



Geographical Range Extension of The Common Bamboo Pit Viper, *Trimeresurus gramineus* Shaw, 1802) to Korba Forest Division

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The Viperidae family encompasses the Indian Green Pit Viper (*Trimeresurus gramineus*) (Shaw 1802), A snake found widely across India, known as one of the 11 pit viper species in the country. This species is notable for its affinity for tree-dominated environments, where it thrives in areas filled with trees and shrubs (Whitaker and Captain 2004; Chowdhury et al 2017). *Trimeresurus gramineus*, or the bamboo pit viper, is a mildly venomous, green arboreal snake of peninsular India that shows amplified activity at night, especially during the monsoon season. Geographically, *T. gramineus* can be found across the southernmost sections of the Western Ghats Mountain range, spanning several states, including Goa, Gujarat, Tamil Nadu, Karnataka, Maharashtra, and Kerala (Srinivasulu 2003; Whitaker and Captain 2004; Nande and Deshmukh 2007; Srinivasulu and Das 2008; Chowdhury et al. 2017). The species also extends to Andhra Pradesh's Eastern Ghats, encompassing areas like Shevaroy, Javadi, Seshachalam, Nallamala Hills, and Adilabad (Srinivasulu and Das 2008; Nande and Deshmukh 2007; Giradkar et al. 2023). Researchers have documented its presence in the Amaravati District (Deshmukh et al. 2020; Giradkar et al. 2023). Chhattisgarh's natural environments are home to a rich diversity of living organisms. The elusive *T. gramineus* has been spotted in a multitude of hotspots, including the Achanakmar Tiger Reserve, the Barnawapara Wildlife Sanctuary, and the Dhawalpur Range. Its presence has also been confirmed in the Udanti-

Sitanadi Tiger Reserve, as well as in the districts of Durg, Rajnandgaon, and the picturesque Bastar region (Ahmed et al. 2021), and this report shares the first recorded sighting of this rare species in the Korba district, and Korba located at the confluence of the Hasdeo and Ahiran rivers, lies in the northern part of Chhattisgarh within the Korba Forest Division (22°01'-23°01' N, 82°08'-83°09' E), covering 7,14,544 ha. Bounded by Koriya, Surguja, Raigarh, Bilaspur, and Janjgir-Champa districts, it is traversed by four perennial rivers: Sonbhadra, Hasdeo, Ahiran, and Lilagar.

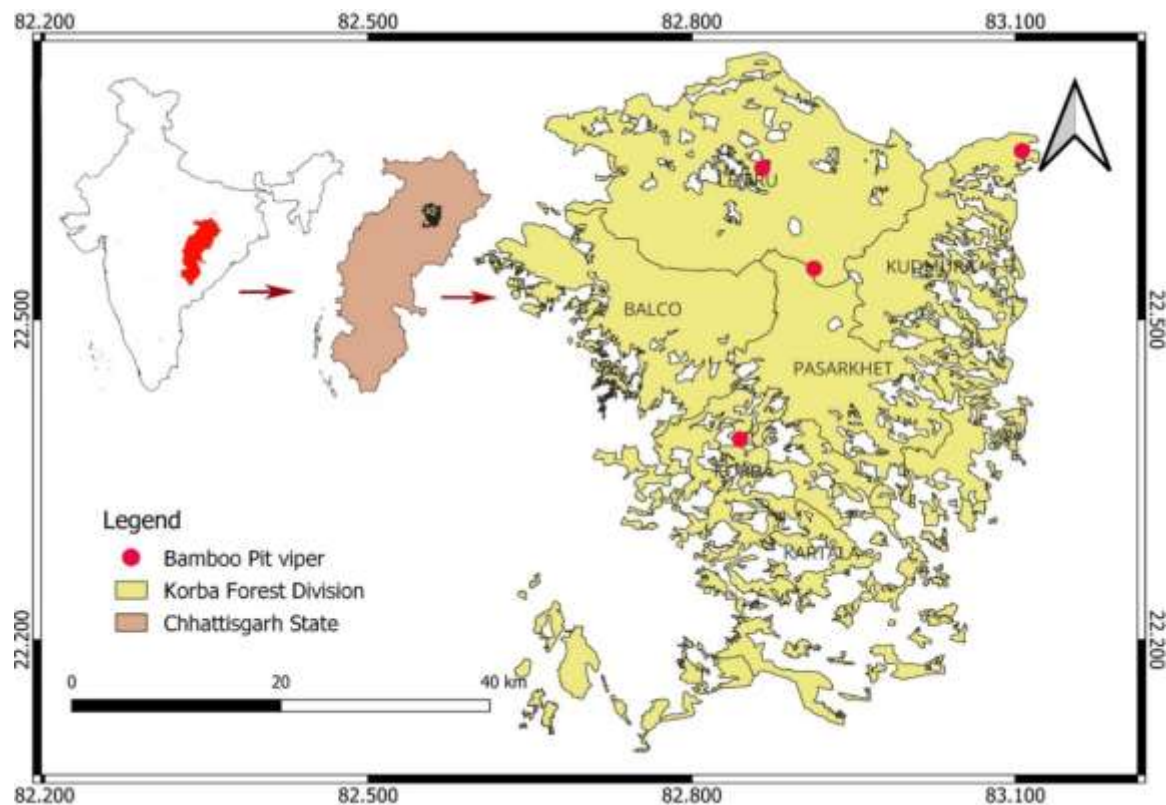


Figure. 2 This Map Displays All Known Locations of *T. gramineus* Sightings in Korba Forest Division, Chhattisgarh, India.

