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VARIATION IN SPEYERIA MORMONIA, OR, DO SUBSPECIES EXIST?

The taxon *mormonia* (Bdv.) dates back to 1869. The lectotype (by dos Passos & Grey; in U. S. N. M.) is of an aspect found commonly in the Great Basin, being silvered, with pale brownish disk LHW—in general very like the well-known Cordilleran "*eurynome*", only somewhat paler. The specimen, derived from Boisduval, ex Oberthur Coll., bears a tag reading "Lac Sal". This was a puzzler inasmuch as Boisduval's western material was derived from Lorquin, who was based in California. Fixation of type locality as the "Salt Lake" of Utah was a mistake. It seemed a reasonable choice at the time since variation of this sort was unknown from California and is common in Utah, from whence Lorquin might have procured material taken by some emigrant friend?

Two bits of data now fit together to provide a more reasonable hypothesis: It has been ascertained that the distinctive California Sierran "arge" is replaced on the eastern slopes by Basin forms similar to the mormonia lectotype. Furthermore, the pamphlet put out in 1938 by the Lorquin Society, detailing Lorquin's travels, clearly indicates that Lorquin got across into those areas. Hence, the "Lac Sal" may be accepted as a genuine California reference, perhaps to Mono Lake or nearby? At any event, no present concepts are disturbed; mormonia is used loosely for the brownish-disk silvered Basin populations, much as "eurynome" has come to embrace many diverse Cordilleran series.

Two novelties in mormonia deserve mention, viz:

(1) The "artonis" divergency is known mainly from two areas, namely, the Ruby-East Humboldt region (Elko Co., Nevada) and the Steen Mtns. (in Harney Co., Oregon). Representatives also occur in the North Humboldt Mtns. and the population near Jarbidge, both in the valley at Pine Creek and up on Bear Creek Pass, seems to be a hitherto undescribed pallid extreme. This might not be noticeable in individuals but is quite apparent in series. Silvered forms (in both sexes) crop up rarely in all of these "pure artonis" colonies including the Jarbidge set, but in a facies somewhat different from the silvered individuals which may be found in Cordilleran series wherein the unsilvered "clio" happens to predominate.

(2) The Trout Creek Range, in extreme southeastern Oregon (Harney Co.), has been eyed for some time as an area which might yield subspecific introgressions. E. J. Newcomer collected there and his material (in the National Museum) proved to be not too exciting aside from the mormonia. They are of the "artonis" persuasion, but exhibit intermediates ranging into a "eurynome" of sorts. We tend to think of "artonis" as comprising a fairly well separated gene pool, a "good subspecies", but in the Trout Creek series I think we may suspect a "recent contact of isolates" introgression, something different from the "unsilvered/silvered" populations (e. g., as in Wyoming, Montana and Idaho) involving "eurynome" and "clio". These latter colonies most likely are essentially of one stock, with the morphs in some kind of dynamic selective balance.

Among the older names, "opis" is the one most in need of study. Now that Martin Brown's notes *re* Edwards's "Bald Mt." type locality indicate promise of accessibility (near Keathley Creek, northwest of Williams Lake, B. C.) we should be getting series to allow a fresh look and reevaluation of its status. It is annoying that so many names like this, based on a few faded antiques, are still fogging the air. Conventionally, the name has been applied to smallish, unsilvered, yellowish blurry-patterned individuals from places as far apart as southern B. C. and central Alaska.

Incidentally, expanded Alaskan coverage being assembled by Kenelm Philip and others indicates variation greater than hitherto known of *mormonia*, including some colonies which might be termed "undescribed subspecies". Our needs at present are mainly to learn more about geographical distribution, variation, biology, behavior and genetics; whoever would supply more "nomenclature" might well think first of the uncertainties which continue to hinder useful application of taxa already available. If "new" varients are to be publicized, a good one to start with would be "opis"!

Another case in point is "bischoffii". There has been considerable published and unpublished wrangling regarding where the moot "Kodiak" Edwards (C. M.) specimens were taken. I remain personally unconvinced that series from suggested type localities (e. g., Skagway; Sitka) provide a reasonable match with the Edwards relics. But I am impressed by a sample Don Eff obtained from Anchorage, courtesy of the Whitmore family, who discovered a colony in the "Arctic Ski Bowl" in back of the town. Historians of this snarl should give thought that: (1) Anchorage might have been a logical landfall for a sailing vessel in the latitude of Kodiak Island, (2) it has yielded melanic mormonia plausibly similar to "true bischoffii".

During the many years I have participated in efforts to deduce relationships among the argynnid butterflies, I have come to realize more and more that nomenclature, our indispensable tool, has some exasperating shortcomings. I am skeptical of the objective existence of "subspecies". And indeed, *Speyeria* appears to furnish living proofs that even "species" are merely the inventions which we tailor to fit whatever lines of discontinuity we can find reason to believe are the "best" which Nature offers.

The mormonia series is not quite so "wild" as some of the others in this genus, but it displays most of the problems of categorization. At the outset, all known N. A. argynnid data have to be reckoned with: i. e., we know mormonia as much by what it "is not" as by what it "is". Totality of evidence from all sympatries indicates mormonia comprises a separate phyletic group, hence the species category is justifiable for this complex. But then one may ask if the "luski" isolate in Arizona is "really conspecific" with the Alaskan "bischoffii"? With "luski", certainly, we have a sharp discontinuity which can be put without apology in a subspecies pigeonhole. But then, as convention dictates, if we go on to use the same category for populations in the Pacific Northwest (where variations seem endless, partially isolated and partially blending) where does consistency go but out the window?

