

NOTES ON SOME GENERA OF OPHIONINÆ WITH TOOTHED FEMORA.¹

BY CHARLES T. BRUES.

Eiphosoma Cresson.²

This genus was first proposed by Cresson (Proc. Ent. Soc. Philadelphia, Vol. 4, p. 52, 1865) for four Cuban species. Since then five others have been described, one from Brazil and the others from Mexico and the southern United States.

The addition of the species here described extends considerably the northern range of the genus which has not been hitherto found north of Missouri.

Omitting the Brazilian species, the others may be separated by the following dichotomy.

Key to the Species of Eiphosoma.

1. Mesothorax with two yellow oval spots anteriorly on its middle lobe; metathorax principally black.....**E. pyralidis** Ashm.
Mesothorax either yellow with black stripes or black with elongate yellow stripes; metathorax prevailingly yellow or at least with three yellow stripes.....2
2. Metathorax with only a median black line, its anterior suture sometimes black.....3
Metathorax with lateral black markings additional to the median spot or line.....6
3. Mesopleura with a black spot or oblique line.....4
Mesopleura entirely yellow; wings entirely hyaline, areolet present.....**E. vitticolle** Cress.
4. Posterior tibiæ entirely honey-yellow; areolet wanting
.....**E. nigrovittatum** Cress.
Posterior tibiæ black, except for a median pale annulus5
5. Large, length nearly 25 mm. Wings entirely hyaline.....
.....**E. mexicanum** Cress.
Smaller, length 12 mm., wings infuscated somewhat at the tip
.....**E. septentrionale** sp. nov.

¹Contributions from the Entomological Laboratory of the Bussey Institution, Harvard University, No. 34.

²(Changed to *Xiphosoma* by Szépligeti in the Genera Insectorum, fasc. 54, p. 4, but I believe that the original orthography should be adhered to, and not changed for mere philological reasons.)

6. Wings entirely hyaline.....7
 Wings tipped with pale fuliginous8
7. Metathorax yellow with the median excavated space and a line
 (abbreviated posteriorly) on each side black.....**E. annulatum** Cress.
 Metathorax black with four yellow stripes, the lateral one
 abbreviated basally**E. texanum** Cress.
8. Hind tarsi and hind tibiæ except pale median annulus, black;
 metathorax with one black line, and a black spot on each side.
**E. aztecum** Cress.
 Hind tarsi and hind tibiæ yellow; metathorax with three black
 stripes.....**E. atrovittatum** Cress.

Eiphosoma septentrionale sp. nov.

♀ Length 12 mm. Head, thorax and legs yellow, marked with black; abdomen fulvous. Head lemon-yellow; mandibles piceous at tips, and vertex above antennæ, except orbits, black; the black enclosing the ocelli and widening out to cover the entire occiput. Face protuberant beneath the antennæ and again on the clypeus, smooth, with sparse coarse punctures. Mandibles with two equal teeth; palpi four jointed, the basal joint stouter; vertex and occiput medially shagreened, the latter with a few punctures laterally and sharply declivous behind the ocelli; head margined behind on occiput, temples and cheeks, the latter shagreened, a little broader than the malar space. Ocelli in a curved line, separated from each other and from the eye margin by narrow depressions; front below them irregularly aciculated. Antennæ filiform, setaceous toward the tips, about 45-jointed; black, except the two basal joints, first flagellar joint five times as long as thick; following growing shorter, those toward the tip becoming nearly as broad as long. Prothorax entirely yellow. Mesonotum with coarse, separated punctures; yellow, with three broad longitudinal black lines, the median one abbreviated just behind the middle, the lateral ones uniting v-shaped near the base of the scutellum. Scutellum shining yellow, very convex, with a deep transverse furrow at the base that is furnished with a sharp elevated margin laterally. Metathorax incompletely areolated; with two transverse carinæ and one lateral one on each side; spiracles elongate oval; median depression broad, but not deep, lateral ones narrower. Surface of metathorax finely rugulose, entirely yellow except for a median black stripe abbreviated both before and behind, and a thin black line on its anterior suture which meets just above the middle coxa an oblique mesopleural line that extends nearly to the upper anterior angle of the mesopleura. Remainder of pleuræ and underside of thorax yellow and sparsely punctate, the oblique black line depressed and irregularly transversely aciculate.

