

Research Article

First occurrence of *Leptoglossus crassicornis* (Dallas) (Heteroptera: Coreidae) in Chile, with a key to the species of *Leptoglossus* Guérin-Ménéville recorded in the country

Primera cita de *Leptoglossus crassicornis* (Dallas) (Heteroptera: Coreidae) en Chile, con clave para las especies de *Leptoglossus* Guérin-Ménéville registradas en el país

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Abstract. The presence of the leaf-footed bug *Leptoglossus crassicornis* (Dallas, 1852) is reported for the first time in Chile. Specimens were collected in Valparaíso and Metropolitan of Santiago regions. *Erioseye senilis coimasensis* (F. Ritter) Katt. is recorded for the first time as host plant for *L. crassicornis*, confirming its association with Cactaceae. The significance of this record is discussed and a key to the species of *Leptoglossus* recorded so far from Chile is included.

Key words: Hemiptera, Coreinae, Anisoscelini, faunistics.

Resumen. Se cita por primera vez la presencia de la chinche foliada *Leptoglossus crassicornis* (Dallas, 1852) en Chile, con base en ejemplares provenientes de las regiones de Valparaíso y Metropolitana de Santiago. Se registra por primera vez a *Erioseye senilis coimasensis* (F. Ritter) Katt., como planta hospedante para esta especie, confirmando su asociación con cactáceas. Se discute y analiza la significancia de este registro y se provee una clave para las especies de *Leptoglossus* presentes en Chile.

Palabras clave: Hemiptera, Coreinae, Anisoscelini, faunística.

Introduction

Leptoglossus Guérin-Ménéville, 1831 is a genus of coreid bugs commonly known as leaf-footed bugs, because of the foliaceous dilations of their metathoracic tibiae (Mitchell 2000). This genus currently comprises 62 species (Faundez and Carvajal 2016), and several of these are considered agricultural pests (Mitchell 2000). This genus is considered one of the more complex genera within the Anisoscelini of the Western Hemisphere (Coreinae), and two of its members are considered invasive species, *Leptoglossus occidentalis* Heidemann and *Leptoglossus gonagra* (Fabricius) (Brailovsky 2014). *Leptoglossus* species are mainly phytophages, however there are records of species feeding on carrion (Mitchell 2000). Additionally, there have been records of adventitious bites by *Leptoglossus* (Faundez and Carvajal 2011; Hornok and Konstchan 2017).

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Leptoglossus crassicornis (Dallas, 1852) (Fig. 1) is a large species of this genus, distributed in central and South America (Coreoidea Species File 2018). This species is associated with Cactaceae (Di Iorio 2004), and is considered a very variable species in the group of *Leptoglossus cinctus* (Allen 1969; Brailovsky 2014). The purpose of this contribution is to report its first occurrence in Chile, as well as provide an identification key to the *Leptoglossus* species known from the country.

Materials and Methods

For identification we follow Brailovsky (2014) and Allen (1969). Morphology for the key follows the terminology of Brailovsky (2014) and additions by Faúndez and Carvajal (2016). In Systematics, Coreoidea Species File (2018) is followed. Photos were taken with a digital camera. Map was developed with Panmap, Pangaea®.

Results and Discussion

Specimens of *Leptoglossus* have been collected in the central zone of Chile which does not match with the known species in the country. These have been identified as *Leptoglossus crassicornis*, and its data is given as follows:

Material examined. CHILE, Metropolitan Region, Maipo VIII-1959, 1♀ (Instituto de la Patagonia Collection). Valparaíso Region, Putaendo, Las Coimas, 1-IX-2018, *ex Eriosyce senilis coimasensis*, leg. and col. Manuel Lopez Aliste, 1♂.

Leptoglossus crassicornis, becomes the third species recorded in Chile of *Leptoglossus*, following the native *Leptoglossus chilensis* (Spinola, 1852) and the introduced *Leptoglossus occidentalis* (Faúndez and Carvajal 2016; Faúndez *et al.* 2017; Faúndez and Rocca 2017; Faúndez *et al.* 2018). From these species it can be easily differentiated by the following key:

Key to the species of *Leptoglossus* known to occur in Chile

- 1(2) Pronotum deltoid, humeral angles rounded, never with a small tooth or spine oriented laterally (Fig. 5) *L. occidentalis* Heidemann
2(1) Pronotum hexagonal or octagonal, humeral angles acute, usually with a small tooth or spine oriented laterally (Figs. 6-7) 3
3(4) Dilation of metatibiae lanceolate, entire (Fig. 2); hemelytra with a transverse ivory patch or fascia (Fig. 1), labium clearly surpassing at least 2nd abdominal segment
..... *L. crassicornis* (Dallas)
4(3) Dilation of metatibae with two teeth, and an invagination (Fig. 4), hemelytra without a median transverse ivory patch, labium reaching metacoxae *L. chilensis* (Spinola)

