

The Lepidopterists' News

THE MONTHLY PERIODICAL OF THE LEPIDOPTERISTS' SOCIETY

c/o Osborn Zoological Laboratory, Yale University, New Haven 11, Connecticut, U.S.A.

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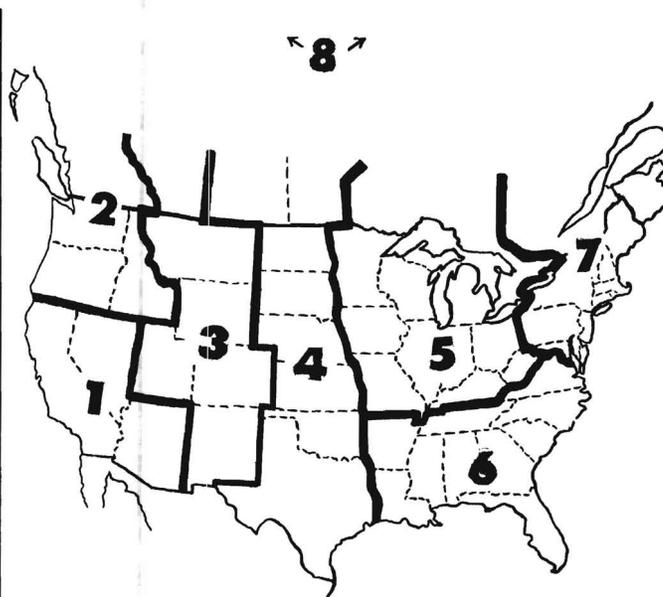
INSTRUCTIONS FOR THE FIELD SEASON SUMMARY FOR 1949

Number 8 of Volume 1 (1947) and the Supplement of Volume II (1948) of the Lep. News were devoted to the Society's annual field season summaries of Lepidoptera in North America. All Society members who were in the field during all or part of the 1949 season are invited to submit summaries of their observations. The two primary reasons for these annual summaries are: first, the lively interest among Lep. News readers in fresh information on collecting results around the continent during the recent season; and second, the assembling of a permanent reference source which will grow in value as more and more years are on record and factual information accumulates regarding cycles.

The following information is requested from individual cooperators: 1) Were the flight periods of various species earlier or later than the average; precisely what were they for a few representative and fairly abundant species? 2) If the season was earlier or later in spring, did it return to normal or otherwise change as the season progressed? 3) Did unusual climatic events (cold, drought, excessive rain, hurricanes, etc.) occur, and if so what was their effect on Lepidoptera? 4) Was the winter of 1948-49 mild or cold, unusually rainy or snowy or dry, unusually long or short? 5) Did biological or human factors (parasites, forest fires, swamp draining, birds, diseases, etc.) affect Lepidoptera this year in an unusual way or to a significant degree? 6) Did any individual species show unusual occurrences -- rare species suddenly common or vice versa? 7) Did the migrating species make noteworthy flights and if so, what detailed observations were made? 8) Were there any new state or regional records? Please note that it is of little value to call a season "good" or "bad". **DETAILS ARE ESSENTIAL.**

It is already clear that 1949 has been an exceptional year for certain migrants. Please submit ALL information of any sort on Danaus plexippus, Vanessa cardui, and Celerio lineata. We may devote a special section of the summary to these species.

For 1947 there were 46 members providing individual reports. For 1948 there were about 60, with a postal delay in delivery of the News carrying the announcement. For 1949 we expect that over 100 individuals will report their observations. Every report will be used and then placed in a permanent file for later reference. All participants will be named in the published summaries. We hope particularly for more detailed reports and better representation from such regions as California, the Great Plains (Area 4), and the Southeast (Area 6) than we had for 1948. Strong activity from the relatively few moth collectors is especially invited.



For convenient grouping of the summaries, North America is subdivided into eight fairly uniform faunistic areas, for each of which a general summary will be compiled from the individual reports. The accompanying map shows the eight divisions. Each regional summary will be prepared by an active lepidopterist in the region. Please send reports directly to the regional coordinators listed below. If you collected in more than one region, send separate reports.

Area 1. (Southwest) - LLOYD M. MARTIN, Los Angeles Co. Museum, Exposition Park, Los Angeles 7, Calif.

Area 2. (Northwest) - J.C. HOPFINGER, Brewster, Wash.

Area 3. (Rocky Mts.) - J. DONALD EFF, 820 Grant St., Boulder, Colo.

Area 4. (Great Plains) - DON B. STALLINGS, 216 W. First St., Caldwell, Kansas.

Area 5. (Central) - P.S. REMINGTON, 5570 Etzel Ave., St. Louis 12, Mo.

Area 6. (Southeast) - DR. RALPH L. CHERMOCK, Dept. of Biology, University of Alabama, University, Ala.

Area 7. (Northeast) - DR. EUGENE MUNROE, Institute of Parasitology, Macdonald College, Quebec, CANADA.

Area 8. (Far North) - DR. T.N. FREEMAN, Div. of Entomology, Central Exper. Farm, Ottawa, Ont., CANADA.

The new deadline for reports TO REACH the area coordinators is December 15, 1949.

C.L.R.

NOTES ON COLLECTING SPEYERIA DIANA

by Theodore Bock
Cincinnati, Ohio

I have collected Speyeria diana Cramer for the last 5 years. Many collectors claim that they are rare but I would say that they are not if one goes where they really are at home. Holland says that the Diana is confined in the two Virginias, Northern Georgia, Tennessee, Kentucky and occasionally found in the southern portions of Ohio and Indiana. To this I do not agree as I have traveled through all these states but have never seen one. Ohio and Indiana have no mountains and the Diana does not fly in low land; therefore Ohio and Indiana are out. For this reason it may be considered rare. One may just as well try to find a Papilio homerus in Ohio. Of course there may be a chance that a butterfly or a moth may be transported in an automobile into a far-off different state. I have found a moth hanging on the walls of my house one night which is really not an American but a Mexican species. How did it get way up here?

My collecting ground for the Diana is North Carolina and this season I collected 70 perfect males but only 1 female. I wish to emphasize once more that they do not fly in lowlands but on top of the mountain ridges and then only in certain areas. Every year I go to the same place in North Carolina, an area of about a mile square and there find the males in great numbers. The females, though, are hiding in the dense forest and are extremely hard to net. An abnormal winter will also have a more or less strong influence on the emergence. In normal weather conditions the Diana should emerge promptly on the 1st of July. This season it was different. Last winter being very mild, with an early spring and high temperature they emerged ahead of schedule. Arriving at my favorite hunting-ground on the 28th of June I found them on the wing already and acquainted with their flying habits I would judge that they came out around the 24th of June. Previous years I could take them perfect up to the 15th while this year on the 7th of July most of them were already badly worn. In contrast, in 1947 they were late; owing to a severe winter they came out gradually after the 1st of July. In fact the bulk came out about the 4th and 5th of July. I collected 90 males and 7 females.

Other years I have found them to emerge on the 1st of July and it is then I make my big haul. For the first 24 hours they will settle on red dirt roads, sometimes in small groups with wings closed and easily caught, but also easily overlooked as their underside resembles so much the red dirt. The next 24 hours they will still settle on the roads but with wings expanded. However after two days they will take to their wings, fly fast and higher through the woods and are then more difficult to capture.

With the females it is a different story. At no time will they settle on the roads. I have passed days without even seeing one. Once in a great while one will dare to fly across the road and quickly disappear on the other side into the dense forest.

It is then when one may be lucky enough to capture one but into the woods one cannot follow them without getting tangled up and a net is then almost useless. It is also very annoying to get the face into hundreds of spiderwebs so I say it's quite a feat to capture a female. A miss with the net will send them up into the treetops. This year in two weeks' time I have seen but 7 females and captured only one. There seems to be a decrease in the females from year to year. Five years ago, in my best year, I took over 100 males and 7 females and saw some 25 females fluttering around the treetops just before a thunderstorm, but they would never descend to a lower level for a swing with the net.



