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Biodiversity Record: Omura's whale carcass off Tanjong Pagar

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Subject: Omura's whale, *Balaenoptera omurai* (Mammalia: Artiodactyla: Balaenopteridae).

Subject identified by: Jayanthi Puniamoorthy and Marcus A. H. Chua.

Location, date and time: Singapore Strait off Tanjong Pagar Terminal; 6 September 2025; 1824 hrs.

Habitat: Marine. Coastal sea adjacent to shipping port.

Observers: Marcus A. H. Chua, Danwei Huang, Maosheng Foo, Yen Yi Tan, Natasha W. L. Tay, and Darren C. J. Yeo.

Observations: The floating carcass of a rorqual whale was seen stranded along the pilings of a wharf at Tanjong Pagar Terminal (Fig. 1). The observers detected a strong odour, and noted that the carcass was in an advanced stage of decomposition (Code 4) (Geraci & Lounsbury, 1993). Most of the skin had sloughed off, and the posterior part of the body was missing. The remains were initially estimated to be about 4.8 m in length.

Six days later, on 12 September 2025, the carcass was salvaged by the Lee Kong Chian Natural History Museum, National University of Singapore, and prepared for preservation and deposition in the Zoological Reference Collection with the catalogue number ZRC 4.10674.

Based on DNA analyses, the whale is identified as a male *Balaenoptera omurai* Wada, Oishi & Yamada, 2003. A 307 bp fragment of the cytochrome b marker was a 100% BLAST match to the *Balaenoptera omurai* holotype genome (Sasaki et al., 2006). PCR-based sex determination was conducted as described in Jayasankar et al. (2008).

The defleshed skull with a greatest length measurement of 2.64 m has the posterior end of the premaxilla concealed by the posterior ascending process of the maxilla along the nasal (Fig. 2) — a diagnostic character of *Balaenoptera omurai* (see Wada et al., 2003). No baleen plates were recovered.

Fig. 1. Carcass of Omura's whale at Tanjong Pagar on 6 September 2025. (Photograph by: Marcus A. H. Chua).

Remarks: This is the first stranding record of the Omura's whale in Singapore, and the first recorded stranding of a large whale in its territorial waters after a sperm whale ten years ago in 2015 (Chua et al., 2019). The Omura's whale has a circum-global distribution, mainly in tropical and warm temperate coastal waters (Cerchio et al., 2019). In Southeast Asia, the species has been recorded alive and stranded along the coasts and in waters of Indonesia, Malaysia, Philippines, Thailand and Viet Nam (Cerchio et al., 2019).

Using a generally accepted skull-to-body length conversion factor that baleen whales skulls are approximately 25% of their body length (Omura & Kasuya, 1979; Goldbogen et al., 2010), the estimated body length of this whale would have been about 10.6 m. Although male Omura's whales seem to attain physical maturity by the time they are around 9 m in length (Wada et al., 2003), the absence of epiphyseal fusion in the sixth thoracic vertebra in this individual indicate that this Omura's whale is a subadult.

Preliminary investigations from the damage to the skeleton—broken bones and hemorrhage—are consistent with ship strike injuries (Moore et al., 2013). The near-coastal habits of the Omura's whale may place the species at higher risk of impacts from human activities and incidents of marine vessel injuries or entanglement (Cerchio et al. 2019).

Fig. 2. Dorsal views of the Omura's whale cranium. Picture on the left shows characteristic morphology of pre-maxilla (pmx), maxilla (max) and nasal bones (na) (screen shot from video recorded by: Doris How). Picture on the right depicts the cranium with the premaxilla removed (Photograph by: Marcus A. H. Chua).

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