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MOLECULAR SYSTEMATICS AND SPECIES DELIMITATION OF Podarcis cretensis, P. levendis AND P. peloponnesiacus OF THE SOUTH AEGEAN REGION

Loukia SPILANI¹,², Katia BOUGIOURI¹,², Aglaia ANTONIOU³, Petros LEMBERAKIS¹, Nikolaos PSONIS¹,² and Nikos POULAKAKIS¹,²*

1. Natural History Museum of Crete. School of Sciences and Engineering, University of Crete, Knossos Avenue, Heraklio, Crete, Greece, Email: poulakakis@nhmc.uoc.gr
2. Department of Biology, School of Sciences and Engineering, University of Crete, Vassilika Vouton, Heraklio, Crete, Greece
3. Institute of Marine Biology, Biotechnology and Aquaculture, Hellenic Centre for Marine Research, Gournes Pediados, Heraklio, Crete, Greece

* Equal contribution
* Corresponding author

In recent years, there have been numerous studies focusing on the systematics of the wall lizards of the genus Podarcis, uncovering several cases of cryptic diversity, such as the cases of the Cretan (southern Aegean) and Pori (islet between Crete and Peloponnisos) wall-lizards that were recently recognized as distinct species (P. cretensis and P. levendis, respectively). In this study, nucleotide sequences from five genes (two mitochondrial – 16S rRNA & cytb and three nuclear – MC1R, pod15b & pod55) were used to infer intra- and inter- phylogenetic relationships of P. cretensis, P. levendis, and P. peloponnesiacus through Bayesian Inference and Maximum Likelihood approaches using P. erhardii as outgroup. Moreover, the boundaries of the putative species were evaluated by employing several species delimitation methods, aiming to ‘determine’ the exact number of species and their phylogenetic status. The phylogenetic analyses revealed that all the examined species are monophyletic. Among them P. levendis, although without statistical support, appear to be more closely related to P. peloponnesiacus. The Cretan species is further subdivided into three major groups of lineages with distinct geographic distributions whereas P. peloponnesiacus into two. The above results combined with the analyses of species delimitation stress the need for a taxonomic reconsideration of the studied taxa both at the species and subspecies level.