Orialella aerizulae (Hemiptera: Cicadidae): first record in Brazil

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Cicadas (Hemiptera: Cicadidae) are insects very common in the tropics and subtropics and make themselves evident in environments in which they occur by the loud sound emitted by males. Species of cicadas have been linked to resource pulses by their high emergence densities in a short period of time (Aoki et al. 2011). As cicadas have large amounts of dissolved nitrogen, phosphorus, carbon, and lipid, the surface layer of the soil becomes an important trophic resource (Mellec et al. 2011). Cicadas, in particular, translocate nutrients from the underground, where the nymphs feed, to above the ground, where the adults are susceptible to predation (Young 1980; Sazima 2009). For some environments, cicadas have received the status of keystone species due to the large number of individuals that emerge synchronously and due to their large bodies (Andersen 1994; Callaham et al. 2000).

Despite the ecological importance of cicadas, studies on this group of insects have been infrequent in Brazil. The paucity of studies has resulted in a lack of basic information, such as the species that occur in the country and their respective distributions. Thus, the present work aimed to record the occurrence of a species of cicada new to Brazil.

In October 2013, a female of *Orialella aerizulae* Boulard, 1986 (Hemiptera: Cicadidae: Cryptotympanini) was collected in the area about 8 km west of the municipality of Iporá, State of Goiás, Brazil (16°26'S, 51°11'W). The identification was made by following the original description. In general, *O. aerizulae* is diagnosed easily by the blue turquoise color at the wing base and by a plate of spines at the posteroinferior region of the 9th abdominal segment of the female (Boulard 1986). The specimen collected was deposited in the Entomological Collection of the Universidade Estadual de Goiás, Campus Iporá, State of Goiás, Brazil.

The tribe Cryptotympanini Handlirsch, 1925 currently includes 20 genera that are distributed in all faunal regions except continental Africa (Sanborn 2013). From the Neotropical Region, 5 genera are recorded (*Diceroprocta* Stål, 1870; *Tibicen* Latreille, 1825; *Cornuplura* Davis, 1944; *Cacama* Distant, 1904; and *Orialella* Metcalf, 1952), of which only *Orialella* has been reported in Brazil (Metcalf 1963; Sanborn 2013). This genus is composed of 2 species, *O. aerizulae* and *O. boliviana* (Distant, 1904). The last was recorded in Bolivia, and in the Brazilian states of Amazonas and Pará (Metcalf 1963). In contrast — despite the effort to recognize the cicada fauna in several New World countries (e.g., Sanborn 2001a,b, 2006, 2007a,b, 2008, 2009, 2010a,b, 2011a,b, 2014; Sanborn et al. 2005, 2008, 2011a,b, 2012; Sanborn & Heath 2012, 2014; Sanborn & Maes 2012; Sanborn & Phillips, 2013; Maes et al. 2012) — *O. aerizulae* has been recorded only in the type locality (French Guiana, Kaw region), attesting to its rarity in collections.

The region where the specimen was recently collected is located in the core area of the Brazilian Savanna (Cerrado biome) (Fig. 1). The climate in this region corresponds to Köppen classification AW, which is characterized by a dry season (Apr to Sep) and a rainy season (Oct to Mar) with an average annual precipitation of 1,617 mm (Alves 2011). Its vegetation shows a remarkable physiognomic variation from grassland to woodlands (Oliveira & Marquis 2002). The characteristics of this biome differ considerably from the region where the genus *Orialella* had been reported previously in Brazil, typically tropical rain forest (Distant 1912). The type locality for *O. aerizulae*, a marsh (Boulard 1986), also differs significantly from the location in Brazil where the specimen was found.

The Cerrado biome is considered a hotspot of biodiversity (Myers et al. 2000) and has been suffering various changes due to the increasing anthropogenic degradation including expansion of the agropastoral borders (Sano et al. 2008). Only 7.44% of the area of this biome is protected in conservation units (Lapola et al. 2014). Knowing the biodiversity that the Cerrado possesses is one of the priorities for developing relevant conservation strategies.

With this new record, the area of occurrence of *O. ariazulae* is expanded considerably to the South and is recognized to include Brazil. In addition, the total reported Brazilian cicada fauna is increased to 159 species.

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Summary

This present note for the first time registers the occurrence of the cicada *Orialella aerizulae* Boulard, 1986 (Hemiptera: Cicadidae: Cryptotympanini) in Brazil. The species was previously known only at its type locality from French Guiana.

