



NEWS

of the LEPIDOPTERISTS' SOCIETY

No. 5 Sept./Oct. 1988

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PITTSBURGH 1988

They came from Australia, Brazil, Denmark, New Zealand, Taiwan, Canada and from 24 of the states of the U.S.A., including Hawaii, plus from Washington, DC, to talk about butterflies and moths, foodplants and larvae, evolution and phylogeny and many other subjects. They gathered to learn and to socialize, to visit the Carnegie Museum's insect collections and to make new friends and greet old acquaintances. The well-planned and smoothly-run 39th Annual Meeting in Pittsburgh was the drawing card. Following the meeting, several field trips were planned. For one, to Powdermill Nature Preserve near Pittsburgh, mothing was quite good. The others were to Resthaven Wildlife Area in Erie Co, Ohio and to the Backbone Mountain Bogs in West Virginia. Collecting was reported very poor in Ohio and no word has been received from West Virginia. The official Annual Meeting minutes and photographs, which follow, tell the story of an excellent meeting and a wonderful experience. We want to thank both Dave Winter and Charlie Covell for the excellent photographic coverage of the meeting activities.

MINUTES OF THE 39TH ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY Carnegie Museum of Natural History Pittsburgh, Pennsylvania 14-17 July 1988

The 39th Annual Meeting of The Lepidopterists' Society was hosted by the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania, 14-17 July 1988. Meeting activities were held at the Carnegie Museum, plus the University of Pittsburgh, and Carnegie Mellon University campuses. Attendees included 106 paid registrants, with over 120 individuals participating in various meeting activities.

While the Section of Invertebrate Zoology hosted an open house of the lepidoptera collection in the William J. Holland Room at the Carnegie Museum on Thursday afternoon, 14 July, Society President Jerry A. Powell presided over a combined meeting of the Executive Council and Editorial Board in the Blue Classroom of the museum. That evening, our meeting host, John E. Rawlins and his staff at the Carnegie Museum hosted a social on the third floor of the museum.

The formal program began the following morning, Friday, 15 July at 8:45 a.m., in David Lawrence Hall, Room 121, of the University of Pittsburgh, with

announcements by our meeting host, John E. Rawlins, and a welcome from the director of the Carnegie Museum of Natural History, James King. The program continued with Richard L. Brown presiding over the initial session of papers titled, "SYSTEMATICS AND EVOLUTION", which included the following papers (presenter's name given first in cases of joint authorship):

ELLIPTICAL GOLDENROD GALL MAKER, *Gnorimoschema gallaesolidaginis* (RILEY), DISCOVERED TO BE SIBLING SPECIES (GELECHIIDAE), W. E. MILLER, Univ. Minnesota, Minneapolis, MN;

THE EVOLUTION OF NORTH AMERICAN BLASTOBASIDAE (LEPIDOPTERA: GELECHIOIDEA), D. Adamski, Mississippi State Univ., Mississippi State, MS;

PHYLOGENY OF *Myscelia*, *Nessaea*, AND *Catonephele* (EURYTELINA, SUBTRIBE CATOPHELENA), D. W. Jenkins, Allyn Museum of Entomology, Florida State Museum, Sarasota, FL;

THE BIGGER AND BETTER GENUS *Atalopedes* (HESPERIIDAE), J. M. Burns, Smithsonian Institution, Washington, D.C.; and

THE HIGHER CLASSIFICATION OF THE RIODINIDAE, D. J. Harvey, Smithsonian Institution, Washington, D.C.

After a brief coffee break, the second session, titled "ALL ABOUT FOOD" was convened, with Susan Borkin presiding. The following paper were presented:

ADULT NUTRITION AFFECTS MALE VIRILITY IN *Papilio glaucus*, R. C. Lederhouse, M. P. Ayres, & J. M. Scriber, Michigan State Univ., E. Lansing, MI;

CURIOUSER AND CURIOUSER: OLD AND NEW HYPOTHESES ABOUT HOSTPLANT SPECIFICITY IN PIERINE BUTTERFLIES, F. Chew, Tufts Univ., Medford, MA; and

CONSEQUENCES OF HOSTPLANT SHIFTS FOR THE CHECKERSPOT, *Euphydryas phaeton* (NYMPHALIDAE), M. D. Bowers, Harvard Univ., Cambridge, MA & N. E. Stamp, S.U.N.Y., Binghamton, NY.

After recessing for lunch, attendees reconvened in David Lawrence Hall for the third session of papers, titled "BIOGEOGRAPHY" and chaired by Don Harvey. Paper titles and authors were:

THE PENINSULAR EFFECT: FROM DOGMA TO DOGMEAT, J. W. Brown, Univ. of California, Berkeley, CA;

CHARACTERS, BIOGEOGRAPHY AND NATURAL GENERIC LIMITS IN THE EUMAEINI (LYCAENIDAE), K. Johnson, Dept. of Entomology, American Museum of Natural History, New York, NY;

NEARCTIC *Aglaia* AND *Nymphalis* (LEPIDOPTERA: NYMPHALIDAE): LAURASIA REVISITED? L. D. & J. Y. Miller, Allyn Museum of Entomology, Florida State Museum, Sarasota, FL; and

BIOGEOGRAPHY OF THE MICROPTERIGIDAE, G. W. Gibbs, Victoria Univ., Wellington, New Zealand.

Following a coffee break, John Lane chaired the fourth session, titled "FAUNISTICS", in which the following six papers were presented:

THE OLYMPIAN MARBLE (*Euchloe olympia*, PIERIDAE) IN NEW YORK STATE, J. F. Cryan, New York State Dept. of Environmental Conservation, Long Island City, NY & R. E. Dirig, Bailey Hortorium Herbarium, Cornell Univ., Ithaca, NY;

NEW LEPIDOPTERA RECORDS FROM WYOMING WILDERNESS AREAS AND THEIR USE IN LONG RANGE WILDERNESS MANAGEMENT PLANS, K. Bagdonas, Univ. of Wyoming, Casper, WY;

BUTTERFLIES IN THE ALLEGHENY NATIONAL FOREST, PENNSYLVANIA, J. Prescott Erie, PA;

MOTHS OF SPECIAL CONCERN IN OHIO (LEPIDOPTERA: SATURNIIDAE, SPHINGIDAE, AND ARCTIIDAE) WITH NOTES ON SPECIES OF SPECIAL INTEREST, E. H. Metzler & V. P. Lucas, Columbus, OH;

NEOTROPICAL TIGER MOTHS NEW TO THE UNITED STATES FAUNA (ARCTIIDAE: CTENUCHINAE, LITHOSIINAE), J. P. Donahue, Natural History Museum of Los Angeles County, Los Angeles, CA; and

THE SILVERY BLUE (*Glaucopsyche lygdamus*, LYCAENIDAE) IN NEW YORK STATE, R. E. Dirig, Bailey Hortorium Herbarium, Cornell Univ., Ithaca, NY & J. F. Cryan, New York State Dept. of Environmental Conservation, Long Island City, NY.

On Friday evening, the group assembled at Camp David Lawrence in nearby Schenley Park for a barbeque picnic dinner. Following the picnic, a slide fest was held at David Lawrence Hall.

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The program resumed Saturday morning, 16 July, in David Lawrence Hall with Jackie Miller chairing the fifth session, titled "THE STUDY OF LEPIDOPTERA". Paper titles and authors included:

THE OHIO LEPIDOPTERISTS: ON THE EVE OF OUR TENTH ANNIVERSARY, J. V. Calhoun, Westerville, OH;

ANNETTE FRANCES BRAUN: EARLY CONCEPTS IN LEPIDOTERAN PHYLOGENETICS, M. A. Solis, Dept. of Entomology, Univ. of Maryland, College Park, MD; and

THE MAKING OF THE FIRST 'CHECKLIST OF THE LEPIDOPTERA OF AUSTRALIA', E. S. Nielsen, CSIRO, Canberra, Australia.

After a brief coffee break, the sixth paper session, titled "EVOLUTIONARY BIOLOGY" followed, with Charles V. Covell presiding. Papers presented included:

PAPILIO HYBRIDS: HAND-PAIRINGS OF NORTH AND SOUTH AMERICAN SPECIES FROM SECTION III AND SECTION V (PAPILIONIDAE), J. M. Scriber, R. Lederhouse, Dept. of Entomology, Michigan State Univ., East Lansing, MI & K. S. Brown, Jr., Universidade Estadual de Campinas, Sao Paulo, Brazil;

THE FOSSIL *Vanessa* BUTTERFLIES (LEPIDOPTERA: NYMPHALIDAE) WITH THE DESCRIPTION OF A NEW SPECIES FROM THE FLORISSANT FORMATION (OLIGOCENE), J. Y. Miller & F. M. Brown, Allyn Museum of Entomology, Florida State Museum, Sarasota, FL;

CHEMICAL DEFENSE SYNDROMES OF AMERICAN ACRAEINAE AND OF OTHER APOSEMATIC BUTTERFLIES, K. S. Brown, Jr. & R. B. Francini, Universidade Estadual de Campinas, Sao Paulo, Brazil;

REASSESSING THE MIMICRY RELATIONSHIP BETWEEN VICEROY AND QUEEN BUTTERFLIES IN FLORIDA, D. B. Ritland, Dept. of Zoology, Univ. of Florida, Gainesville, FL;

VARIATION IN FLORIDA POPULATIONS OF *Eurema daira* (LEPIDOPTERA: PIERIDAE), M. C. Minno & T. C. Emmel, Dept. of Zoology, Univ. of Florida, Gainesville, FL; and

POPULATION STUDIES OF BRAZILIAN BUTTERFLIES THREATENED WITH EXTINCTION, K. S. Brown, Jr., Universidade Estadual de Campinas, Sao Paulo, Brazil.

After recessing for a group photograph and lunch, attendees reconvened Saturday afternoon in David Lawrence Hall to hear more papers. The first presentation of the afternoon was the Presidential Address, titled:

LEPIDOPTERISTS...COLLECTORS AND BIOLOGISTS?, Jerry A. Powell, Dept. of Entomological Sciences, Univ. of California, Berkeley, CA.

The afternoon session continued with John Rawlins presiding over a symposium on "HISTORICAL BIOGEOGRAPHY" that included the following papers:

DISTRIBUTIONAL PATTERNS OF BUTTERFLIES AND MOTHS IN OHIO, E. H. Metzler, D. C. Ifner, & L. L. Martin, The Ohio Lepidopterists, Columbus, OH;

A REVIEW OF ISLAND BIOGEOGRAPHIC THEORIES, WITH A PLAUSIBLE COMPOSITE VICARIANCE/DISPERSAL MODEL FOR THE WEST INDIAN BUTTERFLY FAUNA, L. D. & J. Y. Miller, Allyn Museum of Entomology, Florida State Museum, Sarasota, FL;

HISTORICAL BIOGEOGRAPHY OF *Myscelia*, *Nessaea*, and *Catonephele* (EURYTELINAE, SUBTRIBE CATONEPHELINAE), D. W. Jenkins, Allyn Museum of Entomology, Florida State Museum, Sarasota, FL;

OF MOTHS AND MOUNTAINS: A MONTANE BIOGEOGRAPHY OF NEOTROPICAL TIGER MOTHS, J. E. Rawlins, Carnegie Museum of Natural History, Pittsburgh, PA;

HOLARCTIC BIOGEOGRAPHY OF NOCTUIDAE EMPHASIZING NORTH TEMPERATE SPECIES DISTRIBUTIONS, J. D. Lafontaine, Biosystematics Research Centre, Agriculture Canada, Ottawa, Canada, & K. Mikkola, Dept. of Zoology, Univ. Helsinki, Helsinki, Finland; and

HOMOLOGY AND HOMOPLASY IN THE BUTTERFLIES OF COLD CLIMATES: DARWIN'S LAW AS ILLUSTRATED BY PIERIDAE, ETC., A. M. Shapiro, University of California, Davis, CA.

Saturday evening's banquet activities began with a social hour hosted by the Carnegie Museum at Skibo Hall of Carnegie Mellon University. Afterwards, attendees migrated into the Faculty Dining Room for a delicious banquet. After dinner, President Powell presented Niels P. Kristensen (Zoologisk Museum, Copenhagen, Denmark) with the Karl Jordan Medal and a check for \$1,000. After a brief acceptance speech, Dr. Kristensen presented the Karl Jordan Medal Address, titled EARLY STEPS TOWARDS AN EVOLUTIONARY SUCCESS: THE STRUCTURE AND PHYLOGENY OF THE LOWEST LEPIDOPTERA. The banquet program concluded with the distribution of numerous door prizes, with Charlie Covell as Master of Ceremonies.

* * * * *

On Sunday morning, 17 July, remaining attendees reassembled in David Lawrence Hall to listen to a special session moderated by John Rawlins and titled, "OPEN FORUM ON ISSUES CONCERNING SOCIETY PUBLICATIONS". Charlie Covell, Bill Miller, and June Preston, editors of the MEMOIRS, JOURNAL, and NEWS respectively, each spoke about their accomplishments, problems, and anticipated future directions of these publications. A general discussion about the society's publications followed the presentations by the editors.

