

NEWS

of the LEPIDOPTERISTS' SOCIETY

No. 5

Sep/Oct 1979

EDITOR: Jo Brewer
257 Common Street
Dedham, MA 02026 U.S.A.

ASSOCIATE EDITORS

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Frances Chew
Donald Eff
Thomas C. Emmel

Thomas Franks
H. A. Freeman
Q. F. Hess

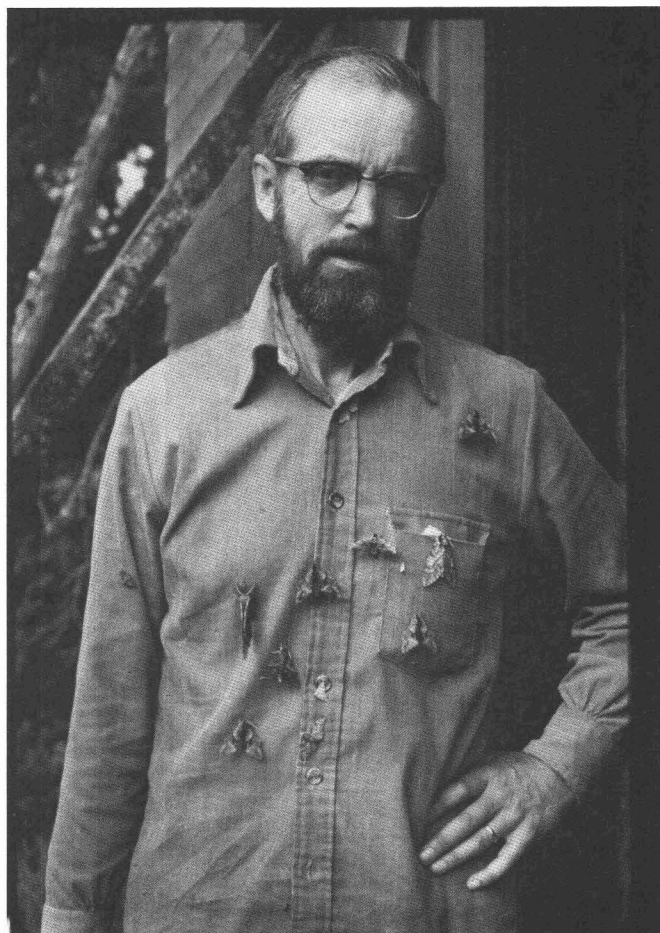
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Moths to get Equal Time under New Editor!

Beginning with the January-February, 1980, issue, the editorship of the NEWS will move across the room into the hands of Dave Winter, who has been observing the process at short range (and offering innumerable unsolicited suggestions for the past three years.

In addition to being married to the present editor for those three years, Dave has had an interest in leps reaching back four further decades, when he began collecting and rearing in New Hampshire and New Jersey, in the latter area under the guidance of the late Charles Rummel. After a long hiatus spent in medical education and establishing a pediatric practice (punctuated by taking an *Erebus Odora* in the emergency room of the Boston Children's Hospital following a September hurricane) he resumed lepidopterous activities about 15 years ago, concentrating on the New England area, collecting, rearing, and photographing. He served as president of the Cambridge Entomological Club in its 101st year (1974-75), has been vice-president of the Xerces Society since 1976, season summary coordinator for the north-east (Zone 7) since 1977, is presently a member of the executive council of the Lep. Soc., and is one of nearly forty survivors of the recent Alaska North Slope expedition. "The fate of the NEWS is again in the hands of an amateur; may it fare as well as in the past 3 years. And moths will get equal time!"



Dave Winter

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FRONT COVER The News Editor as of January 1979

Dave Winter

ADVERTISERS PLEASE NOTE

The Buy-Sell-Exchange column will be omitted from the Nov/Dec issue of The NEWS

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* * * NOTICE * * *

The final issue of The NEWS for the year 1979 will deviate from the norm to the extent that it will be almost entirely devoted to the 'Alaskan Adventure'.

New Members, Changes of Address and Research Requests which arrive before the deadline will be included. Ripples will be confined to 1 page if it appears at all.

Any important announcements MUST be in our hands by October 15.

PLEASE COOPERATE

A Message from the Editor

Dear People,

During my 3 years as Editor of The NEWS I have learned a great deal, used up a lot of time, and enjoyed practically every minute of it all. Now, with the Nov/Dec issue, my tenure will cease. When I resigned, I felt almost as if I were walking away and leaving my child alone in the cold, cold world, but now I believe I have actually sent it (the child) off to a boarding school where it will learn to be less prone to foolish mistakes, and more filled with wisdom. I can say this with confidence, since I know the Head Master quite well.

To all of you who have sent me articles, photographs, letters, anecdotes -- all the things that have made my job (and I hope The NEWS) especially interesting, I send my appreciation and thanks. I am happy to say that the new Editor has invited me to continue the RIPPLES column (as long as I leave him a free hand with the rest of the publication).

I have a few photographs of melanic butterflies on which there are no names, so if anyone who has not received back slides or photos will write and describe the missing articles, I will send them along. Again, many thanks to all of you for your support.

Sincerely yours,

Jo Brewer, Editor, The NEWS of the Lep's Soc.

IMPORTANT NOTICE

To ALL who were Participants in the Trips to Eagle Summit &/or The Brooks Range in Alaska

Ken Philip has requested that everyone who helped to collect on this trip, send him a list of the species taken, the location where taken, and approximate numbers of each species flying and/or taken. Please give Priority Listing to any species you may have taken which is (are) not already on the list of Confirmed Species in the Alaska Lepidoptera Survey Collection (Feb. 1979).

Please have these items in the mail by December 1 to avoid delays owing to the Christmas rush!!! This is very important to Ken, especially in view of the fact that the Brooks Range Trip was the first opportunity he has had to collect in his own habitat with a significant array of serious world wide Lepidopterists.

IMPORTANT: Send any questionable species to Ken for positive identification! Fear not. He will return them despite his anguish in doing so.

Jo Brewer, (Scribe for the Brooks Range Trip.)

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FIELD SUMMARY INFORMATION

--- Contributors Please Take Note !!

Please condense your report mercilessly, retaining only such data as are of unusual significance, re: species, range extension, dates, relative abundance, food plants, etc. If you cannot yourself assess significance, try to enlist the assistance of a more experienced collector in your area.

LIST OF ZONE COORDINATORS:

- ZONE 1. Southwest: Ariz. Nev. Cal. R.L. Langston, 31 Windsor Av. Kensington CA 94708
- ZONE 2. Pacif. NW: Oreg. thru Brit. Columbia. Jon Shepard, RR #2, Nelson, BC CANADA
- Zone 3. Rocky Mt. rgn. Alberta, Mont, WY, UT, COL, New Mex. Ray Stanford, 720 Fairfax St, Denver, CO 80220.
- ZONE 4. Gr. Plains: Sask., Manitoba, N&S DK, Neb, KS, OK, TX. H.A. Freeman, 1605 Lewis Dr, Garland, TX 75040.
- Zone 5: Eastern midwest: Min, Iowa, Missouri, Wis, IL, Mich, Ind, Oh, KY, W.VA. MC Neilson, 3415 Overlea Dr., Lansing, MI 48917
- Zone 6: S.E: Ark, LA, Tenn, MS, Ala, FL, GA, N&S Carol, VA, Dave Baggett, Dept of Nat.Scs. U. of Florida, St. Johns Bluff Rd S, Jacksonville, FL 32216
- ZONE 7: NW: P.Q., Maritimes, New Eng, NY, NJ, PA, DEL, DC, MD. Dave Winter, 257 Common St, Dedham MA 02026.
- ZONE 8: Far North: Alaska, N. Canada, Newfoundland, Greenland, Keneim Philip, Institute of Arctic Biol. Univ. of Alaska, Fairbanks, AK 99701
- ZONE 9: N. Neotropics: Mex, Cen. Amer, Antilles, Eduardo C. Welling, Apartado Postal, 701, Merida, Yucatan, MX
- ZONE 10: S.A. No Coordinator. Send to Dave Winter.
- Zone 11: Q.F. Hess, 11 Esgore Dr, Toronto12,

The Society extends thanks to DON EFF who served as Coordinator for Zone 3 for a great many years and did a splendid job.

ABSTRACTS OF PAPERS PRESENTED
at the
30th ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY
June 28 - July 1, 1979
FAIRBANKS, ALASKA

A Virginia Butterfly Community: Seasonality and Nectar Utilization
PAUL A. OPLER US Fish & Wildlife Service, Washington D.C.

A 3 mile route through young woods and fields was followed each week from April through November, 1978. Species, individuals, behavior, and flower visitations were recorded. More than 7500 Individuals of 64 species were found. Peak species abundance occurred in early August, while peak individuals abundance occurred in September. 80 species of flowering plants were utilized as nectar sources. Proboscis length was the best correlate of which flowers were chosen. Mud-puddling was engaged in by freshly emerged males, particularly of patrolling species. The number of broods was determined for most species.

