

Non-native fishes at inlet of Upper Seletar Reservoir

Subjects: Heckel's eartheater, *Acarichthys heckelii* (Teleostei: Cichlidae); Fig. 1.
Longfin eartheater, *Geophagus altifrons* (Teleostei: Cichlidae); Fig. 2.
Peacock bass, *Cichla orinocensis* (Teleostei: Cichlidae); Fig. 3.
Mosquitofish, *Gambusia affinis* (Teleostei: Poeciliidae); Fig. 4.
Molly, *Poecilia sphenops* (Teleostei: Poeciliidae); Fig. 4.

Subjects identified by: Contributor.

Location, date and time: Singapore Island, Upper Seletar Reservoir, inlet adjacent to Mandai Lake Road; 27 & 28 March 2014; 0800-0830 hrs.

Habitat: Artificial freshwater lake with silt substrate, grassy earth banks, murky water and secondary forest vegetation on the shores.

Observer: Contributor.

Observation: A mixed assemblage of fish comprising non-native species was observed in the shallows of an inlet. At least 5 juvenile individuals of *Acarichthys heckelii* (one of which is shown in Fig. 1) were observed foraging in the shallows. These were around 4 cm in total length. The juvenile *Acarichthys* has a distinct black blotch on the anterior part of the dorsal fin, and mottled pattern on the sides of the body.

About 3 examples of *Cichla orinocensis* (one example depicted in Fig. 2) were observed in the shallows. These were about 8 to 10 cm in total length and possess the typical black blotched pattern of juveniles. An adult *Geophagus altifrons* of about 20 cm total length was observed in deeper water (Fig. 3). It was sifting the substrate with its mouth on the silty bottom.

A small school of about five *Gambusia affinis*, the largest about 3 cm total length was observed at the water surface (Fig. 4, right), together with an individual of a domesticated form of *Poecilia sphenops* of about 3 cm total length (Fig. 4, left). A single species of native fish, the pygmy halfbeak *Dermogenys collettei* (family Zenarchopteridae) was observed at the site.

Remarks: This appears to be the first record of *Acarichthys heckelii* from Upper Seletar Reservoir (see Ng & Tan, 2010). The presence of *Cichla orinocensis* had been reported earlier by Tan (2013), and the establishment of a breeding population in the reservoir is suggested by the observation of juvenile fish. The single *Poecilia sphenops* seems to be recently released at the site by people, either as excess live bait or an item of 'fangsheng' (release of organisms into the wild to gain spiritual merit for the person who performs the act).

References:

- Ng H. H. & H. H. Tan, 2010. An annotated checklist of the non-native freshwater fish species in the reservoirs of Singapore. *COSMOS*. 6 (1): 95-116.
Tan H. H. 2013. Peacock bass in Upper Seletar Reservoir. *Singapore Biodiversity Records*. 2013: 97.

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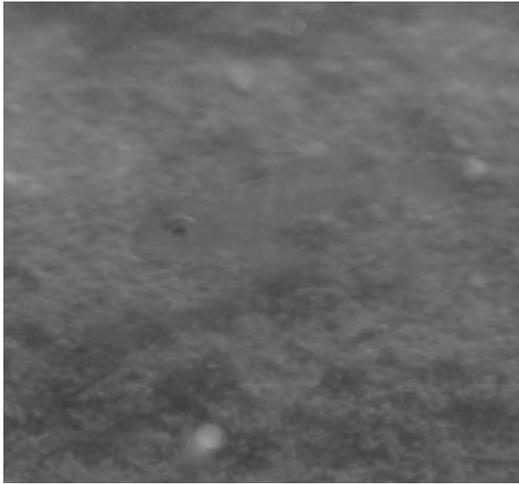


Fig. 1. Juvenile *Acarichthys heckelii*.

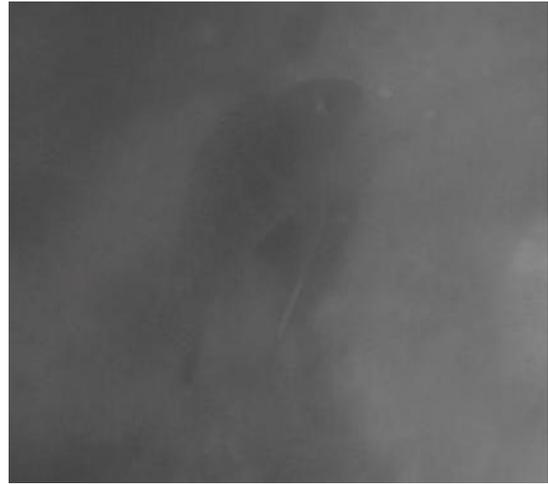


Fig. 2. Adult *Geophagus altifrons*.



Fig. 3. Juvenile *Cichla orinocensis*.



Fig. 4. A school of *Gambusia affinis* (right) and a single *Poecilia sphenops* (left, indicated by arrow).

Photographs by Tan Heok Hui