

Observation of the nursery and microhabitat of juveniles of sea cucumber *Stichopus cf. vastus* in the Kabira Bay Marine Protected Area, Ishigaki Island, Okinawa, Japan

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Juveniles of sea cucumber *Stichopus cf. vastus* were observed on a reef flat (24.4552° N, 124.1431° E) (Fig. 1A) in inner Kabira Bay (marine protected area, MPA), Ishigaki Island, Okinawa, Japan. The water depth was ~50 cm at the observation around 16:00 JST on 21st September 2021. The juveniles were 6.0–13.5 cm long and 4.6–5.8 cm wide and distributed at a density of ~2 individuals m⁻². Identification was made based on external morphology only. However, the appearance was partly different from those reported previously (Pakoa et al. 2009; Kinch 2012); among morphological characteristics of *S. vastus*, the dorsal dark depression lines, and the ventral reddish-brown color (Woo et al. 2015) were present, while dark numerous fine stripes around the dorsal papillae (Massin et al. 2002) were absent in the observed juveniles (Fig. 1B and C). Therefore, further investigations of ossicles or genetic traits are needed for accurate identification. All the juveniles were attached to underside of large corals/rubble (> 30 cm) (Fig. 1A) and not found from smaller corals/rubble. Because the adults were abundantly distributed in nearby deeper (>2 m) areas with fine sand sediments and massive corals, this sea cucumber may migrate from shallow to deep areas along with their growth. Previously, juveniles of *S. vastus* have been reported in seagrass beds in Micronesia (Pakoa et al. 2009; Kinch 2012). Our observation contains valuable implications for the ecology of the early life history of this species and management of the resource in this MPA.

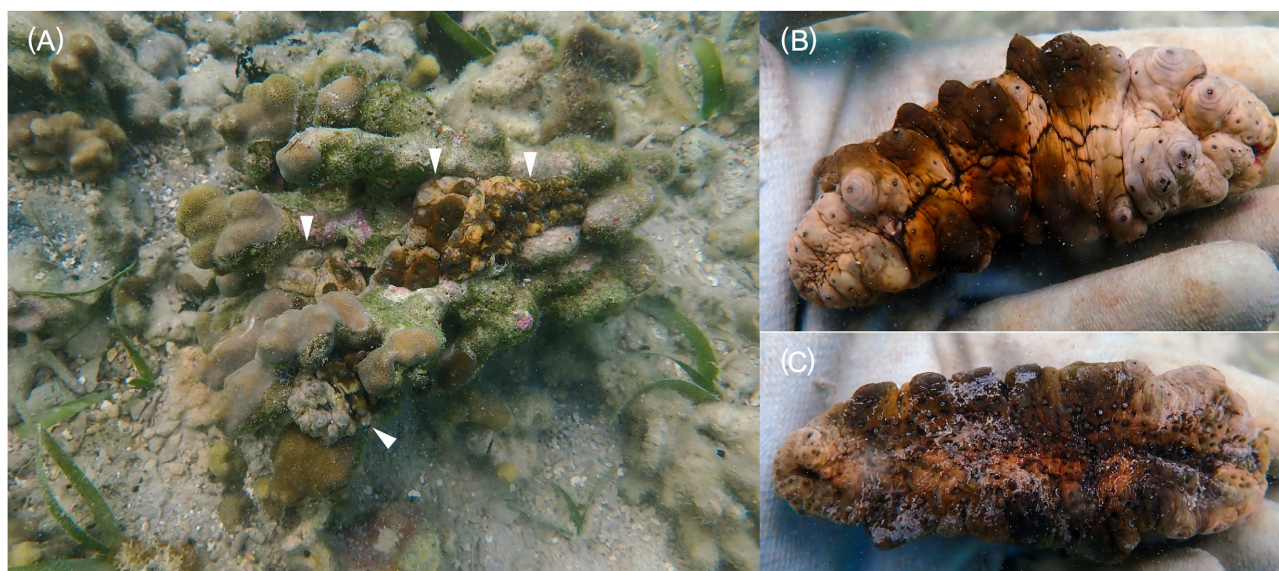


Fig. 1 (A) Juveniles of sea cucumber *Stichopus cf. vastus* attached to underside of coral rubble; (B) the dorsal and (C) ventral sides of an individual. Photographer: Iwao Tanita.

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