KENTUCKY LEPIDOPTERIST

Newsletter of the Society of Kentucky Lepidopterists

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EDITORS' NOTES

I start off by eating crow... or the lepidopterological equivalent thereof. I misspelled Dr. Varley E. Wiedeman's name. To make matters worse, it isn't the first time! I misspelled his name on the first college paper I ever wrote! It stuck with me for years and then I let my guard down. Of course, it wasn't the only mistake I made. You may have noticed that the numerical designations for some of the days had "the" attached to them instead of "th". This substitution was made by my spell checker that I set on auto replace. Never unleash the power of the machine without proper supervision...

I recorded the following leps at the Grateful Dead shows at Deer Creek, Noblesville, INDIANA on July 19-21, 1994:

Pieris rapae (L.) (4197): Cabbage Butterfly Clouded Sulphur Colias philodice Godt. (4209): Colias eurytheme Bdv. (4210): Alfalfa Butterfly Papilio cresphontes Cram. (4170): Giant Swallowtail Catocala sp. (seen through binoculars--they were on

Eacles imperialis (Drury) (7704): Imperial Silk Moth. This one flew up during the show and landed on Bob Weir's amplifier. For you list makers, that brings my list to 6 at Dead shows. Now, I wonder if I can write the trip off? [Only kidding!!]

This issue does not have the write up for the July 4th Butterfly Count at Horner Wildlife Sanctuary. There were a number of members who came out but conspicuous in his absence was Squid. The next issue will contain accounts of the count and associated fun stuff. Also, the Butterfly Counts get published in the North American Butterfly Association's publications. Which prompts me to repeat the notice in the last issue.

The NORTH AMERICAN BUTTERFLY ASSOCIATION (NABA) has a New Members Program designed to benefit other lep organizations. If members of the SKL would like to join NABA, rather than

communicate directly with NABA, the SKL member sends the dues to an SKL officer (in our case, Charles Covell) Our treasurer then forwards all monies to NABA. NABA in return sends a check back to SKL for ONE-HALF THE TOTAL AMOUNT. This is a great opportunity to join NABA and help out the Society of Kentucky Lepidopterists at the same time. NOTE: According to NABA President Jeffrey Glassberg, the new dues MUST be submitted by our officer NOT by individuals. NABA dues are as follows:

NABA is a 501(c)(3) organization and donations are tax deductible. For further details please contact Covell (address and phone later in this issue).

We have now exhausted the article file. SKL needs YOU. Please send your articles, collecting accounts, pictures, etc., now.

LOCALITY REPORT: VICINITY OF JACUMBA, SAN DIEGO COUNTY, **CALIFORNIA** by Harry Zirlin

This past April 2 and 3, Ira Nadborne and I visited the area around Jacumba, Ca. This locality appears on many of the data labels in Emmel and Emmel's Butterflies of Southern California. We visited the area previously in March of 1989 with the late Chuck Bergson.

Jacumba is a small town (pop. 400) near the San Diego/Imperial County border and just north of the Mexican border. There is a clearly marked exit on Interstate Route 8 and Jacumba itself is on Old Highway 80. The best butterflying spots are west of

the town itself. Try the areas 1/4 mile west (on your right hand side going west), 3 miles west (same), five miles west (both sides) and six miles west (left hand side). Any of the other areas could yield good things as well.

The habitat is a strange jumble of boulders, yuccas, agaves, *Ceanothus* bushes and buckwheat plants with some junipers mixed in. One of the most common butterflies here is *Apodemia mormo virgulti* (Behr)(4402b)which darts around the buckwheat plants. Also here in good numbers are *Glaucopsyche lygdamus australis* Grinnell (4372), *Callophrys dumetorum* (Bdv.)(4301) and a *Euphydryas chalcedona* subspecies (referred to as *quino* (Behr)(4517b) in Emmel and Emmel but the nomenclature has become confused).

There are also a number of interesting pierids flitting about including Anthocharis sara Luc. (4206), Pontia sisymbrii (Bdv.) (4192), Euchloe hyantis (Edw.) (4203), Falcapica lanceolata (Luc.)(4208) and Colias alexandra harfordi Hy. Edw. (4211b) Besides G. lygdamus australis Grinnell (4372), there are also lcaricia acmon(Westwood & Hewitson)(4380), Philotes sonorensis (C.&R. Felder)(4365), Everes amyntula (Bdv.)(4362), and G. piasus piasus (Bdv.)(4371), which, according to Emmel and Emmel, is rare in this county. Other lycaenids include Mitoura loki (Skin.)(4317), and I. augustus iroides (Bdv.)(4322c).

