The Lepidopterists' News

THE MONTHLY NEWSLETTER OF THE LEPIDOPTERISTS' SOCIETY
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THE BUTTERFLIES NORTH OF MEXICO

- A Society Project -

During the past months the editor of the News has received several letters suggesting that it would be advantageous to establish as a Society project the preparation of a definitive work on the butterflies of the Nearctic fauna. The two most recent attempts to do this are outdated and of relatively little use to the serious student. Seitz' monumental work, the Macrolepidoptera of the World, vol.5, is poor in many respects although some of the generic revisions included in it are excellent. Holland's Butterfly Book is outdated and does not go into sufficient detail. Of the older works Edwards' Butterflies of North America does not cover the entire fauna and is not conveniently arranged. Scudder's Butterflies of the Eastern United States is a perfect study, but is restricted to only part of the fauna.

The available knowledge has now become so extensive that there is no single entomologist today who has the capacity and the breadth of field knowledge to write singlehandedly a comprehensive study of the butterflies of the Nearctic fauna. However, if the various students of the different genera pool their resources and each member of the Society contributes from his own field experience, the Society can prepare such a study. The editor of the News has asked me to prepare for your consideration a plan for such a study. I firmly believe that if the members of the Society will cooperate wholeheartedly, we can write a "Butterflies North of Mexico" that will not be equalled for some years to come, and then only by a cooperative effort.

Before showing how this job can be done, let me first present outlines of how each family, genus, and species should be treated:

FAMILY TREATMENT

1. Name.
2. Synonymy
   a) citation and type genus;
   b) discussion of status of the name used.
3. Palaeontology (if known to science).
4. Anatomical characteristics of the family.
5. Range of the family and importance of Nearctic genera.
6. Key to the Nearctic genera.

GENUS TREATMENT

1. Name.
2. Synonymy
   a) citation and genotype of every generic name ever used with the species now considered composing the genus;
   b) discussion of the status of each name.
3. Discussion of relationship to other genera in the family.
4. Range of the genus and relationship of Nearctic species to those of other faunal regions.
5. Anatomical characteristics of the genus.
6. General bionomics of the genus
   a) peculiarities of habitat;
   b) peculiarities of habits.
7. Keys to the Nearctic species: larvae, pupae, adults.
8. Bibliography of revisions and monographs.

SPECIES TREATMENT

1. Name.
2. Synonymy
   a) citation of original descriptions relating to the species;
   b) type localities of named forms;
   c) present location of types.
3. Check list of acceptable names arranged in the order that will be followed in the discussion.
4. Detailed description of the imago following a system that has been adopted for all species of the genus.
5. Detailed description of preparatory stages:
   a) chrysalis;
   b) larval stages;
   c) egg.
6. List of food plants and citations.
7. List of parasites and predators.
8. Habits of the imago.
9. Habits of the larva.

(cont. on next page)

10. Variation in imago due to seasonal conditions
    a) coloration and structures;
    b) size.

11. Variation in imago due to geographic range
    a) discussion of races.

12. Distribution of the species and of its races.

13. Problems that require further study.

14. Bibliography.

15. Illustrations
    a) photographs of type(if still extant);
    b) photographs to show normal range of variation of each acceptable race;
    c) photographs of eggs, larvae, pupae;
    d) anatomical drawings useful in diagnosing the species and its races;
    e) maps showing range of food plants;
    f) map of range of species and its races.

Now that you see how fully the Nearctic butterflies should be treated in this proposed work, let me outline how the job can be done. Our membership includes practically every active collector in the area in question. Each of us knows the habits of the butterflies of our own region and probably others. Among us are a variety of taxonomic specialists that blankets nearly every genus known to fly in the faunal region.

Let me take a specific instance, say the genus Incisalia. Harry Clench has been studying this genus intensively for some time. We may call him the specialist whose job it is to prepare the manuscript on that genus. He knows the other men who are strongly interested in these butterflies. They constitute a sort of committee to decide with him which names will be admitted as species names and which as races and synonyms. Meanwhile the rest of us dig up all the field information we can on the genus in our particular areas and send it to Clench. This will be a chore, but IT IS THE SECRET OF THE JOB. We also put at Clench's disposal the loan of material in our collections. With this information and the specimens plus everything in the literature before him, our specialist then does the best job possible on the genus. When his revision is completed, the several co-specialists read and criticize it and Clench makes what changes he feels are necessary. Then one or two of us who are not specialists take a look at the job to see if we can understand what it is all about. After any ambiguous statements are modified, the manuscript is ready for final editing for the printer.

This will take time-- five or ten years. It will take the full cooperation of the membership. There will be no room in it for personal and petty jealousy. It can be done. Shall we do it? Let me have your answer on the enclosed printed post card.

F. Martin Brown
Coordinating Editor for
"Butterflies North of Mexico"

PROCEDURE IN TAXONOMY - IV. SYMBOLS

In entomological writings several symbols appear frequently enough so that it is worthwhile to give their meanings.

1. ♀ Female.

2. ♂ Male.

3. ⚥ Hermaphrodite (bisexual).

4. ! Following a citation of data means "specimen examined".

5. x Between two names means hybrid (e.g., Platysamia cecropia x P. columbia). If parents are known, the female is always written preceding the x. Hybrids may also be written as fractions (e.g., $\frac{\text{Papilio ajax}}{\text{Papilio machaon}}$).

6. ? When placed immediately after the generic name means doubt as to correct generic assignment; when placed after the specific or racial name, expresses doubt only of specific or racial correctness; when placed in front of the generic name, indicates doubt of whole citation. (e.g., Sphinx? ligustri, Speyeria diana?, ?Lycaena dispar).

7. = Means "equals" or "identical with". A synonym is usually placed in parentheses and preceded by the sign of equality. [e.g., Vanessa (= Pyrameis) cardui, Clossiana toddi (= bellona), Phalaenidae (= Noctuidae)].

8. ( ) Used to enclose the subgeneric name [e.g., Hemiargus (Echinargus) isola alce]. If placed around the describer's name, it means it was originally described in another genus [e.g., rapae was described by Linné in the genus Papilio, so the citation must now read: Pieris rapae (Linné)]. See also its use for synonyms in 7, above.

9. F_1 Signifies the first generation of offspring of a cross with known parents. (F_2 signifies offspring of a cross-mating of brother and sister F_1. F_3 signifies offspring of a cross of brother and sister F_2).

C.L.R.

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Entomologishes Nachrichtenblatt is a monthly mimeographed periodical similar to vol.I of the Lep. News. It deals largely with Lepidoptera. Now in its second volume, it is written entirely in German. The annual subscription fee is 3 francs (Swiss), or the editor will exchange subscriptions for living pupae and publications on Lepidoptera. Address: A. Lüthi, Inneres Sommerhaus, Burgdorf, SWITZERLAND.

*

Professor Kenneth J. Hayward, of the Universidad Nacional de Tucuman, Argentina, writes that he is spending "about ten months to a year" at the British Museum of Natural History in London, doubtless in working out taxonomic problems related to his huge monograph of the Rhopalocera of Argentina.

*

Sr. José Oiticica Fº, of the Museu Nacional of Brazil, is in the U.S.A. studying Saturniidae, aided by the award of a Guggenheim Fellowship.

