

A NEW *TRACHYSPHYRUS* OF THE PLANOSAE GROUP  
FROM FLORIDA (HYMENOPTERA: ICHNEUMONIDAE)<sup>1</sup>

CHARLES C. PORTER<sup>2</sup>

Department of Biological Sciences,  
Fordham University, Bronx, N. Y. 10458

ABSTRACT

The new species *Trachysphyrus weemsi* is described on the basis of specimens collected at Sarasota, Florida. This is the first record of the genus *Trachysphyrus* for the state.

In 1967 (p. 206-207) the author described the Planosae Group of the mesostenine genus *Trachysphyrus* for a small series of Neotropical and Nearctic species distinguishable from their congeners by the following key characters: second gastric tergite with uniformly distributed, large, dense punctures; base of petiole with a prominent, flange-like lateral expansion; axillus vein close to and paralleling hind margin of wing.

These ichneumonids range from northeastern United States to central Argentina but appear to reach maximum abundance and diversity in subtropical Argentina and Brasil. Members of the Planosae Group are never common, and so museum collections consist of single specimens or short series from widely separated localities. This problem has complicated the taxonomy of the group, to the extent that we are as yet unsure whether we are dealing with a single, far-ranging and geographically variable species or perhaps with as many as 5 or 6 distinct species.

The present article describes a new member of the Planosae Group from the state of Florida. This constitutes the first record of the genus *Trachysphyrus* for Florida and the first notice of the Planosae Group from the eastern United States south of Pennsylvania and Ohio.

*Trachysphyrus weemsi* n. sp.

Fig. 1

FEMALE: *Color*: scape mostly pale red with brownish to blackish staining near base and interiorly and with an inconspicuous whitish area near apex below; pedicel black with brown on apical rim; flagellum black with a white band above and laterally on segments 5 (wholly or in part) to 10 or 11 (in part) and with dull brown staining below toward apex; head pale red with about apical 1/3 of mandible black and with white markings as follows: large blotch on basal 1/2 of mandible; large blotch on clypeus; and a broad orbital ring, interrupted only at bottom of eye, which ventro-posteriorly is widened into a

<sup>1</sup> Contribution No. 285, Bureau of Entomology, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida 32601.

<sup>2</sup> Research Associate, Florida State Collection of Arthropods, Florida Department of Agriculture and Consumer Services, Gainesville.

band that extends across malar space to hypostomal carina; mesosoma pale red with a little blackish staining on some sutures and margins as well as with the following white: broad band on all but about apical 1/10 or less of anterior margin of pronotum, broad band on dorsal margin of pronotum from a little before level of upper end of epomia to apex; a short stripe exteriorly along each notaulus on about median 1/4 of mesoscutum; a little more than anterior 1/3 of scutellum; most of tegula except for some reddish staining interiorly; most of subalarum; and a little staining dorsally on apical margin of mesopleuron; gaster pale red with conspicuous white apical bands, ventrally incomplete and dorsally narrowed, on tergites 5-7, and a faint, narrow whitish apical band on 8; legs predominantly pale red with fore trochanter more or less broadly white below; fore trochantellus with a little white or whitish below; fifth front tarsomere a little dusky apicad; fifth mid tarsomere a little dusky; hind tibia with dorsal and lateral dusky staining which begins faintly beyond basal half and becomes darker and broader toward apex or sometimes only becoming dusky near apex; hind tarsus with first segment black on about basal 3/8 and white apically, segments 2-4 white, and segment 5 black with brownish staining below; wings hyaline.

*Length of fore wing:* 5.3-5.5 mm.

*Clypeus:* in profile high and nasutely pyramidal with the apical face definitely shorter than the basal and gently concave. *Malar space:* 0.8-0.9 as long as basal width of mandible. *Occipital carina:* sharp and fine, reaching below to the moderately raised hypostomal carina. *Temple:* 0.3 as long as eye in dorsal view, rounded off and strongly receding. *Face:* with a definite median swelling.