FIELD NOTES

HAWK MOTH IMPALES ITSELF.— On a recent trip along a country road north of Washington, D.C., my attention was attracted by a hawk moth hanging from a barbed wire fence. I stopped my car and went to examine it. The moth, Phlegethontius quinqueaculata (Haw.), was suspended from a barb which was driven about one-quarter of an inch into its head between its eyes. Otherwise it was unharmed and very much alive. I can think of no other explanation for its plight than that it impaled itself in headlong flight.

Frank C. Cross
Silver Spring, Md.



OVIPOSITION OF CALIFORNIA PHALAEINIDAE.— During April of 1948 and of 1949 I observed five species of diurnal Phalaenidae ovipositing in the field. A list of these species and the particular parts of the food plants on which the eggs were laid follows.

- Xanthothrix neumoegei H. Edw.: between the tubes of disc flowers of half-developed blossoms of Chaenactis glabriuscula DC.
Incita aurantiaca H. Edw.: between floral bracts of Gilia virgata (Benth.) var. dasyantha (Jepson).
Annaphila diva Grt.: on underside of leaves of Montia perfoliata (Donn) Howell.
Annaphila depicta Grt.: on the underside of leaves of Nemophila Menziesii H. & A.
Annaphila superba H. Edw. (differs slightly from typical superba from N. California): on floral bracts of Gilia lutea (Benth.)

W. H. Evans
Sun Valley, Calif.



RESEARCH REQUEST

Prof. Lauro P. Travassos needs to obtain the common North American species of the families Adelocephalidae, Arctiidae, and Pericopidae (= Ctenuchidae) to continue his significant research on these groups. He will be glad to provide Brazilian Lepidoptera in exchange. His address is:

Instituto Oswaldo Cruz
Caixa Postal 926
Rio de Janeiro, Brasil

HUNGARIAN LEPIDOPTEROLOGY

II. THE LEPIDOPTERA FAUNA OF THE CARPATHIAN BASIN

by Dr. L.A. Gozmány
Budapest, Hungary

To understand the characteristics and compounding factors of the lepidopterous fauna in the Carpathian Basin, where Hungary also lies, we must investigate the geographical pattern of historical Hungary, and its influence on her zoogeography.

Hungary is situated in Middle Europe, and was, in historical times, circumvented by the Carpathians as her borders. This range, with its 2,000 kms. length demarcates her from the West (following the last mountains of the Alps) going in a large semi-circle from northwest through south, ending at the Danube as it enters the Balkans. On the southwest the country once had the Adriatic seacoast and some rivers as borders. The central parts of the country consist of smaller basins, mountains and the Great Plains, connected by numerous rivers. The main importance of this natural unit lies in the fact that the Carpathian Basin is just a big cauldron where species entered 1) during the glacial periods from the north and, during the regressing stages of the glaciers, from the south; 2) from the open western parts leading to western Europe; 3) from the east (alpiphil and psammophil) and REMAINED HERE, finding all the necessary habitats and bio-conditions for their survival, among numerous endemic brethren.

Let us examine these zoohistorical factors in due consequence. I shall consider only Macrolepidoptera, but the following holds good for "micros", too.

1.) Northern species, immigrants into the Carpathian Basin (either because as the inhabitants of higher mountains they acclimatized to the colder climate of our Northern Ranges - alpine and boreal species - or were driven south by the approach of the glaciers) were, among others, as follows:

Boloria pales Schiff.
Brenthis amathusia Esp.
Comacla senex Hbn.
Pericallia matronula L.
Pygaera timon Hbn.
Panthea coenobita Esp.
Diarsia hyperborea Zett.
Diarsia dahl Hbn.
Operophtera fagata Scharfenb.

These all found here the same climate, elevation (Mts. Tatra, etc.), and habitats (sphagnum moors, birch woods) as those of Poland, Finland, etc., and are now all established in the Carpathian Basin.

During and after the glacial recession, nemoral and psammophilous species pushed north from Italy, Asia Minor, the Balkans and the Mediterranean Basin, slowly acclimatizing to their new sustaining country, that in its southern and central parts is not very different from the Mediterranean (bushy lands, arid

areas, warm swamps, etc.), and northern Africa (the Deliblat desert). Among these are:

Pieris argane Hbn.
Jolana jolas O.
Libythea celtis Laich.
Polygonia egea Cr.
Synanthedon stomoxyformis Hbn.
Chaemaesphesia masariformis O.
Hyalia punctum O.
Pelosia obtusa HS.
Hypopta caestrum Hbn.
Euxoa cog Hbn.
Cucullia celsiae HS.
Grammodes stolidia F.

2.) Western European species had ample means to become compatriotic with Eastern ones in Hungary, winding their way through the hilly regions along the Danube and the westernmost frontiers of the country. They found climate, topography, and biotops the same as in their original breeding habitats. Such species are:

Coenonymphe oedipus F.
Laelia coenosa Hbn.
Hoplitis milhauseri F.
Crymodes maillardi Hbn.
Habrynitis scita Hbn.
Omia cymbalariae Hbn.
Eupithecia gueneata Mill.

3.) Eastern species found, surprisingly, some places in Hungary similar to their (a) Volgaic, (b) Caucasian or even (c) Amurian territories (in the Great Plains, the Eastern Carpathians, small basins in Transsylvania, etc.). There are species here whose nearest known collecting localities are the Amur River (Vanessa urticae maxima, Zanolagnatha stramentacealis, etc.)! Some of these Eastern species are:

- (a) Melanargia japygia suwarowius Hbst.
Gnophos stevenaria Bdv.
- (b) Pararge clymene Esp.
Perisomena ceacigena Cupido
Hyssia cavernosa Ev.
Athetis lepigone Möschl.
Amphipyra micans Ld.
Gnophos stevenaria Bdv.
- (c) Vanessa urticae maxima Butl.
Argynnis laodice Pall.
Athetis lepigone Möschl.

Some species, occurring in the relict swamps and turfmoores of the Great Hungarian Plains, can be found nearest the Sarepta plains (southern U.S.S.R.):

Melanargia japygia v. suwarowius Hbst. (Foreign collectors exterminated this variation; see Part I, Lep. News, vol.3: p.43)

Micros:

Epibactra sareptana HS.
Atychia pumila O.
Ateliotum hungaricellum Z.
Depressaria venusulella Möschl.
Cryptolechia sareptensis Möschl.
Teleia anguinella HS.
Megacraspedus lagonellus HS.
Chilopsephalus fallax Mn.

From a zoogeographical point of view we can also classify Hungarian Lepidoptera as the citizens of some 13 faunal elements*. These elements designate geographical territories relative to representatives of fauna. When we state that a given species belongs to the Baltic faunal element it means not only that the center of occurrence of said species is the Balticum (Northern Germany, etc.) but that the places where the species also occurs outside of the Balticum proper has environmental characteristics corresponding to the country of origin (the Balticum).

This unsurpassed quantity and convergence of faunal elements in such a relatively small place as zoogeographical Hungary is the cause why the country has an incredible melée of Lepidoptera in her fauna, NOT TO BE FOUND IN ANY OTHER EUROPEAN COUNTRY! That was why foreign collectors came to Hungary: she contains treasures! (See: Part I, ibid). That is why even today, almost every year, new species to our fauna are discovered, sometimes unbelievable occurrences, as their original localities are in faraway countries (Asia Minor, Spain, etc.).

The faunal elements, according to Szent-Ivány, and Holdhaus, are briefly, with a few examples for each, as follows:

1. BOREAL (Selenophera lunigera Esp., Xanthorrhoe lignata Hbn.)
2. BOREALPINE (Aricia donselii B., Zygaena exulans Hochw., Orodemias quenselii Payk.).
3. BALTIC (Lycaena sappho Esp., Endrosa kuhlweini Hbn.).
4. PONTIC (Pararge roxelana Cr., Coenonympha leander Esp., Marumba quercus Schiff.).
5. PONTOMEDITERRANEAN (Zerinthia hyperanestra Sc., Pieris manni Mayer, Melitaea arduinna Mayer).
6. MEDITERRANEAN (Charaxes jasius L., Ocnogyna parassita Hbn., Catocala conversa Esp.).

