

First Report of the Banded Krait (*Bungarus fasciatus*) in the Korapuzha Estuary, Kerala, India

VIDYA PADMAKUMAR¹, MURUGAN S²

^{1,2} *Department of Zoology, Bangalore University, Bengaluru, India*

Abstract— *Kraits are a species of extremely venomous snakes that can be found throughout tropical Asia, from Borneo's tropics to Iran and the Indian subcontinent. 8 of the 16 recognized species are present in India, with several others classified as subspecies. While the banded krait has been sighted in Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Northeast India, Odisha, Tamil Nadu, Karnataka, and Bengal, the Common Krait Bungarus caeruleus (Schneider, 1801) is prevalent across the nation. The present report describes the first sighting of the Banded Krait in the Korapuzha estuary basin of the Kozhikode Shoreline in India. This indicates the immediate need for a holistic evaluation of the herpetology of the site.*

Indexed Terms— *Bungarus fasciatus; Korapuzha Estuary; Banded Krait; Kozhikode; herpetofauna*

I. INTRODUCTION

One of the deadly elapids of the genus *Bungarus* (Daudin, 1803) that is broadly distributed in South and South-East Asia is the banded krait, *Bungarus fasciatus* (Schneider, 1801). With a maximum length of 2.7 meters, it is the dominant species of kraits (8 ft 10 in). The banded krait is neurotoxic and can kill humans with its bite, but because it is timid, primarily active at night, and not highly aggressive, there is little danger to people from it. The species is widespread in the Indian states of West Bengal, Odisha, Mizoram, Assam, Manipur, and Tripura, as well as Nepal and Bangladesh, although it has steadily become less ubiquitous westwards in the country. It has been reported in Andhra Pradesh (Srinivasulu et al., 2009), Bihar, Chhattisgarh, Jharkhand, Maharashtra (Khaire, 2006), Northeast India, Odisha, Tamil Nadu, and West Bengal (Smith, 1943) in India. Hassan in Karnataka, Chalkari in Bokaro (Jharkhand), Trivandrum in Kerala, Kondagaon in Chhattisgarh, and Amalapadu

in Srikakulam in Andhra Pradesh have all reportedly confirmed the species. From rainforests to croplands, banded kraits can be found in a range of ecosystems. They dwell in termite mounds and rodent burrows near water, usually near human settlements, particularly villages, due to the availability of small mammals and water. They inhabit remote regions with extensive open fields. In Myanmar, the banded krait has been spotted at an elevation of 5000 ft (Smith, 1943).

Although it is a common species, there is no indication of significant species collapse. However, overharvesting in Vietnam is thought to have reduced it by well over 50% across a decade, despite the fact that it is still commonly witnessed. The species is nocturnal and terrestrial. It has been found in a variety of environments, including human habitations, deteriorated ecosystems, dry and damp deciduous forests, subtropical forests, mangroves, and tropical scrubs. 4 to 14 eggs make up a clutch, and females remain with the eggs until they hatch. This species is protected under India's Wildlife (Protection) Act of 1972, Schedule IV. Although it is listed as Endangered in the national Red Data Book, it is a protected species in Vietnam. Numerous restricted locations have reported seeing this abundant snake (Srinivasulu et al., 2014). In addition to eating fish, frogs, skinks, and snake eggs, the banded krait is known to consume other snakes and their eggs. The venom renders the prey immobile, and it is then consumed head first (Daniels, 2005). About its breeding patterns, little is documented. At hatching, juveniles have been measured to range between 298 and 311 mm. When the snake reaches around 914 mm in length in its third year of life, it is thought to have reached adulthood (Evans, 1906).

