

**Two New Trichogrammatidae (Hymenoptera) From North America:  
*Ittysella lagunera* Pinto and Viggiani (N. Gen, N. Sp.) and  
*Epoligosita mexicana* Viggiani (N. Sp.)**

JOHN D. PINTO and GENNARO VIGGIANI

(J.D.P) Department of Entomology, University of California, Riverside, CA 92521; (G.V.) Institute of Agricultural Entomology, University of Naples, Portici, Italy

---

*Abstract.*—*Ittysella lagunera* Pinto and Viggiani, and *Epoligosita mexicana* Viggiani are described. Both are parasites of leafhopper eggs. *Ittysella* is assigned to the Paracentrobiini and appears closest to *Ittys* Girault. *Epoligosita mexicana* is closest to *E. clara* Hayat and Viggiani, from India.

---

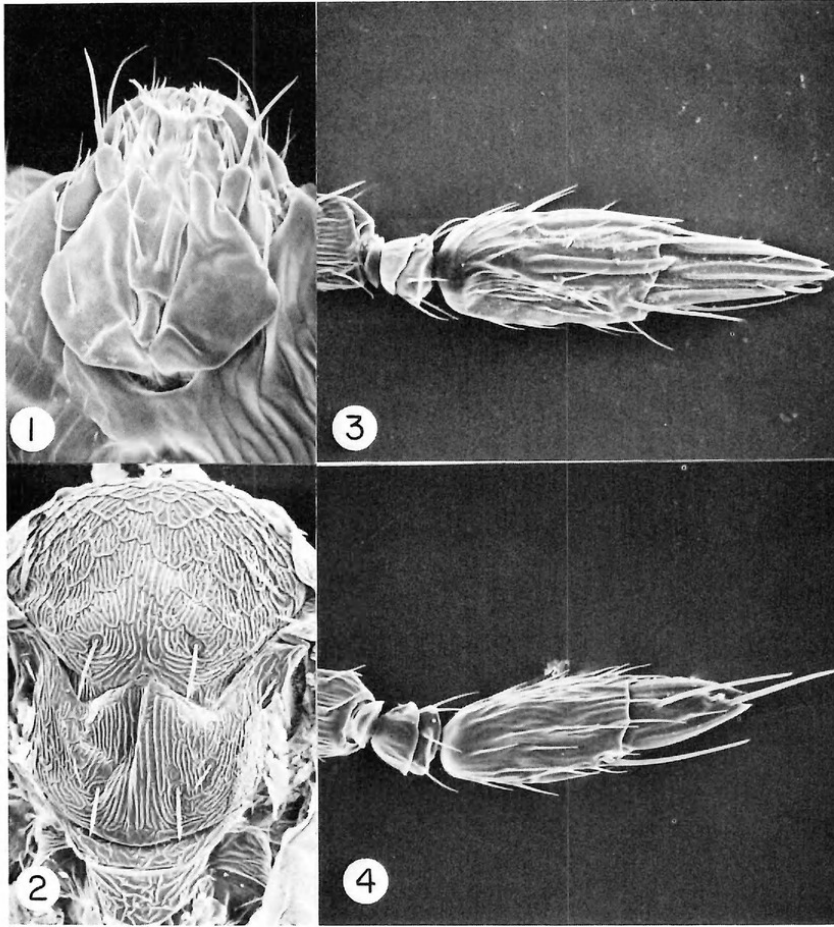
Recent surveys for parasites of leafhoppers on grape have been conducted in northern Mexico and the southwestern United States by D. González, Division of Biological Control, University of California, Riverside. Among the egg parasites collected are two new taxa of Trichogrammatidae, *Ittysella lagunera* Pinto and Viggiani (n. gen, n. sp.) and *Epoligosita mexicana* Viggiani (n. sp.). Both are described below. Collections of *E. mexicana* represent the first records of this genus in the New World.

***Ittysella* Pinto and Viggiani, n. gen.**

Antenna of male and female with a single anellus, two funicle segments and a two-segmented club; funicle II annuliform, distinctly shorter than I. Maxillary palpi one-segmented (Fig. 1). Forewing (Fig. 5) moderately narrow, ca. 0.4 as wide as long; marginal vein contacting anterior border of wing, contiguous with submarginal vein at base, terminating abruptly at apex; stigmal vein well-developed, slightly constricted at base; disc with linear vein tracks; RS<sub>1</sub> track absent. Male genitalia (Fig. 6) with phallobase subconical in shape and a relatively small anterodorsal aperture; parameres distinct, unciform, apices directed laterally; volsellar digiti absent.