Taxonomic and Distributional Notes on *Polites sabuleti* (Hesperidae) in the Rocky Mountains
RAY E. STANFORD University of Colorado, Boulder

The Sand Hill Skipper, *Polites sabuleti* (Boisduval) is a polytypic species occurring throughout much of western North America. It is related to, but distinct from, both *P. draco* (Edwards) and *P. peckius* (Kirby) (= *P. corus* Auctorum). Most populations are multivoltine, including the distinctive undescribed ones in Colorado. Other Rocky Mountain populations, although variably divergent, are referred to nominate *sabuleti* (TL California) except that the southwestern desert ssp. *chusa* (Edwards), (TL northern Mohave County, Arizona, Arizona) (K.C. Roever, in Brown & Miller, in press), enters the region in southwestern Utah.

The Holarctic Sub-Genus *Callophrys*: A Study in Biogeography and Evolution
GLENN A. GORELICK Citrus College, Azusa, California.

The lycaenid sub-genus *Callophrys* Billberg, typified by variable shades of green scaling on the wing undersides, appears to have originated in Siberia, radiating eastward into North America and south into Asia prior to separation of the Bering Land Bridge. Glaciation and climatic change west of the Rocky Mountains might explain the group's current restriction to western North America in the Nearctic realm. Current examination indicates that today's Palearctic and Nearctic *Callophrys* diversity exhibits a great deal of adaptive radiation, differentiating more ecologically than many theclines. It is highly probable that many subspecies of the type, *C. rubi* Linnaeus, and perhaps new species, now exist unnamed in Eurasia. While intergrades and population overlaps occur throughout their ranges, current taxonomic approach (as listed by Dos Passos N.A.) is satisfactory.

Evolution of Larval Food Preferences in Microlepidoptera
J. A. Powell University of California, Berkeley

Study of a regional microlep fauna reflects fundamental aspects of larval food preferences indicated by review of the world faunas. Each superfamily and major family uses a diversity of Angiospermae. There is adaptation to Gymnospermae, but no higher taxon has diversified with Pteridophyta or Embriophyta other than Angiospermae. No superfamily is dependent on one angiosperm subclass, and no large family has more than 12% of host plant records in a primitive angiosperm subclass. It appears that evolutionary radiation in Monotrysia and Ditrysia occurred through specialized feeding in niches or horizons within communities (detritophagy, root- and stem-borers, leaf miners, external foliage or seed feeders), rather than along botanical evolutionary lines. Presumably this occurred during mid to late Cretaceous, after development of the generalized angiosperms, as is suggested by the plant and moth fossil records.

On the Biology of *Acerbia alpina* (Quensel) (Arctiidae)
OLAVI SOTAVALLA University of Oulu, Oulu, FINLAND

The early stages except pupa, and biology of this international rarity have been undescribed. It occurs in the New & Old World arctic and in a few disjunct alpine areas in Asia, inhabiting the treeless tundra and rocky and scree boitopes. In 1977 two sets of caterpillars and in 1978 a second filial generation were reared ex ova in Finland. Eggs are yellow, caterpillars have a transversely striped black/yellow haircoat and are polyphagous. They have a prepupal diapause at 7th instar, most have another diapause at 6th or 5th and optionally additional at earlier instars. Reared in high temperature they may skip one instar and even pupate without a diapause. This plasticity in lifecycle gives them a chance to adapt to the very variable short-range and long range climatic conditions and a means for survival of the populations through unfavorable periods. (A detailed description will appear in "Notulae Entomologicae")

The Other side of the Bering Sea: a Collecting trip to NE Siberia
KENELM W. PHILIP University of Alaska, Fairbanks

In 1978 a two-month collecting trip was made to Magdanskys Oblast', USSR, under the auspices of the exchange program between the Soviet Academy and the National Academy of Sciences. Collecting was hampered by bad weather, but was carried out at two remote field stations: "Aborigen" in the upper Kolyma valley (larch taiga and alpine tundra biotopes primarily); and "Chaun" on the arctic coast of Chukotka (arctic tundra biotopes). At Aborigen 45% of the species occur on the Alaskan North slope. The Chaun fauna is mainly Holarctic, while at Aborigen there is a mixture of Holarctic and Palearctic elements. Slides will show various biotopes and the butterfly fauna.

Notes on Subantarctic Lepidoptera and Their Habitats.
ARTHUR M. SHAPIRO University of California, Davis

Southern Patagonia and Tierra del Fuego have a depauperate butterfly fauna including the Pierines *Tatochila sterodice* and *theodice* and *Hypsochila argyrodice*, the Nymphalid *Yranea cytheris*, and a variety of Satyridae. Aspects of the life history, ecology, and biogeography of this fauna will be presented along with an overview of the major vegetation types. The Noctuid, Geometrid and Saturniid moth faunas will also be discussed. Similarities and differences as compared to subarctic faunas are of ecological and biogeographical interest.

Butterfly Collecting in the European Arctic.
GLENN A. GORELICK Citrus Collefe, Azura, California

Various wanderings between June-August 1973 in search of macrolepidoptera both north and just south of the Arctic circle in Europe yielded a paucity of species. The naive search for *Callophrys rubi* immatures in particular was not at all successful but the numerous treks made for these larvae traversed most of Iceland, Norway, Sweden and Finland where the scenic beauty of the tundra and taiga made it all worthwhile.

The Concept of the Behavioral Niche -- How Many Are There, and Why?
BENJAMIN H. LANDING Los Angeles, California

That different and often unrelated species will fill available ecological niches is well recognized. For adult butterflies, a behavioral niche, with parameters of size, color and site (e.g. medium sized white butterflies which fly in the sun) appears a useful concept. Minimum and maximum estimates of the number of such niches theoretically available in the world (2-8 color groups, at least 3 size groups, at least 3 site groups, and 6 or 7 geographical regions) may be 104 and 672, suggesting that all possible niches may not be filled. Examples of filling of niches by different species include, e.g.: 1) large black-blue butterflies which occupy the sun-shade edge: N. America -- nymphalids (*Limenitis*); Europe, N. Asia -- apaturids; S. Asia, Australia -- danaiids. 2) medium-sized transparent, fly in shade: S. America -- ithomiids, satyrids; Africa, Australia -- acraeids. 3) large brown butterflies, fly at dusk (=shade); S. America -- brassolids (*Caligo*); S. Asia, Australia -- satyrids (*Melanitis*). Factors "gearing" size, color and preferred site, so that not all niches are equally exploitable, including temperature-regulation, light distribution, size of predators, availability of Batesian and Mullerian mimicry situations, etc., will be discussed.

Macrolepidoptera Distribution Survey in Fennoscandia
OLAVI SOTAVALTA University of Oulu, Oulu, Finland

Insect collection and listing of regional faunas have been a tradition in Fennoscandia since Linnaean times. Mapping of Fennoscandian distribution started in the 1940s, resulting in Vol. 1 of Fennoscandian Rhopalocera distribution atlas (1955). Vol. 2 (Bombycoidea, Sphingoidea, Drepanidae, Arctiina, Zygaenoidea, Psychoidea, Cossioidea, Hepialoidea) was published 1961, Vol. 3 (Noctuoidea) 1969. Vol 4 (Geometroidea is still in preparation). This work is independent of the All-European scheme started in England 1970. - Comparing Alaska and Fennoscandia, both lying between 55° and 70°N.L., there are similarities and differences in the faunas based on topography and climate: Alaskan mountain ranges run W-E and Fennoscandian S-N, besides which Gulf Stream warms the west coast and continental SE winds the SE part of Fennoscandia. Coniferous forest zone extends to 69° in Finland and alpine zone to S. Norway. Survey has been almost quantitative because of numerous active collectors and extensive road network.

Indepth Cataloging Program of Systematic Entomology Laboratory
RONALD W. HODGES USDA Systematic Entomology Laboratory, Beltsville, Maryland

A pilot project to capture systematic information about insects is underway in the Systematic Entomology Laboratory. Literature on the New World fruit flies is being catalogued retroactively to 1758. The interactive, computer-based system should be functional by September 1980. It will serve as a model for systematic catalogs and indepth catalogs of the Insecta and Acari for the United States Department of Agriculture.

Taxonomic Notes on North American Sterrhinae (Geometridae)

CHARLES V. COVELL JR. University of Louisville, Louisville, Kentucky

Changes in classification and generic and specific nomenclature for moths of the subfamily Sterrhinae (Family Geometridae) are revealed as they will appear in the forthcoming Checklist of Lepidoptera of America North of Mexico. New additions to the United States faunal list will also be included.

Longitudinal Size Trend in North American Lepidoptera

WILLIAM E. MILLER USDA Forest Service, St. Paul, Minnesota

Wing length or span averages 13 percent greater in western than eastern lepidopterans. This conclusion is based thus far on 20 genera in 6 superfamilies of Ditrysia. Data were obtained from published sources. All genera were considered that were represented by at least 5 species or subspecies in eastern and 5 in western North America. East and west were defined by the 100th meridian (passing through central Nebraska). Some familiar genera and percentages by which their western components exceeded their eastern ones are: *Papilio* - 9, *Sphinx* - 6, *Crambus* - 14, *Synanthedon* 3, *Ecosma* - 22, and *Agonopteryx* - 6. The size trend corresponds with results produced experimentally by slightly different rearing temperatures such as occur at the different average elevations characterizing east and west.