Incongruities far more atrocious than these have to be glossed over, somehow, by nomenclature, in some of the other speyerian species, but *mormonia* furnishes its share. A concluding example may indicate how often a taxon, instead of of reflecting some profound verity, is something to be interpreted in various ways. To the beginner, any "named subspecies" is taken to be a major component, whereas to a specialist, once all the *mormonia* (for example) are in one bin and sorted geographically, little else matters. Consider,

THE NEED FOR A DUES INCREASE

During the August meeting of the Society Executive Council in Los Angeles, a dues increase was voted unanimously. The increased cost of printing both our NEWS and JOURNAL added to the increased postal costs made such a decision mandatory; our only alternative was a decrease in quality. Your Council felt this latter course of action would be unacceptable. then, a name proposed in 1940 by McDunnough, the "Argynnis bischoffii opis Edw. form jesmondensis":

The type locality, Jesmond, B. C., is accessible via a branching, torturous dirt road which extends all the way from the Cache Creek-Lillooet road (Hy. 12) up to Williams Lake in the Cariboo District. It remains unillustrated and few students ever have seen it. I took a large series on Aug. 5-6, 1973 (which was a week or more late for peak), about 20 miles south of Jesmond on Pavilion Mountain. These are nearly topotypical and they match McDunnough's material.

I can report that the trend here is mainly toward "erinna": i. e., somewhat melanic above and silvered with brown disk below, like Cascade populations. But the disk also varies toward greenish and to paler browns, and occasional individuals are unsilvered. Which all adds up that we have here one of the many, many variable local strains of mormonia.

I am in no position to throw rocks at Dr. McDunnough's "jesmondensis". I have participated myself in equally dubious naming. Fortunately for all of us, and for the needs of descriptive classification, Speyeria students have become remarkably adept at stretching the truth-holotypes and legal sources are made into conceptual fictions whereby major trends in subspeciations can be integrated fairly well. So it seems likely that, in time, "jesmondensis" will atrophy and "erinna" probably will be the taxon of choice for Northwestern colonies running mainly brown-disk. The name "washingtonia" is available for the greenish trends and perhaps "eurynome" can be stretched to cover the nondescript tans. If all else fails, those who feel uncomfortable with two or three "subspecies" in one colony are at library to invoke mormonia. This is a respectable category designed to overcome all such imaginary problems.

Indeed, a certain amount of de-emphasis of "subspecies" might be desirable, leading to a better apprehension of the species in genera like *Speyeria*. Beginning students in particular (and even some of the old-timers who ought to know better) seem prone to "taxidolatry", making much of check lists, as though living organisms could be classified like postage stamps. Lower-than-species names are too helpful to dismiss entirely; they restrict geographical variation to smaller radii and furnish descriptive tags for some of the outstanding variations. My own gesture toward a compromise has been to put all subspecific names in quotation marks, indicating non-categorical use. It can be seen that species like *mormonia* come in too many "issues" to admit of the precise subdivisions implied by a latinized filing system.

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Your elected officers put in many long hours without payment of any kind to produce your NEWS and JOURNAL. But, only with your help and support will we be able to continue publishing a first quality NEWS and JOURNAL. Pay your dues promptly upon receipt of your statement; and, should you decide to discontinue your membership, please let the treasurer know in order that a realistic print order may be made. Help us to help you!

THE EFFECT OF PLASTIC SHIELDING ON BLACKLIGHTS

Portable black lights, often conveniently operated from the cigarette lighter of a car, have become increasingly popular within the last few years. Many of the lights in use, however, have originally been designed for quite different purposes and carry plastic front-shields or are encapsulated in plastic tubes. While these protecting devices have almost no effect on the intensity of the light emitted in the visible range, there was a suspicion that some of the uv (ultra-violet) light was being absorbed. If the absorption occurred in the near uv, that is, in the area just below 400 nm it would be quite detrimental, because this is exactly the region in which the eyes of most light-attracted insects show the highest sensitivity. After all, the reason for employing a black light is to make use of this region.

In order to investigate the situation, the plastic of a McLean (California) 15-watt light was employed. No fault, of course, is in any way put to the manufacturer because the light is constructed and principally marketed for water-proof operation in camps or skin diving and thus the plastic encapsulation is a basic feature. The figure shows in curve A the emission of the lamp alone, that is, with the plastic tube removed. No scale applies to this curve because the sensitivity of the Bausch and Lomb Spectronic 505 employed for the measurement was cut heavily in order to bring the spikes of the mercury lines completely on the recording paper. With the plastic tube on, the emission spectrum is shown in curve B. Again no scale applies but, of course, the sensitivity setting was the same to allow comparison. The small horizontal bars at the two right-hand spikes indicate the height of the lines for curve B.

