THE LEPIDOPTERISTS' SOCIETY EST 1947

NEWS of the LEPIDOPTERISTS' SOCIETY

No. 4 July/Aug 1983

June Preston, Editor
832 Sunset Drive
Lawrence, KS 66044
USA

HOW MANY BUTTERFLY SPECIES IN YOUR BACKYARD?

Ever since it was discovered that the tropics harbor a much greater variety of living things, in contrast to the temperate zones, this fact has intrigued generations of naturalists. It is agreed now that the number of locally coexisting species varies from place to place, fluctuating both in space and time, as local conditions and community structure change. A number of different hypotheses, based on ecological and/or historical factors, have been invoked to explain the origins and evolution of the diversity patterns observed in different areas of the world. Also, several diversity measures have been devised to depict the differences between comparable sites.

Most studies on biotic diversity have been performed on birds and mammals; on the other hand, long-term investigations on patterns of species diversity among butterflies are very scant (and almost non-existent for the tropics).

During the past three years, I have been conducting a survey of the butterfly fauna of the Tambopata Natural Reserve, in the department of Madre de Dios, Perú. After five visits, totalling some 600 man/hours of collecting, 865 species have been recorded (see table 1). The survey was performed in an area covering some 2 sq km, in the neighborhood of the living quarters at the Reserve (for a general description of the study site, and a preliminary check list of the species recorded, see Lamas, 1981, Rev. Soc. Mexic. Lepid. 6(2):23-40; additions and corrections to the list have been submitted for publication in the same journal). This represents the highest number of butterfly species recorded for any area of comparable size in the world. However, I believe this list is far from complete, as I now estimate the total number of species dwelling in the Tambopata Reserve at over 1200. It is considered that about a dozen different, major terrestrial habitats are included within the Reserve; of these, only six--river banks, open area near the dwellings, periodically flooded forest (igapó), bamboo thicket, permanent swamp, and high forest (várzea)--have been sampled intensively. Other habitats lie outside the 2 sq km covered, or have not been surveyed yet due to logistic difficulties.

So far, the only diversity measure employed has been the species total; it has not been feasible yet to use within- and among-habitats diversity measurements (sometimes referred to as the α- and β-diversity curves). Nor has it been possible to start studies on the temporal fluctuations of either the species composition of the communities, or of the population densities of individual species.

Despite this paucity of "hard" data, it is still possible to give some anecdotical information on the patterns of species diversity and population abundance at Tambopata.

Possibly, the observation that struck me most on my first visit to the Reserve (during one week in November 1979) was the "apparent" scarcity of both species and

individuals. Having done most of my previous collecting in montane forest habitats such as the "classical" localities of Tingo María, Chanchamayo and Satipo, justly famed for their abundance of butterflies, I was quite disappointed with the meagre results of my collecting efforts. Fortunately, John Heppner had been doing some butterfly collecting during the previous three weeks--although he was pretty busy most of the day mounting the "micros" he had collected the night before--and when we added our materials, we obtained a list of some 225 species. My second disappointment was with the forest itself. I had expected the classical "cathedral-like" type of mature, primary forest with a high, closed canopy and many tall trees soaring up to 60 m, and with little understory vegetation. I was certainly not prepared for the bamboo thicket or the quite lush undergrowth found in many places of the Reserve! I have since found that there are indeed some patches of primary forest in Tambopata, and although some interesting butterfly species seem restricted to them, they are by no means as diverse or abundant as the species found in other types of forest. However, on each succeeding visit, I have been truly amazed at the enormous diversity of the site and how almost every single day, I have been recording new species for the list. Furthermore, each day is different from the previous one, in terms of the species found, and their individual population densities. Although several species are seen on the wing almost every day during each trip, many others seem to experience population bursts, which last for a very short time. For instance, I have seen only three days (26 to 28 September 1981) in which hairstreaks were really abundant, both in terms of species and individuals; during the remainder of the time, hairstreaks were normally scarce. Conversely, an extremely high proportion (up to 50%) of the species have been collected--or seen--only once or twice during the last three years, and this is in accordance with the observation that many, if not most, tropical species have very low population densities.

In general, the highest number of species and the densest populations are found towards the end of the dry season and beginning of the rains (September to November). The lowest numbers were observed in February, during the height of the rainy season, although days with good weather were quite similar to those in October.

The following figures indicate the numbers of additional species recorded during each trip: Nov 1979 (~225); July-Aug 1980 (267 more); Sep-Oct 1981 (254 more); Feb 1982 (46 more); and Oct 1982 (73 more).

Why are there so many butterfly species in such a small area in Tambopata? What follows is highly speculative, but may serve as a working hypothesis to be tested when many more data are available. In the first place, there is obviously a great variety of habitats in Tambopata, and this is reflected by the fact that the Reserve can boast at least two other world records, the highest number of species of birds (some 550) and of dragonflies (142). But, why are there so many different habitats? My impression is that the area is geomorphically very young and unstable, and that most of the forest is not yet mature, climax vegetation. There are several ox-bow lakes in the neighborhood, the remains of old meanders of the rivers which surround the Reserve. Although there is no evidence of lumbering activities inside the Reserve, in many places the forest appears to be secondary. However, this might be the result of local, natural disturbances, caused by strong winds, prolonged cold spells (short cold spells are frequent nowadays) or rapid changes of the river courses, of which the ox-bow lakes remain as witnesses.

