



# An Elongated Tortoise (*Indotestudo elongata*) Attempting to Prey on a Buff-striped Keelback (*Amphiesma stolatum*) at the Turtle Rescue and Conservation Centre in Eastern Nepal

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The Elongated Tortoise (*Indotestudo elongata*) is distributed across southeastern Asia, including northern India, southern Nepal, Bhutan, and Bangladesh (Sharma 1998; Schleich and Kästle 2002; Bonin et al. 2006; Kästle et al. 2013; Ihlow et al. 2016; Uetz et al. 2019). In Nepal, it is well documented in the Terai with some records from the midlands (Schleich and Kästle 2002; Kästle et al. 2013; Kiesel and Schleich 2016; Rai 2019). Recently, the globally threatened Elongated Tortoise has been upgraded from Endangered to Critically Endangered on the IUCN Red List (Rahman et al. 2019). It is listed in CITES Appendix II (<https://www.cites.org/eng/app/appendices.php>).

Elongated Tortoises inhabit a variety of forest types, including open deciduous dipterocarp, mountainous and hilly evergreen, mixed semi-evergreen, bamboo, pine, and secondary forests, as well as savannah grasslands and dry

thorn scrub (Sharma 1998; Schleich and Kästle 2002; Bonin et al. 2006; Ihlow et al. 2016). In Nepal, *Indotestudo elongata* is typically associated with forests dominated by Sal (*Shorea robusta*) (Schleich and Kästle 2002; Kästle et al. 2013; Kiesel and Schleich 2016), usually in areas with high humidity and often near bodies of water (pers. obs.).

Elongated Tortoises are omnivorous generalists and the diet varies according to availability by habitat and season (Ihlow et al. 2012, 2016). It feeds on fruits, herbaceous leaves, flowers, mushrooms, grasses, vegetables, earthworms, slugs, thin-shelled terrestrial snails, worms, insects, crabs, egg shells, carrion, detritus, and the excrement of other animals (Sharma 1998; Schleich and Kästle 2002; Bonin et al. 2006; Ihlow et al. 2012, 2016; Kästle et al. 2013; Kiesel and Schleich 2016). The majority of these food items also are consumed by Elongated Tortoises (Fig. 1) in captivity (pers. obs.).



**Fig. 1.** Elongated Tortoises (*Indotestudo elongata*) at the Turtle Rescue and Conservation Centre in eastern Nepal feeding on a cracked land snail (*Achatina* sp.) (left) and on Taro (*Colocasia* sp.) (right). Photographs by Tapil Prakash Rai.



The Turtle Rescue and Conservation Centre (TRCC) in eastern Nepal, the only community-based turtle conservation centre in Nepal, was established as a joint venture by the Amphibian and Reptile Conservation Society of Nepal (ARCO-Nepal) and Sukhani Martyrs Memorial Foundation (SUMMEF) in 2012 (Rai 2017).

*Indotestudo elongata* is primarily crepuscular and its activity is mainly restricted to dusk and dawn. Elongated Tortoises are most active during the rainy season when courtship and mating take place (Schleich and Kästle 2002; Kästle et al. 2013; Ihlow et al. 2016). In captivity at the TRCC, courtship has been observed from May to July (pers. obs.). Males are very aggressive during the breeding season and will fight violently with each other. During courtship, a male will persistently harass a female by biting her head and limbs and thunderously ramming her with his thick anterior plastron. This could lead to casualties, especially if the ratio of males to females is imbalanced. If a female is receptive to a male, she remains still with her tail averted to expose her cloaca. Mating typically lasts 5–7 min (pers. obs.). After mating, five male Elongated Tortoises at the TRCC were isolated. One robust young male was kept temporarily in one of the concrete pools that had been converted into a terrestrial enclosure by draining the water and lining it with leaf litter.

At 1322 h on 26 June 2019, an injured adult Buff-striped Keelback (*Amphiesma stolatum*) was discovered in the enclosure along with the male Elongated Tortoise (Fig. 2). Buff-striped Keelbacks are small (<80 cm), non-venomous natricid snakes that are encountered frequently in southern Nepal (Schleich and Kästle 2002; Kästle et al. 2013). This diurnal and nonaggressive snake is harmless, and when alarmed, it will quickly seek to escape. This individual must have fallen into the enclosure, where it was bitten by the tortoise more than five times, at least three of which caused considerable damage and exposed internal organs. Although Elongated Tortoises usually consume plant material or prey on invertebrates, Ihlow et al. (2016) reported feeding the carcass of a Light-barred Kukri Snake (*Oligodon albocinctus*) to an Elongated Tortoise in central Laos.

After the injured snake was removed from the enclosure, it was disinfected with locally available povidone-iodine and released into nearby habitat. An Elongated Tortoise preying on a live snake is herein documented for the first time.

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**Fig. 2.** A Buff-striped Keelback (*Amphiesma stolatum*) injured by an Elongated Tortoise (*Indotestudo elongata*) that had attempted to consume it at the Turtle Rescue and Conservation Centre in eastern Nepal. Note the exposed internal organs of the snake. Photograph by Sabin Adhikari.

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