NATURE IN SINGAPORE **15**: e2022004
Date of Publication: 28 January 2022
DOI: 10.26107/NIS-2022-0004

Biodiversity Record: New record of the crested oyster, *Dendostrea cristata*, in Singapore

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Recommended citation. Chan S-Y & Lau WL (2022) Biodiversity Record: New record of the crested oyster, *Dendostrea cristata*, in Singapore. Nature in Singapore, 15: e2022004. DOI: 10.26107/NIS-2022-0004

Subject: Crested oyster, *Dendostrea cristata* (Mollusca: Bivalvia: Ostreidae).

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

Location, date and time: Johor Strait, Changi Beach Park; 27 July 2021; around 0900 hrs.

Habitat: Estuarine shore. In the littoral zone during low tide.

Observer: Lau Wing Lup.

Fig. 1. *Dendostrea cristata* attached to a dark-coloured pen shell fragment. (Photograph by: Lau Wing Lup).

Observation: A mature specimen of about 53 mm in length was found lying on muddy sand, with its left valve still attached to a fragment of a pen shell (*Pinna* sp.) (Fig. 1).

Description of the shell: Attachment area extends halfway from the umbo to the ventral margin. Shell exterior (Fig. 2) dirty yellowish with an oval outline and some obsolete spines along growth lines. Dark purplish streaks radiate from umbones. Both valves with roundish ribs radiating from umbones. These ribs of varying thickness turn to round, irregularly undulating margin on shell edge and also present on shell interior. Shell interior (Fig. 3) lustrous white with dirty-yellow and dark brownish-grey patches particularly along internal ridges. Several pearl-like blisters present on interior of valves, the most protruding one on adductor muscle scar of left valve (Fig. 3B). Adductor muscle scars crescentic and stained with brownish patches. Dirty-yellowish-brown stripes present on ventral margin of interior surfaces of both valves. Growth squamae of both valves still attached, render a textured and layered sculpture especially near shell periphery. Right valve has chomata only on one side of the hinge (Fig. 4), which are elongated tubercles with corresponding pits on the other valve (Fig. 4). In lateral view, right valve is convex and appears thicker than left (Fig. 5). Upper valve has prominent rounded projections at the shell margin, which fit into notches of the lower valve. Left valve

greatly inflated compared to right. Commissural shelf narrow and poorly developed. Umbonal cavity shallow and ligament short.

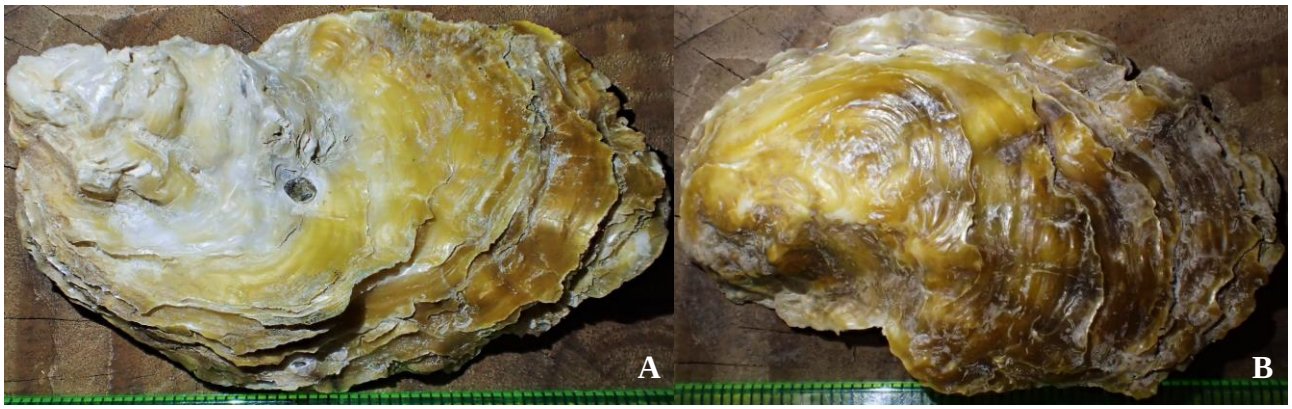

Fig. 2. *Dendostrea cristata*. Exterior surfaces of right valve (A) and left valve (B). Space between black bars = 1 mm. (Photographs by: Lau Wing Lup).