The Reserve lies at 300 m above sea level, so it truly belongs to the lowland forest realm, but montane forest habitats are close by (some 35 km as the Morpho flies), and they are a likely source of sporadic colonization by some lower montane species. For instance, two species which were recorded previously only above 500 m, have been found now in Tambopata, i.e. Morpho zephyritis Butler and Ituna ilione phenarete Doubleday. On the other hand, it is strange that some common, widespread, nonforest species, like Danaus plexippus erippus (Cramer), quite frequent at Puerto Maldonado, 30 km NE of Tambopata, is absent at the study site. A single specimen of the related D. eresimus plexaure (Godart) has been caught in the Reserve.

Table 1. Number of species of butterflies recorded at Tambopata Natural Reserve (1979-1982)

PAPILIONIDAE	25
PIERIDAE	
Dismorphiinae	3
Pierinae	19
NYMPHALIDAE	
Danainae	3
Ithomiinae	40
Satyrinae	77
Brassolinae	20
Morphinae	6
Acraeinae	1
Heliconiinae	21
Nymphalinae	97
Apaturinae	28
Libytheinae	1
LYCAENIDAE	
Riodininae	148
Lycaeninae	105
HESPERIIDAE	
Pyrrhopyginae	14
Pyrginae	125
Hesperiinae	132
TOTAL:	865

Finally, judging by a certain amount of genetic introgression evident in some Heliconius populations, I would surmise that Tambopata lies in between two areas postulated as Pleistocene forest refuges--Inambari in SE Perú and Yungas in N Bolivia. Although the butterfly species and subspecies found in Tambopata are regarded as being much more closely linked to the forms which presumably evolved in the Inambari refuge, they also show some influence from the Yungas forms. It may have happened that the Tambopata area was covered during the last glacial period by savanna-like vegetation, which has been replaced slowly by forest spreading out of the refuge areas. As Keith Brown (1979, Ecologia Geográfica e Evolução nas Florestas Neotropicais, São Paulo, Universidade Estadual de Campinas) has shown, such postulated peripheral areas have a higher diversity than the refuges themselves.

To sum up, the high specific diversity found in Tambopata could be the outcome of a complex ecological milieu which has not reached equilibrium yet, in close proximity to a rich colonization source--the eastern chain of the Andes--and which has been shaped by historical factors related to Quaternary glaciation events.

It would be extremely interesting if similar long-term surveys could be conducted in other areas of South America, as we would be then in a position to compare results and test new hypotheses. It has been suggested recently (Gentry, 1982, Evol. Biol. 15:1-84) that the number of plant species found on a given plot is directly related to the amount of rainfall present in the area. If we assume that more plant species provide more ecological niches for more butterfly species, does the above mean that Chocó Province in Colombia, the rainiest area in the world, harbors also more butterfly species than any other place? Meanwhile, the only serious challenge to the supremacy of Tambopata lies in Jaru, Rondonia, Brazil, an area surveyed with characteristic efficiency by Keith Brown [1976, News Lepid. Soc. 1976(2):17-18], where some 800 species have

been recorded. However, I wouldn't be surprised if some other place in western Amazonia proves richer than Tambopata and Jaru.

Gerardo Lamas
Lima, Perú

Postscript: A two week collecting trip to the Tambopata Reserve during February-March 1983 yielded 28 new records for the area, bringing the total number of species up to 893. G.L.

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MINUTES OF THE 33rd ANNUAL MEETING
OF THE LEPIDOPTERISTS' SOCIETY
combined with the 29th Annual Meeting of the
PACIFIC SLOPE SECTION
Laramie, Wyoming, 15-19 July 1982

The 33rd Annual Meeting of The Lepidopterists' Society was held on the campus of the University of Wyoming, Laramie, 15-19 July 1982.

On Thursday afternoon, 15 July, President Lincoln P. Brower presided over a meeting of the Executive Council in the Wind River Room of the Conferences and Institutes Building.

On Thursday evening, meeting coordinator Clifford D. Ferris hosted an open house at his "Ranch" east of town.

The formal program commenced with opening announcements at 9:05 a.m. on Friday, 16 July, in Room 304 of the Classroom Building, followed by a welcome message from Dr. Donald L. Veal, President of the University. There were 77 members and guests present.

Lincoln P. Brower then presided over a symposium on "The Behavior and Ecology of the Lepidoptera," consisting of the following papers:

"Iridoid glycosides and unpalatability in Euphydryas butterflies," Deane Bowers, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts;

"Biology of Euphydryas butterflies," Katherine Williams, University of British Columbia, Vancouver, Canada;

"Behavioral interactions of parasitoids and Baltimore checkerspot caterpillars, Euphydryas phaeton," Nancy Stamp, University of Florida, Gainesville;

"Reproductive biology in Heliconius and Speyeria butterflies," Carol Boggs, Stanford University, Stanford, California;

"Thermal ecology of Colias butterflies," Joel Kingsolver, University of California, Berkeley;

"Components of survival in rainforest caterpillars," John Smiley, University of California, Irvine.