Variant Adaptations in Moths in Crouse Canyon, Utah

KAROLIS BAGDONAS & MARK HARRINGTON University of Wyoming, Laramie

Crouse Canyon in the northwestern corner of Utah, Daggett County, is a remote, narrow, red rimrock canyon which supports a wide variety of lepidopterans. The habitat of the lush, deep canyon contrasts sharply with the xeric juniper covered hills of the surrounding area. Within the confines of the canyon, a number of moth species have evolved cryptically colored forms which match the reddish siltstone of the canyon walls. At least a dozen species in five families are represented by red forms which comprise all or most of their population numbers. From observations made over the last four years, it appears these red variants are restricted to Crouse Canyon and its immediate vicinity. The evolution of crypsis in these species can be regarded as a protective adaptation within a specific habitat.

The Alternate Year Occurrences of Two Satyrid Butterflies (*Oeneis chryxus stanislaus* and *Neominois ridingsii*) at Sonora Pass, California

JAMES R. MORI Great Valley Museum, Modesto, California

Collecting records and field observations over a 26 year period indicate the occurrence of *Oeneis chryxus stanislaus* during odd numbered years and *Neominois ridingsii* during even numbered years at Sonora Pass.

The California drought of 1975-1977 appears to have had a dramatic effect on the occurrence and habits of these butterflies.



REMOTE ISLAND BUTTERFLIES

HAWAII has 12 butterflies, including 2 endemics: *Vanessa tameamea* & *Vaga blackburni*; three introduced from Asia: *Papilio xuthus*, *Lampides boeticus*, *Erionota thrax*; two introduced from Mexico to control Lantana: *Tinolus echion*, *Strymon bazochii*; five others also in the United States (mainland): *Pieris rapae*, *Vanessa atalanta*, *V. cardui*, *V. virginiensis*, *Danaus plexippus*.

The Pribilof and Aleutian Islands West of Alaska, have one: *Pieris napi*.

GREENLAND has 6 or seven: *Lycaena phlaeas*, *Colias nastes*, (A. Clark?) *hecla*, *Agriades glandon aquilo*, *Boloria titania chariclea*, *B. polaris*, and another *Oeneis taygete* where the type was supposedly caught but no valid specimen is known. These butterflies came into Greenland from Ellesmere Island to the northwest and most then spread along the coasts (the interior is solid ice 10,000 ft thick).

ICELAND has *Pieris rapae*, *Vanessa atalanta*, *V. cardui*, *V. virginiensis*, all probably strays, although *rapae* may live all year there now.

BERMUDA has *Danaus plexippus*, *Precis coenia*, *Vanessa cardui*, *V. atalanta*, *Agraulis vanillae*, *Pieris rapae*, *Eurema lisa*, *Colias philodice*, *Phoebis sennae*, *Papilio cresphontes*, *Hylephila phyleus*, *Calpodus ethlius* and *Prepona amphitoe* (dubious). But A. Clark mentions 14 from Bermuda. What is the other one? and which of these butterflies is native now?

THE DRY TORTUGAS are islands west of the Florida Keys. They have *Ascia monuste*, *Nathalis iole*, *Strymon columella*, *Hemiargus hanno antibubastus*, *Ammon bethune bakeri*, *Leroda eufala*, *Panoquina panoquinoides* . . . any others? I urge readers to report any additions because it is hard to find records from these remote places.

NEWS AND NOTES FROM THE 26th ANNUAL PACIFIC SLOPE SECTION MEETINGS,
UNIVERSITY OF CALIFORNIA, DAVIS, August 24 - 26, 1979

The meetings were held in Storer Hall, headquarters of the Department of Zoology, which along with the Department of Entomology co-sponsored the event. The group was welcomed by Dr. Martin Birch, chairman of Entomology and noted pheromone specialist. The program included 22 submitted papers and a mini-symposium on northern California habitats, including relict riparian forest and grasslands in the Central Valley. R.O. Schuster, curator of the UCD collection, discussed the history and growth of the University collections, which are threatening to outgrow their space allocation. There were 7 student speakers giving a total of 9 papers. The John Adams Comstock Award committee, consisting of Ray Stanford, Chairman, John Masters, and C. Don MacNeill, selected James Bruce Walsh of U.C. Davis as the winner of the first \$25 prize for his paper on "Quantitative Methods in Biogeography."

Exhibits in the Storer Hall lobby centered on field trips, past and present. For the benefit of those not attending the Fairbanks meeting several members set up cases of material collected at Eagle Summit, in the Brooks Range, and in the Fairbanks area. The Eagle Summit count prepared by Ray Stanford, abstracts of papers presented, and Fairbanks group photo were also on display. In connection with the scheduled Trinity Alps - Mount Eddy field trip following the meeting, photos, maps, literature, specimens and species lists were on view. Many attendees took the opportunity to examine the 16 drawers of specimens accumulated in the 4-year butterfly survey of the Trinity-Eddy area. There was also a small exhibit on the butterflies and natural history of subantarctic Patagonia, as a counterpoint to Alaska, and one on temperature manipulation of Nymphalid phenotypes and its evolutionary significance. An unusual "exhibit" was a live female Precis coenia of the melanic aberration "schraderi," manufactured for the occasion and kept in a cage at the registration desk.

The attendance was the largest ever at a Pacific Slope meeting separate from the national: 91 members, students, and guests attended the sessions and 76 were at the banquet. People came from as far away as Gray's River, Washington; Utah; Colorado and New Mexico. Several northern California members were attending their first meeting. On Saturday evening, following a multi-course gourmet Greek meal, the attendees heard Prof. Miklos Udvardy, one of the world's foremost biogeographers, discuss the impact of plate tectonics and mathematical theory on the science of zoogeography. Dr. Udvardy is the author of the widely-used textbook "Dynamic Zoogeography" and of the new Audubon field guide to the birds. Another distinguished guest was Prof. Jose Herrera of the University of Chile, who attended the entire meeting. Prof. Herrera is Chile's leading Lepidopterist and one of the foremost entomologists in Latin America.

To everyone's amazement the temperature never got above 92° throughout the meeting! The unseasonably cool weather was related to an upper-air disturbance in the north Pacific which threatened to dampen the scheduled trip north.

Among the submitted papers should be noted important range extensions and additions to the California fauna announced by Sterling Mattoon of Chico, who has been working the northeastern and northwestern corners of the state in ecologically unique and seldom-collected habitats; the rediscovery of the long-lost metalmark Apodemia phyciodoides in Mexico, announced by Richard Holland; the life-history of the extremely rare Sphingid Euproserpinus euterpe, shown by Paul Tuskes - the insect receives a Federal threatened-species-status hearing in Bakersfield on September 18; and a variety of new, ---and often surprising ---, taxonomic developments in the confusing tribe Melitaeini, described by John Masters. Copies of the abstracts of submitted papers are available for 30c postage from A.M. Shapiro, Dept. of Zoology, U.C. Davis, Davis, CA 95616.

At the business meeting it was decided to meet next year in the Pacific Northwest, and the year after probably in San Diego. Bob Pyle will be next year's Program Chairman. The paper award next year will be in honor of Lloyd Martin. Resolutions of appreciation were passed honoring the work of the Program and Local Arrangements Committees (A.M. Shapiro, chairman; A. R. Shapiro, C.V. Kellner, T. Eichlin, W. Overton, L. Litman, J.B. Walsh, N.J. Smith); thanking T. Eichlin for arranging the printing of the program; and commending the chef at the Symposium Restaurant. Jerry A. Powell once again invited contributions to the award fund. Send tax-deductible donations payable to "Lepidopterists' Society Memorial Fund" to J.A. Powell, Dept. of Entomology, 201 Wellman Hall, U.C. Berkeley, Berkeley, CA 94720. Dr. Shapiro was directed to thank the two host Departments at Davis for their support. The meeting concluded with a slide-fest centering on the national meeting in Alaska and collecting before, after, and during the proceedings.

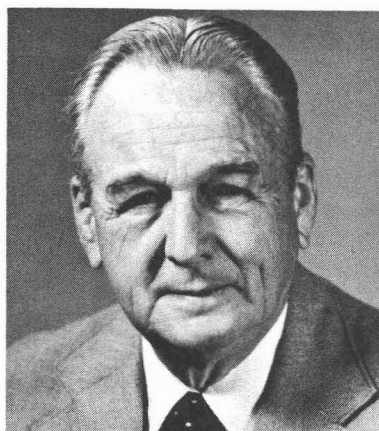
Following a particularly entertaining paper by Leslie V. Smith, a motion was brought to broaden the scope of the award to include amateurs. After considerable discussion and parliamentary tomfoolery it was unanimously agreed to open the award to amateurs who are giving their first paper, and to limit it to persons unpublished in refereed journals. The new eligibility rules go into effect next year.

At least two carloads of field-trippers went north to Deadfalls Lakes and Mount Eddy after the meeting, despite persistently threatening weather in one part of sunny California where it does rain in the summer. The collecting was decidedly inferior to the same time last year, but they still got Satyrus fuliginosus, Lycaena nivalis ssp. and L. mariposa, L. heteronea, the undescribed endemic ssp. of Polites sabuleti, etc., plus the real prize of the trip - a male of the extremely rare endemic ssp. of Speyeria mormonia, previously known from only one specimen. It was collected on August 27 by Marilyn Mullins and very kindly donated by her and her husband Bill to the U.C. Trinity-Eddy Survey. As is so often the case, Mrs. Mullins stayed near the car and caught the prize while those who climbed to its known habitat higher up saw none!

