

The Lepidopterists' News

THE MONTHLY NEWSLETTER OF THE LEPIDOPTERISTS' SOCIETY

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There has always been a tendency for Lepidopterists to segregate themselves from other entomologists, often with the result that they fail to apply advancement of other phases of entomology (and zoology) and lose the balanced approach necessary to good scientific work. A primary aim of the Lep.Soc., through the NEWS, is to reduce this barrier.

In North America there are several local entomological societies holding regular meetings and in some cases publishing their own general journal. There is one correlating society, THE ENTOMOLOGICAL SOCIETY OF AMERICA, which has members from all parts of the continent. Lepidopterists should be aware of its existence, its functions, and its activities. It is hoped that all Lep.Soc. members devoting much time to entomological research will want to become members of the E.S.A. if they have not yet done so. A short account of the history and activities of this Society will help to acquaint Lep. Soc. members with it.

THE ENTOMOLOGICAL SOCIETY OF AMERICA was organized in 1906 as a result of a spontaneous demand, and under the leadership of Prof. John H. Comstock, Dr. William Morton Wheeler, Dr. L.O. Howard, Dr. Henry Skinner, J. Chester Bradley, and others. By the end of its first year the Society had over 400 members and had Professor Comstock as its first president. Dr. Skinner, noted Lepidopterist, was elected Second Vice President and became President two years later. In order to recognize the achievements of its members it established three classes of membership - Honorary Fellow, Fellow, and Member. Of the seven original Honorary Fellows, two, Dr. Samuel Hubbard Scudder and William Henry Edwards, were Lepidopterists. Election to this class is the highest honor American entomology can bestow. Apparently no other Lepidopterists have been so recognized, there being none among the twelve living Honorary Fellows. Five charter members of the Lep. Soc. were charter members of the E.S.A. Thirteen Lep.Soc. members are Fellows of the E.S.A.

THE ENTOMOLOGICAL SOCIETY OF AMERICA now has two primary activities other than recognition of accomplishment. It publishes one of the finest entomological journals in the world - its Annals, with Dr. A.W. Lindsey as editor. And it holds an annual meeting composed of paper-reading sessions and a business meeting. This year the meeting will be held in Chicago in conjunction with the American Assoc. for Advancement of Science from December 27-30. All Lep. Soc. members in the vicinity of Chicago are urged to attend the sessions, to be held in the Congress Hotel. Lep. Soc. members who wish to join the E.S.A. should write immediately to the NEWS editor for a membership form so that they may be elected to membership at the December business meeting. The annual dues are \$5.00 and bring a subscription to the valuable Annals.

SUMMARY OF "SOME PRINCIPLES OF CLASSIFICATION IN LEPIDOPTERA,
WITH SPECIAL REFERENCE TO THE BUTTERFLIES", BY B.C.S. WARREN.*

This patient exposition of a generally confusing and confused subject should be read by all Lep. Soc. members, but cannot, of course, be reproduced here in its entirety. However a summary is presented of the first two installments. Succeeding parts are not yet published, but the meat of Warren's arguments is probably given in these two issues.

Warren's oft-stressed attack is against DETAILED definitions of categories above genus. He maintains that "large numbers of valid characters do not exist. Actually the more fundamental the group, the fewer the characters; so that in superfamilies and families there most frequently are no more than one or two characters indicative of relationship, or of any real classificatory value." Analyzing definitions in modern works, he concludes that all characters used fall into one of three types: (1) The true diagnostic character - constant throughout the unit, either present or clearly secondarily lost; (2) the complementary character - a feature or combination found only in the unit, but not constantly; (3) the false, or worthless character - having no recognizable frequency and not confined to the unit alone. Applying these methods of characterization, Warren presents the following grouping in the Lepidoptera:

- Suborder HOMONEURA (both pairs of wings with identical neurulation)
- Suborder HETERONEURA (neurulation of fore and hind wings differing)
 - Super-family- Group I (wings coupled by frenulum)
 - Super-family- Group II (wings coupled by humeral lobe of secondaries)
 - Superfamily HESPERIOIDEA (neurulation unbranched)
 - Family HESPERIIDAE
 - Superfamily PAPILIONOIDEA (neurulation branched)
 - (A) Primitive family-group (fore legs functional in both sexes)
 - Family PAPILIONIDAE (claws simple)
 - Family PIERIDAE (claws bifid, eggs elongated)
 - Family LYCAENIDAE (claws bifid, eggs not elongated)
 - (B) Advanced family-group (fore legs degenerate only in male)
 - Family RIODINIDAE (palpi short)
 - Family LIBYTHEIDAE (palpi very long)
 - (C) Specialized family-group (fore legs degenerate in both sexes)
 - Family NYMPHALIDAE (specialization of fore legs not constant in either sex)
 - Family DANAIDAE (specialization of fore legs constant in female)
 - Family SATYRIDAE (specialization of fore legs constant in both sexes)

Under NYMPHALIDAE he includes the subfamilies: Acraeinae, Argynniinae, Heliconiinae, Melitaeinae, Limenitinae, Nymphalinae, Euthaliinae, Morphinae, and Amathusiinae (including tribes Brassolidi and Hypolimnidi).

The complementary characters listed for these groups come mainly from the neurulation and the pupal suspension and freedom of movement. The suspension of the pupa seems hardly a fundamental character having evolutionary significance. Warren's treatment is conservative and the general grouping apparently sound, but his rebellion against the multiple-character definitions of higher categories seems to have rebounded too far in the other direction. Surely it will not discourage workers from continuing investigations of larvae (see A.H. Clark, NEWS p.52, #39), pupal structures, adult body structures other than appendages (see Kiriakoff, NEWS p.78, #108), and other approaches to fundamental classification.

