somewhat local, species in California. It flies in the hot sunshine and seems to have a preference for open plots in wooded localities and along the roadsides. Professor French, in his paper already alluded to, has fully described the preparatory stages, there being but one brood a year. The food-plant is *Pentestemon* and Professor French has also fed the larvæ on *Ribes aureum* (Missouri Currant). In fact, the larvæ, like other *Arctians*, should prove to be quite general feeders. About San Francisco Bay, the adult insect emerges in late April and May. I have taken specimens in the Sierra Nevadas in Placer County, early in April.

---

**REVIEWS.**


Meunier has given in the present paper descriptions of a number of species of Leptidæ and Phoridæ (principally the latter) occurring in Baltic Amber. Of Leptidæ, he recognizes two genera, *Leptis* and *Atheris*, seven species of the former and three of the latter, while in the Phoridæ three genera are recorded, *Phora*, *Aphiochæta* and *Conicera* with fourteen, five and one species respectively. A comparison of the Phorids with recent species is rather difficult as their describer fails to mention many of the characters used for the separation of living forms, and lays great stress upon the comparative length of the tarsal joints which have not been hitherto extensively used in the classification of recent species.

There are several species, however, which are of especial interest. One, *Phora vinca* Meun, resembles greatly in the armature of the legs, species of the section *Dorniphora* Dahl, represented in both the American and the Malayan regions and the antiquity of this very minor group may explain its present wide distribution. Another, *Phora concinna*¹ has a peculiar flattened space on the hind tibia resembling a structure seen in certain Platypezidæ and Dolichopodidæ, but known among the Phoridæ only in three species of *Aphiochæta* (*A. smithii* Brues from America and *A. hirtiventris* Wood, and *A. derasa* Wood from Europe). Five tolerably well executed plates accompany the paper.

---

¹ Not the *Phora concinna* of Meigen (1830) which is a common European species, and entirely different from this one to which Meunier inadvertently gives the same name.
lack of a satisfactory catalogue of the group. This want has been filled in
the present paper which should serve to call the attention of entomologists
to this interesting group of Arthropods as well as to furnish them with
some basis for taxonomic work. Although, as the author says, the cata-
logue presents no changes in nomenclature or classification it cannot fail
to find a field of usefulness. Over 1300 species are included, belonging to
nearly 275 genera in 28 families.

C. T. Brues.

U. S. Bureau of Entomology, No. 88, pp. 126 (June, 1910).

This is a very complete account of the methods of mosquito prevention
and destruction, and also contains a most instructive account of the re-
sults accomplished by mosquito crusades in a number of countries. At-
tention is called particularly to the fact that while the United States has
done much toward exterminating mosquitoes in Cuba and the Canal Zone,
measures relating to mosquito control within its own territory have been
received with most deplorable indifference.

C. T. Brues.

of Entomology, Tech. Ser., No. 18, pp. 162, fig. 87.

Aside from its especial usefulness to those interested in bee-keeping,
the present account will be of value to many others on account of its most
excellent illustrations and good descriptions of both the external and in-
ternal anatomy. The several parts of the paper are preceded by short
general considerations of the structure of more generalized insects, which
will serve to make the whole intelligible to those unfamiliar with insect
anatomy.

C. T. Brues.

Entom. Soc. Amer., Vol. 3, No. 2, pp. 94-132, pls. X-XX.

This is a systematic account of the characters present in the caterpil-
lars of a large series of Lepidoptera belonging to many families. The
major part of both text and illustrations deals with the comparative ex-
ternal anatomy of the head and the disposition of its setae, although some
attention has been given to the body setae and armature of the prolegs.
The author finds many useful classificatory characters and reaches a num-
ber of conclusions regarding the phylogeny and relationships of certain of
families and genera.

C. T. Brues.


This important catalogue adds another group of considerable size to
the series of North American insects which have been listed within the past
few years and forms a welcome addition. Although the list primarily in-
cludes only Nearctic species found north of Mexico, a number of Mexican
and all Cuban species are included, the southern limit being placed at 20°
latitude, which, with a few exceptions, the author believes "closely ap-
proximates the natural zoogeographical limit." Such a treatment should
avoid the omission of many species found in the southwestern states, as
these become more thoroughly explored. Nearly 500 forms are included with full synonymic references and also an extensive series of ethological references. Useful innovations are the citation of the present location of all types, so far as this could be ascertained; the mention of both actual places of capture of species and their zonal distribution; and the listing in a separate series of all fossil species. Matters of nomenclature have been dealt with by a conservative application of the International Zoological Code.


