

Biodiversity Record: Frogs of Mount Pleasant stream at Bukit Brown

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Subjects: Bengal toad, *Duttaphrynus bengalensis* (Amphibia: Anura: Bufonidae) [Fig. 1];
Crab-eating frog, *Fejervarya cancrivora* (Amphibia: Anura: Dicroglossidae) [Fig. 2];
Malayan giant frog, *Limnonectes blythii* (Amphibia: Anura: Dicroglossidae) [Fig. 3];
Four-lined tree frog, *Polypedates leucomystax* (Amphibia: Anura: Rhacophoridae) [Fig. 4];
Mukhlesur's chorus frog, *Microhyla* cf. *mukhlesuri* (Amphibia: Anura: Microhylidae) [Fig. 5];
American bullfrog, *Lithobates catesbeianus* (Amphibia: Anura: Ranidae) [Fig. 6].

Subjects identified by: Chen Xuanhe.

Location, date and time: Singapore Island, Bukit Brown, along Mount Pleasant stream; various dates from August 2022 to 1 June 2023; from 2000 to 2200 hrs.

Habitat: Freshwater stream in open parkland.

Observers: Chen Xuanhe and Odelia Tam.

Observations: A total of six species of frogs were visually recorded from the stream and its immediate surroundings. The common Asian toad appears to be the most abundant species in the area. One of them was photographed on 19 August 2022 at 1258 hrs (Fig. 1). A pair of crab-eating frogs mating in a puddle of water was recorded on 1 June 2023 at 2114 hrs (Fig. 2). The Malayan giant frog seems to be the least common, with one individual photographed on 4 May 2023 at 2023 hrs (Fig. 3). A four-lined tree frog was noted on 15 November 2022 at 2013 hrs (Fig. 4). A Mukhlesur's chorus frog was photographed on 1 June 2023 at 2119 hrs (Fig. 5). This species was only seen after a heavy downpour on that one day. Several juvenile American bullfrogs (Fig. 6) were seen close to each other in the stream on 17 August 2022 at around 1700 hrs. Frog spawn and tadpoles were abundant in the puddles during the surveys, but the species are not listed because some of them could not be identified with confidence.

Remarks: Names and species status used in this entry follow the most recent Singapore herpetofaunal checklist by Figueroa et al. (2023). The Mount Pleasant stream drains beyond Bukit Brown Cemetery and into the Whampoa Canal along Thomson Road (Tan et al., 2013). All six species herein recorded are known to inhabit parkland habitats (see Baker & Lim, 2012; Figueroa et al., 2023 – *Duttaphrynus bengalensis* as *Duttaphrynus melanostictus* and *Microhyla mukhlesuri* as *Microhyla fissipes*).

We believe that a few more species characteristic of disturbed and exposed habitats are also likely to be present, but they have not been observed. These include the supposedly native field frog (*Fejervarya limnocharis*), green paddy frog (*Hylarana erythraea*), dark-sided chorus frog (*Microhyla* cf. *heymonsi*), painted chorus frog (*Microhylac* cf. *butleri*), as well as the non-native painted bullfrog (*Kaloula pulchra*), greenhouse frog (*Eleutherodactylus planirostris*) and Günther's frog (*Sylvirana guentheri*).

Of the six species, the Mukhlesur's chorus frog and the American bullfrog are believed to be introduced. The Mukhlesur's chorus frog was first recorded on Singapore Island at Jurong in 2015 (Law, 2015 as 'East Asian ornate chorus frog' *Microhyla fissipes*) but has since been found at other sites such as Kranji Marshes, Lorong Halus, Pang Sua Woodland and Windsor Nature Park (see Figueroa et al., 2023). The American bullfrog was seen only once on our surveys on 17 August 2022. As several juveniles were found in close proximity to each other, it is believed that these individuals were released at the site, probably as part of a religious ritual, earlier on the same day.



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Fig. 1. Bengal toad, about 9 cm SVL (snout-vent length). Fig. 2. Mating pair of crab-eating frogs, female about 10 cm SVL. Fig. 3. Malayan giant frog, about 15 cm SVL. Fig. 4. Four-lined tree frog, about 7 cm SVL. Fig. 5. Muhklesur's chorus frog, about 2.5 cm SVL. Fig. 6. American bullfrog, about 6 cm SVL. (Photographs by: Odelia Tam [Figs. 1, 2, 4, 5, 6] and Chen Xuanhe [Fig. 3]).

Literature cited:

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