

## NOTA / NOTE

# First record of *Leptoglossus gonagra* (Fabricius, 1775) (Hemiptera: Heteroptera: Coreidae: Coreinae: Anisoscelini) in Costa Rica.

Torsten van der Heyden<sup>1</sup> & Ignacio Gamboa Hidalgo<sup>2</sup>

<sup>1</sup> Immenweide 83, D-22523 Hamburg, Germany. e-mail: tmvdh@web.de

<sup>2</sup> 150 metros al norte de la Escuela Alejandro Rodríguez, CR-10603 Vuelta de Jorco, Aserrí, Costa Rica.  
e-mail: vi\_ig13@hotmail.com

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**Abstract:** The Leaf-footed Bug *Leptoglossus gonagra* (Fabricius, 1775) is reported as a new record for Costa Rica. Additional information about the biology, the ecology and the distribution of this species is also given. This is the eleventh part of a series of publications about different Heteroptera in Costa Rica.

**Key words:** Hemiptera, Heteroptera, Coreidae, Coreinae, Anisoscelini, *Leptoglossus gonagra*, first record, Costa Rica.

**Resumen:** Primera cita de *Leptoglossus gonagra* (Fabricius, 1775) (Hemiptera: Heteroptera: Coreidae: Coreinae: Anisoscelini) en Costa Rica. Se cita por primera vez a *Leptoglossus gonagra* (Fabricius, 1775) para Costa Rica. Se incluye información adicional sobre la biología, la ecología y la distribución de esta especie. Esta es la undécima parte de una serie de publicaciones sobre diferentes heterópteros en Costa Rica.

**Palabras clave:** Hemiptera, Heteroptera, Coreidae, Coreinae, Anisoscelini, *Leptoglossus gonagra*, primera cita, Costa Rica.

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## Introduction

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The genus *Leptoglossus* Guérin-Ménéville, 1831, which belongs to the family Coreidae, subfamily Coreinae, is one of the most diverse and complex taxa of the tribe Anisoscelini in the Western Hemisphere. It consists of sixty-one species and one subspecies of large bugs (Brailovsky, 2014), commonly known as Leaf-footed Bugs because of the leaf-like dilations on the hind tibiae (Brailovsky & Barrera, 2004; Fent & Kment, 2011). The genus is cosmopolitan, mainly widely distributed in the Nearctic and the Neotropical region (Brailovsky & Barrera, 2004; Fent & Kment, 2011; Brailovsky, 2014). Its species are phytophagous and some of them are considered as a pest because they feed on cultivated plants.

Until 1998, four species of *Leptoglossus* were reported from Costa Rica, when Brailovsky & Barrera (1998) added six noteworthy records and two new species to the list. Within the last ten years, *Leptoglossus arenalensis* Brailovsky & Barrera, 2004 (Brailovsky & Barrera, 2004) and *Leptoglossus franckei* Brailovsky, 2014 (Brailovsky, 2014) were added to the list of *Leptoglossus* species known from Costa Rica. So far, fourteen species of *Leptoglossus* have been listed to be known from Costa Rica, among them *Leptoglossus zonatus* (Dallas, 1852) (van der Heyden & Gamboa, 2012). To our knowledge, *Leptoglossus gonagra* (Fabricius, 1775) has not been reported from Costa Rica, yet.



Fig. 1.- *Leptoglossus gonagra* (Fabricius, 1775). Eggs, Vuelta de Jorco, Aserrí, San José, Costa Rica, 24.7.2014.

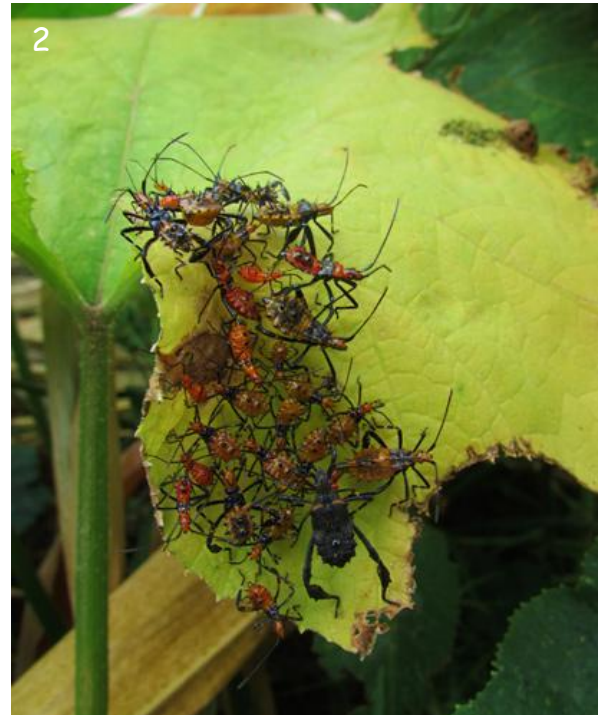


Fig. 2.- *Leptoglossus gonagra* (Fabricius, 1775). Nymphs of different development stages, Vuelta de Jorco, Aserrí, San José, Costa Rica, 25.7.2014.