Doctor Hewitt has put together in the present book his three valuable papers on the house fly, which appeared in the Quarterly Journal of Microscopical Science during 1907, 1908 and 1909, and has added several short appendices dealing mainly with matters of practical importance. The appearance of this book just at present is very timely, when general interest is awakening in the economic importance of the house fly and it is to be hoped that Doctor Hewitt's fine work may find many appreciative readers.

C. T. BRUES.

THE POMONA JOURNAL OF ENTOMOLOGY.

Published by the Biological Department of Pomona College.

The only entomological journal published on the Pacific slope. A well established, high class quarterly in its second year, fully illustrated, and devoted to original investigations in economic, biological and taxonomic entomology. Indispensable to working entomologists everywhere. Price merely nominal — $1.00 to domestic and $1.25 to foreign postal countries. Separates of any articles always available. Address,

Pomona Journal of Entomology, Claremont, California.

R. Friedlander & Sohn, Booksellers, Berlin N. W. 6, Germany.

Just out: Catalogue No. 473: Lepidoptera—86 pages with 3,500 titles of books and pamphlets comprising the whole library of Doctor Staudinger of Dresden.

Previously published: No. 461, Diptera; No. 462, Neuroptera and Orthoptera; No. 463, Rhyncota; No. 464, Coleoptera; No. 464, Entomologia Generalis.

Any Catalogue sent postpaid upon application.
PUBLICATIONS FOR SALE

By the Cambridge Entomological Club.

Orders, accompanied by remittances, should be sent to C. T. Brues, Bussey Institution, Forest Hills, Boston, Mass.

PSYCHE.

Vols. 1-2; Vols. 5-10, each, $3.00.
Vols. 11-16, each $1.00.

The following articles, originally published in PSYCHE, are to be had separately, at the prices indicated:

Lepidoptera.

Anon. On the Relation between European and American Noctuina. 4 pp., 1875, $15
Beutenmuller, W. Descriptions of some New North American Moths. 3 pp., 1890, .05
Chambers, V. T. The Classification of the Tineidae. 5 pp., 1883, .10
Dimmock, George. Notes on Pterophoridae of North America, 1 p., 1882, .05
———. The Cocoons of Cionus scrophularia. 4 pp., 1882, .10
Dyar, H. G. Notes on Two Species of Datana, with Descriptions of Their Larval Stages. 6 pp., 1890, .10
———. Preparatory Stages of Cerura multiscripta. 3 pp., 1890, .05
Edwards, W. H. The Number of Molts in Butterflies, with some History of Callosamia promethea. 5 pp., 1881, .10
Elwes, H. J. The Argynnides of North America. 10 pp., .20
Field, W. L. W. The Offspring of a Captured Female of Basilarchia proserpina. 3 pp., with plate, 1910, .05
Forbes, S. A. The American Plum-borer, Euzophera semifuneralis. 5 pp., .05
Fernald, C. H. Note on Phoxopteris angulifasciana. 1 p., 1880, .05
Holland, W. J. Descriptions of New West African Lycenidae. 8 pp., 1890, .10
Jones, J. M. On an Immense Flight of Small Butterflies (Terias lisa) in the Bermudas. 5 pp., 1875, .15
Lintner, J. A. A New Sexual Character in the Pupae of Some Lepidoptera. 4 pp., 1883, .10
Morrison, H. K. Notes on White Mountain Noctuidae. 3 pp., 1875, .10
———. Summer Butterflies at the White Mountains. 4 pp., 1874, .15
———. Varieties of Cleora pulchra. 3 pp., 1875, .10
Newcomb, H. H. Argynnis cybele Fabr. var. baal Streck., melanic, 1 p., with plate, 1910, .05
Packard, A. S. Notes on the Early Stages of Two Sphingidae. 5 pp., .05
Advertisements

