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Recommended Citation

Hoeksema, B.M., Sellanes, J., Easton, E.E. 2019. A high-latitude, mesophotic *Cycloseris* field at 85 m depth off Rapa Nui (Easter Island). *Bulletin of Marine Science*. 95(1), 101–102. <https://doi.org/10.5343/bms.2018.0053>

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A high-latitude, mesophotic *Cycloseris* field at 85 m depth off Rapa Nui (Easter Island)

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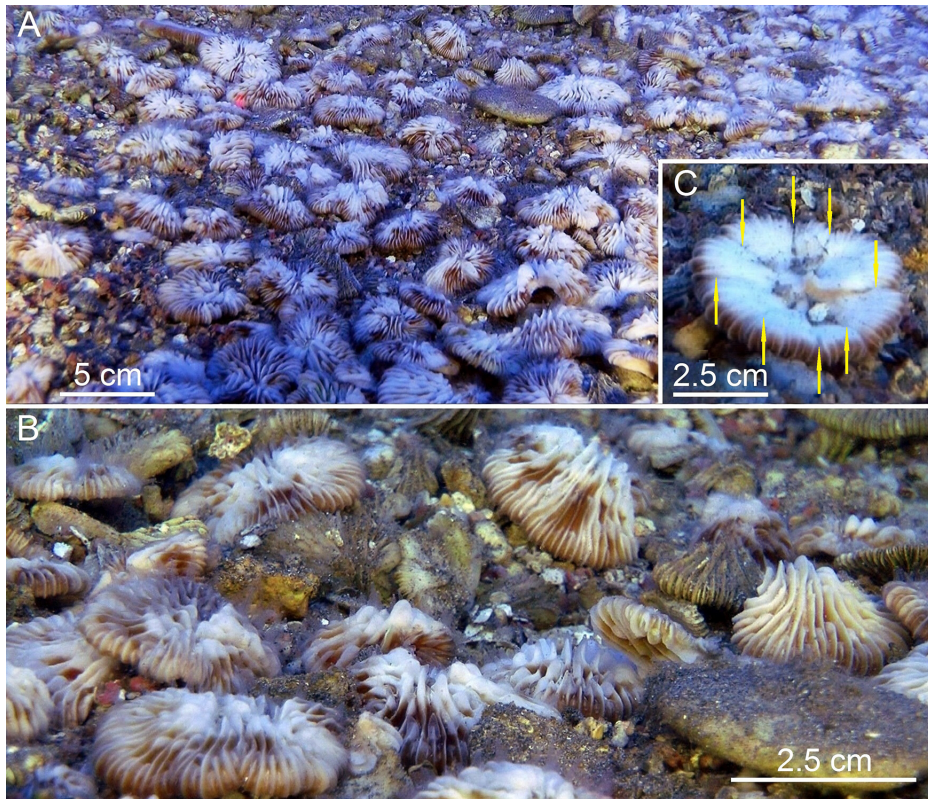
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Published records of mesophotic zooxanthellate corals from Rapa Nui (Easter Island) are rare and so far based only on dredged specimens and observations during scuba dives (Wells 1972, Glynn et al. 2003, 2007). During recent remotely operated vehicle (ROV) surveys off Rapa Nui (March 2016), a large and dense aggregation of zooxanthellate *Cycloseris* corals (Scleractinia: Fungiidae) with a density of approximately 500 ind m⁻² was discovered (27°08'55"S, 109°26'46"W) on black sand in a depth range of approximately 79–85 m (Panels A, B). A few corals were overturned, exposing their white (azooxanthellate) undersides and sutures along which self-fragmentation took place (Panel C, arrows). The *Cycloseris* field was video-recorded on 17 March, 2016, with a high-resolution camera, equipped with two red parallel laser beams for size calibration (see Online Supplementary Video). More than 95% of the corals showed autotomy and regeneration, similar to fields dominated by *Cycloseris distorta* (Michelin, 1842) in the Galápagos Islands (Feingold 1996, Hickman 2008, Glynn et al. 2018) and by *Cycloseris fragilis* (Alcock, 1893) in the Persian Gulf (Hoeksema et al. 2018).

Specimens were sampled for identification and deposited in collections at Sala de Colecciones Biológicas Universidad Católica del Norte (SCBUCN 7619) and Naturalis, Leiden (RMNH COEL 42230). All corals were provisionally identified as *Cycloseris vaughani* (Boschma, 1923). This species usually occurs in discoidal shape (Wells 1972, Hoeksema 1989, 2014) and is rarely known to become wedge-shaped after self-fragmentation (Hoeksema and Waheed 2011). Previously reported aggregations of this species were found on sandy reef bases (24–36 m deep) in Indonesia and consisted of circular corals (Hoeksema 1989, 2012).

The *Cycloseris* field at Rapa Nui is remarkable because of its mesophotic depth and isolated, southeastern location at high latitude. Earlier records from this island concern a few dead skeletons and live corals in complete and fragmenting shape from 100 to 174 m depth (Wells 1972, Glynn et al. 2007). Discoidal corals (alive and dead) of the same species were also dredged from 73–132 m depths at the Pitcairn Islands (24°58'S, 127°27'W), 1825 km west of Rapa Nui (<https://collections.nmnh.si.edu/search/iz/>). The mesophotic records from both remote localities are of interest because of a presumed dispersal barrier between them (Glynn et al. 2017). These observations indicate that ROV surveys and museum collections offer a great potential for new discoveries concerning mesophotic corals.

ACKNOWLEDGMENTS

M Gorny of OCEANA piloted the ROV. G Zapata-Hernández, E Hey, and R Hito collaborated in specimen sampling and curation. T Coffey (National Museum of Natural History, Smithsonian Institution) made photographs of coral specimens from Rapa Nui and the Pitcairn Islands. Sampling was performed under permission Res. Ext N°41/2016 from SERNAPESCA (Chile) to Universidad Católica del Norte. FONDECYT 1181153, 1180694 and the Chilean Millennium Initiative ESMOI provided funding. We thank P Glynn and one anonymous reviewer for constructive remarks on the manuscript.

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Date Submitted: 1 August, 2018.

Date Accepted: 5 September, 2018.

Available Online: 10 September, 2018.

