DESCRIPTIONS OF A NEW GENUS AND EIGHT NEW SPECIES OF ICHNEUMON-FLIES, WITH TAXONOMIC NOTES[1]

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Descriptions of one new genus and eight new species of ichneumon-flies of the family Braconidae are contained in this paper and, in addition, notes on the classification of several previously described but poorly understood braconid genera. Certain synonymical notes are also included.

For the opportunity of examining some of the genotypes discussed, I am indebted to Dr. H. Bischoff, of the Berlin Zoological Museum; Dr. Erno Csiki, of the Hungarian National Museum, at Budapest; Dr. H. Wachs, of the Pommeranian Museum of Natural History, at Settin, Germany; Dr. James Waterston, of the British Museum of Natural History; and Prof. E. B. Poulton, of the Hope Museum, at Oxford, England.

Family BRACONIDAE

Subfamily MICROGASTERINAE

Genus MICROGASTER Latreille

Microgaster Latreille, Hist. Nat. Crust. Ins., vol. 13, p. 189, 1805. (Genotype, *Ichneumon deprimator* Fabricius.)

Xanthomicrogaster Cameron, Timehri Journ. Roy. Agr. Com. Soc. British Guiana, vol. 1, p. 325, 1911. [Genotype, *Xanthomicrogaster fortipes* Cameron (new synonymy).]

MICROGASTER FORTIPES (Cameron) (new combination)

Xanthomicrogaster fortipes Cameron, Timehri Journ. Roy. Agr. Com. Soc. British Guiana, vol. 1, p. 325, 1911.

The genotype of *Xanthomicrogaster*, *X. fortipes*, which is in the British Museum, is a typical *Microgaster* except in having the second

[1] This paper is a contribution from the Gipsy Moth Laboratory of the Bureau of Entomology, Melrose Highlands, Mass.

cubital cell smaller than usual and the second intercubitus joining the first intercubitus at about the middle. A similar small second cubital cell is found in some other species of *Microgaster*; among our North American species it occurs in *M. zonaria* (Say) and *M. ecdytolophae* Muesebeck.

Genus MICROPLITIS Foerster

Microplitis Foerster, Verh. Naturh. Ver. Preuss. Rheinl., vol. 19, p. 245, 1862. (Genotype, *Microgaster sordipes* Nees.)

Dapsilotoma Cameron, Journ. Bombay Nat. Hist. Soc., vol. 17, p. 101, 1906. [Genotype, *Dapsilotoma testaceipes* Cameron (new synonymy).]

MICROPLITIS TESTACEIPES (Cameron) (new combination)

Dapsilotoma testaceipes Cameron, Journ. Bombay Nat. Hist. Soc., vol. 17, p. 101, 1906.

This species, which is the genotype of *Dapsilotoma*, is a perfectly normal *Microplitis*. The antennae of the type, which is in the British Museum, are 18-segmented, not 36-segmented, as noted by Cameron.

Genus APANTELES Foerster

Apanteles Foerster, Verh. Naturh. Ver. Preuss. Rheinl., vol. 19, p. 245, 1862. (Genotype, *Microgaster obscurus* Nees.)

Xestapanteles Cameron, Zeitschr. Natur. Halle, vol. 81, p. 447, 1909. [Genotype, *Xestapanteles latiannulatus* Cameron (new synonymy).]

APANTELES LATIANNULATUS (Cameron) (new combination)

Xestapanteles latiannulatus Cameron, Zeitschr. Natur. Halle, vol. 81, p. 447, 1909.

I have examined Cameron's two original specimens of *Xestapanteles latiannulatus*, which are in the collection of the Berlin Zoological Museum. The species unquestionably belongs to *Apanteles*, as this genus was defined in my revision of the Nearctic species.[2] It is not clear how Cameron could have described the antennae as 31-segmented, for, like those of all other species of *Apanteles*, they are 18-segmented.

APANTELES PARALECHIAE, new species

Most similar to *polychrosidis* Viereck, but readily distinguished from that species by the slenderer thorax, by the mesoscutum being evenly distinctly punctate and opaque, by the shorter and subequal spurs of the posterior tibiae, and by the generally smaller size.

Female.—Length, about 1.8 mm. Head strongly transverse, at least as wide as mesonotum; face practically smooth; antennae

[2] Proc. U. S. Nat. Mus., vol. 58, p. 485, 1920.