A SHORT REPORT ON THE DAMAGE CAUSED TO LEPIDOPTEROLOGY DURING AND AFTER THE PACIFIC WAR IN JAVA AND MALAYA

by Dr. A. Diakonoff
Zoölogisch Museum, Buitenzorg, Java

At the request of the Editor of the News we give a short account of the damage caused to lepidopterology in Java and Malaya.

JAVA

The Zoological Museum of the Botanic Gardens at Buitenzorg (Zoölogisch Museum van 's Lands Plantentuin) was very fortunate in saving its entire collections, among which is an extensive collection of Lepidoptera of the Malay Archipelago. During the Japanese occupation a few members of the original scientific Dutch staff and of the native personnel were kept on their posts and were able to look after the collections. Only a small part of insect collections has been damaged by lack of disinfesting and drying chemicals at the end of the war.

In the same way is saved an important collection of bred insects of the Institute for Plant Diseases and Pests of the General Agricultural Experiment Station at Buitenzorg.

The Japanese who liked to play the role of the "protectors of science" brought several private collections in West Java to the Buitenzorg Museum, and saved them in this way from destruction.

The greatest damage to private collections has been done during the troubles after the capitulation of the Japanese in 1945-47, by senseless barbaric looting and arson.

We lost the following lepidopterists:

Dr. Edw. R.J. JACOBSON, the famous collector of insects, died in an internment camp in 1945. His collections of Lepidoptera from Sumatra are chiefly in the Leiden Museum.

F. DUPONT, an excellent collector and specialist of Malay Sphingidae, was killed in action during the invasion of Celebes in 1942. His collection of Sphingidae is in the Agricultural College in Wageningen, Netherlands. His collections of other Lepidoptera and insects from Celebes are in the Buitenzorg Museum.

J. OLTHOF, Assistant Entomologist at the Buitenzorg Museum, a young but zealous collector and breeder of Macrolepidoptera, died of consequences of imprisonment in 1945. His collections are in the Buitenzorg Museum.

J.P. ROSIER, collector, was drowned, his ship being torpedoed during a draft of prisoners of war to Sumatra in 1943. His collection is purchased by the Buitenzorg Museum. Contains important material from very little known localities in South Sumatra.

Of the important collections which are lost may be recorded an extensive collection of naturalia, especially Lepidoptera from East Java, but also from many other islands brought together during many years by A.M.R. Wegner, at that time professional collector, whose small private museum in Tengger Mountains, East Java, was burnt to the ground by "extremists" as recently as Sept. 15th, 1947.

An important collection of Lepidoptera (especially Pieridae) and Coleoptera from Bali Id., from extreme East Java, from Lombok Id. and from Celebes by J.P.A. Kalis, at that time private collector, was destroyed by looters in 1946 in East Java.

A collection of Lepidoptera of Java by H. Lucht, estate-manager, was lost by the same agencies in Idjen Mountains, East Java.

Furthermore, private entomological libraries were almost entirely lost. Luckily, the entomological literature in official libraries suffered but little damage.

MALAYA

The Raffles Museum at Singapore suffered hardly any damage. It contains only a small show collection of Lepidoptera.

The Federated Malay States Museum at Kuala Lumpur, Selangor, has been very unfortunate. It has been hit by a miss during a bombardment of the railway station nearby in 1944, and the building was totally destroyed together with the collections of higher animals. A part of the insect collection, however, escaped destruction, but Lepidoptera were very heavily damaged. This is the more deplorable as this collection contained valuable material of Rhopalocera of the Malay Peninsula and unique collections of the expedition to peninsular Siam and to Mt. Kinabalu, North Borneo, by Pendlebury and others.

Mr. H.M. Pendlebury, Director of the above Museum, specialist of the Malay Rhopalocera, was imprisoned by Japanese in Singapore and died of the consequences in Ceylon in 1945, on his way back to England.

In this place we may remember the late Dr. A. Steven Corbet, Lepidopterist of the British Museum, zealous and capable specialist of the Malay Rhopalocera, who died unexpectedly in Tilehurst, England, on May 17th, 1948, in the middle of his critical 2nd edition of Corbet & Pendlebury's "Butterflies of Malay Peninsula."

(Note:)- Australian Microlepidoptera.

We learned recently that the important collection of Australian Microlepidoptera by the late Dr. A. Jefferis Turner was bequeathed to the Council for Scientific and Industrial Research, Canberra, Australia. It is a relief to know that there is a successor to Dr. Turner. Mr. Ian F.B. Common is going to continue the studies on Australian Microlepidoptera with a revision of Tortricidae and Eucosmidae.

REPORT ON WAR DAMAGE IN EUROPE - III.

by S.G. Kiriakoff
Ghent, Belgium

The following are the data which I have been able to collect regarding the war losses to lepidopterology in the formerly occupied West European countries, France and Belgium. I have to thank Messrs. Jean Bourgogne, of the Paris Museum, and Abel Dufrane, Curator, Zoological Museum, Mons, Belgium, for the following information.

1. FRANCE. Most of the important collections have not directly suffered, although, as M. Bourgogne says, there has been some damage due to lack of care as the result of fuel shortage and similar causes. Fortunately, this has not been the case with the Paris Museum which contains the most important collections of France. During the war, the most valuable specimens were carefully put in security and the collections have been since adequately cared for.

Among the public collections lost, are that of the University of Caen and that of the Abbeville Museum; further, that of the Société Entomologique du Nord de la France, Cambrai. Private collections lost or heavily damaged: those of Morault in Nantes; of Frémont in Bordeaux; of Dervaux in Riom.

Lepidopterists deceased: Le Magnan, killed in action; Georges Dorant, died of illness in Indo-China with General Leclerc; F. Le Cerf, of the Paris Museum, died in 1944 after being weakened by war privations; G. Praviel, of the Institute of Agronomy, Paris, died of the same cause.

2. BELGIUM. Fortunately, there is no damage to report concerning the public collections, except partly those of the University of Louvain, and I am not aware of any damage to the Lepidoptera collections there.

Among lepidopterists, F. Derenne was killed during an air raid together with several members of his family, but a large part of his private collection-- the finest in Belgium--was saved from the ruins of his home and is now at the Brussels Museum. Other large private collections lost are those of Colonel Sandras, Ostend, and of Laurent Sarlet, Ensival. The latter collection was destroyed during the Von Rundstedt ("Bulge") offensive, December 1944, and is probably the last one lost during the war in West Europe.

For completeness' sake, it may be added that the well known Belgian phylogenetist Auguste Lameere died during the occupation. He was an old man, being born in 1864, and it is possible that war privations were partly responsible for his death. Prof. Lameere was the author of two classifications of the Lepidoptera, chiefly built up from a phylogenetical point of view.

