



Notes on Two Species of Threatened Turtles at the Forestry Campus Complex, Hetauda, Makwanpur, Nepal

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From 7 April to 5 July 2019, we observed six Elongated Tortoises, *Indotestudo elongata* (Blyth 1854) (Fig. 1), and four Tricarinate Hill Turtles, *Melanocheilus tricarinata* (Blyth 1856) (Fig. 2), during Visual Encounter Surveys (VES) (Foster et al. 2012; Hofmeyr and Henen 2016) along existing trails of the Forestry Campus Complex (FCC), Hetauda, Makwanpur, Nepal (Fig. 3). We also searched diligently for these species in various microhabitats around the periphery of the study site (~97 ha) (Pradhan et al. 2020). Turtles were identified using field guides by Shah and Tiwari (2004) and Kästle et al. (2013). Both species are threatened with extinction; *Indotestudo elongata* is listed as Critically Endangered (CR) (Rahman et al. 2019) and *Melanocheilus tricarinata* as Endangered (EN) (Horne et al. 2020) on the IUCN Red List of Threatened Species.

Of the six Elongated Tortoises, three were in closed-canopy forest (two in Rhino Apple [*Trewia nudiflora*] and one in Sal [*Shorea robusta*] dominated forest), two in grassland, and one

along the forest-settlement edge. Distance to water was 3–135 m (mean = 40.3 m) and distance to the settlement was 21–421 m (mean = 284.0 m). Of the four Tricarinate Hill Turtles, two were in closed-canopy forest (one each in Rhino Apple and Sal dominated forest) and two were along the forest-settlement edge. Distance to water was 108–650 m (mean = 355.0 m) and distance to the settlement was 20–408 m (mean = 236.9 m).

During this study, we adventitiously encountered local residents hunting turtles for meat or as pets or even ornaments (Fig. 4). We also identified cattle grazing and human alteration of habitats, factors previously identified by Schleich and Kästle (2002), Leuteritz et al. (2005), and Moore and Seigel (2006) as threats to turtles, affecting the populations in the area. The current situation indicates an urgent need for educating the local community and for strong legal sanctions to conserve the local breeding populations of these two endangered species.



Fig. 1. Carapace (left) and plastron (right) of an Elongated Tortoise (*Indotestudo elongata*) at the Forestry Campus Complex, Hetauda, Makwanpur, Nepal. Photographs by Sandeep Chhetri Luitel.



Fig. 2. A Tricarinate Hill Turtle (*Melanocheilus tricarinata*) encountered at the Forestry Campus Complex, Hetauda, Makwanpur, Nepal. Photograph by Nahakul Bhusal.

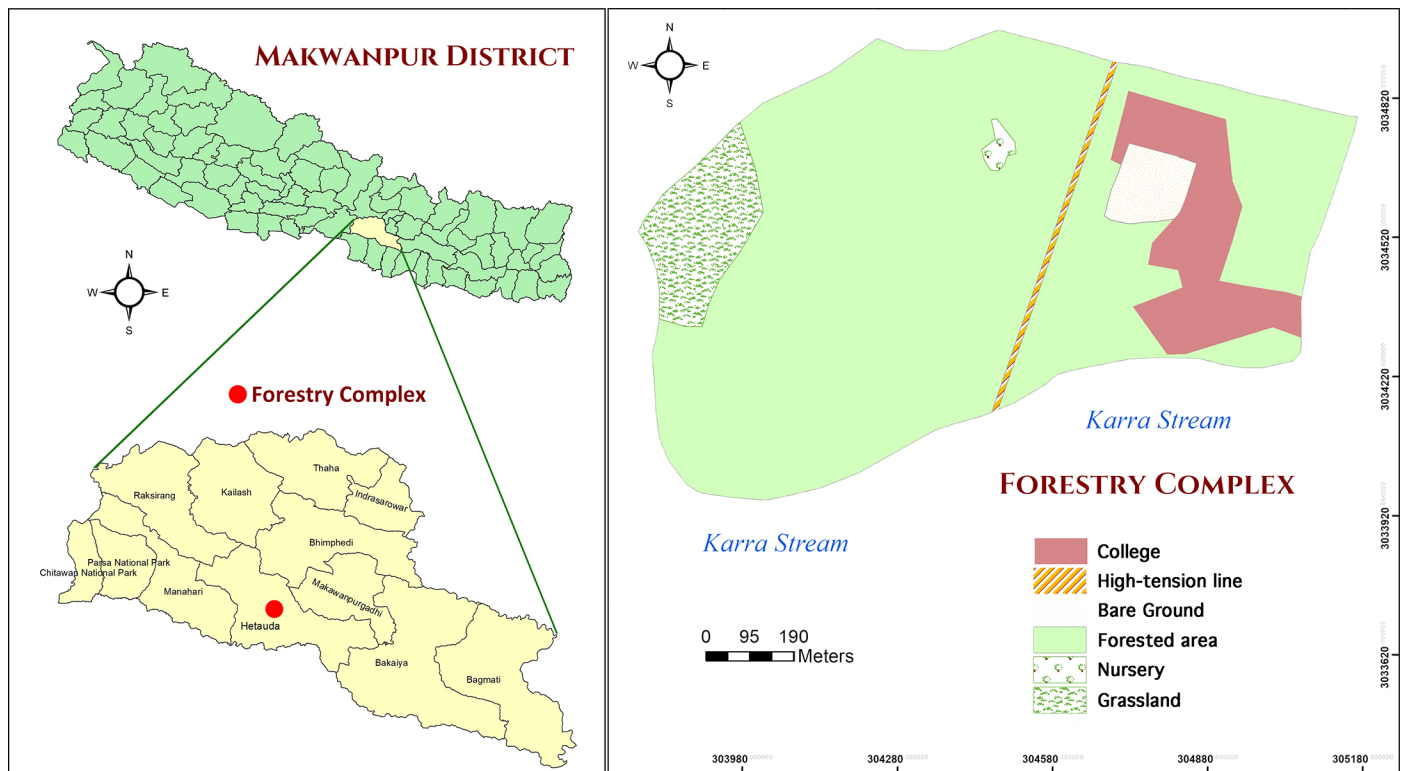


Fig. 3. Map of the Forestry Campus Complex, Hetauda, Makwanpur, Nepal.



Fig. 4. Shell of a Tricarinate Hill Turtle (*Melanocheilus tricarinata*) used for decorative purposes. Photograph by Sandeep Chhetri Luitel.

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