
KENTUCKY LEPIDOPTERIST

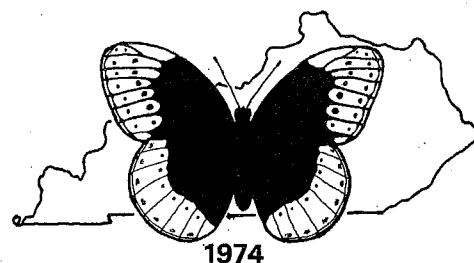
Newsletter of the Society of Kentucky Lepidopterists

VOLUME 18, NUMBER 1: FEBRUARY 1992

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7004 Ethan Allen Way,
Louisville, KY, USA 40272



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EDITORS' NOTES

I received several responses in regards to the question put to the members in the last issue (17:4) about writing articles on specific taxa or groups. However, all of the responses came in the form of requests for the articles and not offers to write them. If no offers of articles for this series are made, I'll assume there is no interest and kill the topic.

I thank those of you who have sent copy for the newsletter. Some submissions will be moved into 18:2. Those of you using computers are requested to send your contributions on disk. It will be returned. The dates for the rest of volume 18 are:

18:2 April 15, 1992
18:3 July 1, 1992
18:4 October 1, 1992.

REPORT ON THE 18th ANNUAL MEETING

by Charles V. Covell, Jr.

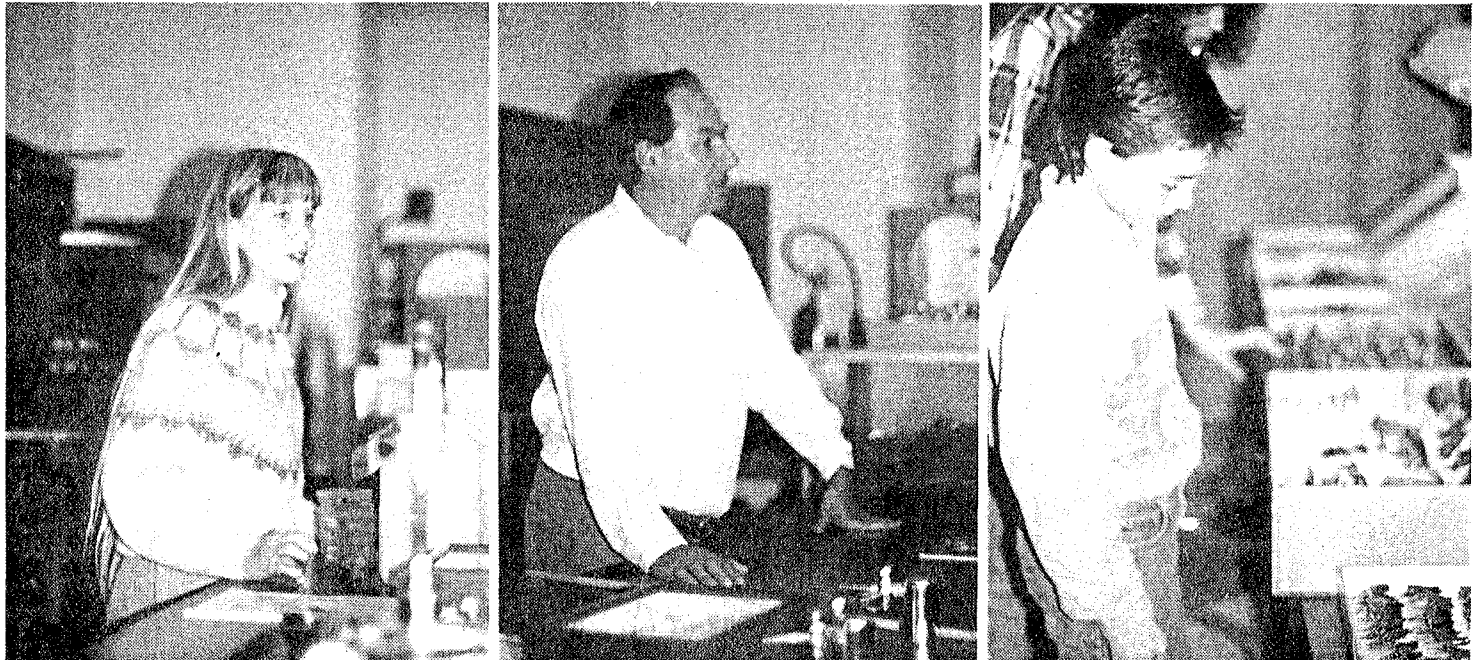
The 18th Annual Meeting of the Society was held in Louisville on November 15 and 16, 1991. The annual Open House at the Covells was highlighted by viewing a video sent by Ron Boender of Butterfly World in Florida. The video included a tour through the visitor's and rearing areas of Butterfly World, and interviews with Ron by national TV personalities. Ron had also kindly sent a supply of guide books to Butterfly World for those attending the meeting. Charles Covell showed slides of the 1990 trip to Irian Jaya, New Guinea, for those who had not seen them last year. Thanks to all who brought goodies for the refreshment table.

