

NEW RECORDS FOR *ZETHUS* FROM TEXAS
(HYMENOPTERA: EUMENIDAE)¹

CHARLES C. PORTER²

Department of Biological Sciences,
Fordham University, Bronx, N. Y. 10458

ABSTRACT

Recent collecting at McAllen in the Lower Rio Grande Valley of Texas has revealed 3 species of *Zethus*: *Z. aztecus* and *Z. montezuma*, here recorded for the first time from the United States, and *Z. miscogaster*, previously unknown from the state of Texas. All the U. S. *Zethus* are keyed and ecological data are provided for the Texas species.

The solitary vespoid genus *Zethus* has 187 species in tropical America but is poorly represented in the United States. *Z. spinipes* Say occupies most of the Upper and Lower Austral Zones. *Z. slossonae* Fox inhabits subtropical Florida. *Z. miscogaster* Saussure extends from southern Arizona to Argentina, and *Z. guerreroi* Zavattari has been reported from Arizona and New Mexico to El Salvador. These 4 species constitute the entire Nearctic fauna, as cited in Bohart and Stange's (1965) recent monograph of the New World *Zethus*.

During the last two years, I have been surveying the Hymenoptera of the Valley Botanical Garden at McAllen, Texas. Among material collected are series of *Z. aztecus* Saussure, *Z. montezuma* Saussure, and *Z. miscogaster*. *Z. montezuma* and *Z. aztecus* have not been recorded previously from north of Mexico. *Z. miscogaster* is cited for the United States by Bohart and Stange on the basis of a single specimen from the Baboquivari Mountains of Arizona.

These additions to our *Zethus* fauna are not surprising. Few entomologists have sampled the Hymenoptera of the Lower Rio Grande Valley. Furthermore, that region harbors the richest Neotropical biota of any part of the United States. Indeed, the plant community at the Valley Botanical Garden is subtropical thorn scrub resembling that which grows in suitably arid places from Mexico south to Argentina. The dominant large angiosperm genera are *Acacia*, *Baccharis*, *Celtis*, *Condalia*, *Opuntia*, *Parkinsonia*, and *Prosopis*. This same element forms a prominent part of Chaco communities in northern Argentina at the other extreme of the Neotropics.

The following contribution offers a revised key to the United States *Zethus* and field notes on the species newly recorded from Texas.

KEY TO UNITED STATES *Zethus*

1. Third gastric sternite with a conspicuous translucent apical lamella or flange that is truncate abruptly on each side before attaining lateral margin of sternite (Fig. 1) 2

¹Contribution No. 328, Bureau of Entomology, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida 32602.

²Research Associate, Florida State Collection of Arthropods, Florida Department of Agriculture and Consumer Services, Gainesville, Florida 32602.

- 1'. Third gastric sternite with apical flange weakly to conspicuously differentiated but not especially abbreviated toward lateral margin of sternite 3
2. Hind margin of 2nd gastric tergite evenly convex, hardly membranous; only 1 well developed mid-tibial spur; interocellar area without tubercles *aztecus* Saussure
- 2'. Hind margin of 2nd gastric tergite divided into 3 sections by translucent lateral lobes; 2 mid-tibial spurs; interocellar area with broad, more or less polished tubercles separated by a narrow line of punctures *guerreroi* Zavattari
3. Female clypeus mat with very minute regular longitudinal striae, as well as numerous large punctures; male flagellum rolled toward apex; mid-tibia with 1 well developed apical spur; gaster mostly red *slossonae* Fox
- 3'. Female clypeus shining with strong punctures and/or coarse striations but without minute wrinkling; male flagellum hooked toward apex (Fig. 2, 4); mid-tibia with 1 or 2 apical spurs; gaster mostly black 4
4. Stem of 2nd gastric tergite definitely longer than that of 1st (Fig. 3); notaulus weakly impressed or absent *miscogaster* Saussure
- 4'. Stem of 2nd gastric tergite definitely shorter than that of 1st (Fig. 5); notaulus distinct at least over apical 0.5 of meso-scutum 5
5. Apical propodeal lamella produced into a rounded lobe above valvula (Fig. 5); 2 well developed mid-tibial spurs; petiole slender *montezuma* Saussure
- 5'. Apical propodeal lamella scarcely distinguishable from rest of submarginal carina; only 1 well developed mid-tibial spur; petiole very stout *spinipes* Say

Zethus aztecus Saussure
(Fig. 1)

SPECIMENS EXAMINED: 1 female, 8 males, TEXAS, Hidalgo Co., Valley Botanical Garden, McAllen, C. C. Porter. On 12-VI-1973, 2 males were swept from flowers of *Acacia greggii* A. Gray. The other 7 specimens, including the only female, were taken between 27-VIII and 8-IX-1973, on flowers of *Baccharis halimifolia* L.

Outside the United States *aztecus* ranges from Tamaulipas and Sonora in Mexico south to Guatemala and El Salvador.

I am indebted to Dr. Lionel Stange of the Instituto Miguel Lillo (Tucumán, Argentina) for determination of this material.

Zethus guerreroi Zavattari

No specimens of *guerreroi* were available for examination. Bohart and Stange (1965:177) recorded it from southern Arizona, southwestern New Mexico, most of the Mexican states, and Quetzaltepeque in El Salvador.