*Type species.*—*Ittysella lagunera* Pinto and Viggiani, n. sp.

*Remarks.* *Ittysella* belongs to the Paracentrobiini as defined by Viggiani (1971). This tribe also includes *Paracentrobia* Howard, *Ittys* Girault and *Paraitytys* Viggiani. Structure of the male genitalia suggests that *Ittysella* is closest to *Ittys*. In both, the parameres are well developed and unciform. Parameres are lacking in *Paracentrobia*, and are present but of an entirely different structure in *Paraitytys* (see Viggiani, 1973). *Ittysella* differs from *Ittys* in lacking an RS<sub>1</sub> vein track, and from all genera of the tribe in possessing antennae with a single anellus and a club with two rather than three segments.

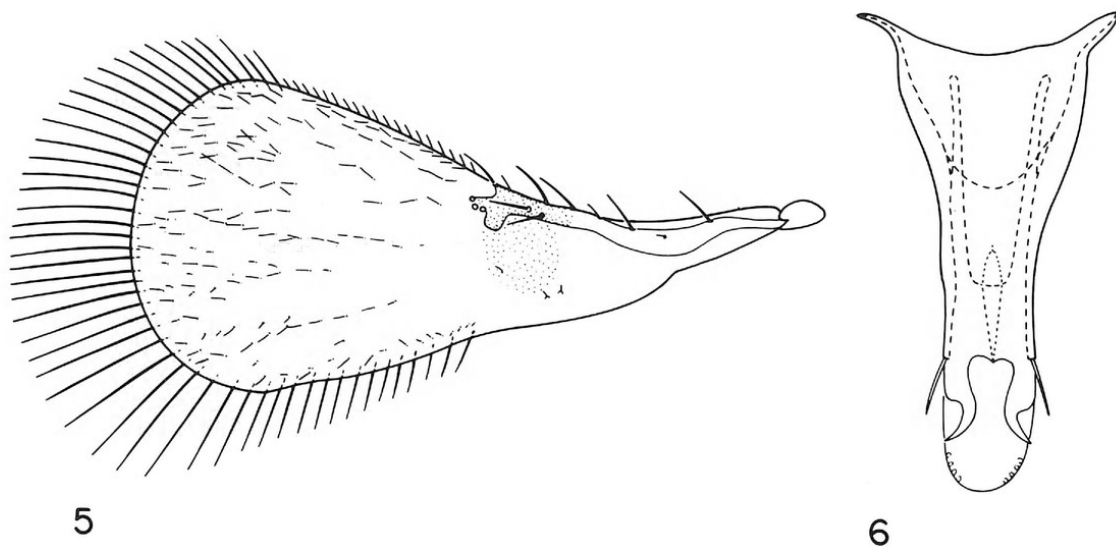


Figures 1–4. *Ittysella lagunera*. 1. Head, ♀, anteroventral view (Torreon, Coah.) (940X). 2. Thorax, ♀ (Torreon, Coah.) (540X). 3. Antenna (right), ♀ (Torreon, Coah.) (780X). 4. Antenna (left), ♂ (Caborca, Son.) (780X).

***Ittysella lagunera* Pinto and Viggiani, n. sp.**

Length 0.40–0.45 mm. Color yellow with limited brown as follows: basal portion of pedicel and antennal club; mandibles; transverse stripe on gena behind eye; ventral and dorsal margins of pronotum; anterior and posterior margins of mesepisternum; metacoxa; marginal and stigmal vein, and area below them on forewing; maculae on dorsolateral margins of visible urotergites, together appearing as a longitudinal stripe; apical half of ovipositor. Legs pallid. Eyes and ocelli reddish.

