

Monospecific Stands of *Turbinaria mesenterina* in the Pescadores (Penghu), Taiwan: Ecological and Conservational Significance

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Turbinaria corals have distinct patterns of biogeographic distribution, with most species being abundant and forming larger colonies in non-reef habitats of high-latitude locations (Schoel et al. 1986, summarized in Veron 1995). In the Pescadore Is. (the Penghu Archipelago), Taiwan (Fig. 1), we discovered a coral community composed of unusually large monospecific stands of *Turbinaria mesenterina* (Fig. 2) on the southwestern coast (23° 44'532"N, 119° 35'683"E) of Jibei Is. (Fig. 1), a famous spot for aquatics for Taiwanese tourists. These *Turbinaria* stands form leaf-like stacks with an average colony size of 91.26 m³ ($n = 10$, 3.2 (height) x 4.6 (width) x 6.2 m (length)), and are distributed at depths of 3-5 m at low tide. The area of the sea covered by the *Turbinaria* stands is also relatively large (> 3000 ha), and provided fishing grounds for coral reef fishes and lobsters at Jibei Is. during the 1970s and 1980s.

Nevertheless, local overfishing by blasting and cyanide and natural disturbances by typhoons in the last 2 decades have caused high mortality of *T. mesenterina* (Fig. 3) and severe reduction of certain keystone marine organisms (Dai et al. 2004). Recently, illegal fishing practices were mitigated by local legislation, but the increasing numbers of tourists and unsustainable management practices continue to threaten the survival of the coral communities around Jibei Is.

Conservation efforts, such as instituting a marine protected area and tourist controls, should be implemented to ensure the resilience and sustainability of the *Turbinaria* monospecific carpet in the Pescadores, "the island of fishermen".
<http://zoostud.sinica.edu.tw/Journals/46.5/591.pdf>

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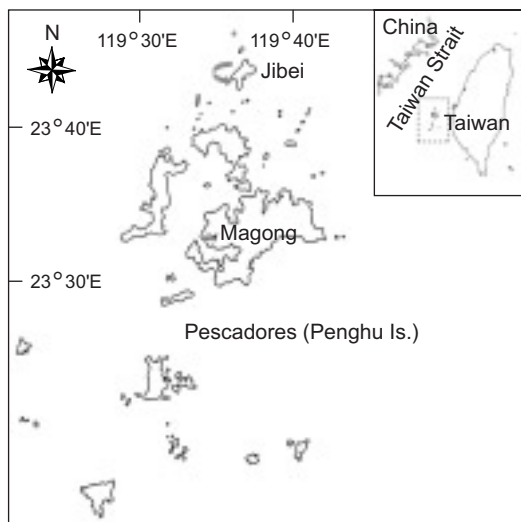


Fig. 1. Map showing the locality (gray arrow) of the *Turbinaria* stands in Pescadores.



Fig. 2. Large stands of *Turbinaria mesenterina*.



Fig. 3. Large dead colonies.

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