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Guest Editorial

SPEAKING OUT: WHY AND HOW TO COLLECT LEPIDOPTERA

One of the greatest assets of the Lepidopterisis' Society resides in the strength of the many amateur enthusiasts who make up the majority of the membership. The leadership of the organization includes avid scholars and professional entomologists who devote much time to the study of these insects, and periodically a call is made to encourage the development of the amateur ranks, realizing that many have little background in biology or ecology and come from quite varied educational and occupational experience. The purpose of this article is to recognise the value of the amateur to the Society, as well as to encourage the development of amateur collecting above the level of "postage stamp" collecting, by promoting useful collecting practices which enhance the goals of the Society.

Most of us are drawn to lepidoptera via the simple aesthetic awareness of the remarkable variety of colorful forms and interesting shapes of these fascinating animals. Unfortunately, the awareness stops here for too many, and bogs down with simple random field collecting of adults. Others proceed, out of curiosity, to investigate the life histories of species of special interest. Certainly we all read about host plant relationships and life histories, but often wrongly assume that what we read applies to all populations and subspecies, when much regional preference remains to be explored. It is in this area that the amateur can make valuable contributions, by concentrating on the local species.

First, since we are dealing with living creatures, some time should be devoted to better understanding of these animals, rather than simply collecting adults to treasure in cabinets. We should make field observations while collecting; log findings in a notebook. Write down not only the species found, but also temperature and weather conditions, jot down times of day, nectaring sources, apparent plant relationships; watch for courtship and mating behavior, and observe natural predation by birds, lizards, spiders, etc. This sort of information, combined with new distributional records, will make the Season Summary more useful and raise it above the level of "brag sheet" of individual accomplishments. Too many collectors spend virtually all of their time obsessed with the acquisition of adults to add to personal collections and for trade, spending virtually no time engaged in the field studies of the species so fervently persued. Granted, we all view collecting from different points of view, but the Society should encourage collecting from a need-to-know rather than a need-to-have perspective. Realizing that I have probably raised a few hackles by now, the intention is to demonstrate that we can be great and gluttonous predators ourselves, especially where rare or extremely local species are involved.

There is indeed a great need to collect, simply to find out what exists where and when. Such general collecting, when documented, helps provide needed data on flight period and distribution, as well as providing specimens for taxonomic studies. Trading specimens offers access to material for comparison and enables many to enjoy lepidoptera they would not be able to capture and study otherwise. However, it ends here for too many, since study of adults is only a small portion of the overall situation. Some of our field time should be spent in active search for ova, larvae, and pupae; larvae are less well-known than adults, and no one can claim to having seen the larvae of all the species in his collection. Extra effort regarding the immature stages will help uncover new host plant information, help clarify old (and often vague or erroneus) records, yield information on parasites, and better define the status of many of our species and subspecies. This type of study offers valuable insight into habitat associations and life histories, and increases familiarization with plants and environment. which will aid in locating new colonies in other localities. Learning should be the prime motivation for collecting lepidoptera, and far more can be learned from a live butterfly or moth than from a dead one.

Another productive activity is rearing. A major goal of most lepidopterists is to obtain reasonable series of "perfect" specimens, and there is no better way to obtain them than to rear them yourself. Ova may be obtained by confining a live female in a suitable mini-environment designed to stimulate oviposition; many moths will deposit eggs freely on the inside of a paper bag, while butterflies require sunlight, a nectar source, and often a sprig of host plant. Larvae of many species can be easily field-collected, as can cocoons of many moths. Much can be learned about camouflage and concealment tactics in this fashion. By saving a few females from which to obtain ova, a high percentage of offspring can be reared to adulthood, therby harvesting the progeny which would normally be lost to disease, predation, and weather factors. This is especially true for species with elusive or hardto-obtain adults; rearing will require far less time than field-collecting an equivalent series. Rearing is a fascinating activity, and removes fewer females from the natural system, something to be considered when dealing with local or scarce species. Fully recognizing the fact that many parents or spouses regard the only good bugs around the house as the dead ones, there is worthwhile argument for trying your hand at rearing. By combining what you have read with what you can observe in the field, it is possible to unveil new host plant information and even to discover unknown life histories, both very valuable information worthy of mention in the Season Summary, if a formal paper is not intended.

The collecting of moths needs to be greatly encouraged. The majority of the North American butterflies are known, at least as adults, but our moth fauna is far from being understoood, especially in terms of life histories, distribution, and even speciation. Anyone just developing an interest in lepidoptera should give strong consideration to the moths, where the gaps in our knowledge are still immense. We do need to study the butterflies, and there is no objection to specialization. However, the moths greatly outnumber the butterflies, are equally interesting to study, often are as aesthetically attractive to the eye, and certainly present a real challenge in terms of identification. The unknown can often be much more excting to deal with than the known.

Also to be addressed is the conservation of our rarer species, especially those with THREATENED or ENDANGER-ED fereral status. The pressure on Florida members to capture, for exchange, species such as <u>Papilio aristodemus ponceanus</u>, <u>P. andraemon bonhotei</u>, or <u>Eumaeus atala</u> <u>florida</u> is intense. This undoubtedly true elsewhere. Some collectors refuse to respond to such requests, while others will openly collect all within reach "before it's too late". (The latter, who place ego-satisfation above the ultimate survival of a species, should revert to amassing stamps, coins, or matchbook covers.) Fortunately, most of the butterflies are very common insects under no environmental duress, enjoying a reasonable distribution and proliferation. Those special cases which involve rare species very limited by host plant or habitat should receive utmost respect from all collectors. The designations THREATENED or ENDANGERED seem to serve as stimuli to collect, rather than to observe and protect, and few seem satisfied with a male or a pair. Speaking from the background of an environmental biologist, I am concerned about the removal of each female (and her reproductive potential) and viable larvae from such fragile populations. We do not know how many are needed to maintain a relatively stable population under stress conditions, nor how prolific these species are, nor how many ova and larvae are needed to offset natural attrition. Rear-release might be a suitable compromise, and might help build up wild populations in suitable habitat while allowing for the removal of a few specimens. It is illegal to remove immatures of threatened species, yet this is a common practice today. Conservation will continue to be an individual interpretation of moral and ethical values, it seems. We should all be aware of the situation. Photographic study is badly needed in these cases, and offers another alternative to collecting threatened species.

I hope these comments will serve to inspire a few of you, and that others will broaden their collecting practices in the ways mentioned which will serve the goals of the Society. I hope your personal endeavors will be justifiably rewarded by taking heed, so that we can all benefit by working together towards a goal of better understanding our lepidoptera.

Dave Baggett

(The Editor invites comments and reactions to the above from any member, as well as presentations of other subjects, relating to the goals of the Society, which merit serious consideration and debate.)

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It is often worthwhile to shake out old ideas and recycle them, which is what Dave Baggett has been doing, unbeknownst. Compare the following, written 62 years ago by Theodore Roosevelt for Natural History Magazine, reminiscing about his contributions in the field of natural history:

"....Here again, this contribution, as far as I was concerned, consisted chiefly in seeing, recording, and interpreting facts which were really obvious, but to which observers hitherto had been blind, or which they had misinterpreted partly because sportsmen seemed incapable of seeing anything except as a trophy, partly because stay-at-home systematists never saw anything at all except skins and skulls which enabled them to give Latin names to new 'species' or 'subspecies', partly because collectors had collected birds and beasts in precisely the spirit in which other collectors assembled postage stamps."



