

A NEW SPECIES OF *RHAGOLETOTRYPETA* (DIPTERA: TEPHRITIDAE)
FROM TEXAS, WITH A KEY TO THE KNOWN SPECIES

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Abstract.—A species previously identified with the Mexican species *Rhagoletotrypeta annulata* Aczél is shown on the basis of additional material reared from berries of *Celtis laevigata* Willd. (Ulmaceae) to be a new species, here described as *R. uniformis* including the larva, the first described in the genus. A key to the known species of *Rhagoletotrypeta* is also given.

Specimens of a tephritid fly reared from berries of the sugarberry or Mississippi hackberry (*Celtis laevigata* Willd.; family Ulmaceae) by D. R. Johnston were sent to me for determination. The specimens were found to be the same as earlier specimens collected by Mr. Johnston in the same locality and reported by R. H. Foote (1966) as *Rhagoletotrypeta annulata* Aczél. However, comparison of this additional material with authentic specimens of *R. annulata* revealed that the Texas specimens exhibited characters sufficiently distinct from those of *R. annulata* for it to be considered a distinct species. It is therefore so described here.

The six species of *Rhagoletotrypeta* now known may be distinguished as in the following key. I agree with Foote (1966) that the genus *Serpentographa* is congeneric with *Rhagoletotrypeta*, although it forms a monotypic group within that genus comprised by the type-species *R. argentinensis* (Aczél). Two other subgroups may be distinguished, one including the other two Argentinian species (*R. pastranai* and *R. xanthogastra*) and the other including the three North American species (*R. annulata*, *R. rohweri*, and *R. uniformis*, n. sp.).

KEY TO SPECIES OF THE GENUS *RHAGOLETOTRYPETA* ACZÉL

- 1(2). Medial crossband of wing (passing through *tp*) turned basad anteriorly, meeting costa well basad of *tp*; ovipositor with 2

- ventral notches close to tip and without lateral notches (Argentina) *R. argentinensis* (Aczél)
- 2(1). Medial band of wing more or less straight and oblique, meeting costa opposite to or apicad of *tp*; ovipositor in known females with lateral notches and teeth or simply aculeate.
- 3(6). Mesoscutum with crescentic or J-shaped sublateral whitish marks and with mesal whitish stripe not extending anterior to transverse suture; scutellum broadly blackish basally as far as bases of lateral bristles; 4th and sometimes 5th abdominal terga with 4 black basal spots; ovipositor with 2 pairs of lateral teeth (Argentina).
- 4(5). Lateral whitish marks of mesoscutum largely on transverse sulcus, crescentic and extending but little posterad; mesoscutum without patches of whitish tomentum; humerus with central whitish spot *R. xanthogastra* Aczél
- 5(4). Lateral whitish marks of mesoscutum extending from transverse sulcus to postalar bristles; mesoscutum with pair of median fusiform patches of whitish tomentum in anterior $\frac{1}{2}$; humerus largely whitish *R. pastranai* Aczél
- 6(3). Mesoscutum with whitish marks only on humeri and meson, mesal stripe extending anterior to transverse sulcus; abdominal terga wholly yellowish or with varying extent of dark basal annulation, which may be interrupted mesally; ovipositor simply aculeate (female of *R. annulata* not known) (North America).
- 7(8). Dark bands of wing broad, apicomarginal band meeting medial band so broadly as to fill entire width of cells R_1 and R_{2+3} ; mesoscutum with 4 longitudinal stripes of gray tomentum, a pair on each side of mesal whitish stripe (northern USA)
..... *R. rohweri* Foote
- 8(7). Dark bands of wing narrower, apicomarginal band not or only slightly invading cell R_{2+3} , where meeting medial band; mesoscutum with grayish tomentum covering 1 pair of narrow stripes on whole lateral $\frac{1}{3}$ of mesoscutum (south of range of *R. rohweri*).
- 9(10). Oblique dark pterostigmatal band of wing (from pterostigma to *tp*) of nearly uniform width; apicomarginal band at widest point about as wide as medial band in cell R_5 ; mesoscutum with pair of rather narrow gray tomentose stripes in intra-alar position (USA: Texas) *R. uniformis*, new species
- 10(9). Pterostigmatal band much broader in posterior than in anterior $\frac{1}{2}$; apicomarginal band very narrow, at broadest point much

narrower than medial band in cell R_5 ; mesoscutum lightly tomentose in lateral $\frac{1}{3}$ (Mexico: Tamazunchale, San Luis Potosi)

