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Range extension of *Cyrtopodion himalayanus* Duda and Sahi, 1978 (Reptilia: Sauria) in Jammu Province of State Jammu and Kashmir from District Doda, Northern India

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***Abstract.*—Documented are new distributional records of the poorly-known Gekkonidae *Cyrtopodion himalayanus* from the Doda region of Jammu and Kashmir State (India) based on specimens collected in three localities of the Doda region (Village Nai-Bhallara, Village Chagsoo, and Village Zazinda). Presented are notes on the morphology and coloration of the species in Doda, as well as photographs and a map indicating the known localities of *Cyrtopodion himalayanus*. This record represents an extension range of 60–80 km from the earlier reported locality of the species. The species *Cyrtopodion himalayanus* is the sole representative of the group *Cyrtopodion*, documented four decades ago from Kishtwar town of District Kishtwar (formally under District Doda) in the state of Jammu and Kashmir.**

Keywords. Gekkonidae, new distribution, Kishtwar, reptiles, visual encounter survey, morphology

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Introduction

The state of Jammu and Kashmir includes three main areas: Jammu, Kashmir, and Ladakh, which are different from one another in terms of topography, altitude, and climate. District Doda geographically falls in the outer Himalayan ranges and comes under the Jammu province of the state Jammu and Kashmir. District Doda also falls under seismic zone-V as per IS 1893 (Part I): 2002 and situated between 33°08′N, 75°32′E at an average elevation of 1,107 m asl. The studies associated with other faunal components of the state have been increasing over the past years, whereas the study associated with reptilian fauna of the region is very scant. Fenton (1910) was a pioneer in ophidian studies in the state of Jammu and Kashmir. Since the publication of *The Fauna of British India* by Boulenger (1890) and Smith (1935), very little attention has been given to its reptilian fauna. The work of Das et al. (1964), Duda and Koul (1974), Murthy and Sharma (1976), and Murthy et al. (1979) enlisted some records of reptiles, but their studies focused on only two regions of the state (Jammu and Kashmir), Kashmir and Ladakh.

There was no information regarding reptilians from Jammu province until Sahi (1979), who has conducted an extensive survey of Jammu and Kashmir state for the herptiles and reported 76 species. He stated that the Jammu province of the state is the richest of the two regions of the state in terms of reptilian diversity. The distinguishing oversight of references to the Doda region of Jammu province (Jammu and Kashmir state) on herptiles of the state undoubtedly indicates the lack of any faunistic survey ever having been conducted in this part of the state since Sahi (1979).

Methodology

We have conducted surveys during the years 2014–2015 following the visual encounter surveying method (Campbell and Christman 1982). The survey was conducted from March to mid-June for both years (2014 and 2015). We have photographed the specimens using a digital camera (Sony HX300), and geo-coordinates were recorded using GPS (GPS test). Morphological measurements of the specimens collected were recorded by using a digital caliper (Precision 150). The specimens sighted

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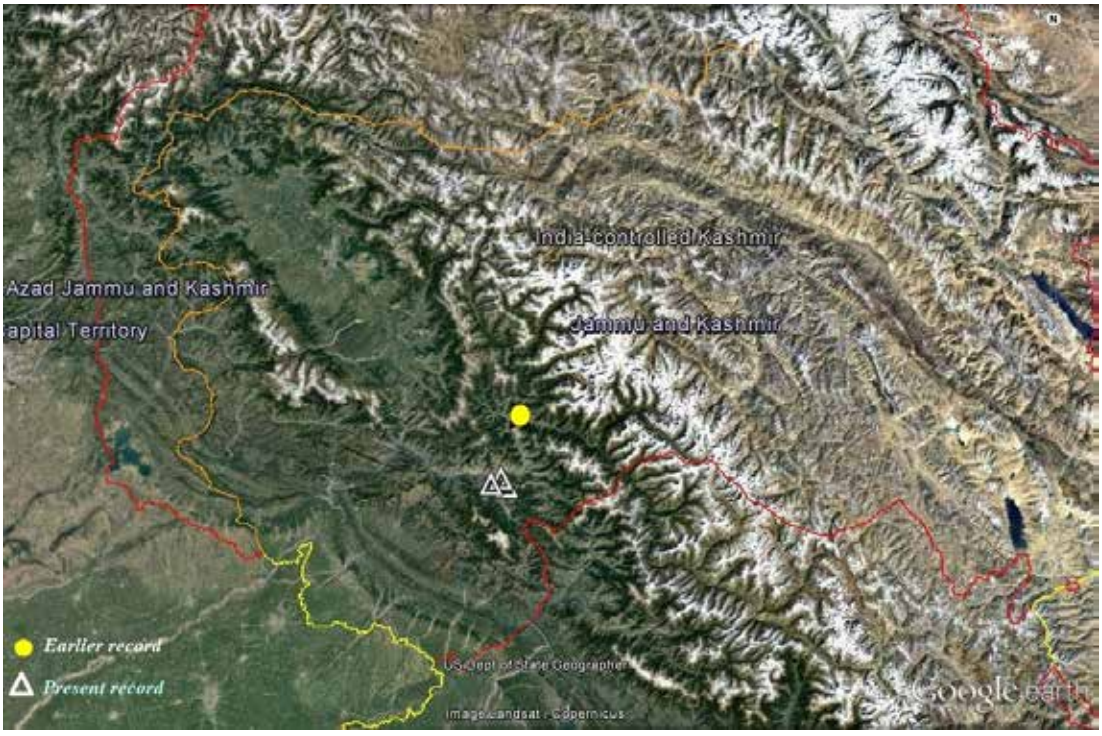

