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NOTES ON TEXAS ROBBER FLIES WITH THE
DESCRIPTION OF A NEW SPECIES OF
PROCTACANTHELLA (ASILIDAE:
DIPTERA)

BY S. W. BROMLEY

SINCE the publication of my paper on "The Robber Flies of Texas,"¹ several records of particular interest have come to hand. Of special importance has been the large collection (448 specimens: 38 species) made by F. M. Gaige and his co-workers of the Museum of Zoology, University of Michigan, Ann Arbor, Michigan, which adds three species to the list of Texas, bringing the total number of species known from that state to 164. The majority of the specimens of the Gaige collection were taken in Brewster County.

The species added to the state list are as follows:

162. *Promachus sackeni* Hine, Ann. Ent. Soc. Amer., 4, No. 1, 1911: 166. Eight males and females: Juniper Creek, Chisos Mountains, July 11-23, 1928 (F. M. Gaige). In my key, page 85.
163. *Asilus delicatulus* Hine, Ohio Jour. Sci., 18, No. 8, 1918: 320. Two females: Glenn Spring, Brewster County,

¹ Ann. Ent. Soc. Amer., 27, No. 1, 1934: 74-113.

June 20–July 1, 1928 (F. M. Gaige), and one male: Del Rio, Terrell County, July 2, 1930 (Leonora K. Gloyd). This species will not run to *Asilus* in my key as the "metanotal" slopes are bare, nor is it a true *Proctacanthella* as the tip of the ovipositor is not spinose. Under *Asilus* on page 87, it would run to *mesae*, but the arista is clearly demarked from the oval third antennal segment. It is a small (10–12 mm.) species, white pollinose, white haired, white bristled, with red legs and genitalia. In the male, the femora are blackish.

164. *Asilus tenebrosus* Williston, Biol. Centr.-Amer., Dipt. 1, 1901: 328, 3. Three females: Juniper Canyon, Chisos Mountains, July 12–23, 1928 (F. M. Gaige). This species runs to *notatus* in my key, page 87, but differs in having the interior of the cells of the posterior half of the wing spotted with gray, and the legs reddish brown with the posterior aspect of the femora black-lined. 17–22 mm.

Following is the list of species of the remainder of the Gaige collection. The number preceding the name is that given the species in my list of Texas robber flies.

3. *Leptogaster eudicranus* Loew. Two specimens. Dallas County, July, 1931 (J. K. G. Silvey).
13. *Ospriocerus eutrophus* Loew. One specimen. Blanco County, July, 1931 (J. K. G. Silvey).
18. *Stenopogon aeacidinus* Williston. Two specimens. Hebronville, Duval County, June 30, 1930 (L. K. Gloyd).
21. *Stenopogon helvolus* Loew. Four specimens. Juniper Canyon and Glenn Spring, July 11–August 1, 1928 (F. M. G.).
23. *Stenopogon subulatus* (Widemann). Eighteen specimens. Glenn Spring, June 22–26, 1928 (F. M. G.); Chisos Mountains, July 10, 1930 (L. K. G.).
24. *Stenopogon longulus* Loew. One specimen. Fort Davis, July 5, 1930 (L. K. G.).

