Extreme white colouration of frogfish *Antennarius maculatus* due to coral bleaching event

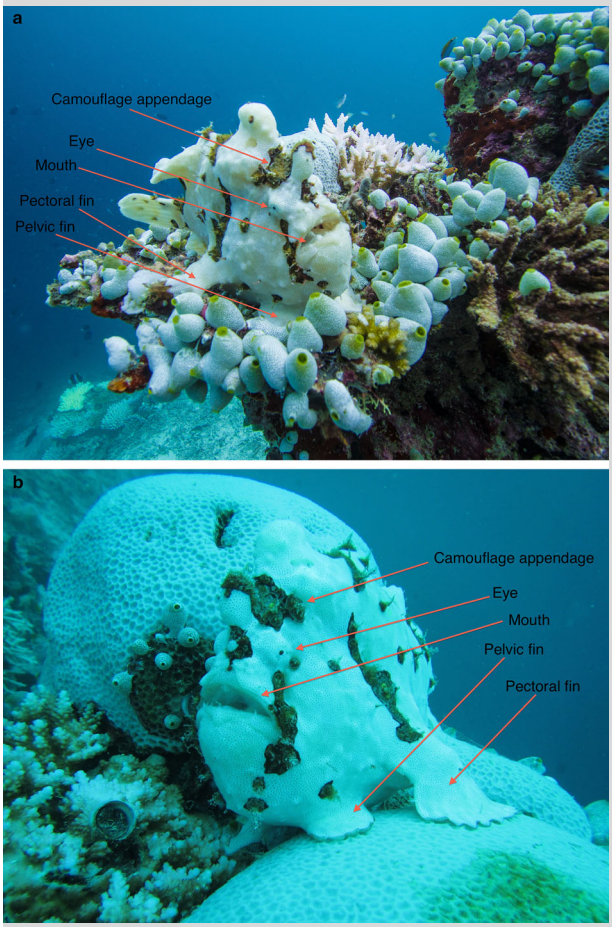

Fig. 1 Warty frogfish *Antennarius maculatus* camouflaged against bleached *Acropora* (**a**) and *Goniastrea* (**b**) coral colonies

An individual of the warty frogfish species *Antennarius maculatus* was observed camouflaging itself against fully bleached corals at 10 m depth at the Velidhoo Island resort reef (4°11′41.35″N, 72°49′20.55″E) in North Ari Atoll, Maldives, on 19 May 2016. The frogfish was approximately 20 cm long, and being completely white, matching the bleached coral background, it displayed several camouflage flaps and appendages on its body that resembled the turf algae growing on dead parts of a *Goniastrea* coral skeleton. The individual was first spotted resting at the bottom of the reef slope, amongst *Didemnum molle* sea squirts, bleached corymbose *Acropora* and bleached *Goniastrea* colonies (Fig. 1a). Within a 5-min period, the individual had moved to the other side of the coral block where it was surrounded entirely by a bleached and dead skeleton of a *Goniastrea* colony, as well as patches of turf algae (Fig. 1a, b). Because *Antennarius maculatus* is a sedentary species that rarely moves location, it is probable that this individual changed its colouration to match the bleached coral. Coral bleaching mostly likely occurred in late April or early May 2016 given that the sea surface temperature anomalies were above the 31 °C coral bleaching threshold in the Maldives at that time (NOAA Coral Reef Watch 2016). Individuals from the *Antennarius* genus have been known to change colour in both experimental aquaria and in field observations (Pietsch 1984). However, it would be interesting to observe whether the frogfish would change colour to match the coral as the coral either regained its pigmentation after bleaching or died and was covered in turf algae or other benthic organisms. This sighting is an interesting example of the extreme changes in colouration that frogfish are capable of, and of how frogfish may react to increasingly frequent coral bleaching events around the world.

References

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