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NEWS

of the LEPIDOPTERISTS' SOCIETY

EDITOR
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U.S.A.

MISCELLANY

ON STAMPS AND BUTTERFLIES

Since the beginning of the Lepidopterists' Society in 1947, there has always been a keen interest among our membership in stamps published with butterfly and moth designs. Current members may be interested to learn that there is an organization specifically catering to the interests of persons who specialize in butterfly and moth stamps from around the world.

The BUTTERFLY AND MOTH STAMP SOCIETY was officially formed on November 1, 1985, to provide a meeting ground for the large number of thematic stamp collectors who specialize in butterfly and moth stamps. Starting in January 1986, the Society began production and distribution of its journal, "THE SWALLOWTAIL," several times a year. An additional aim of this Society has been to compile a list of all butterfly/moth stamps ever issued throughout the world. The committee in charge of this cataloguing project is listed on the inside cover of each issue of the Society journal so that members can contribute information to the list. In addition, as in our own Society, the issue of a list of members in the journal gives members an opportunity to correspond on an individual basis and exchange stamps with fellow collectors. A list of dealers who specialize in butterfly and moth stamps is also available.

Butterfly and moth stamps may be collected in different ways. For instance, the American secretary to the BMSS, Dr. Greg Herbert of Maryland, has been collecting and exhibiting butterfly stamps for over 15 years. He won a Vermeil Medal at the international exhibition Ameripex '86, and his exhibit, "The Pursuit of Butterflies," has also been accepted to Finlandi '88 for exhibition. There are many ways one can collect stamps (and exhibit them), with some collectors specializing in the classification of butterflies (much like one would organize his collection of actual Lepidoptera specimens, the stamps are arranged in taxonomic order representing different groups around the world), the structure of butterflies such as color pigmentation, the larvae of butterflies and moths, sericulture (production of silk from silkworms), and rarities in butterflies and moths. Collectors find interesting variance among such stamps, including those with incorrect taxonomic identifications, postmarks incorporating larvae or adult lepidoptera, and other aspects of the pursuit of butterflies and moths around the world. Incidentally, the only country that has ever corrected its error in the printed identification on a stamp (which was a 30T stamp depicting a beautiful picture of Amauris ansorgei under the initial name of Euphaedra zaddachi) was the country of Malawi in Africa. As to priority in philatelic history, Sarawak's issue of January 3, 1950 included the first butterfly stamp, with a picture of Troides brookiana, now known as Trogonoptera brookianus.

Thus the hobby of stamp collecting contains as many interesting facets as collecting or photographing actual butterfly and moth specimens, and the interested lepidopterist may wish to contact the American secretary of this new Society for more information: Dr. Greg Herbert, 341 Timber Grove Road, Owings Mills, Maryland 21117.

Thomas C. Emmel
University of Florida

BUTTERFLIES LOSE OUT TO BEETLES

The Rolex Awards for Enterprise for 1987 included one for the survey of beetles in Nepal (to a French taxi driver), but none of the proposals for butterflies won. A good illustrated write up was given to Kyong Chol Chou of the Dept of Astronomy and Meteorology, Yonsei University, Sinchon-dong, 120 Seoul, Republic of Korea, whose proposal was a study of "Korean butterflies-Exploration and classification," wherein the 100,000 butterflies that have been collected over the past 45 years and are now housed in a newly built annex of the Korean National Science Museum are being studied taxonomically, the collection expanded, a major public exhibition arranged and an illustrated book on Butterflies of Korea will be published. A brief description of Bernard D'Abrera's proposal for a multi-volume masterwork on Butterflies of the World was mentioned. Also mentioned was the proposal by Chris Nagano on "Saving the western North American population of the migratory Monarch butterfly." Another proposal involved the "Development of a reference butterfly collection and sanctuary" in the Philippines. Also proposed was "A lepidopteran exploration of the Kodiak Archipelago."

Bryant Mather
Clinton, Mississippi

Editor's note: The Rolex Awards for Enterprise were established in 1976 to encourage individuals who have demonstrated a remarkable spirit of enterprise and commitment in their fields of endeavor. Twenty awards have been given since then. There are 3 different categories: Applied Science and Invention, Exploration and Discovery, and The Environment. An international panel of judges determines the winners. The 1987 Rolex Award projects (5), plus 32 Honourable Mention projects and 206 other projects of interest were published by Van Nostrand Reinhold (UK) Co. Ltd. in a book entitled The Spirit of Enterprise.

IDEAS FOR HOMEMADE INSECT STORAGE BOXES

The ever-recurring problem for collectors of butterflies (and of other insects too) is what to do with them once they are mounted, dried, and labeled. I suppose [those with adequate funds] merely buy expensive chests or storage cabinets with drawers as required. Those of us with modest incomes must make do with improvisations or home-manufactured boxes.

I made some with 3/4" foam-board (the type used for insulation). The foam board is easily cut with a sharp knife or fine saw and the pieces can be glued together with "white" glue. I used pins to hold the pieces together until the glue dried. Any cracks or small holes I sealed with Poly-filla. I put strips of 3/8" foam "peal-and-stick" tape along the top of the box as a seal and used a sheet of foam board for the lid. These work fine except for the problems listed below.

A. "Sawdust" from the foam board is very "magnetic" and sticks to hands, clothes, etc.

B. Naptha balls don't seem to effect the board, but paradichlorobenzene crystals melt right through it.

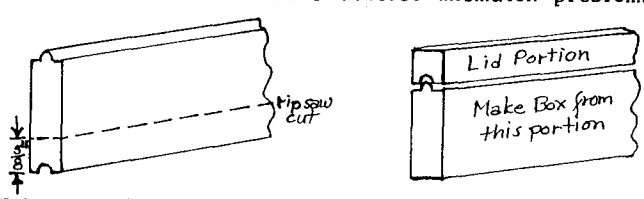
C. I never found a satisfactory method of securing the lid properly.

1. I use U-shaped clamps made from 1/2" strips of galvanized sheet steel bent to size.

2. Because my clamps aren't exact size, if they are too tight they tend to warp the lids.

But for temporary storage these boxes are fine. They are light weight, easy to manufacture and inexpensive. For long time storage they could be sealed with tape, but they would have to be resealed after each opening which would be bothersome. They aren't very handsome either, but the foam board interior is a perfect pinning surface. Unfortunately, foam board is very flammable.

Not really content with these foam board boxes, I looked into my odds and ends and re-discovered some aromatic cedar left over from a project a number of years ago. The cedar boards are usually sold in bundles and the pieces are from one to four feet in length. They are "tongue and grooved" so they fit nicely together. Usually they are used as closet liners. The strips I have were manufactured by George Brown & Co, Greensboro, North Carolina, and are approximately 2 1/2" in width. Using a table saw, I ripped 5/8" strips from the grooved side of the boards. I then inserted the tongue of the same board into the groove and taped the pieces together using masking tape. By matching the two pieces of the same board I avoided mismatch problems.



Using the longer pieces for the sides and the shorter lengths for the ends, I made boxes and lids at the same time (still taped together) using "white" glue and 1/2" finishing nails. I measured diagonally and put a holding strip to keep the corners square until the glue dried. For the top of the lid and box bottom, I used 1/8" mahogany wall panelling (left over from a project) and some 1/8" Masonite hardboard I had on hand. I glued and nailed the plywood on with 1/2" finishing nails, but had to be careful not to inadvertently glue the lid to the box. After the glue was dry I filled any small holes on the outside and the tongue, where needed, with plastic wood. Then I put a bead of "white" glue on all inside joints as a sealant. For a pinning bottom I used 1/4" cork sheeting (available from building supply companies). This sheeting is made of cork pieces glued together and comes in 48" widths in large rolls. I fastened the cork in place with contact cement. Two coats of Polyurethane and the boxes are finished. For the smaller boxes, I hold them closed with simple brass hooks rotating around a screw and locking onto another screw (two each side). For the larger boxes, luggage snaps are better, but more expensive. The tongue and groove between lid and box makes a reasonably tight seal. I am open to suggestions as to how to make a perfect seal without accidentally cementing the lid closed forever.

Jack Holliday
Ottawa, Ontario, Canada

SOME NOTES ON OVULAR "HEAD START" IN ANTHOCHARIS AND PONTIA?

I am currently rearing Anthocharis cethura cethura (Felders' Orange-tip) and photographing its early stages. By confining a wild-caught female, I obtained many eggs and noticed a seemingly methodical difference in the color of recently laid ova. The following is an excerpt from my notes. ....In the course of three days, she laid singly a total of 16 eggs which were found: day 1 (March 6th)--8 ova, day 2 (March 7th)--5 ova, and day 3 (March 8th)--3 ova. Upon daily removal of the eggs, it was noted that on each day, one ovum deposited earlier that same day was already orange in color, whereas the other eggs were pale yellow on the same day as laid, not turning to orange until the next day. These already-orange ova would each hatch one day before their respective siblings.... Ovular stage of the 3 already-orange ova was about 3 days, that of the yellow-turning-orange ova was 4 days. Eggshells were fully to partially consumed, with one egg not eclosing. Nine larvae survived to pupate....