The dotted curve C is the transmission curve for the plastic tube (one layer) and the scale on the left-hand side of the diagram applies. As can be seen almost all the light (90%) is passed in the visible region (400 nm and up). But in the near uv a drastic decrease in transmittance can be noticed and from about 350 nm down the cut-off is complete. The measurements substantiate the expectations and are in complete agreement with the field observation that for attracting moths (and other insects) a light without the plastic tube is noticeably superior over one with the tube. Similar results are to be expected with the plastic sheets on other types of lamps.

The remedy is simple. Where a shield is encountered, its removal is usually quite simple and commonly provided for to enable changing of the fluorescent tube. With the encapsulating tube, the situation is more complicated because the tube is not only a protector against weather or physical impact but also is the support for the fluorescent tube. However, the problem is solved by cutting parts of the tube away so that only two small strips (about 1 cm) are left. These strips are opposite to each other and bridge from the lamp handle to the upper, rubber-cup-covered portion of the tube. The cutting is best done with a table saw by gently pushing the tube along

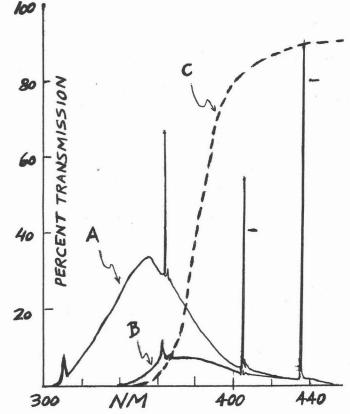


Figure 1: (A) Emission curve of black light alone, (B) with plastic shield added, and (C) (Dotted) Transmission curve of the plastic shield.

the side guide. The cutting rate should be low in order to avoid heating to the extent where the plastic becomes pliable. Care should also be exercised not to cut the thin wire leading into the upper contacts. Added rigidity is obtained afterwards by wrapping a few lengths of thin cord or plastic tape around the middle of the assembly so that the two strips are pressed to the fluorescent tube and held there to avoid sidewards slippage. It is also wise, at this step, to fix the thin wire behind one of the strips so that it will not be in danger of getting entangled in twigs.

The modified assembly has been used in the field and was exposed several times to severe showers. As was expected, no short circuiting occurred because the rain water is almost completely devoid of ionic solutes and thus the conductivity is insufficient to pose any problems.

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MINUTES OF THE 25th ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY

The 25th Annual Meeting of the Lepidopterists' Society was held at the Natural History Museum of Los Angeles County between 22-25 August 1974.

Registration began on Thursday afternoon, 22 August, from 1:00 to 5:00 P.M. in the Museum Lounge. During this same time period the Entomology Section of the Museum was open to Society members.

The combined meeting of the Executive Council and the Publications Board convened at 2:20 P.M. in the Museum Lounge to discuss Society business. The meeting adjourned at 5:25 P.M.

Members in attendance at the meetings were entertained at a cocktail party and poolside picnic at the home of Mr. and Mrs. Julian P. Donahue on Thursday evening.

Late registration was held from 8:30 to 10:00 A.M. on Friday morning, 23 August accompanied by coffee and doughnuts. The morning session with Mr. Julian P. Donahue began at 10:00 A.M. with a welcoming message by Dr. Giles W. Mead, Director of the Natural History Museum of Los Angeles County. It was also at this time that the retiring Society President, Dr. J. F. Gates Clarke turned over the gavel to the new Society President, Mr. Harry K. Clench. The Society gavel is a present to the Lepidopterists' Society from Dr. Clarke. The following papers were delivered as part of this session:

"Butterfly Collecting in Some Little-known Areas of the California Desert." John F. Emmel, Santa Monica, California, and Bruce Griffin, Tucson, Arizona.

"Life Histories of Two Central California Rhopalocera." Bruce Walsh, Carmel Valley, California.

"Malaise Trap Collections of Butterflies in Kentucky." Charles V. Covell, Jr., University of Louisville, Louisville, Kentucky.

"Zoogeography of Australian and New Zealand Clearwing Moths (Lepidoptera:Sesiidae)." W. Donald Duckworth, National Museum of Natural History, Smithsonian Institution, Washington, D.C.

"Inter- and Intraspecific Relationships in the *leonardus* Group of *Hesperia*. 1. *Hesperia leonardus* and *Hesperia pawnee* (Hesperiidae)." Ray E. Stanford, University of Colorado Medical Center, Denver, Colorado, and James A. Scott, University of California, Davis, California.

The Friday afternoon session featured a symposium on "The Lepidoptera of Baja California, Mexico." with Charles L. Hogue presiding. The following papers were delivered as part of this symposium:

"Introductory Remarks and a Review of Biogeographic Elements in Baja California." Jerry A. Powell, University of California, Berkeley, California.

"The Distribution of Butterflies in Baja California." Herman Real, University of California, Berkeley, California.

"A Preliminary Survey of the Arctiidae and Ctenuchidae of Baja California." Julian P. Donahue, Natural History Museum of Los Angeles County, Los Angeles, California. "A Brief Review of the Ennominae (Geometridae) of Baja California, with Emphasis on the Glaucinini." Frederick H. Rindge, American Museum of Natural History, New York, New York.

"A Look at Guadalupe Island with Reference to the Lepidoptera Fauna of Baja California." Charles L. Remington, Yale University, New Haven, Connecticut.

"Human Impact on the Baja California Lepidoptera Fauna and on Future Problems in Collecting and Study." Richard Holland, Albuquerque, New Mexico.

