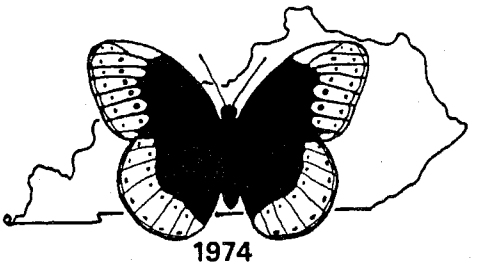
KENTUCKY LEPIDOPTERIST

NEWSLETTER OF

The Society of Kentucky Lepidopterists



VOL. 15, NO. 2 M. L. McInnis, Editor April, 1989

CATERPILLAR MAKES THE COVER OF SCIENCE

by George J. Balogh

An excellent color larval photograph of spring brood Nemoria arizonaria (Geometridae: Geometrinae), an oak catkin mimic, made the cover of a recent issue of Science (A Diet-Induced Developmental Polymorphism in a Caterpillar by Erick Greene, Science 243:643-6,3 February, 1989). The resemblance of the larva to its oak catkin food is impressive in itself but this species of Geometrid lives a different lifestyle during the summer with a corresponding dramatic morphologic change in the larva.

Both spring and summer brood eggs of Nemoria arizonaria hatch into larvae that look initially the same. In nature the spring brood larvae develop into catkin mimics that are yellow in color with reddish stamen-like markings. Their rugose integument is ornamented with large dorsolateral processes. In contrast, the summer brood larvae develop into mimics of first year oak twigs and feed on leaves after catkins have fallen from the trees. These larvae are greenish-grey. Their integument is less rugose and the dorsolateral processes are smaller. Side by side color photographs of both the spring and summer brood larvae are included in the article.

If the change in appearance isn't remarkable enough, consider that the two larval forms differ in behavior and head and jaw size. Spring brood larvae have small jaws, feed on soft catkins, and choose catkins to rest on. Summer brood larvae have larger mouth parts and larger heads to accommodate the more massive jaw musculature needed to feed on tough oak leaves and these summer larvae show preference for twigs as resting sites.

Laboratory rearing experiments outlined in Green's article indicate the spring/summer polymorphism is determined by the tannin content of larval food. Eggs reared on tannin poor catkins develop into the spring (catkins) morph, those reared on tannin rich oak leaves develop into the summer (twig) morph. This is further verified using artificial diets of catkins mixed with leaves and catkins enriched with tannins. These diets induce young larvae to develop primarily into the summer (twig) morph. Temperature and photoperiod do not influence larval morphology in experimental rearings.

This work certainly gives us much to think about. As Greene points out, diet induced polymorphism could be more widespread than previously appreciated. Just imagine what conclusion you would reach if shown samples of spring and summer brood larvae of Nemoria arizonaria without knowledge of the full life cycle. Different species of course! If larval differences were not enough to convince you that two species are involved, nature has laid another trap for the unwary taxonomist. until as recently as the MONA checklist

spring and summer brood adults of this Nemoria were considered distinct species. The moths differ considerably in appearance and the male genitalia show differences in proportions of certain structures. It was Noel McFarland's rearing of summer brood moths (now form aemularia) from a spring brood female (form arizonaria) that convinced Douglas Ferguson that the two are seasonal morphs of one species. (See recent MONA fascicle on the Green Geometridae).

Certainly the effects of foodplant species, plant biochemistry, geography, and climate need to be taken into account when larval comparisons are made. In some situations, only rearings under controlled conditions will provide answers to complex life history problems.

I would like to invite anyone who has knowledge of similar environmentally induced larval polymorphisms to summarize them for this newsletter.

[Copies of the subject article are available on request - Editor]

AN ABERRANT MALE Speyeria diana (Nymphalidae) FROM KENTUCKY

by Leroy C. Koehn

The Society of Kentucky Lepidopterists held a field meeting in the Big Black Mountain area of Harlan County, Kentucky on the weekend of July 13, 14 and 15, 1984. Collecting forays were made to the top of Black Mountain, along SR 160 from Appalachia, Virginia to Cumberland, Kentucky, and at Kingdom Come State Park.

