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ABIOTIC FILTERING OF BENTHIC INVERTEBRATE GUILDS IN THE MARGHERITA DI SAVOIA SALT PAN, ITALY

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Abstract

The structure of biological communities is a result of the combined action of an environmental selection, determined by the physico-chemical characteristics of an ecosystem. This process results in the selection of the species depending on their tolerances (abiotic filter) and their ability to cope with the interactions among species (biotic filter).

In this work, the importance of abiotic filters on the structure of benthic macro-invertebrate guilds was evaluated in a hyperalyn transitional water ecosystem, the “Margherita di Savoia” salt pan. In two seasons, spring and fall, the selective action of abiotic filter was studied along four levels of an increasing confinement. The role of confinement gradient is fundamental for determining the differences in terms of species richness, diversity and evenness among the four levels. Taxonomic similarity among confinement levels decreases with decreasing physico-chemical similarity. Densities of *Chironomus salinarius*, *Corophium* sp., *Ventrosia ventrosa*, are strongly related to the confinement gradient.

The results of this work suggests that in the “Margherita di Savoia” salt pan abiotic filters play an important role in the determination of benthic macro-invertebrate communities.

Key words: benthic macroinvertebrates, metrics, saltworks, transitional waters

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