RESPECTFULLY SUBMITTED,
Art Shapiro and Bruce Walsh, Co-conspirators
(Program Chmn. and Sec. Pro Tem, respectively)

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Karl Jordan Medal Award 1979 to J. F. GATES CLARKE



John Frederick Gates Clarke, born February 22, 1905, Victoria, B.C.; came to U.S. 1916 and naturalized 1934; married Thelma Blanche Canterbury Miesen, 1929; two children, son and daughter.

Education: Attended Washington State University with PhC in Pharmacy, 1926, BS in Zoology, 1930, MS in Entomology, 1931. Postgraduate work: Washington State University, 1935-36 and University of Paris, 1945-46. PhD

in Entomology, University of London, 1953.

Member and held office in numerous professional and honor societies: Fellow, Royal Entomological Society, Entomological Society of America (Chm. Com. proposal to establish the National Institute of Entomology, 1957), Lepidopterists' Society (Pres., 1973), Entomological Society of Washington (Chm., Prog. Com., 1955-58, Pres., Mem Exec. Com, 1960), Society for British Entomology, Biological Society of Washington, Washington Biologists Field Club, Sigma Xi, Phi Kappa Phi, Rho Chi, Phi Sigma and Phi Delta Theta.

Dr. Clarke served as an entomologist with the U.S. Dept. of Agriculture, 1936-1954. He became a curator in the Division of Insects, U.S. National Museum and Smithsonian Institution, 1954-1962, assumed the position of the Chairman of the Dept. of Entomology, 1963-1965, and finally became senior entomologist, 1965-1975. He is currently a research associate of the same department.

Over his long and varied career, Dr. Clarke has been the recipient of numerous grants and conducted field expeditions especially in the Pacific Islands, Micronesia, West Indies, Virgin Islands, and Argentina. He is the author of almost one hundred books and publications dealing primarily with the microlepidoptera, including the *Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) Described by Edward Meyrick* (1955-1970), a work of almost 4000 pages. This latter work is an outstanding contribution in the taxonomy of lepidoptera world-wide and remains a basic reference for all who study the microlepidoptera. His latest research interests include new genera and species of Oecophoridae from Chile.

NEW PUBLICATION

The Aurelian

A new Journal
to be
Published quarterly
by the
Saruman Museum

Vo I No 1 16 pp 4 drawings
of butterflies w/ distribu-
tion maps.

First 4 issues, beginning
with Vo I No 1, 14 Sept.,
1978, 3.50 overseas,
2.75 UK.

The Saruman Museum, Paul Smart, F.R.E.S., and Gita Smart, F.R.E.S., Administrators, is Britain's first museum devoted to entomology, especially Lepidoptera. The policy of this museum has been to obtain important collections by purchase or donation. These now constitute the most extensive assemblage of insects outside of the British Museum. Earliest specimens date from 1795. Many specimens collected by Alfred Russel Wallace, A. S. Meek, and the Pratt Brothers are included in the collection. The principal aims of the administrators are to build reference collections and a research library, and to provide a unique educational facility in the field of entomology to students and school children.

LIFE HISTORIES ANONYMOUS

Papilio machaon aliaska: H. P. Kimmich reports that on 2 July 1979, near Stewart Crossing, Yukon, Canada, he found one female fluttering among patches of Osmorhiza longistylis (Umbelliferae). The insect willingly deposited eggs on that plant in captivity, as well as on other Umbelliferae presented. Rearing was accomplished in Vancouver, taking six weeks from egg to pupa. The species is single brooded.

Regarding the presumed foodplant Artemisia arctica: "To my knowledge the only Artemisia found in the Yukon is A. campestris ssp. borealis. I have not observed any machaon in the vicinity of any Artemisia."

* * * * *

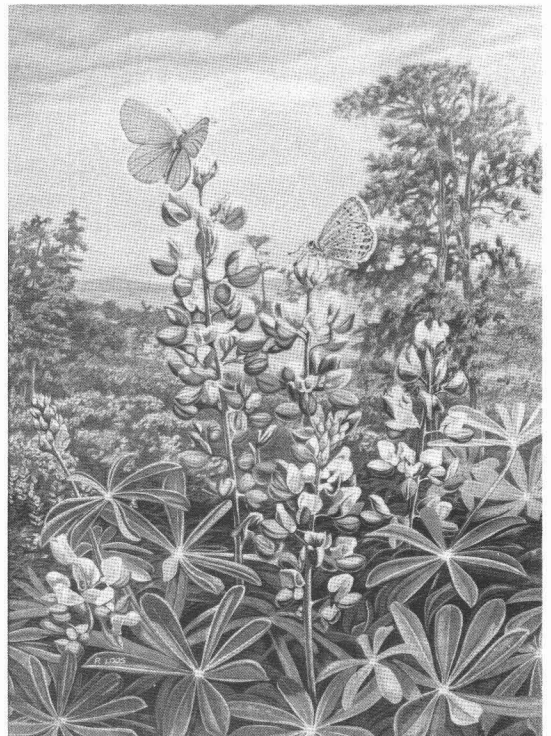
-- GRANTS IN AID --

The Xerces Society, an international non-profit scientific organization, offers modest grants to support scientific research related to conservation of terrestrial arthropods. Proposals explicitly related to potential endangered species or management of terrestrial arthropod populations will be given preference. Grants will usually be several hundred dollars U.S. Young investigators and those without formal professional affiliation are encouraged to apply. Deadline for 1980 proposals is 15 January 1980. For further information, write after 15 September 1979 to Dr. Francie Chew, Xerces Grants Committee, c/o Dept. of Biology, Tufts University, Medford, MA 02155 USA.

* * * * *

PRINT OF KARNER BLUE BUTTERFLY AVAILABLE

A 19 x 25 inch, full color, limited edition print of the Karner Blue Butterfly (Lycaeides melissa samuelis Nabokov) has been issued jointly by the Pine Bush Historic Preservation Project, Inc., and the Xerces Society, Inc. The poster is from a watercolor painting by Ryland Loos, a well known biological illustrator in the Department of Biology, State University of New York at Albany, whose work has appeared in the Missouri Conservationist, Yankee Magazine, The (New York State) Conservationist, Science, and many other periodicals and books. Prints are on high quality paper with a wide border, are suitable for framing. Each will be signed and numbered by the artist. They will be shipped rolled in a mailing tube. The price is \$20.00 per print, plus us \$1.50 for postage and packing costs. The edition is limited to 950 copies. Prints may be ordered from the Pine Bush Historic Preservation Project, Inc., P.O. Box 22820, 1400 Washington Avenue, Albany, NY 12222. Remittance payable to the "Pine Bush Historic Preservation Project, Inc." should accompany all orders.



((Ripples)))

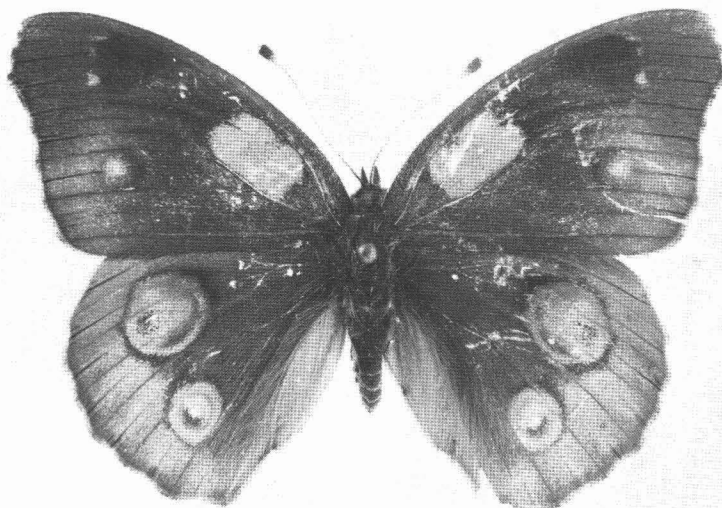
A REMARKABLE BUTTERFLY ABERRATION

On October 7 1951 while collecting on the grounds of Ogelthorpe University near Brookhaven, Georgia, I was fortunate enough to observe a very unusual butterfly. As it flew across the unused athletic field it appeared to be jet black except for an orange spot or bar on the forewings. A closer examination after capture revealed it to be a melanic aberration of *Junonia coenia* (Hubner). The transverse orange bands of the cell of the forewing had fused into one spot and occupied most of the cell. The ocellate spots of the wings were nearly obsolescent, appearing as vague metallic blue-gray patches. A sub-marginal area distad of the ocellate spots of the hindwing was similarly colored.

When he examined the specimen in 1953, Dr. W. T. M. Forbes expressed such interest in it that I gave it to him for the collection at Cornell University. Recently, stimulated by illustrations of aberrant specimens in the publication of the Lepidopterists' Society, I borrowed the specimen to prepare this note and to provide an illustration (Fig. 1). When I reexamined it after more than 25 years, I was amazed at the change in coloration. Much of the melanic coloration had faded, and the specimen looked much more like a normal buckeye butterfly. Even so, this aberration is of interest. The fading clearly indicates that the melanic pigmentation merely masks the normal coloration and does not replace it.

It would be interesting to know whether the normal black pigmentation is chemically the same as the melanic pigmentation. The cause of melanism is unknown. In addition, the factors responsible for the absence of melanic masking of the aberrant orange spots of the forewing is unknown.

