

First Report of Death-feigning Behavior in a Twin-spotted Wolfsnake, Lycodon jara (Shaw 1802), from Nepal

Sandeep Chhetri Luitel¹ and Kamal Devkota²

¹Faculty of Forestry, Agriculture and Forestry University, Hetauda, Nepal (luitelsandeep96@gmail.com) ²Nepal Toxinology Association, Major Chowk, Kawasoti-08, Nawalpur, Nepal

Death-feigning or thanatosis (tonic immobility; TI) is one of the lesser-recognized defensive strategies of prey species following detection or physical contact with potential predators (Humphreys and Ruxton 2018). The first observation of death-feigning behavior by snakes in Nepal was documented by Bhattarai et al. (2017) in the Burmese Python (*Python bivittatus*) from Chitwan Park in central Nepal. Subsequently, observations of such behavior were reported in the Copper-headed Trinket Snake for the first time (on three distinct occasions) from Kaski District by Giri et al. (2020). Herein, we report an observation of death-feigning in the Twin-spotted Wolfsnake (*Lycodon jara*) from Nepal, which is the first documentation of this behavior in the species and the genus *Lycodon* from Nepal and the third documentation from the ophidiofauna of Nepal.

An observation of death-feigning in this species was reported in a juvenile from West Bengal, India, by Mahapatra et al. (2021). Displays of such behavior in other species of the genus *Lycodon* across Asia include the Common Wolfsnake (*Lycodon aulicus*) (Mirza et al. 2011; Deshmukh et al. 2020), Oriental Wolfsnake (*Lycodon capucinus*) (Mirza et al. 2011), and Yellow-collared Wolfsnake (*Lycodon flavicollis*) (Muliya et al. 2018).

The Twin-spotted Wolfsnake is a small, non-venomous, slender-bodied snake often found around forests and farmland. It is endemic to Asia with a wide distribution from India to Nepal, Bangladesh, Bhutan, and Myanmar (Uetz et al. 2022). In Nepal, the species was formerly described as rare in the Terai lowlands (Schleich and Kästle 2002). However, widespread observations from the Protected Areas network have been reported: Chitwan National Park (NP) and its vicinity (Pandey et al. 2018), Parsa NP (Bhattarai et al. 2018), Bardiya NP (Lohani et al. 2022), and Shukla Phanta NP (Rawat et al. 2020). Outside the PA network, few sightings have been reported, although reports exist for Sarlahi District (Chettri and Thapa Chhetry 2014) and Kaski District (Baral et al. 2020). The first report of the species in Parsa National Park was from the Amlekhgunj-Hattisar area, 6.6 km north of the present observation (Bhattarai et al. 2018).

At about 0940 h on 3 May 2022, a juvenile Twin-spotted Wolfsnake was observed under a concrete block inside the Parsa NP office complex (27.2302 N, 84.9874 E). The snake became aggressive in the presence of humans. After nearly a minute, it tried to escape by moving under other blocks. To prevent escape and ensure relocation into natural habitat, the authors tried handling it with a snake hook. On physical con-







Figure 1. Death-feigning behavior in a Twin-spotted Wolfsnake (*Lycodon jara*) after initial contact (left), after manual inversion (center), and still immobile after release (right). Photographs by Sandeep Chhetri Luitel.

1

tact with the hook, the snake became immobile and rolled upside down, exposing the venter with mouth and the eyes fully closed (Fig. 1). No other behaviors were observed. After 4–5 minutes, the snake was inverted manually, but it did not respond. The snake was then relocated into nearby undergrowth, where it remained immobile for a minute before moving into the brush.

Acknowledgements

We thank the Parsa National Park office and staff who helped in the observation and release of the snake.