II. STUDY AREA

The Kozhikode District of Kerala is located in the basins of three significant river basins: the Chaliyar,

Korapuzha, and Kuttiadi Rivers. The Korapuzha Estuary extends between 11°21'05.8"N 75°44'11.2"E to 11°21'28.8"N 75°44'37.6"E. The Elathur River enters the Korapuzha lagoon system (Figure 1) close to the estuarine mouth. The estuary never dries out. The river's banks are devoid of towns, factories, or significant villages (Rao and George, 1959), but there are smaller settlements as well as dense mangrove vegetation rich in biodiversity. Large backwaters that resemble lagoons that connect the brackish waters of the Korapuzha and Kuttiadi Rivers promise to be rich ecological sites for a variety of species, especially herpetofauna (Padmakumar and Murugan, 2022).

III. OBSERVATION AND DISCUSSION

On 22 September 2019 a Banded Krait *Bungarus fasciatus* (Figure 2) was spotted at 11°21'24.96"N 75°44'19.54"E at 11 AM IST. The krait was encountered to wade through the creek into a hamlet with very few inhabitants. This is the region's first mention of the banded krait. The alternate black and yellow crossbands, triangular body cross-section, and noticeable vertebral ridge made up of larger vertebral shields along the body make the banded krait easy to distinguish. The head is rounded and drooping. The eyes are dark. It features a black head with yellow markings that resemble arrowheads, as well as yellow lips, chin, and throat. The longest banded krait ever recorded was 2.25 m long, however often they only reach lengths of 1.8 m. The identified krait at the spot was approximately 2.0 meters in length. The snake possesses a complete anal plate as well as a single subcaudal. The snake's tiny tail is just about a tenth of its length. The genus name is derived from the Telugu word "bangarum," which means "gold," and refers to the yellow bands that encircle its body (Smith, 1911).



Figure 1- The location of spotting *Bungarus fasciatus* in the Korapuzha estuary



Figure 2- Banded Krait (*Bungarus fasciatus*) observed at Korapuzha Estuary

CONCLUSION

Unsurprisingly, little is known about the estuary region's reptile fauna. The area's rich faunal resources are not properly documented. Recent years have seen a significant decline in Banded Krait sightings, notably in places like Kerala. Therefore, it is crucial that ongoing monitoring be carried out to confirm the species' presence and preserve the region's faunal richness.

REFERENCES

- [1] Daniels, R. R. (2005). *Amphibians of peninsular India*. Universities Press.
- [2] Evans, G. H. (1905). Breeding of the banded krait (*Bungarus fasciatus*) in Burma. *J. Bombay Nat. Hist. Soc*, 16, 519-520.
- [3] Khaire, N. (2006). Guide to the snakes of Maharashtra, Goa & Karnataka.
- [4] Padmakumar, Vidya and Murugan, S. (2022, July 1-3) *Mangrove species diversity and Zonation patterns in the Elathur estuary, Kozhikode, India*, [Conference presentation abstract]. 9th International Gap Summit Scientific Research Congress, Adiyaman, Turkey. DOI: 10.13140/RG.2.2.25336.72963
- [5] Rao, S. V., and George, P. C. (1959). Hydrology of the Korapuzha estuary, Malabar, Kerala state. *Journal of Marine Biological Association of India*, 1(2 & 3), 212-223.
- [6] Smith, O. A. (1911). Large Common and Banded Kraits. *Journal of the Bombay natural History Society*, 21, 283-284.
- [7] Smith, M. A. (1943). The Fauna of British India. *Amphibia and Reptilia*, 3.
- [8] Srinivasulu, C., Venkateshwarlu, D., and Seetharamaraju, M. (2009). Rediscovery of the Banded Krait *Bungarus fasciatus* (Schneider 1801) (Serpentes: Elapidae) from Warangal District, Andhra Pradesh, India. *Journal of Threatened Taxa*, 353-354.
- [9] Srinivasulu, C., Srinivasulu, B., and Molur, S. (Eds.). (2014). *The Status and Distribution of Reptiles in the Western Ghats, India: Conservation Assessment and Management Plan (CAMP)*. Wildlife Information Liaison Development Society.