Head ca. 1.15 as wide as thorax; mandibles tridentate; thorax (Fig. 2) shorter than gaster (ca. 0.6 gaster length), midlobe of mesoscutum subpentagonal, with a pair of setae near apical third at lateral margin and another more medial pair near posterior margin, both pair subequal in length; mesoscutellum ca. 0.67 length of mesoscutum, with two pair of setae, posterior pair closer together and longer than anterior pair. Forewing (Fig. 5) with marginal vein elongate; stigmal vein short, broad, only slightly constricted at base, ca. 0.20 length of marginal vein; marginal vein with six relatively elongate setae dorsally; premarginal vein with one elongate seta; disc relatively sparsely setose, with six poorly developed vein tracks, tracks most distinct



Figures 5–6. *Ittysella lagunera*. 5. Forewing, ♀ (Torreon, Coah.). Male genitalia, ventral view (Hermosillo, Son.).

at apical third of wing;  $RS_1$  absent or indicated by one or two setae at most; fringe setae elongate, longest seta about half the greatest wing width (see below); substigmal macula obsolescent. Hind wing narrow, elongate, with only one row of setae on disc; hamuli on apex of an acute projection of anterior margin of wing; longest fringe seta ca. 1.7 greatest wing width (at hamuli). Legs unmodified; tarsomeres subequal; hind tibial spur ca. 0.6 length of basitarsis.

*Female*.—Antenna (Fig. 3) with scape 3.60 as long as wide; pedicle almost twice as long as wide and 0.55 the length of scape; single anellus distinct; funicle segments short, subequal in width, wider than long, distinctly narrower than club; funicle I widening apically, 0.6 as long as wide; funicle II annuliform, only a third as long as wide and ca. half the length of I; club elongate ca. 3.3 as long as wide, widest at basal fourth, with two distinct but appressed segments, first segment 1.5 as long as second, club with 3–4 linear sensilla on each segment and relatively short inconspicuous setae.

Ovipositor moderately elongate, 0.16 mm long, length ca. half that of gaster and 1.4 that of hind tibia, not projecting appreciably beyond apex of gaster.

*Male*.—Coloration similar to female but with legs more brownish primarily from the coxae to tibiae. Antenna (Fig. 4) as in female except club shorter, ca. 2.9 as long as wide, with 1–2 linear sensilla on each segment and with more elongate setae on apical half. Phallobase (Fig. 6) 0.07 mm long, 0.5–0.6 as wide as long; unciform parameres laterally directed, each with a moderately long ventral seta at base, parameres occupying 0.25 length of entire phallobase; medio-ventral ridge obsolescent; aedeagus subequal in length to phallobase and ca. half the length of hind tibia; apodemes occupying 0.5–0.6 length of aedeagus.

*Type information*.—Holotype ♀ and allotype from MÉXICO, Coahuila, Torreon; 16 July 1985; D. González, collr.; “ex. grape stem cuttings.”; deposited in the National Museum of Natural History. Twenty paratypes (6 ♂♂, 14 ♀♀) also

from Torreon deposited as follows: British Museum (Natural History) 1 ♂, 1 ♀; Canadian National Collection, Ottawa, 1 ♂, 1 ♀; University of California, Department of Entomology, Berkeley, 1 ♀; University of California, Department of Entomology, Riverside (UCR), 2 ♂♂, 5 ♀♀; University of Naples, Institute of Agricultural Entomology, Portici (UNP), 2 ♂♂, 6 ♀♀.

Holotype, allotype and ten of the paratypes are slide mounted in Canada balsam; the remaining paratypes are point mounted. The type series emerged from grape cuttings harboring eggs of the leafhoppers *Dikrella cockerelli* (Gillette) and *Erythroneura ziczac* Walsh.

**Records.**—MEXICO. *Baja California Sur*: Las Barracas, ca. 30 km E Santiago, 1 ♂, 2 ♀♀, 19 and 29 April 1984, yellow pan trap, P. DeBach (UCR). *Coahuila*: Parras, 1 ♂, 3 ♀♀, 29 August 1985, D. González (UCR). Torreon, 9 ♂♂, 13 ♀♀, 16 and 28 July 1985, D. González. *Sonora*: Caborca, 2 ♂♂, 2 ♀♀, 19 August 1986, D. González (UCR). Hermosillo, 7 ♂♂, 10 ♀♀, 29 and 30 July 1985 (UCR, UNP). UNITED STATES. *Arizona*: Cochise Co., Chiricahua Mts., Sunny Flats Campground, 1 ♀, 10 July 1983, screen sweeping, A. Mayor (UCR). *New Mexico*: Las Cruces, 5 ♂♂, 10 July 1986, D. González (UCR).

All material from Coahuila, Sonora and New Mexico emerged from collections of grape cuttings. Leafhopper eggs of the following species were deposited in the leaves of these collections: *Dikrella cockerelli* (New Mexico, Coahuila), *Erythroneura ziczac* (Coahuila), and *Erythroneura variabilis* Beamer (Sonora).

