

## Biodiversity Record: New record of the cat's paw oyster, *Talonostrea talonata*, in Singapore

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**Recommended citation.** Chan S-Y & Lau WL (2021) Biodiversity Record: New record of the cat's paw oyster, *Talonostrea talonata*, in Singapore. Nature in Singapore, 14: e2021142. DOI: 10.26107/NIS-2021-0142

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**Subjects:** Cat's paw oyster, *Talonostrea talonata* (Mollusca: Bivalvia: Ostreidae).

**Subjects identified by:** Chan Sow-Yan and Lau Wing Lup.

**Location, date and time:** Singapore Island, Pasir Ris Park, near the mouth of Sungei Tampines; 30 January 2021; around 1750 hrs.

**Habitat:** Estuarine shore, on muddy sand at low tide (Fig. 1).

**Observer:** Lau Wing Lup.

**Observation:** Six specimens were found on muddy sand. Three were alive, while the rest were apparently freshly dead as their valves have minimal encrustations and remained articulate (Figs. 2–5). Two of the specimens have a jingle clam, *Anomia* sp., attached to the exterior surfaces of their shells (Fig. 3).

The shells are small, thin, flattish and mostly oval or subcircular in outline. The surfaces can be yellow-violet or purple, with purplish or whitish bands in varying widths radiating from the umbo. Five to seven strong ribs radiate from the hinge area to the shell margin on the left (lower) valve. These radiating ribs often protrude beyond the ventral margin as erect, short, claw-like projections. The inner shell surface is generally white with bluish iridescence. The hinge surface and ligament groove are small and lacking in chomata, and the umbonal cavity is shallow. The adductor muscle scar is white and reniform. The right upper valve is digitate, smaller and fits into the left lower valve. The attachment area of the left valve is either small or about half the shell's anteroposterior length. The largest left valve is about 25 mm in length.

**Remarks:** The featured specimens were identified based on the illustrations and descriptions in Li & Qi (1994), Fang et al. (2009: 42, figs. 30–33), Huber (2010) and Li et al. (2017: 361, fig. 1B, C). The known distribution of *Talonostrea talonata* includes the South China Sea, where it is native (Li & Qi, 1994), as well as Argentina, Brazil and Peru, where it is an invasive species (Cavaleiro et al., 2019, as *Crassostrea talonata*). The ecological plasticity and strong invasive capacity that *Talonostrea talonata* possesses makes it a significant threat to oyster culture in areas where it is non-native (Cavaleiro et al., 2019, as *Crassostrea talonata*). *Talonostrea talonata* is herein reported as a new record for Singapore (see Tan & Woo, 2010), but we are unable to ascertain if it was introduced there, or previously overlooked.



Fig. 1. Habitat where *Talonostrea talonata* was found. (Photograph by: Lau Wing Lup).



Fig. 2. In situ, dorso-lateral view of a freshly dead and articulate *Talonostrea talonata* shell. (Photograph by: Lau Wing Lup).

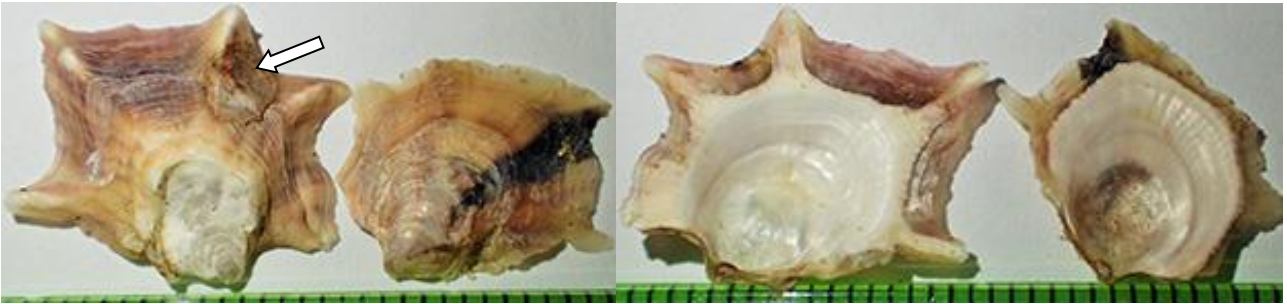


Fig. 3. *Talonostrea talonata* specimen with dorsal views of the exterior (left picture) and interior (right picture) shell valves. Note the jingle clam, *Anomia* sp. (indicated by arrow), attached to the exterior surface of the left valve. Note differences in shell shape, sculpture, colour and pattern of both valves. Distance between black bars = 1 mm. (Photographs by: Lau Wing Lup).



Fig. 4. *Talonostrea talonata* specimen with dorsal views of the exterior (left picture) and interior (right picture) shell valves. Note differences in shell shape, sculpture, colour and pattern of both valves, as well as the bluish iridescence of the shell interior. Distance between black bars = 1 mm. (Photographs by: Lau Wing Lup).



Fig. 5. *Talonostrea talonata* specimen with dorsal views of the exterior (left picture) and interior (right picture) shell valves. Note that the hinge surface and ligament groove are small and lacking in chomata, and the umbonal cavity is shallow in both valves. Distance between black bars = 1 mm. (Photographs by: Lau Wing Lup).

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