*See: Szent-Ivány, "The Elements of the Macrolpidoptera Fauna of Historical Hungary", Folia Entom. Hungarica, vol.3, Fasc.1-4; 1938.

7. ATLANTOMEDITERRANEAN (Agriomenia fausta L., Aspilates ochrea Ross.).
8. ATLANTIC (1 sp. only: Sphecia crabroniformis Lew.).
9. ALPINIC (Euxoa birivia Schiff., Gnophos pullata Schiff.).
10. ILLYRIC or LYBURNIAN (Oreopsyche birói Rbl., Celama ancipitalis HS.).
11. SIBERIAN-CENTRALEUROPEAN (Papilio machaon L., Pieris brassicae L.).
12. GEOPOLITIC (Vanessa cardui L., Herse convolvuli L.).
13. SYBILLIC or EUROPEAN-EAST ASIAN (Sphinx pinastri L., Lophopteryx cuculla Esp., Oenistis quadra L.).

The intrusion of "foreign" Lepidoptera continues even in our own days. The trend is strictly northward, the cause as yet unknown. I have made observations, jointly with my colleagues, on the northward trend of the following southern species:

Plebeius saphyrus Friv.
Aricia donselii Bdv.
Libythea celtis Laich.
Ellicrinia trinotata Metzsn.
Orthostixis cribraria Hbn.
Ophiusa algira L.
Callogonia virgo Tr.
Polygona egea Cr.

Hungary's special geological, geographical, botanical, and climatic structure is also responsible for a series of unique endemics, famous species all:

Nola pannonica Kovacs
Rhyaroides metelkana Ld.
Amicta ecksteini Ld.
Acanthopsyche zelleri Mén.
Epichnopteryx undulata F.Rös.
Rebelia sappho Mill.
Monima schmidtii Diösz.
Athetis teleki Diösz.
Oxytrippa orbiculosa Esp.
Cucullia balsamitae Bdv.
Cucullia formosa Rghf.
Porphyrinia pannonica Friv.
Ellicrinia cordiaria f. röselstammia Stgr.
Agriopsis ankeraria Stgr.
Cleogena ostrogowichii Caradja
Chondrosoma fiduciaris Anker
Boarmia viertlii Bohatsch.
Eupithecia alliaris Stgr.
Psodos teleki Diösz.
Psodos diószoghi Schmidt

It is worthwhile to collect Lepidoptera and to investigate ecological, biological, phenological, biotopical aspects, to find out more of the life-cycles of our Lepidoptera species in Hungary, as in so many other parts of the world.





BRIEF BIOGRAPHIES

19. R.P. Joseph de Joannis (1854-1932)

Joseph de Joannis originated from Anjou (one of the wine provinces of France). He worked during a part of his life with his brother R.P. Léon de Joannis. The possibility of easily obtaining exotic specimens through missionaries made the two brothers interested in the world fauna, sharing the work between them. Léon, who lived in the country, had the task of breeding and of preparing; Joseph, who lived in Paris, had the task of determining, classifying and publishing. Long stays in the island of Jersey, in Canterbury (England) and in Louvesc (France: Ardèche) enabled Joseph de Joannis to collect a great many species of Lepidoptera, to make numerous breedings and even to discover new species. In Paris he carried on his observations and rearing, especially of Micros, and he never went about, even in town, without small tubes in his pocket. Finally every year he went to London to study the material that he could not determine in Paris and it is in this way that he got in touch with the English authors, especially Hampson and Meyrick.

In 1902 he was asked to study the Lepidoptera from Tonkin (Indochina) and from then, during almost thirty years, J. de Joannis accumulated material to use for his contribution to the Fauna of Lepidoptera from Tonkin, published in 1928 and 1929 in Annales de la Société entomologique de France. The Micros were studied in this work by Meyrick. He also knew very well the fauna of the Mascareignes Islands, on which he published many papers. One of his most important works is the revision of the Cecidogenous Lepidoptera (Ann. Soc. entom. France, 1932).

But, above anything else, he was a Microlepidopterist. With Constant he finished the Monography of the Phycitinae, work of his Master Ragonot. Even if he had never published any important works on the Micros, he contributed a great deal in the development of the study of them in France, principally when L. Lhomme started his publication L'Amateur de Papillons - today Revue française de Lépidopterologie - and in determining the specimens that different colleagues sent him.

He was a familiar figure in the National Museum in Paris where he came to study each week. It is

there, as was his desire, that his important collection is placed. This collection remains, in particular for the Micros, the best of documents. By his way of living he occupied only one room so, by 1920, he gave a part of his collection of Macrolepidoptera to the National Museum so as to keep towards the end of his life only the Micros. The last box of Micros has number 583 and almost the entire collection (up to number 472) was in boxes measuring 78 cm. x 52 cm. Today almost all of the families have been included in the general collection of the National Museum. In this collection were many types, some of which were described by Meyrick.

Pierre E. Viette
Paris, France



The Entomological Society of America will hold its annual meeting for 1949 at Tampa, Florida, December 13-16.

PERSONALIA

Dr. A. DIAKONOFF spent part of the summer on a collecting trip in Celebes for the Zoölogisch Museum en Laboratorium in Buitenzorg, Java.

P.E.L. VIETTE, of the Muséum National d'Histoire Naturelle in Paris, is spending October and November at the British Museum working with Dr. E.C. Zimmerman on the Microlepidoptera of the Hawaiian Islands.

JOHN L. SPERRY (not "Commander"; see Lep. News 3: p.37) spent the early summer in the Wallowa Mts. of northeastern Oregon and found that: "The Geometridae have a Colorado Rocky flavor with traces of Canadian fauna and a few all the Wallowas' own."

We were sorry to learn of the passing in New York City of Dr. ANDREY AVINOFF, a Charter and Sustaining Member of the Lepidopterists' Society, on 16 July 1949, at the age of 65 years. A noted lepidopterist, he was Director of the Carnegie Museum in Pittsburgh from 1926 to 1945.

Professor FILIPPO SILVESTRI died at Bevagna, Italy, on 1 June 1949. One of the world's greatest entomologists, he specialized in the Thysanura, Entotrophi, Isoptera, termite and ant guest insects and in economic entomology. He was for many years the director of the Laboratory of Entomology of the Portici branch of the University of Naples, and he had only retired in 1948. He was a Fellow of the Entomological Society of America.



Many of the most successful Lepidoptera collectors have found that a clean, white net bag alarms specimens being stalked. Some suggest dyeing the bag green; others dip a new bag in strong tea.



by Margaret M. Cary
Philadelphia, Pennsylvania

Since collecting Sphingidae in the cloud forests of north-central Venezuela is very much like collecting Sphingidae in our own subtropical or tropical North America and Mexico I think perhaps readers of The Lepidopterists' News will be interested in a brief account of an expedition under the auspices of the Academy of Natural Sciences of Philadelphia and the Institute of Jamaica at Kingston, Jamaica. This was a two-person expedition made up of my nephew, John W. Cadbury of Pemberton, New Jersey, and the author.

We are undertaking an interesting piece of research into the causes of distribution and the origin of species of the Sphingidae of the Caribbean region, embracing islands, countries and even far southern Florida. This study entails in its first stage the collection of a long series of those similar species occurring in these islands and countries, or where there are no similar species in a genus, of any representative of the same genus. Where certain similar species have undergone such marked changes as to establish variations or even new species we hope to rear and study instars and foodplants of larvae of such species, recording all our observations with relation to altitude, climate, humidity, etc.

A few of the species which have undergone marked changes in this Caribbean region are Pholus vitis, which in Jamaica becomes P. vitis hesperidum Ky., Pachylia syces which becomes P. syces insularis Rothschild & Jordan, Erinnyis obscura which becomes E. obscura pallida Grote or even Erinnyis jamaicensis Clark, and others of great interest.¹

We spent the month of June, 1949, collecting at Rancho Grande in the cloud forest jungle of the National Park of Aragua, Venezuela. This region is about 3500 feet high, has a cool temperature and very high humidity. Although we also used several high-powered gasoline pressure lamps in our collecting, we were able to have one 200 watt bulb attached to a roof some fifty feet above ground and this shone far out across the jungle, attracting on rainy or foggy nights many more insects than the pressure lamps hung nearby. There are no flowers in this jungle over which we could collect at dusk, and besides darkness falls here very suddenly, so that we had to confine our collecting to lights.

