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Dr. Austin P. Platt Appointed New Editor of the

Journal of the Lepidopterists' Society

Dr. Platt grew up in Illinois, north of Chicago. He became interested in Lepidoptera at an early age, and as a youth he accumulated an extensive series of both netted and reared specimens.

In 1959 he graduated from Williams College in Massachusetts with a B.A. in Biology. In 1963 he completed his M.A. , and in 1965 his Ph.D. in Zoology, both at the University of Massachusetts in Amherst, Ma. He has taught Zoology at the University of Rhode Island, and Biology at Wesleyan University (Middletown CT). He is currently an Associate Professor of Biology at the University of Maryland(Baltimore Co.) teaching such courses as <u>Population</u> and <u>Vertebrate Biology</u>, General Ecology and Introductory Biology.

Dr. Platt undertook collaborative research on intergradation and mimicry in the <u>Limenitis</u> <u>artemis-astayanax</u> complex with <u>Professor</u> <u>Lincoln</u> P. Brower of Amherst College soon after receiving his Doctorate, and his research in this field has continued to the present day.



Austin P. Platt

In December 1971 he participated in the founding of the Maryland Entomological Society (M.E.S.) and in 1973, while its president, played an active part in coercing the State Government into passing legislation making the Baltimore checkerspot butterfly (Euphydryas phaeton) the state arthropodic emblem of Maryland.

Sir Arthur Conan Doyle once wrote "The little things are infinitely the most important", but anyone who has ever engaged in the harassment of politicians in behalf of a butterfly knows that this accomplishment was no small matter. It is with great pleasure that I look forward to sharing the honor of editing and publishing for the Lepidopterists' Society with such an active and accomplished member as Bob Platt.

! WRITE TO THE RIGHT PERSON PLEASE !

Send to the NEWS Editor: Jo Brewer, 257 Common St, Dedham, MA 02026:

Notices, Research requests, ads, popular articles, news items, items for Ripples column, Spreading Board, Short lived phenomena and Serendipity.

Send to the TREASURER: Ron Leuschner, 1900 John St, Manhattan Beach, CA 90266: Money for annual dues, applications for membership in the Society (with dues), changes of address.

Send to the Librarian: Charles V.Covell Jr, University of Louisville, Louisville KY 40208: Money for back issues of the Publications of the Lepidopterists' Society.

Number 1

Jan/Feb 1978

PUBLICATIONS

M. S. Moulds: BIBLIOGRAPHY OF THE AUSTRALIAN BUTTERFLIES 1773-1973, published by Australian Entomological Press, 14 Chisholm Street, Greenwich, N.S.W. 2065, Australia. \$18.00 Australian plus 60¢ postage. This comprehensive work which has just been published lists over 2,000 references. All species mentioned in smaller works are listed after such references. Notes concerning dates of publication, voyages and other points of interest occur throughout. Available direct from the publisher.

JONES' ICONES. The unique and unpublished butterfly paintings known as JONES' ICONES, which formed the basis and in some cases the only existing "specimen" of Fabrician types have been photographed recently. These will be made available shortly to entomologists in 35 mm. color transparencies (roll form). There are more than 700 transparencies of excellent quality and these include not only the paintings but also various Fabrician notes. The price will depend on the total number of copies made. All enquiries concerning purchase should be sent to Mrs. Audrey Smith, Librarian, Hope Department of Entomology, University Museum, Oxford, England.

(- and speaking of publications, Bryant Mather has drawn our attention to a handsome picture article by Manuel Gomez entitled <u>Tropical Wings</u> which appeared --of all places-in the U.S. Army magazine SOLDIERS Vol 32 no. 10 ps 33-35. The butterfly gets around!)

FOR YOUR CALENDAR

THE 1978 ANNUAL MEETING of the Lepidopterists' Society will be held in Louisville Kentucky Friday July 7 - Sunday July 9 1978 HOSTS Charles V. Covell Jr. & the University of Louisville.

IMPORTANT NOTICES

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE has given the required six months' notice of the possible use of plenary powers in connection with the following Lepidop-tera listed by case number: (see Bull. Zool. Nom. 34, part 2, 31 August 1977)

- 2115 <u>Glyphipterix</u> Hübner, (1885) (GLYPHIPTERYGIDAE): proposed designation of a typespecies.
- 2186 PIERIDAE Duponchel,(1835): proposal to give precedence over COLIADINAE Swainson, 1827 (Insecta, Lepidoptera).
- 2204 <u>bjerkandrella, Tinea, Thunberg</u>, 1784, and <u>cardui</u>, <u>Phalaena</u> (<u>Noctua</u>)Hübner, 1790 (Insecta, Lepidoptera): proposed conservation.
- 2201 MORPHIDAE Boisduval, 1836 (Insecta, Lepidoptera): request for revision of the Official List.

Comments should be sent in duplicate (if possible within six months of the date of the publication of this notice), citing case and number to:

R.V. Melville, The Secretary, International Commission on Zoological Nomenclature, c/o British Museum (National History), Cromwell Rd, LONDON, SW7 5BD, England. Those received early enough will be published in the Bulletin of Zool. Nomenclature.

ATTENTION SYSTEMATISTS. The Association of Systematics Collections (ASC) is expanding its registry of systematists, originally restricted to ASC member institutions and their personnel. If you want to be included in this nation-wide registry, or wish further information, contact Dr. Jerry R. Choate, Project Director, ASC Registry, Museum of the High Plains, Fort Hays State University, Hays, Kansas 67601 (913-628-5326). The ASC Newsletter is also provided without charge to anyone interested in systematics and systematic collections. Dear Jo:

I became very excited when I read the March/April issue of the NEWS No. 2 as I had also located a specimen similar to the semi-melanic female of *Papilio glaucus* pictured during my studies of the West Virginian butterfly fauna. I was equally pleased to see more space devoted to these melanic forms in the September/October issue (No.5). I hope in this letter to add to this rapidly growing bulk of information. Enclosed you will find a picture of the semi-melanic

Enclosed you will find a picture of the semi-melanic from West Virginia. It was collected by Tom Allen of Elkins, WV, and remains in his possession. Collection data Spruce Laurel Fork near Clothier, WV (Boone Co.) 24 Aug 1972. The specimen is a female more similar to the specimen pictured in NEWS No. 5 than that pictured in No.2 as the hind wings do not show the blue pattern characteristic of late season forms.