The final paper session, titled "MORPHOLOGY AND ITS INTERPRETATION", was chaired by Fred Stehr, and included the following papers:

RELATION OF LIGHT INTENSITY AND SPECTRUM TO PAPAGEORGIS' SEQUENCE OF WING COLOR PATTERNS AND FLIGHT LEVELS IN VEGETATION, B. H. Landing, Los Angeles, CA;

THE DISTRIBUTION, STRUCTURE AND PUTATIVE ROLES OF MALE SEX SCALES IN THE PRIMITIVE LEPIDOPTERA, D. L. Wagner, Dept. of Ecology & Evolutionary Biology, Univ. of Connecticut, Storrs, CT;

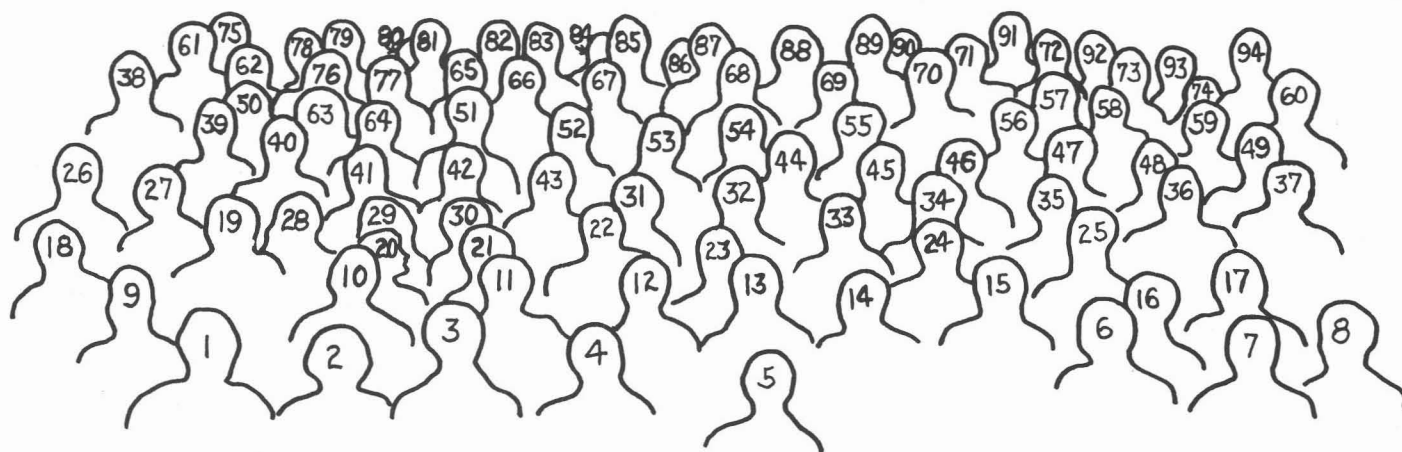
ON THE WING MARKINGS OF HESPERIIDAE WITH SPECIAL REFERENCE TO THE HYALINE SPOTS, H. Chiba, Dept. of Entomology, Univ. of Hawaii, Honolulu, HI; and

PITFALLS IN THE IDENTIFICATION OF LARVAL *Spodoptera* SPP. IN HONDURAS, S. Passoa, Univ. of Illinois, Urbana, IL.

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ANNUAL BUSINESS MEETING OF THE LEPIDOPTERISTS' SOCIETY

After a brief coffee break, President Jerry Powell called the ANNUAL BUSINESS MEETING to order at 11:15 a.m., with approximately 50 people present.



GROUP PHOTO IDENTIFICATIONS

1. John Rawlins, 2. Herma LaFontaine, 3. Don LaFontaine, 4. Richard Holland, 5. Peg Tuttle, 6. Waldemar Kmentt, 7. Leland Martin, 8. John Calhoun, 9. June Preston, 10. Dick Arnold, 11. Tim Cashatt, 12. Jean-Francois Landry, 13. Eric Metzler, 14. Bill Edmonds, 15. Kent Wilson, 16. John Burns, 17. Dennis Currutt, 18. Irving Finklestein, 19. David Adamski, 20. Elaine Hodges, 21. Ron Hodges, 22. Gaspar Danish, 23. Teresa Danish, 24. Ronald Harrell, 25. David Iftner, 26. Michael Holy, 27. Monica Miller, 28. Deborah Matthews, 29. Nancy Jacobson, 30. Francie Chew, 31. Florence Ferge, 32. Andy Danish, 33. Stephanie McKown, 34. Les Ferge, 35. Charles Covell, 36. Donald Wright, 37. John Prescott, 38. Ben Ziegler, 39. Judy Pooler, 40. Floyd Preston, 41. Adrienne Venables, 42. Deane Bowers, 43. Alma Solis, 44. Jerry Powell, 45. Hide Chiba, 46. Jo Brewer, 47. Dave Winter, 48. Ken Frank, 49. Bill Miller, 50. Sue Borkin, 51. George Gibbs, 52. David Wagner, 53. Stephan Goldstein, 54. John Lane, 55. Steven Mueller, 56. Joanne Jenkins, 57. Patricia Gentili, 58. Dale Jenkins, 59. Keith Brown, 60. Jim Tuttle, 61. Art Shapiro, 62. Bob Lederhouse, 63. Walt Zanol, 64. Brian Scholtens, 65. Niels Kristensen, 66. John Brown, 67. Ronald Flaspohler, 68. Ernest Williams, 69. Mark Mello, 70. Thomas Massey, 71. Lee Miller, 72. Jacqueline Miller, 73. C. S. Lin, 74. Chen Young, 75. Rich Brown, 76. George Godfrey, 77. Robert Dirig, 78. Mark Scriber, 79. John Cryan, 80. Donna Tidwell, 81. Ebbe Nielsen, 82. Kenneth Tidwell, 83. Fred Stehr, 84. Julian Donahue, 85. Don Harvey, 86. David Ritland, 87. Ron Robertson, 88. Karolis Bagdonas, 89. Mo Nielsen, 90. Marc Minno, 91. Ron Leuschner, 92. Ben Landing, 93. Kurt Johnson, 94. Allen Young

Old Business:

Assistant Treasurer, Eric Metzler, reported that our organization is in good financial condition. Total income for calendar year 1987 was \$59,088.29, with expenses of \$33,989.40, and a net income of \$25,098.89.

Powell announced that future meeting sites and dates are:

- a) 1989 in Albuquerque, New Mexico, probably in early August;
- b) 1990 in Milwaukee, Wisconsin, during 14-17 June; and
- c) 1991 probably at a site in Arizona.

President Powell then announced several actions approved by the Executive Council.

a) Because the Life Membership Fund is dwindling, the Executive Council approved the transfer of \$10,000.00 from the General Operating Fund to the Life Membership Fund. As of October 15th, 1988, dues for the Life membership class will be set to an amount equal to 20 times the Active membership dues. Since Active membership dues are currently \$25.00, the new dues for the Life membership class will be \$500.00.

b) NEWS Editor, June Preston, has been paying for typing of copy for the NEWS. The Council approved that all typing expenses incurred by June Preston, in her capacity as Editor of the NEWS, should be paid for by the society.

c) Retiring JOURNAL Editor, Bill Miller, suggested that future editors of the JOURNAL be provided an annual stipend of \$1,000.00. In particular, the stipend may be used to fund their travel expenses to annual meetings.

d) Boyce Drummond will become the new Editor of the JOURNAL, while retiring JOURNAL Editor, Bill Miller, will become Editor of the MEMOIRS. June Preston was reappointed to another three-year term as Editor of the NEWS.

e) A Publications Committee has been formed, consisting of the three editors of our society's publications and two at-large members. Paul Opler and Fred Stehr will serve as at-large members, with Opler as Chairman of the committee.

f) Paid advertisements may now be shipped in the mailing envelope of the JOURNAL at a fee of \$300.00 plus costs per mailing. All paid advertising must be approved by the JOURNAL Editor.

g) Prices for back issues of the NEWS were raised to \$3.00 per issue, except for the Season's Summary issue, which was raised to \$5.00. Back issues of the JOURNAL were raised to \$8.00 per issue, or \$30.00 per volume for those volumes that contain four numbers. Prices for volumes that contain more than four numbers will be prorated at \$8.00 per issue.

h) The Executive Council passed a resolution, supporting efforts by the Entomological Society of America to establish the Monarch Butterfly as the national insect for the USA.

i) The election schedule for at-large members of the committee to select the Karl Jordan Medal recipient was revised to facilitate timely evaluation of medal candidates. Previously, at-large members were not elected until the evaluation process was already in progress. To rectify this problem, two at-large members will be selected during the 1988 election, one to serve in 1989 and a second in 1990. In subsequent elections, at-large committee members will be elected in advance of their one-year term.

j) The Harry K. Clench Memorial Award for the outstanding student presentation at the annual meeting

of our society was approved in concept. Details of the award will be worked out by an ad hoc Awards Committee. This committee will also formulate suggestions about other awards and their possible sources of funding, plus become a standing committee. President Powell appointed Eric Metzler (Chairman), Richard Brown, and John Rawlins to serve on the committee, with Powell as an ad hoc member.

President Powell appointed Dale Jenkins to serve the remaining two years of Julian Donahue's term as a member at-large of the Executive Council. Donahue resigned this position due to his election as President of the society.

Also, Powell announced that he had appointed Fred Stehr (Chairman), John Brown, and Francie Chew to the Nominating Committee.

Jo Brewer and Jackie Miller of the Resolutions Committee then recited the following resolutions:

WHEREAS:

It's off to the Steel City they came,
The Leps who were reaching for fame,
And some just emerged,
Who looked quite absurd

But were willing to handle the game.

AND WHEREAS:

Ah yes, to Carnegie they flew,
With folders of research -- all new,
The heat was intense,
The collection immense,

Each seeking a personal clue.

AND WHEREAS:

The Curator -- Rawlins, J. E.
Was obviously laughing with glee
At morbid inspection
From every direction

Of bugs found in meadow and tree.

AND WHEREAS:

Chen Young labored long to perfection,
Directing Leps through the collection,
Walt Zanol came through,
With bugs old and new,

While Rawlins Looked on for protection.

AND WHEREAS:

Bob Lederhouse ran the projector
With Bob Davidson -- lighting director,
For topics diverse,
With never a curse,

While Powell researched lep collectors.

AND WHEREAS:

The food at the picnic was delightful,
But Sue Thompson had nary a biteful,
Until she concluded
Not a thing was excluded,

The banquet was an event just rightful.

AND WHEREAS:

The weather, much hotter than Hades,
Was hard on the gents and the ladies,
But in lecture hall cool,
Without sweat, we could drool,
Over theories, facts, and strange clades.

AND WHEREAS:

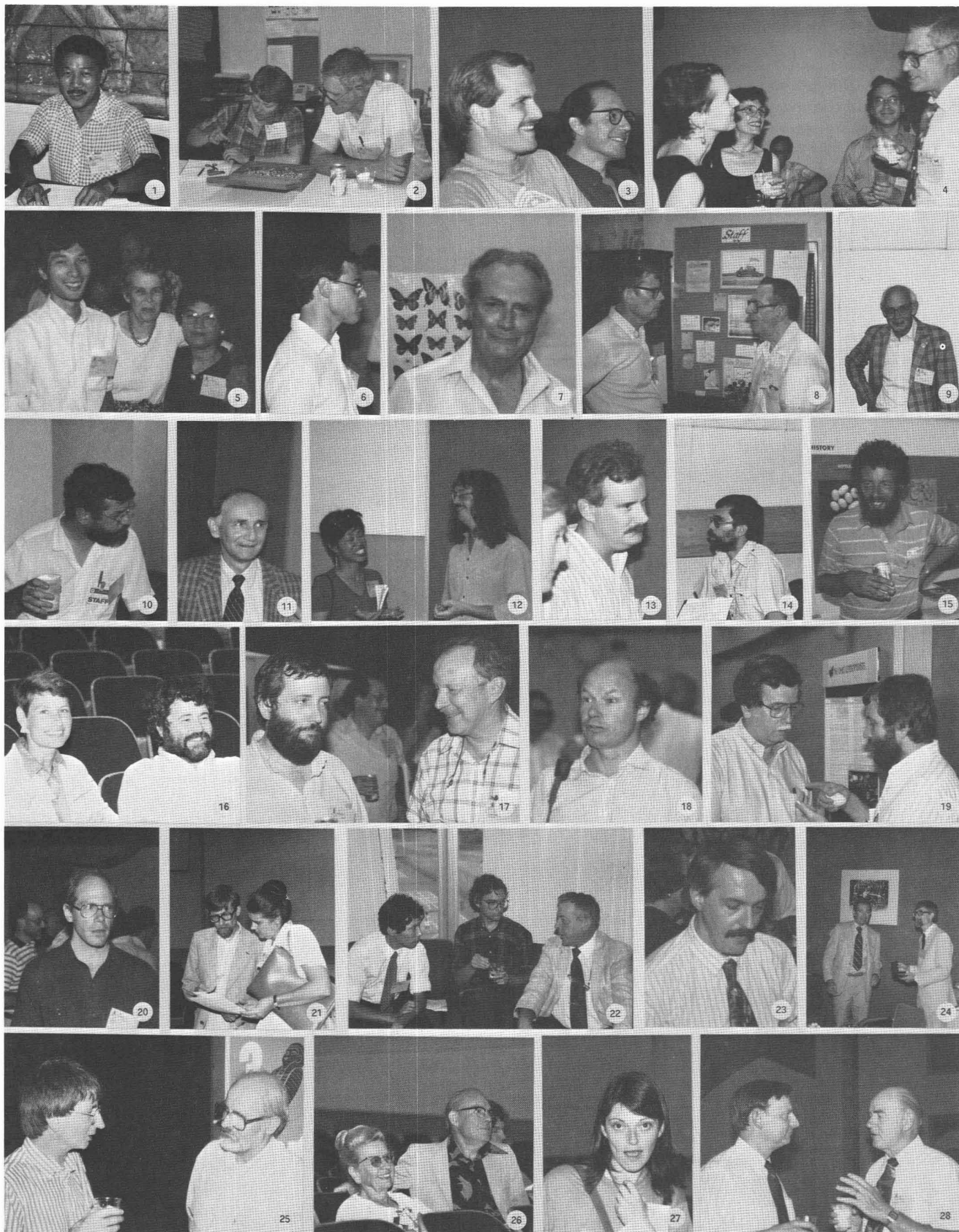
In the Memoirs of Charlie Covell,
The deeds of the Leps did excell,
Bill Miller -- The Journal
O'ercame every hurdle,

With many a story to tell.

continued on page 75

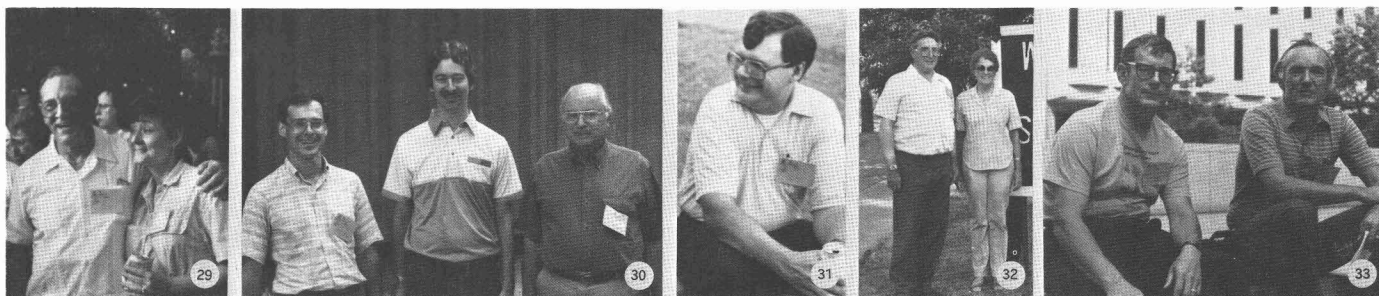
CANDID PHOTOS FROM PITTSBURGH, * #'s 1-28, by Dave Winter.

