



First Photographic Evidence Of *Dendrelaphis Tristis* (Daudin, 1803) (Colubridae: Squamata) Bronzeback Tree Snake From The Forest Of Bandwan-1 Range Under Kangsabati South Division Forest Department, Purulia, WB, India

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Abstract:

Common Bronze-back is tree-snake species widely distributed in Sri Lanka, India, Pakistan, Bangladesh, Nepal, Myanmar, and Bhutan. It can be recognized without difficulty by observing a round whitish spot on top of the head, with very thin sleazy body having sky blue dots on back surface and most of the side back & belly of yellowish-white color. Ten more species of bronze-backs are established in India; among them four are in peninsular India, all of them native to the Western Ghat.

Keywords: *Dendrelaphis tristis*, Bronzeback Tree snake, *Alangium salviifolium*, Ankol tree, new record, new sighting, conservation, Bandwan, Purulia, West Bengal, India.

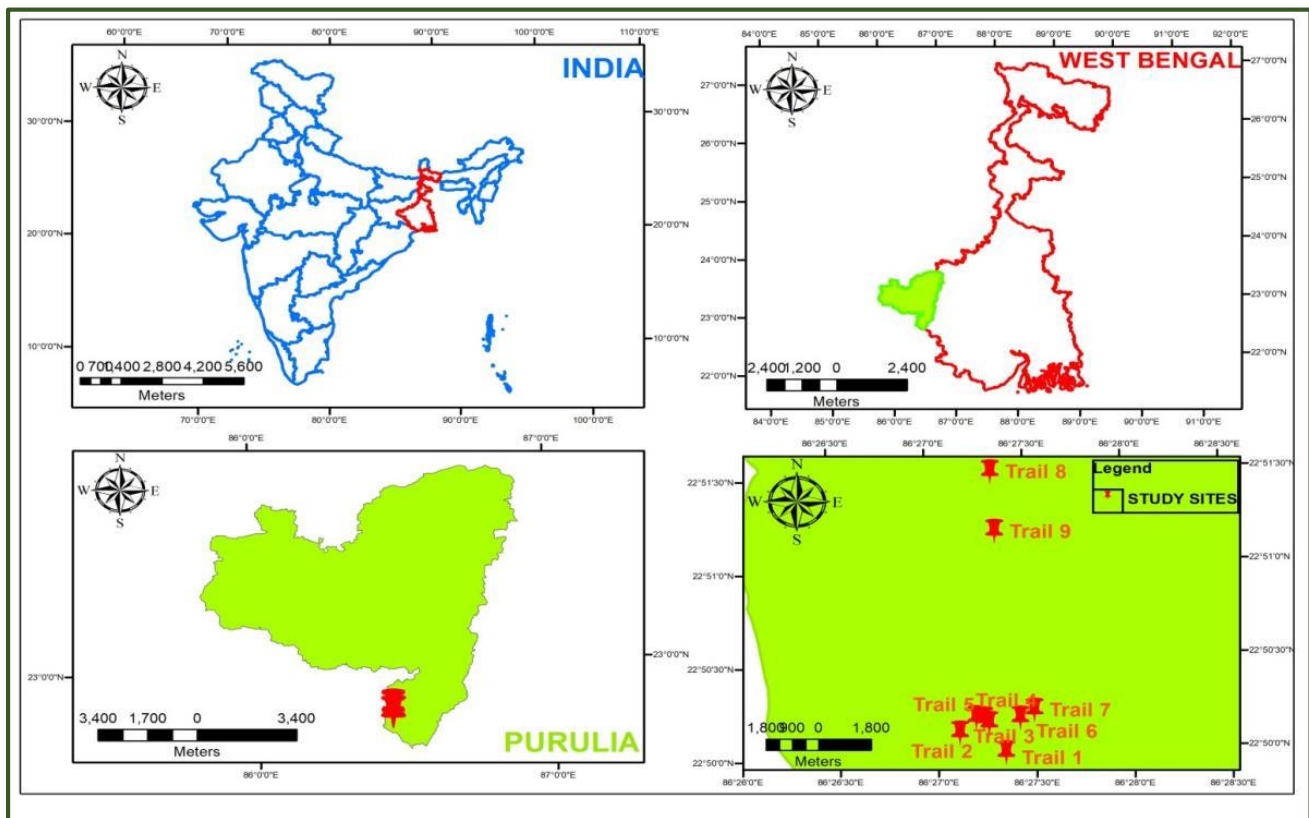
Introduction:

