

Reticulated swamp crabs at Upper Seletar

Spencer Yau Jia Ming, Jerome Lee, Drima Chakraborty, Miyana Yoshino & Low Si Hui

Spn.Yau1234@gmail.com (Yau), jerome20398@gmail.com (Lee), Drimachuck@gmail.com (Chakraborty), miyanaxx@gmail.com (Yoshino), lowsihui@yahoo.com.sg (Low)

Subjects: Reticulated swamp crab, *Parathelphusa reticulata* (Crustacea: Decapoda: Brachyura: Gecarcinucidae).

Subjects identified by: Darren C. J. Yeo.

Location, date and time: Singapore Island, Upper Seletar Reservoir Park; 24 June 2020 at 2006 hrs and 27 June 2020, evening.

Habitat: Parkland at the edge of freshwater swamp forest. In shallow concretised drain at the side of a road.

Observers: Spencer Yau Jia Ming, Jerome Lee, Drima Chakraborty, Miyana Yoshino and Low Si Hui.

Observation: An adult example of about 5-6 cm carapace width (Fig. 1) was found submerged in a drain on 24 June 2020. Upon contact with light from a torch, it immediately tried to hide among dead leaves. The drain also contained numerous forest-associated species, including a young Malesian frog (*Limnonectes malesianus*) and an unidentified catfish of the genus *Clarias*. When released after measurements and photographs were taken, the crab took shelter in a hole on the wall of the drain. At the same location, a smaller example was observed on 27 June 2020 (Fig. 2).



Fig. 1. Antero-dorsal (left) and dorsal (right) views of the reticulated swamp crab photographed out of water ex-situ on 24 June 2020. Photographs by Spencer J. M. Yau

Remarks: *Parathelphusa reticulata* is one of three freshwater crabs that are known to be endemic to Singapore Island, and regarded as ‘critically endangered’ at the international level (IUCN, not dated). They are believed to be mainly restricted to Nee Soon Swamp Forest (Yeo & Lim, 2011) but have been recorded in peripheral areas (Tan & Low, 2017). The featured observations were also made in a peripheral zone.

Parathelphusa reticulata inhabits lowland streams with high organic substrate cover, and water with low pH and gentle current (Chua et al, 2015). Examples found in peripheral areas such as in the featured instances could have been flushed out of the forest stream that drains the swamp forest, which may have been caused by recent heavy rainfall. The crabs’ tendency to retreat into dense leaf litter and the reticulate pattern on its carapace could help it to evade visual detection from the observers. This species is believed to be an indicator of a healthy ecosystem as it appears to have strict habitat requirements, and may be sensitive to minor fluctuations in its environment (Ng, 1997). It is not known if these crabs are

able to flourish in the peripheral areas, or if these apparently displaced animals will eventually make their way back into the swamp forest proper.



Fig. 2. Dorsal view of reticulated swamp crab submerged in water, in-situ, on 27 June 2020. Photograph by Jerome Lee

References:

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