

NEWS

OF THE

LEPIDOPTERISTS' SOCIETY



Volume 39, Number 5

Winter 1997



Inside:

**Backyard Butterflies:
*Heliconius charitonius***

**Salvaging Damaged
Pupae...**

**Fossil Butterfly
Update...**

**More 50th Anniversary
Meeting Photos...**

News from Russia

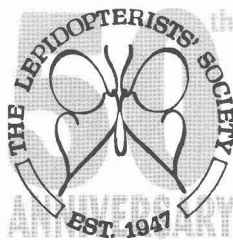
**Range Expansion of
the Giant Swallowtail**

**Butterflies of the
Hempstead Plains, NY**

**Registration forms
and information for
the 49th Annual
Meeting in Eureka, IL**

...and more!

NEWS OF THE LEPIDOPTERISTS' SOCIETY



Contents

Volume 39, No. 5 Winter 1997

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

The **News of the Lepidopterists' Society** (ISSN 0091-1348) is published 4 times per year by The Lepidopterists' Society, c/o Los Angeles County Museum of Natural History, 900 Exposition Blvd., Los Angeles, CA 90007-4057, USA, and includes one or two supplements each year. The **Season Summary** is published every year as issue number 2 of the News. In even numbered years a complete **Membership Directory** is published as issue number 6. Please see the inside back cover for instructions regarding submissions to, and deadline dates for, the News. Postage paid at Lawrence, KS.

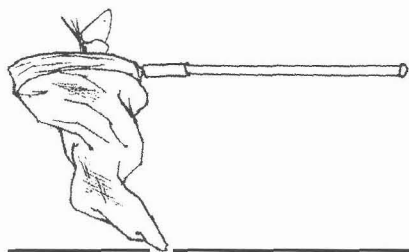
Copyright © 1997 by The Lepidopterists' Society. All rights reserved. The statements of contributors do not necessarily represent the views of the Society or the editor and the Society does not warrant or endorse products or services of advertisers.

Fourth of July Butterfly Count. Katherine Covell	97
Backyard Butterflies: Life History of Heliconius charitonius L. at San Jose, Costa Rica. Miguel E. Chumpitasi	98
Entomological News from Russia. Sergei Gundorov	98
Fossil Butterfly Update. Oakley Shields	99
From the Editor's Desk.	99
Salvaging Damaged Pupae. Mark D. Schmidt	100
Metamorphosis...	101
Butterflies of the Hempstead Plains. Paul Manton	102
The Lepidopterists' Bookshelf. Boyce A. Drummond	103
More Recently Published Books. Boyce A. Drummond	103
<i>New Video: Collecting Butterflies & Moths</i>	105
<i>Back Issues of Journal of the Lep. Soc.</i> available	105
Out of the Net... Jim Taylor	106
49th Annual Meeting Registration Form, Information and Call for Papers	Center Section
Range Expansion of the Giant Swallowtail, <i>Heraclides cresphontes</i> (Cramer). Lawrence H. Shaw	107
Resolution of the Lepidopterists' Society.	107
Membership Update... Julian Donahue	108
1997 Season Summary Submissions. Jim Tuttle	109
J.A. Scott's "Butterflies of North America" on CD-ROM.	110
Proposed Monarch Council. Jurgen Hoth	110
The Marketplace.	111
More 50th Anniversary Meeting Photos.	114
The Brenton Blue Butterfly: a test case for conservation in South Africa. John A. Ledger	116
Mapping European Butterflies: project outline. O. Kudrna	117
Backpages:	
Membership Information, Dues Rates, Journal of the Lepidopterists' Society, Change of Address?, Our Mailing List?, Missed or Defective Issue?, Book Reviews, Submission Guidelines for the News	118
Executive Council.	119
Season Summary Zone Coordinators.	119

Issue Date: Dec. 15, 1997

ISSN 0091-1348

Cover: Egg, larva, pupa and adult of the Zebra Longwing (*Heliconius charitonius*) with one of its hostplants, *Passiflora biflora*. Drawing by Miguel Chumpitasi. See *Backyard Butterflies* on page 98.



Mailbag...

Dear Editor,

I'm a 16 year old high school student, and have collected butterflies for five years. I have a collection of more than 2,000 butterflies. My letter is to ask you how I can publish some news that I have and other things that I am doing. I have popular news of "ideas, observations and mini news" and big studies about the butterflies of Costa Rica, like news about hostplants and larvae and very big studies about one butterfly in particular. Can you answer some questions please:

1. Where do I send my studies?
2. I don't write and speak good English. Can I send it in Spanish, or do I have to send it in English?
3. Can I send only photographs or do I have to send the negatives, too. How do you know in what part of the text to put the photos?
4. Do you tell whether you will put the studies in the *News* or in the *Journal*?

Please answer these questions, because it is important to me to publish everything that I have written. Thank you.

Luis Ricardo Murillo H.

P.O. Box 4377-1000, San Jose, Costa Rica, Centroamerica

(Dear Luis,

Those are good questions! I'll try to answer them as best as I can...

My answers to questions 1 & 4 are pretty similar - where you submit your work depends a lot on what kind of work it is. If they are in-depth, robust studies or technical details that are "new to science" then I'd suggest that you submit them to the *Journal* to be peer-reviewed. If they are short observational or "newsy" items or non-technical studies then the *News* is the perfect place for them.

Personally, I have no objection to items for the *News* in spanish but you have to remember that the vast majority of Society members speak English and that this language is the de facto

language of science. I think that, for the time being, it would be better if submissions were in English. I'm sure that there are enough members that speak Spanish and English that getting a translation done should not be too much of a problem. Contact me about this and we'll work something out.

As for photos and pictures, all of the various kinds (prints, slides or negatives) are equally acceptable. I try to put pictures in where they "make sense" but if you want to specify where a picture should go then just put a note in your text like "figure 1 goes here" and I'll try and fit it in there.

Hope this answers your questions and I look forward to your first submission...

Phil



Dear Editor,

My reason for writing is twofold: First, my husband Steve and I want you to know that the *News* has never looked better. It is so much easier to read, wonderfully streamlined, and looks great. Thanks for your tremendous effort in turning out such a wonderfully revamped *News*.

Second, your notice at the bottom of page 25, concerning the USDA/APHIS/PPQ (United States Department of Agriculture/Animal and Plant Health Inspection Service/Plant and Quarantine) is incorrect. I believe this statement was put in long ago and has never been corrected. You will be receiving a letter from Bob Flanders (USDA/APHIS/PPQ/BATS) in Riverdale, M.D. in the near future. My husband is the National Lepidoptera Specialist for the USDA/APHIS/PPQ and discussed with Bob the need for a uniform statement that should be printed whenever Lepidoptera is changing hands. Bob agreed and will issue a statement.

Again, we will be looking forward to receiving the *News*. By the way, I have been

rearing saturniids for many years and study life history with an emphasis on immatures. Steve is a worldwide immature specialist and national microlepidoptera expert. Currently, we are awaiting the reviews of our first coauthored-paper on the mandibular morphology of *Eupackardia caletta*. If we can ever be of help to you, please let us know.

Valerie A. Passoa

602 Jasonway Avenue,
Columbus, OH 43214

(Many thanks for your kind words! I'll keep an eye out for that statement but haven't received anything yet. Ed.)



Dear Editor,

I have sent the following letter in response to the letter from Dr. Jack Ward Thomas, Chief of the USDA Forest Service, regarding the requirement for Collecting Permits in National Forests, which Rosser W. Garrison reported in the *News of the Lepidopterists' Society*, Vol. 38(6), October-December 1996.

+++++

Dr. Michael P. Dombeck, Chief
USDA Forest Service, Washington Office
14th and Independence SW
P. O. Box 96090
Washington, DC 20090-6090

Dear Dr. Dombeck:

I see from the Association of Systematics Collections Newsletter that you are the new Chief of the Forest Service, so perhaps your viewpoint on the subject that follows is different. I hope so, but this letter is directed at the viewpoint expressed by Dr. Jack Ward Thomas, former Chief of the Forest Service, and

dated 15 May 1996, in reply to an inquiry made by Mr. Rosser W. Garrison regarding the non-commercial collection of insects on Forest Service lands. Mr. Garrison is a member of The Lepidopterists' Society, and the reply to him by Dr. Thomas was printed in the News of the Lepidopterists' Society, July-September, 1996, p. 197 (copy enclosed). This letter is rather long, but a number of points need to be addressed.

Dr. Thomas's stated policy really disappoints me, because I know the Forest Service has a long-standing policy of multiple use, and I expected the policy to be more enlightened with respect to the collection of insects on Forest Service lands. I am not writing about the sampling of any species listed as "endangered" or "threatened". Everybody I know who maintains a collection, professional and avocational alike, does not want to see a listed species go extinct, and respects these listings.

I have collected insects in National Forests ever since I could walk, participating with my father on trips to Wayne National Forest in southeastern Ohio where I grew up, and collecting on many other National Forests throughout the West on vacation trips. He specialized in lady beetles and ground beetles, but we saved many other western insects for the Ohio University collection. Later, as a student, I made 6-month long research trips in 1960 and 1961 collecting tent caterpillars for my Ph. D. research, sampling many of them on Forest Service lands. At the same time miscellaneous other insects were collected for the University of Minnesota Insect Collection.

As a past president of The Lepidopterists' Society, I primarily collect butterflies and moths, but I also collect many other insects for the Michigan State University Insect Collection, where I am employed as a professor and curator. I collect as a professional entomologist, but the great majority of the Lepidoptera in our collection have been collected by avocational lepidopterists who regularly donate specimens, and who eventually give their collections to public institutions. These specimens are vouchers of

the past, and are used for current scientific study. Here at Michigan State, we have been compiling a database for the Listed Lepidoptera of Michigan, and nearly all of our records are specimens donated by avocational lepidopterists whose collections are in public institutions or eventually will be in those institutions. Without their efforts over the past 70 years in sampling these formerly unlisted species in areas that have now been "developed" (= largely destroyed biologically), we would have almost no data with which to make present-day management decisions. These collectors have also contributed an immense amount of biological and behavioral data by their rearing and observations. In addition, contemporary collections will provide the data for making informed management decisions in the future.

Dr. Thomas stated that . . . "the non-commercial collection of insects by amateur and professional researchers is subject to the regulations at 36 CFR 251.50 and must be approved by the Forest Service. In these cases, the Forest Officer most familiar with and responsible for management of the affected area, usually the District Ranger, must determine if the requested use is consistent with the purposes for which the NFS lands are managed. Even casual or incidental insect collection could be harmful to the species or the resources and the District Ranger should make that determination..."

The last sentence is simply incorrect, but the universal qualifier "could" is there to cover the most unlikely possibility. No entomologist will subscribe to the proposition that casual or incidental insect collection will have a harmful effect on any species of insect that is not listed as "endangered" or "threatened". The District Ranger is asked to make the decision about collecting, but the ranger will have no basis upon which to make a decision, since each district will contain many thousands of species, and relatively few will be known to the ranger or even to a visiting entomologist. Such a policy is simply not necessary, and not workable with the information that is likely to be available.

Contacting the District Ranger may seem reasonable to Forest Service personnel, and it could be reasonable for a person who is going to the same district many times for a specific purpose, or who knows the ranger, and can easily explain what they want to do. However, for those who are going on a month-long trip through many National Forests, and who do not know where they will be, or when they will be there, or what the ranger districts are, or what the addresses are, or if they are open after 5 o'clock, or what kind of insects are likely to be found, this is an unreasonable policy. It also does not appear to be a reasonable policy for the District Rangers, since I suspect they wouldn't relish the additional paperwork that would no doubt be involved in issuing permits.

Entomologists often sample by using nets and hand collecting, but many also use various kinds of traps as an efficient way to collect, or as a means of collecting at night since different species fly at different times throughout the night. Trapping has a negligible impact on populations of insects, as demonstrated by the fact that isolated traps are not used as a control technique by pest managers, only for determining the presence or estimating the abundance of pests. It is curious that National Forest campers are permitted to bring along "bug tappers" (under the mistaken impression that tappers can control biting flies). I presume the Forest Service does not require permits for the use of bug tappers, a device whose total kill includes < 1% biting flies, kills mostly moths for no good reason, and which disrupts the peace and tranquillity of campgrounds.

Most avocational entomologists are selective in their collecting since they do not have the time, space, or money to properly care for specimens of all insect groups. Professional entomologists may also be selective, but they are more likely to do general collecting since they may have the time, equipment, help and facilities to properly care for more comprehensive samples. Geographically widespread general collecting should not be discouraged because most groups of in-

sects are poorly known and poorly sampled. In addition, adult insects are not present year round like vertebrates and many plants, most of them being present only from a day to a month. There is also a huge number of insect species, there being an estimated 20,000 in Michigan alone, more than the total number of birds and mammals worldwide. If collecting is actively discouraged, we will never have adequate samples.

When trying to evaluate the number of specimens that might be taken by collectors in a season, consider the following. Every filling station near a National Forest and elsewhere has windshield cleaning equipment to remove the bugs that are smashed on windshields. Think of all the freeways, state highways, and other roads passing through National Forests and the millions of vehicles going over them each day, all of them getting their windshields smeared by National Forest insects. I doubt that collecting by a small number of entomologists has even a fraction of the impact that vehicle traffic does. In summary, any method used by entomologists to sample insects will have a negligible effect on the populations of unlisted species.

As I am sure you realize, the public has been encouraged by some individuals or groups to develop a distaste for Government. This has many causes, including those who advocate "no new taxes", deregulation advocates, rude and unhelpful public employees, employees sticking to the letter of the law rather than the spirit of the law or what is reasonable, and policies such as that put forth by your predecessor that don't make biological sense. As a former fisheries biologist, you certainly have a good understanding that overharvesting (= a type of collecting) can have disastrous impacts, as the current demise of many of the world's fisheries is demonstrating. I believe you can also appreciate that avocational and professional entomologists who collect unlisted insects are not overharvesting, and their activities will have no effect on the populations of those species collected.

Permits from the Fish and Wildlife Service should certainly be required for col-

lecting protected species of insects anywhere. Permits should also be required by the Forest Service for collecting insects on National Forests for commercial use (= sales). However, a policy that requires permits for the avocational collector or a professional entomologist like myself is unreasonable, and is an outstanding example of unnecessary government regulation.

This letter is written from a personal viewpoint, and is not intended to represent the views of the Lepidopterist's Society. However, there are about 1800 members of The Lepidopterists' Society, nearly 1400 are United States citizens, and nearly all of them have collected on National Forest lands at one time or another, although most of them do not do so regularly. I believe nearly all of them have held the Forest Service in high regard in the past because of an open collecting policy. If your predecessor's policy is still in effect, and if it stays in effect, you and I can be reasonably certain that the Forest Service has lost a large group of supporters and recruited more anti-regulation believers.

Sincerely,

Frederick W. Stehr, Professor

Past President, The Lepidopterists' Society, 1995

cc: President Bill Clinton, Vice President Al Gore, Secretary of Agriculture Dan Glickman, Michigan Senator Carl Levin, Michigan Senator Spencer Abraham, 8th Michigan District Representative Debbie Stabenow, Lepidopterists' Society President Eric Metzler, Lepidopterists' Society President-Elect James Tuttle, and Phil Schappert, Editor, News of the Lepidopterists' Society.