The same difference in initial egg color was also observed with Pontia sisymbrii which is being raised concurrently. I would greatly appreciate learning from someone, either via the NEWS or through direct correspondence, the cause and significance of this ovular "head start".

Incidentally, upon viewing the processed color slides of cethura immatures, it was realized that one of the caterpillars was deformed. The transparencies showed that the right side of this last-instar larva appeared normal, but its left side was missing the prolegs on segments 3 and 4, there being a large white blemish on the subspiracular forepart of segment 4.

Keith Wolfe
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AN APPEARANCE OF LEPTOTES MARINA IN SOUTHERN ILLINOIS

The Marine Blue, Leptotes marina (Reakirt), is common with multiple broods in all months of the year, from Central America to Texas, and west to southern California. The species is apparently absent from the southeastern part of the United States; there is one record for Mississippi. Northern colonies are established annually by summer migrants in western Illinois and Nebraska (Howe, William H. 1975. The butterflies of North America. Doubleday & Co., Inc., Garden City, New York.). Irwin and Downey (Irwin, R. R. and J. C. Downey. 1973. "Annotated checklist of the butterflies of Illinois." Illinois Natural History Survey Biological Notes 81:1-60.) considered L. marina as a rare casual in Illinois.

Three previous Illinois records for this species include: Mason Co., Sand Ridge State Forest, July 5, 1983 (R. Henderson); Mercer Co., Hamlet, September 5, 1953 (P. Conway); Cook Co., Forest View, near Lyons, August 18, 1933 (Mares). The two most recent records are listed by Sedman and Hess (Sedman, Y. and D. F. Hess. 1985. "The butterflies of West Central Illinois." Western Illinois University, Series in Biological Sciences No. 11.).

Larval host plants of L. marina are Wisteria, Plumbago, and many legumes, including Astragalus (rattle-weed), Dolichos (hyacinth bean), Galactia (milk-pea), Medicago (alfalfa), and Phaseolus (beans) (Howe 1975).

During 1986, L. marina was taken and observed by me at two southern Illinois localities. These are:

Randolph Co., 3.2 kilometers south of Sparta, IL, August 11-17, 1986; Jackson Co., R.R. tracks between Ava and Campbell Hill, IL, August 13, 1986.

Instead of giving daily accounts of behaviors, the week long observation has been collated since any or all of the behaviors observed may have occurred during any day of the week. Both male and female L. marina butterflies were seen flying unidirectionally to the northeast over open areas of corn and alfalfa. Males were found flying bidirectionally from east to west, at the edge of a Medicago field which is adjacent to an abandoned road. Nearby, a female was ovipositing on Medicago. At the northeast corner of the alfalfa field, males were found to perch on the dried flower heads of Erigeron ramosus, but a few moments later these were to return to another catenation of repetitive meandering, back and forth across the same area along the edge of the Medicago field. Occasionally, there would be deviance from this meandering when a male would fly, usually north or south, over forested or open areas. At this time the flight was at the height of at least six meters, until the individual was lost from sight. Often, when males came into contact with one another, they would spiral around each other near the ground, and then very swiftly commence an upward vortical flight, high into the air, that would end before reaching ground level again. Such flights were common and are probably territorial in nature.

The general height of flight assumed by the male while in search of the female, is approximately 30 to 45 centimeters above the ground vegetation. Unlike the comparable Everes comyntas which has a low lingering flight, the flight of L. marina is consistently higher, more steady, and faster. Prior to August 18, 1986 and the cutting and baling of the Medicago, L. marina was observed flying in open areas and along corridors.

I wish to thank David F. Hess, Western Illinois University, Macomb, Illinois, for sponsoring me in the writing of this material, and also for the attainment of the most recently published records of Leptotes marina in Illinois.

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NEW HOME FOR SONORAN ARTHROPOD STUDIES, INC.

Steve Prchal of Sonoran Arthropod Studies, Inc, a 2 year old organization, is moving his bugs to Tucson Mountain Park, about 12 miles west of Tucson, according to Chris Limberis of the Tucson, "Arizona Daily Star" in an item appearing on Saturday, March 19, 1988. A converted ranch house, scheduled to open sometime this year, will house the new Arthropod Research Center. Prchal, a Lep. Soc. member, has been associated with the Arizona-Sonoran Desert Museum for the past 16 years and hopes that the Research Center will create a bridge linking the public, the University of Arizona and the Desert Museum. He emphasizes that public awareness of arthropods is critical. He and his staff have been kept busy answering phone calls about bugs and conducting tours of the present Sonoran Arthropod Studies facilities. He hopes to maintain a presence in the city in addition to the Research Center.

Item sent by Ron Leuschner

FROM THE LONDON OBSERVER

"In October's hurricane, one of the millions of overthrown trees damaged the Syon Park Butterfly Centre, and released scores of tropical butterflies to flutter surrealistically through that wild night. The world-wide loss of wealth which occurred almost simultaneously in the stock market crash was, according to some estimates, no less than a trillion pounds (it is worth spreading that figure out to get the full benefit of the width: £ 1,000,000,000,000). Where had that stupendous amount of theoretical value, written off share prices around the globe, actually departed to? It was difficult not to envisage it fluttering around in the form of notes and bills along with a cloud of iridescent butterflies, in some fourth dimension at the end of the wind."

Bob Pyle sent the NEWS the above clipping from the "London Observer," but unfortunately had no date for it. The author of the item is George Hill. Pyle comments that "it's a beautiful idea, eh?"

INTERGENERIC COPULATION: Mitoura gryneus (Hubner) and Satyrium favonius ontario (W. H. Edwards)

On 6 May 1984, in lower Barton Creek, Austin, Travis Co., Texas, a pair of hairstreaks was taken in copula from two meters high in a blooming mesquite tree (Prosopis glandulosa), nectaring on the flowers. The male was a Fixsenia favonius ontario (W.H. Edwards), and the female, a Mitoura gryneus (Hubner): the two were firmly paired, not even separating in the net when captured. Both specimens were preserved and are in the collection of the author. The female was not dissected to determine whether or not sperm was actually transferred. The temperature at the time of observation (1430 h. CDT) was 36^{0} C.

This was the only case of copulation found by the author among any of the Theclinae during 99 hours of observation in 44 visits to the site. As has been suggested by numerous authors, mating in many hairstreaks probably occurs at night (Miller and Clench 1968 "Some aspects of mating behavior in butterflies," J. Lepid. Soc. 22: 125-132; Heitzman 1969 "Nocturnal copulation in lepidoptera," J. Lepid. Soc. 23: 105; Opler and Krizek 1984 Butterflies East of the Great Plains, Johns Hopkins University Press, p. 87)

Fixsenia f. ontario and Mitoura gryneus were the most abundant lycaenids in the area at the time and were found in numbers nectaring on dogwood (Cornus drummondii), mesquite (Prosopis glandulosa), and hedge parsley (Torilis arvensis) during the hours of observation (1230 to 1515 h). Actual counts of observed specimens put F. f. ontario at 52 and M. gryneus at 17. Five other hairstreak species were in flight as well: Satyrium calanus, Atlides halesus, Phaeostrymon alcestis, Parhassius m-album, and Strymon melinus. Of the seven thecline species flying, the two taken in copula are the most similar in appearance dorsally, both showing coppery-brown coloration (none of the other hairstreaks present are so colored). Both are perching species, and both tend to "treetop" in the area, the foodplants (Oak and Juniper respectively) growing in close proximity.

William M. M. Edmonds (1985 "Satyrium edwardsi: Some notes on life history and interspecific pairing," NEWS of Lep. Soc. 3: 43) notes three additional sympatric (but synchronous?) thecline species at the Toronto site where a S. edwardsi male was found coupled with a S. acadica female. Abundance ratios there might have been revealing. An account of an interspecific copulation in nymphalids (Priestaf. 1970 "Courtship and mating between Chlosyne neumoegeni and Chlosyne californica (Nymphalidae)," J. Lep. Soc. 24: 226) notes that Chlosyne californica was far greater in abundance than was C. neumoegeni. The male of that pair was C. neumoegeni, and it is suggested that the scarcity of suitable females might have influenced the event. In the present case, numerous female F. f. ontario were observed.

Predation pressure at the Austin site was apparently strong. During the above-mentioned observation period M. gryneus was found prey to an ambush bug (Phymata sp.) on one occasion, and F. f. ontario was noted as prey on two occasions, once of the same Phymata species, and once of a green and maroon crab spider.