*From The Entomologist, vol. 80, pp. 208-217, 235-241, -; Sept., Oct., - , 1947. C.L.R.

7. The Butterflies of North America by William Henry Edwards*

Edwards' great classic very likely will never be equalled for superbness of style and color plates, because it is doubtful that anyone will be willing to go to the great expense required. Edwards himself remains the leader among American butterfly students in the amount of time given and in the value of his contributions. His three-volume work was the pinnacle and fruition of his diligent devotion over a great many years. It is deeply to be regretted that the book is unavailable to nearly all Lepidopterists because of its prohibitive cost.

The text is a series of chapter-like accounts of one species of butterfly after another. Each species is thoroughly described in the adult, with careful descriptions of the egg, larvae, and pupa if known. Then follows the engrossing discussion of habits, habitat, and results of breeding experiments. The text alone would provide exciting reading for any enthusiastic Lepidopterist with some field experience. Many of the field notes are quoted from letters written by the great collectors of the day, especially Mr. David Bruce. The high mountain butterflies of the genus "Chionobas" (=Oeneis) were of particular interest both to Edwards and to Bruce. Under C. oeno (=lucilla), Bruce is quoted thusly: "The butterflies played around me and apparently fought for a position, a jutting point on the edge of the snow. On this they would walk a few inches in their jerky manner, stop a few minutes and begin an almost imperceptible gliding, then stand quiet a moment, and walk again - about which time a rival would appear, and the usual skirmish in the air would ensue; and I generally improved the occasion by catching both of them. .. For shelter during storms they return to the mountain verge. I once took quite a cluster of them in a crevice under a huge overhanging rock where I had taken refuge during a furious hailstorm. .. It is found, as I have said, at the highest points attainable and is common; yet from frequenting such inaccessible localities, collectors have not often collected it." At another point, regarding C. brucei, Bruce had written: "There are few or no birds at these high stations to destroy the larvae or catch the butterflies, but mice, ground squirrels, spiders, and predaceous beetles are legion. Parasitic diptera and ichneumon flies are as numerous as on the lower levels; a large gray Asilus, too, is ever present like an evil spirit, capturing Brucei without the least effort. It is, therefore, surprising that so frail a butterfly should hold its own so persistently." Edwards was also primarily interested in Papilio and the relationships of named "species" which could be brought out by rearing. He proved P. marcellus, telamonides, and walshii to be seasonal forms of P. ajax (=marcellus). He once travelled all the way from West Virginia to Colorado on the crude railroads of the time expressly to rear large numbers of the offspring of P. bairdii and P. brucei females, and his results if carefully reviewed now would surely result in the recognition of these entities as races of the same species - suggested as machaon by Edwards himself.

The beautiful plates are the finest feature of the great work. Of the 101 plates in volumes I and II, 98 were executed by Mrs. Mary Peart, "with a fidelity to nature that cannot be surpassed." 100 of these were colored by Mrs. Lydia Bowen and her sister Mrs. Leslie, both of whom had served originally with the bird artist, John J. Audubon. The 51 plates for volume III are mostly the work of Edward A. Ketterer. C.L.R. *Published by Houghton, Mifflin, & Co., Philadelphia, New York, and Boston. Pages unnumbered. Vol. I- 1868; vol. II- 1874-84; vol. III- 1887-97. 41 parts in all. 152 colored plates. Available from John D. Sherman, 132 Primrose Ave., Mt. Vernon, N.Y. for \$100.00.

RECENT PAPERS ON LEPIDOPTERA

Erratum: On p.52, item #36, in lines 9 & 12 "guasca" should be "quasca".

90. Bell, E.L., "A Catalogue of the Hesperioidea of Venezuela." (see #35, p. 52). Copy kindly sent the NEWS by Mr. Bell. This paper should be useful for any work with American Hesperidae. The 3 American subfamilies are characterized in some detail. Genotypes all are designated, specifically noted as Orthotype, Haplo type, Logotype, Diatype, or Pseudotype. English system of venation numbering used. Each of the 155 genera is characterized. The entire known distribution of the 409 species, races, and forms is given. Of course the complete references to original descriptions are always given, with additional references of papers having figures and of papers giving Venezuela records. An index to names is the final section. A mimeographed list prepared by Mr. Bell corrects a very large number of typographical errors due to his having had no opportunity to correct a galley proof.
91. Birkett, N.L. "Observations on Drepana binaria in North Lancashire". The Entomologist, vol. 80, pp. 161-164. July, 1947. This moth apparently is spreading its range northward. Larvae on mature leaves did well. Larvae on tender second-crop foliage all died.
92. Blackwelder, Richard E., "The Dates and Editions of Curtis' British Entomology." Smithsonian Misc. Coll., vol. 107, no. 5, 4 plates. 12 June 1947. Attempts to date accurately the reprinted, revised edition of this important 1824 book, to aid in correct selection of genotypes, etc. Following Lepidoptera genera concerned: Lycaena, Deilephila, Eyprepia, Bupalus, Dendrolimus, Peronea, Sarrothripus, Gastropacha.
93. Brandt, William, "A new Ocnogyna Species from N.E. Iran", Entomologisk Tidskrift (Stockholm), vol. 68, nos. 1-2, p.90. 1947.
94. Carpenter, G.D.Hale "A new subspecies of Papilio dardanus Brown." Proc. Roy. Ent. Soc. London (B), vol. 16, pp. 55-56. 16 June 1947. A distinctive race, apparently restricted to the isolated Mount Kulal in Kenya, characterized by strongly yellow antennae and named: P. dardanus flavicornis.
95. Carpenter, G.D.Hale "The geographical distribution of the forms of the African Nymphaline butterflies Charaxes etesipe Godart and Ch. penricei Rothschild." Trans. Roy. Ent. Soc. London, vol. 98, pp. 91-104, 2 pls., 7 figs. 2 July 1947. Concludes that the two "species" are actually one and that Comoro Is. and Madagascar races arrived there after separation of these islands.
96. Chang, S.C. "A Redescription of Ailantus Arctiid Mouth (Eligma narcissus Cram. Lepid. Arctiidae)." (All in Chinese). Entomologia et Ars (Wukung, China), vol. 1, pp. 5-9, 55-56. 5 figs. Apr., Aug., 1946.
97. Clarke, J.F. Gates, "A New Dichomeris from Eastern United States (Lepidoptera, Gelechiidae)." Proc. Ent. Soc. Washington, vol. 49, pp. 187-189. Oct. 1947. D. glenni described from Putnam Co., Ill. Known also from Florida, Kansas, and Michigan. Male and female genitalia figured. Named for M.O. Glenn, collector of the type.