..... *R. annulata* Aczél

No data on the Argentinian species and *R. rohweri* have come to hand since those given in the original descriptions:

- R. argentinensis* (Aczél), 1951: 308 (*Serpentinographa*).
- R. pastranai* Aczél, 1954: 146.
- R. xanthogastra* Aczél, 1951: 315 (♀); 1954: 150 (♂).
- R. rohweri* Foote, 1966: 804.

Rhagoletotrypeta annulata Aczél
Fig. 1

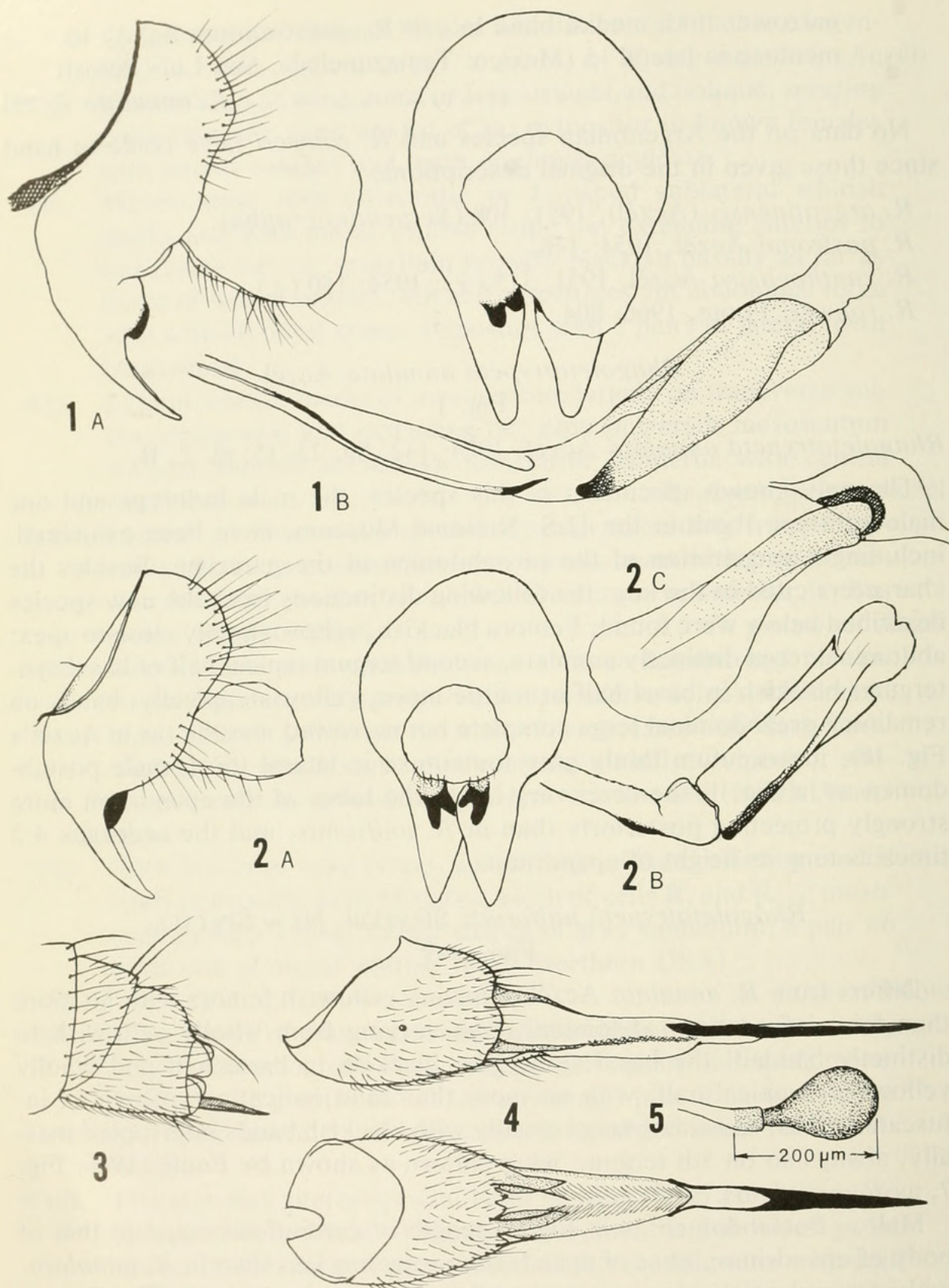
Rhagoletotrypeta annulata Aczél, 1954: 142, fig. 13–15; pl. 2, B.

