Classification of the Fossorial, Predaceous and Parasitic Wasps, or the Superfamily Vespoidea No.12

William H. Ashmead

U.S. National Museum

Follow this and additional works at: https://digitalcommons.usu.edu/bee_lab_an

Part of the Entomology Commons

Recommended Citation
https://digitalcommons.usu.edu/bee_lab_an/80

This Article is brought to you for free and open access by the Bee Lab at DigitalCommons@USU. It has been accepted for inclusion in An by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.
CLASSIFICATION OF THE FOSSORIAL, PREDACEOUS AND PARASITIC WASPS, OR THE SUPERFAMILY VESPOIDEA.

BY WILLIAM H. ASHMEAD, A. M., ASSISTANT CURATOR, DIVISION OF INSECTS, U. S. NATIONAL MUSEUM.

(Paper No. 12.—Continued from Vol. XXXV., p. 8)

FAMILY XXXVII.—Tiphiidae.

By most systematists this family is still classified with the Scoliidae, although separated as a distinct family by the Swedish entomologist, C. G. Thomson, as early as 1874. I agree with Thomson, and believe these wasps form a distinct family, easily recognized by the characters made use of in my table of families.

The genus Engycistus, Fox, based upon Myzine rufiventris, Cresson, was classified by Cresson, Cameron and Fox with the Scoliidae. Mr. Fox has kindly sent me specimens for examination, male and female, and I find them true Tiphiids; they have nothing to do with the Myzinidae or Scoliidae as now restricted.

The genus Pterombus, Smith, still unknown to me in nature, also evidently belongs here.

Mr. Peter Cameron, in Biologia Centrali-Americana, has described a number of species under the genus Epomidiopteron, De Romand. Those of his species that I have recognized, however, do not belong to it, but belong to the genus Paratiphiia, Sichel. Epomidiopteron, De Romand, is something quite different, and is apparently closely allied to Engycistus, Fox.

In habits the Tiphiidae agree with the Scoliidae, being parasitic upon ground-inhabiting beetle larvae. Tiphia inornata, Say, attacks our Lachnosterna larvae, but it is widely distributed and must have other hosts.

Table of Genera.

1. Females ................................................... 2.

Males .......................................................... 7.

2. Marginal cell open at apex ................................... 5.

Marginal cell closed at apex; first transverse cubitus complete, the first and second cubital cell separated.

Cubitus in hind wings interstitial with the transverse median nervure, or originating just before it; three cubital cells in front wings .................................................. 3.

February, 1903.
Cubitus in hind wings originating before the transverse median nervure........................................... 5.

3. Hind femora not produced at apex beneath............................................. 4.
Hind femora produced at apex beneath.
Hind tibiae very strongly serrate on the outer face........................................ Engycistus, Fox.
(Type Myzine rufiventris, Cress.)

4. Hind tibiae denticulate or tuberculate on outer face; the front tibiae produced into a long, acute spine at the middle........................................ Epomidioptron, De Romand.
(Type E. Juli, De Romand.)
Hind tibiae not serrate on the outer face, the front tibiae normal, unarmed........................................ Pterombrus, Smith.
(Type P. aenigma, Smith.)

5. Front wings with two cubital cells.............................................. 6.
Front wings with three cubital cells.
Cubitus more or less obliterated at its origin; second and third cubital cells each receiving a recurrent nerve, the first recurrent nervure strongly curved or angularly broken by a stump of a vein and received by the second cubital cell at its basal third; tegulae abnormally large; mandibles bidentate; claws cleft................................. Paratipha, Sichel.
(Type P. albilabris, Sichel.)

6. First transverse cubitus entire, not angularly broken by a stump of a vein; middle tibiae with only one apical spur........ Tiphia, Fabricius.
(Type T. femorata, Fabr.)

7. First transverse cubitus entire, not obliterated at base, the first and second cubital cells distinctly separated........................................ 8.
First transverse cubitus obliterated at base, the first and second cubital cells more or less confluent........................................ 9.

