

ON THE PRESENCE OF *CLAVELLA STELLATA* (COPEPODA: LERNAEPODIDAE) (KROYER 1838) IN THE EUROPEAN HAKE (*MERLUCCIUS MERLUCCIUS*) (L.1758)

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Abstract

The aim of the present study is to assess the presence of *Clavella stellata* in *Merluccius merluccius* from the southern Tyrrhenian Sea. 859 specimens of European hake, coming from two experimental trawl surveys, were examined for the occurrence of copepods. *Clavella stellata* was found in the buccal cavity (76) and gills (2) of 78/859 (9.08%) of hakes.

Keywords: *Fishes, Parasitism, Copepoda*

Clavella stellata belonging to the Family Lernaeopodidae (Copepoda, Siphonostomatoida) is a poorly studied copepod. This family is characterized by a sharp sexual dimorphism. Adult females are attached by a permanent anchorage organ, the bulla. This is produced in the frontal region of the cephalothorax (1). Male lernaeopodids are dwarf, and they are usually attached to the females. Males die after copulation (2). The aim of the present study is to assess the presence of *C. stellata* in *Merluccius merluccius* from the southern Tyrrhenian Sea. Study area is situated in the southernmost part of the Tyrrhenian Sea. Two experimental trawl surveys were conducted in July and November 2003. A total of 859 fishes belonging to the species *M. merluccius* were caught. Macroscopical exam was aimed at evaluating the presence of ectoparasites on the skin, buccal and gills cavities. 10 parasite specimens were fixed in 70% alcohol solution and clarified by lactophenol for optical microscopy study. Parasite identification followed Scott & Scott (3) and Kabata (4). A total of 78 out of 859 (9.08%) specimens were parasitized, 76 in the buccal cavity and 2 in the gills (Table 1). Each of the infected fish showed only one parasite. The examined parasites, all female sex, showed morphologic features that, according by Scott & Scott (3) and Kabata (4), allowed to classify the copepods as *Clavella stellata* (Kroyer, 1838) sin. *Anchorella stellata* – Fam. Lernaeopodidae (Figure 1). As far as we know, *C. stellata* has been described in the same host in North Sea and Atlantic Ocean (4), but has never been reported in the Tyrrhenian Sea. Our study does represent the first report of this parasite in the European hake in this area. From the literature the elective site of *C. stellata* is along the rims of the host opercula, although some specimens can be found between the bases of pectoral fins and occasionally even on the top of the head (5). The bulla is not embedded in the host tissues, but rather glued to the surface of scales or to the skin (4). In our observations, parasites were never localized on the skin; In 76 individuals they were in the mouth and only in 2 subjects in the gills, with the bulla glued to the mucosa.

Tab. 1. Table 1. Number and percentage of infected hakes.

Samplings	Number of examined hakes	Number of infected hakes	Percentage of infected hakes
July 2003	96	16	16,67
November 2003	763	62	8,13
tot	859	78	9,08

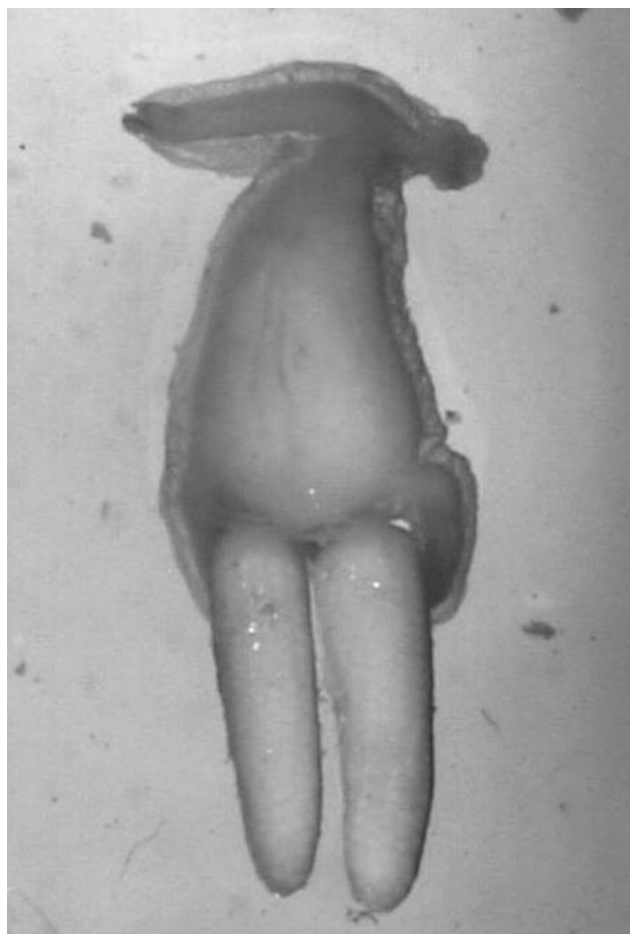


Fig. 1. Macroscopic image of *Clavella stellata*

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