

an *Elaphe hodgsoni* (Günther 1860). During capture, the snake regurgitated the specimen of *E. hodgsoni*, which measured a total length of ca. 92 cm.

The second instance was observed near Chamaravilla village (32°50'13"N, 76°08'40"E, 1624 m a.s.l.), situated in Chamba district of Himachal Pradesh, 2.37 km away from Jukyani. On 15 August 2020, at 14:21 h, an adult *N. oxiana* was observed feeding on an *E. hodgsoni*. The anterior portion of *N. oxiana* was hidden behind a stone with one third of the prey snake already swallowed. The cobra regurgitated the prey as it was disturbed by a crowd that had gathered and entered a burrow nearby. The snake returned to the dead *E. hodgsoni* after a few minutes, but was disturbed by the crowd again and moved away.

The range of *E. hodgsoni* and *N. oxiana* overlaps in Himachal Pradesh, as well as in Jammu and Kashmir in India. It is likely that *E. hodgsoni* might form a part of the diet of the latter in this range. Further studies are necessary to ascertain if *Naja oxiana* feeds exclusively on serpents, or includes snakes as part of a broader range of prey items. The present report is noteworthy as it adds to our understanding of an otherwise poorly known elapid species.

### Acknowledgments

We are grateful to Zeeshan Mirza for encouraging us to write the note.

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DOI

Date submitted 23/03/2021

Date accepted 12/10/2021

Available online 22/07/2022

Hamadryad Vol. 39 (1&2), pp. 76-79, 2022.

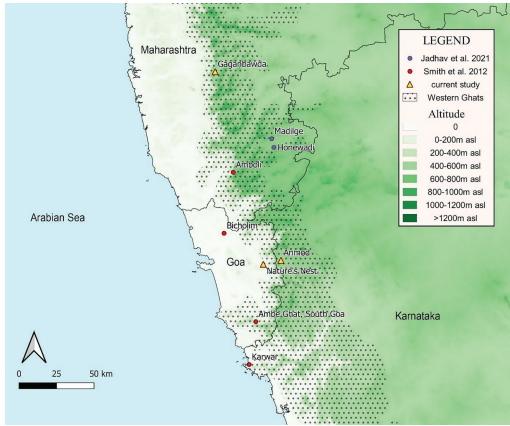
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### Additional locality reports of *Calliophis castoe* Smith, Ogale, Deepak & Giri, 2012 (Squamata, Elapidae) from the Western Ghats, India

CITATION. Praveen, HN., Badiger, R., Zarmekar, R. and Kamble, S. (2022). Additional locality reports of *Calliophis castoe* Smith, Ogale, Deepak & Giri, 2012 (Squamata, Elapidae) from the Western Ghats, India. *Hamadryad*: 39, 76-79.

KEYWORDS. Reptilia, Elapidae, Coral snake, *Calliophis castoe*, Range Extension



**Figure 1.** Map showing known and new localities of *Calliophis castoe*

The genus *Calliophis* Gray, 1834 currently has 15 recognised species distributed throughout the oriental region, of which five occur in India (Uetz et al. 2021). *Calliophis beddomei* has been previously reported from Shevaroy hills in the Eastern Ghats, Mudumalai and Koppa in the central Western Ghats, and Kallar in the southern Western Ghats (Jins et al. 2014); *C. bibroni* is known to be present along the Western Ghats range with Agumbe hills marking the northern limit, to Agasthiyar hills in Kerala (Deepak et al. 2010); *C. melanurus* has been reported from

multiple localities across the Indian peninsula and Sri Lanka (Whitaker & Captain 2004; Shine & Nameer 2012); and *C. nigrescens* distributed across the Western Ghats is sympatric with *C. castoe* in Goa (Smith et al. 2012). Rarely seen, these are some of the least known snakes in India.

Smith et al. (2012) described a new species of coral snake, *Calliophis castoe* from the Western Ghats, based on three specimens from three different localities, namely Amboli, Maharashtra; Amba Ghat, South Goa and Karwar, Karnataka. They also reported the species from Dicholi (Bicholim), North Goa. Subsequently, this species has been reported from Cotigao Wildlife Sanctuary, Goa (Khandekar et al. 2021) and also recently reported from Madilge and Hone-wadi, Maharashtra (Jadhav et al. 2021). It is an uncommon species with limited information on its natural history, except for a few anecdotal reports suggesting its fossorial habit (Smith et al 2012). We report the species from Kolhapur district (Maharashtra), South Goa district (Goa) and Uttara Kannada district (Karnataka).

On 28th June 2020, SK reported an individual in Sangashi (16.5614° N, 73.8595° E; altitude 630m asl) near Gaganbawada, Kolhapur district, Maharashtra. This new locality is approximately



**Figure 2.** A) and B) Road-killed *C. castoe* specimen from Anmod, Karnataka; Picture credit: Ramesh Badiger. C) *C. castoe* specimen from Gaganbawada, Maharashtra Picture credit: Sachin Kamble. D) and E). *C. castoe* specimen from Goa; Picture credit: Ramesh Zarmekar

70 km (straight line distance) north of the type locality of this species, Amboli. It was identified as *Calliophis castoe* based on the unicoloured, unpatterned dorsum, slender body, orange band on the head, and the underside of the tail which was uniformly orange. This individual was ~80 cm in total length. It was seen approximately two feet below the ground in loose soil while digging a pit in the home garden. Typical tail curling behaviour of *Calliophis* was not seen.