McKown gets help from Ron Leuschner on some moth identifications; 1. Registration table manned by Chen Young; 2. Stephanie Elaine Hodges, Ken Frank and Ron Leuschner in conversation; 3. David Wagner and John Brown; 4. Deane Bowers, Francois Landry; 5. Hide Chiba, Jo Brewer and Yu Cheng Chang; 6. Jean-Francois Landry; 7. Ben Ziegler; 8. Charles V. Covell, Jr. and Dale Jenkins; 9. Ben Landing; 10. Bob Davidson; 11. Bill Edmonds; 12. Francie Chew and David Ritland; 13. Society treasurer, Jim Tuttle; 14. Marc Minno; 15. Art Shapiro; 16. Judy Pooler and Bob Lederhouse; 17. John Rawlins and Fred Stehr, with John Lane in the background; 18. Ebbe Nielsen; 19. Allen Young listens to John Rawlins; 20. John Cryan; 21. Niels Kristensen and Jackie Miller pour over some notes; 22. Hide Chiba, Kurt Johnson and Lee Miller; 23. Bob Dirig; 24. Jerry Powell presents the Jordan Medal to Niels Kristensen; 25. George Gibbs and Bill Miller; 26. June and Floyd Preston; 27. "Who, me?", Patricia Gentili; 28. Julian Donahue and Mo Nielsen in animated conversation. *Identifications in each photo are always from left to right.



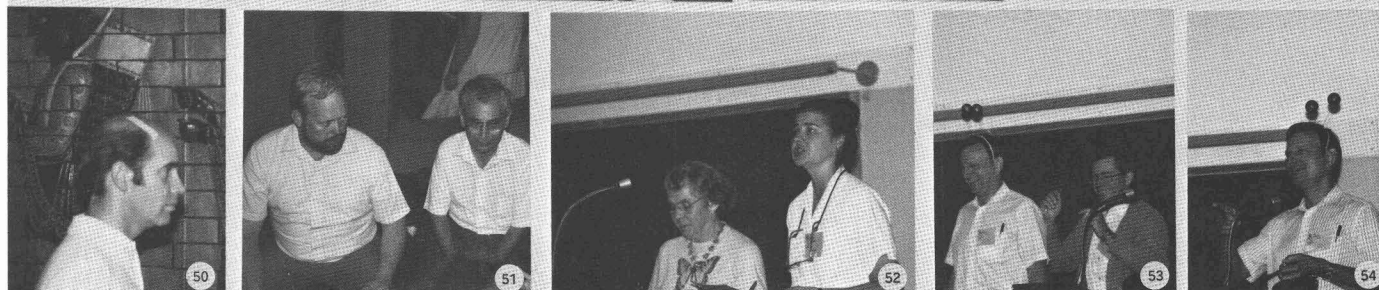
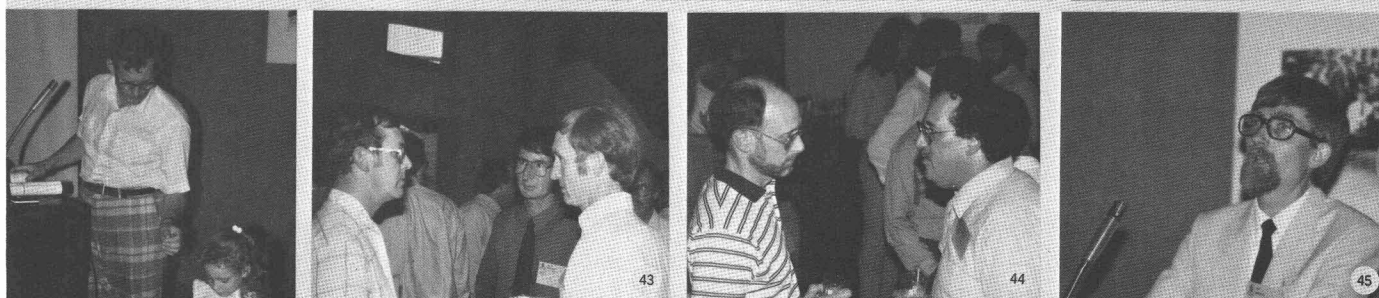
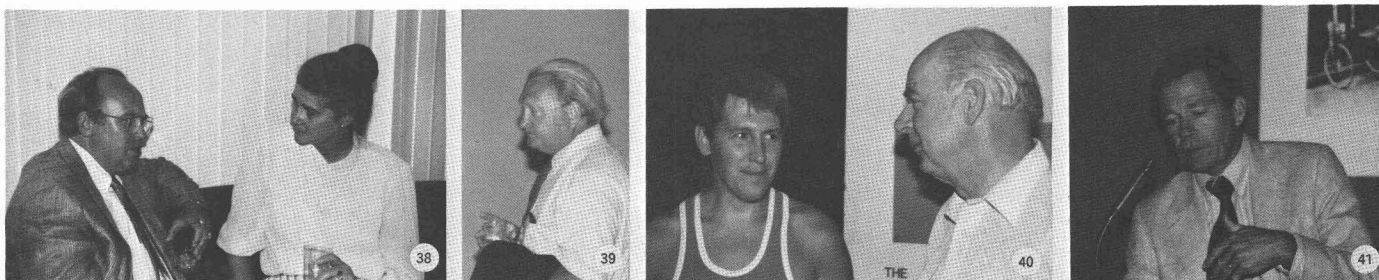
PITTSBURGH IN PICTURES

Photography,
Dave Winter



MORE PITTSBURGH PICS

↑ Charles V. Covell Jr. Photos
↓ Dave Winter Photos



CANDID PHOTOS FROM PITTSBURGH,* #s 29-37 by Charles V. Covell, Jr and #s 38-54 by Dave Winter. 29. Dale and Joanne Jenkins at the picnic; 30. Jean-Francois Landry, Steve Passoa and Kent Wilson; 31. Eric Metzler enjoys the picnic; 32. Ken and Donna Tidwell; 33. Charles V. Covell, Jr and George Godfrey; 34. "Gap" (Gaspar) and Terri Danish; 35. John Burns, Jerry Powell, Ron Leuschner and Keith Brown, Jr; 36. Jo Brewer and Dave Winter; 37. Ron Hodges in earnest discussion with Ebbe Nielsen in the meeting hall; 38. Tim Cashatt and Jackie Miller; 39. Karolis Bagdonas; 40. Steve Mueller and Mo Nielsen; 41. President Jerry Powell at the microphone; 42. Charlie Covell, assisted by a young guest, tends to handing out door prizes; 43. Don LaFontaine, George Gibbs and Richard Brown; 44. Ernest Williams and John Lane; 45. Niels Kristensen presents the Jordan Medal Address; 46. Leland Martin and John Calhoun; 47. Mrs Frank and Mrs LaFontaine; 48. Society secretary, Dick Arnold; 49. Waldemar Kmentt, Les Ferge and Judy Pooler; 50. Dennis Currutt; 51. David Iftner and Irv Finkelstein; 52. "Two Young Lassies from Limerick", Jo Brewer and Jackie Miller here present the resolutions in rhyme; 53. Julian Donahue has just received the presidential accouterments from Jerry Powell to Jerry's glee; 54. President Donahue adjourns the meeting. *Identifications in each photo are always from left to right.

BE IT RESOLVED THAT:

Dick Arnold recorded the news,
As scribe he has taken all views,
His spirit rose,
When the Monarch we chose,
As our national insect of which no one has even refused!

Respectfully submitted,
Jo Brewer, Jackie Miller,
and Dave Winter

New Business:

As a follow-up to the earlier forum on publications of the society, a brief discussion about the NEWS ensued. Members expressed concern about the constitution's wording regarding the NEWS as a place to publish their brief articles and notes "not requiring a permanent record". Les Ferge suggested that the constitutional wording should be changed to indicate that the NEWS is for publication of "non-referreed" rather than non-permanent items.

Mo Nielsen suggested that the society reprint and market past issues of the Season's Summary. This suggestion prompted a discussion about the mechanics of indexing the Season's Summary issues of the NEWS.

Outgoing President Powell then turned over the gavel and presidential crown to incoming President Donahue. After a few brief remarks, Donahue adjourned the meeting at 12:02 p.m.

Respectively submitted,

Richard A. Arnold

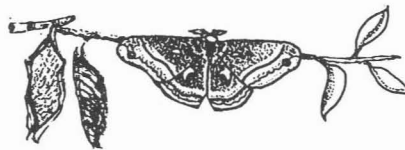
Richard A. Arnold, Secretary

KARL JORDAN MEDAL AWARD 1988

The recipient of the Award is Niels P. Kristensen who was born in Aarhus, Denmark, on March 2, 1943; married Else Steenstrup 1967; two daughters, Mette (1969) and Hanne (1971). He was educated at Copenhagen University, graduated Mag. scient. in entomology in 1968 under the supervision of Dr. A. Nielsen, trichopterist and erudite general morphologist. As a research student, he worked at Bristol University (1966-67) under the supervision of Professor H. E. Hinton. During 1970, he studied morphological technique in the laboratory of Professor J. Chaudonneret, Université de Dijon, France. He received the Dr. scient. from Copenhagen University in 1984.

He is a member and has held office in a number of professional and honor societies, including: Council Member (1984-88) and Vice-President (1985-88) of the Entomological Society, Copenhagen; Council Member, Societas Europea Lepidopterologica; Danish Academy of Natural Sciences, and Royal Danish Academy of Science and Letters. He has been associated with the Entomology Department of the Zoological Museum of Copenhagen University since his early student days. Dr. Kristensen joined the departmental scientific staff in 1968 as Curator of Lepidoptera, and this position was expanded to include the smaller endopterygote orders in 1977. He currently serves as the Director of the Museum and Chairman of the University Museum Committee.

With more than 50 publications to date, Dr. Kristensen's principal scientific interests include: (1) comparative anatomy and phylogeny of high-rank insect taxa and (2) diversity of Lepidoptera. He has combined these two lines of research and concentrated his efforts on the structure and evolution of the primitive Lepidoptera. Since the lowest lepidopteran grades are so widely distributed geographically, Dr. Kristensen has collaborated with several colleagues on an international basis working on several ongoing research projects. His detailed anatomical studies and excellent systematic syntheses have had a profound impact on the higher classification of the Lepidoptera. For this imposing series of interrelated studies on systematics and morphology of primitive Lepidoptera and his outstanding contributions to our understanding of the phylogeny of Lepidoptera, Dr. Niels P. Kristensen is recognized by the Committee and awarded the Karl Jordan Medal.



PACIFIC SLOPE MEETING, 1988

About 50 Lepidopterists, with their families, met July 8 to 10 at the Pikes Peak Research Station near Florissant, Colorado for the 35th Annual Meeting of the Pacific Slope Section of the Lepidopterists' Society. The meeting coordinator was Boyce Drummond who was assisted by Tom Emmel and the Research Station's capable staff, plus Lowell Harris who was in charge of the field trips following the meeting. There was an open house and tour of the Research Station facilities on Friday afternoon with a wine and cheese party mixer before dinner and the formal program beginning after dinner with welcoming addresses by Boyce Drummond and by Roger A. Sanborn, director of the Colorado Outdoor Education Center of which the Pikes Peak Research Station is a part. F. Martin Brown then presented an overview of "The Fossil Insects of Florissant", followed by an open slide session which included Jim Mori's presentation of "A Collecting Trip to Israel", some of John Lane's slides, some of Julian Donahue's and others.

The symposium: MICROEVOLUTIONARY CHANGES IN WESTERN LEPIDOPTERA was presided over by Tom Emmel on Saturday morning with the following papers being presented:

"Subspeciation in Islands, Especially the California Group" by Charles L. Remington;

"Variation in *Phyciodes pascoensis* Populations" by Paul A. Opler and Charles G. Oliver;

"A Review of Possible Selective Forces Resulting in a Shifting Blend Zone Between Two Distinctive Subspecies of *Speyeria zerene* (Nymphalidae) in the Warner Mountains of Northeastern California" by Sterling O. Mattoon;

"Estimating Gene Flow across Taxonomic Boundaries in Butterflies" by Adam H. Porter;

"The Evolution of Euphilotes Biotypes" by Gordon Pratt;

"Foodplant Races in Cupressaceae-associated Mitoura (Lycaenidae)" by John Lane

"Hybridization, Isolating Mechanisms, and Sexual Selection in Colias" by Orley R. Taylor.

Following lunch a Contributed Papers Session was moderated by John Lane, which included the following:

"The Diverse Color-Vision Systems of Butterflies" by Gary D. Bernard;

"The Climax to a Century of Indecent Exposure: The Lurid Story of a "Naked Name" for the California Silver-spotted Skipper, Epagyreus clarus californicus (Hesperiidae)" by Julian P. Donahue, C. Don MacNeill, and Paddy McHenry;

"The Pawnee Montane Skipper (Hesperia leonardus montana): Ecology and Habitat of a Highly Restricted Skipper" by Scott Ellis.

There was also a poster display by Gary Bernard on "Far Red Sensitive Visual Pigment of Apodemus mormo" which was available throughout the meeting.

A late afternoon field trip to the Florissant Fossil Beds National Monument was enjoyed by many participants despite the heavy rain showers which preceded the Annual Banquet.

Following a delicious meal, Tom Emmel and Bob Pyle presented the John Adams Comstock award to Dr. Charles L. Remington, after which Paul Opler presented the Banquet Address which was a photographic essay entitled "Rocky Mountain Butterflies and their Habitats." Julian Donahue distributed door prizes as a fitting finale to the evening.

* * * * *

The Sunday morning session was another symposium: ECOLOGY OF IMMATURE STAGES OF BUTTERFLIES with Boyce Drummond presiding and including the following papers:

"Larvae of Megathymidae, A Family with Unique Adaptive Qualities" by Charles L. Remington;

"Avoiding Larval Desiccation During Diapause: A Review of Life Histories and Behavioral Strategies in the Genus Speyeria (Nymphalidae), With Comments on Rearing Techniques" by Sterling O. Mattoon;

"Quantification of Ant Associative Behavior with Western Lycaenids" by Gordon Pratt and Greg Ballmer;

"Larval Host Shift in the Butterfly Incisalia mossii windi (Lycaenidae) in Response to a Severe Drought" by Sterling O. Mattoon;

"Possible Allopatric Mimicry Systems Involving Larvae of Lepidoptera in Europe and Asia" by Benjamin H. Landing;

"Juvenile Ecology, Morphology, Behavior, and Classification of Butterflies" by Keith S. Brown, Jr., Ana Beatriz Barros de Moraes, Ronaldo Bastos Francini, Paulo Cesar Motta, and Jose Roberto Trigo.