IMPORTANT COLLECTIONS

1. LEPIDOPTERA IN THE CARNEGIE MUSEUM

About half of the specimens--approximately a million of them--in the Section of Entomology of the Carnegie Museum are Lepidoptera. These include a smattering of moths and butterflies from all over the world, mainly the result of the late William J. Holland's desire to have in his collection a specimen of each known genus. From the standpoint of distribution, our best representation is from western Pennsylvania. Of the North American fauna we also have excellent collections from the far North, the Rocky Mountain regions and Florida. From the Isle of Pines in the Antilles we have a large collection and a very complete one from Jamaica. South America is represented best by Bolivian material with central Brazil, the Guianas, Venezuela and Colombia only slightly behind. We have a tremendous West African collection, mainly from the Cameroons, but are fairly weak in South African specimens. The European collection is weak; the Asiatic is strong in Manchuria and Japan and particularly in butterflies from the high altitudes of Central Asia. India is copiously but spottily represented; Malaya, fair; Java, Buru, Dutch New Guinea and Borneo, moderately so. With the exception of a comprehensive local collection, we have relatively few Microlepidoptera.

Among special collections, perhaps the Edwards Butterfly Collection is the most famous and most controversial. The sphingid collection ranks as one of the world's leading accumulations of these insects. There are 42,000 specimens, lacking only about forty of the named forms. Included are the collections of B. Preston Clark, Charles Oberthur, A. Hume, Boisduval, Leconte, Wm. J. Holland and others. There are 807 sphingid types. The Parnassius collection assembled by Dr. Andrey Avinoff is the leading one of its kind in this country. Although the common European Parnassius apollo, with its hundreds of forms, is almost completely neglected, the rare Central Asiatic species are all present in good series. The Lindsey collection of Hesperiidae is deposited here. We have the only complete collection of the Central Asiatic genus Karanasa in the world.

All of these collections are combined and arranged by faunal regions in accordance with the latest available check lists, with special labels showing the original collection. There are about 2700 type specimens, including types and paratypes of good species and synonyms.

There have been few lepidopterists on the staff of the Carnegie Museum. Dr. William J. Holland was the dominant personality from about the turn of the century until his death in 1932. Dr. Andrey Avinoff, the Russian expert on Central Asiatic butterflies, joined the staff in 1922, and though soon made Director of the Museum, maintained a very active interest in the department. The present curator was appointed in 1941, after a dozen years of sporadic volunteer work. Dr. Richard Fox, formerly with the Reading Museum, is now Research Associate and is finishing a monograph of the family Ithomiidae.

Walter R. Sweadner
Curator of Insects
Carnegie Museum
Pittsburgh, Pa.

METHODS FOR COLLECTING BUCK-MOTHS (HEMILEUCA, SATURNIIDAE)

by David L. Bauer
Yuma, Arizona

The entire family Saturniidae has long been of special interest to collectors, partly because of the great size and beauty of many of the species. However, the Buck-moths, as the species of Hemileuca are commonly called, are overlooked by many collectors. This may be because the majority of the species are found in the western part of the U.S.A. where resident collectors are few and far between, or it may be because of the late emergence of the adults in the fall of the year. Due to the fact that they occur in scattered colonies, little is as yet known about the precise range of most of the species. In habitat they vary from the bogs of Maine to the deserts of Arizona, but in general each species is limited to a rather narrow set of ecological factors. This no doubt is partly responsible for the usually spotty distribution, and for the fact that some species are still almost unknown and are represented only in the largest collections.

The life histories of the various species of Hemileuca are in general similar: the winter is usually passed in the ova, and the larvae hatch when the leaves come out on the foodplant, and by early summer the pupal state is entered, with the adults emerging in the fall or winter. Much information is needed in regard to the habitat and habits of each species, especially the food-plants and specific dates for the appearance of the adults and larvae in the various parts of their range. Some species

(cont. on next page)

FIELD TABLE FOR HEMILEUCA OF U.S.A.

SPECIES	DISTRIBUTION	DATES FOR COLLECTING IMAGO	LARVA	FOODPLANT
H. electra Wgt.	Coastal plains and mts. of S. Calif.	Sept.-Oct.	Mar.-May	Wild Buckwheat (Polygonaceae)
race clio B. & McD.	Desert slope of mts. and desert mts. of S. Calif. and cent. Ariz.	Sept.-Oct.	Mar.-May	Wild Buckwheat
H. juno Pack.	Ariz., s.e. Calif., Nev., Utah, reported from Idaho	Sept.-Jan.	Apr.-June	Mesquite (Prosopis)
H. grotei G. & R.	Mts. of New Mexico, e. Ariz.	Sept.-Nov.	June?	Oak (Quercus)
race diana Pack.	Cent. Texas	Sept.-Oct.	Apr.-June	Oak
H. maia Dru.	Most of U.S.A. east of Rocky Mts.	Sept.-Dec.	Apr.-June	Oak, Willow, Cherry (Prunus), Hazel (Corylus)
H. lucina Hy.Edw.	Maine	Sept.	Apr.-June	Spirea
race latifascia B. & McD.				Willow (Salix)
H. nevadensis Stretch	Most of U.S.A. west of Rocky Mts.	Sept.-Nov.	Apr.-June	Cottonwood (Populus), Willow
race californica Wgt.	S. Calif.	Oct.-Dec.	Apr.-June	Cottonwood, Willow
H. burnsi Wats.	Desert slope of mts., desert mts. of s. Calif., Nev., Utah, Ariz.	Sept.-Nov.	Feb.-Apr.	Spinosum?
H. neumoegeni Hy.Edw.	Higher desert mts. of eastern Mojave Desert and cent. Ariz.	Sept.-Nov.	Mar.-May	Wild Buckwheat
H. tricolor Pack.	S.e. Ariz., s.w. N.Mex.	Feb.-July	July?	Palo Verde (Cercidium)
H. oliviae Ckll.	New Mexico, Colo.	Oct.	?	?
H. sororius Hy.Edw.	Baja Calif., s.e. Ariz., possibly s. Calif.	?	?	?
race hualapai Neum.	?	?	?	?

occupy the same area but have different food-plants and do not have the same habits or fly at the same time. Species that have a wide range north and south may emerge in August or September in the north and as late as December in the south. Likewise the larvae are to be found at widely different times of the year with varying altitude and latitude.

Hemileuca are not hard to collect once a colony is located. The adults of all but one or two species found in the U.S. fly in broad daylight and can be netted the same as butterflies. There are two Southwestern species, tricolor and oliviae, that fly at night and may be caught at light. Most specimens netted or taken at light are males. Where the males are flying thickest females may usually be found clinging to the grass, twigs of bushes, or trunks of trees. This is the best way to secure good specimens of females, for usually they have not yet flown and are in perfect condition. Males may also be brought within netting reach by placing a female in a good locality, and catching the males as they come.

The fact that the winter is passed in the ova by all but one species would give ample time for the exchange of ova by collectors who are interested in rearing their own specimens. The ova are laid in clusters on the twigs or stems of the food-plant. These egg masses may be found with a little searching during the winter when the leaves are off the trees and shrubs. The eggs may be secured with much less effort by enclosing the female. If the female is given considerable room in which to fly around more eggs will be secured. The females will oviposit without the presence of the food-plant, but it is best to place a few dried twigs in the enclosure.