RECENT PAPERS-cont.

98. Collenette, C.L. "The Identity of Phalaena chrysoorrhoea, Linnaeus, 1758." Bull.Ent.Research, vol. 38, pp. 259-261. Aug., 1947. Carefully reviews evidence and concludes that Linnaeus' name must apply to the Brown-tail, as generally accepted, and not the Gold-tail as maintained by Rothschild (1917).
99. Cripps, C. "Scent perception in some African Myrmecophilous Lycaenidae." Proc. Roy. Ent. Soc. London (A), vol. 22, pp. 42-43. 16 June 1947. Several remarkable cases indicating highly developed scent perception in butterflies and ants. Ovipositing females apparently find proper host plant by scent. Ants appear to know their myrmecophilous larvae by scent and parasites of the lycaenid larvae emerge and leave the ant nest unmolested, probably because they have acquired the key odor from the larvae. Larvae of the Blue Neochrysope (sev. spp.) are carried down into the ant nest for maturing and pupating.
100. Evans, R. Tenniel, "East African Butterflies." Journ. East Africa Nat. Hist. Soc., vol. 19, pp. 18-39, plates I-IV. June, 1946. Takes up continuation of van Sommeren's list of Kenya and Uganda butterflies. This part covers Pseudoneptis, Catuna, Pseudargynnis, Pseudacraea, and Neptis, with key to spp. of Neptis. 41 photos of specimens.
101. Franz, Herbert, "Die Landtierwelt der Mittleren Hohen Tauern." Denkschriften AK. Wiss. Wien (Austria), vol. 107, 552 pp., 14 plates. 1943. Ecological study of animals of one range of W. Austrian Tirol. Pp. 144-207 covers 966 spp. of Lepidoptera.
102. Freeman, T.N., "The Taxonomic and Economic Approach to an Entomological Problem." 77th Ann. Rep't Ent. Soc. Ontario (1946), pp. 8-9. 1947. Instructive review of biological aspects of Budworm, Archips fumiferana complex, revealed in intensive studies of Canadian Gov't agencies, proving in this case museum taxonomy cannot give the answer to species separation without prior biological work with living material.
103. Freeman, H.A., "New Skipper Records for the United States." Ent. News, vol. 58, pp. 184-186. July 1947. New U.S.A. records (all from Pharr, Texas) are: Aguna asander form panthus, Pellicia costimacula, Gorgythion begga pyralina. Summary of all his new U.S.A. skipper records lists 6 as probable residents and 11 as strays. Records of actual breeding are the next important step.
104. Gardner, J.C.M. "On the larvae of the Noctuidae- III." Trans. Roy. Ent. Soc. London, vol. 98, pp. 59-90, 34 figs. 2 July 1947. Deals with his "Division B" of the family - containing most genera of the Catocalinae and Noctuinae, some Acontiinae, and the Erastriinae, Plusiinae, and Hypeninae. Larval evidence removes Chasmina, Androlymnia and Elydna from Acronyctinae. Descriptions, keys, and figures, continuing previously reported studies on this family.
105. Golding, F.D. "Further Notes on the Food-Plants of Nigerian Insects, VI." Bull.Ent.Research, vol. 38, pp. 75-80. May, 1947. Continuing earlier lists, gives host plants of 3 Nymphalidae, 1 Lycaenidae, 1 Hesperidae, 1 Arctiidae, 10 Noctuidae, 3 Lymantriidae, 4 Sphingidae, 3 Notodontidae, 1 Geometridae, 1 Saturniidae, 4 Lasiocampidae, 11 Pyralidae, and other insects.

RECENT PAPERS-cont.