1980 ANNUAL MEETING.....

Programs for the 1980 Annual Meeting (Gainesville, Florida, June 19-22) have been mailed to all members in the U.S., Canda, Mexico, and the Caribbean Islands. If you know in advance that you will be attending, please pre-register. This will facilitate planning for the details for the banquet, field trips, etc. Transportation from the airport to your motel or dormitory will also be provided. If you haven't received your program or you need pre-registration forms, etc., please contact Dale H. Habeck, Department of Entomology & Nematology, Archer Rd. Lab., University of Florida, Gainesville, FL 32611.



Dear Sir,

It is extremely unlikely that the cream colored larvae of Automeris io (NEWS, p.8, Jan/Feb '79) will give rise to imagines that are in any way different from normal. So far as I know there is only one recorded case of linkage between a mutant larva and a mutant imago: the British Lasiocampa quercue L., f. olivacea-fasciata, which is dark with a greenish, instead of a tawny band on the forewing, and a blackish form of the larva. The larval and imaginal conditions were formerly thought to be due to the same gene. It has since been found that in some areas dark larvae always produce dark imagines whilst normal larvae never do. In other places the two conditions are independent. It is now thought that there are two closely linked genes, one responsible for the larval and the other for the imaginal condition.

The ratio of normals to mutants in this breed (31 : 11) is almost the exact expected ratio (33 : 11) of a heterozygote x heterozygote pairing with the mutant due to a recessive gene. It is hoped that the strain will be carried on to confirm this inheritance. D.G. Sevastopulo, F.R.E.S. Mombasa, 26 . 111 . 80.

Dear Ripple,

Blueberry is merely a folly If *henrici* feeds upon holly It took Ron Gatrelle To sound out the knell Of Forbes, Klots and Cook-Watson by golly

Re. Gatrelle's letter in NEWS No. 1, 1980. The '38 hurricane never blew down any <u>holly</u> trees in Putnam, since there aren't any nor ever have been. Lots of maples, oaks, ashes, white pines etc. went down and let light in to the lower layers of a swamp. But we do have the Black Holly, or Winterberry (*Ilex verticillata*) and maybe other deciduous *Ilex*. At Putnam, *henrici* 1938 (a couple), 1957 (one) and 1978 (one). Sometimes abundant in the Coastal Plain - very prone to sit on the upper leaf surfaces of Holly (*opaca*) and Mountain Laurel (*K. latifolia*) sunning and "slanting". Y'rs in bonds,

Bill Klots, Penhaven, Five Mile Rd, Putnam, CT 06260.

Dear Jo,

I read with interest Ron Gatrelle's letter in the Jan/Feb issue of the NEWS in which he stated that he had found no valid records of *Vaccinium* as a host of *Callophrys henrici*. I would now like to add by own comments. In the spring of 1978 I reared *henrici* on *Vaccinium* from Cape May Co., N.J., and on red bud from York Co., PA. I have also reared *henrici* on *Ilex* from Volusia Co., FL.

Ilex is indeed the primary host of *henrici* in the southern U.S.. but not in New Jersey. My experience with *henrici* indicates that the flight period is closely correlated to the time when its host plant is in flower and is pushing out new leaves. My confined 99 from N.J. oviposited on flowers and flower buds of Vaccinium. The larvae ate only flowers and refused leaves, unlike those from PA on redbud, which ate flowers and leaves. *Ilex* in southern N.J. often grows in association with Vaccinium. When I collected henrici in 22 April 1978 in Cape May Co. N.J., I noticed many of them perched on *Ilex* trees as well as visiting blueberry blossoms. Those on *Ilex* were overwhelmingly males engaged in territorial behavior. At this time the *Ilex* showed no sign of buds or flowers, possessing only old tough leaves from last year's growth. *Henrici* larvae will not eat old tough leaves. Only flowers & fresh young leaves are accepted. Eggs generally hatch within five to six days following oviposition. Any larvae from eggs laid on *Ilex* at this time in southern N.J. would be doomed to starvation.

When I collected *henrici* in Volusia Co., FL on March 22, 1979, the *Ilex* trees were starting to flower and buds were beginning to open. It is my belief that a plant must be in this condition when the adults are flying if it is to serve as a host for *henrici*. Regards, Richard Bosco, 150 Ridge Pike # 201, Lafayette Hill PA 19444.

Message from Ripples Editor:

In January a letter to us from Mecky Furr of 7925 Cross Pike, Germantown, TN, 38138, she reports having caught 2 melanic butterflies a month apart in time, and at opposite ends of the state of Tennessee. At our request she has sent us slides of these two butterflies. Since they are unlike anything so far seen in this column, we thought them well worth publishing. Here they are. The first one, caught on August second, 1979 in Great Smoky Mts. National Park, is a *P. glaucusd* more than 3/4 black. The second, taken while flying over *Passiflora* off Winchester Rd, 1 mile south of Germantown, is a *Euptychia claudia*, apparently a *d* also.



Papilio glaucus 3 August 1979, Little Pidgeon R., Sevier Co., TN



Euptoieta claudia September 1979, Winchester Rd., Shelby Co., TN

Message, via RIPPLES, for Philip A. Holzbauer:

Dear Philip,

My copy of the NEWS of the Lep Soc for Jan/Feb came today. Your troilus is, I am sure, Papilio troilus ab. radiatus Strecker, 1900 (see p. 36 of the Dos Passos List, Lep Soc Memoir No. 1, 1964). Your specimen is in excellent condition. The one taken by D. B. Mackey in Washington D.C. on 10 Nov. 1907, figured by Austin Clark in "The Butterflies of the District of Columbia & Vicinity", USNM Bulletin 157, 1932, plate 46, wasn't.

Best wishes, sincerely, Bryant Mather, 213 Mt. Salus Drive, Clinton, MS 39056.

(Items for *RIPPLES* should be sent to: Jo Brewer, 257 Common Street, Dedham, MA 02026.)



ATTENTION: BUTTERFLY PHOTOGRAPHERS.....

The NEWS has received the following notice from Chanticleer Press in New York:

"We are preparing <u>The Audubon Society Field Guide to</u> North American Butterflies by Robert Michael Pyle, author of <u>Watching Washington Butterflies</u>. We are seeking original color transparencies of every native and naturalized species as well as eggs, larvae, and pupae. Photographs must be of good quality and of living butterflies in the field. Mounted specimens are not acceptable.

"We will consider existing material as well as any speculative work shot this season. We will pay for all work used, return all chromes, and give credit. Please immediately send list of material available. Do <u>not</u> send transparencies until we answer your response.

"Reply to: Butterfly Editor, Chanticleer Press, 424 Madison Ave., New York, NY 10017."

BOOK NOTICE.....

Mariposas de la Peninsula Iberica, Volume IV (Butterflies and Moths of the Iberian Peninsula; text in Spanish) by Dr. M. R. Gomez-Bustillo et al. (Macro- & Microlepidoptera, ISBN 84-500-6204-7); US \$42.00. Includes review and color plates of the following families: Notodontidae, Thaumetopoeidae, Dilobidae, Lymantriidae, Arctiidae, Hypsidae, Endrosidae, and Nolidae. Other volumes already published (of the projected ten) are: I & II (Rhopalocera & Grypocera) 1974, US \$38.00; III (Cossidae, Cochlididae, Epipyropidae, Zygaenidae, Thyrididae, Ctenuchidae, Lemonidae, Bombycidae, Sysphingidae, Attacidae, Endromididae, Lasiocampidae, & Sphingidae) 1976, US \$38.00. Set of four volumes available at US \$106.00 incl. surface mail postage. SHILAP, Apartado 331, Madrid, SPAIN.