Edward L. Todd
Systematic Entomology Laboratory
IIBIII, Agricultural Research
Sci. & Educ. Admin., USDA
c/o U.S. National Museum of
Natural History,
Washington, D.C. 20560.



Ripples

Dear Jo:

July 20, 1979

The butterfly with an Identity Crisis cannot be *P. Polydamus* which has no tails. The butterfly pictured has tails.

It cannot be *B. philenor* nor *P. troilus*, both of which have longer tails than the specimen pictured. It looks more like an aberrant *P. palamedes*, but again *P. palamedes* has longer tails.

I think it is an unintentional hoax or not a North American butterfly. Again I have searched my library and not come up with a foreign look-alike.

Pete Czura in his correspondence indicates he was not exactly sure when and where the picture was taken. As Lee Miller states, without a collected specimen, the identity will probably remain in doubt forever.

Ray W.Bracher, 17145 Cherokee Dr.,South Bend, IN 46635.

Dear Jo:

July 22, 1979

Re the aberrant *Papilio* in the July-August NEWS, my first impression was that it suggest ab. "calverleyi" of *P. polyxenes asterius*. The primaries appear to be a close match with Holland's figure, although the secondaries, so far as can be seen, do not. Perhaps it is a less pronounced variant in that direction. Roderick R.Irwin, 24 East 99th Place, Chicago, IL 60628.

Jo/Bryant:

25 July 1979

From the correspondence I must infer that the spots on the Czura swallowtail are blue. If they were yellow I would not hesitate to propose a *polyxenes X cresphontes* hybrid, since both species occur in the area and the shape of the spots, as well as the diagonal band below the cell, could derive from such parentage. If the spots are blue, though, this hypothesis would be in doubt because the bug would have to be a female, which is relatively unlikely due to Haldane's rule. You should have stated the colors explicitly! Has anybody out there made this particular hybrid by hand-pairing? Has anybody tried?

Art Shapiro, Univ. of Cal, Davis, Dept. of Zoology, Davis,CA 95616
Ed.Note: In this slide the light areas were yellow!

Dear Jo:

July 26, 1979

I was very much interested in Bryant Mather's account of identifying the butterfly with an identity crisis from West Virginia in the July/August 1979 issue of the NEWS. My interest is high not only because the specimen was photographed in West Virginia, where the butterfly fauna has just recently been documented but also because the specimen looks very similar (in black and white) to specimens pictured in W.H. Edwards' *The Butterflies of North America* (1868-1897), *Papilio* plate XI. He has illustrated *Papilio asterias* var. *calverleyi* which shows wing patterns remarkably similar to those in the Czura photograph. Enclosed is a color Xerox of the Edwards' plate. If I recall correctly, the specimens pictured by Edwards were collected along the east coast (New Jersey?). I hope this can be of some help in solving this mystery.

Bastiaan M. Drees,Dept.of Ent, Ohio State U,1735 Neil Ave, Columbus, OH 43210

Molly Monica contributed the following thought:

"A curious predicament for a butterfly to be in. As for myself, I have settled for this poor creature possibly being *P. cresphontes* (or maybe *pennsylvanicus*). The angle of the photograph on your butterfly in question does not enhance it's being correctly labelled at best."

Dear Jo,

August 26, 1979

I have a specimen in my collection that might help in solving the mystery of the butterfly with an identity crisis. It is a very unusual aberrant form of *Papilio troilus*. I am in the process of making arrangements to have the specimen photographed so I can send you a picture of it. Would you please let me know when your deadlines are.... I do think it would be of great interest to many of our society members.

Thanking you for your time and consideration, I am,
Sincerely,

Philip A. Holzbauer, Rt 1, Palmyra, WI 53156.

Ed. note: The picture didn't arrive in time.
Look for it in the next Ripples.

Dear Jo

July 23 1979

Last summer I captured 2 fairly fresh 2nd brood *Papilio glaucus* feeding on milkweed blossoms. One was yellow -the other the dark form. U was curious about the progeny of the two different forms. I put them in large nylon sleeves on wild cherry bushes and fed them daily with fresh milkweed blossoms. They both laid a good crop of eggs, and each lived 5 days. The result was a good crop of larvae. Due to an accident in transferring larvae & sleeves to new feeding areas, the larvae of the two ?? became mixed, but I am still amazed at the results. There were some casualties, but 60 chrysalids were produced. Only 1 died, and there were 59 adults, which emerged as follows:

25 ♂♂ 14 yellow ?? 20 dark ??

This is most unusual, as dark ?? are rarely seen in this area in the spring brood. In fact, this spring the ones that were flying here were 90% yellow ?? . Is it possible that dark??' flights are more limited??? The dark ?? are more prevalent in the fall, from my observations here. Perhaps others have done some research with yellow & dark ?? of *P. glaucus*. Their comments would be appreciated. Sincerely yours,
Ray Bracher, 17145 Cherokee Dr., South Bend IN 46635.

Dear Jo

29 May 1979

The worms in the May/Jun Lep News 1979, #3, p. 4 sound like horsehair worms, *Nematomorpha*, but I thought that they developed in the body cavity, not the intestine; they alternate generations between aquatic insect larvae and terrestrial insects. James Scott, 60 Estes St, Lakewood, CO 80226.

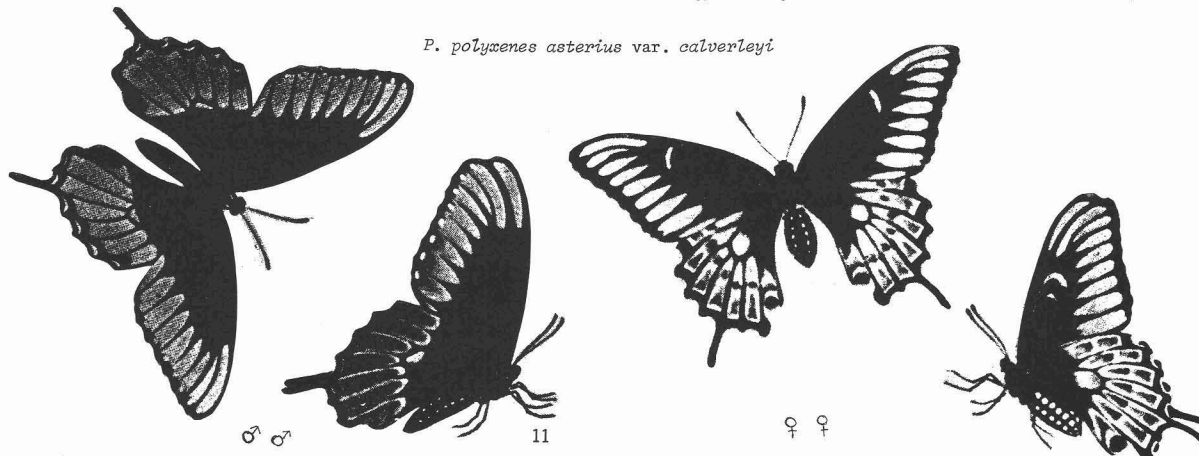
??? Sex or sun bathing for *Satyrrium* ??

Dear Jo,

I would like to comment on Robert Cavanaugh Jr.'s behavioral observations on *Satyrrium kingi*. The leaning and tilting behavior to the sun is probably not for attracting males, (since both male & female *S. kingi* can be observed performing this behavior) but rather for thermoregulation. Measurements on these butterflies show that preferred body temperatures are 34.5±1.0 C, and the lateral basking postures, particularly on large, exposed concave leaves elevates thoracic temperature to this range in 15 to 30 seconds, depending upon the ambient thermal conditions. Because of small body mass (less than .01 grams), even brief flights at ambient temperatures of 20 C under an afternoon sun can rapidly lower thoracic temperatures, hence flight efficiency and control.

As such, small butterflies,are basking disproportionately greater amounts of time than large butterflies, and prefer lower flight levels within the protective boundary layer of the earth or near vegetation which has a vertically distributed boundary layer. These sites experience less turbulence and reduce convective heat loss. As far as I know lateral basking (with the ventral surface of the wings presented perpendicularly to the sun) is the only behavioral thermoregulatory strategy used by this genus. Matthew M. Douglas, Assistant Prof. Entomology & Ecology, Biological Science Center Boston University MA 02215

P. polyxenes asterius var. *calverleyi*



FAIRBANKS



First row:

Charles V. Covell Jr
 Ronald W. Hodges
 Elaine R. Hodges
 Glenn A. Gorlick
 Martha Elledge
 KENELM PHILIP
 John Neyhart
 Vikki Neyhart
 John Hinchliff
 Kate Wilkinson
 Mary Lou Merritt
 James R. Merritt

Second row:

Ian F.B. Common
 Jill Common
 June Preston
 Betty Anne Philip
 Dave Winter
 Jo Brewer
 Dorothy L. Bauer
 David L. Bauer
 Anita Delafield
 Benjamin H. Landing
 Jerry Powell
 Kathy Donahue

Third row:

Camilla Weems
 Howard Weems
 David W. Bouton
 Bob Langston
 Evelyn Langston
 J.W. Tilden
 Hazel Tilden
 Raymond Castilonia
 Mark Harrington
 Mignon Davis
 Don Davis
 Ray Stanford
 William E. Miller

Fourth row:

Jennifer Ripple
 Bob Wuttkin
 Uri Caspi
 Arthur Shapiro
 David Tilden
 David Faulkner
 James Mori
 Constantino Della Bruna
 Kathleen Sorensen
 John Sorensen
 Dale Habeck
 Paul A. Opler

Fifth Row

Jocelyn Muggli
 Julian P. Donahue
 José I. Castro
 Olavi Soltavalt
 Barbara Laudan
 Jon Shepard
 Ron Leuschner
 Joyce Karpuleon
 Karolis Bagdonas
 Fay Karpuleon
 J.F. Gates Clarke
 Ron Vanderhoff
 Joseph Zeligs
 William Patterson
 Barry Wright
 Gerry Wright
 Floyd Preston



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1979

THE NEXT TWO MEETINGS OF THE LEPIDOPTERISTS' SOCIETY WILL BE IN :

1980: University of Florida, Gainesville, June 19-22. Contact: Dr. Dale H. Habeck, Dept. of Entomology & Nematology, Archer Rd Lab, University of Florida, Gainesville, FL 32601

1981: vicinity of Cuernavaca, Morelos, MEXICO, summer (date to be announced), co-sponsored by the Sociedad Mexicana de Lepidopterología. Contact: Sr. Alberto Díaz Francés, Berlín 105, Col Coyoacán, México 21, D.F. México.

