

PRELIMINARY DATA ON THE BIOLOGY OF *ALEPOCEPHALUS ROSTRATUS* RISSO, 1820 IN THE CENTRAL-WESTERN MEDITERRANEAN

Follesa M.C. *, Cabiddu S., Pesci P., Sabatini A., Cau A.

Department of Animal Biology and Ecology, University of Cagliari, Italy - * follesac@unica.it

Abstract

This note deals with 107 specimens of *Alepocephalus rostratus* caught in the Sardinian Channel at depths between 950 and 1190 m. Its frequency of numerical abundance increased with depth. The standard length (SL) of the specimens caught ranged between 13 and 45 cm for females and 13 and 36 cm for males. The length-weight relationship was $TW=0.0063SL^{3.113}$ for sexes combined. The main prey identified in the stomachs were the tunicate *Pyrosoma atlanticum* as well as crustaceans.

Key words: deep sea fish; *Alepocephalus rostratus*; Mediterranean Sea

Introduction

Alepocephalus rostratus Risso, 1820, the only known representative of the family Alepocephalidae in the Mediterranean Sea (1), occupies a dominant position among the typical bathyal species and its biology has been studied mainly in the Catalan Sea (NW Mediterranean) (2-3). In this note we present preliminary data on its biology based on specimens caught in the Sardinian Channel (central-western Mediterranean).

Materials and methods

Samples were collected from 12 experimental trawl hauls (mesh size 40 mm, stretched) carried out in the Sardinian Channel at depths between 800 and 1200 m (4 at a mean depth of 800 m, 4 at 1000 m, and 4 at 1200 m) during summer 2003. A total of 107 specimens were caught, which were measured for standard length (SL, cm), weighed (total weight, TW, g), sex was identified and state of gonad was determined microscopically. The length-weight relationship was estimated for sexes combined. Finally, a preliminary analysis of stomach contents was done for 55 specimens, with prey identified to the lowest taxonomic level.

Results

A. rostratus was caught at depths between 950 and 1190 m. The number of specimens caught was zero between 800 and 900 m and gradually increased with depth, making up 6% in 900-1000 m and 11% in 1100-1200 m. In the Sardinian Sea it was found at depths between 550-780 m (4) as in the remaining part of the western Mediterranean (5).

Of the 107 specimens caught 62 were females, 30 males whereas sex was not determined for 15 individuals. Their SL ranged between 13 and 45 cm for females, 13 and 36 cm for males and 13-18 cm for indeterminate specimens. The sex ratio (F:M) was 2.06 in favour of females.

The length-weight relationship was $TW=0.0063SL^{3.113}$ for sexes combined ($N=104$; $R^2=0.95$; $SE_b=0.64$), indicating positive allometry.

The analysis of the stomach contents of 55 individuals indicated a large number of empty stomachs (41 out of 55). The diet was dominated by the tunicate *Pyrosoma atlanticum* ($N\%=81\%$), crustaceans ($N\%=16\%$) and, to a lesser extent, cephalopods ($N\%=3\%$). The diet composition was similar to that reported from the Catalan Sea (1).

References

- 1 - Markle D.F., and Quero J.-C., 1984. Alepocephalidae. Pp. 228-253. In: P.J.P Whitehead, M.-L. Bauchot, J.-C. Hureau, J. Nielsen and E. Tortonese (eds.), Fishes of the North-eastern Atlantic and the Mediterranean. UNESCO, Paris, Vol.1.
- 2 - Stefanescu C., Lloris D., and Rucabado J., 1992. Depth size trends in western Mediterranean demersal deep-sea fishes. *Mar. Ecol. Prog. Ser.*, 81: 205-213.
- 3 - Carasson M., and Matallanas J., 1990. Preliminary data about the feeding habits of some deepsea Mediterranean fishes. *J. Fish Biol.*, 36: 461-463.
- 4 - Cau A., 1980. Secondo contributo alla conoscenza dell'ittiofauna dei mari circostanti la Sardegna meridionale (Osteichthyes). *Quad. Civ. Staz. Idrobiol. Milano*, 8: 39-43.

- 5 - Raimbault R., 1963. Notes sur certaines espèces ichthyologiques capturées au cours des campagnes de l'Institut des Pêches en Méditerranée (1957-1961). *Rév. Trav. Inst. Pêches Marit.*, 27 (1).