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New species and new song record of the genus *Dociostaurus* Fieber, 1853 (Orthoptera, Acrididae, Gomphocerinae) from Southern Anatolia, Turkey

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Abstract

The new species *Dociostaurus (Kazakia) icconium* Şirin & Mol **sp. n.** (Orthoptera, Acrididae, Gomphocerinae) is described on the basis of morphology and male calling song. The congeneric partner of new species is *Dociostaurus (Stauronotulus) cappadocicus* (Azam, 1913) whose song description is done for the first time in this study. The species *Dociostaurus (Kazakia) brevicollis* (Eversmann, 1848) is assumed to be the closest relative of *Dociostaurus (Kazakia) icconium sp. n.* The relationships between the new species and the relatives/congeneric partners were evaluated by using both song and morphological characters, for which illustrations were provided. Finally, a brief remark on the distribution pattern of the species was given.

Key words: *Dociostaurus icconium sp. n.*, *Dociostaurus cappadocicus*, song, morphology, biogeography, Anatolia

Introduction

Most gomphocerine (Orthoptera) species are normally confined to cold environments or higher altitudes in the refugia (Uvarov 1921; Weidner 1969; Demirsoy 1977; Chernyakhovskii & Ravina 1997; Şirin *et al.* 2010a; Şirin *et al.* 2011). Conversely, *Dociostaurus* (Fieber, 1853) (Gomphocerinae, Acrididae, Orthoptera) is one of the most common genera with twenty-six taxa (Harz 1975; Soltani 1978; Bei-Bienko & Mistshenko 1951; Willemse 1984; Savitsky 2007) and resides in semi-desert and desert landscapes of the Palaearctic region (Savitsky 2007, 2010). Although the acoustic signals of eleven taxa within the genus *Dociostaurus* have been recorded and analyzed (Blondheim 1990; Garcia *et al.* 1994; Rague & Reynolds 1998; Bukhvalova & Vedenina 1998; Savitsky 2000; Garcia *et al.* 2005; Savitsky 2007) in the last two decades, these studies can be expanded upon. Also, studies on acoustic behavior have been shown to be the most powerful tools for defining lineages or species within the Gomphocerinae (Acrididae, Orthoptera) (Perdeck, 1957; Helversen & Helversen 1975; Elsner & Popov 1978; Rague & Reynolds 1998).

This genus is generally found in similar ecologic and climatic conditions, (Ünal 1997, 2001, 2008; Sevgili & Çıplak 2000; Sevgili *et al.*, 2011 and 2012 Şirin *et al.* 2010b) with seven taxa within the genus *Dociostaurus* having been found in Turkey: *Dociostaurus (Dociostaurus) maroccanus* (Thunberg, 1815), *Dociostaurus (Dociostaurus) salmani* Demirsoy, 1977, *Dociostaurus (Kazakia) brevicollis* (Eversmann, 1848), *Dociostaurus (Kazakia) jagoi jagoi* Soltani, 1978, *Dociostaurus (Notostaurus) anatolicus* (Krauss, 1896), *Dociostaurus (Stauronotulus) cappadocicus* (Azam, 1913) and *Dociostaurus (Stauronotulus) hauensteini hauensteini* (Bolivar, 1893) (Karabağ 1958; Demirsoy 1977; Ünal 2011). To date, there are no published song data for populations of these species in Turkey. However, the Anatolian populations were distinguished only on the basis of traditional morphology, which is not useful for several taxa of the subfamily, such as *Chorthippus* Fieber, 1852, *Stenobothrus* Fischer, 1853 and *Myrmeleotettix* Uvarov, 1914. During the field studies in Anatolia between 2010 and 2012, we collected the specimens belonging to *Dociostaurus* from the Taurus Mountain range. We found this population to be similar to *D. brevicollis* with some morphological differences; however, they share a similar habitat with *D.*