**Remarks.**—All material examined is relatively uniform structurally. Specimens from Arizona and New Mexico have a somewhat longer forewing fringe (0.50–0.56 wing width;  $\bar{x} = 0.524 \pm 0.03$  S.D.;  $n = 6$ ) than material from México (0.43–0.50 wing width;  $\bar{x} = 0.480 \pm 0.02$ ;  $n = 8$ ).

The specific epithet is derived from La Laguna, the name commonly applied to the type locality and environs.

***Epiligosita mexicana* Viggiani, n. sp.**

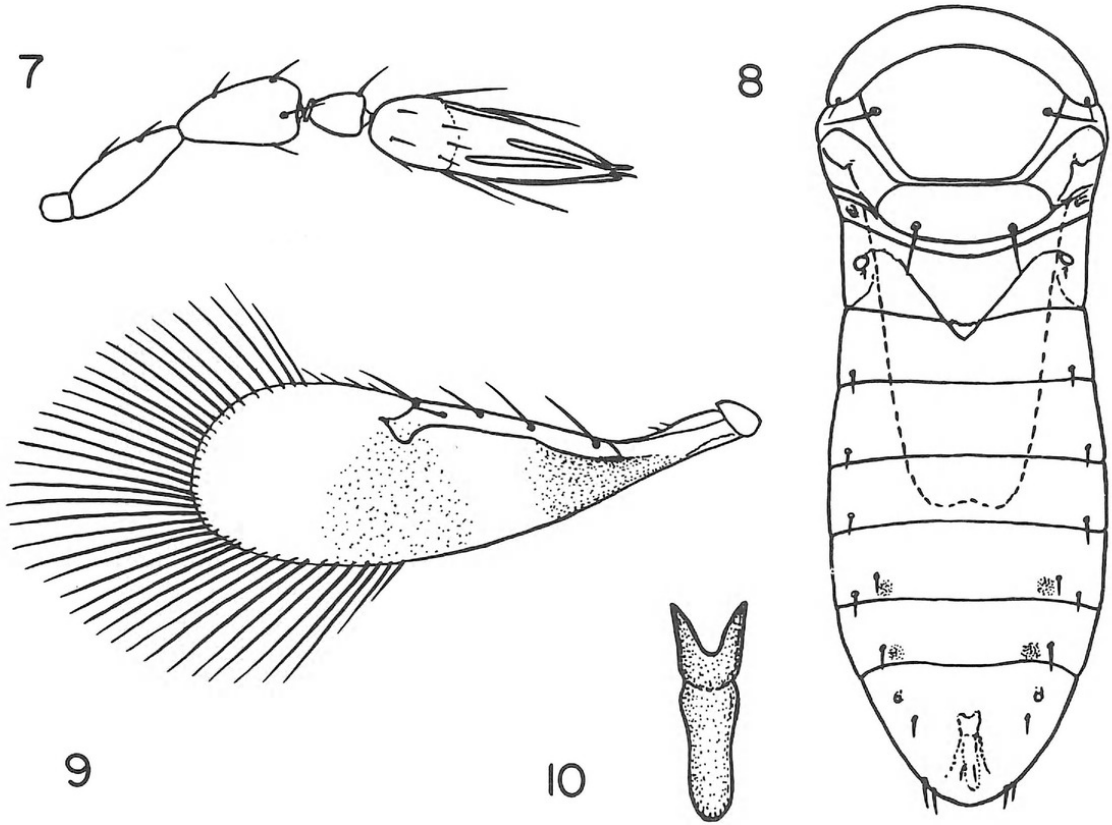
**Female.**—Length: 0.47 mm. Body yellow; eyes and ocelli blackish; tips of mandibles yellowish brown; antenna, middle and hind tibiae, meso- and metapleurae, with some brown; forewings with basal third and substigmatal area infuscated; ovipositor honey-brownish.

Head normal for the genus, ca. one-fourth wider than high. Mandibles tridentate. Maxillary palpi uniarticulate and labial palpi reduced. Antenna (Fig. 7) with scape 3.0 as long as wide, pedicel slightly shorter but distally ca. one-third wider; single anellus distinct; funicle segment about as long as wide, narrower than pedicel and club; club not clearly divided in two segments, 2.0 as long as pedicel, ca. 5.0 as long as funicle segment and ca. 3.0 as long as wide; first segment with one linear sensillum and distal one with 4.