BOOK NOTICE.....

A Monograph of the Birdwing Butterflies J. Haugum, F.R.E.S. & A.M. Low, F.R.E.S. Photographic plates by D. Wilson, F.R.E.S. Volume I. The genus <u>Ornithoptera</u> Scandinavian Science Press Ltd. Klampenborg, Denmark. 308 pp. of full color illustrations. Otherwise illustrated throughout with photographs, anatomical drawings & maps. Foreword by T. Graham Howarth, B.E.M., F.R.E.S.

This is Volume I of 2 volumes, each volume having 3 parts. The parts of Volume I include the 3 subgenera of the genus <u>Ornithoptera</u>. The book is so detailed and so thoroughly documented that it should remain a prime

source of information on the genus for years to come. This is the book which was announced in the May/

Jun 1978 issue of the NEWS, in a 4 p. brochure. An additional 20 p. brochure which includes the table of contents of Vol. I, 6 color plates and the opening pp. of part 3: the subgenus <u>Schoenbergia</u>, will be sent free to interested lepidopterists on request. Write to: Scandinavian Science Press Ltd., Klampenborg, Denmark.

SIXTH ANNUAL NORTH AMERICAN BUTTERFLY COUNT.....

The 1980 Fourth of July Butterfly Count will be held between 21 June and 13 July. Participating groups should select one day during this period to compile a list of species and estimated numbers of individuals of each species observed on that day. Groups planning to repeat counts from preceding years should use the same site as a center for the 15-mile diameter circle which comprises the count area and should sample the same habitats as in previous counts, so far as practical.

For many years North American bird watchers have spent one day at Christmastime counting birds. The same areas are visited each year by teams of local enthusiasts coordinated by experienced leaders. A great deal of comparative data has accumulated on year-to-year fluctuations in population levels, local extinctions, and so on. The results, published in <u>American Birds</u>, have been used to trace range expansions, plot diversity indices, and in other ways, such as in monitoring abundance patterns of familiar species based on an immense data base (Bock, 1979, <u>Natural</u> <u>History</u>, Dec., 7-12).

In 1975 the Xerces Society initiated a comparable count of North American butterflies, centered around the Fourth of July holiday. Beginning with 28 counts in 12 states that year, the number of participating groups and persons has increased each season. In 1979 there were 49 counts in 20 states and one Canadian province, involving more than 270 participants, who tabulated from 3 to 66 species. Eight groups reported more than 40 species, and more than 1000 butterflies were counted at 5 sites. Results are enumerated in the Xerces Society publication, Wings.

Persons interested in starting counts in new areas are urged to do so. It is important to realize that this is not an attempt to compete for the highest numbers with other count areas. Rather, sites should be selected on the basis of their potential as a count center year after year for the forseeable future, not just for richness or rarities. Most of the interest and enjoyment to participants arises from annual comparison of occurrences in their own count area, and isolated counts on visits to distant localities are less valuable.

Even if the July 4 season is not optimum, many interesting comparisons can be produced from annual, standardized counting. For example, the surveys have provided new data on locality and seasonal occurrences, indications of declines or increases in abundance (indicated by average individual butterflies/ party hour), and new host-plant associations.

One person can conduct a count, but experience has shown that parties of two or more generate more data, and depending on the ecological diversity within the count circle, it may be desirable to visit several habitats, which can be accomplished best by several parties. A few rules must be followed in order to make the data comparable: a) an area 7.5 miles in radius from a center, not to be varied from year to year; b) a one-day count of all butterflies collected or sighted (and positively identified, either at species or genus level); and c) accurate records of party-miles and particularly, party-hours spent in the field, as a measure of census effort.

An instruction sheet and forms for recording data are available from: J.A.Powell, 201 Wellman Hall, University of California, Berkeley, CA 94720.

PACIFIC SLOPE MEETING SET.....

The 1980 Pacific Slope Meeting of the Lepidopterisis' Society will be held at the University of Washington, Seattle, 8-11 August. The Theme will be "Plants & Lepidoptera". Field trips in the Cascades are planned. This will be the first time that the Lep. Soc. has met in Bob Pyle Washington State.



Metamorphosis

ROMAN GROTHE

Phillip E. Koenig reports the intimely death of Roman Grothe on 30 March 1980. He will be remembered by many friends as an enthusiastic lepidopterist. He was the first to rear Boloria bellona from Missouri stock, and also reared Papilio joanae and many other species.

RICHARD GUPPY.....

On 25 February 1980 Mr. Richard Guppy, of Thetis Island, British Columbia, passed away following a stroke. He was a charter member of the Lepidopterists' Society and collected insects on Vancouver Island most of his life. He is survived by his wife Honor.

C. S. Guppy



MORE 1979 SEASON SUMMARY.....

ZONE 2: PACIFIC NORTHWEST. Idaho, Oregon, Washington, & British Columbia. Coordinator: Jon H. Shepard (JS). Contributors: S.G.Jewett, Jr. (SJ), Norbert Kondla (NK), R.E.Stanford (RES).

General Conditions: Oregon, cold spring and dry summer; otherwise, too poorly collected to generalize.

IDAHO: No report

OREGON: Moths: SJ reports excellent moth collecting in Harney Co. Butterflies: Lake Co., Greaser Cyn., E. Lakeview May 19 (SJ) <u>Chlosyne leanira</u> nr. alma STATE RECORD. Union Co., Kamela exit I-80N June 27 (RES) <u>P. rapae, C</u>. cardui COUNTY.

WASHINGTON: Grays Harbor Co., Quinault, July 6 (RES) E. vestris, L. lorguini COUNTY; Polites sonora sirus. Ferry Co., Canyon Ck. Campground & Bangs Mt. Rd. July 9, 22 species, <u>S. sylvinus</u>, COUNTY. Lincoln Co., Hawk Ck. Campground n. of Creston, May 19 (JS) <u>P. communis</u>, <u>P.</u> catullus, <u>P. eurymedon</u>, <u>P. multicaudatus</u>, <u>P. rapae</u>, <u>P.</u> napi, P. sisymbrii, C. philodice, S. melinus, L. melissa, G. lygdamus, P. battoides, all COUNTY, and 15 other species. Pend Oreille Co., Leo Lake Rd., Hwy 20, July 9 (RES) P. occidentalis, C. oetus, both COUNTY. Skagit Co.

Rainy Pass el. 4855' July 7 (RES) <u>C. palaemon</u> COUNTY, & nr. Newhalem, Hwy 20 <u>P. rutulus</u>. Stevens Co., Colville July 9 (RES) <u>P. rapae</u>, <u>N. antiopa</u>, <u>D. plexippus</u> all COUNTY; Leo Lake Rd. July 9 (RES) <u>P. campestris</u> COUNTY; Sheep Ck., n. of Northport, May 19 (JS) <u>I. fotis</u> COUNTY.

