

“Uncovering” Behavior at Spawning of the Trumpet Sea Urchin *Toxopneustes pileolus*

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The trumpet sea urchin *Toxopneustes pileolus* (Lamarck, 1816), distributed in shallow reefs of the Indo-West Pacific, is known to possess distinctive globiferous and venomous pedicellariae. The aboral surface of individuals is usually almost fully covered with fragments of dead coral (Fig. 1a) at Hobihu, southern Taiwan (21°56'57"N, 120°44'53"E). The coral fragments may serve as ballast to stabilize the urchins in moving waters, or as shade in well-lit habitats (James 2000, Dumont et al. 2007). Although spawning of many echinoids was reported (Pearse and Cameraon 1991), no information is available for this species or genus. The species was first seen spawning in nature (Fig. 1b) at low tide of a spring tide (1 d after the new moon) on the afternoon of 18 May 2007. In total, 12 individuals were seen to be “naked”, i.e., their aboral surface was almost devoid of coral fragments, and were moving around and waving their tube feet while releasing gametes. The 2nd spawning event was observed under almost the same conditions, i.e., an afternoon low tide of a spring tide (2 d after the new moon) in spring, but 2 yr later, on 26 May 2009. Spawning individuals shed the coral fragments before spawning, while non-spawning ones remained covered. No other spawning event or “naked” trumpet urchins were observed in a total of 20 dives (10 at low tide) between 8 and 31 May of the same year.

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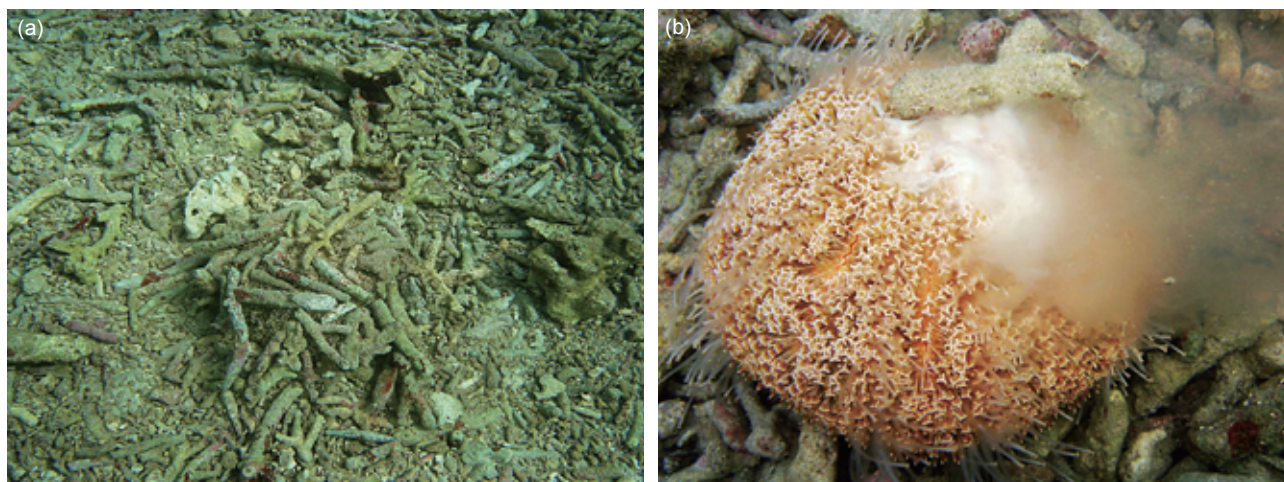


Fig. 1. *Toxopneustes pileolus*. (a) An individual (at the center of the picture) fully covered by coral fragments. (b) A spawning individual with only 1 piece of coral fragment left on the shell.

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