Phylogeography of a mountain lizard species: An ancient fragmentation process mediated by riverine barriers in the Liolaemus monticola complex (Sauria: Liolaemidae)

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Liolaemus monticola is a mountain lizard species, with a widespread distribution from central Chile that displays several highly polymorphic chromosomal races. Our study determined the phylogeographic structuring and relationships among three chromosomal races of L. monticola in Chile. Mitochondrial DNA (mtDNA) sequences of the cytochrome b gene were examined using the following phylogenetic methods: maximum parsimony, maximum likelihood, Bayesian inference and nested clade phylogeographic analyses (NCPAs). These methods revealed two major monophyletic clades (north and south) in the L. monticola species, with non-overlapping geographical locations separated by the Maipo and Yeso rivers (except one hybrid, from a zone of secondary contact). The NCPA showed that a past fragmentation process likely resulted in the separation of the two clades. The southern clade includes all samples of the 'Southern, 2n = 34' race; the northern clade is comprised of all remaining derived chromosomal race