By seven o'clock the moths began to come, collecting under the light on a white wall, and the best hours for Sphingidae collecting were between 7:30 and 11:30. On very foggy nights we worked much later, occasionally staying up all night. On nights of bright moonlight we went to bed early, setting our alarm for 2:30, and did our collecting until dawn. This was not very productive for Sphingidae, but there were certain larger moths, especially members of the saturniid genus Rothschildia which came only at this time, so that we found much of interest in this dawn collecting. The collecting was most exciting; insects of all orders came, often in

such hordes as to cover us completely and to swarm into our eyes, nose, and mouth. Of course these excellent nights did not often occur, and usually on such nights the kinds of species were less scarce and interesting than on a more moderate night.

Although we took some thousands of moths in other families and other orders of insects for our friends and the above institutions, we were able to secure 637 Sphingidae, representing 50 species and 4 subspecies. After these have been mounted and identified with certainty, we may have 52 species, but of this we are not yet certain. The list is as follows:²

Herse cingulata (Fabricius)
Cocytius duponchel (Poey)
Phlegethontius florestan (Stoll)
scutata (Rothschild & Jordan)
albiplaga (Walker)
ochus (Klug)
rustica (Fabricius)
diffissa tropicalis (Rothschild & Jordan)
corallina (Druce) or lichenea (Burmeister)
Protambulyx eurycoles (Herrich-Schaeffer)
strigilis (Linne)
Isognathus rimosa papayae (Boisduval)
Amplipterus gannascus (Stoll)
tigrina (Felder) and race simera Lichy
Erinnyis alope (Drury)
ello (Linne)
obscura crameri (Schaus)
oenotrus (Stoll)
lassauri (Boisduval) and races cmphaleae (Boisduval) and impunctata Rothschild & Jordan
domingonis (Butler)
Hemeroplanes parce (Fabricius)
nomius (Walker)
callimenae (Schaufuss)
Stolidoptera tachasara (Druce)
Perigonia lusca tenebrosa (Felder)
lusca restituta (Walker)
stulta Herrich-Schaeffer
pallida Rothschild & Jordan
Pholus anchemolus (Cramer)
triangulum Rothschild & Jordan
satellitica lichaon (Cramer)
phorbas (Cramer)
labruscae (Linne)
vitis (Linne)
obliquus Rothschild & Jordan
Xylophanes tyndarus (Boisduval)
porcus continentalis Rothschild & Jordan
chiron nechus (Cramer)
pyrrhus Rothschild & Jordan
amadis meridanus Rothschild & Jordan
neoptolemus (Stoll)
ceratomioides (Grote & Robinson)
germen yurakani Lichy
titani (Druce)
pluto (Fabricius)
tersa (Linne)
resta Rothschild & Jordan
anubus (Cramer)
crotonis (Walker)

¹ See account of collecting Jamaican Sphingidae in Lep. News (vol. 2: p. 86; 1948).

² Note no Pachylia, Epistor, or Sesia and few Phlegethontius. These come in greater numbers in April.

REVISED CATALOGUE OF THE THECLINI (LYCAENIDAE) OF JAPAN, KOREA, SAKHALIN, AND FORMOSA

by Yoshio Okada
Kyoto, Japan

For the last fifteen years, many synthetic papers on the so-called genus *Zephyrus* or *Thecla* have been published in Japan (references 1-7, 11), and the development of the taxonomy of the tribe Theclini has made remarkable progress. Above all, A. Sibatani, in collaboration with S. Ito (9), described some new genera and classified Theclinae of Japan and its surroundings as a result of their genitalic survey of *Zephyrus* and its relatives. Afterwards A. Sibatani (10) corrected the terminology of the male genitalia and the unreasonable classification of Theclinae applied in his former paper. At the same time, others made clear parts of the life history of Theclini of Japan. Recently, T. Shirōzu (8) emphasized the importance of the West-Chinese elements in Japanese butterflies and cited most of the Theclini of Japan as instances of them.

As these contributions seem to be unknown to foreign entomologists, I should like to summarize them according to the above-cited works by Sibatani on that tribe. According to Sibatani's works, the subfamily Lycaeninae (= Theclinae) of Japan, Korea, Sakhalin and Formosa is divided into the following tribes:

Lycaenini	(<i>Lycaena</i> , <i>Heliophorus</i>)
Sithonini	(<i>Spindasis</i> , <i>Horaga</i> , <i>Catapoecilma</i> , <i>Tajuria</i> , <i>Camena</i>)
Strymonini	(<i>Drina</i> , <i>Amblopala</i> , <i>Deudorix</i> , <i>Rapala</i> , <i>Strymon</i> , <i>Callophrys</i> , <i>Satsuma</i>)
Theclini	(<i>Artopoëtes</i> , <i>Coreana</i> , <i>Japonica</i> , <i>Thecla</i> , <i>Iratsume</i> , <i>Neozephyrus</i> , <i>Araragi</i> , <i>Antigius</i> , (<i>Euaspa</i>), <i>Wagimo</i>)
Arhopalini	(<i>Arhopala</i> , <i>Mahathala</i>)

TRIBE THECLINI

Genus *Artopoëtes* Chapman, 1909. Sibatani & Ito settled this curious genus into the Theclini considering the similarity of the fore tarsus and ♂ genitalia to those of the genera *Coreana* and *Japonica*. *A. preyeri* Moore¹ from Japan (Hs, Hk, Sh, Ky²) and Korea is common in central Japan from June to July.

Genus *Coreana* Tutt, 1907. The next three species, with shorter and broader valvae than the genus *Japonica*, are recorded from within our limits: *C. raphaelis* Oberthür* and *C. michaelis* Oberthür from Korea; *C. ibara* Butler from Japan (Hk, Hs, Ky), locally common in the mountainous region of central Japan in July.

Genus *Japonica* Tutt, 1907. Genera *Artopoëtes*, *Coreana*, and *Japonica*, which are provided with the divided tarsus of the fore leg, form a primitive group of the Theclini. However, *Japonica* can be

¹ * Signifies generotype.

² Abbreviations: Hk: Hokkaido; Hs: Honshu; Sh: Shikoku; Ky: Kyushu.

distinguished from the others by the following points: larger saccus, v-formed juxta, slender valvae and more developed ampulla. *J. lutea* Hewitson is from Japan (Hk, Hs, Sh, Ky), Korea, Formosa; *J. saepestriata* Hewitson* is from Japan (Hk, Hs), Korea. These two orange species are common in central Japan in June.

Genus *Thecla* Fabricius, 1807.

Subgenus *Shirozua* Sibatani & Ito, 1942. Despite the similarity of the external appearance to *Japonica*, the genitalia of *Shirozua* closely resemble the *Thecla* type. At first, Sibatani & Ito described *Shirozua* as a new genus, but Sibatani settled it later in *Thecla*.

T. (S.) ionasi Janson* from Japan (Hk, Hs), Korea, is locally common in northern Japan; *T. (S.) comes* Leech is from Formosa.

Subgenus *Thecla (s.str.)* Two Korean butterflies *T. (T.) betulae* Linné* and *T. (T.) betulina* Staudinger have short and broad valvae, but no saccus.

Genus *Iratsume* Sibatani & Ito, 1942. This peculiar genus has only one species, *orsedice* Butler*, whose genitalia are characterized by isolated socii, projected ampulla, flat juxta, and small signa. It appears in June and July in the mountainous region of central Japan (Hs, Sh, Ky).

