

Biodiversity Record: River terrapins, *Batagur affinis affinis*, at Upper Seletar Reservoir

Luqmanul Hakim Bin Othman* & Chen Xuanhe

Email: luqmanulhakimtwgs@gmail.com (*corresponding author), xuanhezen@gmail.com

Luqmanul HBO & Chen X (2025) Biodiversity Record: River terrapins, *Batagur affinis affinis*, at Upper Seletar Reservoir. Nature in Singapore, 18: e2025069. DOI: 10.26107/NIS-2025-0069

Subjects: Western Malay river terrapin, *Batagur affinis affinis* (Reptilia: Testudines: Geoemydidae).

Subjects identified by: Chen Xuanhe.

Location, date and time: Singapore Island, Upper Seletar Reservoir along the Mandai Boardwalk; 20 January 2025, around 1230 hrs.

Habitat: Artificial freshwater lake surrounded by native-dominated secondary forest.

Observers: Tung Ing Huat, Luqmanul Hakim Bin Othman and Chen Xuanhe.

Observation: Two adult terrapins, a male (Fig. 1) and a female (Figs. 2 & 3), each of approximately 40 cm straight carapace length, were encountered along the grassy shore of the reservoir. The female was observed feeding on vegetation along the bank.



1



2



3

Fig. 1. Dorso-lateral view of the male subject.

Fig. 2. Dorsal view of the female subject.

Fig. 3. Latero-frontal view of the female subject.

(Photographs: Tung Ing Huat)

Remarks: The featured subjects are identified as *Batagur affinis affinis* based on the male's sexual dichromatism during the mating season (from October to February), expressed as a white iris ringed with a dark cornea and jet black head. The female individual lacks silvery blotches on the head. The nominate subspecies is native to the western coast of Peninsular Malaysia, Sumatra, and southwestern Thailand. The subspecies indigenous to the east coast of the Malay Peninsula up to Cambodia, is *Batagur affinis edwardmotti*, the eastern Malay river terrapin. In the eastern subspecies, the breeding male has a yellowish to cream iris ringed with a bright orange cornea, chocolate brown to black head, and orange colour at the edges of the mouth. The female has silvery blotches in the temporal and parietal regions (Praschag et al., 2009; Moll et al., 2015; Dylan Wang, pers. comm., 2025).

Although Singapore sits within the native range of *Batagur affinis*, the species is not regarded as native to the country. It is believed that individuals seen recently were artificially introduced (see Ng & Lim, 2010; Figueroa et al., 2023). This applies to the two turtles herein featured. According to Moll et al. (2015), the subspecies *Batagur affinis affinis* is believed to have become extinct in Singapore. This is possible considering that the riverine and estuarine environments inhabited by *Batagur affinis* appeared to be present in Singapore in the early 20th century (see Seventh Indian Air Survey Company and 110 Map Production Company RE, 1945) until the channelisation and damming of waterways (e.g., Sungei Berih, Sungei Kangkar, Sungei Peng Siang, and Sungei Tengah) in the 1970s. This is further corroborated by Tan et al. (2022) which suggested the Sungei Buloh Wetland Reserve could be a suitable habitat through species distribution modelling.

Acknowledgements: We would like to thank Joseph K. H. Koh and Balázs Farkas for editorial advice, and Tung Ing Huat for contributing to the observation.

Literature cited:

Figueroa A, Low MEY & Lim KKP (2023) Singapore's herpetofauna: updated and annotated checklist, history, conservation, and distribution. *Zootaxa*, 5287: 1–378.

Moll EO, Platt SG, Chan EH, Horne BD, Platt K, Praschag P, Chen PN & van Dijk PP (2015) *Batagur affinis* (Cantor, 1847) – Southern River Terrapin, Tuntong. In: Rhodin AGJ, Pritchard PCH, van Dijk PP, Saumure RA, Buhlmann KA, Iverson JB & Mittermeier RA (eds) *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*. Chelonian Research Monographs, 5(8): 90–91. DOI: 10.3854/crm.5.090.affinis.v1.2015.

Ng HT & Lim KKP (2010) Introduced aquatic herpetofauna of Singapore's reservoirs. *COSMOS*, 6(1): 117–127. DOI: 10.1142/S0219607710000516.

Praschag P, Holloway R, Georges A, Päckert M, Hundsdörfer AK & Fritz U (2009) A new species of *Batagur affinis* (Cantor, 1847) one of the world's most critically endangered chelonians (Testudines: Geoemydidae). *Zootaxa*, 2233: 57–68.

Seventh Indian Air Survey Company and 110 Map Production Company RE (1945). Singapore & Johore Bahru, 1:63,360. HIND 1035, Sheet 3L/12, 4th Edition. [India]: Survey Production Centre, Allied Land Forces South East Asia. In: *Historical Maps of Singapore*, digitised by Department of Geography, National University of Singapore, made available by NUS Libraries. <https://libmaps.nus.edu.sg>.

Tan WC, Ginal P, Rhodin AGJ, Iverson JB & Rödder D (2022) A present and future assessment of the effectiveness of existing reserves in preserving three critically endangered freshwater turtles in Southeast Asia and South Asia. *Frontiers of Biogeography*, 14(1): e50928.