Regarding gynandromorphic forms historically, the work by W.H.Edwards should not be forgotten. In his <u>Butterflies</u> of <u>North America</u>, Vol. 1 Plate V, No.4, he depicts "biformed" specimens of *Papilio glaucus* similar to those of the Strecker series. Clark and Clark, in <u>The <u>Butterflies</u> of <u>Virginia</u>, mention also that "there are two records of black males, neither from the region under consideration". Thus, the wing pattern should not be the only consideration in the question of gynandromorphism.</u>

I hope this information is of some use to you in compiling the article expected early next year.

Clark, A.H. and Clark, L.F., 1951. The Butterflies of Virginia. Smithsonian Misc. Coll. 116(7),227pp.30pls. Edwards, W.H. 1868. The Butterflies of North America, Vol.1. Houghton Mifflin and Co., Boston.

Sincerely,

Bastiaan M. Drees, 376 W. 6th Ave, Apt 7, Columbus, OH 43201



Mr. Drees's Melanic Swallow Tail

Dear Ms. Brewer,

I was interested in your comments about the semi-melanic *Papilio glaucus*, Lepidopterists' News September/October 1977. I have colour photographs of all the Strecker series of abherrant *P. glaucus* and it is quite true that some are female and some are male. The point that I wanted to make was that the particular individuals which look like the insect on the top of page 6 in the issue of September/October 1977, are, I think, all males and I think they are mutants and <u>not</u> gynandromorphs. Strecker's "Look-alike" is seen not infrequently in collections and I am sure that a mutation is the most likely cause. It would be interesting to breed from one of these.

Yours sincerely, Sir Cyril A. Clarke, High Close, Thorsway, Caldy, Wirral, Merseyside L48 2JJ, ENGLAND.

November 26, 1977

The recent issue of the NEWS was a good one, and I enjoyed it very much. The Monarchs had good flights through here also this fall. The heaviest day here was September 21st. The whole Western Shore of the Chesapeake Bay here in Calvert County was a one-night roosting area. And the next morning along the highway inland there were thousands at all altitudes flying SW from 7:30 A.M. on. This was the largest Monarch flight that I've seen and it was over by noon.

Sincerely,

Dear Jo.

John H. Fales, 2809 Ridge Rd., Neeld Estate, Huntingtown, MD 20639.

Dear Ms. Brewer:

I delayed sending my enclosed report until the current NEWS arrived, thinking a local Monarch migration might be described therein. The article on the Squantum, Mass. mass flight was very interesting. There is a remote chance that "my" Monarchs could have been part of the "mob" viewed by Mr. Sharp. With a few slight direction shifts a splinter group from that migration could have arrived here 22nd to 24th September.

I anticipate the appearance of further reports in the NEWS on Monarch movements.

You deserve to be commended for editing the NEWS of Lep. Sec. with just the right mixture of the serious and lighter, often humorous side.

Sincerely,

William H. Evans, 3333 Wisconsin Ave., N.W., Washington, D.C. 20016.

a window-sizeview of mighating

monarchs

WILLIAM H. EVANS

On September 22, 23, and 24, 1977, I was able to watch a small migration of 75 Danaus plexippus by looking out of my third floor window on the north side of the east wing of the Wisconsin Avenue Nursing Home. All the butterflies were flying from NNE to SSW at 5 to 10 miles per hour with steadily beating wings and going over the eighth floor roof of the east wing of this building. Most of them approached between 20 and 50 feet above the paved street and parking lot and then changed their level flight to an almost vertical climb when nearing (5 to 15 feet away) the building. An increased rate of wing beating was needed to carry them over the roof. Two specimens flew so close to the window that they had to switch to an ascending spiral corkscrew flight pattern to gain altitude. Three individuals which were about 100 feet above the ground when they came over the tops of 60 ft. high trees across the street, actually stopped flapping their wings and glided a few moments to drop down to eighth floor roof level. Most of the Monarchs stayed within a 35 foot wide air corridor, but 3 which were 60 feet east of my window flew past the east end of the building.

Sept. 22 was cloudy with a 75° maximum temperature and no wind.

The first 4 Monarchs flew over between 12:15 P.M. and 12:35 Eastern Standard Time.

One passed at 12:45, one at 1:15. 5 came between 4:55 and 5:15.

The last six for the day came 5:25 to 5:37.

On Sept. 23, the sky was again covered with gray and white clouds; the mid-morning temp. was around $72^{\rm o}.$

The first Monarch flew over at 7:00 EST.

The 2nd at 7:45, the 3rd at 8:15, and the 4th at 8:20 The next 32 came over between 9:15 and 9:45. 9 more came in next 15 minutes. 3 more between 10:45 and 11:00.

One more at 3 P.M. (79^O), and the last one flew over at 4:00. On Sept. 24, the morning and early afternoon were mostly sunny with a light breeze. The day's total of 8 butterflies flew over between 10:00 A.M. and 2:00 P.M. After this day, no more were seen.

Observation of such a small migration proved that even when individuals are out of sight of one another they still fly in the same direction when migrating. Was this the edge of a wider band of Monarchs passing through Washington, D.C.?



More About Flash Floods

To the Editor:

The "California Patch (Chlosyne californica) was back in full swing this September in Palm Springs, California. In 1968 three of us took 173 in one afternoon. The next year saw the canyon washed away in a flash flood. Finally things are back to normal, and over 150 *C. californica* were taken on one sunny afternoon. Some aberrant "chino patches" were also netted.

