NOTA CIENTÍFICA

First record of the subfamily Proctolabinae (Orthoptera: Acridoidea: Acrididae) from Argentina

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Primer registro de la subfamilia Proctolabinae (Orthoptera: Acridoidea: Acrididae) para la Argentina

■ **RESUMEN.** Esta contribución registra por primera vez la subfamilia Proctolabinae para la Argentina. La subfamilia Proctolabinae contiene 29 géneros y 209 especies restringidas a la región Neotropical, con sólo uno de sus géneros, *Eucephalacris* Descamps, que llega al sur hasta Mato Grosso en Brasil y el norte de Paraguay. Ejemplares pertenecientes a *Eucephalacris borellii* (Giglio-Tos) fueron colectados en el departamento de Guaraní, provincia de Misiones. La presencia de *Eucephalacris borellii*, registrada en este trabajo, eleva a once el número de subfamilias de Acrididae presentes en la Argentina, y destaca la necesidad de realizar relevamientos sobre la diversidad de Acridoidea y de Orthoptera en general, en diversas regiones de nuestro país. También se brindan en esta contribución una breve diagnosis e ilustraciones de los caracteres que permiten la identificación del género y de la especie.

PALABRAS CLAVE. Proctolabinae. *Eucephalacris borellii.* Biodiversidad. Tucuras.

■ **ABSTRACT.** This contribution records for the first time the subfamily Proctolabinae from Argentina. This subfamily contains 29 genera and 209 species restricted to the Neotropics with only one genus, *Eucephalacris* Descamps, reaching south as far as Mato Grosso in Brazil and northern Paraguay. Specimens belonging to *Eucephalacris borellii* (Giglio-Tos) were collected in Misiones province. The presence of this species registered herein raises to eleven the number of Acrididae subfamilies known to occur in the country, and highlights the importance of conducting surveys of Acridoidea and Orthoptera in general, in diverse regions of Argentina. Brief diagnoses and illustrations of the characters that allowed the identification of the genus and species are also given in this contribution.

KEY WORDS. Proctolabinae. *Eucephalacris borellii*. Biodiversity. Grasshoppers.

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The Proctolabinae subfamily was first defined by Amedegnato (1974) and further classified by Descamps (1976, 1980, 1981) and Amedegnato & Poulain (1987). It is distinguished from the Melanoplinae based on the face straight or concave; fastigio-facial angle distinct; fastigium separated from face by a transverse prominent carina (Fig. 3); second segment of hind tarsi elongate (Amedegnato, 1974). At present, it contains 29 genera and 209 species restricted to the Neotropics, extending from Southern Mexico to Northern Paraguay and Southern Brazil. The subfamily is characterized to live in wet forest up to 2000 meters of elevation. In South America, most of the known species are fully winged and mostly arboreal, they occur in both primary and secondary forest throughout (Rowell & Flook, 2004). Only one of the Amazonian genera, *Eucephalacris* Descamps, reaches south as far as Mato Grosso in Brazil and northern Paraguay. The genus *Eucephalacris* is constituted by 17 species distributed in Eastern Paraguay and Bolivia, and Brazil. The purpose of this contribution is to record for the first time this subfamily from Argentina and to give a brief diagnosis and illustrate the characters that allowed the identification of the genus and species collected. This is important because despite the numerous collections carried out in different regions of the country with adequate habitats for Proctolabinae, this constitutes the first record of the subfamily from Argentina. The finding highlights the importance of conducting surveys of Acridoidea in diverse regions of the country guided by the existing taxonomic knowledge, prioritizing field work to fill in gaps that exist in our inventory of Acridoidea species. It additionally highlights the importance of protected areas such as the "Reserva de Biósfera Yabotí" where it is still possible to find grasshopper species sensitive to human activities.

Samplings were performed with an entomological net in the "Reserva de Biósfera Yaboti" Guaraní department, Misiones province. Photographs of the habitus were captured with a Canon Eos Rebel digital camera with a series of images montage using the program CombineZ5.3 (Hadley, 2006); images of the head, distal segments of the abdomen and phallic complex were captured with a Micrometrics digital Camera attached to a Nikon SMZ1000 microscope.

Eucephalacris Descamps, 1976

Type species: *Bucephalacris spatulicerca* Descamps & Amedegnato, 1970.