Samuel A. Johnson
Chicago, Illinois.

NOTES FROM JAMAICA

I am prompted to write due to the large numbers of queries I have received recently from dealers wishing to

buy specimens of Papilio homerus. It is clear that many people are unaware of the endangered status of this and other Jamaican butterflies - or are willfully ignoring the fact - and I feel that members should be made aware of the current Lepidoptera conservation situation here in Jamaica.

As most readers will know, the splendid species Papilio homerus is the largest butterfly in the Americas, with a wingspan of some five inches. It is also found only in Jamaica. These two factors conspire to make P. homerus a much sought after species by collectors, who pay ludicrously inflated prices for dead specimens. Once P. homerus roamed the forests that then covered much of central Jamaica. However, today the species is confined to two isolated pockets of vegetation due to the destruction of surrounding habitat. One pocket is in the west of the island, in the Cockpit Country, and the other is in the John Crow mountains in the far east of the island. Both areas provide the only known habitat of P. homerus' larval foodplant - two endemic species of Hernandia, known locally as 'Water Mahoe'.

We have little information concerning the western population. Only an unwise collector would venture far into the Cockpit Country, which is used extensively for 'Ganja' (Marijuana) cultivation. Contrary to popular belief in the U.S.A., 'Ganja' is highly illegal in Jamaica and fields are frequently protected by growers with firearms. However, it is clear that extensive habitat destruction is occurring in this area, principally for planting of the aforementioned drug.

In the eastern range, the situation is definitely grim. Sanctioned by the Government, most of the native forest habitat of P. homerus has been ripped out for pine plantation. Indeed, this has accelerated rather than slowed during the past few months: visitors to the area in early 1987 would probably not now recognise this site due to the extensive destruction that has taken place.

The outlook for P. homerus is hence not at all good. There is now even some evidence to suggest that inbreeding in the two tiny, isolated sites has resulted in genetic weakening of the species. Furthermore, both this species and its foodplant have proved extremely difficult to rear outside their native habitat.

Dr. Eric Garraway, of the University of the West Indies' Zoology Department, has conducted considerable research into this species and its biology. However, this work has now been halted due to lack of funding. Indeed, even transport to get to what is left of the species habitat is not now available. Unfortunately, a recent joint application with the University of Florida to the World Wildlife Fund was unsuccessful, and therefore the situation is stalemated. Rapid funding for research into ways of rearing this species in captivity is now essential, as the butterfly appears perched on the very edge of extinction. Eventually it may prove possible to 'farm' the species commercially, in imitation of the highly successful scheme used in Papua New Guinea to conserve and commercialise birdwing butterflies.

Conservation generally is a very low priority in Jamaica. Indeed, Jamaica appears to be the only sizable American state not to have a single National Park or Wildlife Reserve. I am constantly annoyed by references to P. homerus being 'common in its habitat'. That may have once been true, but alas the habitats are fast disappearing. Put simply, P. homerus is critically endangered due to habitat destruction. Additional pressure due to unscrupulous collecting will definitely tip the balance against this species. I can hence only appeal to collectors to stop buying specimens - thereby, I hope, drying up the trade in this butterfly.

Habitat destruction is a major problem generally in Jamaica. Brown & Heinemann's classic work 'Jamaica and its Butterflies' (published by E.W. Classey in 1972) lists 133 species of butterflies from the island, of which some 31 species are claimed to be endemic. Some of these species, such as Calisto zangis (Satyridae) and Mestra dorcas (Nymphalidae), are common; however, to see the majority of Jamaica's specialties it is necessary to visit shrinking areas of specialized habitats, often at very specific times of year.

With regard to moths - my own major interest - there is very little known of the Jamaican fauna. I am attempting to rectify this omission over the next three or four years by conducting an island-wide moth survey. By identifying and listing the species from various habitats I hope - among other things - to add weight to the growing conservation lobby here. As always, however, the problem is one of funding and support. I would be glad to hear from any individuals or institutions interested in such a project or able to help with transport, equipment and/or literature. Any moth collectors visiting Jamaica are very welcome to stay free of charge in my (modest) flat in Kingston. In return I would be grateful to accompany them on any collecting trips they may make to remote areas of the island, and to act as driver/guide for any transport they may hire here.

I hope that these notes have alerted Lepidopterists in the U.S.A. and elsewhere to some of the possibilities of one of America's more interesting offshore islands. I would welcome correspondence with any Lepidopterists interested in Antillean moths: however, please be warned - dealers or others requesting specimens of P. homerus or other endangered Jamaican species are likely to elicit an unpleasant reply!

M. J. C. Barnes
Kingston, Jamaica

Editor's Note: In 1987, P. homerus was proposed for Appendix I of CITES, making it illegal to trade in this species. This action was taken on October 22, 1987. See NEWS #3, 1988, pg 53 for this announcement.

CALIFORNIA MONARCH BUTTERFLY SETS LONG DISTANCE RECORD

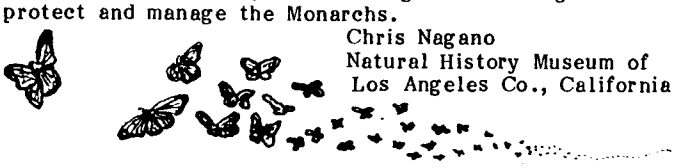
A Monarch butterfly tagged last winter at an overwintering colony in Ellwood, a seaside community near Goleta in Santa Barbara County, California, was recovered last week in southeastern Arizona. The butterfly had migrated 660 miles from its coastal overwintering roosting site, where it had been tagged five months earlier, to the Chiricahua Mountains in extreme southeastern Arizona. The previous long distance record of a tagged Monarch migrating from the California coast was a 565 mile flight from the San Francisco Bay Area to the Grand Canyon in 1957. The Monarch was tagged on November 7, 1987, by Chris Nagano, a Research Associate at the Natural History Museum of Los Angeles County, Walter Sakai of Santa Monica College, and a group of volunteers from the Museum. Five months later, on April 9, 1988, the female Monarch was captured by Peter Jump, an amateur lepidopterist and Douglas, Arizona, high school biology teacher, during a collecting trip in Cave Creek Canyon in the Chiricahua Mountains, some 1-1/2 miles south of the Cochise County town of Portal. In an unusual coincidence, the actual tagging of this record-breaking butterfly may have been recorded by CBS News, which was filming the research activities of Nagano and Sakai for a nationally televised segment of the evening news with Dan Rather.

Generally, the Continental Divide separates the Monarchs of North America into two populations with distinct migratory routes and overwintering areas. Each autumn, butterflies born east of the Rocky Mountains travel from as far north as southern Canada and New England to a few isolated mountains in central Mexico. The western population, on the other hand, migrates through the Great Basin, the Pacific Northwest, the Southwest, and portions of western Canada to an archipelago of colonies stretching along the California coast. The following spring the Monarchs begin a return flight to the interior of North America, only to die soon after laying their eggs. Later that year their great-great-grandchildren repeat the journey of their ancestors, guided in unknown ways to spend the winter in a foreign locality that they have never before visited.

The Monarch is a member of a largely tropical group known as the Milkweed Butterflies. The sole

foodplant of the caterpillars is Milkweed. These plants supply not only nourishment, but also chemicals that render the butterflies poisonous to many birds, one of their predators. The Monarchs elaborate bird-like migration allows it to exploit this foodsource in vast areas of North America while escaping the fatal freezing weather of winter.

More than 59,000 Monarchs have been tagged in the last three years by Nagano and Sakai, aided by several dozen volunteers, with a procedure analogous to bird banding. The butterflies are banded by placing self-adhesive paper tags that are six by ten millimeters in size on the right forewing; each tag is individually numbered and bears instructions to mail the specimen to the National History Museum of Los Angeles County. The data collected are used to map migration routes, measure population sizes, and detect changes in the ecology of the Monarchs and their habitats. The two Japanese-American entomologists have surveyed some 900 miles of California coastline to locate the overwintering colonies, and they are also actively working with the U.S. National Park Service, the California Department of Parks and Recreation, and other government agencies to protect and manage the Monarchs.



Chris Nagano
Natural History Museum of
Los Angeles Co., California

LARVAL PREDATION OF THE BLUE SWALLOWTAIL, BATTUS PHILENOR, IN KANSAS.