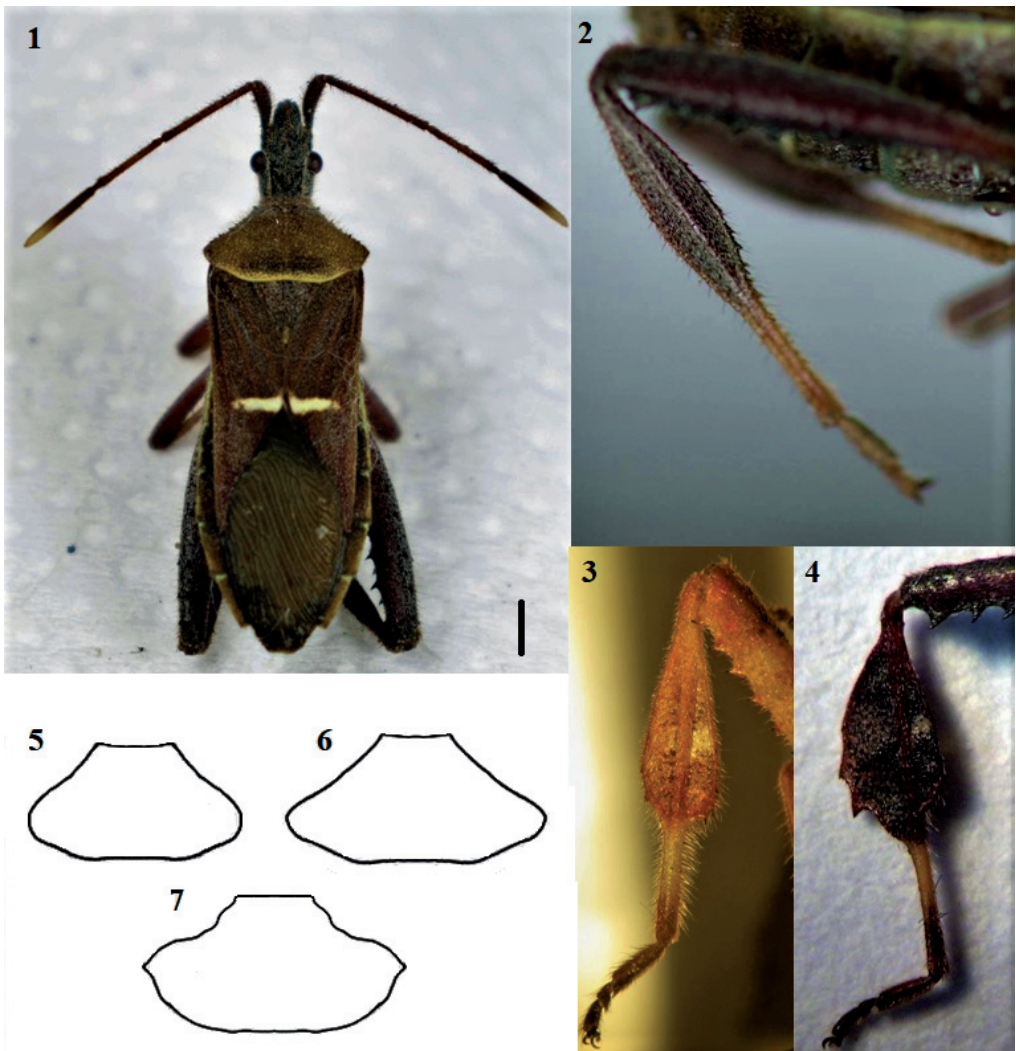
It is worth to mention that *L. crassicornis* foliaceous dilations of tibiae may be confused with these of *L. occidentalis*, because both of them are lanceolate and entire. However, in *L. crassicornis* are more slender and elongate (Fig. 2), whereas in *L. occidentalis* are widened in the apical section, and less elongated (Fig. 3).

The Chilean specimens match morphologically with these collected in Argentina. Allen (1969) stated that the northern specimens (i.e. Colombia and upwards), vary considerably from these in the southern part of the distributional range, however as there are few specimens from middle grounds it has been treated as a cline.

