

Sexual dimorphism of the Black Rock Agama, *Laudakia melanura lirata* (Blanford, 1874)

(Sauria: Agamidae)

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Abstract. Sexual dimorphism in the Black Rock Agama, *Laudakia melanura lirata* (Blanford, 1874), is described. Fourteen mensural and 9 meristic characters of 12 males and 9 females from Gandu Protected Area, south-east of Iran have been examined. Results show that males have larger bodies and limbs and often more developed callous scales on the midventral and preanal regions. Head size dimorphism was not observed among the examined specimens, but distinct differences in the arrangement of the orbit, nostrils and ear opening between the two sexes was observed. None of the meristic characters differ significantly between the two sexes. According to our results, we assigned the sexual dimorphism in this species to trade-offs between sexual selection and ecological factors which act through the pressure of natural selection.

Key words. Herpetofauna, sexual dimorphism, sexual selection, Iran, Middle East.

Introduction

The Black Rock Agama, *Laudakia melanura* (Blyth, 1854), is one of the representative faunal elements of the southeastern periphery of the Iranian plateau, which extends from southern Iran east to northwestern Punjab. *Laudakia melanura lirata* was first described by BLANFORD (1874) from Saman, Dasht, southwestern Pakistan, near the border of Iran. ANDERSON (1999) indicated that the range of the species probably extends over the whole Makran coast. This hypothesis was confirmed by a recently documented observation of the species in Tis, about 9 km north of Chabahar (RAJABIZADEH & RASTEGAR-POUYANI 2008) and several unpublished observations after this first record, from Gando protected area in the east to the vicinity of Jask, Hormozgan province (RAJABIZADEH, pers. comm. to H. CHEATSAZAN, 2009). Using current taxonomic data, Iranian populations of *L. melanura* have been identified as *L. m. lirata* (RAJABIZADEH & RASTEGAR-POUYANI 2008), but because of reports of both subspecies from closely placed localities in south-western Pakistan (MERTENS 1969), it is likely that a comprehensive molecular and morphological study of these populations will result in substantial changes in their taxonomy. We report here the results of our studies on sexual dimorphism of *L. melanura lirata*, which has never been studied before.

Material and methods

Nine females and 12 males were captured between September 2008 and February 2009 from different localities in Gando Protected Area, which extends from 25°03' to 26°16'N and 61°09' to 61°53'E on the south-eastern border between Iran and Pakistan, with an area of 445,000 ha.