Truly, Ken Denton, Box 906, Laguna Beach, CA 92651



Dear Jo,

October 24, 1977

I enjoyed the striking photographs of gynandromorphs and melanics of *Papilio glaucus* in the September/October issue of the <u>News</u>. However, something is seriously amiss with the specimen illustrated in the lower right-hand corner of page six: it is $1/4 \sigma$ and $3/4 \, \wp$! While that would make sense according to Mr. Walsten's explanation of the method of production of gynandromorphs, his explanation is not entirely in accordance with what is otherwise known about sex-determination in the Lepidoptera. As a consequence, readers of the <u>News</u> have been misinformed of the nature of Lepidopteran sex-determination, and also deprived of what is certainly a genetic enigma.

I should begin with the error in Mr. Walsten's article. He states that "the condition of gynandromorphism is ordained shortly after fertilization of the ovum, or egg, and such individuals always develop from a female egg: that is to say, one with two x chromosomes -- a configuration known as xx." The problem here is that in the orders Lepidoptera and Trichoptera, the male is xx, not the female! In literature on the subject, the terminology ZZ and ZW (or ZO) is usually substituted for XX and XY (or XO). Geneticists call the sex that carries two unlike sex-chromosomes the heterogametic sex. Thus, in the Lepidoptera, the female is the heterogametic sex, not the male as in man, fruit flies and most other animals.

For this reason, gynandromorphs in the Lepidoptera that arise from problems in the separation of the sex chromosomes at an early embryological stage must begin with a male (ZZ), not a female (ZW) egg. If an "error" occurs during the first division, such that one cell receives only one Z chromosome, that side should become female. Thus the production of perfect bilateral gynandromorphs. If the "error"occurs during the second cell division, the resulting gynandromorph would be $3/4\vec{*}$ and $1/4^{\circ}$. If at the third cell division, the gynandromorph would be $7/8\sigma$ and $1/8^{\circ}$. And so on. The point is that the sex of the tissues represented in the minority must be the heterogametic sex. I usually illustrate this point in teaching by showing my classes a striking set of *Colias* gynandromorphs (see figure), containing a perfect bilateral, a 1/4, a 1/8 and a probable 1/16!

Now we come to the real stickler.

The 1/4 gynandromorph of Papilio glaucus illustrated is 3/4º, 1/4ơ! Or so it appears, based on the distribution of melanic pigments, which are expressed only in the female. This specimen could not be produced by the "classical" method described above. There are several other possibilities, among which it is not possible to decide based on the information available. One is that this is a double gynandromorph, i.e., a bilateral gynandromorph in which, at the second division, another disjunction took place. If we assume that both disjunctions were independent of one another, the probability of such a double event would be almost infinitesmally small. A second possibility, that sexdetermination in P. glaucus is different from other Lepidoptera, must be discounted, based on independent genetic studies of Clarke, Sheppard and others of this particular species. Another possibility, that the specimen is entirely female and that the male-looking wing is the result of a' second-division disjunction for a chromosome affecting sex-limited melanism, is conceivable, but the right hindwing shown definitely looks male in other features. Multiple fertilization of multi-nucleate eggs, and other bizarre possibilities, can also be entertained. The genetics of melanism in this species is not completely understood, and anomalous individuals of various kinds have been reported in reared broods. (A fine review of the genetics of P. glaucus, and other related matters, can be found in Roy Robinson's book, Lepidoptera Genetics (Pergamon Press).) But I do not have an explanation, with which I feel comfortable, to account for this intriguing specimen. Has anyone else a 1/4 gynandromorph of *P. glaucus*, and if so, does it conform to the $1/4\sigma$ or $1/4^{\circ}$ pattern?



Whatever the explanation, the 1/4 gynandromorph illustrated in the News is correctly captioned. It must certainly be one of "the world's rarest butterflies," even more so than an "ordinary" 1/4-gynandromorph -- if such a term can be used for any sexual mosaic!

Yours sincerely,

Bob Silberglied Museum of Comparative Zoology The Agassiz Museum Harvard University Cambridge, MA 02138





The Winner

YET MORE RIPPLES

The following three titles are excerpts taken from Clyde F. Gillette*s Expanded Glossary of Lepidoptera. Col. Gillette states he is in the process of revising and updating the following information based on any newer genetic findings in this subject area, but would rather print it as is while the subject of gynandromorphism is still fairly fresh in the NEWS.

Sex determination.

(Chromosomes usually occur in matched pairs and are called autosomes. An unmatched pair, called the sex chromosomes, contains a pair that in one or the other sex, either does not match or is represented by only one chromosome. In mammals, including Man, and in most orders of insects, males have XY sex chromosomes and females have XX sex chromosomes. (The Hymenoptera are exceedingly different and complex in that the males are haploid or only very rarely diploid, and the females are diploid.) In addition, in mammals, but not in insects, these sex chromosomes control only the reproductive glands (testes or ovaries) which, through hormonal secretions, determine maleness or femaleness in all other parts of the body.)

In Lepidoptera (and Trichoptera(Caddisflies) and from which the Lepidoptera are most probably derived, and in birds) males have XX chromosomes and females have XY chromosomes, which is a reversal from most other insects and from Man. In addition, all cells in the body of a male or female Lepidopteran have these XX or XY sex chromosomes, not just the reproductive glands and organs. The genes responsible for sex determination are carried by the X chromosome, which contains the genes for maleness. (This, again, is opposite that for most other orders of insects.) The Y chromosome carries very few genes of any kind and is nonfunctional in determining sex.

Since males possess XX chromosomes, upon meiotic splitting all sperm cells (male gametes) will carry an X chromosome, and therefore every fertilized egg will receive one X chromosome from the male parent. And since females carry XY chromosomes, upon meiotic splitting half the egg cells (female gametes) will have a Y chromosome, which is nonfunctional in sex determination, and half the egg cells will have an X chromosome. When the male X sperm fertilizes a female X egg, a Male (XX) is produced since two Xs=male. When the male X sperm fertilizes a female Y egg, a Female (XY) is produced since one X = female. Since half the female's egg cells carry an X, and half carry a Y, the probabilities of the X sperm cells producing a male zygote as opposed to a female zygote are based on the laws of chance and are theoretically equal.

