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(From the 21st Annual Report of the Department of  
Geology and Natural Resources of Indiana. 1896.)

# A Collection of Diptera from Indiana Caves.

By J. M. ALDRICH.



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## A Collection of Diptera from Indiana Caves.

BY J. M. ALDRICH.

This collection embraces 12 species, of which five are herein described as new, one constituting a new genus. Two species are only generically determined. The family Mycetophilidæ is represented by five species, Helomyzidæ by four, and Psychodidæ, Borboridæ and Phoridæ by one each. The Helomyzidæ furnish by far the greater number of individuals. It does not appear that any of these species are wholly confined to a cave life. They show no marked peculiarities of structure and are probably found in shady places generally. None of those previously described, except *Blepharoptera defessa*, have been heretofore known to inhabit caves.

### 1. MACROCERA HIRSUTA Loew.

Loew, Centuries IX, 5.

One specimen, Truett's Cave, July 9. Slightly larger than Loew's type, thoracic dorsum and pleuræ more infuscated; halteres brownish at tip. Described from the District of Columbia. I have no knowledge of any captures of the species since that time till now.

The specimen noted was taken on the wing in the main room of the cave, 800 feet from the entrance.—W. S. B.

### 2. SCIARA SPP.

Two species, both small. Of the first, which is dark with a shining black thoracic dorsum, there are seven specimens, six from near the mouth of Salt Petre Cave, the other from Wyandotte Cave. November 5, 1896. Of the second, which is lighter with yellowish brown thorax, one specimen is from Donnehue's Cave, July 14; another, Wyandotte Cave, near Augur Hole.

The specimens of *Sciara* were in all instances taken in small crannies in damp portions of the cave. The "Augur Hole" of Wyandotte is about three-fourths of a mile from the entrance. Species of the genus are quite common in Mammoth Cave, Kentucky, and the young, according to Osten Sacken, live on decaying vegetable matter, fungi, etc.—W. S. B.

### 3. MYCETOPHILA UMBRATICUS n. sp.

*Female.* Front dark brown; palpi and three basal joints of antennæ yellow. Thorax clay yellow, somewhat pruinose with white, the dorsum somewhat infuscated and provided with numerous stout black hairs along the sides; scutellum and metanotum also brownish, the former with two

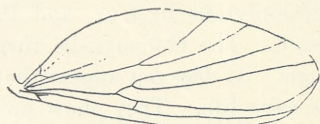
distinct hairs. Abdomen brown, compressed, the distal part of each segment with a lighter ring, which is broader underneath. Legs pale yellow with a distinct fuscous tinge. Coxæ paler, the front ones with only a few fine hairs at tip; tibiæ wholly without spines except at tip, still on the posterior ones a few scarcely perceptible setulæ. Tarsi elongated, uniformly infuscated, slightly darker than the tibiæ; in the front leg the entire tarsus is about *four times* the length of the tibia, in the middle leg two and a half, and in the hind leg one and a half times. The tibial spurs on the front leg are a fifth the length of the metatarsus; on the other legs a third.

Wings without maculæ, tinged with yellow along the costa and to a less degree all over the apical half. Venation as figured.

Length, 5.2 mm.; of wing, 4.5 mm.

One female, Shiloh Cave, July 15.

The specimen was taken from beneath a rock about 300 feet from the entrance. A member of the genus has been recorded by Osten Sacken from Bradford Cave, 16 miles from New Albany, Ind. The larvæ live in fungi.—W. S. B.



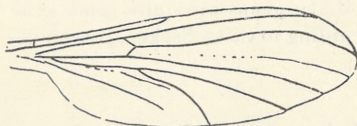
Wing of *Mycetophilæ umbraticus* n. sp.

#### ODONTOPODA, new genus.

(ὄδους tooth; ποὺς foot.)

(Mycetophilidæ near Glaphyoptera.)

