

# Sexual dimorphism in Blanford's Fringe-toed Lizard, *Acanthodactylus blanfordi* Boulenger, 1918, from Southern Iran

(Sauria: Lacertidae)

Nastaran Heidari, Hiva Faizi, Nasrullah Rastegar-Pouyani

**Abstract.** Detailed investigations carried out on a population of *Acanthodactylus blanfordi* Boulenger, 1918, from Hormozgan Province, southern Iran, to clarify the presence of sexual dimorphism and determine clear-cut characters for distinguishing the two sexes showed that sexual dimorphism is significant ( $P < 0.05$ ) in some metric and pholidosis characters. Males have relatively longer snout-vent length and tail length than females. The results can be explained by intrasexual selection as well as by the fecundity advantage hypothesis. Differences in colour pattern and colouration between the two sexes are not obvious.

**Key words.** Sexual dimorphism, *Acanthodactylus blanfordi*, metric, meristic, statistical analysis, southern Iran.

## Introduction

Blanford's Fringe-toed Lizard, *Acanthodactylus blanfordi* Boulenger, 1918, is one of the least studied species in this genus. It is distributed in southern and south-eastern Iran, south Afghanistan, south-west Pakistan, India, and north Oman, but so far no detailed information is available on its morphological characters, habitat or distribution. Here we study basic characters in males and females to clarify the degree of sexual dimorphism in this taxon. Lacertid lizards present considerable variation in the extent and direction of sexual dimorphism (FITCH 1981). Sexual dimorphism is a complex issue which does not occur in all lizards. Differences can be found e.g. in colouration, body shape and size, and pholidosis. Based on traditional evolutionary hypotheses there are two general explanations for sexual dimorphism: sexual selection for large male size in intrasexual mate competition (intrasexual selection hypothesis) and natural selection for large female size which awards fecundity advantages (fecundity advantage hypothesis). The former is also correlated with reproductive success via the number of females in a territory and the number of copulations attained, and consequently this enhances the number of offspring (LEWIS & SALIVA 1987, ANDERSON & VITT 1990, OLSSON 1992, HAENEL et al. 2003).

Here we add another lizard species to the long list of lacertid species where sexual dimorphism has been demonstrated by trying to find whether sexual dimorphism exists in colouration, body size, metric and meristic characters and to define the main differences between the sexes in *A. blanfordi*. The sexual dimorphism in body proportions of lacertid lizards has been studied by SEIFEN et al. (2009) and BRAÑA (1996). In all these studies, the males were larger than females and had relatively larger heads and appendages.