

DISTRIBUTION AND ABUNDANCE OF THE MACROZOOPLANKTON COMUNITY IN THE BLACK SEA IN 2021

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Abstract. *This paper focuses on the dynamics of four jellyfish species, Aurelia aurita, Beroe ovata, Mnemiopsis leidyi and Pleurobrachia pileus, from the Black Sea. The samples were taken in time of two expeditions in 2021 (May-June and August-September). Aurelia aurita species was dominant in terms of biomass due to its large size, The density of the species Pleurobrachia pileus recorded high values, in the north, but also between the isobaths of 40-80 m. The density of the species Mnemiopsis leidyi was higher in the southern and central area of the Romanian Black Sea. Because jellyfish feed on zooplankton organisms, the eggs and larvae of commercially important fish, high densities of jellyfish can produce direct decreases in the trophic chain by reducing the biomass of zooplankton, and fish eggs and larvae.*

Keywords: Macrozooplankton, Romanian Black Sea, ctenophores, biomass, distribution.

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1.Introduction

The Black Sea has been exposed to a series of stress factors, thus characterizing it as an ecosystem that responds quickly to environmental changes [1]. Among these stressors, overexploitation of marine resources, nutrient input and the impact of eutrophication have been studied to see their impact on the marine environment [1]. A classic example of adverse effects on the ecosystem is the invasion of the ctenophore *Mnemiopsis leidyi* (A. Agassiz, 1865), in the Azov and Black seas in the early 1980s [2]. Introduced by ballast water from the North Atlantic coast, *M. leidyi* became a species whose impact on the Black Sea in the early 1990s was superimposed on the effects of eutrophication, overfishing, environmental damage, the destructive effect of the marine environment appearing quickly [3]. The high abundances of the species *M. leidyi* contributed to the decrease of zooplankton biomass and fish stocks [3, 4, 5].

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