106. Jackson, T.H.E., "The early stages of some African Lycaenidae." Proc. Roy. Ent. Soc. London (A), vol. 22, pp. 44-48. 16 June 1947. Describes rather tersely the egg, larva, pupa, and records host of Capys catharus Riley, Epitola crippsi Stoneham, Deudorix odana Druce, Deameronia Ploetz, Stugeta olalae Stnrm., Spindasis sp., Axiocerses harpax Fabr., Athene sobrina Talbot, and A. lamias Hewitson. The 2nd, 4th, 6th, and 7th spp. are tended by ants, with A. harpax apparently unable to feed on plants and living in the ant runs on some sort of concentrate excreted or produced by the ants.
107. Kiriakoff, S.G., "Taxonomie intraspécifique dans ses applications aux Lépidoptères." (In French). Bull. & Ann. Soc. Ent. Belgique, vol. 82, pp. 209-224. 1946. A clear statement of a code for nomenclature below species (subspecies, race, variety, form, seasonal form, etc.), closely agreeing with our viewpoint, as emphasized in the NEWS in every issue. Accepts as nameable: geographic race and biological race, treated as trinomials. Seasonal, sexual, and individual variants should not be named. If they are, they have no standing or protection under the International Rules. Then gives a code for naming these variants: placing the Latin name in brackets. We have asked M. Kiriakoff for an article on this subject for the NEWS and hope to present it soon. Otherwise we will give a more detailed translation of this paper.
108. Kiriakoff, S.G., "On the systematical position of the lepidopterour family Hesperidae." 13th Biologisch Jaarboek, Dodonaea, 1946, pp. 288-292. Agrees with most recent authors in discarding the "suborder Rhopalocera" for skippers and butterflies. Considers the skippers far removed from butterflies (PAPILIONOIDEA). Apparently accepts suborders FRENATA and JUGATA, dividing the former into the "cohors STEMMATONCOPODA" (PYRALIDOIDEA, etc., having "crowned prolegs" in the larva) and the "cohors HARMONCOPODA" (PAPILIONOIDEA, higher moths, having harmoncopodous prolegs). On the basis of this character Kiriakoff places the skippers in the STEMMATONCOPODA. He considers the tympanal organ (ear) a superfamily character and thus places the PTEROPHORIDAE and THYRIDIDAE in the superfamily HESPERIOIDEA, to be placed near the PYRALIDOIDEA (PYRALIDIDAE only). If true, the contentions of this paper need to be developed much more before acceptance can be assured.
109. Le Mout, E., "Études préliminaires sur le genre Apatura s. str. (Lep. Nymphalidae)." Miscellanea Entomologica (Paris), vol. 43, pp. 58-75. Oct. 1946. Describes as new: A. clytie s.-sp. juno (n. France and Belgium) and its "f. ind. margineljuno" (n. France), A. clytie s.-sp. carueli (Ukraine) and its "f. ind. marginecarueli" (Ukraine), A. clytie s.-sp. bernardii (Siberia) and its form mandschurica (Manchuria) and "f. ind. fabreae" (Siberia & Manchuria), A. ilia s.-sp. minerva (n. France & Belgium) and its "f. ind. pseudoserarum" (Berlin) and "f. hybride fulvopuncta" (n. France), A. ilia s.-sp. asturiensis (n. Spain), A. ilia s.-sp. russica (Russia), A. ilia s.-sp. orientalis (Manchuria), A. serarum s.-sp. szechwanensis (Szechwan), A. serarum s.-sp. phaedra f. pseudilia (China), A. serrarum s.-sp. yunnanensis (Yunnan), A. serarum s.-sp. extensa

- 109 (cont.) (Yunnan), A. metis s.-sp. oberthuri (Russia) and its "f. hybride intermedia" (Russia), A. metis s.-sp. asiatica (Siberia & Manchuria) and its forms ind. pseudohere (Manchuria) and obscura (Manchuria), A. metis s.-sp. lavernoides (Tibet), A. metis s.-sp. monardi (Yunnan), A. gertraudis s.-sp. mirei (Manchuria), A. gertraudis s.-sp. japonica (Japan), A. iris s.-sp. iris "f. ind. obscurior" (Germany), A. iris s.-sp. moriei (China) and its "f. ind. obscuremoriei" (China). The paper seems a thorough muddle, taxonomically.
110. Lichy, R., "Document pour servir à l'étude des Lépidoptères du Venezuela (3e. note)." Bol. Ent. Venezolana, vol. 5, pp. 1-13. 1946.
111. Lichy, R., "Documents pour servir à l'étude des Sphingidae du Venezuela (Lepid. Heter. 8e. note)." Bol. Ent. Venezolana, vol. 5, pp. 15-26, 1946.
112. Moss, A. Miles, "Notes on the Syntomidae of Para, with Special Reference to Wasp Mimicry and Fedegosa, Heliatropium indicum (Boraginaceae), as an attractant." The Entomologist, vol. 80, pp. 30-35. Feb. 1947. Pleasant account of wasp-mimic syntomids and their attraction to Fedegosa, an amazing insect lure.
113. Munroe, Eugene G., "Four New Pieridae from the West Indies." Am. Mus. Novitates, no. 1362, 5 pp. 4 Nov. 1947. Describes as new: Phoebis (Aphrissa) orbis subsp. browni, P. statira subsp. hispaniolae, Eurema (Abaeis) nicippiformis, and E. (Pyrisitia) euterpiiformis, all from Hispaniola. Descriptions are detailed, comparative, and in all cases accompanied by genitalic analysis. References given. P. orbis browni named for F.M. Brown, reviser of Phoebis.
114. Opheim, M., "Nye funn og finnesteder for Macrolepidoptera." Norsk Ent. Tidsskr. (Oslo), vol. 7, pp. 190-192. "1946" (In Norwegian).
115. Price, Geoffrey C., "Chrysophanus phlaeas in Egypt" (Lycaenidae). Bull. Soc. Fouad Ent. (Cairo), vol. 30, p. 77. 1946. Records typical phlaeas for first time. C. phlaeas coerulea-basalis Andres described from western Egypt in 1930.
116. Rehfoos, Marcel, "Note sur Hyalina albida" (Psychidae). Mitt. Schweiz. Ent. Gesell. (Geneva), vol. 20, pp. 211-216. Nov. 9, 1946.
117. Romei, Enzo, "Glaucopsyche lysimon and Cupido minimus." Ent. Record & Journ. Variation, vol. 59, pp. 99-100. Sept. 1947.
118. Romieux, Jean, "Nouvelles Observations sur quelques Sesies" (Aegeriidae). Mitt. Schweiz. Ent. Gesell., vol. 20, pp. 225-231. Nov. 9, 1946.
119. Romieux, Jean, "Notice sur la progression de l'Arachnia levana en Suisse occidentale" (Nymphalidae). Mitt. Schweiz. Ent. Gesell., vol. 20, pp. 262-264. Nov. 9, 1946.
120. Schepler, Fritz, "Nydansk sommer fugl, Rhyacia fugax Tr." Entomologiske Meddelelser (Copenhagen), vol. 25, pp. 150-152, 1 fig. 1947. (In Danish).