Several duskywings are about in the spring as well. We identified *Erynnis afranius* Lint.)(3960), *E. propertius* (Scudder & Burgess)(3949), *E. funeralis* (Scudder & Burgess)(3957) and *E. brizo lacustra* (Wgt.)(3946c) on this trip. Sailing over the landscape are *Papilio eurymedon* Luc.(4179) and *P. rudkini* Comst. (4161).

During the day there are a number of interesting day-flying moths bombing about and good beetles too. I'd like to get back and see what is around at night. I suspect that Spring is the best time to visit the area but if anyone tries another time and finds interesting things, let us know.

MONTEREY MONARCHS IN GEORGIA

by James M. Taylor

On October 11, 1993, Paul Cherubini called for cooperation in a Monarch migration experiment. Paul is a Lepidopterists' Society member in Placerville,

California, who studies migration and the mechanisms of navigation employed by the Monarch butterfly.

Paul was in the process of netting as many California Monarchs in one day as possible, and he proposed sending them to me by United Parcel Next Day Air. He would collect a second batch the next day and send them along. At about 300 in each mailing, I would receive a total of 600 or so Monarchs.

On the morning of October 12 just before 10:00 a.m. United Parcel delivered a cardboard box sealed with duct tape. Inside were two standing rows of letter size envelopes through which three diamond-shaped holes had been punched for ventilation. Each envelope had 3/8" to 1/2" of space in thickness, and each contained three or four butterflies, wings folded upward in the normal position. A paper clip on the top of each envelope kept the prisoners from escaping. Also in the package were several very damp paper towels to prevent dehydration.

I drafted my wife to help with the release, and we took the package out to the pool deck for opening. Usually, no more was required of us than the spreading of the top of the envelope; the butterflies came out on their own.

It was sunny with temperature in the high 60s at the time of release, and most of them managed an initial flight to nearby deck chairs, wax myrtle bushes, or the grass. One male's short first flight ended in the pool, and Pauline went in after him. Only his dignity was hurt.

The Monarchs devoted the first half-hour or so out of the envelopes to basking, taking water from the grass and bushes, and short, limbering-up flights. They clustered together from the moment of release. Within an hour clumps of them were high in the trees, and except for a few stragglers, they were gone in another half-hour. Astonishingly, all of them arrived alive and left our yard under their own power.

Each butterfly was tagged with a small neon-red sticker on the underside of each hindwing. The tag contained a serial number, a "call collect" invitation with a telephone number, and a Post Office box number where Paul can be notified of its capture.

The second day, October 13, was a carbon copy of the first. In total, a little over 600 tagged California Monarchs were released here on the Eastern Seaboard. Paul personally searches the overwintering (continued on back page)



Design from Tall Bellflower.

OROTHY, Brett and I were sharing a few moments of peace on the porch of their old Kentucky farmhouse. The alpenglow was at its finest, glimpsed through the graceful wind-rustled leaves

of a large Silver Maple in the yard, and from all around came a cricket and katydid chorus of unsurpassed quality. Bats swept by, hawking for moths in the open space beyond the picket fence toward the brook. What a welcome, placid change, after a long day of driving for me, a long day at the office for them.

I had travelled from Bloomington, Indiana, to this rural area outlying Lawrenceburg, Kentucky, to visit these good friends whom I see far too rarely. Dorothy had studied Magnolia taxonomy at the Cornell University herbarium, where I work, and Brett had earned his Ph.D. in plant breeding at Cornell, both finishing in early 1989. I had visited them in North Carolina months before, but this was my first time at their new Kentucky home, and my first visit to the state, in the summer of 1991. Knowing of Kentucky's rich flora and Lepidoptera fauna, I had high hopes.

My journey had taken me from Ithaca, New York, across Pennsylvania and Ohio to northeastern Indiana, where I had spent several days. As I neared Bloomington, the seemingly endless miles of northern Indiana corn fields had given way to gently rolling hills that demarcated the southern limit of glaciation. I had passed through the Bedford limestone region, and made a brief stop at the Marengo Cave National Landmark, before crossing the Ohio River and zipping by Louisville on ribbons of asphalt. How very different this city must have

looked in Audubon's day, I mused, while regretting a lack of time to visit Charlie Covell at the University of Louisville. When I turned into Dorothy and Brett's driveway at 1871 Glensboro Road in Anderson County, Kentucky, an hour and a half later, I entered a place of timeless charm and fascinating natural history.