BRITISH COLUMBIA: n. of Atlin July 7 (NK) P. draco PRO-VINICIAL RECORD (first verified specimen, though reported in old literature where determination doubtful).

ZONE 5 addendum: INDIANA, Ernest Shull, contributor.

From 17 March to 17 November Shull collected 89 species of butterflies and 346 species of moths. While the number of butterfly species was about normal, many species were sparse and a few were very abundant. Many noteworthy moth species were taken at blacklight.

<u>Choice Butterflies:</u> A samoset 12-13 June, Brown Co.* (*=record); <u>E</u>. dion 12 July, <u>H. leonardus</u> 23 Aug., Wabash Co.; <u>N. iole</u> 5 July, Allen Co.; <u>C. muticum</u> 30 July, 17 Aug., Wabash Co.*; <u>E. ontario</u> 27 June, Kosci-usco Co.; <u>L. dorcas</u> 20 July, Lagrange Co.; <u>L. bachmanii</u> 29 July, Union Co.; <u>A. celtis</u> 14 June, thousands in Mongan Mongoo St. For the actioners 12 12 June Morgan-Monroe St. For.; L. arthemis astyanax 12-13 June, Brown Co.; V. <u>cardui</u> Aug.-Sept., Elkhart, Kosciusko Co.; L. anthedon, 12-13 June, Brown Co.

Early Dates: C. eurytheme 22 March; P. coenia 1 Apr.

D. plexippus 3 Apr., Wabash Co. Butterflies at Light: S. calanus falacer 7 July, Kosciusko Co., at UV at 2220 hrs.

<u>Choice Moths: C. catalpae</u> 18 July, Wabash Co.; S. <u>abbotti 4</u> June, Union Co.; D. pholus 21 July, Wabash Co.; P. spraguei 22 June, Lagrange Co.; E. scribona 13 June, Brown Co.; C. inconcinna 29 May, Wabash Co.; C. fungorum

Brown Co.; C. inconcinna 29 May, Wabash Co.; C. fungorum 13 July, Kosciusko Co.; N. acadiensis 21 July, P. iris 7 July, T. delicata, D. scabriuscula, P. umbra 21 July, Wabash Co.; B. pepita 18 Aug., Union Co.; P. balluca 10 July, P. aeroides 21 July, Wabash Co.; P. robiniae 4 June, Union Co.; A. aurea 8 Aug., Brown Co. STATE RECORDS: P. abdominalis 22 June, Lagrange Co.; S. dama 3 Sept., Wabash Co; H. tortuosa 12 June, Brown Co.; O. definita 18 July, Wabash Co.; L. salicis 6 July, P. titea 5 Aug., L. cognataria 1 June, Wabash Co.; L. permagnaria (det. F.H.Rindge) 13 July, Kosciusko Co.; L. unitaria (det. F.H.Rindge) 12-13 June, Brown Co.; X. sospeta 3-4 June, Union Co. X. sospeta 3-4 June, Union Co.



WANTED: Exchange or gift specimens of Callophrys niphon and C. eryphon (Lycaenidae), with full data, from any part of their range, for a study of morphological variation. Series of ten or more specimens from single localities would be ideal. All cooperation will be acknowledged. I have a limited number of Alberta and Ontario butterflies to offer in exchange. James D. Reist, Dept. of Icthyology & Herpetology, Royal Ontario Museum, Toronto, CANADA, M5S 2C6.

** WANTED: Information on the life history of Morpho menelaus (Guyana variety, if possible). Clark Thompson, 2577 United Lane, Elk Grove Village, IL 60007 USA.

OVERWINTERING MONARCHS IN FLORIDA.....

A memorandum generated in the Florida Department of Natural resources and forwarded by Molly Monica indicated the presence of significant numbers of overwintering monarch butterflies in the Wilderness Preserve at St. Joseph's State Park (Gulf County, about 40 mi. s.e. of Panama City); observations by Tom Francis & Buddy Bush:

"We found the butterflies hanging in clumps of varying size, the largest of which was at least four feet long and contained an estimated several hundred individuals. These clumps or groups were scattered in an area of mature slash pines which were draped with vines, either greenbriar or grapevines. The clumps of butterflies were scattered over an area of about one acre. The area where we observed the butterflies was about a quarter mile from St. Joseph Bay, just where the tree line ends and the dunes begin which extend to the St. Joe Spit.

"I estimate there were at least 5,000 individuals in the area. Due to rain and mist conditions no photographs were taken. (These observations 13 January 1980.)

"I returned to the same area 13 February 1980. Only three or four individuals were observed during an hour of searching."

PROTECTION FOR THE MEXICAN MONARCH SITES.....

Information provided by Molly Monica indicates that Professor & Mrs. Fred A. Urquhart have received the Mexican Televisa II Award for their conservation achievements in behalf of the monarchs, as well as the Franklin Burr Award from the Committee on Research & Exploration of the National Geographic Society.

An article from <u>Canadian</u> <u>Research</u> for December, 1979, is herewith quoted in part:

"....More recently the (overwintering) site in the Neovolcanic Plateau of Mexico was established as a restricted wildlife sanctuary.

"Following discussions with Dr. Ricardo Enriquez, special consultant to the Subsercretario Forestal Y de la Fauna of Mexico, a law is being passed declaring all areas between 2500 and 3500 metres of the Neovolcanic Plateau as wildlife sanctuaries, Countless millions of monarch butterflies from all parts of North America east of the Rocky Mountains overwinter here annually. These areas will now be patrolled by guards, currently being trained, and a fine of \$800 US will be imposed on anyone entering the protected areas without official permission."

CATOCALA AT HOME.....

With today's gas situation, many collectors will be staying at home, feeling frustrated by not being able to travel to choice habitats for moths and butterflies as in previous years. This situation may be somewhat alleviated by using a bait trap right in your own back yard. I have had considerable success trapping <u>Catocala</u> with a collapsible bait trap hung from a maple tree in the middle of my yard. My local environment in Lansing, Michigan, is that of a single-family residential neighborhood with individual lots measuring approximately 55 feet wide by 150 feet long. Most of the homes in the area have various types of ornamental trees and shrubs that were planted in the early 1950's. There are relatively few Catocala foodplants in close proximity to the trap site.

During the summer of 1978, much to my surprise, I collected underwings in one trap for 37 evenings and recorded a total of 59 specimens. They represented 12 species: <u>innubens</u>, <u>retecta</u>, <u>ilia</u>, <u>relicta</u>, <u>unijuga</u>, <u>par-ta</u>, <u>meskei</u>, <u>concumbens</u>, <u>amatrix</u>, <u>ultronia</u>, <u>grynea</u>, <u>mira</u>. In 1979 the trap was used fewer evenings, but recorded three additional species: <u>paleogama</u>, <u>subnata</u>, <u>cara</u>. I had started using the trap in the yard in 1977 and recorded many of the same species as the following year, plus minuta.