The only known specimens of this species, the male holotype and one male paratype, both in the U.S. National Museum, have been examined, including a preparation of the postabdomen of the paratype. Besides the characters cited in the key, the following distinctions from the new species described below were found: Femora blackish, yellowish only close to apex; abdominal terga distinctly annulate, second tergum (apical half of basal syntergum) blackish in basal half or a little more, yellowish apically; bands on remaining preabdominal terga complete but narrowed mesally (as in Aczél's Fig. 18); mesoscutum thinly gray tomentose in lateral third; male postabdomen as in Fig. 1, the cerci very large, the lobes of the epandrium more strongly projecting posteriorly than in *R. uniformis*, and the aedeagus 4.2 times as long as height of epandrium.

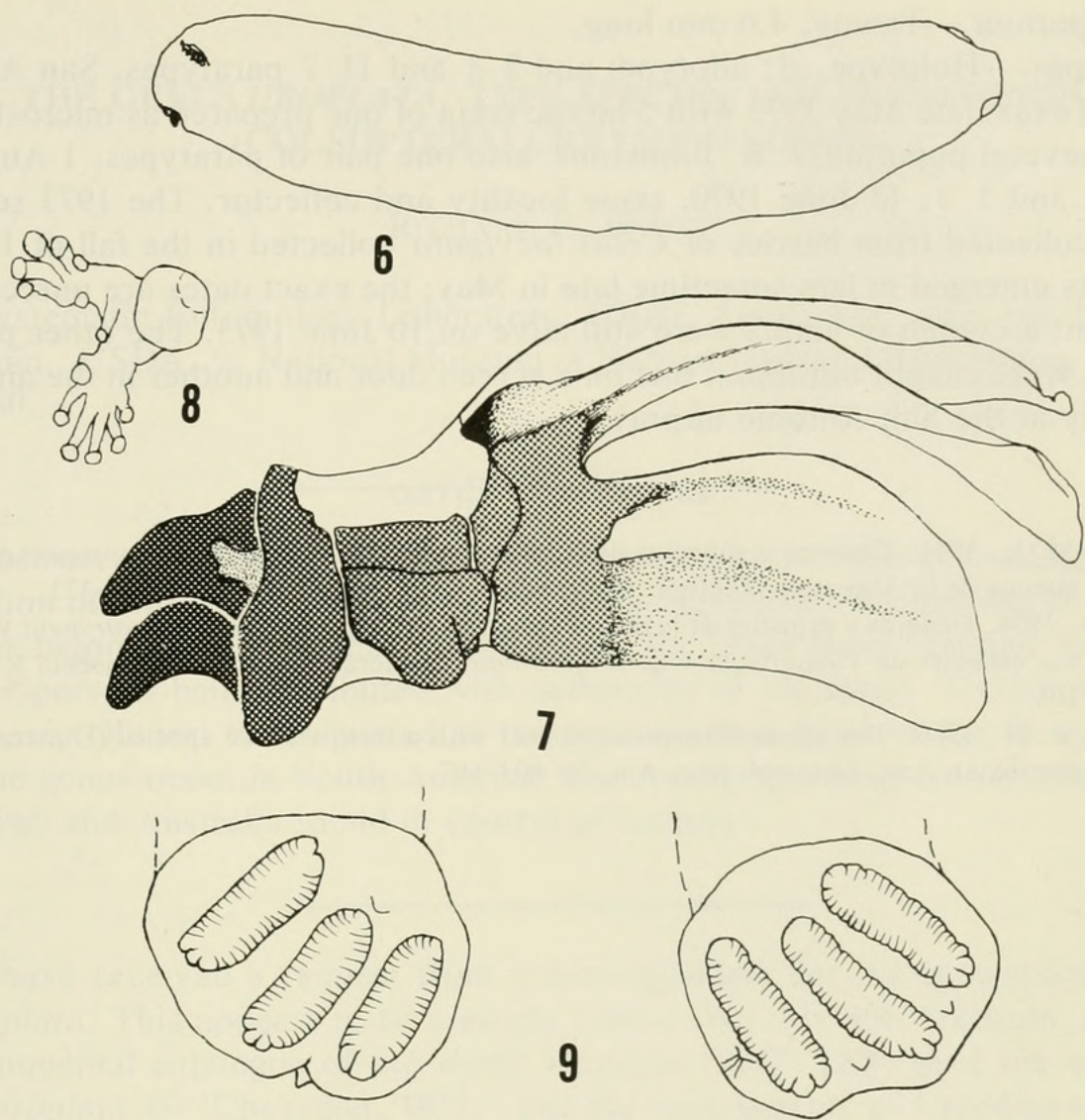
Rhagoletotrypeta uniformis Steyskal, NEW SPECIES
Figs. 2–9