During the summers of 1986 and 1987, I had an opportunity to observe first-hand the intense predation by a host of birds (both native and migratory) upon the larvae of the Pipevine or Blue Swallowtail, Battus philenor (Linnaeus), in eastern Kansas. It was somehow supposed that the larvae of this butterfly should be distasteful or even poisonous to birds. This assertion turned out to be totally false. The mature larvae always fed openly on the leaves of the host plant, in this case, Aristolochia macrophylla, a native deciduous Pipevine. I say "native" somewhat advisedly--the vine is native from the region about Erie, Kansas, southward, and is not actually native to my knowledge in this immediate area. However, many of these vines are grown as ornamentals over porches and verandas about older homes all over Ottawa, Kansas. The larvae often heavily defoliate these vines all summer. Yet the beautiful adults, flashing their showers of brilliant shimmering blue and green light, give local flower gardens a tropical look.

The exposed larvae were continuously and relentlessly attacked and eaten with obvious relish by robins, bluejays, catbirds, orioles, mockingbirds, English sparrows, wrens, cardinals, migratory shrikes, brown thrashers, and other bird species not recognized by this observer. Fearing that I would have no adults by the end of summer I decided to "rescue" surviving caterpillars by placing them in a screened cage so that they could reach the pupal state without attack from birds. I placed several of the fattest and most nearly mature of the caterpillars in the cage where birds could not eat them. Yet despite the seemingly heavy numbers of larvae consumed by birds many larvae escaped without my assistance and attained adulthood on their own. The adults were everywhere in the area.

A. macrophylla quickly "escapes" wherever it is planted. Underground runners produce new plants which spread out in an ever-widening perimeter covering everything in sight--shrubs, trees, even climbing up other vines like the Virginia Creeper and reaching the tops of large trees eighty feet tall. This is probably the way macrophylla grows in the wild state.

A question remains: if the larvae are so obviously vulnerable to bird attack, can the adults of philenor truly be as "protected" as reported in the literature?

William H. Howe
Ottawa, Kansas

The collecting season is in full swing for many of us. I hope it will be a successful one for everyone, and that there will be many interesting anecdotes to share with our readers when the season is over. Again, I wish to thank all of the many contributors, since the Editor's job is made much easier and a lot more enjoyable by you members who send me items to print. We cannot use copyrighted material, however. When sending newspaper clippings be sure you include the name of the newspaper and the date on which the item appeared.

In response to the request in a recent letter in the NEWS (Ripples, NEWS #2, 1988, pg, 43), it has been suggested that the book A Glossary of Entomology by J. R. de la Torre-Bueno, published in 1973 by Lubrecht & Cramer, (available from Bio-Quip Products Inc. and probably others) would be useful in defining terms not readily found elsewhere. Also, as a result of this letter there will be a new section established in the NEWS under the heading "Lepidopterists' Lexicon." This section will provide definitions for words sent to the NEWS editor by Society members. A professional entomologist will act as the definition consultant. Because of the time involved in sending words to the consultant and getting the definitions back, the words must be received by the NEWS editor at least 2 weeks before the deadlines printed on the back page, in order to appear in a specific issue.

The following letters from some of our International members should be of interest to many of our members and so are printed here. As usual, the opinions expressed by the authors are their own and do not in any way reflect any policies of the Lepidopterists' Society nor views of the Editorial Board.

Dear Mrs. Preston,

I am writing with regard to Robert Pare's interesting note in the Nov/Dec 1987 issue of the NEWS of the Lepidopterists' Society, concerning the presence of Danaus plexippus in Mauritius.

This species has in fact been known from Mauritius for some years now, as will be confirmed by the Danaid specialist R. I. Vane-Wright at the British Museum (Natural History). A full account of its discovery may be found in the paper on "The Butterflies of Mauritius' by P. M. H. Davis and myself, when and if it is ever published. (The "special supplement" of the Journal of Lepidopteran Research which accepted the paper has been "in press" for four years now!)

Although the species does not appear to have been present on the island during my own visit in 1980, a letter from Dr. J. R. Williams (formerly of the Mauritius Sugar Industry Research Institute) indicated that some specimens had been taken subsequently. Regrettably my notes on Mauritian Butterflies are still back in the U.K.; however, my memory suggests that this was about 1982 or 1983. I have since been sent several specimens of D. plexippus from the island, and it appears to be well established there. Asclepiads of various species are present on the island and also support two endemic Danaid species - Amauris phaedon and Euploea euphon - as well as the pan-African species Danaus chrysippus.

The origins of the Mauritius population of D. plexippus will probably remain a mystery. Interestingly, the new record for the island means that Mauritius shares with Madeira (I believe) the distinction of being the only places in the world where D. plexippus and D. chrysippus fly side by side.

Like my current home, Jamaica, Mauritius is much more than just a beach to the interested lepidopterist. Some 40 species of butterflies are recorded from the island, many of which are endemic. Apart from our own

recent paper, which appears unlikely to see the light of day for some time, there is very little recently published on its lepidoptera. The interested holidaymaker could make some very valuable contributions to our knowledge of the fauna of this fascinating land.

Yours Sincerely
Matthew Barnes

Dear June,

A number of short comments concerning the Jan/Feb 1988 issue. In re the Light Hypothesis: in 7 years of collecting in San Cristobal de las Casas Chiapus, I found that few eggs of Saturnids were deposited on walls beneath mercury vapor street lamps. The main depositers were Arctiids. The main danger was being consumed at dawn by English sparrows (Passer domesticus) and by great-tailed grackles (Quisculus mexicanus, formerly Cassider mexicanus). However, the English sparrows prey upon moths and other insects only during breeding and molting, or about 5 months per year. Once these nutritionally high demand periods pass, they return to a more granivorous diet. In the eastern U.S. cities the English sparrow began to decline in numbers around 1910-1915, as internal combustion vehicles began to replace the oat-hay fueled horse. Hence, if these sparrows are the major predator, I would assume that numbers would be low pre 1915 and increase in the 20's, 30's and 40's. In Chester, Morris Co, New Jersey in the late 1940's and early 1950's, Luna moths and most Saturnids were either rare or uncommon. I quite commonly found "Hickory Horned Devils and "Tomato worms" although the latter were about two thirds parasitized. Hummingbird sphinx were regular in our garden and like hummingbirds seemed to be trap line feeders, passing in a regular ordered manner from flower group to flower group. This seems to be an energy maximizing strategy for high energy vs time groups.

At present, before the Guatemalan Congress is a proposal which would put aside almost 4,000,000 acres of Guatemala's 27,500,000 acres into forest preserves of various types. 1,500,000 acres in N. Central Peten would be a multi-use forest reserve. One allowed usage would be the raising of Neotropical Lepidoptera. Also, all 29 volcanic peaks in the country would be declared protected areas. Since these act as islands of habitat, they, as islands, are vulnerable to over-human predation. At present, no roads go to the tops as happens in Costa Rica, hence access in and of itself becomes a control on collecting. At present no spraying occurs in the area although the U.S.D.A. has a huge spray and sterile fly proposal called CAP Med (= Central America and Panama Med fly Eradication Program). This proposes to spray all lowland (up to an altitude of 5000'-6000') Central America. It is an ecological disaster in the making. Further, it appears that Fish and Wildlife was not involved through its non-game (migratory) bird people. What is the worst is that U.S.D.A. has apparently learned nil in 25-35 years of badly thought out sledge hammer like programs. The public is more aware than the Bureaucrats. Also, Hawaii, which has Medfly, will not allow a massive program of eradication.

Re CITES. The Fish and Wildlife and State Dept have increased the number of people working on CITES. They have hired more Lawyers. Sir Thomas More in Utopia - had no lawyers "as they are the type of people who confuse things." The lawyers, and in particular, State Dept came up with the "brilliant" idea of "Valid documents." I.E. if your paperwork from a foreign country was "proper," the animals entered. Two and a half years ago, with proper paperwork, 220,000 crocodile skins went from Guatemala to the U.S. and world markets. There are not that number [of crocodiles] in the whole country. The skins were South American in origin. But the U.S. let them in. What "valid paperwork" has in fact done is create a new item to collect bribes given by the immoral to the immoral; continued the overcollection of certain species (in Guatemala mainly Parrots, which are smuggled to Mexico and Honduras); allowed officials to treat fast reproducing groups (insects) the same as slow reproducing top of the line predators and has [in effect] stopped scientific collecting and work while once more, in a display of Bureaucratic demogogry, it has allowed the insect collector to be made the scapegoat. The CITES Treaty and The Endangered Species Act are not acts prohibiting collecting except in a very limited number of species and populations, and it is clear that prohibition was not the intent of Congress. My assumption is that if Congress wished to prohibit, it would have so stated. That in passing the right to regulate to Depts of State and Interior, Congress granted no right to extend or of interpretation to these Depts. As presently drafted, the Rules promote dishonesty by foreign officials and by collectors. The crooked are rewarded, the honest abused.