———. The Life History of Sierarctia echo. 3 pp., 1890, .05
Scudder, S. H. Early Spring Butterflies at the White Mountains. 4 pp., 1874, .15
Scudder, S. H. The Introduction of Danaida plexippus into the Pacific Islands. 4 pp., 1875, .15
———. Notes on Melitta cucurbitae and a Related Species. 2 pp., 1885, .05
———. A North Greenland Butterfly. 3 pp., 1875, .10
———. Cosmopolitan Butterflies. 3 pp., 1889, .05
———. Pieris rapae in Midcean. 1 p., 1876, .05
———. The Natural History of Anosia plexippus in New England. 4 pp., 1888, .10
———. The Means Employed by Butterflies of the Genus Basilarchia for the Perpetuation of the Species. 7 pp., 1888, .10
———. The Arrangement of the New England Species of Thanaos. 2 pp., 1888, .10
Soule, C. G. Notes on the Early Stages of Some Heterocera. 11 pp., 1888, .20
———. Description of the Larva of Sphinx luscitiosa. 2 pp., 1888, .05
———. Description of Egg and Larva of Apatelodes torrefacta. 2 pp., 1888, .05
Sprague, F. H. Notes on Butterflies of Massachusetts. 4 pp., 1879, .10
Thaxter, R. List of Sphingidæ taken about Newton, Mass., 2 p. 1874, .10
———. Hibernation of Amphipyra pyramoides. 2 pp., 1875, .10

Coleoptera.

Austin, E. P. Rediscovery of Cicindela limbata Say. 2 pp., 1875, .10
Austin, E. P. Geographical Distribution of North American Coleoptera. 7 pp., 1879, .20
Blanchard, F. Some Account of Our Species of Geotrupes. 8 pp., 1876, .15
———. Lixus rubellus Randall. 2 pp., 1876, .10
Dimmock, George. The Scales of Coleoptera. 25 pp., 1888, .40
Edwards, H. On the Localities and Habits of the Various Species of Omus. 3 pp., 1875, .10
Forbes, S. A. The Life Histories and Immature Stages of Some Eumolpini. 8 pp., 1884, .15
Gissler, C. F. The Anatomy of Amblychila cylindriformis Say. 11 pp., 1 plate, 1879, .25
Henshaw S. List of Coleoptera Collected in the Vicinity of Cliftondale, Mass. 4 pp., 1874, .15
Hubbard, H. G. Notes on the Habits of Magdalinus armicollis Say. 2 pp., 1874, .10
———. Description of the Larva of Galerita janus. 3 pp., 1875, .10
Psyche

[Schwarz, E. A. List of Coleoptera Collected in Michigan in 1874, 5 pp., 1876, 15

Diptera.

Brauer, F. The Larvae of Oestridae. 6 pp., 1885, 10
Coquillett, D. W. The Systematic Position of the Genus Apiocera. 2 pp., 1885, .05
Gillette, C. P. A New Cecidomyid Infesting Box Elder. 2 pp., .05
Smith, J. B. Notes on the Structure and History of Hamatobia serrata. 5 pp., 1890, .05
Snow, F. H. Hominivorous Habits of Chrysomyia macellaria. 4 pp., 1883, 10
Wheeler, W. M. Descriptions of Some New North American Dolichopodidae. 22 pp., 1890, 30
Williston, S. W. The Screw-worm Fly (Chrysomyia macellaria). 3 pp., 1883, .10
Collection and Preservation of Diptera. 3 pp., 1884, .05
Notes on Asilidae. 5 pp., 1889, .10
Hilarimorpha and Apiocera. 5 pp., 1888, .10

Hymenoptera.

Bassett, H. A. On the History of a Cynipidous Gall-fly. 4 pp., 1889, .05
Brues, C. T. A New Species of Telenomus Parasitic on the Eggs of Tussock Moths. 2 pp., 1910, .05
Cockerell, T. D. A. Some Bees of the Genus Nomada from Washington State. 8 pp., 1910, .10
Dimmock, George. Salivary Glands in Bees. 3 pp., 1883, .05
Gillette, C. P. Notes on Certain Cynipidae, with Descriptions of New Species. 14 pp., 1889, .20
Lintner, J. A. An Egg Parasite of the Currant Saw-fly. 4 pp., 1883, .10
Weed, C. M. Biological Notes on Some North American Ichneumonidae. 3 pp., 1888, .10
Wheeler, W. M. Colonies of Ants Infested with Laboulbenia formicarum. 4 pp., 1910, .05

Homoptera.

