



Frog Bites Snake: A Robust Horned Frog (*Megophrys robusta*) Bites a Himalayan Keelback (*Herpetoreas platyceps*) in Darjeeling, West Bengal, India

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Asian horned frogs (Megophryidae: *Megophrys*) are distributed across southern and southeastern Asia, including India, Bhutan, China, the Sunda Islands, and The Philippines (Frost 2021). Considered rare across the range (Jha and Thapa 2002), very little is known about the natural history of many of these frogs. Megophryids are known to be opportunistic and generalist predators, and their diet, which consists largely of insects, varies depending on prey availability (Emmerson et al. 1994; Wells 2007). The Robust Horned Frog (*M. robusta*) is known to occur in Darjeeling, India (Pradhan et al. 2018), where it is associated with damp humid forests and fast-flowing hill streams (Mahony et al. 2018).

The Himalayan Keelback (*Herpetoreas platyceps*) is a mildly venomous natricid that is less than one meter in total length (Jha and Thapa 2002). These snakes occupy hilly forests near water from Pakistan through northern and northeastern India, Nepal, and Bhutan into Bangladesh and Tibetan regions of China (Uetz et al. 2021).

Herein we report an encounter between a Himalayan Keelback and a Robust Horned Frog. At about 0950 h on 11 August 2021 on a pedestrian footpath approximately 20 m from the nearest house in the rural village of Takdah Cantonment, Darjeeling, India (27.0403°N, 88.3571°E; WGS 84; 1,630m elev.), we observed a Robust Horned Frog that had engulfed the head of a Himalayan Keelback about 60 cm in total length (Fig. 1). The frog had a visible injury resembling a bite mark on the left hindlimb, suggesting that it was attacked by the keelback, which is known to prey on frogs (Tillack 2003), and responded by biting the snake. That the frog is biting its own hand also is indicative of a panicked defensive reaction. Neither the frog nor the snake moved much, and both were largely motionless during the

entire duration of our ~25-minute observation. In order to avoid a gathering of spectators, we left the scene. When we revisited the site two hours later, we found neither the frog nor the snake and were unable to determine the outcome of the encounter.

When first observed, we initially thought the frog was attempting to eat the snake. Reports of such events are not common, although some large anurans readily consume anything they can fit into their mouths (Duellman and Trueb 1986). American Bullfrogs (*Lithobates catesbeianus*) are particularly notorious for eating large prey, including snakes (e.g., McCoy 1967; Krutsch 2011), and similar events have been addressed recently in social media, including at least two accounts involving Australian Green Treefrogs (*Ranoidea caerulea*) (Gibbens 2017a, 2017b; Smith 2020; Wynne 2020). Most recently, Vazifdar et al. (2021) documented an Indian Bullfrog (*Hoplobatrachus tigerinus*) that tried to eat an Andaman Bronzeback (*Dendrelaphis andamanensis*) in the Andaman and Nicobar Islands, India. Although we cannot rule out such a scenario, in this instance, especially considering the relative sizes of the frog and snake, we believe the encounter was initiated by the snake attempting to prey on the frog. Also, large species of *Megophrys* in the subgenus *Brachytarsophrys* are quick to bite if provoked (S. Mahony, in litt. 23.VIII.2021). However, this behavior had not been recorded previously in species of the subgenus *Xenophrys*.

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Fig. 1. A Robust Horned Frog (*Megophrys robusta*) biting the head of a Himalayan Keelback (*Herpetoreas platyceps*) in Darjeeling, West Bengal, India. Photographs by Anil Pradhan.

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