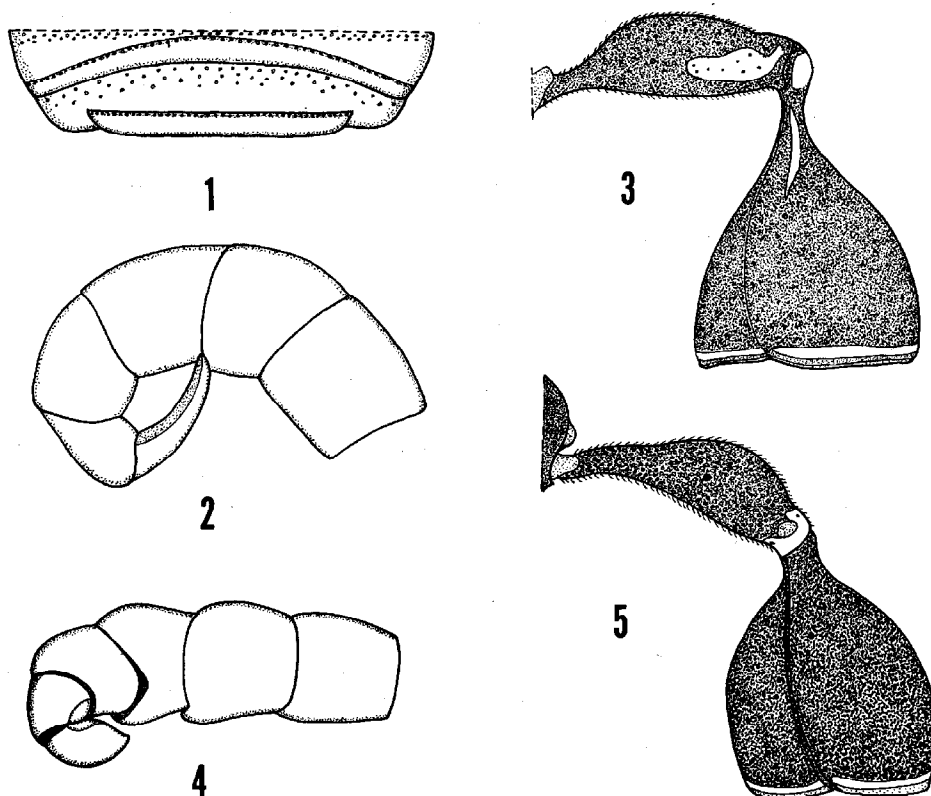


Fig. 1-5. *Zethus* species. 1) *Z. aztecus*, ventral view 2nd and 3rd gastric sternites, showing laterally truncate apical flange of 3rd. 2) *Z. miscogaster*, male, apex of flagellum. 3) *Z. miscogaster*, lateral view of 1st and 2nd gastric segments. 4) *Z. montezuma*, male, apex of flagellum. 5) *Z. montezuma*, lateral view of apex of propodeum and 1st 2 gastric segments.

Zethus slossonae Fox

SPECIMENS EXAMINED: 1 female, FLORIDA, nr. Everglades, 26-VI-1972, C. C. Porter.

Z. slossonae is confined to the subtropical part of Florida. Its closest relatives are West Indian and South American.

Zethus miscogaster Saussure

(Fig. 2, 3)

SPECIMENS EXAMINED: 2 females, 2 males, TEXAS, Hidalgo Co., Valley Botanical Garden, McAllen, C. C. Porter. On 11-VI-1973, 1 male was collected from flowers of *Acacia greggii*. The other 3 specimens were found on flowers of *Baccharis halimifolia* between 27-VIII and 8-IX-1973.

Bohart and Stange (1965:74) reported *miscogaster* from Arizona and outside the United States from Mexico, El Salvador, Panama, Colombia, Venezuela, Brasil, Paraguay and Argentina.

Zethus montezuma Saussure

(Fig. 4, 5)

SPECIMENS EXAMINED: 4 females, 2 males, TEXAS, Hidalgo Co., Valley Botanical Garden, McAllen, C. C. Porter. A single female appeared on

flowers of *Baccharis* between 27-VIII and 8-IX-1973. Between 20-27-XII-1973, 2 more females were collected on foliage of *Prosopis juliflora* DC. From 12-21-I-1974, 1 female and 2 males were found on foliage of *Condalia obovata* Hook and *Baccharis halimifolia* L.

Zethus spinipes Say

SPECIMENS EXAMINED: 1 female, 1 male, MARYLAND, Dorchester Co., Hudson, 1-VIII-1972, C. C. Porter.

Z. spinipes ranges over most of the eastern United States from Massachusetts and Kansas south to Florida and Texas.

MATERIAL

One female each of *Z. aztecus*, *miscogaster*, and *montezuma* has been donated to the Florida State Collection of Arthropods at Gainesville. Other material herein cited remains in the collection of Charles C. Porter at McAllen, Texas.

LITERATURE CITED

- BOHART, R. M., AND L. A. STANGE. 1965. A revision of the genus *Zethus* Fabricius in the Western Hemisphere. Univ. Calif. Pub. Ent. 40:1-208.