The symposium was summarized by Jerry Powell.

On Friday evening an informal session was held with Bill Cory of the Automobile Club (AAA) of Southern California showing a film "Ribbon Through the Wilderness: Baja and its Trans-Peninsular Highway." A slide fest followed.

On Saturday morning, 24 August, the program consisted of submitted papers with Charles V. Covell, Jr. presiding:

"The Ecology of *Paragyractis confusalis*, an Aquatic Pyralid." Paul M. Tuskes, University of California, Davis, California.

"Pieris napi — venosa & castoria. Separate Species?" Robert L. Langston, Kensington, California.

"Preliminary Observations on the Nature of Papilio nitra." Michael S. Fisher, Denver, Colorado, and Ray E. Stanford, University of Colorado Medical Center, Denver, Colorado.

"Habits of a Few Lycaenids in the Larval Stage." Jo Brewer, Xerces Society, Auburndale, Massachusetts.

"The Alaska Lepidoptera Survey — a Progress Report." Kenelm W. Philip, Institute of Arctic Biology, University of Alaska, Fairbanks, Alaska.

"Butterfly Fauna Unique to the Beartooth Plateau (Wyoming-Montana)." Clifford D. Ferris, University of Wyoming, Laramie, Wyoming.

On Saturday afternoon a symposium on "Arctic Lepidoptera" was held with Ron Leuschner presiding. The following papers were given:

"Adaptation to the Arctic: the Problems, a Few Solutions, and More Problems." Kenelm W. Philip, Institute of Arctic Biology, University of Alaska, Fairbanks, Alaska.

"The Grand Banks Refugium." Douglas C. Ferguson, U.S. Department of Agriculture, Washington, D.C.

"Some Microlepidoptera of Schrader Lake, Alaska." J. F. Gates Clarke, National Museum of Natural History, Smithsonian Institution, Washington, D.C.

"Biennialism with Special Reference to Arctic Butterflies." John Masters, South Gate, California.

"Polymorphism in Arctic Butterflies." Clifford D. Ferris, University of Wyoming, Laramie, Wyoming.

"The Distribution of *Oeneis jutta* in Northwestern North America." Cyril F. dos Passos, Menham, New Jersey. (read)

Saturday evening, the Annual Banquet was held in the Hall of African Mammals at the Natural History Museum. After dinner, award of the second Karl Jordan Medal to Frederick W. Stehr in recognition of his work on *Malacosoma*. The award was presented to Dr. Stehr by Mr. A. C. Allyn who established the award two years ago for the Society. The Presidential Address entitled "Names" given by Harry K. Clench, Carnegie Museum, Pittsburgh, Pa. followed. Later more than 28 door prizes were awarded to members.

The Sunday session with Robert L. Langston, presiding, began with:

Karl Jordan Lecture: "Malacosoma — Something for Everyone." Frederick W. Stehr, Michigan State University, East Lansing, Michigan.

"Some Notes on the Genus *Agapema* in Arizona (Saturniidae). Michael D. Van Buskirk, Tucson, Arizona.

"No Deposit, No Return: Insect Conservation in the Throwaway Age." Robert M. Pyle, The Xerces Society, Rocky Mountain Biological Laboratory, Crested Butte, Colorado.

"The Origins of British Columbia's Post-Glacial Butterfly Fauna." Jon H. Shepard, Nelson, British Columbia.

"Ultraviolet Reflectance Patterns in Mimicry Complexes." Charles L. Remington, Yale University, New Haven, Connecticut.

RESOLUTIONS

The Lepidopterists' Society, on the occasion of its 25th Annual Meeting, resolve the following:

- To thank the authorities of the Los Angeles County Museum for use of its facilities and extending their hospitality for our meeting;
- 2. To thank Julian Donahue, Kenelm Philip and Jerry A. Powell for conceiving and arranging the program;
- To thank Julian Donahue, Charles Hogue and John Lane for making arrangements for housing, transportation and responding to innumerable individual requests;
- To thank Butch Ellis for handling the audio-visual equipment for our formal meetings;
- To thank Katherine Donahue for making the banquet arrangements;
- To thank John Lane, John F. Emmel and Ronald Leuschner for arranging the field trips;
- To thank Betty Birdsell, Judy Estoni, Charlotte Low and R. Clark McPherson for handling registration;

The Annual Business Meeting was held shortly before 2:00 P.M. President Clench announced that Hans Epstein had sent a detailed proposal to the Society which includued the publication of Palearctic issues of the News and Journal supplementary to the Society's publications at present, which would be completely financed and edited by Europeans. The details will be presented to the membership in a forthcoming issue of the News. Resolutions were presented and unanimously passed. A brief Treasurer's report was given by President Clench. He announced that due to the expected increase in publication costs next year, the annual dues would be raised to \$10.00 for student dues, \$13.00 for regular membership dues, and \$18.00 for institutional dues. The site of the Annual Meeting for 1975 will be the University of Massachusetts, Amherst, Mass. Dr. Theodore D. Sargent will host the meetings. The Pacific-Slope Section will meet in Corvallis, Oregon. President Clench appointed Julian P. Donahue to head a committee to find alternate ways of producing the Lepidopterists' Society publications to decrease costs. The meeting was adjourned at 2:45 P.M.

