

FIRST PHOTOGRAPHIC EVIDENCE OF *Oligodon arnensis* FROM MAGADH DIVISION (BIHAR).

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ABSTRACT:-

Beside the 21 confirmed species of *oligodon* snakes in India and from which *oligodon arnensis* was believed that the species occurs in Bihar also, but till now no any relative study or photographic evidence has proven it yet. The occurrence of this species is hard to detect, but based on our local contacts and regular field observations from oct 2018- Mar 2019. We confirmed the occurrence and photographed it.

The first evidence based finding of *Oligodon arnensis* in Bihar gives a bit more hope for the species survival, however the population is still under threat due to its non-venomous nature, road kills, small population, minimum egg laying capacity and other types of threats.

This Genus is separated morphologically from other species of snake for having large nostril, long frontal, two shield like temporal. The Banded Kukri snake is pale brown with well defined black cross bands with white edge like "Zebra Pattern". Adults measuring in length upto 500-700 mm. female lays 3-5 eggs and Juvenile emerges 7mm in length.

INTRODUCTION:-

Oligodon arnensis (Shaw; 1802), a non-venomous colubrid snake is well known for its egg feeding behavior with the help of strongly curved broad hind teeth like Nepali origin knife called "Kukri". The common name of *O. arnensis* is also known as "Banded Kukri" Snakes due to the name derived from its Kukri like teeth. They are interpreted as an evolutionary adaptation to Oophagy (coleman et. al., 1993). *O. arnensis* is a nocturnal or crepuscular snake. It shelters during the day in tree holes, termite mounds or in rocky crevices. Usually it forages at night and hunts lizards (Akshay Pandirker et. al., 2015; Vivek Sharma et. al., (2012), small snakes, mice and eggs, in the farming land or gardens, but all from this genus are specialized with Kukri type teeth to feed upon birds and reptile eggs that form a major part of their diet.

Oligodon's preference for eggs as a source of food is well documented (Broadley, 1979 ; Coleman et. al.,1993; Hu and Zhao; 1987). They use their kukri shaped teeth to cut a hole in egg shell to insert their head and feed on contents and can also in jest small eggs of reptile and birds. The Banded Kukri snakes are in offensive they can inflict deep slashing wounds with their Kukri like teeth.

MATERIALS AND METHODS:-

The present study is based on first photographic evidence of *O. arnensis* from two different localities of Magadh division (2 snake from Gaya and 1 snake from nawada) in Bihar. The Specimens were collected and examined for thirteen morphological Characters along with colouration, banding pattern, eye diameter, Scale count, hollow type patterns included. All the data were taken with the help of Caliper to the nearest 0.1 mm. The measurements were taken in mm. Dorsal, ventral and subcaudal scales were counted by manual magnifying lens. Colouration and banding patterns at different position were recorded.

RESULTS AND SPECIES DESCRIPTION:-

The Prime thing of the present study is to record all the Characteristic features, photographs of different views, distribution and others useful details of *O. arnensis* from morphological, survival, habit and habitats point of view as the species is first hand recorded from different localities of Bihar.

Distribution range:- Matihani Village Bodhgaya, Narhat.

Diagnosis: - HEAD: - Seven supra-Labials (3rd and 4th entering the eye), one loreal, two Pre- Ocular, Two Post-Ocular, five infra-labials (three in contac with chin- shields) , five infra-labials.

Dorsal: - Smooth, Seventeen rows of scales.

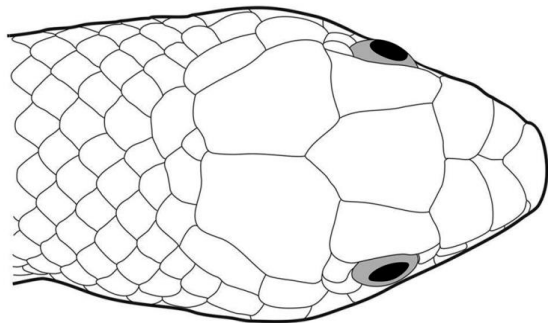
Ventral: - Angulate laterally.

Description: - HEAD: - An arrow shaped deep black band with white edge (2nd) present in the head region extending up to in between eyes, band on head is in perfect "V" shape.

