



# Article

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## New species of the genus *Troglophilus* Krauss, 1879 (Orthoptera: Rhaphidophoridae) from Western and Southern Anatolian caves, Turkey

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### Abstract

In this paper four new species of *Troglophilus* Krauss, 1879 cave crickets from Southern and Western Anatolia are described (*T. alanyaensis*, *T. fethiyensis*, *T. ozeli* and *T. ferzenensis*). Considering the other five species already documented from the area, there is now a total of 9 recorded species of *Troglophilus* that currently inhabit the caves and epigeal habitats of Turkey. The occurrence of two new species in the western Aegean region of the Anatolia (*Troglophilus fethiyensis* **sp. nov.** and *T. ozeli* **sp. nov.** from Mugla and Havran provinces respectively) allowed us to improve considerably the knowledgements on their geographic distribution in Turkey, until now limited to the Southern Anatolia and a little enclave of Pontic region. The new species are all morphologically homogeneous, showing a clear affinity with the other Anatolian species *T. adamovici* Us, 1974; *T. gajaci* Us, 1974; *T. escaleraei* Bolivar, 1899 and *T. bicakcii* Rampini & Di Russo, 2003 from Southern Taurus caves. The best character that permits to distinguish these groups is the ovipositor shape. Of particular interest is the finding of the new species *T. ferzenensis* **sp. nov.** in the Ferzene cave. This species, synoptic with *T. adamovici*, although morphologically similar to *T. escaleraei*, differs from all the known Turkish species in the different spinulation of the legs, resulting close to the Aegean species *T. spinulosus* Chopard, 1921 from Crete and *T. marinae* Rampini & Di Russo, 2003 from Santorini.

**Key words:** Orthoptera, Rhaphidophoridae, *Troglophilus*, cave crickets, Turkey

### Introduction

The genus *Troglophilus* Krauss, 1879 shows a discontinuous distribution in southern Europe from Mediterranean basin to Anatolia (Turkey) including at present 15 known species (Karaman *et al.* 2011; Eades *et al.* 2011). Until now, five species of genus *Troglophilus* belonging to the subgenus *Troglophilus* (*Troglophilus*) Krauss, 1879 were described from Anatolia, Turkey. The first species of this genus recorded from Turkey *T. escaleraei* (Jenidje-Kalè) was described by I. Bolivar (1899), on the basis of the sample collected during the pioneering travel in Asia Minor of M. Martinez Escalera. Other species from Anatolia, *T. adamovici* (Zindan cave) and *T. gajaci* (Cennet cave) were described seventy-five years later by P. A. Us (1974) on the material collected by Jean Gajac between 1963 and 1970. After these first studies we have to await the new century to obtain new data and new collections of Rhaphidophoridae from caves and epigeal habitats of Turkey. Particularly our researches in Mediterranean and Black Sea areas of Turkey allowed us to expand our knowledge on this genus in Anatolia describing two new species: *T. bicakcii* Rampini & Di Russo, 2003 and *T. tatyanae* Di Russo & Rampini, 2007. Therefore the known distribution of *Troglophilus* included only Eastern Black Sea region and Mediterranean region, from Antalya to K. Maraş along the Taurus Mountains. However, commencing in 2008, new extensive investigations on cave habitats from different geographic regions of Anatolia (Taylan *et al.* 2011), permitted us to study new populations of *Troglophilus* which are the point of our descriptions reported in this article. These new data expand the geographic distribution of *Troglophilus* in Turkey and now include not only Black Sea and Mediterranean regions but also several caves from Western Anatolia.