The largest collectors of insects in the world are cars, trucks and railway trains but no studies are done of their impact. I once made a rough estimate by counting just the butterflies and skippers on radiator covers of 10 semi-cabs, multiplying by the number passing per hour [and counting] 13 hours of daylight. In August, between Veracruz City and Catemaco, the trucks killed a minimum of 6,300,000 day flying leidoptera! I see no movement to ban the truck.

Sincerely, Peter Hubbell
Antigua Guatemala
Guatamala, Cent. Am.

Notices

THE JOURNAL INVITES SUBMISSION OF FEATURE PHOTOGRAPHS AND COVER ILLUSTRATIONS

Because many Society members are avid photographers, the Journal will consider black-and-white photographs to feature in each issue on one page or two half pages. Selection of photographs for publication will be based on subject interest and photographic quality. Subjects may include unusual behavior, interaction with nonhost organisms, specimens in nature illustrating marks by which they can be identified using binoculars, unusual habitats or type localities, and many others. Captions, including details of photography, must be limited to a few lines. Submitted prints should be mounted on white cardboard no larger than letter size, with captions on a separate sheet, and be suitable for reproduction with caption in spaces either 9 or 18 cm high by 11 cm wide. Regular page charges will apply, but as listed on the inside back cover of the Journal, they are modest.

Response to a solicitation last year for front cover illustrations was rewarding. Cover illustrations are being made a regular submission category. A new cover illustration appears on each Journal issue. Drawings are more suitable than photographs for the front cover because drawings can usually withstand the coarse reproduction necessitated by cover stock texture. Submitted cover illustrations should be no larger than letter size, and be accompanied by a brief explanation to appear on the inside front cover. Page charges are waived for cover illustrations.

Send all submissions to Journal editor Bill Miller, Entomology Department, University of Minnesota, St. Paul, MN 55108. Submissions will be acknowledged promptly.

COSTA RICA ANYONE?

LEPIDOPTERISTS/NATURALISTS PROGRAM TO COSTA RICA. New brochure offers fully-inclusive program for 14 nights at a lodge by virgin rainforest. Ideal for

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BACK ISSUE AVAILABILITY & ORDERING PROCEDURE
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(revised March 1988)

LEPIDOPTERISTS' NEWS (fore-runner to JOURNAL)
1947 Vol. 1: (reprint of original)
1948 Vol. 2: 1, 2, 3, 4, 5, 6, 7, 8, and 9.
1949 Vol. 3: 1, 2, 3, and 4-5.
1950 Vol. 4: 1-2, 3, 4-5, and 8-9.
1951 Vol. 5: 1-2, 3-5, 6-7, and 8.
1952 Vol. 6: 1-3, 4-5.
1953 Vol. 7: 5-6.
1954 Vol. 8: 1-2, 3-4, 5, and 6.
1955 Vol. 9: 4-5, and 6.
1956 Vol. 10: 3-4, 5, and 6.
1957 Vol. 11: 4-5, and 6.
1958 Vol. 12: 3-4, and 5-6.

JOURNAL OF THE LEPIDOPTERISTS' SOCIETY: began with Vol. 13 (1959), 4 issues per year, plus 3 Supplements to Vol. 23 (1969), 3 Supplements to Vol. 25 (1971), and 1 Supplement to Vol. 33 (1979).
ALL issues of the JOURNAL are available EXCEPT THE FOLLOWING:
Vol. 19 (1965): Nos. 1 and 2.
Vol. 21 (1967): No. 1.
Vol. 27 (1973): No. 2.

NEWS OF THE LEPIDOPTERISTS' SOCIETY: an informal bimonthly publication initiated in 1959. The following issues are available:
1965: No. 5.
1969: Nos. 1 and 2.
1972: No. 5.
1973: Nos. 3, 4, 5, and 6.
1974: Nos. 2, 3, 5, and 6.
1975: Nos. 1, 2-3, 4, and 6.
1976: Nos. 1, and 4.
1977: Nos. 2, 5, and 6.
1978: No. 6.
1979: Nos. 2, 3, and 5.
1980: Nos. 1, 2, 4, and 5.
1981: Nos. 2, 3, 4, 5, and 6.
1982: Nos. 1 through 6 complete. (#6 is Membership Directory).
1983: Nos. 1 through 6 complete.
1984: Nos. 1 through 6 complete. (#6 is Membership Directory).
1985: Nos. 1 through 6 complete.
1986: Nos. 1 through 6 complete. (#6 is Membership Directory).
1987: Nos. 1 through 6 complete.

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(revised March 1988)

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2-5	$10	not sold separately
6-12	-----	$3
13-34	$16	$5
35-38	$20	$6
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3. When issues of a volume are not available, pro-rate the cost of those remaining; thus a volume with one missing issue would cost 3/4 of the normal volume price.

NEWS of The Lepidopterists' Society $2.00 per issue, except for 1986, Issue #6 (Membership Directory), which is $5.00.
MEMOIR NO. 2: A CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO, by Lee D. Miller and F. Martin Brown. 1981. vii + 280 pages.
Clothbound (ISBN 0-930282-02-7): $17.00 (Member/Subscriber Price: $10). Paperbound (ISBN 0-930282-03-5): $8.50 (Member/Subscriber Price: $5).
COMMEMORATIVE VOLUME: 1945-1973: (the first quarter century of the Society, featuring historical sketches, biographies, and a 25-year index to the JOURNAL). 1977. xvii + 374 pages. Clothbound (ISBN 0-930282-01-9): $10 (Member/Subscriber Price: $6).

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NEWSLETTER ABOUT MONARCHS IN CALIFORNIA

The first issue of a newsletter about the Monarch butterflies in California was sent out in late February 1988. Called DANAUS, this newsletter originates from the Life Science Dept, Santa Monica College, 1900 Pico Blvd, Santa Monica, California 90405 USA. The editors are Walter Sakai, Gary Wolfe and Christopher Nagano. The publication can be had by sending a self addressed, stamped envelope (with postage to cover a 3 ounce mailing) to Walt Sakai at the above address. The editors hope to provide two issues a year, although that depends upon the response from readers. Information for the next issue of DANAUS is being solicited and should also be sent to Walt Sakai at Santa Monica College. The editors reserve the right to edit or refuse material submitted.

CENTER FOR INSECT IDENTIFICATION FORMED IN MICHIGAN

Lansing, Mich... A new organization has been formed to provide accurate and timely identifications of insects and other terrestrial arthropods over a much broader spectrum than is currently available. At the same time, the company will return the desired information to the customer within a promised schedule according to Gregory A. Dahlem, founder and director of the firm.

Named The Center for Insect Identification, the company is also distinctive in that it is a commercial venture in this field. Determinations of specimens will be accomplished using a network of systematic entomologists from across the United States and Canada. Each entomologist is a specialist in a particular group of insects. The company claims this structure will permit it to make accurate and fast identifications on a cost effective basis.

A corollary objective of the Center is the establishment of a voucher collection which will contain series of specimens as permanent reference material to substantiate the organisms that provided a basis for a given piece of research or for a specific project. The voucher system will offer the qualities of standardization and centralization and will be housed as a separate unit in the entomological collection at Michigan State University.

The basic service offered by the Center will be a routine identification with a written report to the

customer within four weeks. Rapid identifications - with a report by telephone within five working days - will be available upon request at an additional cost. Other services include placing the specimens in the voucher system. Previously identified specimens may also be placed in the voucher system. Of special interest to non-systematists is the option of submitting a number of specimens so that personnel at the Center can select the specimen that is best preserved and of the proper sex to facilitate accurate identifications.

Full details concerning the services offered are available by writing to The Center for Insect Identification, P.O. Box 26245, Lansing, MI 48909.

ICZN

The following Applications were published in Vol 45, Part 1 of the Bulletin of Zoological Nomenclature on March 25, 1988. Comment or advice is welcome and should be sent to the Executive Secretary, ICZN, c/o British Museum (Natural History), Cromwell Rd, London SW7 5BD, U.K.

Case No.

2617 Colias alfacariensis Ribbe, 1905 (Insecta, Lepidoptera): proposed availability as a senior synonym of 'Colias australis Verity, 1911'

S. E. Whitebread, Maispracherstrasse 51, CH-4312 Magden, Switzerland
L. Rezbanyai-Reser, Naturmuseum Luzern, Kasernenplatz 6, CH-6003 Luzern, Switzerland
H. Geiger, Zoologisches Institut, Baltzerstrasse 3, CH-3012 Bern, Switzerland

Abstract. The purpose of this application is confirmation that the specific name alfacariensis Ribbe, 1905 is available for the European butterfly known in English as Berger's Clouded Yellow, and that the often used name australis Verity, 1911 is not available from its first publication.