Saturday morning brought many regulars and a few new members to the Entomology Lab in the Life Sciences Building at the University of Louisville. After a morning of viewing the collections, exchanging

information and material, and visiting, we began the annual business meeting. There were several young lepidopterists present, and there were duplicate specimens for them to pick through to take home. The famous doughnuts from Heitzman's bakery were a big hit as in years past.

President Roger Zebold could not attend because of his son's wedding, but sent greetings to the group. Charles Covell conducted the meeting, and as Treasurer reported a balance of \$418.25. Jim Merritt was elected President for 1992. Barry Nichols and Charles Covell were re-elected to their posts of Editor and Secretary/Treasurer, respectively. Field trips for 1992 were discussed. Covell offered to lead one in April to collect Celastrina ebenina, Pieris virginiensis, and other spring fauna (see announcement below). Covell also announced the Kentucky Lepidoptera book is nearing completion, with Nancy Esarey formatting the manuscript for publication. There are 2,318 species now recorded from the Commonwealth.

After a break, our special guest, Dr. Paul A. Opler, member of our Society since 1975, spoke on identification problems in eastern butterflies. He also updated us on the progress of his revision of the Klots Field Guide to the Butterflies of Eastern North America, which is nearing completion. After his talk and a question period, Charles Watson spoke on the butterflies of the Clemson University preserves near that campus in SC, and illustrated with slides. Jessica Hutti told of her science project research in progress with tobacco hornworms she is rearing on artificial medium for diapause studies. She is being aided by Dr. Doug Dahlman of the University of Kentucky Entomology Department, and Charlie Covell. Karen Holl from VPI in Blacksburg, VA, spoke on her research with Lepidoptera on reclaimed strip mine lands. Christa



MEETING PHOTOS: Jessica Hutti
C.V. Covell Jr.

Paul Opler

Philip & Janice Jaber

Anderson presented a hilarious video on problems with the marshmallow crop, and we rounded out the program with a second viewing of the Butterfly World video. As is traditional, door prizes were raffled at the end, and there were enough for everyone to take home something. A number of us dined together at Masterson's Restaurant after the meeting.

In addition to those mentioned above, those present at the meeting were: Eric and Pat Metzler, Reed Watkins, John Hyatt, Philip and Janice Jaber, Don Wright, Carl Kaster, Kristi Saunders, Thad Merritt, Burt Monroe, Phil Jaeger, John Suggs, Anthony Wood, Bill Black Jr., Richard Henderson, Jim Merritt, Roy Rings, Loran Gibson, Fay Karpuleon, Bob Hoffman, Joe Gallagher, Richard Cassell, Yin-Rei Hicks, Mel and Kyra Weinberger, and one more whose signature I cannot read.

PHOTO TIP by S. W. Loftin

On October 3, 1990, my wife Julie and I decided to bother our neighbors in suburban

Nashville by setting up our mercury vapor lamp on the patio to see what sort of fall species we could draw in to the light. That night, several Agrius cingulata came to the sheet. We had been watching for them to come to feed on the Ipomoea grandiflora, or moonflowers, that cascade over the patio fence but they had gone unnoticed until we began to collect at the lights. The next night, at dusk, four large and beautiful specimens began feeding on the flowers and we opted not to turn on the lamp, but try to photograph them.

After a beginning frenzy of hand held shots and a good dose of Murphy's Law of Moth Photography, we set up a tripod and waited for the moths to visit our chosen flower. Along with the fact that the moths seemingly visited all the other flowers (about 60 open blooms) twice before visiting our flower once, there were other trying matters with which we had to contend. The moth only visited the flower for what seemed to be milliseconds. Having stared at a single bloom in poor light for 15 minutes, this photographer's eyes and reflexes were dimmed just enough to cause plenty of misses. Twenty shots of moonflower blossoms

without moths makes for a boring contact sheet. After feeding for ten minutes, the moths disappeared for 20 minutes, then returned and repeated the cycle. During their absence, we wondered if they had depleted the flower's nectar supply, or had gorged themselves to 20 minutes worth of satisfaction.