Sex determination cannot be explained by assuming the chromosomes carry genes for the respective sexes, since the Y chromosome is nonfunctional and the X chromosomes are shuffled back and forth between both sexes. (i.e. one of an offspring male's X chromosomes came from his mother and was the very agent which made her female. And an offspring female's X chromosome, the one that made her female, came from her father and was partly responsible for making him male.) Therefore, the action of the X chromosome carry the genes for femaleness and the X chromosomes carry the genes for femaleness and the X chromosome carry the genes for maleness, and sex is determined by the balance between these two groups of genes (from the autosomes and the sex chromosomes). Genes for maleness are in effective excess against the autosomes when supplied in double quantity (XX). Genes for females (autosomes) are in effective excess when balanced against only one X chromosome.

When a developing male (XX) has the loss of one X chromosome by either one of two mechanisms in an abnormal cell division, resulting in a cell's receiving an (X-) sex chromosomal combination, female cells (X-) are produced (since one X = female) which creates a gynandromorph. The XY chromosomal combination produces normal females. The X- condition produces female cells. (see gynandromorphism).

Gynandromorphism.

This is the process whereby "female-male-forms" are produced (see sex determination). The situation wherein all cells in the bodies and wings of Lepidopterans receive a pair of sex chromosomes makes them highly sensitive to abnormalities in the distribution of these chromosomes. During the first cell division of the fertifized egg (or zygote), each of that cell's two sex chromosomes splits and divides into two daughter cells, each cell having two sex chromosomes, the same as the zygote parent cell. One of these two new cells will form the left half of the larva and the other the right half. If the first and following cell divisions are normal, normal male or female individuals will be produced.

There are, however, two basic abnormal mechanisms which cause the development of gynandromorphs. One is the loss of an X chromosome during miotic cell divisions, and the other is the failure of one of the split X chromosomes to separate. Loss of an X chromosome in the first cell division of a male zygote XX will result in the formation of a bilateral gynandromorph (XX/X- = σ/\mathfrak{P}). This same loss in the first cell division of a female zygote XY will result in the death of the individual (XY/Y- = \mathfrak{P} /lethal). This same loss in later cell

divisions of a male XX will result in female cells (but less than half) in a male butterfly $(XX/X = \delta^3/P$, with prior cells male). This same loss of an X chromosome in later cell divisions of a female XY will result in a female (XY/Y = P/cell death, with prior cells female).

Failure of one of the split X chromosomes to properly separate in the first cell division of a male zygote XX results in the death of the individual (X-/XX = %/lethal). Separation failure in the first cell division of a female zygote XY also results in the death of the individual, but for a different reason $(\%Y/Y - = \vec{\sigma}/lethal)$. Failure of one of the split chromosomes to properly separate in later cell divisions of a male XX results in female cells (but less than half) in a male butterfly (X-/XXX = %/cell death, with prior cells male). Separation failure in later cell divisions of a female XY results in male cells (in any proportion but half, depending on when it occurs) in a female butterfly, and is the only mechanism for doing so (% Y/Y- = $\vec{\sigma}/cell$ death, with prior cells female).

Thus various proportions of the male/female ratio can occur as a result of one or the other, or both of these two abnormal mechanisms, when and how often in the same butterfly they occur, and whether they are operative on a specimen that begins as a male or a female.

When you find a gynandromorph, the chances are greater that it was formed from a basically male Lepidopteran than from a basically female Lepidopteran. This is true because considering the available gynandromorphic producing mechanisms (loss of an X chromosome or failure of a split X chromosome to separate), there are much greater opportunities for causing female cells to develop in basically male butterflies than there are for male cells to develop in basically female butterflies. When you check the ratio of the male/female portions of its wings, the likelihood is greater that the larger portion of its wings is male with the smaller portion being female. This is because the gynandromorph producing abnormalities, if they occur at all, have more likelihood of occurring at a later stage in the developmental process, which reduces the time in which the female cells (altered from male cells) would be able to reproduce themselves.

Bilateral gynandromorphism is a very special case that can only be formed starting with a male zygote XX, in which during the first (mitotic) cell division one of the four, split X chromosomes is lost, and in which no further abnormal sex chromosomal cell divisions take place!

Gynandromorph.

(Gk. gyne-female & andros-male & morph-form) an individual Lepidopteran of mixed sex having male features in one part of the wings (and body) and female features in the other part. This abnormality can range in form through sexual mosaics where: the only apparent male portion is a small patch on one wing; where one wing could be male and three wings female (25%/75%); where the male/female ratio is equal (50%/50%); where three wings could be male and one wing female (75%/25%); to the more common case where the female portion is only a small patch on one wing; and through various combinations in between.

The most striking case is the bilateral gynandromorph where the two halves are of opposite sex, and wherein the division line is remarkably sharp, occurring exactly down the midline of the body including the genitalia! It is a very rare and noteworthy phenomenon, for the sex differences include all aspects of body and wing color, pattern, shape, size, and structural differences. They are exceedingly contrasty in those species having extreme sexual dimorphism. Bilateral gynandromorphism is a very special case that can only be formed starting with a male zygote XX, in which during the first (mitotic) cell division one of the four, split X chromosomal cell divisions take place!

Many gynandromorphs go undetected in species having little or no obvious sexual dimorphism. Due to their great rarity and to the extreme difficulty in detecting them, little or nothing has been reported concerning bilaterally gynandromorphic larvae or pupae which give rise to gynandromorphic adults.



They may all look alike, but one of them was my mother and your father.

