

Egg brooding behaviour of the spot-tail frogfish

Subject: Spot-tail frogfish, *Lophiocharon trisignatus* (Teleostei: Antennariidae).

Subject identified by: Contributor.

Location, date and time: Singapore Straits, lagoon at Semakau Landfill; 14 August 2014, morning.

Habitat: Marine. Patch reef within an artificial lagoon with sandy bottom, at intertidal zone and exposed during the morning low tide, around 0.5 m depth.

Observer: Contributor.

Observation: An adult frogfish of 87.7 mm standard length (from snout tip to tail base) was collected from among coral. It was later observed to be carrying a clutch of eggs on the left side of its body. The clutch, four to five eggs deep, consisted of more than 800 elliptically-shaped eggs that were adhered to the fish's skin. Each egg was about 4.0 x 2.5 mm in dimensions. The eggs were held together, and attached to the side of the adult fish with sticky threads (Fig. 1). The frogfish was maintained for two days in an aquarium. During that time, it was observed occasionally folding its dorsal, caudal and anal fins onto the egg mass (Fig. 2). Unfortunately, the fish expired on the third day; the cause of its demise unknown. The specimen and the eggs have been preserved, as ZRC 54563, in the Zoological Reference Collection of the Lee Kong Chian Natural History Museum, at the National University of Singapore. Dissection of the fish has shown that it is a male.

Remarks: Frogfishes of the genus *Lophiocharon* are known to exhibit brood care for their eggs. The gender of the egg-carrying parent was not established, but it is presumed that the female lays eggs directly onto the side of the male, which then look after the eggs by curling his body around the eggs, and folding his dorsal, caudal and pectoral fins over the egg mass to partially conceal them (Allen & Erdmann, 2012: 143). The present observation shows that it is the male fish that brood the eggs.



Fig. 1. Lateral view of adult *Lophiocharon trisignatus* (ZRC 54563) of 87.7 mm standard length from Semakau Landfill, with an egg mass on the left side of its body. Photograph by Tan Heok Hui



Fig. 2. Frontal view of *Lophiocharon trisignatus* (ZRC 54563) in the aquarium with egg mass on the left side of its body. The fish had been observed folding its dorsal, caudal and anal fins over the egg mass. Photograph by Tan Heok Hui

Reference: Allen, G. R. & M. V. Erdmann, 2012. *Reef Fishes of the East Indies. Volume I.* Tropical Reef Research, Perth, Australia. pp. 1-424.

Note: This is a contribution of the Singapore **Comprehensive Marine Biodiversity Survey** conducted by the National University of Singapore's Tropical Marine Science Institute and the National Parks Board.

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