slender, about as long as the body. Thorax slender; mesoscutum narrowing gradually anteriorly, opaque, and entirely evenly punctate, the punctures not confluent; scutellum flat, polished, with a few weak punctures; propodeum mostly smooth and shining, with some weak sculpture medially adjoining the shallowly impressed, imperfectly defined areola; mesopleura mostly polished, weakly punctate anteriorly; metapleura polished; anterior wing with metacarpus distinctly longer than stigma; stigma rather broad; radius not oblique, a little longer than intercubitus, not strongly angled with the latter; posterior coxae smooth; inner spur of posterior tibia scarcely longer than the outer and much less than half as long as metatarsus. Abdomen narrow; chitinized plate of first tergite parallel-sided, the base and apex of practically equal width, the entire plate very finely rugulose and opaque, and with a poorly defined median longitudinal impression posteriorly; second tergite transverse, much shorter than third, the finely rugulose plate broader at apex than at base and defined laterally by oblique impressed lines; membranous margins on apical half of first tergite and along the second, broad; following tergites practically smooth, at least the third subopaque; hypopygium large but not surpassing apex of last tergite; ovipositor sheaths slender, about as long as the abdomen, slightly decurved at apex. Black; tegulae pale; wing bases black; wings hyaline, stigma and veins pale brown; legs blackish, anterior pair beyond coxae mostly yellowish brown; middle femora sometimes pale brownish, their tibiae at base and their tarsi pale; posterior tibiae pale on basal fourth or third; lateral membranous margins of first and second tergites yellowish brown.

Male.—Essentially like the female, except for blackish tegulae.

In the paratypes the tegulae vary from yellow to blackish.

Type.—U.S.N.M. No. 42870, from Billerica, Mass.

Host.—*Paralechia pinifoliella* Chambers.

Described from five females and three males reared by J. V. Schaffner, jr., July 5 to August 4, 1927, under Gipsy Moth Laboratory No. 12164 N37.

APANTELES DEPRESSARIAE, new species

Very closely resembling *aristoteliae* Viereck, from which it especially differs in the weaker sculpturing of the second abdominal tergite, the less sharply defined propodeal areola, the usually relatively broader abdomen, the slightly shorter ovipositor sheaths, and, in the case of the males, the pale stigma.

Female.—Length, 2.5 mm. Head strongly transverse, narrower than thorax; face finely, closely punctate; antennae distinctly shorter than the body, the five apical segments conspicuously shortened although still longer than broad. Thorax stout; mesoscutum closely,

finely, in part confluently, punctate; scutellum a little longer than broad, slightly convex, smooth and shining, with only a few weak punctures; propodeum short, strongly declivous, closely rugulose and with a median areola that is rather poorly defined; radius of anterior wing longer than intercubitus: posterior coxae smooth and shining; inner spur of posterior tibia half as long as metatarsus. Abdomen short and rather stout; chitinized plate of first tergite large, the base and apex of about equal width, the sides of the plate bulging somewhat, the surface closely, finely rugulose and provided with a shallowly impressed longitudinal median area posteriorly; second tergite very short, strongly transverse, the posterior margin slightly arcuate, the surface of the plate very minutely granular; following tergites smooth and shining; hypopygium large, slightly surpassing apex of last tergite; ovipositor sheaths about three-fourths as long as the abdomen. Black; anterior femora except at base, anterior and middle tibiae and tarsi, and the posterior tibiae except at apex, yellow; tegulae black; wings hyaline, stigma brown, the veins pale, almost hyaline.

Male.—Legs even darker than in female; wings whitish hyaline; stigma hyaline except the margin, which is brown; veins colorless.

Type.—U.S.N.M. No. 42871, from Kenduskeag, Me.

Host.—*Depressaria heracliana* De Geer.

Cocoons.—White, elongate-cylindrical, solitary.

Seven females and seven males reared July 22 and 23, 1926, by J. V. Schaffner, jr., under Gipsy Moth Laboratory No. 12430 M2. There is additional material of this species at the Gipsy Moth Laboratory, all reared from the same host as the type series, from Manchester and Castleton, Vt.; Bangor, Me.; and Dover, Mass.

APANTELES SCHAFFNERI, new species

In my key to the North American species of *Apanteles*[3] this species runs to *delicatus* Howard. It differs from *delicatus*, however, as well as from all related species, especially in the exceptionally dark posterior tibiae and in the unusual coloring of the posterior tarsi, which have the basal segment black, the second and fifth segments slightly dusky, and the third and fourth pale yellow.

Female.—Length, barely 2 mm. Head about as wide as mesonotum; face broad, finely punctate: antennae slightly shorter than the body, the apical segments considerably shortened. Mesoscutum entirely closely punctate and opaque; scutellum shining, with sparse but distinct punctures; propodeum very short, entirely closely rugulose, median carina indistinct; posterior coxae smooth and shining; posterior tibiae short and rather strongly thickened apically; spurs of hind tibia subequal and not distinctly half as long as metatarsus;

[3] Proc. U. S. Nat. Mus., vol. 58, p. 500, 1920.

stigma short and broad, emitting radius from its middle, the latter perpendicular to anterior wing margin and slightly longer than intercubitus; second abscissa of cubitus unusually short, only about half as long as intercubitus. Abdomen short and stout; first and second tergites combined longer than remainder of dorsum of abdomen; chitinized plate of first tergite broadening apically, entirely finely rugulose; second and third tergites subequal in length, the second completely, the third except at apex, closely finely rugulose and opaque; hypopygium not surpassing apex of last tergite; ovipositor sheaths barely exserted. Black; tegulae blackish; wings hyaline, stigma and veins brown; all coxae black; trochanters, femora, and tibiae of anterior and middle legs yellow, their tarsi whitish; posterior legs with trochanters and femora yellow, the tibiae black, pale only at extreme base, their tarsi with the basal segment black, the second and fifth segments more or less dusky, and the third and fourth segments pale yellow.