P.S. Note that this letter primarily addresses your immediate predecessor's stated policy. The above copies are sent to people who should care about this subject and the problems that are created for biologists and Government when such unnecessary policies are put into effect. Some regulation is necessary, but this kind of regulation is not justifiable, and simply generates ill will.

+++++

Fred Stehr,

Dept. of Entomology, Michigan State Univ., East Lansing, MI 48824-1115



Fourth of July Butterfly Count

Katherine Covell

A long gravel road winds around the edge where my father and I would collect butterflies, the Star-Spangled Fritillary, the Red Spotted Purple.

Sometimes I would get so tired, I'd just fold up my net and sit in the car, which smelled of

killing jars and bug spray.

Somehow, though, I would always become restless, and find my way to the

small enclosed patch of overgrowth,

surrounded on all sides

by a low, crumbling wall.

Gravestones were broken and fallen

and my father would come over

and speculated about the family buried there.

I wondered about the

young children who slept beneath the soft pine needles,

I wondered about their

favorite jokes.

Sun rays smacked the damp rocks

(a butterfly's haven in this quiet place)

moss hugged the ground

with a gentle trace of evergreens

in the air.

Reprinted from The Louisville Review, No. 39-40, Fall 1995-Spring 1996, pp. 158 by permission of the author.

Update...continued from page 108

Medina, Mirian: Dept. of Entomology & Nematology, University of Florida, Gainesville, FL 32611-0620.

Penz, Carla M.: Dept. of Biology, University of Oregon, Eugene, OR 97403.

Rice, Riley W.: 2778 Shaner Drive, Alameda, CA 94502.

Sun, Sam: 11894-B Scripps Creek Drive, San Diego, CA 92131.

Thompson, Paul M.: 914 South Palisade Court, Louisville, CO 80027.

Backyard Butterflies

Life History of *Heliconius charitonius* (L.) at San Jose, Costa Rica

Miguel E. Chumpitasi

Apartado 1106 – 2150 Moravia, San Jose, Costa Rica

Sequence of events, 1997

July 28: several eggs placed – around 9 am on a sunny day – on dorsum and ventrum of *Passiflora biflora* leaves, shoots and tendrils. Subsequent ovipositing is preferentially done on shoots. When no shoots were available (eaten by larvae) females started placing eggs on shoots of neighbor *Passiflora apetalata*.

Egg: yellow elongated, ovoidal.

Aug 1: first larvae hatch, eat egg remains and shoots (exclusively). When placed on mature leaves they - after some biting efforts - move looking for meristems. Recently hatched are creamy-orange.

Aug 5: larvae change color to cream and develop dark spines and 2 small horns.

Aug 7: larger larva moults to 1st instar (during the night), 13 mm in length. Head changes to turquoise color and develops dark spots on sides of head and body.

Aug 10: 24 mm long. Head now creamy like body.

Aug 11: ventrum is now chocolate color as well as lateral spots. Dark spines develop small branches/ramifications.

Aug 12: now the larvae will eat adult leaves as well as meristems. Larger larva is 32 mm long. Several larvae left in the open disappear. Large larva eat a meristem with 4 eggs recently oviposited. A larva in captivity eats a large leaf several times its volume in 12 hours. Non-gregarious eating (though sometimes they occasionally gather).

Aug 14: larva in the open leaves the hostplant and starts pupation in grass (Graminae) in the vicinity.

Aug 15: other larvae in captivity start pupation. Before pupation they start a wandering phase – without eating. They afix themselves in grasses placed purposely, release some liquid and start prepupation. A pre-pupa – already static – was placed in direct sun and started

moving away. The creamy color darkens becoming slightly orange.

Aug 16: Pupae fully formed overnight, 28 mm in length. Pupa is, at the beginning, soft, light brown with characteristic head horns. As it matures it becomes darker and develops slightly golden spots on the ventrum and small spines both on ventrum and dorsal, 2 sides especially prominent. It shakes the abdomen strongly when molested.

Aug 23: two first butterflies eclose (9 am). Characteristic zebra like pattern, 90 mm in wingspan (female). Adults highly preferred feeding on *Lantana* flowers rather than *Stachytarpheta* ones.

Summary: Egg: 5-6 days; Larva: 14-16 days; Pupa: 8-10 days.

Ed. Note: Mr. Chumpitasi is a pharmaceutical chemist with an MBA who is new to both the Society and to Lepidoptera. He is especially interested in the Passiflora of Central and South America and is looking for an identification guide for them. He would appreciate hearing from anyone who could help him out... Phil

New Magazine...

Entomological News from Russia

About 2000 entomologists are engaged in the study of Lepidoptera and Coleoptera in Russia today. There are numerous expeditions each year to different regions of Russia and former USSR. Unfortunately, most have no communication with each other or with foreign partners. There has been a need for the creation of a magazine and society to facilitate the regular communication and association of these efforts.

The first issue of a magazine will appear

in January-February, 1998. We plan to publish four issues per year. Each issue will consist of scientific articles (reports on expeditions, regional lists of insects, descriptions of new species and subspecies, ecology, biology, guards of a nature and other) and news (info. on new books, organization of expeditions, advertisements for partners for the purchase, sale, exchange and cultivation of insects, info. about international exhibitions and dates of exchanges, etc.). Each volume will be

issued in English and a membership list will be issued annually.

Membership in the society is \$65. Each member will receive four issues of the magazine per year by air mail. Members will also have the opportunity to publish two articles and two announcements.

For more info. contact: Mr. Sergei Gundorov, President, Plant Protection Department, Agricultural Institute, Teatralnaia Square, Saratov 410710 Russia, Fax (8452)264963

Fossil Butterfly Update

Oakley Shields

6506 Jerseydale Rd., Mariposa, CA 95338

Various moth families are known from Jurassic and Cretaceous strata, with the more primitive microleps mainly represented. Butterflies, however, are unreported so far from these strata and are absent from the rich insect deposits of Victoria, NE Brazil, Spain, and S. England in the Lower Cretaceous.

The literature on fossil butterflies has been surveyed in recent years (van Schepdael, 1974; Shields, 1976; Leestmans, 1983; Emmel *et al.*, 1992), but there is no telling how much else is "out there". Most occurrences are from Oligocene to Recent deposits, with all butterfly families being present in the Lower Oligocene about 29-35 million years ago (mya).

Butterflies also existed during Eocene times. A nymphalid and a riodinid were found on the Isle of Wight that are either Lower Oligocene or Upper Eocene in age (Jarzembowski, 1980). Samland amber from Königsberg (Kaliningrad) is more definitely Upper Eocene and contains a *Papilio* adult and a lycaenid larva. The upper Eocene was about 35-39 mya. The earliest-known butterflies are two papilionids, a riodinid, and an undescribed satyrid near Elymniinae and Satyrinae from the Green River Shale upper beds or Raydome in NW Colorado (Durden & Rose, 1978). These strata are dated as Bridgerian (lower Middle Eocene), or 48-51 mya (Wilson, 1978; Opdyke, 1990).

There are strong indications that the Raydome fossils must have been preceded by still earlier butterflies. Raydome *Riodinella* is close to some extant genera like *Rhetus* and *Ancyluris* in the tribe Ancyluridi which is not considered basal in riodinids (Stichel, 1930). Likewise, the Raydome satyrid relationships are not basal in Satyridae (Miller, 1968).

The presence of papilionids, satyrids and riodinids at Raydome hints of more family diversification than that known from the Middle Eocene since these three families don't seem to form a clade in published cladograms. The Raydome *Praepapilio*, however, is close to *Baronia*, which is usually considered to be the most primitive extant papilionid. The larval foodplant of *Baronia* is *Acacia* that extends down into the Lower Eocene in Egypt and the Paleocene in North America (Durden & Rose, 1978; Herendeen & Dilcher, 1990). *Praepapilio* is archaic compared with the other Raydome taxa and may be a relict from the Paleocene.

Literature Cited

- Durden, C. & H. Rose. 1978. Butterflies from the Middle Eocene: the earliest occurrence of fossil Papilionoidea. *Pearce-Sellards Ser.* 29: 1-25.
- Emmel, T. C., M. C. Minno & B. A. Drummond. 1992. *Florissant Butterflies: a guide to the fossil and Present-day species of Central Colorado*. Stanford University Press, Stanford. 118 pp.

- Herendeen, P. S. & D. L. Dilcher. 1990. Fossil mimosoid legumes from the Eocene and Oligocene of Southeastern North America. *Rev. Palaeobot. Palynol.* 62: 339-361.
- Jarzembowski, E. A.. 1980. Fossil insects from the Bembridge Marls, Paleogene of the Isle of Wight, Southern England. *Bull. Brit. Mus. Nat. Hist. (Geol.)* 33: 237-293.
- Leestmans, H. 1983. Iles Lépidoptères fossiles trouvés en France. *Linneana Belgica* 9: 64-89.
- Miller, L. D. 1968. The higher classification, phylogeny and zoogeography of the Satyridae. *Mem. Amer. Entomol. Soc.* 24: 1-174.
- Opdyke, N. D. 1990. Magnetic stratigraphy of Cenozoic terrestrial sediments and mammalian dispersal. *J. Geology* 98: 621-637.
- van Schepdael, J. 1974. Macrolépidoptères fossiles du domaine paléarctique. *Naturalistes Belges, Bruxelles* 55: 3-37.
- Shields, O. 1976. Fossil butterflies and the evolution of Lepidoptera. *J. Res. Lepid.* 15: 132-143.
- Stichel, H. 1930. Riodinidae II: Nemeobiinae II et Riodininae I. *Lepidopterorum Catalogus* 40: 113-544.
- Wilson, M. V. H. 1978. Paleogene insect faunas of Western North America. *Quaestiones Entomologicae* 14: 13-34.



Blue...continued from page 109

At this stage the Brenton Blue Campaign could still register as a defeat or victory for conservation in South Africa. Both government and the conservation NGOs will lose considerable credibility should it prove impossible to save this species from destruction in spite of all the efforts that have been made.

Conclusion

We hope that members of your society will be interested in supporting our current Brenton Blue fund-raising initiative. Please contact us if you are interested in participating in the Brenton Blue Campaign or should you have any further questions in this regard.



From the Editor's Desk

Phil Schappert

will return next issue...

Salvaging Damaged Pupae

Mark D. Schmidt

8780 Red Lion – Five Points Road, Springboro, Ohio 45066

Despite years of handling lepidoptera, even the most experienced and gentle hands can have accidents. Often, it seems, it is with the particular specimen for which one has waited the longest or struggled the most to obtain.

One September, while sorting *Eurytides marcellus* chrysalides, one which had snagged the loose fibers of a neighboring Saturniid cocoon, pulled from my open palm as I raised it out of the cage. Gravity had its predictable effects, causing the fairly fresh chrysalis to hurl earthward, striking the tabletop. Falling a mere foot, the chrysalis struck along the juncture of the upper wing case and the body, near the wing base. An angular, 2mm piece of the chitinous case chipped open. Pale green endolymph bubbled up at the site of injury.

Past experience taught me that this was a fatal blow. I would simply destroy the specimen, putting it out of its misery and avoiding a slow death from dehydration or infection. With nothing to lose, the accident was turned into an opportunity.

Gingerly, the damaged chrysalis was lifted. Even gentle pressure caused a drop of endolymph to be lost. The fragment of shell was still attached by a mere fiber. It was rotated back into its original orientation. My extrapolation from human examples in embryology led me to believe that replacing the original piece would be important to proper development of the future image. In the humans, cells differentiate from more primitive stem cells based upon their relationship to the cells next to them.

Though I am uncertain as to whether or not insects possess a clotting mechanism, my experience with traumatized larvae is that they are able to “seal up.” Much endolymph is lost from the larva, but once the internal pressure is lost, closure occurs if the insect is not disturbed fur-

ther. One important distinction between larva and pupa is that the larva will be able to feed, thus replacing lost fluid and tissue.

The helpless chrysalis now needed a seal. Finding a candle, it was lit until a pool of wax formed about the base of the wick. With flame extinguished and before the wax began to congeal, the clear warm wax was dropped, with several attempts, over the wound. It could not be totally immersed for that would suffocate the animal. Care was taken not to put too much wax over the wing cases and “face” so that emergence would be compromised. The creature was carefully rested back on the cage floor to be overwintered.

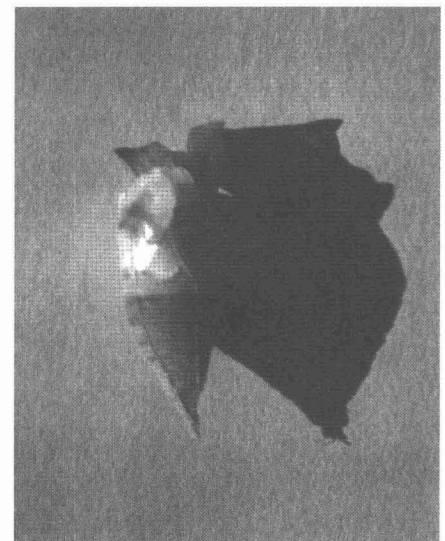
In May, the first *E. marcellus* of the year to emerge was this chrysalis. The male was fully developed, without obvious defect or blemish to the body or wing pattern. There was no evidence of defect caused by the overflow of hot wax. Wingspan was normal and only the abdomen was skinnier than normal — probably due to the original loss of endolymph in the fall. It was vigorous, taking flight immediately.

The chrysalis was examined. The wax remained in place. It did impair hinging of the faceplate and the insect exited through the left upper wing case. The only marking on the inside was a quadrangular, 2mm black mark with a white oblong spot in the center.

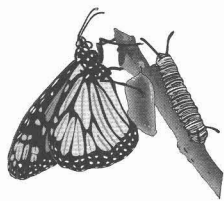
Nature once again turned on the intrigue. In human perspectives, the injury would be likened to a third degree burn about the size of the shoulder blade. Significant body heat and water would be lost through such an injury. Nutritional needs to heal the wound would be great. Yet nature did this without the insect imbibing a single drop of fluid or nutrition. Further, it was able to overwinter for seven months, being the last brood of

the year. Even more amazing is the fact that this “dirty wound” did not produce a fatal septic infection as would threaten the human example above. Without an active bone marrow and source of nutrition to fuel the production of immune cells, the lack of infection is striking.

This waxing procedure may have other relevant applications. Breeders of *Citheronia regalis* may have similar experiences to mine in that frequently, imperfect pupae are made. Even a defect as small as an antenna out of place leads to death of the pupa. The pupa is usually quite vigorous until about March or April, when it stiffens and loses life. This fall, I will try an application of wax to the defect. My contention is that the defect allows dehydration to occur since death occurs before image development. Whether or not the defect will then cause the now surviving adult to become stuck because of adherent parts, remains to be tested. For now, at least this single experience leads to the possibility of salvaging injured pupae.



Chrysalid of *E. marcellus* with drop of wax sealing the rupture in the pupal case.
Photo. by Mark D. Schmidt.



Metamorphosis...

The Society has learned of the deaths of the following members. Our condolences to their families.

Roger Lynn Heitzman Leslie V. Smith

Of Independence, Missouri, died 22 April 1997 at the age of 44 at St. Mary's Hospital, Blue Springs, Missouri. Roger was a graduate of Van Horn High School. He received a Bachelor's Degree from the University of Warrensburg, a Master's Degree from the University of Missouri, Columbia, and a Ph.D. from the University of Maryland. He was a member of the Delta Chi Fraternity, an ordained minister of the RLDS Church, and had been a member of The Lepidopterist's Society from 1972 through 1985. He is survived by his son, Jason Ryan Heitzman; his father and mother, Mr. and Mrs. J.R. Heitzman; brother, Robert L. Heitzman; and sister, Brenda S. Brown, all of Independence, Missouri.