ANNOUNCING

THE FOUNDATION OF A EUROPEAN LEPIDOPTEROLOGICAL SOCIETY

SEL (Societas Europaea Lepidopterologica)

Since the times of Maria Sibylla Merian and the Aurelians, numerous European Lepidopterists have, through their contributions to our knowledge of butterflies and moths, made Europe the best known part of the world in this field. However, the work has been done by individuals from various parts of Europe who wrote, painted or researched *as* individuals rather than as members of a European community. This has led to the formation of a number of localized lepidopteralogical societies.

The founding of a European society similar to the American-based Lepidopterists" Society has long been hindered by both political and linguistic barriers, but in recent years the scope of both of these problems has been reduced until the time has now come for the Lepidopterists of Europe to join together.

On September 18/19 1976, twenty-two lepidopterists from eight European countries met in Bonn, Western Germany, and founded <u>SEL</u>, the first truly European Lepidopterological Society.

The Society aims to provide European Lepidopterists with a long overdue "roof" organization for discussing research, the protection of habitats of Lepidoptera and other pertinent aspects of the science at an international level.

Plans are to hold a general meeting every two years, thus increasing personal contacts and providing for the distribution of information. Dr. G. Bernadi from the Muesum of Natural History in Paris has undertaken the task of organizing the first of these meetings in the spring of 1978. At that time a new council will be elected.

Journals, monographs & catalogues will be published as an increase in membership makes it financially possible to do so.

Committees within the organization have already been formed as follows:

- Committee for Systematics, Taxonomy and Nomenclature (Chairman: E. Schmidt Nielson, Zoological Museum, Copenhagen)
- Committee for Literature (New publications).Reviews to be published in Nota Lepidopterologica, a journal of the Society.
- Committee for Protection of the Environmant (Chairmen: Dr. F. Kasy, Museum of Natural History, Vienna & G. Hesselbarth, Diepholz).

The following Council was elected at the inaugural meeting:

President: Dr. Rienk de Jong, Rijksmuseum van Naturlijke Hist., Leiden, Netherlands.
Vice Pres.: John Heath, Inst. of Terrestrial Ecology, Huntington, England.
Gen. Secretary: Gunter Ebert, Landessammlungen fur Naturkunde, Western Germany.
Membership Secretary: Dr. P. Sigbert Wagener, Bucholt, Western Germany.
Meetings S.: Dr. Georges Bernardi, Mus. Nat. d'Histoire Naturelle, Paris, France.
Treas: Dr. Hans-E Back, Zoolog. Forschungsunst. & Mus. Alex.Koenig, Bonn W. Germany.
Editor: Otakar Kudrna, Portsmouth Polytechnic, Dept of Bio. Scs, Portsmouth, England.

The annual membership fee which includes a subscription to the NEWSLETTER and NOTA LEPIDOPTEROLOGICA, has been fixed at DM 20. An initiation fee of DM 5 to cover administration expenses will be charged at the time of joining. (An additional DM 8 will be charged to American members for air mail postage.) Lepidopterists from both hemispheres are cordially invited to join <u>SEL</u>, although the emphasis of the Society will be on Palearctic Lepidoptera.

> Dr. Hans-E. Back Sonderkonto SEL, Museum Alexander Koenig (as above) 5300 Bonn, W. Germany.

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S L N Т Е A S N С F С 0 0 L 0 R V A Y D E T. K S L Y A R T. K. 0 V Β. L A Ι E S N В C В 0 A G A G R D E D 0 0 N J N A A C AS S K T and a В E young R Princess U М envel-С oped in E L butter-L flies, 0 E identity М R unknown. A Ν L A G R A R L ΥL

S

A A N R

R C Т Н Y

MORE ECHOES OF THE ANNUAL MEETING. Scene at the Saturday Night Steak Fry: around the table, starting at far left corner:

Kit Stanford, (our hostess), Betty Covell, Hazel Tilden, Cliff Ferris, John Emmel, Stan Nicolay. Marion Anderson, Bill Tilden, Jo Brewer, Robert Anderson, Teresa Benton.

The 1977 Annual Meeting of the Lepidopterists was the largest in the history of the Society, with over one hundred and sixty members, their families and guests registered. If you were unlucky enough to miss it, start planning now for the 1978 meeting in Louisville, July 7 - 9. And start saving now for the 1979 meeting in Fairbanks, Alaska, which will be an experience never to be forgotten, and probably never to be repeated.

Karl Jordan Medal Award 1977 to DONALD R. DAVIS



Donald R. Davis, born March 28, 1934, Oklahoma City, Oklahoma. Attended the University of Oklahoma (1952 -1954) and the University of Kansas (1954 - 1956, B.A., June 1956). Graduate study: Cornell University (1956 - 1961, Ph.D., February 1962).

Honor Societies: Phi Eta Sigma, Phi Kappa Phi, Sigma Xi. Professional societies: Entomological Society of America,

Entomological Society of Washington, Society of Systematic Zoology, Lepidopterists' Society, Association for Tropical Biology, National Speleological Society.

Dr. Davis assumed his first position as associate curator of insects with the Smithsonian Institution in September, 1961. Since September 1964, he has served as curator of the Division of Lepidoptera, and since July, 1976, as chairman of the Department of Entomology.

He is a specialist on the primitive Microlepidoptera and is concerned with the life history, phylogeny, and systematics of the suborders Zeugloptera, Dacnonypha, Monotrysia and the superfamily Tineoidea. He is currently subjecting these groups to revisionary studies in an attempt to clarify their supergeneric relationships as well as to better understand the origins of the primary divisions of the Lepidoptera. The basic systematics of several groups have already been worked out and attempts are now being made to relate these results to zoogeography, major biological steps and features, and fossil evidence. His immediate research interests involve particularly the biology of leafmining and cave dwelling Lepidoptera.



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NOTICES - Buy, Sell, Exchange

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. By decision of the Board, prices of specimens offered for sale will not be published henceforth. Please be brief, clear, and check spelling. Notices will be limited to two appearances. The Editor reserves the right to alter or reject unsuitable copy.