8. Cubitus in hind wings interstitial with the transverse median nervure or originating just before it; hind tibiae serrate, the tarsi very long................................. Engycistus, Fox.
Cubitus in hind wings originating a little before the transverse median nervure.
Hind tibiae denticulate or tuberculate on outer face........................................ Pterombrus, Smith.
Hind tibiae not serrate on outer face, the tarsi normal................................. Epomidioptron, De Romand.
9. Three cubital cells, the second not longer than the third.................. Paratipha, Sichel.
   Two cubital cells, the second very transverse ......... Tipha, Fabricius.

Family XXXVIII.—Cosilidae.

This family is based upon the genus Cosila, Guérin, described in 1839 from Chile. The affinities are most perplexing, although apparently closely allied to the Myzinidae, Scoliidae and Tiphidae. The middle coxae, however, are much closer together than in those families; the eyes in both sexes are entire, not emarginate within; the venation of the wings, too, is different, while the male genitalia is quite characteristic and totally different from that in the families mentioned. In having the eyes entire in both sexes, it agrees with the family Tiphidae, but may be easily separated by coxal characters, by venation and by the unarmed hypopygium of the males.

I have also placed in this family the genus Fedtschenkia, Saussure, unknown to me in nature. Both Saussure and André, however, place it with the Mutillidae, and Mr. Ernest André has even gone so far as to make it the type of a subfamily—the Fedtschenkiinae. My reason for differing from these eminent authorities is that the female is winged, while all known females in the Thynnidae, Myrmosidae and Mutillidae are always wingless, never winged. The abdomen in the male, too, is unarmed and totally unlike that in the Mutillidae and allied families, a most important character, which, in my opinion, is sufficient to exclude it from any of those families.

Table of Genera.

1. Front wings with two cubital cells. .......................... 2.
   Front wings with three cubital cells. ........................ 3.

2. First cubital cell about thrice as long as the second, receiving the first recurrent nervure at its apical third; pronotum shorter than the mesonotum; scutellum with lateral keels; metathorax striate, the sides toothed. ....... Nursea, Cameron.
   (Type N. carinata, Cam.)

First cubital cell about twice as long as the second, receiving the first recurrent a little beyond its middle; submedian cell slightly shorter than the median; pronotum not shorter than the mesonotum; parapsidal furrows distinct; scutellum without lateral keels; metathorax not striate, but with a delicate median keel and keeled at sides, the spiracles small, rounded; abdomen fusiform, with a
constriction between the first and second segments, the first segment trapezoidal, convex above, not longer than wide at apex. ♂ (♀ unknown).......................... Sierolomorpha, Ashmead.  
(Type Sierola ambiguа, Ashm.)

3. Second and third cubital cells each receiving a recurrent nervure... 4. Second cubital receiving both recurrent nervures.  
Claws cleft; marginal cell not separated from the costa at apex; first joint of flagellum a little shorter than the second.  
♂ ........................................... Cosila, Guérin.  
(Type C. Chilensis, Guér.)


5. Claws with a tooth beneath; head large, quadrate or nearly, armed with a tooth on each side beneath...... Dicrogenium, Stadelman.  
(Type Pristocerus rosmarum, Stadelm.)  
Claws usually cleft; head transverse, unarmed.  
Claws not dilated into a rounded lobe at base; hind tibiae serrate; marginal cell at apex rounded, separated from the costa and usually with an appendage; cubitus in hind wings originating before the transverse median nervure. ♀ .... Cosila, Sichel.  
Claws dilated into a rounded lobe at base; hind tibiae with the superior margin tuberculate, crenate and pilose or spined between the tubercles; third cubital cell anteriorly not dilated.  
Marginal cell at apex entire............. Callosila, Saussure.  
(Type Myzine signata, Smith.)  
Marginal cell at apex strongly truncate... Colobosila, Sichel.  
(Type C. fasciculata, Sich.)

6. Head not large, quadrate, quite differently shaped.............. 7.  
Head very large, quadrate; ocelli subtriangularly arranged; mandibles short, stout, bidentate; antennae short, inserted on the anterior part of the face, the scape stout; marginal cell hardly as long as the first cubital cell, rounded at apex, the submedian cell much longer than the median.................. Maurillus, Smith.  
(Type M. australis, Smith.)

7. Head subglobose, the ocelli close together in a triangle; mandibles tridentate; antennae inserted close to the anterior margin of the head, filiform, the scape longer than joints 2 and 3 united; marginal cell long, subtruncate at apex; median and submedian cells equal;
cubitus in hind wings originating beyond the transverse median nervure... Fedschenkia, Saussure.