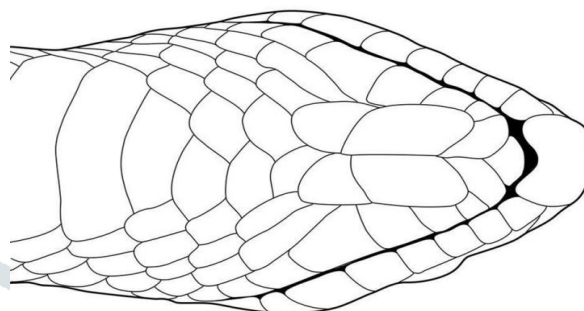
Neck: - Another angular black band with white edge (3rd) also observed in this region.

Dorsal: - Brown in color, slender, Bands limited within the dorsal scales, from neck to vent the number of bends various from 45-51.

The bands are deep black with white edges. The Width of the bands is two- three scales wider and band to band difference in irregular.



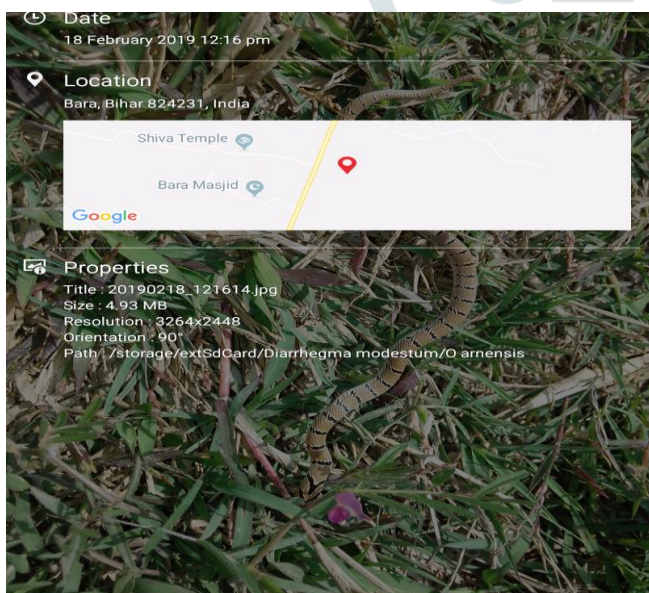
1A



1 B

Fig. 1 A: - Showing Dorsal Scale Pattern.

Fig.1 B: - Showing ventral Scale Pattern.



2A

Fig. 2 A: - Showing GPS enabled image of locality where *O. arnesis* found.



2 B

Fig. 2 B: - Showing *O. arnesis* image which having 51 bands.

Table: -1. Morphological characters of *oligodon arnensis* (n=3).

Characters	1 st Specimen 10 Feb. 2019 Bodh Gaya	2 nd Specimen 18 Feb. 2019 Bodh Gaya	3 rd Specimen 22 Feb. 2019 Nawada
Total length	15.2 cm	16.5 cm	14.6 cm
Tail tip	1.3 mm	1.5 mm	1.3 mm
Eye diameter	1.5 mm	1.7 mm	1.2 mm
Dorsal	232	232	232
Ventral	202	202	207
Loreals	1	1	1
Supra- labials	7	7	7
Infra - labials	5	5	5
Pre Ocular	2	2	2
Past Ocular	2	2	2
Bands Head to neck	3	3	3
Bands Necks to vent	39	43	39
Bands on Tail	4	5	4

CONCLUSION:-

O. arnensis is a most challenging group of snake facing fast population decreasing due to lack of shelter, food, urbanization, pesticide pollution, human confliction and non-venomous nature. The Banded Kurki Snake is a genus need of future investigation and study in Bihar. The rarity of occurrence and high morality in the field will continue to be a key challenge to future survival of species. This genus may not be uniform display of egg feeding and defensive mechanism it is in need of further studies about distribution, Feeding and defensive behaviors in Bihar. The prime findings of the present study surely help in revealing new knowledge about this species.

However, we still do not yet know the true population number of the extent of their home range as the snakes are shy and very hard to access in farming or residential areas due to its nocturnal behavior.

Conflict of Interest: - The present study was not supported by any kind of grant. The authors confirm that this article content has no conflict interest.

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