

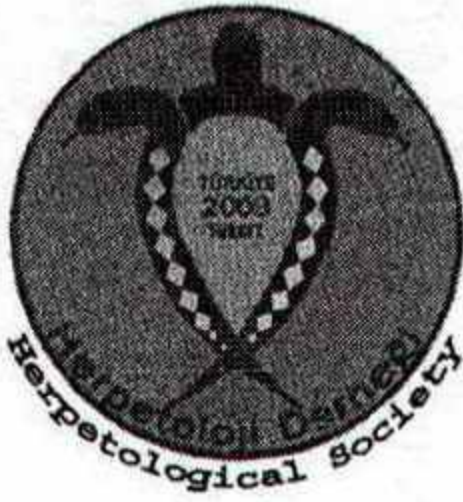
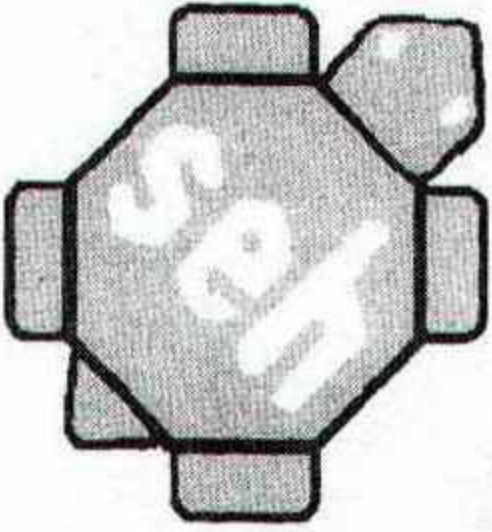
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TÜBİTAK



EKODOSD
EKOSİSTEMİ KORUMA VE
DOĞA SEVENLER DERNEĞİ
KUŞADASI

Geographic variation in adult body length and sexual size dimorphism in the common lizard, *Zootoca vivipara*

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In recent decades, variation in adult body size and sexual size dimorphism (SSD) in lizards was studied quite intensively but geographic patterns within widely distributed species have rarely been documented. Our study species, *Zootoca vivipara*, has the largest range among terrestrial reptiles. It occupies much of the northern Palaearctic and includes viviparous and oviparous clades. Using original and published data on the snout-vent length (SVL) of adult males and females in 36 local or regional samples over the range of this species, macrogeographic and regional variation for body size and SSD were analysed.

Male size varied moderately, with no clear geographic patterns. Female size varied stronger than male size thus providing the converse of Rensch's rule in the SSD variation. As predicted by the fecundity advantage hypothesis, the oviparous sample (Pyrenees) showed the lowest female size and SSD, but it differs from the viviparous samples weaker than some of the viviparous samples from one another. Among viviparous populations, female size and especially SSD tended to be larger in the eastern part of the species range (from the eastern Ukraine to Sakhalin and

Japan) as compared to the western samples (from France to Carpathians) (cf. Orlova 1975). This finding might argue for a phylogenetic effect on the geographic SSD variation in this species because the two groups roughly correspond to the western and eastern viviparous clades identified by Surget-Groba et al. (2006). A pronounced female size and SSD variation within these groups is likely related to ecological factors (current environment) which are still to be identified.