PROTOCOOPERATION AMONG SMALL POLYPS ALLOWS THE CORAL *ASTROIDES CALYCULARIS* TO PREY ON LARGE JELLYFISH

Luigi Musco, Tomás Vega Fernández, Erik Caroselli, J. Murray Roberts and Fabio Badalamenti

Study Description

Predation on the large, venomous jellyfish *Pelagia noctiluca* by the stony coral *Astroides calycularis* is illustrated. The coral occurs in the western Mediterranean, while the jellyfish is cosmopolitan in temperate and warm seas. The coral lacks symbiotic zooxanthellae and has small polyps with tiny mouths. It forms cup-shaped colonies on vertical cliffs and caves, in shallow waters. It was thought that its diet was made of small-sized zooplankton and particulate matter. Unexpectedly, small polyps belonging to the same or different colonies collaborate, allowing the coral to take advantage of large but ephemeral food resources.

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Photo 1. The orange coral, *Astroides calycularis*, Marettimo Island, 17 June 2014. The two low-intensity red laser points are separated by 20 cm. Photo credit: Tomás Vega Fernández.

Photo 2. The mauve stinger, *Pelagia noctiluca*, Favignana Island, 7 May 2017. Photo credit: Fabio Badalamenti.

Photo 3. A jellyfish (*Pelagia noctiluca*) seized by various coral (*Astroides calycularis*) colonies, Favignana Island, 7 May 2017. Photo credit: Fabio Badalamenti.

Photo 4. Two polyps of the orange coral (*Astroides calycularis*) engulfing a piece of jellyfish (*Pelagia noctiluca*) umbrella. Pantelleria Island, 23 May 2014. Photo credit: Tomás Vega Fernández.

Photo 5 Polyps of the orange coral (*Astroides calycularis*) eating a tentacle of jellyfish (*Pelagia noctiluca*). Pantelleria Island, 23 May 2014. Photo credit: Tomás Vega Fernández.

These photographs illustrate the article "Protocooperation among small polyps allows the coral Astroides calycularis to prey on large jellyfish" by Luigi Musco, Tomás Vega Fernández, Erik Caroselli, J. Murray Roberts, and Fabio Badalamenti published in *Ecology*. https://doi.org/10.1002/ecy.2413