Zooxanthellae in Ellisellid Gorgonians of the Philippines

G.C. Williams, J.C. Delbeek, B. Shepherd, S. Wolters
California Academy of Sciences, 55 Music Concourse Drive, San Francisco, California, 94118 U.S.A;
Email: gwilliams@calacademy.org

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).

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.
ACKNOWLEDGMENTS

We thank staff biologists of the Steinhart Aquarium, for their sharp-eyed observations and the collection of material in southern Luzon, May 2010.

REFERENCES

