NEW NEARCTIC PLATYGASTER (HYMENOPTERA: PROCTOTRUPOIDEA, PLATYGASTRIDAE): THE COLORADENSIS GROUP

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Abstract

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Several Schmitt boxes of previously unplaced Platygastridae were made available to me through the kindness of Dr. Paul Marsh, U.S. National Museum. This is the first in a series of papers describing new species and illustrating the types from these and from previously described species.

Introduction

Ashmead and Fouts are the only American authors to have written extensively about U.S. Platygastridae, and since Fouts' (1924) revision of Platygastrinae, there has been only scattered taxonomic work relative to North American fauna. The U.S. National Museum collection contained about 2000 unplaced specimens, some in long series, representing well over 50 new species as well as existing species from the Nearctic area. My objective is to describe new species from this material, illustrating these as well as types of existing species where possible.

The coloradensis group

Species in the coloradensis (Ashmead) group are generally rather difficult to distinguish from each other due to intraspecific variation. The group, however, may be quickly diagnosed by the complete notauli, stout shape, and by the scutellum, which is partly, though in some cases very lightly, scaly on the anterior corners, but otherwise smooth and polished. The abdomen is often quite broad at the middle, with the terga sometimes overlapping the sterna, the last four terga relatively short (Figs. 1–17).

Key to Species

Females ................................................................. 2
1'. Males ......................................................................... 6
2. Antennae very long, flagellum longer than thorax filicornis (Ashm.)
2'. Antennae shorter .................................................... 3
3. Tergite II about 1.1 times as long as wide (Figs. 11, 12) californica (Ashm.)
3'. Tergite II wider than long, or, if as wide as long, then widest before middle .... 4
4. Interfoveal area broad posteriorly, with faint striae on inner slopes (Fig. 1) coloradensis (Ashm.)
4'. Interfoveal area apparently narrowed posteriorly due to a peripheral carina which is more or less convergent behind (Figs. 5, 7, 13) similis n. sp.
5. Posterior margins of tergites III–V expanded, rather broadly overlapping anterior margins of succeeding tergites, the lateral margins of the gaster discontinuous (Figs. 5, 7) libocedri n. sp.
5'. Sides of gaster continuous, tergites not expanded (Fig. 13) libocedri n. sp.
6. Basal foveae with numerous striae filicornis (Ashm.)
6'. Basal foveae with at most a few striae on the inner slopes ......................... 7
7. Antennal segment IV dilated apically, concave basally on outer edge (Fig. 17) 8
7'. Antennal segment IV neither dilated nor concave ........................................ 9
8. Antennal segments IV through IX about 1 1/3 times as long as wide ................ californica (Ashm.)
8'. Antennal segment V twice longer than wide, VI through IX 1.5 to 1.8 times as long as wide (Fig. 17) libocedri n. sp.
9. Interfoveal area very broad, narrowest anteriorly, with (variably) a few weak striae on the inner slopes (Fig. 1) ........................................... coloradensis (Ashm.)

9'. Interfoveal area narrow posteriorly, with a peripheral carina and usually a median carina (Fig. 5) .............................................. similis n. sp.

Plateygaster similis n. sp.

Differential Diagnosis. P. similis is most clearly distinguished from P. coloradensis (Ashm.) by its very narrow median interfoveal area on tergite II, this with a peripheral carina and a more or less obvious carina down the center. Other than this feature and host data, the species appear identical.

Description. Female. Length 1.2 mm. Head in top view 1.8 times as wide as long; in front view, as high as wide; face mat in holotype (smooth in several specimens), faintly aciculate at the sides above middle of eyes. Vertex and occiput finely aciculate, the occiput more strongly so. Ocelli forming a broad triangle, POL:POL:OOL::14:7:4.

Length to width ratios of antennal segments: 5.86, 1.83, 1.75, 1.50, 1.40, 1.80, 1.28, 1.43, 1.43, 2.33. Thorax stout, 1.25 times as long as wide, 1.1 times as high as wide. Pronotum unsculptured dorsally, the dorsolateral carinae reduced, straight; sides of pronotum unsculptured except for a shagreened line extending diagonally from anterodorsal corner to posterodorsal corner (Fig. 6), with a few scattered setae. Notauli complete, the median lobe of the mesonotum shagreened basally, smooth on apical half, truncate before the scutellum; lateral lobes polished with faint aciculae in the center and a few short setae apically. Scutellum semicircular in top view and lower than the mesonotum in side view, faintly scaly on the anterior corners, smooth medially. Propodeum with sparse pubescence. Mesopleura polished, with a longitudinal impressed line at the middle, this continued across the metapleura, which are pubescent.

Abdomen as long as the head and thorax united, 1.42 times as long as wide; ratios of lengths of tergites, 5:24:3:4:3:4:3:6. Tergite I much broader apically than basally, elevated medially, depressed at the sides; the middle, elevated portion outlined by a high carina except at the apex; tergite II as wide apically as long, strongly narrowed at base, evenly convex; basal foveae broad, not striate, the median interfoveal area narrow, with 3 faint striae (subject to variation); sides of tergites III to V expanded apically, overlapping each other much as in P. coloradensis. Each tergite beyond II with a transverse row of white setae; tergite VI triangular, the ovipositor exserted and as long as tergite VI.

Wings transparent, extending past the apex of the abdomen by the length of the last two tergites.

Color. Black, the legs and antennae piceous.

Male. Length 1.15 mm. Similar to female except: antennal segments beyond III all pubescent, segment IV enlarged; thorax variably mat on dorsum, the pronotum more thoroughly so laterally; abdomen 0.71 as long as the head and thorax united. Abdomen very much abbreviated after tergite II.