> Jacqueline Miller, Secretary Allyn Museum of Entomology 3701 Bay Shore Road Sarasota, Florida

- To thank Charles V. Covell, Jr. for obtaining and distributing the door prizes, and of course all of those who contributed the prizes;
- To thank our generous hosts, Julian and Katherine Donahue for the great party at their home on Thursday evening;
- 10. To thank Richard and Louise Fall for hosting the social hour at the Vagabond Motel on Friday evening;
- 11. To thank Dr. Theodore D. Sargent, the retiring editor of the Journal of the Lepidopterists' Society, for his devotion to and his successful execution of this most necessary, time-consuming and exacting task, thus maintaining the high standards for which our publication is now widely recognized. We wish him well in all of his future pursuits;
- 12. To thank Col. Stanley S. Nicolay, the retiring treasurer, for an outstanding job he has done over the last six years in this, the most onerous and time-consuming task of the Society, the maintenance of the Society's records and overseeing its finances. We wish him the best in his future endeavors.

MINUTES OF THE COMBINED MEETING OF THE EXECUTIVE COUNCIL AND PUBLICATION BOARD OF THE LEPIDOPTERISTS' SOCIETY

Los Angeles, California; August 22, 1974

Members of combined boards in attendance: Clench, Blanchard, Hodges, Nicolay, Miller, Clarke, Ferguson, Kendall, Powell, Brewer, Philip, Leuschner. Other members present: C. V. Covell, L. M. Martin, J. Y. Miller.

The meeting was called to order by President Clench at 2:20 P.M., August 22. After a few introductory remarks, he proceeded to the agenda.

The first order of business was a proposal by Hans Epstein, an American living in Switzerland, for the establishment under Society auspices of a Holarctic (basically Palearctic) section of the Society, but run separately from it. A long discussion of this proposal followed with many items for and against the Society's participation in the scheme mentioned. Nicolay stated that the Society was being asked to simply approve or disapprove the concept. The general sense of the discussion hinged around a few points:

1. Would the Society be asked to contribute financially to the venture? All members agreed that the Society could not and should not divert finances to it.

2. Would the proposed group drain away members in the

Palearctic from the Society, and was this a divisive proposal for the Society? The general, but not unanimous, thought was that the Society might lose a few members initially, but later the effect might be to increase Society membership from this area.

3. Had the Palearctic members really given the *Journal* a chance as a vehicle of publication? The consensus was that they had not, but were not likely to, either.

4. Would the Society, if it granted its name for the project, have any say in the establishment of a quality publication? The final consensus was that the Society had no real power in this matter, but that it should leave the quality control in Epstein's hands. Society sponsorship could be withdrawn later, but this would probably have no real effect.

5. If approved, what about advertisement? The general opinion was that approval should be given to the project only if advertisements were placed in the equivalent of the *News*, NOT in the *Journal* equivalent.

6. Is an increase in parochialism counter to the avowed aims of the Society? In general members felt that perhaps it might be, but that the Society should give it a try. This was by no means unanimous.

7. What would be the Constitutional implications of such a proposal? Formal establishment of the publications would require a constitutional amendment to the relevant portion on publications. This could not go before the membership before 1975, since the Constitution requires publication of proposed amendments at least three months before the ballot comes out in one of the Society's publications.

Resolved: The Executive Council agrees that the idea of Palearctic publications of the Lepidopterists' Society, with a local newsletter and a supplemental *Journal of the Lepidopterists' Society* has merit. The publications would be produced and financed entirely in Europe without additional cost to the Lepidopterists' Society. The Council will take further steps toward its implementation immediately. Nicolay moved (Brewer second), passed 9-3.

Nicolay, Philip and Miller appointed to recommend changes in Constitution.

Nicolay gave Treasurer's report showing a balance of over \$1700 for 1974, but he also cautioned that costs for printing will rise dramatically next year and in succeeding years. Three-year contracts for printing the *Journal* may no longer be feasible because of the uncertain financial conditions.

The necessity for appointing a new Assistant Treasurer and *Memoirs* manager was discussed. C. V. Covell, Jr. volunteered to undertake the job and Miller moved (Clarke second) that he be appointed (unanimous approval).

The fact that publication costs were going to rise brought up the subject of possible dues increases. The possibility of allowing quicker publication for papers that were paid for by page charges was discussed and agreed upon in principle. Clarke moved (Leuschner second) that an across-the-board \$5 increase be placed on dues. Discussion ensued and when question was called the \$5 increase was tabled 7-5. Leuschner then moved (Powell second) that the dues be increased \$3 in all categories (passed 9-3).

Possible compensation for the Editors of the *Journal* and *News* was discussed. This idea was tabled for the future after some discussion of the inability to get organizations to provide secretarial help as they did in the past for free and the fact that the Editors (indeed all officers) of the organization served voluntarily.

A brief discussion followed on the progress of the Commemorative issue and action was urged since many contributors might begin asking for refunds soon.

The question about a new Editor for the *Journal* was discussed and Powell was placed in charge of a search committee to look for a replacement as soon as possible. Several names of possible people were suggested.

Hodgs and Ferguson were appointed to the Resolutions Committee.

Clarke, Nicolay and Philip were appointed to the Nominating Committee.