Our pondering led us to conduct an experiment. Moonflowers have blooms that are between 10 to 15 cm across, on tubes that are as much as 14 cm deep. We wanted to find out what would happen if we filled them with sugar water. Using the scientific method of adding exactly one pinch of sugar to one half syringe of water and shaking it, we then filled the tube with the sugar water and waited. Watching a moth approach with maddening circuitry, we were finally rewarded when, at last, it hovered before our flower, and hovered, and hovered, and hovered... Eureka! It worked! Another problem that we had was that the flash had been turning our pink spotted sphinx into blinded sphinx, and after one blast of flash, the moths would either flee or drop to the ground. After the sugar water was put in the flower, the moths withstood as many as four flashes before seeking refuge.

It is well known that *A. cingulata* will frequent hummingbird feeders. This makes for another type of interesting photograph. Often the feeder tube can be disguised as a flower by slipping a tubular bloom over it, feigning the natural habit for the camera and obtaining the same holding power that the "spiked" flowers present. The "spiked" flowers made for a less stressful night of photography and we did not have to rely on the hope that the moths would understand the purpose of all those hummingbird feeders.

STUDY OF LEPIDOPTEROUS GENITALIA: Chapter 2 by L.P. Grey

After steps taken to insure the preservation of data (previous notes, KY. LEP. 17:4, page 23), the next procedure is to remove the abdomens from the desired

specimens, for immersion along with the identifying data slips, in a bath of Potassium Hydroxide (KOH). Answers to various questions that one might ask are attempted now.

With male butterflies in particular, some collectors seem tempted to snip merely the end abdominal sections, to preserve a "less mutilated" specimen. These ideas of beauty should be squashed: surprises have a habit of turning up anywhere, and even the fact of monotonous similarities is something to document. Too, this approach could be absolutely fatal to dissection of females, wherein in many species abdominal sexual appendages may extend almost to rub against the thorax.

The abdomen therefore should be broken off as nearly as possible to its thoracic junction. In dry specimens, an injudicious move easily results in the secondary wings falling off with the abdomen, along with a curse from the preparator. One of the finest tools to avert this disaster is a tiny scalpel. A scalpel may be made from a scrap of pointed razor blade inserted in an end cleft of a small hardwood handle, tightly bound with fine but strong thread and finished off with epoxy glue. In use, this may be bradded dorsally (and delicately!) to start the disconnection, and held against pressure exerted upward from the ventral side by another microtool, preferably a dissecting needle with a spoon shaped end. A few trials will convince one that the best way to break is up.

Students who have browsed the literature know that a "ten per cent KOH" (aqueous) solution is used, in which abdomens are immersed for some time. But to understand the reasoning, assemble materials, plus overall details needful in achieving desired results often seem left for the novice to puzzle out for himself. (Gender bias!)

Chemically, this first bath does to an abdomen the same thing Great-Grandmother did when she hoarded the winter's scraps of fats and greases, along with a barrel of wood

ashes. In the spring, the ashes were soaked with water, and the leachings (the "lye") went into a big kettle along with the disgusting fats, to be boiled (outdoors!). The end product was beautiful bars of white soap, the annual household supply. Abdominal contents are mainly fatty tissues, saponified by the KOH. The resulting "soap" is squeezed out and washed away in following water baths. Some of the ovarian or testicular materials are too fragile to survive but also are too amorphous to be of much taxonomic value. Study of these materials, of musculature, etc. are outside our purview, requiring special techniques. The organs usually studied, even if in part very lightly membranous, are able to survive a lot of mauling and still retain characteristic features.

KOH is marketed as small tablets, by various supply houses. However, procuring needed chemicals can be difficult. One cannot now, as in yesteryear, walk into a local drugstore and obtain, say, a pound of potassium cyanide! The best advice now is to have the right friends: Biology or Chemistry lab instructors, physicians, etc., or to live near a college or other institution with research facilities.

The "ten percent solution" of KOH is by weight. The mixture need not be exact and can be left to the ingenuity of the student if no pharmacist is nearby. Personally, I have an ancient apothecary scale and can thus boast that I do indeed have "scruples".