Genus *Neozephyrus* Sibatani & Ito, 1942. The ♂ genitalia are hard chitinous, brachia frequently thorny, ventral margin of ampulla smooth, saccus prominent. Most of the males of the species in this genus have the gorgeous green color on the upperside of the wings, and many females have red, blue, or red and blue spots in the blackish-brown ground color of the upperside. They fly in crowds on high trees exposed to the setting sun. This genus is divided into three groups:

1. *N. hecale* Leech from Formosa; *N. taxila* Bremer* from Japan (Hk, Hs, Sh, Ky), Korea, Sakhalin, common in every place in Japan; and *N. coruscans* Leech from Formosa.

2. *N. hisamatsusanus* Nagami & Ishiga, a very rare species from Japan (Hs, Sh, Ky); *N. scintillanus* Leech, *N. mushaellus* Matsumura, *N. taiwanus* Wileman, all from high elevations of Formosan mountains; *N. smaragdinus* Bremer from Japan (Hk, Hs, Sh, Ky), Korea, Sakhalin, locally common in the mountainous region of Japan in July and August; *N. nishikaze* Araki & Sibatani from Formosa; *N. aurorinus* Oberthür from Japan (Hk, Hs, Sh, Ky), Korea; and *N. duma* Hewitson and *nitakanus* Kano from Formosa.

3. *N. ataxus* Hewitson from Japan (Hs, Ky) uncommon.

J. Sonan (11) and Y. Araki & A. Sibatani (1) explained in detail the Formosan species of *Neozephyrus*.

Genus Favonius Sibatani & Ito, 1942. The ♂ genitalia lack saccus and thorn of brachia, but are provided with more complicated valvae than Neozephyrus. Most males have the blue-green color on the upperside, but females rarely have the blue or red spots on the upperside of the fore wings. F. yuasai Shirôzu, from Japan (Hs), is a very rare species which was described by T. Shirozu two years ago; F. orientalis Murray* from Japan (Hk,Hs,Sh, Ky), Korea, is common in every part of Japan; F. saphirinus Staudinger is uncommon in Japan (Hk,Hs), Korea; F. fujiisanus Matsumura from Japan (Hs,Sh, Ky) is uncommon; F. jezoensis Matsumura is from Japan (Hk,Hs), Korea; and F. ultramarinus Fixsen is from Japan (Hk,Hs), Korea. The last two species closely resemble each other and fly in the mountainous region of north Japan in July and August.

Genus Teratozephyrus Sibatani, 1946. With an undeveloped uncus, this is an intermediate genus between the Neozephyrus group and the Antigius group. T. arisanus Wileman* is from Formosa.

Genus Araragi Sibatani & Ito, 1942. This genus is characterized by an elongate uncus. A. enthea Janson* from Japan (Hk,Hs), Korea, Formosa, is common in Hokkaido and northern Honshu.

Genus Antigius Sibatani & Ito, 1942. Two-branched uncus, simple valvae and naked eyes characterize this genus.

A. attilia Bremer*, from Japan (Hk,Hs,Sh,Ky), Korea, is common in central Japan in June; A. butleri Fenton, from Japan (Hk,Hs,Sh), Korea is uncommon.

Genus Wagimo Sibatani & Ito, 1942. It is vague to distinguish this genus from Antigius by ♂ genitalia with slender two-branched uncus and slender valvae, but decisive by female genitalia. W. signatus Butler*, from Japan (Hk,Hs), Korea, is rare.

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- (2) Esaki, T., 1934. Zephyrus, vol.5: pp.74-86, pl.22.
- (3) ----- 1934. Zephyrus, vol.5:pp.194-211, pl. 27.
- (4) ----- 1935. Zephyrus, vol.6: pp.51-58, pl.5.
- (5) ----- 1936. Zephyrus, vol.6:pp.195-204, pl.13.
- (6) ----- 1937. Zephyrus, vol.7: pp.96-105, pl. 9.
- (7) ----- 1938. Zephyrus, vol.7: pp.223-234, pl.16.
- (8) Shirôzu, T., 1947. Matsumushi, vol.2: pp.1-8.
- (9) Sibatani, A. & Ito, S., 1942. Tenthredo, vol.3: pp.299-334.
- (10) Sibatani, A., 1946. Bull. Lep. Soc. Japan, vol. 1: pp.61-86.
- (11) Sonan, J., 1940. Trans. Nat. Hist. Soc. Formosa, vol.30: pp.77-85.



"During my very first walk into the forest at Batchian, I had seen sitting on a leaf out of reach, an immense butterfly of a dark colour marked with white and yellow spots. I could not capture it as it flew away high up into the forest, but I at once saw that it was a female of a new species of Ornithoptera or 'bird-winged butterfly', the pride of the Eastern tropics... During the two succeeding months I saw it only once again ... till one day ... I found a beautiful shrub ... a species of Mussaenda, and saw one of these noble insects hovering over it, but it was too quick for me, and flew away. The next day I went again to the same shrub and succeeded in catching a female, and the day after a fine male. I found it to be as I had expected, a perfectly new and most magnificent species, and one of the most gorgeously colored butterflies in the world... The beauty and brilliancy of this insect are indescribable, and none but a naturalist can understand the intense excitement I experienced when I at length captured it. On taking it out of my net and opening the glorious wings, my heart began to beat violently, the blood rushed to my head, and I felt much more like fainting than I have done when in apprehension on immediate death. I had a headache the rest of the day, so great was the excitement produced by what will appear to most people a very inadequate cause."

A.R. Wallace, in The Malay Archipelago, pp.257-258.

Dr. P.H.H. Gray, of Macdonald College, Quebec, suggests this passage by the co-discoverer of evolution and great naturalist of the East Indies as the best example of enthusiasm in a butterfly hunter.



A NEW JAPANESE PERIODICAL

The Akita Kontyu Dokokai (Akita Insect Lovers' Society) was established on 19 November 1948. In May 1949 it began publishing Ageha (Papilio), with Tadashi Matsuyama as editor. Included in the first issue are articles on such subjects as: winter hibernation of Papilio; the amount of food eaten by a Polygonia larva; observations on the path of butterfly flight; and notes on Hypolimnas and Luehdorfia. The first issue is entirely in Japanese, which is disappointing after the fine example set by Matsumushi, in which a table of contents and brief summaries of important papers are always in a European language. While it is apparently mimeographed, there are numerous useful figures in Ageha. The editors of the Lep. News extend compliments on the new venture to Mr. Matsuyama and his associates. He may be addressed:

Mr. Tadashi Matsuyama
No.1, Kaminakajima-honmachi
Akita, Japan

PLEASE NOTIFY THE NEWS EDITORS
OF CHANGES OF ADDRESS PROMPTLY

RECENT LITERATURE ON LEPIDOPTERA

Under this heading are listed each month recent papers from all the scientific journals which are accessible to us and our cooperating abstractors. It is hoped eventually to make our coverage of the world literature as complete as possible. Members outside North America are urged to send us references of Lepidoptera papers from journals unavailable to us. Papers devoted entirely to economic aspects will be omitted. Reprints are solicited from all publishing members. Initials of cooperating abstractors are as follows: (P.B.)- P.F. Bellinger; (A.D.)- A. Diakonoff; (C.D.P.)- C.F. dos Passos; (L.G.)- L.A. Gozmany; (C.R.) - C.L. Remington; (T.S.)- T. Shirôzu.