I feel that additional species can be collected in my yard if I continue to use a bait trap in the coming years. Instead of thinking that you have to get away from home to collect <u>Catocala</u>, why not try trapping right in your own back yard? Mogens C. Nielsen





Materials:

- Top and bottom rings: wire coat-hangers bent into full 11" diameter circle; do not untwist hangers (bend hook into loop; these are convenient as handles when folding trap for storage).
- Cup and cone rings and radii: similar wire; I use aluminum electric-fence wire, since it is easy to form and twist.
- Olive-drab nylon mosquito-netting for cylinder and cone; white netting (such as from old nylon window curtains) makes a good top which admits more daylight and encourages butterflies to go up into the trap.
- Dimensions for cutting mesh: CYLINDER, 27x35"; machine sew $\frac{1}{4}"$ in, along 27" edge; turn inside out and doublesew the seam. CONE: make cardboard template, consisting of a 90-degree sector of a circle of $22\frac{1}{2}"$ radius, with inner circle of $7\frac{1}{2}"$ radius cut out, as guide for cutting mesh; fold and machine-sew along the straight edge, as for the cylinder. TOP: circle 12" diameter.
- To assemble: sew both ends of cylinder to rings, bending free edges of the mesh over the rings from inside to outside; make three small slits in lower edge to accommodate radii; sew small end of cone to cone ring, bending edge of mesh over ring from inside to outside;

sew large end of cone to bottom ring (three slits for radii), bending free edge of mesh to outside

Install cone-stays to hold the cone in a smooth, erect position. Use string, attached at each end with very small brass safety pins (need 9 per trap).

Sew mesh top onto top ring.

- Install hanging-stays (string with safety pins, as above) about 18" long, tied into loop at top to hang over cut twig.
- Set cup, containing layer of bait about ¹₂" deep, into cup ring. 7-ounce styrofoam coffee cups are convenient and give good footing for the insects.

To retrieve specimens from inside the trap, insert one hand, holding jar with loosened cover, up through the cone; manipulate cover with other hand from outside the mesh while scooping bug into jar. Dave Winter

RELAXING & SPREADING TECHNIQUE FOR SKIPPERS.....

I am frequently surprised, and disappointed, by the number of lepidopterists specializing in butterflies who do not collect skippers. Some have lamented that the main reason for ignoring this fascinating group of insects is that they are difficult to relax and spread. Perhaps the following comments may assist collectors in handling skippers, whether they are relaxing and spreading dried material or spreading fresh specimens from the field. In some collections I have noted that skippers have been poorly mounted, i.e., wings torn by spreading needles, or wings that either droop or appear as though the specimen was about to take flight again.

After inserting the proper sized insect pin into the thorax of a fresh or relaxed specimen, try "tenderizing" the thorax muscles by gently piercing the base of the wings (underside) with a minuten pin inserted into a wooden match stick. You will be surprised how easy it is to soften, or loosen, the wing muscles by this manoeuver. I do NOT recommend using a scalpel to cut these muscles, as some have suggested. Cutting will usually increase the chances of removing the wings! I use the minuten pin method on all relaxed specimens, whether mounting silkmoths, hairstreaks, or skippers. I suggest you try it on a few common species until you feel comfortable in relaxing skippers.

After covering the wings with paper (pieces of 3x5 cards) on the spreading board, I insert a minuten pin (mounted in a match stick) just behind the costal veins on both fore and hind wings to prevent them from slipping under the paper as they dry. The tiny hole left by the minuten is rarely noticeable when the specimen is placed in the collection.

I encourage you to collect skippers, and to mount them by this method, and I believe you will find it most interesting and satisfying for this frequently overlooked group of lepidoptera. Mogens C. Nielsen

THE LEPIDOPTERIST'S PICKLE-FORK.....

The moth collector faced with the necessity of papering large numbers of medium and small moths is often plagued with the frustration of trying to fold the wings over the back before placing the specimen in the envelope. Loss of scales, legs, thoracic vestiture (and one's temper) can be the result, and he may often settle for the wings-down or out-flat position, with inevitable degradation of the specimen.

A simple tool to minimize these problems and speed up processing can be made as follows:

Cut two small peices (about 4 mm. long) from a thin rubber band; pierce one piece of rubber with two #0 insect pins, about 1-3 mm. apart (make different spacings for different sized bugs), and push the rubber half-way up the pins. Pierce the second piece in the same fashion and push it one-forth of the way up the pins. To use, thrust the paired pins through the dorsum (only) of the the thorax, or thorax plus abdomen for smaller moths, as if impaling a pickle with a fork. Using forceps or fingers, the wings can then be folded upward from beneath. The paired pins prevent rotation of the body, and piercing only the dorsum keeps the bug



from sliding up the pins. The device can also be used handily in the field for papering skippers and lycaenids which have died with their wings flipped down.

After using, body fluids may be cleaned from the fork by thrusting it through a fold of fabric, such as a trouser leg (carefully). Dave Winter

BRYANT MATHER PRESENTS.....

(Bryant Mather, of Clinton, Mississippi, has the knack of spotting lepidoptera-related material in the most improbable publications. The clippings that he sends us form the basis for the items that appear, herewith and from time to time, under the above header. Ed.)

Harper's BAZAAR advertised "Pheromone Parfum from Marilyn Miglin" at \$7.50 for a sample! Don't send for it. The offer expired last October, and there was no information as to whether it was intended to attract moths or just wolves.

In May 1978 Eastman Kodak incinerated its entire supply of diethyl 4,4'-azoxydicinnamate, a smectic liquid crystal. They had overlooked a paper a few months earlier describing the use of their diethyl-etc. in a gas-liquid chromatography method for separating and defining configurations of various lepidopterous pheromones. Eastman appears not entirely happy in its role of manufacturer of chemicals for the manufacture of pecticides for the induction of pesticide resistant strains of insects. On learning that its diethyl-etc. could play a significant role in the biological (as opposed to pesticidal) attack on insect pests with pheromones, it promptly went back into production of diethyl-etc.

The U. S. Army Corps of Engineers recently astounded (and pleased) us by concluding that the best approach to flood control in the Charles River (Massachusetts) drainage area was to protect the existing riverside marshes from further encroachment: no ditches, no edifices, no expenditures.

They are now engaged in a venture in Louisiana, in an attempt to effect biological control of the water hyacinth, using an approach which leans heavily on lepidoptera. Acting on the theory that the health of an organism can be adversely affected by many different factors, and that if several factors operate simultaneously the total effects should be more adverse, they are teaming a pair of weevils, two leps, and a fungus in an effort to clobber the weed. The South American moths <u>Arzama densa</u> (Amphipyrinae) and <u>Sameodes albiguttalis</u> (Pyraustinae), along with the weevils Neochetina eichorniae and N. bruchi (Curculionidae), were selected for their specificity for the target plant species and their lack of interest in or danger to native or economic species. The fungus Cercospora rodmanii completes the team. Larval feeding is expected to provide wounds for the entry of the fungus, while the movements of the insects themselves should assist in spreading fungal spores.

Safety experiments had been completed and large

scale field operations were underway in 1979. The practical efficacy of the combination, the ability of each of the five agents to maintain itself for continuing control, and the economics of the whole opera remain to be clarified.



The following feedback is from Dave Baggett:

APATURIDAE: I have reared both Asterocampa alicia and A. flora from both ova and larvae gathered on Celtis laevigata. I also am sure that Walfried Reinthal did much rearing of these two species in years past. Ova are deposited in pyramidal clusters on the underside of leaves.