2481 Elachista Treitschke, 1833 (Insecta, Lepidoptera): proposed conservation, and confirmation of type species designation

E. S. Nielsen, CSIRO Division of Entomology, GPO Box 1700, Canberra, A.C.T. 2601, Australia
I. W. B. Nye, British Museum (Natural History), Cromwell Road, London, SW7 5BD, U.K.

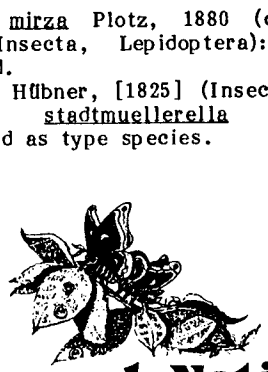
Abstract. The purpose of this application is the conservation of the name Elachista Treitschke, 1833 (leaf-mining microlepidoptera) by the suppression of the unused senior homonym Elachista Kollar, 1832. In addition the Commission is asked to confirm that the type species of Elachista Treitschke, 1833, is E. bifasciella Treitschke, 1833.

The following Opinions were published in the Bulletin of Zoological Nomenclature, Vol 45, Part 1 on March 25, 1988.

Opinion

1478 Lycaena mirza Plotz, 1880 (currently Azanus mirza; Insecta, Lepidoptera): specific name conserved.

1479 Antispila Hübner, [1825] (Insecta, Lepidoptera): Antispila stadtmuellerella Hübner, [1825] designated as type species.



Research Notices

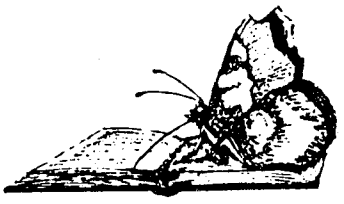
● Research and proposed publication notice: Prior to Ham Tyler's death, he was working on a book on the American Papilionidae. His wife, Mary, has asked Keith Brown (Brazil) and Kent Wilson (Oklahoma) to complete the MS, prepare the color plates, and follow the project through to the publishing. Swallowtail Butterflies of the Americas (Papilionidae), A Study of Biological Dynamics is progressing well. The color plates are being done by the same method as MONA. As a major portion of the project is based on the immature stages, it is urgent that preserved immatures and color 35mm slides be made available for study. If the color slides have good enough resolution they will be incorporated into the immature plates. Credit, of course, will be given along with other data. We especially need Latin American material and slides of the following: females and immatures of any of the Protesilaus, Thyastes, Dolicaon, Tysithous, Marcellus, species group. Immatures are needed of Machaonides, Clodius, Phoebus, Anchisiades, Torquatus, Homerus, Ascainus, Aeneas, Lysander, Polydamus and Philenor species group. Please contact Kent Wilson, P.O. Box 1097, Edmond, Oklahoma 73083-1097.

● WANTED: Mexican specimens of Polygonia haroldi, P. g-argenteum and Vanessa cyanomelas. I have been working on the taxonomy, systematics and natural history of the tribe Nymphalini for many years. This consists of Polygonia and Nymphalis plus perhaps Araschnia (Aglais and Inachis are synonyms of Nymphalis) according to my definition. So far, however, I have been unable to examine any material from Mexico, and the literature references are rather obscure and few and far between. I would like to buy or borrow some of the above named specimens. Please contact Joseph Belicek, 15004 96th Ave, Edmonton, Alberta T5P 4M7 Canada.

● I am interested in comparing populations of the Saturniid moth Eacles imperialis from different parts of its range. I am looking for people in the vicinity of breeding populations of this moth, especially those representing the northern subspecies pini and any other populations in the vicinity of the northeast. It is my hope to find someone to help in obtaining eggs and adults this summer from these areas for the purpose of taxonomic and life-history comparative research. The flight season for the species varies but should fall between mid-June and late July in these areas. I would appreciate hearing from anyone with assistance to lend, pertinent information to relate, or both! Paul Z. Goldstein, c/o Deane Bowers, Museum of Comparative Zoology, 26 Oxford Street, Cambridge, MA 02138. During the month of June I can also be reached at the following address: RFD 321 Makonikey, Vineyard Haven, MA 02138. Tel. (617) 693-1811.

● WANTED - Live (or fresh frozen) specimens of Limenitis spp., Adelpha spp., and Ladoga spp. are needed for on-going research studies, and lab-cultures. I am seeking "random" samples of 12-30 wild-collected individuals from local populations for electrophoretic studies. Live eggs, larvae (including those overwintering in hibernacula), pupae, and adults (any condition) will be accepted. Especially needed are populations from the southern, western, and southwestern U.S. Forms needed include L. populi (from Japan and Europe), L. arthemis-astyanax (esp. the northwestern rubrofasciata subsp.), L. archippus (incl. floridensis, obsoleta, and watsoni subspp.), L. lorquini, L. weidemeyerii (all subsp. of both), Adelpha bredowii (all subspp.), other Adelpha spp. (Mexican or neotropical), and Ladoga camilla (from Japan, Britain or Europe). I will purchase live wild-caught individuals at $.50 - $1.00 each, and fresh wild caught females (from which 30+ fertile eggs can be obtained) for $5.00 each, or else I will exchange bred specimens or stocks, as available. Specimens will be needed for at least the next three years (1988-1991). Write or call (U.S. only) for details, import permits (if needed), and mailing instructions: Dr. A. P. Platt, Department of Biological Sciences, U.M.B.C., Baltimore, Maryland, 21228; Phone (301) 455-2241.

Books



NEW BOOK

Butterflies of North Dakota; an atlas and guide by Ronald Alan Royer. Science Monograph Number One, 1988. Minot State University, 500 University Avenue West, Minot, North Dakota 58701. 5½" x 8", Velo binding, 192 pgs, 12 color plates, 1 black and white plate and numerous black and white illustrations. $14.95. This Field Guide size book is a valuable resource for anyone interested in butterflies of the northern prairies. All 142 currently recorded species for North Dakota are illustrated. County and date of capture data are given for each pictured specimen, along with brief descriptions of each species and pertinent information such as food plants and/or nectaring sources and flight seasons. The atlas features state wide county dot maps for all known North Dakota species. Ample space is allowed for notes and for additional species. Potentially occurring species are listed and erroneous records are noted. A glossary and bibliography are included. Particularly useful features for the novice are short lists of butterfly equipment and literature suppliers and names of butterfly organizations. The index lists common and scientific names; scientific names of species are subheadings under the genus name. Faunal Life Zones for North Dakota are described in the Introduction as are the terms used to delineate markings on butterfly wings. The bulk of the book is devoted to the descriptions of the butterflies and to the atlas which gives their distribution. The color plates are excellent although the small size of the book has necessitated a 60% reduction in size for most specimens.

June D. Preston

NEW MANUAL

Lepidoptera is a recent publication from CAB International and the first in a new series entitled Guide to Insects of Importance to Man; a set of practical manuals designed for university, training course, reference and laboratory use. Lepidoptera is primarily concerned with pest and beneficial species and provides a practical introduction to all the Lepidoptera through illustrated keys and detailed accounts at family and sub-family level. Priced at only $29.00 (spiral bound)/$52.25 (hardback), this 262 page manual is an ideal source reference work as well as a practical laboratory manual, which is surely of significant interest to many members. CAB International is a not-for-profit organization providing agricultural, medical and social sciences information to researchers, educational establishments and corporations worldwide. For more information or to order, write: CAB International, Wallingford, Oxon OX10 8DE, ENGLAND.

BOOK REVIEWS

Genetics and Ecology of a Hybrid Zone in Hyalophora (Lepidoptera: Saturniidae). Michael M. Collins, 1984. Univ. Calif. Publications in Entomology 104:1-93. Collins' thesis work on Californian silk moths hybridity is a deft blend of ecological, genetic, laboratory, and field approaches. His focus is on the dynamics of the Sierra Nevadan hybrid zone between the western Hyalophora euryalus and the north-central Hyalophora gloveri. He employs morphometrics to characterize and classify pure and hybrid moths, breeding programs to establish levels of hybridity in wild and lab populations and the presence/absence of genetic barriers, and rearing studies to assess fitnesses of immatures from the various morphological classes.

The principal findings are: the hybrid zone is geographically broad; hybrids show at least some increased vigor in the field compared to parental stocks; no striking ecological or ethological divergences exist between the taxa, in or outside the hybrid zone; topography mediates genetic exchange from west to east; and the hybrid zone appears to be rather stable, perhaps in equilibrium, at least over recent ecological time.

This small monograph is not for the casual reader. It contains quite a dose of data (pp. 39-93) in which -- if it's you're cup of tea -- it's a pleasure to browse to see Collins' arguments, and otherwise. I found the accompanying statistical testing a little wanting, but satisfactory overall. Although a few of the Tables are hard to read, the graphics are all well thought out and executed, and easy to follow. It is also refreshing to hear someone speak honestly throughout about methodological stumbling blocks that one always encounters doing field work (this invariably raises my confidence in the veracity of the piece of research in question).