29. *Microstylum galactodes* Loew. Five specimens. Glenn Spring, June 20, 1928 (F. M. G.); Hebronville, June 30, 1930 (L. K. G.); Blanco County, July, 1931 (J. G. K. S.).
46. *Stichopogon trifasciatus* (Say). Seven specimens. Port Aransas, June 27, 1930 (L. K. G.).
51. *Saropogon combustus* Loew. One hundred and nine specimens. Glenn Spring, June 6–July 2, 1928 (F. M. G.).
60. *Diogmites symmachus* Loew. Three specimens. Austin, Travis County, June 24, 1930 (L. K. G.); Palo Pinto County, July–August, 1931 (J. K. G. S.).
67. *Cophura lutzi* Curran. Two specimens. Juniper Canyon, July 7–9, 1928 (F. M. G.).
74. *Laphystia opaca* Coquillett. One specimen. Port Aransas, June 27, 1930 (L. K. G.).
89. *Bombomima macquartii* Banks. One specimen. Travis County, July, 1931 (J. K. G. S.).
98. *Mallophora bromleyi* Curran. One specimen. Glenn Spring, July 30, 1928 (F. M. G.).
Mallophora sp.? One specimen. Kent, Culbertson Mountains, June 25, 1931 (L. K. G.).
102. *Mallophora fulviventris* Macquart. Four specimens. Juniper Canyon, July 11–19, 1928 (F. M. G.). A male, July 19, feeding on a small wasp.
104. *Promachus painteri* Bromley. Two females. Juniper Canyon, Chisos Mountains, July 6–28, 1928 (F. M. G.).
109. *Promachus magnus* Bellardi. Twenty-five specimens. Juniper Canyon, Chisos Mountains, July 5–August 1, 1928 (F. M. G.); Glenn Spring, July 3, 1928 (F. M. G.); Marathon, July 15, 1930 (L. K. G.).
111. *Promachus giganteus* Hine. Nine specimens. Glenn Spring, June 17–July 27, 1928 (F. M. G.); Fort Davis, July 5, 1930 (L. K. G.); Hueco Mountains, El Paso County, June 27, 1931 (L. K. G.).
113. *Proctacanthus arno*, Townsend. Two specimens. Glenn Spring, June 18–25, 1928 (F. M. G.).

119. *Proctacanthus rufus* Williston. One specimen. Port Aransas, June 27, 1930 (L. K. G.).
121. *Erax anomalus* Bellardi. Four specimens. Juniper Canyon, July 6-16, 1928 (F. M. G.); Chisos Mountains, July 11, 1930 (L. K. G.).
122. *Erax candidus* Coquillett. Fifteen specimens. Glenn Spring, June 16-July 2, 1928 (F. M. G.).
127. *Erax texanus* Banks. One specimen. Uvalde, June 23, 1931 (L. K. G.).
129. *Erax argentifrons* Hine. Two specimens. Hebbroville, Duval County, June 30, 1930 (L. K. G.); Laredo, June 30, 1930 (L. K. G.).
130. *Erax argyrosoma* Hine. One hundred and twenty-six specimens. Glenn Spring and Juniper Canyon, June 16-July 16, 1928 (F. M. G.); Del Rio, Terrell County, July 2-9, 1930 (L. K. G.).
132. *Erax auripilus* Hine. Two specimens. Smith County, July, 1931 (J. K. G. S.).
142. *Erax snowii* Hine. Three specimens. Travis County, July, 1931 (J. K. G. S.).
144. *Erax tuberculatus* Hine. One specimen. Laredo, July 1, 1930 (L. K. G.).
Erax sp.? One specimen. Juniper Canyon, July 15, 1928 (F. M. G.).
146. *Erax barbatus* (Fabricius). Eight specimens. Glenn Spring and Juniper Canyon, June 26-July 6, 1928 (F. M. G.); Phantom Lake, May 26-June 11 (F. M. G.); Blanco County, July, 1931 (J. K. G. S.).
149. *Erax bicolor* Bellardi. Eight specimens. Glenn Spring, June 17-July 2, 1928 (F. M. G.).
153. *Asilus compositus* Hine. Fifty-six specimens. Juniper Canyon, July 6-22, 1928 (F. M. G.); Chisos Mountains, July 14, 1930 (L. K. G.).
161. *Philonicus truquii* Bellardi. Two specimens. Fort Davis, June 25-July 7, 1930 and 1931 (L. K. G.).

Following are notes adding to our knowledge of Texas robber flies which I have obtained from other sources. On page

109,² under *Proctacanthella leucopogon*, I stated that some of the specimens did not quite agree with the description and might prove to be new. Mr. Joseph Wilcox, United States Bureau of Entomology, Puyallup, Washington, was the first to point out characters definitely differentiating these specimens from *leucopogon* and *cacopiloga*. A further study of the specimens in the Hine collection (Ohio State Museum) proves them to be definitely distinct. I am giving a complete description of the species, which I am pleased to name in honor of Mr. Wilcox. This brings the list of Texas to 165 species.