NYMPHALIDAE: Siproeta stelenes biplagiata is definitely a breeding resident of south Florida, and efforts are underway to reveal its Florida life history. Phyciodes texana seminole is almost certainly a good species rather than a subspecies of the nominate texana. Life history work is currently underway on this, as well as revisional clarification. In Texas, a colony is known to feed on <u>Dicliptera</u> <u>brachiata</u>; in the southeast it is currently thought to utilize <u>Ruellia</u> <u>caroliniensis</u>. Mike Rickard has reared it in Texas.

LYCAENIDAE: Larvae of Satyrium kingi feed on Symplocos tinctoria and have been reared on this by Steve Roman. Judging from experience, the species always seems to be found in association with this plant and is quite local. Harris gave the record for Flame Azalea, and this is currently considered as a possible alternate host, rather than the preferred host. To my knowledge, no one has put out any information on the life history of Tmolus azia up to the present, nor on Electrostrymon angelia, both residents of southern Florida. The life history of <u>Chlorostrymon</u> <u>s</u>. <u>simaethis</u> is being described for Florida in a forthcoming paper by Steve Roman in the Bulletin of the Allyn Museum.

HESPERIIDAE: One foodplant record was recently given for Euphyes dukesi in the Southern Lepidopterisis News as Carex hyalinolepsis. It has been reared by Richard Heitzman and Bill McGuire as well, but I do not know the specifics. Hesperia attalus slossonae and Hesperia meskei almost certainly utilize one or more species of Aristida. Aristida virgata, A. stricta, and A. purpures-cens all probably serve as host plants. A paper is forthcoming from Bill McGuire regarding this, and ova and early instars have been obtained by Jeff Slotten and Bob Godefroi in Florida. It is a difficult genus to rear, apparently. Poanes yehl probably uses Cane species (Arundinaria), and I believe that McGuire told me he had reared this on Cane. Erynnis zarucco utilizes Glottidium vesicarium as its host in Florida.

The following is a list of butterfly species from the Mexican border regions of the U.S. which, as recorded in Howe, have apparently unrecorded or incompletely observed life histories. Unless there is a specific notation, all may be classed as "immature stages unknown". Geographic distribution is given by state or be season summary Zone. (See also NEWS for Mar/Apr 1978 and May/June 1979.)

DANAIDAE: Danaus eresimus, fp in TX; Lycorea ceres, fp in TX.

SATYRIDAE: Gyrocheilas patrobas, se AZ; Paramecera xicaque, s AZ.

APATURIDAE: Asterocampa montis, s AZ & NM, (LHI); sub-pallida, s AZ; leila, border 1-3-4 (LHI); louisa, s TX;

Anaea aidea, border 1-3-4.

NYMPHAIIDAE: Maestra anaemone, s TX; Dynamine dyonis, s TX; Adelpha fessoni, s TX; P. coenia nigrosuffusa, s TX to se AZ, ? fp Stemodia tomentosa (LHI); Anartia s TX (?LHI); Siproeta steneles, s TX (?LHI); Phyciodes frisia tulcis, s TX; P. mylitta arizonensis, AZ & NM; Texona elata, border 1-3-4; Chlosyne definita, s AZ, NM, TX; C. endeis, s TX; C. theona bolli, s TX (LHI), Microtia elva, se AZ; Dymazia dymas, s TX; Polydryas arachne monache, s CA.

LIBYTHEIDAE: Libytheana carinenta, s AZ & TX.

- RIODINIDAE: Lasaia sula, s TX; Emesis zela, s TX; E. ares, s.TX; Apodemia hepburni, w TX, s AZ; A. walkeri s TX; A. multiplaga, s TX; phyciodoides, se AZ; A. chisonensis. w TX
- LYCAENIDAE: <u>Chlorostrymon simaethis</u>, for s TX & s CA (LHI); <u>Callophrys loki</u>, s CA, fp <u>Juniperus californica</u> (LHI); <u>C. miserabile</u>, s TX; <u>C. goodsoni</u>, s TX; <u>Tmolus</u> <u>echion</u>, s TX, fp <u>Lantana</u> (LHI); <u>T. azia</u>, s TX, s AZ; <u>Ministrymon leda</u>, s AZ & CA, fp mesquite (LHI); <u>M.</u> <u>clytie</u>, s TX, AZ; <u>Calycopis isobeon</u>, s TX; <u>Dolymorpha</u> <u>jada</u>, s AZ; <u>Eurystrymon polyngi</u>, sw TX; <u>Hypostrymon</u> <u>critola</u>, s AZ; <u>Strymon bebricia</u>, s TX; <u>S. alea</u>, s TX; <u>S. rubofusca</u>, s TX; <u>S. cestri</u>, s TX; <u>Electrostrymon</u> <u>endymion</u>, s TX; <u>Zizula</u> cyna, AZ, s TX. PIERIDAE: <u>Eurema proterpia</u>, s AZ to TX; <u>E. mexicana</u>, 1-3-4 border (LHI); <u>Ascia josephina</u>, s TX; <u>Lerodea arabus</u>, LYCAENIDAE: Chlorostrymon simaethis, for s TX & s CA
- HESPERIIDAE: <u>Panoquina hecebolus</u>, s TX; <u>Lerodea arabus</u>, s AZ; <u>L</u>. <u>dysaules</u>, s TX; <u>Amblyscirtes exoteria</u>, se AZ; <u>A</u>. <u>cassus</u>, se AZ, w TX; <u>A</u>. <u>aenus</u>, AZ, s 3-4; <u>A</u>. <u>prenda</u>, se AZ; Atrytonopsis deva, se AZ; A. lunus, se AZ; A. cestus, s AZ; <u>Mellana eulogius</u>, s TX; <u>Adopaeoides pritt-</u> witzi, se AZ, w TX; <u>Cymaenes odilia</u>, s TX; <u>Nastra nea-</u> mathla, border 1-3-4; <u>Monca telata</u>, s TX; <u>Heliopetes</u> domicella, AZ, TX; <u>H. laviana</u>, AZ, TX; <u>Pyrgus philetas</u>, border 1-3-4; <u>Chiomara asychis</u>, AZ, TX (LHI); <u>Grais</u> stigmaticus, s TX; Systasea zampa, w TX, border 1-3; <u>Carrhenes canescens</u>, s TX; <u>Stabylus</u> <u>ceos</u>, s AZ, NM, TX; <u>Pellicia arina</u>, s TX; <u>Staphylus</u> <u>ceos</u>, s AZ, NM, TX; <u>Spathelepia clonius</u>, s TX; <u>Thorybes m. mexicana</u>, s AZ; <u>T. drusius</u>, se AZ, w TX; <u>T. valeriana</u>, s AZ; <u>Achalarus</u> <u>casica</u>, se AZ, TX; <u>Codatractus arizonensis</u>, s AZ, TX; <u>C. olcaeus</u>, s AZ, TX; <u>Aguna asander</u>, s TX; <u>Chiodes</u> zilpa, AZ, TX. zilpa, AZ, TX.

Any information forwarded to the Editor on the immature stages of the above or previously cited species, whether new observations or overlooked references, will appear in a subsequent issue.

HEMILEUCA IN A NEW FOODPLANT ASSOCIATION.....

Ross A. Layberry, of Ottawa, Ontario reports that two colonies of <u>Hemileuca</u> sp. near <u>lucina</u> Henry Edwards were discovered in late 1977 in two calcareous fens, the Phragmites fen in Marlboro Twp., Carleton Co., and at the floating White Lake Fen in McNab Twp., Renfrew Co., about 35 miles apart.