*Eleanor R. Adams,
(via e-mail to Lawrence F. Gall)*

Frederick S. Howell

Of Cornelia, Georgia, on 15 June 1997. His widow reports that his final metamorphosis was the result of pancreatic cancer, following a lifelong love of butterflies and moths. He had been a member of the Society since 1972.

Wendell E. Knoshaug

Of Pinole, California; he had been a member of the Society since 1972.

Dale M. Phillippi

Of Dayton, Ohio. Mr. Phillippi was a member of the Society from 1975 to 1987, but we did not learn of his death (date not specified) until 1997.

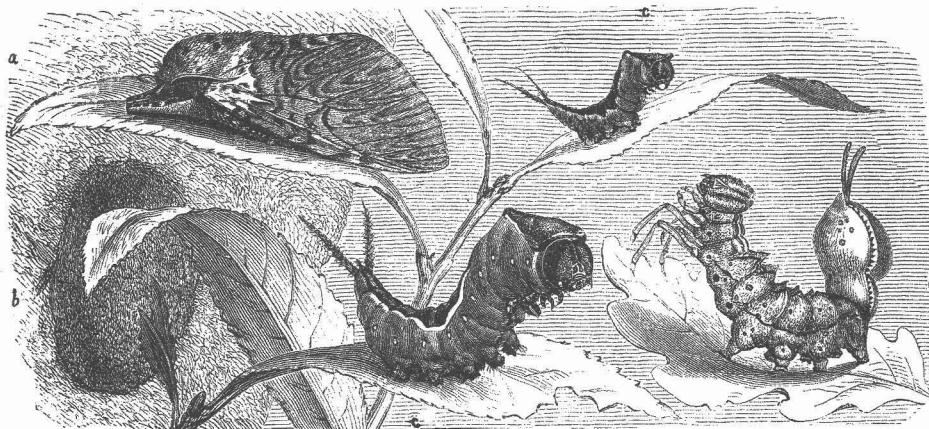
Died October 12, 1997 in Sacramento, Calif. of natural causes at age 69. Born in Hoxie, Ark., he and his family moved to Loomis (suburban Placer County, Calif.) in the early 1940s. He received his B.S. and M.S. in Forestry from U.C. Berkeley in 1954, training as a forest products biochemist. His career was cut short by manic-depressive illness, which bedeviled him much of his adult life. An ardent photographer and amateur Lepidopterist, he became a cooperating observer with F.A. Urquhart's monarch-monitoring network.

In 1986 he published a short note ("Placement and fate of monarch butterfly pupae in northern California", *J. Lepid. Soc.* 40:67). He became interested in factors affecting the spatial arrangement and degree of aggregation of both Pipevine Swallowtail pupae and nocturnally-roosting adult butterflies, advancing the hypothesis that the latter were aligned with the earth's magnetic field.

He consulted and corresponded with numerous biologists, and was still mapping swallowtail pupal distributions a few weeks before his death. For years he lived near the American River Parkway in Rancho Cordova, Calif., and provided me faithfully with a report on the phenology of butterflies seen on his daily walks. He maintained a lively correspondence, ranging over politics, American history (he was a descendant of Thomas Jefferson), and an insider's look at the world of long-term mental patients.

He delighted in jokes and cartoons. He was dedicated to his pursuits, and those of us who tried to help him with his research could not help but envy him his freedom to pursue it unencumbered by careerism. But we did not envy him the reason for that freedom. His friends around Sacramento and elsewhere will miss his unique personality.

*Arthur M. Shapiro,
Center for Population Biology,
UC Davis, Davis CA 95616*



Butterflies of the Hempstead Plains

Paul Manton

10 Flower Street, Hicksville, NY 11801

Originally encompassing some 60,000 acres of glacial outwash in the heart of western Long Island, New York, the Hempstead Plains was the only self-sustaining prairie ecosystem east of the Alleghenies. Its complex, oftentimes paradoxical, history is a chronicle of livestock grazing, potato farming, and post-World War Two suburban development. Although only a dozen-acre prairie restoration project is all that now remains, an endeavor to assess the ecosystems original lepidopteran fauna might serve as a model for future restoration projects as butterflies are excellent biodiversity indicators.

There are three factors I am examining via local historical sources to extrapolate the former abundance or dearth of particular lepidopteran species on the now vanished Hempstead Plains: 1) The indigenous floral community which has been displaced by wild and cultivated introductions. 2) The potential for these floral species as foodplants for lepidopterians that are endemic to the Long Island area. 3) Historical records scant though they may be, of hitherto common but now rare or extirpated lepidopteran species.

Here is an example of this endeavor thus far:

Of four butterfly species now exceedingly uncommon in the Long Island area, two, the regal fritillary (*Speyeria idalia*) and the meadow fritillary (*Boloria belliona*), appear to have declined as a direct result of the decline of members of the violet family, the birdsfoot violet (*Viola pedata*) in particular. As late as 1910 patches of these flowers covering scores of acres of prairie land were still a beautiful and much mentioned phenomenon described in local natural history sources and the

unpublished diaries and journals of many of the farming families. By 1960, the violet was rare and today it is protected by New York State conservation laws. Only a small colony, carefully managed, remains.

The decline of the Baltimore (*Euphydryas phaeton*) is possibly due to the paving over, piping, or draining of many of the little creeks that ran through the Plains. The moist soils of stream banks and little ponds created thereof, were the habitat of turtleheads (*Chelone glabra*). Similarly, the Hackberry's (*Asterocampa celtis*) namesake foodplant preferred to grow in the more fertile open areas away from the sandy soils and their tangles of prickly pears. These very open areas were ideal for the pre-suburban potato farmers.

Finally, the checkered white (*Pontia protodice*), a once ubiquitous species which fed on cabbages and mustards, should have prospered given the acreage employed to cultivate these crops prior to 1945. It is likely that the introduction of the European cabbage butterfly (*Pieris rapae*) into the New York City area in

1868 and its subsequent rapid expansion to the surrounding countryside is partly responsible for the disappearance of local checkered white populations. But the major factor is suburbanization as the populations decline has been reported since the 1940s which coincides with the rapid decline of agriculture in Nassau County.

Although my efforts may produce but a thumbnail-sketch of the butterfly fauna of the Hempstead Plains and be subject to conclusions of a somewhat conjectural nature, it is my hope that the Lepidopterists Society membership might have data, ideas, and suggestions that will serve to create a more concrete picture of the Hempstead Plains which played so significant a role in the history of western Long Island.

References

1. "A Distributional Checklist of the Butterflies and Skippers of the New York City Area and Long Island." New York City Butterfly Club. May 1993
2. "A Long Island Natural History." The Nature Conservancy, Long Island Chapter. 1973
3. Lewis, Jeanne R. "What was Jerusalem Like?" Long Island Forum (March/April 1971)
4. Lutz, Frank E. "Field Book of Insects." G.P. Putnam's Sons. 1935
5. Murphy, Robert Cushman. "Fish-Shape Paumanok"
6. Neidich, Carole. "The Hempstead Plains and the Birdsfoot Violet." Long Island Forum, June, 1980.
7. Palmer, E. Laurence and Fowler, H. Seymour. "Field Book of Natural History." 2nd ed. McGraw Hill Inc. 1975
8. Schultz, Bernice. "The Pastoral Period of Western Long Island." Nassau County Historical Society Journal, Vol. 39. 1984
9. Shapiro, A.M. "The Butterflies and Skippers of New York State." Search, Vol. 4:3 Cornell University Press 1974
10. Wheat, Maxwell C. Jr. "The Hempstead Plains." Nassau Co. Hist. Sec. Journal, Vol. 39 1984



The regal fritillary, *Speyeria idalia*, nectaring at coneflower, *Echinacea sp.* Photo. by Ann Swengel



The Lepidopterists' Bookshelf

Boyce A. Drummond, Editor

More Recently Published Books...

Anyone knowing of the publication of new titles of books, video, or audio tapes of interest to lepidopterists, and especially of books published outside the United States, are requested to send full particulars to the Book Review Editor, The Lepidopterists' Society, both for announcement in this column and to allow for timely review in the *Journal* or *News of The Lepidopterists' Society*.

Publishers are invited to send review copies directly to the Book Review Editor for consideration for review in the *News* or *Journal*. Members interested in reviewing books for the *News* or the *Journal* should send their requests or interests to:

Dr. M. Alma Solis
Systematic Entomology Lab., USDA,
c/o National Museum of Natural History, MRC 127,
Washington, D.C. 20560, (202) 382-1785 (office), (202) 786-9422 (fax)

MNHEN127@SIVM.SLEU

The Moths of Borneo, Part 9: Family Geometridae, Subfamilies Oenochrominae, Desmobaethrinae and Geometrinae

by J. D. Holloway. 1996. *Malayan Nature Journal* 49: 147-326. Available from H. S. Barlow, P.O. Box 10139, 50704 Kuala Lumpur, Malaysia. 180 pp., 427 halftone figures, 12 color plates. Softcover, 17.5 x 25.5 cm, ISBN 983-99915-3-1, RM 50 plus postage (RM 10) (RM 60 converts to \$24, payable to H. S. Barlow).

This monograph is the eighth to be published in a series planned on the Bornean macrolepidopteran superfamilies Cossioidea, Zygaenoidea, Bombycoidea, Noctuoidea, Geometroidea, Calliduloidea, and Castnioidea. The three subfamilies of Geometridae treated here are Oenochrominae (6 species in one genus), Desmobaethrinae (45 species in 8 genera) and Geometrinae (209 species in 52 genera). For each species a diagnosis and the geographical range are given and, where known, details of habitat preference and biology. Summary lists are provided of the new taxa describe (13 genera, 53 species and 1 subspecies) as well as of numerous other taxonomic changes. A checklist of all species summarizes the fauna. In an introductory section the family-group names applied within these subfamilies are listed and reviewed. A commentary on the higher classification is presented, particu-

larly with reference to reorganization of most of the Oenochrominae into the revived subfamily Desmobaethrinae.

Atlas of Neotropical Lepidoptera, Checklist: Part 4B: Drepanoidea - Bombycoidea - Sphingoidea

edited by John B. Heppner. 1996. *Association for Tropical Lepidoptera*, P.O. Box 141210, Gainesville, Florida 32614. 87 pp. Softcover, 21.5 x 28 cm, ISBN 0-945417-25-X (series), \$14.95 (members), \$29.95 (nonmembers).

This third part of the Neotropical catalog includes the bombycoid families, plus Drepanoidea and Sphingoidea. Among the 2,488 species cataloged are many of the favorite and spectacular species of the Neotropics. The species index lists 4,682 names, which includes all synonyms and 7 species excluded from this catalog. The generic index lists a total of 605 generic names, higher category names, and their synonyms. There are 41 new combinations and 90 new species synonyms noted in the catalog, plus 3 new generic synonymies. The geographical area of coverage includes the entire Neotropical faunal region (including such offshore islands as Bermuda and the Galapagos Islands) and also regions bordering the tropics in northern Mexico north to the United States border area, plus the Florida Keys. Three new species names are proposed in

Lasiocampidae to replace homonyms.

The Butterflies of Venezuela, Part I: Nymphalidae I (Limenitidinae, Apaturinae, Charaxinae)

by Andrew F. E. Neild. 1996. *Meridian Publications*, 116 Crosslet Vale, Greenwich, London SE10 8DL. 144 pp., 32 color plates. Hardcover, 22 x 30.5 cm, ISBN 0-9527657-0-5, £75 (about \$ US), plus postage (£2.00 in the United Kingdom, £5.00 in Europe, and £11.00 elsewhere).

This is the long-awaited first volume of a projected four-volume series that will serve as the first comprehensive identification guide to the adult butterflies of Venezuela. Over 950 species (1250 taxa) will be treated in the series, equivalent to over 32% of the total species of Neotropical butterflies in the families covered. Part 1 treats 274 species in 47 genera. Nearly 1200 specimens are reproduced on 32 color plates (by Bernard D'Abbrera). The figures include the dorsal and ventral surfaces of the wings of every species (only one wing is depicted), both sexes of sexually dimorphic species, a least one diagnostic surface for each additional subspecies, and a series of additional figures for polymorphic taxa. Over 345 specimens of type status are figured, many for the first time since their description as early as the late 18th century. Two new species and 24 subspecies are described for the first time. One

neotype and five lectotypes are designated. Much of the text in the identification section is of a revisionary nature, and readers will find a mine of information regarding correct nomenclature and identification. In this respect the notes and plates for the complex species in the genera *Adelpha* and *Memphis* will be especially helpful. Many related taxa that fly outside of Venezuela are also discussed, thus ensuring that this work will benefit those working on the fauna of other countries in the region.

Coming Through the Swamp: The Nature Writings of Gene Stratton Porter

edited and with an introduction by Sydney Landon Plum. 1996. University of Utah Press, 101 University Services Bldg., Salt Lake City, UT 84112. 172 pp. Hardcover, 15 x 23 cm, ISBN 0-87480-497-3, \$55; softcover, 16 x 23.5 cm, ISBN 0-87480-498-1, \$19.95.

This collection of readings should help to reinstate Gene Stratton Porter (1863-1924) as a serious and pioneering nature writer. In her lifetime, Stratton Porter was an extremely popular author of fiction. Less well-known, especially to today's readers, are Stratton Porter's nonfiction nature writings and photography. Among lepidopterists she is best-known for *Moths of the Limberlost* (1912), a non-fiction work that illustrates both her abilities and the value of her writing as a record of the natural world and the human community it supported in the rural areas of the American midwest at the beginning of the twentieth century. Moths and butterflies figured prominently in her fiction as well, especially in *A Girl of the Limberlost* (1909). My own connection with Stratton Porter is more personal; my mother, Gene Thornton Drummond (a member of the Lepidopterists' Society) was named after her.

A Field Guide to Butterflies of Texas

by Raymond W. Neck. 1996. Photography by Geyata Ajilvsgi and others. Texas Monthly Field Guide Series. Gulf Publishing Company, Book Division, P.O. Box 2608, Houston, Texas 77252-2608. 324 pp., figures, 64 color plates. Softcover, 14 x 21.5 cm, ISBN 0-87719-243-X, \$21.95.

This field guide covers 446 species found in Texas and illustrates many of them with photographs of living adults and juvenile stages. The bulk of the book consists of species accounts that provide a description; list of food plants; a brief description of life history; the range of the species, in words and with a generalized map showing occurrence in Texas; and very brief comments that highlight behavior, subspecies, or distinguishing characteristics. There is a short introductory section on the biology of butterflies, an appendix on collecting versus watching, a checklist, glossary, bibliography, and indices to plant names and to butterfly names. The photographs are generally crisp and clear, but most are reproduced at less than life size.

Checklist of the Lepidoptera of Australia

edited by E. S. Nielsen, E. D. Edwards, and T. V. Rangsi. 1996. Monographs on Australian Lepidoptera, Volume 4. CSIRO Publishing, 150 Oxford Street, Collingwood, Victoria 3066, Australia. 529 pp. plus CD-ROM; 89 photos. Hardcover, 18 x 25.5 cm, ISBN 0-643-05028-0, \$120 Australian (\$120 US in all other countries).