The ANNUAL BUSINESS MEETING with Julian P. Donahue presiding followed the symposium. Minutes from that meeting are presented below. Following lunch a field trip to the Cripple Creek area was planned and for Monday there was a planned field trip to some Alpine/Subalpine collecting areas, although many participants had to leave even before the conclusion of the meeting.

MINUTES OF THE 1988 PACIFIC SLOPE BUSINESS MEETING

1. Selection of the 1989 J. A. Comstock Awardee. This year, H. H. Keifer and Charles Remington were considered, and the latter was selected. H. H. Keifer was unanimously selected for 1989. It was understood that Jerry Powell is willing to write the award biography.

2. Selection of 1989 Meeting Site. Next year's National meeting will be in Albuquerque, N. Mex. (organized by Richard Holland and Steve Cary). After

some discussion, the following plan was formulated. Bob Pyle will look into a possible meeting site (with camping/collecting possible) in Washington or Oregon (esp. eastern Oregon). Within 2 months at the latest, Bob will report whether such a meeting can be organized at a time different from that of the National meeting. If this does not happen, then the Pacific Slope will request a joint meeting with the National group in Albuquerque.

3. Butterfly Common Names. Bob Pyle reports that the long worked upon list of common names is now ready for possible publication. A motion was approved that the Pacific Slope section recommend that the Lepidopterists' Society join with the Xerces Society to find a practical way to publish this list.

4. National Insect. Bob Pyle reports that there is effort underway to have the Monarch Butterfly designated as the National Insect of the United States. A motion was passed to list the Pacific Slope Section as an organization which supports this designation.

5. Awards Publicity. It was suggested that when any kind of award is given, this information (in the form of a "Press Release") should be sent to one or more newspapers in the awardee's home town. Bob Pyle agreed to look into techniques to do this.

6. Resolutions of Appreciation. It was generally agreed that these meetings were most enjoyable and successful. Special thanks were given to Boyce Drummond and his staff and volunteers for organizing the meetings. The kitchen staff was also applauded for supplying a series of excellent meals.

Submitted by Ron Leuschner



THE JOHN ADAMS COMSTOCK AWARD, 1988 THE MAN WE HONOR, CHARLES L. REMINGTON

Charles L. Remington was one of the two co-founders of the Lepidopterists' Society in 1947 and has served in this Society and in the development of the science of lepidopterology in the United States for more than four decades. His researches in the biology of western Lepidoptera, particularly in Colorado, Texas, northern Mexico, and the Channel Islands of California, have made important contributions to our knowledge of the evolution, ecology, biogeography, and life histories of our western species. His editorship of the Journal of the Lepidopterists' Society during its formative years included not only remarkable expansion of its scientific and amateur scope, but also the careful nurturing of many of our western lepidopterist authors and researchers. For all these accomplishments and a multitude of others, we honor Charles L. Remington with the JOHN ADAMS COMSTOCK AWARD.

Charles Lee Remington was born in Reedville, Virginia in 1922 and grew up in St. Louis, Missouri. He pursued his undergraduate work at Principia college in Illinois, receiving his B.S. degree in 1943. He migrated eastward to Cambridge, Massachusetts, where he earned his Masters in 1947, and his Ph.D. at Harvard University in 1948. During those graduate school years at Harvard, he and Harry K. Clench, who knew each other by previous correspondence due to their mutual interests, got together and decided to promote the formation of a society of lepidopterists that would encourage the scientific study of Lepidoptera. This joint aim was to be accomplished through distributing a periodical on that insect order and through facilitating the exchange of specimens and ideas by both the professional worker and the interested amateur in the field.

This effort formally started on March 24, 1947, with a letter to the wide circle of friends that each man had in the field. The dues were a modest \$1. Charles Remington was the first Treasurer in this founding year of the Lepidopterists' Society. The Journal began that year as an inexpensively mimeographed publication. It graduated to photolithography when revenue and membership grew enough to warrant the change. From there, it eclosed to regular printing. As Harry Clench has said in the Society's commemorative volume, Charlie Remington knew what he wanted and how to go about getting it. Lepidopterists, evidently, have agreed with him. We, the members of this Society he largely shaped, have much indeed to thank him for. In the beginning no meetings or elected officials were contemplated. By 1950, however, members realized that formal organization would be in the best interests of the growing group and on July 31, 1950, Charles Remington appointed an organization committee, naming Cyril F. dos Passos as chairman, with the charge to appoint temporary officers and develop the Constitution and By-laws. The present form of the Society resulted from this committee's efforts, and the first annual meeting of the Society was held 29-30 December 1950 at the American Museum of Natural History. In September 1954, the first Pacific Slope Section Meeting of the Lepidopterists' Society was held in California at the Academy of Science in San Francisco. Pacific Slope Section annual meetings have been held each year since 1954 and occasionally these have been combined with the national meetings of the Society (1962 Santa Barbara, 1970 Carson City, 1974 Los Angeles, 1976 Boulder, 1982 Laramie, and 1987 Berkeley). Though an eastern member, Remington participated in the programs of the 1965 and 1974 Pacific Slope meetings, and attended others during the 1960s.

Publications of this Society were also heavily influenced by Charles Remington. The Society's first publication, which began in 1947, was known as The Lepidopterists' News. Under Charles' editorship, this organ evolved from an initial mimeographed format to a photolithographed format and finally to a letter press format from Volume 6 onward. In 1959 (with volume 13), at Charles' urging, the name of the Society's major publication was changed to the Journal of the Lepidopterists' Society, and the Society initiated a second publication, The News of the Lepidopterists' Society, which was designed to include matter of more transient interest. Charles Remington served as Editor-in-Chief of the Journal and its predecessors from 1947 to 1963.

It is also of great interest to note that the first Annual Field Summary was begun at the same time by C. L. Remington and Harry K. Clench, founders of our Society. North America was divided into eight zones in their initial efforts, and by the time of the second annual (1948) summary, each had a corresponding "zone coordinator." Thus, from the very first year of our Society (1947), individual members were encouraged by Remington and his colleagues to contribute to the Summary and to keep careful field notes during each collecting season. In the first year, there were 59 contributors and this has increased to several hundred today. Charles Remington also started the library of the Lepidopterists' Society, which today is housed at the Los Angeles County Museum of Natural History in California but was started at Yale University. This evolved from the publications being received by Charles in exchange for copies of The Lepidopterists' News. The Society Library contains complete or nearly complete sets of some forty periodicals devoted in whole or in part to entomology, and incomplete sets of many more. In addition, there are many reprints and a large collection of books which have been donated over the years by authors and members. From the beginning, the policy has been to make this material available on loan to members upon request.

In addition to his contributions of inestimable value to the founding and evolution of our Lepidopterists' Society, Charles Remington has had a remarkably diverse research career. The range of his specialties extend from evolutionary genetics to speciation theory and

experimental and natural hybridization in animals and plants. He had dived into island biology and biogeography, mimicry, insect-plant coevolution, the systematics of Lepidoptera, paleoentomology, and even cytosystematics of insects. Collaborating with K. Maeki, he pioneered the study of chromosomes in the North American Rhopalocera, uncovering many fascinating cytotoxic situations, especially in the Megathymidae. In this latter family, he pursued profitable collaborations with Don B. and Viola Stallings, the Turners, and Hugh Avery Freeman throughout the southwestern United States and northern Mexico. His field research has taken him to Australia, Iceland, England, Norway, Italy, Mexico, Canada, the offshore islands of California, the Hawaiian Islands, the Marshall Islands, Nauru, Guadalcanal, the New Hebrides, New Caledonia, New Zealand, Fiji, Tonga, Moorea, Bora Bora, Tubuai, Layte, Hokkaido, Ecuador, the Galapagos Islands, Peru, Brazil, Chile, Venezuela, and 49 states in the U.S.A. He has collected Lepidoptera on all eight of the California Channel Islands, particularly on San Clemente Island in August 1968 and December 1981 and extensively on Santa Cruz Island in all the spring months except February and in July, August and October, between 1967 and 1974. He deployed his son Eric there for about three months in 1970, and many moth records from Santa Cruz in the California Insect Survey come from his efforts. Charles was one of the organizers of the 1978 Channel Islands Symposium at Santa Barbara and presented an overview of the insects in a plenary session paper. He likewise participated in the 1981 Entomological Society of America symposium on Channel Islands insects.

Despite his intensive research program and field travel, he has found time to be an outstanding teacher at Yale University since his appointment there in 1949. He has risen through the academic ranks to his present position as Professor in the Department of Biology, Curator in Entomology of the Peabody Museum, and Professor of Forest Entomology and Museology in the School of Forestry and Environmental Studies.

Among his many academic honors, he was a Sheldon Traveling Fellow at Harvard University in 1947, a John Simon Guggenheim Fellow at Oxford University in 1958-59, was named an honorary Life Member of the Lepidopterists' Society in 1966, was named a Research Fellow in Entomology for C.S.I.R.O. in Australia in 1976, a Research Fellow in Ecology at Campinas University in Brazil in 1981, a Research Fellow in Entomology at the University of California, Berkeley, in 1981, and has been an invited lecturer at many national and international meetings. He has been Secretary (1955-59) and Trustee (1962-63) for the Rocky Mountain Biological Laboratory in Gothic, Colorado, where he has actively pursued field research for more than 20 years, and is currently working with Dr. Gary Bernard of Yale on the color vision of butterflies. He has served on the advisory boards of the Connecticut Audubon Society, the IUCN, the Connecticut State Geological and Natural History Survey, and is currently Counselor of the Xerces Society.

Dr. Remington has contributed to the development of lepidopterology in the western United States not only through his publications and his participation in meetings and as a visiting research fellow at western institutions, but also through his personal encouragement of scores of western lepidopterists who today are highly active in the Society and in Lepidoptera research. His friends and colleagues stand in awe of the indefatigable energy, boundless interests, and incredible breadth of knowledge of this "Founding Father" of the Lepidopterists' Society, who has brought so much favorable worldwide attention, from sophisticated scientific research to greatly expanded amateur interest, to this fascinating group of insects. For all these accomplishments, Charles L. Remington richly deserves the honor conferred by our award of the JOHN ADAMS COMSTOCK AWARD for 1988.

Thomas C. Emmel



MISCELLANY

MAY MEMORIES OF A YOUNG LEPIDOPTERIST

This spring some first time occurrences for me have prompted me to write them down so they are more permanent. I call these my MAY MEMORIES. Here are some of my very favorites.

1. I caught my first Graphium marcellus (6 total but only kept 2).
2. I caught my first Anthocaris midea (with the help of another Lepidopterist's son).
3. While at night lights I found a very large (35mm) Calosoma scrutator and saw ten of this beetle's smaller caterpillar hunter cousins, Calosoma willcoxi.
4. I had my first look at living H. euryalis and H. gloveria, thanks to some trading done in "The Market Place".
5. I was lucky enough to get a male gloveria to mate with a female H. cecropia. (The ova have now hatched and my dad and I are rearing some.)
6. I was astounded to see my sister catch 15 Papilio glaucus with one swoop of her net as they fed on dog manure. (3 got away and she didn't dirty the net.)
7. My dad caught our first Amphion nessus and we saw another feeding on the juices of a dead opossum.
8. I found a dead female Sphecodina abbotti in a carrion trap baited with fish intended to catch burying beetles.

Jeff Frey (age 11)
Lebanon, PA

(Ed. Note: For more interesting observations from this young insect enthusiast, see his letter in the From the Editor's Desk section on pg 81)

FATAL ATTRACTION: JAPANESE BEETLE TRAPS AND TIGER SWALLOWTAILS

I have discovered to my chagrin that the yellow plastic Japanese beetle traps commonly sold in garden stores and home centers under such trade names as "Bag-a-Bug" and "Beetle Bagger" have a fatal attraction for tiger swallowtail (Papilio glaucus) butterflies. These devices use a floral lure (active ingredients Eugenol and 2-Phenylethyl propionate) and a pheromone lure [active ingredient (R,Z)-5(1-decenyl) dihydro-2(3H)-furanone] to attract Japanese beetles to the trap, where they are deflected by its plastic vanes into a cone which funnels them into a bag suspended below the trap. Because these devices avoid the use of insecticides, they appeal to organic gardeners, especially those like myself who are trying to attract butterflies to the garden.

Unfortunately tiger swallowtails are also attracted to these traps and may become wedged in the cone beneath the vanes. In struggling to free themselves they quickly become battered and exhausted. Over the course of the summers of 1986 and 1987 I extracted at least 8 tiger swallowtails of both sexes, about half of them dead, from a single trap in my garden. A single specimen of the black swallowtail (Papilio polyxenes) is the only other butterfly trapped in this fashion, although a variety of other species including spicebush swallowtails, monarchs, many small species, and occasionally large fritillaries frequent the garden.

I have stopped using Japanese beetle traps in my own garden. I wince when I see them on other people's property, but usually manage to restrain myself from trespassing to see whether a tiger swallowtail has been trapped. Readers of the NEWS who use these devices may wish to check them regularly for unwished-for prisoners.

James F. Burris

XERCES SOCIETY ANNUAL MEETING

The 15th annual Xerces Society membership and board meeting was hosted by the Colorado Outdoor Education Center, just west of Pikes Peak, Colorado. From June 22-25, 37 members, officers, and guests were treated to a delightful meeting organized by Pikes Peak Research Station director Dr. Boyce Drummond and his capable staff.

Highlights of the meeting included symposia of fossil arthropods and the Rocky Mountain alpine environment; a tour and dig at Florissant Fossil Beds National Monument, led by Dr. F. Martin Brown; a banquet plus slide show on Rocky Mountain butterflies by Vice President Paul Opler; and a field trip to nearby alpine habitats.

At a brief membership meeting, Xerces President Jeffrey Glassberg and Executive Director Melody Mackey Allen announced the accomplishments of the past year, which include the revival of Wings, increased membership, and contributions including a \$5,000 donation from Chevron to the Monarch Project; a \$40,000 grant for the Conservation Register of Invertebrate Specialists from Pew Charitable Trusts; and a \$37,500 grant from the William Bingham Foundation to support publication of a full-color book on butterfly gardening in collaboration with the Smithsonian Institution.

Officers newly elected or re-elected are Jeffrey Glassberg, President; Paul Opler, Vice President; Ed Grosswiler, Secretary; and David Furth, Treasurer.



