

PRELIMINARY DATA ON RECOVERY OF A VULNERABLE SEA PEN POPULATION FOLLOWING AN UNDERWATER CABLE INSTALLATION

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Cnidarians are among the main habitat formers and ecosystem engineers of deep-sea habitats, enhancing the tridimensionality of the sea bottoms and providing biodiversity and ecosystem services. Trawling is considered the main stressor for deep communities, resulting in loss in biodiversity. The present work is aimed at highlighting the possible recovery of *Funiculina quadrangularis* (Pallas, 1766) after the installation of an underwater cable, leading to a trawling fishing ban in an area off Tremiti Islands (South Adriatic Sea).

A 42 km long video-transect, along the cable installation route (100-150 m depth), was conducted by a ROV. Four surveys were carried out: M21, before the cable laying and the trawling ban; J21, during the cable installation; J22 and J23 after one and two years, respectively, from cable installation and trawling ban. Abundance and height of *F. quadrangularis* colonies were estimated by video analyses. The populations of *F. quadrangularis* were split into ten size classes, from 0 to 100 cm.

162 colonies of *F. quadrangularis* were counted in M21, 13 in J21, 429 in J22, and 1000 in J23. The significant increase in the population may be due both to the movement of the colonies within the banned area and to an increase in recruitment. The average height of the colonies from M21 to J23 was recovered; a higher structuring of the population was observed, with the presence of both juvenile and adult classes. This study might show a possible “accidental” protection effect, induced by the trawling fishing ban linked to the presence of the cable.