Following a recess for the group photograph and lunch, the afternoon session began with Clifford D. Ferris presiding over a "Symposium on Rocky Mountain and Arctic Species," with the following papers:

"Ecology of Euproserpinus wiesti," Karolis Bagdonas, Xerces Society, Laramie;

"Type localities of Rocky Mountain butterflies described in 'The Genera of Diurnal Lepidoptera' by Doubleday," Jon H. Shepard, Brandon University, Brandon, Manitoba, Canada;

"The Montana Butterfly Project," Steve Kohler, Montana Division of Forestry, Missoula;

"Nathalis in the North: movements of a migrant pierid," Robert M. Pyle, International Union for Conservation of Nature and Natural Resources--Species Conservation Monitoring Unit, Cambridge, England.

After a coffee break, Karolis Bagdonas presided over a continuation of the Rocky Mountain and Arctic Species symposium, plus a paper rescheduled from the morning session:

Speyeria atlantis in the Front Range: polymorphism or sibling species?," Clifford D. Ferris, University of Wyoming;

"Beringian Lepidoptera," J. Donald Lafontaine, Biosystematics Research Institute, Ottawa, Ontario, Canada;

"Biology of Connecticut underwing moths," Larry Gall, Yale University, New Haven, Connecticut.

The Symposium adjourned at 4:52 p.m.

Friday evening featured a wild game cookout and blacklighting at the Bagdonas "Ranch" north of Laramie.

* * *

On Saturday morning, 17 July, Jacqueline Y. Miller presided over a session of contributed papers on the Neotropical fauna, as follows:

"Taxonomy of the Taygetis thamyra complex," Lee D. Miller, Allyn Museum of Entomology, Sarasota, Florida;

"Taxonomy of Neotropic Wallengrenia," Jacqueline Y. Miller, Allyn Museum of Entomology, Sarasota, Florida;

"5000 miles and 325 butterfly species, Mexico, 1981," Ray E. Stanford, Denver, Colorado;

"Highlights of Neotropical collecting in Ecuador and the Dominican Republic," Charles V. Covell, Jr., University of Louisville, Louisville, Kentucky.

Following a coffee break, Ray E. Stanford presided over a general session of the following contributed papers:

"The biology and threatened status of Speyeria zerene hippolyta," David V. McCorkle, Western Oregon State College, Monmouth;

"Iridescence as a protective 'color'--does the angle of iridescence relate to the angle of attack?," Benjamin H. Landing, Children's Hospital of Los Angeles, California;

"'Beak tears' in quantitative samples of Limenitis: an interpretive dilemma," Austin P. Platt, University of Maryland, Catonsville. [This paper was dedicated to the late Robert Silberglied.];

[An unscheduled paper on the comparative biology of Parides and Heliconius], Keith S. Brown, Jr., Universidade Estadual de Campinas, Campinas, São Paulo, Brasil;

"Biological notes on a new species of Narraga from Georgia," Charles V. Covell, Jr., University of Louisville, and Irving Finkelstein, and Abner B. Towers, Atlanta Georgia.

Following a recess for lunch, the afternoon session began with a "Symposium on the Noctuoidea" chaired by J. Donald Lafontaine. The generally chaotic state of the higher classification of this group was documented by the chairman (phylogenetic concepts), George L. Godfrey (noctuid larvae), Robert Poole (classification of Cuculliinae), and Tim L. McCabe (classification of Hadeninae).

At 4:05 p.m. Clifford D. Ferris introduced this year's recipient of the Karl Jordan Medal, Dr. Jerry A. Powell of the University of California, Berkeley, who presented an address entitled "Adaptation to arid habitats by ethmiid moths."

Saturday evening was devoted to a social hour and banquet at The Precinct. After dinner, the Karl Jordan Medal was presented to Dr. Jerry A. Powell in recognition of his major work, "A Systematic Monograph of New World Ethmiid Moths (Lepidoptera: Gelechioidea)" (Smithsonian Contrib. Zool. 120: 302 p., 294 figs., 22 pls., 68 maps, 1973).

Lincoln P. Brower of the University of Florida then presented the Presidential Address entitled "Extinction of a phenomenon? The case of the Monarch Butterfly."

Charlie Covell concluded the evening's activities by presiding over the distribution of a wealth of door prizes donated by members and businesses.

* * *

On Sunday 18 July, the program resumed at 9:06 a.m. with a session of contributed papers on Lepidopteran Behavior, chaired by Lee D. Miller:

"Mating and flight behavior of Hepialus sequoiolus and H. hectoides," David Wagner, University of California, Berkeley;

"Presumed pheromonal communication between male lycaenids," Robert Robbins, Smithsonian Institution, Washington, D.C.;

"A largely overlooked phenomenon: the case of the Monarch Butterfly in California," John Lane, Santa Cruz, California;

"Geographic variation in foodplant utilization abilities of papilionids and saturniids," J. Mark Scriber, University of Wisconsin, Madison.

