DIET COMPARISON OF THE BATHYAL SHRIMPS ARISTEOMORPHA FOLIACEA (RISSO, 1827) AND ARISTEUS ANTENNATUS (RISSO, 1816) (DECAPODA: ARISTEIDAE) IN THE EASTERN MEDITERRANEAN.

Chartosia N.¹*, Kitsos M.-S.¹, Karani I.¹, Tzomos Th.¹, Tselepides A.², Koukouras A.¹

¹ Department of Zoology, School of Biology, Aristoteleio University of Thessaloniki, Greece - * akoukour@bio.auth.gr ² Institute of Marine Biology of Crete, Iraklio, Crete, Greece

Abstract

Stomach contents analysis of the bathyal shrimps *Aristeomorpha foliacea* and *Aristeus antennatus*, collected by otter trawl in the Cretan Sea, at depths of 623-627 m, revealed the presence of a wide variety of prey categories. Crustacea was the most abundant and frequent prey category in both species. The diets of *A. foliacea* and *A. antennatus* do not differ significantly.

Key words: Diet, Aristeus antennatus, Aristeomorpha foliacea

Introduction

The information concerning the diet of *Aristeomorpha foliacea* (Risso, 1827) and *Aristeus antennatus* (Risso, 1816) in the Mediterranean is limited to studies carried out in the northwestern or central Mediterranean (1-5).

The aim of this study is to document and compare the diet of these species in the Eastern Mediterranean.

Material and methods

The material was collected with an otter trawl in the Cretan Sea in February 2000, at depths 623-627 m. Analysis of the stomach contents followed previously described methods (6).

Results and discussion

The stomach content analysis of 200 individuals of *A. foliacea* showed that 37% were empty. The most abundant prey category was Crustacea (50.23% of the prey items) followed by Chordata (20.54%).

The analysis of 192 stomachs of *A. antennatus* showed that 39% of them were empty. The most abundant prey category was Crustacea (41.80%) followed by Echinodermata (18.88%).

The percentage frequency of occurrence (F %) for the two species is given in Figure 1. The most frequent prey category was Crustacea, both for *A. foliacea* (Fig.1A) and for *A. antennatus* (Fig.1B).



Fig. 1. The percentage frequency of occurrence (F %) of A. Aristeomorpha foliacea, B. Aristeus antennatus.

Concerning *A. foliacea*, our results agree with Bello au Pipitone (5), while those of *A. antennatus* agree with those of Cartes (3).

The diet comparison of these two species does not show significant differences between them.

References

1 - Lagardère, J.-P., 1971. Research on the nutrition of shrimps from the Moroccan continental shelf. *Tethys*, 3(3): 655-675.

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2 - Cartes, J.E., F. Sardà, 1989. Feeding ecology of the deep-water aristeid crustacean *Aristeus antennatus*. *Mar. Ecol. (Prog. Ser.)*, 54(3): 229-238.
3 - Cartes, J.E., 1994. Influence of depth and season on the diet of the deep water aristeid *Aristeus antennatus* along the continental slope (400 to 2300 m) in the Catalan Sea (western Mediterranean). *Mar. Biol.*, Berlin, Heidelberg, 120(4): 639-648.

4 - Cartes, J.E., 1995. Diets of, and trophic resources exploited by bathyal penaeoidean shrimps from the western Mediterranean. *Mar. Freshwat. Res.*, 46(6): 889-996.

5 - Bello, G., C. Pipitone, 2002. Predation on cephalopods by the giant red shrimp *Aristaeomorpha foliacea*. J. Mar. Biol. Assoc. U.K., 82(2): 213-218.

6 - Deniel, C., 1975. Régimes alimentaires d'Arnoglossus thori Kyle et d'Arnoglossus imperialis Rafinesque (Téléostéens-Bothidae) en la baie de Douarnenez. Rev. Trav. Inst. Sci. Pêches marit., 39(1): 105-106.