This species has been recorded in Cactaceae of the genera *Opuntia*, *Harrisia* and *Tephrocactus* (Di Iorio 2004). As a side note, both, Coreoidea Species File (2018) and Linares

and Orozco (2017) are missing *Thephrocactus* in the host plants, which has been mentioned by Di Iorio (2004) and Coscarón and Pall (2015). Thus, *Eriosyce senilis coimasensis* (F. Ritter) Katt. (Cactaceae), becomes a new host plant, and provides additional support to the relationship of this species and Cactaceae.

The known distribution of this species ranges from Honduras to Mendoza province, in central Argentina. This province is contiguous to the localities in which this species was collected in Chile (Fig. 8). Also the collecting places are not well urbanized and the human traffic is reduced compared to other areas. This, together with the host association makes very probable that this portion of Chile is part of its native distribution and not a recent introduction. This situation has been demonstrated recently with other Heteroptera in the zone, even several species remained undescribed (Faúndez and Rider 2014a, 2014b; Faúndez and Carvajal 2017). Thus, further prospection may lead to new discover localities and possibly expand the known distribution of *L. crassicornis* in Chile.



Figures 1-7. *Leptoglossus* species. 1. *Leptoglossus crassicornis*, habitus, specimen from Las Coimas, Chile. (Scale: 1 mm). 2. Metathoracic leg of *L. crassicornis*, detail. 3. Metathoracic tibia of *Leptoglossus occidentalis*. 4. Metathoracic tibia of *Leptoglossus chilensis*. 5. Scheme of pronotum of *L. occidentalis*. 6. Scheme of pronotum of *L. crassicornis*. 7. Scheme of pronotum of *L. chilensis*.

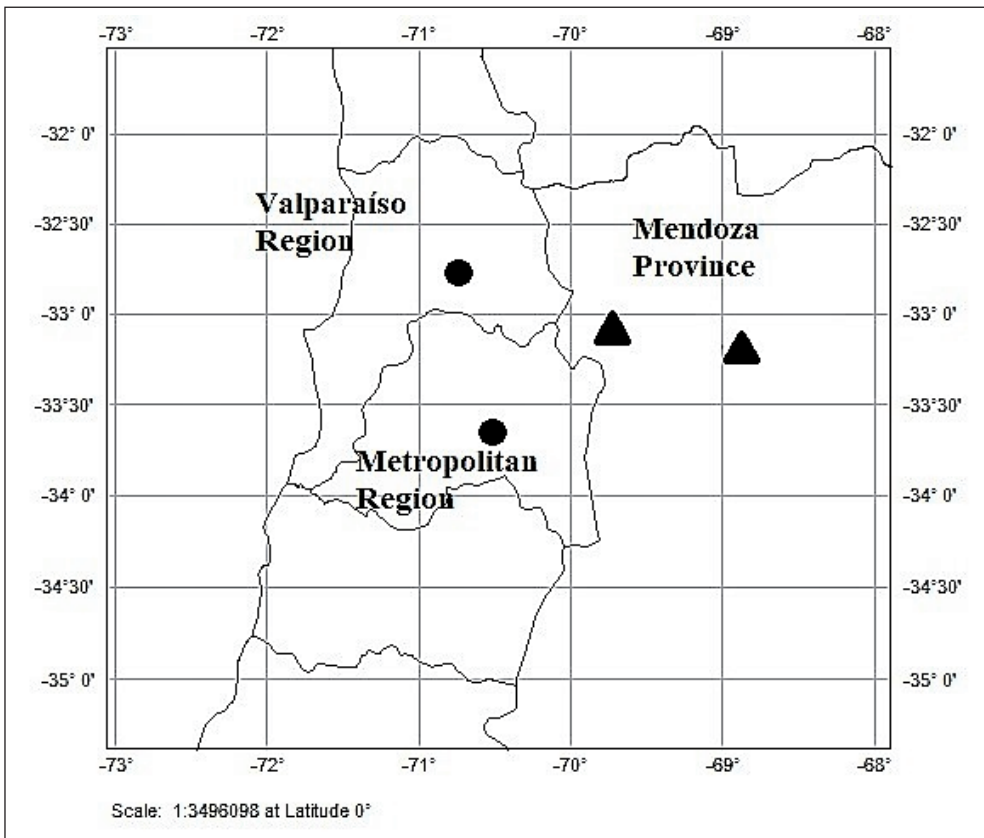


Figure 8. Distribution of *Leptoglossus crassicornis* in Chile and Argentina (Mendoza Province). Circles, new Chilean records; triangles known localities within Mendoza Province.

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