The meeting was adjourned at 5:25.

NOTICE: There are a few free copies of Pellet 2 of FRASS (an occasional journal of paralepidopterology) left over from the Los Angeles Annual Meeting. If you want one, send a self-addressed, stamped (10_{c} in U.S., Canada, and Mexico), #10 (long) envelope to Julian P. Donahue, Natural History Museum, 900 Exposition Boulevard, Los Angeles, California 90007, U.S.A. (If you don't want your copy folded, send a 9 x 12" manila envelope, stamped & addressed.)

GROUP PHOTOGRAPHS of the Los Angeles meeting are still available at \$2.00 each, postpaid. Send check or money order payable to Julian P. Donahue, Natural History Museum, 900 Exposition Boulevard, Los Angeles, California 90007, U.S.A.

THE LEPIDOPTERISTS' SOCIETY 25TH ANNUAL MEETING

Natural History Museum

Los Angeles, California

August 22-25, 1974

REGISTERED AND/OR PRESENT BUT NOT IN GROUP PHOTO (includes names of the seven unidentified persons in photo)

97. 98.	A. C. Allyn, Jr. Mrs. Nelson W. Baker
99.	Bruce Bayer
100.	Donald E. Bowman
101.	Charles A. Bridges
102.	Jim P. Brock
	Thomas E. Bullwinkle
104.	
	Thelma M. Clarke
106.	John T. Cooper
107.	John De Benedictis
108.	J. Dellahuey (sp.?)
109.	Robert A. Dewitt
110.	Katharine E. Donahue
111.	Jerome Eisenberg
112.	Richard Fall (exhibitor)

113. Mary Jane Ferris 114. Loree Ford Timothy P. Friedlander 115. John S. Garth Ronald Highton 116. 117. Ronald W. Hodges 118. 119. Barbara Hogue Erika Hopkins Julie C. Hopkins Wendell Knoshaug Steven R. Kutcher Benjamin Landing 120. 121. 122. 123. 124. 125. Mary Lombardi Steven McElfresh 126. Jacqueline Y. Miller Lee D. Miller 128.

129. Scott Miller 130. Jim Mori Stanley S. Nicolay 131. Arlin L. Penner Edwin M. Perkins, Jr. 132. 133. 134. Bob Scharf 135. George Soule Jane Soule Judie Sullivan (exhibitor) 136. 137. Pat Sullivan (exhibitor) Terry W. Taylor (exhibitor) April Walsh 138. 139. 140. 141. Bernie Weber William L. Wheaton Carol E. Wheaton 142. 143. Jim Wiseman 144.



- Frederick H. Rindge 1.
- Thomas D. Eichlin 2.
- Art Strong 3.
- Bruce Griffin 4. John Masters
- 5. Jeff Roth
- 6. 7.
- John McBurney Peter Herlan 8.
- Kenelm W. Philip 10.
- 11. Charles Sekerman
- Sterling O. Mattoon 12.
- Mike Van Buskirk 13.
- Robert J. Ford 14.
- 15. Andre Blanchard
- Ron Leuschner 16.
- 17. Paul Tuskes
- 18. May Elise Blanchard
- C. Don MacNeill 19.
- 20. William D. Field
- 21. Clyde F. Gillette
- 22. John H. Shepard
- 23. Thomas E. Dimock Michael D. McAdams 24.
- Donald C. Frack 25.
- 27. Herman Real
- 28. Jerry A. Powell
- 29. John Sorensen
- 30. Fred Ryser



43.

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54.

32. Frederick W. Stehr 33. J. F. Gates Clarke 34. Christopher Henne 35. Joe Roberds 36. William L. Klein 37. Dorothy Henne 38. Norman Nakanishi 39. Charles L. Remington 51. 52. 40. Richard Holland 41. John F. Emmel 42. Erich Walter

Julian P. Donahue	55.
Velda Walter	56.
W. Donald Duckworth	57.
William A. Harding	58.
William L. Swisher	60.
Kilian Roever	61.
Ray E. Stanford	62.
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Change:	BRANDT, John H.	N. Mex.	
Delete:	Bogimport (Business, not an individual)		
Add:	FLOYD, Joseph C.	Texas	
Add:	HINCHCLIFF, John	Oregon	
Delete:	KURCZEK (Dupl. entry, erroneous spelling)		
Add:	MOULDS, Maxwell S.	Australia	
Add:	STEPHENS, Cristopher A.	New York	
Delete:	"Australia" entry for SAWYER, Philip F.; he is correctly listed under "Papua/New Guinea"		

1973 Field Season Summary: Correction and Notes

ZONE 4 - TEXAS

In the 1973 summary for Texas, the report by McGuire and Rickard contains several records noted as either new state or U.S. records which should not be so accorded. *Polythrix mexicanus* Freeman was first collected and reported for the U.S. by J. Richard Heitzman, 28 June 1968, from Bentsen-Rio Grande Valley State Park, Hidalgo Co., Texas (J. Res. Lepid. 10: 284-286). *Satyrium kingi* (Klots & Clench) was previously taken in Texas by Christopher J. Durden 3.5 miles east of Saratoga, Hardin Co., 29 May 1971, one male (personal communication). One male *Lerema ancillaris liris* Evans was collected 28 Sept. 1968 in Santa Ana National Wildlife refuge, Hidalgo Co., Texas by Roy O. Kendall (J. Lep. Soc. 24 (4):266). J. W. Tilden collected one example of *Aguna claxon* Evans on 21 Oct. 1970 in Santa Ana Refuge (J. Lepid. Soc. 25 (4):293). While our 1973 captures of these species are not new records, they are still outstanding and help to document the fantastic year for Rhopalocera in Texas; more information on specific species (new records) will be presented in a forthcoming paper.