Type.—U.S.N.M. No. 42872, from Raubsville, Pa.

Host.—An undertermined Cochlidiid.

Four females reared August 15, 1929, by J. V. Schaffner, jr., under Gipsy Moth Laboratory No. 12164 R128.

APANTELES HALISIDOTAE, new species

Runs to *phobetri* Rohwer in the key to the North American species (loc. cit.) and is very similar to that species. It is distinguished, however, by its larger size and by the relatively longer and more oblique intercubitus, which is as long as the radius and is strongly angled with the latter; in addition, the subdiscoideus is much more distinct, being well pigmented, while in *phobetri* its location is indicated only by rows of closely placed setae. Both species are gregarious parasites, but the cocoons of the two are strikingly different, being pale buff and exposed in the case of *phobetri*, while those of *halisidotae* are pure white and inclosed in the cocoon of the host.

Female.—Length, 3 mm. Head as broad as mesonotum; face weakly punctate, shining; antennae as long as the body, the apical segments only gradually shorter, mesoscutum entirely closely punctate; scutellum somewhat convex, polished, practically impunctate; propodeum finely rugulose, narrowly smooth at extreme base, and with a weak indication of a median longitudinal carina; stigma moderately large, more than twice as long as broad; radius obliquely directed outwardly, not longer than intercubitus and sharply angled with the latter, which is strongly oblique; subdiscoideus distinct to wing margin; posterior coxae smooth and shining; inner spur of posterior tibia a little longer than the outer and slightly more than half as long as metatarsus. Abdomen long-ovate, somewhat compressed apically; first abdominal tergite broadening gradually to

the apex, very finely ruguloso-punctate laterally and at apex, smooth and highly polished medially at base, this polished area narrowing posteriorly but extending to apical fourth of tergite; second tergite shorter than the third, finely rugulose except for broad lateral margins, which are smooth; the sculptured plate set off by irregular, somewhat oblique, impressed lines; third and following tergites polished; hypopygium not surpassing apex of last tergite; ovipositor sheaths only slightly exserted. Black; tegulae black; wings hyaline; stigma and veins brown; all coxae black; remainder of legs yellow, except apex of posterior femora above, apex of posterior tibiae, and the posterior tarsi, which parts are black; lateral membranous margins of first and second tergites brown, darker on second tergite than on first.

Male.—Like the female in essential characters.

Type.—U.S.N.M. No. 42873, from Shirley, Me.

Host.—*Halisidota maculata* Harris.

Cocoons.—Pure white, gregarious, inclosed within the cocoon of the host.

Described from five females and three males reared June 14, 1928, by J. V. Schaffner, jr., in the Bureau of Entomology, under Gipsy Moth Laboratory No. 12451 N25. At the Gipsy Moth Laboratory there are additional series, not included among the type material, from Winterport, Patten, Hampden, Wallagrass, Fort Kent, Eagle Lake, Grand Isle, Van Buren, St. John, Ashland, and Presque Isle, Me.; Chateaugay and Nicholville, N. Y.; Hopkinton, N. H.; and Cheshire, Mass. All this material was reared from *Halisidota maculata.*

APANTELES CINGILIAE, new species

Most similar to *koebelei* Riley but differing particularly in the less strongly compressed abdomen and the completely black hind femora.

Female.—Length, 2.7 mm. Head nearly as wide as mesonotum; face only very slightly broader than long, shining, sparsely shallowly punctate; antennae about as long as the body or only indistinctly shorter, even the apical segments elongate. Thorax stout; mesoscutum closely punctate, shining; scutellum with a few distinct punctures; propodeum closely rugulose, very narrowly smooth and shining at extreme base, and with a complete median longitudinal carina; posterior coxae large, mostly smooth; inner spur of posterior tibia longer than the outer and more than half as long as metatarsus; radius arising from a little beyond middle of stigma and not longer than intercubitus, with which it is rather strongly angled. Abdo-

men about as long as thorax, not broad, a little compressed apically; chitinized plate of first tergite broadening gradually posteriorly, mostly smooth on basal half, delicately rugulose apically; second tergite much shorter than third, more than twice as broad as long, very finely rugulose, opaque laterally, shining medially; following tergites smooth and polished; hypopygium attaining apex of abdomen; ovipositor sheaths barely exserted. Black; tegulae black; all coxae and basal segment of trochanters black; apical segment of all trochanters mostly yellowish; remainder of anterior legs yellow, except the femora at base beneath blackish; middle femora yellowish on outer side, mostly blackish within and below; middle tibiae and tarsi yellow; posterior legs with femora black, their tibiae yellowish, black on apical fourth or third, their tarsi black; wings hyaline, stigma and veins brown.

Male.—Like the female in the essential characters.

Type.—U.S.N.M. No. 42874, from Bernardston, Mass.

Host.—*Cingilia catenaria* Drury.