This remarkable volume compiles the first complete documentation of the taxonomy, nomenclature and classification of the entire named Australian Lepidoptera fauna, generated from computer database compiled with strict protocols. Over 24,660 names are included, with records of over 850 significant misspellings, over 1250 new synonymies, and over

1500 new combinations. There is an introduction to each family and a comprehensive bibliography of works concerned with the taxonomy and nomenclature of Australian Lepidoptera. In addition to a full index to all names recorded in the Checklist, there is a CD-ROM packaged with the book that contains all text files in ASCII format.

Oecophorine Genera of Australia II: The *Chezala*, *Philobota* and *Eulechria* Groups (Lepidoptera: Oecophoridae)

by I. F. B. Common. 1997. Monographs on Australian Lepidoptera, Volume 5. CSIRO Publishing, % of Aubrey Books 721 Ellsworth Drive, Suite 203-A, Silver Spring, MD 20910-4436 USA. xvi + 407 pp., 774 figures. Hardcover, 18.5 x 26 cm, ISBN 0-643-05934-2, \$130 Australian (about \$90 US).

This is the second volume revising the genera of the Australian Oecophorinae. The three groups treated by this volume are almost entirely endemic to Australia. The revision covers 84 genera, 61 of which belong to the *Chezala* group, 13 to the *Philobota* group, and 10 to the *Eulechria* group. Thirty-nine new genera are proposed. Included in the three groups are 842 named species and some 800 undescribed species already recognized in collections, mainly the Australian National Insect Collection (ANIC). The revision proposes 160 new combinations and five new specific synonyms, in addition to the 338 new combinations and 123 new specific synonyms listed by Common in his 1996 checklist of Oecophorinae (Nielsen, E.S., E.D. Edwards & V. Rangsi, *Checklist of the Lepidoptera of Australia*, Monogr. Aust. Lepid. 4: xiv + 529 pp.)



Moths of Thailand, Volume 2: Sphingidae

by Hiroshi Inoue, Robert D. Kennett, & Ian J. Ketching. 1997. Published by Chok Cah Press, 45 Soi Isarapab 12, Klong San, Bangkok, 10600 Thailand. vi + 149 pages, 44 color plates. Hardcover, dust jacket, 18.5 x 26.5 cm, no ISBN. \$35.00 US. Available from Brother Amnuay Pinratana, St. Gabriel's College, Bangkok 10300, Thailand.

Volume 1 of the series **Moths of Thailand** appeared in 1990 and covered the Saturniidae. This second volume treats 176 species of Sphingidae known from Thailand and is more than twice as thick as Volume 1, which treated only 29 species. The photographic plates in Volume 2 show all species, subspecies, and color forms and should serve well to identify speci-

mens collected in the country. The book is sturdy, with a well-organized text, numerous color figures, and very few errors. Coupled with its relatively low price, these qualities make it attractive to anyone interested in Sphingidae in particular or Asiatic Lepidoptera in general.

Spineless Wonders: Strange Tales from the Invertebrate World

by Richard Conniff. 1997. Henry Holt and Company, 115 West 18th St., New York, New York 10011. 232 pp. Hardcover, dust jacket, 14.5 x 22 cm, ISBN 0-8050-4218-0, \$25.

According to the dust jacket, the word for the feeling, whether actual or imagined, that creepy invertebrates are crawling over our

skin, is formication. According to author Richard Conniff, the implied sense of horror and fascination conveyed by that word is something many of us actually crave. His *Spineless Wonders* is an "unabashed wallow in the joy of formication." Not content to simply describe the "bizarre adaptations that enable [invertebrates] to survive in the world", Conniff details as well his "often hilarious encounters with the highly intelligent and eccentric people who study these creatures and their history." Butterflies are passed over, but there is an entire chapter on moths ("Ghosts on Wings") — I won't spoil the fun by telling you who the "highly intelligent and eccentric" moth expert is...

New Video

Collecting Butterflies and Moths

Narrated by Dr. Norman Campbell. Available from Chip Taylor Communications, 15 Spollett Drive, Derry, NH 03038; \$29.95 plus handling (amount not specified).

This 17-minute video is easy to listen to, and seems aimed at the beginner who is considering starting a butterfly collection. Great emphasis is placed on not having to spend a lot of money to begin. You are shown how to make your own net out of a broom handle, a coat hanger, and have Mother sew an old curtain into a net bag. I started that way myself, and everything said is true, but I would

have preferred a completed net from Bioquip instead.

Venturing into backyard or woods, the listener is shown how to catch a butterfly with the new net and pinch it quiet. Next, a mounting demonstration is given. Unfortunately, the only method shown is upside-down on a flat surface with a hole for the body. When the specimen is dry, the pin is removed (oops, there go

the legs) and inserted right side up. Since this is a movie, you can see the butterfly actually spinning around on the re-inserted pin.

This video might make a good gift to interest some young person in exploring the wonderful world of butterflies. But I hope that, once started, they would then get a proper net and a real mounting board.

Ron Leuschner

Back Issues of Journal Available

A few of the 20 complete sets of the *Journal* that were assembled in 1989 are still available. Of the 220 *Journals* from Vol. 1 through 50, about 20 are out of print and have been replaced with repro pages. Costs are as follows:

Volumes 1 - 33	\$600.00
Volumes 1 - 50	\$1025.00

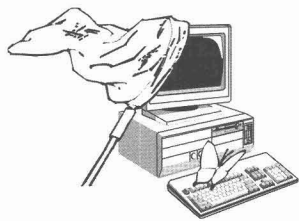
Shipping costs are additional: within U.S. (Book rates, insured) \$25.00, outside U.S. (Book rate, not insured) \$70.00

The last 18 years of *Journals* (vol. 33 - 50) are available by the volume (\$35.00, postpaid) or single issue (\$9.00, postpaid). Most recent issues of the *News* are available at \$2 each (latest Member-

ship List is \$5). If you have other special needs, write first.

Payment in U.S. Dollars made out to The Lepidopterists' Society should accompany all orders. Send orders or inquiries to: Ron Leuschner, Publications Manager, 1900 John Street, Manhattan Beach, CA 90266 USA.





Out of the Net...

by Jim Taylor

Michigan Lepidoptera Survey

[HTTP://WWW.MSU.EDU/USER/KRIEGLR/MLS/](http://www.msu.edu/user/kriegelr/mls/)

Anyone with something in his collection from Michigan might want to participate in this project. This is a project of the Michigan Entomological Society, and the goal is to develop a database of Michigan Lep records. Instructions are at this URL on the submission of entries.

Lepidoptera Classification

[HTTP://WWW.TROPLEP.ORG/LEPCCLASS.HTM](http://www.troplep.org/lepclass.htm)

Here is an up-to-date classification of the families of Lepidoptera - currently, 124 in number - by John Heppner (Doyle Museum, University of Florida, Gainesville). He includes a family name index and a common name index. You might want to compare it with Ron Hodges' 1978 M.O.N.A. Fascicle.

Integrated Pest Management

[HTTP://IPMWWW.NCSU.EDU/](http://ipmwww.ncsu.edu/)

These folks are certainly not heeding the advice of little Billy Blake:

"Kill not the moth nor butterfly For the Last Judgment draweth nigh"

The "IPM" in this URL stands for Integrated Pest Management, and this is a joint effort of the North Carolina Cooperative Extension Service and the NSF Center for Integrated Pest Management at North Carolina State University. The web site covers pest management and production information for North Carolina crops, including pesticide recommendations and the like.

There is some neat stuff associated with this site, however. At [HTTP://IPMWWW.NCSU.EDU/INSECT_ID/AG136/CATERKEY.HTML](http://ipmwww.ncsu.edu/insect_id/ag136/caterkey.html) is a caterpillar key to "Most Common Caterpillars Found on Flowers and Foliage Plants", complete with line drawings. I don't know how complete the key is (its

title, after all, only claims "most common"), but there doesn't seem to be enough entries to cover a big fraction. Perhaps someone can comment.

From here you can click your way to [HTTP://IPMWWW.NCSU.EDU/INSECT_ID/AG136/](http://ipmwww.ncsu.edu/insect_id/ag136/), an index of all the critters covered as pests in the sites and sub-sites. There are many pictures reachable from the index from aphids to whiteflies, including about 30 caterpillars. A click on [CATER14.HTML](http://ipmwww.ncsu.edu/insect_id/ag136/cater14.html) in the index takes you to Plume Moths. There you will find descriptions of the egg, larva, cocoon, and the adult, as well as pictures of three species. The complete write-up (distribution, host plants, life history, etc.) includes instructions on control of the animals without damaging your geraniums and snapdragons.

New Orleans Mosquito Control Board

[HTTP://WWW.NEOSOFT.COM/~NOMCB/INDEX.HTML](http://www.neosoft.com/~nomcb/index.html)

Yes, I know mosquitoes only have two wings (if you don't count the halteres). However, embedded in this site is a good presentation of the buck moth. Just click your way to [HTTP://WWW.NEOSOFT.COM/~NOMCB/BUCK.HTML](http://www.neosoft.com/~nomcb/buck.html) - the pictures are worth the trip - and there is a write-up of the life history of the creature.

The Peppered Moth

Do not try:

[HTTP://WWW.CUSTOMCPU.COM/PERSONAL/MGROSETH/ORIGINS/PEPPEREDMOTH.HTML](http://www.customcpu.com/personal/mgroseth/origins/pepperedmoth.html).

I found this site about three months ago when I first started this quarter's column, and in checking its continuing validity just before sending this to the Editor, I discovered it is no longer there. It was a discussion of how evolution might or might not have happened, talking about unusually visible animals, white on black and black on white, and preda-

tory birds - but with a twist. And this site was my lead-in to...

[HTTP://WWW.UMICH.EDU/~NEWSINFO/U_RECORD/ISSUES96/NOV26_96/MOTHS.HTM](http://www.umich.edu/~newsinfo/u_record/issues96/nov26_96/moths.htm) where a picture of trays of peppered moths introduces an article about the collection making the front page of the New York Times science section last November. And at...

[HTTP://FMC.UTM.EDU/~RIRWIN/PEPPERMOTH.HTM](http://fmc.utm.edu/~rirwin/peppermoth.htm) The University of Tennessee at Martin uses the peppered moth in an evolution model to demonstrate natural selection and genetic drift. And at...

[HTTP://STRAFFORD.K12.MO.US/WILDTHINGS/FINISHED/SCHMITT_HS/HS_LESSON_PLANS/UNDERSTANDING_EVOLUTION-1.HTML](http://strafford.k12.mo.us/wildthings/finished/schmitt_hs/hs_lesson_plans/understanding_evolution-1.html) A teacher in "the heart of the Bible belt" uses the peppered moth and a simulation to introduce the concept of evolution - an idea, he says, "not always readily accepted in the biology classroom". He feels that [after the exercise] "the theory itself becomes much less controversial."

As you can see, I was on a roll with peppered moths - and the principal link disappeared. If you are interested in missing links, however, where peppered moths are mentioned - along with some unique and convoluted arithmetic and very passionate argument - you might visit [HTTP://WWW.GHGCORP.COM/HOLLAWAY/ISEVOLUT.HTML](http://www.ghgcorp.com/hollaway/isevolut.html). Then again, if you believe the Earth to be older than about 6000 years, maybe you shouldn't.

Pictures

[HTTP://WWW.EX.AC.UK/~GJLRAMEL/LEPIDOP2.HTML](http://www.ex.ac.uk/~gjlramel/lepido2.html)

Next, for some truly awesome pictures, try this site. The pictures are all from the 1850's by John Curtis. The site is

continued on page 109...

COME TO THE 49th ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY

To be held July 30 - August 2, 1998
at Eureka College,
Eureka, Illinois

The setting: Eureka College is a small, private, church-related, liberal arts college located in the small (pop. 4500) central Illinois town of Eureka. The College was founded by Disciples of Christ abolitionists in the mid-1800's. It was the 1st college in Illinois, and the 3rd in the nation, to admit women on an equal status with men. Being founded by abolitionists, it was also one of the earliest colleges in the country to admit African-Americans. The 40th President of the United States, Ronald W. Reagan, graduated from here in 1932. Located on 112 acres, the campus is richly endowed with a variety of native and ornamental trees (one of the early botany professors wanted to plant at least one individual of all the species of trees found in Illinois on campus. He came pretty close to succeeding). The town is the county seat of Woodford County.

The program: We will have a symposium on prairie lepidoptera and a symposium on the biology of microlepidoptera (a farmer in nearby Putnam County collected micros for years, discovering many new species - over 30,000 specimens representing over 1,000 species are at the Illinois Natural History Survey). Contact myself (Mike Toliver) or Terry Harrison (Program Chair) for details.

Facilities: Meetings will be held in the G. Raymond Becker auditorium, located in the Donald B. Cerf College Center. The auditorium seats 350 people, and is equipped with good audio-visual facilities (projection booth, sound system, and the ability to project computer and video signals on screen). The Center was completed in 1994 and is therefore the newest building on campus. Also in the Cerf Center are the North and South Terrill Rooms, where we will have exhibits and the banquet (and the barbecue if it rains). The Moser Lobby, outside the auditorium and the Terrill Rooms, is an ideal place for the Photo Contest exhibits, posters, registration, etc. There is a snack bar (the Burgoo) located here as well, where participants may be able to purchase lunch if they so desire. And you'll be able to visit the Ronald Reagan Exhibit, with mementos from the White House, his time as Governor of California and his acting career (one of his movies will probably be showing on the TV in this exhibit).

Housing will be in the dorms (air-conditioned) and will cost \$20.00/night, single occupancy or \$10.00/night if you want to room with somebody. A meal plan will be available, serving breakfast and lunch. Off-campus housing is all located some distance away, as there are **no motels** in Eureka. The closest motels are a Days Inn and a Super 8 in El Paso (13 miles away) and a Super 8 and a private motel in Washington (7 miles away). I have arranged conference rates at the Days Inn in El Paso (right off I-39, (309) 527-7070) and the Super 8 in Washington ((309) 444-8881). The price will be around \$50.00/night. Mention that you are attending the

Lepidopterists' conference to obtain the conference rate. It is also possible that one may find bed and breakfast facilities in Eureka - the Women's Board of the College often does this as a fundraiser. There are two campgrounds within about 10 miles - a Jellystone Park near Goodfield (about 6 miles away) and a private campground near Secor (again about 6 miles away). There is a KOA along I-74 between Bloomington and Eureka (about 15 miles away). If you desire fancier housing, there are some fine hotels in both Bloomington and Peoria (each about 20 miles away).

As far as **dining facilities** are concerned, if you purchase the meal plan you will have all your meals on campus at the dining hall (Dickinson Commons). You may also purchase lunch-only at the afore-mentioned snack bar (hours between 12 and 1). In Eureka, there are only a few restaurants: Kim's (open 5 am - 9 pm daily, about 4 blocks from campus), Tea for Two (lunch only - closes at 2), Pizza Hut (lunch, dinner), Rocco's (lunch, dinner) (all in downtown Eureka, about 6 blocks away), Hardee's, Dairy Queen (both on US 24 going west out of town - about 1/2 mile from campus), Eureka Family Restaurant (breakfast and lunch only) and Subway (both on Ill. 117 going south out of town - about 3/4 mile from campus). In addition, the Chanticleer (north of town) serves dinner (and beer!), while the Outpost (technically not in town, but only about 3 blocks from campus) occasionally serves dinner and has snacks and liquor. These last two are "out of town" establishments because Eureka is a dry town and the College is a dry campus. This means **we won't have any alcohol** at the barbecue or the banquet.

