

Life history traits of a *Bufo variabilis* (Variable toad) population from Sapanca, Turkey

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Aim of the study: The goal of this paper is to reveal the first data on some life history traits (the age, body size and sexual maturity) of a *Bufo variabilis* (variable toad) population from Marmara region (Sapanca, Sakarya) of Turkey.

Material and Methods: In order to determine the age structure of *Bufo variabilis* (Pallas, 1769) population living in Sapanca, the skeletochronological method, which based on counting the lines of arrested growth (LAGs) in cross-sections taken from phalanges, was used. We prepared cross-sections (16 µm) of the phalangeal diaphysis by a freezing microtome (Shandon Cryostat, Germany) and stained them with Ehrlich hematoxylin. Cross-sections with the narrowest medullar cavity were examined for the presence of LAGs under a light microscope and they were independently assessed by two of the authors to provide precise age estimation.

Results: The maximum observed lifespan was 8 years for females ($n= 7$, mean= 4.28 years, range= 3-8 years) and 7 years for males ($n= 23$, mean= 3.08 years, range= 2-7 years). Mean body size was found 67.94 and 63.97 mm for females and males, respectively. Age at maturity was estimated as 2 years for males and 3 years for females. Endosteal resorption which is the replacement of the periosteal bone and endosteal bone was observed 10% of the all individuals. According to Independent Sample t t-test, differences in mean age and body size between sexes were not statistically significant (age: $t= 1.878$, $df= 28$; $p> 0.05$; body size: $t= 1.130$, $df= 28$; $p> 0.05$). Age and body size were significantly correlated in both males ($r= 0.835$, $p< 0.001$) and females ($r= 0.944$, $p< 0.001$). In this study, age and body size of a *Bufo variabilis* population living in Marmara region in Turkey were examined for the first time and the results were compared with populations in other regions.

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