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**Oriental Rat snake *Ptyas mucosa* (Linnaeus 1758)
feeding on an Indian Rock Python *Python molurus*
(Linnaeus 1758) from Mumbai, Maharashtra, India**

CITATION. Gokarankar, P.K., Hadkar, S.M. and Joshi, P (2024) Oriental Rat snake *Ptyas mucosa* (Linnaeus 1758) feeding on an Indian Rock Python *Python molurus* (Linnaeus 1758) from Mumbai, Maharashtra, India. *Hamadryad*.

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Snakes frequently engage in ophiophagy (the practice of feeding on snakes), especially the genera *Bungarus*, *Clelia*, *Cylindrophis*, *Drymarchon*, *Lampropeltis*, *Micrurus*, *Naja*, and *Ophiophagus* (Jackson et al. 2004; Maritz et al. 2019). Ophiophagy provides snakes with increased energy due to the higher mass relative to cross-sectional size compared to alternative prey, and some species can eat other snakes that are as long or even longer than they are (Cundall and Greene 2000; Jackson et al. 2004; Maritz et al. 2019). *Ptyas mucosa* (oriental rat snake) is a diurnal snake species with a wide distribution stretching across Iran, Turkmenistan, the Indian Subcontinent, and parts of Southeast Asia (Das 2010). Being a diurnal snake, it is also known to forage during the night (Ghosh et al. 2020). *Ptyas mucosa* is a predatory generalist and is also known to feed on other snakes, including the species *Chrysopelea ornata*, *Fowlea piscator*, *Naja naja*, *Oligodon taeniolatus*, *Psammophis condanarus*, *Rhabdophis plumbicolor*, and uropeltid snakes (Weiss and Kalki 2023). In addition, several studies have also reported instances of cannibalism in *P. mucosa* (Saha and Chaudhari 2017; Joshi et al 2023). Herein we report another instance of ophiophagy in the oriental rat snake from Maharashtra Nature Park (MNP), Mumbai, India (Location co-ordinates: 19°03'09.8"N 72°51'46.1" E).

On 22nd July 2022, at 14:48 h Indian Standard Time (IST), we observed an adult *Ptyas mucosa* attacking a juvenile/sub-adult *Python molurus* (much smaller in size compared to *Ptyas mucosa*) on the ground. As the two snakes were sparring, the rat snake captured the python's

mid-body in, its mouth (Fig 1A). In response, the python coiled its body around the rat snake's head and began constricting. This predator-prey interaction lasted for approximately 20 minutes. After some time, around 15:15 h, as soon as the python's grip around the rat snake's mouth loosened, the rat snake started swallowing the python from its tail end. By 15:30, after 42 minutes, the rat snake had completely engulfed the python. The rat snake did not kill the python, it engulfed its prey alive (Fig 1B). This instance of ophiophagy was recorded on Oppo A3s Mobile phone (Guangdong Oppo Mobile Telecommunications Corp., Ltd., China) and the snakes were identified based on the characters mentioned in Whitaker and Captain (2004).

Ptyas mucosa is a generalist snake that mainly feeds on frogs, snakes, rodents, lizards, and birds (Whitaker and Captain 2004; Weiss and Kalki 2023). Consumption of inorganic substances was also documented in *P. mucosa*. There have been instances documented where the snakes were seen consuming substances like a piece of cloth, male contraceptive, discarded sock, polythene roll, and plastic bottles (Sharma et al. 2016; Parmar and Patel 2022). However, the intent behind any of these feedings is unknown. In *P. mucosa*, the adult snakes are more inclined towards ophiophagy or cannibalism than subadults or smaller individuals (Saha and Chaudhuri 2017; Weiss and Kalki 2023). Our observation recording an adult *P. mucosa* feeding on *P. molurus* is the first documented instance of such an interaction. This observation adds to the growing knowledge about the diet and generalist nature of *P. mucosa*.

