

## Non-indigenous sun corals invade mussel beds in Brazil

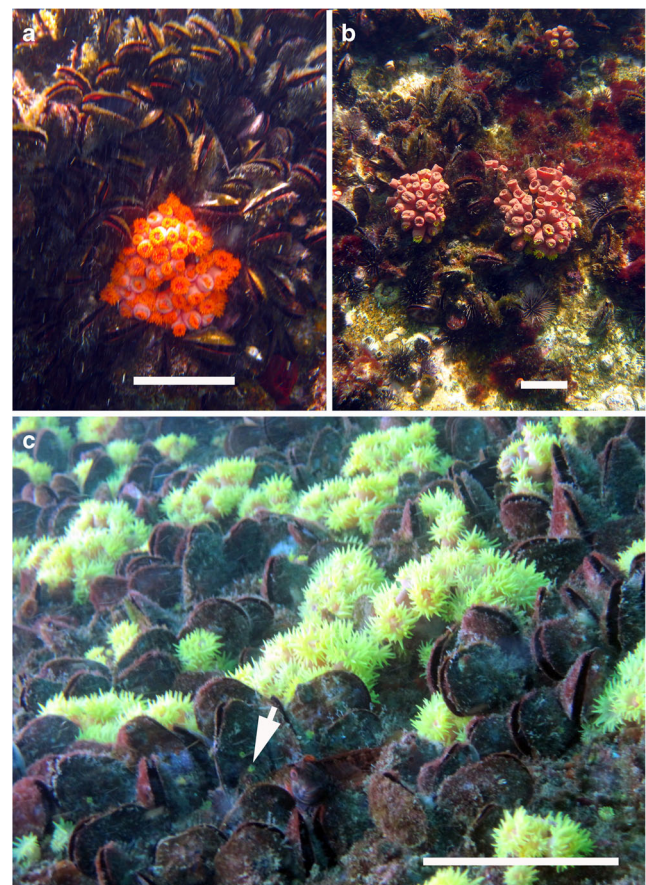
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The sun corals *Tubastraea coccinea* and *T. tagusensis* (Scleractinia: Dendrophylliidae) have invaded Brazilian shores and are expanding their ranges and abundances in the Southwest Atlantic (Silva et al. 2014), where they impact native species (Lages et al. 2011). Here we report their occurrence in *Perna perna* mussel beds (Mytilidae), which are found along most of the Brazilian coastline, forming dense beds from the intertidal to the shallow subtidal zone. The mussel is commercially harvested from natural beds by artisanal fishermen (Lage and Jablonski 2008) and is also farmed on lines in marine aquaculture systems.

The two coral species were recorded among *P. perna* beds at Ponta Grossa, Ilha Grande Bay, Brazil (23°7'18" S, 44°8'6" W) (Fig. 1a, b); *T. tagusensis* was also found growing among and over mussels at Jorge Grego Island, Brazil (23°13'22" S, 44°9'23" W) (Fig. 1c). Using known growth rates, the colonies were estimated to have established > 2 years ago (Paula 2007). These sites are fished by local mussel collectors, and by providing space, the manual extraction of mussels probably facilitates the settlement and establishment of the corals. This, and the fact that the corals, unlike most other organisms, can also grow on the mussel shells (Fig. 1c), suggests that the corals may be competitively superior. *Tubastraea* spp. have also been reported from mussel farms (J. Avelar, pers. comm.)

and the ongoing range expansion of *Tubastraea* spp. may impact mussel beds in other regions in Brazil. Over the long term, these corals may cause social and economic problems associated with loss of income.



**Fig. 1** *Perna perna* mussel beds in Brazil invaded by sun corals, *Tubastraea* spp. **a** *T. coccinea*, **b** *T. tagusensis* at Ponta Grossa, Ilha Grande and **c** *T. tagusensis* with open polyps and recruits (arrow) growing on mussels at Jorge Grego Island. Scale bars: 5 cm

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