

SOME PRELIMINARY DATA ON THE NUTRITION OF DOMINANT COPEPODS
IN THE KAŠTELA BAY

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Abstract

This paper comprises the preliminary results of dominant copepods nutrition in the Kaštela Bay.

Résumé

On a présenté les résultats préliminaires des investigations sur la nutrition des Copépodes dominants dans la Baie de Kaštela.

The investigations of copepods in the Kaštela Bay (Central Adriatic) showed that dominant species, accounting for 45,3 percentage of copepods total number, were mainly herbivorous (REGNER, D., in preparation). The variations in their nutrition throughout the year were determined according to oscillations in phytoplankton composition (HOMEN, D., in press). The guts contents of dominant copepods were analyzed, with the special attention paid to the food qualitative composition.

This short communication comprehends our preliminary results.

All the guts examined were filled up with phytoplankton species, what indicated enough phytoplankton food at copepods disposal.

In spring, the dominant copepods were: Acartia clausi, Otenocalanus vanus, Centropages typicus and Temora longicornis in which we identified following diatoms: Nitzschia seriata, Leptocylindrus danicus, Thalassiothrix frauenfeldi, Skeletonema costatum, 6 species of the genus Chaetoceros, L. adriaticus, 4 species of the genus Raizosolenia, N. closterium and Hemiaulus haucki, and dinoflagellate Ceratium extensum. In this season 81 % of the total phytoplankton were diatoms, with dominant species N. seriata, L. danicus, L. adriaticus and S. costatum.

In summer, the dominant copepods were: Centropages krøyeri, T.

stylifera and A. clausi in whose guts next diatoms were present: S. costatum, N. seriata, L. danicus, Chaetoceros curvisetus, Ch. lacinosus, L. adriaticus, 2 species of the genus Rhizosolenia, and dinoflagellates Prorocentrum gibbosum and P. micans. At the same season the diatoms prevailed in the phytoplankton (91 %). S. costatum and L. adriaticus were distinctly dominant.

Dominated copepods in autumn (31,6%) were: A. clausi, T. stylifera and C. kröyeri whose guts contained following diatoms: N. seriata, 10 species of the genus Chaetoceros, L. danicus, L. adriaticus, Thalassionema nitzschioides, H. haucki, Cerataulina bergoni, Dactyliosolen mediterraneus, 4 species of the genus Rhizosolenia, Thalassiothrix frauenfeldi, Th. mediterranea, N. closterium and Pleurosigma nicobaricum. At the same time diatoms prevailed in the phytoplankton of the Kaštela Bay (90 %). The dominant diatoms were N. seriata and the species of the genus Chaetoceros.

In winter, in guts of the dominant copepods A. clausi, C. vanus and Centropages kröyeri (68,3%) we determined following diatoms: S. costatum, N. seriata, 8 species of the genus Chaetoceros, Thalassionema nitzschioides, Thalassiothrix frauenfeldi, D. mediterraneus, Asterionella japonica, 2 species of the genus Rhizosolenia, L. danicus, H. haucki and N. closterium. In the same season 75 % of the total phytoplankton were diatoms, with the dominant species N. seriata and the species of the genus Chaetoceros.

First results of our preliminary investigations allowed us to conclude that the dominant copepods mainly consumed the most prevailed species of the phytoplankton community. It is interesting to note that we almost found the species of the genus Chaetoceros up to 22 cells chains, although some authors have been pointed out the avoidance of this species because of their long setae.

The further investigations on large number of specimens require much more data available.