F. Martin Brown, center front, leads the Xerces Society Field Trip to the Florissant Fossil Beds Nat'l Monument

Photo by Paul Opler

A LONG WAY FROM HOME

It may be of interest to record that at 1350 hrs on Thursday the 30th of June 1988, whilst on route from Fort Lauderdale, Florida, to Bermuda on board a 55 foot yacht, a fresh specimen of the American Painted Lady butterfly, Cynthia virginensis Drury, was seen flying strongly around the boat. It rested for 2-3 minutes on a spinnaker pole on the deck before continuing to fly, settling briefly on other part of the boat. Unfortunately none of the crew saw from which direction it arrived, nor whence it eventually departed. The precise location was 28° 44.97' North, 75° 41.46' West which is about 250 miles east of Cape Canaveral and 145 miles northeast of the Abaco Islands, the nearest land. I do not know whether the species is resident on the Abaco Islands. It was a very hot day with hardly a breath of wind; what little breeze there was was coming from the Atlantic.

W J Tennent
North Yorkshire, ENGLAND

CORRIGENDA TO CALIFORNIA BUTTERFLIES

by John S. Garth & J. W. Tilden

P. 82: *Aster californica* should read Common Goldenrod, *Solidago californica*. [More recently, Tilden has found the Northern Checkerspot in association with Common Aster (*Aster chilensis*).]

P. 128: *Arceuthobium douglasii* is taken from the literature. In California the food plant, as noted by McCorkle, 1962, is *A. campylopodium* var. *tsugensis* or Douglas Fir.

P. 143: Line 2--should read *Lupinus variicolor*, not *L. versicolor*.

P. 153: Line 3--should read *Yucca baccata*, not *Y. semibaccata*.

P. 183: (Check List)--No. 34--*Charidryas hoffmanni* (Behr), not Skinner.

SEASON SUMMARY ADDENDA

1987 REPORT FOR SONORA, MEXICO

The Sonoran Lepidoptera Survey members collected in the state finding several new state records. Members participating were Janet Bardwell, James Brock, Kenneth Hansen, Peter Jump, Scott McCleve, Ray Nagle, John Noble, Stephen Prchal, Pat Savage, Richard Sobonya, Michael J. Smith, and Ralph Wells.

20 km east of El Novillo, Sierra la Campanera, on April 26, 1987, adults of *Hemileuca hualapai* were taken (STATE RECORD); *H. diana* larvae were found under *Quercus oblongifolia*, this being the first confirmed locality in Sonora. 15-18 km NW of Yécora on July 28, 1987, at the edge of a plateau, *Autochton cincta* and *Oarisma edwardsi* were taken. 3 km south of La Trinidad, on July 28, 1987, in oak forest, *Manduca lanuginosa* (STATE RECORD), *Agapema homogena* (STATE RECORD), *Othorene verana* (STATE RECORD), *Paradirphia lasiocampina*, a *Coloradia* sp. (charcoal black female, not *luskii*), *Sphingicampa raspa* (*albolineata*), *Automeris randa*, plus usual sps. reported in 1986 Season Summary, were collected. 3 km south of Alamos, on July 30, 1987, in tropical deciduous forest, found were *M. lanuginosa*, *M. kuschei* (STATE RECORDS), *O. verana*, *Citheronia beledonen*, *C. splendens sinaloensis*, *Eacles oslari*, *Sysphinx molina*, *Dysdaemonia boreas*, *Caio richardsoni*, *Automeris* *io* ssp., *Hylesia continua cressida*, *Sphingicampa raspa*, *S. colloida*, and the *S. hubbardi/heligbrodti* complex. Along Highway 16, 30 km southeast of Rio Yaqui, on July 26, 1987, *Xylophanes eumedon* was taken.

Eduardo Welling M.

COLLECTION PROFILE: LEPIDOPTERA AT BISHOP MUSEUM

Although Bishop Museum has a very large entomology collection (13.5 million specimens), our holdings of Lepidoptera are the weakest among the major insect orders. This is because the museum did not have a staff lepidopterist prior to 1986 (Otto Swezey had an honorary appointment and worked on the collection in his spare time). However, the collection includes material of substantial research interest, and we are beginning to reorganize it. The collection includes some 330,000 Lepidoptera, including 24,000 from the Hawaiian Islands. Other geographic strengths include New Guinea, Philippines, Borneo, Hong Kong, and Southeast Asia (especially Laos, Cambodia, Vietnam). We have some 240 primary types, mostly from Hawaii and other Pacific islands.

The collection includes material assembled by O. H. Swezey and F. X. Williams (formerly at Hawaii Sugar Planters Association collection), E. C. Zimmerman, J. J. H. Szent-Ivany, and others. J. C. E. Riotte has curated the collection as a volunteer since 1974, and S. E. Miller joined the staff in 1986, although he currently spends most of his time in administration.

Except for the older and Hawaiian material, most of the collection has been accumulated in general surveys

since 1952, and is unidentified. With the NSF funded move into the new compactor, the collection is being reorganized to promote accessibility and further curation. We hosted Dr. Eugene Munroe for two months of curating Pyralidae in March and April 1988, and intend to continue inviting visiting specialists as funds become available.

In order to provide a core synoptic collection for identification and research, we are eager to receive donations of identified specimens, especially from North America, Japan, and Australia.

For further information, contact: Dr. Scott E. Miller, Chairman, Department of Entomology, Bishop Museum, Box 19000-A, Honolulu, Hawaii, 96817, USA.

MORE IN RE COCAINE DESTROYING "BUTTERFLIES"

NEWS #3, 1988, pg 50, carried an item from the Los Angeles Times concerning "swarms of tiny white butterflies," destroying coco plants in Peru. Gerardo Lamas writes from Lima to set the record straight, since the original article was full of errors and was mostly "utter nonsense." The "butterflies" are actually the lymantriid moth *Eloria noyesi* Schaus which has long been known to be a pest of coco. Its actual local name is *malunya*, not *malumbia* as reported. Julian Donahue adds that it was described by Schaus in 1927 from Venezuela, appearing on pg 540 in Vol 6 of Seitz' *Macrolepidoptera of the World*. It was named after Francis H. Noyes, who painted the lymantriid plates for that volume. It appears on plate 73, row b. It is the larvae that are destroying the coco plants, not the moths as was implied.

ERORA LAETA SEEN ON MT GREYLOCK AGAIN

In 1889 Samuel H. Scudder collected *Erora laeta* on Mt Greylock in Massachusetts and included a description of its capture in his volumes *The Butterflies of New England*. In June of 1988 the butterfly was again sighted, and captured on Mt. Greylock for the first time in 99 years according to an Associated Press release with a Pittsfield, Mass dateline that appeared on page 2 of the Jackson Clarion Ledger-Daily News on July 2, 1988. The item was sent to the NEWS by Bryant Mather.

SONORAN ARTHROPOD STUDIES, INC.

Sonoran Arthropod Studies, Inc. (SASI) is a non-profit organization based in Tucson, AZ, committed to the study, preservation, and appreciation of arthropods indigenous to the Sonoran desert region. If you are interested in insect life, you should be a member of this organization. Membership enables you to receive a quarterly journal "Back Yard Bug Watching". Annual dues are \$15.00, individual and \$20.00 family. For further information, contact Steve Prchal, PO Box 564, Tucson, AZ 85703, (602) 884-7274.

PHILIP DEVRIES NAMED AS AN AWARD WINNER

The New York Times of July 19, 1988 reported that 31 winners for 1988 had been named to receive the MacArthur Foundation of Chicago awards for exceptionally gifted people. These "no-strings" fellowships were created by the John D. and Catherine T. MacArthur Foundation "with the aim of freeing exceptionally talented people from economic constraints to develop their potential" according to reporter Kathleen Teltsch. Philip James DeVries, whose work on butterflies in Costa Rica has stimulated conservation efforts for all tropical invertebrates in the western hemisphere, was one of the winners. He will receive at least \$150,000 over the next 5 years to spend as he pleases. Butterflies do indeed have their own rewards.

A RESPONSE TO "OVULAR HEAD START IN ANTHOCHARIS AND PONTIA"

In the July/August NEWS, Keith Wolfe observed an apparent disparity in the rates of development of eggs oviposited by wild-caught females of *Anthocharis cethura* and *Pontia sisymbrii*. Mr Wolfe noted that eggs of both species had undergone a change in color from pale yellow to orange, yet within clutches of eggs laid by the same female on the same day, some ova were found to turn orange sooner, and were consequently observed to hatch earlier than their siblings.

The orange or red color reported from Wolfe's reared ova is referred to in accounts of pierid life histories by A. M. Shapiro (1981) and J. S. Scott (1986) and was identified by J. S. E. Feltwell and L. R. G. Valedon (1972) as carotenoid pigment deposited in the shells of developing *Pieris brassicae* ova. Scott cites no less than 19 North American pierid taxa, representative of the subfamilies *Coliadinae*, *Pierinae* and *Euchloeinae* in which this ovular color change is characteristic, including *Anthocharis cethura* and *Pontia sisymbrii*.

Regarding the significance of orange or red egg color, Shapiro (1981) conducted an extensive study of the oviposition behavior of adult females of the following Californian "red egg" pierids: *Pontia protodice*, *P. sisymbrii*, *Euchloe ausonides* and *Anthocharis sara*. In an investigation of the hypothesis that red or orange-colored eggs provide gravid females with highly visible cues for inter- and intraspecific egg-load assessment (that is, avoidance of overloading a plant host with eggs) Shapiro found that females of *Pontia protodice* and *Euchloe ausonides* were both unwilling to oviposit on individual inflorescences of *Brassica geniculata* when red eggs were already present. Conversely, when eggs were experimentally removed, females of both species oviposited in earnest.

In addition, Shapiro found a bizarre case for "egg mimicry" in the *Streptanthus glandulosus* plant complex, on which *Pontia sisymbrii* feeds in California. Orange egg-like protuberances or "callosities" found at the margins of *Streptanthus* leaves were later observed to deter females of *P. sisymbrii* from ovipositing on the leaves, seemingly lending further credence to the notion that red or orange eggs serve as eggload assessment cues for some female pierid butterflies.

Concerning the "head start" or temporal stagger observed by Wolfe, it has been shown in *Pieris brassicae* that from 0% (Karlinski, 1977) to 50% (Gardiner, 1977) of a female's ova are yolked upon eclosion, implicating the presence of eggs at different stages of maturity within a female. Moreover, C. L. Boggs and W. B. Watt (1981) have documented the mating dynamics of *Colias eurytheme*, whose eggs turn orange 12 to 24 hours after having been fertilized. Multiply-mated *C. eurytheme* females were found to lay eggs which were already red, along with cream-colored eggs (fertilized by a second male) which turned red later. As *C. eurytheme* exhibits complete sperm precedence, the progeny of the first male were rendered infertile by the second mating; the already-red eggs did not hatch.

While the specific details of resource allocation and life history strategies cannot be extrapolated over closely related taxa in the Lepidoptera (cf. Boggs 1981) the "ovular head-start" observed by Wolfe in *Anthocharis cethura* and *Pontia sisymbrii* could be attributable to patterns of ovular development and mating frequency in post-imaginal females of those species. A multiply-mating pierid with incomplete or altogether absent sperm precedence could well oviposit ova fertilized by different males at different times, with temporally staggered development timetables or an apparent "ovular head start" as a result.

Robert A. Raguso, Dept of Biology
Stanford University, Stanford, CA

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BUTTERFLIES OF PANOLA MOUNTAIN STATE CONSERVATION PARK, GEORGIA

Panola Mountain Park is a unique granite outcrop area covering 585 acres, located in the Georgia Piedmont Region, 18 miles southeast of Atlanta. The terrain is variable, providing a mountain, hardwoods, softwoods, wetlands and fields. The mountain has been described as "a million-year-old mountain in the process of evolution, unhindered by anyone." It was our privilege to have been permitted freedom to examine the Lepidoptera in this park, beginning with preliminary observations in 1974. An intensive scan was conducted in 1978-79, followed by sporadic surveys annually through 1988.

We were able to identify 80 species of butterflies. This figure represents 71% of the butterfly species known to us to have been reported as indigenous to the entire Georgia Piedmont Region (Harris, L., Jr. 1972. *Butterflies of Georgia*. Univ. Oklahoma Press, Norman Oklahoma. 326 pp.). The identified specimens were as follows:

PAPILIONIDAE - *Battus philenor*, *Papilio polyxenes*, *Heracles cressphontes*, *Pterourus glaucus*, *Pterourus troilus*, *Eurytides marcellus*. PIERIDAE - *Pontia protodice*, *Artogeia rapae*, *Anthocharis midea*, *Colias philodice*, *Colias eurytheme*, *Phoebis sennae*, *Eurema lisa*, *Eurema nicippe*. LYCAENIDAE - *Feniseca tarquinius*, *Atides halesus*, *Incisalia henrici*, *Incisalia nippon*, *Satyrus calanus*, *Satyrus liparops*, *Euristemon ontario*, *Calycopis cecrops*, *Strymon melinus*, *Harknessia titus*, *Everes comyntas*, *Celastrina ladon*. LIBYTHEIDAE - *Libythea bachmanii*. NYMPHALIDAE - *Agraulis vanillae*, *Euptoleta claudia*, *Phyciodes tharos*, *Charidryas gorgone*, *Polygonia interrogationis*, *Polygonia comma*, *Nymphalis antiopa*, *Vanessa virginiensis*, *Vanessa cardui*, *Vanessa atalanta*, *Junonia coenia*, *Basilarchia astyanax*, *Basilarchia archippus*, *Asterocampa celtis*. SATYRIDAE - *Enodia portlandia*, *Enodia creola*, *Satyrus eurydice*, *Cyllopsis gemma*, *Hermeuptychia sosybius*, *Megisto cymela*, *Cercyonis pegala*. DANADIDAE - *Danaus plexippus*. HESPERIIDAE - *Epargyreus clarus*, *Urbanus proteus*, *Autochthon cellus*, *Thorybes bathyllus*, *Thorybes pylades*, *Achalarus lyciades*, *Erynnis brizo*, *Erynnis juvenalis*, *Erynnis horatius*, *Erynnis martialis*, *Pyrgus communis*, *Pholisora catullus*, *Nastrea lherminier*, *Lerema accius*, *Ancyloxypha numitor*, *Hylephila phyleus*, *Atalopedes campestris*, *Hesperia metea*, *Polites themistocles*, *Polites origines*, *Polites vibex*, *Wallengrenia otho*, *Atrytone delaware*, *Problema byssus*, *Poanes zabulon*, *Euphyes ruficollis*, *Amblyscirtes aesculapius*, *Amblyscirtes vialis*, *Amblyscirtes belli*, *Lerodea eufala*. MEGATHYMIDAE - *Megathymus yuccae*.

The preceding taxonomy follows the system employed by M. R. Pyle (1986. The Audubon Society Field Guide to North American Butterflies. Alfred A. Knopf, New York, NY. 924 pp).

