

**A New Species of Crane Fly Associated with the Plant Genus
Lopezia in Mexico**
(Diptera: Tipulidae)

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During the course of his studies on the pollination of plants of the onagraceous genus *Lopezia* in Mexico, Dr. Dennis E. Breedlove collected about a dozen species of Tipulidae of which one proved to represent a new species. In order to make the name available for his use the fly is described herewith. The type of the novelty, as well as the other crane flies collected, are preserved in the California Academy of Sciences. I am indebted to Dr. Paul H. Arnaud and Dr. Breedlove for the privilege of examining this interesting material.

***Tipula* (*Trichotipula*) *breedlovei* Alexander, new species**

Mesonotal praescutum with four nearly confluent grayish brown stripes, posterior sclerites of notum variegated brown and yellow, pleura chiefly light gray; wings light brown, stigma and costal border slightly darker; outer wing cells with strong

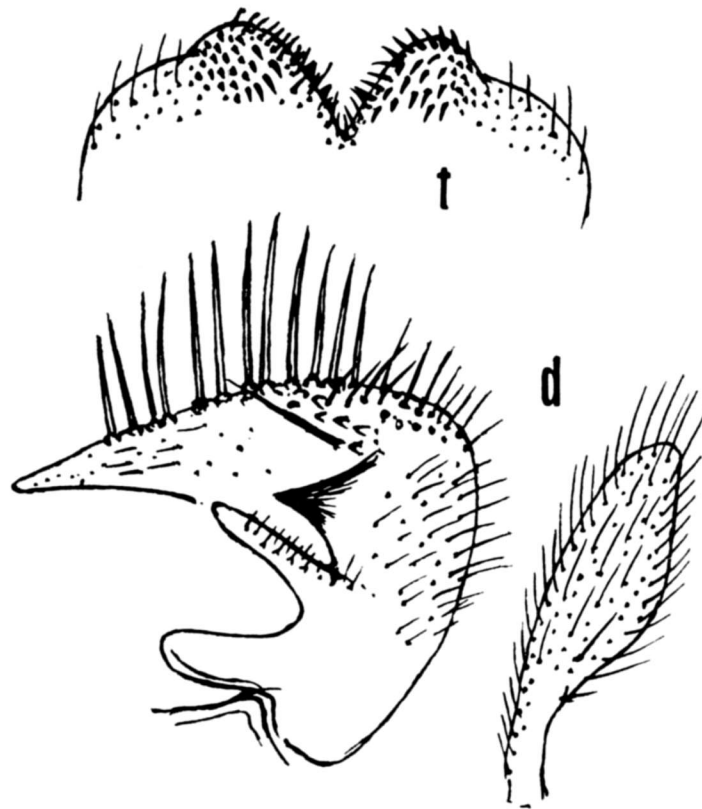


FIG. 1. *Tipula (Trichotipula) breedlovei* Alexander. Details of male hypopygium. Symbols: *d*—dististyles; *t*—ninth tergite.

black trichia, abundant in cell R_5 ; abdominal tergites brown, bases more yellowed, sternites brown, yellow laterally; male hypopygium with tergal lobes bearing abundant spinoid setae; outer margin of beak of inner dististyle with about a dozen long powerful yellow bristles, face of style near base with a slender darkened rod and a broad-based blackened plate that narrows into an acute spine.

MALE.—Length about 13 mm; wing 13 mm.

Frontal prolongation of head obscure yellow, nasus short; palpi broken. Antennae with proximal three segments yellow, remainder broken. Head brownish gray above, front, orbits and sides of the low vertical tubercle obscure yellow.

Pronotal scutum brownish gray, scutellum and pretergites yellow. Mesonotal praescutum with four nearly confluent grayish-brown stripes, the very narrow interspaces darker brown; scutal lobes brownish gray; scutellum brownish yellow, parascutella clearer yellow; mediotergite light yellowish brown, yellowed laterally, pleurotergite clear light yellow, its ventral border light brown. Pleura chiefly light gray, propleura restrictedly brown; dorsopleural membrane broadly clear light yellow, metapleural region more obscured. Halteres with stem brownish yellow, base narrowly yellowed, knobs broken. Legs with coxae grayish yellow; trochanters yellow; femora yellow, tips infuscated; tibiae obscure yellow, the outer parts and the tarsi broken. Wings light brown, stigma, prearcular field and cells C and Sc slightly darker; veins brown. Strong black macrotrichia in outer ends of cells R_3 to M_4 , abundant in cell R_5 ; a few similar trichia in proximal half of stigma. Venation: Sc_1 ending about opposite one-third Rs , Sc_2 near its tip; petiole of cell M_1 nearly twice m ; $m-cu$ on vein M_4 some distance beyond base, the latter subequal in extent to M_{3+4} .

Abdominal tergites chiefly brown, bases more yellowed; sternites brown, yellow laterally; hypopygium light yellow. Male hypopygium (fig. 1) with posterior border of tergite, *t*, deeply notched, the resulting lobes with abundant black spinoid setae,

those at midline long and slender, the most lateral ones small and peglike. Outer dististyle, *d*, relatively small, about equal in length to the inner style, setae pale; inner style on outer margin of the beak with about 20 long powerful yellow spinoid bristles, the remaining setae shorter, black; face of style in the position of the lower beak bearing a long slender darkened rod, above this with a broad blackened plate that narrows to an acute spine. Aedeagus very long and stout, as in the subgenus.

Holotype male (broken), taken ABOUT 10 ROAD MILES NORTHEAST OF MADERA, CHIHUAHUA, MEXICO, at 7300 feet, 29 September 1966, on flowers of *Lopezia gracilis* (Onagraceae) by D. E. Breedlove.

I am pleased to name this distinct fly for the collector, Dr. Dennis E. Breedlove. Approximately 35 regional species of the subgenus now are known, as discussed in the *Crane flies of California* (Alexander, C. P., Bulletin of the California Insect Survey, volume 8: 56–60, 1967) and in various other papers that concern the species of Mexico. All of these differ from the present fly in hypopygial characters, most evidently in the long powerful bristles on the beak of the inner dististyle, a unique character in this subgenus but occurring in various members of the subgenus *Indotipula* Edwards in the Oriental and eastern Palaearctic regions.