

{rokbox title=|Colonia de *Oculina patagonica* en la que se puede apreciar como el ramoneo de los erizos facilitan la expansión de la colonia :: Foto: David Díaz, COB-IEO| thumb=|images/stories/ieo/imagenespublicaciones/oculina2_plosonedavid_640_thumb.jpg|}images/stories/ieo/imagenespublicaciones/oculina2_plosonedavid_640.jpg{/rokbox}

Rafel Coma, Eduard Serrano, Cristina Linares, Marta Ribes, **David Díaz**, and Enric Ballesteros, (2011). [Sea Urchins](#)

[Predation Facilitates Coral Invasion in a Marine Reserve.](#)

PLoS One. 2011; 6(7): e22017.

Abstract: Macroalgae is the dominant trophic group on Mediterranean infralittoral rocky bottoms, whereas zooxanthellate corals are extremely rare. However, in recent years, the invasive coral *Oculina patagonica* appears to be increasing its abundance through unknown means. Here we examine the pattern of variation of this species at a marine reserve between 2002 and 2010 and contribute to the understanding of the mechanisms that allow its current increase. Because indirect interactions between species can play a relevant role in the establishment of species, a parallel assessment of the sea urchin *Paracentrotus lividus*, the main herbivorous invertebrate in this habitat and thus a key species, was conducted. *O. patagonica* has shown a 3-fold increase in abundance over the last 8 years and has become the most abundant invertebrate in the shallow waters of the marine reserve, matching some dominant erect macroalgae in abundance. High recruitment played an important role in this increasing coral abundance. The results from this study provide compelling evidence that the increase in sea urchin abundance may be one of the main drivers of the observed increase in coral abundance. Sea urchins overgraze macroalgae and create barren patches in the space-limited macroalgal community that subsequently facilitate coral recruitment. This study indicates that trophic interactions contributed to the success of an invasive coral in the Mediterranean because sea urchins grazing activity indirectly facilitated expansion of the coral. Current coral abundance at the marine reserve has ended the monopolization of algae in rocky infralittoral assemblages, an event that could greatly modify both the underwater seascape and the sources of primary production in the ecosystem.

Keywords: *Oculina patagonica*, sea urchins, marine reserve, invasive coral