



## Contribution to the taxonomy of *Poecilimon bosphoricus* species group (Orthoptera: Phaneropteridae): two new species from its core range

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### Abstract

The *Poecilimon bosphoricus* species group, representing the most diverse lineage of the bushcricket genus *Poecilimon*, has been studied in the Basin of Marmara Sea. Two new species, *P. warchalowskiae* sp. n. and *P. canakkale* sp. n., are described morphologically and acoustically in comparison to their related taxa of the *P. bosphoricus* species group. Song type and morphology of the new species suggests that they are related to *P. turcicus*, *P. turciae* and *P. athos* and each of these five species can be distinguished by their specific male cerci. The diagnoses are supplemented with comparative figures of morphology and song. Additionally, a short account is given on the synonymy of *P. anatolicus* with *P. sureyanus*.

**Key words:** Genus *Poecilimon*, biacoustics, systematics, taxonomy, Turkey

### Introduction

The extraordinary speciose bushcricket genus *Poecilimon* (Orthoptera, Phaneropteridae, Phaneropterinae) presently includes about 130 valid species (Eades *et al.* 2015 except the synonymous according to Kaya *et al.* 2012 *P. boldyrevi* Miram, 1938 and the undecided priority for the names *P. tauricus* Retowski, 1888 and *P. flavescens* (Herrich-Schäffer, 1838)) distributed mainly in the Aegean and the Black Sea Basins. The taxonomical arrangement in this genus has been unstable for the conflicts existing between different studies. A main reason for these conflicts may be considered the specific evolutionary history of the genus. In many cases species radiated in allopatry that led to weak morphological and/or acoustic differentiation or, in other cases, the rapid recent radiation events have been altered by subsequent hybridization in secondary contact zones (see Boztepe *et al.* 2013). In addition, the results may be distorted, when the systematic studies rely on unidirectional approaches or/and are restricted taxonomically or geographically.

After the bioacoustic study on *Poecilimon* by Heller (1984), a tendency of integrating different approaches for grouping taxa and studying their relationships developed resulting in a significant contribution to the systematics of this genus (e.g., Heller & Lehmann 2004; Heller & Sevgili 2005; Heller *et al.* 2006; Heller *et al.* 2008; Chobanov & Heller 2010; Ullrich *et al.* 2010; Heller *et al.* 2011; Kaya *et al.* 2012; Boztepe *et al.* 2013). First outlined as "Group VIII" by Ramme (1933) and later supported by Ullrich *et al.* (2010) as monophyletic, the *Poecilimon bosphoricus* species group has been reviewed by Kaya *et al.* (2012) as the largest group in the genus. Kaya *et al.* (2012) listed 21 valid species grouped in three subgroups according to the amplitude-temporal pattern of the male song. Later on Ünal (2012) rejected some synonymies and re-established the subspecific status of *P. similis proximus* Ünal, 2010, thus, presently the group counts 24 species (considering the above mentioned synonymy of *P. flavescens* and *P. boldyrevi*).

The highest diversity of species and morphotypes of the *Poecilimon bosphoricus* group is concentrated in the region of the Dardanelles—the Sea of Marmara—the Bosphorus straits system, which appears to be the main (core)