Thorax ca. one-third shorter than gaster, with main dorsal characters as illustrated for male (Fig. 8). Forewing (Fig. 9) ca. 3.0 as long as wide; disc with only a single minute seta located mid-way between center of marginal vein and posterior margin; longest fringe setae as long as greatest wing width. Hind wing very narrow, without setae on disc. Legs normal; fore, middle, and hind tarsomere ratios respectively as follows: 8:9:10; 18:13:13; 13:12:12 (hind tibial spur = 8).

Gaster conic; ovipositor occupying about half length of gaster, about as long as hind tibia; third valvulae very short, one-sixth of the entire ovipositor.





Figures 7–10. *Epoligosita mexicana*. 7. Antenna, ♀. 8. Thorax, ♂. 9. Forewing. 10. Male genitalia.

*Male*.—Similar to female, but antenna with longer setae on the club. Male genitalia as in Fig. 10, 0.057 mm in length.

*Type information*.—Holotype ♀ from MEXICO, Coahuila, Torreon; 28 August 1985; D. González, collr.; allotype, same data as holotype, except 16 July 1985. Both deposited in the National Museum of Natural History. Paratypes from the same locality deposited as follows: University of California, Department of Entomology, Riverside; University of Naples, Institute of Agricultural Entomology, Portici.

Holotype, allotype and 6 paratypes are slide mounted in Canada balsam; 3 additional paratypes are point mounted. All type specimens emerged from leaves of grape cuttings harboring eggs of the leafhoppers *Dikrella cockerelli* and *Erythroneura ziczac*.

One female, UNITED STATES, Arizona, Cochise Co., 25 August 1982, J. LaSalle, collr., screen sweeping, probably belongs to the new species.

*Remarks*.—The new species *Epoligosita mexicana* runs to the group of *Epoligosita* Girault with the funicle segment quadrate or wider than long (couplet 1 in Hayat and Viggiani, 1981), in which *E. biclavata* (Girault and Dodd), *E. nudipennis* (Kryger) and *E. clara* Hayat and Viggiani are included. Of these species the closest seems to be *E. clara*, from which *E. mexicana* may be separated by having the scape 3.0 as long as wide (in *E. clara* 3.5 as long as wide), the funicle segment as long as wide (in *E. clara* a little wider than long), the club twice as long as length of pedicel (shorter in *E. clara*),

ovipositor as long as half length of gaster (in *E. clara* more than half length of gaster), and the forewings with the basal third and substigmatal area infuscated (in *E. clara* only basal third of forewings infuscated).

#### ACKNOWLEDGMENTS

Figures 5–6 were prepared by Patricia Mote. Robert Velton was responsible for the SEM photographs and specimen curation. Individuals participating in the leafhopper parasite surveys include J. Ellington, D. González, F. González, L. Guerra Sobrevilla, M. Moratorio, A. Tijerina, and W. White.

#### LITERATURE CITED

- Hayat, M. and G. Viggiani. 1981. The genus *Epoligosita* from India, with descriptions of two new species (Hymenoptera: Trichogrammatidae). Boll. Lab. Ent. Agr. Portici, 38:119–123.
- Viggiani, G. 1971. Ricerche sugli Hymenoptera Chalcidoidea XXVIII. Studio morfologico comparativo dell'armatura genitale esterna maschile dei Trichogrammatidae. Boll. Lab. Ent. Agr. Portici, 29:181–222.
- Viggiani, G. 1973. Ricerche sugli Hymenoptera Chalcidoidea. XXXV. Nuovi trichogrammatidi d'Israele (*Paraittys latipennis*, n. gen., n. sp. e *Oligosita gerlingi*, n. sp.), con reperti su varie specie. Boll. Lab. Ent. Agr. Portici, 30:152–157.



Pinto, John D. and Viggiani, Gennaro. 1987. "Two new Trichogrammatidae (Hymenoptera) from North America: *Ittysella lagunera* Pinto and Viggiani (n. gen., n. sp.) and *Epiligosita mexicana* Viggiani (n. sp.)." *The Pan-Pacific entomologist* 63(4), 371–376.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/252442>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/269706>

**Holding Institution**

Pacific Coast Entomological Society

**Sponsored by**

IMLS LG-70-15-0138-15

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Pacific Coast Entomological Society

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <http://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.