RECENT PAPERS-concl.

121. Sevastopulo, D.G., "The Early Stages of Indian Lepidoptera. Pt. XVII." Journ. Bombay Nat. Hist. Soc., vol. 46, pp.575-586, Apr. 1947. Early stages of some species in several families of Rhopalocera and Heterocera.
122. Snodgrass, R.E., "The Insect Cranium and the 'Epicranial Suture'." Smithsonian Misc. Coll., vol. 107, no. 7, 52 pp., 15 figs. 30 July 1947. See note on page 82.
123. van Someren, V.G.L., "Comments and additional notes on Professor Carpenter's paper entitled 'Notes on Charaxes (Lep. Nymphalidae) in the Hope Department of Entomology, University of Oxford!" Proc. Roy. Ent. Soc. London (B), vol. 16, pp. 53-54. 16 June 1947. A few comments on Carpenter's paper, one transferring "female form ethalionoides Carp." to ethalion from etheocles.
124. Vasquez, Leonila, "Papilios nuevos de Mexico." (In Spanish). Annales Inst. Biologia (Mexico), vol. 18, pp. 249-256, 5 photos. 1947. Describes as new P. pharnaces male form paucimaculata (Guanajuato), P. erostratinus (Puebla), and redescribes P. erostratus West, with photos of all.
125. Williams, C.B., "The Generic Relations of Species in Small Ecological Communities." Journ. Animal Ecology (London), vol. 16, pp. 11-18. May, 1947. Sets out to determine whether large natural communities have more or less intra-generic competition than small communities of plants and animals. Concludes that there are more species per genus in a small community than in a random sample of the same size from a larger community. Therefore natural selection operates in favor of more than one species per genus rather than for one species per genus, since competition and resulting selection are present between all species of a given group in a small community. Williams uses the Lepidoptera of Wicken Fen, Hertfordshire, and the British Isles among his examples.
126. Williams, Joseph L., "The Anatomy of the Internal Genitalia of Fumea casta Pallas (Lepidoptera : Psychidae)." Trans. Am. Ent. Soc., vol. 73, pp. 77-84, figs. 1,2. 16 July 1947. This European species is established in the U.S.A., with a strong colony around Boston, Mass., and another in the Morris Arboretum in Philadelphia. Present paper describes and figures clearly the internal genitalia (male and female) of this psychid, comparing it with three other psychids covered in an earlier paper (1944). Psychidae are diplotremes, like all the higher Lepidoptera (see above).
127. Woodhouse, L.G.O., "Observations on species of Nacaduba Moore, and some other Lycaenidae from Ceylon." Proc. Roy. Ent. Soc. London (B), vol. 16, pp. 3-9, 12 figs. 13 Mar. 1947. Gives notes on these lycaenids supplementary to the Woodhouse & Henry book: "The Butterfly Fauna of Ceylon", and figures the male genitalia of twelve species. Records Nacaduba olyetti and Horaga albimacula viola, not previously listed from Ceylon, considers Celastrina puspapfelderi and C. lilacea to be one species on Ceylon.
128. Wright, Albert E., "Acentropus niveus, Oliv., in North Lancashire." Ent. Record & Journ. Variation, vol. 59, pp. 100-101. Sept. 1947.

BRIEF BIOGRAPHIES

7. John Bernhard Smith (1858-1912)

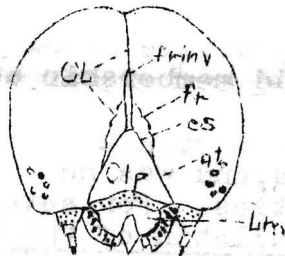
John B. Smith was born in New York City on Nov. 21, 1858, and attended public schools and law school. After four years of law practice he decided in 1884 to respond to the insistent demands of his scientific interests, and therefore accepted a position as special agent for the U.S. Dep't of Agriculture, under C.V. Riley. During his two years in the Dep't he spent most of his time on field research. In 1886 Smith transferred to the National Museum as assistant curator of insects. Three years later he accepted a professorship at Rutgers College, where he taught entomology for 23 years. Rutgers awarded him an honorary Sc.D. At his death on March 12, 1912, after an illness of many months, he left a wife and two children.