Shopping is also limited in Eureka, but there are some antique stores and a Mennonite Relief store for those so inclined. Generally, you've got to go to the city for shopping.

Recreational facilities include the College facilities (swimming pool, basketball courts, tennis courts) and the lake. Yes, Eureka has a small lake which offers fishing, picnicking and a playground. This is also an area where moth collectors might find some interesting critters. There is a woods next to the lake which has a number of hiking trails, bike paths, etc. Additional recreational opportunities (zoos, movie theatres, riverboat gambling etc.) are to be found in Peoria and/or Bloomington.

Collecting: At this time, we have no field trips organized, but there are some interesting localities not too far away. Perhaps the most interesting is Sand Ridge State Forest, about an hour southwest of Eureka, along the Illinois River. This area includes extensive sand prairie and has many unusual butterflies and moths (several species of *Speyeria*, including *idalia*, many hairstreaks and skippers, lots of moths). However, some lepidoptera here are state-endangered and may not be collected. It would be wise to contact the park if you intend to collect here. Before the meeting takes place, I will have a better handle on this for those of you who are interested. In the immediate area, some interesting moths are to be found at lights in town or at the lake. And the Illinois River basin serves as a highway for many mobile lepidoptera (ex. *Nathalis iole*, *Pontia protodice*). You should be able to attract a number of *Catocala* by sugaring on the trees on campus.

Registration Form

49th Annual Meeting of The Lepidopterists' Society

July 31 - August 2, 1998, Eureka College, Eureka, Illinois, USA

Name: _____ Arriving on: _____ .
 Phone: _____ Departing on: _____ .
 Fax: _____ Address: _____ .
 Email: _____ .
 Sex: _____ .

Advance Registration
Until May 1, 1998

Late Registration
May 1 - June 30, 1998

Regular Registration: Meeting: ___persons @ \$55/person ___persons @ \$65/person
 By the Day: ___persons @ \$20/person ___persons @ \$25/person

Student Registration: Meeting: ___persons @ \$40/person ___persons @ \$50/person
 By the Day: ___persons @ \$14/person ___persons @ \$17/person

Eureka College Dormitory Housing:

persons for: ___Wed., July 29 ___Thu., July 30 ___Fri., July 31 ___Sat., Aug. 1

Cost per night, single occupancy: \$20.00/person = \$ ____.

Cost per night, double occupancy: \$10.00/person = \$ ____.

Linens, one-time charge of \$3.50 = \$ ____.

Friday night barbeque ___persons @ \$8.50/person = \$ ____.

Saturday night banquet ___persons @ \$15.00/person = \$ ____.

(Check if you would like vegetarian entrees _____)

Meal Plan:

Breakfast (Fri., Sat., Sun.) ___persons @ \$8.25/person = \$ ____.

Lunch (Fri., Sat., Sun.) ___persons @ \$16.50/person = \$ ____.

Both ___persons @ \$ 24.75/person = \$ ____.

Please make check payable to "Eureka College" Total enclosed: \$ ____.

Advance registration lasts until May 1, 1998. Late registration lasts until June 30, 1998. Registration forms must be received by Eureka College before May 1, 1998 to secure advance registration rates. The meeting will be held in the Cerf College Center, within easy walking distance of the dorms. The dorms are air-conditioned. You can save money if you want to room with someone. Your cancelled check is your registration confirmation. Please contact Mike Toliver, Dept. of Biology, Eureka College, Eureka, IL 61530, (309) 467-6446, MIKETOL@ EUREKA.EDU, if you need further information. Detailed registration packets will be mailed to advance registrants after May 1, 1998.

Please tell us about your special needs:

Return completed form with payment to:

Dr. Michael Toliver, Department of Biology
 Eureka College, Eureka, IL 61530.
 Phone: (309) 467-6446; Fax: (309) 467-6386

CALL FOR PAPERS

49th Annual Meeting of the Lepidopterists' Society

Eureka College

Eureka, Illinois

July 30th - August 2nd, 1998

Name : _____.

Address: _____.

_____.

_____.

_____.

_____.

Check one:

15 minute paper.

Poster

Student Paper (for consideration for the Clench award)

Abstract (100 words maximum, please type):

Return form to Terry Harrison, Department of Entomology, University of Illinois, 320 Morrill Hall, 505 S. Goodwin Ave., Urbana, IL 61801 OR Mike Toliver, Eureka College, Eureka, IL 61530. Please return abstracts by April 30th.

Range Expansion of the Giant Swallowtail, *Heraclides cresphontes* (Cramer)

Lawrence H. Shaw

13001 Garden Grove Boulevard, Garden Grove, California 92843

The *Citrus* – feeding Giant Swallowtail Butterfly *Heraclides cresphontes* (Cramer) has been established in California with confirmed records going back to 1963 (Emmel & Emmel). These early records of *Citrus* growing areas are in Imperial, Kern, Tulare, and Riverside Counties.

In the early 1990's, the *H. cresphontes* (Cramer) has been a resident of urban areas of San Diego County, California.

Since the summer of 1995, I have observed and collected *H. cresphontes* (Cramer) at several sites in central and northern Orange County. This summer (1997), I have made several observations in southern Los Angeles County.

In Orange County, I have observed *H. cresphontes* (Cramer) in the city of Irvine at abandoned orange groves. I have also observed them in the cities of Garden

Grove, Orange, Tustin, Fullerton, Placentia, Yorba Linda, Brea, La Habra, and Villa Park. At the Placentia site, I have seen several females ovapositioning on a Valencia orange tree (*Citrus sinensis*, Rutaceae).

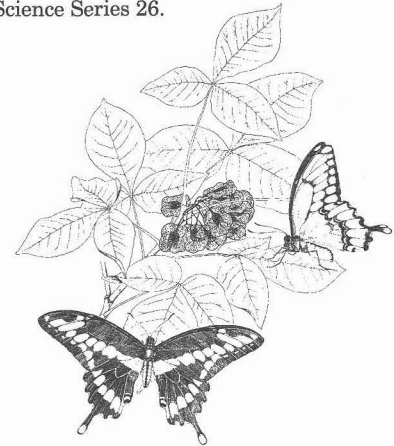
In southern Los Angeles County, I have observed them flying in Whittier, La Mirada, and Downey.

In all the areas that I observed, the butterflies (except for the abandoned orange grove in Irvine) were in city gardens where the larval host, *Citrus*, is commonly planted. The flight period that I have casually observed is from late May to early October.

It is likely the butterfly is found throughout Orange County and at least the southern half of Los Angeles County. The mild climate and abundance of larval hosts insure *H. cresphontes* (Cramer) to become established as a resident.

Literature cited:

Emmel, Thomas C. & John F. Emmel, 1973. *The Butterflies of Southern California*. Natural History Museum of Los Angeles County, Science Series 26.



The Giant Swallowtail and one of its larval hostplants, the Hop-tree. Drawing by Ontario artist Steve Varga. Reprinted from: *Conserving Carolinian Canada*, 1990. G.M. Allen, P.F.J. Eagles & S.D. Price (eds.), University of Waterloo Press, Waterloo, Ontario, ISBN 0-88898-102-3.

Resolution of the Lepidopterists' Society

Resolution Made at the Lepidopterists' Society 50th Anniversary Meeting at Yale University in New Haven, Connecticut, Regarding the Monarch Butterfly Overwintering Sites in Mexico.

Passed Unanimously at the Business Meeting on 13 July 1997.

WHEREAS more than two decades have passed since the overwintering sites of millions of North American monarch butterflies were discovered in the Transverse Neovolcanic Mountains of Central Mexico;

and

WHEREAS more than a decade has passed since six of the known overwintering sites were decreed as protected by the President of Mexico;

and

WHEREAS the unique migration and overwintering behavior of the monarch butterfly, involving Canada, the United States, and Mexico, has been recognized by the International Union for the Conservation of Nature and Natural Resources as an endangered biological phenomenon, and the first priority in world butterfly conservation;

and

WHEREAS the intact Oyamel Forest Ecosystem in Mexico has been scientifi-

cally documented as critical to the survival of this phenomenon;

and

WHEREAS the integrity of this Oyamel Forest Ecosystem has NOT been assured, as evidenced by the following:

(1) One overwintering area was clear cut shortly after the Presidential decree to protect it was issued;

continued on next page...

Membership Update...

Julian Donahue

This update includes all changes received by 20 Nov. 1997.

"Lost" Members

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

Muehlbach, Lauritz (Chino Valley, Arizona)

Corrections and Minor Revisions to the '96 Membership Directory

(make appropriate changes in *Alphabetical List of Members*)

Dalmau, Albert: change street number from "14" to "30"

Wanzor, Scott: change ZIP Code to "30097"

New & Reinstated Members

Members who have joined/renewed/ been found/or rescinded their request to be omitted since publication of the 1996 membership directory (NOT included in the 1996 Membership Directory; all in U.S.A. unless noted otherwise)

Bibbo, Christopher (Dr.): 438 Penns Way, Basking Ridge, NJ 07920.

Donovan, Jesse: 309 Fork Bridge Road, Pittsgrove, NJ 08318.

Gereck, Kurt: 7660 Myrtle Avenue #38, Eureka, CA 95503.

Grishin, Nick: 6071 Village Bend Dr. #114, Dallas, TX 75206.

Hoffman, Lynn (Ph.D.): 4141 Apalogen Road, Philadelphia, PA 19144.

Kittredge, Audrey L.: Box 135, Wells College, Aurora, NY 13026.

Koshio, Chiharu (Ph.D.): Naruto University of Education, Takashima, Naruto 772, Japan.

Lohman, David: MCZL, 26 Oxford Street, Harvard University, Cambridge, MA 02138.

Mann, John R.: 41 Dakin Street,

Mumford, NY 14511.

McKone, Jeffrey: 130 Alewa Drive N.W., Grand Rapids, MI 49504-5801.

Morningstar, Rachel: 395 Vincent Drive, Mount Dora, FL 32757.

Provenzano, Mike: 1611 North 44th Avenue, Stone Park, IL 60165.

Radke, David L.: 1076 West Murray Lane, Hubertus, WI 53033.

Shaffer, Daniel: 5530 Cynthia Lane, Naples, FL 34112.

Smith, Albert J., Jr. (M.D.): 531 Whip-poorwill Drive, Morehead, KY 40351-8869.

Address Changes

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

Cochran, Neil: 2643 Carroll Place #1, Anchorage, AK 99508.

Coelho, Osni: Butterfly House, 1576 Mission Drive, Shop 9, Solvang, CA 93463.

Conces, Dewey J., Jr.: 5884 South 950 East, Zionsville, IN 46077.

Furuya, Kenji (Ph.D.): Genentech, Inc., Quality Control Clinical Development, 1 DNA Way, South San Francisco, CA 94080.

George, Jeremiah N.: 600 Central Avenue #223, Riverside, CA 92507.

Hardbarger, Robert J. (Capt.): 4126 Amber Ridge Lane, Valrico, FL 33594.

Harp, Chuck E.: 3426 St. Johns Avenue, Billings, MT 59102.

Hosaka, Mitsuru: Sankyo Co., Shin-Otsuka Bldg. 4F, 5-25-15, Otsuka, Bunkyo-ku, Tokyo 112, Japan.

Kohnen, Paul D.: 2802 Newton Place, Philomath, OR 97370.

Kudrna, Otakar (Dr.): Mapping European Butterflies, Brombergstrasse 6, D-97424 Schweinfurt, Germany.

continued on page 97...

Resolution...cont'd. from page 107

(2) Major unauthorized and authorized tree cutting abounds in and adjacent to all overwintering sites;

(3) A new highway was authorized and is being built by the Government of Mexico that threatens the integrity of the most pristine overwintering colonies in the Sierra Chincua;

and

WHEREAS the needs of the indigenous human populations dependent upon the forests have not yet been adequately addressed in such a way that will allow them to coexist with the Oyamel Forest Ecosystem in a long-term sustainable manner;

THEREFORE, BE IT RESOLVED that the Lepidopterists' Society urges the international collaboration of Mexico, Canada, and the United States in order:

(1) to assure the long term integrity of the Oyamel Forest Ecosystem upon which the monarch butterfly overwintering and migratory phenomenon depends;

(2) to join and substantially enlarge the six designated reserves as intact ecosystems and watersheds;

(3) to promote, encourage, and assist in the development of new legislation to provide similar protection to all known but currently unprotected monarch butterfly overwintering areas in Mexico; and

(4) to facilitate viable alternative economies for the local human populations who are affected by these forest protection measures.

and

BE IT RESOLVED that the Secretary of the Lepidopterists' Society, Michael Smith, be instructed to (1) forward this resolution to the Secretary of the Interior of the United States of America and to his counterparts in Mexico and Canada; and (2) distribute this document to all like-minded individuals, NGO's, and other organizations in order to enlist their support and action.

Michael Smith,
Secretary

1997 Season Summary Submissions

The only change in submitting data for the Season Summary this year is that we are no longer requiring the use of an Input Form. As a result, you can submit your data to the Zone Coordinator in any format that is mutually acceptable to both parties. The only caveat is that the Zone Coordinator must be able to obtain the following information for each taxon you submit, regardless of the format; Zone Number, Contributor Name (if you already have a name code from previous years, please make it clear to the Zone Coordinator), State/Province, County/Region, Specific Locality, Date(s), Family, Genus, Species, Subspecies (if appropriate), and Comments (optional). The Zone Coordinators will still accept reports on the 1996 Input Form (see News 38(4), July-September 1996, pp. 81). The submission deadline to the Zone Coordinators is December 15, 1997.

We encourage each of you to look back over the past collecting season and share your data. Emphasis should be placed on new STATE and COUNTY records,

range extensions, altitudinal and unusual seasonal observations, and new host plant associations.

We will continue to use the taxonomy as set forth in Atlas of Western United States Butterflies including Adjacent Parts of Canada and Mexico by Stanford & Opler (1993) and Distribution of the Butterflies (Papilionoidea and Hesperioidea) of the Eastern United States by Opler (1995). All butterfly submissions will be converted to that taxonomy (with inclusion of new taxonomy as set forth in recent major works; i.e., The Butterflies of Alberta by the Zone Coordinators). Moth taxonomy should continue to follow the M.O.N.A. series except where major treatments (i.e., Poole's Noctuidae) have been published.

The Season Summary offers a great opportunity for each of us, whether professional or amateur, to make a contribution to the science of lepidopterology. Thanks for contributing.

Jim Tuttle,

Season Summary Editor

Net...continued from page 106

maintained by a gentleman whose address is G.J.L.RAMEL@EXETER.AC.UK. All the moths, per Mr. Ramel, are European (although some do not occur in the U.K.), and he feels some of the names are dated. He is soliciting pictures from others which he will post with appropriate acknowledgment.

