

# Local phase shift from *Acropora*-dominant to *Condylactis*-dominant community in the Tiao-Shi Reef, Kenting National Park, southern Taiwan

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**Fig. 1a, b** a *A. muricata* patch; b *Acropora* debris covered by dense sea anemone, *Condylactis* sp.

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In 1992 at Tiao-Shi Reef (21° 55'N, 120° 46'E), Kenting National Park, southern Taiwan, the coral community was characterized by scleractinian corals with *Acropora* spp. patches dominant between depths of 5 to 15 m (*A. muricata*, Fig. 1a; Dai 1993). This reef has suffered from pressures of overfishing, coastline development, and tourism in the last two decades (reviewed in Dai 1997). ReefCheck-conducted surveys between 2000 and 2003 indicated that some *Acropora* patches were replaced by the sea anemone, *Condylactis* sp. (Fig. 1b). Statistical comparison of surveys conducted in 1987 and 1997 demonstrated a significant decrease in the average number of species (21 to 16), average number of colonies (35 to 29), coral coverage (47 to 41), and species diversity (2.63 to 2.23) in the Tiao-Shi Reef over a decade (Dai et al. 1998, 1999). Areas occupied by *Condylactis* sp. may reduce the recruitment of coral larvae, and subsequently delay the recovery of coral community. Causes of *Condylactis* sp. outbreak are still unknown, but have been correlated to the consequences of Typhoon Herb in 1996, the 1997 mass coral bleaching, landslides, sewage run-off, and tourist impact in the Kenting National Park (Dai et al. 1998, 1999). Proper management and a long-term ecological research plan are endorsed to ensure the recovery of the coral community in the Tiao-Shi Reef and the sustainability of the Kenting National Park.

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