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longhorn beetle introduced in Chile

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Stictoleptura cordigera (Füssli, 1775)
(Cerambycidae: Lepturinae: Lepturini), a new alien
longhorn beetle introduced in Chile

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Abstract. The Palaearctic longhorn beetle *Stictoleptura cordigera* (Füssli, 1775) (Cerambycidae: Lepturinae: Lepturini) is recorded for the first time in Chile, based on specimens collected in a rural locality of the Maule Region. This new record is the first in the New World and increases to eleven the number of exotic cerambycids introduced and established in the Chilean territory. A brief diagnosis for recognition of the species and data about its distribution and natural history are provided. The possible route of entry of this cerambycid into Chile is discussed.

Key words. Adventive species, South America, cerambycid, Maule Region, Palaearctic.

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Introduction

Stictoleptura cordigera (Füssli, 1775) is a polyphagous, saproxylic, anthophilous cerambycid widely distributed in southern Europe and the Middle East (Sama 2002; Sama et al. 2010).

In December 2020, the second author (GR) collected floating in the pool of a house one male specimen of *S. cordigera* in Ranquimilí, Las Rastras, Talca (35°26'01"S, 71°32'43"W), a rural area of the Maule Region in central Chile (Fig. 3). Subsequently, in November and December 2022, an additional male and two female specimens were collected in the same place and under the same circumstances.

Stictoleptura cordigera is the eleventh cerambycid reported as adventive in Chile, in addition to *Nathrius brevipennis* (Mulsant, 1839), *Phoracantha semipunctata* (Fabricius, 1775), *P. recurva* Newman, 1840, *Ambeodontus tristis* (Fabricius, 1775), *Xylotrechus (Rusticoclytus) rusticus* (Linnaeus, 1758), *Aegomorphus jaspideus* (Germar, 1824), *Hylotrupes bajulus* (Linnaeus, 1758) (Sandoval 2002; Barriga and Cepeda 2007; SAG 2008; Mondaca and Zavala 2016; González et al. 2018); and three species restricted to Rapa Nui island: *Ceresium unicolor unicolor* (Fabricius, 1787), *Lagocheirus obsoletus* Thomson, 1860 and *Sybra alternans* (Wiedemann, 1823) (Cerdeña 1991; Mondaca 2008; Mondaca et al. 2016).

The objective of this note is to communicate the presence of *S. cordigera* in the national territory from adult specimens collected in two different years in the Maule Region, being the first report of this longhorn beetle for Chile and for the New World.