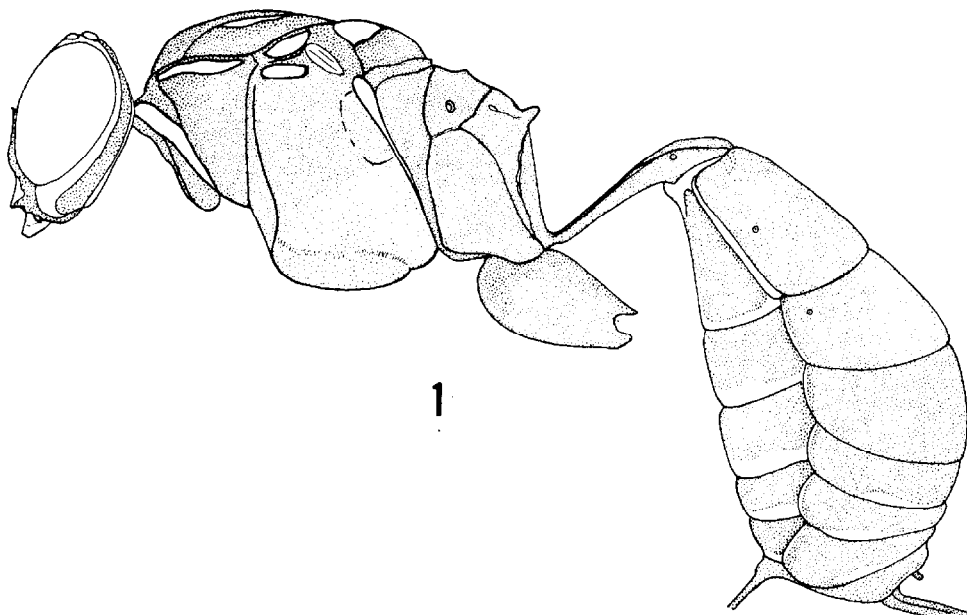


Fig. 1. *Trachysphyrus weemsi* Porter, female holotype. Lateral view of body, showing color pattern.

*Pronotum*: dorsal margin faintly swollen and without a submarginal groove; epomia sharp in scrobe, without a differentiated area or swelling above its upper end, more weakly prolonged a considerable distance below scrobe. *Mesoscutum*: notauli shallow and rather weak but traceable about 0.7 the length of mesoscutum; surface dully shining with large, coarse, uniformly adjacent to reticulately confluent punctures. *Mesopleuron*: speculum swollen, sometimes mostly smooth and polished or sometimes broadly invaded by strong punctures; surface otherwise shining with abundant, large, strong, almost uniformly adjacent to reticulately confluent punctures grading into reticulate wrinkling broadly below subalarum and on a large part of apical 1/2.

*Wing venation*: radial cell 3.5-3.7 as long as wide; areolet large with intercubiti gently convergent above; second abscissa of radius 0.8 as long as first intercubitus; disco-cubitus broadly angled; nervulus interstitial to slightly antefurcal; mediella gently arched; upper part of nervellus 2.5-2.6 as long as lower; axillus close to hind margin of wing.

*Propodeum*: in profile short and high with the basal face gently sloping rearward and the discrete, definitely longer apical face almost vertically declivous; spiracle 1.4-1.5 as long as wide; basal trans-carina sharp throughout, highest medially and laterally; apical trans-carina in holotype weaker than basal and becoming irregular medially, in paratype female as strong as basal trans-carina and only a little irregular medially, its cristae large, stout, broadly subligulate; areola defined, about 1.7 as wide as long; median apical area irregularly delimited; lateral longitudinal carinae irregularly to very irregularly defined between crista and basal trans-carina; surface very strongly reticulately wrinkled, the reticulation on the apical face markedly coarser and delimiting larger enclosures than that on the basal face.

*First gastric segment*: petiole with a large, rounded-off baso-lateral flange; postpetiole strongly expanded, 1.8 as wide apically as long from spiracle to apex; surface of postpetiole with central field smooth and polished except for a few scattered punctures rearward and lateral field slightly duller with faint micro-reticulation and numerous but mostly sub-adjacent or sparser, large, strong punctures; ventro-lateral carina defined throughout but strongest toward apex of petiole and on postpetiole; dorsolateral carina defined throughout; dorsal carinae scarcely suggested or sometimes weakly defined on apex of petiole and base of postpetiole. *Second gastric tergite*: smooth and shining with slight micro-reticulation that is best developed laterad, as well as with abundant, large, well defined punctures which mesad average a little sparser than subadjacent and laterad become a little denser, the punctures emitting short setae that mostly equal or a little fall short of the length of their interspaces. *Gaster*: moderately stout fusiform; succeeding tergites with progressively weaker and finer punctures and a little longer and denser setae than on second.

*Ovipositor*: sheathed portion 0.44-0.45 as long as fore wing; straight, slender, compressed; nodus distinct, with a broad, shallow notch; dorsal valve on tip with delicate, well spaced transverse ridges and with a gradual, faintly concave taper between notch and apex; ventral valve with fine, inclivously oblique ridges on tip; tip 0.19-0.21 as high at notch as long from notch to apex.

MALE: *Color*: scape above dull pale reddish with a little dusky staining and below mostly white; pedicel black with pale brown on tip; flagellum black, grading into pale brownish on apical 1/2, especially below; head pale red with about apical 1/4 of mandible blackish brown, a pallid brownish band across