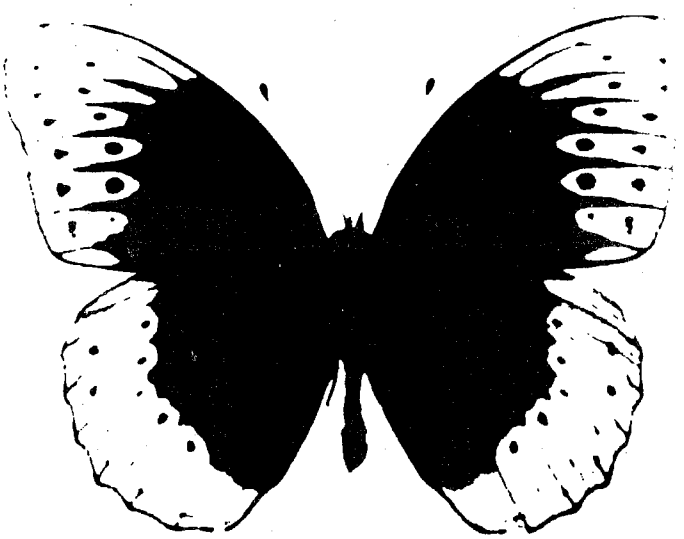
The primary objective of the trip was Erora laeta; however, only two individuals of this species were seen. General collecting was excellent, however, and many species were common, including Speyeria diana. Wherever a stand of flowering common or purple milkweeds (Asclepias syriaca and A. purpurascens) were located, several male and female S. diana could be found visiting the blooms. While collecting at a stand of milkweed in Kingdom Come State Park, I observed an aberrant male of S. diana visiting the flowers. With a quick sweep of the net, I collected the individual (figured below).

In place of the bright orange color was a pale whitish tan, and the dark brown was a very washed out milky brown. The butterfly appeared normal in every other way. It appeared to be several days old and was in fresh condition.

There have been many reports of aberrant individuals of Speyeria, (Clark, 1932, McCabe, 1977, Marrone, 1981) The author has collected several aberrant individuals of Speyeria cybele and S. aphrodite in the mountains of Virginia. This is the first known report of an aberrantly colored male Speyeria diana.

Showalter & Drees (1980) reported on a bilateral gynandromorphic S. diana. S. diana can be a difficult species to locate, an aberrant individual even more so.

I would like to thank Dr. Charles V. Covell, Jr. for photographing the specimen and reviewing the article.



Literature Cited

Clark, A. H., 1932. The Butterflies of the District of Columbia. Bull USNM. 157.

McCabe, T. L., 1977. Speyeria idalia. J. Res. Lepid. 16(1).

Marrone, G., 1981. News Lepid Soc. Jan/Feb 1981, No. 1.

Showalter, A. H., & Drees, B. M., Bilateral Bynandromorph Speyeria diana. Journal of the Lepidopterists' Society, Vol 34 No. 4.

SUGAR BAITING

by Don Ennis

Although I first took an interest in moths during 1981, it was not until the spring of 1987 that I began using light and bait traps to lure new species. Some days those lures really work, with scores of a single species showing up at once! As the cold temperatures set in, I decided to put the traps up for a couple months. My journal was devoid of January moth records for southwest Indiana.

During January and February, we gather maple syrup here, so I started tapping maple trees in late December. It turned out that January 1989 was the warmest since 1950, temperatures in the 30s at night, 60s during the days for a couple of weeks. One day I went to collect sap and was surprised to find five moths in the sap bag, with eight others yet to visit! To summarize, I found eighteen moths (4 species) in one day that otherwise would not have been noticed.

The sugar content of these trees is in the five to six percent (5-6%) range. While I had done some reading about nectar extraction from flowers, it never occurred to me that maple trees acted as a sugar source during winter for moths and other insects. The bags that I use to collect sap are designed to prevent falling matter from mixing with the collected sap. Insects that are attracted by the sugar in the sap must crawl or fly horizontally through a metal corridor to reach the sap.

