Biogeographic and evolutionary patterns in endemic reptiles from Corsica and Sardinia

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Abstract: Corsica and Sardinia are important hotspots of diversity and endemism. Surprisingly, only a few studies are available on geographic variation and evolutionary history of Corsican-Sardinian species. In this study we investigate biogeographic and evolutionary patterns of three lacertid lizards endemic to Corsica and Sardinia under a comparative phylogeographic framework. We analysed mitochondrial gene genealogies in *Archaeolacerta bedriagae, Podarcis tiliguerta*, and *Algyroides fitzingeri* including populations from the entire species’ distribution range. Preliminary results show a complete lack of phylogeographical concordance among significant genealogical partitions across the studied species. Each species shows an idiosyncratic pattern of geographical distribution of genetic diversity and a different degree of differentiation among the main lineages with *P. tiliguerta* likely representing a species-complex, *A. bedriagae* showing two main (well differentiated) lineages and *A. fitzingeri* showing a very low differentiation among populations. Based on these preliminary results, the absence of common phylogeographic patterns in these three co-distributed species would reflect a complex of historical, evolutionary and biogeographical processes within the Corso-Sardinian biota. Further investigations with the inclusion of nuclear markers are needed for a better understanding of the complexity of the processes underlying the origin and the patterns of diversity in endemic reptiles from Corsica and Sardinia.