

## Kite butterflyfish and carpet anemones

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**Subjects:** Kite butterflyfish, *Parachaetodon ocellatus* (Teleostei: Chaetodontidae);  
Haddon's carpet anemone, *Stichodactyla haddoni* (Cnidaria: Actiniaria: Stichodactylidae).

**Subjects identified by:** Authors.

**Location, date and time:** Johor Strait, Pulau Ubin, Chek Jawa; 5 November 2017; 1700 hrs.

**Habitat:** Estuarine. Intertidal shore with mud substrate and seagrasses. In shallow pools during low tide.

**Observers:** Jianlin Liu, with Loh Kok Sheng and Ria Tan.

**Observation:** At least 15 young kite butterflyfish of about 2-4 cm were observed swimming in close proximity to carpet anemones in shallow water of around 10-15 cm depth. They were either swimming beside (Fig. 1 left & 2), or over the anemones (Fig. 1 right & 3). The butterflyfish may get as close as 2 to 4 cm from the anemones' tentacles, but they did not come into contact with the anemones. One small (2 cm) butterflyfish was seen taking shelter under a carpet anemone.

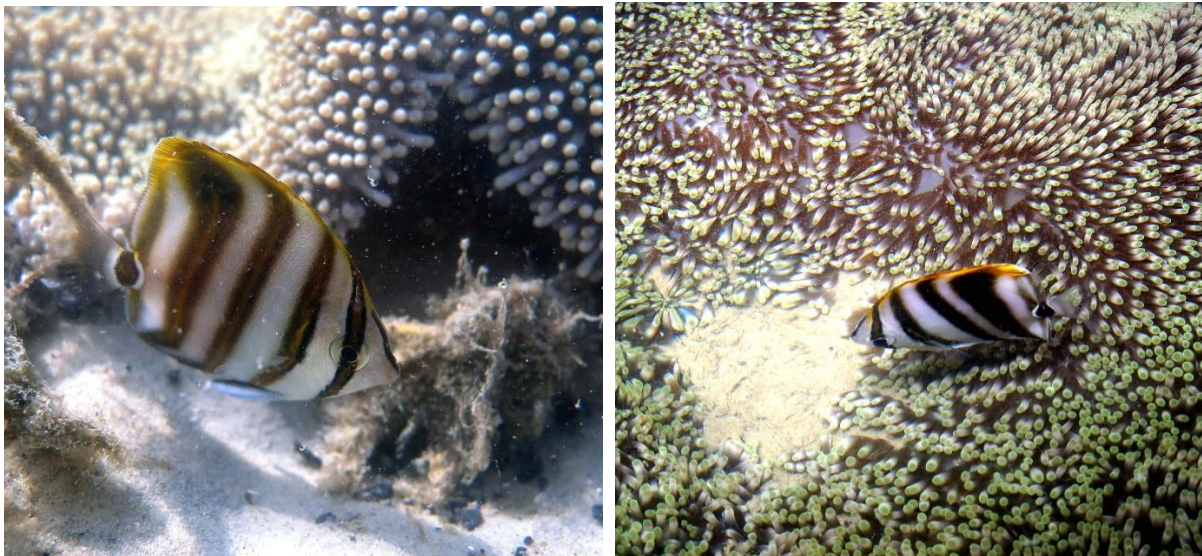


Fig. 1. Left: Lateral view of a butterflyfish swimming beside a carpet anemone (in the background). Right: Dorsal view of a butterflyfish swimming extremely close to the anemone's tentacles. Photographs by Jianlin Liu

**Remarks:** The featured behaviour appears to show that the butterflyfish is adept at avoiding contact with the carpet anemones' venomous tentacles. By staying as close as possible to carpet anemones, it is possible that the butterflyfish is using this proximity to the anemones to deter potential predators, which may hesitate to attack the butterflyfish to avoid getting stung by the anemones. However, this apparent association is nowhere as intimate as that practised by clownfishes (*Amphiprion* and *Premnas* spp.) and the kite butterflyfish may, at best, be considered a facultative symbiont as it is not dependent on sea anemones (see Fautin & Allen, 1997: 7; Allen et al., 1998: 182). Although some butterflyfishes are known to attack and eat sea anemones (see Fautin & Allen, 1997: 137), the kite butterflyfish in the featured observation were not observed picking at the tentacles.

**References:**

Allen, G. R., R. Steene & M. Allen, 1998. *A Guide to Angelfishes & Butterflyfishes*. Odyssey Publishing/Tropical Reef Research. 250 pp.

Fautin, D. G. & G. R. Allen, 1997. *Anemone Fishes and their host sea anemones*. Revised edition. Western Australian Museum. vii + 160 pp.



Fig. 2. Dorsal view of two butterfly fish at the edge of a carpet anemone.



Fig. 3. Dorsal view of a carpet anemone with a kite butterfly fish swimming over the mouth of the anemone.

Photographs by Ria Tan