Finally, I'd like to know from you if this is the sort of material you want. Would you like serious and scholarly only? (If so, I'm probably not the one to be writing this.) A theme for each issue? More jocularity? Feedback would be appreciated. My address is 1_IRON@CLASSIC.MSN.COM

Marketplace...cont'd from p. 113

Help Offered

Wish to collect legally in Costa Rica? Whether you decide to visit Costa Rica for leisure or work we can help you obtain your Official Collecting Permit for the time of your stay. You would be allowed to collect in all the country (except National Parks). Costa Rica rain forests are unique in what you can get species coming from the north (Mexico) or the south (South America). Contact Miguel E. Chumpitasi, P.O. Box 1105-2150 Moravia, San Jose, Costa Rica or phone/fax (506) 235-5160.

394

Blue...continued from page 116

single butterfly species. The Endangered Wildlife Trust, as do the other NGOs involved, feel that species conservation in a vacuum does not result in the establishment of long lasting conservation solutions. The Brenton Blue, however, has become a flagship species for South African conservation. Not only did the Brenton Blue Campaign set very valuable legal precedents, but also contributed to the development of South African conservation in a variety of ways.

It has made the public aware of the rapid overdevelopment of the South African coastline and the habitat destruction that accompanies it. Media coverage of the butterfly was followed by a series of articles in the national press focusing on the mismanagement of coastal development in South Africa and the erosion of the very foundation of our tourism industry. The precedents set by the Brenton Blue Campaign will, we hope, help turn this destructive trend around. Already the embattled provincial government has responded by promulgating new legislation aimed at regulating coastal development.

Final success of the Brenton Blue Campaign however, will be measured by whether or not it will result in the establishment of South Africa's first Provincial Butterfly Reserve. Such a step would mark the beginning of a more serious orientation toward invertebrate conservation in South Africa, an aspect of conservation that has thus far largely been neglected by our conservation fraternity.

The Brenton Blue case highlighted a number of serious structural deficiencies in our national conservation system. Successful establishment of the Provincial Butterfly Reserve would create the momentum needed to address these. If, for example, the conservation NGOs are able to make a meaningful contribution towards expropriating the developer and establishing the reserve, they will be in a strong position to insist that government actually makes provision for such eventualities in their future conservation budgets.

continued on page 99...

Announcement:

The Butterflies of North America CD-ROM: A Natural History and Field Guide

by James A. Scott

A must for amateur and professional lepidopterists and an essential reference for anyone interested in butterflies! The only field guide to cover all North America butterfly species, this monumental work is now available on CD-ROM. A complete natural history, fully describing the biological and ecological world of butterflies in general. Over 4,500 beautiful, full-color pictures covering 679 species, with many photographs illustrating the various life forms in natural habitat. 24 videos. Complete with over 600 field maps of all native species and 100 figures ranging from larval, pupal and adult structures to glands, nervous systems, reproductive parts, and cells, veins and other organs.

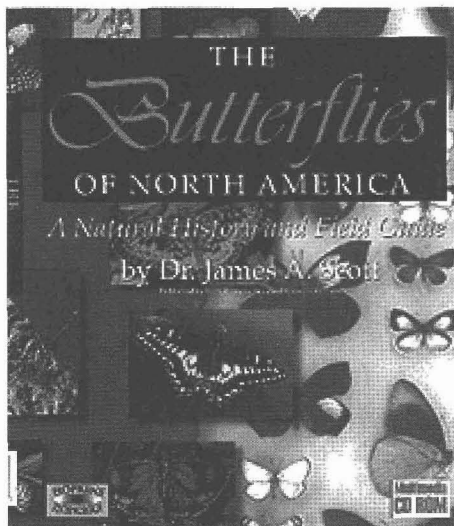
Learn about the ecology, behavior, evolution, physiology, genetics, biogeography and other fields related to how butterflies live, how they came to exist, and where, when and how you may find them. Extensive discussions on life cycles, behavior, hostplants, variation, and other topics. Discover butterfly gardening, so you can see these beauties in your own yard.

Discover keys and tools for the identification of the major butterfly groups, in all life stages and data on recognizing species that are native to or strays into the United States, Canada, Alaska, Greenland, Iceland, Bermuda and Hawaii. The appendixes provide information on studying, collecting, and raising butterflies and about 50 useful references on butterflies and their hostplants.

A comprehensive, integrated glossary with simple, clearly defined terms, so that persons who may be unfamiliar with butterfly terminology can easily learn them, 24 wonderfully colorful videos, enchanting original music by musician Eric Speier, full text search, and much more round out this essential, all-inclusive reference.

Requires Windows 3.1 or Windows 95 or higher, VGA or better, CD-ROM drive, sound card, and mouse. List price \$49.95 + \$5.00 shipping and handling.

© 1986-1997 Stanford University Press and James A. Scott - Content © 1997 Hopkins Technology, LLC. - Software Implementation All rights reserved. Originally published in book form by Stanford University Press. The CD-ROM contains additional photography, video and material.



Proposed Monarch Council

Jurgen Hoth

Attaché for Scientific and Environmental Affairs, Mexican Embassy in Canada, 1500-45 O'Connor St., Ottawa, Ontario, Canada K1P 1A4

Whereas one of the main challenges for assuring conservation of the Monarch butterfly and its winter and summer habitat in the three countries of North America, is **communication and coordination** between the social, academic, governmental and non-governmental sectors within and among countries;

Whereas not one single sector can ensure the conservation of the Monarch butterfly, or sustainable development, making **inter-sectorial collaboration** indispensable;

Whereas it is important to ensure **continuity** of conservation and development projects, a **permanent, participatory, accountable and inclusive forum** is needed to advise the various sectors and promote conservation and sustainable development initiatives related to the Monarch butterfly in each country and between countries;

Therefore, establishment of a **North American Network of Monarch Councils** in each North American countries is proposed.

The **functions** of the Network and the Councils will be to contribute to **continental congruency** with **conservation and sustainable development priorities, provide advice** to any sector, assist in the **identification of conservation priorities**, establish **financial mechanisms** to ensure that funds will be directly applied to those priorities, and establish an **evaluation program** to monitor progress towards conservation goals.

Comments welcome...



The Marketplace

IMPORTANT NOTICE TO ADVERTISERS: If the number following your advertisement is "391" then you must renew your advertisement before the next issue! Remember that all revisions are required in writing.

Books For Sale

Now available: Monograph to the North American Heliothentinae by D.F. Hardwick. A comprehensive treatise on species of *Schinia*, *Heliothis* and related genera. Adults and over half of the larvae of the 147 species are illustrated in color. Species discussions include descriptions of immatures, food plants, distributions and periods of flight. The 7"x10" book has 279 pages including 25 full-page colored plates. A check list to species and a food-plant list is included. Eight new species are described, 23 lectotypes are designated, and 40 nominal species reduced to synonymy. Price Canadian: perfect binding, \$70+\$10 S&H; hard covered, cloth-bound, \$95+\$10 S&H. Price U.S. soft covered, \$50t\$10; hard covered, \$70+10. Available from Ms. Julia Hardwick, 535 Highland Avenue, Ottawa, Canada, K2A 2J5. Cheques payable to D.F. Hardwick. ³⁹⁴

Apollo Books is Europe's leading mail order bookseller specializing in entomology supplying museums and university libraries as well as amateur and professional entomologists world wide. We have probably the world's largest selection of new books on insects and now and then we also produce a list of second hand and antiquarian books and journals. We also publish high quality book series such as *Noctuidae europaeae* and *Microlepidoptera of Europe*. Ask for free prospectuses as well as a copy of our 1997-98 catalogue. Easy ordering, easy payment. Apollo Books, Kirkeby Sand 19, DK-5771 Stenstrup, Denmark. Fax + 45 62 26 37 80. Phone + 45 62 26 37 37. ³⁹⁴

New issues of **Papilio (New Series)** for sale: No. 8, *Speyeria hesperus* and *S. atlantis* are distinct species, J. A. Scott, N. G. Kondla and S. M. Spomer, 26 pp., \$3.00; No. 9, New *Celastrina* for the eastern slope of Colorado, J. A. Scott & D. M.

Wright, 18 pp., \$2.00; No. 10, *Phyciodes* (*Phyciodes*): new discoveries, new subspecies and convergence, J. A. Scott, 44 pp. \$4.00; No. 11, New western North American butterflies, J. A. Scott, 10 pp., \$1.00; Nos. 8-11, \$9.00; Nos. 1-11, \$29.00. All postpaid U.S. James A. Scott, 60 Estes St., Lakewood, CO 80226-1254. ³⁹⁴

E. W. Classey Ltd provides a service for over 10,000 entomologists worldwide. Our catalogs contain hundreds of Lepidoptera books, including the very latest titles from all around the world. Why wait until you hear of new titles through the grapevine? E-mail, fax, or write to be placed on the mailing list. We export books daily to the United States, and we accept checks and all major credit cards. We regularly visit the US as buying agents for several large booksellers, to buy natural history books from individuals and institutions. Let us know if you

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

No mention may be made in any notice in the **News** of any species on any federal threatened or endangered species list. For species listed under **CITES**, advertisers must provide a copy of the export permit from the country of origin to buyers. **Buyers must beware and be aware.** Advertisements for credit, debit, or charge cards or similar financial instruments or accounts, insurance policies and those for travel or travel arrangements cannot be accepted be-

cause they jeopardize our nonprofit status.

Only members in good standing may place ads. All advertisements are accepted, in writing, for two (2) issues unless a single issue is specifically requested and must be renewed before the deadline of the following issue to remain in place. All ads contain a code in the lower right corner (eg. 386, 391) which denote the volume and number of the **News** in which the ad. first appeared.

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

The Lepidopterists' Society and the Editor take no responsibility whatsoever for the integrity and legality of any advertiser or advertisement. Disputes arising from such notices must be re-

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

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

have a collection or library for sale. Contact Peter Classey, E. W. Classey Ltd, PO Box 93, Faringdon Oxon SN7 7JP, UK, +44-1367-244700. 394

Atlas of New Jersey Butterflies by David C. Iftner and David M. Wright. Twenty eight page Atlas consists of a checklist and plotted county maps for all 151 species of skippers and butterflies that have been recorded for New Jersey. Copies can be ordered for \$5 (postage paid) from Dr. David C. Iftner, 8 Alpine Trail, Sparta NJ 07871. 393

Livestock

For sale: pupae of *C.regalis* and cocoons of *Attacus atlas*. For prices and info. contact Mike Benton at 6102 NW111th Pl., Alachua, FL 32615, (904)418-0472, SAM0128@JUNO.COM 394

I'm interested in trading, buying or selling saturniidae or sphingidae livestock. I'm also interested in exchanging information or articles on rearing, collecting, field guide, butterfly gardening, etc.). Contact Patrick Marceau, 1470 St-Oliver, Ancienne-Lorette, Québec G2E 2N9, Canada, PMARCEAU@CMQ.QC.CA 394

Cocoons and papered specimens of *Actias luna*, *Antheraea polyphemus* and *Hyalophora cecropia* for sale. Send a self-addressed stamped envelope to: Ronald Aaron Royer, R.D. 4 Box 2295, Lebanon, PA 17042-9433, or call (717)867-1021 394

Wild collected cocoons of *Hyalophora gloveri* for sale. Send a self-addressed envelope to: Bruce Duncan, 10132 Buttercup Drive, Sandy, Utah 84092 394

H. Cecropia for sale. Call Nathan Barry at 716-682-4285 or write at 14259 Oak Orchard on the Lake Waterport, New York 14571, SAAQ18A@PRODIGY.COM 394

Wanted: Specimens or eggs of any Saturniidae species, foreign or U.S. Especially: *Citheronia* species, *Argema mittrei*, *Argema mimosae*, *Coscinocera hercules*, *Antheraea* species, *Copiopteryx semiramis*, *Eupackardia calleta*, *Automeris* species, *Actias* spp., *Eochroa trimeni*, *Arsenura* spp., etc. I am especially interested in South American, African and Australian species. I'm also interested in Epicopeidae, Uraniidae and

Papilionidae. Will exchange with ova, specimens or pupas of *Actias luna*, *Antheraea polyphemus*, *Hyalophora cecropia* and many more. Send your offerings to Randy Lyttle, 901 Cayuga Street, Hannibal, NY 13074 U.S.A. 394

Cocoons & papered specimens of *Actias luna* for sale. Send a self-addressed stamped envelope to Ronald A. Royer, RD 4 Box 2295, Lebanon, PA 17042-9433, or phone (717) 867-1021. 394

Saturniidae, Sphingidae and Papilionidae of North Eastern U.S.A. and Canada. Available in fall of 1997 in winter diapause. Also: Reemay larvae sleeves, spun-bonded polyester caterpillar bags, sewn to your specifications or in standard sizes. In Canada send SASE for price list, in U.S. enclose 50c and SAE for price list. Bill Oehlke, Box 476, Montague, P.E.I. Canada, C0A 1R0, (902) 838-3455/0861 (H/W), Fax (902) 838-0861, CLAYCOE@CYCOR.CA 393

Ova of *Hyalophora cecropia* for sale, cocoons of same will be available in fall. Possibly cocoons of *Antheraea polyphemus* also in fall. Send SASE for prices or call, Michael Jablonski, 8735 US 30 N., Forest, Ohio 45843-8853, (419) 326-4641. 393

Cocoons of 1st generation *Actias luna*, *Antheraea polyphemus*, *Callosamia promethea*, *C. angulifera*, *Samia cynthia* and *S. ricini*. Additional species may also be available. Please send S.A.S.E. 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. 391

Specimens

For Sale: Lepidoptera from Russia at minimal prices. Large stocks, excellent quality, super-rarities (*Parnassius*, *Colias*, *Oeneis*, *Erebia*, moths, etc.). Guaranteed delivery to any place in the world. Fulfilling of firm orders possible. Mr. Sergei Gundorov, Plant Protection Department, Agricultural Institute, Teatralnaia Square, Saratov, 410710, Russia Fax 8452-264963 394

Free to a good home: Several hundred,

mostly western U.S. butterflies, all papered and with full data. "Home" will be chosen by a random drawing 3-4 weeks after ad comes out. All specimens show natural damage or wear. They may be used for dissections, practice mountings, jewelry, art, study, or for display for any collector to whom condition is not a prime concern. No calls please. Dr. Bruce O'Hara, 24211 Cross Street, Newhall, Calif. 91321 394

WANTED: Contacts for purchase, sale or exchange. I am seeking collectors and dealers world wide, who interested in a large selection of butterflies from former USSR, especially *Parnassius* and *Colias*. Request a free price lists in US\$. I am interested in purchase or exchange large quantities of all attractive and colorful butterfly, moth, beetles and other insects for decorative collections and art works. Dr. Ilya Osipov, Novogireevskaja str. 53-8, Moscow, 111394, RUSSIA. Tel./FAX: (7-095) - 301-25-14, OSIPOV@GLAS.APC.ORG 394

"Wanted to buy: Oriental Lycaenidae (Polyommata), especially of the genera *Jamides* and *Nacaduba*. Will consider small or large quantities of these. Full collecting data are mandatory but determination is not needed. Stefan Schroeder, Auf dem Rosenhuegel 15, D-50997 Koeln, Germany; STEFAN.SCHROEDER@UNI-KOELN.DE 394

For sale: Large selection of Iranian butterflies, perfect quality, with data. All *Louristana* sp., *Hybushirica*, *A. apollinaria*, *Colias sagartia*, *C. cholorocoma*, *C. aurorina*, *C. thisoa* ssp. *shahkuhensis*, and more. Many species from other families at fair prices, local or rare species are allowed for exchange. Also, local beetles and dragonflies, books. Write for extensive price list to A. Karbalaye, P.O. Box, 11495-175, Tehran, Iran. 393

