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## Contribution to the knowledge of two endemic species of Anatolian Gomphocerinae Fieber, 1853 (Orthoptera: Acrididae)

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### Abstract

This study focuses on two endemic Anatolian Gomphocerinae Fieber, 1853 species, which are evaluated in terms of nomenclature and taxonomy using biogeographical, morphological, and acoustical data. The original description of *Eremippus zeybekoglu* is supplemented by the data on new specimens collected from type locality, and the female of this species is described for the first time in this study. Based on the new specimens of *Stenobothrus weidneri* (Demirsoy, 1977) comb. nov., which were collected at the type locality, the species is transferred from *Eremippus* Uvarov, 1926 to *Stenobothrus* Fischer, 1853. Additionally, male calling songs of both species are described for the first time in this study. Also, the biogeography of these species is presented and discussed.

**Key words:** Gomphocerinae, *Eremippus zeybekoglu*, *Stenobothrus weidneri* comb. nov., calling songs, biogeography

### Introduction

Gomphocerinae Fieber, 1853 is one of the most widespread Acrididae subfamily in Orthoptera and they generally prefer lush lowland meadow, steppe, open woodland, and high mountain habitats (Bei-Bienko & Mistshenko 1951; Harz 1975; Bukhvalova & Vedenina 1998; Mol & Zeybekoğlu 2013). It is reported that Gomphocerinae grasshoppers constitute some 1350 taxa (species/subspecies) belonging to 186 genera in the whole Holarctic region (Eades *et al.* 2014).

The first study about Gomphocerinae taxa of Turkey was carried out by Bolivar (1899) followed by Uvarov (1934), Ramme (1951), Bey-Bienko & Mistshenko (1951), Karabağ (1958), Weidner (1969), Ünal (1999), and Sevgili & Çıplak (2000). This subfamily was studied in detail by Weidner (1969) and Demirsoy (1977) who reported 67 and 66 taxa, respectively. Later, Çıplak *et al.* (2002) reported a total of 80 taxa belonging to 18 genera, while Ünal (2014) listed 18 genera and 92 taxa in these genera. In the most recent and comprehensive study, Mol & Zeybekoğlu (2013) reported that a total of 98 taxa belonging to 18 genera are distributed all over Turkey.

The members of the genus *Eremippus* Uvarov, 1926 have been mostly recorded from semi-desert and desert landscape of the Palaearctic Region (Bei-Bienko & Mistshenko 1951; Kalacheva 2005; Savitsky 2007; Zinenko & Striganova 2012). Consisting of some 47 taxa, the species of this genus are distributed in Crimea, southeastern European part of Russia, Caucasus, southern West Siberia, Armenia, Iran, China, Kazakhstan, Azerbaijan, Turkmenistan, Georgia, Tajikistan, Kyrgyzstan, Uzbekistan, and Anatolia (Bolivar 1899, Uvarov 1934, Bei-Bienko & Mistshenko 1951, Harz 1975; Demirsoy 1977; Stolyarov 1997; Kalacheva 2005, 2006; Savitsky 2007; Gyulainé 2010; Pokivailov 2011; Zinenko & Striganova 2009, 2012; Eades 2014; Ünal 2014). Until now, only six species have been recorded in Anatolia, namely *E. simplex* (Eversmann 1859); *E. angulatus* Uvarov, 1934; *E. gracilis* Uvarov, 1934; *E. turcicus* Ramme, 1951; *E. weidneri* Demirsoy, 1977 and *E. zeybekoglu* Mol, 2012 (Mol & Zeybekoğlu 2013; Ünal 2014). Almost all of them were loosely defined and described by respective researchers,