Collecting and rearing the larvae is the most successful method of securing good specimens. It is well to look for larvae while they are still small, because thet are less likely to be infested with parasites. They are much easier to secure when small as they are gregarious during the first, second and part of the third instars. The black clusters of larvae are fairly easy to see as one looks over the food-plants in search of them. A word or two more should be said in regard to parasitism. Among mature larvae it is nearly always high, although infestation seems to run in cycles reaching a peak and then dropping off sharply. In 1947 Hemileuca juno larvae were 75 to 80% infested, while this year ('48) parasitism was only 14% in larvae collected from the same colony.

At times it is profitable to search for the pupae in dead leaves and debris in the vicinity of the food-plant. The places where one is most likely to find pupae are: under logs, boards and rocks, at the bases of trees, and in litter under trees and shrubs. Rarely are the pupae buried in the ground, but are usually enclosed in a meager, loose cocoon in or at the bottom of the layer of litter.

To help in collecting the various species the accompanying table has been prepared. It is hoped that this information will be of aid in showing when and where to collect.

Medical Journal of Australia

ALFRED JEFFERIS TURNER (1861-1947)

By the passing of Dr. A. Jefferis Turner on Dec. 29, 1947, entomology suffered the loss of the dean of Australian lepidopterists.

Turner trained as a physician at the London University College, receiving his M.D. in 1886. Three years later he went to Australia. A brilliant record as a pioneer in public health and children's medicine made him a well-known and respected figure, and he has been termed "Queensland's greatest physician". His retirement in 1937 made possible his concentration on entomology during the last ten years of his life, although much of his entomological work was done during his active professional career.

Dr. Turner began to collect insects when a young man, specializing in butterflies, but later turning to moths as a more challenging group. His paper on Microlepidoptera in 1894 was followed by about 100 entomological articles. Descriptions of hundreds of new species and genera of moths were only part of his contribution, for he had a keen interest in evolution and classification. His penultimate paper was a noteworthy classification of Lepidoptera (see Lep.News 2: p.65). Turner's papers were orderly and careful, although by modern standards of taxonomic descriptions they lack important material such as comparisons and figures. His knowledge of Greek and Latin made his names for new species and genera unusually meaningful, and it was his habit to state the derivation.

His large and valuable collection is now deposited in the museum of the Division of Economic Entomology (Council for Scientific and Industrial Research) at Canberra. He was a Fellow of the Royal Entomological Society of London, a member of the Royal Society of Queensland, the Linnean Society of New South Wales, the Lepidopterists' Society, and others.

Dr. I.M. Mackerras wrote of Turner: "He lived a full life, he completed the task he set himself, and he left... the results of a vast amount of original work clearly and systematically presented, so that future workers will not have to delve over the old ground again. ... And a memory will remain...of kindly gentleness and whimsicality, which will still, for a while be talked about when entomologists gather together." J.E.R.

Mary E. Murtfeldt

BRIEF BIOGRAPHIES

15. Mary Esther Murtfeldt (1839-1913)

The appointment of Prof. C.V. Riley, in 1868, as entomologist of the State of Missouri marked a turning point in American entomology. Economic entomology then became a recognized profession. An increasing number of states realized the need for these services and by the end of another decade the federal government in Washington established the Division of Entomology in the Department of Agriculture. It early became evident that Riley had considerable genius for organizing this work. He soon enlisted the help of certain persons having some knowledge of entomology to assist him in his duties. Foremost among these assistants was Miss Mary Esther Murtfeldt, an amateur entomologist who resided at Kirkwood, Missouri. L.O. Howard says of her: "she was an educated, charming lady, who met Prof. Riley when he first went to Missouri in 1868 and who was much influenced by him in her entomological studies."

Mary Esther Murtfeldt, the eldest daughter of C.W. and Esther Murtfeldt,was born in New York City, August 6, 1839. There, as a child, she suffered a serious illness which left her with a paralysis,so that in all her later life she was restricted in her walking. While she was still quite young the family moved to Rockford, Ill., where Mary attended school and later Rockford College. In 1869 the family moved to St. Louis, Mo., and two years later to Kirkwood, a suburb of St. Louis, where she lived the rest of her life.

Miss Murtfeldt's interest in entomology was chiefly with the Microlepidoptera, of which she had quite a considerable collection. These were nearly all bred specimens. Due to her physical handicap, she was not able to go out into the field to collect. The family had a beautiful garden where she could sit and observe while her fathers and sisters did the work. Members of her family collected insects for her to some extent, but she soon found that insufficient toward making an orderly and scientific collection. Consequently she succeeded in interesting a number of boys to go out into the fields and woods and, having been instructed on how and where to find the eggs and larvae, they brought them to her for rearing in her home laboratory.

Miss Murtfeldt collaborated with C.V. Riley, then State Entomologist of Missouri, from 1876 to 1878, and was Acting State Entomologist from 1888 to 1896. She was a field agent of the Division of Entomology of the United States Department of Agriculture from 1880 to 1893. During these years her work consisted principally of studying the life history of insects, especially the Microlepidoptera, which she was able to do on the study table of her home laboratory. She described 18 new species of moths, 7 of which have since been placed in the synonymy.

Miss Murtfeldt began writing on entomological subjects in 1870, when she was 31 years old. It was then that she wrote "The Firefly", "Life of a Butterfly" and "The Preying Mantis", which were published in Little Corporal Magazine. In 1873 she wrote "Women and Science", published in the Rural New Yorker, and in 1874 she read "Value of Natural Science for the Education of Women", before the Women's Congress in Boston. Then followed a number of papers in the scientific journals, many of them on insect life-histories. In 1890 appeared the second series of "Stories of Insect Life", prepared by Miss Murtfeldt in collaboration with Clarence M. Weed.

In 1891 she wrote a book entitled "Outlines of Entomology, prepared for the use of Farmers and Horticulturists, at the Request of the Secretary of the State Board of Agriculture and the State Horticultural Society of Missouri", published at Jefferson City, Missouri. This was a popular work of 130 pages prepared with a view of introducing farmers and horticulturists to the science of entomology. The object of the author was to produce a perfectly elementary work. She goes carefully over the subject of the general structure of insects, defining the terms commonly in use, treats of the transformations and the classification and names, and in short chapters discusses the main forms of each of the orders. Some 50 figures, nearly all by Riley, are given in the text.

Many honors were bestowed upon Miss Murtfeldt. She was a Fellow of the American Association for the Advancement of Science and in 1890 was elected Vice President of the Entomological Club of this organization. She was an Honorary Member of the Academy of Science of St. Louis. She disposed of her collection of Microlepidoptera to Cornell University during the later years of her life. At the time of her death, which occurred on February 23, 1913, at the age of 74, she was associate editor of "Farm Progress", a bi-weekly journal issued by the St. Louis Republic.

Edwin P. Meiners, M.D.

Correction: In paper #43 of the News (2: p.19) it should ne noted that the fluid in Nepenthes pitchers is a digesting fluid secreted by the plant and not rain water, as we had stated. Dr. Diakonoff kindly pointed out the error. Listings 324, 325, 343 (below) were contributed by Dr. Diakonoff.

310. Beirne, Brian P., "Eublemma astrina, E. parva and other Lepidoptera in Ireland in 1947." Entomologist, vol.81: pp. 132-136. June 1948.

