

Biodiversity Record: Asiatic softshell turtles in a woodland at Sembawang

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Subjects: Asiatic softshell turtle, *Amyda cartilaginea* (Reptilia: Testudines: Trionychidae).

Subjects identified by: Luqmanul Hakim Bin Othman and Chen Xuanhe.

Location and dates: Singapore Island, Sembawang N4 forest ($1^{\circ}27'30.7''N$ $103^{\circ}49'12.9''E$); 15 May 2023 and 30 November 2024.

Habitat: Semi-natural stream (a tributary of Sungei Sembawang) with sand substrate and submerged wood in secondary woodland (Fig. 1).

Observers: Luqmanul Hakim Bin Othman and Chen Xuanhe.

Observations: Two examples were recorded. A juvenile of about 5 cm SCL (straight carapace length) was observed on 15 May 2023 at 1030 hrs (Fig. 2). It has greyish-brown carapace, limbs, and face covered with yellow spots, radiating streaks on its carapace margins, a small black ocellus on the middle of the posterior part of its carapace, protuberances along the anterior carapace margin, and distinct tubercles on the anterior part of its carapace. An adult of around 30 cm SCL, identified by the large protuberances along the anterior margin of its carapace, was found in the stream hiding under logs on 24 July 2024 at 2103 hrs (Fig. 2). It escaped into a submerged burrow nearby.



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Fig. 1. Stream habitat of the softshell turtles. Fig. 2. Dorsal view of juvenile turtle (Photographs by: Luqmanul Hakim Bin Othman).

Noteworthy aquatic vertebrate fauna observed in the stream include Malayan giant frog (*Limnonectes blythii*), field frog (*Fejervarya limnocharis*), Indochinese spotted barb (*Barbodes rhombeus*), mosquito fish (*Gambusa affinis*), and Sunda swamp eel (*Monopterus javanensis*) (Fig. 5). Dominant flora along the stream includes strangler fig (*Ficus* sp.), fishtail palm (*Caryota mitis*), Macarthur palm (*Ptychosperma macarthurii*), and simpoh air (*Dillenia suffruticosa*). Seeds of the

Indian-almond (*Terminalia catappa*) observed in the stream on 24 July 2024 (Fig. 6) may potentially be eaten by Asiatic softshell turtles (see Jensen, 2009). On 20 July 2024, a cage trap apparently for poaching turtles (Fig. 3) was found and destroyed by the corresponding author, who also reported this incident to the National Parks Board.



Fig. 3. Dorsal view of the adult turtle in-situ. Note the large protuberances along the anterior carapace margin (Photograph by: Chen Xuanhe). Fig. 4. Half-submerged wire cage trap found in the stream on 20 July 2024 (Photograph by Luqmanul Hakim Bin Othman).

Remarks: The discovery of *Amyda cartilaginea* in this highly disturbed habitat, is in contrast with previous records which are mostly from the Central Catchment Nature Reserve (see Chen & Luqmanul, 2024). In Singapore, it has been suggested, but not proven, that *Amyda cartilaginea* found outside the Bukit Timah and Central Catchment Nature Reserves are released animals imported from elsewhere in the region (Ng & Lim, 2010). The presence of a breeding population at the featured site, as implied by the young individual, could indicate that a feral population has been established there, or that individuals of the native population have adapted to life in disturbed and exposed conditions. Research into the genetics of *Amyda cartilaginea* from all parts of Singapore is required to shed light on this.

Literature cited:

Chen X & Luqmanul HBO (2024) Biodiversity Record: A juvenile Asiatic softshell turtle at Upper Seletar. *Nature in Singapore*, 17: e2024095. DOI: 10.26107/NIS-2024-0095
 Jensen K (2009). Dietary observation on the Asian softshell turtle (*Amyda cartilaginea*) from Sarawak, Malaysian Borneo. *Chelonian Conservation and Biology*, 7(1): 136-141. DOI: 10.2744/CCB-0659.1
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Fig. 5. Dorso-lateral view of Sunda swamp eel of about 30 cm total length, in-situ, on the night of 24 July 2024. Fig. 6. Seeds of Indian almond (*Terminalia catappa*) in the stream on the night of 24 July 2024 (Photographs by: Chen Xuanhe).