Materials and Methods

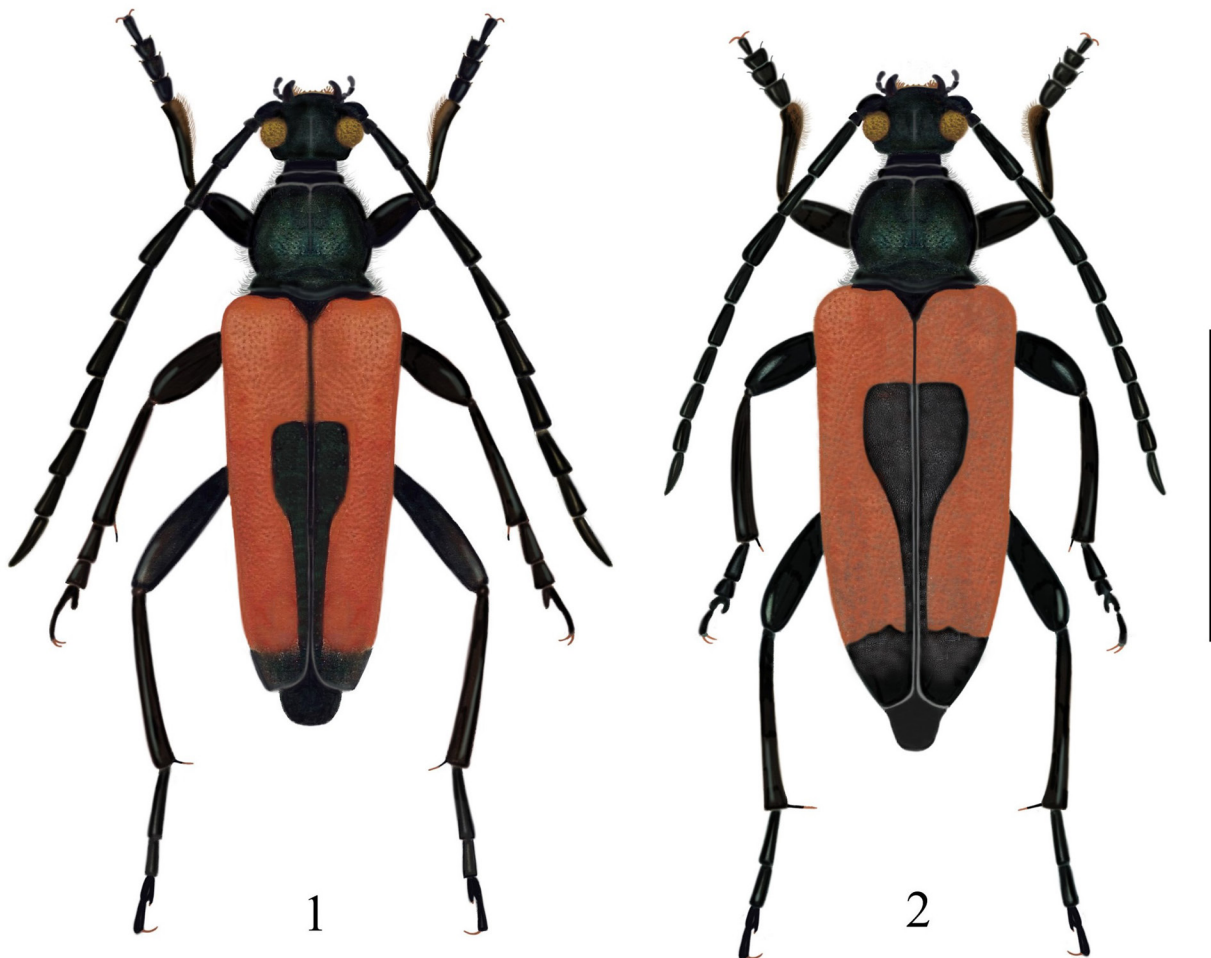
The measurements were made with an ocular micrometer attached to an Olympus SZ51 stereoscopic magnifier. The drawing of two of the specimens collected in Chile was made using the watercolor technique and digital editing with Photoshop CS6. The distribution map (Fig. 3) was generated by entering the geographical coordinates on the website www.simplemappr.net. Specimens collected are deposited in the private collection of the second author (GR) and in the collection of the Unidad de Entomología, Subdepartamento de Laboratorios y Estaciones Cuarentenarias, Servicio Agrícola y Ganadero, Santiago, Chile (SAGC).

Results

Stictoleptura cordigera (Füssli, 1775)

(Fig. 1–2)

Material examined. 2♂, 2♀: CHILE, Maule Region, Talca, Ranquimilí, Las Rastras (35°26'01"S, 71°32'43"W), December 2020 (1♂); November 19 and 25, 2022 (1♂, 1♀), December 13, 2022 (1♀), col. G. Rebolledo. All specimens collected floating in the water of a pool.



Figures 1–2. *Stictoleptura cordigera* (Füssli) from Maule Region, Chile. 1) Male, dorsal habitus. 2) Female, dorsal habitus. Scale bar: 1 mm. Illustrations by Paula Fuenzalida.

Diagnosis. Body length: 13.8–19.6 mm ($n = 4$). Species distinctive and readily identified among the Chilean cerambycid fauna. Forebody, legs and antennae black, elytra red with a median heart-shaped or wedge-shaped black spot which is prolonged posteriorly along the suture to fuse with an extensive transverse apical black spot (Fig. 1–2). Head with large emarginate eyes, scape basally expanded and truncate apically; antennae reaching the apical third of the elytra in male (Fig. 1) or at most the apical half in female (Fig. 2). Pronotum trapezoidal in both sexes, rounded laterally and with a strong sub-basal constriction and projecting posterior angles, evenly convex and transversely impressed in front of the base and often with a shallow longitudinal impression, surface densely punctured and with abundant black pubescence. Elytra narrow from humeri to the obliquely-truncate apical margin; apex with a sharp tooth at the sutural angle; surface without striae, densely punctate and with fine pale pubescence darker on dark areas. Legs long and slender, usually black; protibiae generally lighter. Females can be distinguished from males by their much broader and less strongly narrowed elytra.