Bill McGuire, M.D., 2911 Avenue O, Galveston, Texas 77550

A NEW COLUMN FOR THE "NEWS"

I would like to try my hand at providing you with a column each issue which will include the following:

- (1) Answers to questions on any subject concerning Lepidoptera, sort of in the vein of the column called, "Questions for Professor Forbes" which ran in the early issues of the old *Lepidopterists' News*. Members may submit their questions on taxonomy, biology, history, techniques, sources of equipment, literature, etc., and I will either answer them myself or find the answer by asking someone who knows. Follow-ups will be welcome, if you find an answer inadequate or worthy of further treatment.
- (2) Nuggets of news, interesting anecdotes, collecting tips, etc. that might be of general interest, especially to the amateur lepidopterist.

Please submit questions and other items to me directlynot to the Editor. We will run items as space permits, and all contributors will be acknowledged and mail answered. Right away I need suggestions for a TITLE for this column, and

OBITUARY

Sidney A. Hessel

Just before publication, word came of the death of Sidney Hessel, on November 11. He had been in good health until October 16, when he had emergency surgery, and never fully recovered.

Sidney Hessel was a charter member of the Lepidopterists' Society and a strong force in its formation and progress. His counsel will sorely be missed. Most recently, he had served as editor of the Memoirs, and handled back issue supplies and orders. More details will follow in a later issue.

solicit your suggestions. Sorry, but the title "FRASS" is not an available name! Charles V. Covell Jr.

Dept. of Biology, Univ. of Louisville Louisville, KY. 40208

NOTICES:

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their needs and offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. Please be brief, clear, and check spelling. Avoid long lists. Generally, notices will be limited to 3 appearances if more than one are requested. The Editor reserves the right to alter or reject unsuitable copy.

- WANTED: One copy of Holland's Butterfly Book in decent condition at a reasonable price. D. A. Currutt, 7533 Mulberry Rd., Chesterland, OHIO 44026, U.S.A.
- FOR SALE: 10 different unnamed butterflies from Peru, incl. Papilio, \$1.50. Brookiana birdwing from Malaya, \$1. Owl butterfly,
 \$1. Brilliant blue Morpho menelaus, \$1. Sent postpaid by return mail. Send 35¢ for list, issued monthly. Will also consider exchange. David W. Bouton, 408 S. Franklin St., Wilkes Barre, PA. 18702, U.S.A.
- FOR SALE: Worldwide butterflies, moths, and other insects. Large inventory of Morpho, Papilio, Catagramma, etc. Dan Capps, 231 Powers Ave., Madison, WISC. 53714, U.S.A.
- FOR SALE: Very extensive mounted worldwide butterfly and moth collection. Would fill 160 Cornell drawers. Many Morpho, Agrias, birdwings, etc. Would cost \$50,000 to replace, sell for \$7,500 including older cabinets. Will not divide. Jerry Schloemer, P.O. Box 307, Round Lake, III. 60073, U.S.A.
- WANTED: Comstock's Butterflies of California, and Blatchley's Coleoptera of Indiana. Please state price and condition. S. Osmundson, 1926 Bernice Way, San Jose, CALIF. 95124, U.S.A.
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- WANTED: Comstock's Butterflies of California, to buy or trade. Phone 213-851-7082. William R. Lasky, Of Cabbages and Hummingbirds, 1710 Laurel Canyon Blvd., Hollywood, CALIF. 90046, U.S.A.
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- FOR SALE: Collection with over 1200 species of butterflies and moths from all over the world, artistically mounted in Riker mounts, about 60 boxes. Value estimated at over \$1000, asking \$750. Johanna C. Boonstra, 145 Maskwonicut St., Sharon, MASS, 02067, U.S.A.
- FOR SALE: Over 900 rare and common species of butterflies, beetles, scorpions, centipedes, and other insects from Malaysia, Indonesia, Thailand, Portuguese Timor, etc. K. H. Wong, P.O. Box 74 Paya Lebar, SINGAPORE 19.
- FOR SALE: 3000 Manitoba moths and butterflies. Price list on request. C. S. Quelch, 21 Park Circle, Winnipeg, MAN. R2C OL6, CANADA.
- WANTED: Ornithoptera croesus, Teinopalpus imperialis (fem.), Graellsia isabellae, Papilio blumei, Morpho cypris, Morpho rhetinor (fem.), Phoebis avellanada (from Cuba). Write if you have perfect specimens to sell. B. E. Ellis, 2221 Kinkel Ave., Cleveland, OHIO 44109, U.S.A.
- EXCHANGE: Butterflies from eastern Europe for North and South American specimens. Attila Haltrich, Strada Pandurilor No. 32, Reghin, Reg. Mures, ROMANIA.
- FOR SALE: Ova, pupae, and papered specimens of *H.cecropia, euryalus, and gloveri, A.luna, P.cynthia, A.io, A.polyphemus, C.promethea & angulifera, A.rubicunda, C.regalis, E.imperialis, A.mylitta, Sphinx ligustri, D.myron, Pap.troilus, Bat. philenor and many other papered Sphingidae. Send stamped self-addressed envelope for complete price list. Wild-flower Catalog, 25¢. WANTED: Pupae or ova of Att.atlas or edwardsi, Roth. sp., Arg.mittrei, Act.sinensis, Br.wallichi or japonica, Anth.eucalypti, C.sepulchralis, Grae.isabelae. Will exchange above specimens for these. Michael R. O'Brien, 22 Richards Ave., Pine Hill, N.J. 08021, U.S.A.*
- FOR SALE: At present, Ornithoptera paradisea. Write for price if interested. Donald Eff, 445 Theresa Drive, Fairview Estates, Boulder, COLO. 80303, U.S.A.
- FOR SALE: S. American butterflies: Morpho, Agrias, Papilio, Prepona at moderate prices. Reared Arg.mittrei and Att.atlas. Att. lorquini, Pap.rumanzovia, Tr.rhadamanthus, Cun.peninsula, megalenus, helena minos, T.brookiana and trojanus and other worldwide species. Also many beetles. Lists available. WANTED: Will buy or exchange butterflies, moths or beetles of any country if A1 quality, or books on beetles or Lepid. (any language). Mrs. M. A. Azevedo, 10, Dunholme Court, Ermine East. Estate, Lincolnshire, ENGLAND.

