

A RECENT SINGAPORE RECORD OF THE CRINOID CRAB, *HARROVIA LONGIPES* LANCHESTER (CRUSTACEA: BRACHYURA: PILUMNIDAE)

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ABSTRACT. — Two specimens of the crinoid crab, *Harrovia longipes*, were collected from crinoids identified as *Phanogenia gracilis*, on a shallow coral reef off Pulau Satumu in the Singapore Straits, on 12 Apr.2012.

KEY WORDS. — crinoid symbiont, Crustacea, biodiversity, shallow reefs, echinoderm

INTRODUCTION

The crinoid crab, *Harrovia longipes* Lanchester (family Pilumnidae), was originally described from Singapore by Lanchester (1900). It is an ectosymbiont of crinoids on shallow coral reefs of the Sunda Shelf (continental Southeast Asia) and the Philippines to the Sahul Shelf (continental Australia and Papua New Guinea), New Caledonia and northwards to Okinawa, Japan (Chia & Ng, 1998; Fujita & Shokita, 2003). This species was previously misidentified as *Harrovia albolineata* (see Ng & Lim, 1990; Chia et al., 1993).

Harrovia longipes appears to be largely solitary, with one individual to each crinoid host. On few occasions, two individuals consisting of a heterosexual pair or an adult female and a juvenile, inhabit a single crinoid (Ng & Lim, 1990; Fujita & Shokita, 2003). The first zoeal stage of *Harrovia longipes* was documented by Lim & Ng (1988 as *Harrovia albolineata*) and the larval characters were used subsequently by Chia et al. (1993) to differentiate *Harrovia longipes* from *Harrovia albolineata*.

To the author's knowledge, *Harrovia longipes* was last recorded from Singapore waters in the 1990s, and there had been no collections or reported sightings since then. The present record shows that *Harrovia longipes* is still found in its type locality where it appears to be uncommon.

OBSERVATIONS

A series of night dives was conducted from 10–12 Apr.2012 to document a mass coral spawning event on a shallow water coral reef at the western side of Pulau Satumu, the southern-most island within Singapore's port limits. On an initial dive beginning at 1900 hours on 12 Apr.2012, a large (around 25-cm diameter) yellow and brown crinoid, identified as *Phanogenia gracilis* (family Comasteridae), was encountered at the edge of a flat coral head at a depth of around 4 m. A long-armed grey crab was observed on the ventral surface of the crinoid (Fig. 1, crab obscured by arms of crinoid).

In the author's attempts to collect the crab, the crinoid was dislodged, and it fell onto the seabed immediately below the coral head. When it was retrieved, the crab was not on the crinoid. The crab was subsequently found crouching beside some coral rubble and collected. It was an adult male with a carapace width of 10.6 mm (Fig. 2). A second crab was located on a similarly sized and coloured crinoid about 2 m away at the same depth. This specimen was also collected, and it turned out to be an adult female of carapace width 12.5 mm (Fig. 3). Both specimens, collected at around 2000 hours, were deposited in the Zoological Reference Collection (ZRC), Raffles Museum of Biodiversity Research (RMBR), National University of Singapore, and catalogued under ZRC 2012.0140. Other crinoids in the area did not yield ectosymbionts.

On the 2nd dive in the same vicinity starting at 2015 hours, around 20 crinoids were encountered and examined, but no crabs were found on them. However, a smaller yellow crinoid of about 12 cm diameter had on it a pair of symbiotic pistol shrimps, *Synalpheus stimpsoni* (Malacostraca: Alpheidae).



Fig. 1. *Phanogenia gracilis* crinoid host to *Harrovia longipes* (arms obscuring crab on central disc).

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Fig. 2. *Harrovia longipes*, male, ZRC 2012.0140, 10.6 mm carapace width; dorsal and ventral views.



Fig. 3. *Harrovia longipes*, female, ZRC 2012.0140, 12.5 mm carapace width; dorsal and ventral views.