Ocelli three, all large, nearly in a straight line; antennæ 16-jointed, the two basal joints distinct, the others cylindrical, the third longest; palpi four-jointed, first short, second a little longer, third longer than the two preceding, fourth a trifle shorter; coxæ elongated; abdomen (male) long, slender, clavate, composed of seven distinct segments besides the hypopygium. Wings, fourth longitudinal arising near the base; third vein not branched; costal vein not extending beyond tip of third longitudinal; fifth vein forked; auxiliary vein ending in the costa almost half way to the apex; small crossvein nearly equal in length with the first segment of the third vein; fourth vein with a very thin anterior branch arising at the origin of the crossvein, or seemingly from the crossvein itself.



Wing of *Odontopoda sayi* n. sp.

#### 4. ODONTOPODA SAYI, n. sp.

*Male.* Front black, antennæ brown, except the first three joints, which are yellow; mouth parts yellow; thorax and coxæ yellow, rather pale; the dorsum, however, more acorn-colored without distinct lines. Abdomen brown, the bases of the segments and a larger part underneath of

a lighter color; seventh segment distinct, nearly as long as the sixth, hypopygium as long as the seventh, first segment over half as long as the second. Femora and tibiæ yellow, with a brownish tinge; front tarsi black (the others wanting, but doubtless black). Wings of a clear yellow tinge, lighter posteriorly; third vein with a rather strong curvature.

Length, 6 mm.; of wing, 4.7 mm.

One male, Marengo Cave.

The single specimen was on the side of a damp rock, 400 feet from the entrance.—W. S. B.

5. *PSYCHODA MINUTA* Banks.

Banks, *Canad. Ent.*, XXVI, 331.

One specimen, Salt Peter Cave, Crawford County.

6. *ULOMORPHA PILOSELLA* Ostën Sacken.

Osten Sacken, *Proc. Acad. Nat. Sci. Philadelphia*, 1859, 342

Osten Sacken, *Monograph N. A. Dipt.*, IV, 233.

One specimen, Porter Cave.

7. *BLEPHAROPTERA DEFESSA* Osten Sacken.

Osten Sacken, *Bulletin U. S. Geol. and Geog. Survey*, Vol. III. No. 1, p. 168, note.

One female, Wyandotte Cave.

By the kindness of Professor Packard, I was enabled to see the description of this species. The following sentence is at the end of the description: "*Blepharoptera* are often found in caves, where they are said to breed in the excrement of bats." The description occurs as a footnote to an article by Professor Packard on "A New Cave Fauna in Utah," but the specimens described were from Hundred Dome Cave, near Glasgow, Kentucky, and were also reported from Wyandotte Cave, among others.

This is the *Anthomyia* of Cope's "Fauna of Wyandotte Cave." *Ind. Geol. Surv.*, 1872, 160. For description and figure see also, Packard's "Cave Fauna of North America," 1889, 80.—W. S. B.

8. *BLEPHAROPTERA PUBESCENS* Loew.

Loew, *Centuries II*, 82.

Seven specimens, both sexes: Shiloh Cave, July 15 (1); Salt Peter Cave (2), Coon's Cave (2), Porter Cave (1), Wyandotte Cave (1).

The species was described from Massachusetts.

9. *BLEPHAROPTERA LATENS* n. sp.

Brownish-black, head, knees, venter and tip of abdomen reddish; two vibrissæ each side.

Head dark red, rather variable in color, vertical triangle black, second fronto-orbital bristle a trifle smaller than the preceding; antennæ dark red, third joint more or less infuscated; face and mouth parts dark red; two large vibrissæ on each side, one a little longer than the other, a narrow strip only is bare below the eye, the remainder of the cheek with rather coarse black pubescence; occiput black above. Thorax black, the roots of wings, halteres and pleural sutures red or yellowish-red; scutellum and mesopleuræ bare, hypopleuræ with a group of four ascending bristles near the upper edge, otherwise bare on the sides except for a little very small scattering black pubescence; underneath, between the fore and middle coxæ, are very numerous bristles. Abdomen black, its tip, the venter, and usually the posterior margin of each segment red. Coxæ and femora black, hairy, the latter stout; trochanters and knees red; tibiæ usually with a considerable red or reddish yellow, especially near the middle; tarsi almost uniformly brown. No special long bristles on the legs. Wings without spots, slightly yellow, the costal bristles small.