We tarried over dinner, accented by Dorothy's incomparable zucchini relish, and then Brett gave me a twilight tour of their 100-acre farm in this land of rolling hills. We passed his row of beehives, haunting the shadows like white ghosts, and then drove up a steep incline to a meadow, shaded here and there by large hickories, oaks, and Black Walnuts. An empty tobacco barn loomed eerily at the summit, recalling a past use of the land. (I had noted long fields of chartreuse, pyramidal tobacco plants, crowned by pink flowers, a few miles distant.) Just past the barn, Brett guided his pickup truck into the woods, and we jounced down a dirt road, occasionally stopping to inspect interesting plants. I was intrigued by the glossy deep green leaves of Carolina Buckthorn, one of the most striking shrubs I have seen. We briefly parked to stroll through an out-of-the-way field, then resumed our tour, for it was quickly growing darker. By the time we'd completed the circuit, I had a good idea of the extent and highlights of their property, and could hardly wait to explore it in daylight. Then we rejoined Dorothy on the porch.

My friends needed to leave for their jobs in Frankfort at 7:30, so we breakfasted early the next morning. Since a heavy dew covered the lawn, I leisurely organized for the day, waiting until 10:00

to begin my peregrinations.

I had actually had a hint of this the previous evening, when for a few minutes before dinner I had strolled down the drive to the sleepy brook, hardly flowing over its flat limestone bed. A Green Heron silently retreated--the usual way I see this enigmatic wader, which well deserves its alternate common name "Fly-up-the-Creek." A veritable frenzy of insect life was evident, notable among these a hovering Snowberry Clearwing (Hemaris diffinis). which I watched dip the water twice, evidently drinking, before settling for the night on a tall streamside herb with wings folded flat, much like a large fly. I also found a partly grown Spiny Oak-Slug, the strange urticating larva of Euclea delphinii, on an American Elm leaf. A moss- and lichendecorated limestone fence of diagonally slanted rocks edged the drive, contrasting markedly with the horizontally-planed grey sandstone walls of my boyhood in the Catskill Mountains of New York.

I had promised myself a closer examination of this wall and stream, so when I left the house the next morning, I headed in that direction. But I was immediately decoyed by a pair of huge Giant Swallowtails (Heraclides cresphontes) that played tag through the yard under my nose, landing briefly on a Quince bush in close view. I scurried to get my net from the car and was able to ensnare the female, a fluttering yellow-orange blur as she nectared at a potted, purple-flowered Hibiscus. Her wings were a bit worn and a hindwing tail was missing, so she went on her way after my scrutiny was over. I had reared adults of this splendid butterfly from eggs and chrysalids found in an Arizona orange orchard many years before, but this was my first close view of a wild one.

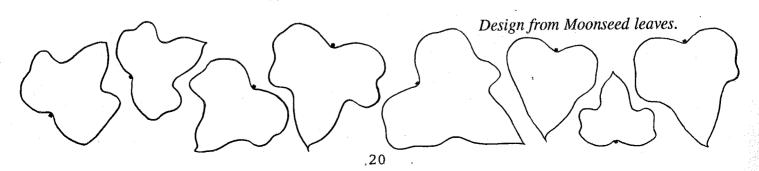
Ghostly shells of Periodical Cicada (Magicicada septendecim) nymphs clung to buildings and tree trunks throughout the yard. When I had pointed to one the previous evening, Dorothy and Brett had described the incessant screeching of the adults in May. In daylight, the nymph shells seemed to lurk everywhere. The rare phenomenon of their emergence must have been exciting to witness.

