

Biodiversity Record: First record of the placuna oyster, *Placuna lobata*, from Singapore

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Subjects: Lobed placuna oyster, *Placuna lobata* (Mollusca: Bivalvia: Placunidae).

Subjects identified by: Tan Siong Kiat.

Location, date and time: Two locations in the Singapore Strait —

- 1) off southwestern Semakau Landfill at 01°11.468'N 103°45.683'; 11 November 2022; between 1300–1330 hrs;
- 2) off eastern Kusu Island at 01°13.829'N 103°52.939'E; 10 November 2022; between 1330–1400 hrs.

Habitat: Marine. On muddy substrate in depths between 16.8–17.3 m at Semakau. On seabed at depths of 24.4–37.4 m. Substrate type not recorded for the haul at Kusu.

Observers: Collected by Tan Heok Hui and other staff members of the Lee Kong Chian Natural History Museum on the research vessel Galaxea.

Observations: During a series of dredge samplings carried out at a few locations around Singapore, many disjointed *Placuna lobata* valves and fragments patterned with varying degrees of red markings were collected by dredge from the seabed. Some examples, measuring ~20–70 mm in shell length, were deposited in the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum at the National University of Singapore. The shells from Semakau (Fig. 1) were catalogued as ZRC.MOL.28001, and the Kusu specimens (Fig. 2) as ZRC.MOL.28013. No live or articulate specimens were found amongst the dredged material.

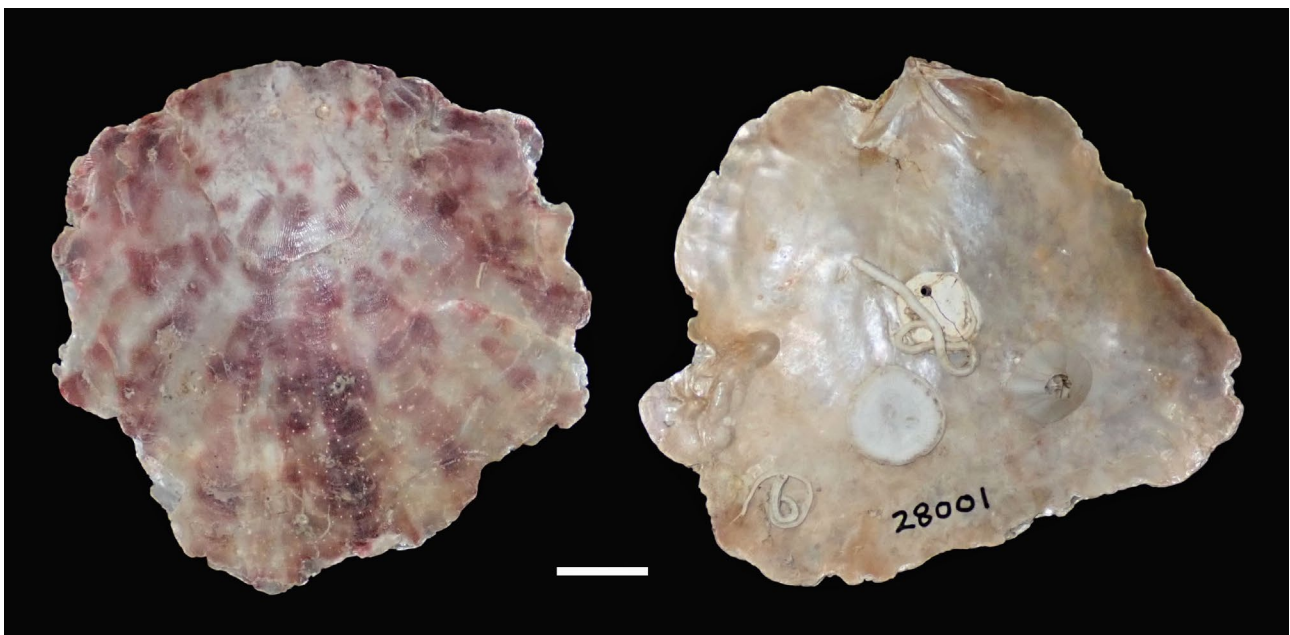


Fig. 1. *Placuna lobata* (ZRC.MOL.28001) dredged off the southwestern part of Semakau Landfill showing the sculpture and colouration of the exterior of the upper or left valve (on left) and the interior of the lower or right valve (on right); scale bar 10 mm. (Photograph: Tan Siong Kiat).