Key Words: cicada; distribution; Neotropical; Cerrado

Sumário

A presente nota registra pela primeira vez a ocorrência da cigarra *Orialella aerizulae* Boulard, 1986 (Hemiptera: Cicadidae: Cryptotympanini) no Brasil. Até então, esta espécie encontrava-se registrada apenas para a localidade tipo na Guiana Francesa.

Palavras Chave: cigarra; distribuição; Neotropical; Cerrado

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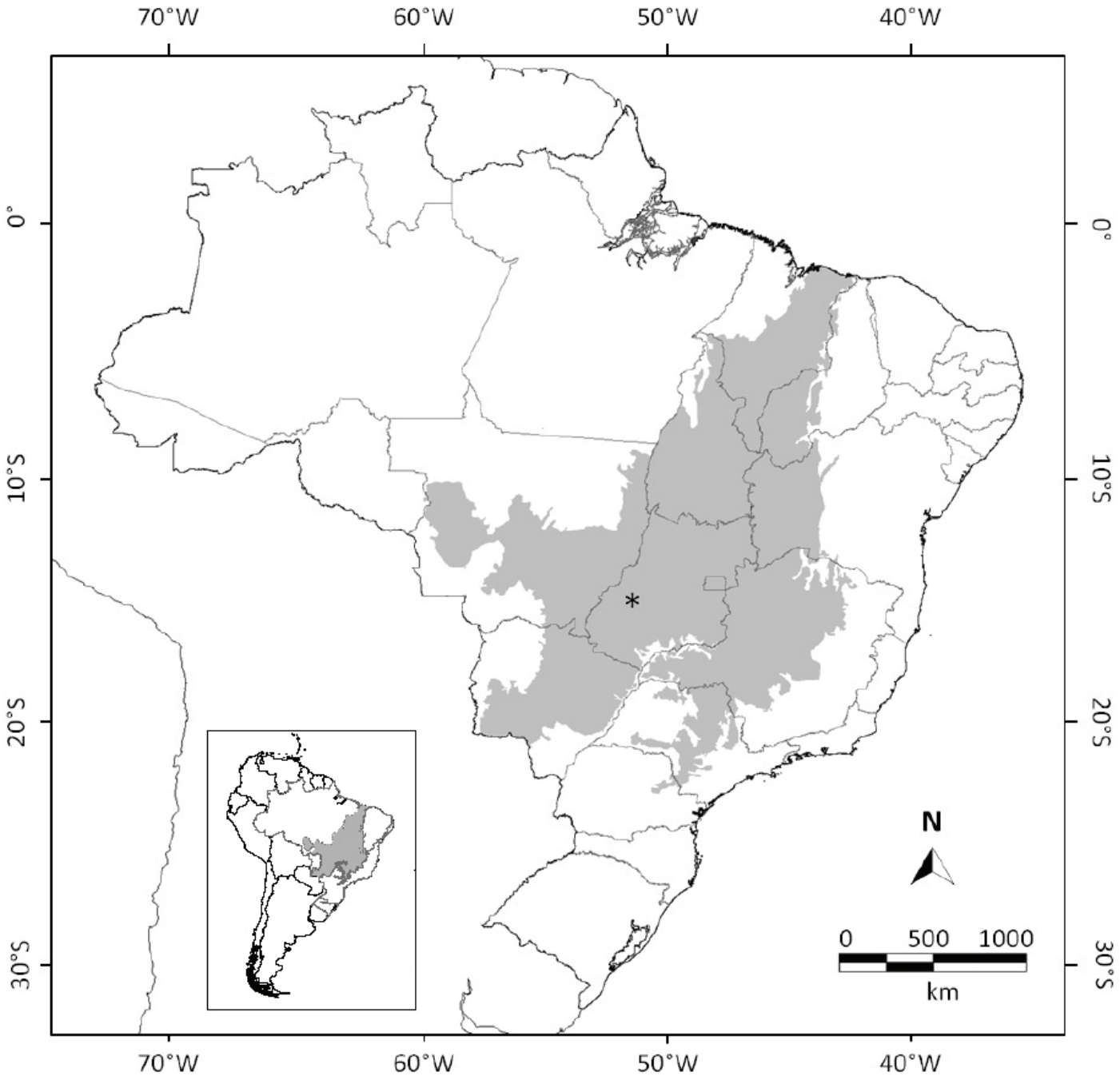


Fig. 1. Site of first record of *Oriallela aerizulae* in Brazil. The grey area represents the original distribution of the Cerrado biome.

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