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A NEW SPECIES OF RHOPALOMYIA (DIPTERA: CECIDOMYIIDAE) FROM ARTEMISIA LUDOVICIANA NUTTALL (COMPOSITAE) IN UTAH

Raymond J. Gagne

ABSTRACT.—Rhopalomyia (Diarthronomyia) subhumilis Gagné, a new species of Artemisia ludoviciana Nuttall (Compositae), is described and its taxonomically important structural features illustrated. The new species is compared to its most similar North American congeners.

This paper provides a name for a species of Rhopalomyia whose biology is treated in a companion paper by Ranasinghe (1977). As pointed out in Jones, Gagné, and Barr (in press), Rhopalomyia species are so numerous and the structural differences so few and so slight that the species do not lend themselves well to description without biological data. That condition is met for this new species by the information in Ranasinghe (1977).

Rhopalomyia subhumilis n. sp.

MALE.—Wing length, 2.2-2.5 mm. Eyes separated at vertex by less than diameter of 1 eye facet. Antenna with 14-16 flagellomeres; neck flagellomere III, 0.50-0.86 times length node; neck V, 0.60-0.88 times length node; neck VII, 0.64-0.90 times length node. Fused labellae (Fig. 6) with ventral notch in frontal view, 0-4 setae per side. Palpus (Fig. 6) 2-segmented: segment I as wide as long, with 1-5 setae; segment II as long as I but tapered apically, with 1-3 setae. Frontoclypeus with 6-9 setae per side. Aneipisternum with 4-8 setae. Claws toothed (Fig. 7). Empodia as long as claws. Abdomen: tergum III with 8-22 setae per side, tergum V with 13-26, VII with 13-20 and occasional scales, and VIII with 8-20, the two groups on VII united mesally or separated by short distance; pleura with scales, 0 setae; sterna II-VII each with basal pair of trichoid sensilla, sternum VII with basal setal group continuous across sclerite. Terminalia (Figs. 3-5): basimere stout with short ventral lobe; telomere short-ovoid, the tooth wide; sternum X concave apically.

FEMALE.—Wing length, 1.8-1.9 mm. Antenna with 15-16 flagellomeres; flagellomere necks not defined or very short to VI, undefined beyond VI. Other head and thoracic characters as in male. Abdomen: tergum III with 12-14 setae per side; V with 13-18, and VII with 5-12, the two groups on VII barely divided; pleura and sterna as in male; tergum VII 0.23-0.26 times length distal half of ovipositor.

PUPA.—Head (Figs. 1-2): antennal horns strongly developed, acutely pointed; frons with two prominent, pointed protuberances. Pronotum convex, not prominent, the two setae long.


REMARKS.—Rhopalomyia subhumilis belongs in the subgenus Diarthronomyia as do all other Rhopalomyia that occur on Artemisia and Chrysanthemum. The dis-
Figure Legends

Figs. 1-7, taxonomic characters of Rhopalomyia subhumilis Gagné: 1-2, pupal head; 3, male terminalia (dorsal); 4, same (ventral); 5, same (mesal); 6, labella and palp; 7, claw and empodium.
Distinguishing structural feature uniting these species is the lack of all but caudal setae on the abdominal terga. The new species differs from all other Nearctic species of Diarthronomyia by the following combination of characters: palpus two-segmented, claws toothed, male basimere with ventral lobe, male telomere short, with wide apical tooth, pupal head with frontal protuberances and strongly developed antennal horns. Rhopalomyia subhuminis will not run past couplet 5 in the key to 23 species of Rhopalomyia on Artemisia tridentata (Nuttall) in Jones, Gagné, and Barr (in press). The pupal head will readily distinguish this species from the other keyed Rhopalomyia having 2-segmented palpi and toothed claws. Of the 9 other Nearctic Rhopalomyia (Diarthronomyia), only R. gnaphalodis Felt from a woolly leaf gall of “Artemisia gnaphaloides” and R. chrysan-

them from a conical gall on green tissues of Chrysanthemum spp. have two-segmented palpi and toothed claws, but the pupal antennal horns are much more attenuate in both species, and the male telomere of R. chrysanthemum is much longer than in R. subhuminis. The name “subhuminis” means “subterranean”.

Literature Cited