Differs from *R. annulata* Aczél in having yellowish femora with no more than faint infuscation; abdominal terga varying from wholly yellowish to distinctly banded, the basal syntergum blackish in basal half and wholly yellowish in apical half, with no more than faint indications of pair of infuscated areas, remaining terga usually with blackish bands interrupted mesally, always so on 5th tergum; wing pattern as shown by Foote (1966: Fig. 7, as *R. annulata*).

Male.—Postabdomen as in Fig. 2, length of cerci about equal to that of body of epandrium; lobes of epandrium projecting less than in *R. annulata*, with strong denticles (prensisetæ) well anterior to posterior profile of epandrium; aedeagus 3.5× as long as greatest height of epandrium (anterior margin to tip of lobes); aedeagal apodeme hardly capitate, unilaterally expanded toward tip.



Figs. 1-5. Terminalia. 1, *Rhagoletotrypeta annulata*. 2-5, *R. uniformis*. 1A, Male, lateral and posterior views. 1B, Apical part of aedeagus, lateral view. 2A, Male, lateral and posterior views. 2B, Apical part of aedeagus, lateral view. 2C, Sperm pump. 3, Same, female, lateral view, retracted. 4, Same, lateral and ventral views, extended. 5, Same, spermatheca.



Figs. 6-9. Larva of *Rhagoletotrypeta uniformis*. 6, Whole larva in profile. 7, Cephalopharyngeal skeleton. 8, Anterior spiracle. 9, Posterior spiracles.

Female.—Postabdomen in lateral view, retracted as in Fig. 3, extended as in Fig. 4, simply aculeate, tip beyond end of oviduct 1.5× as long as basal portion; spermathecae 2, as in Fig. 5, dark brown with paler brown collar.

Larva (mature).—Whitish, mouthhooks and heavily sclerotized parts of cephalopharyngeal skeleton blackish, posterior spiracles and anal plates brownish; surface smooth, with creeping spicules minute and sparse; shape as in Fig. 6, length 6.3 to 7.4 mm, blunt at both ends; cephalopharyngeal skeleton as in Fig. 7, mouthhooks bluntly pointed, without accessory teeth; posterior spiracles as in Fig. 8, sunray hairs seen under high magnification at only one point on mesal side of right spiracle; anterior spiracle as in Fig. 9, with about 13 “buds” on fairly long stems; anal plates together forming circle.

Puparium.—Tawny, 4.0 mm long.

Types.—Holotype, ♂; allotype; and 2 ♂ and 11 ♀ paratypes, San Antonio, Texas, late May 1973 with 5 larvae (skin of one prepared as microslide) and several puparia (D. R. Johnston); also one pair of paratypes, 1 August 1956, and 1 ♀, 13 June 1970, same locality and collector. The 1973 series was collected from berries of *Celtis laevigata* collected in the fall of 1972. Adults emerged in jars sometime late in May; the exact dates are unrecorded, but a couple of adults were still alive on 10 June 1973. The other paratypes were caught outdoors, one on a screen door and another in the airline jetway at the San Antonio airport.

LITERATURE CITED

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