THE LEPIDOPTERISTS' SOCIETY
TREASURER'S REPORT - 1978

1. Comparison of Net Assets:

<u>End of 1977</u>		<u>1 April 1978</u>	<u>End of 1978</u>		
Ckg.Acct.:	8677.86	Old Ckg.Ac:	2378.40	Ckg.Acct.:	2415.56
Sav/Ln(3):	31233.32	Sav/Ln(1) :	40181.76	Sav/Ln(2):	31634.62
Petty Csh:	39.34	Petty Csh :	10.24	Petty Csh:	35.52
		New Ckg.Ac:	1000.00		
Total	39950.52	Total	43570.40	Total	34085.70

2. Allocation of Funds at End of 1978:

Life Members (76 @ 140*)	10640.	*Based on
'78 News Expenses paid in '79	1736.54	9.47% Interest
'78 Journal Expenses paid in '79	5151.71	
'79 Income received in 1978	3156.	
Memberships paid ahead	364.	
Illustrations Fund	879.68	
Publication Fund	6257.68	
	<u>Subtotal</u>	
	28185.61	
Operating Balance of Society	5900.09	
	<u>Total</u>	
	34085.70	

3. Expenses during Calendar 1978:

Journal Printing & Distrib.	16912.92	Jour.Total	17651.62
Journal Editorial Expense	738.70		
News Printing	2282.22	News Total	4401.97
News Postage	637.51		
News Distribution	721.22		
News Labels/Envelopes	511.02		
News Typing	250.		
Office Supplies	358.48	Other Total	3109.41
Soc.Printing	829.70		
Postage	402.96		
Mailing List Maintenance	340.93		
Annual Meeting	210.		
Pacific Slope Meeting	35.79		
Back Issues Handling	568.23		
Commemorative Issue	225.80		
Check charges, refunds	43.20		
Misc.	94.32		
	<u>EXPENSE TOTAL</u>		
	25163.		25163.

4. Income during Calendar 1978:

Savings/Loan Interest	1706.59	}	14430.70
Regular Members	6555.50		
Sustaining Memb.	700.		
Student Memb.	837.60		
Institutional Subscr.	540.		
Air Mail	204.55		
Page Charges	1265.		
Back Issues Sales	1764.97		
Other (Misc.)	856.49	}	1711.48
Spec.Income: New Life Members	500.		
Illus.Fund	66.48		
Publ.Fund	91.		
Comm.Issue sales	1054.	}	3156.
1979 Income rcvd. in 1978	3156.		
			INCOME TOTAL 19298.18

TREASURER'S REPORT - Page 2

INCOME PROJECTION FOR 1979:

Regular Membership, 1200 x 13	15600	
Instit. Subscribers, 128 x 18	2300	
New Members, 3200 x 13	4160	
Air Mail Postage	250	
Back Issue Sales	1800	
Page Charges	1500	
Other Income	500	
Savings/Loan Interest	1800	
	Subtotal	27910
Special: Life Members	1000	
Fund Donations	200	
Comm. Issue Sales	1000	
	Subtotal	2200
	TOTAL INCOME	30110

EXPENSE PROJECTION FOR 1979 (BUDGET):

News	5000	
Journal	22000	
Office Sup/Prtg.	1000	
Postage	500	
Mailing List Mt.	400	
Meetings	300	
Back Issue Hdlg.	600	
Misc.	200	
	TOTAL EXPENSE	30000
		PREDICTED NET LOSS 2090

MEMBERSHIP STATISTICS (AS OF 19 June):

Regular Paid Members	984	
New Members/Re-instat.	177	
Already Paid	24	
Paid Ahead	16	
	Subtotal	1201
Life Members	80	
Society Exchange	31	
Society Gifts	6	
Inst. Subscribers	127	
Dues Waived	1	
	Subtotal	245
Not Paid but on mailing list	182	
	TOTAL MAILED	1628

Late update!

Deceased	1
Resigned	1
Now Paid	18

RESULTS OF THE LEPIDOPTERISTS' SOCIETY'S "QUESTIONNAIRE ON THE APPLICATION OF THE FEDERALLY ENDANGERED SPECIES ACT OF 1973 TO THE LEPIDOPTERA."

In late 1978 and early 1979, the Society distributed a questionnaire to its 1,400 members as directed by the Executive Council. The purpose of the questionnaire was to assess the members' feelings concerning the application of the Federal Endangered Species Act of 1973 to the Lepidoptera.

A total of 540 questionnaires was returned, representing approximately 38% of the membership, from throughout the world (but primarily from the United States, where the majority of members resides).

Some 263 of the questionnaires (48.7%) were returned with additional comments. These were initially analyzed separately but the result was that the responses of the two groups (those who made comments and those who did not) were virtually identical. ("No Opinion" responses for all four questions ranged from 5.5% to 16.1% of the respondents with comments, vs. 7.4% to 19.5% in the group that did not offer additional comments.)

THE RESULTS

QUESTION #1: "Do you believe in principle in the conservation of Lepidoptera?" 96.1% of the respondents said "Yes," while 2.4% said "No," and another 1.5% were either uncertain, had no opinion, or did not answer the question. Since Question #2 only sought the opinion of those who did believe in the conservation of Lepidoptera, the 13 "No" questionnaires were not tabulated further (leaving a total of 527 for the following analysis):

QUESTION #2 consisted of four non-exclusive choices of measures to achieve the conservation of Lepidoptera:

Choice A: government legislation, such as the Endangered Species Act of 1973:

Favor:	55.6%	(293)
Oppose:	31.9%	(168)
No Opinion/No Response:	10.8%	(57)
Uncertain, or with Reservations:	1.7%	(9)

Choice B: action by private conservation organizations such as the Nature Conservancy:

Favor:	69.8%	(368)
Oppose:	11.6%	(61)
No Opinion/No Response:	17.8%	(94)
Uncertain, or with Reservations:	0.8%	(4)

Choice C: action by scientific and/or specialist societies, such as the Lepidopterists' Society and the Xerces Society, such as establishing formal codes or guidelines for collecting, the preservation and disposition of collections, etc.:

Favor:	87.7%	(462)
Oppose:	4.9%	(26)
No Opinion/No Response:	6.5%	(34)
Uncertain, or with Reservations:	0.9%	(5)

Choice D: Action by individual lepidopterists through personal example and influence brought to bear on other members of the peer group:

Favor:	76.7%	(404)
Oppose:	7.0%	(37)
No Opinion/No Response:	16.3%	(86)

From the above results it can be seen that all questions and choices listed on the questionnaire received a majority of favorable responses, the degree of preference varying from 87.7% favoring action by societies, to 55.6% favoring government legislation.

A further analysis was made of the 461 questionnaires which had a definite "Favor" or "Oppose" response to Choice A concerning government legislation:

Of the 293 (63.6%) who FAVORED government legislation:

70.3% (206) also favored B, C, and D
 6.8% (20) also favored B and C
 3.4% (10) also favored B and D
 5.5% (16) also favored C and D
 2.4% (7) also favored B only
 6.5% (19) also favored C only
 0.7% (2) also favored D only
 4.4% (13) did not favor any other alternative

Or, to look at it from another perspective:

82.9% (243) favored B (private conservation organizations)
 89.1% (261) favored C (society action)
 79.9% (234) favored D (personal example)

Of the 168 (36.4%) who OPPOSED government legislation:

41.7% (70) favored B, C, and D
 7.7% (13) favored B and C
 4.2% (7) favored B and D
 26.8% (45) favored C and D
 1.8% (3) favored B only
 10.7% (18) favored C only
 5.4% (9) favored D only
 0.6% (1) did not favor any other alternatives
 1.2% (2) expressed qualified or mixed alternatives

Or, from another perspective (compare with above):

55.4% (93) favored B (private conservation organizations)
 86.9% (146) favored C (society action)
 78.0% (131) favored D (personal example)

The highlight of the preceding set of figures is that people who favor government legislation for the protection of butterflies are also much more likely to favor any and all other alternatives proposed in the questionnaire, while those who oppose government legislation are much less likely to do so.

To date, analysis of the comments provided on 263 questionnaires indicates that the single most frequent comment pertains to "Habitat Protection," and its importance in maintaining the population of butterflies.

