

## (II)

# FIRST EVER SIGHTING OF KING COBRA NEST IN THE KUMAON HILLS OF UTTARAKHAND

## Introduction

King Cobra – Hamadryad – (*Ophiophagus hanna*), the third largest snake in India and the world's largest venomous snake is a very elusive snake. In spite of its large size, it is rarely encountered, even in areas that they are known to be quite common. The “*Encyclopaedia of Indian Natural History*” (Hawkins, 1986) mentions that they are found in dense evergreen forests of the Western Ghats, Orissa, Bihar, West Bengal, Andamans and the Northern Hills. In Uttarakhand it was mostly considered to be distributed along a narrow strip of evergreen forest sandwiched between the foothills and the Tarai region. The name King Cobra is misleading; King Cobras are altogether different genus from the Cobras (*Naja* spp.). (Daniel 1983)

## Sighting of the Nest

On two separate occasions, spread over a period of two years, the authors had come across adult King Cobras in places where they had hitherto never before been reported from. Both were seen at an altitude of around 1,740 m above msl near Bhowali, Nainital (N29°23'17", E79°30'23.7"). Manish Rai, who lives in the Talla Ramgarh valley in Nainital District, had seen and photographed an adult 12 feet long King Cobra feeding on a Indian Rat Snake (*Ptyas mucosa*) at an altitude of more than 1,700 m above msl

near the place he lives in the valley. Ever since, the authors were on the look-out for the nest.

On 1st September 2006, a King Cobra nest was located on a slope overgrown with a rich crop of Kumaria grass (*Heteropogon contortus*), Chadi grass (*Apluda mutica*) and Godia grass (*Chrysopogon serrulatus*) and interspersed with small trees of Banj Oak (*Quercus leucotrichophora*), Khinna (*Sapium insigne*) etc. The nest was at a distance of 4.57 m (15 feet) from the path, nestled at the base of a small Oak tree. On examination it was found that the nest consisted of a highly compacted and rotting mass of dead leaves, twigs and other assorted vegetative materials. The eggs were pale yellow in colour and looked fresh and healthy. In order to stop the newly hatched snakes from crawling into people's homes and thereby become victim of people's wrath, the authors raised up a metre high polythene sheet barricade around the nest. The temperature within and outside the nest was regularly measured with a mercury thermometer. (Table 1).

The eggs started to hatch on and from 18th September 2006 morning and continued till the next day. In all, 18 hatchlings were collected out of which one was deformed (it died soon after). Finally it was found that out of a total of 26 eggs only 17 (65.38%) had hatched successfully. Each new hatchling was weighed and

**Table 1***Temperature within and Outside the nest*

Date	Time	Temp. (°C) (inside the nest)	Temp. (°C) (outside the nest)	Weather
05.8.06	10.10	25.00	28.00	Sunny
08.8.06	10.10	24.50	25.00	-
09.8.06	17.45	24.50	25.00	-
10.8.06	17.30	24.50	23.40	-
11.8.06	08.30	23.00	24.50	Cloudy
12.8.06	12.10	26.00	28.00	Shade
13.8.06	17.45	24.50	24.00	Sunny
14.8.06	09.00	24.00	21.80	Raining
17.8.06	18.20	21.50	22.00	Cloudy
18.8.06	10.00	23.00	24.20	Bright
19.8.06	10.30	24.40	26.00	Partial shade
21.8.06	09.30	23.40	26.00	Sunny
22.8.06	08.30	25.00	30.00	Sunny
23.8.06	19.00	24.70	25.00	Cloudy
25.8.06	16.50	25.40	28.00	Cloudy
28.8.06	11.50	25.60	28.50	Cloudy
29.8.06	17.30	25.00	23.00	-
01.9.06	08.30	22.00	21.00	Raining
05.9.06	16.00	24.00	23.50	Sunny
06.9.06	08.15	23.00	22.00	-
07.9.06	08.20	22.30	22.50	-
08.9.06	08.35	24.00	23.00	-
09.9.06	08.20	23.00	22.00	-
10.9.06	08.05	23.20	23.00	-
11.9.06	08.25	22.30	23.00	-
12.9.06	08.30	23.00	22.00	-
13.9.06	08.35	24.00	23.00	-
14.9.06	09.00	23.10	22.00	-
15.9.06	08.25	22.30	23.00	-
16.9.06	08.05	23.00	22.50	-
17.9.06	08.10	22.40	23.00	-
18.9.06	08.00	22.30	23.00	-

measured (Table 2). The hatchlings were kept in a bucket for a day before being released.