197. Bank Jr., G., "Lepidopterologische vangsten in 1947" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.XXXIX-XL. 1 May 1949. Gives collecting notes on Macrolepidoptera in Holland in 1947. (A.D.)
198. Bontinck, G.A., "Nieuwe en zeldzame Lepidoptera" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.XIX-XX. 1 May 1949. Gives a list of rare Macro- and Microlepidoptera captured in 1947 in Holland; new for the fauna are *Opostega auritella* (Lycoetidae), *Acalla shepherdiana* (Tortricidae), and *Conchylis implicitana* (Eucosmidae). (A.D.)
199. Bontinck, G.A., "Bijzondere Lepidoptera" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.LXIII-LXIV. 1 May 1949. Collecting notes on Macro and Microlepidoptera in Holland in 1948. (A.D.)
200. Blackwelder, R.E., "Notes on the Preparation of Catalogs." *Coleop. Bull.*, vol.3: pp.33-37. 11 July 1949. Discussion of problems of making entomological catalogues, by a noted cataloguer. (C.R.)
201. Carpenter, G.D. Hale, "Mimicry, and Ecogenotypical Variation." *Amer. Naturalist*, vol.82: pp.234-240. July-Aug. 1948. Evidence is presented, largely from the Lepidoptera, that similar environmental effects are inadequate to account for resemblance between insects in cases of supposed mimicry. Some direct evidence for protective value of concealing and warning coloration is also given. (P.B.)
202. Conder, P.J., "Observations on a migration of *Pieris brassicae* L. at Skokholm Island, Pembrokeshire, in August, 1947." *Proc. R. Ent. Soc. Lond.* (A), vol. 24: pp.35-38, 2 figs. 15 June 1949.
203. Diakonoff, A., "Microlepidoptera from Indo-China and Japan." *Bull. Mus. Hist. Nat. Paris*, vol.20: pp. 267-272, 2 figs. April 1948. Describes *Epagoge stenochocha* (Japan); *Homona magnanima* (Japan); *Snellenia ignispergens* (Japan). Gives records for a number of other species. (P.B.)
204. Evenden, J.C., "An epidemic of the Douglas-Fir Tussock Moth." *Northwest Science*, vol.22: pp.53-59. May 1949.
205. Geijskes, D.C. & J. Doeksen, "Nieuwe gegevens over de insecten-fauna van Terschelling" (In Dutch). *Tijdschr. voor Entomol.*, vol.90, 1946: pp.16-34. 1 July 1949. A survey of the insect fauna of Terschelling Is., in the North Sea, made in July 1937. 15 species of Microlepidoptera, 25 species of Macrolepidoptera are recorded. (A.D.)
206. Gorter, A.J., "Nachtvinders op bloeiende *Epilobium*" (In Dutch). *Entomol. Berichten*, vol.12: p.380. 21 May 1949. Gives list of 24 spp. of Heterocera collected in twilight on flowers of *Epilobium* in Holland. (A.D.)
207. Greer, Thomas, "Entomological Notes from East Tyronne 1948." *Ent. Rec. & Journ. Var.*, vol.61: pp.67-68. June 1949.
208. Harper, G.W., "Lepidoptera of West Sussex, 1948." *Ent. Rec. & Journ. Var.*, vol.61: pp.65-66. June 1949.
209. Herbulot, G., "*Paramathia*, nouveau genre de Larentiinae palearctique (Lep. Geometridae)." (In French). *Misc. Ent.*, vol.45: p.118. 1948. Describes new genus *PARAMATHIA* (type - *Geometra sabinata* Hbn.); also includes *obscuraria* of Asia. Related to *Trichopteryx*, *Trichopterigia*, *Episauris*. (C.R.)
210. Hovanitz, William, "Interspecific Matings between *Colias eurhytheme* and *Colias philodice* in Wild Populations." *Evolution*, vol.3: pp.170-173, 4 tables. June 1949. Compares frequency of *eurhytheme* and *philodice* in mating pairs to frequency in population (Ohio), concluding that mating is at random. Abstractor believes that small number of copulations (21), and especially of "interspecific" ones (5), makes any conclusions shaky. (C.R.)
211. Lempke, B.J., "Catalogus der Nederlandsche Macrolepidoptera" (In Dutch with Observations in English). *Tijdschr. voor Entomol.*, vol.90, 1946: pp.61-197. 1 July 1949. The eighth part of this elaborate catalogue, in which fam. Agrotidae is finished (pp.61-145) and Geometridae begun (pp.146-197). Observations in English: differences between *Sarothrips revavana* and *S. degenerana*: pp.97-99 (f.21, fore wing of five forms of *S. revavana*, f.22, f.23 ♂ genitalia, f.24 aedeagus, f.25 ♀ genitalia of these 2 spp.); pp.115-116 on differences between *Plusia pulchripa* and *P. jota* (f.26: cornuti, f.27 ♀ genitalia); forms of *Hypena rostralis*, pp.142-143; nomenclature of *Sterrha rusticata*, p.159. Figs. 29-32 of genitalia and wing patterns of Dutch Geometridae. (A.D.)
212. Michener, Charles D., "Parallels in the Evolution of the Saturniid Moths." *Evolution*, vol.3: pp. 129-141, 8 figs. 15 June 1949. Discusses in some detail, with phylogenetic trees, phylogeny of genera of Saturniidae, showing subfamilies Rhesocyninae, Citheroniinae, Hemileucinae, Aglinae, Ludiinae, Salassinae, Saturniinae. Extensive discussion of independent origin of similar characters in unrelated Saturniids. (C.R.)
213. Meulen, G.S.A. van der, "Zeldzame en bijzondere Macrolepidoptera" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.XXX-XXXI. 1 May 1949. Collecting notes of Macrolepidoptera for 1947 in Holland. *Hoplodrina superstes* Tr. (Caradinae) is new for the fauna. (A.D.)
214. Obratsov, N., "Three new species of *Ceryx* Wallgr. from Java and Sumatra (Lep., Amatidae)." *Tijdschr. voor Entomol.*, vol.90, 1946: pp.57-60. 1 July 1949. *Ceryx javanica* (W. Java), *C. sumatrensis* (Sumatra), and *C. burgeffi* (W. Java) are described as new, with photos. (A.D.)
215. Peterson, Björn, "Die regionale und synökologische Gliederung der Schmetterlingsfauna des jämtländischen Gebirges." (In German). *Ent. Tidskrift*, vol.70: pp. 184-192, 5 figs. 1949. Gives an ecological classification of the Lepidoptera fauna of the Jämtland region of Lapland, with list of characteristic spp. of heather, bog, meadow, and marsh habitats and with photos of habitats. (C.R.)
216. Picken, L.E.R., "Shape and Molecular Orientation in Lepidopterous Scales." *Phil. Trans. R. Soc. (B)*, vol.234: pp.1-28, 3 figs, 3 pls. 10 Aug. 1948. Study of chemical and physical morphogenesis of scales in *Ephestia sericarium* (= *kühniella*). (P.B.)
217. Regteren Altena, C.O. van, "Is *Melitaea didyma* (Esper, 1779) in Nederland gevangen?" (In Dutch). *Entomol. Berichten*, vol.12: pp.374-375. 1 May 1949. 2 specimens of this nymphalid, unknown in Holland before, received in the Leiden Museum from a Dutch locality. (A.D.)