311. Bell, Ernest L. & William P. Comstock, "A New Genus and Some New Species and Subspecies of American Hesperiidae(Lepidoptera, Rhopalocera)." Am. Mus. Novitates, no.1379: 23 pp.,16 figs. 28 June 1948. Describe as new: Chioides catillus subsp. churchi (Jamaica), Proteides mercurius subsp. vincenti (St. Vincent) & subsp. sanchesi (Hispaniola), Polygonus manueli (Brazil)(also north to Florida), P. manueli subsp. punctus (St. Vincent), Echelatus sempiternus subsp. dilloni (Hispaniola), Achylodes janus (Jamaica), genus Burca (type- Nisioniades concolor H.-S.), B. stillmani (Dominican Rep.), B. hispaniolae (Hispaniola), Ephyriades dominicensis (Dominica), E. brunnea floridensis (Key Largo, Fla.), Copaeodes stillmani (Dominican Rep.), Atalopedes nabokovi (Haiti). Figure ♂ genitalia of manueli, dilloni, janus, B. stillmani, hispaniolae, dominicensis, C. stillmani, nabokovi, and similar spp. not new.

312. Bell, J.H. & P.J., "West Hertfordshire Light Trap, 1947". Entomologist, vol.81: pp.105-106. May 1948.

313. Berger, Lucien A., "A Colias New to Britain (Lep. Pieridae)." Entomologist, vol. 81: pp.129-131. June 1948. Records his newly discovered Colias similar to C. hyale from several localities. Mentions host plant as Hippocrepis comosa. Summarizes differences from larva and adult of C.hyale. Considers correct name to be probably C. alfacariensis, an aberrational name.

314. Betz, J.-T., "Une nouvelle aberration de Melanargia." (In French). Rev. franç. Lépid., vol.11: pp.297-298, 2 figs. Apr.1948.

315. Blackie, J.E.H., "The English Colonies of Erebia aethiops Esper." Entomologist, vol.81: pp.107-109. May 1948.

316. Breland, Osmond P., "Two Migrations of the Snout Butterfly, Libytheana bachmannii larvata (Strecker). (Lepidoptera: Libytheidae)." Ent. News, vol.59: pp.128-131. May 1948. Records westward and southeastward migrations of larvata in Texas and reports extensive feeding on sticky exudate on gall-wasp (Cynipidae) galls on oaks.

317. Bryk, Felix, "Neue Formen von Eudia pavonia (L.) aus Schweden. (Lep.: Saturniidae)." (In German). Entomologisk Tidskrift, vol.69: pp.142-144, 3 figs. 5 Aug. 1948. Figures clearly and describes as new "forms" of E. p. pavonia: f. postrosacea (Uppland) and f. trafvenfelti (Wästerbotten) and E.p. ssp. lappmarchica (Lappland) each based on 2 or less specimens!

318. Clark, Austin H., "Classification of the Butterflies, with the Allocation of the Genera Occurring in North America North of Mexico." Proc. Biol. Soc. Wash., vol.61: pp.77-81. 16 June 1948. See summary in Lep. News 2: 73.

319. Corbet, A. Steven, "The 'Preliminary List of the Rhopalocera of Borneo' by W.B. Pryer and D. Cator." Ann. & Mag. Nat.Hist., vol. 14: pp.415-420. 2 Mar. 1948. Analyses this very rare 1894 paper, reproducing original descriptions. Sinks as races: Danais tuak (under D. plexippus), Charaxes saida (under Polyura jalysus), Euthalia borneensis (under E. aconthea), Ergolis ahmat (under Ariadne merione), Ergolis telok (under Larina castelnaui), Atella creaghana(under Vagrans egista). Euripus kabeli is the ♀ form of Idrusia nyctelius pfeifferae. Sinks as synonyms: Euploea susah (under E. sylvester tyrianthina), Herona arborescens (under H. sumatrana schoenbergi), Neptis fulva & kechil (under Neptis n. nata), N. bahalla (under N. d. duryodana), Abisara skertchlyi (under Zarax teneta), Poritia dorothiana (under Cyaniriodes l. libna). Lists as NOMINA NUDA: Elymnias annea; Euthalia halimah, vesta, abayah, lakayah.

320. Dannreuther, T., "Migration Records,1947." Entomologist, vol.81: pp.73-83, 110-117. Apr.May 1948. Summarizes records for British Isles. Remarkably numerous in 1947 were: Colias croceus, Macroglossum stellatarum, Rhodometra sacraria.

321. De Laever, E., "Espèces nouvelles pour la faune belge: Coenobia rufa Haw." (In French). Lambillionea, vol.48: pp.18-20. Apr. 1948. Redescribes genera Coenobia, Arenostola, and Archana. C. rufa new record for Belgium.

322. de Puységur, K., "Contribution à l'étude des Rhopalocères de l'Hérault." (In French). Rev. franç. Lépid., vol.11: pp.306-310. June 1948. Records 12 spp. of butterflies from l'Hérault.

323. de Toulgoët, H., "Chasses de nuit aux Cols du Galibier et du Lautaret (Hautes-Alpes)." (In French). Rev. franç. Lépid., vol.11: pp.265-272. Apr. 1948. Account of collecting rare moths at light in the Alps. New record for France: Standfussiana wiskotti.

324. Diakonoff, A., "Waarnemingen over Indische Insecten." (In Dutch). Tijdschrift v. Ent., vol.88: p.xlviii. 1 Oct. 1947. Observations on myrmecophile Lycaenidae and on Epipyropidae were made in prisoner-of-war camps. In Java larvae and pupae of Lycaenestes emolus javanus Feld. and of Amblypodia centaurus amazona Pag. were observed "nursed" by the rapacious and dreaded rang-rang ant, Oecophilla smaragdina F. Hypolucaena erylus God. is possibly also associated with this ant. In Sumatra epipyropid larvae were found on the abdomen of a pyropid, but could not be reared. This is probably the first record of Epipyropidae from the Malay Archipelago. (A.D.)

325. Diakonoff, A., "Notes on Tortricidae from the Malay Archipelago with description of a new species (Lepid.)." Tijdschrift v. Ent., vol.88: p.340. 1 Oct. 1947. A tortricid, Procalyptis liberatrix, is described from Christmas Island. (A.D.)

326. dos Passos, Cyril Franklin, "The Occurrence of Anthoxanthins in the Wing Pigments of some Nearctic Oeneis (Rhopalocera: Satyridae)." Ent. News, vol.59: pp.92-96. Apr. 1948. Applied Ford's (1941) technique for finding anthoxanthins without injuring the specimens. Apparently tested all N.American

spp. of Oeneis, finding the pigment only in the uhleri and taygete groups. Of the former, all spp. and subspp. had anthoxanthins, but only ivallda in the taygete group reacted positively. Dos Passos therefore raised ivallda to full specific rank, rather than a race of chryxus.

327. Dufrane, Abel, "A propos des races françaises de Parnassius apollo." (In French). Rev. franç. Lépid., vol.11: pp.295-296. Apr. 1948.

328. Fox, Richard M., "Roswellia, a New Genus of Ithomines (Lepidoptera)." Ent. News, vol. 59: pp.131-132. May 1948. Describes new genus Roswellia (generotype- Athesis acrisione) with only one species. This leaves Athesis also monotypic. Named for Roswell G. Williams, Jr.