NOTICES

I. Field Trip

We plan a July 4th butterfly count at Horner Sanctuary, Brownsboro, KY, on Saturday, June 17, beginning at 9:30 AM and running through the day. Bring a picnic and friends. Those who wish may collect moths that night. Write or phone Covell for maps and details.

[Our planned trip to Red River Gorge was cancelled to avoid a conflict with the butterfly count. Details on a late summer/fall field trip will be in Volume 3 of the newsletter. Editor]

II. Endangered Species Act:

Paul Opler graciously provided a Fish and Wildlife Service "Notice of Review" that concerns 50 CFR 17, Endangered and Threatened Wildlife and Plants; Animal Notice of Review. I have included that portion of the notice which addresses "Insects, Order Lepidoptera". The purpose of this notice is to solicit comments as to whether the listed taxa should receive protection pursuant to the Endangered Species Act of 1973. A "Category" Key follows.

Category	Status
1	Service has substantial information on hand to support a proposal to list as endangered or threatened.
2	Conclusive data on biological vulnerability and threat are not currently available.
3A	Service has persuasive evidence of extinction.

BUTTERFLIES & MOTHS (Insects, Order Lepidoptera)

1A	Chestnut ermine moth	*Argyresthia castaneela*	Argyresthiidae	NH*,VT*.
2	Green heterocrossan carposinid moth	*Heterocrossa (=Carposina) viridis*	Carposinidae	HI.
3B	Lora Aborn's moth	*Lorita abornana (synonym of L. scarificata)*	Cochylidae	CA.
1A	Chestnut casebearer moth	*Coleophora leucochrysella*	Coleophoridae	PA*.
2	Lost ethmiid moth	*Ethmia monachella*	Ethmiidae	CO.
2	Ioxanthum looper moth	*Fletcherana ioxantha*	Geometridae	HI.
2	Geometrid moth, no common name	*Lytrosis permagnaria*	Geometridae	GA,KY,MO,TN,MS*.
1A	Kona giant looper moth	*Scotorythra (=Acrodrepanis) megalophylla*	Geometridae	HI*.
1A	Ko'olau giant looper moth	*Scotorythra (=Acrodrepanis) mesiotes*	Geometridae	HI*.
1A	Hawaiian hopseed looper moth	*Scotorythra paratactis*	Geometridae	HI*.
1A	'Ola' a peppered looper moth	*Tritocleis microphylla*	Geometridae	HI*.
2*	Hecker petrochroan leaf miner moth	*Petrochroa meckerensis*	Gracilariidae	HI.
2	Dun skipper	*Euphyes vestris harbisoni*	Hesperiidae	CA.
2	Dakota skipper	*Hesperia dacotae*	Hesperiidae	MN,IA,SD,ND,IL*, Canada.
2	MacNeill sooty wing skipper	*Hesperopsis gracielae*	Hesperiidae	AZ,CA,NV,UT.
2	Salt marsh skipper	*Panoquina errans (=panoquinoides e.)*	Hesperiidae	CA, Mexico.
2	Rare skipper	*Problema bulenta*	Hesperiidae	ND,VA,NC,SC,GA.
2	Wandering skipper	*Pseudocopaeodes eunus eunus*	Hesperiidae	CA,NV?,AZ?, Mexico?.
2	Laguna Mountains skipper	*Pyrgus ruralis lagunae*	Hesperiidae	CA.
2	Atala butterfly	*Eumaeus atala florida*	Lycaenidae	FL.
3C	Comstock's blue butterfly	*Euphilotes (=Shijimaeoides) battoides comstocki*	Lycaenidae	CA.
2	Baking Powder Flat blue butterfly	*Euphilotes battoides ssp.*	Lycaenidae	NV.
3C	Langston's blue butterfly	*Euphilotes (=Shijimaeoides) enoptes langstoni*	Lycaenidae	CA.
2	Mattoni's blue butterfly	*Euphilotes (=Shijimaeoides) rita mattoni*	Lycaenidae	NV.
1A	Xerces blue butterfly	*Glaucopsyche xerces*	Lycaenidae	CA*.
2	Miami blue butterfly	*Hemiargus thomasi bethunebakeri*	Lycaenidae	FL.
1A	Fender's blue butterfly	*Icaricia icarioides fenderi*	Lycaenidae	OR.