*

After a coffee break, President Lincoln P. Brower called the Annual Business Meeting to order at 11:03 a.m., with approximately 60 persons present.

Brower introduced those members of the Executive Council present, then read a Necrology listing some members who have died within the last year. There was a moment of silence in their memory.

Treasurer Leuschner summarized the financial report, noting that we ended 1981 with a better operating balance than the year before. No dues increases are anticipated in the near future, and he expects us to break even in 1982.

Journal Editor Eichlin noted that he will continue publishing 80-page issues.

Former Editor Platt explained the reasons for the publication delay, primarily a result of the very large Clench Memorial Issue.

Leuschner announced that a committee had been formed to investigate purchase/lease/use of a computer in Society operations. He further noted that, at present, 90% of Society expenditures are for publications.

Dave Winter announced the completion of the Society's Collecting Policy Statement, noting that 88% of our members had favored the adoption of such formal guidelines in a recent questionnaire. In response to a question from Pat Dooley, Winter said that the Policy can be reprinted, preferably with attribution. [The "Statement of the Committee on Collecting Policy" was published as a center insert in the No. 5 issue of the NEWS for 1982.]

Stan Nicolay, Chairman of this year's nominating committee (other members: Bob Pyle, David Ahrenholz, Gloria Harjes, Jack Clarke) read the list of nominees.

Donahue noted that additional nominations could be made.

Donahue announced that Everett ("Tim") Cashatt had been appointed by the Executive Council to fill the unexpired term of the late Robert Silberglied.

Ferris announced the formation of a Taxonomy Committee to facilitate the worldwide interchange of current literature affecting the nomenclature of butterflies, with possible later expansion to include moths.

Pyle said that the Northwest Caucus (Oregon and Washington) would like to see the Recent Literature series reinstated. Donahue noted that cost of publication in the Journal proved prohibitively expensive unless it was subsidized. The fact that Zoological Record is going "on-line" may help solve the problem.

Ron Hodges announced the current status of The Moths of America North of Mexico series: the Check List will be out in October, 1982 [subsequently delayed at least until June, 1983--ed.]; printing is now cheaper in the U.S.A., and future fascicles will be printed here; the next fascicle will probably be the green Geometridae (Geometrinae). Donahue confirmed that subscribers to the series will not automatically receive the Check List--it must be ordered separately.

Covell mentioned that Memoir #2 was on sale at the meeting; Metzler reminded members of the 1983 Annual Meeting in Columbus, Ohio.

Pyle noted that some members find the Season Summary hard to use in its present format. Winter said that he will solicit suggestions.

Jo Brewer announced the formation of Butterfly Garden sections of garden clubs in Florida. She solicited slide/tape sets on the subject. Pyle announced a new Xerces Society publication on the subject of butterfly gardening.

Cliff Ferris presented the Comstock Award to David Wagner of the University of California, Berkeley, for having presented the best paper by a student at the meeting.

The Resolutions Committee (Irving Finkelstein, Chairman, and Roy Kendall) presented our thanks to the organizations and institutions whose contributions made this meeting so successful, including (but not limited to): The University of Wyoming; Clifford D. Ferris (open house, planning coordinator); presiding officers; Karolis, Sylvia, and Pee Wee Bagdonas (program, local arrangements, cookout); the Flying Circus (local arrangements, transportation); Dave Winter (collecting guidelines); volunteers (unnamed, but so very important); Charlie Covell (door prizes); the donors of door prizes; projectionists; the Cowboy Bar; and, finally, the meeting participants themselves.

Covell read a resolution calling for the protection of overwintering sites of the Monarch Butterfly in California [appended separately to these minutes]. PASSED unanimously.

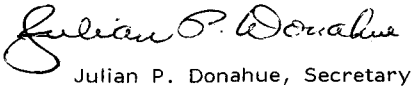
Since President Brower forgot to bring the official gavel of office to the meeting, he presented "antennae of office" instead to incoming President Charles V. Covell, Jr. With thanks again to Cliff Ferris for organizing such a successful meeting, Covell adjourned the meeting at 11:55 a.m.

* * *

Program activities continued with a meeting of the Pacific Slope Section [see appended minutes], followed by a picnic and field trip to the Snowy Range Mountains west of Laramie.

On the following day, Monday, 19 July, a group field trip explored the Sierra Madre Range about 140 miles west of Laramie, where a few die-hards camped under the cottonwoods to sample the moth fauna of the area.