For Sale: Specimens of Russian Lepidoptera, including Sphingidae (*Marumba daschkewitchi*), Arctiidae (*Grammia quenseli*, *Spilarctia subcarnea*, *Pragmatobia fuliginosa*, *Parasemia plantaginis*), Papilionidae (*Papilio machaon kamschadalus*, *Parnassius phoebus kamschatica*), and various species of Pieridae, Lycaenidae, Nymphalidae, and Satyr-

idae; also Carabidae (*Carabus macleani*, *Carabus arcensis*). Contact: Dean Morewood, 4705 Hillwood Road, Victoria, B.C. V8Y 2N3 Canada. ³⁹³

For Sale: specimens of *Idea tambusisiana* and *Papilio jourdani* from Sulawesi. Albert Dalmau, Mariano Estrada, 14, 08328 Alella (Barcelona), Spain. Tel. 555 46 52. ³⁹³

Collection for sale: Moderate-sized collection of Lepidoptera, primarily tropical, with a small number of North American insects other than Lepidoptera, from the estate of George F. Caldwell, deceased. Contact the Executor, Michael F. O'Neill, Mellon Private Asset Management, 1735 Market Street, PO Box 7899, Philadelphia PA 19101-7899, telephone (215)553-3080. ³⁹³

Serving lepidopterists since 1976. Offering many unusual butterfly specimens from Neotropical, African, and Indo-australian regions. Many ex-pupae and bred specimens. Please send \$1 (cash or stamps) for a 12-page illustrated catalog to: Transworld Butterfly Company, Apartado 6951, 1000L San Jose, Costa Rica, Central America. ³⁹³

Offered: Papilionidae, *Charaxes Euphaedra*, *Cymothoe* etc. from the Republic of Central Africa and Burundi. Wanted: *Charaxes* from East Africa and South African Republic, as well as *Charaxes* and *Polyura* from the Philippines and Indonesia (exchange or purchase). Giancarlo Veronese, Viale Venezia n. 138, I-33100 Udine (Italy). Tel. 0432-232754. ³⁹¹

Equipment

For Sale: 12 drawer walnut covered Cornell cabinet (Bioquip Number 2512FWL) and 12 Cornell drawers (Bioquip Number 1012AF). SASE for details. Russell Rahn, 3205 W. Rochelle Road, Irving, Texas 75062-4127. ³⁹⁴

Insect pins, black and stainless steel. Telescopic net sticks from 29 to 74cm and from 60 to 115cm. Complete nets from 30 to 65cm diameter also available. We are looking for wholesaler in North America, Australia and Japan. Contact: J. Krüger, Danziger Str. 14, D-40822 Mettmann, Germany. ³⁹³

For sale: Light traps, 12 volt DC or 110 volt AC with 15 watt or 8 watt black lights. The traps are portable and easy to use. Rain drains and beetle screens protect specimens from damage. Also available: Battery charging system for 12 volt batteries (for use while traveling, plugs into cigarette lighter, safely charges up to four 12 volt batteries in 3 hrs., great for the traveling lepidopterist with light traps) and custom made light fixtures. For a free brochure and price list, contact Leroy C. Koehn, 207 Quail Trail, Greenwood, MS 38930-7315, Telephone (601)455-5498. ³⁹³

Art

Beautiful butterflies laminated between beveled glass. Felt bodies, thread antennae, soldered and antiqued. Sun catchers, diamond shaped (4" x 7"). Mary Jane Zisoff, Trilogy of Art, Box 143, Parry Sound, Ontario, Canada, P2A 2X3, 705-746-4147, [HTTP://WWW.ZEUTER.COM/PARRYSD/SPECIALTYSTORES](http://www.zeuter.com/parrysd/specialtystores) ³⁹³

Information Wanted

Correspondence wanted: with individuals who have collected butterflies and skippers from New Jersey or have specimens in their collections from New Jersey. I am particularly interested in specimen data, larval host plant records, nectar resources, observations, etc. for an ongoing study of New Jersey's butterflies and skippers. Contact Dr. David C. Iftner, 8 Alpine Trail, Sparta NJ 07871. ³⁹³

Audio/Visual

CD-ROM: Butterflies of North America. Lepidoptery hits the computer age with the publication of this CD-ROM by James A. Scott. Everything in the 600 page Stanford Univ. Press book plus about 1000 new color photos of eggs, larvae, pupae and adults (about 5000 photos overall). Features include a new section on butterfly gardening, videos, instantaneous search capabilities for words or topics, species photos now grouped together, print photos and text, online glossary, background music. Windows only. \$49.95 + \$5 shipping/handling. Order from Hopkins Technology, 421 Hazel Lane, Hopkins, Minn. 55343-7116,

1-800-397-9211, [HTTP://WWW.HOPSTECHNO.COM](http://www.hopstechno.com). ³⁹³

Help Needed

The Nature Conservancy is in the process of producing an educational publication called the Biodiversity Status Report. The publication will assemble information from all 50 U.S. Heritage Programs into one central reference source. It will be comprised of two major products: a published book of approximately 400 pages that will provide a graphic overview and analysis of the condition and patterns of biodiversity in the U.S. as well as the threats to those species and ecosystems, and an electronic supplement on CD-ROM that will provide information and distribution maps for rare species and ecosystems of the U.S.

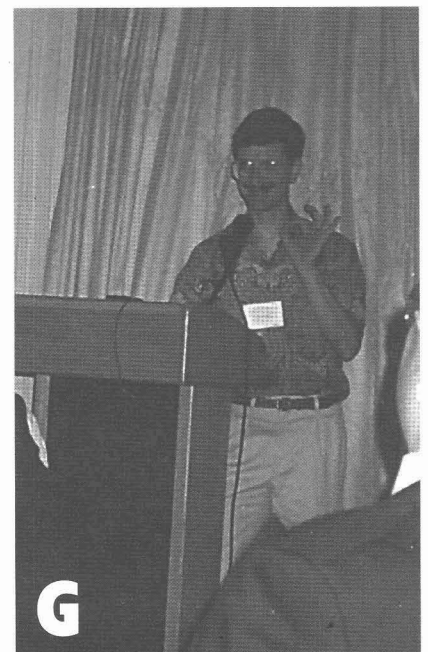
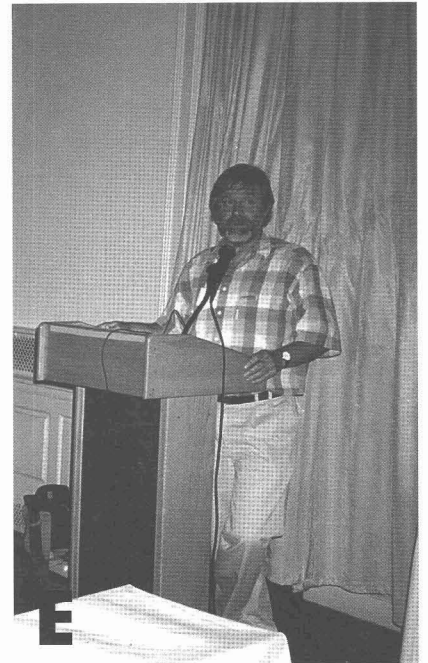
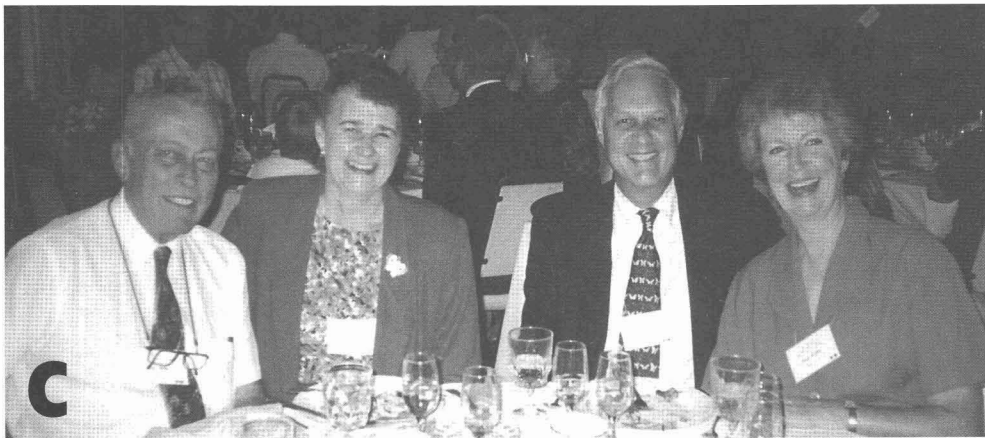
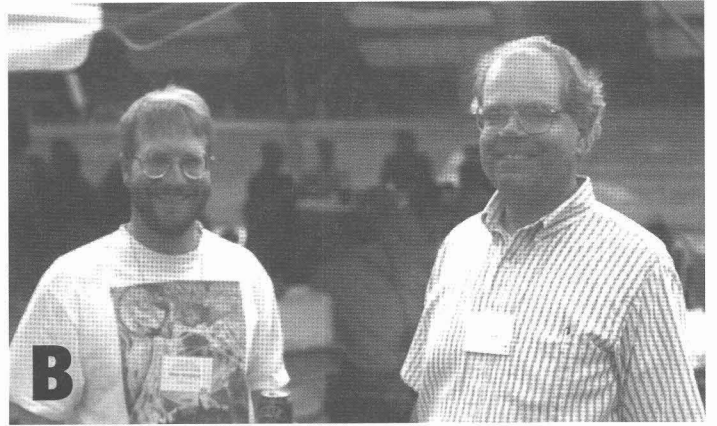
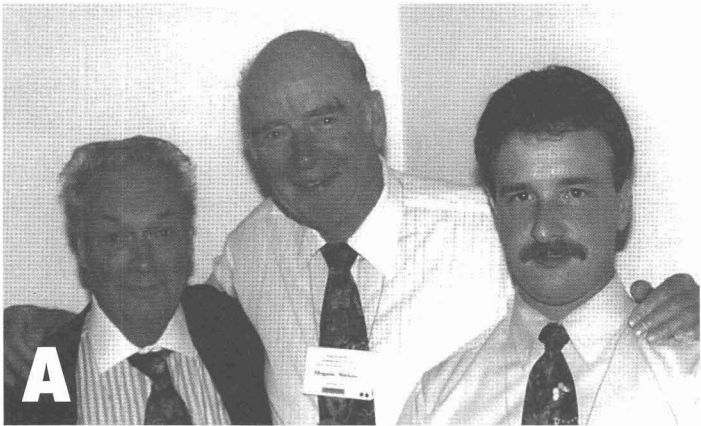
At this time, we are looking for slides/illustrations/images of various federally listed U.S. plant and animal species to be used in the electronic publication. Any slides donated will be processed, digitized, and returned within 4-8 weeks. All Copyright will be retained by, and Photo credit will be given to, the appropriate owner.

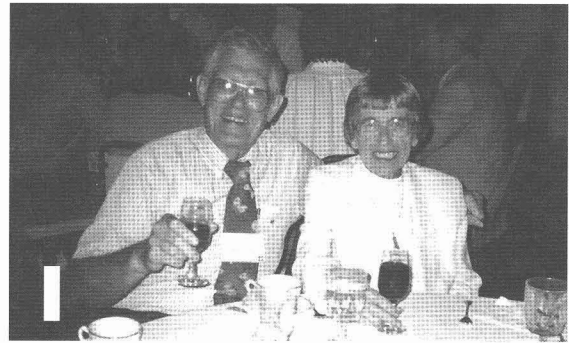
List of Butterfly Slides Needed:

Pyrgus ruralis lagunae (Laguna Mountains Skipper); *Hesperia leonardus montana* (Montana Skipper); *Incialia mossi bayensis* (San Bruno Elfin); *Eupilotes battoides allyni* (El Segundo Blue); *Euphilotes enoptes smithi* (Smith's Blue); *Glaucopsyche lygdamus palosverdesensis* (Palos Verdes Blue); *Lycaeides idas lotis* (Lotis Blue); *Icaricia icarioides missionensis* (Mission Blue); *Icaricia icarioides fenderi* (Fender's Blue); *Apodemia mormo langei* (Lange's Metalmark); *Speyeria zerene hippolyta* (Hippolyti Fritillary); *Speyeria zerene myrtleae* (Myrtle's Silverspot); *Speyeria callippe callippe* (Callippe Fritillary); *Boloria acrocneuma* (Uncompahgre Fritillary); *Euphydryas editha bayensis* (Bay Region Checkerspot); *Euphydryas editha wrightii* (Wright's Euphydryas); *Neonympha mitchellii francisci* (Mitchelli's Satyr); *Euploea eleutho* (Marianes Euploea Butterfly).

Sonal Pandya, Biodiversity Project Assistant, SPANDYA@TNC.ORG, phone: (703) 841-8758. Please note: The Nature Conservancy is a non-profit, tax-exempt organization under IRS code 501(c)(3). All gifts are tax deductible.

continued on page 109...





More 50th Anniversary Meeting Photos...

A) Ben Zeigler, Mo Nielsen, Ken Bliss; B) Brian Scholtens, George Balogh; C) Lee & Jackie Miller, ? & Jane Ruffin; D) Floyd & June Preston, Charlotte & Dave Bauer; E) Mike Toliver (organizer of the 1998 meeting); F) Eric & Pat Metzler, Ron & Elaine Hodges; G) "Mr. Everything's a-ok" Larry Gall; H) John Brown, Sarah & John Burns, Fred Rindge; I) Ron & Jeanne Leuschner; J) Mignon, Marissa, Don & Steve Davis; K) Andy & Sally Warren; L) Kathy & Julian Donahue, Ray Stanford; M) Louise & Richard Fall; N) Marc Epstein, Beth & Bart Brinkman, Ben Zeigler; O) Dave Wagner, Jerry Powell, Felix Sperling, unidentified.



Photos A & B courtesy of Mo Nielsen, C through O inclusive courtesy of Ray Stanford.

The Brenton Blue Butterfly: a test case for conservation in South Africa

Dr. John A. Ledger, Director

Endangered Wildlife Trust, Private Bag x11, Parkview 2122, South Africa.

The Endangered Wildlife Trust is a 25-year-old conservation NGO in South Africa with more than 80 projects throughout southern Africa. We are currently spearheading a precedent setting butterfly conservation project.

The Brenton Blue (*Orachrysops niobe*) is a lycaenid butterfly species which occurs only at one location near Knysna along the Southern Cape Coast, South Africa. Its habitat elsewhere has been destroyed by coastal housing development and afforestation. In 1995, it came to our attention that a new luxury coastal development was threatening to wipe out the last remaining Brenton Blue Butterfly breeding colony.

The Brenton Blue Campaign

By October 1996 it was clear that the Brenton Blue Campaign, a Knysna-based alliance of environmental groups consisting of the local branch of the Wildlife & Environment Society and the Lepidopterists' Society of Africa, had been unable to prevent the planned development from proceeding. The butterfly's habitat had been divided up into stands, half of which were already on the property market. A negotiated moratorium on the other half was due to lapse at the end of that month.

Though the Brenton Blue Campaign had been very successful in placing the plight of the Brenton Blue in the public eye, their efforts to involve government were less fruitful. In spite of South Africa's obligations as a signatory to the International Convention on Biological Diversity as well as clear powers in terms of South African legislation, both provincial and national government refused to intervene. It seemed as if South Africa's first 'planned extinction' was unavoidable.