218. Roepke, W., "The genus *Nyctemera* Hübner." *Trans. R. Ent. Soc. Lond.*, vol.100: pp.47-70, 14 figs., 2 pls. 25 Mar. 1949. A complete revision of the Javan species of these Lithosiidae, and notes on some Malayan species. Describes as new: *N. diaphana*, *N. lugens* and *N. limbata* (all from Celebes); also *N. crameri crameri*, previously known as *N. laticinia* (nec Cramer). All species mentioned, as well as the ♂ genitalia of most, are figured. (P.B.)
219. Roepke, W., "Het vervaardigen van genitaal-preparaten" (In Dutch). *Entomol. Berichten*, vol.12: p.391. 21 May 1949. The following method for making genitalia slides of large Lepidoptera is recommended. Macerate during 10-20 min. on water bath in 10% KOH or NaOH, transfer in water, warm on water bath for 10-15 min. in a mixture of phenolum liquefactum and chloral hydrate (1:1), transfer to creosote for a few minutes and mount in Canada balsam. (A.D.)
220. Roepke, W., "Nomenclatorische aantekeningen 1" (In Dutch). *Entomol. Berichten*, vol.12: pp.372-373. 1 May 1949. In Holland occur *Saturnia pavonia*, *S. pyri*, and *S. spini*. It is desirable that the first two names be validated by the Intern. Congress of Nomencl. If Linné described a variety from southern Sweden, the Central European species must be called *S. pavonia carpini* Schiff.; *Eudia* Jordan 1911 is a synonym of *Saturnia* Schrk. 1802. (A.D.)
221. Roepke, W., "Uittheemse insecten in Nederland en waarnemingen omtrent *Colias* (Lep.)" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: p.VII. 1 May 1949. Observations on occurrence of *Colias hyale* and *C. croceus*, migrant Pieridae, in Wageningen, Holland. (A.D.)
222. Scholten, L.H., "De invloed van de zomer van 1947 op de vlinderwereld" (In Dutch). *Entomol. Berichten*, vol.12: pp.331-332. 1 Mar. 1949. Faunistic notes on the influence of that exceptionally warm summer upon Lepidoptera in the East of Holland. (A.D.)
223. Scholten, L.H., "Bijdrage tot de kennis van *Arachnia levana* L. en zijn verbreiding in ons land" (In Dutch). *Entomol. Berichten*, vol.12: pp.362-364. 1 May 1949. Notes on biology and distribution in Holland. This rare species spread in the years 1940-1945 over the province of South Limburg, where the larvae can be found on stinging nettle. (A.D.)
224. Scholten, L.H., "Vlindervangst op grassen die door *Claviceps* zijn aangetast" (In Dutch; English summary). *Entomol. Berichten*, vol.12: pp.393-397. 21 May 1949. In this interesting paper is described how great numbers of Lepidoptera are attracted at night by sweet secretion of flowering grasses attacked by *Claviceps* fungus. Gives lists of Macrolepidoptera observed on common grasses: *Estuca arundinacea* and *Molinia coerulea* infected by this fungus, in province of Guelderland, Holland. (A.D.)
225. Schuh, Joe & Don C. Mote, "Insect Pests of Nursery and Ornamental Trees and Shrubs in Oregon." *Oreg. Agr. Exp. Sta. Bull.* 449: 164 pp., 83 figs. Jan. 1948. Brief descriptions and biological notes for Oregon Lepidoptera on pp.54-97 and figs. 29-55. Includes 9 Rhopalocera, 9 Sphingidae, 4 Saturniidae, 5 Arctiidae, 13 other macros, 20 "Olethreutidae", 12 Aegeriidae, 34 other micros. (C.R.)
226. Sevastopulo, D.G., "Notes on four Indian Bombycid species." *Proc. R. Ent. Soc. Lond.* (A), vol.24: pp. 6-7. 15 Mar. 1949.
227. Sevastopulo, D.G., "Field Notes from East Africa." *Entomologist*, vol.82: pp.130-133. June 1949. Mostly on Lepidoptera (P.B.)
228. Stovall, T.H., "A new type of microscope-slide cabinet." *Can. Ent.*, vol.81: pp.120-122, 2 figs. May 1949. Describes a cabinet in which a number of desirable features are incorporated, and gives full details for its construction. (C.d.P.)
229. Toxopeus, L.J., "De 3^o Archbold Expeditie naar Nieuw Guinea (1938-1939) en haar resultaten" (In Dutch). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.XI-XIX. 1 May 1949. A summary of the author's address at the Intern. Entom. Congress at Stockholm. A short itinerary is given and zoogeographical results based on a study of the Rhopalocera. The author collected about 500 species, of which 50 are new. His results agree very well with those of recent ornithological and geological studies. New Guinea must have been formed out of a group of islands which were soldered together by strong rising of central mountainous region resulting in the Snow Mts. formation. The fauna of butterflies and birds in these previously isolated parts is strikingly different. The relatively young age of the Snow Mts., which view is supported by geological data, explains scanty fauna of Rhopalocera in that region. Several low valleys have been strongly uplifted in that rising process. This explains remarkable "low-land fauna" of such elevated regions as Baliem Valley and Wissel Lakes. (A.D.)
230. Toxopeus, L.J., "De samenstelling der Javaansche vlinderfauna" (In Dutch: The composition of the Lepidopterous fauna of Java). *Tijdschr. voor Entomol.*, vol.91, Verslag: pp.LX-LXIII. 21 May 1949. Java is a land of problems and may not be regarded as a homogeneous zoogeographical unity with uniform fauna. On the basis of extensive studies of Roepke and of the author, especially of the fauna of alpine Rhopalocera, Toxopeus explains the Javanese fauna by accepting that the Island is formed out of about four parts: eastern, central, western and Mt. Muria (N. Central Java), which were isolated from each other for a long time. Besides, the influence of immigrants from neighboring regions is evident, e.g. the bridge over Mt. Muria and Bawaan I. in the Java Sea; this view is supported by the occurrence of certain Rhopalocera and deer in these regions. Another bridge must have run through S. Sumatra. This immigration must have taken place in three different periods, which is supported by the findings both of Javanese Rhopalocera and fossil and recent mammals. As an illustration is chosen the occurrence in Java of three subspecies of *Adolias dirtea* F. (Nymphal.), viz. *javana*, *boisduvali*, and *roepkei*, the last described as new. (A.D.)
231. Viette, P., "Les Lépidoptères Gelechiidae du Pacifique Sud" (In French). *Bull. Mus. Nat. Hist. Nat.*, vol.21: pp.98-104. Jan. 1949. Gives a key to the genera occurring in the South Pacific and a synopsis of the known species. (P.B.)
232. Viette, P., "Contribution à l'étude des Micropterygidae, 3^e note; Description de deux espèces nouvelles de *Micropteryx* (Lepid.)" (In French). *Rev. Franc. Ent.*, vol.16: pp.50-51, 3 figs. 1 April 1949. Describes as new: *Micropteryx jeanneli* (Albania); *M. rebeli* (Portugal). ♂ genitalia of *jeanneli* and wing patterns of both are figured. (P.B.)
233. Viette, P., "Contribution à l'étude des Hepialidae, 4^e note; Description de deux nouveaux genres sudaméricains (Lepid.)" (In French). *Rev. Franc. Ent.*, vol.16: pp.52-55, 9 figs. 1 April 1949. Describes as new *DRUCEIELLA* (type *D. mcamus*) and *PARAPIELUS* (type *P. luteicornis*). The type species and a third, *D. metellus*, are redescribed and characters of the palps, genitalia and abdominal sclerites are figured. (P.B.)

Erratum: In Recent Literature abstract #188 (*Lep. News* 3: p.70) strike out "genitalia not mentioned". Mr. Sperry discusses the genitalia in some detail and I extend my sincere apologies to him for my error. C.J.R.



NOTICES BY MEMBERS

SPANISH LEPIDOPTERA for sale or exchange. Want American, Indo-Australian, etc. Rhopalocera and Macroheterocera. H. Flores & J. Vives, 17 Plaza Lesseps, Barcelona, SPAIN.

Wanted: Papilionidae of world, especially Archon, Hypermnestra, Zerynthia, Baronia and Eurycus. Have for exchange many species of Japanese Rhopalocera. Yoshio Okada, Yanagida-cho, Saga, Kyoto, JAPAN.

Speyeria diana (males only) for sale or will exchange for tropical Lepidoptera or Coleoptera. Fresh stock, perfect and caught this season. Theodore Bock, 70 Ehrman Ave., Cincinnati 20, Ohio.

For sale: ECUADORIAN BUTTERFLIES from both slopes of Andes, collected by William Clark-Macintyre. Prices PER 100 for average material as follows:
Papilio - \$15.00; Pieridae - \$6.00; Ithomiidae - \$6.00; Heliconiidae - \$8.00; Satyridae - \$7.00; Nymphalidae, common - \$6.00; Nymphalidae, uncommon - \$12.00; Lycaenidae & Erycinidae, common - \$7.00; Hesperidae - \$5.00.

Rarer material such as Morpho, Caligo, Brassolis, and material selected by genus or species - prices on application. Send for recent price lists. Advise me of your wants. F. Martin Brown, Fountain Valley School, Colorado Springs, Colo.

Jorge Kesselring, Caixa Postal 6, João Pessoa (Parabiba), BRAZIL, wishes to exchange, with U.S.A. members, Brazilian butterflies for his Lepidopterists' Society membership dues.

CALIFORNIA ACADEMY OF SCIENCES DRAWERS for sale. 17 x 19 x 2 1/2 inches, white lined composition bottom, double strength glass top, hand-rubbed clear lacquer finish, complete with hardware. \$6.00 each, \$65.00 doz. Cabinets available. Bio Metal Associates, P.O. Box 346, Beverly Hills, Calif.

