

## Biodiversity Record: Mangrove box jellyfish at Sungei Simpang

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**Subjects:** Mangrove box jellyfish, *Tripedalia cystophora* (Cnidaria: Cubozoa: Carybdeida: Tripedaliidae).

**Subjects identified by:** Iffah Iesa.

**Location, date and time:** Singapore Island, Sembawang, Sungei Simpang; 10, 11, 15, 28 December 2020 and 8 January 2021; between 0853 and 1000 hrs.

**Habitat:** Estuarine waterway fringed with mangroves. In brackish water.

**Observers:** Kong Pei Ling, Sim Cher Huey and Topping Christopher Charles.

**Observations:** Five separate observations were recorded –

- 1) On 10 December 2020 at 1000 hrs, between 50 and 100 individuals were seen swimming actively among submerged *Avicennia* roots in relatively clear water.
- 2) On 11 December 2020 at 0853 hrs, two examples of box jellyfish were videographed swimming close to the surface of relatively murky water (Fig. 1).
- 3) On 15 December 2020 at around 0930 hrs, at least 50 individuals were spotted in the murky water. Two examples were collected and deposited as reference material (Fig. 2) in the Lee Kong Chian Natural History Museum at the National University of Singapore, accessioned as ZRC.CNI.2820. Tissue subsamples were taken before preservation. In the preserved state, dimensions of the specimens are (bell height × bell width) 9.8 × 13 mm and 8.1 × 11 mm, respectively.
- 4) On 28 December 2020 at around 0900 hrs, approximately 20 to 30 individuals were observed in a 30 × 30 cm area.
- 5) On 8 January 2021 at around 1000 hrs, only a few individuals were observed. A male example was collected and videographed (Fig. 3).

**Remarks:** Also dubbed the ‘Caribbean box jellyfish’, *Tripedalia cystophora* was originally described by Conant (1897) from Jamaica in the eastern Atlantic. It has since been reported from many other parts of the world including Ecuador, Brazil, Seychelles, U.S.A. (Florida), the Philippines, Thailand, Indonesia and Australia (see Ekins & Gershwin, 2014), and a broad pan-tropical distribution is associated with this species (Kingsford & Mooney, 2014). Cubozoan members belonging to the family Tripedaliidae are unusual among jellyfishes in exhibiting sexual dimorphism and mating behaviour (Straehler-Pohl et al., 2014).

This is possibly the first observation of *Tripedalia cystophora* occurring in relative abundance (or ‘bloom’) over a period of time in Singapore. The species was first reported there four years ago based on two specimens collected from Pulau Ubin in 2004 (Iesa, 2017).

**Note:** Lim Cheng Puay was instrumental in the preparation of this report, for introducing the authors to each other regarding the jellyfish sightings.



Fig. 1. An example of *Tripedalia cystophora* in situ (indicated by arrow) at Sungei Simpang mangroves on 11 December 2020, 0853 hrs. (Screengrab from a 14-second video by: Kong Pei Ling).



Fig. 2. Close-up of the bell of a live *Tripedalia cystophora*. Three unbranched pedalia or tentacles (indicated by arrows) per bell corner is a characteristic feature of this species of box jellyfish. (Photograph by: Iffah Iesa).



Fig. 3. A male *Tripedalia cystophora* (indicated by arrow) collected on 8 January 2021. (Screengrab from video recorded by: Sim Cher Huey).

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