

Feeding Biscuits to Critically Endangered Black Soft-shelled Turtles (Nilssonia nigricans) in the Tripureswari Temple Pond, Tripura, India

Priyanka Das and Sreedharan Nair Vishnu

Wildlife Institute of India, Chandrabani, Deharadun-248002, Uttarakhand, India (vishnusreedharannair@gmail.com)

The Black Soft-shelled Turtle (*Nilssonia nigricans*) is a critically endangered freshwater turtle species found in northeastern India and adjacent Bangladesh (Uetz et al. 2021). The species is listed under CITES Appendix I, the Third Schedule of the Bangladesh Wildlife Preservation Act 1974, and the Fourth Schedule of the Indian Wildlife Protection Act of 1972 (Praschag et al. 2021). Wild populations in India survive in the main channel of the Brahmaputra River, Pakhui Wildlife Sanctuary, Nameri National Park, and Kaziranga National Park (Praschag and Gemel 2002). The species is otherwise restricted to temple ponds in Tripura, Assam, and West Bengal in India and Chittagong in Bangladesh (Ahsan and Saeed 1989; Ahsan et al. 1991; Baruah et al. 2010; R.K. Das et al. 2020; Praschag et al. 2021).

Because of a strong mythological belief that the turtles are the evil spirits of ancestors (Ahsan and Saeed 2009), the shrine community never releases any of these turtles. Although habitat maintenance occurs in some temple ponds in Assam, India, (S. Das et al. 2018), such ponds are unsuitable sanctuaries as the turtles are unable to breed and can be exposed

to diseases and other threats associated with overcrowding (Baruah et al. 2010; Khudamrongsawat et al. 2019; Praschag et al. 2021). Unhygienic conditions in ponds can lead to various health issues in turtles, the most common symptoms of which include shell lesions, excessive algal growth on shells, sunken eyes, and swollen eyelids (Khudamrongsawat et al. 2019).

The water in the Tripureswari Temple Pond, Udaipur, Tripura (23.5090°N, 91.4989°E) is discolored due to contamination, steps into the water are covered by algae, and minimal space exists for turtles to bask — and most basking activity is hampered by visitors. Near midday on 20 June 2021, we observed devotees feeding biscuits to Black Softshelled Turtles (Fig. 1). The diet of *Nilssonia nigricans* in nature is unknown, but these turtles presumably eat the same food as congeners. Other species in the genus Nilssonia are omnivores; they will consume vegetation but are predominantly carnivorous, feeding on carrion, frogs, fish, prawns, earthworms, and snails (Yates 2019). Although visitors to the shrine apparently provide sufficient food for the turtles, a diet





Fig. 1. Biscuits being fed to Black Soft-shelled Turtles (*Nilssoina nigricans*) in the Tripureswari Temple Pond at Udaipur, Tripura, India. Photograph by Priyanka Das.

of biscuits provides minimal nutritional value; also, such feeding events cause the turtles to fight each other for food and could affect the hunting ability of these captives.

Outside of the ponds, illegal trade remains a major threat to this species, targeted egg collection has been documented in the Brahmaputra Basin (Baruah et al. 2010) and individuals are being sold in fish markets in Tripura (Adhikary 2019). Nevertheless, in light of conditions in temple ponds, the government should take steps to conserve the species in its natural habitat. In Assam, the release of about 300 hatchlings into the Pobitora Wildlife Sanctuary (Niyogi 2020) was a very modest first step. We strongly recommend that similar conservation efforts be implemented throughout the species' very limited range.

Acknowledgement

We thank Aishwarya Ramachandran, Wildlife Institute of India, for support and encouragement.

Literature Cited

- Ahsan, M.F. and M.A. Saeed. 1989. The Bostami turtle, *Trionyx nigricans*Anderson: population status, distribution, historical background and lengthweight relationship. *Journal of the Bombay Natural History Society* 86: 1–6.
- Adhikary, A. 2019. Illegal turtle trade at Agartala, Tripura. *Conservation India.* https://www.conservationindia.org/gallery/illegal-turtle-trade-at-agartala-tripura.

- Ahsan, M.F. and M.A. Saeed. 2009. Bostami turtle (Aspideretes nigricans) no longer endemic only to Bangladesh. Tigerpaper 36: 29–32.
- Ahsan, M.F., M.N. Haque, and C.M.Fugler. 1991. Observations on *Aspideretes nigricans*, a semi-domesticated endemic turtle from eastern Bangladesh. *Amphibia-Reptilia* 12: 131–136. https://doi:1163/156853891x00095.
- Baruah, C., D.K. Sharma, and A.H.M. Ali Reza. 2010. Le trionyx noirâtre, la tortue de Bostami *Nilssonia nigricans* (Anderson 1875) (Ang: black softshell turtle, Bostami turtle). *Cheloniens* 18: 33–38.
- Das, R.K., R. Mondal, B.S. Joardar, and N. Ray. 2020. First report of occurrence and conservation status of Black Softshell Turtle, Nilssonia nigricans (Anderson 1875) (Reptilia: Testudines: Trionychidae) in West Bengal, India. Proceedings of the Zoological Society 73: 215–219. https://doi.org/10.1007/s12595-020-00329-3.
- Das, S., D. Datta, N. Saha, and F.B. Hye. 2018. Conservation status of black soft shell turtle (Nilssonia nigricans) in Bangladesh. Journal of Wildlife Research 6: 12–16.
- Khudamrongsawat, J., D. Meetan, and N. Chansue. 2019. Turtles in temple ponds in Thailand: Species, abundance, and health issues. *Society & Animals* 28: 215–232. https://doi.org/10.1163/15685306-12341532.
- Niyogi, D.G. 2020. Moved from temple ponds to wild, black soft shell turtles walk towards- revival. *Mongabay*. https://india.mongabay.com/2020/05/moved-from-temple-ponds-to-the-wild-black-softshell-turtles-walk-towards-revival/.
- Praschag, P. and R. Gemel. 2002. Identity of the black soft-shell turtle *Aspideretes nigricans* (Anderson, 1875), with remarks on related species. *Faunistische Abhandlungen* 23: 87–116.
- Praschag, P., M.F. Ahmed, and S. Singh. 2021. Nilssonia nigricans. The IUCN Red List of Threatened Species 2021: e. T2173A2778172. https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T2173A2778172.en.
- Uetz, P., P. Freed, R. Aguilar, and J. Hošek (eds). 2021. *The Reptile Database*. http://www.reptile-database.org/>.
- Yates, B. 2019. Black Softshell Turtle (Bostami Turtle). All Turtles. https://www.allturtles.com/black-softshell-turtle/.