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Record of *Hemidactylus* cf. *sahgali* from Telangana with a bifid tail

The recently described Sahgal's Gecko *Hemidactylus sahgali* is a member of the *Hemidactylus triedrus* complex inhabiting northern and western India (Mirza et al. 2018). Currently in India, this species has been reported from the states of Rajasthan, Maharashtra, Chhattisgarh, Madhya Pradesh, and from Sindh of Pakistan by Mirza et al. (2018). Additionally, several observations have been uploaded on iNaturalist platform by citizen science members (https://www.inaturalist.org/taxa/797687-Hemidactylus-sahgali), mostly from the same states of Gujarat, Rajasthan, Maharashtra, and Chhattisgarh.

Hemidactylus* cf. *sahgali **(IMG0368 – ZRC(IMG) 2.683a) photographed at Depalli Village, Nawabpet Mandal, Mahbubnagar District of Telangana State, India. © B. Laxmi Narayana.**

On 25 November 2023, at 1828 h, we photographed a live uncollected subadult male (SVL= 67 mm) Sahgal's Gecko *Hemidactylus* cf. *sahgali* in the agricultural lands in Depalli Village (16.9909 N &78.0790 E), Nawabpet Mandal, Mahbubnagar District of Telangana State, India. This individual was provisionally identified as *Hemidactylus* cf. *sahgali* based on diagnostic characters of dorsum in a shade of light brown with paired, broad, black-edged white bands at regular intervals and dorsal scalation on trunk, granular, intermixed with enlarged, keeled 15–16 trihedral tubercle rows arranged in fairly regular longitudinal series (Mirza et al. 2018).

Hemidactylus cf. *sahgali*:A—Dorsal view | B—Dorsal lateral view | C—Dorsal view of head | D—Lateral view of head | E—Ventral view of head | F—Mid-dorsal trunk with 15 keeled trihedral tubercle rows | G—Ventral region showing pre-cloacal opening | H—Ventral view of the lamellae of right pes | I—Ventral view of bifurcated tail | J—Doral view of bifurcated tail. Note: I & J—Y-shaped bifurcated tail with a leftward to perpendicular angle.
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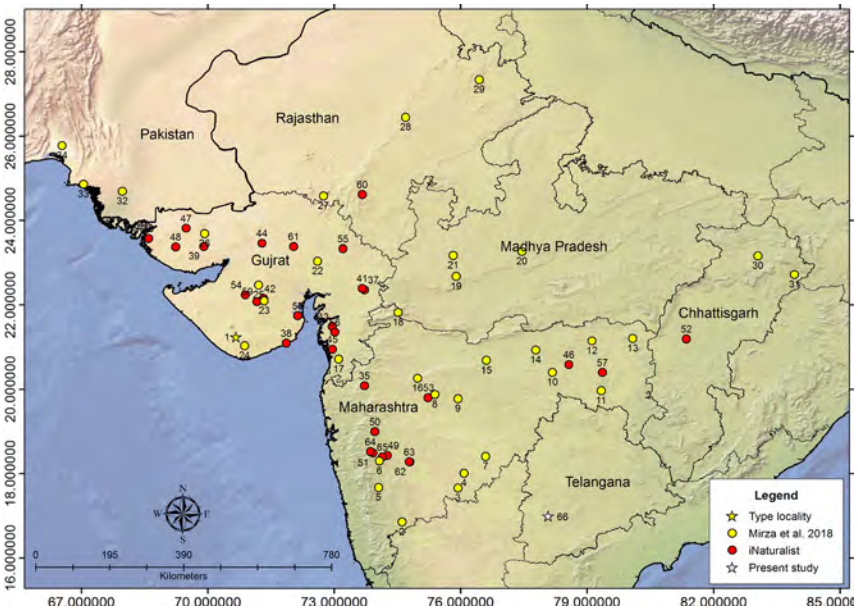

Map showing current known distribution records of *Hemidactylus* cf. *sahgali* in India and Pakistan, where the yellow star is Khambha, Gujarat (Type locality), yellow dots are distribution records presented by (Mizra et al. 2018), red dots are photographic records from the iNaturalist and the white star is the present new locality record of *Hemidactylus* cf. *sahgali* from Depalli Village, Nawabpet Mandal, Mahbubnagar District of Telangana State, India.

Digital image vouchers have been catalogued at the Zoological Reference Collection, of the Lee Kong Chian Natural History Museum, at the National University of Singapore (IMG0368 – ZRC(IMG) 2.683a and IMG0842 – ZRC(IMG) 2.683b). All the photographs were verified by Pratyush P. Mohapatra who confirmed them as *Hemidactylus* cf. *sahgali*, that is the closest to this than any other members of *H. triedrus* complex. Hence, we report a new locality record of Telangana State, India and also the first case of tail bifurcation in this gecko species from India.

However, even after the work of Mirza et al. (2018), there was no record of this species in published literature from Telangana State (Narayana & Bharath 2021; Srinivasulu & Kumar 2022). Hence, we present an additional locality record from the state of Telangana, India. Furthermore, the present study reveals the presence of *Hemidactylus* cf. *sahgali* in Telangana and extends the species' distribution range. We suggest further studies may reveal many more additions in adjacent states, also extended specimen examination with phylogenetic studies in the *Hemidactylus triedrus* complex may reveal a few more new

species form the other localities in the Indian subcontinent.

The gecko that we encountered had a bifid tailed with Y-shaped tail bifurcation with a leftward growth to perpendicular angle. Later, it was identified as *Hemidactylus* cf. *sahgali* with two tails. The basal part of the tail was apparently its original tail that was best with spiny tuberculate whorls, whereas the bifid portion was smooth indicative of a regeneration. Only one such case has been reported in *Hemidactylus giganteus* Stoliczka, 1871 from Adilabad District, Telangana (Kumar & Srinivasulu 2015). A few more records yielded from India in *Hemidactylus frenatus* from Tamil Nadu (Vishnu & Ramesh 2021), *Hemidactylus* cf. *brookii* from Surat City, Gujarat (Vyas 2016), *Hemidactylus* sp. from Dangs, Gujarat (Vyas 2016), and *Hemidactylus flaviviridis* from Odisha (Fullonton et al. 2024). Outside India some observations have been documented on tail bifurcation in *Hemidactylus frenatus* Duméril & Bibron, 1836 from Bangladesh (Khan 2004; Maria & Al-Razi 2018; Khandakar & Sultana 2020) and from introduced populations in Hawai'i (Chan et al. 1984), Honduras (Heyborne & Mahan 2017), and Mexico (García-Vinalay 2017).

Tail bifurcation in geckos, which is relatively rare, typically results from incomplete caudectomy. This condition may occur during an escape from a predator, where the injury is significant enough to trigger new tail growth (Arnold 1988; Meyer et al. 2002). Incomplete tail amputation leads to the regeneration of two tails instead of one, due to sufficient damage at the wound site (Kumar& Srinivasulu 2015). Other causes of tail bifurcation include spinal cord issues and genetic mutations (Brindley 1894). While bifurcated tails are uncommon in nature (Kornilev et al. 2018), they can have adverse effects on an animal's fitness. The tail is crucial for locomotion, balance, mating, foraging, and escaping from predators. Anomalies such as bifurcation can impair these functions, leading to potential disadvantages in the gecko's survival and reproductive success (Passos et al. 2014). Our observation of *H.* cf. *sahgali* from a new locality in Telangana, with a bifid tail is hence worth placing on record.

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