As were C.V. Riley, Henry Skinner, and other great entomologists of that generation, Smith was enthusiastically active in many organizations which were developing at that time. He held membership and often an official post in the American Association for the Advancement of Science, The Entomological Society of America, the New York Academy of Sciences, and numerous other scientific organizations, and was honored by election as a Fellow of the three above-named societies. For several years previous to 1885, he was editor of the young Bulletin of the Brooklyn Entomological Society (it was then devoted entirely to Lepidoptera and Coleoptera), and when this publication merged with Papilio in 1885 he became editor of the resulting journal, Entomologica Americana, for five years. When the state agricultural experiment stations were founded, due to the efforts of Smith's former chief, C.V. Riley, Smith became one of the first men to be connected with the project, and later, as New Jersey State Entomologist, he also made important contributions, being among the foremost to devise and demonstrate mosquito control over large areas.

From his early life Dr. Smith always had been intensely interested in Lepidoptera, and although he did publish papers on beetles, bees, and other insects, the majority of his work was on moths. He was acknowledged as the leading authority on the huge and complex "superfamily" Noctuidae, but also among the outstanding monographic papers written while at the National Museum are: "A Monograph of the Sphingidae of North America north of Mexico", "A Revision of the Lepidopterous Family Saturniidae", and a "Preliminary Catalogue of the Arctiidae of Temperate North America". In 1893 he published an annotated catalogue of the Noctuidae of Boreal America, and the first part of a noctuid monograph, to which many additions, such as the 120-page "Revision of the Deltoid Moths" were made during subsequent years. Holland's evaluation of the noctuid catalogue, given in the Moth Book (1903), illustrates the high esteem with which Lepidopterists regarded Smith's work: "This is the most scholarly and complete work upon the Noctuidae of America which has up to the present time been published, and is indispensable to the student". Smith described hundreds of new species and many genera, such as Papai-pema, Neleucania, Stylopoda, Copicucullia, and Euthyatira, and among the numerous genera revised by him were Acronycta (with H.G. Dyar) and Callimorpha. One of the few works including the whole order was a "List of the Lepidoptera of Boreal America", the original appearing in 1901 and the complete revision two years later. To the field of general entomology Smith contributed a glossary of terms used in insect study, later used as a basis for Torre-Bueno's 1937 glossary, and one of the first state checklists, that of the insects of New Jersey. He also wrote several books: Economic Entomology and Our Insect Friends and Enemies.

ON THE TERMINOLOGY OF THE CATERPILLAR CRANIUM

Snodgrass' paper (see Recent Lit.#122 on p.80), stabilizing the interpretation of the topography of the insect cranium, being of considerable importance to Lepidopterists as well as other Entomologists, a brief summary of certain sections follows. The primary conclusion is: "The insect cranium is not composed of 'plates' united by 'sutures'." Most of these "sutures" are actually grooves left by formation of internal ridges. The postoccipital sulcus and the gular suture are probably true sutures. The "epicranial suture" is merely the ecdysial line of cleavage or line of weakness where the head can split for moulting. The application to Lepidoptera larvae is indicated by the following figure, copied from Snodgrass' fig. 11E, representing Malacosoma americana:



- CL - ecdysial cleavage line
- frinv - frontal invagination
- fr - median part of frons between arms of cleavage line
- es - epistomal sulcus
- at - anterior tentorial pit
- Clp - clypeus
- Lm - labrum

On page 145 of Turtlox News 25, No. 8, for August, 1947, is a short but interesting account, by Ralph W. Dexter of Kent State University, Ohio, of a specimen of Euphydryas editha Bois. with three antennae. The extra antenna, aside from a slightly narrower base, is perfectly normal in appearance, and originates .5 mm. posterior to the left antenna. The specimen was presented to the Dept. of Biology, along with several other E. editha, all of uncertain, though probably Californian, locality. A photograph of the specimen accompanies the article.

H.E. Woodcock, of Chicago, reports finding 3 arctiid larvae (Epantheria deflorata?) at Turkey Run State Park, Indiana, in a canyon "hundreds of yards from any vegetation." It was mid-October and the larvae were apparently preparing to hibernate. An interesting study would be an accurate determination of the distance traveled by Lepidoptera larvae of various species when about to moult, hibernate, or pupate.

SPHINGIDS OVER WATER

On a hot August day, from a bridge in Estes Park, Colo., my wife and I watched for almost a minute a striped Hawk Moth (Celerio) poised above the water, facing upstream against a swift current, in the act of drinking. The delicate wake produced by the immersion of the proboscis was a special feature of the performance. This should not be confused with the dipping-the-abdomen habit noticed by me -- and other Russian collectors -- in the case of Smer. populi and S. amurensis.

V. Nabokov

MISCELLANY

On Bruggemann's Wood-boring Larva

"Referring to note by P.F. Burggemann Page 70, the larva he found was probably that of Harrisimemna trisignata, which makes its cocoon or pupa housing in the fashion described. It feeds on Ash, Privet, and Viburnum lentago L. and probably also on Lilac. Have found and reared 15 on the first three."

- Alex K. Wyatt

* * * * *

All Lepidopterists primarily interested in taxonomy should read "Reflections on the Subspecies" by Professor M. H. Hatch in the July, 1947, Entomological News (pp. 168-170). We are glad to maintain that the trend in Lepidoptera taxonomy for the last few years, at least in North America, has been to study the species, rather than the subspecies (race), as the BASIC biological unit.

* * * * *

In preparing some notes on the history of the Cambridge Entomological Club recently, the NEWS editor came across the following in the Secretary's minutes for the Club meeting of 13 December 1878: "Dr. H.A. Hagen said that he had learned from Mr. W.H. Edwards that a collection of butterflies sent by the latter gentleman to Europe, and containing the types of 70 rare species of Hesperia, had been on board the wrecked steamer Pommerania, and, in all probability had been lost." The McDunnough Check List (1938) lists 103 skipper names proposed by Edwards, including synonyms. If types of 70 were lost as Hagen indicates, a serious deficiency in Edwards' reference material exists.