Again on a personal note, for containers, I use some old "Pond's Cold Cream" jars that happen to be just the right size to hold fifteen small plain-mouthed vials (glass, 8mm diameter, 43mm high). These vials are nearly filled with the KOH solution using a pipette and drawing from a premixed pint or more (which will supply an active worker for quite a long time). One learns to conserve and the tiny amount used per vial per specimen is sufficient for almost any butterfly or small moth. Large saturniids and the like would require larger vials. These containers are used once, then washed before reuse. Collectors are

inveterate gadgeteers so these hints should suffice for them to make do with apparatus and technique, to get an abdomen ready to go into a prepared KOH bath. A preliminary step should be mentioned: most workers dip abdomens into alcohol or detergent, to speed up processing. This is desirable but not absolutely necessary. The best preliminary wetting agent I have found is "Aerosol OT" thinned with water.

Heating in test tubes, for a quick fix, has been done, but the majority of preparators, myself included, seem to prefer the "overnight at room temperature" soaking. The latter method works well for most butterflies and for small moths, but the noctuids I am handling now are too densely vestitured to succumb without longer immersion and considerable heating. In winter, here in Maine, I rely on our large wood-stoked convection heater, on the grill of which is placed a jar containing vials with abdomens (in a pan, in case of breakage). This puts out a lot of heat overnight. The same result can be achieved in summertime by leaving in a gas oven over the pilot light, perhaps with a brief burst from the main burner (assuming one has a tolerant chief cook).

Seriously, though, a better and much quicker cleaning of pelts results from longer than "overnight" in the KOH. Also, supplementing with heat can cut the time and should be given a try. Too much of this good thing of course can ruin a specimen, but here, as elsewhere, trials and failures will hone one's judgement.

Making an end to this chapter, an article to come will discuss apparatus and skills needed in cleaning the saponified abdomens. One hopes that beginners, to whom these notes are addressed, will be encouraged to follow on to the rewards that will come into sight during staining, dissecting, etc., as are to be described still later in this series.

[Ed. note: I use the overnight method with noctuids with success. I use 12% KOH for males and 14-15% for females.]

INTERESTING (AND OTHER) LEPIDOPTERA IN GEORGIA by James K. Adams

It might be expected that numerous interesting northern Appalachian Lepidoptera would reach the southernmost parts of their ranges in northern Georgia, but from what I have been able to ascertain since moving here a little over a year ago from Lawrence, Kansas, very little concerted collecting has been done in northwest Georgia. (Here, by the way, is Dalton, Whitfield Co.) Indeed, in Charles Covell's field guide, many species are listed as having ranges reaching into the mountains of eastern Kentucky and Tennessee, and western Virginia and North Carolina, with very little mention of ranges extending farther south, unless the species has also been collected in Florida. So, along with the generally exciting collecting I have experienced since arriving in Dalton, a pet project of mine has been to pay special attention to those species which may indeed be at the southernmost extension of their ranges (we do get some interesting southern moths here, too, by the way, but that's another story!), and the following is a partial list of the most interesting species.

Perhaps the most interesting are the noctuids Chrysanypha formosa (May) and Panthea acronyctoides (March), both of which may represent state records, though it would probably be difficult to ascertain this. Other noctuids nearing their most southern localities here are Eupsilia vinulenta (Feb.-March, common), Lacinopolia olivacea, Lithacodia concinnimacula, Catocala flebelis, C. judith, and C. robinsoni. Geometrids in this category include Glena cribrataria (quite common in April-July), Biston betularia, Erannis tiliaria (Nov.-Dec.), Euchlaena irraria, Campaea perlata (actually, this species has been recorded from Florida, so my records are a fill-in for the state of Georgia), Selenia kentaria, Metarranthis duaria, Cepphis armataria, Plagodis serinaria and P. phlogosaria. Drepana arcuata and the arctiids Grammia anna and Holomelina laeta also may fit into this group, though I just recently took a

specimen of H. laeta in Tallahassee, Florida, and it has been recorded from Florida before. The most exciting family of moths to collect here (at least from my perspective!) have been the limacodids. In the months of May and June this year, I collected every species of limacodid pictured in Covell's field guide, some of which are considered uncommon (Isochaetes beutenmulleri, Natada nasoni, Parasa indetermina) are actually some of the more abundant moths, continuing to fly up into the middle of July in good numbers.

