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488

Taxonomic revision of Algero-Tunisian *Pleurodeles* (Caudata: Salamandridae) using molecular and morphological data. Revalidation of the taxon *Pleurodeles nebulosus* (Guichenot, 1850)

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Abstract

The taxonomic status of Algero-Tunisian *Pleurodeles* was reanalysed in the light of new molecular and morphological evidence. Mitochondrial DNA sequences (396 bp of the cytochrome *b* and 369 of the 12S rRNA) and the results of the morphometric analysis, indicate that Algero-Tunisian *P. poireti* consists of two genetically and morphologically distinct forms. One restricted to the *Edough Peninsula*, and another one covering all the rest of its distribution in Algeria and Tunisia. The name *P. poireti* (Gervais, 1835) is restricted to the population of the *Edough Peninsula*, while *P. nebulous* (Guichenot, 1850) correctly applies to all other populations in the distribution. *P. poireti* originated approximately 4.2 Myr ago, probably as a result of the *Edough Peninsula* being a Pliocene fossil island, allowing both forms of Algero-Tunisian *Pleurodeles* to diverge both genetically and morphologically.

Key words: *Pleurodeles***,** Algeria, taxonomy, mitochondrial DNA, 12S rRNA, cytochrome *b*, morphology, Pliocene fossil island

Introduction

The genus *Pleurodeles* currently consists of two species. *P. waltl* Michaelles and *P. poireti* (Gervais, 1835). Morphology and mitochondrial DNA sequences indicate that, among living forms, the sister taxon of *Pleurodeles* is *Tylototriton* from southeast Asia (Titus and Larson, 1995). Despite some fossils originally thought to be related to *Pleurodeles* dating back to the Upper Oligocene of Germany (*Palaeopleurodeles* Herre 1941), it is believed that the origin of *Pleurodeles* is much more recent, having split from its sister taxon (*Tylototriton*) during the Middle Miocene, some 10 Myr ago (see Carranza and Arnold, 2003 for a critical review of the Palaeontological data). This result is supported by the age of the

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