

Larval Case: Length 21-27 mm., and of almost uniform diameter; thatched outside with short flat pieces of dried grass, closely applied, and overlapped or shingled longitudinally.

Described from four males bred (May, 1910) from larvae and numerous cases collected at Biloxi, Mississippi. Types are deposited in the U. S. National Museum and in my own collection.

The female is wingless and grub-like as in the related species; a single female was bred but was not secured in condition for detailed description. Like *confederata*, this insect passes the winter as a larva, apparently always in the last larval stage, and feeds for a short time in early spring, suspending its case to some tree, fence, or twig for final transformation. Though apparently by choice a grass-feeder in swampy places, the spring-time food is often the petals of flowers, and several larvae were found devouring the tender yellow petals of pitcher plants (*Sarracenia sledgei*). Though of less expanse, this is a much more robust insect than the well-known *E. confederata* G. & R. and its larval case is proportionately larger. I take pleasure in dedicating this interesting species to Prof. S. M. Tracy, whose hospitality and knowledge of the district and its flora added greatly to the pleasure and profit of my stay at Biloxi.

Cases of Phoresie.

BY NATHAN BANKS, East Falls Church, Va.

The cases where insects are transported by other insects are comparatively few. Among the mites, there are long series of forms in which it is the rule that the mite is in some of its stages transported by insects. The well-known case of the triungulins of Meloidae, being carried by bees, is found in all text-books. But there is a considerable number of records of other insects being transported by larger insects. Some years ago Mrs. Slosson sent me some Chrysopids from Mt. Washington that had, clinging to their wings, some small flies.

Since then I have been interested in listing articles on this subject, and the titles, with comment, are herewith presented, recognizing, of course, that the list is not complete.

Meigen, J. W.—Systematische Beschreibung der europäischen zweiflügeligen Insekten VII, p. 409, 1838.

Describes *Limosina sacra*, a Borborid fly found on the under surface of the sacred Scarabæus (*Ateuchus sacer*).

Xamheu, P.—Bull. Soc. Ent., France, 1877, p. lxxix. Records finding a specimen of a Chalcidid.

Podagrion pachymerus Dalm., attached to the under wings of a *Mantis religiosa* L.; it waits till the female makes an egg-mass, and then deposits its eggs therein.

Moulton, J. T.—Flies riding on a tumble-bug. Amer. Entom., vol. III, p. 226, 1880.

Noticed in Missouri, a small fly (possibly *Limosina*, from the brief description), riding on a tumble bug.

Sharp, D.—Proc. Ent. Soc., London, 1890, p. xxx.

Exhibited a specimen of one of the bird flies, *Ornithomyia avicularia*, to which were attached by their mandibles several specimens of Mallophaga.

Eaton, A. E.—Flies riding on beetle back.—Ent. Mo. Mag., 1896, p. 139.

Borborid fly on back of a coprophagous beetle in England.

Walker, J. J.—Flies riding on beetle back.—Ent. Mo. Mag., 1896, p. 161.

Notes *Ateuchus variolosus* at Gibraltar with Borborid flies upon them.

Lesne, P.—Mœurs du *Limosina sacra*. Phénomènes de transport mutuel chez les animaux articulés; origine du parasitisme chez les insectes Diptères.—Bull. Soc. Ent., France, 1896, p. 162-165.

Gives account of *Limosina sacra* on specimens of *Ateuchus laticollis*; also notes that larvae of *Antherophagus* (Cryptophagid beetles), ride on bees like triungulins of Meloids. Lesne proposes the term "*phorésie*" for this transportation of one insect by another.

Chobaut, A.—Observations sur un Diptère vivant sur les Ateuchus.—
Bull. Soc. Ent., France, 1896, p. 166.

Confirms the observations of Lesne.

Bloesch, Ch.—Physapodes se sont transporter par les guepes.—Feuille
Jeun. Natur. (3) vol. XXV, p. 75-76, (1896).

Slosson, Mrs. A. T.—Singular habit of a Cecidomyid—Ent. News, 1896.
p. 238.

A Cecidomyiid attached to *Chrysopa*; suggested that the
cecidomyiid is predaceous on plant lice, that are also preyed
upon by the *Chrysopa* larvae.

