

Acanthaster planci preying on soft corals in southern Japan

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The crown-of-thorns starfish *Acanthaster planci* is well known as a destructive predator on shallow water Scleractinia, and in particular *Acropora* spp. (Pratchett 2007). Outbreaks of *Acanthaster planci* have caused serious damage to coral reefs. However, it is less well-known that the crown-of-thorns does occasionally prey upon other benthic cnidarians (e.g. zoanthids in Obuchi and Reimer 2011).

In October 2011, we observed *A. planci* preying on soft corals, primarily from the genera *Lobophytum* and *Sarcophyton*, at the coast of Ei-cho Town, Kagoshima. The southern Satsuma Peninsula coast has experienced a severe outbreak of *A. planci* since 2007 (Ministry of the Environment 2008), and it was noted that at the dive site at Ei-cho that there was no live coral cover but many dead scleractinians covered with algae. Many individuals were observed exclusively on soft coral colonies (Fig. 1). The individuals were fully grown, approximately 30–40 cm in diameter.

It has previously been observed that in the absence of favored scleractinian prey that *A. planci* will prey upon soft corals, with reports from Guam (Chesher 1969) and Australia (Laxton 1974), although reports are scarce. De'ath and Moran (1998) theorized that such a situation is most likely to occur at the end of *A. planci* outbreaks, and given the timing of the *A. planci* outbreak, the lack of live Scleractinia observed and the presence of recently (e.g. within past 1–2 years) dead corals, this is a likely explanation for the unusual feeding behavior of *A. planci* in Ei-cho. With the scleractinian community of southern Satsuma already devastated, it appears the remaining benthic soft corals are becoming the next victims of the *A. planci* outbreak, and continued monitoring should assess if the starfish then move on to decimate the only remaining benthic cnidarians, the sea anemones (Actiniaria). Continued observations could demonstrate if *A. planci*

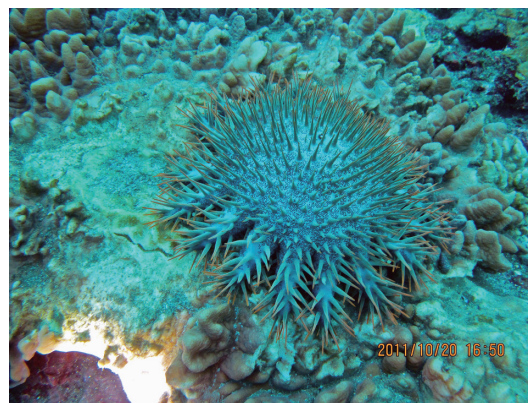


Fig. 1 An individual of *Acanthaster planci* preying on soft coral at Ei-cho, Kagoshima, 20 October 2011. Depth = 6 m. Note damaged area of soft coral to the left of starfish

can rely upon the nutrition of different prey asides from corals.

With other recent *A. planci* outbreaks in locations in southern Kyushu in Kagoshima (K. Kawai, pers. comm.) and Miyazaki (H. Fukami, pers. comm.), it is clear continued observations in the Kyushu region of Japan are needed.

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