Ecology. Larvae are polyphagous and develop in rotten wood of deciduous trees (Sama 2002). Adults are anthophilous and occur during indicate the seasonality in Europe (November–December in Chile); they are diurnal and fly readily to a range of flowers, especially Apiaceae, *Cistus* sp. (Cistaceae), *Origanum* sp. (Lamiaceae) and *Allium cepa* (L.) (Amaryllidaceae), where they feed on pollen and nectar (Jenis 2001; Dauber 2004; Ambrus et al. 2014). On the iNaturalist platform (www.inaturalist.org) there are numerous records of this species visiting a wide variety of flowers, including *Ligustrum* sp. (Oleaceae), *Scabiosa* sp. (Caprifoliaceae), *Cynara cardunculus* L. (Asteraceae), *Rubus* sp. (Rosaceae) (EOL 2022). In Europe, mating pairs are common on flowers throughout their short season and soon after females oviposit on a range of broadleaf trees such as oak and beech (*Quercus* sp., *Fagus* sp., Fagaceae), sweet chestnut (*Castanea sativa* Mill., Fagaceae), *Pistacia* spp. (Anacardiaceae) and *Betula* sp. (Sama 2002). The species has also been reported on *Prunus* sp. (Rosaceae), *Eucalyptus* sp. (Myrtaceae), and *Pinus* sp. (Pinaceae) (Sama et al. 2005, 2010). Larvae develop over two or three years and pupate in a subcortical cell. Adults emerge from late spring in the Old World.

Distribution. Originally a Euro-Turanian species that is widespread from the Iberian Peninsula and Balears to northern Iran, through southern France, Italy, the Balkans, Crimea and Caucasus (Sama 2002). In the Middle East, it reaches Israel, through Turkey, Lebanon and Syria (Sama et al. 2010).

In Central Europe, it is associated with thermophilic localities. This association is sometimes questioned by some authors (Hoskovec et al. 2021), but records in Germany and Switzerland available on iNaturalist confirm its presence. However, old records from Belgium (Everts 1903; Bondroit 1909) and recently, southeastern England (Richardson 2014) and Libya (Sama et al. 2005), completely disconnected from the area of this species, should be considered as introductions.

In South America, Chile, Maule Region (Fig. 3) (**New country record**).

Discussion

All cerambycids introduced into Chile are the result of international trade or tourism. The source of the introduction of *S. cordigera* is unknown, but it is possible that the species arrived undetected from wooden packaging commonly used in the commercial import trade, as pointed out by Ernst et al. (2010) for the Netherlands. The extent of the development of the dorsal black pattern of *S. cordigera* is indicative of its origin, being broadened in the Balkan subspecies *S. c. illyrica* (Müller, 1948) and restricted to a T-shape in the Cretan subspecies *S. c. anojiaensis* (Sláma, 1982). The pattern of the specimens introduced in Chile corresponds to the nominotypical form, widespread in Western Europe.

With the exception of the two *Phoracantha* species and *Hylotrupes bajulus*, the remaining eight species introduced into Chile do not represent major threats to local forestry or natural ecosystems (Mondaca et al. 2016). *Stictoleptura cordigera* has a close relationship with various types of host plants, being considered in its region of origin as a pollinator of flowers in the adult stage, while in the larval stage it has been reported as saproxylic, feeding on decaying dead wood of deciduous and coniferous trees (Sama 2002). For this reason, the negative impact that this species may have on the native and non-native vegetation of Chile is likely very low.



Figure 3. Collection site (Maule Region) of *Stictoleptura cordigera* in central Chile.

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