



## Studies on Pakistan Lizards: *Cyrtopodion baturense* (Khan and Baig 1992) and *Cyrtopodion walli* (Ingoldby 1922) (Sauria: Gekkonidae)

KURT AUFFENBERG<sup>1,4</sup>, KENNETH L. KRYSKO<sup>2</sup> & HAFIZUR REHMAN<sup>3</sup>

<sup>1</sup>Florida Museum of Natural History, Powell Hall, P. O. Box 112710, University of Florida, Gainesville, Florida 32611 USA.

E-mail: [kauffe@flmnh.ufl.edu](mailto:kauffe@flmnh.ufl.edu)

<sup>2</sup>Florida Museum of Natural History, Division of Herpetology, P.O. Box 117800, University of Florida, Gainesville, Florida 32611 USA. E-mail: [kenneyk@flmnh.ufl.edu](mailto:kenneyk@flmnh.ufl.edu)

<sup>3</sup>Zoological Survey Department, Government of Pakistan, Karachi 72400 Pakistan

<sup>4</sup>Corresponding author

### Abstract

The taxonomy of Eurasian angular or thin-toed geckos has undergone a great deal of revision over the last 30 years. However, it is clear that a desirable level of taxonomic resolution has not yet been attained as their taxonomic assignments are somewhat arbitrary. In this paper, we discuss two lesser-known gecko species, *Cyrtopodion baturense* (Khan and Baig 1992) and *C. walli* (Ingoldby 1922). One adult specimen of *Cyrtopodion baturense* (the only known specimen other than the type series) and a series of 53 *C. walli* collected by Walter Auffenberg and the Zoological Survey Department of Pakistan (ZSD) and subsequently deposited in the University of Florida Herpetology collection were compared to the type specimens. Specimens were examined for 46 morphological characters and measurements. *Cyrtopodion baturense* and *C. walli* are diagnosable and confirmed to be distinct species. *Cyrtopodion baturense* is known only from the holotype locality of Pasu and the nearby village of Dih, Hunza District, in the Gilgit Agency, Federally Administered Northern Areas (FANA), Pakistan, at 2,438–3,078 m elevations. *Cyrtopodion walli* is known from Ayun, Chitral, Bamburet Valley, Bermoghluhscht, Drosh Tehsil, and 7.0 km N Drosh, in the Chitral District, Northwest Frontier, Pakistan, at 1,970–2,120 m elevations. We also conclude that the likely paratype (BMNH 1922.5.22.1) of *Gymnodactylus walli* is not conspecific with the holotype (BMNH 1910.7.12.1) and is most morphologically similar to *Cyrtopodion tibetanus* (Boulenger 1905). We concur with Khan (1992), based on our own examination of the syntype of *Gymnodactylus chitralensis* Smith, 1935, that *G. chitralensis* is a junior synonym of *Gymnodactylus walli* Ingoldby, 1922. Furthermore, the tail associated with the holotype of *G. walli* does not belong to that individual.

**Key words:** Gekkonidae, gecko, lizard, taxonomy, *Gymnodactylus*, *Mediodactylus*, *Tenuidactylus*, *Altigekko*

### Introduction

The gecko fauna of Pakistan remains poorly understood despite a number of recent advances (Auffenberg *et al.* 2004; Khan 1993 a, b, 2003a, b). The taxonomy of Eurasian angular or thin-toed geckos, variously assigned to *Cyrtodactylus*, *Cyrtopodion*, *Gymnodactylus*, *Tenuidactylus*, etc., has undergone a great deal of revision over the last 30 years (*see* Anderson 1999 for brief review). Szczerbak & Golubev (1986, 1996) produced the most comprehensive recent treatment of these geckos, but their taxonomic scheme is not based on characters that are irrefutably synapomorphic. Recently, Khan (2003b) described three new genera for species occurring in Pakistan and adjacent areas. Khan's generic assignments for Pakistan species may have merit with additional research, but we believe their use at this point is premature. It is clear that a desirable level of taxonomic resolution has not yet been attained although recent increased understanding of a few taxa is encouraging (Macey *et al.* 2000; Červenka *et al.* 2008)

The taxonomic assignment of angular-toed geckos in southern and central Asia remains somewhat arbitrary. This is particularly true in Pakistan with its large (21 recognized species) and morphologically