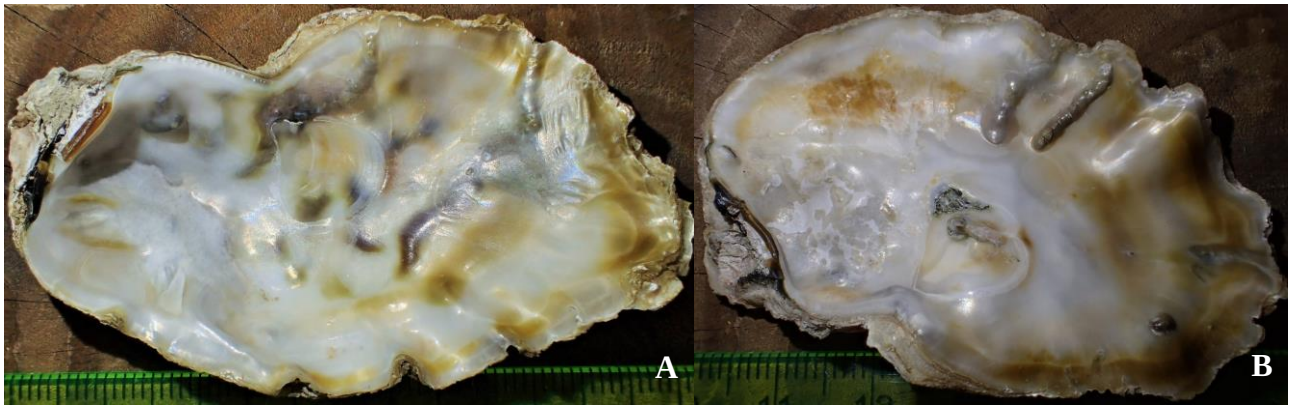

Fig. 3. *Dendostrea cristata*. Interior surfaces of right valve (A) and left valve (B). Space between black bars = 1 mm. (Photographs by: Lau Wing Lup).

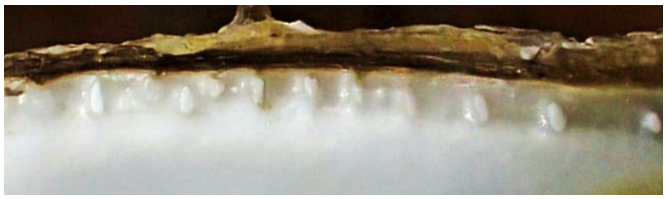

Fig. 4. *Dendostrea cristata*. Chomata on the edge of the interior surface of the right valve near the hinge. (Photograph by: Lau Wing Lup).

Fig. 5. *Dendostrea cristata*. Lateral views with both valves attached. (Photographs by: Lau Wing Lup).

Remarks: *Dendostrea cristata* was originally described by Born (1778) as *Ostrea cristata*. Its type locality, by redesignation, is Kuantan in West Malaysia (Huber, 2010). This species is distributed through the central Indo-West Pacific from northwestern Australia up to China (Huber, 2010). It was one of the most common oyster species washed ashore along the beaches of the Gulf of Thailand, with individuals growing up to 82 mm (Swennen et al., 2001, as *Dendrostrea glaucina*).

Despite Singapore being in the range of *Dendostrea cristata*, this species was not recorded there previously (e.g., Chuang, 1973; Lam & Morton, 2009; Tan & Woo, 2010; Yahya et al., 2020). It could have been overlooked since, like most oyster species, *Dendostrea cristata* is variable in shape (see Bussarawit & Cedhagen, 2010; Huber, 2010). The featured specimen thus represents the first record of *Dendostrea cristata* in Singapore.

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