

Biodiversity Record: Two alien fishes at Windsor Nature Park

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Recommended citation. Tan HH (2021) Biodiversity Record: Two alien fishes at Windsor Nature Park. Nature in Singapore, 14: e2021062. DOI: 10.26107/NIS-2021-0062

Subjects: Silver arowana, *Osteoglossum bicirrhosum* (Teleostei: Osteoglossiformes: Osteoglossidae);
Flowerhorn cichlid, Cichlidae hybrid (Teleostei: Cichliformes: Cichlidae).

Subjects identified by: Tan Heok Hui.

Location, date and time: Singapore Island, Windsor Nature Park; 25 February 2021 at around 1000 hrs and 14 May 2021 at around 0940 hrs.

Habitat: Artificial earthen pond at the edge of secondary forest, fed by natural stream and with lush growths of aquatic macrophytes.

Observer: Tan Heok Hui.

Observations: An *Osteoglossum bicirrhosum* of around 60–70 cm (Fig. 1) was observed swimming just under the water surface amongst aquatic weeds on both occasions. A pair of adult flowerhorn cichlid (male ca. 20 cm, female ca. 12–15 cm) was observed on 25 February (Fig. 2), but only the male, recognised by his large nuchal hump and colour markings, was seen on 14 May (Fig. 3). On the earlier occasion, the male was following the female about. Other fishes noted on both mornings but not illustrated are *Barbodes* cf. *rhombeus* (Cyprinidae), *Dermogeny collettei* (Zenarchopteridae), *Poecilia reticulata* (Poeciliidae) and *Xiphophorus maculatus* (Poeciliidae).



Fig. 1. Dorsal view of adult *Osteoglossum bicirrhosum* on 25 February 2021. (Photograph by: Tan Heok Hui).



Fig. 2. Dorso-lateral view of flowerhorn cichlids on 25 February 2021. The male (right) has a significantly larger nuchal hump. (Photograph by: Tan Heok Hui).



Fig. 3. Dorso-lateral view of same male flowerhorn alone on 14 May 2021. (Photograph by: Tan Heok Hui).

Remarks: Of the five species of fish listed by Tan (2019) from Windsor Nature Park, the two-spot rasbora (*Rasbora elegans*) was the only species not observed on the two days. Both silver arowana and flowerhorn cichlid are known to occur in the wild state in Singapore (see Tan et al., 2020), but they are recorded from the featured locality for the first time. None of the fishes in this feature are native to Singapore. The silver arowana and flowerhorn cichlids are very likely abandoned pets that originated from the ornamental fish trade. Despite being a hybrid, the male flowerhorn cichlid appeared to be exhibiting courtship behaviour, and could be breeding in the pond.

Literature cited:

Tan HH (2019) Fishes observed at Windsor Nature Park. Singapore Biodiversity Records, 2019: 20–21.
Tan HH, Lim KKP, Liew JH, Low BW, Lim RBH, Kwik JTB & Yeo DCJ (2020) The non-native freshwater fishes of Singapore: An annotated compilation. Raffles Bulletin of Zoology, 68: 150–195.