In 1979 he studied both intensively and discovered black, 3rd instar, typically Hemileucine larvae, at Phragmites Fen 9 June and White Lake Fen 17 June, on Buckbean, Menyanthes trifoliata (Gentianaceae). He managed to rear a few from each colony; they pupated 10-21 July and emerged 2-16 September 1979.

The moths were flying at Phragmites Fen on 9 Sept. & 15 Sept.(abundant), and at White Lake Fen on 9, 16 (abundant), 22, & 29 Sept. 1979.

As no part of the buckbean plant can be found by the time that the adults emerge, it was obvious that the females do not oviposit on the larval foodplant. After several unsuccessful attempts he finally found four egg masses at White Lake Fen 10 November 1979. Two masses were on stems of Phragmites (a 7-9 ft. high grass), one on a small grass, and one on a tiny shrub. All were between three and nine inches from the "ground", actually the thin surface of the floating fen. Probably at the

Phragmites Fen the egg masses are laid higher up, because the fen is flooded 6-12 inches deep in May and June. At White Lake Fen this flooding is avoided because the fen surface rises up, probably at least a foot. He comments that it will be interesting to ascertain this year how the newly emerged larvae get to their foodplants.

Quimby F. Hess, who submitted the above, notes that according to Douglas C. Ferguson in "The Moths of North America", Fascicle 20.2A, the type locality of <u>H. lucina</u> is Norway, Oxford County, Maine, and the foodplant is <u>Spirea latifolia</u>. He stated that it had not been reported from Canada, even though searches had been carried out.

ENGLISH SPARROWS FEEDING ON ADULT MALACOSOMA AMERICANA...

It is well known that birds catch, kill, and eat insects. There is, however, very little literature as to the particular species being eaten.

I therefore found it surprising and instructive to watch English Sparrows flying to and partly alighting on a perpendicular brick wall and taking resting <u>Malacosoma</u> moths. The moths had swarmed the night before, 20 July 1973, and were on a north wall in the shade. There were perhaps four to six moths per square foot. It was a hot afternoon.

The English Sparrows were roosting in large elm trees in downtown Winnipeg, Manitoba, and making periodic forays out of the forty-foot high elms to the wall. There was an audible sound made by the beak of the sparrow as it hit the brick wall while taking a moth. The birds would return to the branches to eat the moths. The wings were discarded as the moth was eaten. In a few instances a patch of <u>Malacosoma</u> eggs could be seen smeared on the wall where the impact of the bird's beak had crushed the moth.

In the next few days similar patches of smeared <u>Malacosoma</u> eggs were seen on the walls of buildings in different parts of the city. The <u>Malacosoma</u> flight was extensive. This feeding behavior may have been a general and suddenly learned response to an edible species of moth. English Sparrows are recent arrivals here, perhaps in 1890.

Different birds evidently learn at different rates as to what insects are edible. These changes have evidently been swift. English sparrows living in the cities and towns regularly pick up many species in the early morning where they have gathered on shop windows. This essentially is an unnatural accumulation recently accentuated by street lights being changed over to mercury vapor lights. These draw more insects, and moths in particular. The number of sparrows has been also increased.

The numerical changes that have taken place in the last thirty years are rather interesting. In the 50's & 60's is was possible to collect about fifty specimens of moths by 8:00 a.m. in two town blocks of shop windows. Today by that hour one would be lucky to collect six to twelve specimens in a half hour of searching. Birds awake very early and fly from one shop window ledge to another, picking up moths. They then kill the moths in the gutters or cement sidewalks by pecking and then eat them after dismembering them.

In 1961-63 I noted English Sparrows at Riding Mountain National Park, at Wasagaming, Manitoba, exploring the front grates of parked cars, often loaded with insects. In June various warblers would do the same here. They became expert in carefully examining all parts of the car grating. Any insects that fell to the ground, fluttering, were immediately eaten up. Evidently not all insects are equally relished. Some fishflies and dragonflies caught in the grating were left uneaten.

English Sparrows, resident as they are throughout the year. now exert considerable pressure on moth populations in city areas. This may lead to drops in moth species and moth populations in urban areas for reasons other than chemical pollution.

(Walter Vladamir Krivda, The Pas, Manitoba)

GRADING LEPIDOPTERA SPECIMENS.....

Your editor receives ads offering for sale or exchange specimens described as "A1", or "1A", or "B1", or "A2", or frequently, "in mint condition". (A mint stamps things out, and any specimen that has been stamped out holds little appeal, in my experience!) Is "A1" different from "1A"? Is "A2" different from "B1"? Is there a "B2"? Are there 3's or C's?

Does a formal grading system exist in print somewhere, giving objective standards for rating the condition of specimens, or would some knowledgeable reader be willing to formulate such a system, to alleviate my ignorance? Publication of objective grading criteria would be of great help in avoiding misunderstandings and misrepresentations. Let me hear from you. Ed.

A QUESTION ON COCOON CONSTRUCTION.....

A hairy noctuid larva, as yet unidentified, was given to us in a glass jar, at the bottom angle of which it promptly pupated. Its flimsy coccon is in two layers, separated by a 2 mm. space. In the outer layer are imbedded all the yellow body hairs of the larva; the inner layer is white and contains no hairs; the enclosed shed larval skin is hairless.

Is the function of the outer layer, perhaps, to remove and trap the bristles, so that they will not "contaminate" the inner cocoon and act as foreign body irritants at the time the soft pupal shell is hardening?

A METHOD FOR PRESERVATION OF SPREAD SPECIMENS.....

Being an artist I often make use of fixative concentrated spray for my drawings. One day I tried it on a butterfly, thinking that the scales of the wings are just like particles of a pencil or charcoal drawing. The outcome was very interesting. The treated butterfly looked much fresher and the wings became stronger, and what is more important, the scales remained more firmly attached on the wings. By using a soft brush, I could cleanse the wings from dust, etc.

However, it is a pity that one connot use this method for butterflies which possess blue structural colors, like the blue Lycaenids and Morphos. Such treated butterflies lose their brilliant colors and look dull. Also, the treated specimens are not protected against vermin in the collection. Perhaps it might be possible to make a mixture of fixative, insecticide, and a preparation against fading of the colors. In this way the specimens could be protected for years against different things and one need not kill unnecessarily too many sepcimens for replacement of those which deteriorate.

I have already used the fixative for a number of years, and the butterflies still remain in excallent condition. (Herman J.L.T. Stammeshaus, Grens straat 15, 1091 SV Amsterdam, Netherlands)

(One could not recommend this approach for specimens for scientific study or for deposition in a museum collection; it might, however, be useful for display specimens for school demonstrations, for example. Ed.)

RESEARCH NOTICE.....

(received late)

Assistance is requested from Society members in connection with a revision of the genus <u>Anisota</u> (Saturniidae). With financial research assistance, I will be extensively collecting adult <u>Anisota</u> throughout the southeast during July & August. Needed are additional sources of <u>live</u> females in glassine envelopes with complete data. Personal contacts with local collectors in S.C, coastal Georgia, and Florida during this time would also be appreciated. All contributions will be gratefully acknowledged. Jim Tuttle, 1929 Plymouth Rd. #3011, Ann Arbor, MI 48105; phone (313) 665-7662.