Lawrence F. Gall
Entomology, Peabody Museum
Yale University, New Haven, CT

The Monarch Butterfly: International Traveler by Fred A. Urquhart. Nelson-Hall Publishers, October 1987. List Price: $39.95. 218 pages, 24 color plates.

This handsomely illustrated volume discusses all aspects of the Monarch: its development, habits and of course its migrations. The author was the first to publish information on the Mexican over-wintering site of the Monarchs (National Geographic, August 1976 and Journal Lep. Soc. Vol. 30, No. 3; Pp. 153-158; Sept. 1976) which culminated years of marking and tagging studies.

This book is a chronicle of the author's lifetime studies of the Monarch and is complete and well written. It is written entirely in the first person and the uninitiated might well assume that the author was the only person studying the Monarch in the last 40 years. The brief set of references at the end do nothing to change this implication.

Ron Leuschner

Butterflies of the Neotropical Region, Part IV, Nymphalidae (Partim), by Bernard D'Abrera, 1987. Hill House, Victoria, Australia; 150 pp. excluding front matter. Distributed by BioQuip Products, 17803 LaSalle Ave, Gardena, CA 90248. Price $185.00 + $5.00 shipping.

This is the fourth volume in the author's neotropical series (numbered pp. 528-678), and the cost per page is 25% above its predecessor. There is no indication in the text of the subfamilies treated; the coverage includes roughly the Limenitidinae, Nymphalinae, and Apaturinae, with some omissions and other inclusions. The primary arrangement of the index is by species name only, so that the reader cannot look up family or genus names. I find this aggravating since the book also lacks a Table of Contents. Page utilization is better in this volume than its predecessor, but there is still considerable blank space. In general, the color reproduction is excellent, especially of their iridescent blues and greens associated with the genera Eunica, Perisama, Diaethria, Callicore, Asterope, Agrias, Prepona and Doxocopa. In several instances, it seems that specimens in better condition could have been selected than those used to illustrate Atlantea tulita, Polygonia haroldi and a few other species. As in previous volumes, no ( ) are used with author names to indicate specific names described under generic names different from those shown in the book. On p..638, the author has probably validated the name Adelpha holli D'Abrera, although the taxon is referred to a manuscript name used by Forbes.

In general, the text follows recent revisions by Turner (Junonia) and Jenkins (Myscelia, Epiphile). The

nomenclature in Agrias is that suggested by Manfred Spaeth. The revisions by Jenkins of Asterope and Eunica were not available to the author at the time volume IV went to press, although they are noted. In several instances (the introductions to Asterope, Myscelia, Prepona [sensu lato], Agrias), D'Abrera espouses his personal philosophy concerning matters taxonomic and phylogenetic. I suspect that these comments will not be taken kindly by some readers of his book. As noted by the author, the order of the genera and species generally follows the arrangement of the collection in the British Museum (NH). Asterocampa leilia (which is sympatric with Asterocampa celtis montis in Arizona) is shown in the combination Asterocampa celtis leilia.

As is the case with previous volumes in this series, the current volume will probably prove useful to those who can afford it. As is also the case with prior volumes, the text is minimal, and there are extensive color photos of live butterflies and habitats included in the front matter.

Clifford D. Ferris
Laramie, WY

The Butterflies of Costa Rica and their Natural History (Papilionidae, Pieridae, Nymphalidae) by Philip J. DeVries. 1987, Princeton University Press, 41 William Street, Princeton, New Jersey 08540 U.S.A. xxii plus 283 pgs, 50 color plates and 42 pages of Appendices, Bibliography and Index. Cost is $22.50 paperback or $60.00 clothbound. This excellent medium-sized book, 6¼" x 9¼", provides comprehensive coverage of the Papilionidae, Pieridae and Nymphalidae families in Costa Rica. It focuses on the natural history and identification of the 560 members of these families that occur in this small Central American country. Most of these butterflies are depicted on the color plates, frequently with both sexes shown and often also both dorsal and ventral views. Within the text there are 21 black and white photographs, most of which are of the various habitats in the country. There are 27 line drawings, mostly for identification of pupae and larvae or showing wing veination to help in identification of Ithomiids. The book is basically divided into three sections. The section on The Biology and Systematics of Butterflies briefly discusses butterfly life cycles, morphology, defenses against parasites, predators, etc, mimicry, systematics and the collection and study of butterflies. The section on Faunal Regions, Habitats and Butterfly Diversity delineates the various regions of Costa Rica and gives an idea of which genera are likely to be found in a region. A map is included showing region boundary zones and species pockets. Costa Rican butterfly diversity is also compared with that of Malaysia and Liberia. The bulk of the book (222 pages) is devoted to the Guide to the Butterflies of Costa Rica. Each species is discussed, using forewing length as a size comparison, with a description of the adults. Early stages are described when known and hostplants given. The species range, habits and habitat are addressed and frequent comparisons noted with similar species and distinguishing characters pointed out. Subspecies are given when pertinent. Because of the great amount of information given in this section the print is very small, but still readable. The color plates are good for diagnostic purposes with similar species pictured side by side. Unfortunately, the size reduction necessitated by the large numbers of species illustrated causes some detail to be lost, especially on the smaller specimens. The color plates are referenced back to the text which is a big plus in using the book, and the color reproduction is quite good. Indexing is by genera, so one must know which genus a species is in before being able to find it, but a good systematic check list of all treated species is a big help in this respect. This is an excellent text for anyone interested in neotropical butterflies, since many of these species have wide ranges. It is to be hoped that someday a similar treatment of the remaining families of the Rhophalocera will be undertaken.

June D. Preston

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The Market Place

Buy • Sell • Exchange • Wants

Items submitted for inclusion in this section are dealt with in the manner set forth on page 9 of the Jan/Feb 1988 NEWS. Please note that in keeping with the guidelines of the Society, henceforth no mention of any species on any threatened or endangered species list will be accepted in these items. This will include all Ornithopterans now and for the forseeable future. Items will be accepted from members only and will be printed only once unless entry in the maximum of two successive issues is requested. Please keep items short. A maximum of 100 words is allowed. SASE calls for a self addressed stamped envelope.

The Society, as always, expects all notices to be offered in good faith and takes no responsibility for the integrity of any advertiser. Any disputes arising from such notices must be resolved by the parties involved outside of the structure of the Society.

FOR SALE: Ova of A. io neomexicana, and A. zephyria. Things look very good this year. I have a number of cocoons, and should be able to get a number of wild matings. Sorry about last season. S.A.S.E. please. Jim Coleman, 5812 Leta Rd. N.E.; Albuquerque, New Mexico 87107. U.S.A. Phone [505] 345-7279.

OFFERING FOR EXCHANGE: Many rare European Papilionidae in ex-pupa quality offered. Desired are A-1 fresh pairs of the less common American Parnassiinae (i.e. eversmanni, phoebus sternitzkyi, p. behrii, p. apricatus) and better Asiatic Parnassiinae, plus pupae and eggs of Sericinus and Luhdorfia. Write to Nardelli Uberto, Via Cosma e Damiano 9/2, I-38100-Vela-Trento, Italy.

FOR SALE: Evenus coronata (Ecuador) this is one of the largest and most beautiful of the Lycaenids (sapphire blue dorsally & emerald green ventrally), Morpho sulkowskyi (Ecuador), Papilio arcturus (pairs), and many more interesting species. Bred pairs of Papilio bairdii (forms brucei & bairdii) from Utah are still available. For other rare species write for list of Hard-to-Get Lepidoptera of the World. Send S.A.S.E. to: Wayne H. Whaley, Wymount Terrace 8B-477, Provo, Utah 84604, U.S.A.

LIVESTOCK WANTED: Ova or pupae of Battus philenor, Nymphalis milberti or other species whose larval foods are Aristolochia or Urticacae (nettle). Dr Stanley Temple, Sr. Chemist, Research and Development, E. I. DuPont de Nemours & Company (INC), Chemicals & Pigments Dept, Environmental Services, Deepwater, NJ 08023. Phone (609) 540-3759.

WANTED: The following books and publications. The Butterflies of the West Coast by W. G. Wright, On the Sphingidea of Peru by A. M. Moss, Butterflies of Cuba by D. Marston Bates, "Monograph of the Genus Erebia" by B. C. Warren, and Birdwings of the World by D'Abrera. Please state condition and price. ALSO FOR SALE: Collapsible bait traps and portable light traps, for information and prices, contact Leroy C. Koehn 2848 NW 91st Ave. Coral Springs, FL 33065. Telephone (305) 344-3873 (home) or (305) 561-8301 (work).

