

New Records for Mexico: Gynaikothrips uzeli, Androthrips ramachandrai (Thysanoptera: Phlaeothripidae) and Montandoniola confusa (Hemiptera: Anthocoridae)

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Gynaikothrips uzeli Zimmerman is almost exclusively associated with the weeping fig, Ficus benjamina L. (Moraceae) and it has been reported as such in Trinidad and Tobago, Belize, the southeastern United States, and Puerto Rico (Boyd & Held 2006; Dobbs & Boyd 2006; Held et al. 2005; Held & Boyd 2008; Malcom & Van Savers 2005). Adults and immatures damage young leaves by causing them to fold along the main vein (Held 2005). In galls of Ficus benjamina L., several natural enemies have been associated with G. uzeli; e.g., Chrysoperla sp. (Chrysopidae) (Held et al. 2005), Montandoniola moraguesi Puton (Anthocoridae) (Dobbs & Boyd 2006; Held et al. 2005), Thripastichus gentilei (Del Guercio) (Eulophidae) (La Salle 1993), and the predaceous thrips Androthrips spp. (Mound et al. 1995).

In Dec 2009, 1110 galls of F. benjamina (Fig. 1) were collected in 3 different counties of the State of Navarit. Santiago Ixcuintla (21°49'16.55"N. 105°12'06.08"W), San Blas (21°32'28.7"N, 105°17'10.2"W), and Tepic (21°30'14.14"N, 104°53'40.27"W). Specimens of thrips and anthocorids (Table 1) were collected from these galls. The thrips were identified by M. S. Octavio J. Cambero Campos at Universidad Autonoma Agraria Antonio Narro (UAAAN) and confirmed by M. S. Axel P. Retana Salazar at Universidad de Costa Rica. For the identification of the anthocorid *M. confusa*, dissections of female and male genitalia were made and the redefinitions of Pluot-Sigwalt et al. (2009) were followed; a further confirmation was made by Dominique PloutSigwalt del Muséum National d'Histoire Naturalle, Département Systématique & Evolution (Entomologie).

Altogether 7808 adults, 9687 immatures, and 11240 eggs of G. uzeli and 632 adults of A. ramanchandrai were recorded from field collected galls of F. benjamina. In the same galls, 43 adults and 126 nymphs of *M. confusa* were found (Table 1). Mound et al. (1995) and Retana (2006) mention that the relative length of the pronotal posterolateral setae is the only characteristic to distinguish G. uzeli from G. ficorum. A practical but less accurate way to distinguish these 2 species is by their host association. Mound et al. (1995) suggest that G. uzeli is the main builder of galls in F. benjamina, while G. ficorum is associated with F. microcarpa. Boyd & Held (2006) and Held & Boyd (2008) noted that the thrips A. ramanchandrai is a gall inhabitant and a predator of these thrips.

Until 2008, the predator *M. moraguesi* was considered to be the only species within the genus. Plout-Sigwalt et al. (2009) concluded that the genus *Montandoniola* is actually a complex of species that includes *M. moraguesi* (Puton 1896), *M. thripodes* Bergroth 1916, *M. pictipennis* (Esaki 1931), and *M. confusa* Streito & Matocq. Plout-Sigwalt et al. (2009) contend that many of the earlier reports of *M. moraguesi* associated with *Ficus* in the New World actually refer to a newly described species, *M. confusa*.

Specimens of both species of thrips, as well as the anthocorid, were deposited in the National Insect Collection of the Universidad Nacional Au-

 TABLE 1. COUNTIES OF NAYARIT MÉXICO WHERE GYNAIKOTHRIPS UZELI, MONTANDONIOLA CONFUSA AND ANDRO-THRIPS RAMANCHANDRAI WERE COLLECTED.

		G. uzeli			M. confusa		A. ramanchandrai
Counties	\mathbf{N}^1	Eggs	Immature*	Adults	Nymphs	Adults	Adults
Santiago	100	152	139	479	13	7	11
San Blas	700	9268	7479	4488	102	30	387
Tepic	300	1820	2069	2841	11	6	234
Total	1100	11240	9687	7808	126	43	632

 $^{\imath}Number$ of galls collected; $^{\ast}1^{\scriptscriptstyle st}$ and $2^{\scriptscriptstyle nd}$ instars, propupa, pupae 1 & 2.

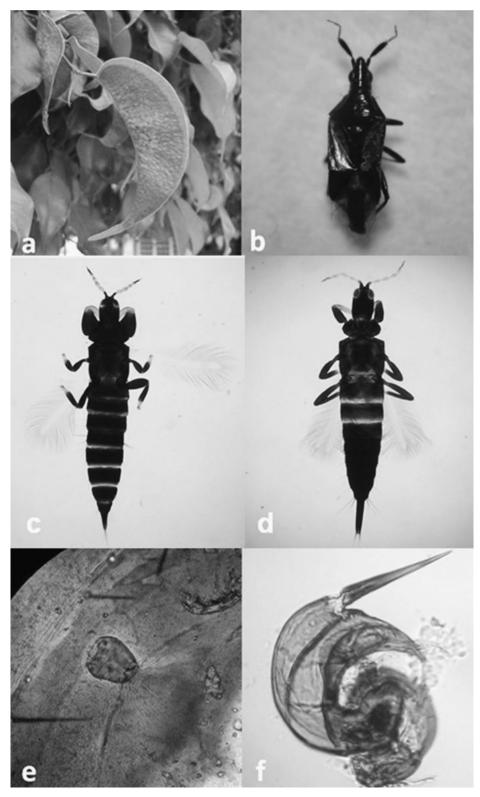


Fig. 1. (a) Galls of Ficus benjamina; (b) Montandoniola confusa \Im ; (c) Androthrips ramanchandrai \Im ; (d) Gynaikothrips uzeli \Im ; (e) Female copulatory tube (M. confusa) and (f) Male paramere, dorsal view (M. confusa).

tonoma de México, at the Research Center in Microscopic Structures (CIEMic), Research City, Universidad de Costa Rica 2060 and at the Insect Collection of the Parasitology Department at UAAAN, Buenavista, Saltillo, Coahuila, México.

SUMMARY

The presence of the thrips *Gynaikothrips uzeli* Zimmerman, *Androthrips ramachandrai* Karny, and the anthocorid *Montandoniola confusa* Streito & Matocq are reported for the first time associated with galls of *Ficus benjamina* in San Blas, Santiago Ixcuintla, and Tepic of Nayarit, México.

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