Here are a few samples of some of the other comments offered:

"Ban trade except by permit system for true research only."

Breed endangered species both for supplying demand by collectors and scientists, and to reintroduce species into original or potential new habitats where protection is assured.

Establish "bag limits" or "taking limits," as is done for game and fish.

Designate precise geographical boundaries where a species is protected, and allow collecting outside this area (peripheral stragglers probably would not contribute much to the population anyway).

"(Federal legislation) can cover only the most obvious cases on a national level. Local action for taxa endangered in a particular state or region is also necessary...."

Amend the Endangered Species Act to allow the "taking" of endangered species of Lepidoptera and other insects, in recognition of the fact that collecting of invertebrate animals does not have the same impact on the population as the collecting of vertebrates.

"Stop collecting!"

"When any species is declared endangered or threatened...there should also be some kind of mandatory procurement funding made available for purchase of habitat areas....To simply place species on some sanctified list becomes an empty and meaningless gesture if not coupled with efforts to insure that the natural habitats so vital to their continued existence are provided for."

"I do not believe that collecting is a significant factor in reducing population levels."

Julian P. Donahue, Secretary
 June, 1979

LEPIDOPTERA RESEARCH PROJECT IN PAUPAU NEW GUINEA

In August 1977, for 2½ months, Dr. Robert Pyle, in his capacity as Chairman of the Lepidoptera Specialist Group of the International Union for the Conservation of Nature, came to P.N.G. on a consultancy to study all aspects of the Insect Farming and Trading Project. His findings, produced as an advisory report, are collated in the 1978 "Conservation and Utilization of the Insect resources of Paupau New Guinea".

The operation plan for 1978-79 called for an entomologist/ecologist to be brought into the conservation programme to implement some of Bob's recommendations and, in brief to "undertake studies, projects and experimental work on the Lepidoptera biology and ecology, particularly to improve village farming techniques".

I was chosen to fill this role, and I am writing to outline some aspects of this new research post here. Filling this role, I fully endorse two of the suggestions that he stressed in his report, and feel that they should be undertaken as soon as possible and I have given them top priority in my research programme.

Firstly there is the conservation concern regarding *Ornithoptera alexandrae*, the world's largest butterfly. This, arguably the most beautiful of the seven species of birdwing butterflies endemic to P.N.G., is entirely restricted to the Pomondetta region of the Northern Province. It is in this area that much of the habitat in which its food plant, *Aristolochia slechteri* grows, is being cleared and planted with oil palms. Bob's comments were as follows: "Unquestionably the single most critical and timely insect conservation research needed in P.N.G. is for sound, long term intensive autecological, synecological and biogeographical studies of *Ornithoptera alexandrae* *O. alexandrae* is accorded first emphasis both because it is the largest butterfly in the world and because its habitat seems clearly to be the most limited and pressured of any of the birdwing habitats".

A necessary part of such an ecological study is the accurate mapping of the total distribution of the species which will be carried out on an intensive basis by recording the presence or absence of *O. alexandrae* and its foodplant for each square of a 1 km grid covering the whole of the Pomondetta region as far north west as its type locality on the Mambare River. At present the boundary of a large Wildlife Management Area just north of Pomondetta has been drawn up and is in the process of being put into practice. This will help to begin the conservation of some of the habitat in which *O. alexandrae* occurs.

Secondly, there has long been a need for an accurate approach to recording species distributions in P.N.G., not only for the Insecta, but also for other fauna and flora. Bob points out that "It is very difficult to assess the relative rarity of an organism when one has no clear idea of its range". Of course for many groups of insects which are insufficiently known or poorly studied systematically, accurate recording on a large scale, over a longterm period is not practical. As the butterflies of P.N.G. are well studied, however, and there is a distinct need for accurate distributional data for many species to be collated before the correct conservation measures can be determined and implemented (especially for example, for the *Ornithoptera*) it was decided that a recording scheme based on that founded by John Heath of the Biological Records Centre, Monkswood, England, for the British Isles, should be adopted in P.N.G.

The method now also being used in Europe and Korea, requires that record cards, which list all the species to be found in a country, be completed by field observers for each 10 km square of a grid covering the whole of its land area. The ecological patterns that emerge from such a recording scheme will undoubtedly prove most interesting, because the variety of biotopes in a mountainous, tropical country like P.N.G. with all its islands, is enormous; and also because there are approximately 625 known species of butterflies in this country. Data from the scheme should also prove interesting in the study of mimicry complexes and clinal variations within species on the mainland and on the larger islands.

There are obvious problems involved. This is the first time such a scheme has been attempted in a tropical country. P.N.G. has a total land area of 461,693 sq. km. which is half as large again as the British Isles, but the islands of P.N.G. are spread over an area which is about five times as large. Although there are very few recorders for the country, the operation of the Insect Farming and Trading Agency lends itself ideally to such a system, as butterflies and other insects are received and sorted daily from all over P.N.G. The extension work of the Agency is also continuing to cover new areas which have not yet been studied.

Finally, I should like to point out that I would welcome correspondence with those members of the Lepidopterists' Society who would like to know more about the system, and I would be most grateful to receive the assistance of those who have collected in P.N.G. and feel that they may be able to provide some records based on their collections.

Michael J. Parsons, Entomologist, Wildlife Division, Lepidoptera Research Project, PO Box 129, Bulolo Morobe Province, P.N.G.

NEW MEMBERS

ANALAU, N. Z., Mangga Besar 4L/9, Jakarta Barat, INDONESIA
 BOURGEAT, Jacques, 17 rue des Lilas, 78700 Conflans Ste. Honorine, FRANCE
 BRADLEY, John James, 90 Pembroke Rd. Flat 5. Bristol, Co. of Avon, BS8 3EG, ENGLAND
 CALHOUN, John, 154 Barcelona Ave, Westerville, OH 43081
 CERMAK, Michael, 23 Hodel St., Cairns, N. Queensland, AUSTRALIA 4870
 CHAPDELAINE, M. Gilles, 21 St. Robert, St. Romuald, Quebec, CANADA
 CHAPDELAINE, Pierre, 1111 De la Voie Ouest, St. Jean Chrysostome, Quebec, CANADA GOS 2T0
 CHASE, Fred E., PO Box 5519, North Pole, Alaska 99705
 CHASTEEN, Nathan, Rt.1, Box 40, Prophetstown, IL 61277
 DYER, Harold C., Jr., Rt. 3, Box 985, Greensboro, NC 27410
 ELDER, Alfred S., Director, Pesticide & Plant Protect. N.C. Dept. of Agriculture, PO Box 27647, Raleigh, NC 27611
 ELLIS, Simon, Transworld Entomological Co., 18 Upper West St., Reigate, Surrey, RH2 9PW, / ENGLAND /
 FINKELSTEIN, Jordy, 20 Adler Circle, Galveston, TX 77550
 GEYER, Dr. James W., 204 N. Gurney, Burlington, NC 27215
 HARKRIDER, Dr. J. Robert, Dept. of Biology, Cypress College, Cypress, CA 90630
 KING, H.M., PO Box 387, Coco Solo, CANAL ZONE (Post Zone 8)
 KINKEADE, Hal, 144 Nottingham Cir., Bridgeport, TX 76026
 KITIGAWA, Asao, 24-13 4-chome Mejiro, Toshima-ku, Tokyo, JAPAN
 KOBAYASHI, Mutsuharu, 4150 Druid #1, Dallas, TX 75205
 KONDOR, Charles A., Sr., West 193 South 7409 Richdorf Dr., Muskego, WI 53150
 KUZICH, David M., 200 Virginia #21, Royal Oak, MI 48067
 MARQUEZ, Lic. Carlos A. Velasquez, Managua No. 14, Fracc. las Americas, Naucalpan Edo. de / Mexico, MEXICO. /
 PASKO, John G., 340 Lynn Oaks Ct., Thousand Oaks, CA 91360.
 PATTERSON, Ricky, 905 Chickasaw Trail, Tupelo, MS 38801
 REXRODE, Harlan L., Jr., 87 Pleasant Hill Rd., Harrisonburg, VA 22801
 SACKETT, Arthur W., Fetcham Cottage, Bell Lane, Fetcham, Leatherhead, Surrey, ENGLAND 76929
 SLADKOV, Dr. A. M., Vavilov Str., 28, Moscow, U.S.S.R.
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 SOUTH, Nigel, 52 Chaffers Mead, Ashstead, Surrey, ENGLAND
 WALKER, David S., 540 Platts Lane, Apt. 34, London, Ontario, CANADA N6G 3A8
 YATES, James R., 595 Hicks Rd., Apt. 17-A, Nashville, TN 37221

