

FIRST RECORD OF *NASSARIUS STOLATUS* (FAMILY NASSARIIDAE: GASTROPODA)
FEEDING ON DEAD HOOK-NOSED SEA SNAKE *HYDROPHIS SCHISTOSUS* FROM INDIA¹

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Juhu Beach (19° 5' 48.507" N, 72° 49' 35.35176" E) lies between Malad creek and Mithi river in Mumbai, on the western coast of Maharashtra, India, bordering the Arabian Sea. The beach stretches six km up to Versova and is dominated by sandy, muddy, and rocky shore habitats. On September 26, 2021, at 18:05 hours, a dead Hook-nosed Sea Snake *Hydrophis schistosus* (Daudin, 1803) was spotted on the muddy shore of the beach. Hook-nosed Sea Snake, also known as Beaked Sea Snake, was identified by the presence of a long and curved rostral scale (at tip of the snout), which gives it a beak-like appearance. Its body was covered with keeled scales, the body coloration grey to dark olive, with bands dorsally, and whitish ventrally, as described by Rao and Muralidharan (2017).

The snake had been wounded and was bleeding. Many individuals of a gastropod snail, later identified as *Nassarius stolatus*, were seen to be attracted to the bleeding part of the snake (Fig. 1). As we watched and photographed the scene, the snails reached for the bleeding part of the snake's mouth and started feeding on it. Chemical cues provide aquatic organisms with sensory information that guides behavioral responses and thus interactions among themselves and the environment (Raw *et al.* 2013). Other gastropods have also shown to respond to distant chemical feeding cues (Murphy 2001).

Nassariidae (Iredale, 1916) is a family of marine snails, commonly known as mud snails or basket shells. These snails are seen during low tide searching for food, where each species leaves a distinctive trail on sand or mudflats (Apte 2014). Most Nassariids are known to be scavengers, feeding on dead and decaying matter in the intertidal zone.

The species was identified as *Nassarius stolatus* (Gmelin, 1791) based on the thick, smooth and glossy shell. It showed a moderately high spire. All whorls including body whorls have strong axial ribs and well-defined

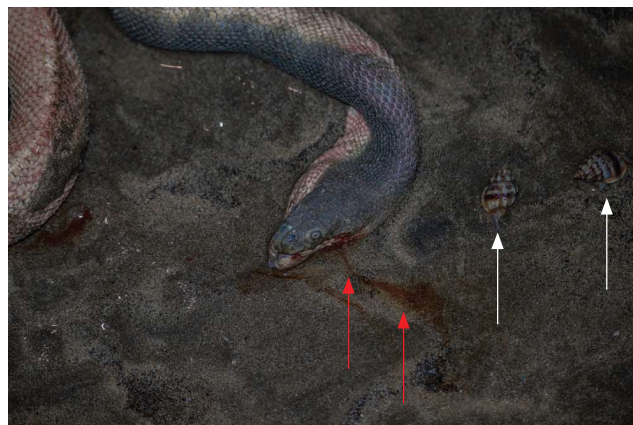


Fig. 1: Bleeding from the head of the snake (red arrows) and two snails attracted and moving towards it (white arrows)



Fig. 2: Snails feeding on the snake by drilling into the wounded part

sutures, with the body whorl highly inflated. Entire shell surface has chocolate brown bands. Outer lip is thick, denticulated, and columella calloused (Sonak 2017). The specimens measured an average length of 20–30 mm. Observation of *Nassarius stolatus* feeding on a Hook-nosed Sea Snake was recorded for the first time in India.

REFERENCES

APTE, D. (2014): Sea Shells of India: An Illustrated Guide to Common Gastropods. Bombay Natural History Society, Mumbai and Oxford

University Press. pp. 197.

MURPHY, A.D. (2001): The neuronal basis of feeding in the snails,

MISCELLANEOUS NOTES

- Helisoma*, with comparisons to selected gastropods. *Progr. Neurobiol.* 63: 383–408.
- RAO, C. & M. MURALIDHARAN (2017): Sea snakes of Sindhudurg district, Maharashtra, India. Project: Sea Snakes of Maharashtra Coast, India. Dakshin Foundation. pp. 20.
- RAW, J.L., N.A.F. MIRANDA & R. PERISSINOTTO (2013): Chemical Cues Released by an Alien Invasive Aquatic Gastropod Drives its Invasion Success. *PLoS ONE* 8(5): e64071.
- SONAK, S.M. (2017): Marine Shells of Goa: A Guide to Identification. Springer International Publishing. pp. 249.

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