Photogallery

Does *Acanthaster planci* preferably prey on the reef zoanthid *Palythoa tuberculosa*?

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Communicated by Beatriz E. Casareto (Biogeochemistry Editor)

Keywords *Acanthaster planci*, feeding habit, Zoantharia, coral reef

The crown-of-thorns starfish *Acanthaster planci* is generally known as an intensive predator on hermatypic corals, especially *Acropora* spp. (Pratchett, 2007). Outbreaks of *A. planci* cause serious damages to coral reefs. In contrast, it is less known that *A. planci* also consumes zoanthids. We observed *A. planci* preying on a reef covering zoanthid, *Palythoa tuberculosa* at night between August and September 2010, in the outer reef flat of Mizugama, Okinawa. Several individuals aggregated on *P. tuberculosa* colonies (Fig. 1). The individuals were relatively small, approximately 5−10 cm in radial length. *Acanthaster planci* preying on *P. tuberculosa* were also observed in the daytime in October 2010 in Lyudao, Taiwan. According to Gleibs and Mebs (1999), *A. planci* predates upon *Palythoa* in the South Pacific, which may indicate this is a usual event.

Fig. 1 Three individuals of *Acanthaster planci* preying on *Palythoa tuberculosa* at night 18 August 2010 at Mizugama

Interestingly, at Mizugama, no individuals were detected on neighboring *Acropora* spp. colonies that probably had recruited after the mass bleaching event of 1998. From additional observations in April 2011, neither *A. planci* individuals nor feeding traces of them were detected on *P. tuberculosa* colonies, suggesting that preying on *P. tuberculosa* occurs seasonally. At Mizugama, *P. tuberculosa* breeds in August (Hirose et al. 2011). In fact, pink-colored mature eggs were observed within colonies damaged by *A. planci* feeding. It is possible that *A. planci* preys on *P. tuberculosa* to obtain a more nutritious food, their eggs.

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Received: 12 April 2011/Accepted: 26 August 2011