A permanent exhibit of 259 butterfly specimens was prepared for the Interpretive Center in the park. Additionally, 66 species of moths were identified, and an exhibit of 104 specimens was prepared, which included numerous unidentified species. A detailed day-by-day report of this study is filed with the park. We are indebted to park superintendents David Miner and Robert S. Emery for their enthusiastic cooperation.

William S. Cassel, MD and
William A. Cassel, PhD
Atlanta, Georgia

From The Editor's Desk

June Preston



The summer is about over and so is the collecting season for the gallivanting Prestons. This was an unusual summer for us as we spent almost as much time going to meetings and to workshops as we did going to collecting sites for butterflies. And while much of the United States was suffering from drought conditions, we seemed to be where there was too much rain instead, which spoiled some of our collecting attempts. Nonetheless, it was a rewarding summer for us and hopefully was not too discouraging for other Society members. The following letters deserve to be shared with the membership, and we add our congratulations to Richard Heitzman as recipient of the Abbot Award.

Dear June,

For the past few years I have been tying female saturniid moths outside to attract wild males. I feel it's a good way to keep the genes mixed. I have been helped with my project by several Lep. Society members who also use this method to try to insure that no inbreeding takes place. We use the method of harnessing the female to a wooden stake which can be hung in a tree or other suitable place for attracting males of the same species. I have used it successfully for H. cecropia, A. polyphemus, S. cynthia (not true wild males), C. promethea and A. luna. I realize that more than one male may be attracted as I saw a female C. promethea that attracted some 60 or 70 males. However, one morning in July 1988 I had an occurrence that I'm hoping some readers will clear up for me. When I collected one stake and female at dawn, there were two male A. polyphemus at the stake with the female. The male on her right was mating with her, and the male on her left was just sitting on the stake, close to the pair. Around supertime, I checked the trio and was surprised to see that the second male was now mating with her and the original male was calmly sitting there, close to them. My questions about this are as follows:

1. Why would the second male have even stayed around if the female had mated and stopped calling?
2. After mating once (at least) already, why would the female accept the second male and how did she even know to switch? Was she aware the second male was there?
3. What percentage of times do female saturniids double mate without moving or taking any time to oviposit?
4. When does sperm transfer take place?

If anyone has had similar experiences or can answer my questions, I would appreciate hearing from them. And why didn't I photograph it?

Jeff Frey (age 11)
364 Oaklyn Road
Lebanon, PA 17042

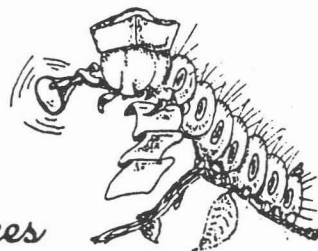
Dear June:

As Chairman of the Southern Lepidopterists' Society, I wish to congratulate Richard Heitzman as our Abbot Award winner for 1988, and Tom Neal for his ten years of service as secretary and treasurer of our society. We welcome new members to our society, and have an excellent editor this year, namely Leroy Koehn. Membership requests can be addressed to Tom Neal at 3820 NW 16th Place, Gainesville, Florida 32605.

Lastly, I wish to thank all members of the Lepidopterists' Society for contributing excellent articles and information, locality records and data. All this information benefits those members who want to visit other regions of the country and provides addresses of members who can be contacted.

Sincerely,
Jeffrey Slotten

Notices



NOTICE OF INCREASE IN LIFE MEMBERSHIP DUES

The funds in the Life Membership Reserve are fully invested and Constitutionally protected. Yet fluctuating interest rates and the devaluation of the U.S. dollar required a close look at potential future short-falls in the fund. Many societies have eliminated Life Membership categories but such drastic measures are not necessary for us at this time. However in an effort to avoid having Life Memberships become a drain on the general membership fund in the future, it will be necessary to increase the cost of a Life Membership.

Effective October 15, 1988, a new Life Membership will cost twenty times (20X) the annual Regular Membership Fee for the year in which application is made. For 1988-1989 the one time cost of a new Life Membership will therefore be \$500.00 U.S. (Regular Membership \$25.00 U.S. X 20). As a result of this dues increase, it will be possible to continue offering this important membership category.

INTERNATIONAL ENTOMOLOGICAL TRADE FAIR

The first INTERNATIONAL ENTOMOLOGICAL TRADE FAIR of PARIS will be held December 17 and 18, 1988 at the Hotel Pullman, 17 Boulevard Saint-Jacques 75014 Paris, FRANCE. It is expected that collectors from all parts of the world will be in attendance as well as the general public. Arrangements can be made for either of two different-sized display tables (46 cm or 92 cm wide) and very reasonably priced accommodations close by. The exhibition will be held in a large, first floor room of the hotel, with 4 entrances. The hotel is easily accessible by bus, metro and train, and there is a large, free parking lot nearby. There will be radio, television and newspaper publicity of the event. For any additional information, or to reserve display space or to arrange for accommodations, please contact Bernard Courtin, FRANCE ENTOMOLOGIE, 18 Sente des Chatagniers F-92380 Garches, FRANCE.

1989 BUTTERFLY CALENDAR AVAILABLE NOW

The Delaware Nature Society announces a 1989 calendar featuring 12 full color 9"x12" photographs taken continued on next page

by Dr Elton Woodbury, a retired Hercules, Inc entomologist whose pictures have appeared in several national reference books including "The Audubon Society's Field Guide to North American Butterflies." Pictured are 12 native (and common) butterflies plus some unique photographs of caterpillars and chrysalids along with comments on life cycles and habitats. All proceeds benefit the Delaware Nature Society, a private, non-profit membership organization dedicated to education and conservation. To order, send \$8.00 plus \$1.50 postage for first calendar and \$.50 for each additional one to Ashland Nature Center, PO Box 700; Hockessin, DE 19707 or phone (302) 239-2334.

ANNUAL MEETING GROUP PHOTOS AVAILABLE

There are still a number of group photos available from the 39th annual Meeting in Pittsburgh. Anyone interested in obtaining one may do so by writing to John Rawlins, Division of Life Sciences, Carnegie Museum of Natural History, 4400 Forbes Ave, Pittsburgh, PA 15213. Enclose \$3.00, or a check for this amount made payable to The Lepidopterists' Society, and the Carnegie will pay postage and handling costs.

1987 TREASURER'S REPORT

1. Beginning Balance	\$54,684.44
2. INCOME for 1987	
Member Dues	49,903.56
Institutional Subscriptions	7,976.00
Air Mail	1,150.00
Late Fees	192.00
Interest Earned	3,545.31
Undesignated Gift	687.00
Illustrations Fund Gift	163.50
Publication Fund Gift	190.50
Sale of Memoirs/Commemoratives	661.75
Sale of Back Issues	1,261.20
Page Charges, Vol 39	288.75
Vol 40	6,358.75
Vol 41	2,144.25
Mailing List Rental	1,351.22
New Life Members	6,650.00
Miscellaneous Income	173.00
Total	82,696.79
3. EXPENSES for 1987	
NEWS publication	11,682.51
JOURNAL [Vol 40(3,4); Vol 41(1-3)]	32,699.64
Supplies	122.46
Printing	719.36
Postage	1,025.85
Back Issue Handling	771.97
Treasurer	137.16
Secretary	683.46
Editor	53.88
Mailing List Maintenance	62.41
Bank Service Charges	302.74
Miscellaneous Expenses	217.83
Total	48,479.27
ENDING BALANCE	88,901.96
4. Distribution of Cash Assets	
Petty Cash Fund	100.00
Checking Account @4.5%	47,364.02
CD: 12 mos @7.5%	15,000.00
CD: 12 mos @7.6%	15,000.00
CD: 12 mos @6.75%	11,437.94
Total	88,901.96

For comparison, the 1986 figures may be found in NEWS #6, 1987 on page 84.

James Tuttle, Treasurer

LAST CHANCE TO CHANGE YOUR LISTING IN THE NEW MEMBERSHIP DIRECTORY

The next issue of the NEWS for 1988 (#6) will be devoted entirely to the biennial Membership Directory. To add to or revise your list of interests, report a new address, add your telephone number (many members who have moved in the last two years have not reported their new phone numbers; please indicate whether phone number is at work or home), or make any other changes, please notify Julian Donahue (address on back cover) immediately. DEADLINE FOR RECEIPT OF DIRECTORY CHANGES is Friday, October 14, 1988.

MATERIAL WRITTEN BY NABOKOV DESIRED

WANTED: Offprints or reprints of entomological articles and personal letters by the Russian-American writer and entomologist, Vladimir Nabokov. For updating my standard bibliographic work on the author, I need to acquire or examine such papers. I will send a list of his entomological journal appearances to anyone who asks. Contact Michael Juliar, 355 Madison Ave, Highland Park, NJ 08904 USA. Phone (201) 846-4221.

SEASON SUMMARY, INSTRUCTIONS TO CONTRIBUTORS

Format: type double-spaced, one side of paper only; please list, rather than writing narrative; use separate sheet for each state.

What to report: species of unusual occurrence with regard to geography, flight season, altitude, numbers; "choice" species; migrations; new food-plant observations; unusual behavior; aberrations. Contributors should be able to defend accuracy of determinations, assertions re county records, etc.

How to report: segregate by states or provinces; separate butterflies from moths; give name of species, locality (at least as definable on topographical or road map), county, date of record, how attracted or captured, if pertinent (primarily for moths).

Names and sequences: use Miller-Brown list (Lep. Soc. Memoir No. 2, 1981) for butterflies, MONA list (Hodges, 1983), for moths or the most up-to-date reference available to you for each group. List the species in the same sequence as in that reference (this will save the coordinator an immense amount of time). Cite the name of any expert who defined a difficult or unusual species for you.

Records from prior years, dated as such, may be included, if proper determination resulted in delay, or to respond to a statement in a previous Summary.

When to report: reports must reach coordinator by 5 January 1988 in order to allow him the next six weeks to compile data. EARLIER REPORTING IS ENCOURAGED, so that coordinator will have time to inquire about any data that are unclear.

Where to send reports: The 13 numbered and defined zones with the Coordinators' names and addresses follow this notice. Please send the state/province report directly to the Coordinator for the appropriate area.

All contributors will be acknowledged by name in the summary. However, the balance of significance vs. space available will determine whether a particular record is included by the coordinator.

NOTE: A record as used in the summary should mean the first time known to the collector that that species had been captured in a given province, state or county.

LIST OF ZONES AND COORDINATORS

1. **FAR NORTH** (Eastern Siberia, Alaska, Yukon, NWT, Greenland): Ken PHILIP, Inst. of Arctic Biology, Univ. of Alaska, Fairbanks, AK 99701 USA.
2. **PACIFIC NORTHWEST** (OR, WA, ID, B.C.): Jon SHEPARD, Sproule Creek Rd., R.R. 2, Nelson, B.C., V1L 5P5, CANADA.

3. **SOUTHWEST** (CA, NV, AZ): Bob LANGSTON, 31 Windsor Ave., Kensington, CA 94708 USA.
4. **ROCKY MOUNTAINS** (Alta, MT, WY, UT, CO, NM): Ray STANFORD, 720 Fairfax St., Denver, CO 80220 USA.
5. **PLAINS** (Sask., Man., ND, SD, NE, KS): Dick ROSCHE, 501 Shelton St., Chadron, NE 69337 USA.
6. **SOUTH CENTRAL** (OK, TX, AR, LA): Ed KNUDSON, 804 Woodstock, Bellaire, TX 77401 USA.
7. **ONTARIO/QUEBEC**: Ross LAYBERRY, 2220 Halifax Drive, #1409, Ottawa, Ontario, K1G 2W7, CANADA.
8. **MIDWEST** (MN, WI, MI, IA, MO, IL, IN, OH, KY, WV): Les FERGE, 7119 Hubbard Ave., Middleton, WI 53562 USA.
9. **SOUTHEAST** (TN, MS, AL, VA, NC, SC, GA, FL, Bermuda): Andy BECK, NDVECC, Box 43, Naval Air Station, Jacksonville, FL 32212 USA.
10. **NORTHEAST** (NF, Labr., Maritimes, New England, NY, PA, NJ, MD, DE, DC): Dave WINTER, 257 Common St., Dedham, MA 02026 USA.
11. **HAWAII/PACIFIC ISLANDS**: J. C. E. RIOTTE, Dept. of Entomology, Bernice P. Bishop Museum, P.O. Box 19000-A, Honolulu, HI 96817 USA.
12. **NORTHERN NEOTROPICS** (Mexico, Cent. Am., Antilles): Eduardo WELLING M., Apartado Postal 701, Merida, Yucatan, MEXICO.
13. **SOUTH AMERICA**: Boyce DRUMMOND, Pikes Peak Research Station, Florissant, CO 80816 USA.

EDITOR'S NOTE: It frequently takes first class mail 3 to 4 weeks for delivery in Canada, so mail your Canadian records early with this in mind. The same is true for mail to reach the U.S. from Canada so give the Canadian based coordinators plenty of time. It takes over a week for mail to reach Mexico also. Also, note that the deadline for material to be in the hands of the coordinators is Jan. 5th and material received by them after this date is apt to be left out of their reports altogether.

PRICE LIST OF PUBLICATIONS (revised July 1988)

It has been necessary to increase our prices to reflect current costs of back issue stocking and handling. All prices include postage and packing.

JOURNAL (Vols. 1-12 titled **LEPIDOPTERISTS' NEWS**) (ISSN 0024-0966) (For inventory, see 1988 NEWS 4, page 63)

Volume No.	Price Per Volume	Price Per Issue
1 (reprint)	\$25	not sold separately
2 (complete)	\$25	not sold separately
3-4 (as is)	\$20	not sold separately
5 (complete)	\$25	not sold separately
6-7 (only 1 issue avail.)	----	\$7.50
8 (complete)	\$30	\$8
9-10 (2-3 issues avail.)	----	\$7.50
11 (complete)	\$30	\$8
12 (2 issues avail.)	----	\$7.50
13-current	\$30	\$8

NOTES:

1. Journal Supplements are extra, at \$8 each.
2. Vol 34, No. 2 (Clench Memorial Issue) is \$16 when ordered separately.
3. When issues of a volume from 13 onwards are not available, the cost is reduced proportionately: a volume missing one issue is 3/4 normal price.

NEWS of The Lepidopterists' Society (See inventory for availability): \$3 per issue, except for Season Summary issue and Membership List, which are \$5 each.

MEMOIR NO. 2: CATALOGUE/CHECKLIST OF BUTTERFLIES OF AMERICA NORTH OF MEXICO, by Miller/Brown.

