# Sexual dimorphism in the Banded Dwarf Gecko, *Tropiocolotes helenae fasciatus* (Gekkonidae) on the western Iranian plateau

**by Farhang Torki**

**Abstract.** Sexual dimorphism is widespread in lizards, but was so far undocumented in *Tropiocolotes helenae*, an endemic gecko of the western Iranian plateau. A multivariate statistical analysis revealed that males are much smaller than females, but with relatively longer tails and more colour bars on the tail, together with more subtle shape differences.

**Kurzfassung.** Sexualdimorphismus ist unter Lacertiden weit verbreitet, war aber bisher für *Tropiocolotes helenae*, einer auf dem westiranischen Plateau endemischen Geckoart, nicht dokumentiert. Mit Hilfe einer multivarianten statistischen Analyse konnte gezeigt werden, dass die Männchen bedeutend kleiner sind als die Weibchen, aber relativ längere Schwänze und mehr Farbbänder auf dem Schwanz besitzen. Außerdem bestehen weitere subtile Unterschiede in der Körperform.

**Key words.** *Tropiocolotes helenae fasciatus*, Gekkonidae, sexual dimorphism, western Iran.

## Introduction

The genus *Tropiocolotes* Peters, 1880 comprises four species, which occur on the Iranian Plateau (ANDERSON 1999, TORKI & RASTEGAR-POUYANI 2006, TORKI 2006). These include the Banded Dwarf Gecko *Tropiocolotes helenae* (Nikolsky, 1907), which is endemic to the Zagros Mountains of the western Iranian Plateau (e.g., ANDERSON 1999). The latter comprises two subspecies: *T. h. helenae* (Nikolsky, 1907) which is distributed in Khuzestan, Isfahan and Shiraz provinces, and *T. h. fasciatus* (Schmidtler & Schmidtler, 1972) which has been found only at two localities on the western Iranian Plateau, in Kermanshah, the type locality, and in Lorestan province (SCHMIDTLER & SCHMIDTLER 1972, ANDERSON 1999, TORKI 2006).

The type locality of the *fasciatus* subspecies lies in a valley on the western slopes of the Zagros Mountains, at about 1500 m elevation. It is a small (maximum 26 mm) rock-dwelling lizard. It has a single pair of postmentals, 80-92 dorsal scales between axilla and groin, and 5 distinct crossbars with white posterior margins (ANDERSON 1999).

Among *Tropiocolotes* sexual dimorphism was briefly described in *T. nattereri* by SHIFMAN et al (1999), but sexual dimorphism in *T. helenae* has previously been undocumented, and therefore the study of this small Iranian endemic gecko is of interest and importance. Reproductive success in males and females is determined in very different ways; evolutionary theory predicts that the sexes will differ not only in overall body size and shape, but in many other, more subtle aspects not immediately obvious to an observer (ANDERSSON 1994). In this paper I evaluate the extent of sexual dimorphism in both general and specific characters of this subspecies.

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