Respectfully submitted,



Julian P. Donahue, Secretary

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RESOLUTION PASSED AT THE ANNUAL BUSINESS MEETING OF THE LEPIDOPTERISTS' SOCIETY, 18 JULY 1982

Be it known that The Lepidopterists' Society at its 33rd Annual Meeting, held at the University of Wyoming in July, 1982, resolved that:

1) We express our concern for the future well-being of the remaining Monarch Butterfly overwintering sites in Pacific Grove, California, and we urge the City of Pacific Grove to preserve and protect the remaining overwintering habitat (all roosting trees and adjacent forest) to insure the continued viability of this unique phenomenon for its scientific, aesthetic, and natural history values for the entire nation;

2) We urge the State of California and all its responsible agencies to give its highest priority to integrating into its management policies and future planning programs considerations to insure the protection, conservation, and management of Monarch Butterfly overwintering sites on any and all public lands in the State;

3) We further urge the State and its agencies to incorporate public awareness of and access to Monarch Butterfly overwintering sites into said policies and planning programs;

4) We urge the favorable consideration and facilitation of scientific studies of Monarch Butterflies;

5) We urge that the State of California, in the course of any management plans involving the control or removal of non-native vegetation, including eucalyptus trees, give high priority to the protection, maintenance, and conservation of Monarch Butterflies overwintering sites;

6) We therefore direct the Secretary of the Society to write the Director of the Resource Agency of

California, and the Director of the Planning Department, City of Pacific Grove, California, with copies to the Executive Director of the California State Coastal Commission, to convey copies of this resolution and to express the Society's concern for overwintering populations of the Monarch Butterfly in California.

* * *

MINUTES OF THE 29th ANNUAL MEETING
OF THE PACIFIC SLOPE SECTION

The meeting was called to order at 11:58 a.m. Sunday, 18 July 1982, on the campus of the University of Wyoming, Laramie, Ron Leuschner presiding. There were 25 members present.

Utah was unanimously selected as the 1983 meeting site; Ray Stanford will convey our official acceptance. [The Utah invitation was subsequently withdrawn; the meeting has now been rescheduled for Big Pine, California, 26-28 August 1983.]

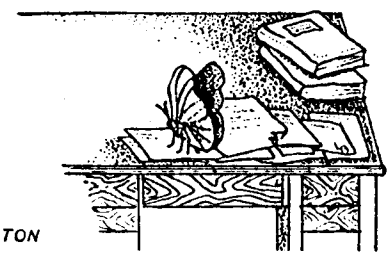
Charles Harbison was unanimously selected as the John Adams Comstock honoree for 1983; Jerry Powell will coordinate the preparation of the documentation and write-up.

Bob Pyle announced that the 1984 Xerces Society meeting will be held in the Puget Sound area of Washington--the date may be linked to that of the Alberta meeting of the Lep. Soc.

Respectfully Submitted,

Julian P. Donahue
Secretary Pro Tempore

From The Editor's Desk



JUNE PRESTON

The following letter is in answer to Dr. Miller's letter which begins on page 45 of NEWS #3, 1983. Dr. Miller does not care to answer it, although some others of you may wish to express your opinions on this matter also, and your letters are welcome.

Dear June:

I am grateful to Dr. Miller for his agreement that the Miller & Brown checklist is not official. This should go a long way towards correcting the implication of sanction that Society publication of the work seems to have conveyed to some of us. It should stand or fall on its own merits rather than on any mistaken thought that it is "official".

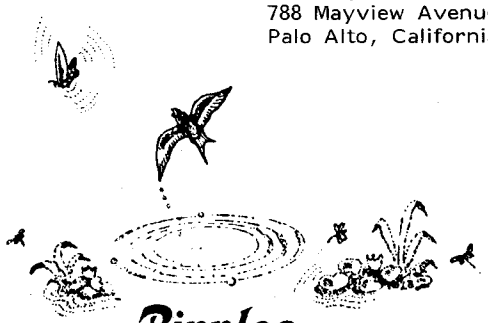
I grant Dr. Miller's point about my being parochial about increasing the number of monotypic genera in North America. I suggest that the approbrium normally connoted by the term might not be fully appropriate when we consider the large number of interested parties within North American and the small number transcending the area.

I fail to see how "taxa between tribal and generic level" that convey information about relatedness of other taxa could be "meaningless". It is peculiar that a taxonomist is so disdainful of the non-obligatory taxa (subspecies, subgenus, supergenus, tribe subfamily, superfamily) available to him. One could, by using primarily the non-obligatory levels, erect new schemata that could change with new data relating to phylogeny without changing the well-known obligatory (species, genus, family) taxa except rarely. The two nomenclatures that Dr. Miller speaks of could thus coexist.

A taxonomy is not necessarily wrong as a taxonomy if it is incorrect phylogenetically or morphologically. An unchanging taxonomy would not be able to reflect today's thoughts on phylogeny, but would be a very useful information retrieval tool.

Whether it is resented or not, it is my assertion that the Miller & Brown checklist was not critically refereed in the way that scientific papers usually are. Many taxonomic changes were made that were not subject to the quality of criticism that would have been applied to journal articles. No referee worth his carbon would let a name change go by without insisting on clear statements of reasons, and clear reasoning in the statements. By publishing in book form, Miller and Brown were not subject to this review.

Sincerely yours,
Dr. Raymond R. White
788 Mayview Avenue
Palo Alto, California 94303



Jo Brewer, Ed, 257 Common St, Dedham, MA 02026

Dear Madam,

Herewith are some comments on items that appeared in the Sept/Oct NEWS.