A number of Lep. Soc. members sent for Psyche reprints as listed in the NEWS (p. 32) and obtained some valuable reference material. The NEWS editor has recently been made aware of a bargain in good entomological literature. Although this material is principally on insects other than Lepidoptera it is advertixed here because various Lep. Soc. members have mentioned a desire for good scientific literature since they are situated far from library facilities. There is a limited number of sets of the "CONTRIBUTIONS FROM THE ENTOMOLOGICAL LABORATORY OF THE BUSSEY INSTITUTION OF HARVARD UNIVERSITY." They contain the 292 papers published by Harvard entomologists in many journals from 1909 to 1929. Altogether there are over 5800 pages, with seven large volumes well bound in red buckram and enough other unbound papers to make an eighth volume. The price is \$15.00, with shipping costs extra (the set weighs about 50 lbs.). Mention the NEWS when ordering from: Mrs. M.D. Frazier, Library of Museum of Comparative Zoology, Cambridge 38, Mass.

Several Lep. Soc. members attending the November meeting of the Cambridge Entomological Club were treated to a talk by a veteran Lepidopterist, Mr. W.L.W. Field. Mr. Field informally presented his recollections of his close association as a young man with Samuel Hubbard Scudder. We joined Field in paying many visits to the aging Scudder in his private study on Brattle Street in Cambridge. (see NEWS pp. 17 & 18). All of us went away from the meeting keenly aware of the warm and enthusiastic encouragement Scudder was always ready to give to young entomologists. Mr. Field, now retired from his professional duties as Headmaster of Milton Academy, plans to continue his studies of hybridization in the butterfly genus Limenitis (= Basilarchia).

NOTES FROM A TRAVELLING EDITOR - II

Co-editor Clench extracted the former notes (see p. 42) from a letter sent him in July. A brief continuation may be of some interest.

After leaving the Boulder Co. region in Colo., we paused at the famous fossil insect beds at Florissant. In the meadows containing these beds Neominois ridingsii, Euphydryas capella, Melitaea arachne, and Oarisma garita were common and fresh (July 18).

Ephraim Canyon in Utah was an excellent collecting spot recommended to us by P.S. Remington, and we hit it (July 24) just as Hypaurotis chrysalus was emerging. Collecting a series of these gems was a real thrill. Limenitis wiedemeyeri, Plebejus rustica and icarioides, and Pieris napi were abundant. Less common were Pieris beckeri, Mitouri siva?, several Speyeria spp., Aglais antiopa, a Euphydryas, and a single battered Boloria aphirape. Bryce Canyon was barren.

The famed Sabino Canyon near Tucson was hopelessly dry and lifeless, but when we joined the Lloyd Martins in Madera Canyon in the Santa Rita Mts. a rich fauna was present. The beautiful Rhabdoides cellus was common, as were Emesis zela and other fine diurnals. However, the real feature was the night collecting. Lloyd used Dr. Comstock's old cloth-covered frame with two Coleman lanterns and we caught moths and other insects just about as fast as the several dozen cyanide tubes would knock them out. The moth fauna there has a distinctly Mexican character.

California was very disappointing during our stay (July 31-Aug. 21). We covered over 3000 miles in that state alone, touching the coast at numerous points from Los Angeles to Eureka, and collecting in the Coachella Valley, San Jacinto Mts., high Sierras, the Redwood Groves, Mt. Lassen and Mt. Shasta. Everywhere the extreme dryness resulted in poor collecting. Only Habrodais grunus was common generally.

The high spot of our trip in the Northwest was a short visit with J.C. Hopfinger near Brewster, Washington. John is very near the top among the many fine collectors in the country. He has perhaps done a more thorough job in making known his virgin territory than any previous collector in any region, and he has by no means slowed down. I made a trip with John's collecting partner, Andrew Anderson, to their newest rich spot, Salmon Meadows, where the Polygonia (at least 3 spp.) were commoner than ever before in my experience. We were late (Aug. 28) for Speyeria, but took some good females of a new race of S. atlantis. Neophasia menapia was surprisingly common.

We saw few Lepidoptera in Idaho, Montana, and Yellowstone Park, but the Teton Mts. were productive. We penetrated the Tetons on the WEST side, from Idaho, and found a marvelous campsite, where 2 different Polygonia, Aglais milbertii, and especially Neophasia menapia abounded. I took a fine female of menapia, my first. On Teton Pass I was elated to find two ant-tended Plebejus larvae on lupine - a thrill because of the particular attention recently given to ant-tended lycaenids. (see NEWS pp. 16, 36).

We enjoyed a collecting ramble with P.S. Remington near St. Louis and took several Calephalis muticum? and Hesperia leonardus Sept. 13. While hurrying back to Cambridge, we had the pleasure of visiting Dr. Sweadner at the Carnegie Museum and Mr. dos Passos at Mendham, N.Y.

C.L.R.

NOTICES BY MEMBERS

Members are invited to contribute to this page any special requests, at no cost to the member. Unless withdrawn sooner by the contributor, each notice will be carried for three consecutive numbers. If the notice is to be continued, the contributor must again submit it, with new wording.