malar space, and the following white: most of basal  $5/8$  of mandible; clypeus, except for its translucently pallid brownish apical margin; face; and a broad orbital band, interrupted only at bottom of eye, which becomes increasingly wider below on temple, finally extending across to occipital and hypostomal carinae on about its lower  $1/5$ ; mesosoma pale red with a little dusky staining on some margins and sutures as well as with the following white: broad band on all but apex of anterior margin of pronotum; broad band on dorso-lateral margin of pronotum extending from somewhat before level of epomia to apex; a rather broad, short stripe exteriorly along each notaulus on about median  $1/4$  of mesoscutum; a little less than anterior  $1/2$  of scutellum; tegula; subalarum; large blotch situated a little behind prepectus in lower front quadrant of mesepisternum; mesepimeron dully, more brightly so dorsad; large lateral blotch on upper division of metapleuron; and some staining on and rearward of propodeal cristae; gastric tergites entirely pale red; legs largely pale red with fore coxa broadly white above and grading ventro-basad into pallid stramineous; fore trochantellus white; fore femur a little white stained near apex; fore tibia very pale reddish with some white staining; fore tarsus more nearly whitish stramineous than reddish; mid coxa with considerable whitish staining, especially dorso-anteriad; mid trochanter white with faint reddish staining above; mid tibia tending to whitish stramineous; mid tarsus stramineous tending to whitish, especially on segments 3 and 4; hind tibia dusky on about apical  $1/12$ ; hind tarsus with first segment blackish brown on basal  $3/4$  and brownish white on apical  $1/4$ ; segments 2-4 white, and 5 brownish black with about basal  $1/4$  brownish white; wings hyaline.

*Length of fore wing:* 4.6 mm.

*Malar space:* 0.7 as long as basal width of mandible. *Temple:* 0.5 as long as eye in dorsal view. *Face:* with but a faint median swelling.

*Mesoscutum:* more shining and with slightly larger and coarser punctures than in female. *Mesopleuron:* punctures a little coarser and reticulate wrinkling a little more extensive than in female.

*Wing venation:* radial cell 3.4 as long as wide; nervulus about  $1/3$  its length antefurcal; upper part of nervellus 2.1 as long as lower.

*Propodeum:* in profile longer and lower than in female with apical face obliquely declivous rather than vertical and subequal in length to basal face; basal trans-carina stronger and higher than in female; apical trans-carina sharp and high throughout, scarcely weaker than basal trans-carina, its cristae broadly obtuse cuneate, larger and more strongly projecting than in female; areola 1.3 as wide as long, more sharply and regularly defined than in female; median apical area well defined; surface with coarse reticulate wrinkling delimiting, especially on basal face, larger enclosures than noted for female.

*First gastric segment:* postpetiole 1.4 as wide apically as long from spiracle to apex; central field apicad with well separated but more numerous punctures than in female; lateral field with hardly a trace of micro-reticulation. *Second gastric tergite:* mat with very fine micro-reticulation and slightly larger and denser punctures than in female; setae slightly denser than in female.

**TYPES:** *Holotype:* female, USA (*Florida:* Sarasota, 13 March 1972, J. J. Myhre, in McPhail trap). *Paratypes:* 1 female and 1 male, USA (*Florida:* Sarasota, 24 February 1964, C. L. Yax, in Steiner trap; 14 April 1970, S. V. Hiatt, in McPhail trap).

The female holotype and a male paratype have been deposited in the Florida State Collection of Arthropods at Gainesville. The female paratype is in the collection of the American Entomological Institute at Ann Arbor, Michigan.

DISCUSSION: This new species closely resembles *Trachysphyrus planosae* (Fitch) of the northeastern United States, but, on the basis of material so far examined, may be distinguished from *planosae* by the following key:

1. Ground color of head, pronotum, and mesoscutum black; hind face of propodeum with a pair of conspicuous white blotches that reach from cristae to apical margin; gastric tergites 4-7 with white apical bands and otherwise mostly blackish; punctures on upper 1/3 of mesopleuron in female mostly adjacent to subadjacent and in male denser but at least partly discrete; punctures on median field of postpetiole denser; sheathed portion of ovipositor 0.3 as long as fore wing ..... *T. planosae* (Fitch).
- 1'. Ground color of head, pronotum, and mesoscutum red; propodeum red with only a trace of whitish staining on cristae and area immediately apicad; gastric tergites 4-7 red, with white apical bands on 5-7 in female and without white markings in male; punctures on upper 1/3 of mesopleuron of both sexes mostly reticulately confluent; punctures on median field of postpetiole sparser; sheathed portion of ovipositor 0.4 as long as fore wing ..... *T. weemsi* n. sp.

Additional collecting someday may reveal populations linking *weemsi* and *planosae* from the region between Virginia and Georgia, whence no member of this group as yet has been reported. Since these are elusive wasps, however, it probably will be many years before their specific or subspecific status can be confirmed.

*Trachysphyrus planosae* has been reared from cocoons of lasiocampid moths of the genera *Tolyte* and *Epicnaptera*. It may be suspected that *T. weemsi* uses similar hosts.

FIELD NOTES: All specimens of *weemsi* were collected in Steiner and McPhail traps operated as part of the Florida Department of Agriculture's fruit fly surveys.

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SPECIFIC NAME: For Dr. Howard V. Weems, Jr., curator of the Florida State Collection of Arthropods.

#### LITERATURE CITED

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