Fig. 1. Depicting the localities of distribution (Earlier and Present).

were identified with the help of descriptions and keys given by Sahi (1978).

Results and Discussion

Cyrtopodion is a complex group of Asian geckos comprising of 37 species at present (Uetz and Hošek 2015). While surveying the herptiles of the state (Jammu and Kashmir), Duda and Sahi (1978) had collected eight specimens of *Cyrtopodion himalayanus* (75.7E, 3.3N; 1,700 m) at an elevation of 1,700 m from a house in Kishtwar town on 8 May and 24 October, 1978 in District Kishtwar (formerly under District Doda) and described it as a new species of *Cyrtopodion* (earlier = *Cyrtodactylus* (Duda and Sahi 1978)) (Fig. 2). During an investigation (2014–2015) of reptilian fauna in District Doda, we sighted individuals of the species from three localities different from the earlier record (Fig. 1). The stations are Nai-Bhallara (33°05’20.69”N, 75°42’30.24”E; 1,808 m asl), Village Chagsoo (33°07’33.27”N, 75°40’11.50”E; 1,743 m asl), and Village Zazinda (33°5’34.48”N, 75°38’19.74”E; 2,157 m asl). The stations Nai-Bhallara and Village Chagsoo fall under Tehsil Thathri of District Doda, whereas the latter falls under Tehsil Bhaderwah. The stations are about 60–80 km away from the Kishtwar town. The specimens were sighted near human settlements (inhabited debris and house wall crevices). The specimens were studied alive and released at the same place after ensuring their morphological and physiological characteristics.

The morphological and physiological characteristics of *Cyrtopodion himalayanus* sighted during the present investigation are given in Table 1. Various distinguishing features of every individual were observed, such as: greyish body with dark brown reticulation; brown head with a distinct streak from nape to snout passing through eye on each side; inverted snout; small nostrils placed dorsolaterally; ten upper-labials; eight lower-labials; snout longer than the distance between the eye and ear opening; ear opening sub-oval; clawed digits; claws embedded between two large shields.

Duda and Sahi (1978) analyzed and documented the body length of the specimens to be between 125 mm and 140 mm during their study, whereas morphological characteristics of *Cyrtopodion himalayanus* of the current study reveal specimens with lengths from 115 mm to 136 mm.

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Fig. 2. *Cyrtopodion himalayanus* **(A)** Enlarged lateral view of head. **(B)** Full lateral view of the body.

Table 1. Variations in various characteristics of specimens of species *Cyrtopodion himalayanum*.

Characteristics	Range
Full body length	115 mm–136 mm
Snout-vent length	61.89 mm–68.79 mm
Tail length	53.11 mm–67.21 mm
Head width	11.75 mm–14.91 mm
Head length	16.35 mm–21.38 mm
Snout to mouth length	12.13 mm–14.58 mm
Intra-orbital distance	1.86 mm–3.10 mm
Eye diameter	5.22 mm–5.45 mm
Nostril to eye length	5.35 mm–6.16 mm
Ear diameter	1.89 mm–2.80 mm
Nostril to ear length	13.86 mm–15.79 mm
Forearm length	17.80 mm–20.81 mm
Hind arm length	14.97 mm–17.87 mm
Supralabial scales	10/10
Infralabial scales	8/8

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