Coral growth on entangled ghost nets in a tropical Indian Ocean atoll

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Coral growth is subject to large-scale fluctuations induced by natural and anthropogenic effects (Buddemeier and Kinzie 1976). One critical extrinsic factor that can affect coral growth is pollution, which can be caused by nutrient enrichment or marine debris, especially derelict fishing gear that is indiscriminately dumped in the seas. For example, ghost nets that become trapped on healthy corals can hinder their growth, preventing access to sunlight and potentially smothering them, leading to the eventual death of the colony (Valderrama Ballesteros et al. 2018). Similarly, corals in contact with plastic have a significantly higher chance of contracting disease (Lamb et al. 2018).

During an underwater survey in February 2021, we encountered a colony of Acropora cf. gemmifera in the Kavaratti Atoll in Lakshadweep (10.567509, 72.626564). A discarded nylon fishing net with a mesh size of approximately 40 mm had become entangled on this colony (Fig. 1). However, rather than growth being hindered, this colony overgrew the fishing net. Although coral overgrowing ghost nets has been reported previously (Valderrama Ballesteros et al. 2018), instances of corals successfully overgrowing nets are uncommon. The ability of A. cf. gemmifera to overgrow the net might be linked to the comparatively faster growth rate of acroporids (100–150 mm/year) versus massive corals (<50 mm/year) (Dullo 2005) and the absence of other stressors that might have interfered with its growth.

Fig. 1  A. Acropora cf. gemmifera growing on entangled nylon net  B. Close up image

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Compliance/Conflict of interest
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References

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