CHANGES OF ADDRESS

ADAMS, Greg, Dept. of Entomology, Univ. of Florida, Gainesville, FL 32611
 ALTIC, Stephen, 4-201 Monticello Village, Athens, OH 45701
 BECK, Andrew F., Dutch Village X-4, Blacksburg, VA 24060
 BLOSSOM, C. Bingham, 1185 Union Commerce Bldg., Cleveland, OH 44115
 BOWERS, M. Deane, Dept. of Biol. Sciences, Stanford Univ., Stanford, CA 94305
 BREUER, The Rev. David R., 61 Santa Rosa Ave, Sausalito, CA 94965.
 CASE, Dr. J. W., Dept. of Physics, Univ. of Calgary, Calgary, Alta., CANADA T2N 1N4
 CASTRO, Capt. J. I., 1061 Hwy 17 ByPass, Apt. K4, Mt. Pleasant, SC 29464
 DYMAK, Joseph F. III, 8829 Glenwood, Overland Park, KS 66212
 GAYLORD, Thomas K., 3180 Verdun Dr., NW, Atlanta, GA 30305
 HATCH, Richard R., Navseeact Japan, Box 5 FPO, Seattle WA 98762
 HENRY, Parker, Rt.2, Box 478D, Heber Springs, AR 72543
 HEVEL, Gary F., 8104 Arundel Dr., Camp Springs, MD 20022
 KNIGHT, Kenneth R., 433 Brady N.S., Comstock Park, MI 49321
 LeSAGE, Laurent, Biosystematics Rsch. Inst., Agriculture Canada, Ottawa, Ontario, CANADA K1A 0C6
 McCLUSKEY, Ronald L., PO Box 362, Loma Linda, CA 92354
 McFARLAND, Noel, PO Box 1404, Sierra Vista, AZ 85635
 PFEILER, Edward J., Jr., 733 N. Ontare Rd., Santa Barbara, CA 93105
 PLAGENS, Michael J., Dept. of Entomology, Univ. of Arizona, Tucson, AZ 85721
 RIOTTE, J.C.E., Dept. of Entomology, Bernice P. Bishop Museum, PO Box 19000-A, Honolulu, HI / 96819 /
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THURMAN, Albert A., YSU-ROTC Instr. Gp., Youngstown, OH 44555
VENABLE, George L., W-600, NHB-169, Smithsonian Inst., Washington, DC 20560

ADDITIONAL NEW MEMBERS

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CLARK, Mark P., Med.Box 197, Loyola Univ., Stritch School of Med., 2160 S. First Ave., /
KEMNER, John, 9018 Liptonshire, Dallas, TX 75238 Maywood, IL 60153
MATHER, Miss Edith, 1218 Greene Ave., Westmount, Quebec, CANADA H3Z 2A3
MAXWELL, Judi, 1606 Hewitt Ave., St. Paul, MN 55104
MOYER, Timothy R., 706 Sledge Ave., Reading, PA 19609
PATTEN, Ben, Box 98007, Zenith, WA 98188
POCEWICZ, Anthony A., 302 Dunbar Ct., Streamwood, IL 60103
PRICE, Dick, PO Box 67, Key Biscayne, FL 33149
RICHARDSON, Charles Herb, 2600 Pualani Way, #2102, Honolulu, HI 96815
SALA, Frank P., 3830 Carnavon Way, Los Angeles, CA 90027
SELLE, Joe A., Route 7, Box 355, Decatur, IL 62521
SIMCOX, Joseph & Joyce, Entomological Assoc., 1103 E. St. Charles Rd, Ithaca, MI 48847
SIMPSON, Robert C., Rt. 1, Box 154-B, Stephens City, VA 22655
TAYLOR, John S., Rt. 2, PO Box 170, Walterboro, SC 29488
WALKER, Dennis Edward, 1441 So. 18th Ave., Maywood, IL 60153
WHITNEY, George, R.R.3, Mt. Brydges, Ontario, CANADA
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ITALIA 00100

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HOLDEN, Elaine M., 110 N. 3rd Ave., Marshalltown, IA 50158
IFTNER, David C., 2161 Heatherfield Ave., Worthington, OH 43085
LACEY, G. William, 3110 N. 95th St., Omaha, NE 68134
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Choong-Ku, C.P.O. Box 3026, Seoul, KOREA /
MAY, Peter G., 4400 NW 39th Ave., #242, Gainesville, FL 32602
OGUNWOLU, Mr. E.O., Dept. of Entomology, Louisiana State Univ., Baton Route, LA 70803
PYLE, Robert M., Swede Park, Loop Rd., Box 123, Gray's River, WA 98621
RAHN, Russell A., 3205 West Rochelle Rd., Irving, TX 75061
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Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. By decision of the Board, prices of specimens offered for sale will not be published henceforth. Please be brief and clear, and check spelling. Notices will be limited to two appearances. The Editor reserves the right to alter or reject unsuitable copy.

- FOR SALE:** Apodemia phycioides is the rarest Nearctic butterfly, being known only from the holotype and allotype, which were taken before 1924 (Howe, p. 271). In order to establish a fair market value, I am accepting bids for the sale of one specimen. Write for details. Do not remit funds. I reserve the right to reject all bids or to require payment be donated to charity in my name. Richard Holland, 1625 Roma NE, Albuquerque, NM 87106.
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- WANTED:** Copy of Tropical Leaf Moths by P.E.S. Whalley; Beautiful Beetles of the World by T. Tamanuki & T. Sekiguchi; Butterflies and Moths by Alfred Werner; Beetles by Ewald Reittler. Les Eielski, PO Box 21, Wheeler, IN 46393.
- EXCHANGE:** Eastern North American butterflies and moths (mainly Nova Scotian), for North American Noctuidae. Ken Neil, Dept. of Biology, Dalhousie Univ., Halifax, Nova Scotia, CANADA B3H 4J1.
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- WANTED: Papered specimens of all forms of P. sisymbrii, P. beckerii, P. protodice, P. occidentalis, P. napi, - form hulda, pseudobryoniae, marginalis, venosa, frigida. Will trade upon request. Please send all offers, -species available with prices to: Mecky Furr, 7925 Cross Pike, Germantown, TN 38138.
- WANTED: Limenitis arthemis, L. astyanax, L. archippus, L. weidemeyerii, Boloria astarte, B. toddi, B. freija, B. napaea, B. selene, B. alberta, B. kriemhild in exchange for calias ssp and other California butterflies. Marc L. Grinnell, 1137 Reibli Rd., Santa Rosa, CA 95404 USA.
- FOR EXCHANGE: Papilio joanae exoura Topotypes in exchange for other North American butterflies of similar rarity. Interested persons contact: Roman Grothe, #1 Heather Dr., St. Peters, MO 63376.
- WANTED: Correspondence with Western United States collectors who would be interested in exchanging Lepidoptera. Also needed: ova or overwintering larva of Speyeria & Boloria species from the Western U.S. All letters answered. Frank Bodnar, Box 52, Spring Church, PA 15686.
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- WANTED: N. antiopa form hygiea, Inachus io, Papilio pilumnus, P. daunus, P. nitra, P. indra, P. oregonius, P. hollandi, P. rudkini, P. bairdi, P. homerus, Battus philenor hirsuta, Morpho ockendini, M. amphitron, Speyeria diana (female only), Hemileuca moth species, Sphingacampa types, Anisota oslari, Eacles pini, E. i. nobilis, E. oslari, E. magnifica. Any hard to get species of Citheroniidae, Dryocampa rubincunda alba, Coloradia doris, C. pandora lindseyi, and Callosamia securifera; also any aberrant form of butterfly or moth and gynandromorphs. Send your lists of available species. All letters answered promptly! Fred Bower, YMCA 19 East Ave., Lockport, NY 14094.
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Notes on *Incisalia henrici henrici* in New Jersey

Incisalia henrici henrici was almost unknown to New Jersey collectors until Ray Stanford described a colony at Atko to the members of the New Jersey Entomological Society in 1971. Since then, this species has been captured near Swainton, Petersburg and other areas. For many years, I have visited these spots when the foodplants (*Vaccinium* and *Gaylussacia*) were in bloom and have never found more than two to five specimens in any visit. To me, it has continued to be a very rare bug.

The winter of 1977 - 78 was the coldest on record for New Jersey, with snow on the ground until early March. After that the weather continued to be cold, rainy and mostly cloudy. The result, a late spring for collectors.

On April 22, often a good collecting day for early butterflies, I headed for south Jersey to see what species had emerged. The day was mostly cloudy and by 11 AM I had unsuccessfully searched for *Incisalia augustinus croesioides*, *Mitoura gryneus gryneus* and *Anthocharis midea annickae*. Before heading home, I decided to visit the woods near Petersburg to search for *I. henrici*. Things looked pretty dismal as it was still only partly sunny with the temperature in the mid 50's, and the buds on the foodplant were just beginning to open. However, I soon saw and captured a fresh *I. henrici*, my first butterfly of the day. By beating the shrubs along the path, I managed to take 8 by 1 PM.

The day had become brighter and as I looked into the sky to see how many clouds were left, I suddenly discovered several butterflies playing out of reach near the top of a tall American holly tree. In fact, they were flying around the tops of almost every tall holly tree (25 - 40 feet high), hundreds of them in the area. This experience was reminiscent of my first encounter *Mitoura hesseli*, mostly out of reach near the tops of tall white cedars of a New Jersey swamp.

I rushed to the car to get my extension net. With this I can reach to 16 feet, still not high enough to catch the majority of the butterflies. From 3 o'clock on, I no longer saw them spontaneously flying, but was able to get them to fly by hitting the branches. When I missed them, they would usually return to almost the same spot and I often had several chances at the same butterfly. They were seldom seen below about 12 feet and did not remain on the same holly trees. Although I saw 3 pairs in copula, I was unable to capture any of them. I did not see a single specimen on the food plant. Is it possible that American holly serves as more than a spot for sunning in the life cycle of *I. henrici*?

Bill Wright
18 Clinton Place
Woodcliffe Lake, NJ 07675

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