I did mention that there are many other good moths to be had here in Dalton, and I will give you a taste of this as well. The sphinx moth Paonias astylus, though not numerous, is a regular visitor to my porch light. Anisota virginiensis pellucida can be caught here, and Olceclostera angelica and Lacosoma chiridota are quite common. Other exciting noctuids that can be collected here include Feralia major (Jan.-March), Elaphria georgei, Eutolype grandis (extremely common in Feb. and March), Baileya doubledayi, Tarachidia semiflava, Catocala ulalume, C. insolabilis, C. dejecta. The notodontids Peridea ferruginea, Hyparpax aurora, and Schizura concinna can be collected here, and the geometrids Caripeta aretaria and Probole nepiasaria should whet the appetite of most geometrid enthusiasts. Thyris sepulchralis (common) and T. maculata, as well as the epiplemid Calledapteryx dryopterata round out the list of relatively uncommon moths that have caught my eye since arriving here. Too bad I haven't yet evolved into my tortricid-appreciation stage in my life yet, the diversity of tortricids here is tremendous!

NOTES ON THE PROPER LABELLING OF SPECIMENS by Barry S. Nichols

There are seemingly as many methods of specimen labelling as there are specimens. For those who work with the material of many different collectors, they may find that the information recorded with some specimens is

spotty at best. It is with this in mind that this article is written.

When working on other collections it is of great help if the specimens are labelled as completely as possible. My labels start with the method used in collection of the specimen, possibly coupled with some mention about the habitat or activity of the insect at the time of capture. This ranges from statements such as "at light", "at bait", "swept from Acer rubrum", "nectaring on Dentaria" or even "flying over road, 42 F". This is not only a help to those wishing to collect the same species, but often notes on behavior and environment are never recorded in a journal and this method would keep this information intact with the specimen.

The next line(s) describe, as well as possible, the location, County, State, etc. It is important that this be done with precision. Ideally, one should be able to find the same location based on the information given on the label. Many people record the topographic map coordinates of their captures. This is extremely valuable information. Sometimes the "landmark method" doesn't hold up well over time.

The date of capture is recorded on the next line. This is another area where there has been some confusion. Many people prefer to put the day before month while others put month first. This is a problem when using numbers. Does 6-8-1991 mean June 8 or August 6? I prefer putting the month first. However, I use the Roman numeral for designating the month. The label would then read "VI-8-1991" or "VIII-6-1991". This eliminates the confusion.

The collector's name is on the last line. Any additional information on rearings, behavior, etc. should be written on a second label. I even like to put the MONA number under the species name in the determination label. This is a great time saver if you find yourself working with the specimens at a later date. I have seen some specimens with as many as four labels (five including the determination label). While this method is time consuming, it is well

worth the effort and provides a great deal of information and a degree of standardization.

NEWS AND NOTES

Please note the year on your mailing label. If it does not have 1992 on it, please remit your dues with the enclosed notice now so as not to miss out on the next issue.

We regret the death of Connie Kendall, wife of Roy Kendall, our friend and colleague in Bexar Co., Texas.

The Lepidopterists' Society will have their 43rd annual meeting at Michigan State University in East Lansing, Michigan on June 25-28, 1992. Symposia on the ecological and evolutionary aspects of oviposition behavior, and the survey and conservation of regional Lepidoptera have been planned. For information contact Dr. Fred Stehr, Dept. of Entomology, Michigan State University, East Lansing, MI 48824.

The Michigan Entomological Society will have their 38th annual meeting on Thursday, June 25, 1992. It will be held in the Natural Science Building, at Michigan State University, East Lansing, Michigan. For more information contact Dr. Roland L. Fischer, Dept. of Entomology, Michigan State University, East Lansing, Michigan 48824.

FOR SALE: Butterflies of Southeastern Arizona by Richard A. Bailowitz and James P. Brock. 364 pgs. 4 color plates & 624 life-size B/W prints. Contains new information on flight periods and foodplants. \$32.95 postpaid. Order from Sonoran Arthropod Studies, Inc., P.O. Box 5624, Tucson, AZ 85703. Mastercard and Visa orders welcome (602) 883-3945.

Olle Pellmyr, of the University of Cincinnati, addressed the Ohio Lepidopterists' meeting in Columbus, OH, January 11. That meeting was very well attended, with 51 registrants. Charles Covell had the honor of distributing door

prizes, which were in such abundance that nobody went home without something.

The Association for Tropical Lepidoptera, after one year of existence has 722 members. Their color magazine "Tropical Lepidoptera" alone is well worth the \$25 annual dues. Address: P.O. Box 147100, Gainesville, FL 32614-7100 USA.

