

Isolation and characterization of 15 polymorphic microsatellite loci in the wall lizard *Podarcis lilfordi*

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Abstract: The endangered (CITES II listed) lizard species *Podarcis lilfordi* Günther, 1874 is endemic to the Balearic Islands. It is biogeographically unique, in that natural populations are absent from the main islands of Mallorca and Menorca, but present at generally very high densities on many of the tiny coastal rocks, islets and islands that surround them.

Analyses using mtDNA sequences have identified considerable fine-scale geographical structuring (Terrasa *et al.* 2009), a complete understanding of the significance of current subspecific designations, the occurrence of cross-islet introductions, and the evolutionary history of the different forms have been hampered by the relatively slow fixation rates of this marker in relation to recency of population vicariance. Markers with many alleles, such as microsatellite loci, have unprecedented ability to detect and describe genetic differences between populations at much smaller geographical scales and time intervals than has traditionally been possible using mtDNA. A panel of fifteen microsatellite loci was described for the lizard *Podarcis lilfordi*, by using enriched genomic libraries for AAAG and ACAG repeat sequence. Characterization of these loci, in 26 individuals within one population (Dragonera's islet) showed to be highly polymorphic with 6–19 alleles, the observed and expected heterozygosities ranged from 0.46 to 0.92 and 0.78 to 0.95, respectively, and did not deviate from Hardy–Weinberg expectations.

These loci were successfully cross-amplified in the closely related species *P. pityusensis*, so these markers will be used to study population differentiation in these species as well as the evolutionary history of different morphological forms.