

**NEW BETHYLID AND SERPHOID PARASITES FROM NORTH  
AMERICA. (HYMENOPTERA.)**

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This paper contains descriptions of eleven new species and one new genus of Hymenoptera belonging to the families Bethyliidae, Scelionidae, Calliceratidae and Diapriidae.

All measurements recorded were made with a Bausch and Lomb binocular microscope, 24 mm. objective, No. 5 ocular and a micrometer disc ruled to five mm. in .05 mm. divisions. Each division equals .0111 mm.

I take as the width of the thorax the length of a line drawn from the outside edge of one tegula to the outside edge of the other. In computing the height of the thorax an imaginary line is drawn from the middle of the mesonotum above to that part of the sternum just in front of the middle coxae below. When speaking of the length of the head I mean its greatest length, not back to the foramen magnum but to the apices of

the lateral lobes. The "proportion" discussed several places in this paper is obtained by dividing the width of the head by the length of the thorax and multiplying the result by the length of the second tergite.

Unless otherwise mentioned the type material described below is in the author's collection.

#### Family BETHYLIDAE.

##### *Psilodryinus carinatus*, new species.

*Female*.—Length 4 mm. Runs to section 4 in Kieffer's key (Das Tierreich, Lief. 41, 1914, p. 54), and differs from *sumatranus* in having the abdomen dark. From *acuticollis* (ibid., p. 56), it differs more particularly in having the basal nervure about as long as the nervulus, and in having the first tarsal joint of the anterior leg a little over twice as long as the second and third united. The species may be distinguished from *thoracicus* (Fouts, Philippine Journ. of Science, vol. 20, 1922, p. 632), by having a small subbasal tooth on the outer claw and by having the fourth joint of the anterior tarsus only slightly longer than the second and third united.

Scape very little longer than the second joint, the latter twice as long as thick; prothorax a little longer than the combined lengths of the mesonotum and scutellum; scutellum separated from the mesonotum by a transverse depression, the latter partitioned eight times longitudinally; propodeum with many more or less straight and parallel longitudinal ridges, the intervals twice as wide as the ridges and crossed frequently and indiscriminately by other ridges or carinae; wings rounded distally, the outer brown band extending below to the brachius; third joint of anterior tarsus three times as long as the second; fourth joint a little more than half as long as the first; outer claw of chela reaching nearly to the base of the inner one, with a minute tooth subapically and also with an equally small one basally; inner claw attached to the fourth joint at its apical one-fifth. Coloration of the legs as in *thoracicus* Fouts.

Occurs at Carlisle, Pennsylvania. (Robert Fouts, July 21, 1920, one specimen.)

A correction should be made in the author's paper referred to above (Fouts, 1922, p. 632.) On the second line at the top of the page for "posterior" read "anterior."

#### Family SCELIONIDAE.

##### *Hoplogryon similis*, new species.

*Female*.—Length 1.00 mm. Closely related to *crassicornis* Kieffer. The fourth tergite is faintly reticulated basally and this character serves to distinguish the species. *H. crassicornis* has the tergites following the third bare and shining. Kieffer's description (Berl. Ent. Zeit., vol. 50, p. 262), with the exception noted above and one other, noted below, fits the present species very well. The author has, however, omitted the discussion of several characters of interest. These are as follows: thorax as wide as long, finely and rather densely pubescent above, bare laterally and below; abdomen as wide as the thorax; its length is

to its width as five is to three; second tergite provided with about a dozen deep longitudinal grooves extending to a little past its middle; there is nothing suggesting raised carinae as is the case in *longipennis* of Ashmead; the length of the anterior wing is to the length of the abdomen as eight is to five. The very short radius is situated slightly anterior to the apical third of the wing.

Occurs at Ames, Iowa. (Phillip Spong, January 20, and February 19, 1923, three specimens.) Type and paratype in collection U. S. N. M., Cat. No. 26833. Paratype in collection Fouts.

