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Assessment of the origin of the Iberian populations of *Podarcis sicula* using mitochondrial markers

The species introductions already constitute one of the major threats to biodiversity worldwide. Determining the origin of such aliens is the first step to develop successful strategies of prevention and minimisation. The Italian wall lizard, *Podarcis sicula*, is a lacertid predominantly present in the central Mediterranean region, also inhabiting Sardinia, Sicily and Corsica as well as on many Adriatic islands. It frequently occurs in humanized areas, but is really fast and shy compared to other lacertids. Several scattered populations have been reported across the Mediterranean basin, namely Toulon in France, Istanbul and Marmara Islands in Turkey, Tunis and Tripoli in North Africa, and Menorca in Spain where is the dominant lizard. Experimental evidence has demonstrated behavioural interference and competitive exclusion of congeneric species and instances of hybridisation between introduced populations and other local *Podarcis* are also known. This suggests that the introduction of this species may be highly harmful for the local biota. In the Iberian Peninsula, populations of undetermined origin are currently known from three coastal populations with very contrasting climatic conditions. Namely, those in Almeria city (SE Spain) and Noja beach (Santander, N Spain) are suspected to be old (40-50 years ago) whereas that in Lisbon (SW Portugal) is a more recent (end of 90's). Here we assess the origin of all three populations using the cytochrome b gene by putting sequences generated together with those published for the species both in its autochthonous range and in other introduced populations. Results are discussed in the context of the phylogeography of the species and its invasive character.

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Chytrid fungus and the reality of Portuguese amphibian high elevation populations

In the last years, it has been recognised that the emergence of a new infectious disease, chytridiomycosis, is one of the major causes of amphibian decline and biodiversity loss at the global scale. This pathogen has been first detected in Europe less than ten years ago. By the end of August 2009, several post-metamorphic *Alytes obstetricans* were found dead on the surroundings of an artificial pond called "Lagoa do Covão das Quelhas" (1810 m a.s.l.) in the Serra da Estrela Natural Park (PNSE), Central Portugal. The similarity of this event with the mass die-offs in Peñalara Natural Park (Central Spain), lead us to suspect of a possible new chytridiomycosis outbreak. We here present new evidence suggesting that chytridiomycosis is related, not only, to the observed mortalities of *A. obstetricans* but also to the experienced recent decline of the toads' populations in the area. Some ponds/lakes in the same area and elevation range maintain different levels of chytridiomycosis prevalence. We present data on the association with the presence/ absence of predators, other amphibian species and their densities.