2	Morro Bay blue butterfly	*Icaricia icarioides moroensis*	Lycaenidae	CA.
2	Pheres blue butterfly	*Icaricia icarioides pheres*	Lycaenidae	CA.
2	Bog elfin butterfly	*Incisalia (=Callophrys =Mitoura) lanoraieensis*	Lycaenidae	ME,NY, Canada, NH*.
3C	Doudoroff's elfin butterfly	*Incisalia (=Callophrys =Mitoura) mossi doudoroffi*	Lycaenidae	CA.
3C	Wind's elfin butterfly	*Incisalia (=Callophrys =Mitoura) mossi windi*	Lycaenidae	CA.
2	San Gabriel Mountains elfin butterfly	*Incisalia (=Callophrys =Mitoura) mossi hidakupa*	Lycaenidae	CA.
2	Karner blue butterfly	*Lycaeides melissa samuelis*	Lycaenidae	IN,MI,NH,NY,OH,VI,IL*,MA*,PA*.
3C	Clouded tailed copper butterfly	*Lycaena arota nubila*	Lycaenidae	CA.
2	Clayton's copper butterfly	*Lycaena dorcas claytoni*	Lycaenidae	ME.
2	Hermes copper butterfly	*Lycaena hermes*	Lycaenidae	CA, Mexico.
2	Sweadner's olive hairstreak butterfly	*Mitoura (=Callophrys) gryneus sweadneri*	Lycaenidae	FL.
3C	Hessel's hairstreak butterfly	*Mitoura (=Callophrys) hesseli*	Lycaenidae	GA,FL,MA,NC,NH,NJ,VA,MD*.
2	Thorne's hairstreak butterfly	*Mitoura thornei*	Lycaenidae	CA.
2	Bohart's blue butterfly	*Philotiella speciosa bohartorum*	Lycaenidae	CA.
2	San Emigdio blue butterfly	*Plebulina (=Plebejus) emigdionis*	Lycaenidae	CA.
2	Mardon blue butterfly	*Plejebus mardon*	Lycaenidae	CA.
2	San Gabriel Mountains blue butterfly	*Plejebus saepiolus aureolus*	Lycaenidae	NV.
2	Spring Mountains blue butterfly	*Plejebus shasta charlestonensis*	Lycaenidae	FL.
2	Bartram's hairstreak butterfly	*Strymon acis bartrami*	Lycaenidae	HI.
3C	Hawaiian hairstreak butterfly	*Vaga blackburni*	Megathymidae	TX.
3C	Kendall's yucca skipper butterfly	*Megathymus coloradensis kendalli*	Megathymidae	TX, Mexico.
2	Maculated manfreda skipper butterfly	*Stallingsia maculosus*	Nepticulidae	MD*.
1A	American chestnut nepticulid moth	*Ectodemia castaneae*	Nepticulidae	MD*.
1A	Phleophagan chestnut nepticulid moth	*Ectodemia phleophaga*	Noctuidae	MA,MD,NJ, Canada, CT*,GA*,NC*,NY*, PA*,OH*,CO*,NH*.
2	Albarufan dagger moth	*Acronicta albarufa*	Noctuidae	NJ.
2	Bucholz' dart moth	*Agrotis bucholzi*	Noctuidae	HI*.
1A	'Poko' noctuid moth	*Agrotis (=Spaelotis) crinigera*	Noctuidae	HI*.
1A	Midway agrotis noctuid moth	*Agrotis (=Peridroma) fasciata*	Noctuidae	HI*.
1A	Kerr's agrotis noctuid moth	*Agrotis kerri*	Noctuidae	HI*.
1A	Laysan agrotis noctuid moth	*Agrotis (=Prodenia) laysanensis*	Noctuidae	HI*.
1A	Procellaris agrotis noctuid moth	*Agrotis procellaris*	Noctuidae	VA*,IL*.
2*	Smyth's apamea moth	*Apamea smythi*	Noctuidae	KY,NC,SC,IL*,IN*,MO*,NJ*,NY*,OH*,PA*, VA*,VT*,WV*.
3C	Marbled underwing moth	*Catocala marmorata*	Noctuidae	NJ,NH*,CT*,MA*,MD?*,NY*,PA*,OH*, MD*,VA*,TN*.
2	Precious underwing moth	*Catocala pretiosa*	Noctuidae	OH,NJ,VA*.
2	Hebard's noctuid moth	*Erythroecia hebardi*	Noctuidae	HI*.
1A	Confused helicoverpan noctuid moth	*Helicoverpa confusa*	Noctuidae	HI*.
1A	Minute helicoverpan noctuid moth	*Helicoverpa minuta*	Noctuidae	HI*.
1A	Laysan dropseed noctuid moth	*Hypena (=Mesamiptis) laysanensis*	Noctuidae	HI*.
1A	Hilo hypenan noctuid moth	*Hypena (=Mesamiptis) newelli*	Noctuidae	HI*.
1A	Lovegrass noctuid moth	*Hypena (=Mesamiptris) plagiota*	Noctuidae	HI*.
1A	Kaholuamano noctuid moth	*Hypena (=Mesamiptris) senicula*	Noctuidae	NJ,NY,CT*,NC?,SC?.
2	Lemmer's noctuid moth	*Lithophane lemmeri*		

