

OCCASIONAL PAPERS OF THE MUSEUM OF
ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN

UNIVERSITY OF MICHIGAN PRESS

A NEW ANT-ATTACKING FLY OF THE GENUS
PSEUDACTEON, WITH A KEY TO THE
FEMALES OF THE NORTH AMERI-
CAN SPECIES (DIPTERA,
PHORIDAE)

BY GEORGE STEYSKAL

ALTHOUGH direct evidence is lacking, it is supposed that the species of *Pseudacteon*, like those of the related genus *Apocephalus*, are parasitic in the heads of ants, inasmuch as females have been recorded as attacking the heads of ants, an observation that I have made on the species described here, the first found in northeastern America.

Pseudacteon onyx, new species

FEMALE.—Length of body, 1–1.3 mm.; wing, 1 mm.

Color of antennae, head, dorsum of thorax, and abdomen black; antennae, head, and thorax grayish pruinose, the latter and base of third antennal joint somewhat brownish. Abdomen matt black, the ovipositor shining. Pleura dark brown. Mouth-parts, legs including coxae, and halteres yellow. Wings hyaline, the strong veins brown.

Antennae with third joint roundish; the arista subapical, about one and one-half times as long as antennae, a little swollen and yellowish at base, microscopically pubescent.

Palpi stout, oval, with a blunt apex, bearing a single very short but stout black spinule at apex and another even smaller one near middle below.

Frontal bristles consisting of one pair of proclinate supranennals, a first row of one incurved bristle in each lower corner; a second row of four bristles in a slightly upcurved transverse line, the middle pair being slightly farther from each other than from each outer bristle and may be reduced or even absent; a third row of four comprising the two ocellars and the two outer verticals. A very small incurved inner vertical is usually discernible. The frontal picture is very nearly as figured by Malloch¹ for *P. crawfordii*.

Thoracic dorsum with one small pair of dorsocentral bristles, one strong postalar, one supralar, two notopleurals, and one weak humeral. One upcurved propleural bristle. Scutellum with four bristles, the anterior pair about half the size of the posterior. Hairs of dorsum of thorax short, reclinate, black, rather thickly and evenly distributed, none on the scutellum.

Wing with third vein simple, it and costa ending at a little farther than one-third the wing length, the second costal division about twice the length of the third. The costal fringe short, about one and one-half times the width of the costal vein, which has four setae over the last section.

Legs with hind femora bearing four moderate preapical anteroventral hairs, the middle two of which are a little larger; the hind tibiae with a black carina, which curves posteriorly in its middle; spur of middle tibiae about three-fourths as long as metatarsus.

Abdomen without hairs on dorsum, sixth tergite represented by a pair of obliquely placed ovate sclerites narrowly separated at their anterior, smaller end. Venter membranous except a quadrate sclerite (? sixth sternite) preceding the ovipositor. This sclerite bears a pair of stout, almost straight bristles over half as long as the ovipositor, inserted close together near the center, and a pair of short, stout spinules laterad of the long

¹ "The Insects of the Dipterous Family Phoridae in the United States National Museum," *Proc. U. S. Nat. Mus.*, 43 (1912): Pl. 39, f. 5.

bristles and close to the margin. The ovipositor is clawlike, a little more than half the length of the remainder of the abdomen in fresh material, in dorsal view parallel-sided proximally, carinate laterally in distal half and becoming very thin dorsoventrally at tip.

HOLOTYPE.—Female, Detroit, Michigan, August 7, 1942, in University of Michigan Museum of Zoology; found attacking the ant *Crematogaster lineolata* Say, var. *cerasi* Fitch (det. F. M. Gaige), on its runways on the trunk of a large dead elm tree.

PARATYPES.—Females, topotypical, August 3, 7, 12, and 20, 1942, ten specimens in the University of Michigan Museum of Zoology, three in the United States National Museum, three in the Museum of Comparative Zoology at Harvard University, three in the Academy of Natural Sciences of Philadelphia, and several in the author's collection.

I am indebted to Charles T. Greene for information concerning the types of the Coquillett and Malloch species. This has enabled me to construct the following key. The taxonomic relationships of *P. onyx* may be gleaned therefrom.

FEMALES OF THE NORTH AMERICAN SPECIES OF *Pseudacteon*

1. Ovipositor broad, bilobed, with apical emargination 2.
Ovipositor not bilobed, simple and more or less pointed 3.
2. Emargination of ovipositor deeper than wide, with parallel sides (Dallas, Texas, associated with *P. crawfordii* and the ant *Solenopsis geminata*—1912, *Proc. U. S. Nat. Mus.*, 43: 502, Pl. 39, f. 7; Vicksburg, Mississippi—Smith, 1928, *Proc. Ent. Soc. Wash.*, 30: 105) *P. spatulata* Malloch.
Emargination of ovipositor roughly semicircular (Jamaica and Mississippi, associated with the ants *Solenopsis geminata* and *S. xyloni*—1941, *Proc. Ent. Soc. Wash.*, 43: 183).
P. grandis Greene.
3. Sternite preceding ovipositor without stout bristles; second row of frontal bristles almost straight; palpi with four bristles apically (Dallas, Texas, associated with the ant *Solenopsis geminata*—1907, *Can. Ent.*, 39: 207; Vicksburg, Mississippi—Smith, 1928, *Proc. Ent. Soc. Wash.*, 30: 105; genotype).

P. crawfordii Coquillett.

- Sternite preceding ovipositor with a pair of stout bristles in the middle; northern species 4.
4. Ventral bristles less than one-third as long as the strongly tapering short ovipositor, well separated at insertion; outer pair of frontal bristles of second row placed much lower than inner pair and very close to the single pair of the first row (Kaslo, British Columbia, "hovering over ant galleries in stump"—1912, *Proc. U. S. Nat. Mus.*, 43: 501, Pl. 39, Figs. 4, 9, 10, 12).

P. curriei Malloch.

Ventral bristles over half as long as the long, preapically somewhat expanded ovipositor, very close together at insertion; second row of frontal bristles straight as in *P. crawfordii*; palpi with but a single short stout bristle apically (Detroit, Michigan, attacking the ant *Crematogaster lineolata cerasi* on dead tree).

P. onyx new species.

Of the males of the North American species only two have been described, those of *P. curriei* (Malloch, 1912, *Proc. U. S. Nat. Mus.*, 43: 501) and *P. antiguensis* (*ibid.*, 502, Pl. 39, f. 11, Antigua, West Indies, male only), although in the description of *P. crawfordii* Coquillett mentions three males collected with the type lot of females.