Zootaxa 1665: 19–30 (2007)
www.mapress.com/zootaxa/

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Crocidura hikmiya, a new shrew (Mammalia: Soricomorpha: Soricidae) from Sri Lanka

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Abstract

A new species of crocidurine shrew, *Crocidura hikmiya,* is described from the Sinharaja World Heritage Site, Sri Lanka. The species is diagnosed on the basis of both morphology and mitochondrial DNA sequence data. Morphologically *C. hikmiya* is distinguished from *C. miya*, among other characters, by having a shorter tail, condyles protruding beyond the margin of the braincase, a posterior edge of maxillary bone rounded (dorsal view), an occipital bone triangularly shaped with an obtuse angle (dorsal view) and slightly flattened on the back; a foramen magnum less deep (ventral view); a dorsal posterior brain case not smooth; and an angular process of dentary short and stout. Phylogenetic analysis suggests that *C. hikmiya* is the sister-species of *C. miya*. The uncorrected genetic distance between the two species for the mitochondrial cytochrome-*b* gene fragment is 9.7–10.1%, suggesting species-level divergence. *Crocidura hikmiya* is confined to the mid-montane forests and lowland rainforests in the southwestern Sri Lanka, while *C. miya* is confined to montane forests of the central hills.

Key words: *Crocidura miya*, Sinharaja, phylogenetics, shrew taxonomy

Introduction

Crocidura is the most diverse genus of shrews in the world, comprising 172 species distributed throughout much of Europe, Asia and Africa (Hutterer 2005). Of the nine species of shrews described from Sri Lanka, two are included in this genus: *C. miya* (Phillips, 1929) and *C. horsfieldii* (Tomes, 1856). *Crocidura miya* is a medium-sized shrew with a head-and-body length (HBL) of 75–83 mm and a tail length of 90–100 mm. It is confined to the higher elevations (> 900 m) of the island's central hills (Phillips 1980). *Crocidura horsfieldii* is a smaller shrew with a HBL of 62–68 mm and a 49–55 mm tail. It has been recorded from the lowlands and mid-elevations of Sri Lanka; Mysore (Karnataka State, India); Ladakh (Jammu and Kashmir State, India); and Nepal (Hutterer 2005).

Despite prolonged terrestrial connections to the mainland during successive glacial sea-level lowstands (most recently until *ca* 10,000 ybp), the biota of Sri Lanka's south-western 'wet zone' rainforests (rainfall > 2,000 mm yr^{-1}) shows evidence of significant and prolonged isolation from both the island's dry zone and from peninsular India (Meegaskumbura *et al.* 2002; Bossuyt *et al.* 2004). Most of the island's endemic taxa are restricted to the wet zone, almost all of which was occupied by rain forests until large-scale clearing for coffee, cinchona and tea plantations in the 19th century. The shrews of Sri Lanka also show a high level of endemicity, with five of the nine currently recognized species being restricted to the island: *Solisorex pearsoni, Feroculus feroculus, Crocidura miya, Suncus fellowesgordoni* and *Suncus zeylanicus* (Phillips 1980).

Accepted by P. Gaubert: 19 Nov. 2007; published: 19 Dec. 2007