

Comparative morphology of *Triturus karelinii* populations from western and central Turkey (Amphibia: Urodela)

by Kurtuluş Olgun, İbrahim Baran and Cemal Varol Tok

Abstract: Three different populations of *Triturus karelinii* from the Aegean region (Bozdağ), eastern Anatolia (Koyulhisar), and the Marmara region (İstanbul) are compared in terms of morphometric measurements and ratios, and features of colouration pattern. The Bozdağ population differs from the Koyulhisar population in eight characters, and from the İstanbul population in ten characters. According to the coefficient of difference, males from Bozdağ differ from Koyulhisar males in three characters, whereas the males from İstanbul differ in two characters. Furthermore, females of the Bozdağ population differ from females from Koyulhisar in three characters, whereas they are different from İstanbul females in two characters. These results show the clear separation of the Bozdağ population from the other two populations. However, in our opinion the Bozdağ population should be re-examined with biochemical methods combined with biological, ecological and behavioural approaches.

Kurzfassung: Es werden drei Populationen von *Triturus karelinii* aus der Ägäis (Bozdağ), Ost-anatolien (Koyulhisar) und der Marmara-Region (İstanbul) im Hinblick auf Körpergröße und -proportionen sowie Färbung und Zeichnung vergleichend untersucht. Dabei unterscheidet sich die Population aus Bozdağ von der aus Koyulhisar in acht Merkmalen und von der aus İstanbul in zehn Merkmalen. Nach den Verschiedenheits-Koeffizienten unterscheiden sich männliche Exemplare aus Bozdağ in drei Merkmalen von Männchen aus Koyulhisar und in zwei Merkmalen von Männchen aus İstanbul. Weibliche Exemplare aus Bozdağ unterscheiden sich in jeweils zwei Merkmalen von solchen aus Koyulhisar und İstanbul. Zusammenfassend kann festgestellt werden, dass deutliche Unterschiede zwischen der Bozdağ-Population einerseits und den zwei anderen Populationen bestehen. Es erscheinen aber weitere umfassendere Untersuchungen nötig, um den Sachverhalt befriedigend zu klären.

Key words: *Triturus karelinii*, systematics, distribution, morphology, Turkey.

Introduction

Morphological, chromosomal, mitochondrial, DNA variation and isoenzymatic studies show that the subspecies of *Triturus cristatus* – *cristatus*, *carnifex*, *dobrogicus* and *karelinii* – should be recognized as full species. These populations live in definite regions which are separated from each other by clear borders (KALEZIC & HEDGECOCK 1980, MACGREGOR & SESSIONS 1986, MACGREGOR et al. 1990): *T. cristatus* is distributed from northern France, England, southern Scandinavia through Central Europe to the Ural mountains; *T. dobrogicus* is distributed in two regions west of the Black Sea region, Romania, Moldavia, Southwestern Ukraine, Hungary, Eastern Austria, Southern Slovakia, Slovenia, Serbia and Northern Croatia; *T. carnifex* is distributed in Italy, the Southern Alps and the western Balkans, and the range of *T. karelinii* extends along the south and west coast of the Black Sea region and from