Abdomen very long and slender, the first segment slightly swollen at the tip, one-half longer than the metathorax; second segment one third longer than the first; third two thirds as long as the second; fourth and fifth subequal, each slightly longer than the third; sixth as long as the second with the ovipositor arising from its tip, the apical segments being very short

and bent downwards. Ovipositor not quite half the length of the abdomen. The abdomen is fulvous except the base of the petiole which is pale testaceous, and a narrow dorsal black line interrupted at the tips of the segments, which is black. Four anterior legs yellow, lighter on the trochanters and base of the middle tibiæ; posterior pair fulvous, their coxæ with a black dot within, their trochanters testaceous; their femora black on the basal third and whitish at tips; their tibiæ black except for broad annulus, and their tarsi black. Wings hyaline except for a faint cloud at the tip. Areolet present¹ petiolate, oblique, median and submedian cells of equal length; discoidal nervure broken far above the middle.

Castle Rock, Pa., collected on August 25, 1907, by Mr. H. S. Harbeck.

Pristomerus Curtis.

Key to the North American Species.

1. Cubital and discoidal veins distinct to the margin of the wing
 **P. euryptichiæ** Ashm.
 Cubital and discoidal veins obliterated just beyond the second
 recurrent nervure, from thence to the wing margin continued as
 scarcely perceptible streaks..... 2
2. Superomedian area of metathorax broad, scarcely longer than
 broad, third section of discoidal vein entirely obsolete..... 3
 Superomedian area nearly twice as long as broad; third section
 of discoidal vein nearly as long as the transverse cubitus.....
 **P. appalachianus** Viereck.
3. Hind coxæ almost entirely black, wings clear hyaline; base of
 third discoidal cell very strongly contracted at the base
 (see fig. 8)..... **P. coloradensis** sp. nov.
 Hind coxæ entirely ferruginous. Wings tinged with yellow;
 third discoidal cell less strongly contracted at the base. (see
 fig. 2)..... **P. pacificus** Cress.

Pristomerus coloradensis sp. nov.

♀ Length 8 mm.; ovipositor 5 mm. Black; head, legs and abdomen in part ferruginous. Head very strongly transverse; face not narrowed below; front much excavated above the antennæ, shagreened and subopaque; face slightly elevated medially and sparsely punctate; clypeus convex, polished, its anterior border broadly rounded; mandibles 3-dentate, yellowish white, with black tips; cheeks punctate, the malar space one third as long as the eye-height; head behind dull, shagreened; distinctly margined. Head clothed with conspicuous white pubescence; the anterior and posterior orbits, widened beneath the antennæ, also the clypeus and cheeks ferruginous. Antennæ slender, first flagellar joint four times as long as thick; second and third slightly shorter, subequal and each three times as long as thick; following

¹This character is not common to all species of the genus as stated by Ashmead (Classification of Ichneumon Flies, 1900, p. 89).

joints growing shorter, at the apical third becoming nearly quadrate; entirely black. Palpi 5-jointed, black at base and fuscous toward tips. Ocelli well separated, in a triangle, the lateral ones as far from each other as from the eye-margin. Thorax coarsely and closely punctate; mesonotum with quite distinct notauli which converge and fade out posteriorly. Metanotum completely areolated, but with the carinæ very weak and indistinct except on the sides; superomedian area large, pentagonal, as long as the petiolar area, basal area very small, longer than wide. All the pleuræ strongly and coarsely punctate, the punctures more densely placed on the metapleuræ but nowhere confluent. Mesopleura with a smooth space below the root of the posterior wing, bordered below by a row of short striæ.

Thorax black, with only the tegulæ and the extreme margin of the pronotum anteriorly ferruginous. Abdomen scarcely longer than the head and thorax together, strongly compressed beyond the third segment. Petiole suddenly constricted at its middle, the basal portion being less than one half as broad as the apical half; its spiracles placed just before the apical third; its surface shining and very faintly striolate laterally behind the spiracular elevations; seen from the side it is quite strongly curved apically. Second segment as long as the first, shining, very distinctly aciculate along the sides. Gastrocoeli very distinct. Following segments shining. Ovipositor slightly longer than the abdomen. First segment entirely black; second narrowly ferruginous on the apical margin and on the sides behind: third to fifth broadly ferruginous on the sides and behind; sixth and seventh ferruginous with a broad dorsal black line. Legs ferruginous; hind coxæ, except base, hind trochanters, hind tibiæ, except their inner edges, and four posterior tarsi piceous; posterior femora darkened inwardly below and pale yellow at their extreme tips, the femoral tooth moderately long, the denticulations following it very minute. Wings hyaline; third discoidal cell very much contracted inwardly, its base being scarcely one third the length of the second recurrent nervure.

Described from a female collected by Mr. S. A. Rohwer on flowers of *Antennaria microphylla* at Florissant, Col., June 16, 1907, and sent me by Professor Cockerell.

Pristomeridia (?) *dubia* sp. nov.

