

Thanatosis Behavior: A Unique Strategy for Survival by a Spectacled Cobra, *Naja naja* (Linnaeus 1758) (Squamata: Elapidae) in Bhubaneswar, Odisha

Shreya Pandey*, Aurobindo Samal, Barnava Pattnaik

Department of Entomology, Indira Gandhi National Open University, Bhubaneswar, India

INTRODUCTION

When an animal is threatened or attacked by a predator, it may appear to be dead by keeping a rigid posture or by mimicking entirely relaxed muscles (a behavior known as death feigning; also known as catalepsy, or tonic immobility; or letisimulation. Letisimulation is a common defensive behavior in which an animal pretends to die in order to avoid predation [1-5]. After all other anti-predator measures have failed. There are not many accounts that describe Thanatosis in Southern Asian snakes: Checkered keelback, *Coelognathus radiatus*, and the copper-headed trinket snake.

DESCRIPTION

The spectacled cobra also called as common Indian cobra (*Naja naja*) (Figure 1) is a venomous elapid dwelling in a variety of natural habitats as well croplands and even near human habitations. Death feigning behavior has been described in several leptotyphlopoid, colubrid and elapid snakes. Its range includes most of mainland India (excluding the Northeast), Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, and possibly Eastern Afghanistan. Here, we present the first observation of a spectacled cobra exhibiting Thanatosis [6-11].

The *Naja naja's* initial reaction to being disturbed is a swift escape, however if individuals are unable to do so. If disturbed further, it may strike or bite. Raising raise one-third of its body, lifting its hood, and hissing loudly. We received a rescue call on 24 December, 2021 from Bhubaneswar (20°15' 19.0836"N 85°50' 29.9796" E). Upon reaching the location we observed a spectacled cobra found dead (Figure 1), and it was decided to relocate the snake as for the villagers concern, after the rescue was been done and trans locating process, the snake was seen alive and healthy. The snake was relocated to a safer habitat.

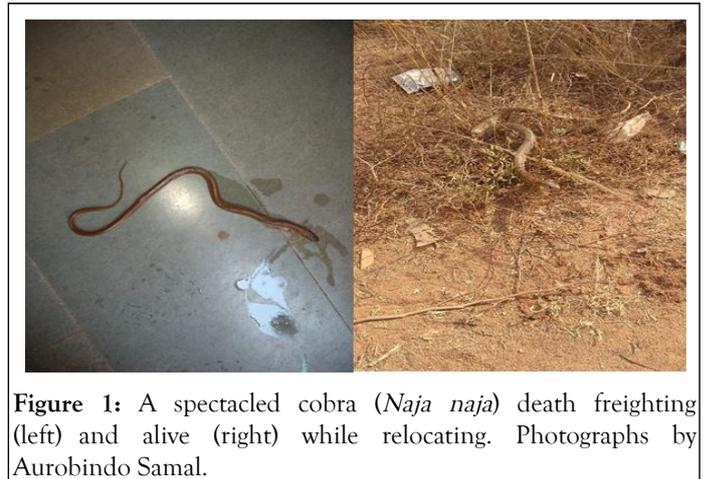


Figure 1: A spectacled cobra (*Naja naja*) death feigning (left) and alive (right) while relocating. Photographs by Aurobindo Samal.

CONCLUSION

The cobra was found showing feigned death, and unique behavior of thanatosis which is often a strategy to defend from predators. This is a first documentation of thanatosis behavior shown by a binocellate cobra in Bhubaneswar, India.

ACKNOWLEDGEMENT

We are thankful to Earth Crusaders Organisation for their social awareness on wildlife from grassroot level and helping in drafting of this manuscript and also thankful to Bhubaneswar Judo Hall Association for calling us to rescue the snake.

REFERENCES

1. Greene HW. Antipredator mechanisms in reptiles. In Biology of the reptilia. Alan R. Liss, New York, 1988;16:1-152.
2. MacDonald ASJ. Shamming death. J Bombay Nat Hist Soc. 1947;47:173.
3. Vogel G, Han-Yuen HK. Death feigning behavior in three colubrid species of tropical Asia. Russ J Herpetol. 2010;17(1):15-21.

Correspondence to: Shreya Pandey, Department of Entomology, Indira Gandhi National Open University, Bhubaneswar, India; E-mail: shreyapandey.2244@gmail.com

Received: 14-Jul-2022, Manuscript No. EOHCR-22-18394; **Editor assigned:** 16-Jul-2022, PreQC No. EOHCR-22-18394 (PQ); **Reviewed:** 01-Aug-2022, QC No. EOHCR-22-18394; **Revised:** 10-Oct-2022, Manuscript No. EOHCR-22-18394 (R); **Published:** 17-Oct-2022, DOI: 10.35248/2161-0983.22.11.292

Citation: Pandey S, Samal A, Pattnaik B (2022) Thanatosis Behavior: A Unique Strategy for Survival by a Spectacled Cobra, *Naja naja* (Linnaeus 1758) (Squamata: Elapidae) in Bhubaneswar, Odisha. Entomol Ornithol Herpetol. 11:292.

Copyright: © 2022 Pandey S, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

4. Mirza ZA, Vaze VV, Sanap RV. Death feigning behavior in two species of the genus *Lycodon* of Asia (Squamata: Colubridae). *Herpetology Notes*. 2011;4:295-297.
5. Gehlbach FR. Death-feigning and erratic behavior in leptotyphloid, colubrid, and elapid snakes. *Herpetologica*. 1970;24-34.
6. Humpherys RK, Ruxton GD. A review of thanatosis (death feigning) as an anti-predator behavior. *Behav Ecol Sociobiol*. 2018;72(2):22.
7. Ramani D, Trivedi K. Death-feigning behavior by a banded racer, *platyceps plinii* (Merrem 1820) (Squamata: colubridae). *Reptiles and Amphibians*. 2021;28(3):506-507.
8. Deshmukh RV, Deshmukh SA, Badhekar SA, Udapure UM, Hattimare SK. Death-feigning behavior in the common sand boa, *eryx conicus* (Schneider 1801) (Erycidae), and the common wolfsnake, *Lycodon aulicus* (Linnaeus 1758). *Reptil Amphib*. 2020;27(1):65-67.
9. Daniel JC. *Bombay Natural History Society. The book of Indian reptiles and amphibians*. Bombay Natural History Society, India: Oxford University Press. 2002: 252.
10. Whitaker R, Captain A, Ahmed F. *Snakes of India*. Chennai: Draco books, 2004.
11. Bhosale HS, Thite V. Death feigning behavior in large-eyed false cobra *Pseudoxenodon macrops* (Blyth, 1854) (Squamata: Colubridae). *Russ J Herpetol*. 2013;20(3):190-192.