Diagnosis. Male: Eyes usually prominent. Interocular distance about the same as the width of pedicel of the antenna (Fig. 3). Anterior and middle femora short and robust. Apex of tegmina barely reaching the hind knee (Fig. 1). Last tergite divided dorsally. Epiproct short, truncated distally (Fig. 5). Cerci robust, with the distal portion upcurved, generally spatulated (Fig. 4). Pallium highly prominent.

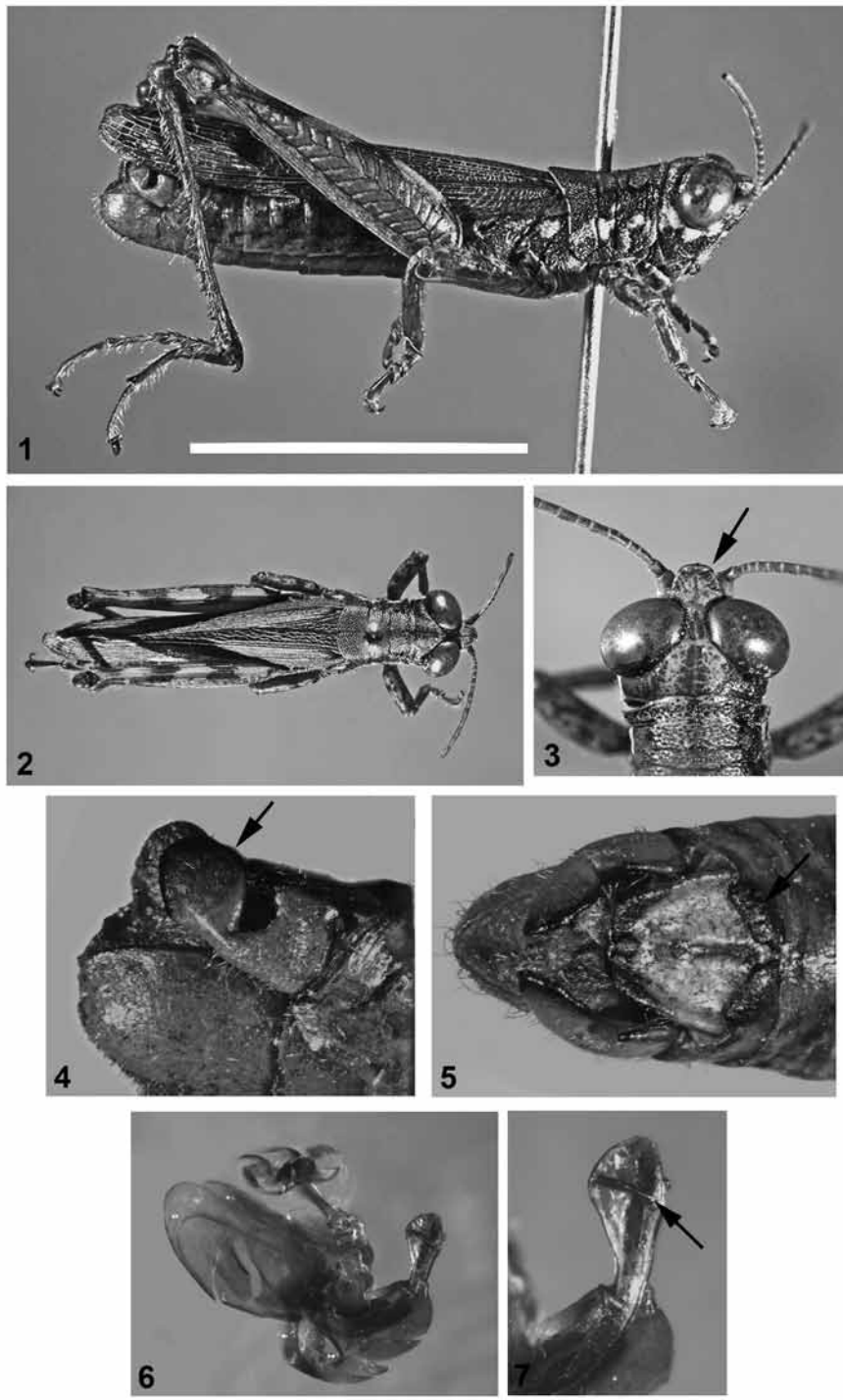
Eucephalacris borellii (Giglio-Tos, 1897) (Figs. 1-7)

Bucephalacris borellii Giglio-Tos, 1897: 31; Bruner 1906: 665.

