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TITLE: Exploring composition and behaviour of fish fauna by *in situ* observations in the Bari Canyon (Southern Adriatic Sea, Central Mediterranean)

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ABSTRACT:

Abstract Canyons play a fundamental role in enhancing the abundance and diversity of marine organisms through the transport of organic matter and food resources, the presence of complex physical habitats and the absence of trawl fishing. During four baited lander deployments carried out in the Bari Canyon (Southern Adriatic Sea, Central Mediterranean), at depths of 443-788 m, about 43 h of video records were taken, for a total of 619,200 video frames. A total of 12 benthopelagic fish species (five chondrichthyes and seven osteichthyes) were identified. The blackspot seabream (*Pagellus bogaraveo*) was the most often observed fish species. The depth of 787 m represents a new depth record for this fish in the Adriatic Sea. Groups of up to 40 individuals of *P. bogaraveo* were attracted to the bait and were shown in single frames. The individuals were observed both exploring the area and feeding actively on the bait. The European conger (*Conger conger*) was recorded at each deployment. Clear scavenger behaviour was also observed in this teleost fish and in the shark *Etmopterus spinax* . The shark species *Centrophorus granulosus* and *Hexanchus griseus*, which are considered 'vulnerable' on the published IUCN Mediterranean Regional Red List, were also recorded but, although attracted by the bait, they were never seen feeding on it. Other fish species, harvested on fishing grounds, such as *Merluccius merluccius* , *Helicolenus dactylopterus* and *Polyprion americanus* , were also recorded. This study represents the first *in situ* documentation, at very low impact, of the fish fauna in the Bari Canyon, providing new insights into its small scale distribution and behaviour, the first *in situ* direct observation of the variable feeding behaviour of *P. bogaraveo* and its gregarious habits, as well as indicating that this canyon could act as a refuge area for species that are vulnerable to fishing on the open slope.

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