Literature Cited

- Baral, R., K.R. Sapkota, M.P. Katila, R. Giri, S. Pandey, A. Bhandari, A. Sapkota, and R. Gautam. 2020. Diversity of snake in Kaski District of Gandaki Province, Nepal. Nepalese Journal of Zoology 4: 101–107. https://doi.org/10.3126/njz.v4i2.33892.
- Bhattarai, S., C.P. Pokheral, and B.R. Lamichhane. 2017. Death feigning behavior in the Burmese Python *Python bivittatus* Kuhl, 1820 in Chitwan National Park, Nepal. *Russian Journal of Herpetology* 24: 323–326. https://doi.org/10.30906/1026-2296-2019-24-4-323-326.
- Bhattarai, S., C.P. Pokheral, B.R. Lamichhane, U.R. Regmi, A.K. Ram, and N. Subedi. 2018. Amphibians and reptiles of Parsa National Park, Nepal. *Amphibian & Reptile Conservation* 12: 35–48.
- Chettri, K. and D. Thapa Chhetry. 2014. Diversity of snakes in Sarlahi District, Nepal. Our Nature 11: 201–207. https://doi.org/10.3126/on.v11i2.9600.
- Deshmukh, R.V., S.A. Deshmukh, S.A. Badhekar, U.M. Udapure, and S.K. Hattimare. 2020. Death-feigning behavior in the Common Sand Boa, *Eryx*

- conicus (Schneider 1801) (Erycidae), and the Common Wolfsnake, Lycodon aulicus (Linnaeus 1758) (Colubridae). Reptiles & Amphibians 27: 65–67. https://doi.org/10.17161/randa.v27i1.14457.
- Giri, R., R. Giri, and K. Devkota. 2020. Death-feigning behavior by Copper-headed Trinket Snakes, *Coelognathus radiatus* (Boie 1827) (Squamata: Colubridae), in Nepal. *Reptiles & Amphibians* 27: 249–250. https://doi.org/10.17161/randa.v27i2.14196.
- Humphreys, R.K. and G.D. Ruxton. 2018. A review of thanatosis (death feigning) as an anti-predator behaviour. *Behavioral Ecology and Sociobiology* 72: 22. https://doi.org/10.1007/s00265-017-2436-8.
- Lohani, A., R. Kadariya, U. Paudel, B.P. Shrestha, and R. Bahadur K.C. 2022. A survey of snake diversity in Bardiya National Park and associated corridor forest in Nepal. *Reptiles & Amphibians* 29: 182–186. https://doi.org/10.17161/randa.v29i1.16293.
- Mahapatra, A.D., S.K. Ghorai, and V. Santra. 2021. *Lycodon jara* (Twin-spotted Wolf Snake). Death feigning. *Herpetological Review* 52: 671–672.
- Mirza, Z.A., V.V. Vaze, and R.V. Sanap. 2011. Death feigning behavior in two species of the genus *Lycodon* of Asia (Squamata: Colubridae). *Herpetology* Notes 4: 295–297.
- Muliya, S.K., A. Nath, and A. Das. 2018. First report of death feigning behaviour in the yellow collared Wolf snake (*Lycodon flavicollis*). *Herpetological Bulletin* 143: 41–42.
- Pandey, D.P., D. Jelic, S. Sapkota, H.M. Lama, B. Lama, K. Pokharel, M. Goode, and U. Kuch. 2018. New records of snakes from Chitwan National Park and vicinity, central Nepal. *Herpetology Notes* 11: 679–696.
- Rawat, Y.B., S. Bhattarai, L.P. Poudyal, and N. Subedi. 2020. Herpetofauna of Shuklaphanta National Park, Nepal. *Journal of Threatened Taxa* 12: 15587–15611. https://doi.org/10.11609/JOTT.5611.12.5.15587-15611.
- Schleich, H.H. and W. Kästle. 2002. Amphibians and Reptiles of Nepal. ARG Gantner Verlag, Königstein, Germany.
- Uetz, P., P. Freed, R. Aguilar, and J. Hošek (eds.). 2022. *The Reptile Database*. http://www.reptile-database.org>.