KEY TO *PROCTACANTHELLA*

1. Anterior crossvein beyond the middle of the discal cell; hairs on first antennal joint white; front femora in male with only white pile—no bristles—below; upper forceps of male genitalia protruding half their length beyond the lower forceps (15–18 mm.).....
..... *leucopogon* (Williston)
- Anterior crossvein at or before middle of discal cell; hairs on first antennal segment black or mixed black and white; upper forceps of male genitalia protruding less than half their length beyond lower 2
2. Anterior crossvein at middle of discal cell; ninth sternite with a pencil of white hairs extending caudad; upper forceps about equal in length to lower; front femora in male with only white pile below (15–18 mm.).....*cacopiloga* (Hine)
- Anterior crossvein before middle of discal cell; front femora of male with several white spines among the fine hairs on under side; ninth sternite expanded vertically, making the genitalia appear considerably larger than in *cacopiloga* or *leucopogon* from side view; no pencil of hairs as in *cacopiloga*; upper forceps extending only slightly beyond lower, never half their length; a pair of curved hook-like processes at the apex of upper forceps (15–20 mm.).....
.....*wilcoxi*, new species

(165) *Proctacanthella wilcoxi*, new species

Total length, 15–20 mm. A light, tawny brown pollinose species closely related to *P. cacopiloga* Hine from which it may be distinguished by the structure of the genitalia, lacks the pencil of hairs on the ninth sternite, the anterior crossvein

² *Ibid.*

decidedly before the middle of the discal cell, the front femora of the male with white spines below, in addition to the fine white pile. From *leucopogon* Williston, it may be distinguished by the structure of the genitalia, the anterior cross-vein well before the middle of the discal cell, not beyond, and the front femora in the male with white spines below in addition to the fine pile. The females of all three species have white spines on the under sides of the front femora.

MALE.—Pale brown pollinose. Head black, pale yellowish brown pollinose. Mystax, vertical and occipital bristles pale yellow. Palpi and antennae with black hairs. Beard white. Thorax brown pollinose, grayish brown on pleura. Pleural hairs and bristles of pronotum and coxae white. Mesonotum with fine black hairs anteriorly and black bristles posteriorly. Supra-alar bristles straw colored, as are the scutellar hairs and bristles. Wings faintly tinged with brown, nearly hyaline, bases of veins reddish. Halteres very pale reddish yellow. Legs reddish; four anterior femora with a broad black vitta above, posterior femora blackish with base and tip reddish; four anterior tibiae reddish, posterior tibiae reddish with tip and external portion black; tarsal segments reddish basally, black apically. Claws black. Legs with white hairs and some black and some white bristles. The supra-terminal bristles of hind femora black. Front femora with a few white bristles among the fine white hairs below. Abdomen with fine straw colored hairs, the sides and posterior margins of segments grayish yellow pollinose, dorsal areas of segments 1-6 dark brown. Genitalia reddish. Sternites 6, 7, 8, and 9 increasingly expanded vertically. The upper forceps with a small pair of hook-like processes at tip; hairs of genitalia straw colored.

FEMALE.—Similar, ovipositor piceous.

Holotype, male, Bexar County, Texas, August 12, 1932. Allotopotype, female. Paratopotypes, three females, same date and collector, H. B. Parks. Paratypes, three males, College Station, Texas, August 20, 1933, September 23, 1933, and October 10, 1930; three females, College Station, August 20,

1933, October 16, 1930 (all H. J. Reinhard), and a female from Mount Calm, Texas, August 20, 1930; a male and two females in Hine collection from Port Lavaca, Texas, August 22, 24, and 25, 1925; four males in Mr. Joseph Wilcox collection from: Seguin, Texas, August 1, 1933; Brazos County, October 28, 1927; College Station, Texas, October 10, 1930.

Holotype and allotype in S. W. Bromley collection; other types in Museum of Zoology, University of Michigan; Texas Agricultural Experiment Station collection, and Ohio State Museum collection.

