



**SEXUAL DIMORPHISM AND ALLOMETRY OF SAND LIZARDS FROM BISTRA MT., FYR MACEDONIA –
PRELIMINARY RESULTS**

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We tested intra-population morphological variability and the ontogeny of sexual dimorphism in a sample of 78 individuals of *Lacerta agilis* (Linnaeus, 1758) from the Bistra Mountain in the Former Yugoslav Republic of Macedonia. The effect of predation was also assessed by examining the animals' tails. In 43.8% of individuals of all age classes tails were missing or regenerated, which means that lizards are subjected to high predation at this locality. After measuring, marking and photographing, all animals were released into their natural habitat. The set of 17 linear measurements and body mass were taken for each individual, and snout-vent length was taken as a standard descriptor of body size. Among adults, significant sexual dimorphism was recorded in body size, head dimensions and distance between front and hind limbs, while sexual dimorphism was not observed in juveniles. Females had greater body size and distance between front and hind limbs, while males had proportionately larger heads. Static allometric trajectories of adult females and males were assessed, and they diverged only for head and mouth width. Divergence of ontogenetic allometric trajectories was significant for all measurements except the dimensions of the fourth toe on the front and hind limbs. Sexual dimorphism pattern in sand lizards from Bistra Mountain was in concordance with previous studies. Larger adult female body size could be interpreted as a result of sexual selection for fecundity, while larger male heads could result from selection for greater bite force in two ways: intra-sexual selection (between males) in relation to territory defense, and inter-sexual in relation to copulatory bites. Sexual dimorphism was not significant among juveniles: adults apparently attain a different morphology through diverging allometric trajectories during growth. Further studies should include populations of sand lizards from different habitat types to further assess patterns of intra-specific morphological variability.