Note: Species in categories 1 and 2 are candidates; species in category 3 are not (see text for explanation of categories).

CATEGORY AND COMMON NAME		SCIENTIFIC NAME	FAMILY	HISTORIC RANGE
2*	Noctuid moth, no common name	*Luperina trigona*	Noctuidae	TN*.
2*	Noctuid moth, no common name	*Papaipema avene*	Noctuidae	MI*,NY*, Canada*.
2*	Rattlesnake-master borer moth	*Papaipema eryngii*	Noctuidae	IL*,IN*.
2	Decodon borer moth	*Papaipema sulphurata*	Noctuidae	MA.
2	Ceromatic noctuid moth	*Pyreferra ceromatica*	Noctuidae	AL,FL,SC,IN,AL*,CT*,MA*,MD*,NY*, Canada*.
2	Noctuid moth, no common name	*Schinia indiana*	Noctuidae	MI,MN,WI,AR?*,IL*,IN*,NC?,NE?,TX?.
2	Okefenokee zale moth	*Zale perculta*	Noctuidae	GA,FL*.
2	Florida leafwing butterfly	*Anaea troglodyta floridalis*	Nymphalidae	FL.
1	Uncompahgre fritillary butterfly	*Boloria acrocnema*	Nymphalidae	CO.
3C	Alamosa satyr butterfly	*Cercyonis meadi alamosa*	Nymphalidae	CO.
3A	Sthenele wood nymph butterfly	*Cercyonis sthenele sthenele*	Nymphalidae	CA*.
2	Oso Flaco patch butterfly	*Chlosyne leanira osoflaco*	Nymphalidae	CA.
2	Morand's checkerspot butterfly	*Euphydryas anicia morandi*	Nymphalidae	NV.
2	Mono checkerspot butterfly	*Euphydryas editha monoensis*	Nymphalidae	CA,NV.
2	Wright's checkerspot butterfly	*Euphydryas editha quino (=E. e. wrighti)*	Nymphalidae	CA, Mexico.
3C	Obsolete viceroy butterfly	*Limenitis archippus obsoletus*	Nymphalidae	AZ,CA,NM,NV, Mexico.
2	Mitchell satyr butterfly	*Neonympha (=Euptychia) mitchelli*	Nymphalidae	IN,MI,NC,NJ,OH*,MD*?.
3C	Chryxus arctic butterfly	*Oeneis chryxus valerata*	Nymphalidae	VA.
2	Tawny crescent butterfly	*Phyciodes batesi*	Nymphalidae	NC,VA,NY,MI,WI,ND,SD,MN, Canada, GA*,WV*,PA*,NJ*.
3C	Minute checkerspot butterfly	*Poladryas minuta minuta*	Nymphalidae	TX,NM.
3C	Smoky eyed brown butterfly	*Satyrodes eurydice fumosa*	Nymphalidae	CO,IL,IA,NE.
3C	Unsilvered fritillary butterfly	*Speyeria adiaste adiaste*	Nymphalidae	CA.
3A	Atossa fritillary butterfly	*Speyeria adiaste atossa*	Nymphalidae	CA*.
3C	Clemence's fritillary butterfly	*Speyeria adiaste clemencei*	Nymphalidae	CA.
2	Callippe silverspot butterfly	*Speyeria callippe callippe*	Nymphalidae	CA.
3A	Willamette silverspot butterfly	*Speyeria callippe extincta*	Nymphalidae	OR.
2	Tehachapi Mountain silverspot butterfly	*Speyeria egleis tehachapina*	Nymphalidae	CA.
3B	Hydaspe fritillary butterfly	*Speyeria hydaspe conquista*	Nymphalidae	CO*,NM*.
2	Regal fritillary butterfly	*Speyeria idalia*	Nymphalidae	MA,MD,VA,WV,PA,OH,IN,MI,IL,MO,MN,WI, IA,OK,KS,NE,SD,ND,CO,CT*,DE*,ME*, MT*,NC*,NH*,NJ*,NY*,RI*, Canada.
3C	Apache silverspot butterfly	*Speyeria nokomis apacheana*	Nymphalidae	CA,NV.
2	Blue silverspot butterfly	*Speyeria nokomis caerulescens*	Nymphalidae	AZ*, Mexico.
3B	Blueblack silverspot butterfly	*Speyeria nokomis nigrocaerulea*	Nymphalidae	AZ,NM.