## Distribution of *L. gonagra* (Fabricius, 1775)

Beside *Leptoglossus occidentalis* Heidemann, 1910, *L. gonagra*, commonly known as Passionvine Bug or Citron Bug, is one of the two species of the genus *Leptoglossus* which occur outside the Western Hemisphere (Brailovsky & Barrera, 2004; Fent & Kment, 2011; Brailovsky, 2014). Its distribution extends through the United States of America, Puerto Rico, Cuba, Mexico, Belize, Guatemala, El Salvador, Nicaragua, Venezuela, Ecuador, Brazil, Bolivia, Paraguay and Argentina to Africa, Asia, Australia and the Pacific Islands (Maes & Goellner-Scheiding, 1993; Packauskas, 2010; Fent & Kment, 2011; Brailovsky, 2014). It has not been reported from continental Europe (Taylor *et al.*, 2001) yet, but has reached the Canary Islands (Heiss & Báez, 1990; Aukema *et al.*, 2006; Fent & Kment, 2011).

## Ecology of *L. gonagra* (Fabricius, 1775)

*L. gonagra* is phytophagous and has been reported to feed on a wide range of plants, belonging to the families Anacardiaceae, Asteraceae, Bixaceae, Capparidaceae, Cucurbitaceae (including *Cucurbita* sp. and *Cucumis* sp.), Euphorbiaceae, Malvaceae, Myrtaceae, Passifloraceae (including various species of cultivated *Passiflora*), Poaceae (including *Zea mays*), Punicaceae (including *Punica* sp.), Rutaceae (including *Citrus* sp.), Solanaceae (including *Nicotiana* sp. and *Solanum* sp.), Typhaceae and Vitaceae (including *Vitis* sp.) (Maes & Goellner-Scheiding, 1993; Boiça Jr. & Caetano, 1999; Joy & Sherin, 2013). As other species of the genus, *L. gonagra* is considered as a pest (Boiça Jr. & Caetano, 1999; Joy & Sherin, 2013).

## Ecology of *L. gonagra* (Fabricius, 1775) in Costa Rica

Recently, the co-author was able to find and photograph eggs, nymphs and adults of *L. gonagra* in Costa Rica. The site of the findings is located in Vuelta de Jorco, county of Aserrí in the province of



Fig. 3.- *Leptoglossus gonagra* (Fabricius, 1775). Adult, lateral view, Vuelta de Jorco, Aserrí, San José, Costa Rica, 25.7.2014.

Fig. 4.- *Leptoglossus gonagra* (Fabricius, 1775). Adult, dorsal view, Vuelta de Jorco, Aserrí, San José, Costa Rica, 25.7.2014. (All photographs: Ignacio Gamboa Hidalgo).

San José, about 1100 m above sea level. The specimens were found at a plantation of *Z. mays*, which was mixed with other cultivated plants as *Cucurbita argyrosperma*, the Japanese pie pumpkin or pipian, in Costa Rica known as "ayote" and *Coriandrum sativum* (Apiaceae), in Costa Rica known as "culantro".

On 24.7.2014, the co-author found eggs (Fig. 1) of *L. gonagra* on leaves of *C. argyrosperma* and of *Bidens pilosa* (Asteraceae), in Costa Rica known as "mozote". The eggs were found in groups of 25 to 40, the bigger groups were found on *C. argyrosperma*.

One day later (25.7.2014), the co-author was able to photograph nymphs of different development stages (Fig. 2) at the same site. The nymphs were only found on leaves of *C. argyrosperma*, where they could be seen in aggregations of about thirty specimens, sometimes with one or two adults nearby.

On the same day and at the same site the co-author photographed adults of *L. gonagra* (Figs. 3, 4), which were seen as single individuals or, in most cases, associated with groups of nymphs. The adults were found on *Z. mays*, *C. argyrosperma* and *B. pilosa*.

The specimens of *L. gonagra* were found during the rainy season, although the amount of rainfall in the Central Valley of Costa Rica has been -so far- very low this year.

Taking into account that *L. gonagra* has been reported from other Central American countries, the presence of this species in Costa Rica had to be expected.

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