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Beddome's Coralsnake *Calliophis beddomei* Smith, 1943, is a front-fanged venomous snake endemic to the hills of southern India—the Eastern and the Western Ghats (Smith 1943; Whitaker & Captain 2004; Castoe et al. 2007). This species was originally described based on two specimens - the holotype: BMNH 1946.1.17.99 (formerly 74.4.29.49) in the Natural History Museum, London collected by Lt. Col. Richard Henry Beddome (1830–1911) from Shevaroy Hills at 1219m, a disjunct isolated massif in the southern Eastern Ghats, and the paratype: ZSIC 13559 in the Zoological Survey of India, Kolkata, from Koppa, in the central Western Ghats. Three more non-types are known from Shevaroy and Mudumalai, Nilgiris, all collected by Beddome and currently at the California Academy of Sciences Herpetology Museum, USA (<http://www.calacademy.org> accessed on 16 November 2013 CAS 17262, 17264 and 17266). This species was listed as Data Deficient in the latest published IUCN conservation status assessment of Indian reptiles (Srinivasulu et al. 2013). Although formally named as a new species only in 1943, this species was collected in the 19<sup>th</sup> century by Col. Beddome. Since Beddome's days, this species has not been found (Wall 1919, Daniels & Ishwar 1994; Ganesh et al. 2013). In this note, a recently rediscovered topotypic specimen is illustrated and described to enhance our understanding of the species' diagnosis and intraspecific variation.

## REDISCOVERY OF BEDDOME'S CORALSNAKE *CALLIOPHIS BEDDOMEI* SMITH, 1943 FROM THE TYPE LOCALITY

S.R. Ganesh<sup>1</sup> & Eric Ramanujam<sup>2</sup>

<sup>1</sup>Chennai Snake Park, Rajbhavan Post, Chennai, Tamil Nadu 600022, India

<sup>2</sup>Pitchandikulam Bioresource Centre / Forest Consultants, Auroville, Tamil Nadu, India

<sup>1</sup>snakeranglerr@gmail.com (corresponding author),

<sup>2</sup>ericramanujamowl@yahoo.com

### *Calliophis beddomei* Smith, 1943

**Material examined:** CSPT/S-82 [Chennai Snake Park Trust], from Yercaud (11°47.15'N & 78°11.35'E; 1305m elevation), Shevaroy Hills, Salem District, Tamil Nadu State, India (Image 1).

### Description

**Measurements in mm:** head length 9.95; head width 6.85; head depth 4.75; eye diameter (horizontal) 1.05; eye to snout distance 3.75; nostril to snout distance 1.40; eye to nostril distance 2.10; interorbital distance 4.10; internarial distance 3.45; eye to lip distance 1.35; body width 8.90; tail width at the base 5.40; snout to vent length 520; tail length 65.

**Scalation:** rostral barely visible from above, higher than broad, subequal to internasal; internasals trapezoid, narrow anteriorly, broader posteriorly; prefrontals larger than internasals, frontal and supraoculars, but smaller than parietals; parietals, large, lung shaped; supralabials 7/7, 3<sup>rd</sup> in contact with prefrontal; 3<sup>rd</sup> and 4<sup>th</sup> entering orbit, 5<sup>th</sup> touching postocular; temporals 1/1, much larger, in contact with supralabial and parietal; infralabials much elongate and narrow, 6/7; mental

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**Image 1. (a) *Calliophis beddomei* non type CSPT/S-82; insets showing closeup of lateral view of head, midbody and ventral view of tail; (b) holotype BMNH 1946.1.17.99 (Photo: ColinMcCarthy); (c) paratype ZSIC 13559 (Photo: S.R. Chandramouli).**

larger than infralabial, triangular; genials evident, anterior and posterior pairs subequal; dorsal scale row formula 13-13-13 (at one head length after neck, middle of body, and at one head length anterior to anal shield, respectively); scales smooth, without any apical pits; ventral scales 212, not strongly angulate laterally; anal scales 2; subcaudal scales 34 pairs + terminal scale tip.

Colouration in formalin: dorsum greyish sooty black, with 76 pairs of darker, jet black spots, each ca. 3mm diameter; along scale rows 2, 3, 4 and 10, 11, 12; a dark black broken vertebral stripe on scale row 7; narrower elongated spots, 3 pairs on tail, across rows 1-2 and 5-6; venter anteriorly yellowish-white with light rosy tinge; venter scarlet red from the first 1/5<sup>th</sup> of the body till

the anal scale; subcaudals whitish medially flanked by scarlet red on both the sides.

