

## Starry pufferfish with barnacles in its gut sold for food in a market

**Subjects:** Starry pufferfish, *Arothron stellatus* (Teleostei: Tetraodontidae);  
Unidentified barnacles (Crustacea: Cirripedia).

**Subjects identified by:** Contributor.

**Location, date and time:** Singapore Island. The pufferfish was purchased at a wet market in Yew Tee housing estate on 28 May 2016. According to the fishmonger, it was recently caught in a cage trap (bubu) in the Singapore Strait.

**Habitat:** Marine. Presumably from coral reef.

**Observer:** Contributor.

**Observation:** The 30.5 cm (standard length) freshly dead pufferfish was not eaten, but preserved and deposited as a specimen in the Lee Kong Chian Natural History Museum at the National University of Singapore as ZRC54868 (Fig. 1). While the specimen was being processed, hard lumps with a crunchy texture were felt on its abdomen near the anus. After flushing with water, large numbers of broken shells and undigested remains of barnacles were retrieved from the hind gut (Fig. 2).

**Remarks:** This record is interesting because this pufferfish was publicly sold in a local wet market for human consumption despite the general assumption that most members of the family Tetraodontidae are poisonous, particularly the viscera, skin and blood (Matsuura, 2001). The fishmonger said that the flesh of this pufferfish is edible, and that it is esteemed by the Malay community. As there has been no recently reported cases of pufferfish poisoning in humans, it is assumed that whoever purchase these fishes will have the knowledge to properly prepare them to render them safe for eating.

The diet of *Arothron stellatus* is known to be varied, consisting of sea urchins, sponges, crustaceans, coral and algae (Sadovy & Cornish, 2000). This observation highlights barnacles as one of the fish's crustacean food items.

*Arothron stellatus* is one of six species in the genus *Arothron* known to occur in Singapore waters. The other congeners are *Arothron immaculatus*, *A. reticularis*, *A. mappa*, *A. hispidus* and *A. caeruleopunctatus* (Tan, 2013; Yap & Sankar, 2015).

### References:

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- Yap, S. & A. Sankar, 2015. New record of blue-spotted pufferfish in Singapore. *Singapore Biodiversity Records*. 2015: 47.

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Fig. 1. *Arothron stellatus* (ZRC 54868) of 30.5 cm standard length, obtained from the Singapore Strait.

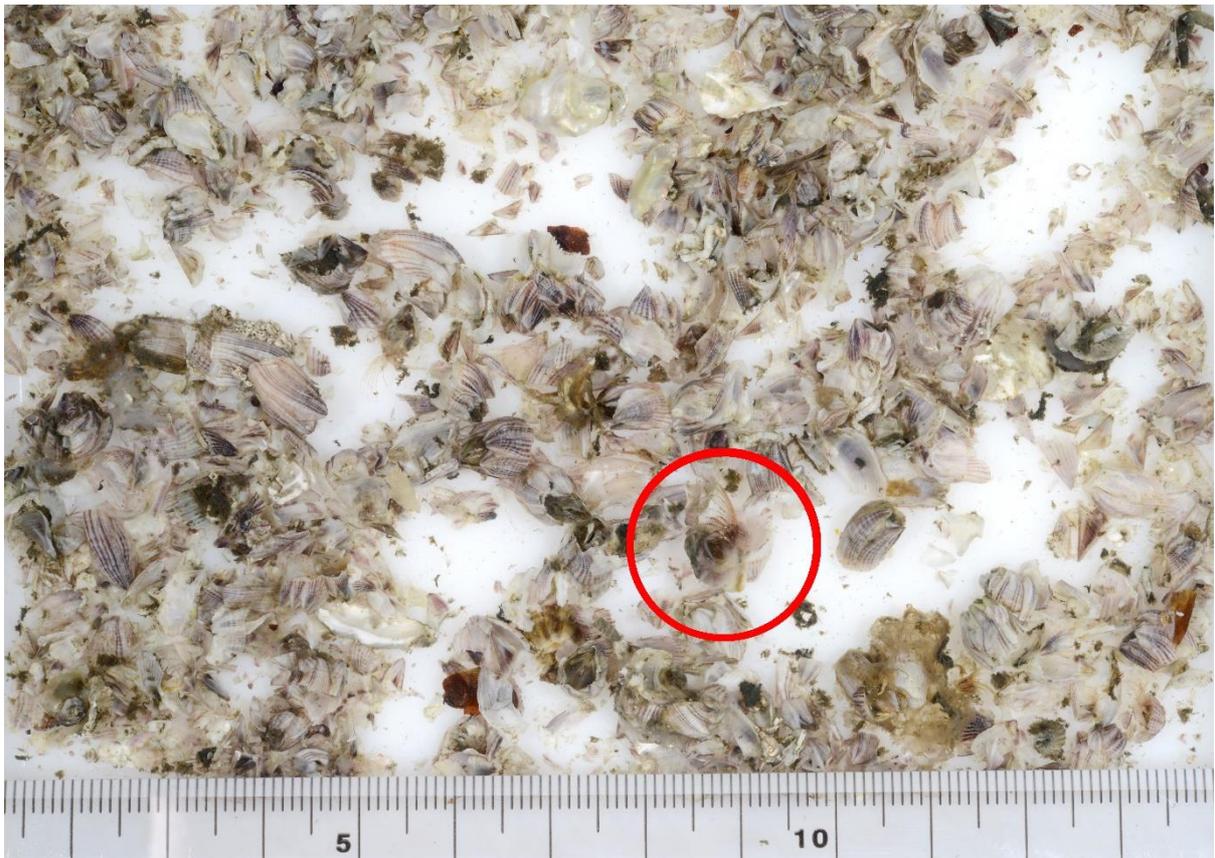


Fig. 2. Hind gut contents of *Arothron stellatus* (ZRC 54868), showing numerous broken pieces of barnacles. Red circle encloses the filter-feeding appendages of a barnacle. Scale rule in cm.

Photographs by Tan Heok Hui