

Habitat preferences of non targeted demersal fish in the Aegean Sea as inferred from experimental bottom trawl surveys.

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Fish-habitat associations were examined for twentyfive noncommercial demersal species in the Aegean Sea (eastern Mediterranean) using Generalized Additive Modeling techniques. Fishery related abundance indices, derived from experimental bottom trawl surveys, were linked to various environmental and spatiotemporal variables: area, season, depth, substrate characteristics (sand and organic carbon content), temperature, and salinity. Depth was the most influential factor for all species examined. Eleven species showed a clear negative correlation with depth, while the remaining species were more abundant in a restricted range of depths, either on the continental shelf or just within the upper continental slope. Fish species were associated with specific substratum characteristics, especially dry weight percentage of sand in the sediments, which was an important predictor of relative abundance for twenty three species. Seasonal patterns in the relative abundance of most species were observed, related in most cases to the seasonal likely ntiation of temperature and salinity gradients. During the period of water stratification (summer and autumn) the influence of temperature or salinity on fish abundance was always greater than during the period of vertical mixing (winter). Identification of species-specific habitat preferences is the key of ecosystem based management, since it can serve as a surrogate for species distributions, whenever detailed data are not available, as is the case for most of the non-targeted, discarded or poorly known species.