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Alimentary strategy in Diplodus annularis Linnaeus, 1758 (Teleostei: Sparidae) and Mullus surmuletus Linnaeus, 1758 (Teleostei: Mullidae) in the area of artificial reef in Asinara Gulf (Sardinia, Italy)

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Abstract

Antitrawlingc artifacts were placed, in an area of Asinara Gulf, with the aim of protecting a submarine cable of SAPEI electrical Project.. In this context, an environmental monitoring plan has been developed, in order to evaluate changes in feeding habits of two target species, between control and impact sampling sites (3 replicates each), both stratified by two depth strata

On the whole, 293 *Diplodus annularis* and 160 *Mullus surmuletus,* collected in 5 seasonal fishing scientic surveys, were analyzed,. *resulting in*45 stomachs for *D.annularis* and67 for *M.surmuletus* actually containing prey items.

Prey items found in stomachs have been identified at the lowest taxonomical level possible and their numerical abundance was analysed using the main community structure indices, as well as through multivariate statistics techniques. Based on frequency of occurrence and relative abundance, Costello's chart was used to interpret the importance of prey and the food strategy of the target species.

The analysis of the stomach contents of *D. annularis* and *M. surmuletus* showed a diet consisting essentially of Crustaceans (especially Decapods and Amphipods), Polychaetes, Molluscs and Echinoderms with variable percentages.

Analyzing the data as a whole, it is possible to hypothesize for *M. surmuletus* a feeding preference for the taxon of the Echinoderms, chiefly the species *Echinociamus pusillus.* Crustaceans represent the most abundant prey. Factors such as bathymetry, season or the presence of structures are discussed as variables potentially affecting feeding preferences in the context of our data.

Keywords

Diet variation, Mullus surmuletus, Diplodus vulgaris, Antitrawling artifacts