

A new record of cream coloured morph of *Naja kaouthia* Lesson, 1831 (Reptilia, Serpentes, Elapidae) from Hazaribag, Jharkhand, India

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ABSTRACT

A rare cream coloured morph of monocellate cobra, *Naja kaouthia* Lesson, 1831 without hood mark has been recorded for the first time from Hazaribag town residential area (Jharkhand state), outside the known range of the snake extant distribution.

KEY WORDS

New record; Cream coloured morph; *Naja kaouthia*; Hazaribag; Jharkhand.

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INTRODUCTION

Asiatic cobra complex comprises 10 species (Wuster, 1998). However, only four species, namely *Naja naja* (Linnaeus, 1758), *N. kaouthia* Lesson, 1831, *N. oxiana* (Eichwald, 1831) and *N. sagittifera* Wall, 1913 occur in India; and out of them only *N. naja* shows a fairly wide distribution.

N. kaouthia has been reported from Gangiatic plain, Bengal, Orissa, Sikkim, and Assam in northern and eastern India where it occurs sympatrically with *N. naja* (Wuster, 1998) but, up to now, has never been reported from any part of Jharkhand state (India), outside its extant geographic distribution range (Fig. 1).

Besides India, it occurs in Nepal, Bangladesh, Burma, Malaysia, Cambodia, Thailand, southern Vietnam and south western China. It inhabits a wide range of habitats particularly those associated with water but also occurs in agricultural land and human settlements including cities.

It occurs up to 1000 m elevation but is mainly found below 700 m in a broad range of habitat types. *N. kaouthia* is specified in schedule-II, of Part-II of WPA, 1972 and listed in CITES Appen-

dix-2. The IUCN status of this snake is under category of least concern.

Prakash & Raziuddin (2009) have recently reported 19 species of snakes from Hazaribag district of Jharkhand which does not include *N. kaouthia*.

Further, a report on the reptilian fauna of Bihar (including Jharkhand) published by Dasgupta & Raha (2004) also does not mention this species of cobra in their list. We report here for the first time the occurrence of *N. kaouthia* ("Suphan"/cream colour morph) from Hazaribag town of Jharkhand state.

Hazaribag district of Jharkhand forms a part of Chotanagpur Plateau lying between extent 84°27'E longitude to 85°55'32"E longitude and 23°25'29"N latitude to 24°49'24" N latitude with an average elevation of 604 m. It is a region of undulating terrain with residuary hills and intermountain valleys and is predominantly a forest district with about 36.05% forest area.

The average annual rainfall is 1234.5 mm. During peak summer (May) maximum temperature shoots up to more than 40°C and from December to early part of January average temperature is 4°C to 5°C or less.

DISCUSSION AND CONCLUSIONS

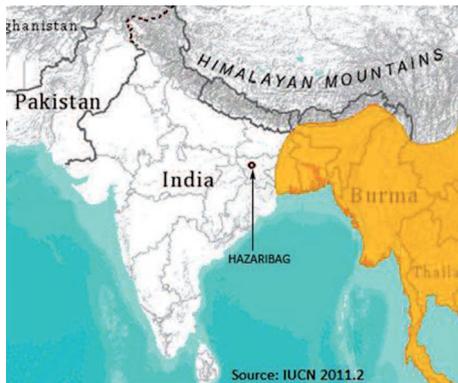
On 15 June 2011, during day time a single live adult, 208 cm long, cream-coloured, acellate cobra, hitherto unreported from any part of Jharkhand state, was rescued live (Fig. 2) from the store house of a cafeteria in “Swarnajayanti Park” of Hazaribag town (24° 00' 21.5" N; 85° 22' 04.0" E) which is situated adjacent to "Hazaribag Lake" at an elevation of 610.5 m. It was temporarily released in a big play field and photographed using Canon PowerShot SX 300IS camera.

The dorsal surface of the cobra was cream coloured while the ventral surface was lighter than the dorsal. It was not observed to spit venom but hissed explosively and only occasionally protruded tongue. On the basis of absence of any hood mark (Fig. 3) the specimen was initially suspected to be

N. oxiana which is reported only from extreme north-west regions of India (Murthy et al., 1979; Wuster, 1998).

A closer examination of morphological characters of the rescued atypical cream coloured cobra however, revealed that it was *N. kaouthia* Lesson, 1831. Although *N. kaouthia* typically has a monocellate hood mark which may vary in shape, the rescued specimen lacked the hood mark but had distinct throat pattern characteristic of *N. kaouthia*.

It had a pair of darker spots on the ventral side of hood, each surrounded by a distinctly lighter ring (or a half-circle, or “D-shaped”) with its flat side towards ventral body midline and the fairly wide distinctly darker cross band farther back (i.e. farther posterior) on the ventral side (Fig. 4). Number of ventral and subcaudal scales was 186 and 48 respectively, less than those described for *N. oxiana*



1



2

3



4



Figure 1. Rescue site of *Naja kaouthia* in Jharkhand state (India). Extant distribution of the species is shown in yellow (modified from IUCN, 2011). Figure 2. *Naja kaouthia*, cream coloured morph. Figure 3. Absence of hood mark in the rescued *Naja kaouthia*. Figure 4. Ventral surface of hood of *Naja kaouthia* showing distinct throat pattern.

(Wuster, 1998). This cobra resembled very much a relatively rare cobra *N. kaouthia suphanensis* Nutaphand, 1986, the so called "Suphan cobra", a light coloured snake reported from central Thailand by Nutaphand (1986) which has been regarded as a rare taxon with a restricted distribution (Cox, 1991).

Multivariate analysis of morphometry and comparative sequencing of cytochrome oxidase sub unit I (COI) gene of typical monocellate *N. kaouthia* and "Suphan cobra" made by Wuster et al. (1995) have, however, confirmed that the latter is just a colour variety of *N. kaouthia*. On the basis of the colour and absence of hood mark we believe that the rescued cobra was the "suphan"/cream colour morph of *N. kaouthia*, a species of cobra reported here for the first time from Jharkhand state.

Since it is an uncommon species of cobra in the state, it warrants special conservation measures which should be addressed separately from those reserved for the commonly occurring venomous snakes. The rescued specimen was handed over to the Hazaribag Wildlife Division office whence it was subsequently sent to snake park of Bhagwan Birsa Biological Garden, Ormanjhi, Ranchi, Jharkhand for conservation.

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