- FOR SALE: Papered Saturniidae, most in A-1 condition and with complete data, including Coloradia pandora lindseyi, Hemileuca electra electra, H. nevadensis and H. eglanterina from So. CA., R. forbesi from Texas, and A. luna from MO. Will also exchange for other nearctic Saturniidae, particularly Hemileucinae. David Hawks, 6466 Cowles Mnt. Blvd., San Diego, CA. 92119.
- WANTED: Seeking correspondence with collectors in Central & South America with access to rarer species of Rothschildia, especially R. condor, R. betis, R. roxana. Need also E. cal leta ova and/or material of African genus Epiphana & Argema. Have interesting exchange items, or will buy. Richard L. Halbert, 1085 Hoffman Ave, - Apt 14 Long Beach, CA 90813.U.S.A.
- WANTED: Rhopalocera of USA, Mexico, Columbia, Venezuela, Guayana, Brasil, Papered in Al condition. Gunther Oswald, Keferloherstr.136, 8000 Munchen 40, West Germany.
- WANTED: Housing. I would like to minimize expenses while enhancing my own collection of U.S. butterflies. I will provide housing, a car, and local expertise for 1 or 2 collectors for any 7 day period here in Southern California during the 1978 season. In exchange for exactly same consideration at your place. Eastern or NE U.S. collectors pre= ferred; all inquiries answered. Dr. Bruce A. O'Hara, 28045 Robin Ave, Saugus,
- Will buy Catagramma from Mexico and other Central American countries, esp; C. casta WANTED: and patelina. Also wanted, Megasoma elephas from Mexico and large bird spiders. Henry Hensel, 145 Belleview Str, Edmunston, N.B. CANADA.
- WANTED: World-wide Sphingidae. All species, determined or undetermined, and in large or small numbers. Buy or exchange for other butterflies. All specimens must carry the whole exact data with date of capture. All offers welcomed. Mr. Jose Luis
- Sanchez de Vivar; Guzman el Bueno 37; MADRID -15 <u>SPAIN</u>. One pair of <u>Ornithoptera victoria isabellae</u> Santa Isabel Isl. Male should have a WANTED: great reduction of green coloration over the hindwing recto. Possibly with a goldband on the hindwing recto. Not to be confused with 0. v. reginae. Gary Walter Simon, 118 Sunnybrook Rd, Cherry Hill, N.J. 08043 U.S.A.
- Large or small quantities of the following pupae: Pachysphinx modesta, Paonis myops, FOR SALE: Darapsa myron, Actias luna, Saturnia pavonia, Papilio troilus and Eacles imperialis. Please send inquiries to William Houtz, R.D. #4 Box 477, Pine Grove PA 17963.
- WANTED: Quantities of papered butterflies Al condition, of Kallima inachus (Taiwan) <u>Urania ripheus (Madagascar), Morpho & Caligo (South America). Please write to</u> Amoruso Vito - Dorsoduro 2266/B, 30123 Venezia ITALIA.
- FOR SALE: <u>S</u>. diana of only, and <u>I</u>. henrici. All are in A-l condition, fresh with complete data. or will trade for any Ornithoptera. Write for prices. John Pagliai, RR 3, Kirkville, MO 63501. U.S.A.
- FOR SALE: and to order: Palearctic insects etc. of the KUMAON Himalayas, from the smallest to the largest, including Micro-Heterocera, Lycaenidae, Hesperidae, Carabidae etc. A-1 papered, dated, identified. Year long collections of families or sub-families by arrangement. No livestock, no pricelists. Write for details. Fred Smetacek, Bhimtal Forest Estate; Bhimtal 263136, UTTAR PRADESH, India.
- EXCHANGE: Living pupae of C. Promethea for papered Lepidoptera of North America. Send offers to Leroy C. Koehn, Rt# I. 38 Southern Drive, Dublin, VA 24084.
- FOR SALE: Large selection of worldwide Lepidoptera. For price list send 50¢ to Philip A. Holzbauer Rt 1 Box 331 Palmyra, WI 53156. Also wish to exchange with any member of the Society, especially members of Central or South America or other tropical places.
- Living cocoons of <u>H. gloveri</u>, wild collected. Otherwise I have no breeding stock, con-trary to popular belief. If and when I do again, I will advertise. Jim Oberfoell, Rt 2, Bowman, ND 58623. FOR SALE:
- WANTED: I manufacture butterfly pictures and buy butterflies by the hundred each species. If you have quantities, please send me your lists. Fred Cheeseman, 1337 Park Rd, Bloomington, MN 55420.
- WANTED: US Heliconidae - Living material, all stages. Indicate what quantities you have, and approximate shipping date. Will exchange for local or exotic species, or will buy. Joseph M^a Massip, Muralla, 35 BANYOLES (Girona)- SPAIN. <u>A. polyphemus</u> cocoons in lots of 12, 50 or 100. Limited quantity. Reasonable. Reared from wild collected \$9. Dr. Bruce C. Pulsifer 22 Newell St So Windham, ME.
- FOR SALE:
- FOR SALE: Lepidoptera livestock - over 100 species (Sphingidae including Acherontia atropos. <u>Hippotion celerio, Daphnis nerii;</u> Saturniidae including <u>Actias selene, Attacus atlas</u>, <u>Attacus Torquini & A. caesar;</u> Rhopalocera including Canary Island endemics. For complete list, please send one U.S. \$1 note to Ray Adams, F.R.E.S., Carretera Principal 139, TAMARACEITE, LAS PALMAS DE GRAN CANARIA.
- **EXCHANGE:** Would like to exchange Lepidoptera from Virginia for those of Texas, Michigan and New York only. Leroy C. Koehn, Rt #1, 38 Southern Drive, Dublin, VA 24084 Correspondence with collectors worldwide. All letters will be quickly answered. Have WANTED: available price list of papered butterflies from several countriesand at very fair prices. All material is first class quality. Send inquiries to Mark P. Sitter, 12915 NE Morris Court, Portland OR 97230 U.S.A.