Length, 5 to 5.5 mm.; of wing, 4.5 to 5 mm.

Nine specimens, both sexes: Donnehue's Cave, July 14 (3); Shiloh Cave, July 15 (1); Porter Cave, (2); Mayfield's Cave, July 9 (3). Two of the specimens have numerous mites attached to the body.

#### 10. BLEPHAROPTERA SPECUS n. sp.

Cinereous, largely yellow, scutellum pubescent.

Head yellowish, vertical triangle and upper part of occiput black, second fronto-orbital bristle smaller than first. Antennæ far apart, yellow, third joint somewhat darker, one vibrissa, the small hairs behind it confined to a narrow strip close to the oral cavity. Dorsum of thorax brown, about the edges more yellow; humeri, the posterior part and the scutellum usually entirely yellow, scutellum with distinct black pubescence besides the usual bristles. Pleuræ yellow with a darker color on the meso and hypopleuræ, the former part bare, the latter with one ascending bristle above and almost imperceptible sparse black pubescence, underneath a few bristles; tegulæ and halteres yellow. Abdomen on the basal half quite blackish, overlaid with cinereous dust, toward the tip yellow; male hypopygium large. Legs principally yellow, but varying in different individuals. In both sexes a row of six or eight bristles in front near the tip of the middle femur; in male a similarly placed row, but higher up, on the hind femur, numbering four or five. Wings slightly yellow, the costal bristles large.

Length, 3.5 to 5 mm.; of wing, the same.

Eighteen specimens, both sexes: Eller's Cave (3); Porter Cave (11); Mayfield's Cave, July 9 (2); Donnehue's Cave, July 14 (1); Wyandotte Cave (1).

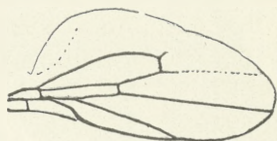
The species of Blepharoptera were the largest and most common Diptera noted in the caves. They were found in the damper portions of nearly every cave vis-

ited, on the walls and roof. They were never noted on the wing, except when disturbed, when they would fly but a short distance before alighting. The large species were about as long as, but more slender than, the common house fly. The larvæ, according to Osten Sacken, live in fungi and the excrement of bats.—W. S. B.

11. *LIMOSINA TENEBRARUM* n. sp.

General color throughout, dark brown, sub-shining. Front, face, edge of clypeus and proboscis the same, the last at the tip yellowish; third joint of antenna rounded, arista slender, microscopically pubescent. Dorsum of thorax with moderate bristles; scutellum concolorous, with four bristles; pleuræ with a little yellow along the sutures; halteres yellow. Legs of simple structure; the tibiæ a trifle lighter than the femora, their tips and the tarsi yellow; hind metatarsus but little thickened, two-thirds of the length of the following joint.

Wings as figured. The last section of the third vein perfectly straight, the fourth beyond the posterior crossvein becoming extremely thin, yet traceable to the margin; second and third sections of costal vein subequal. The wings are moderately tinged with brown.



Wing of *Limosina tenebrarum* n. sp.

Length 2 to 2.1 mm.; of wing, 1 to 1.3 mm.

Ten specimens, both sexes; Truett's Cave, July 9 (2); Donnehue's Cave, July 14 (2); Clifty Cave (1); Marengo Cave (1); Wyandotte Cave (3); same, near Augur Hole (1); same, November 6, 1896 (1).

The venation will readily distinguish the species.

The specimens from Donnehue's and Clifty caves were taken from piles of half dry excrement of the raccoon. Those from Wyandotte from beneath stones in the vicinity of remains of dead bats near the "Scuttle." The insects leap a few inches, rather than fly, when disturbed.—W. S. B.

12. *PHORA NIGRICEPS* Loew.

Loew, Centuries, VI, 99.

Nine specimens, Wyandotte Cave, near Augur Hole.

Taken from the mouldy remains of bread, chickens, etc., near the "Augur Hole," three-fourths of a mile from the mouth, July 27, 1896.—W. S. B.