Body length of *T. gramineus* ranges from 70 to 112 centimeters, with a scale configuration of 21:21:15 dorsal rows. Sexual dimorphism is evident in scale counts: males feature 145-175 ventral scales and 55-71 sub caudal scales, while females possess 164-177 ventral scales and 57-62 sub caudal scales (Ahmed et al. 2021).

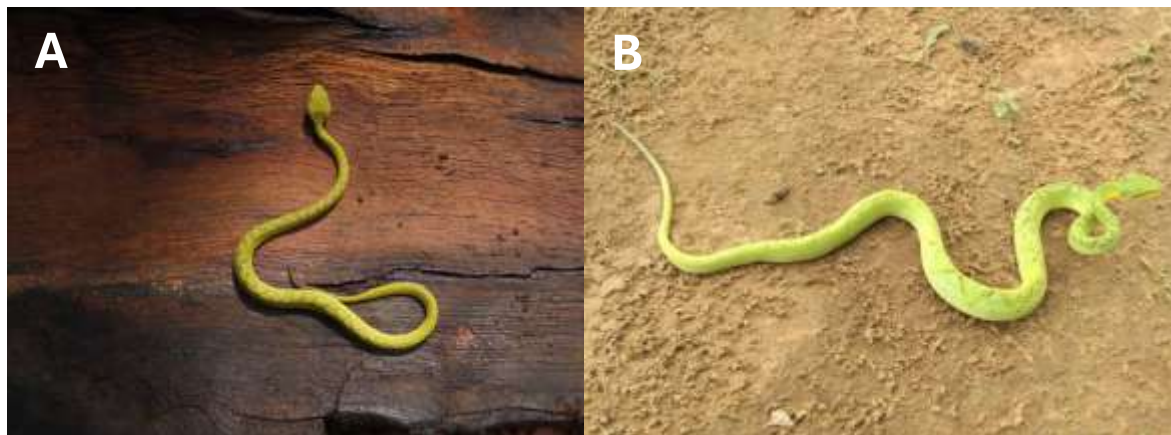


Figure. 1 (A) *T. gramineus* from the villager's backyard garden in Kudmura range of Korba forest division, Chhattisgarh. Photograph by Mayank Bagchi (B) *T. gramineus* near cave during field survey within Korba Forest Division, Chhattisgarh. Photograph by Raju Barman.

Comprehensive research methodologies have been carefully outlined, the field surveys conducted between 2023 and 2024 revealed more sightings in different habitats of Ranges. In 2023, on a rainy afternoon at Sonaliya Bridge, Korba range (22.351206°N, -82.702705°E), an adult was observed in a completely urban habitat surrounded by roads, buildings, and minimal vegetation. Through a daytime observation at Patharra pahad lemru range, (22.642076, -82.865324), the month of August was found under slightly cloudy weather. The individual was vertically hanging from beneath the bark of a Sal tree (*Shorea robusta*) in a forested area, indicating its preference for sheltered arboreal resting sites, and a night time herpetological survey at Lemr, Lemru range (22.67809167, -83.03605278), we gained valuable insights into the species behavior we observed the species in its microhabitat—resting on the branches of a Tendu tree (*Diospyros melanoxylon*), approximately 5 meters above the ground—indicating its preference for elevated, arboreal habitats during night time. Furthermore, finding a hatchling specimen in the Kudmura village, kudmura range (22.547917, -82.913379), was observed during the evening hours, hanging from the branches of a heena plant (*Lawsonia inermis*) in a villager's backyard garden, indicating its adaptability to semi-urban or human-influenced habitats and its indicates successful local reproduction, highlighting the area's significance as a breeding ground. The resilience of this fascinating species (Ahmed et al. 2021). Historically, this species was confined to the southern region (Bastar plateau) and central areas of Chhattisgarh. This species of snake has been recorded at seven distinct localities across Chhattisgarh, underscoring its presence and distribution within the region (Ahmed et al. 2021). Nestled approximately 157 kilometers from Korba is the Achanakmar Tiger reserve, the closest



known area. Recent climate changes may have helped the *T. gramineus* expand its range in Chhattisgarh.

Table.1 This table mentions the place and date of *T. gramineus*

Sr. No.	Range	Year	Season	Time	Place	Latitude (N) Longitude (E)	Elevation (m.)	Life Stage
1	Korba	2023	Rain	After-noon	Sonaliya bridge	22.351206 82.702705	318	Adult
2	Lemru	2024	Summer	After-noon	Near cave during Field survey	22.642076 82.865324	500	Adult
3	Lemru	2024	Summer	Night	Near roadside during night herping	22.678091 83.036052	753	Adult
4	Kudmura	2024	Monsoon	After-noon	Hanging upon the Heena Plant	22.666944 83.112500	833	Hatchling

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