REPTILES & AMPHIBIANS

Tail-vibrating Behavior in a Bamboo Pitviper, *Trimeresurus gramineus* (Shaw 1802) (Squamata: Viperidae)

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The Bamboo Pitviper (*Trimeresurus gramineus*) is an arboreal species usually associated with thick vegetation; however, individuals occasionally descend to the ground during monsoons to exploit abundant prey like frogs or, in the case of males, to follow the pheromonal trails of females (Sawant and Jadhav 2013).

Tail movements can serve multiple purposes. Some snakes wave their tails to lure prey (Hagman et al. 2008; Sazima 1991) and many snakes wave or vibrate their tails in response to a perceived threat, usually a predator (e.g., Greene 1973; Araújo and Martins 2006). In India, Deshmukh et al. (2020) observed tail-vibrating behavior in an Indian Egg-eater (*Boiga westermanni*), Common Catsnake (*Boiga trigonata*), Banded Kukri (*Oligodon arnensis*), and a Common Wolfsnake (*Lycodon aulicus*), and Deshmukh et al. (2021) described tail-waving behavior in a Green Keelback (*Rhabdophis plumbicolor*).

At 0222 h on 1 September 2019, during a night survey at Matheran, Maharashtra, India (18.997342°N, 73.271875°E), we observed an adult Bamboo Pitviper on the ground. In response to the approach of a stray dog, the snake assumed an S-shape, elevated its head, and vibrated its tail vigorously for 5 min. When this failed to dissuade the dog, the snake struck at him twice, which elicited the desired response. However, even after the dog moved away, the snake continued vibrating its tail for 10 min before slowly moving into a nearby bush.

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Literature Cited

Araújo, M.S. and M. Martins. 2006. Defensive behaviour in pit vipers of the genus *Bothrops* (Serpentes, Viperidae). *Herpetological Journal* 16: 297–303.

Deshmukh, R.V., S.A. Deshmukh, S.A. Badhaker, S. Katgube, S. Bhondawe, and R. Sethe, 2020, Tail-vibrating behavior in an Indian Egg-eater (*Boiga westermanni*), Common Catsnake (*Boiga trigonata*), Banded Kukri (*Oligodon arnensis*), and a Common Wolfsnake (*Lycodon aulicus*) from India. *Reptiles & Amphibians* 27: 68–70.

Deshmukh, R.V., S.A. Deshmukh, S.A. Badhaker, S. Katgube, and A. Bhelkar. 2021. Notes on behavior in Green Keelbacks, *Rhabdophis plumbicolor* (Cantor 1839) (Reptilia: Squamata: Natricidae). *Reptiles & Amphibians* 28: XXX–XXX.

Greene, H.W. 1973. Defensive tail display by snakes and amphisbaenians. *Journal of Herpetology* 7: 143–161. https://doi.org/10.2307/1563000.

Hagman, H., B.L. Philips, and R. Shine. 2008. Tails of excitement: caudal luring by an ambush-foraging snake (*Acanthophis praelongus*, Elapidae). *Functional Ecology* 22: 1134–1139. https://doi.org/10.1111/j.1365-2435.2008.01466.x.

Sawant, N.S. and T.D. Jadhav. 2013. Factors influencing habitat selection by arboreal pit vipers. *Zoological Science* 30: 21–26. DOI: 10.2108/zsj.30.21.

Sazima, I. 1991. Caudal luring in two Neotropical pitvipers, *Bothrops jararaca* and *B. jararacussu. Copeia* 1991: 245–248. https://doi.org/10.2307/1446274.

Fig. 1. A Bamboo Pitviper (Trimeresurus gramineus) vibrating its tail in response to an approaching dog. From a video by Prathamesh Amberkar.