We still have a few orange Ky. Lepidopterist T-shirts available in sizes Large and Medium only. They cost \$8.00, including shipping. Order from Charles Covell.

If you are interested in the informal club for people interested in butterflies and moths on stamps, contact Charles Covell. They expect to have a newsletter out in February, in case you have already joined. Dues are \$10/year. Name: Philatelic Lepidopterists of America.

FIELD TRIP to collect spring butterflies in Bullitt Co., KY. Sat. April 11. Possibility of night collecting, too. Contact Charles Covell for particulars at the address on the cover or call (502) 588-6771 (work) or 456-6122 (home).

NOTICES

BOOK FOR SALE: Rainforests: A Guide to Research and Tourist Facilities at Selected Tropical Forest Sites in Central and South America by James L. Castner. 416 pgs, 35 black and white photos, 32 line drawings, and 9 maps. Discusses sites in seven accessible countries. Data are provided on location, logistics, seasonality, forest types, trail systems, and costs. Additional information allows readers to contact lodge owners and field station directors or their representatives directly. \$21.95 plus \$1.50 shipping. Order from Feline Press, P.O. Box 7219-KL, Gainesville, FL 32605.

WANTED: Covers (used envelopes) with butterfly and/or moth stamps on them, from any country. I can buy or swap specimens for them. C.V. Covell Jr.

Wish to EXCHANGE for specimens of Calephelis muticum, particularly females. Can offer numerous species in return. Ronald R. Gattelle, 126 Wells Rd., Goose Creek, SC 29445.

I would like to obtain a copy of TREE & SHRUB INSECTS OF THE PRAIRIE PROVINCES by W.G.H. Ives and H.R. Wong. 1988. INFORMATION REPORT NOR-X-292. It was published by the Northern Forestry Centre, Canadian Forestry Service. It is no longer in stock. If anyone knows of a copy please contact Barry S. Nichols, 7004 Ethan Allen Way, Louisville, KY 40272.

Fine bait traps for sale. Normal, cone-type traps and a "tropical" type with a wide lip instead of a cone. They are 3 ft. high, 15 in. in diameter, and have a 22 in. access zipper and a 16 sq. in. plywood base. Those with cones have a cone opening of 4 inches. Cost is \$35.00 (plus \$3.00 shipping). Contact Chris Ward at 1474 Melbourne Dr. SE, Girard, OH 44420, or call (216) 539-5374 for more information.

RESEARCH REQUEST: Anyone who has recorded the Regal Fritillary, Speyeria idalia, in Kentucky since 1970, please send locality and date information to Charles Covell.

I wish to buy or trade for specimens of the following: Speyeria diana, S. idalia, Eurytides marcellus forms lecontei and telamonides, Euchloe olympia, any Amblyscirtes spp., Celastrina ebenina, Celastrina neglecta-major, Calephelis muticum, Polygonia faunus smythi, P. progne (both broods), Pieris virginiensis, Sphinx eremitus, S. eremetoides, S. frankii, S. lucitiosa, S. vashti, S. drupiferarum, Callosamia securifera (cocoons & both broods), C. anguilifera (cocoons & both broods), any Anisota spp., Lethe creola, L. portlandia. I would also like any Coleoptera. Material should be in A1 condition. If interested please reply to Ira Nadborne, 1793 Riverside Dr. 2 I, New York, NY 10034, or call collect (212) 942-5721 between 11am and 3pm E.S.T. and

identify yourself as a Kentucky lepidopterist.

PUBLICATION FOR SALE: Signed copies of the new "Discover Butterflies" are available from the author, Gary A Dunn. It is published by Publications International. Explore the fascinating world of butterflies -extraordinary colors, migration, survival, caterpillars and the miracle of metamorphosis. This 44 page hardcover book features hundreds of color photographs and drawings, plus an informative, easy-to-read text. Recommended for ages 8 and up. Autographed copies are available for \$10.95 (plus \$1.50 S & H) from Gary A. Dunn, 1915 Peggy Place, Lansing, MI 48910-2553.

Back issues of the Kentucky Lepidopterist may be ordered by Volume # (or year) for \$5.00 per volume or \$1.25 per issue.

NEW MEMBERS

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Richmond, VA 23294

REINSTATED MEMBER

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NEW ADDRESSES

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PRESORTED
FIRST CLASS

FROM: Barry S. Nichols
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pd92

