

Zooxanthellae in Ellisellid Gorgonians of the Philippines

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The common name “sea whip” applies to a variety of unbranched whip-like corals including the black corals *Cirripathes* and *Stichopathes*, the gorgonians *Viminella* and *Junceella*, and the sea pens *Halipteris*, *Funiculina*, and *Distichoptilum*. The symbiotic relationship between unicellular dinoflagellates (known as zooxanthellae) and coral reef octocorals almost always occurs in all species within a given genus. The few exceptions include *Virgularia*, *Cavernularia*, and *Pseudopterogorgia*. All ellisellid gorgonians have been previously recorded as a zooxanthellate (Fabricius and Alderslade 2001), but a zooxanthellate form was previously suspected in the genus *Junceella* by Sprung (1999).



FIGURE 1. A dense aggregation of sea whips, Luzon, Philippines, 12 m depth.

Staff of the Steinhart Aquarium, California Academy of Sciences, collected five specimens of *Junceella fragilis* (Ridley 1884) at a depth of 12 m from Maricaban Island, Luzon (13°41'12.02"N, 120°49'38.01"E) in May 2010 (Fig. 1). On closer observation it became apparent that the brown polyp coloration might be due to the presence of zooxanthellae (Fig. 2), which was confirmed by microscopic examination of an excised polyp (Fig. 3). This validates the report of a zooxanthellate in *Junceella* (Oppen et al. 2005) and underscores the importance of working with live material when describing species characteristics.



FIGURE 2. Brown, extended polyps of *Junceella fragilis*.

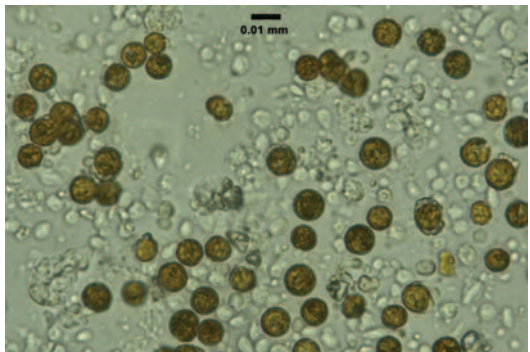


FIGURE 3. Zooxanthellae from polyps of *Junceella fragilis*.

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