Antennal ratios, lengths:widths: 5.71, 1.83, 1.00, 1.00, 1.50, 1.43, 1.50, 2.66.

Coloration as in female.

Types. Holotype, female, Oreana, Idaho, 16 March 63, from galls on Chrysothamnus sp. (Fig. 8); no collr. cited; Musebeck determiner label attached, "Plateygaster n. sp. near coloradensis Ashm." Deposited in U.S. National Museum (No. 72521).

Paratypes, 22 females, 20 males, same data as holotype. Deposited in U.S. National Museum, Canadian National Collection, colln. H. Vlug (Netherlands), and colln. MacGown (Belfast).

Plateygaster libocedri n. sp.

Differential Diagnosis. P. libocedri is distinguished from P. californica (Ashm.) since in the former the occiput is distinctly and extensively striate but is shagreened in the latter. In P. californica the median interfoveal area of tergite II is the narrowest anteriorly, expanded posteriorly, with or without faint striae on the inner slopes. The interfoveal area of P. libocedri appears wider anteriorly squarely truncated, with a peripheral carina and one or more (usually one) obvious central longitudinal carinae, these more or less convergent posteriorly.
Figs. 1–4. *Platygaster coloradensis* (Ashm.). 1, female, from paratype; 2, thorax, side view; 3, female antenna; 4, male antenna.
Figs. 5-10. Platygaster similis n. sp. 5, male abdomen; 6, side view of thorax; 7, female abdomen; 8, gall; 9, female antenna; 10, male antenna.
DESCRIPTION. Female. Length 1.83 mm. Head, in top view, 2.2 to 2.4 times as wide as long, slightly wider than thorax just before tegulae; occiput extensively, rather coarsely striate, depressed just behind vertex; vertex and ocellar triangle generally shagreened, quite strongly so just over posterior margins of eyes. Ocelli prominent, POL:LOL:OOL::16:10:5; anterior ocellus set in a depression, the lower margin of this depression opening into a depressed line extending to the center of the face; face clearly but weakly diagonally aciculate on upper sides, less obviously so on sides at middle, very faintly so in center. Lower face above antennal insertions weakly to moderately striate, the area above the clypeal process raised into a low crest which merges above with the midfacial depression. Clypeal process broad, truncate, with reflexed margins. Inner eye margins somewhat convergent below.

Antennal ratios, length:width: 5.30, 2.00, 1.00, 1.73, 2.14, 1.87, 1.60, 1.60, 1.50, 2.50.

Thorax stout, very high, convex; dorsal plate of pronotum smooth, set off laterally by two dark carinae, narrowest near occipital foramen, widest at anterior mesonotal border; pronotum smooth at sides, sparsely pubescent, with a diagonal shagreened line from anterodorsal corner to hind margin; pronotal collar finely striate to apex; mesonotum broadly truncate at anterior margin of middle lobe, the middle lobe with two basal, parallel longitudinal lines between bases of notauli. Notauli complete, deep, converging in a sharp point before the scutellum, not surpassing the foveae; middle lobe with faint longitudinal aciculae on apical half, faintly shagreened to scaly on basal half; lateral lobes polished except faintly shagreened on inner margins near apex of median lobe, and with a few scattered setae apically. Mesopleura bare, impressed medially; metapleura characteristically pubescent, also with a transverse median impression. Propodeum sparsely pubescent at sides.

Scutellum separated from mesonotum by a deep furrow, the lateral foveae deep and broad; scutellum transverse, convex, sparsely pubescent at the sides, with faintly scaly anterior corners.

Abdomen as long as the head and thorax united, broadly oval except pointed apically and quite narrow at the base; tergite I with the median area quadrate, raised, this area unsculptured but depressed across the middle; lateral areas of tergite I flattened, sparsely pubescent. Basal foveae broad, moderately impressed, the median interfoveal area apparently broader anteriorly than posteriorly (except in some males), a condition implied by the peripheral carina which tends to converge at both sides of the area posteriorly. Median area also with one or more (usually one) carinae.

Length to width ratios of the tergites: 0.47, 0.86, 0.25, 0.35, 0.54, 1.67.

Ovipositor extended about .3 mm, decurved, rather strongly sclerotized and stout than that observed in most Platygaster species. Wings lightly infuscated beyond base, the stigma represented as a whitish oval spot; wings extending slightly past apex of abdomen.

Color. Head piceous; thorax mahogany brown, abdomen light reddish brown; legs reddish brown except yellowish at the joints.
Figs. 13-15. *Platygaster libocedri* n. sp. 13, female; 14, male abdomen; 15, female.
Male. Length 1.8 mm. Very similar to female except: scutellum very high, prominent; striae over antennal bases somewhat stronger, and the antennal segments pubescent, with segment IV very enlarged apically, narrowed basally and concave on the outer side as in *P. hiemalis* Forbes. Antennal ratios, lengths to widths: 5.00, 1.44, 0.75, 1.46, 2.11, 1.60, 1.50, 1.67, 1.78, 2.62.

Types. Holotype, female, Oregon, J. M. Miller collr., 30 Nov. 1916, reared from mistletoe on (?) *Libocedrus decurrens*; Hopkins No. 13213b. Deposited in U.S. National Museum (No. 72522).

Paratypes, 14 males and females, same data.

Other records: 6 males and females from *Rhopalomyia libocedri*, Yosemite Natl. Pk., California, March 1940, E. P. Felt, collr.

Remarks. In some specimens the ocellar triangle is entirely recessed into an oval depression. Color varies from entirely reddish brown to entirely black. Among males the interfoveal area of tergite II may be parallel-sided, and is nearly obsolete in one male.

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Reference

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