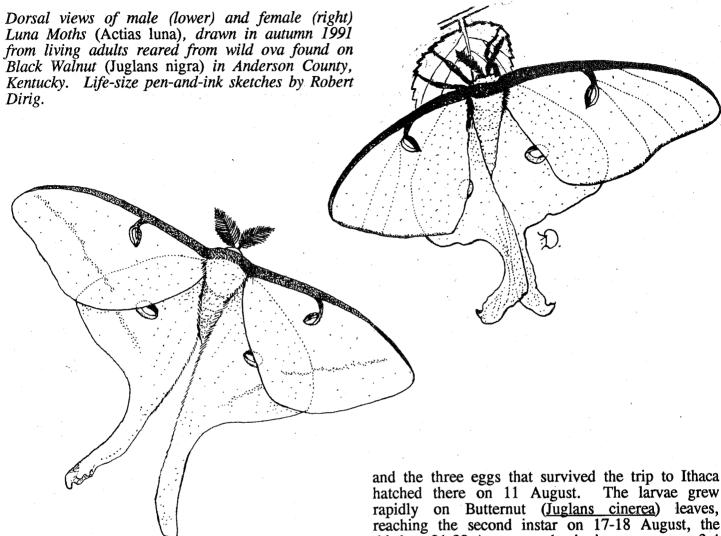
Strolling to the brook, I found a colony of Silvery Crescent (Charidryas nycteis) caterpillars on a tall composite in a marshy spot along the bank. Without flowers, it was not possible for me to identify this plant with certainty, except as a wild sunflower (Helianthus sp.). Odonata alternately hovered and darted over the stream on crisp, flashing wings. A vine superficially resembling wild grape grew on the far side of the waterway, but a closer examination showed it to be a thicket of Moonseed. I had not often had an opportunity to admire its wonderfully artistic leaves, and gathered a few to press. Another exciting floristic discovery was Tall Bellflower, its five-pointed azure blooms tolling a lovely silent anthem in the shade of large ashes, elms, and Boxelder Maples that edged the stream. A Tawny Emperor (Asterocampa clyton) darted up from the road as I returned to the yard. It came as no surprise that the overhanging tree was a

large Hackberry, its larval foodplant.

The steeply sloping meadow beckoned, so I climbed the hill, keeping a sharp watch for butterflies and plants. A gorgeous tall Ironweed (Vernonia sp.) grew in large clumps behind the house, its royal purple flowers in full display. Bright orange Alfalfa Butterflies (Colias eurytheme), lacy Pearl Crescents (Phyciodes tharos), and bronzy Monarchs (Danaus plexippus) fluttered through the field, while Blue-eyed Graylings (Cercyonis pegala pegala) danced up from the shrubbery around the edges, their yellow-blotched dark wings catching my eye. Fragrant Sumac grew in pretty clumps, like huge Poison Ivy bushes; and a natural hedge of Prickly Ash fringed the field, revealing the secret of the Giant Swallowtail's success in this region. Close examination of its leaves disclosed no eggs or "Orange Dog" caterpillars, however. I did see another of these superb butterflies nectaring on a lavender-flowered Teasel (Dipsacus sp.) plant in an adjacent field a few minutes later, in company with some of Brett's honey bees.

Red Cedars and real Poison Ivy vines flourished around the old tobacco barn at the top of the hill; also Field Thistle, with finely dissected leaf





margins and whitish ventral leaf surfaces. Gorgeous orange flower clusters of Butterfly Milkweed had flamed here and there among the dry meadow

grasses during my climb.

I had high hopes of finding recently hatched larvae of the Royal Walnut Moth (Citheronia regalis) on the abundant Black Walnut trees and saplings that grew all over the farm. I spent considerable time examining every Walnut leaf in reach for first or second instar Hickory Horned Devils resting in their characteristic J-shaped pose. I must have checked hundreds of leaves, but found no regalis. Something almost as fine did come to light-eight grey eggs of the Luna Moth (Actias luna) on the underside of a Walnut leaflet, on a branch about 10 feet up along a lane through light woods! These were collected on 1 August 1991,

and the three eggs that survived the trip to Ithaca hatched there on 11 August. The larvae grew rapidly on Butternut (Juglans cinerea) leaves, reaching the second instar on 17-18 August, the third on 21-22 August, and spinning cocoons on 3-4 September (dates of later instars not recorded). A male moth emerged on 22 September, a female on the 24th, and another male on the 25th, all of the "summer brood" morph. It had been several years since I had seen a living Luna. Watching and drawing them gave me much pleasure at a season when one could not expect to find a wild adult Luna in New York.

I paused at the entrance to the wood road that Brett and I had traversed by truck the previous evening, having glimpsed a Spicebush Swallowtail (Pterourus troilus) flying swiftly along the edge of the woodlot. Unless lured to flowers in more open spots, I usually have seen this large dark butterfly in rapid flight along the fringes of a forest. It is a rarely encountered and local species in upstate New York, probably reflecting the relative scarcity of its larval foodplants, Sassafras (Sassafras albidum) and Spicebush (Lindera benzoin), which always grow in specific habitats.

It was slightly cooler in the woods. Native Redbuds and Honey Locusts grew there--two trees that can be successfully cultivated in New York, but do not naturally occur that far north. A few Pawpaws splayed their luxuriant emerald leaves at one point, and Red and Black Maples were rooted throughout. I flushed a Red-spotted Purple (Basilarchia arthemis astyanax) in a sunny glade, but rather quickly made my way back to the meadow.