The second individual was seen at Nature's Nest, Sacordem, Dharbandora taluka, South Goa district, Goa (15.411256, 74.200198; altitude 60 m asl). The nearest known locality is Bicholim, North Goa, which lies ~31 km aerially from Sacordem. It was examined and identified as *Calliophis castoe* based on the unicoloured, dark dorsum and prominent orange band on the head. It was then photographed and released. From snout to tail-tip, it measured 56 cm, and the specimen did not display any form of aggression or tail curling behaviour when handled.

One road-killed specimen was observed by RB at Anmod (N 15.438602, E 74.309182; altitude 597 m asl), Karnataka on 31 October 2020. This locality is ~45 km aerially from the nearest known locality of occurrence (Ambe Ghat, South Goa). This road-killed specimen was fresh, and seen on the main road passing through the semi-evergreen forest near the forest check post. Morphological data of this specimen was taken before it was left in the forest. We followed Smith (1943) for dorsal row scale count. These dorsal rows were counted two head lengths behind the head, at midbody, and two head lengths before the vent. Dorsal scales were in 13:13:13 rows. We followed Dowling's (1951) method to count ventral scales and they were 242, divided subcaudals 36, supralabials 7, 3 and 4 touching the eye, preocular 1 and postoculars 2 on both sides. It had a total length of 60 cm and colouration was as mentioned in Smith et al. (2012).

The Western Ghats, India, is home to five species of coral snakes of the genus *Calliophis* (Uetz et al. 2021). Among these, *Calliophis nigrescens* is one of the widely distributed species and known from Gujarat, Maharashtra, Goa, Kerala, and Tamil Nadu (Whitaker and Captain 2004). Although a widely distributed species, it is a poorly known species in terms of ecology

and natural history. Although considered terrestrial, coral snakes are best at burrowing. Thus, the apparent rarity of these coral snakes would be directly associated with their fossorial nature. *Calliophis castoe* is also a poorly known species. The only information about their habitat and behaviour is based on a single live individual collected from Amba Ghat, Goa (Smith et al. 2012). This individual was seen among the leaf litter close to the road. Our observation based on a live specimen at Gaganbawada, Maharashtra also suggests that this species is burrowing. The observation of a live individual from Sacordem, Goa indicates their nocturnal habits. Our report of a road-killed specimen from Anmod, Karnataka assures the presence of this species in this landscape.

For the effective conservation assessment of a poorly known taxon like *Calliophis*, information about the distribution and natural history is vital. Hence, we take this opportunity to report the occurrence of *Calliophis castoe* from additional localities and a few notes on their habitat and natural history.

### Acknowledgements

We would like to thank Varad B Giri for encouraging us to write this note, and also Roozbeh Gazdar and Anuj Shinde for reviewing the same.

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DOI

Date submitted 23/02/2021

Date accepted 12/10/2021

Available online 22/07/2022

Hamadryad Vol. 39 (1&2), pp. 79–82, 2022.

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**Evidence towards antipredatory behaviour  
by Indian Spiny-tailed lizard *Saara hardwickii*  
(Gray, 1827) towards Indian Red sand  
boa in Desert National Park, India**

**CITATION.** Jangid, A.K., Tripathi, R., and Daniel C.G. (2022). Evidence towards antipredatory

behaviour by Indian Spiny-tailed lizard (*Saara hardwickii* GRAY 1827) towards Indian Red sand boa in Desert National Park, India. *Hamadryad*: 39, 79-82.

**KEYWORDS.** Arid, Defensive strategy, Natural history, Tail spination, Thar desert.

The Indian Spiny-tailed lizard *Saara hardwickii* (Gray 1827) is the only herbivorous lizard in the Indian subcontinent. Earlier reported to be widespread, the current known largest population density of this species is confined to the arid tracts of India, which are in Kutch district in Gujarat (Dutta & Jhala 2007), and Jaisalmer district in Rajasthan (Ramesh & Ishwar 2008; Kaur et al. 2020). These lizards have an average snout-to-vent length of 175 mm, with blunt snouts, dorso-ventrally flattened bodies and thick tails that are covered with hard spiny ornamented scales (Smith 1935). Locally known as “Sanda”, these diurnal lizards excavate long curved burrows with an elliptical mouth (Figure 1a) in gravel plains, which leads into a tunnel that gradually slopes downward (Ramesh & Sankaran 2013). They live in clustered colonies with multiple burrows scattered in close vicinity (Abdulali 1960; Minton 1966) and close their burrows with sand soon after the sun sets or during rains (Figure 1b). The species represents an important prey base in this particular landscape as they are fed upon by the Great Indian Bustard *Ardeotis nigriceps*, Laggar Falcon *Falco jugger*, Tawny Eagle *Aquila rapax*, Steppe Eagle *Aquila nipalensis*, Short-toed Snake Eagle *Circaetus gallicus*, Cattle Egret *Bublcus ibis*, Indian Fox *Vulpes bengalensis*, Desert Fox *Vulpes Vulpes pusilla*, Golden Jackal *Canis aureus*, Bengal monitor Lizard *Varanus bengalensis*, Desert Monitor Lizard *Varanus griseus*, and Red Sand Boa *Eryx johnii*, to name a few (Gupta 1975; Dutta & Jhala 2007; Pardeshi et al. 2008; Home & Jhala 2009; Maurya et al. 2009; Jhala et al. 2012; Ramesh & Sankaran 2013). *S. hardwickii* is ‘vulnerable to extinction’ (Molur & Walker 1998) owing to the decline in population due to loss of habitat and poaching pressure (as a result of superstitious medicinal properties of the lizard’s body fat; Ramesh & Ishwar 2008).

The Red Sand Boa *Eryx johnii* (Russell 1801), of the family Boidae, are a widely distributed species found throughout the Indian subcontinent, and are common within the limits