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# First Report of Square Spotted Gecko, *Hemidactylus gracilis* Blanford, 1870 (Squamata: Sauria: Gekkonidae) from Bhandara District Maharashtra, India

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## ABSTRACT

*Hemidactylus gracilis* is common to India and it has an extensive distribution in central India and northern Western Ghats but inadequately known for its distribution. Few distribution reports were available in Maharashtra. It is also known as common in eastern Vidarbha. The distribution reports of *Hemidactylus gracilis* are incomplete in the state of Maharashtra. In the opportunistic survey this species reported for the first time from the Bhandara district of Maharashtra. As per assessment report it is come under Least Concern by IUCN. The present paper deals with the Identification and locality/distribution of the *H. gracilis* species with reference to first report of locality/distribution in Bhandara district of eastern Vidarbha region.

**Key words:** *Hemidactylus gracilis*, New Location, Distribution, Bhandara District, Maharashtra, India.

## INTRODUCTION

The genus *Hemidactylus* Oken 1817 is one of the most species rich genus of the family Gekkonidae and widely distributed of all reptile genera, been found in the tropical and subtropical regions of the world and hundreds of continental and oceanic islands. However, the great majority of *Hemidactylus* species has relatively small distributions confined to southern Asia and Africa (Dandge and Tiple 2015). *Hemidactylus* geckos remain poorly known with a number of recent descriptions and taxonomic works significantly altering the view of both regional and local diversity (Zug et al. 2007; Giri 2008; Giri and Bauer 2008; Giri et al. 2009; Mahony 2009; Bauer et al. 2010a, 2010b; Agarwal et al. 2011). The genus *Hemidactylus* with 144 species were documented worldwide (Uetz and Hošek 2016).

*Hemidactylus gracilis*, Blanford, 1870 is also known as graceful leaf-toed gecko or square spotted

gecko. It is small sized gecko found in Indian sub-region, exclusively endemic and mostly from the climatically diversified geographical zones in India like plains of Ganga and Yamuna, Eastern Ghats, Western Ghats, Eastern Himalaya, Western Himalaya, Central and Peninsular India. This ground-dwelling gecko occurs in grasslands, scrubland and dry forest, with a preference for well-wooded areas, where it is reported to occur under rocks, cracks and crevices in the ground (Bauer et al. 2005). It has nocturnal and insectivorous in habit.

Blandford described the *H. gracilis* based on four collected specimens, two each from “S. E. Berar (Yawatmal District, Maharashtra) and Raipur Chhattisgarh (MP) (Bauer et al. 2005). Also recorded from Nagarjunakonda Hill of Nalgonda district In Andhra Pradesh, Mahavali of Pune district; Wai and Alandi in Satara district; Chanda, Berar, and Bilimora in Maharashtra (Tikadar and Sharma 1992).

D'Abreu 1928 was reported this species is common at Nagpur. Chandra and Gajbe (2005) reported *H. gracilis* from Mandala and Shivpuri in the state of Madhya Pradesh; they also provided additional localities from Sarguja and Raipur in Chhattisgarh. Recently Mirza and Sanap (2010) reported *H. gracilis* from Nashik Maharashtra. Murthy (1990) summarized the distribution of this species by state, the distribution of *H. gracilis* remains poorly known (Bauer et al. 2005). Bauer et al. (2005) reported this species from Chatusrunji Hill, Pune Maharashtra. Murthy (1986); Tikadar and Sharma (1992); Sharma (2002) provided some additional localities for *H. gracilis* in Andhra Pradesh (Kalavabugga, Sugalmatta, Gorgyapurum and Hatkeshwar). Notes on habitat, distribution, natural history, reproduction and phylogenetic relationship were given by Bauer et al. (2005). In the present paper

the specimen based first locality record of the Square spotted gecko *H. gracilis* from Bhandara district of Maharashtra State is discussed.

## MATERIAL AND METHODS

In the general opportunistic survey from many years for biodiversity studies, the sighting was noticed, recorded along with the photographic evidences. The species was spotted (Fig. 1) in the dry habitat of patches of thorny shrubs of Sawari-Murmadi (21.0830859N, 79.8112028E) near Lakhani town of Bhandara district in Maharashtra. The specimen was collected by hand and released after collecting data within one hour. The description and mensural characters were captured with the available Standard literatures.



**Fig. 1.** Site of occurrence of *Hemidactylus gracilis* from Bhandara district

## RESULTS AND DISCUSSION

### Species Identification

(Fig.2, 3, 4 & 5)

**Body:** Small sized; Slender, **Body dorsum:** Grayish with dark brown square spots in two longitudinal rows on either side of thin dark vertebral line, one prominent line along the side of head and body, yellow stripe running from the nostril up to eye and from posterior side of eye to end of the neck. **Body ventrum:** White, Each ventral scale spotted with 3 to 7 dark brown or black spots, 10 to 13 longitudinal series of strongly keeled tubercles. **Head:** Covered by small juxtaposed scales; largest on snout, Narrow and fairly long, small sub-circular ear opening, Four large post-mentals, gular region with small rounded scales, rostral broader than high; nostril between rostral and several small

scales, 9 or 10 supra-labials and 7 infra-labials. **Digits:** Narrow, weakly webbed, the sub-digital scensors are divided distally, but entire or only notched basally (Bauer et al. 2005), Distal lamella is entire undivided. Five lamellae is under first toe and 9 -10 under fourth toe of pes. Sex is male having six pre-cloacal pores. One Rounded post-cloacal spurs on each side.

Many of new localities of the *Hemidactylus gracilis* reported recently in Maharashtra, particularly in northeastern region of Vidarbha. This finding of new locality in Bhandara district for the first time adds a new report of another locality of the species. Dandge and Tiple (2018) reported the new localities/distribution in eastern and Central Maharashtra, Wadgaon-mahure village (Amravati), Umredtahsil (Nagpur), Near Ghogali Village (Nagpur), Pathanpura area (Chandrapur), Panjabrao Krishi

Vidyapith campus (Akola), Shegaon road (Khamgaon), Buldhana, Aanandgarh, Jalna, Satarahill's, Aurangabad, Mhaismal, Aurangabad, Yawatmal, and Gadchiroli are some new localities. Intensive survey is essential to explore the geckos' diversity in Bhandara and Gondia district since this region is still remains inadequately explored in terms of its reptilian fauna. There are possibilities of occurrence of new species from Bhandara and Gondia district; harbors rich floral and faunal biodiversity. Bhandara and Gondia district is well recognized for

water bodies, freshwater fisheries, historical places and rice production. Very few studies on herpetofauna from Bhandara and Gondia district were reported viz Bhandarkar et al. 2012, Paliwal and Bhandarkar 2017a; 2017b, Bhandarkar and Paliwal 2021. The distribution of genus *Hemidactylus* has been highly affected by anthropogenic activities, repeated transmarine colonization, spontaneous rafting, which have contributed significantly to the unusually wide distribution range (Smid et al. 2013).



**Fig: 2** Square spotted gecko, *Hemidactylus gracilis* lateral view



**Fig.3:** Scancors and distal part of digits and spurs



**Fig. 4.** Rostrum and Gular region



**Fig.5:** *Hemidactylus gracilis* showing complete body dorsum

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