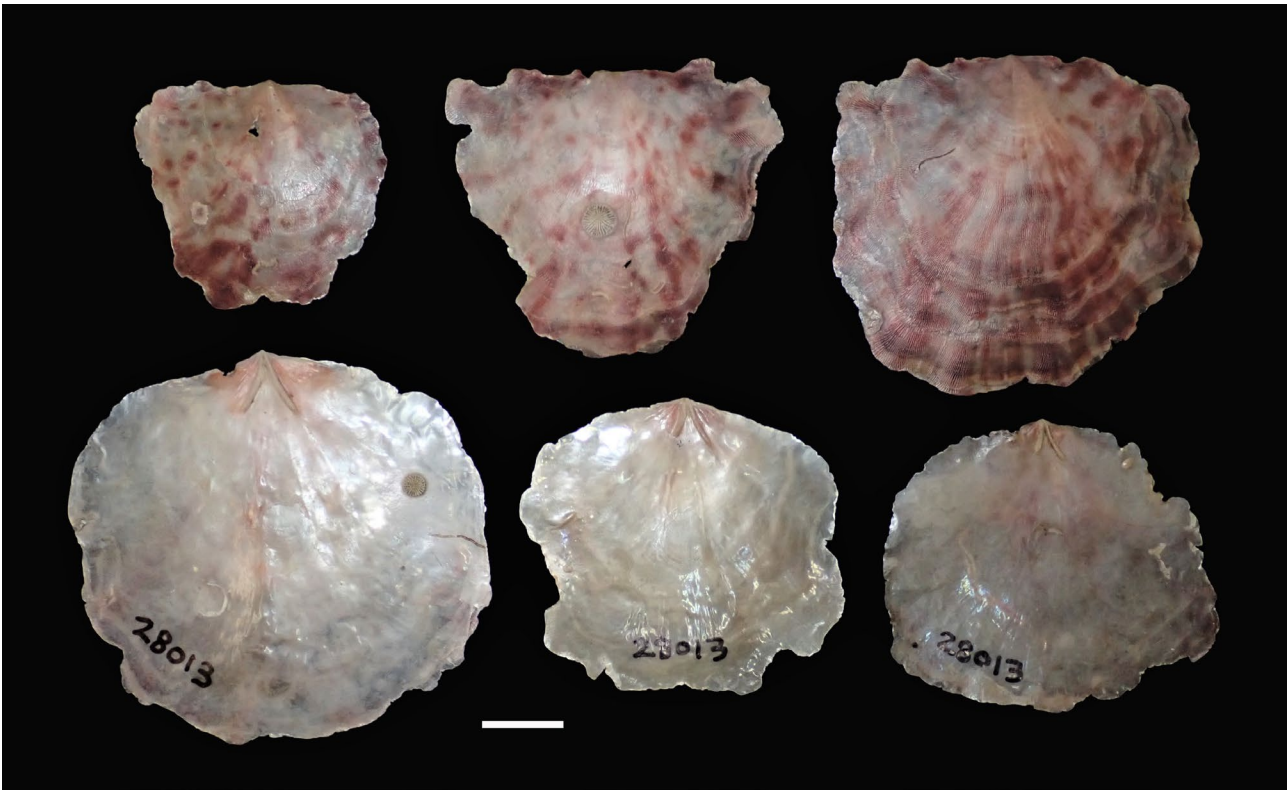


Fig. 2. *Placuna lobata* (ZRC.MOL.28013) dredged off the eastern side of Kusu showing the sculpture and colouration of the exterior of the left valves (top row) and the interior of the right valves (bottom row); scale bar 10 mm. (Photograph: Tan Siong Kiat).

Remarks: This appears to be the first record of *Placuna lobata* from Singapore (see e.g., Tan & Woo, 2010, and references therein cited). Its known distribution includes northern Australia, Palau, and the Philippines (Matsukuma, 1987; Lamprell & Whitehead, 1992; Huber, 2010). Although no live examples were collected during the recent dredge surveys, they are likely to be present in and around the surveyed locations judging from the numerous shells recovered and fresh conditions of some of them.

This species can quite easily be distinguished from its known congeners in Singapore by the dark red spots and radial streaks, and by the distinctly lobed shell margin. Small juvenile shells may be difficult to identify with certainty as the aforementioned characters may not be as obvious. The posterior limb of the inverted V-shaped crurae of the right valve, distinctly longer in smaller specimens, seems to be more equal in length in larger shells examined.

Further study is probably needed to determine whether this species is restricted to the deeper subtidal areas in Singapore as we have not encountered this species in past intertidal surveys around Singapore. The Palau specimen in Matsukuma (1987) was collected from around 18 m deep, which is similar to the depths of around 17 m, and between 20–40 m where our specimens were dredged. Lamprell & Whitehead (1992) stated that the species inhabits the surface of mud near mangroves in northern Australia, presumably intertidally.

Literature cited:

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- Matsukuma A (1987) Studies on the Kawamura Collection (Mollusca) stored in the National Science Museum, Tokyo IV. The Family Placunidae (Bivalvia) with special reference to their ligament. *Venus*, 45: 231–244.
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