329. Gozmány, László, "Az Ócsai-turján lepkeritkaságai" ("Lepidopterological rarities of the Torfmoor of Ócsa.") (In Hungarian with English summary). Folia Entomologica Hungarica, vol.2(s.n.):pp.60-62. 1947. Records various moths from central Hungary; describes new aberration of Boarmia punctularia.

330. Gozmány, L.,"Breeding Perigrapha cincta F. (Lepidopt.)." (In English). Fragmenta Faunistica Hungarica, vol.10: pp.20-21. 1947. Reports 5 forms reared from batch of eggs of P. cincta.

331. Gozmány, L., "New data to the Macrolepidoptera Fauna of Budapest with the description of a new aberration of Euplexia lucipara L." (In English). Fragmenta Faunistica Hungarica, vol.10: pp.55-58, 1 fig. 1947. Records of 15 moths and a skipper. Photo of new aberration.

332. Herbulot, Claude, "Atlas des Lépidoptères de France, Belgique, Suisse, Italie du Nord. Fascicule II: Hétérocères.", (In French). 145 pp., 16 pls. col. Editions N. Boubée & Co., Paris. 1948. See note on p.88 of this issue of the Lep. News.

333. Janmoulle, E., "Espèces nouvelles pour la faune belge: Microlépidoptères." (In French). Lambillionea, vol.48: pp.20-21, 33-34. Apr.,June 1948. Records: Acalla abietana, Steganoptycha subsequana, Hypatima inunctella, Coleophora sylvaticella, Euplocampus anthracinalis, Grapholitha gemmiferana, Anacampsis (Tachyptilia) betulinella.

334. Kiriakoff, S.G., "Taxonomie et Spéciation. La semi-espèce et la super-espèce." (In French). Bull. & Ann. Soc. Ent. Belgique, vol.84: pp.64-70. 1948. Discusses semi-species and ultra-species (see Lep. News 2: pp.15,16), giving as examples of the former: (a) Glaucopsyche melanops, paphos and charybdis; (b) Cupido argiades, alcetas and decolorata; (c) Hydraecia oculea (9 genitalic forms).

335. Le Marchand,S., "Stigmella(Nepticula)prinophyllella LeMd. est synonyme de Nepticula haraldi Soffner." (In French). Rev.franç. Lépid.,vol.11:pp.297-298,2 figs. Apr.1948.

336. Le Marchand, S., "Tineina - Les Oecophoridae." (In French). Rev. franç. Lépid., vol.11: pp.284-291. Apr. 1948. Summarizes characters of family and subfamilies (Oecophorinae, Scaeosophinae, Eulechriinae, Philobotinae, Depressariinae). Gives key to the 24 French genera.

337. Le Marchand, S., "Une petite question de Nomenclature." (In French). Rev. franç. Lépid., vol.11: pp.310-312. June 1948. Discusses Law of Priority and points out that it is unavailable for names erected for galls and mines whose causative insect was unknown. As an example of application of this principle Le Marchand gives Nepticula pseudoplatanella Weber (nec Skala). A scholarly article.

338. Muschamp, P.A.H., "Fusio (Switzerland) as an Entomological Centre." Ent.Mon.Mag., vol.84: pp.106-108. May 1948. Took 7 hybrids of Parnassius delius and apollo.

339. Oiticica F?, José, "Sôbre a Genitália das Fêmeas de Hepialidae (Lepidoptera)." (In Portuguese). Summa Brasiliensis Biologiae, vol.1: pp.384-428, 12 figs. May 1948. Describes female genitalia of Hepialus humuli (Belgium) and Phassus gigantea (Brazil) and gives superb photos of dissections. Finds previous work incorrect and that Hepialidae actually have separate vulva and ovipore, but that both are on the ninth segment. Maintains that this is an intermediate step between the very primitive (monotreme) Lepidoptera and the higher (diplotreme) groups. Existence of such an intermediate had been doubted by Williams after similar studies of other groups.

340. Picard, J., "Pyrgus (Pyrgus) malvae L." (In French). Rev. franç. Lépid., vol.11: pp. 272-283,2 figs.,pl.15. Apr.1948. Concludes that malvoides is undoubtedly a race of malvae, and ponticus and melotis almost certainly are also mere races. Summarizes knowledge of genitalia, biology, distribution. Believes Hesperiidae, esp. Pyrgus, do not travel significant distances or cross large bodies of water.

341. Querci, Orazio, "Notes on Satyrus (Melanargia) arge, Sulz. and S. ines, Hoffgg." Ent. Rec. & Journ. Var., vol.60: pp.57-58. Apr. 1948.

342. Sarlet, Laurent, "Les Géomètrides à Femelles Aptères." (In French). Faune de la Belgique (Les Naturalistes Verviétois), 150 pp., 25 pls. 1948. Detailed account, with descriptions, specific differences, synonymies, references, and photos of Geometridae with wingless ♀♀ occurring in Belgium: Alsophila aescularia, A. quadripunctaria, Operophtera fagata, O. brumata, Theria rupicapraria, Erannis bajaria, E. leucophaearia, E. aurantiaria, E. marginaria, E. defoliaria, Phigalia pedaria, Apocheima hispidaria, Nyssia zonaria, Poecilopsis pomonaria. Numerous biological notes. A very fine paper!

343. Toxopeus, L.J., "On the borer moths Zeuzera coffeae Nietn. and Z. roryvyanea Wlk. (neuropunctata Gaede) (Lep. Cossidae, Zeuzerinae)." Treubia, vol.19: p.167. 1947. With the help of extensive bred material the author discriminates these two species, which are dangerous borers of cultivated trees in Java, and describes a new subspecies from Java: Z. coffeae vireus. (A.D.)

344. Turner, A. Jefferis, "A Review of the Phylogeny and Classification of the Lepidoptera." Proc. Linnean Soc. N.S. Wales, vol.71: pp.303-338, 96 figs. 30 Apr. 1947. See review in Lep. News 2: 65.

345. Williams, L.H., "Notes on the Lepidoptera occurring in the Reading District during 1947." Ent. Rec. & Journ. Var., vol.60: pp.44-45. Apr. 1948.

COLLECTING SPHINGIDAE IN JAMAICA, 1948

In connection with a piece of work I am doing with the Institute of Jamaica, at Kingston, Jamaica, I spent the month of June 1948 collecting there.

We are trying to secure a good series of all the species of Sphingidae common to southern Florida, Jamaica, the Lesser Antilles including Trinidad, and northern South America, especially Venezuela and Colombia. We believe that a study of these series may throw some light on speciation, on the origin of certain species and variations, and may be another link in the belief that Jamaica was once a part of the North American land mass and Trinidad and the southern Antilles may have been a part of the South American continent.