Clothbound: \$12 for Members/Subscribers; \$19 for non-members. Paperbound: \$7 for Members/Subscribers; \$10.50 for non-members.

COMMEMORATIVE VOLUME: Clothbound: \$8 for Members/Subscribers; \$12 for non-members.

KARL JORDAN MEDAL NOMINEES SOLICITED

The Karl Jordan Medal is awarded by the Lepidopterists' Society in conjunction with the Allyn Museum of Entomology, Florida State Museum, Sarasota, Florida. This award is given in recognition of outstanding original research in lepidopterology, which particularly emphasizes the fields of morphology, taxonomy, zoogeography, and "natural history" [For the procedures and criteria, please see *Journal* 26(4): 207-209]. Nominations of potential recipients should be forwarded for consideration to Karl Jordan Medal Awards Committee, Allyn Museum of Entomology/FSM, 3621 Bay Shore Rd., Sarasota, FL 34234.



Research Notices

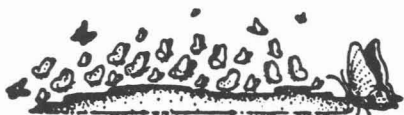
● **WANTED:** Information on the butterflies of the Lesser Antilles for forthcoming book on the West Indian fauna to be published by Oxford University Press. List location, date, with ecological and hostplant data if possible. All data will be used and contributors acknowledged. Please forward information at your earliest convenience to Drs. Lee and Jacqueline Miller, Allyn Museum of Entomology/Florida State Museum, 3621 Bay Shore Rd., Sarasota, FL 34234.

● People have asked me for more information on bug zappers since the publication of my article in the *J. of the Lep. Soc.* on the impact of outdoor lighting on moths. One correspondent who is a wildlife manager considered banning the devices in certain areas, but deplored the lack of data required to formulate a policy. In response, I have begun to compile a "data bank" on bug zappers. I am asking readers of the *NEWS* to help by sending me the following information on bug zappers sold in their communities:

1. Baffle size (i.e., the grid that limits the size of insects that reach the electrocuting wires. Examples would be one-quarter inch or one-half inch grids)
2. Claim as to efficacy (please give a verbatim quote)
3. Name and address of manufacturer, distributor, or both
4. Brand name and model number
5. Wattage
6. Price
7. City, town or county where sold

I would also like to have any opinions or observations about the effect of these devices on insects, including "beneficial" ones of interest to fishermen (Plecoptera, Ephemeroptera, Trichoptera) and farmers (Braconidae, Ichneumonidae, Tachinidae, Chrysopidae). Do you know of any evidence that these devices accomplish what the manufacturer claims? Send all correspondence to Kenneth Frank, 2508 Pine St, Philadelphia, PA 19103.

● A tagged monarch was seen 15 years ago in Victoria, British Columbia, Canada in July 1973 by Rick West (a local biologist). He was unable to capture the butterfly, but noted that the tag was a pale paper label folded around the front edge of the forewing. Can anyone suggest a likely origin of the tagged individual? Perhaps tagged monarchs were only released from one or a few places in western North America in 1973? Please contact Cris Guppy, Biological Collections, Royal BC Museum, 675 Belleville St., Victoria, B.C. V8V 1X4, Canada



Forthcoming Meetings

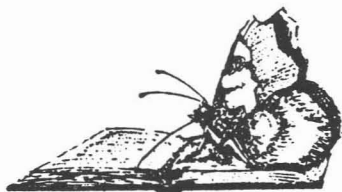
SOCIETY OF KENTUCKY LEPIDOPTERISTS TO MEET

The 14th Annual Meeting of the Society of Kentucky Lepidopterists will be held in Louisville, Kentucky on November 11 and 12, 1988. The guest speaker will be Dr John Burns of the Smithsonian Institution, who will speak on North American skippers he has studied. Everyone is invited to attend. For information on membership and on the meeting, contact Dr Charles E. Covell, Jr., Dept of Biology, University of Louisville, Louisville, KY 40292-0001. Phone (502) 588-5942.

40TH ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY

By popular demand, the dates of the 40th Annual Meeting of the Lepidopterists' Society, to be held in Albuquerque at the University of New Mexico, have been changed from June 4-6, 1989 to July 28-30, 1989. Local arrangements are being handled by Richard Holland, 1625 Roma NE, Albuquerque, New Mexico 87106, USA. Further announcements will follow.

Books



NEW EDITION PUBLISHED

How to Write and Publish a Scientific Paper, 3rd Edition by Robert A. Day, 1988. ORYX Press, 2214 North Central at Encanto, Phoenix, Arizona 85004-1483. This new and revised volume is 6"x9" and contains 224 pages. It sells for \$21.95 in North America and \$26.35 (in U.S. funds) elsewhere for the clothbound edition. Paperback is \$14.95 in North America and \$17.95 (in U.S. funds) elsewhere. The toll-free order number is 1-800-457-ORYX. Robert A. Day, Professor of English at the University of Delaware, has served as President of the Society of Scholarly Publishing, chairman of the Council of Biology Editors, Director of ISI Press, and has spent 19 years as Managing Editor for the American Society of Microbiology. He shares his expertise on writing technical papers and getting them published in this informative and enjoyable "how to" volume.

NEW PUBLICATION

"The Saturniidae of America: Ceratocampinae" (= Citheroniinae) by Claude Lemaire has been published in honor of the 100th anniversary of the Museo Nacional de Costa Rica. This is the third of Lemaire's revisions of the New World saturniid subfamilies and covers all 170 known species (27 genera) of Ceratocampinae in 480 pages of text, 379 text figures, 56 lifesize color photographic plates of adults, 2 black and white plates and 6 color photographic plates of 24 species of larvae. The text is in French with an English summary for each species and an English and Spanish summary for each genus. Male and female genitalia drawings are given for virtually all species, along with geographic ranges and host plants as known at the time of publication.

This is a book of exceptional beauty as well as thorough taxonomic coverage, and the result of over 20 years of intense study by the author. The color plates of both sexes allow virtually instant identification of adults, which means that there is now the opportunity for extensive work on the ecology, behavior, and physiology of this speciose group of geographically and ecologically widespread group of predominantly tropical moths. The book may be obtained by sending a check made out to Fundacion Neotropica for \$80 U.S. (\$85.00 if airmail delivery is desired). Mail checks to Museo Nacional de Costa Rica, Apartado 749-1000, San Jose, Costa Rica, or write to Dr Daniel H. Janzen, Dept of Biology, University of Pennsylvania, Philadelphia, PA 19104 for additional information.

PREPUBLICATION NOTICES

The Butterflies of Hispaniola by Albert Schwartz, University of Florida Press. Due for release in December 1988. 604 pp. Clothbound \$35.00. Contains a discussion of the known lepidopteran fauna of Hispaniola, including information on natural history, ecology, taxonomy, elevational distribution, foodplants used by adults, seasonality, and occurrence on satellite islands. There are detailed distribution maps for each species and photographs of selected ecologies.

Butterflies of Florida by Eugene J. Gerberg and Ross H. Arnett. Publication date: December 1988. ca 108 pages, color illustrations. E. J. Brill/Flora & Fauna Publications Division, Gainesville, Florida. Priced in the neighborhood of \$9.95 U.S. or 25 Dutch guilders for paperback. The most interesting butterfly fauna of the United States is that of Florida where these beautiful tropical animals may be seen flying throughout the entire year. About 103 species breed in the state and another half dozen or more are occasionally seen flying across south Florida, visitors from nearby islands. Some species are extremely abundant and at times their larvae are pests. Others are rare treats seen only once in awhile, and several are extremely rare. All species are protected from collectors in state and national parks, but may be watched visiting flowers and flying around mud puddles. This compact book is a full color guide to these species, each illustrated and described for easy, on-the-spot identification. The food plant of the larvae is given which enables the collector to search out the eggs and larvae. Instructions are given for rearing the common species and propagation of the rare species where permitted. Both common and Latin names are given in a complete checklist which can be used by observers to record field notes.

PUBLICATION REVIEW

BUTTERFLY HOUSES IN BRITAIN, the Conservation Implications: a report prepared for The Nature Conservancy Council, the UK Department of the Environment, and the World Wildlife Fund-UK, by N. M. Collins, IUCN Conservation Monitoring Centre, 219c Huntingdon Road, Cambridge CB3 0DL, UK, June 1987. 60 pp + 4 annexes. Price not stated.

Butterfly houses, which are, in effect, butterfly zoos, are burgeoning in Great Britain. Dr. Collin's report to the IUCN considers the nature of these houses, the manner in which they are maintained, their interface with the viewing public, and their problems and potential with regard to education, conservation, and research.

A butterfly house must have sufficient controlled light, warmth, and humidity for good plant growth, including species suitable as nectaring sources and even larval host plants for its inhabitants. It must be continuously stocked with lepidoptera selected for visibility, availability, and longevity. Physical design must be such that butterflies do not become trapped or damaged in peaks and corners; visitors should be able to walk within the exhibit and view it easily and safely.

The concept seems simple, but the problems are many. A single enclosure can embrace only a limited temperature and humidity range, so it is usually not feasible to house tropical and temperate species together. While it is possible to maintain larval host plants in palatable condition for some species, for others this proves impractical. The larvae must therefore be reared separately, or pupae must be shipped in from rearing sites worldwide. Danainae, Nymphalinae, and Papilionidae are most commonly used, as well as species of Heliconiinae and Pieridae which breed well in captivity. Lycaenidae, Satyrinae, and Hesperidae are rarely shown. While over 200 species are flown in an average year, the species most universally used include only 21 butterflies, all tropical, and the Atlas and Indian Moon Moths.

The number of live specimens involved is staggering. An average house of 5-10,000 square feet may fly 500-1000 specimens at one time. While accurate figures were difficult to obtain, Collins estimates the use of about 10,000 specimens per establishment in a season, or about 440,000 specimens per season for the entire industry of 44 houses.

How are the butterflies obtained? One-third are reared on the premises, 27% are purchased from dealers within the UK (middlemen, not breeders), and the remaining 40% directly from overseas dealers. The vast majority are shipped in the pupal stage, with acceptably low mortality if proper procedures are used. Shipment of adults in paper triangle envelopes carries a mortality in the neighborhood of 40% and is usually resorted to when a rapid population boost is needed. Collins properly condemns this as poor practice, symptomatic of poor management.

The economics of the industry is likewise impressive. In one year an estimated 3.67 million viewers (average admission £1.24) yielded £4.55 million in gross revenues. But pupae purchased from British dealers cost about £2.00 apiece.

The foregoing has been largely descriptive. The more important part of Collins' report deals with comments and recommendations about regulation, the role of butterfly houses in education, and the potential for basic research. The relation to conservation draws particular attention.

An educational role of the butterfly houses is to enable the visitor to see, enjoy, and begin to understand the environmental needs of a butterfly species, and to sense the role of a tropical forest. The contingent expectation is that at least some viewers will thereby kindle or reinforce an interest in global ecology and conservation. The owners also understand the value of school-oriented efforts, and that children return bringing adults.

As for research, while the current investigations of immature morphology and chemical aspects of foodplant relationships are commendable, Collins feels that research attention should be directed particularly to the welfare of the display insects: optimizing environments, improving breeding potential, use of artificial diets, etc.

With regard to conservation, Collins emphasizes the importance of adherence to the various listings of the IUCN, The European Economic Community, etc., designating "threatened" and "endangered" status. He recommends that repeatedly updated IUCN listings, and updated information on insect-related legislation world-wide, be made readily available to butterfly houses.

While protection and appropriate management of key habitat are underscored as the *sine qua non* of butterfly conservation, the suggestion is made that *ex situ* rearing of certain selected threatened species in butterfly houses could be of value, (1) for recolonizing patches of recovering habitat from which the species has disappeared, and (2) in acquainting the viewing public with the need for (and raising funds for) specific conservation efforts.

The ties between butterfly and *in situ* conservation are at best dubious. The butterfly "farms" and back-yard

breeding operations which supply live pupae deal largely in common species and have much in common with the American "broiler factories" supplying the fast-food industry. There is a concept of rearing threatened species, developing an economic market (for pupae for butterfly houses), and hence furthering habitat conservation to maintain a source of breeding-stock for that market. This is theoretically reasonable but has yet to be realized.

The British butterfly house industry, numbering one in 1960, two in 1977, and 44 in 1987, is still in a growth phase but will probably soon reach maturity. The industry needs to return some of its profits to their source, i.e., butterflies and their well-being and conservation. Furthermore, it must improve its methods of supply, handling, and management of the butterflies, so that the public's feeling for the butterfly houses will not turn from fascination to skepticism and even aversion. Public acceptance of vertebrate zoos has been experiencing such a decline.

The information and insights provided by Dr. Collins in this report can and should provide essential guidance to anyone, from entrepreneur to spectator, with an interest in the development of the butterfly houses over the next decade.

Dave Winter

New Members



- BALLANTINE, A.: Room 604-608 Gloucester Tower, 11 Peddler St., HONG KONG.
- BANKS, JAMES C.: Site 87, Box 82, RR#1, Bedford, Nova Scotia B4A 2W9, CANADA.
- BRUCE, JAN: 5911 Parkland Dr, Youngstown, OH 44512.
- CASSEL, WILLIAM: 2518 Varner Dr NE, Atlanta, GA 30345-1571.
- CHAVEZ DE VELA, JUANA: Sven Erickson 294, Tingo Maria, Huanuco, PERU.
- COLLINS, STEVE C.: Monsanto Central Africa, Inc., P.O. Box 47686, Nairobi, KENYA.
- DEWART, MARK L.: 1101 Milky Way Dr, Colorado Springs, CO 80906.
- DREYER, DON: 20 Wendell St, Apt L1, Hempstead, Long Island, NY 11550.
- DUNWOODY, DAN W: 1110 North Catherine St, Kissimmee, FL 32741.
- FASON, JACK: 5275 South University Blvd, Greenwood Village, Littleton, CO 80121.
- FOSTER, PAT: 8909 192nd St SW, Edmonds, WA 98020.
- HINKLEY, MATT: 2409 Haynes, Midland, TX 79705.
- HISER, DAVID L.: 4197-C North Shallowford Rd, Atlanta, GA 30341.
- HOLOYDA, JOHN (Dr.): 5407 North Oketo Ave, Chicago, IL 60656.
- JARDINIANO, ARIGO: Barangay San Miguel, Boac, Marinduque 4900, PHILIPPINES.
- KAWABE, ATSUSHI: Biological Lab, Juntoku Gakuen, 2-11, Senju, Adachi-ku, Tokyo 120, JAPAN.
- KINKEADE, HAL: 2429 Eastbrook, Mesquite, TX 75150.
- KLAWIER, ROBERT L.: P.O. Box 1823, Venice, FL 34284-1823.
- LEO, DAVID J.: 1309 Radcliffe Ln, Schaumburg, IL 60193.
- MANNINO, JOSEPH: 24 Citadel Circle, Chalfont, PA 18914.
- MATTONI, RUDI (Dr.): 9620 Heather Rd, Beverly Hills, CA 90210-1757.
- MEANS, STEVEN (Dr.): 2609 Burnham Rd, Minneapolis, MN 55416.
- MORAN, MALCOM: P.O. Box 948, Carmel, CA 93921-0948.
- NICHOLSON, BARBARA: 889 Walker St, Dubuque, IA 52001.
- NONAKA, MASARU: 7154 Vernon, St. Louis, MO 63130.
- O'CONNOR, DANIEL B.: 17155 Beaver Springs Rd, Houston, TX 77090.
- RICHARDSON, NORMAN: 18 Dale St, Needham Heights, MA 02194.