Emerging into the warmer sunlight, I was welcomed by more Blue-eyed Graylings, bouncing like sentinels out of shrubs; then treated to views of basking Southern Cloudy Wings (Thorybes bathyllus), darting Buckeyes (Junonia coenia), and the first living Cloudless Sulphurs (Phoebis sennae eubele) of my experience. By this time it was past noon, so I strolled back to the house for lunch.

Although my hike had been brief, it provided a rich harvest of experiences for reflection. Over the course of the afternoon and all through the next day while I drove across Ohio on the way home,

several impressions were growing.

The first involved limestone. This bedrock is rare in New York, with calciphilic plants and their associates arranged very locally insect Catskill background had predictably. My thoroughly (if unwittingly) acquainted me with the flora and Lepidoptera of an acid-soil region, but as a extralimital naturalist with no developing experience, I was puzzled by the absence of certain plants and butterflies that were supposed to be generally common in the Northeast. When I moved 100 miles west to Ithaca in the Finger Lakes Region a few years later, I finally found many of these hitherto unfamiliar plants in the limy gorges and woodlands surrounding the city--and with them some of their butterfly herbivores that I had likewise never before seen. During the ensuing years, I have kept the question "acid or limy soil?" constantly in mind when in the field, until I think I have a good grasp of the soil pH requirements, or tendencies, of many plants, based on circumstantial evidence. An added complication in New York comes in soils scoured, dumped, and mixed by glaciation and runoff, making such interpretations difficult at times.

On Dorothy and Brett's farm, the bedrock, upon which I trod in the stream bed, is limestone, and all soils resting on it are naturally weathered from this source, and have never been disturbed by Arctic ice. Thus I was much interested in seeing what plants were naturally rooted in such a place. The observations I made of lime-loving (or lime-tolerant) plants on their farm confirmed many

hunches involving pH requirements of plants I have often encountered in apparently limy situations in the Northeast. It also underscored the principle that many butterflies and moths, as obligate feeders on a single plant species, must accomodate themselves to the habitat, season, and annual cycle of their host. Understanding the edaphic and topographic features that foster the proper conditions for the foodplant helps us understand how the plant-insect unit functions, and helps us find the lepidopteran we seek. A number of butterflies are obligately limestone-associated simply because their foodplants are calciphiles.

APPARENT LIME-LOVING PLANTS AND LEPIDOPTERA ASSOCIATES OBSERVED IN ANDERSON COUNTY, KENTUCKY

(1871 Glensboro Road = Kentucky State Highway 44, 3.3 miles W of intersection with Highway 127 bypass) ON 31 JULY-2 AUGUST 1991.

[Plant species marked with an asterisk (*) appear to be at least weakly lime-associated, those not marked are more strongly associated.]

*Silver Maple (Acer saccharinum)

*Black Walnut (Juglans nigra):

Luna Moth (Actias luna)
Carolina Buckthorn (Rhamnus caroliniana)

*American Elm (<u>Ulmus americana</u>):

Spiny Oak-Slug (Euclea delphinii)

Moonseed (Menispermum canadense)
Tall Bellflower (Campanula americana)

Hackberry (Celtis occidentalis):

Tawny Emperor (<u>Asterocampa clyton</u>)
Prickly Ash (Zanthoxylum ameicanum):

Giant Swallowtail (Heraclides cresphontes)

Fragrant Sumac (Rhus aromatica)
Red Cedar (Juniperus americana)

*Poison Ivy (<u>Toxicodendron radicans</u>)

Field Thistle (Cirsium discolor)

Honey Locust (Gleditsia triacanthos)

Redbud (<u>Cercis canadensis</u>) Pawpaw (<u>Asimina triloba</u>)

Butterfly Milkweed (Asclepias tuberosa)

*Boxelder Maple (Acer negundo)

*Red Maple (<u>Acer rubrum</u>)
Black Maple (Acer nigrum)

Another impression was of frenzied insect life in Kentucky, comparable only to that I have seen in very hot pine barrens habitats in the Northeast. Do warmer climates produce more abundant insects, or higher degrees of activity in these cold-blooded animals?

