

Synchronous daytime spawning of the solitary coral *Fungia danai* (Fungiidae) in the Chagos Archipelago, central Indian Ocean

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Fig. 1 Cloud of sperm being released from *Fungia danai*

In scleractinian corals, the synchronous release of gametes occurs predominantly between dusk and midnight, while daytime spawning is rare, recorded early morning, late afternoon or prior to sunset (Harrison and Wallace 1990). Recently, midday spawning of *Pavona* sp. in Thailand highlighted the need for studies to look for spawning during daylight hours (Plathong et al. 2006).

During a 6 week multidisciplinary scientific expedition to the Chagos Archipelago, synchronous daytime spawning was observed in *Fungia danai* between 9 and 10 a.m. on 18 February 2006 (5 days after full moon) at a lagoonal reef on Salomon Atoll (5°20.2'S, 72°13.5'E). More than 100 individuals released sperm into the water column in short repeated bursts lasting for a few seconds, creating a distinct cloud along the reef between 7 and 20 m depth (Fig. 1). Spawning appeared to be a highly localized, species-specific event, and no other fungiids were observed spawning by divers on the outer reef slope or during any subsequent dives during the expedition. No eggs were observed being released, which suggests that egg release occurred at a different time or that spawning individuals may have been clonemates (Harrison, personal communication). Clonal propagation is known to occur in fungiids (Kramarsky-Winter and Loya 1996; Gilmour 2004).

The timing of spawning in *F. danai* is consistent with seasonal and monthly spawning periods recorded in acroporid and faviid corals at a similar latitude in Mombasa, Kenya (4°S) (Mangubhai and Harrison 2006). These observations represent the first records of daytime spawning in *F. danai* and of coral spawning in the Chagos Archipelago, and contribute to our understanding of reproductive patterns on equatorial reefs in the central Indian Ocean.

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Reef sites

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