

Plastic nets as substrate for reef corals in Lembeh Strait, Indonesia

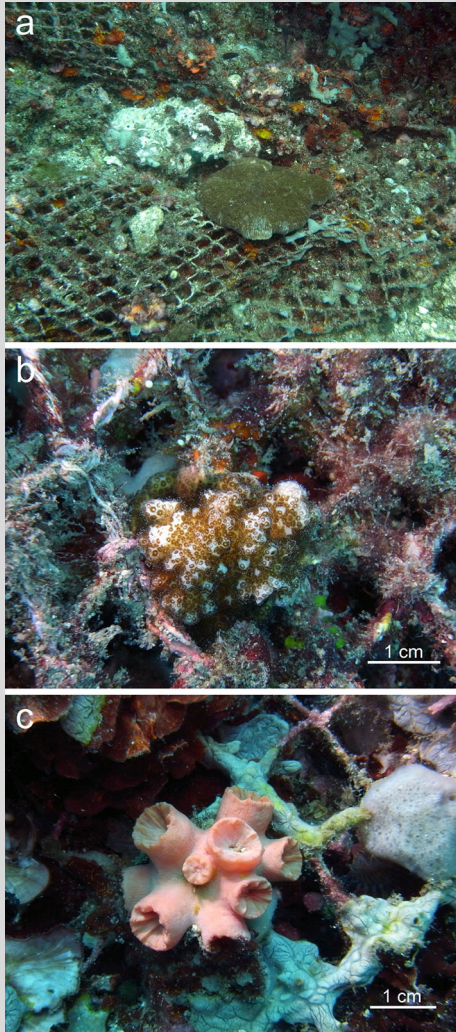


Fig. 1 Lost net (8 m depth) in Lembeh Strait. **a** Part of the net with dead coral and a free-living *Sandalolitha robusta* on top. Juvenile corals of *Pocillopora* sp. (**b**) and *Tubastraea coccinea* (**c**) living attached to the net

Derelict fishing gear is causing damage to corals over wide ranges of latitude, depth, and temperature (Good et al. 2010; Sheehan et al. 2017). Lost nets drift away and may eventually sink until they reach the seafloor. As ghost nests they continue to catch and kill fish until they settle down on the bottom and trap sediment. Corals and other sessile invertebrates get entangled, damaged, covered, and smothered, eventually leading to their death.

During a marine biodiversity survey in Lembeh Strait (North Sulawesi) in 2012, various discarded plastic nets (mesh size 1.5 cm) were encountered. They were covered by biofouling organisms and may have been draped over the bottom for some years. A large net at 8 m depth (1°27'58"N, 125°14'02"E; Fig. 1a) made of synthetic fibres was covered by dead coral boulders, algae, and macrofauna consisting of scleractinians, sponges, and tunicates. Judging by their size, the corals may have been attached for at least 2–3 yrs (Fig. 1b, c). They belonged to the genera *Goniopora*, *Euphyllia*, *Pocillopora*, and *Tubastraea*. A large free-living mushroom coral had dropped down on the net (Fig. 1a). Since 2012 more nets and other plastic debris have been found in Lembeh Strait, acting as unstable and unnatural substrate for reef life. Despite the fact that plastic nets have become part of the reef ecosystem and corals on top may look healthy, they should be removed to prevent the risk of them becoming a continuing source of coral diseases (Lamb et al. 2018).

Acknowledgements The survey was part of a marine biodiversity workshop hosted by the Centre for Oceanography (RCO-LIPI) and Universitas Sam Ratulangi, Manado. Participation by Bambang Hermanto was funded by the Adessium Foundation.

Compliance with ethical standards

Conflict of interest On behalf of both authors, the corresponding author states that there is no conflict of interest.

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Received: 6 April 2018 / Accepted: 10 April 2018 / Published online: 17 April 2018

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Coral Reefs (2018) 37:631

<https://doi.org/10.1007/s00338-018-1686-x>