NOTICES - Buy, Sell, Exchange (continued)

- FOR SALE: North American Lepidoptera, including Arctic species. Papered & livestock. Lists for 1978 free upon request. Write to Ken Thorne, Mill St., Delaware, Ontario, Canada, MOL IEO.
- FOR SALE: Pupae of Papilio troilus, Actias luna, Pachysphinx modesta, Darapsa myron and Saturnia pavonia. Reasonable prices. Write for prices. William Houtz, R.D.#4, Box 477, Pine Grove, PA 17963.
- FREE !! I have a sizeable collection of Hesperiidae to give away to some interested collector. My collection is pinned and cannot be mailed. It would be necessary to come and pick up the specimens in person, and to bring your own boxes. First come gets the skippers! Kenneth R. Knight, P. O. Box 152, White Cloud, Micnigan 49349.
- Have Pennsylvania Lepidoptera for trade. Would like exchanges from the West, Midwest **EXCHANGE**: and Canada. Write for list. All letters answered promptly. Frank Bodnar, RD#2, Apollo, PA PA 15613
- Correspondence. I am taking a survey of people who would be interested in trading North WANTED: American Lepidoptera for Michigan material. Rare sps. such as Euptychia mitchelii, Colias interior, Calephelis muticum expected in the coming season. Marc C. Grocoff, 1950 Coterill Lane, Wesland, MI 48185 WRITE NOW!
- WANTED: One copy of The Migration of Butterflies by C. B. Williams (1930). Thomas J. Walker,
- Dept. Entomology, Univ. of Florida, Gainesville, FL 32611. Many <u>H. Cecropia</u> and <u>C. Promethea</u> cocoons available preferably to trade for other EXCHANGE: Saturniidae. Louis Schwasnick, 2586 Graustark Path, Wooster, OH 44691.
- WANTED: Correspondence. Our company imports lepidoptera from all around the world for collectors in the U.S.A. We are interested in corresponding with other butterfly dealers. Clark Thompson, Curator, Kohshin Shoji of America, Inc., 2577 United Lane, Elk Grove Village, IL 60007.
- FOR SALE: The Butterfly Book by W. J. Holland, hardcover 2nd edition 1899. Also, The Insect Book by Leland O. Howard, hardcover 1st edition 1901. Mint condition. Make offer to Charles Ianni, 4365 West 189, Cleveland OH 44135.



RESEARCH REQUESTS

DESIRE LOCALITY DATA for any gynandromorphic Lepidoptera. Oakley Shields, Agri Science Laboratories Inc, 2122 S. Granville Ave, West Los Angeles, CA 90025

INFORMATION WANTED on Saturniidae, Sphingidae and Catocolinae of Colorado. Information needed regarding species records, flight dates, localities, elevations, notes on habitats, life histories and food planta associations. Wanted for a series of publications on the moths of Colorado. All correspondence will be gratefully acknowledged. Karolis Bagdonas, Department of Zoology and Physiology, University of Wyoming, Laramie, WY 82071.

INFORMATION WANTED from anyone who has collected butterflies on the islands of Captiva and Sanibel, Florida, during the months of May through August. Especially interested in records of hairstreaks and skippers. I would also like to hear from anhone who has seen Graphium marcellus or Papilio glaucus on either of these two islands at any time. Jo Brewer 257 Common St. Dedham MA 02026.

Only in Canada, Eh!

To be a resident of the R.O.M.* A butterfly must be At least a windblown immigrant From far across the sea

To be perused and probed and poked And cut and pinned and spread, Labelled, snorted at, giggled at, loved, Then laid in a mothball bed.

R. Smythe

* Royal Ontario Museum. (Sent in by Ken Thorne)

A message from the Editor:

As I write this, we are approaching the eve of the New Year. I look back to the last 6 issues of the NEWS with a feeling of having acquired an immense amount of knowledge of the publishing business and of having had a great deal of fun while doing so. I especially appreciate all the responses to published articles, and the pictures and comments which have added so much to the interest to the NEWS, coming from far and wide.

I equally appreciate the patience and forebearance of John Snider who helped me along in every way imaginable, as I hacked my way through the thorny jungle of financial details, mailing complications and printing techniques.

I have resolved that in the New Year, I will make fewer typos and less glaring mistakes, but above all that I will stick to my schedule and <u>put the NEWS out on time</u>. So please remember that comments which have added so much to the interest to the NEWS, coming from far and wide.

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I equally appreciate the patience and forebearance of John Snider who helped me along in every

Serendipity



NEW MEMBERS

William G. Alberth, 173 Yale Lane, Seal Beach, CA 90740 Jim Best, P.O. Box 866, Artesia, CA 90701 The Rev. David R. Breuer, 6310 E. Brian Kent, Tucson, AZ 85710 David G. Casdorph, 1845 "C" So. Peck, Monrovia, CA 91016 Richard Cassell, 4003 Poplar Level Road, Louisville, KY 40213 Tom H. Davies, 84 Beach Road, Haumona, Hastings, NEW ZEALAND Dr. John D. Glaser, 6660 Loch Hill Road, Baltimore, MD 21239 Clifford A. Hopkins, Monarch Life Insurance Co., 2149 Electric Road, S.W.. Roanoke, VA 24018 David C. Iftner, 26 Bon Gor Lake Estates, RR #10, Columbia, MO 65201 Dr. Benjamin H. Landing, 4513 Deanwood Dr., Woodland Hills, CA 91364 Duane McDowell, Jr., 5014 Oakes Rd., Brecksville, OH 44141 Mrs. Deborah T. McSwain, 1374 Morgana Rd., Jacksonville, FL 32211 Scott Meredith, 31 Ardor Drive, Orinda, CA 94563 Koichi Moroi, 905 Cherry St. #203, Seattle, WA 98104 Dale Miller, 163 N. Brockway, Youngstown, OH 44509 Antonio S. Moreno, 1700 Kinney Ave., Austin, TX 78745 Mrs. Bonnie D. Normand, P.O. Box 61614, Houston, TX 77208 Dorothy Prowell Pashley, Dept. of Zoology, University of Texas, Austin, TX 78712 James J. St. Sauver, 473-68-4271 Box 234, 124th Maint. Co., APO, New York, NY 09046 Darrol F. Shillingburg, 840 Oak Street, Alameda, CA 94501 Mark P. Sitter, 12915 N. E. Morris Court, Portland OR 97230 Robert B. Sligh, 5230 S. W. 5th Street, Margate, FL 33063 Dennis Sullivan, 103 Ash St., Hopkinton, Mass. 01748 Chester E. Sundquist, 5303 Lost Trail, Louisville, KY 40214 Ichwan Toeante, J1. Kartini 10A/28, Jakarta-Pusat, INDONESIA Nathan Alexander White, Rt. 2 Box 144, Robersonville, NC 27871 Graham Wood, 20 June Place, Gymea Bay, Sydney, N.S.W., AUSTRALIA 2227 Robert Wuttken, 2710¹/₂ Highland Ave., Santa Monica, CA 90405 Dr. Joseph D. Zeligs, 9500 Forest Road, Bethesda, MD 20014