I did most of my collecting over flowers in the Hope Gardens near Kingston, in the hour of dusk and first fallen dark, about 7-8 in the evenings. During 21 evenings spent in the Gardens, which lie on a plain completely surrounded by mountains, I was able to secure 24 of the possible 33 species of Sphingidae reported from Jamaica. The most numerous species, rating almost as pests, were Celerio lineata, Xylophanes tersa, Herse cingulata. Certain moths such as Pachylia ficus and P. syces insularis came for nectar along with the hummingbirds while it was still light. While we were there the moon rose full over the flowers but did not seem to check the flight as I feared. The lovely P. brontes was very abundant during the early part of my stay while the whole genus Erinnyis came only in the latter part of the time. I was fortunate in securing two specimens of Cocytius vitrinus, up to this time reported only from Cuba. Also Pachylia syces insularis had not been recorded at the Institute since about 1888. The species taken were:

Herse cingulata (Fabr.)
Protoparce brontes (Drury)
  sexta jamaicensis Butler
  rustica (Fabr.)
Cocytius antaeus (Drury)
  duponchel (Poey)
  vitrinus Rothschild & Jordan
Pachylia f. ficus (Linné)
  f. aterrima Bonninghausen
  syces insularis Rothschild & Jordan
Protambulyx strigilis (Linné)
Amplypterus gannascus (Stoll)
Erinnyis ello (Linné)
  alope (Drury)
  obscura (Fabr.)
  jamaicensis
  crameri (Schaus)
Grammodia caicus (Cramer)
Epistor l. lugubris (Linné)
  lugubris latipennis Rothschild & Jord.
  ocypete (Linné)
Pholus labruscae (Linné)
  s. satellitia (Linné)
Xylophanes tersa (Linné)
  pluto (Fabr.)
  chiron neccus (Cramer)
Celerio lineata (Fabr.)

Margaret M. Cary
Philadelphia, Pa.

BOLORIA MONTINUS ON THE MOUNT WASHINGTON CARRIAGE ROAD.- On Aug. 15 & 16, 1948, L.P.Grey, D.J. Lennox, and W.P. Rogers, later joined by A.C. Frederick, found both sexes of the elusive Boloria montinus in satisfactory numbers and in a fresh condition at Cragway Spring at the point where the Nelson Crag trail meets the Carriage Road. On both sides of the road the species should be found on goldenrod and meadowsweet, provided the sun shines, during mid-August, with early morning the best time to get the species. Thus an easily accessible area has been discovered which eliminates climbing to the summits of the Presidential range in order to obtain this sought-after insect.

W.P. Rogers, Fall River, Mass.,
and L.P. Grey, Lincoln, Me.

AN UNUSUAL RECORD OF THE BLACK WITCH, EREBUS ODORA (L.).- Dr. R.C. Rush of Hudson, Ohio, turned over to the writer a male specimen of the Black Witch, Erebus odora (L.), which had flown into an office window on the General Electric plant at Nela Park near Cleveland during the evening of June 30 or early morning of July 1, 1948. It was the third Ohio specimen of this species of tropical moth which had come to the attention of Dr. Rush in a quarter of a century. The other two were from Akron and Wooster, were females, and were collected in the month of September. The present specimen, a male, is darker than usually illustrated, and has a wing spread of 6.25 inches. Scattered migrants of this largest of the noctuid moths are occasionally found in the northern United States and Canada, but usually in the late summer or early fall months. The specimen at hand was collected a month or two earlier than most of the known records for the northern United States.

Ralph W. Dexter, Kent State Univ., Ohio

TECHNIQUE NOTES

To mount Lepidoptera on the spread board I use CELLULOID photographic plates. I have noted that celluloid is better than paper on account of its transparency and because the scales do not adhere to it as happens on paper. Celluloid is better than glass plates, used by some, because it can be cut to the required measure. Furthermore celluloid can be bought at low prices.

To fight mildew I have used SALICYLIC ALCOHOL with remarkable success.

S.L. de la Torre y Callejas
Matanzas, Cuba

Prof. R.L. Usinger recommends, as superior to other cloth, white, open mesh nylon marquisette for insect net bags, with plain nylon for the strengthening band around the net hoop. (See Bull.Brooklyn Ent.Soc.43:p.68).

John H. Fales is compiling a check-list of the butterflies of Maryland and requests that records from that state be sent him at: 1917 Elkhart St., Silver Spring, Md.

NOTICES BY MEMBERS

Wanted immediately: All species of the genus ANNAPHILA Grt. and forms of AXENUS ARVALIS Grt. Accurate ecological data desired. Offer in exchange Phalaenidae of So. Calif. & living pupae of Hemileuca nevadensis californica Wgt. C.I. Smith, 161 So. 16th St., Apt. 1-B, Richmond, California.

RARE HUNGARIAN LEPIDOPTERA offered in exchange for literature; especially needed are the McDunnough Check-list (both macros and micros) and Ford's "Butterflies". Dr. L. Gozmány, Budapest XII, Györi ut 1. II. 14., HUNGARY.

WANTED: Wasps (Hymenoptera: Vespoidea, Sphecoidea, Chrysidoidea), particularly Psammocharidae (Spider-Wasps) and Mutillidae (Velvet "Ants"), of the world. Will collect Lepidoptera or other insects in exchange. David G. Shappirio, 4811 17th St., N.W. Washington 11, D.C.

Wanted from collectors or museums: any material of PEREUTE, ARCHONIAS and LEODONTA (Pieridae), for determination and distributional data to be used in revisions. It will be returned promptly and handled carefully. Please write before sending shipment. F.M. Brown, 326 Burns Bldg., Colorado Springs, Colorado.

WANTED: for taxonomic study, any U.S. species of Hesperioid genus MEGATHYMUS. I have for exchange many species of North American Macrolepidoptera. Paul R. Ehrlich, 538 Academy St., Maplewood, New Jersey.

NAMED RHOPALOCERA & PARTIALLY NAMED HETEROCERA & MICROLEPIDOPTERA offered in exchange for Microlepidoptera of South Asia. Collections of such Microlepidoptera also solicited for identification. Dr. A. Diakonoff, Zoölogisch Museum, Buitenzorg, Java, D.E.I.

SPEYERIA DIANA and many other scarce Lepidoptera available for exchange for desired spp., esp. of Papilio, Megathymus, Sphingidae, etc. William F. Duhlmeier, 2535 Indian Mound Ave., Norwood 12, Ohio.

In exchange for Philotes of the world, MY ENTIRE COLLECTION of 5,000 specimens of western Lepidoptera. Will send list of check list nos. available. Let me know your localities. R.H. Mattoni, V-29 Terr.War Housing, Richmond, Calif.

ENTOMOLOGICAL EQUIPMENT FOR SALE. Quality material at quantity price. Write for catalog. Bio Metal Associates, P.O. Box 346, Beverly Hills, Calif.

BUTTERFLIES OF THE BELGIAN CONGO AND BELGIUM offered in exchange for North American butterflies (except Hesperiidae). S.G. Kiriakoff, 14 Universiteitsstraat, Ghent, BELGIUM.

Will trade a ROTHSCHILDIA ORIZABA or a ROTHSCHILDIA ARETHUSA for a Samia rubra or a Samia columbia (both males). D.H. Kistner, 1142 Cheyenne Dr., Cincinnati 16, Ohio.

FOR SALE: common MEXICAN BUTTERFLIES in good condition. Supply limited, order early. Write: L.S. Phillips, Loyola University Medical School, 706 S. Wolcott Ave., Chicago, Ill.

