

## Short Research Article

### First new Record of albino Common Kukri Snake (*Oligodonarnensis*) (Shaw, 1802) from Uttarakhand, India

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#### Abstract:

The discovery of an albino *Oligodonarnensis* in Dehradun, Uttarakhand, marks a significant addition to the known distribution of this species. Previously, ~~the~~ *Oligodonarnensis*, a rare variant of the kukri snake, had been observed only once before, making this find particularly noteworthy. Such records are crucial for understanding the biodiversity and distribution patterns of reptiles in India, contributing to the conservation efforts and scientific knowledge of herpetofauna in the region.

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**Keywords:** New Record, Albino, Dehradun, Uttarakhand, Snake, Kukri Snake.

#### Introduction :

Around 314 amphibians and 518 reptile species comprise India's herpetofauna (reptiles and amphibians) (Angals et al. 2011, Dinesh et al. 2011). Unfortunately, in contrast to other reptiles, snakes have not gotten as much ecological research, and what little has been done may not be adequately represented in the literature (Seigel 1993; Bonnet et al. 2002; Maurya et al. 2017; Maurya et al. 2020; Nishad and Vipul, 2024).

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Almost all vertebrate species on Earth have rare albinism, and wild animals continue to exist in the wild despite this seemingly unfavorable condition (Gamble et al., 2006). Animals that are albinistic exhibit both positive and negative reactions to their traits. Herpetologists hypothesized that, in addition to heredity, albinism may manifest due to genetic mutations, diet, living circumstances, poor habitat, age, illness, or trauma (Sage, 1962; Hayley McCardle, 2012).

Over the past century, there have been sporadic reports of albinism in reptiles (e.g., Hensley 1959; Dyrkacz 1981 and references therein). However, multiple reports for a single species continue to be the exception rather than the rule (Bechtel and Bechtel 1981; Krecsák 2008). The primary cause is the rarity of albinos; in wild populations of a given species, as few as 1 in 30,000 individuals may

have the condition (Bechtel 1995).The rarity of albinism in snakes is reflected in the limited data available, highlighting the need for further research in this area.As far as albinism is concerned, certain snakes are frequently only known from one or a small number of specimens. Still, there is little information on albinism in animals, particularly snakes (Nivalkar et. al. 2012; Kumbar et. al. 2016; Takhur 2018; Fellows 2018; Maurya et. al. 2020; Deshmukh et. al. 2020; Dethé and Ranshoor, 2021).

### Methodology:

The reconnaissance survey in the Lacchiwala Range of the Dehradun Forest Division aimed to explore its diverse habitat and potential wildlife species. During the survey, an albino snake hatchling was found on the Dudli-Doiwala road, in a vulnerable position that posed a high risk of mortality due to vehicular traffic. To mitigate this risk, the hatchling was promptly and carefully relocated to a safer nearby area within the same habitat range, minimizing stress and harm. Detailed notes and photographs documented this sighting and relocation, contributing valuable data for ongoing wildlife monitoring and conservation efforts in the Dehradun Forest Division.

### Result and Discussion:

The discovery of an albino *Oligodonamensis*, commonly called the kukri snake, in Uttarakhand is indeed a significant find. On March 10, 2023, a rare albino snake hatchling was spotted on the Dudli-Doiwala road, within the jurisdiction of the Lacchiwala Range, Dehradun Forest Division, Uttarakhand (Fig.1). This young snake, measuring approximately 5 inches in length, displayed a unique cream coloration, contrasting the typical black to dark brown hues commonly reported for the species in the region (Fig.2& 3). Fortunately, the snake was safely rescued from the road and subsequently released back into the nearby forest area, ensuring its safety and the continuation of its natural life cycle in its native habitat. Such occurrences highlight the rich biodiversity of the area and the importance of wildlife conservation efforts.

### Conclusion:

Documenting this occurrence contributes valuable information to the herpetological community and aids in understanding the genetic diversity and adaptability of the species. It also highlights the importance of biodiversity conservation, especially in regions like Uttarakhand, which are rich in wildlife but face threats from habitat loss and climate change. By increasing our knowledge of local

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species, we can better implement conservation strategies to protect these ecosystems and ensure their resilience in the face of environmental changes.