Cocoons.—White, or yellowish white, apparently gregarious, but loose and not inclosed in a mass of silk.

Eight females and two males reared August 26, 1929, by J. V. Schaffner, jr., under Gipsy Moth Laboratory No. 12418 R7.

PAROLIGONEURUS, new genus

This is a genus of Microgasterinae and is very closely related to *Oligoneurus* Szepligeti, the genotype and only described species of which is from Brazil. It strikingly resembles *Oligoneurus* in the unusual wing venation, the broad head, the widely separated antennae, and the small posterior coxae and short tibial spurs, but differs especially in having bare eyes and antennae with fewer segments.

Head transverse, though not strongly so, a little broader than thorax, immargined behind; eyes practically bare; antennae 18-segmented, inserted unusually high on face and widely separated at base; frons short, only slightly descending anteriorly; notauli wanting; prepectus immargined; posterior coxae small; spurs of posterior tibiae very short; radial cell open, radius represented only by a short spur; both intercubiti wanting, all cubital cells therefore confluent; cubitus and basal vein separated at base, arising independently from parastigma; first brachial cell open; nervulus interstitial with basal vein; abdomen short, the chitinized plates of the first and second tergites similar to those of some species of *Apanteles*.

Genotype.—*Paroligoneurus johnsoni*, new species.

PAROLIGONEURUS JOHNSONI, new species

FIGURE 1

Female.—Length 1.8 mm. Head a little wider than thorax; face large, evenly convex, smooth and shining, with only weak setigerous punctures; clypeus rather large, indistinctly separated from face, shallowly transversely impressed before apex, the anterior margin evenly rounded; antennae 18-segmented, nearly as long as the body; pedicel elongate, about two-thirds as long as the scape; all 16 flagellar segments well separated, elongate, the first four times as long as thick and considerably longer than the second; eyes bare, with only a few scattered indistinct hairs; cheeks and temples convex. Thorax short, compact; mesoscutum flat, smooth, and shining, impunctate, with no trace of notauli; suture between mesoscutum and scutellum fine, smooth, not foveolate; scutellum very slightly convex, smooth and shining; propodeum smooth and polished, not areolated; pleura polished; mesopleura without a furrow; posterior coxae small; inner spur of posterior tibia longer than the outer but hardly one-third the length of metatarsus; stigma

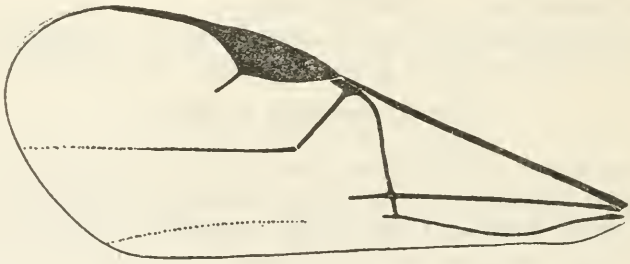

FIGURE 1.—Anterior wing of *Paroligoneurus johnsoni*, new species

moderately broad, a little longer than metacarpus; radius arising from beyond middle of stigma and consisting merely of an oblique, outwardly directed stub; cubitus and basal vein separated at their points of origin on parastigma; basal vein at origin distinctly curved toward base of wing; cubitus obsolescent apically; nervulus interstitial; recurrent vein wanting, or at least not distinctly developed; discoideus distinct only at base, the first discoidal cell, therefore, open; first brachial cell open. Abdomen narrower than thorax, entirely polished; first tergite with a median elongate plate that is strongly narrowed at apex; second tergite with a triangular median plate that is very narrow at extreme base; lateral membranous margins on first and second tergites very broad; hypopygium large, apparently slightly surpassing apex of last tergite; ovipositor sheaths projecting the length of the first tergite beyond apex of abdomen. Head brown, blackish above and behind; thorax black; abdomen brownish on basal half, blackish on apical half; wings hyaline, stigma and veins brown; legs yellow, the posterior coxae blackish above toward base.

Type.—U.S.N.M. No. 42876, from Nantucket, Mass. One female collected by C. W. Johnson, August 17, 1927.

Genus SNELLENIUS Westwood

Snellenius Westwood, Tijdschr. Ent., vol. 25, p. 19, 1882. (Genotype, *Snellenius vollenhovenii* Westwood.)

This genus is discussed here in order to place it definitely in the Microgasterinae. Ashmead [4] assigned it to the Agathidinae (now Braconinae), where Szepligeti [5] also placed it, although in his original description Westwood had called attention to the similarity in venation to *Microgaster*. Both Ashmead and Szepligeti apparently knew *Snellenius* only from literature. Schulz,[6] who had specimens before him, commented on some of the more striking characters but failed to indicate the position of the genus.