**Leptacis obscuricornis**, new species.

*Female*.—Length 1.55 mm. Related to *americanus* Ashmead from which species it differs in having the fourth antennal joint shorter than the pedicel. Head less than twice as wide as long, deep behind the eyes, the cheeks wide, oblique; frons, vertex and occiput faintly reticulate; antennae rather stout; pedicel longer than the fourth joint, the latter longer than the third; fifth joint about half as long as the fourth, a little longer than the sixth; seventh joint wider than the pedicel, twice as wide as the fourth joint, longer than wide; eighth joint shorter, a trifle wider than long; ninth still shorter, as wide as the eighth; tenth a little longer than the seventh, not quite twice as long as wide, blunt apically; thorax smooth and shining, without sculpture, sparsely pubescent; notauli absent; scutellum hump-like basally, its dorsal surface considerably higher than that of the mesonotum; spine extending to the apex of the propodeum, far above it, however, its apex sharply pointed; length of thorax 55, width 33, height 38; abdomen a little longer than the thorax, not quite twice as long as wide, without sculpture of any sort; the length of the second tergite is to its width as four is to three; base of scape yellowish; legs brownish, the coxae, femora and tibiae, apically, darker; tarsi and tibiae (except at apex), yellow.

Occurs at Ames, Iowa. (Phillip Spong, November 25, 1922, two specimens.) Type in collection U. S. N. M., Cat. No. 26834. Paratype in collection Fouts.

Family CALLICERATIDAE.

**Calliceras pallidipes**, new species.

*Female*.—Length .79 mm. Differs from description of *fusciceps* (Ashmead, Monogr. Proct., p. 125) as follows: head uniformly dark brown; ninth antennal joint slightly wider than long, tenth a little over three times as long as the ninth.

Apterous; head finely reticulate; mandibles and that part of head around mouth pale yellow; scape, pedicel, legs, thorax (except propodeum) and abdomen (except apical half dorsally and laterally), pale yellow; flagellum dark brown, gradually incrassated, the last joint acute, a trifle over three times as long as wide; abdomen one and one-half times as long as wide, a little longer than the head and thorax united, finely striate at base.

Occurs at Glen Echo, Maryland. (Robert Fouts, July 11, 1923, one specimen.)

**Calliceras fasciata**, new species.

*Female*.—Length .854 mm. Runs in Kieffer's key (Das Tierreich, Lief. 42, 1914, p. 79), to *pallidiventris* Ashmead. The pedicel in *fasciata* is about twice as long as the third antennal joint. (See Ashmead Monogr. Proct., p. 126.) Head, thorax and greater part of abdomen dark amber-colored; scape and legs yellow; pedicel somewhat darker; flagellum piceous; abdomen below yellow, laterally yellow to reddish yellow. Thorax and head finely and rather closely covered with short decumbent white hairs; length of head 15, width 25, height 24; pedicel about as thick as the fifth joint; joints three and four equal, as long as wide; five wider, transverse, a little longer than the fourth; six slightly longer and wider than five; seven wider, as wide as eighth but somewhat shorter; eighth and nine subequal, nearly twice as wide as long, as wide as ten; ten about as long as eight and nine united, conical, acute apically; length of thorax 27, width 21, height 23; median line on mesonotum faintly impressed; length of abdomen 35, width 20, height 21; length of second tergite 24; wings with a more or less distinct fascia medially; radius bow-shaped, shorter than the marginal vein, a little more than its own length distant from the apex of the wing.

Occurs at Glen Echo, Maryland. (Robert Fouts, August 21, 1917, two specimens.) Paratype in collection U. S. N. M., Cat. No. 26835. Type in collection Fouts.

## Family DIAPRIIDAE.

**CRACINOPRIA**, new genus.

Runs to *Ashmeadopria* in Kieffer's key (Das Tierreich, Lief. 44, 1916, p. 11), and differs from that genus in having lateral processes on the propodeum and in not having a median carina on the propodeum which appears triangular when viewed from the side. Also the marginal vein is not obviously cuniform.

Head transverse, the rather prominent frontal ledge causing it to appear globose, smooth and shining, as is the entire body; frontal ledge rounded or emarginate above (in those species having the latter character the free plate part is much less in evidence and the depression behind becomes shallow and inconspicuous, without a longitudinal carina (*crassicornis* and *emarginata*); face below ledge flattened, smooth; clypeus truncate apically; antenna (in female) rather stout, 12-jointed; joints 4-9 of about equal width, transverse (or at least not longer than wide); terminal three joints forming a club (sometimes distinguished more by the lengths of its several members than by their widths); antennae (in male) rather long, 14-jointed, filiform, and covered with short hairs; fourth joint enlarged toward the apex, longer than joint three, sometimes deeply emarginate below; joints 7-13 moniliform; eyes rather small, oval, bare (eyes larger and apparently with a few scattered hairs in *emarginata*); mandibles bidentate, the lower tooth slightly the longer (not observed in *marylandica*); thorax less than twice as long as wide, about as wide as high, more than half as long as the abdomen, narrower than the head (except in *emarginata*); thorax polished, without sculpture except on the propodeum; pronotum visible from above, with rounded angles (except in *marylandica* and in *perplexa*, the