Bucephalacris paraguayensis Bruner, 1906: 665; Descamps & Amedegnato 1970: 880; Descamps 1976: 105 (=*Eucephalacris borellii*).

Bucephalacris boliviana Bruner, 1920: 72; Descamps & Amedegnato 1970: 880; Descamps 1976: 105 (=*Eucephalacris borellii*).

Diagnosis. General color brown, with three yellow-cream spots below the eyes; lateral lobes of pronotum with light yellow longitudinal band cut by the second transverse sulcus; pleurae with the yellow-cream band starting in the anterior edge of mesothoracic epimeron; dorsal face of hind femora with three black bands; hind tibiae brown. Tarsi of hind leg as long as the two thirds of hind tibia (Fig. 1-2). Subgenital plate with superior edge not folded upwards. Male cerci with distal portion subcircular spatula-like shaped, clearly separated from the basal portion (Fig. 4). Phallic complex with dorsal aedeagal valves with spatulate apex with



Figs. 1-7. *Eucephalacris borellii* male. 1. habitus, lateral view (scale bar = 1 cm); 2, habitus, dorsal view; 3, head, dorsal view; 4,distal abdominal segments, lateral view; 5, distal abdominal segments, dorsal view; 6, phallic complex, lateral view; 7, dorsal aedeagal valves, apex, lateral view.

prominent transverse carina (Fig. 6-7).

Material examined. ARGENTINA. Misiones, Guaraní, between Fracrán and Paraíso, "Reserva de Biósfera Yaboti", 25 km southeast from Fracrán on Ruta Provincial N 15 (S26º 52´35´´ W54º 14´12.80´´), Bardi col, 05/04/2010, 1 male, MLPA. **BRAZIL**. Mato Grosso, Gaucho, Ruta N 186, Ronderos & Carbonell col, 22/01/1972, 1 male, MLPA; Mato Grosso, Ruta 163, 150 km N Campo Grande, Ronderos & Carbonell col, 27/01/1972, 1 male, MLPA.

Habitat. Openings in subtropical forest, with a thick understory of bushes and shrubs species such as *Urera baccifera* and *Chusquea ramosissima* and Compositae species (*Mikania* sp., *Eupatorium* sp, *Vernonia* sp.).

Distribution. In the Chaqueña, Paranense, Cerrado and Amazonica biogeographic provinces (Cabrera & Willink, 1973). Brazil (Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraná, Rondonia, Sao Paulo); Paraguay (Central, Caaguazú, Cordillera, Paraguarí); Bolivia (Santa Cruz); Argentina (Misiones) (See distribution map in the Orthoptera Species File online http://orthoptera.speciesfile.org/Common/editTaxon/Distribution/SpecimensMap.aspx?TaxonNameID=53460).

Cigliano & Lange (1998) summarized the state of knowledge regarding the Orthoptera known to inhabit Argentina and concluded that among this order, the only relatively well known group was the superfamily Acridoidea while all the other taxa of the order is an open subject to future study. Carbonell *et al.* (2006), in the most recent classification of the Acrodomorpha for Argentina, listed the occurrence of ten subfamilies of Acrididae (Acridinae, Copiocerinae, Cyrtacanthacridinae, Gomphocerinae, Leptysminae, Melanoplinae, Marellinae, Ommatolampinae, Oedipodinae and Pauliinae). However, the presence of *Eucephalacris borellii* registered herein raises the number of Acrididae subfamilies in Argentina and highlights the importance of conducting surveys of this group in diverse regions of the country. Taxonomic research in Orthoptera is urgent due to the environmental ravages of the biodiversity crisis and of major importance for progress in conservation and biological research generally (Samways, 2005). Regional species inventories of Orthoptera still need to be undertaken in an ambitious and coordinated manner. Such inventories must be guided by the existing taxonomic knowledge to prioritize field work in order to fill gaps in our inventory of Orthoptera species in Argentina.

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