3C	Mountain silverspot butterfly	*Speyeria nokomis nitocris*	Nymphalidae	AZ,NM,CO.
2	Great basin silverspot butterfly	*Speyeria nokomis nokomis*	Nymphalidae	CO,UT.
2	Behren's silverspot butterfly	*Speyeria zerene behrensii*	Nymphalidae	CA.
2	Carole's silverspot butterfly	*Speyeria zerene carolae*	Nymphalidae	NV.
2	Myrtle's silverspot butterfly	*Speyeria zerene myrtleae*	Nymphalidae	CA.
2	Henne's eucosman moth	*Eucosma hennei*	Olethreutidae	CA.
3C	San Francisco tree lupine moth	*Grapholita edwardsiana*	Olethreutidae	CA.
3A	Strohbeen's parnassian butterfly	*Parnassius clodius strohbeeni*	Papilionidae	CA*.
2	Busck's gall moth	*Carolella buscknna*	Phaloniidae	CA.
3C	Catalina orange tip butterfly	*Anthocharis cethura catalina*	Pieridae	CA.
2	Andrew's marble butterfly	*Euchloe hyantis andrewsi*	Pieridae	CA.
3C	Helios yellow butterfly	*Eurema dina helios*	Pieridae	PR, Caribbean.
2*	Daecke's pyralid moth	*Crambus daeckeellus*	Pyralidae	NJ*.
2*	Molokai sedge hedyleptan moth	*Hedylepta anastrepta*	Pyralidae	HI*.
2	Kohala Mountain sedge hedyleptan moth	*Hedylepta anastreptoides*	Pyralidae	HI.
2*	'Ohe hedyleptan moth	*Hedylelpta asaphombra*	Pyralidae	HI*.
3A	Oahu swamp hedyleptan moth	*Hedylepta epicentra*	Pyralidae	HI*.
2*	Ola'a banana hedyleptan moth	*Hedylepta euryprora*	Pyralidae	HI*.
2*	Fullaway's banana hedyleptan moth	*Hedylepta fullawayi*	Pyralidae	HI*.
2*	Giffard's 'ohe hedyleptan moth	*Hedylepta giffardi*	Pyralidae	HI*.
2*	Kilauea pa'iniu hedyleptan moth	*Hedylepta iridias*	Pyralidae	HI*.
3A	Laysan hedyleptan moth	*Hedylepta laysanensis*	Pyralidae	HI*.
2*	Meyrick's banana hedyleptan moth	*Hedylepta meyricki*	Pyralidae	HI*.
2*	Hawaiian bean leafroller moth	*Hedylepta monogona*	Pyralidae	HI*.
2*	Maui banana hedyleptan moth	*Hedylepta musicola*	Pyralidae	HI*.
2*	Hawaiian lo'ulu hedyleptan moth	*Hedylepta pritchardii*	Pyralidae	HI*.
3A	Telegraphic hedyleptan moth	*Hedylepta telegrapha*	Pyralidae	HI*.
2	Blue maryaroniam moth	*Maryaronia cyanomichla*	Pyralidae	HI.
2	Green maryaronian moth	*Maryaronia exaula*	Pyralidae	HI.
2	'Ohenaupaka oeobian moth	*Oeobia dryadopa*	Pyralidae	HI.
2	Ford's sand dune moth	*Psammobotys fordi*	Pyralidae	CA.
2	Chestnut clearwing moth	*Synanthedon castaneae*	Sesiidae	VA*,PA*,SC*,ME*,MS*,NY*.
2	Blanchards' sphinx moth	*Adhemarius blanchardorum*	Sphingidae	TX.
3C	Weist's sphinx moth	*Euproserpinus wiesti*	Sphingidae	CO,NM,AZ,TX,MT.
3A	Blackburn's sphinx moth	*Manduca blackburni*	Sphingidae	HI*.
2	Fabulous green sphinx of Kauai	*Tinostoma smaragditis*	Sphingidae	HI.
3A	Chestnut leaf miner moth	*Tischeria perplexa*	Tischeriidae	VA*.
2	Stevens' tortricid moth	*Decodes stevensi*	Tortricidae	CO.
2	'Ohe'ohe leaf roller moth	*Spheterista oheoheana*	Tortricidae	HI.
2	Greenbanded 'ohe'ohe leafroller moth	*Spheterista pterotropiana*	Tortricidae	HI.
2	Wailupe leafroller moth	*Spheterista reynoldsiana*	Tortricidae	HI.