latter species having these parts particularly bluntly angulate); mesonotum transverse, with traces of notauli; scutellum with a median longitudinal ridge (*emarginata* and *crassicornis*) or with an indication of such a ridge posteriorly; metapleura and propodeum laterally pubescent; propodeum short, produced posteriorly on each side into a linguiform process; these processes pubescent laterally (except in *perplexa* and *marylandica*); the upper face of the propodeum is very short (*marylandica*) or practically absent, only the inclined posterior face being present; abdomen less than twice as long as the thorax, wider than the head or thorax, twice as long as wide (*crassicornis*) or less than twice as long as wide; wings ciliate marginally, in *emarginata* slightly longer than the combined lengths of the head, thorax and abdomen; marginal vein short, truncate apically, situated (in *emarginata*) at one-fourth of the wing's length from the tegula.

*Genotype*.—*Trichopria marylandica* Fouts.

*Table to Species.*

1. Frontal ledge emarginate above.....	2.
— Frontal ledge not emarginate above.....	3.
2. Emargination shallow; body black.....	<i>emarginata</i> , new species.
— Emargination deeper; body brown, blackish in parts.....	<i>crassicornis</i> , new species.
3. Species larger, 1.76 mm; proportion 33.7.....	<i>perplexa</i> , new species.
— Smaller, 1.20 mm; proportion 28.0.....	<i>marylandica</i> Fouts.

The four species listed above fall into two apparently natural divisions. *C. perplexa* and *marylandica* agree in having the upper margin of the frontal ledge entire, in having the pronotum angulate anteriorly on the sides, in having only a trace of a longitudinal ridge on the scutellum, and in having the propodeal processes devoid of pubescence above and on the sides. The two species *crassicornis* and *emarginata* differ in every one of these particulars.

The proportions (see introduction) are: for *emarginata* 28.0, for *crassicornis* 30.7, for *perplexa* 33.7 and for *marylandica* 28.0.

***Cracinopria emarginata*, new species.**

*Male*.—Length 1.41 mm. Scape about as long as the following three joints united; pedicel a very little longer than wide, subequal to joint seven; third joint about twice as long as wide, a little shorter and narrower than the fourth, longer but slightly narrower than the second; joints five to thirteen subequal, nodose, covered with rather long whitish hairs; joint fourteen a little longer than thirteen, conical.

Length of head 26, width 30, height 30; length of thorax 46, width 31, height 31; length of abdomen 55, width 35; length of second tergite 43.

Scape, pedicel, and legs, yellowish-brown; flagellum fuscous; body black.

Occurs at Hagerstown, Maryland. (Robert Fouts, September 17, 1915, one specimen, swept from wheat stubbles.)

**Cracinopria crassicornis**, new species.

*Female*.—Length 1.51 mm. Antenna clavate, the club three-jointed; scape as long as the joints nine to twelve united; pedicel globular, as long and as wide as the third joint, which is more or less triangular, a little longer than the fourth; joints four to nine about twice as wide as long, ninth a little longer; joints ten and eleven quadrate, distinctly wider than nine, very little shorter than twelve, the latter blunt at apex; all the flagellar joints (including the pedicels) thickly covered with rather long erect whitish hairs, those on the club joints shorter and more thickly distributed.

Length of head 24, width 30, height 30; length of thorax 42, width 26, height 28; length of abdomen 70, width 35; length of second tergite 43.

Legs bright straw-colored; antennae uniformly rather light reddish-brown; body dark reddish-brown.

Occurs at Hagerstown, Maryland. (W. R. McConnell, May 8, 1915, one specimen, swept from volunteer wheat.)

**Cracinopria perplexa**, new species.

*Female*.—Length 1.76 mm. Antennae lost; length of head 29, width 37, height 35; length of thorax 55, width 34, height 36; length of abdomen 75, width 43; length of second tergite 50.

Legs yellow, tinged with brown; thorax reddish-brown; abdomen the same color but darker, almost black on the second tergite.

Occurs at Hagerstown, Maryland. (P. R. Myers, September 21, 1914, one specimen, swept from wheat stubbles.)

**Cracinopria marylandica** (Fouts).

*Trichopria marylandica*, R. M. Fouts, Proc. Ent. Soc. of Washington, vol. 22, 1920, p. 62.