The hatchlings were seen to drink water during the daytime but at night they would go to sleep in two different groups. We

**Table 2***Weight & Measurements of Hatchlings*

Hatchling No.	Length (cm)	Weight (gm)
1	51.50	24.00
2	49.20	22.00
3	51.00	23.50
4	49.00	22.00
5	49.00	21.00
6	50.50	25.00
7	51.00	25.00
8	50.00	24.00
9	51.10	22.00
10	51.00	24.00
11	50.00	22.00
12	50.00	23.00
13	41.00	15.00
14	49.00	20.00
15	51.00	22.00
16	53.00	23.00
17	50.00	22.00
18	Dead & piped	
19	Dead & piped	

were unable to find out if the grouping was based on sex.

**Releasing the Hatchlings**

Ensuring that the maximum number of the King Cobra eggs hatched safely was only half the concern; how to release them safely and without inviting the ire of the local people was the more important other half. Suitable locations were surveyed and finally, an area a few hundred metres from the nest site (N29°27'1.7", E79°32'7.5") was selected for release.

The area we selected, was full of big

moss-covered rocks and boulders, some 50 m above Ramgarh. With a thick cover of small bushes, shrubs and small trees, the rocky terrain appeared to be an ideal habitat for snakes. On the 20th September 2006, the hatchlings were released.

**Nest Details**

*Location* : Talla Ramgarh Village, Nainital Distt. (Uttarakhand).

(N29°27'11.5", E79°31'53.4")

*Altitude* : 1398 15 m above msl.

*Clutch size* : 26 eggs

*Shape* : Roughly circular

*Size of the nest* : 1.80 x 1.30 m dia. and ≈0.80 m deep at the centre.

*Nesting material* : Mostly dry leaves and twigs of Banj Oak (*Quercus leucotrichophora*) and Kilmora (*Berberis asiatica*)

*Vegetation around the nest* : *Apluda mutica*, *Artemesia vulgaris*, *Arundinella nepalensis*, *Asparagus adscendens*, *Berberis asiatica*, *Chrysopogon serrulatus*, *Dioscorea bulbifera*, *Flemingia congesta*, *Indigofera pulchella*, *Mimosa himalayana*, *Quercus leucotrichophora*, *Reinwardtia trigyna*, *Rhamnus triqueter*, *Rhus cotinus*, *Rosa moschata* and *Rubus* spp.

**Hatchlings**

*Shape of egg* : Almost cylindrical with tapering ends.

*Colour* : Ivory white

*Size of egg* : 58 x 36 mm 5 mm

*Clutch size* : 26 eggs

*Total No. that hatched* : 19

*Dead & Piped* : 2

*Survival* : 17 (Survival % on hatching 65.38%)

*Average length* : 50 01.50 cm  
*Average weight* : 22.32 g  
*Coloration* : Pitch black with pale yellow stripes around the body.

### Some Observations

It is very rare that one gets to see a King Cobra nest; rarer still to find one deep in the Outer Himalayas from where King Cobras have never been reported before. But this one was found and 17 healthy hatchlings were observed as they emerged from their nest. Several questions that beg answers are:

- Is this a new subspecies of King Cobra? Romulus Whitaker feels that it could be one. (DNA test is being conducted)
- Why was it that King Cobras had never before been reported from that region? Could there be a relationship between Global Warming and the spread of King Cobras to hitherto unreported higher altitude areas?
- How is it that there has been no report of human casualty on account of King Cobra bite from the region?

- What is the actual distribution of the King Cobra in the inner Himalayas?
- What species of snakes do the King Cobras prey on in the region? Do they subsist on snakes alone, or do they supplement their food with other animals?

### Threats to King Cobras in the region

*Forest fire* : Forest fire seems to be biggest threat to the King Cobras. Their nest-building season seems to coincide with the Forest Fire season in the Kumaon Hills.

*Loss of habitat* : With more and more forested land being converted to agricultural land, the ideal habitat for the King Cobras is shrinking by the day. These may in fact be some of the last few specimens we are coming across.

*Destruction of nests and hatchlings by people* : There are earlier reports of villagers burning the nests of King Cobra in the past. Even in this case, watch had to be mounted to stop the nest from being destroyed.

### References

- Daniel, J.C. (1983). *The Book of Indian Reptiles*. Bombay Natural History Society, Bombay.  
Hawkins, R.E. (1986). *Encyclopedia of Indian Natural History*, Bombay Natural History Society, Bombay.

S.S. Rasaily\*,  
Manish Rai\*\*,  
and  
Manoj Chandran\*\*\*

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\* Presently : Director/Conservator of Forests, Rajaji National Park (Uttarakhand).

\*\* Topogiri Sri Arobindo Ashram, Talla Ramgarh, Nainital (Uttarakhand).

\*\*\* State Silviculturist (Uttarakhand).