1) Collecting Guidelines:

I thoroughly approve of these, but suggest that they may be widened with advantage by alteration of the words "Lepidopterist" and "Lepidoptera" wherever they occur, to "Entomologist" and "Insects". Scientifically there is no difference between overcollecting the most beautiful butterfly and the most hideous Hemipteron,--only emotionally. Further, I might suggest that your column, "Buy, Sell, Exchange, might be drastically pruned to match the guidelines. Regrettably, it seems that members of your society are the worst offenders against these guidelines. I have never had inquiries for large quantities of Papilio antimachus and Papilio zalmoxis from anywhere but the U.S.A.

2) Lopsided Polyphemus Moth

I do not think that the reduced hindwing in the specimen figured is due to any "genetic quirk", but is the result of injury to the imaginal bud in either the final larval instar or in the pupal state.

I am, Dear Madam, Yours truly
D. G. Sevastopulo, F.R.E.S.
P.O. Box 95617, Mobasa, Nyali, KENYA

Editor's Note: About 2 years ago I reared a Caligo eurylochus. A few hours after it pupated I had to drive from mid-Maine to mid-Mass.--a distance of 250 miles. I stood the pupa on its stick in a box backed with cotton to avoid jostling, but when I arrived home I discovered that the right side, which had been leaning against the cotton, had become slightly indented. The dent did not disappear as the wing developed. When the butterfly emerged there was a hole about 2 mm. in diameter in the right forewing border, and the inner margin of the right hind wing was slightly crumpled. Otherwise the butterfly was perfect.

Dear Ripples,

While collecting in Pennsylvania last summer ('82) I met another collector who told me about a new form of Basilona imperialis which had been discovered in the New England states. According to the collector it was discovered about 3 years ago. He also said that it feeds only on pine, and is more lavender in color than the common B. imperialis.

If this is true, would you know where this form of B. imperialis might be found, and the name of the form?

Thanks,
Donald Hepperle
969 Pine Ave, Castle Shannon,
Pittsburg, PA 15234.

Dear Donald,

The Imperial moth (now known as Eacles imperialis) has a form known as E. imperialis pini which is smaller, more pinkish and more heavily spotted than E. imperialis. It is indeed a pine feeder, but it does not inhabit New England. So far, in the U.S., it is only found in northern Michigan. One individual is recorded from the Adirondacks. A complete description may be found in MOTHS OF NORTH AMERICA, Fascicle 20.2A, by Douglas Ferguson (p. 27). *Jo Brewer, Ripples ed.*

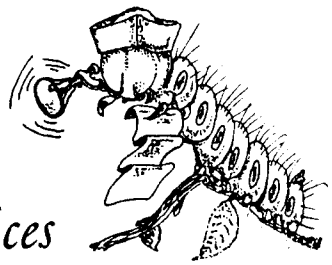
Dear Lepidopterists' Society

What was the largest recorded (in wing span) Basilona imperialis? My friend gave me one. Its wingspan is 6.9".

Your Member, Jeff Robinson
Decatur, Illinois

Dear Jeff,

I can't find anyone willing to claim he has the imperialis with the largest wing spread. We have a ♀ which measures 5". Forbes says the ♂♂ have a wingspread of about 3 5/16" while the ♀♀ measure nearly 6". It sounds as if you have a winner. Does anyone have a bigger one than Jeff's? If you do, write in! J.B.



Notices

CORRECTIONS FOR 1982 SEASON SUMMARY

Some typos that are obvious, which none the less still managed to slip by, I will not mention. However, some do need to be corrected, as follows:

Pg. 18, line 18; for 1949 (WLW) read 1947 (WLW)
Pg. 19, line 65; for A. thoosa read A. sara thoosa
Pg. 20, line 26; for Lucerne Valley read Lucerne Village
Pg. 21, line 7; for July '8s (SAJ) read July '82 (SAJ)
Pg. 21, line 11; for 23 July (GLB) read 23 July (GJB)

ICZN

The following Opinion has been published by the International Commission on Zoological Nomenclature in the Bulletin of Zoological Nomenclature, volume 40, part 1, on 29 March 1983: Reference number ITZN 59. The Commission regrets that it cannot supply separates of Opinions.

Opinion No

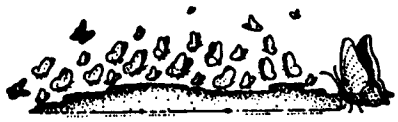
1240 (p. 27) HESPERIIDAE Latreille, 1809 (Insecta, Lepidoptera): added to Official List.

JOURNAL UPDATE

The latest issue of the Journal of the Lepidopterists' Society, Vol. 37, No. 1 should be mailed to members in late July, 1983.

RESEARCH REQUEST

● I may have to scrap my free Sesiidae pheromone program (see Jan/Feb 1981 NEWS, pg 8) for lack of forwarded specimens. If you caught anything interesting with the pheromone, PLEASE WRITE. Chances are I won't want much. Last year's output was nil and a lot of time, effort and money was spent. It is now up to those of you who were given the free pheromone to respond. You can phone me in the evenings at (312) 237-0543. Dr. John Holoyda, 2819 N. Marmona Ave, Chicago ILL 60634 USA.