ROBB, NORRIS: 57-1/2 Fairview Ave, Park Ridge, NJ 07656.
 SCHAPPERT, P. J.: 1-299 Margaret Ave, Peterborough, Ontario K9J 5H1, CANADA.
 SLATTER, CHARLES P.: P.O. Box 22, Central City, CO 80427-0022.
 SLOCOMB, SUZETTE: 219 West 68th St, Kansas City, MO 64113.
 STEVENSON, CATHERINE: Resource Management, Alberta Parks, RR#1, Bentley, Alberta T0C 0J0, CANADA.
 SUN, SAM: 1521 Joseph Court, La Habra, CA 90631-2519.
 WARREN, ANDREW D.: 9951 East Ida Place, Englewood, CO 80111.
 WEST, ANNA: 532 West Pine St, Carson City, MI 48811.
 WEST, FRANKLIN M. (D.O.): 532 West Pine St, Carson City, MI 48811.
 WESTERFIELD, RICHARD: 452 Washington Ave, Hackensack, NJ 07601.
 WILLIAMS, STEPHEN: Houston Baptist University, 7502 Fondren Rd, Houston, TX 77074.
 WILSON, MICHAEL: Cochise County Health Services, P.O. Drawer 1858, Bisbee, AZ 85603.

Address Changes



In the interest of conserving space, no address changes are being reported in this issue. All new addresses will be incorporated in the next (#6) issue of the NEWS, which will be devoted entirely to the Society's biennial Membership Directory. All address changes and lists of interests received by Julian Donahue by 14 October 1988 will be included in the new Directory.

The Market Place

Buy • Sell • Exchange • Wants



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

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

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

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

FOR SALE OR EXCHANGE: *Archon apollinus* and other butterflies from Turkey. I am interested primarily in South American tropical Rhopalocera. For detailed information, please send self-addressed envelope to Dr Oktay Onaran, Havaci Muzaffer Erdonmez Sk, Basak Apt. No 12/5 34800, Yesilkoy, Istanbul, Turkey.

WANTED: Pupae of *Eacles imperialis*, *Citheronia regalis*, *Citheronia splendens* and *Citheronia brissoti* plus cocoons of *Hylaphora euryalis*, *gloveri* and *columbia*, *Actias selene*, *Actias artemis*, *Atticus atlas*, *Antheraea* species excluding *Polyphemus*, *Automeris* species and *Callosamia argulifera*. Contact Ed Komperda, 58 Birch Lane, Massapequa Park, New York 11762. Phone (516) 795-3883 after 4:00 P.M.

WANTED TO PURCHASE: *AGRIAS* Key Rarities! Will pay well, depending on specimen and condition. Send for want list with particulars. Serious replies only, please. Robert E. Aronheim, 3442 Lyrac St., Oakton, VA 22124, USA.

FOR SALE: Overwintering pupae of *P. glaucus*, *P. troilus*, *B. philenor*, *P. polyxenes asterius*, *E. marcellus*. Shipment in season also possible for all of the above plus certain Nymphalids. FOR TRADE: Eastern US butterflies and moths (Saturniidae, Sphingidae, Catocala, Arctiidae) for western material. All material A+ with full data. Mecky Furr, 7925 Cross Pike, Germantown, TN 38138.

WANTED: Dealers and Collectors who have "Biological Labeled" NORTH AMERICAN Butterfly Specimens to Sell. (No Skippers or Moths). Have Specific Want or Interest Lists to send to those responding. Response from individual collectors is desired as much as larger dealers. Need Price Lists and/or Catalogs. Specimens will be used to increase a collection of North American Butterflies. No Endangered or Threatened Specimens. Contact David V. Holmquist, 8318 Doyle Spring Rd #12, Little Rock, AK 72209-5361.

FOR SALE: Entomological Cabinet with glass topped drawers. SASE for details. Russell Rahn, 3205 W. Rochelle Road, Irving, TX 75062.

FOR SALE: *Automeris zephyria* cocoons and papered *Hemileuca hera magnifica*. SASE please. Address until October 15th. Jim Coleman, 5812 Leta Rd NE, Albuquerque, NM 87107 USA. Address after 15th--Teta Kawi Trailer Park, P.O. Box 671, Guaymas, Son. Mexico. Orders received after October will be shipped the end of April 1989.

WANTED: To borrow good 35mm slides of mature larvae of several eastern butterflies (including skippers) for a comprehensive publication - "A Field Guide to The Butterflies of West Virginia". All contributors will be acknowledged in the book, and slides will be returned. For list of species needed contact Tom Allen, c/o WV Department of Natural Resources, P.O. Box 67, Ward Road, Elkins, WV 26241. (304) 636-1767.

WANTED URGENTLY: large or small quantities of U.S. butterfly and moth pupae, preferably papilios, silks, hawks etc. I am trying to put a large breeding stock together this fall (Oct.). I will pay good prices, so please send availability list and cost as soon as possible to: Richard G. Bance, 10836 Kling St., Apt. 101, Toluca Lake CA 91602. All offers are welcome and all letters will receive a reply.

WANTED: Sphingidae from southern and western North America. In exchange I can offer about 30 species of sphingids from my area as well as a number of sphingids from Costa Rica and Columbia. Also, I will have *H. columbia* cocoons in September. Please contact Hal Donly, 90 Penny Cres, Markham, Ontario L3P 5X6, Canada.

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

FOR SALE OR EXCHANGE, the following books: S. Scudder, Frail Children of the Air; F. Bralliar, Knowing Insects Through Stories; C. Weed, Butterflies Worth Knowing; W. J. Holland, The Butterfly Book; H. L. Lewis, Butterflies of the World; P. Smart, Encyclopedia of the Butterfly World. Others available. Send SASE for list to Jerry Dievendorf, 160 Hudson Ave, Delmar, NY 12054.

FOR SALE: Pupae of Graphium marcellus, Pachysphinx modesta, Actias luna and Papilio troilus. SASE, Please, for price information to William Houtz, RD#4, Box 477, Pine Grove, PA 17963.

FOR EXCHANGE: This year from collecting in China, I can offer from Qinghai, Gansu, Sichuan, the following Parnassius. P. przewalskii, imperator imperatrix, nomion gabrieli, richthofeni, others orleans, szechenyi, simo, cephalus, imperator, accestis. Of Beetles, the rare Carabus, Coptolabrus formosus, pustulifer, Apotomopterus, Eucarabus, Orinocarabus, Cechonus, Pagocarabus and others. WANTED, exotic butterflies of Agrias, Papilio, Parnassius and others, of Beetles, Megasoma, Dynastes, Goliathus, Goliathini, Lucanidae, others. yoskiaka Furumi, 97-71 Komizo-Iwatsuki-Shi, Saitama-Ken 339 Japan.

WANTED: A small collection of North American butterflies, spread, grouped and mounted, for my home. Write Angie Boury, 1409 S. Louisiana #6, Little Rock, AR 72202.

FOR SALE: Saturnid cocoons of Samia cynthia, Eacles imperialis, H. euryalis x H. cecropia hybrids, H. columbia and others. SASE or phone (717) 272-6597. Jeff Frey, 364 Oaklyn Rd, Lebanon PA 17042.

FOR SALE: The Tropical Rainforest Engagement Calendar for 1989 is available from The Basic Foundation. This 6 1/2" x 9 1/4" week by week calendar contains 60 colorful photos of tropical plants, insects, birds and beasts, plus an 8 page essay on the rain forest and humanity by Pete Carmichael. The calendar sells for \$9.95, postage paid, in the U.S.A. Outside the U.S.A. add another dollar. Also available for sale are packets of 8 rainforest butterfly greeting cards, size 5"x7", with envelopes. To obtain a free, educational, 8 page color brochure, send a SASE. The Basic Foundation, P.O. Box 47012, St. Petersburg, Florida 33743. Phone (813) 526-9562.

FOR EXCHANGE: I have ex pupae specimens of Eumaeus atala, seeds of Aristolochia tagala (one of the foodplants of the Birdwings), ova of Battus polydamus. I want ova of Papilio, Nymphalids and Saturniids, and especially Eacles and Citheronia. Paul F. Pfenninger, 4085 Floral Drive, Boynton Beach, FL 33436. Phone (407) 732-4123.

MEMBERS' COMMERCIAL NOTICES

JUANA CHAVEZ de VELA, Sven Erikson 294, Tingo Maria, PERU. FOR SALE: Butterflies from Peru with collection data. Price list \$1.00.

KEN THORNE, P.O. Box 684, Lambeth, Ontario N0L 1S0, CANADA. Telephone (519) 652-6696. FOR SALE: Worldwide selection of Lepidoptera and Coleoptera. High quality material. Specializing in world Papilio, Morpho, Lycaenidae and North American species. Send \$1.00 for lists.

JOHN TROTTER, 11 Laurel Way, London N20 8HR, United Kingdom. Specializes in antique and out of print entomology books. Lists issued. Books purchased. FOR SALE: Ova of Papilons, Polytes, Demoleus, var. Saturniidae. Send for list. WANTED: American Sphingidae and butterflies.

MIGUEL SERRANO - 6823 Rosemary Drive, Tampa, Florida 33625 USA - specializing in tropical American butterflies including pairs of many species bred for us in Central America. Send for our list of material (including rarities) covering Papilio, Morpho, Brassolidae, Anaea, Heliconius, etc. from El Salvador, Peru, Colombia, Costa Rica and many other countries. All families represented.

CHANG PI-TZU, P.O. Box 873, Taipei, Taiwan 10099, Republic of China. FOR SALE: More than 100 different dried Formosan butterflies in large quantity; dried Formosan moths including Saturniidae; dried Formosan rare female butterfly specimens; sexual mosaics of Formosan Lepidoptera including one rare gynandromorpho of Actias sinensis specimen and dried various Formosan beetle and other insect specimens. Please send \$1.00 in cash for price lists and information.

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

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

FLORA AND FAUNA BOOKS, P.O. Box 15718, Gainesville, FL 32604, USA. Complete natural history book service. All new book list prices reduced 5% or more. Current sale items (until December 30, 1988): Covell, Field Guide to Moths, \$8.95 (pap.); DeVries, Butterflies of Costa Rica, \$16.96 (pap.); Douglas, Lives of butterflies, \$38.95; D'Abrera, Butterflies of S. Am., \$16.95 (pap); Ferris/Brown, Butterflies of Rocky Mts., \$14.50 (pap.); Gerberg/Arnett, Butterflies of Florida (new release date 12/88), \$8.75 (pap); Klotz, FG to Eastern Butterflies, \$8.95 (pap); Opler/Krizek, Butterflies East of Great Plains, \$39.95; Scott, Butterflies of N. Am., \$39.95; Shull, Butterflies of Indiana, \$19.95; Tilden/Smith, FG to Western Butterflies, \$9.95 (pap); Heitzman, Butterflies & Moths of Missouri, \$9.95 (pap); Miller, Oaks of N. Am., \$9.95 (pap); Schwartz, Butterflies of Hispaniola (release 12/88), \$32.50; Royer, Butterflies of North Dakota, \$13.95. Postage/handling extra (\$1, plus 50c/book). Individuals please prepay. Ask for free catalogs.

E. W. CLASSEY LTD., P.O. BOX 93, FARINGDON, OXFORDSHIRE, SN7 7DR ENGLAND. OUR MAIN CATALOGUE, issued about twice a year, lists hundred of new and available books on Insects, especially Butterflies and Moths, from all over the World. Send to the above address for a free copy. We also PUBLISH many titles of importance to members of the Lepidopterists' Society among which are: SPHINGIDAE MUNDI - HAWK MOTHS OF THE WORLD by that fine photographer Bernard D'Abrera. Size 250 x 340mm. 226 pages, 79 fine colour plates, Hard Cover. Price £97.50 (US\$165.00). JAMAICA & ITS BUTTERFLIES by F. M. Brown & B. Heineman. 4to. 492 pages, 11 fine colour plates, Hard Cover. Price £28.00 (US\$47.50). WHY NOT EAT INSECTS? by A. V. Holt (1885). A new edition co-published by ourselves and The British Museum (Natural History), with a modern Introduction by Laurence Mound, Keeper of Entomology at the BMNH. An amusing and instructive text, a delightful additional Christmas present. Price £3.95 (US\$6.75). All prices shown are inclusive of Postage and Packing. Cash with Order please. You may pay by personal cheque in U.S. Dollars or by Credit Card (ACCESS, MASTERCARD, EUROCARD or VISA) - just tell us which card, your name as on the card and card expiry date. WHEN ORDERING PLEASE MENTION NEWS OF THE LEPIDOPTERISTS' SOCIETY.



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

INFORMATION ABOUT THE SOCIETY.....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER, James P. Tuttle, 3838 Fernleigh Ave, Troy, Michigan 48083, phone (313) 689-6687, the full dues for the current year, \$25.00 US, together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) \$15; sustaining membership \$35; life membership \$500. Remittances must be in US dollars, payable to the Lepidopterists' Society. All members will receive the JOURNAL (published quarterly) and the NEWS (published bimonthly). A biennial membership directory will comprise the last issue of the NEWS in even-numbered years.

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

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

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

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

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

CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO (Memoir No. 2), Lee D. Miller & F. Martin Brown: includes references to original descriptions and location of type specimens. Members and subscribers, \$12 cloth, \$7 paper; non-members, \$19 cloth, \$10.50 paper, postpaid.

COMMEMORATIVE VOLUME, 1947-1972: a 25-year review of the Society's organization, personnel, and activities; biographical sketches; JOURNAL 25-year cumulative index by author, subject, and taxon; clothbound. Members and subscribers, \$8; non-members, \$12, postpaid.

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

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