Cummings, H. A.—Parasites of the house-fly. Science Gossip, 1899.—
(Amer. Mo. Micr. Journ., Oct., 1899, p. 318.)

Notes that in Bermuda a small red ant is carried by the fly.

Kertész, K.—Dipterologisches aus New Guinea. Termes. Füzetek.
XX, p. 611-613, 1897.

Small flies riding on a large one.

Biro, L.—Commensalismus bei Fliegen.—Termes. Füzetek. XXII, p.
200, 1899. (Also Rovartani Lapok, 1897, p. 129).

Two *Agromyza minutissima* carried by an *Ommatius minor*,
in New Guinea.

Mik, J.—Merkwürdige Beziehung zwischen *Desmometopa m.- atrum*
Meig. aus Europa und *Agromyza minutissima* V. d. Wulp. aus
New Guinea.—Wien. Ent. Zeit., 1898, p. 146-151.

Found 13 specimens of a small fly (*Desmometopa* (*Agro-
myza*) *m-atrum*) attached to a dead worker bee, that was still
fresh. Reviews papers by Biro and Kertész.

Warner, W. V.—Proc. Ent. Soc. Wash., V. p. 308-309, 1903.

Exhibited specimen of *Scelio* (*Serphidae*) clinging by jaws
to the side of a grasshopper, *Dichromorpha viridis*. The
genus *Scelio* is parasitic on the eggs of grasshoppers.

Schulz, W. A.—Dipteren als Ektoparasiten an südamerikanischer Tag-
faltern.—Zool. Anzeiger, XXVIII, p. 42-43, 1904.

Notes Phoridæ attached to butterflies of genera *Morpho*
and *Helicopsis* in Brazil.

Fletcher, T. B.—Ent. Mo. Mag., 1909, p. 168.

He exhibited at meeting of Ent. Soc. Lond. 2 June, 1909, an example of *Scarabaeus gangeticus* taken on wing, carrying small Borborid flies.

The habit of certain Borborid flies in attaching to coprophagous beetles is evidently world wide, and undoubtedly aids them in locating suitable breeding places. The habit of certain Hymenopterous egg-parasites of clinging to parents of the eggs is quite possibly confined to certain groups. The other cases are difficult of classification, and some may be accidental.

Three new species of Cynipidae (Hym.).

By WILLIAM BEUTENMULLER, American Museum of Natural History, New York City.

Dryocosmus favus sp. nov.

Female.—Head black, finely rugoso-punctate, mouth parts dull rufous. Antennæ 14-jointed, first joint quite stout, second much shorter, third long, slender at base and broad at end, fourth about one-half as long as the third, fifth shorter than the fourth, sixth to last short and almost uniform in size, deep brown, terminal joints almost black. Thorax jet black, smooth and shining, very minutely punctate anteriorly and laterally, which parts are slightly hairy. Parapsidal grooves sharply defined, with a few short hairs along the outer edges. Median groove wanting. Anterior parallel lines very short and scarcely evident. Lateral grooves wanting. Pleurae very finely rugose, with a rather large polished area. Scutellum finely rugose, with a lateral ridge which extends around the apex, foveæ at base not distinct. Abdomen black, smooth and shining with a few short hairs at the base dorsally. Legs pitchy brown pubescent, coxæ black. Wings hyaline, veins pitchy brown. Radial area partly open. Areolet distinct. Cubitus extending to the first cross-vein. Length, 3 to 3.50 mm.

Gall.—In clusters from about fifty to one hundred on the trunks of young red and scarlet oaks (*Quercus rubra* and *coccinea*), immediately above the ground, in autumn. Hard and woody (when dry) probably soft when fresh, monothalamous. Oblong, narrower at base than at apex, which is flat. In form they are somewhat like square tubes or five or six-cornered tubes, giving them the appearance of cells of a honeycomb. Hollow inside and rather thin-walled. The fly emerges



Banks, Nathan. 1911. "Cases of phoresie." *Entomological news, and proceedings of the Entomological Section of the Academy of Natural Sciences of Philadelphia* 22, 194–197.

View This Item Online: <https://www.biodiversitylibrary.org/item/20277>

Permalink: <https://www.biodiversitylibrary.org/partpdf/986>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.