Just as moving to Ithaca had yielded perspective on the Catskills, travelling south revealed insights on northeastern biota. example, the ranges of yellow-blotched Blue-eyed Graylings and uniformly brown Northern Graylings (C. pegala nephele) blend across southern New York, so I was used to a continuum of expression in the "blotch" character. I had seen the yellowblotched form only in the upper Hudson River Valley sand plains and on Long Island, where it approaches its northern limit, but never far from the coastal plain before. Similarly, ranges of the Banded Purple (Basilarchia arthemis arthemis) and Red-spotted Purple collide in New York, producing phenotypically mixed populations. Seeing true astyanax in Kentucky was a treat.

I feel fortunate to live in a place where northern elements reach their southern limits and southern organisms attain their northernmost extent. One finds Giant Swallowtails, Buckeyes, Cloudless Sulphurs, and Royal Walnut Moths only as strays or rarely breeding peripherally isolated populations in New York; but one can also see Jutta Arctics (Oeneis jutta), and Mustard Whites (Pieris napioleracea) within a few miles. The juxtapositions of disparate elements at this latitude are most

interesting.

After work on the day of my ramble, Dorothy and Brett took me to dinner in Lexington, and then to see the cemetery where Daniel Boone is buried. Standing on the bluff overlooking the river. surrounded by ancient American Hollies (Ilex opaca), American Beeches (Fagus grandifolia), and White Pines (Pinus strobus), I wondered how this region had looked when these trees were saplings; when Daniel Boone was alive. Walking around the Serpent Mound State Memorial near Peebles, Ohio, the next day, I pondered again about the people who had built this impressive earth effigy--a different people, with different cultural parameters and values; different perceptions of the land and their connection to it. If they so valued snakes, I wondered how they regarded insects like Luna Moths? Did they worship them as well? My own encounters with these emerald ghosts of summer nights have had a mystical quality throughout my life.

A final souvenir became apparent as itchy red spots after my return to Ithaca, and lasted nearly as long as it took the Luna caterpillars to complete their growth. Dorothy and Brett had cautioned me about chiggers.... Despite high boots and careful dress, I had been unable to avoid them while looking on all those Walnut leaves--but I couldn't blame it on the Lunas. Even so, I am glad I live beyond the northern limit of this southern species!

REFERENCES USED FOR SCIENTIFIC NAMES OF PLANTS AND LEPIDOPTERA:

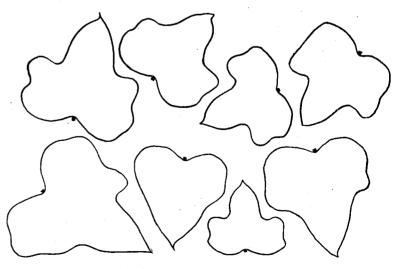
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VOUCHERS: Botanical specimens have been deposited in the Bailey Hortorium Herbarium, Cornell University, and insect vouchers in the Cornell University Insect Collection.



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(continued from page 19):

colonies, and the bright tags should generate some recapture information from the general public. He has promised to keep me posted, and I suspect a paper should be forthcoming on his findings.

NEWS & NOTES

The SOCIETY OF KENTUCKY LEPIDOPTERISTS will have our 20th Anniversary Annual Meeting Friday and Saturday, NOVEMBER 11-12, 1994. Our special guest speaker will be Dr. Paul A. Opler of the National Biological Survey and formerly of the Office of Endangered Species. He is currently President of the Lepidopterists' Society, and author of the revised Peterson Field Guide to Eastern Butterflies and also Butterflies East of the Great Plains. He will give a seminar in the Biology Department at the University of Louisville on Friday entitled "History and Status of Endangered Insect Conservation in North America: Some Case Histories". His address to the SKL Saturday is entitled "Western Lepidoptera Studies: Stresses, Photography, and Mercury Vapor Lights". Mark your calendars now and plan to be present at this historic meeting, whether you are a beginner or an old hand at any aspect of Lepidopterology. Contact Charles V. Covell for further details. (CVC)

FALL FIELD TRIP: We plan to go to Fulton County, Kentucky again this September 9-11 (Friday to Sunday) to collect, watch, and photograph butterflies and moths. Last year's trip was very successful, and we hope to have you with us this time. We recorded 56 butterfly species over the weekend, including a new western limit for *Clossiana bellona*(F.), the Meadow Fritillary (MONA 4465); and another Red Admiral x Viceroy collected at Hickman, KY by Bob Gregg. NOTE: A color article on this subject will be in Journal of the Lepidopterists' Society, October 1994. Contact Charles V. Covell for additional information, HOME= (502) 456-6122 or WORK= (502) 852-6771. (CVC)

BACK ISSUES of the *Kentucky Lepidopterist* can be purchased. Pricing is as follows:

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