CHANGES OF ADDRESS

Dr. Karolis Bagdonas, 209 E. Cannon St., Lafayette, CO 80026 Richard A. Bailowitz, 1750-A Xavier Way, Nogales, AZ 85621 Joseph Belicek, Environmental Res. & Eng., Ltd., 9320 86th Ave., Edmonton, Alberta, CANADA T6C 1J6 David G. Casdorph, P.O. Box 1458, Monrovia, CA 91016 Robert C. Godefroi, 14104 N.E. 77th St., Redmond, WA 98052 Roman M. Grothe, 1 Heather Drive, St. Peters, MO 63376 Richard L. Halbert, 1085 Hoffman Ave., Apt. 14, Long Beach, CA 90813 Kenneth C. Hansen, P. O. Box 892, Redding, CA 96001 James T. Ishida, 26 South Delaware, San Mateo, CA 94401 Heidi Hughes, 8133 Varna Ave., Van Nuys, CA 91402 Major John A. Justice, OFFICIAL ORDERS, 604 Shannon Road, Papillion, NB 68406 David C. MacArthur, 8648 Canyon Crest Road, Fort Worth, TX 76179 Dr. John W. Mason, 32 Maple Vale Drive, Woodbridge, CT 06525 Thomas L. Matula, P.O. Box 3161, Campus Station, Socorro, NM 87801 Wendel L. Miser, 6562 Gildar St., Alexandria, VA 22310 James C. Parkinson, 2001 Zimmerman St., Wausau, WI 54401 Dr. Kenelm W. Philip, Institute of Arctic Biology, University of Alaska, Fairbanks, AK 99701 Jonathan Reimer, 13318 Iowa, Crown Point, IN 46307 Amos M. Showalter, 352 Willard Drive, Nashville, TN 37211 Russell A. Rahn, 411 W. Stewart, Wausau, WI 54401 Stephen R. Steinhauser, 2335 County Line Road, Sarasota, FL 33580 Abner A. Towers, 3260 Rilman Road, Atlanta, GA 30327 Mr. Bernard Turlin, 14 Res. du Nouveau Parc, 78570 Andresy, FRANCE David L. Wagner, P. O. Box 10053, Portland, OR 97210 Bruce Walsh, 941 Waiiki St., Honolulu,Hawaii 96821 Charles N. Watson, Jr., 1337 Watauga St., Kingsport, TN 37660 David M. Walsten, Apt. #3, 5700 Blackstone, Chicago, IL 60637 Gregory R. Watson, P.O. Box 92, New Sarepta, Alberta, CANADA TOB 3MO 11

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AVAILABLE PUBLICATIONS OF THE SOCIETY

- MEMOIRS of the Lepidopterists' Society, No.1, 1964: A Synonymic List of the Nearctic Rhopalocera. C.F. dos Passos (with 3 supplementary articles). Unbound copies ONLY. \$5 (member); \$7.50 (non-members), sent postpaid.
- JOURNAL of the Lepidopterists' Society (and its forerunner, LEPIDOPTERISTS' NEWS), from Vol. 1 947) to date, \$13 per volume, postpaid. Individual numbers available at prices depending on how many were published in each volume (varies from 4-8). NOT available are: Vol.7, no.3/4 (combined in one issue), Vol.9, no.3/4, Vol.12, no.1/2, and Vol.21, no.1.
- NEWS of the Lepidopterists' Society. Some recent issues are still available at \$.25 per copy, postpaid. Inquire as to availability before sending money.

ORDER FROM: Dr. Charles V. Covell Jr., Memoirs Editor, Dept. of Biology, University of Louisville, Louisville, KY 40208 U.S.A.

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, (\$13, U.S.A.) together with full address and areas of interest in Lepidoptera. Remittances in dollars (U.S.A.) should be made payable to the Lepidopterists' Society. All members will receive the JOURNAL published quarterly, and the NEWS in even-numbered years. Back issues of the JOURNAL may be purchased from the TREASURER.

Information on membership may be obtained from the TREASURER, Dr. John M. Snider, 3520 Mulldae Ave., San Pedro, CALIF. 90732, U.S.A. Change of address must be sent to him alone, and only when changes are perminent or very long terms.

Other information about the Society may be obtained from the SECRETARY, Julian P. Donahue, Dept. of Entomology, Los Angeles Co. Mus. of Nat. Hist., 900 Exposition Blvd., Los Angeles, CA 90007. U.S.A.

Manuscripts for publication in the JOURNAL are to be sent to the Editor, Dr. George L. Godfrey, Illinois Natural History Survey, Natural Resources Bldg., Urbana, IL 61801, U.S.A. See inside back cover of a copy of the JOURNAL for editorial policies.