FOR SALE: Catalogue of Lycaenidae & Riodinidae (Lepidoptera: Rhopalocera), by Bridges (1988, 811 pp, 8.5 x 11 in., hardbound). A six-part catalogue of 16475 species-group names in these two families. The bibliography lists more than 4000 publications. Published by, and available from, the author, Charles A. Bridges, 502 W. Main, #120, Urbana, Illinois, 61801. $95.00 in North America, $97.50 elsewhere.

WANTED: Contacts for exchange of Sphingidae specimens of all genera, with a special request for live or dead specimens of the genus Hyles (Celerio), in particular Hawaiian and South American specimens (excluding H. lineata and H. gallii intermedia from the North American Continent). ALSO wish to obtain the publication On the Sphingidae of Peru by A.M. Moss. Contact Hendrik J. Meekel, P.O. Box 549, Pitt-Meadows, British Columbia V0M 1P0, Canada or phone (604) 465-7929.

WANTED: Larvae of Saturniidae in fourth or fifth instar stage. Also larvae and pupae of N. American butterflies. Send price lists to Anthony Cheevers, 1 Clifton St, Boston, Mass 02119. Or phone (617) 427-7528.

WANTED: Ova and pupae of Attacus atlas sp, Rothschildia sp, Coscinocera hercules and Eupackardia calleta. Prefer to buy from American collectors who rear the species in the U.S. Please send list to Joe Myers, 2032 Jade Ct, Grove City, Ohio 43123.

FOR SALE: Large and rare horned coleoptera from Africa, Asia and S. America. Send Want List and SASE to Ken Deitcher M.D., Box 5162, Albany, N.Y. 12205.

WANTED: A used Widefield Dissecting Microscope, zoom-type (not click), preferably with incident overhead variable shading and trans-base illumination. Mail details of features and price to Sam Webber, Rt. #2, Box 98, Piedmont, MO 63957 USA. Phone: (314) 856-4540.

MEMBERS' COMMERCIAL NOTICES....

TRANSWORLD BUTTERFLY COMPANY-LS, Apartado 6951, San Jose, COSTA RICA, Central America: OUR LATEST MAIN CATALOGUE includes new specimens from many countries. Specialists in South American region including 50 species of Morpho. South American Lepidoptera books including THE GENUS MORPHO by P. Blandin. Catalogue for $1 or $6 for a years' monthly catalogue/newsletters. LEPIDOPTERISTS/NATURALISTS PROGRAM IN COSTA RICA. New low prices, 1988 brochure on request.

APOLLO BOOKS, LUNDBYVEJ 36, DK-5700 SVENDBORG, DENMARK. The Lepidopterists' bookseller. BUTTERFLIES OF THE WORLD. NEOTROPICAL REGION, VOL. 4 is available now! DKK 1,225. ATLAS OF THE CHARAXINE BUTTERFLIES OF AFRICA. By S.F. Hennig. Publication expected in 1988. Approx. 460 pages. Illustrated throughout in color. Approx. DKK 995. A MONOGRAPH OF THE BIRDWING BUTTERFLIES. By J. Haugum & A.M. Low. Vol. 1: Genus Ornithoptera. 308 pages, 277 figs., 12 color plates, DKK 740. Vol. 2: Troides and related genera. 355 pages. 434 figs. 16 color plates, DKK 940. SPHINGIDAE MUNDI. Hawk Moths of the World. DKK 1170. Do you know ENTOMOLOGICA SCANDINAVICA, an international journal on systematic entomology, and the only entomological journal in the world where you can subscribe to the papers on lepidoptera only! Ask for a free leaflet on Entomologica Scandinavica. Ask for a free copy of our catalogue #6.

FLORA AND FAUNA BOOKS, P.O. Box 15718, Gainesville, FL 32604, USA. Complete natural history book service. All new book list prices reduced 5% or more. Current sale items (until September 30, 1988): Covell, Field Guide to Moths, $8.95 (pap.); DeVries, Butterflies of Costa Rica, $16.96 (pap.); Douglas, Lives of butterflies, $38.95; D'Abrera, Butterflies of S. Am., $16.95 (pap); Ferris/Brown, Butterflies of Rocky Mts., $14.50 (pap.); Gerberg/Arnett, Butterflies of Florida (6/88), $8.75 (pap); Klots, FG to Eastern Butterflies, $8.95 (pap); Opler/Krizek, Butterflies East of Great Plains, $39.95; Scott, Butterflies of N. Am., $39.95; Shull, Butterflies of Indiana, $19.95; Tilden/Smith, FG to Western Butterflies, $9.95 (pap); Heitzman, Butterflies & Moths of Missouri, $9.95 (pap); Miller, Oaks of N. Am., $9.95 (pap). Postage/handling extra ($1, plus 50c/book). Individuals please prepay. Ask for free catalogs.

MICHAEL E. SNOW, Apartado 73, Siquirres, Costa Rica. Collecting and Photographing butterflies in Costa Rica's Atlantic Rainforest (60-550 meters = 200-1800 feet) with all the comforts of a private home. Weekly rates are available for single, or double room, including transport to and from Siquirres, lodging, meals and guide. Expeditions to Tortuguera Canal (Morphos) and other areas extra. Excellent conditions for attracting nocturnal species. Write for brochure and check list of Papilionidae, Pieridae and Nymphalidae, plus cost information.

From: The Lepidopterists' Society
Address Correction Requested:
Allen Press
P.O. Box 368
Lawrence, KS 66044

J. Donald Eff
445 Theresa Drive
Fairview Estates
Boulder, CO 80303

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DEADLINES: Material for the Jan/Feb issue should reach the NEWS EDITOR by Dec 1 of the previous year, and that for the Mar/Apr issue by Feb 15, for the May/June issue by Apr 1 and for the July/Aug issue by May 1, the Sept/Oct issue by Aug 15 and the Nov/Dec issue by Oct 15. Reports for the SEASON SUMMARY must reach the ZONE COORDINATORS listed on the front cover no later than the 5th of January. NEWS EDITOR is June Preston, 832 Sunset Dr, Lawrence, KS 66044, USA. RIPPLES EDITOR is Jo Brewer, 257 Common St, Dedham, MA 02026,USA.

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INFORMATION ABOUT THE SOCIETY.....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER, James P. Tuttle, 3838 Fernleigh Ave, Troy, Michigan 48083, the full dues for the current year, $25.00 US, together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) $15; sustaining membership $35; life membership $350. Remittances must be in US dollars, payable to the Lepidopterists' Society. All members will receive the JOURNAL (published quarterly) and the NEWS (published bimonthly). A biennial membership directory will comprise the last issue of the NEWS in even-numbered years.

Changes of address (permanent ones only), Additions or Changes in Telephone Numbers or Areas of Interest and Information about Mailing List Rental: Contact the ASSISTANT SECRETARY, Julian P. Donahue, Natural History Museum of Los Angeles County, 900 Exposition Blvd, Los Angeles, California 90007, USA.

Information on Membership and other aspects of the Society must be obtained from the SECRETARY, Dr. Richard A. Arnold, 50 Cleaveland Rd, #3, Pleasant Hill, California 94523, USA.

Requests for Missed Issues (i.e. those not delivered although dues have been paid on time) should be sent to the TREASURER, James P. Tuttle, address above, or the PUBLICATIONS COORDINATOR, Ron Leuschner, address below. Defective issues will also be replaced by the TREASURER. Do not request these of the NEWS editor.

Manuscripts submitted for publication in the JOURNAL are to be sent to Dr. William E. Miller, EDITOR, JOURNAL of the Lepidopterists' Society, Department of Entomology, University of Minnesota, St. Paul, Minnesota 55108, USA. See the inside back cover of a recent issue of the JOURNAL for editorial policies.

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AVAILABLE PUBLICATIONS OF THE SOCIETY..... Order from the PUBLICATIONS COORDINATOR, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, USA.

CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO (Memoir No. 2), Lee D. Miller & F. Martin Brown: includes references to original descriptions and location of type specimens. Members and subscribers, $10 cloth, $5 paper; non-members, $17 cloth, $8.50 paper, postpaid.

COMMEMORATIVE VOLUME, 1947-1972: a 25-year review of the Society's organization, personnel, and activities; biographical sketches; JOURNAL 25-year cumulative index by author, subject, and taxon; clothbound. Members and subscribers, $6; non-members, $10, postpaid.

1986 MEMBERSHIP DIRECTORY (current to November 1986). Biennial directory of members and their addresses, with geographic and interest indices. Not available for commercial use. (NEWS #6 for 1986). $5.00 postpaid.

BACK ISSUES of the JOURNAL and of the NEWS of the Lepidopterists' Society. For a list of the available issues and their cost, postpaid, send a SASE to the SECRETARY or to the PUBLICATIONS COORDINATOR.