Examination of the genotype, which is in the Hope Museum, Oxford, England, has convinced me that *Snellenius* is referable to the Microgasterinae, and that within this group it appears most closely related to *Microplitis* Foerster, although the very small head and the carinately margined prepectus suggest a certain affinity with *Odontofornica* Enderlein (now *Fornicia* Brullé). In wing venation, in the structure of the abdomen, and in the relatively small posterior coxae and the short tibial spurs, *Snellenius* is very similar to *Microplitis*. In the latter group there is also an approach toward certain thoracic structures found in *Snellenius*, including the occasional presence of distinct notauli, the very prominent median propodeal carina, and the strongly declivous propodeum.

The following notes, taken from the genotype, are presented to supplement Westwood's original description and so to contribute toward a clearer understanding of the genus and species: Head very small, transverse; eyes hairy; antennae strongly compressed, 18-segmented (not 17-segmented as noted by Westwood, who apparently overlooked the very short, mostly concealed pedicel). Thorax stout; prepectus carinately margined; notauli present; middle lobe of mesoscutum flat but somewhat elevated; a short median keel posteriorly on mesoscutum; suture between scutum and scutellum broad and deep; scutellum margined laterally, elevated down the middle, impressed either side of this elevation; propodeum with a strong median longitudinal keel and prominent transverse ridges extending laterally from this; dorsal face of propodeum horizontal, the posterior face vertical. Abdomen short; first tergite with a long, narrow, nearly parallel-sided, chitinized plate, and on either side of this with broad membranous margins; posterior coxae not large; spurs

[4] Proc. U. S. Nat. Mus., vol. 23, p. 129, 1900.
[5] Genera Insectorum, fasc. 22, p. 116, 1904.
[6] Zool. Annalen, vol. 4, p. 62, 1911 (1909).

of posterior tibiae short; radial cell incomplete, the second abscissa of radius only weakly indicated; second cubital cell small, subtriangular, complete.

SNELLENIUS PHILIPPINENSIS (Ashmead) (new combination)

Microplitis philippinensis ASHMEAD, Journ. New York Ent. Soc., vol. 12, p. 20, 1904.

Apparently the strongly compressed condition of the antennae in the genotype of *Snellenius* is not of generic importance. The antennae of *Microplitis philippinensis* Ashmead, the type material of which is in the United States National Museum, are not unusually compressed; but, in my opinion, the species is unquestionably referable to *Snellenius*. It agrees with the genotype, *S. vollenhovenii* Westwood, in all important respects, including the margination of the prepectus.

Genus DIRRHOPE Foerster

Dirrhope FOERSTER, Verh. Naturh. Ver. Preuss. Rheinl., vol. 7, p. 39, 1851. (Genotype, *Dirrhope rufa* Foerster.)

In his "Synopsis der Familien und Gattungen der Braconiden,"[7] Foerster separated his Microgasteroidae, on the basis of hairy eyes, from the groups he called the Agathidoidae and Eumicrodoidae. He placed *Dirrhope* in the Microgasteroidae, and it unquestionably belongs there, but it will not run to that group in his key because the eyes of the genotype are distinctly bare. *Dirrhope* further differs from most Microgasterinae but agrees with *Snellenius* Westwood and *Odontofornica* Enderlein (now *Fornicia* Brullé) in having the prepectus distinctly margined.

Subfamily NEONEURINAE

Genus NEONEURUS Haliday

Neoneurus HALIDAY, Ent. Mag., vol. 5, p. 213, 1838. (Genotype, *Neoneurus halidaii* Marshall.)

Ecclites FOERSTER, Verh. Naturh. Ver. Preuss. Rheinl., vol. 19, p. 244, 1862. (Genotype, *Ecclites clypeatus* Foerster.)

Ashmead[8] synonymized *Ecclites* Foerster with *Neoneurus* Haliday. But somewhat later Bengtsson[9] stated that Ashmead's conclusion was undoubtedly wrong; and Muesebeck[10] concurred, suggesting that *Ecclites* might belong to the Blacinae. Examination of the genotypes of both genera shows, however, that Ashmead was correct and that *Ecclites* Foerster must be held as a synonym of *Neoneurus* Haliday as typified by *N. halidaii* Marshall. In view of the misunderstanding evidenced by the literature referred to above, it

[7] Verh. Naturh. Ver. Preuss. Rheinl., vol. 19, pp. 225–283, 1862.
[8] Proc. U. S. Nat. Mus., vol. 19, p. 130, 1900.
[9] Lund Univ. Arsskr. N. F. Avd. 2, vol. 14, no. 32, 1918.
[10] Proc. U. S. Nat. Mus., vol. 61, p. 2, 1922.

has seemed advisable to include this note, which is based on a study of the types of both *Neoneurus halidaii* Marshall and *Ecclitis clypeatus* Foerster.

Subfamily OPIINAE

Genus RHINOPLUS Foerster

Rhinoplus Foerster, Verh. Naturh. Ver. Preuss. Rheinl., vol. 19, p. 258, 1862. (Genotype, *Rhinoplus laevigatus* Foerster.)

