

Indigenous beliefs benefit freshwater turtle conservation in West Bengal, India

PRASUN MANDAL* & PRIYANKA HALDER MALLICK

Department of Zoology, Vidyasagar University, Midnapore, West Bengal, 721102, India

*Corresponding author e-mail: prasunmandalzoo7@gmail.com

Cultural and traditional beliefs can influence the attitudes of humans towards other species and their habitats, and may determine whether these species are protected or threatened by over-exploitation (Uyeda et al., 2016). Ancient civilisations from across the world have held beliefs that value some integration of certain wild species with human society; for instance, chelonians have played important roles in human culture for at least 400,000 years (Stanford et al., 2020). In South India, the presence of turtles in households is viewed as a negative omen, while in North and Northeast India, it is considered to bring good luck (Pratihar et al., 2014). In West Bengal, people generally have a notion that turtles possess a distinct spiritual essence, for example, the second avatar of Lord Vishnu, the God of preservation, appears as half tortoise and half human (Purwanto, 2020). Certain groups practice traditional beliefs such as placing turtle carapaces on cowshed walls to protect cattle from ill health and bring prosperity, put turtle amulets around the necks of cattle to ward off ‘evil eyes’, and the use of turtle carapaces as toys for village children pulled along on ropes like toy cars (Mandal et al., 2024).

A particular example of traditional customs benefitting the conservation of turtles is the case of sacred temple ponds, which date back to ancient times (Kakati & Tamuly, 2020). Temple ponds hosting turtles are notably prevalent in the

north-eastern states of India (Kakati & Tamuly, 2020). In this area, there exists a unique cultural practice where devotees donate turtles to temple ponds when a child is born in their family, believing this act ensures the child attains longevity akin to that of the turtle (Purkayastha et al., 2013). Despite facing numerous threats, many endangered turtle species seem to thrive in these unique habitats, as they are free from pressures such as hunting and human disturbance. For instance, the black soft-shelled turtle *Nilssonia nigricans* (Anderson, 1875), once declared Extinct by the IUCN in 2002, has been rediscovered thriving in temple ponds across West Bengal, Assam, and Tripura in India (Das et al., 2020).

In a recent socio-cultural research study focusing on the dynamic interaction of indigenous communities with freshwater chelonians, harvesting of threatened turtle species was strongly associated with traditional customs and the cultural use of turtle shells (Mandal et al., 2024). Interviews within Joyram Chak village (22° 31'50" N, 87° 47'31" E, Paschim Medinipur district, West Bengal) (Fig. 1) revealed that during the year spanning 2016–2017, “certain persons in the village had killed and consumed a unique species of turtle, previously not found in this area”. The authors attempted to identify the species based on the given description, which mentioned ‘circular markings on its carapace’, the description of which resembled those of the endangered Indian peacock

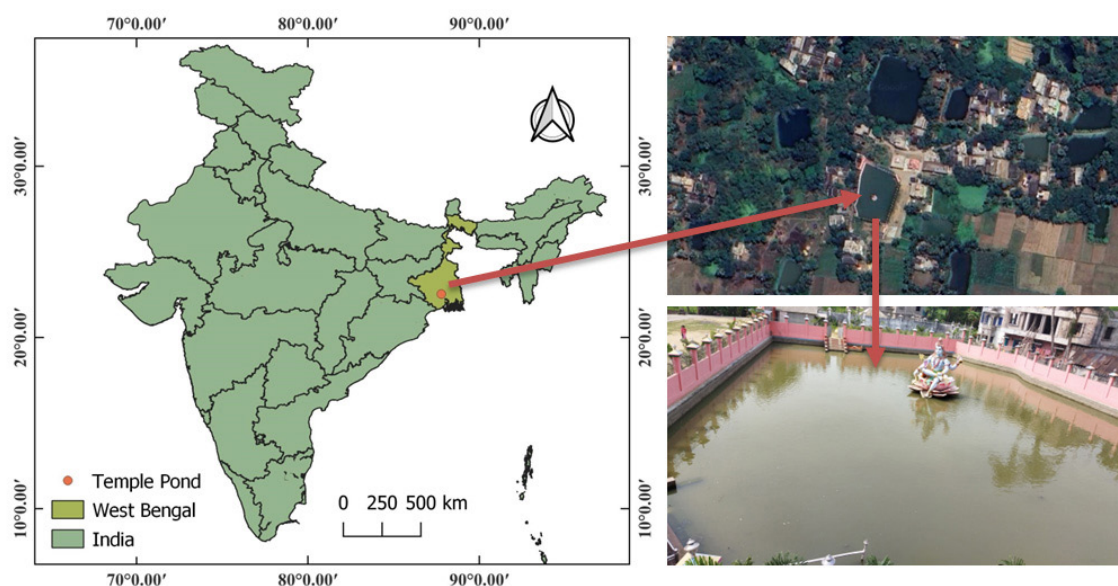


Figure 1. Map of India with marked location of Paschim Medinipur district, West Bengal having the sacred temple pond at Joyram Chak village



Figure 2. Villagers liken the circular markings **A.** on the turtle's *Nilssonia hurum* carapace to **B.** the sacred iconic chakram, the circular weapon (top left), held by Lord Vishnu in his second incarnation as a turtle

softshell turtle *Nilssonia hurum* (Gray, 1831). Co-incidentally, within a couple of years, those people involved in hunting the turtles had either died accidentally, or experienced health issues. As a consequence, villagers believed that “the turtle was an incarnation of Lord Vishnu”, because the circular markings on the turtle’s carapace were likened to Lord Vishnu’s iconic chakram (circular weapon) (Fig. 2). This belief led them to attribute these adverse consequences to actions against the sacred turtle. Since then, there has been a notable transformation in the villagers’ attitudes towards this threatened animal. They now refrain from harming turtles, and actively participate in safeguarding them by various means, especially by releasing encountered turtles into the temple pond (established in 2019) or nearby village ponds. During the survey period, unhatched eggs and hatchlings of the Indian flapshell turtle *Lissemys punctata* (Bonnaterre, 1789) were also observed in the village, which indicated some wider restraint on human interference of turtles, and that the turtles were healthy enough to breed. This would be of particular benefit to *L. punctata* as it is listed by IUCN as Vulnerable (Rahman et al., 2021) and since the early 1990s, in West Bengal, has been the subject of massive illegal exploitation for both local and international trade (Mendiratta et al., 2017).

In West Bengal and other parts of India, certain traditional beliefs and taboos can have a positive impact on the conservation of endangered chelonians and other herpetofauna (Bhattacharya & Koch, 2018). Similarly, such practices have been found to be effective in conserving and reviving marine turtle populations in Ghana (Alexander et al., 2017). The efforts of local communities complement the more conventional approaches to chelonian conservation being made by scientists, government agencies and NGOs.

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