Forthcoming Meetings

ANNUAL MEETING REMINDER

The Lep. Soc. Annual meeting will be held July 7-10 in Columbus, Ohio, followed by several field trips. Please notify Charlie Covell if you can furnish door prizes. Preregistration is very important (see NEWS #1, 1983, insert). The PROGRAM AND REGISTRATION FORM will be sent to all preregistrants.

1983 PACIFIC SLOPE MEETING REMINDER

Information and registration materials will be mailed to all members west of the Rockies. Other interested parties should contact Julian Donahue (see NEWS #1, 1983, pg. 6 or NEWS #2, 1983, pg. 38). The meeting is scheduled for Aug 26-28 at Camp Inyo, Big Pine, California.

II SYMPOSIUM ON NEOTROPICAL LEPIDOPTEROLOGY AND IX LATIN AMERICAN CONGRESS OF ZOOLOGY

A reminder that the Symposium and Congress will be held jointly in Arequipa, Peru from Oct. 9 to 15, and will be both preceded and followed by field trips for a limited number of participants. See NEWS #2, 1983, pg. 38 for further information.

XERCES SOCIETY

The 10th annual meeting of the Xerces Society will be held Aug. 5-7, 1983 at the University of Wyoming, Laramie and the University of the Wilderness in the Snowy Range. For further information contact Karolis Bagdonas, Rt. 2, Box 67, Highway 30, Laramie, Wyoming 82070, phone (307) 742-8434. Preregistration advised.

New Members

COLEMAN, RAYMOND: 803 Casgrain, Detroit, MI 48209.
COLON, RAYMOND: 1227 Curie St., Norfolk, VA 23513.
DELANCEY, CRAIG: 1307 L Ave. N.E., Cedar Rapids, IA 52402.
HESS, DAVID F.: Dept. of Geology, Western Illinois Univ., Macomb, IL 61455.

JACOBY, KENNETH N.: 481 Red Sail Way, Satellite Beach, FL 32937.
KOPPERSMITH, DANIEL L. (M.D.): P.O. Box 878, Marathon, FL 33050.
KRUER, MS. ELAINE S.: Rt. 3, Box 200F, Big Pine Key, FL 33043.
METZLER, DR. M. K.: 8040 Hi-View Dr., North Royalton, OH 44133.
MIRAMON, RICK: 520 Friscoville Ave., Arabi, LA 70032.
MILLER, WAYNE A.: 2209 Parkview, Kalamazoo, MI 49008.
PINEL, HAROLD W.: 1017 19 Ave N.W., Calgary, AB T2M 0Z8, CANADA.
RICHERSON, JACK D.: 1250 Chippewa Tr. B.H., Chesterton, IN 46304.
RIDDLEBARGER, JOE E.: 472 N. Spring St., Logan, OH 43138.
STRINGER, JOHN W.: 4706 Riverview Trail, Corpus Christi, TX 78410.

Address Changes

ALLEN, BOB L.: 27081 Segovia Circle, Mission Viejo, CA 92691.
BANCE, RICHARD G.: 1115 N. Flores St. #3, West Hollywood, CA 90069.
BESS, JAMES: 308 Chippendale Circle, Lexington, KY 40502.
GILBERT, JEFFREY C.: 149½ N. Hanover St., Carlisle, PA 17013.
HALBERT, RICHARD L.: 230 N. 1st St., Sierra Vista, AZ 85635.
HOLLISTER, ROBERT C.: 2347 S. Baird Dr., Highland, MI 48031.
LEVY, JACK N.: CHANGE ZIP CODE TO 85287.
MOODY, ERIC: Box G, Brown Univ., Providence, RI 02912.
LAMAS MULLER, DR. GERARDO: Mus. Hist. Nat. "Javier Prado", Univ. Nacional Mayor de San Marcos, Casilla 11434, Lima 14, PERU.
PAVULAAN, HARRY: 432 Washington St. #3, Coventry, RI 02816.
ROBACKER, DAVID C.: Rt. 2, Box 68E, Mercedes, TX 78570.
SHEPARD, JON H.: Sproule Creek Road, R.R. #2, Nelson, BC VIL 5P5, CANADA.
THRASHER, MR. WILLIAM: R.D. 1, Box 44, S.R. 305, 8473, Garrettsville, OH 44231.
YOUNG, ROBERT (D.D.S.): 3328 N. Midkiff, Midland, TX 79701.

Buy Sell Exchange

Items submitted for inclusion in this section are dealt with in the manner set forth on page 10 of the Jan/Feb 1983 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. Items will be accepted from members only and will be printed only once unless entry in two (maximum) successive issues is requested. 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.

WANTED: How to Know the Butterflies by John Henry Comstock and Anna Botsford Comstock, 1904 and Butterflies of California by John Adams Comstock, 1927. State Condition and Price. David C. Iftner, 2161 Heatherfield Avenue, Worthington, Ohio 43085.

EXCHANGE: A young Czech friend of A. Williams would like contacts in South America. He is also interested in Parnassius, N. vau-album, Neptis, Catocala, Sphingidae, and other genera from all over the world. Write: Otto Drabek, Zliczka 1134, 2800 Kolin V, CZECHOSLOVAKIA.