Since the description of this opiine genus, with *R. laevigatus* as the only included species, two African species have been referred to it, namely, *R. fuscipennis* Szepligeti and *R. fulvus* Brues. Neither of these, however, properly belongs in *Rhinoplus*, both Szepligeti and Brues having misinterpreted Foerster's characterization of the genus on the basis of "Clypeus mit starkem Horn." Foerster's genotype, which I have seen, has the clypeus large and provided with a striking hornlike tubercle situated in the middle and projecting forward at right angles to the surface. The structure is very conspicuous, and while there may be some question as to its value as a generic character it nevertheless sets off *R. laevigata* from all other known Opiinae and, for the present at least, is to be considered of generic importance. Both *fuscipennis* Szepligeti and *fulvus* Brues merely have the anterior margin of the clypeus somewhat angled or toothed at the middle, there being no indication of the horn that is characteristic of *Rhinoplus*. They are accordingly to be excluded from that genus, and, in my opinion, are referable to *Opius* Wesmael.

OPIUS FUSCIPENNIS (Szepligeti) (new combination)

Rhinoplus fuscipennis Szepligeti, Mitt. Zool. Mus. Berlin, vol. 7, p. 226, 1914.

OPIUS FULVUS (Brues) (new combination)

Rhinoplus fulvus Brues, Proc. Amer. Acad. Arts and Sci., vol. 61, p. 259, 1926.

OPIUS GAHANI, new name

Opius fuscipennis Gahan, Proc. U. S. Nat. Mus., vol. 49, p. 79, 1915 [not *fuscipennis* (Szepligeti)].

The transfer of *Rhinoplus fuscipennis* Szepligeti to *Opius* unfortunately makes necessary the renaming of *Opius fuscipennis* Gahan.

Genus OPIUS Wesmael

Opius Wesmael, Nouv. Mem. Acad. Sci. Bruxelles, vol. 9, p. 115, 1835. (Genotype, *Bracon carbonarius* Nees.)

Psyttalia Walker, Ann. Mag. Nat. Hist., ser. 3, vol. 5, p. 311, 1860. [Genotype, *Psyttalia testacea* Walker (new synonymy).]

This synonymy is published here, following an examination of the genotype of *Psyttalia*, in order to make clear the identity of that genus, regarding the position of which there has been some question. The following notes, based on the type of *P. testacea*, are included to

supplement Walker's description: Runs to *Opius* in keys by Szepligeti [11] and Gahan.[12] Head behind margined only laterally; a transverse opening between clypeus and mandibles. Mesoscutum polished; notauli very short, distinct only anteriorly; propodeum polished and provided with a median longitudinal carina; second abscissa of radius much longer than first intercubitus; third abscissa of radius going to extreme wing apex; three cubital cells; recurrent vein entering first cubital cell considerably before first intercubitus. Hypopygium rather large; ovipositor sheaths fully as long as the abdomen.

Since *testacea* Walker, the genotype of *Psyttalia* and the only included species, is preoccupied in *Opius*, it becomes necessary to change that specific name upon synonymizing the genus.

OPIUS WALKERI, new name

Psyttalia testacea Walker, Ann. Mag. Nat. Hist., ser. 3, vol. 5, p. 311, 1860 (not *testaceus* Wesmael).

Subfamily ALYSIINAE

Genus HERATEMIS Walker

Heratemis Walker, Ann. Mag. Nat. Hist., ser. 3, vol. 5, p. 310, 1860. (Genotype, *Heratemis filosa* Walker.)

This is another of Walker's genera that have apparently remained unrecognized owing to the unsatisfactory original characterization. The following notes, taken from the genotype, are given here in order to supplement the original description and to aid in the recognition of this genus, which appears to be most closely related to *Phaenocarpa* Foerster: Head large, although transverse: temples with a weak but distinct posterior tubercle; antennae exceptionally long and slender; first flagellar segment shorter than the second. Notauli strongly impressed; middle lobe of scutum prominent; scutellum drawn out into a conspicuous elevated hornlike projection at apex; propodeum areolated; posterior coxae with a blunt tooth beneath at base; radius arising from beyond middle of stigma; radial cell large, extending to extreme apex of wing; three cubital cells; first cubital and first discoidal cells separated; recurrent vein entering first cubital cell at extreme apex; second abscissa of radius a little longer than first intercubitus; first brachial cell closed, long and narrow; radiellan cell very large, much widened apically. Abdomen long and slender.

Subfamily MACROCENTRINAE

Genus XIPHOZELE Cameron

Xiphozele Cameron, Ent., vol. 39, p. 204, 1906. (Genotype, *Xiphozele compressiventris* Cameron.)

Cerotopia Enderlein, Archiv. f. Naturg., vol. 84, Abt. A, Heft 11, p. 219, 1920 (1918). [Genotype, *Cerotopia corneimacula* Enderlein (new synonymy).]

[11] Genera Insectorum, fasc. 22, p. 159, 1904.
[12] Proc. U. S. Nat. Mus., vol. 49, p. 67, 1915.

In a paper on Ethiopian Braconidae, Brues (1926)[13] included *Xiphozele* in his key to the Macrocentrinae and explained that he had omitted *Cerotopia* because he did not know the genus and since it had not been originally sufficiently well characterized to make recognition possible. After an examination of the genotypes of both genera I find that *Cerotopia* must be suppressed as a synonym of *Xiphozele*. Furthermore, in my opinion, *C. corneimacula* Enderlein is conspecific with *X. compressiventris* Cameron.

