

# Confirmation of the occurrence of *Hemidactylus robustus* Heyden, 1827 (Reptilia: Gekkonidae) in Iran and Pakistan

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**Abstract.** In part because of taxonomic confusion with its congeners, the northeastern extent of the distribution of the gecko *Hemidactylus robustus* has remained uncertain. Comparison of nuclear and mitochondrial DNA sequences of geckos from Iran and Pakistan with *H. robustus* from Egypt and the U.A.E. confirms that this species extends at least as far as Sind. The similarity of mitochondrial sequences across great distances suggests a recent, possibly human-mediated, expansion of the species.

**Kurzfassung.** Hauptsächlich aufgrund von Verwechslungen mit Arten der gleichen Gattung war die nordöstliche Ausdehnung des Verbreitungsareals des Geckos *Hemidactylus robustus* bisher nicht geklärt. Ein Vergleich von nuklearen und mitochondrialen DNA-Sequenzen von *H. robustus* aus dem Iran und Pakistan mit solchen aus Ägypten und den Vereinigten Arabischen Emiraten bestätigt, dass sich das Verbreitungsgebiet dieser Art wenigstens bis Sind erstreckt. Die Ähnlichkeit der mitochondrialen Sequenzen über große Distanzen hinweg lässt eine relativ junge, möglicherweise vom Menschen verursachte Ausbreitung der Art schließen.

**Key words.** *Hemidactylus robustus*, Iran, Pakistan, mitochondrial DNA, nuclear DNA, translocation.

## Introduction

Species boundaries of many of the taxa of *Hemidactylus* geckos occurring in North Africa and the Middle East have long been subject to debate. This has been due chiefly to a combination of morphological conservatism across many of the regional taxa and extensive geographic and ecotypic variation within individual species. This has been exacerbated by inadequate collecting in certain regions and has led to confusion with respect to the application of names, particularly for widespread taxa. One such problematic species has been *Hemidactylus robustus* Heyden, 1827, which, for most of the period since its description, has been considered as a synonym or subspecies of *H. turcicus*. SALVADOR (1981) noted that *H. robustus* (type locality Abyssinia) has priority over *H. karachiensis* Murray, 1884 (type locality Karachi, Pakistan) and *H. parkeri* Loveridge, 1936 (type locality Zanzibar, Tanzania), all of which had been used for certain *H. turcicus*-like geckos of the Red Sea and Persian Gulf regions. However, confusion over taxon boundaries and the lack of a thorough revision of the *H. turcicus* group resulted in the continued explicit or implicit synonymization of *H. robustus* with *H. turcicus* by numerous workers (e.g., KLUGE 1991, 1993, 2001, ANDERSON 1999, RÖSLER 2000). On the other hand, LANZA (1990) and MORAVEC & BÖHME (1997), who reviewed the nomenclatural history of the group, treated *H. robustus* as a full species. More recently, BAHA EL DIN (2005) demonstrated that *H. turcicus* and *H. robustus* occur in near sympatry on the Red Sea coast of Egypt and used this as evidence for the recognition of