A new species of Tribonium Saussure, 1862 from the Province of Misiones, Argentina (Blattaria, Blaberidae, Zetoborinae)

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Abstract

Tribonium rothi sp. n. is described from Argentina, whereas T. neospectrum and T. conspersum are recorded for the first time for that country, and their genitalia is redescribed. Femur and tibial spine armature are given and Tribonium is compared with Schistopeltis. A key to identify species of the genus Tribonium recorded in Argentina is provided.

Key words: Tribonium rothi, male genitalia, geographical distribution, leg armature, Schistopeltis

Introduction

The South American cockroach genus Tribonium Saussure, 1862 includes eleven species (Lopes & De Oliveira Cardoso Da Silva 2010). Species of Tribonium are difficult to tell apart because of their strong external similarities; however, comparative analyses of male genital features allow species distinction, thus these structures are essential in taxonomic descriptions. The most relevant contributions to study the genus are Roth (1970, with corrections in foot note 1974), Lopes (1978) and Grandcolas (1993).

Only two species of Tribonium are known from Argentina (Crespo et al. 2010): T. guttulosum (Walker 1868) and T. spectrum (Eschscholtz 1822). The goal of the present paper is to describe a new species of Tribonium, compare its genitalia and arrangement of leg spines to those of T. conspersum (Guérin-Méneville & Percheron 1835) and T. neospectrum Lopes, 1978, as well as to georeference the species distribution.

Material and methods

The studied material is deposited in the following institutions: Administración Nacional de Laboratorios e Institutos de Salud (ANLIS), Instituto Fundación Miguel Lillo Argentina (IMLA), Museo Argentino de Ciencias Naturales (MACN), Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ), Fundación Félix de Azara, Naturhistorisches Museum Wien (NMW), and Zoological Museum University of Copenhagen (ZMUC).

We measured and photographed specimens using a stereoscopic microscope Leica MZ8 (magnifications 6.3–50x) equipped with an eyepiece micrometer scale for measurements of length, and a digital camera Nikon Coolpix S630 12MP mounted on the microscope. To study and photograph genital cuticular structures, sclerites were treated in a 10% KOH solution to remove remains of soft tissue, rinsed with water and finally placed on a microscopic ring slide with glycerin to avoid structural deformation and proper description.

The distal end of the femora in the Blaberidae has been recognized as an important character (Bohn et al. 2010). Accordingly, the prothoracic femora are classified in four different types (A-D) on the basis of spines and spinules arrangement along their anteroventral edge (Roth 2003). Type D has been defined by the presence of only

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Conclusions

After the description of T. rothi sp. n., and the new records of T. neospectrum and T. conspersum, the number of species of Tribonium known from Argentina increased from two to five. Members of Tribonium and Schistopeltis exhibit femur type D0 and a similar number and distribution of spines on femora and tibiae. These similarities support the hypothesis of Rehn (1916), who suggested a close relationship between Tribonium and Schistopeltis. On the other hand, Hebard (1929), Roth (2003) and Bohn et al. (2010), suggested that leg armature might prove to be useful to distinguish Tribonium species. Our analyses of these structures indicate that this is not the case, at least in those species herein studied.

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References