XIPHOZELE COMPRESSIVENTRIS Cameron

Xiphozele compressiventris Cameron, Ent., vol. 39, p. 204, 1906.
Cerotopia corneimacula Enderlein, Archiv. f. Naturg., vol. 84, Abt. A, Heft 11, p. 220, 1920 (1918) (new synonymy).

Subfamily HELORIMORPHINAE

Genus HELORIMORPHA Schmiedeknecht

Helorimorpha Schmiedeknecht, Die Hymenopteren Mitteleuropas, p. 523. 1907. (Genotype, *Helorimorpha egregia* Schmiedeknecht.)
Stictometeorus Cameron, Soc. Ent., vol. 24, p. 9, 1909. (Genotype, *Stictometeorus rufus* Cameron.)
Erythrometeorus Cameron, Timehri Journ. Roy. Agr. Com. Soc. British Guiana, vol. 1, p. 317, 1911. (Genotype, *Erythrometeorus reticulatus* Cameron.)
Scipolabia Enderlein, Archiv. f. Naturg., vol. 84, Abt. A, Heft 11, p. 220, 1920 (1918). [Genotype, *Scipolabia reticulata* (new synonymy).]

Stictometeorus was synonymized with *Helorimorpha* by Brues,[14] and Turner [15] later pointed out that *Erythrometeorus* also is a synonym of this cosmopolitan genus, but both authors apparently overlooked Enderlein's *Scipolabia*, the genotype of which is likewise a typical *Helorimorpha*. The name *reticulata* Enderlein being preoccupied by *reticulatus* Cameron, it becomes necessary to propose a new name for the former species, which appears to be distinct although closely related to *brasiliensis* Brues.

HELORIMORPHA ENDERLEINI, new name

Scipolabia reticulata Enderlein, Archiv. f. Naturg., vol. 84, Abt. A, Heft 11, p. 220, 1920 (1918) [not *reticulatus* (Cameron)].

Subfamily ROGADINAE

Genus ROGAS Nees

Rogas Nees, Nov. Act. Nat. Curios, vol. 9, p. 306, 1818. (Genotype, *Bassus testaceus* Fabricius.)
Nebartha Walker, Ann. Mag. Nat. Hist., ser. 3, vol. 5, p. 310, 1860. [Genotype, *Nebartha macropodides* Walker (new synonymy).]

Nebartha is still another of Walker's genera concerning the position of which there has been much uncertainty. In his original characterization of the genus Walker emphasized a relationship with

[13] Proc. Amer. Acad. Arts and Sci., vol. 61, p. 274, 1926.
[14] Ann. South African Mus., vol. 19, p. 101, 1924.
[15] Ann. Mag. Nat. Hist., ser. 9, vol. 20, p. 558, 1927.

Coelinius Nees. Examination of the genotype shows, however, that it has little in common with *Coelinius*, and that it is rather a perfectly normal *Rogas*. The head is transverse; eyes somewhat emarginate; a circuliform opening between clypeus and mandibles; abdomen depressed; the first three tergites large, occupying most of the dorsum of abdomen, all three longitudinally rugulose on a granular surface, the first and second with a median longitudinal carina which also extends weakly upon base of third.

ROGAS MACROPODIDES (Walker) (new combination)

Nebartha macropodides WALKER, Ann. Mag. Nat. Hist., ser. 3, vol. 5, p. 310, 1860.

Genus YELICONES Cameron

Yelicones CAMERON, Biol. Centr. Amer. Hym., vol. 1, p. 387, 1887. (Genotype, *Yelicones violaceipennis* Cameron.)

Rhopalotoma CAMERON, Timehri Journ. Roy. Agr. Com. Soc. British Guiana, vol. 1, p. 318, 1911. [Genotype, *Rhopalotoma crassitarsis* Cameron (new synonymy.]

I have examined the genotypes of both genera and am convinced that they are unquestionably congeneric. They agree in all essentials of wing venation and in the head, thoracic, abdominal, and striking leg characters.

YELICONES CRASSITARSIS (Cameron) (new combination)

Rhopalotoma crassitarsis CAMERON, Timehri Journ. Roy. Agr. Com. Soc. British Guiana, vol. 1, p. 318, 1911.

Subfamily DORYCTINAE

Genus EUSCELINUS Westwood

Euscelinus WESTWOOD, Tijdschr. Ent., vol. 25, p. 25, 1882. (Genotype, *Euscelinus sarawacus* Westwood.)

In his "Classification of the Ichneumon Flies," Ashmead (1900)[16] assigned this genus to the subfamily Helconinae. Szepligeti (1904),[17] apparently knowing it only from literature, likewise placed it in the Helconinae although only in his supplement to that group, omitting it from the key. The same year Ashmead[18] described *Euscelinus manilae*, but even with a specimen before him, he retained the genus in the Helconinae.