Following measurements made from paratype retained by the author; length of head 23, width 28, height 28; length of thorax 35, width 23, height 23; length of abdomen 50, width 32; length of second tergite 35.

Occurs at Hagerstown, Maryland. (H. L. Parker, July 31, 1915, four specimens, reared from a dipterous puparium.)

**Ismarus americanus**, new species.

*Female*.—Length 2.0 mm. Runs in Kieffer's key (Das Tierreich, Lief. 44, 1916, p. 354) to *halidayi* from which it differs in having the fourth antennal joint longer than the third and in not having a sharp ridge traversing the scutellar fovea.

Length of head 30, width 55; length of third antennal joint to length of fourth, as two is to three; third very little shorter than the first; antenna gradually thickening distally, the joints becoming shorter to the seventh; joints seven to fourteen subequal in length, the fourteenth a little the longest; length of thorax 75; width 45, height 55, densely pubescent where the surface is roughened, e. g., the upper and lower parts of the pronotum and propodeum; these parts rugose, especially the dorsum of the pronotum; mesosternum punctate,

more densely pubescent than the rest of the thorax; propodeum rugose, reticulate, areolate, with a high and sharp transverse ridge; hair on propodeum as long as that on the first segment of the abdomen but more dense; metapleurum rugose, densely pubescent; length of abdomen 85 (recurved apically), width 50, height 40, highly convex above, less so below, sparsely pubescent, shining and without sculpture (with the exception of the first segment which is furnished with irregular longitudinal carinae or ridges); length of first segment 14, width 19; length of second tergite 55; base of segment strongly fluted, the length of the deep median groove 33; the sutures separating the segments two to five from one another extremely fine and hard to trace; the suture between tergites five and six and that between six and seven are deeper, the latter being virtually a constriction; seventh tergite triangular, as long as wide, pointed apically.

Black; antenna brownish, lighter basally, the proximal three joints stramineous below; legs bright golden-yellow, with the following exceptions: most of tibia and femur of hind leg and last joint of tarsus of hind leg, brown; last tergite, and fifth and sixth narrowly laterally, and sternites three to six, brown or yellowish-brown.

Occurs at Carlisle, Pennsylvania. (Robert Fouts, July 23, 1920, one specimen.)

**Acropiesta semirufa**, new species.

*Female*.—Length 3.0 mm. Differs from *subaptera* in having fully developed wings. Scape yellowish-brown, as long as the following four joints united; third joint longer than the pedicel, as long as the fourth and fifth united, not quite twice as long as wide; joints four and five subequal, quadrate; six and seven as long as five but a little wider; following joints transverse; fifteen slightly longer than three, less than twice as long as wide, rounded apically; flagellum brownish, darker than the scape; marginal vein punctiform, half as long as the first radial abscissa, the latter oblique, one-third the length of the second abscissa; cubitus slightly curved proximad; petiole rugulose, cylindrical, distinctly less than twice as long as wide; legs yellow; femora and tibiae stout, clavate; abdomen slightly depressed, elliptical, one-half longer than the thorax, pointed at tip; segments three to seven subequal; seven as long as the three preceding united; head, thorax and basal two-thirds of abdomen, reddish-brown; abdomen apically yellowish.

Occurs at Glen Echo, Maryland. (Robert Fouts, one specimen.)

**Anectata canadensis**, new species.

*Female*.—Length 2.94 mm. Differs from *hirtifrons* Ashmead in having the scape a little less than twice as long as the third antennal joint.

The lengths of the antennal joints are as follows: 38, 10, 20, 15, 14, 14, 13, 13, 12, 10, 10, 9, 9, 14; all of the joints are subequal in width (about 8); length of thorax 100, width 68, height 75; length of abdomen 120, width 65, height 45; length of first segment 30, width 20, height 17; length of second tergite 90; abdomen moderately thickly covered with long white hairs; first tergite with five straight longitudinal ridges above, the distance between each of them being

about 5; second tergite with a deep longitudinal groove basally (length 25) and with a number of shorter grooves on each side of the central and larger one; that part of the abdomen posterior to the first segment is a perfect broad ellipse when viewed from above; the seventh segment is as long as the four preceding united, as wide as long, triangular, acute at apex; length of basal vein 28, of marginal vein 20, of the first abscissa of the radius 10, and of the second abscissa 45; radial cell closed; wings slightly tinged with brown; antennae rufous, becoming darker towards the apex, the terminal joints black; legs entirely rufous; body black.

Occurs at Gull Lake, Ontario. (H. S. Parish, June 13, 1921, one specimen.)

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