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- WANTED: Reliable suppliers of all livestock and perfect papered specimens of Lepidoptera and other insects. We need permanent suppliers only, who will send every season. Send full details and prices. Exchanges can be made for books, equipment, specimens and livestock of world Lepidoptera. Mailing Index: send 0.60 Pounds Money Order to join. M.C. Dickens, The Butterfly Farm, Ashford, Kent, ENGLAND TN25 7JW.
- WANTED: To trade or buy ova and pupae of *Arctiidae*. Will exchange material from British Columbia and arctic butterflies. H. P. Kimmich, 3372 Mahon Ave., North Vancouver, B. C. V7N 3T6, CANADA.
- FOR SALE: Many Formosan butterflies, moths, beetles, dragonflies, and other dried insect specimens for collectors or art work. Also living cocoons and eggs of moths in large quantities. Mrs. Chang Pi-Tzu, P.O. Box 873, Taipei, FOR-MOSA.
- FOR SALE: Large selection of worldwide Lepidoptera and Coleoptera, esp. boreal and neotropical, many fine exotics. First quality papered with data at reasonable prices. Send \$1.00 for 25 p. listing. Wayne W. Klopp, 6705 S.W. 44 St., #10, Miami, FLOR. 33155, U.S.A.

RESEARCH REQUESTS:

Want specimens for taxonomic and biogeographical study of *Callophrys (Incisalia) irus* (Godart), especially from Ark., Texas, Ga., N.Car., Mich., N.J., and N.Y. All contributions will be acknowledged if used in print, and specimens returned within 90 days. Contact either: Ronald R. Gatrelle, 126 Wells Rd., Hanahan, S.C. 29405, U.S.A. or Steven J. Roman, 205 Shady Hollow, Casselberry, FLA 32707, U.S.A.

Ova or pupae urgently wanted of *Hyles lineata*, the White-lined Sphinx. Will buy or exchange. Interested in live material of other American or exotic Sphingidae. M. C. Birch, Dept. of Entomology, Univ. of Calif., Davis, CALIF. 95616, U.S.A.

Need species records, flight dates and localities for butterflies and skippers of Arkansas for an extensive statewide book on their ecology. All records will be acknowledged. Ed Gage, Rt. 2, Box 155, Prosser, WASH. 99350, U.S.A.

Need information and livestock of *Lithophanini* for Ph.D. thesis. Mating season for most species. Accurate regional lists with option of specimen loan for all areas except NE USA, especially USSR and southern USA. Desire western US and Eurasian papered material. Urgently need living adults of *Metaxaglaea* spp. from SE USA. Need *L.lepida*, *P.ceromatica*. Offer *Hemileuca lucina* adults and ova in exchange. Dale F. Schweitzer, Dept. of Zoology, Univ. of Massachusetts, Amherst, MASS. 01002, U.S.A.

- Wanted for population study of Texas Hesperioidea: any data or information re: genus Hesperia in Texas. All contributions and correspondence acknowledged. Bill McGuire, 2911 Avenue O, Galveston, TEXAS 77550, U.S.A.
- Would like to borrow preserved (in any manner) ova, larvae, and pupae of Speyeria, Boloria, and any other Argynninae. Richard A. Arnold, Dept. of Entomology, Natural Sciences Bldg., Michigan State University, East Lansing, MICH. 48823, U.S.A.
- For dissertation on butterfly conservation: any information, esp. with supporting data, concerning decline of Lepidoptera populations due to human causes. Urgently need biogeography, life history and population biology of *Oen. polyxenes katahdin, O.melissa semidea* and *O.chryxus valerata.* R. M. Pyle, School of Forestry and Environmental Studies, Yale University, New Haven, CT. 06511, U.S.A.

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