**Comparisons:** *Calliophis beddomei* can be diagnosed from sympatric congeners by the following combination of characters (only opposing suite of character states listed)—from *C. bibroni* (Jan, 1858): no preocular; one postocular; body with distinct alternate red and black bands all over except in very old / large individuals; *C. melanurus* (Shaw, 1802): six supralabials, dorsum yellowish-brown; venter orange; subcaudals bluish; *C. nigrescens* Günther, 1862 complex: preocular in contact with nasal; ventrals 234–251, subcaudals 32–44; body dorsally with—five black stripes on a reddish-brown background (*C. n. pentalineatus* Beddome, 1871), with broken stripes or a series of black spots on a nacreous purple body that are not distinct (*C. n. concinnus* Beddome, 1863), with sooty black body and feeble black stripes (*C. n. khandallensis* Wall, 1913); *C. castoe* Smith, Ogale, Deepak & Giri, 2012: head width distinctly larger than body width; unpatterned rich brown dorsum; a distinct orange-yellow collar; subcaudals reddish-orange; ventrals 240–254; subcaudals 45–53 pairs.

In the original description, *C. beddomei* was mentioned as “whitish below” (Smith 1943, also repeated in Deepak et al. 2010). Our examination shows that this species has a reddish ventral colour. The whitish ventral colour mentioned by Smith (1943) might arguably be a preservation artifact where the red might have faded to pale white after decades of preservation.

Coral snakes are among the most speciose elapids in South Asia and are the most poorly-known, as evidenced by recent new descriptions, rediscoveries and range extensions (Gowrishankar & Ganesh 2009; Deepak et al. 2010; Smith et al. 2008, 2012). That *C. beddomei* had not been sighted for over a century, in any of its known localities, despite field surveys suggests that it is rare. Additionally, its taxonomy had also remained rather confused till recently. *Calliophis beddomei* was previously considered as *C. nigrescens*, which again is a species complex, containing allopatric

and morphologically diagnosable population south of Palghat Gap, bearing the name *Calliophis pentalineatus* Beddome, 1871. The recently described *C. castoe* was also once considered as *C. nigrescens*. Such situations call for further reassessments of *C. nigrescens* complex (also see Smith et al. 2012). As for *C. beddomei*, more surveys in the Western and the Eastern Ghats are needed to better document its distribution.

## References

- Castoe, T.A., E.N. Smith, R.F. Brown & C.L. Parkinson (2007). Higher-level phylogeny of Asian and American coralsnakes, their placement within the Elapidae (Squamata: Serpentes), and the systematic affinities of the enigmatic Asian coralsnake *Hemibungarus calligaster* (Wiegmann, 1834). *Zoological Journal of the Linnaean Society of London* 151: 809–831.
- Deepak, V., S. Harikrishnan, K. Vasudevan, & E.N. Smith (2010). Redescription of Bibron's Coralsnake, *Calliophis bibroni* Jan 1858 with notes and new records from south of the Palghat and Shencottah gaps of the Western Ghats, India. *Hamadryad* 35(1): 1–10.
- Daniels, R.J.R. & N.M. Ishwar (1994). Rarity and the herpetofauna of the southern Eastern Ghats, India. *Cobra* 16: 2–14.
- Ganesh, S.R., S.R.Chandramouli, R. Sreekar & P. Gowrishankar (2013). Reptiles of the central Western Ghats - a reappraisal and revised checklist, with emphasis on the Agumbe plateau. *Russian Journal of Herpetology* 20(3): 181–189.
- Gowrishankar, P. & S.R. Ganesh (2009). Sighting record and range extension of *Calliophis (=Calliophis) bibroni* (Jan, 1858) (Reptilia: Squamata: Serpentes: Elapidae). *The Herpetological Bulletin* 108: 10–13.
- Smith, M.A. (1943). *Fauna of British India, including Ceylon and Burma. Vol - III Serpentes*. Taylor and Francis publications, London, 583pp.
- Smith, E.N., K. Manamendra-Arachchi & R. Somaweera (2008). A new species of coralsnake of the genus *Calliophis* (Squamata: Elapidae) from the Central Province of Sri Lanka. *Zootaxa* 1847: 19–33.
- Smith, E.N., H. Ogale, V. Deepak & V.B. Giri (2012). A new species of coralsnake of the genus *Calliophis* (Squamata: Elapidae) from the west coast of peninsular India *Zootaxa* 3437: 51–68.
- Srinivasulu, C., B. Srinivasulu, V. Deepak & A. Das (2013). *Calliophis beddomei*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 18 March 2014.
- Wall, F. (1919). Notes on a collection of snakes made in the Nilgiri hills and the adjacent Wynaad. *Journal of the Bombay Natural History Society* 26: 552–584.
- Whitaker, R. & A. Captain (2004). *Snakes of India - The Field Guide*. Draco Books, Chengalpet, South India, 481pp.

