



Diurnal Predation on a Common House Rat (*Rattus rattus*) by a Spot-tailed Pitviper (*Trimeresurus erythrurus*) in Northeastern Bangladesh

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The family Viperidae is represented in Bangladesh by seven species (IUCN Bangladesh 2015). The Spot-tailed Pitviper, *Trimeresurus erythrurus* (Cantor 1839), listed as Least Concern (LC) in Bangladesh and globally (Hasan et al. 2014; IUCN Bangladesh 2015; Khan and Ghosh 2021), is distributed through Bangladesh, India, Myanmar, and possibly Nepal, Bhutan, and Thailand (IUCN Bangladesh 2015; Pauwels et al. 2000; Whitaker and Captain 2004; Uetz et al. 2024). In Bangladesh, this typically nocturnal species occurs in bamboo and mixed evergreen forests of northeastern and southeastern parts of the country, the Chittagong Hill tracts, and the Sundarbans (Khan 1982; Hasan et al. 2014). Although *T. erythrurus* is known to feed on frogs, lizards, birds, and small mammals, prey and diet have not been quantified (Whitaker and Captain 2004). A few studies have addressed snakebites and venom (Mitrakul 1973; Mitrakul and Impun 1973; Thein et al. 2021; Thakur et al. 2022; Al

Haidar et al. 2024) but information on activity periods and particularly diurnal predation on any species of *Trimeresurus* is sparse.

At 1150 h on 28 June 2023, during a biodiversity survey in the Raghunandan Hill Reserve Forest in northeastern Bangladesh (24.12488611, 91.44671667), we encountered a *T. erythrurus* (total length ~1.7 m) on the ground preying on an adult Common House Rat (*Rattus rattus*) (Fig. 1). The snake struck the rat's neck three times and did not release it until it had become immobilized (~2 min). At 1152 h, the snake started swallowing the head of the rat. After ~5 min, the snake had swallowed the entire head of its prey and began moving to a more secluded site. After ~17 min, the snake moved into the branches of a nearby False Lime Tree (*Suregada multiflora*), where it completed ingestion of the rat.

The Mangshan Pitviper (*Protobothrops mangshanensis*) in China is known to shift activity periods from night to day



Figure 1. A Spot-tailed Pitviper (*Trimeresurus erythrurus*) ingesting an adult Common House Rat (*Rattus rattus*) in the Raghunandan Hill Reserve Forest, northeastern Bangladesh. Photographs by Harish Debbarma.

in response to varying environmental conditions (Deng et al. 2024). The Central Italian Asp (*Vipera aspis francisciredi*) is a diurnal viper reported to shift to nocturnal activity during periods of high temperature (Mattea and Allain 2020). Eyelash Pitvipers (*Bothriechis schlegelii*) hunt both by night and day (Sorrell 2009). Our observation suggests that *T. erythrurus* is a polyphasic forager that can shift its activity patterns, but further studies on behavior, activity patterns, and diet of this snake are necessary.

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