



Taxonomy of *Anterastes* and related genera: a new synonym and a new species of *Anterastes*

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Abstract

Among the Anatolian Tettigoniinae (Orthoptera, Tettigoniidae) the genera *Anterastes*, *Koroglus*, *Sureyaella* and *Rhacocleis* are distinguishable from the others by presence of one pair of spurs on the apico-ventral end of hind tibiae. The last two can be easily distinguished from the others by several distinct features, but the separation of the first two from each other is problematic. A new species described here provided opportunity of re-evaluating their taxonomy. The new species *Anterastes antecessor* **sp. n.** is described based on morphology, male calling song and genetic data. The taxonomy of *Anterastes* and *Koroglus* is rectified based on phylogenetic hypotheses obtained from representative 16S rDNA haplotypes. *Sureyaella bella*, *Parapholidoptera signata* and *Bolua turkiyae* are used as out groups in different combinations to obtain a more stable phylogeny. Although analyses with different outgroups suggested the same topology, the phylogenetic tree with outgroups *Parapholidoptera signata* and *Bolua turkiyae* resulted with the highest bootstrap supports to the branches. Phylogenetic trees suggested the following relationships for the ingroup species; (*A. antecessor* **sp. n.** + ((*Koroglus disparalatus* + *A. uludaghensis*) + (*A. turcicus* + (*A. niger* + (*A. ucari* + *A. babadaghi*)))) + ((*A. tolunayi* + (*A. serbicus* + *A. antitauricus* + *A. burri*))). Considering the phylogenetic hypotheses and characters used in previous publications, *Koroglus* is put in synonymy with *Anterastes*, and a new combination is suggested for the only species of the former *Anterastes disparalatus* **comb. n.** A short remark is given about the characters used in the generic taxonomy of the group.

Key words: *Anterastes*, *Koroglus*, *Anterastes disparalatus*, *Anterastes antecessor*, phylogeny, song, taxonomy

Introduction

Kaltenbach (1971) suggested East Mediterranean to be the centre of origin of the subfamily Tettigoniinae (Orthoptera, Tettigoniidae). This subfamily is represented by 31 genera and 168 species in Turkey (Ciplak 2003; Ciplak *et al.* 1999). Among these *Anterastes*, *Koroglus*, *Sureyaella* and *Rhacocleis* are distinguishable from the others by presence of one pair of spurs (two pairs in others) on the apico-ventral end of hind tibiae (Uvarov 1934; Harz 1969; Ünal 2002; Ciplak 2004). *Koroglus* and *Sureyaella* are monotypic and endemic to Anatolia (Uvarov 1934; Ünal 2002) while the other two include several species (Ciplak 2003). *Anterastes* is represented with 10 species, nine of which are endemic to Anatolia, while *A. serbicus* Brunner von Wattenwyl is also distributed in the Balkans. All Anatolian species of these four genera are known from the western side of the Anatolian Diagonal (Ciplak 2003, 2004, 2008). Of the total 11 species belonging to *Anterastes* and *Koroglus*, one-third has been described in the last decade. The increase in species number is probably because of two reasons; first, extensive field studies and second, application of contemporary and comprehensive taxonomical approaches. In agreement with these statements we encountered a new species belonging to this group during our recent field studies and this obligated us to re-consider the taxonomy of *Anterastes* and *Koroglus*.

Although above mentioned four genera share the presence of two apical spurs *Sureyaella* distinctly differs from the others by several characteristics, some of which are: the pronotum with depressed disc and distinct-rounded lateral carinae (pronotum is cylindrical in the other three), the prominent medial carina in metazona, the titillators with apical arms less than half the length of the long basal arms and both of which denticulate (apical arms are long