Available now: LIVING PUPAE (COCOONS) OF ACTIAS SELENE, long-tailed Indo-Australian saturniid. Reared locally under netting, free from parasites. Otto H. Schroeter, 613 Williams Street, New London, Connecticut

I have at present a very few butterflies in papers for disposal. Let me know what you want in the way of Pacific Coastal insects; I will make an effort to obtain them. I will probably be able to offer later a few pupae of Arzama obliqua. Will accept cash or what have you for exchange. Richard Guppy, R.R. 1, Marine Drive, Wellington, Vancouver Is., B.C., Canada.

I have for sale a large collection of NOCTUIDAE FROM FLA. and COLO., pinned and papered, complete data, and most named. Must dispose of these promptly and will make attractive price for quantity orders. List of spp. sent on request. Expect soon to have Catocala and other Lepid. from Wisconsin. Have also specimens from Chicago area freshly pinned and spread, for exch. Alex K. Wyatt, 5842 N. Kirby Ave., Chicago 30, Ill.

PAPILIONIDAE from all parts of the world wanted for exchange or purchase. In N. Am. material I need: Pap. philenor acauda, asterius americanus, asterius stabilis, brevicauda gaspeensis, brevicauda bretonensis, bairdi, bairdi hollandi, bairdi brucei, nitra, nitra kahli, machaon alaska, machaon hudsonianus, machaon dodi, indra pergamus, indra minori, pilumnus. Need all Parnassius except clodius, smintheus, sayi, hermodur. Carl Cook, Crailhope, Kentucky

A new Insect Breeding Cage, cylindrical in four sections with optional plastic or screen observation chambers, for sale. Literature free on request. Bio-Metal Associates, P.O. Box 346, Beverly Hills, Calif.

WANTED, for exchange or purchase, butterflies of the genus PHILOTES of the world. Rudolph Mattoni, 242 Lasky Drive, Beverly Hills, California.

Lepidoptera of the PARK LAND BELT AND CONIFEROUS FOREST OF WESTERN CANADA for sale or limited exchange. Paul F. Bruggeman, R.R. 1, Furness, Saskatchewan, Canada.

GEORGIA LEPIDOPTERA offered in exchange for Lepidoptera from other parts of U.S.A. or foreign countries. H.W. Eustis, Woodbine Rd., Augusta, Ga.

Wanted: papered specimens of ACTIAS LUNA, AUTOMERIS IO, CITHERONIA RIGALIS, & LACLES IMPERIALIS for cash, or will exchange rare Catocala. R.C. Casselberry, 53 Edgemont Road, Scarsdale, New York.

FOR SALE: COCOONS of Platysamia cecropia, 10¢ each; P. cecropia X P. rubra hybrids cocoons, 15¢ each; Automeris io cocoons, 15¢ each; or exchanged for papered specimens. E.A. Ferguson, 1213 Bellflower Ave., S.W., Canton 4, Ohio.

TO TRADE: 92 Papilio troilus chrysalids for Lepid., preferably cocoons or chrysalids. The Hynes Family, 152 Meachem Ave., Battle Creek, Mich.

NEW MEMBERS NOT INCLUDED IN MEMBERSHIP LIST

Braun, Miss Annette F., Salem Pike, Mt. Washington, R.R. 13, Box 41C,
Cincinnati 30, Ohio. TAX. OF MICROLEP., INCL. LIFE HIST. & HABITS.

Christensen, Georg, Norrebrogade 5, Copenhagen N, DENMARK.

Crawford, Dr. John W., 109 Pinckney St., Boston 15, Mass.

Field, W.L.W., 75 Vose's Lane, Milton 87, Mass. GENETICS, ESP. IN
LEPID.; MIGRATION, DISTR.

Ford, Robert J., 3266 Ardmore Ave., South Gate, Calif. RHOP. & HET.
C. EX. SEASONAL COLLECTING.

Guppy, Richard, R.R. #1, Marine Drive, Wellington, B.C., CANADA.
C. HET. OF N.A.

Kansas, Univ. of, Library, Lawrence, Kansas.

Learned, Dr. I.T., 542 Maple St., Fall River, Mass.

Lennox, Donald J., R.F.D. #1, Whitefield, N.H.

Oregon State College Library, Corvallis, Oregon.

Park, Dr. Francis E., 290 Cypress St., Newton Center, Mass. LEPID.,
ESP. OF NEW ENGLAND.

Sweadner, Dr. W.R., Curator of Ent., Carnegie Museum, Pittsburgh 13, Pa.

(CHANGE OF ADDRESS) Fauteux, J.M., 305 Mt. Auburn St., Watertown, Mass.

Add to Board of Specialists (pp. 13 & 14):

WEST INDIES

All Rhopalocera, except Hesperidae.....EUGENE MONROE
Institute of Parasitology, Macdonald College, Que., Canada

The July, 1947, issue of Science Illustrated contained an article,
"Preserve It in Plastic", depicting the most recent butterfly mounts
to come to our attention.

This issue and the next one will each contain 14 pages instead of
the usual 12, thus rounding off the total pages of volume I at 100,
and allowing us to list promptly the Recent Papers on Lepidoptera which
would otherwise accumulate.

No dues for 1948 can be accepted yet, since arrangements for pro-
ducing volume II are not yet complete. Notices will probably be
mailed with the December issue.

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THE LEPIDOPTERISTS' NEWS is the monthly newsletter of The Lepidopter-
ists' Society. Membership in the Society is open to anyone interested
in the study of butterflies and moths. The dues are \$1.00 for 1947,
and the NEWS is sent free to all members. Please make checks and money
orders payable to: Charles L. Remington, Treas. Address all communica-
tions to: P.O. Box 104, Cambridge 38, Massachusetts.