The Lorquin Entomological Society (Los Angeles Museum, Exposition Park, Los Angeles 7, Calif.) is offering Czech insect pins for $2.50 per 500 (limit per membership) for members only. Annual dues are $0.50.

Japanese Rhopalocera offered in exchange for needed specimens from S. & Cent. America & S. Pacific Is. (list available on request). T/5 R.J. Jablonski, Med. Det., 13th F.A. Bn., A.P.O.24, Unit 4, c/o P.M., San Francisco, Cal.

In papers with data. CATOCALA texana, amestris and westcotti, pretiosa, mira, verilliana, ahola and other Texas species. For cash or exchange. Complete list on request. L.H. Bridwell, Forestburg, Texas.

CASH PAID FOR BUTTERFLIES of almost any species from any part of the world. Only perfect specimens with data wanted. Will buy 1 or 100 of any species, or contract for season's catch. A. Glanz, 289 E. 98th St., Brooklyn 12, N.Y.

WANTED FOR STUDY: PAPILIONIDAE OF WORLD, especially P. glaucus group (incl. eurymedon, daunus, etc.); also machaon and thoas group and Nearctic Parnassiidae. Buy or will exchange U.S. Macrolepidoptera. Kent H. Wilson, 430 Ridgewood Road, Fort Worth 7, Texas.

LARGE STOCK OF HIGH GRADE INSECT PINS from Czechoslovakia available at 65¢/100, $6/1000. R.G. Wind, Rt.1, Box 145, Livermore, Calif.

ALL SPECIES OF EUREMA desired, esp. mexicana, proterpia, arbela, gundlachia, damaris, xanthochlora and others. Cuban butterflies offered in exchange. Dr. S.L. de la Torre y Callejas, Playa 75½, Matanzas, CUBA.

LIVING MATERIAL

WANTED: Living pupae of any species of Colias, esp. eurytheme-philodice, in exchange or for purchase. Carl W. Gottschalk, Harvard Medical School, 25 Shattuck St., Boston 15, Mass.

LIVING COCOONS of Attacus atlas & edwardsi, Antheraea mylitta, Actias selene for sale. Send with U.S.A. orders permit from U.S.Dept. Agriculture. Payment full in advance. Himalayan Butterfly Co., Shillong, Khasi Hills, INDIA.

Can offer living pupae Rothschildia orizaba in exchange for pupae Platysamia columbia or gloveri and Callosamia angulifera. R.L. Halbert, 1201 W. 30th St., Los Angeles 7, Calif.

Wanted: EGGS OR COCOONS OF SATURNIIDAE, esp. Platysamia, for rearing & hybridization stock. Offer in exchange pupae of several genera, including Papilio, Parnassius, Speyeria, Polites, Arctia, and Platysamia eurvale, or will buy. D.P. Frechin, 1504 N. Lafayette, Bremerton, Wash.

Specimens & cocoons of SATURNIIDAE of the world desired. Correspondence invited. F.E. Rutkowski, St. Bede College, Peru, Illinois.

Wanted: CATOCALA EGGS, esp. of Crataegus (Hawthorn) feeders. Will exchange for other Catocala material. Sidney A. Hessel, 8 Woodmere Blvd. S., Woodmere, New York.

QUESTIONS AND ANSWERS

Q. "Is it usually possible to find differences in eggs of various species of Lepidoptera?"

A. Pretty generally, but not invariably: compare the descriptions and figures in Scudder's "Butterflies of Eastern North America" and such papers as J.H. Cook's on the Incisalias, chiefly in the Can.Ent. vols.39,40, 1907-8.

Q. "Which American Lepidoptera other than Lycomorpha pholus feed on fungi, lichens, mosses, or ferns?"

A. A good many, including most of the true Tineidae on fungi etc., many Deltoid Noctuidae; most or all of our local Lithosiinae (Hypoprepia, etc.) on fungi or lichens or both; also a widely scattered list on ferns, among them the genus Eriopus (Methorasa, Euherrichia) in the Noctuidae. For Microlepidoptera and Geometridae see the food indexes of the "Lepidoptera of New York," part 1, and part 2 (in press).

W.T.M. Forbes

Fascicule II of the "ATLAS DES LÉPIDOPTÈRES DE FRANCE, BELGIQUE, SUISSE, ITALIE DU NORD" was recently published. This is the "HÉTÉROCÈRES" by Claude Herbulot. It includes the families: Amatidae, Arctiidae,Callimorphidae, "Noctuidae", Liparidae, Sphingidae, Thyatiridae, Axiidae, Cerutidae (= Notodontidae), Attacidae (= Saturniidae), Lemoniidae, Psychidae, Heterogynidae, Cossidae, Endromidae, Heterogeneidae (= Limacodidae), Drepanidae, and Thyrididae. There are 402 figures of adults and 22 of larvae, all 424 being colored! The figures in most cases are so good that "picture book taxonomy" should be easy for these families in France. There is a key to all French families of Lepidoptera and a phylogenetic diagram for these families. Subfamilies are keyed under their families. Host plants and flight periods are given.

This little manual will be a useful inclusion for the bookshelf of anyone interested in moths of any part of the world, primarily, of course, for the Palearctic Region. Its price is 350 francs (French) and it can be procured from: Éditions N. Boubée & C.ie, 3, Place St.André-des-Arts, Paris(VIe), FRANCE. For U.S.A. members, remittance can be sent by postal money order and the official exchange rate for U.S. dollars can be easily found by telephoning or visiting any large bank.

Dr. Charles D. Michener, recently Associate Curator of Insects in the American Museum of Natural History, has accepted an appointment as Associate Professor in the Department of Entomology of the University of Kansas. This department has long had a record of distinction in training taxonomic entomologists. Dr. Michener plans to continue his research on the systematics of the Saturniidae and bees.

PLEASE NOTIFY THE NEWS EDITORS OF CHANGES OF ADDRESS PROMPTLY

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As noted on page 84, Dr. A. Diakonoff, of Java, has provided us with abstracts of papers in Dutch journals and will be doing so regularly. Eventually we hope to have Society members preparing the brief reports on Lepidoptera papers in every country of the world in a manner which will result in: listing of each paper in the News very soon after it is published, a more complete coverage than is now possible, a more informed appraisal of the paper than is sometimes possible for us for remote regions or unfamiliar languages, and an easing of the exceedingly heavy time load which we have imposed on ourselves in making the News give the services we feel it should.

Our policy regarding copies of the News which fail to reach subscribers is as follows: We are willing to guarantee delivery of every issue. If you fail to receive any number by the time the succeeding number reaches you, merely drop us a card and the lost issue will be sent you.

With the present number the annual Membership List is being distributed. We hope you will notice which of your lepidopterist acquaintances are not present and tell them of the Society and the News. Several members have loaned friends a copy of the News with the result that the friends soon became members.

New members are not listed in the present issue, since they are all included in the Membership List.

THE LEPIDOPTERISTS' NEWS is the monthly periodical of The Lepidopterists' Society. Membership is open to anyone interested in the study of butterflies & moths. The 1948 dues, including subscription to the NEWS, are $1.50 for Regular Members and $3.00 or more for Sustaining Members. Please make remittances payable to : Charles L. Remington.