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DIET COMPOSITION OF *Dentex maroccanus* IN THE AEGEAN SEA

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Abstract

The stomach contents of 416 individuals of *D. maroccanus*, caught by bottom trawl surveys, were examined. Out of all specimens, 67 had non-empty stomachs that allowed the diet composition analysis. The diet of the species consisted of 18 different prey taxa. The dominant prey items unidentified were Decapods, Gastropods, and brachyurans, which showed the benthic character in the feeding habits of the species.

Key words: *Dentex maroccanus*, diet, Aegean Sea

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1. Introduction

Diet and stomach content analysis studies constitute an essential component for understanding, exploring, and contrasting trophic relationships between organisms, as well as population and community dynamics (Baker *et al.*, 2013). Consequently, these studies are essential and fundamental in the Marine Ecology and Fisheries Biology fields providing useful information for fisheries management and ecosystem status (Sivadas & Bhaskaran 2009). Morocco dentex, *Dentex maroccanus*, is a demersal species of the family Sparidae of considerable commercial importance, inhabiting a depth range of 20-500 m and favoring shallower waters with higher salinity (Maravelias *et al.* 2007). *D. maroccanus* is distributed in the Eastern Atlantic, from the Bay of Biscay to the Gulf of Guinea, in the Strait of Gibraltar and the Southern and Eastern Mediterranean (Fisher *et al.* 1987).

The feeding habits of *D. maroccanus* have generally not been studied in detail so far. This paper is dedicated to presenting preliminary qualitative and quantitative results on the diet of *D. maroccanus* in the South Aegean Sea for the first time.

2. Materials and Methods

Sampling was carried out with a commercial bottom trawl in the South Aegean Sea (Cyclades islands) during September 2014 - May 2015 within the framework of EPILEXIS project. A total of 416 specimens were collected, ranging from 99 to 186 mm TL (Total Length) and caught at depths between 68 and 255 m. Fishing was conducted during daytime. Fish were frozen immediately after capture and dissected in the laboratory, where the total weight (TW) (precision 0.001 g), the total length (TL) to the closest mm and the sex were recorded. Stomach content was analyzed with a stereomicroscope to identify prey items, which were counted and weighted. Prey items were identified to the lowest possible taxonomic level. Individuals with inverted stomachs were excluded. The relative abundance (%N) of a prey to the total number of prey items and the frequency of prey occurrence (%F) were estimated (Hyslop 1980).

3. Results and Discussion

The diet composition of *D. maroccanus* was examined from the stomach contents of 416 specimens. Whilst the total number of specimens exceeded 400 individuals, the number of non-empty stomachs that were available for diet analysis was quite low, totaling to 67. The diet of the species consisted of 18 different prey categories, belonging to 4 major taxa (Polychaetes, Crustaceans, Mollusks, Osteichthyes). In particular, Decapods (unidentified) were found in greater occurrence and abundance (%N = 32, %F = 27), followed by Gastropods (%N = 13, %F = 13) and brachyurans (%N = 9, %F = 10).

The results of the present study revealed the benthic and carnivorous character in the diet of *D. maroccanus*, which is in agreement with the results reported by (Bayhan *et al.* 2017) for the species caught in the Izmir Bay. Further studies investigating the feeding strategy and feeding habits of the species in more detail are in progress.



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References

- Baker, R., Buckland, A., Sheaves, M. (2013). Fish gut content analysis: robust measures of diet composition. *Fish and Fisheries*, 15(1), 170-177.
- Bayhan, B., Tuncay Murat S., Oğulcan H. (2017). Diet composition of the Morocco dentex: *Dentex maroccanus* Valenciennes, 1830 (Teleostei: Sparidae) in the central Turkish Aegean Sea. *Oceanological and Hydrobiological Studies* 46 (2), 133-139.
- Fisher W., Schneider M., Beauchot M.-L. (1987). *Fao d' Identification des Espèces pour les Besoins de la Pêche*. Organisation des Nations Unies pour l'alimentation et l'agriculture, Rome, pp.1529.
- Hyslop, E. J. (1980). Stomach contents analysis – a review of the methods and their application. *Journal of Fish Biology* 17, 411– 429.
- Maravelias C.D., Tsitsika E.V., Papaconstantinou C. (2007). Evidence of Morocco dentex (*Dentex maroccanus*) distribution in the NE Mediterranean and relationships with environmental factors determined by Generalized Additive Modelling. *Fisheries Oceanography* 16 (3), 294-302.
- Sivadas M., Bhaskaran M. (2009). Stomach content analysis of the Indian mackerel *Rastrelliger kanagurta* (Cuvier) from Calicut, Kerala. *Indian Journal of Fisheries*, 56 (2), 143-146.