Dendrelaphis tristis also known as Bronzeback tree snake, (Daudin & Sonnini, 1803), is widely concentrated and found in India, Pakistan (Masroor, 2011), Sri Lanka, Bangladesh, Nepal (Van Rooijen & Vogel, 2008). In India, it has been recorded from Kerala (Palot, 2015), Tamil Nadu (Janani et al., 2016), Madhya Pradesh, Chhattisgarh (Chandra & Gajbe, 2005), Gujarat (Patel et al., 2018), Uttar Pradesh (Kanaujia et al., 2017), West Bengal, Assam – Bongaigaon district (Nath et al., 2011), Maharashtra, Goa, Andhra Pradesh, Karnataka. The record of *Dendrelaphis tristis* in northern end is from Rajaji National Park, Uttarakhand (Joshi et al., 2019). But, there was no previous record of this snake from Purulia District of West Bengal. According to wildlife protection Act 1972, the species comes under schedule IV.

Study Area:

Bandwan town is situated in Bandwan block of Purulia district in West Bengal, India [Fig 1] (22°52'33.6"N 86°30'25.2"E). The study area is a part of Burdwan division, located 59 km towards south from the district headquarters, Purulia. Bandwan is surrounded by Patamda Block towards west, Manbazar-II Block towards east, Barabazar Block towards north, East Singhbhum district of Jharkhand on the south. This place is in the border of the Purulia district.

The study area is a mixed deciduous fragmented forest cover with undulating uplands, hills and hillocks, low flat valleys and stretches of crop fields. In general the weather is hot and humid with a tropical savanna type of climate. The particular forest cover is predominant in native vegetation like Sal, Piyal, Kendh, Kusum, Hartaki, Bahera, Sidha, Doka, Mahua and similar other native floral species.



The particular bronzeback tree snake (*Dendrelaphis tristis*) was spotted hanging from a branch of Ankol tree (*Alangium salviifolium*) [Fig 2] of height about 4-4.5ft (GPS: 86.45716E, 22.836313N).

Fig 1. Study area map of Bandwan I

Methodology:

The snake was spotted by direct sighting method while on a wildlife survey at the Gangamanna Beat under Bandwan 1 Range of Kangsabati South Division Forest Department, Purulia, WB, India (Latitude: 22.836313, Longitude: 86.45716 and Elevation: 226 m.a.s.l) at 08:44 AM on 23rd June, 2023 . After spotting the snake, the species was immediately captured at the camera for better species identification. The species was found through the visual encounter method and the vegetation of the study area consists of *Shorea robusta*, *Schleichera oleosa*, *Isobertinia doka* and other small bushes and undergrowth.



Fig 2. GPS location the Bronzeback Tree Snake at the study area



Fig 3. *Alangium salviifolium* (Ankol tree)

Results:

The specimen was found hanging from a branch of Ankol tree (*Alangium salviifolium*) [Fig 3], native to the region, amidst the mixed deciduous fragmented forest cover. *Dendrelaphis tristis* have a thin, long sleazy body covered with smooth scales. Scales arranged in an oblique manner with top row along the vertebra, larger than the adjacent dorsal. The snake has sky blue color on the lower edge of fore and mid body scales which are best visible when snake is in an alert or aggressive position. Head flattened, elongated

and clearly broader than the neck [Fig 5]. Upper lip yellowish-white and ventral scales sharply folded upwards. Color is yellowish-white or greenish-white which extends to first two dorsal rows. Sub caudal scales with olive tint of yellow or brown color. Have a very long and thin tail of bronze, brown or blackish-brown color which ends in a pointed tip. Sub caudal scales paired in a zigzag manner. This characteristic is found only in this particular species of Bronze-back and quite helpful during identification. Have large eyes with rounded pupils. Tongue color is bluish-gray [Fig 6].



Fig 4. Hanging from a branch of tree (*Dendelaphis tristis*)



Fig 5. Head flattened and elongated



Fig 6. Tongue color bluish-gray.