A Joint Endangered Wildlife Trust/The Green Trust Initiative

A forceful intervention was required and following requests from the Lepidopterists' Society of Africa, the Endangered Wildlife Trust and The Green Trust (affiliated very closely with the WWF) a joint campaign was launched to save the Brenton Blue and establish a butterfly reserve at Brenton-on-Sea. Our initial assessment revealed a disturbing lack of political will to resolve the Brenton Blue problem. The particular section in the Environment Conservation Act that enables the provincial or national government to intervene in such cases, had never been successfully implemented.

Provincial government, in fact, seemed to shy away from the potential cost of intervening, while the national government's position seemed to be based on false information on the biology and ecology of the Brenton Blue that had been passed up from the provincial level. In particular, unconfirmed rumors of 'other populations' of the Brenton Blue occurring somewhere else along the coast had effectively sealed the Brenton Blue's fate.

The Endangered Wildlife Trust and The Green Trust consequently renegotiated a six month moratorium with the developer and launched a comprehensive interdisciplinary scientific assessment of the Brenton Blue and its habitat. The scientific study came to the very firm conclusion that no other populations of this butterfly exist and that the species would become extinct should government not intervene.

Success

In the interim one of the butterfly stands had been sold and the owner indicated

his intention to commence with building operations in spite of an agreement to the contrary. A hasty court interdict was obtained from the High Court in Cape Town - the first time this had been achieved with respect to a specific species. The stand was eventually purchased by our main corporate sponsor, Nedbank, and donated to the newly formed Brenton Blue Trust.

On the 31st of April 1997, the very day that the moratorium negotiated with the developer lapsed, the national Minister of Environmental Affairs & Tourism, Dr Pallo Jordan, decided to implement Section 31A of the Environment Conservation Act - another first for South African conservation. The developer was thereby prohibited from selling the stands for a period of six months.

The way forward

The next step in the Brenton Blue Campaign is for the Minister to expropriate the developer. When the Minister acted to halt the development, he did so with the understanding that the NGO community would assist him in raising the money needed to expropriate the land. Anything between R1.2 to 2 million (circa US\$ 300,000 to 500,000) will be needed for this to take place. The government's moratorium expires at the end of October, by which time the NGO community hopes to have made a sizeable contribution to the total amount needed. A major effort is currently underway to achieve this.

The relevance of the Brenton Blue case

One may ask why such effort is being made to prevent the extinction of a

continued on page 109...

Mapping European Butterflies: Project Outline

Dr. Otakar Kudrna,

Gesellschaft für Schmetterlingsschutz e.V., Karl-Straub-Str. 21, D-97616 Bad Neustadt

The butterflies – the best known group of insects – are sensitive to environmental changes and serve as valuable bioindicators providing indispensable information on the state and evolution of the European environment under the impact of changing land use practices and other anthropogenic pressures. Numerous butterfly species are considered threatened and many have been given legal protection on local, regional, European or even a world wide scale. In spite of this, there is no data bank, no distribution atlas, no scientific assessment of the degree of threat and no conservation concept for indigenous butterfly species on a European scale.

These facts are hard to believe, especially in view of the commitment of European governments to the Biodiversity Convention (Rio de Janeiro, 1992), but absolutely true. The only attempt to assess the conservation status of butterflies in Europe made so far (commissioned by the Council of Europe) has failed. The European Invertebrate Survey has never realized its 20 year-old plan to produce an atlas of the distribution of butterflies; their only attempt contains distribution maps of only 10 butterfly species (out of nearly 500 living in Europe) and may present some false records, as for example, the occurrence of *Parnassius apollo* in Holland.

Against this background, the Gesellschaft für Schmetterlingsschutz e. V. (GfS) and the Naturschutzbund Deutschland e. V. (NABU) — the latter represented by the “BFA Entomologie” and “BFA Internationales” — have resolved to start the Mapping European Butterflies (MEB) project. The main objectives of the project are to set-up a data bank on the distribution of indigenous

European wild butterflies and to publish an annotated distribution atlas of European butterflies.

The atlas will contain dot maps (about 14 × 18 cm each) for all European butterfly species; the maps will be based upon geographical coordinates of reference localities. The Reference Locality System (RLS) has been especially devised for this project. Further aims of the project are to assess the conservation status of indigenous European butterfly species, to identify all important butterfly areas of European significance and to determine priorities in the conservation of European butterflies and their habitats from a European point of view, based chiefly upon the evaluation of their present distribution patterns. The project should be completed within four years, resulting in the publication of the distribution atlas in the autumn of 1999 or the spring of 2000.

For this project Europe is defined as the westernmost extremity of the Euroasiatic landmass bordered to the west by the Atlantic Ocean and including the Azores, Madeira and the Canary Islands. The arbitrary section of the eastern and southern borders runs as follows: Ural Mts - Ural River - northwestern Caspian Sea coast to Makhachkala - railway, road and oil pipe line from Makhachkala to Novorossiysk - Black Sea coast southwards (Krym included) - European Turkey (eastern coast). Included also are all Greek islands and Cyprus as well as all Mediterranean islands belonging to any of the European countries and Malta, excluded is Iceland.

The Reference Locality (RL) is a geographical name found in the Times Atlas (9th Comprehensive Edition, 1994) as

long as it is unequivocally referable to a certain place on the map of Europe by means of geographical coordinates (latitude and longitude) in the vicinity of which the site(s) of the species recorded is/are situated. The reference locality is represented by a dot on the map if the species concerned occurs or has been found there. Due to the scale and kind of projection of the distribution map, reference localities situated within a short distance from each other may merge on the map into one dot. The index of reference localities recommended to recorders for this project contains about 8000 geographical names, mostly of human settlements.

One of the drawbacks of any butterfly recording scheme is usually the long time needed for the completion of the survey. To overcome this problem this project is based chiefly upon the evaluation of “readily available” existing original collection data; this method has recently been successfully utilized for the annotated distribution atlas of butterflies of Czechia. The data will be reported by means of specially devised recording sheets and processed by computer programs developed for the project.

The great significance of a distribution atlas for taxonomic, biogeographic and ecological research (but above all as a scientific base for effective conservation of nature) is generally acknowledged. Scientifically based butterfly conservation deserves an exceptionally high priority. The natural and semi-natural habitats of about 180 German indigenous butterfly species are co-inhabited by 10 to 12 thousand insect species. The significance of butterfly habitats for the maintenance of biodiversity on a European scale is much higher.

Membership

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

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

Dues Rate

Active (regular)	\$ 35.00
Affiliate	5.00
Student	15.00
Sustaining	50.00
Contributor	100.00
Life	1400.00
Institutional Subscription	50.00
Air Mail Postage for News	15.00

Students must send proof of enrollment. Remittances must be in U.S. dollars, payable to "The Lepidopterists' Society". All members receive the *Journal* (published quarterly) and the *News* (published quarterly). Supplements included in the *News* are the Membership Directory, published in even-numbered years, and the Season Summary, published annually. Additional information on membership and other aspects of the Society can be obtained from:

Michael J. Smith, Secretary,
The Lepidopterists' Society,
1608 Presidio Way,
Roseville, CA 95661

Change of Address?

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

Julian P. Donahue, Assistant Secretary,
The Lepidopterists' Society,
Natural History Museum of Los Angeles County, 900 Exposition Blvd.,
Los Angeles, CA 90007-4057.

Our Mailing List?

Contact Dr. Donahue for information on mailing list rental.

Missed or Defective Issue?

Requests for missed issues should be directed toward Ron Leuschner (1900 John Street, Manhattan Beach, CA 90266-2068, Phone: (310) 545-9415). Defective issues will also be replaced. Please be certain that you've really missed an issue by waiting for a subsequent issue to arrive.

Journal of the Lepidopterists' Society

Inquiries regarding *Journal* policy and manuscripts submitted for publication in the *Journal* are to be sent to:

Dr. M. Deane Bowers, Editor
Journal of the Lepidopterists' Society
Department of Environmental, Population and Organismal Biology, Campus Box 334, University of Colorado,
Boulder, CO 80309-0334
Phone (303)492-5530,
FAX: (303)492-8699
E-mail: BOWERS@SPOT.COLORADO.EDU

Editorial policy is outlined on the inside back cover of any issue of the *Journal*.

Book Reviews

Send book reviews or new releases for review, for either the *Journal* or the *News* to:

M. Alma Solis
Systematic Entomology Lab., USDA,
c/o National Museum of Natural History,
MRC 127, Washington, D.C. 20560.
(202) 382-1785 (office)
(202) 786-9422 (fax)
MNHEN127@SIVM.SI.EDU



Submission Guidelines for the News

Submissions are always welcome! When space becomes limiting, preference is given to articles written for a non-technical but knowledgeable audience, illustrated, written succinctly, and under 1,000 words. Please submit your article or item in one of the following formats (in order of preference):

1. Article on high-density, DOS- or MAC-formatted, floppy diskette in any of the popular formats. You may include graphics on disk, too. Indicate what format(s) your article is in, and call if in doubt. Include a printed hardcopy and a backup in ASCII or RTF (just in case).
2. Electronically transmitted file in ASCII or other acceptable form *via* e-mail.
3. Typewritten copy, double-spaced suitable for scanning and optical character recognition. Articles may also be faxed directly to my computer for OCR but you must call first so that I can set up for reception of your fax. Artwork should be line drawings in pen and ink or good, clean photocopies suitable for scanning.
4. Handwritten or printed (very legible, short pieces only please, <500 words).

Submission Deadlines

Mail disks and illustrations to the *News* Editor (see right). Material for Volume 40 must reach the Editor by the following dates:

Issue	Date Due
1 Spring	January 31
2 Season Summary	December 15
3 Summer	April 30
4 Autumn	July 31
5 Winter	October 31

Reports for the Season Summary must reach the Zone Coordinator by Dec. 15. See next page for more information.

Executive Council

President

Jim Tuttle
3838 Fernleigh Street
Troy, Michigan 48083-5715
(248)689-6687 (home)
JPT@WWNET.COM

Immediate Past President

Eric H. Metzler
1241 Kildale Square North
Columbus, Ohio 43229-1306
(614)888-3642 (home)
SPRUANCE@INFINET.COM

Vice Presidents

Vitor O. Becker
EMBRAPA-CPAC, Caixa Postale
70-0023, Planaltina, DF 73300,
Brazil

Claude Lemaire
La Croix des Baux, F-84220
Gordes, France

Mogens C. (Mo) Nielsen
3415 Overlea Dr., Lansing, MI
48917-2255

Secretary

Michael J. Smith
1608 Presidio Way
Roseville, CA 95661

Assistant Secretary

Julian P. Donahue
Natural History Museum
900 Exposition Boulevard
Los Angeles, CA 90007-4057
(213)763-3363 (office)
(213)746-2999 (fax)

Treasurer

David C. Iftner
8 Alpine Trail
Sparta, New Jersey 07871
(201)729-1350 (home)

Assistant Treasurer/ Membership Chair

Kelly M. Richers
9417 Carvalho Court
Bakersfield CA 93311
(805)665-1993 (home)

Publications Manager

Ken Bliss
315 Morningside Avenue
Linden NJ 07036

Karl Jordan Medal Representative For 1998

Ronald W. Hodges
Systematic Entomology Lab.,
USDA, c/o National Museum
of Natural History, MRC 127,
Washington, D.C. 20560

Editor, News of the Lepidopterists' Society

Phil Schappert
Department of Zoology,
University of Texas at Austin,
Austin, TX 78712-1064
(512) 232-3377 (office),
(512) 471-9651 (fax),
(512)237-3864 (home),
PHILJS@MAIL.UTEXAS.EDU

Editor, Journal of the Lepidopterists' Society

M. Deane Bowers
Department of Environmental,
Population and
Organismal Biology,
Campus Box 334, University of
Colorado, Boulder, CO 80309-
0334
(303)492-5530 (office)
(303)492-8699 (fax)
BOWERS@SPOT.COLORADO.EDU

Book Review Editor

M. Alma Solis
Systematic Entomology Lab.,
USDA, c/o National Museum of
Natural History, MRC 127,
Washington, D.C. 20560.
(202) 382-1785 (office)
(202) 786-9422 (fax)
MNHEN127@SIVM.SI.EDU

Executive Council, Members-At-Large

Charles V. Covell, Jr., Richard
L. Brown, John W. Peacock,
Ronald Rutowski, Felix A.H.
Sperling, Andy Warren, Ron
Leuschner, M. Deane Bowers,
Michael Toliver

Season Summary Zone Coordinators

Refer to Season Summary for
Zone coverage details.

Chief Season Summary Coordinator And Editor

Jim Tuttle
3838 Fernleigh Street
Troy, Michigan 48083-5715
Phone: (248)689-6687
JPT@WWNET.COM

Zone 1, The Far North:

Dr. Kenelm W. Philip
Institute of Arctic Biology
University of Alaska
P.O. Box 75700
Fairbanks, Alaska 99775-7000
(907) 479-2689
FNKWP@AURORA.ALASKA.EDU

Zone 2, The Pacific Northwest:

Jon H. Shepard
R.R. #2, S.22, C.44
Nelson, British Columbia
V1L 5P5 Canada
(604)352-3028

Zone 3, The Southwest:

Robert L. Langston
31 Windsor Avenue
Kensington, CA 94708-1040
(510)524-3001 (home)

Zone 4, The Rocky Mountains:

Dr. Ray E. Stanford
720 Fairfax Street
Denver CO 80220-5151
(303)377-1332 (home)

Zone 5, The Plains:

Dr. Ronald Alan Royer
Division of Science
Minot State University
Minot, North Dakota 58707
Office: (701)857-3209
FAX: (701)839-6933
ROYER@WARP6.CS.MISU.NODAK.EDU

Zone 6, South-Central:

Charles Bordelon, Jr.,
8440 Washington Boulevard
Beaumont, TX 77707
(409)866-8163 (home)

Zone 7, Ontario And Quebec:

Alan J. Hanks
34 Seaton Drive, Aurora,
Ontario L4G 2K1 Canada
Phone: 905-727-6993 (home)
A.HANKS@ACI.ON.CA

Zone 8, The Midwest:

Leslie A. Ferge
7119 Hubbard Avenue
Middleton, Wisconsin 53562-
3231
(608)836-9438
LESFERGE@JUNO.COM

Zone 9, The Southeast:

Brian G. Scholtens
Biology Department
College of Charleston
Charleston SC 29424
Phone: (803)856-0186
SCHOLTENSB@COFC.EDU

Zone 10, The Northeast:

Mark J. Mello
P.O. Box 87037
South Dartmouth MA 02748
Phone: (508)990-0505
M1MELLO@UMASSD.EDU

Zone 11, Hawaii & the Pacific Islands:

Vacant

Zone 12, Mexico & the Caribbean:

Isabel Vargas Fernandez
Museo de Zoologia, Facultad de
Ciencias, Univ. Nacional
Autonoma, Mexico, Apartado
Postal 70-399, Mexico 04510
D.F., Mexico
ivf@hp.fciencias.unam.mx



The Lepidopterists' Society

c/o Allen Press
P.O. Box 368
Lawrence KS, 66044

Nonprofit Organization U.S. Postage PAID Permit No. 116 Lawrence, Kansas

