Appendix 4

Unique coral community in the Persian Gulf

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A fringing coral community at Larak Island (26° 53' N, 56° 23' E), situated at the boundary between the Persian Gulf and Gulf of Oman in the Strait of Hormuz, is described. Little published information exists about Iranian reefs and their fauna and such a coral community has not yet been reported in the Persian Gulf (Shinn 1976; Sheppard and Sheppard 1991; Riegl 1999; Sheppard et al. 1992; Rezai et al. 2004).

Larak Island has mainly sandy shores with patchy reef development mostly in its northern and western parts. The described area extends about 1 km northeast of the Island. The tidal regime in the area is mixed and tidal range may reach 4 m during the year. Exposed to air for a few hours a day during spring low tide (Fig. 1a), the whole shallow zone (<5 m) coral community was dominated by soft corals, such as *Sinularia compressa*, *S. erecta* (Fig. 1f), other soft coral species, and hard corals, e.g., *Montipora* cf. *danai*, *Platygyra daedalea*, *Stylophora pistillata* (Fig. 1b–d), and *Favia favus*. Total live hard and soft coral cover in this zone was 18 and 15%, respectively. A deeper coral zone (5–8 m), dominated by *Acropora downingi* and *A. khayranensis*, occurred down slope to 8 m in depth (Fig. 1g) with 78.6% cover. Below that, *Sarcophyton* sp. (Fig. 1e), *Junceella juncea*, and *Goniopora* sp. become dominant and continue to 11 m depth (Fig. 1g).

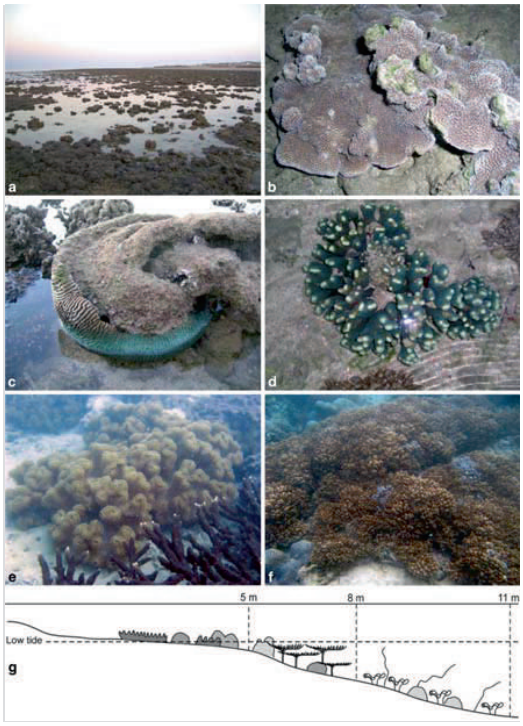

Fig. 1 **a** Shallow zone was exposed during low tide, **b** *Montipora* cf. *danai*, **c** *Platygyra daedalea*, **d** *Stylophora pistillata*, **e** *Sarcophyton* sp., **f** *Sinularia erecta*, **g** Schematic profile of the described area

The described area is of particular ecological importance and unique in the Persian Gulf, as soft corals were dominant in the coral community and that they can tolerate such harsh environmental fluctuations, which is likely due to some special mechanisms and changes in their physiology. It is not known whether this structure represents a true framework reef or whether the corals simply follow existing morphology.

References

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