Fig 7. *Dendrelaphis tristis* (Bronze back tree snake)

Discussion:

The species was found near the human habitation with a mixture of grassland and agriculture fields. In its native habitat it is probably a forest edge species, as it is rarely encountered in dense forest. It prefers secondary scrub, parks and gardens. Common Bronzeback [Fig 7] is a diurnal and arboreal species which mainly shows activity from low to moderate heights during the entire daytime. Locomotion very fast in both arboreal and terrestrial environments, reproduction type of the species is oviparous. It lays upto 8 eggs at heights mainly in tree holes, under dense leaf litters, cracks etc. New born is usually seen from monsoon to pre-winter times.

Amphibian and reptiles are among the least studied faunal group in Kangsabati South Division Forest and there are no specific conservation programs. There is very few data available in these groups. Common Bronzeback is ecologically important diurnal predator for lizards in a variety of forests. In most of the parts of its range, this is the only Bronzeback species making it significant for diversity of genus *Dendrelaphis* for its range. Although the study of the species in Bandwan 1 Range has received no focused attention until now, with young foresters taking up the subject, it is expected that the group will receive a research boost in the near future.

According to IUCN status, Bronze back tree snake is listed as Least Concern. It comes under Schedule IV of Wildlife Protection Act, 1972. Habitat modification would be the main threat to the Bronzeback tree snake, resulting from cattle overgrazing and rabbits grazing, soil erosion, flooding and leaf litter loss. To tackle the future concerns with Bronzeback tree snake we may take the following conservation measures:

1. Implement and design a monitoring program.
2. Monitor known population to identify key threats.
3. Manage areas of vegetation that contain populations of the Bronzeback Tree Snake.
4. Prevention of grazing pressure at sites known, through fencing resistance.
5. Raising awareness of the species within the local community.

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Reference:

1. Aengals, R.; S.R. Ganesh, P.G.S. Sethy, J. Samson Kirubakaran, M. Ahamed Jerith, M. Satheeshkumar, A. Thanigaivel & Gernot Vogel 2022. FIRST CONFIRMED DISTRIBUTION RECORDS OF *Dendrelaphis bifrenalis* (BOULENGER, 1890) (REPTILIA: COLUBRIDAE) IN INDIA, WITH A REVISED KEY TO THE SOUTHERN INDIAN FORMS. *Taprobanica* 11 (1): 25-32
2. Bhattarai S, Pokheral CP, Lamichhane BR, Regmi UR, Ram AK, Subedi N. 2018. Amphibians and reptiles of Parsa National Park, Nepal. *Amphibian & Reptile Conservation* 12(1): 35–48 (e155)
3. Boulenger, George A. 1890. *The Fauna of British India, Including Ceylon and Burma. Reptilia and Batrachia*. Taylor & Francis, London, xviii, 541 pp
4. Das, I. & De Silva, A. 2005. *Photographic guide to snakes and other reptiles of Sri Lanka*. New Holland Publishers, 144 pp.
5. JABLONSKI, D., AND R. MASROOR 2020. Geographic Distribution: *Dendrelaphis tristis* (Common Bronzeback Tree Snake). Pakistan: Khyber Pakhtunkhwa: Haripur District. *Herpetological Review* 51: 273-274.
6. Joshi, Ritesh; Abhishek Singh, Kanchan Puri 2019. New record on geographic distribution of *Dendrelaphis tristis* (Daudin, 1803) (Reptilia: Squamata: Colubridae) from Rajaji Tiger Reserve, north India. *Herpetology Notes* 12: 305-308
7. Luard, C.E. 1918. The Bronze-backed Tree Snake (*Dendrolaphis tristis*) in Central India. *J. Bombay Nat. Hist. Soc.* 25: 306 -
8. Masroor, R. 2011. The Common Bronzeback Tree Snake, *Dendrelaphis tristis* (Daudin, 1803): An Addition to the Herpetofauna of Pakistan. *Pakistan J. Zool.* 43 (6): 1215-1218
9. PARMAR, D. S 2020. *Dendrelaphis tristis* (Common Bronzeback Treesnake). *Reproduction. Herpetological Review* 51: 614-615.
10. Singh, Harsimran 2016. First record of *Dendrelaphis tristis* (Daudin, 1803) from Punjab, India. *J. Chem. Bio. Phy. Sci. Sec. B* 6 (5): 1145-1147