



Albinism in a Monocled Cobra, *Naja kaouthia* (Lesson 1831), from Northeastern India

Sourav Dutta¹, Monish Kumar Thapa¹, Hirakjyoti Das¹, Tilak Kumar Pradhan¹, Debajit Mahanta¹, and Sanjib Deka²

¹Assam Wildlife Rescue and Research Organization (AWRRO). (Bihpuria, Lakhimpur, Assam, India (sourav.awrro@gmail.com [corresponding author], monish.awrro@gmail, hirakjyoti.awrro@gmail.com, tilak.awrro@gmail.com, debajit.awrro@gmail.com)

²Silghat, Kaliabor, Nagaon, Assam, India (dekasanjib1984@gmail.com)

Reptilian taxa display a huge variety of colors arranged in diverse patterns with functions that include: thermo-regulation, protection of vital organs, warning, communication, mimicry, camouflage, and aids in vision (Jackson et al. 1976; Bechtel 1978, 1991). Inherited color anomalies, such as albinism and leucism, are well known in many animal species, including snakes (Bechtel 1991). Albinism in snakes in nature is not unknown, although they are rare, especially in adult individuals (Krecsák 2008). Herein we report the first case of albinism in a Monocled Cobra (*Naja kaouthia*) from northeastern India.

At about 1400 h on 11 January 2020, we rescued a Monocled Cobra (Fig. 1) from inside the Kuwaritol High School in Kaliabor, Assam, India (26°32'55.4"N, 92°55'58.3"E). The juvenile snake was identified by the distinctive O-shaped or monocellate mark on its hood. It was yellowish with a prominent chrome-white hood mark and eyes and tongue were pink, which are characteristics of albinism (e.g., Bechtel 1991; Silvestre et al. 2009; Silva et al. 2010; Abegg et al. 2015). After taking photographs, we released the snake into its natural habitat.



Fig. 1. An albino Monocled Cobra (*Naja kaouthia*) from Kaliabor, Assam, India. Photographs by Sanjib Deka.

Although albinism has been recorded in a variety of Indian species of snakes (e.g., Hoshing et al. 2013; Jadhav et al. 2014; Mahabal and Thakur 2014; Adimallaiah and Vyas 2015; Thakur and Trivedi 2018; Deshmukh et al. 2020), including Spectacled Cobras (*Naja naja*) from several localities (e.g., Mahabal and Thakur 2014; Fellows 2018), and Chanhome et al. (1998) indicated that “albinos with red eyes are not uncommon” when referring to *N. kaouthia* in Thailand, this is the first record of albinism in a Monocled Cobra from northeastern India.

Acknowledgements

We thank the Department of Forest, Assam, and the Kuwaritol High School authorities for help in removing the snake from the school and releasing it into natural habitat. We also thank Tapu Nath, Jaydev Mandal, Dr. Parimal Chandra Ray, and Dr. H.T. Laremsanga for guidance in preparing this manuscript.

Literature Cited

Abegg, A.D., O.M. Entiauspe-Neto, and T. de Lema. 2015. First record of albinism in the Elapomorphini tribe (Serpents: Dipsadidae). *Herpetology Notes* 8: 503–505.

Adimallaiah, D. and A. Vyas. 2015. Cases of albinism in Russel’s Viper *Daboia russelii* from Mumbai, Maharashtra, India. *Reptile Rap* 17: 25–26.

Bechtel H.B. 1978. Color and pattern in snakes (Reptilia, Serpentes). *Journal of Herpetology* 12: 521–532. <https://doi.org/10.2307/1563357>.

Bechtel H.B. 1991. Inherited color defects. Comparison between humans and snakes. *International Journal of Dermatology* 30: 243–246. <https://doi.org/10.1111/j.1365-4362.1991.tb04628.x>.

Chanhome, L., M.J. Cox, and H. Wilde. 1998. Venomous snakebite in Thailand I: Medically important snakes. *Military Medicine* 163: 310–317. <https://doi.org/10.1093/milmed/163.5.310>.

Deshmukh, R.V., S.A. Deshmukh, S.A. Badhekar, J. Rewatkar, V.P. Pachare, and S.B. Kawale. 2020. First records of albinism or leucism in six species of snakes from central India. *Reptiles & Amphibians* 26: 174–179.

Fellows, S. 2018. New records of albino Spectacled Cobra Snakes (*Naja naja*) in Madhya Pradesh. *Entomology, Ornithology & Herpetology* 7: 215. <https://doi.org/10.4172/2161-0983.1000215>.

Hoshing, V., S. Thakur, and A. Mahabal. 2013. Cases of total albinism in Green Keelback *Macropisthodon plumbicolor* and Common Wolf Snake *Lycodon aulicus* (Colubridae). *Reptile Rap* 15: 46–47.

- Jackson F.J., W. Ingram III, and H.W. Campbell. 1976. The dorsal pigmentation pattern of snakes as an antipredator strategy: A multivariate approach. *American Naturalist* 110: 1029–1053. <https://doi.org/10.1086/283125>.
- Jadhav, M., A. Mahabal, V. Desai, and J. Shrivastav. 2014. A case of total albinism in Common Kukri Snake *Oligodon arnensis* (Colubridae) with an unusual colour pattern. *Reptile Rap* 16: 3–5.
- Krečsák L. 2008. Albinism and leucism among European Viperinae: a review. *Russian Journal of Herpetology* 15: 97–102.
- Mahabal, A. and S. Thakur. 2014. Instances of aberrant colors and patterns among the Indian herpetofauna: A review. *Russian Journal of Herpetology* 21: 80–88.
- Silva, F., C. Assis, and F.M. Quintela. 2010. Albinism in a *Liophis miliaris* (Linnaeus, 1758) (Serpentes: Dipsadidae) from Minas Gerais State, southern Brazil. *Herpetology Notes* 3: 171–172.
- Silvestre, A.M., J. Soler, J.M. Gener, M. García, and C. Martí 2009. Albinismo total de *Coronella girondica* en la Península Ibérica. *Boletín de la Asociación Herpetológica Española* 20: 44–45.
- Thakur, M. and K. Trivedi. 2018. Albinism in snakes rescued in Surat, India. *Reptiles & Amphibians* 25: 63–67.