

**Life in extreme habitats. Lizards of small islands, islets and rocks: some examples from the western Mediterranean**

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The Mediterranean region is an important biogeographical "crossroad", where islands represent crucial biodiversity reserves particularly rich in endemic species. Several thousands of islands, islets and rocks, of which less than the 3% is permanently inhabited by Man are found in this area. Paleo-geographical issues are not always the most important factors in explaining the present faunal composition of these islands, because man intervention has also played an important role. Strong and extended effects of human activity are therefore one of the current distinctive features of Mediterranean faunas. According to the present knowledge, this effect has been acting since the Neolithic times starting in the Near East and extending westwards. Since then many of the characteristic biogeographical elements of the region have undergone a process of exploitation which has continued across into historical times till now. The exploitation of habitats, of native species as well as the voluntarily/involuntarily introduction of aliens led to the extinction of several island autochthonous species. At present the terrestrial herpetofauna of many of the Mediterranean islands displays a partially homogeneous composition of elements. It also consists of species that are more or less common to the present fauna of all the Mediterranean islands, showing in part a generic continental origin influenced by the faunal composition of the nearest mainland. Endemic amphibians mostly occur on the biggest western Mediterranean islands while endemic reptiles survived also on secondary, sometimes quite inaccessible and "insignificant" small islands. Some geckoes and some lizard species (e.g. *Podarcis*) are able to inhabit, even in very low densities, tiny islet (area < 5000 m<sup>2</sup>) where no other terrestrial vertebrates would be seemingly able to live. Within reptiles the highest rate of endemism is attained by lizards, in particular in micro-insular contexts. These endemic small island populations that survived therefore became "uniqueness"! Within vertebrates the terrestrial herpetofauna can be considered one of the main indicators for island faunistic population dynamics. Thus the study of the eco-ethological characteristics of this fauna, developed over thousands of years on small islands and islets, become of fundamental importance not only for the identification of proper conservation strategies but also because of the opportunity given by these evolutionary laboratories to test and investigate peculiar ecological traits as well as evolutionary routes.