I have examined Westwood's genotype, which is in the Hope Museum at Oxford, as well as the type of *E. manilae*, which is in the United States National Museum, and as a result am referring the genus to the Doryctinae. It runs direct to the Doryctinae in Szepligeti's classification and undoubtedly belongs in that group as at present defined. In placing *Euscelinus* in the Helconinae, Ashmead

[16] Proc. U. S. Nat. Mus., vol. 23, p. 120, 1900.
[17] Genera Insectorum, fasc. 22, p. 153, 1904.
[18] Proc. U. S. Nat. Mus., vol. 28, p. 145, 1904.

apparently overlooked the distinct circuliform mouth opening and was unduly influenced by the unusually stout and dentate posterior femora.

E. manilae Ashmead is clearly congeneric with the genotype.

Subfamily VIPIINAE

MICROBRACON RHYACIONIAE, new species

Runs to couplet 37 in my key to the North American species of *Microbracon*[19] and is most similar to *pini* Muesebeck, but differs from that species especially in the mostly testaceous abdomen, the generally darker legs, the somewhat longer ovipositor sheaths, and the relatively narrower head.

Female.—Length, 3.8 mm. Head distinctly narrower than thorax, moderately thick antero-posteriorly, smooth and shining; face with a little faint punctation; diameter of mouth opening considerably greater than distance from the opening to the eyes; antennae of type 33-segmented, slender, tapering slightly apically; first flagellar segment about twice as long as broad, the following a little shorter but all distinctly longer than broad. Thorax stout, smooth, and polished, notauli lined with long delicate hairs; propodeum polished, without oblique rugae behind; pleura smooth; second abscissa of radius about twice the first; the third about as long as the first and second abscissae combined. Abdomen longer than thorax, mostly polished; first tergite very weakly roughened, the grooved lines setting off the large median triangular plate foveolate; second tergite strongly transverse, its posterior margin arcuate, the surface of the tergite mostly smooth, with only a little weak sculpture medially; suturiform articulation rather broad; third and following tergites polished, the sutures very fine; ovipositor sheaths slender, a little longer than the abdomen. Head and thorax entirely black; all legs black or blackish; wings weakly infumated; abdomen testaceous, with a median blackish area on first tergite and very small blackish median patches on third, fourth, and fifth tergites.

Male.—In essentials similar to the female; antennae 32-segmented; apical abdominal tergites almost entirely black.

Type.—U.S.N.M. No. 42875, from Pactola, S. Dak.

Host.—*Rhyacionia* on western yellow pine (*Pinus ponderosa.*)

Eight females and two males reared in August, 1926, by L. G. Baumhofer under Hopkins U. S. No. 17511.

Female paratypes present slight variations in the color of the abdomen, which varies from entirely testaceous to rather broadly black medially on third and following tergites. There is also a slight variation in the number of antennal segments.

[19] Proc. U. S. Nat. Mus., vol. 67, p. 12, 1925.

MICROBRACON CRYPTORHYNCHI, new species

Most similar to *hyslopi* Viereck but differs especially in the longer radial cell, which practically attains wing apex, the unicolorous dark brown stigma, the entirely black mesonotum, and the yellow legs.

Female.—Length, 4 mm. Head transverse, not very prominent at insertion of antennae, fully as wide as thorax; face very delicately granular and subopaque, smooth medially; frons and vertex smooth and shining; transverse diameter of mouth opening somewhat greater than distance from the opening to the eyes; antennae of type slender, not so long as the body, 33-segmented, all flagellar segments longer than broad. Thorax moderately stout; mesoscutum and scutellum polished; notauli weak, lined with sparse hairs; propodeum polished, with only a very short stub of a median ridge at apex and a few short rugae radiating from this; second abscissa of radius more than twice the first; the third as long as the first and second combined, and as long as last abscissa of cubitus; radial cell going practically to apex of wing. Abdomen stout, longer than thorax; first tergite finely rugulose; second tergite as long as the third, finely though not closely punctato-granular, except along posterior margin where it is smooth; second suture not broad, practically straight; third and following tergites polished; ovipositor sheaths about as long as the abdomen. Head and thorax entirely black; all legs testaceous, with only middle and posterior coxae blackish above at base; wings hyaline; abdomen brownish testaceous; the first tergite and a small triangular basal median spot on second, black.

Male.—Essential characters as in the female, except that antennae are 32-segmented, the first and second abdominal tergites are more weakly sculptured, and the fourth and following tergites are black.

The number of segments in the antennae of the female paratypes varies from 30 to 33 with only 26 in one unusually small specimen, and in the case of the males from 32 to 34. The male paratypes agree with the allotype in having the abdomen beyond third tergite black; in the females, this part of the abdomen varies from entirely brownish testaceous to entirely black.

Type.—U.S.N.M. No. 42877, from Melrose Highlands, Mass.

Host.—*Cryptorhynchus lapathi* Linnaeus.

Twelve females and six males reared by J. V. Schaffner, jr., in May, June, and July, 1924, under Gipsy Moth Laboratory No. 12164 J5.

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