Length 9.5 mm. Fulvous, varied with piceous and with the legs more or less pale testaceous. Head fully three times as broad as thick, strongly emarginate on the vertex. Ocelli very large, in an equilateral triangle, distinctly farther from the eye margin than from each other. Inner margins of eyes parallel, the face a little broader than either eye. Vertex subopaque, microscopically roughened; face more shining, with traces of transverse striations and sparse punctures intermixed; clypeus very convex, its margin rounded on the sides and subtruncate medially; mandibles bidentate, leaving a small space between them and the clypeus when closed. Lateral clypeal foveæ distinct, the face with a median convexity between the clypeus and the antennæ. Head behind and cheeks shagreened. Antennæ 35-jointed,

three fourths as long as the body; setaceous; first and second flagellar joints of equal length, much elongated; third and fourth each one third shorter than the preceding one, following joints shortening until those just before the apex are but little longer than wide. Mesonotum shagreened, with sparse and large punctures; notauli very distinct on their anterior half beyond which each one fades out into a group of short longitudinal strigæ. Scutellum convex, subtriangular but sharply rounded at the tip; with a deep crenulated furrow across the base. Metanotum elongated, quite distinctly excavated medially along its entire posterior slope; basal area elongate, 4-sided; median area large, elongate, separated from the elongate petiolar area. Lateral and pleural areas completely separated; spiracles round, of moderate size. Tip of metathorax extending considerably beyond the insertion of the hind coxæ; its upper surface shagreened between the carinæ and sparsely punctate on the sides. Mesopleura with sparse coarse punctures and a deep oblique impression above, its upper anterior angle obliquely striated. Propleura with a few irregular and very indistinct striæ and a few punctures above. Abdomen very long and slender, one half longer than the head and thorax together. Petiole gradually enlarged toward its apex, the spiracles placed at its apical third each one giving off a carina which extends to the basal third of the petiole; second segment as long as the first, shining on its basal third but opaque beyond; following segments much shorter and becoming much compressed. Ovipositor issuing from the apex of the fifth segment, as long as the body. Wings (see fig. 10) pure hyaline, slightly infuscated at their extreme tips; stigma broad, subtriangular, the radial cell moderately long; areolet present, very narrow and strongly oblique; third discoidal cell very much narrowed at its base although the discocubital vein is but little curved; discoidal vein in anterior wing broken far above the middle; in posterior wing complete, unbroken. Legs slender, the posterior femora each with an acute tooth before the apex but without any serrations. Body fulvo-ferruginous; antennæ, except basal joint, and tips of mandibles black; front above antennæ somewhat infuscated, the clypeus, mandibles and inner orbits pale yellow or testaceous. Abdomen with the petiole except base and apex; anterior half of second segment, base of third and dorsal spots on the following segments piceous or black; ovipositor black. Legs pale yellow, the posterior femora except extreme base and apex and the tibiæ at base and apex dull piceous.

Described from a female collected at Blue Hills, near Boston, Mass., August 10, 1910.

This peculiar species apparently belongs to the tribe Pristomerini on account of its broad stigma although the venation is otherwise suggestive of *Eiphosoma* as is also the more strongly produced apex of the metathorax and the indication of a median methathoracic excavation. The genus *Xiphosomella* established by Szépligeti (Gen. Insect. fasc. 34, p. 4; 1905) for a

Brazilian species is said (l. c.) to present transitions to certain *Pristomerini* and *Cremastini*, and it would appear on the other hand that the present species shows characters also which ally it with *Eiphosoma* and the related *Xiphosomella*.

Mr. H. L. Viereck, of the U. S. National Museum has very kindly compared the drawing of the wing of this species reproduced on the accompanying plate as figure 10 with the specimen of *Porizon agilis* Cress. on which Ashmead based the genus *Pristomeridia* and writes me that "it agrees with the type except in having an areolet and no indication of a break in the nervellus." I believe therefore that it should be placed in this genus. It has been suggested by Szépligeti that *Pristomeridia* cannot be retained as distinct from *Pristomerus*, but the present species is so different in habitus from typical species of the latter, that I do not think the two extremes can be considered as congeneric, whatever disposition be made of the species which seem scarcely separable from *Pristomerus*.

Whether these Ophionine genera with toothed femora form one or even two natural groups must, however, await the discovery of other forms which will no doubt be found.

EXPLANATION OF PLATE.

- Figs. 1, 2. *Pristomerus pacificus* Cresson, leg and wing of female.
Figs. 3, 4. *Pristomerus vulnerator* Panz., leg and wings of female.
Figs. 5, 6. *Pristomerus euryptychiæ* Ashmead, leg and wing of female.
Figs. 7, 8. *Pristomerus coloradensis* sp. nov., leg and wing of female.
Figs. 9, 10. *Pristomeridia* (?) *dubia* sp. nov., leg and wing of female.
Fig. 11. *Eiphosoma septentrionale* sp. nov., wing of female.