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Notes and Comments

Record of *Leptoglossus cinctus* (Hemiptera: Coreidae) associated with the native tree *Byrsonima sericea* (Malpighiaceae) and the cashew tree *Anacardium occidentale* (Anacardiaceae)

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Coreids of the genus *Leptoglossus* Guérin (Coreinae) comprise a large group of phytophagous insects that are characterized by dilated posterior tibiae in the form of a leaf – the so-called leaf-footed bugs. They are widely distributed across the Americas, ranging from southern Canada to Chile and Argentina (Schaefer et al., 2008). Among the known species, only *Leptoglossus gonagra* (Fabricius) has been recorded outside the Western Hemisphere, with records from Africa, Asia, the Pacific Islands and Australia (Allen, 1969; Brailovsky and Barrera, 1998; Schaefer et al., 2008). Out of the 61 currently described *Leptoglossus* species (Roskov et al., 2015), 19 have been recorded in Brazil and another six species probably occur there, since they have been registered in neighboring countries — Venezuela, Uruguay, and Argentina (Schaefer et al., 2008).

Information on the food plant preferences of coreids is of central importance for pest management and for the establishment of phylogenetic relationships (Schaefer and Mitchell, 1983). However, records of host plant associations are extremely scarce for the vast majority of phytophagous insects in Brazil, being mainly restricted to key species of agricultural interest or vectors of diseases (Flinte et al., 2006). This lack of records includes the species of the genus *Leptoglossus*, especially with respect to their possible associations with wild plants in the border regions of plantations. Such associations could significantly contribute to the persistence of the pest species in the agroecosystem. In this short note we provide data on two new associations of a *Leptoglossus* species from the Atlantic Forest of northeast Brazil.

Voucher specimens, nymphs of different instars (n=11) and adults (n=5) were collected from leaves and fruits on the plant branches of the native Malpighiaceae tree, located in the Atlantic Woods of the "Catolé" (09°33.6'S and 35°47.7'W), a fragment of Atlantic Forest Biome, in the municipality of Maceió, State of Alagoas, Brazil.

Also, voucher specimens, seven adults were collected from the leaves and fruits of *Anacardium* tree (Anacardiaceae) in the border area of other Atlantic Forest fragment, municipality of Paripueira (09°27.5'S and 35°33.3'W). Insects were collected manually and with beating trays in April 2011 (Maceió) and manually in February 2012 (Paripueira). Adults were killed by freezing and nymphs were kept in plastic containers and fed on leaves and fruits of the host plant. Dead nymphs were placed in receptacles containing 70% alcohol. Adults were pinned for kiln drying. Species were identified based on the keys of Allen (1969) and were deposited in the entomological collection of *Museu Paraense Emilio Goeldi*, Belém, State of Pará, Brazil and entomological collection of *Universidade Federal de Alagoas*, Maceió, State of Alagoas, Brazil.

Native host plants were dried and deposited (Nº 42116) in the Herbarium MAC of the *Instituto do Meio Ambiente do Estado de Alagoas* (IMA). The collection procedures were authorized by *Instituto Chico Mendes de Conservação da Biodiversidade* (ICMBio), through the license granted in April 2011 (Registration No. 27642-1).

Nymphs reared in laboratory conditions did not reach the adult stage. Adults from the field were identified as *Leptoglossus cinctus* (Herrich-Schäffer) (Coreinae: Anisoscelini), a Neotropical species distributed from Mexico to southern South America, with records for the following countries: Mexico, Cuba, Honduras, Costa Rica, Panama, Guyana, French Guiana, Venezuela, Colombia, Brazil, Peru, Bolivia, Paraguay, and Argentina (Allen, 1969).

Leptoglossus cinctus has previously been recorded in Southeast, North and Midwest Brazil, in the following states: Amazonas, Pará, Mato Grosso, Goiás, Distrito Federal, Mato Grosso do Sul, Minas Gerais, Rio Grande do Norte, Rio de Janeiro and São Paulo (Allen, 1969; Jurberg and Felippe, 1981).

The native food plant species was identified as *Byrsonima sericea* DC (Malpighiaceae). This tree is a common representative of the upper stratum of the Brazilian Atlantic Forest. *Byrsonima. sericea* is shade intolerant and is predominantly associated with disturbed areas or edge habitats (Oliveira-Filho et al., 2004). The genus *Byrsonima*, with about 150 species, is a large group of trees popularly known in Brazil as "murici". Several groups of insects have already been recorded in association with these trees in the Neotropics (Flinte et al., 2006).

The other host plant species was the cashew nut tree, *Anacardium occidentale* L. (Anacardiaceae), a crop plant with high economic value. The production and commercial exploitation of the fruit of *A. occidentale* is an important component of the agricultural industry in countries such as India, Brazil, Mozambique, Tanzania and Kenya. In addition to the famous cashew 'nut' (actually the fruit), the shell liquid can be used as a source of phenol for various industrial purposes (Embrapa, 1991). Existing records of cashew pests include the coreid *Leptoglossus stigma* (Herbst, 1784). These insects occur mainly in the fruiting period, causing the loss of quality and production of nuts (Mesquita et al., 2002; Bleicher and Melo, 1996).

There are a few existing records of associations between *L. cinctus* and native plants, specifically *B. crassifolia* L. and the cactus genera *Opuntia* and *Cereus* (Cactaceae) (Allen, 1969; Schaefer and Mitchell, 1983). However, these records do not indicate the deposition of herbarium material or provide accurate geo-referenced locations. Benezar and Pessoni (2006) reported the presence of *Leptoglossus* on fruits of *B. coccolobifolia* Kunth in an Amazonian savanna in Roraima state in the north of Brazil. *Leptoglossus cinctus* has also been recorded on *Psidium guajava* L. (Guava) (Myrtaceae) (Allen, 1969; Schaefer and Mitchell, 1983) and tomatoes (Solanaceae) (Mitchell, 2004), indicating their propensity to attack different families of plants of agricultural importance. Given that other *Leptoglossus* species are already included in the list of cashew pests, a new record of *L. cinctus* associated with these plants requires further investigation and risk assessment.

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