Wanted: BASSWOOD MOUNTING STRIPS in all sizes. M.E. Cady, 21 Border St., Dedham, Mass.

A complete line of entomological equipment and specimens is now available: insect boxes, mounting boards, nets, pins, Rikers, etc., as well as hundreds of species of tropical and N.Am. Lepidoptera. Price lists sent free upon request. Robert G. Wind, Rt. 145, Buena Vista, Livermore, Calif.

For sale or exchange - Kansas butterflies and moths, esp. Papilionidae, Pieridae, Nymphalidae, Hesperidae; Heterocera: Sphingidae, Saturniidae, Arctiidae, Noctuidae, Catocalinae and Geometridae. Mounted or papered. William Howe, 822 E. 11th St., Ottawa, Kans.

Student entomologists collected in southern Arizona in August wish to contact persons who will purchase specimens and thus help cover expenses. The material will be named and prepared as desired. Rudolf Mattoni, Div. of Botany, Univ. of Calif., Los Angeles 24, Calif.

Butterflies of Florida, Georgia, and the Carolinas for exchange or sale. H.L. King, 419 Highland Ave. S.W., Roanoke, Va.

Duplicates for exchange - butterflies from European Alps, Pyrenees, Lapland, Mediterranean, Atlas Mts., N. Africa, Alberta. British moths, also local races British butterflies. Desiderata - many N. American spp., chiefly alpine, arctic, desert & Gulf States. Correspondence welcomed. Colin W. Wyatt, Cobbetts, Farnham, Surrey, ENGLAND.

Have few pairs of Argema mittrei from Madagascar for exchange for Papilio specimens, preferably of Africa or Australia. Have also beetles (Buprestidae and Cetoniidae from Madagascar) in exchange for tropical butterflies. A. Glanz, 289 E. 98th St., Brooklyn 12, New York.

Wanted: thirty thousand butterflies and moths from all over the world. Small or large lots. Ben Karp, 3148 Foothill Blvd., La Crescenta, Calif.

Wanted to buy: Dyar's "Classification of Lepidopterous Larvae"; Rothschild & Jordan's "A Revision of the Lepidopterous Family Sphingidae" (Nov. Zool., 1903); Scudder's "The Butterflies of New England". Peter Boone, R.F.D. 3, Box #172, Princeton, N.J.

For sale: The "Libra-Mount"; a double-Riker-type mount in Book Form. Ruggedly built. Send for descriptive leaflet. Will consider exchange for Macro-Rhopalocera from all parts of the world, especially Papilio, Morpho, Ornithoptera, etc. Arthur Gatti, 63 W. 7th St., Mt. Vernon, N.Y.

Would like to exchange butterflies, large moths, and beetles of the world. Have many duplicates, including several thousand from tropics, with full data. Will be pleased to answer all correspondence. G.F. Schirmer, 2912 N. 45th St., Milwaukee 10, Wis.

Japanese moths offered in exchange for those of America and other countries, - especially Geometridae, Pyralidae, Sphingidae, and Noctuidae. Prof. Masao Azuma, Koyo High School, Imazu, Nishinomiya, Hyogo Pref., JAPAN, or 1644, Rinkeiji, Arima, Kobe, JAPAN.



LIVING MATERIAL



Limited number of cocoons of Platysamia euryalus, hybrid cecropia-euryalus, & columbia-cecropia offered in exchange for other living pupae, esp. Callosamia angulifera, Eupackardia calleta, Citheronia regalis. D.P. Frechin, 1504 N. Lafayette, Bremerton, Wash.

Living cocoons of Indian Saturniid moths for sale. Please send U.S. Dept. Agric. importation permit with orders from U.S.A. (see Lep. News 3: p.13). Remittance must accompany orders.

Attacus edwardsii - 50¢; A. cynthia - 12¢; Actias selene - 20¢; Loepa katinka - 20¢; Saturnia grotel - 12¢; Antheraea mylitta - 40¢.
 Himalayan Butterfly Co., Shillong, Khasi Hills, INDIA.

THE NEARCTIC BUTTERFLIES- Notice to Collaborators

On the 15th of September I sent out Data Sheets to all of you whose addresses I had. These sheets are for the first ten species of Satyridae listed in McDunnough's Check-list. I know that I missed some of you. In moving from one office to another in town and then moving all of my North American material out here to my home laboratory, things got very much mixed. If you have not received the above Data Sheets by the end of September PLEASE DROP ME A POST CARD and I will get yours off to you.

Forty-one percent of the collaborators to whom I wrote about the Danaidae replied with either positive or negative information. I hope that this will be raised considerably now that we are working on species that are not common!

Hereafter address all correspondence to me at:
Fountain Valley School, Colorado Springs, Colo.

F. Martin Brown, Coordinating Editor
"The Nearctic Butterflies"

DEALERS IN ENTOMOLOGICAL LITERATURE - SUPPLEMENT

The first list (see Lep. News 3: p.49) was received with considerable enthusiasm. Additions made known to us since then are as follows:

Dulau's Dept., B.H. Blackwell, Ltd., Broad St., Oxford, ENGLAND.

*I-7-7**
William Dawson & Sons, Ltd., London, ENGLAND. Very large stock; reasonable prices.

A. Asher & Co., 386 Herengracht, Amsterdam-C, NETHERLANDS. Large stock; prices reasonable.

Fred J. Pierce, Winthrop, Iowa, U.S.A.

Stechert-Hafner, Inc., 31 E. 10th St., New York 3, N.Y., U.S.A. Specializes in importing books.

John Johnson, P.O. Box 248, Mt. Vernon, N.Y., U.S.A. Occasional lists of papers.

Bernard Quaritch Ltd., 11 Grafton St., New Bond St., London, W.1, ENGLAND. Large stock; prices high.

The long-awaited "Revision of the North American Species of the Genus Eupithecia", by Dr. James H. McDunnough, has now been published and will be reviewed in the next issue of the Lep. News. It includes 145 species of Eupithecia alone!

The future library of the Lepidopterists' Society already has a number of reprints and volumes of journals. We acknowledge gratefully some recent acquisitions. Peter F. Bellinger has presented a fine bound copy, apparently the author's private copy, of J.W. Weidemeyer's "Catalogue of North American Butterflies" (1864). Through the intercession of Dr. A. Diakonoff, the authorities of the Zoölogisch Museum en Plantentuin, Buitenzorg, Java, have presented a set of the papers on Lepidoptera which have appeared in Treubia. Several Society members in many parts of the world have sent substantial sets of their own papers on Lepidoptera.

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The Annual List of Members of the Lepidopterists' Society is being mailed with the present issue of the Lep. News. It is complete as of October 25th and is timed to be distributed as the main exchange season begins. It will greatly aid the Society if members will glance through the List and drop a note to each correspondent not yet a member or send us a list of their names and addresses.

Participation in the North American field season summary for 1949 is earnestly solicited from all collectors on the continent who were in the field during the year. Dr. Munroe, coordinator for Area 7, wrote to the Lep. News editor of the response in his area for 1948: "I imagine that the other coordinators encountered the same difficulty that I did, namely, a reluctance on the part of collectors to believe that their own contributions to the summary might be important. I think part of this reluctance has been due to a mistaken belief that it is necessarily records of rarities or local 'specialties' that are likely to be of greatest interest. You know, of course, that the contrary is in fact the case, and that information relating to common species is not only most likely to be comparable from place to place and from year to year, but will also have the greatest statistical significance. There is the added consideration that common species are recognized by the beginner as well as by the expert, so that the range of observers is increased."

As usual, no numbers of the Lep. News are issued for July through September.

THE LEPIDOPTERISTS' NEWS
The monthly periodical of the Lepidopterists' Society
Membership is open to all persons interested in any aspect of the study of butterflies and moths. The 1949 dues, including subscription to the NEWS, are \$2.00 for Regular Membership and \$4.00 or more for Sustaining Membership. Please make remittances payable to Charles L. Remington. Price for Vol. 2 is \$2.00. No complete sets of Vol. 1 are available.