Items submitted for inclusion in this section are dealt with in the manner explained on page 8 of the 1980 NEWS (Jan/Feb issue). Please note that it was decided several years ago to <u>exclude prices</u> from the printed notices, except for the prices of lists. "SASE" calls for self-addressed stamped envelope.

- TO DONATE: I have 342 species of butterflies (no skippers), nearly 1750 specimens, from central, SE, & western USA, Nova Scotia, Manitoba, Alberta, Mexico, El Salvador, Peru, Brasil, central Europe, eastern Asia, Australia & New Zealand, pinned, in varying condition, for donation in a single lot to a public museum or educational facility. In return require an appraisal statement for tax purposes. Available to first contact. Recipient must pick up specimens in his own containers. Kenneth R. Knight, 433 Brady N.W., Comstock Park, MI 49321. Phone 361-8863
- WANTED: to buy or exchange, cocoons of <u>H. gloveri, A. luna, A. io</u>, P. c. <u>advena</u>; also pupae of Sphingidae and other species of interest. Have in exchange A1 papered specimens of <u>A. mimosae</u> and many other species of Lepidoptera and Coleoptera. Wm. Perrie, 69 Marksbury Ave., Kew-Richmond, Surrey, ENGLAND.
- Ave., Kew-Richmond, Surrey, ENGLAND. WANTED: pupae of <u>Saturnia mendocino</u>, <u>Automeris zephyria</u>, <u>Pseudohazis eglanterina</u>, <u>P. hera</u>; <u>chrysalids of <u>Gra-</u> <u>phium marcellus</u>, <u>Battus philenor</u>, <u>P. cresphontes</u>, <u>P.</u> <u>polydamus</u> or ova of any of the above. Will be in a position this summer to trade ova and/or pupae. Reno Unger, Rd 1, Box 529, Kutztown, PA 19530. FOR SALE: "checklist of the Lepidoptera" by Barnes & Mc-</u>
- FOR SALE: "checklist of the Lepidoptera" by Barnes & Mc-Dunnough (1917: typed, hard-bound); "Ent. News", Vols. 46-70 ('35-'59); Bull. of Ent. Soc. of Canada (misc. 1969-74); "Microlepidoptera of Phillipine Is." by Diakonoff (1967); 70 misc. reprints-separates, by Comstock (1943-70). M.C.Nielsen, 3415 Overlea Dr., Lansing, MI 48917 (phone 517-321-2192).
- WANTED: A1 or B1 Saturniidae from India & S.E.Asia. List wants or quote prices. Les Sielski, P.O.Box 21, Wheeler, IN 46393
- EXCHANGE: Fine papered African & Asian butterflies, including bred <u>Ornithoptera</u>. I welcome most of the common USA & Canadian butterflies. I am <u>not</u> interested in trading very rare, obscure, or endangered species. Let us simply share beautiful bugs and cordial correspondence, please. Brian Wurzell, 47 Rostrevor Ave., Tottenham, London N15 6LA, ENGLAND.
- FOR SALE: glassine envelopes: 2x4½", airtight and pestproof when folded; clear. SASE for details. James Scott 60 Estes St., Lakewood, CO 80226 USA.
- FOR SALE: "The Butterfly Book" by W.J.Holland, 1916, a very good copy. Also, a <u>complete</u> set of color slides from every plate from Sietz, Vol. 5, Butterflies of the Americas. Make offer. Ralph Wells, 304 Hoffman St. Jackson, CA 95642
- FOR SALE: glassine envelopes in three convenient sizes; take stamp pad and fountain pen ink well; samples on request. Eduardo C. Welling M., Apartado Postal 701, Merida, Yucatan, MEXICO.
- SALE OR EXCHANGE: ova or cocoons of various common and unusual Saturniids, Sphinx, <u>Papilio</u> and miscellaneous species. Send SASE + 50¢ for complete list. Michael R. O'Brien, 101 Buffalo Ave., Egg Harbor, NJ 08215.
- WANTED: contacts and lists from anyone who rears or collects any of the above groups, I particularly need <u>Eumorpha pandorus, E. achemon, Antheraea mylitta, Loepa katinka, C. regalis, E. imperialis and C. sepulchralis</u>. Will supply mating and ovipositing in-

structions on request. All letters answered. Mike O'Brien, address above.

- WANTED: "The Butterflies of Virginia" by A.H.Clark and L.F.Clark, 1951. State condition and price. Also...
- WANTED: specimens of Lycaena hermes, L. dorcas dospassosi, dorcas claytoni, phlaeas feildeni, phlaeas arethusa, cupreus henryae, & arota schellbachi. Will buy or exchange, all letters answered. Frank Bodnar, Box 52, Spring Church, PA 15686.
- WANTED: detailed books (with plates) on butterflies and moths from Hawaii, eastern & southeastern Asia, Korae, and Japan, Indonesia, and the Australian region. Chris Campbell, 2150 Perran Dr., Mississauga, Ontario, CAN-ADA L5K 1M1.
- EXCHANGE: many <u>Parnassius</u>, <u>Colias</u>, etc., from the Asiatic part of the <u>USSR</u>: Tien-Shan, Altay, Pamirs, Caucasus, including such rare species as <u>Parnassius patricius</u>, <u>Colias marcopolo</u>, and many others. Dr. D.S.Lastochkin, <u>Poste Restante</u>, Kiev-42, USSR.
- EXCHANGE: papered A1 material with data: Rhopalocera, Sphingidae, Saturniidae (<u>C. regalis</u>, <u>Anisota</u> spp., <u>E. imperialis</u>, and live collected cocoons of <u>C. promethea</u>) from upper South Carolina. Would like western USA or exotic butterflies, moths, or large, showy Coleoptera, also <u>Samia cynthia</u>. Tony C. Boozer, 11 Edgewood Ave., Greenville, SC 29609 USA.
- FOR SALE: two copies of "Butterflies of the World" by H. L.Lewis depicting over 5000 butterflies in color, excellent condition(out of print). Janice Logan, Route 1, Fayetteville. TN 37334.
- WANTED: any or all of parts I thru V of "A Monograph of the Pierine Genus <u>Delias</u>" by G.T.Talbot. Jeff Baier, 3153 Mt. Veeder Rd., Napa, CA 94558 USA.
- WANTED: full-time employment pertaining to any and all aspects of lepidoptera, esp. field work, ecology, taxonomy, hybridization, and endangered species preservation. Prefer mid-Atlantic states of Florida, but will seriously consider other areas. Resume sent on request. Willing to relocate. Fred Bower, YMCA 19 East Ave., Lockport, NY 14094.
- WANTED: correspondence with anyone interested in costshared travelling through mid-Atlantic states for purpose of collecting and field observation during May, June & July 1980. Fred Bower, address above.
- May, June & July 1980. Fred Bower, address above. FOR SALE: surplus <u>Agrias narcissus</u> ²² A1 in papers with full data. Stanley K. Dvorak, 4323 Oxford St., La Mesa, CA 92041 USA.

MEMBERS' COMMERCIAL NOTICES.....

- David W. Bouton, #217 NY Penn Trade Center, 435 Main St., Johnson City, NY 13790: collecting equipment, breeding supplies, lepidoptera & other entomological specimens worldwide, books, special charter overseas tours for lepidopterists, etc. One day service. Year's subscription to monthly list \$3.50 (overseas \$5.00).
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