References

- CUNDALL, D. & GREENE, H.W. (2000)** Feeding in snakes. In: Schwenk, K. (Ed.) *Feeding: Form, Function, and Evolution in Tetrapod Vertebrates*, Academic Press, San Diego, California, USA, pp. 293–333.
- DAS, I. (2010)** *A Field Guide to the Reptiles of South-East Asia*. New Holland Publishers (UK) Ltd., London, United Kingdom.
- GHOSH, A., MADGULKAR, S. & BANEERJI, K. (2020)** Opportunistic nocturnal predation by a diurnal snake: An Indian Ratsnake, *Ptyas mucosa*

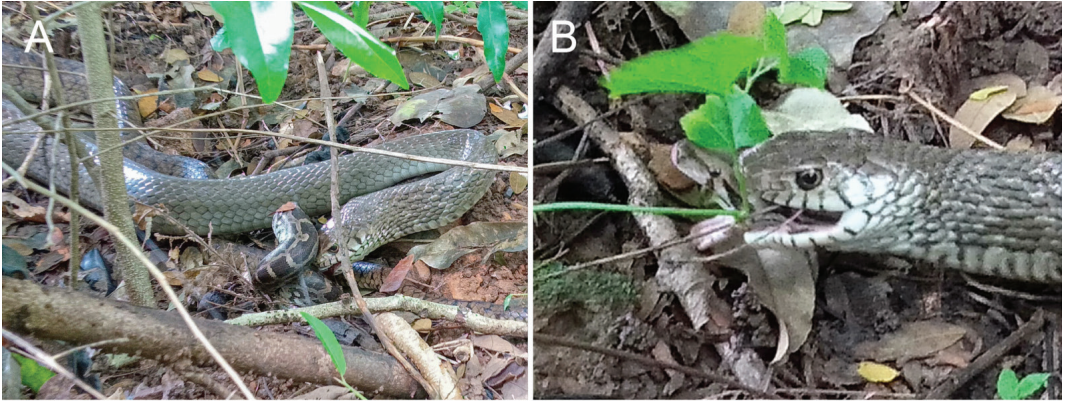


Figure 1. Predation of *Python molurus* (prey) by *Ptyas mucosa* (predator). (A) *Ptyas mucosa* attacking and holding *Python molurus* by its mid-body. (B) *Ptyas mucosa* engulfing *Python molurus* alive.

(Linnaeus 1758), preying on Marbled Balloon Frogs (*Uperodon systoma*). *Reptiles and Amphibians* 27, 245–246

GREENE, H.W. (1997) *Snakes: the Evolution of Mystery in Nature*. Berkeley, California, USA, University of California Press.

JACKSON, K., KLEY, N. J. & BRAINERD, E. L. (2004) How snakes eat snakes: The biomechanical challenges of ophiophagy for the California kingsnake, *Lampropeltis getula californica* (Serpentes: Colubridae). *Zoology*, 107(3), 191–00.

JOSHI, P., SONI, S. & FIGUEROA, A. (2023) Cannibalism in the Oriental Ratsnake, *Ptyas mucosa* (Linnaeus, 1758), in Mumbai, Maharashtra, India. *Herpetology Notes*, 16, 661–663.

LINNAEUS, C. VON. (1758) *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. Tomus I. Editio decima, reformata. Holmiae: Laurentii Salvii.

MARITZ, B., ALEXANDER, G.J. & MARITZ, R.A. (2019) The underappreciated extent of cannibalism and ophiophagy in African cobras. *Ecology* 100(2), 1–4.

PARMAR, D. S. & PATEL, V. D. (2022) Plastic ingestion by the Indian snakes *Ptyas mucosa* and *Coelognathus helena helena* (Serpentes: Colubridae). *Phyllomedusa: Journal of Herpetology*, 21(1), 91–94.

SAHA, A. & CHAUDHURI, A. (2017) *Ptyas mucosa* (Indian Rat Snake). Diet/cannibalism. *Herpetological Review*, 48, 681.

SHARMA, V., SAYYED, A. & BHANDARI, R. (2016) Herbivory and inanimate objects in the diet of the Oriental Ratsnake, *Ptyas mucosa* (Linnaeus 1758). *Reptiles & Amphibians*, 23(2), 102–103.

WEISS, M. & KALKI, Y. (2023) Trophic niche partitioning between sympatric *Naja naja* and *Ptyas mucosa*: Crowdsourced data in application to community ecology. *Journal of Herpetology* 57(1), 107–115.

WHITAKER, R. & CAPTAIN, A. (2004) *Snakes of India. The Field Guide*. Draco Books, Chennai, India.

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