



POSTERS

**SPOTLIGHT ON ISLANDS: DEEPLY GENETIC DIVERGENCE OF THE ITALIAN WALL LIZARD *Podarcis siculus* IN THE PONTINE ARCHIPELAGO**

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Insular systems have always been considered as excellent natural laboratory to study microevolutionary processes driving genetic diversification and lately speciation. In the present study we carried out a phylogeographic analysis on the Italian wall lizard (*Podarcis siculus*) including 46 peninsular populations (n = 82) and four island populations (n = 61) from the Northern Pontine Archipelago. The genetic variability level of the insular populations of Ponza, Gavi, and Zannone was analysed for the first time in this study using two mitochondrial fragments of cytb and nd4 (n=143 specimens) and the nuclear mc1r (n=126 specimens). In the northern Pontine Archipelago the mtDNA showed the presence of an ancient and monophyletic clade highly divergent from the continental clades. Our estimate of the TMRCA placed an early separation dated at about 2.6 Mya suggesting a unique colonization event of the archipelago. The statistical parsimony network allowed us to detect a certain level of structure among islands with Zannone showing the highest level of isolation and differentiation, Ponza and Gavi showed a shared haplotype while Palmarola population experienced multiple colonizations from Ponza. Conversely, the nuDNA on the whole dataset, did not show the same mtDNA structure. However, the Pontine clade exhibits a certain level of differentiation from the mainland with the presence of unique haplotypes. The nuDNA geographic distribution within the Pontine Islands suggest a possible existence of a pre-LGM gene flow when the island were connected. Definitely our data clearly deny the hypothesis of a possible recent human mediated introduction from central Italy to these islands as mentioned by previous studies. Instead, the Pontine clade showed an ancient phylogenetic divergence, a limited and isolated distribution and genetic structure among the islands. Therefore these populations should be considered as ESU / Evolutionary Significant Unit, deserving a conservation attention of its internal diversity.