contact Dr. Donahue for information on mailing list rental.

Missed or Defective Issue?

Requests for missed issues should be directed toward Publications Manager, Ron Leuschner. Defective issues will also be replaced. Please don't ask the editors, because we don't have extra copies of the News. Be sure you've really missed an issue by waiting for the subsequent issue to arrive, as publication may only be delayed.

The Journal

Manuscripts submitted for publication in the Journal are to be sent to Dr. Larry Gall. Editorial policy is outlined on the inside back cover of the Journal. Send book reviews for the Journal or News to Book Review Editor, Dr. Boyce A. Drummond.

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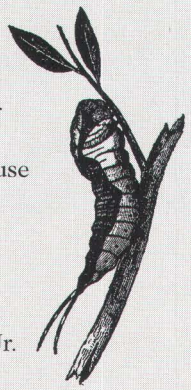

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Allen Press
P.O. Box 368
Lawrence, KS 66044

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The Blizzard by William H. Howe, 822 E 11th Street, Ottawa, Kansas 66067, (913) 242-4148
This painting depicts a huge migratory flight of the Lyside White, *Kricogonia lyside* (Pieridae), which make periodic flights in Mexico and neighboring Texas. This flight took place 6 miles north of Sabinas Hidalgo, Nuevo Leon, Mexico, on December 11, 1971. I watched the flight myself. The bus upon which I was riding was forced to stop by the side of the road to allow the flight to pass. The butterflies resembled flakes of snow. Their numbers were so thick that oncoming cars were obscured by their flight, it was so dense. A similar flight was recorded by Dr. George Byers of the Entomology Department at the University of Kansas at Lawrence. Individual flights of *K. lyside* have also been recorded. I caught a windblown specimen on a dandelion here in Ottawa, Kansas, one spring day, proving that this butterfly is capable of flying great distances, individually as well as collectively.