3B Under current taxonomic understanding, these names do not represent taxa that meet the Endangered Species Act's definition of a species.

3C Taxa that are now considered to be more widespread and/or abundant than previously thought.

Copies of the complete notice may be obtained from either Paul Opler or the Xerces Society.

III. Xerces Society - 16th Annual Meeting

June 2-5, 1989
Woodland Altars, Peebles, Ohio
Approximate cost: $57.00/person

Agenda includes business meeting, presentation of papers, and field trips

To attend: RSVP The Xerces Society, 10 SW Ash Street, Portland, OR 97204, (503) 222-2788 by May 1, 1989

REPORT FROM THE SECRETARY-TREASURER

C. V. Covell, Jr.

Kentucky collecting has been good at the Bearcamp Road site in Bullitt County, so far, although some days have been cool and cloudy to rainy. Covell took a male Celastrina ebenina on April 6. He and others on that date and through April 16 have recorded the following from that site: Erynnis brizo, E. juvenalis, Papilio glaucus (including females with striking mixed yellow and black scaling), P. glaucus (Apr. 16), Eurytides marcellus (Common since Apr. 6), Pieris virginiensis (modest numbers this year), Anthocharis midea (Common), Euchloe olympia (first record from this site, second from Bullitt Co., taken by Denise Hellman on April 12.), Incisalia henrici, Celastrina ladon, C. ebenina (most common on Apr.16, so far), Nymphalis antiopa, Polygonia interrogationis, P. comma, Vanessa cardui (Apr 12.), V. atalanta, and Phyciodes tharos. In nearby open areas, P. rapae, C. philodice, and C. eurytheme have been seen. Moths at Bearcamp have included Psychomorpha epimenis (Noctuidae), and geometrids Xanthorhoe ferrugata and Trichodezia albovittata, among others.

