



### Validation of four species of *Poecilimon* Fischer (Orthoptera: Tettigoniidae: Phaneropterinae)

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Kaya *et al.* (2012) published a paper on the genus *Poecilimon* Fischer (Zootaxa, 3225). They synonymized eight species based on morphological characters by bioacoustic data (according to them). They frequently cited my paper (Ünal, 2010) during the text. But, I have seen that some cited informations from my paper and the reflecting my statements need correction, and some mistakes and wrong evaluations which are the bases of their taxonomic decisions should be re-evaluated. Furthermore many related results of Ünal (2010) were overlooked.

Kaya *et al.* (2012) state "Ünal (2010) has already used the name *P. sureyanus* group, though he listed here only few of the species formerly united in genus *Eupoecilimon*. He (l.c.) splits this natural grouping into few groups, including here only the species found in Turkey. He also refers only to morphology (including variable characters—see below) and thus, the latter grouping cannot reflect the natural relationships. Taking into account the published information (including molecular data—Ullrich 2010) and new information (see below) we outline the group and use the oldest published name for the group—*P. bosphoricus*." First of all I have not used only the name *P. sureyanus* group but also the name *P. bosphoricus* group, *P. cervus* group, *P. similis* group and *P. turciae* group for their *P. bosphoricus* group. Because I have made more detailed grouping [I have also split e.g. *P. syriacus* group into small groups etc. (see Ünal, 2010)]. Kaya *et al.* (2012) unite all of these groups under *P. bosphoricus* group. This is not a surprise, because I have clearly explained the reason of my small grouping with examples in the last paragraph of the discussion part (Ünal, 2010). But, unfortunately Kaya *et al.* (2012) did not mention it. On the other hand they passed over the parameters used to determine the relationship and to determine the speciation stages of the taxa although I have used them several times (on pages 126, 163, 165). In addition to the morphology, I have used the congeneric partners and the distribution to determine the relationships (Ünal, 2010). In addition, contrary of their statement (see above quotation) I have discussed the variable characters under the title "genus *Poecilimon*" (on pages 138, 139) synonymizing the *Poecilimonella* and under the species *P. similis* synonymizing the *P. richteri*. I have not used those variable characters grouping the species (see Ünal, 2010). Therefore, it cannot be propounded that the grouping proposed by Ünal (2010) is "not natural".

Kaya *et al.* state "Ünal (2010) proposes again to use the name *Eupoecilimon* as subgenus name for the *bosphoricus* group, but for such an action the relationship to other species groups should be known." Many important results proposed by Ünal (2010) were overlooked including the relationship of the species groups. Ünal (2010) stated that a detailed grouping and the relationships of the taxa and species groups were studied (17 taxa of their *P. bosphoricus* group, 69 species and subspecies, and 16 species groups of *Poecilimon*). Besides I did not propose the name *Eupoecilimon*, solely for their *bosphoricus* group but also for the *P. luschani* sp. group. I have proposed the relationship of the species groups of the subgenus *Eupoecilimon* (or superspecies group) as follows (see Ünal, 2010: 139): (((((*P. turciae* sp. group+*P. similis* sp. group)+ *P. sureyanus* sp. group)+ *P. bosphoricus* sp. group)+ *P. cervus* sp. group)+ *P. luschani* sp. group). It is clear from this phylogenetic relationship that, Kaya *et al.* (2012) united the first 5 species group into one monophyletic group under the name *P. bosphoricus* group. In fact their grouping supports the relationship determined by Ünal (2010) as a whole. But, they did not mention the relationship of species and species groups proposed by Ünal (2010) which are directly related to their topic.

Kaya *et al.* (2012) repeat three times in the Material Methods, Introduction and Discussion sections "In previous studies, descriptions and diagnoses of the species of *P. bosphoricus* group were based on qualitative examination of three structures; the pronotum (mainly in male), the male subgenital plate and male cerci." But, it is not so. Bey-Bienko (1951), Karabağ (1950, 1953, 1956, 1962, 1964, 1975), Willemse (1982), Heller and Lehmann (2003), Heller and Sevgili (2005); Ünal (1999, 2001, 2003, 2004, 2005, 2010) etc. were used, studied or illustrated the fastigium of vertex in both sexes, the female subgenital plate, ovipositor, especially the gonangulum and the basal fold of the lower valve of ovipositor as taxonomic characters. All this previous accumulated knowledge cannot be ignored.