

Summary

Poecilimon Fischer, 1853, is a genus of bush-crickets, that belongs to the order of the Orthoptera of the family Tettigoniidae Krauss, 1902 and is found in the Palearctic area. It includes 145 species, divided into 17 groups and 16 species not assigned to any of them. One of the species groups is *Poecilimon ornatus*, of which the greatest species diversity is observed on the Balkan Peninsula. Despite several reviews, the systematics and phylogeny of this group are still unclear, and the biggest problem is with *P. affinis* and the taxa closely related to it. Therefore, within the *P. ornatus* group, the *P. affinis* complex was designated based on the morphological similarity of five subspecies of *P. affinis* and two species: *P. nonveilleri* and *P. pseudornatus*. The presented doctoral dissertation in the form of a series of three articles (Kociński, 2020, *Folia Biologica (Kraków)*; Kociński et al., 2021, *PeerJ*; Kociński et al., 2022, *Arthropod Systematics & Phylogeny* - accepted for publication) verifies the phylogenetic relationships of species from the *P. ornatus* group using the molecular and morphological methods. For molecular studies, the sequences of three mitochondrial markers - the cytochrome c oxidase subunit I (COI), NADH dehydrogenase subunit 2 (ND2), the control region (CR), and one nuclear marker - the internal transcribed spacer 1 (ITS1) were used. The morphometric measurements of four morphostructures (pronotum, cercus, ovipositor, and tegmen) were also performed. Additionally, an analysis of the stridulatory file was conducted. The molecular and morphological studies confirmed that the *P. ornatus* group is monophyletic. It was found that within the group there is the *P. affinis* complex, into which two additional species should be included: *P. ornatus* and *P. hoelzeli*. The ancestor of the species in the studied group probably came from the southern Balkans, and then extended its range towards the northern part of the Balkan Peninsula. The process of species differentiation was preceded by six dispersals and five vicariance events linked to climate and geological events changes in the Pleistocene. Analysis of the species delimitation revealed nine hypothetical species within the *P. ornatus* group and one species within the *P. affinis* complex. The results of geometric morphometrics showed that the tegmen and the cercus are suitable structures to distinguish taxa composing the complex from other taxa of the *P. ornatus* group. The confirmation of the taxonomic status of *P. poecilus* and *P. rumijae* requires additional research based on the bioacoustic data of the bush-crickets.