Loran Gibson and Don Wright report early moth collecting good in the Red River Gorge, Powell Co. (Tunnel Ridge), March 4: Eutolype grandis, Psaphida thaxteriana, Copipanolis styracis; Xystopeplus rufago, Feralia jocosa, and F. major (all Noctuidae). On March 11, they returned there to record some of the same, plus Lithophane querquera and Eutolype rolandi (Noctuidae) and Rhyacionia busckana and Sereda tautana (Tortricidae, Olethreutinae).

Some of you have not yet sent in your $5 dues for 1989. Consult your mailing label to see if that is so, and if not, please remit to Covell as soon as possible.

Eric Metzler and Reed Watkins visited Louisville April 15-16 to train Covell and Kelly Thompson in recording Ohio Geometridae data on a DBASE program. While there, Eric identified some specimens in the University of Louisville collection, and found three species not on our list. They are Halisidota harrisii Welch (Arctiidae), Symmerista leucitys Franclemont and S. canicosta Franclement. Some Olethreutinae sent to Dr. William E. Miller recently resulted in three new state records: Eucosma pediasios Miller, Cydia candana (Forbes), and Pelochrista womanana (Kearfott).

Identifications by Dr. Miller are done on a low-cost basis, the funds payable not to him but the University of Minnesota. I am looking for "angels" to provide some additional money to send more specimens to him for identification. The value of his help is great, and the cost reasonable. For

example, two slide preparations were $12, and twenty-two identifications were $88, with $40 deducted because we loan material to him for his research. However, at this time, we need some money in the amount of about $200 to send more material to him for identification.

SOCIETY MEMBER WINS REGIONAL SCIENCE FAIR

M. L. McInnis

Mark Monroe has captured the top prize in the life sciences division of the Louisville Regional Science Fair. His project involved the discovery of a putative new species in the Erynnis persius complex. Mark will next compete in the International Science and Engineering Fair, May 8-14, in Pittsburgh.

Mark's project "What Are the Species Limitations In the Erynnis Persius Complex?" was based on his collecting activities in Eastern Kentucky. He has been collecting butterflies since 1983 and dissecting specimens for the past couple of years. Mark's fascination with biology comes naturally as his father, Dr. Burt Monroe, is a professor of biology at the University of Louisville (and a Ky. Leps. member).

NEW MEMBERS

Brian Scholten
Department of Biology
University of Michigan
Ann Arbor, MI 48109

Chris Rigby
335 Garland Drive
Paducah, KY 42001

Holly Rigby
335 Garland Drive
Paducah, KY 42001

Lynn Collins Wesley
300 Chelsea Road
Louisville, KY 40207

NEW ADDRESSES

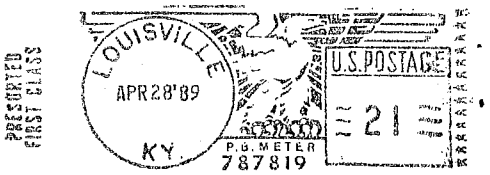
Hue H. Chuah
1602 Enclave Parkway
Houston, TX 77077

Boyce A. Drummond III
Natural Perspectives
P.O. Box 9061
Woodland Park, CO 80866

Kenneth Helfgott
P.O. Box 4201
Smithtown, NY 11787

Steve Loftin
2413 Sterling Road
Nashville, TN 37215

James R. Merritt (Prof.)
1729 South Third Street
Louisville, KY 40208



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M. L. McInnis, Editor
22 Benchmark
New Albany, Indiana 47150

F I R S T C L A S S

Loran D. Gibson
8496 Pheasant Drive
Florence, KY 41042
pd90