WANTED: Diana fritillary, one pair in good condition. Also Silk Moths of the U.S. by Collins and Weast. Send offering price to: James Burris, 4030 Calvert St., N.W., Washington D.C. 20007.

FOR SALE: Student economy series wood spreading boards, non-adjustable with various center slot sizes. All boards in good condition. Also six new Riker mounts (five 8"x12" and one 12"x16"). Prices reasonable, postage not included. SASE for prices and further information. James C. Romer, 7991 E. Hampden Circle, Denver, Colorado 80237.

WANTED: C. regalis ova for the 1983 rearing season. James C. Romer, address above.

FOR SALE: Canadian and Canadian Arctic butterflies, including Oeneis excubitor (new species), Erebia (new species), P. kahli, P. dodi, B. distincta, and many other of the choicest Erebia, Colias, Boloria, Oeneis, etc. All specimens guaranteed in A-1 condition. Jim Troubridge, RR3, Caledonia, Ontario NOA 1A0, CANADA for list.

WANTED: Two pair of Papilio pilumnus. Contact Doss R. Heath, 911 Timmons Dr, Tuscola, ILL 61953.

FOR SALE: Bait traps in two styles. COLLAPSIBLE: 15" diameter by 36" high with 4"X15" inverted cone. Plastic coated fiberglass screen with light canvas top and tethers. 22" plastic zipper for easy access and cleaning. 17" square base suspended by "S: hooks and eye screws. Steel rings for frame. TOTALLY COLLAPSIBLE: same as above except steel rings replaced with removable spring steel hoops. Entire trap can be packed in a suitcase. Idea for travel to South America. Allow 2 to 4 weeks for delivery. For prices and further information contact Leroy C. Koehn, 12862 Clifton Blvd, Apt. 7, Lakewood, Ohio 44107, Phone (216) 521-9571.

FOR SALE OR EXCHANGE: Indonesian Papilionidae and other genera. Butterflies from the island of Bali. Send SASE for list to Joel Miller, 57 Lynwood Lane, Worchester, MASS 01602.

MEMBERS' COMMERCIAL NOTICES....

MICHAEL K. P. YEH, P.O. Box 32, Ipoh Garden P.O., Ipoh, MALAYSIA. Selling butterflies, beetles, insects & moths of Malaysia. Indonesian and Thai species also available. Cocoons of Saturnid moths, Ova of Phasmida. Write for 83 catalogue, $1.00 cash. Reply to dealers only. Ova & cocoons offer to hobbyists.

IT'S NATURE-ALL, Suite #217, NyPenn Trade Center, 435 Main St., Johnson City, NY 13790, USA. Butterflies and Moths from Alaska to Argentina, Africa to Lapland, India to Siberia, Thailand to Timor. Also small series of other insects. Entomological equipment for the backyard student and breeder or international collector. Books on Lepidoptera. Economy international tours for the more independent lepidopterists--specializing in North, Central, South America and the Caribbean. For current listings send SASE (54¢) or send $3.75 for full list and subscription to 11 more issues of list as published (nearly monthly).

TRANSWORLD BUTTERFLY COMPANY (LS), Apartado 6951, San Jose, Costa Rica, C. America. Own British Delivery office, own Butterfly breeding projects, and extensive collectors network. Over 250 European species, over 45 Morpho species, plus much more! If you collect butterflies write us! Mastercard welcome. Catalog $1 or $6 for Year's monthly mailings, discount offers.

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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 15th of January.

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INFORMATION ABOUT THE SOCIETY.....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER the full dues for the current year ($18.00 US), together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) $12; sustaining membership $25. 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 list will comprise the last issue of the NEWS in even-numbered years.

Information on membership must be obtained from the TREASURER, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, USA. Changes of address must be sent to the TREASURER, and only when the changes are permanent or long-term.

Other information about the Society may be obtained from the SECRETARY, Julian P. Donahue, Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, CA 90007, USA. Please notify him of any additions or changes in areas of interest for publication in the membership list.

Manuscripts submitted for publication in the JOURNAL are to be sent to the JOURNAL EDITOR, Dr. Thomas D. Eichlin, JOURNAL of the Lepidopterists' Society, Insect Taxonomy Laboratory, 1220 N. Street, Sacramento, CA 95814, USA. See the inside back cover of a recent issue of the JOURNAL for editorial policies.

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AVAILABLE PUBLICATIONS OF THE SOCIETY.....

CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO (Memoir No. 2), Lee D. Miller & F. Martin Brown: includes references to original descriptions and location of type specimens. Members and subscribers, $10 cloth, $5 paper; non-members, $17 cloth, $8.50 paper, postpaid. Order from Ron Leuschner, Treasurer, 1900 John Street, Manhattan Beach, CA 90266, USA.

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

BACK ISSUES of the JOURNAL and of the NEWS of the Lepidopterists' Society: order from Ron Leuschner, Treasurer, address above. A list of the available issues and their cost, postpaid, is in the NEWS for Jan/Feb 1983, page 6.