Van Duzee, E. P. Synonomy of the Homoptera Described by Say, Harris and Fitch. 5 pp., 1890, .05
A New Species of Pediopsis. 4 pp., 1889, .05
Weed, C. M. Contribution to a Knowledge of the Autumn Life History of Certain Little Known Aphididae. 12 pp., .15
Life History of Certain Little Known Aphididae. 3 pp., .05
Woodworth, C. W. Synopsis of North American Cicadidae. 2 pp., 1888, .10
On the Genus Cicadula. 2 pp., 1888, .10
North American Typhlocybini. 4 pp., 1889, .05
Advertisements

Orthoptera.
Scudder, S. H. Some Genera of Oedopodidae Rescued from the Tryaxalidae. 12 pp., 1890, $1.50.
———. The Note of the Katydid. 2 pp., 1875, .10.
———. Synoptical Table of Groups of United States Orthoptera and Species of Forficulariae. 5 pp., .20.

Neuropteroid Insects.
Banks, Nathan. Some Neuroptera from Australia. 7 pp., 1910, $1.10.
Hagen, H. A. The Tarsal and Antennal Characters of the Psocidæ. 1 p., 1883, .05.
———. Notes and Descriptions of Some North American Libellulina. 5 pp., 1890, .10.
———. Two Species of Aeschna. 3 pp., 1890, .05.
———. Synopsis of the Genus Anax. 6 pp., 1890, .10.
Hagen, H. A. Descriptions of Some North American Cordulina. 7 pp., 1890, .10.
———. Synopsis of the Odonata of North America. No. 1. 10 pp., 1889, .15.
———. The Female of Eutermes ripperti. 6 pp., .10.
Grassi, B. A Contribution Towards a Knowledge of Termites. 6 pp., 1889, .10.
Moody, H. L. The Larva of Chauliodes. 2 pp., 1877, .10.
———. The Aborted Wings of Boreus. 2 pp., 1876, .10.
Scudder, S. H. On the Structure of the Head of Atropos. 3 pp., 1877, .10.

General and Structural Entomology.
Barrett, C. G. The Influence of Meteorological Conditions on Insect Life. 5 pp., 1883, .10.
DImmock, A. K. The Insects of Betula in North America. 5 pp., 1883, .10.
———. Variable Number of Molts of Insects. 2 pp., 1888, .05.
DImmock, George. The Trophi and Their Chitinous Supports in Gracilaria. 4 pp., 1880, .10.
———. Bleaching the Wings of Lepidoptera. 3 pp., 1875, .10.
Edwards, W. H. Experiments upon the Effect of Cold Applied to Chrysalids of Butterflies. 4 pp., 1880, .10.
———. Chemical Change of Coloration in Butterflies' Wings. 2 pp., 1880, .05.
———. Effects of Cold Applied to Chrysalids of Limenitis dis-sippus. 1 p., 1881, .05.
Grote, A. R. On the Insect Fauna of the White Mountains. 2 pp., 1875, .10.
Mark, E. L. The Nervous System of Phylloxera. 7 pp., 1879, .20
Moody, H. L. The Mandibles of the Larva of Eros. 3 pp., 1876, .10
Morrison, H. K. On an Appendage of the Male Leucarcitia acræa. 2 pp., 1874, .10
Packard, A. S. On the Occurrence of Organs, Probably of Taste, in the Epipharynx of the Mecaptera. 6 pp., 1889, .15
Packard, A. S. The Epipharynx and the Epipharyngeal Organs of Taste in Mandibulate Insects. 14 pp., 1889, .20
Scudder, S. H. The Chirp of the Mole Cricket. 2 pp., 1875, .10
Scudder, S. H. Odoriferous Glands in Phasmidæ. 4 pp., 1876, .15
Scudder, S. H. The Work of a Decade on Fossil Insects. 9 pp., 1889, .10
Smith, J. B. Notes on Some Aphid Structures. 6 pp., 1890, .10
Trelease, W. Myrmecophilism. 10 pp., 1889, .15
Van Duzee, E. P. Mimicry in Hemiptera. 2 pp., 1888, .05

_**Myriapoda and Arachnida.**_

Atkinson, G. F. Notes on Protective Resemblances in Spiders. 2 pp., 1888, .05
Emerton, J. H. Spiders Common to New England and Europe. 3 pp., 1876, .10
Scudder, S. H. The Geological History of Myriapods and Arachnids. 6 pp., 1885, .10