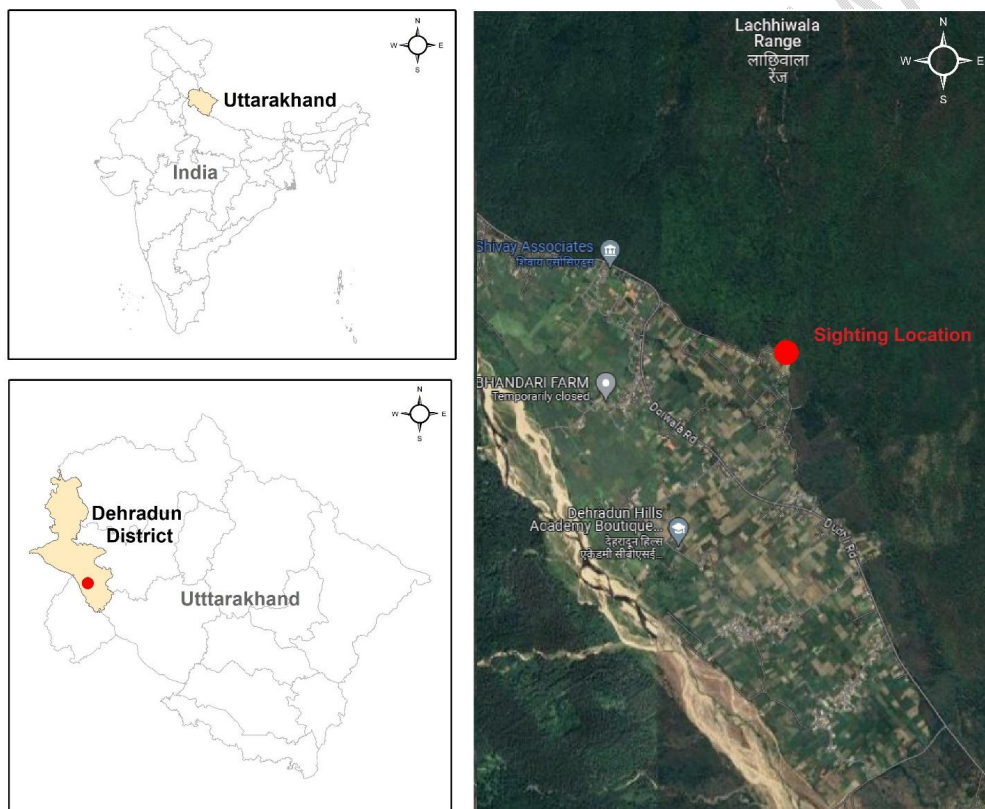


Fig1: Map of the sighting-observing location



**Fig 2:**A typically coloured Common Kukri Snake (*Oligodonarnensis*). Photo by: Aditya Tiwari



**Fig 3:**An albino Common Kukri Snake from Uttarakhand. Photo by: Pravesh Kumar

### References :

- Aengals R, Sathish Kumar VM, Palot MJ 2011. Updated Checklist of Indian Reptiles. Zoological Survey of India. [zsi.gov.in/checklist/Reptiles](http://zsi.gov.in/checklist/Reptiles).
- Bechtel, H. B. 1995. Reptile and Amphibian Variants: Colors, Patterns and Scales. Krieger Publishing, Malabar, Florida. 206 pp.
- Bechtel, H. B. 1991. Inherited color defects: comparisons between humans and snakes. *Int. J. Dermatol.* 30:243–246.
- Deshmukh, R. V., Deshmukh, S. A., Badhekar, S. A., Rewatkar, J., Pachare, V. P., & Kawale, S. B. 2020. First records of albinism or leucism in six species of snakes from central India. *Reptiles & Amphibians*, 26(3), 174-179.
- Dethle, V. D., & Ranshoor, S. B. 2021. Record of albino Trinket Snake from Nashik, Maharashtra, India. *ZOO'S PRINT*, 36(12), 15-16.
- Dinesh KP, Radhakrishnan C, Gururaja KV, Deuti K, Bhatta G 2011. A Checklist of Amphibia of India. Zoological Survey of India. [zsi.gov.in/checklist/Amphibia](http://zsi.gov.in/checklist/Amphibia).
- Dyrkacz, S. 1975. The second recorded occurrence of an albino *Thamnophis radix* radix (Baird and Girard). *Herpetol. Rev.* 6(1):10. 1981. Recent instances of albinism in North American amphibians and reptiles. *SSAR Herpetol. Circ.* 11:1–31.
- Fellows, S. (2018). New records of albino spectacled cobra snakes (*Naja naja*) in Madhya Pradesh. *Entomology, Ornithology & Herpetology*, 7(215), 2161-0983.
- Gamble T., Aherns J. L., and Card V. 2006, "Tyrosinase activity in the skin of three strains of albino Gecko (*Eublepharis macularius*)," *Gekko. Spencer*, 5(1), 39 – 44.
- Hayley McCardle B. S. 2012, Albinism in Wild Vertebrates. Thesis Presented to the Graduate Council of Texas State University-San Marcos in Partial Fulfillment of the Requirements.
- Hensley, M. 1959. Albinism in North American amphibians and reptiles. *Publ. Mus. Michigan State Univ., Biol. Ser.* 1:133–159.
- Krecsák, L. 2008. Albinism and leucism in European Viperinae: a review. *Russ. J. Herpetol.* 15:97–102.
- Kumbar, S. M., Ghadage, A. B., Patil, S. S., & Lad, S. B. 2016. Record of albino sand boa (*Gongylophis conicus*) from Sangli district, western Maharashtra, India. *Russian Journal of Herpetology*, 23(1), 70-72.
- Maurya, V., Kumar P., & Dhakate, P. M. 2020 "First sighting record of

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albino Spectacled cobra *Naja naja* (Linnaeus, 1758) from Uttarakhand, India” In *Biological Forum—An International Journal* (Vol. 12, No. 2, pp. 51-53).

- Maurya, V., Singh, J. P., & Dhakate, P. M. 2017. First record of Coral Red Khukri Snake (*Oligodon kheriensis*) from Uttarakhand, India: Expanding the current known dispersal range of the species. *International Journal of Science and Research (IJSR)*, 6, 276-278.
- Nishad, Rahul, and Vipul Maurya. "First record of an albino Spectacled Cobra (*Naja naja*) from Uttar Pradesh, India." *Reptiles & Amphibians* 31.1 (2024): e21413-e21413.
- Nivalkar, A., Patil, V., Paul, M., & Shinde, V. 2012. Report of an Albino Beaked Worm-Snake *Gryptotyphlops acutus* (Dumeril and Bibron, 1844). *Journal of the Bombay Natural History Society (JBNHS)*, 109(3), 206-207.
- Sage B. L. 1962, "Albinism and melanism in birds," *Br. Birds*, 55(6), 201 – 220.
- Seigel, R. A. 1993. Summary: future research on snakes, or how to combat "lizard envy." Pages 395– 402 in R. A. Seigel and J. T. Collins, editors. *Snakes: ecology and behavior*. McGraw-Hill, New York, New York, USA.
- Thakur, M., & Trivedi, K. 2018. Albinism in snakes rescued in Surat, India. *Reptiles & Amphibians*, 25(1), 63-67.

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