(Type F. grossa, Sauss.)

Head transverse, seen from in front longer than wide; the eyes large, occupying the whole side of the head, and extending from base of mandibles to vertex; mandibles bidentate, the outer tooth much longer than the inner; maxillary palpi 4-jointed, labial palpi 3-jointed; antennae 12-jointed, rather long, the flagellum subclavate, inserted on the anterior margin of the head; pronotum considerably longer than the mesonotum, the latter with two widely separated furrows; scutellum fully one-third longer than the mesonotum; metathorax long, obliquely rounded off posteriorly; abdomen fusiform, a little longer than the head and thorax united, with a constriction between the first and second segments.....Isotiphia, Ashmead, gen. nov.

(Type I. nigra, Ashm.)

1. Isotiphia nigra, sp. nov. ♀.—Length 4 mm. Polished black, the head and the mesonotum with some sparse punctures, the metathorax rugulose; antennae brownish, towards apex black; tips of tibiae and tarsi testaceous; wings hyaline, with a fuscous cloud through the discoidal cells, and another through the second and third cubital cells and the disk of the wings.

Brazil: Santarem. One specimen.

FAMILY XXXIX.—Rhopalosomidae.

The writer established this family in 1896. It was based upon Rhopalosoma Poeyi, Cresson, a most singular looking wasp, that, on account of its colour, the subemarginate eyes and the prominent ocelli, resembles an ichneumon-fly of the subfamily Ophioninae. Mr. Cresson described it as a Braconid. It is, however, a true aculeate, and shows some affinity with the Myrmosidae and Mutillidae, through such genera as Brachyceritis, Tricholaboides, Photopsis, Magrettina, etc.


The only genus known may be recognized by the following characters:

Eyes emarginate within; antennae long, slender, the joints of the flagellum long, cylindrical, each joint with two spurs at apex within; front wings with two oblong, closed cubital cells, the second receiving the recurrent
nervure a little before the middle; abdomen long, clavate, the petiole very long; legs long, the tibial spurs 1, 2, 2, very long and straight; tarsi long, the middle and hind tarsi with joints 2-4 broad and dilated, densely pubescent beneath, subemarginate and armed with some stiff spurs at apex; claws long, curved............. Rhopalosoma, Cresson. (Type R. Poeyi, Cr.)

TUTT'S "BRITISH LEPIDOPTERA" — A REPLY TO DR. Dyar.

It is in no spirit of carping criticism that I write in reply to Dr. Dyar's remarks on the 3rd volume of Mr. Tutt's British Lepidoptera. Far otherwise, for I have always considered myself as one of his disciples, as it was his and Dr. Chapman's stimulating work on Lepidopterous larvæ that first aroused my interest in this branch of entomology, and my chief object in the following remarks is a desire to arrive at a clearer understanding, in view of future work. Unfortunately, owing to the extremely limited time at my disposal, I am not nearly so well versed in the literature of my subject as I should be, it being a question of choosing between first-hand work, at the risk of repeating through ignorance of what another has already done, or acquiring a fuller knowledge of what other workers are doing. I have chosen the former, and this must be my excuse if I have missed some important work of Dr. Dyar's that has already settled some of the points I raise.

With regard to tubercle v of the Sphinges, I gladly acknowledge that the error which led Mr. Tutt astray was chiefly mine, as Mr. Tutt was in this instance largely relying on my notes. I am the more ready to take this action in that by so doing I find myself in company with Dr. Dyar himself, my mistake being, perhaps, somewhat analogous to the mistake so readily acknowledged by him with reference to his statement of the absence of tubercle iv. in the Saturniids ("Additional Notes on the Classification of Lepidopterous Larvae," Transactions of the New York Academy of Sciences, 1894, Vol. XIV., p. 51). Tubercle v. on the abdominal segments of Sphingid larvæ is, normally, not only moved up to the level of the spiracle, but is, in addition, shifted forward until it is situated almost on the verge of the anterior edge of the segment, and it was owing to this unusual position and the fact of there being an accessory tubercle in this position in Lachneid larvæ which led me astray. Almost before the volume had left the binder's hands, an examination of some