

DIVERSITY AND DISTRIBUTION OF ASTEROIDEA (ECHINODERMATA) WITHIN THE BAY OF BOKA KOTORSKA (ADRIATIC SEA, MONTENEGRO)

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Abstract

The diversity and distribution of the asteroids in the Bay of Boka Kotorska (Adriatic Sea, Montenegro) were studied for the first time in 30 years. Two species, *Ophidiaster ophidianus* (Lamarck, 1816) and *Hacelia attenuata* (Gray, 1840), are new records for the Bay of Boka Kotorska.

Keywords : *Adriatic Sea, Echinodermata.*

The Bay of Boka Kotorska penetrates about 20 km inland, and because of its complex geography, enjoys unique physico-chemical characteristics, that differ greatly from the open Montenegrin coast. The environmental features impact the diversity and distribution of the local asteroid fauna. The mention on the sea stars of Boka Kotorska bay is found in [1]. Subsequent authors [2-4] added to that knowledge.

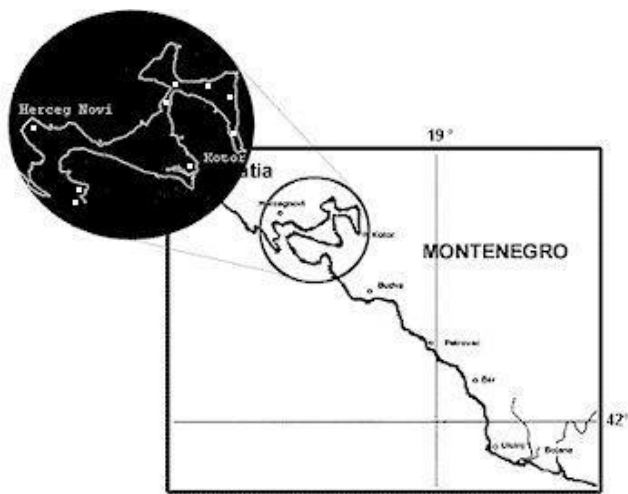


Fig. 1. Bay of Boka Kotorska (Adriatic Sea, Montenegro) with studied positions

We studied 9 localities within the bay (fig. 1). Material was collected from may 2005 to may 2006, by diving, to depths of about 30 meters. Collected material was preserved by drying or in 70% ethanol and labeled according to ERMS [5].

We identified 8 asteroid species in an area of about 36km². The most frequent species, found at all stations, were *Echinaster sepositus* (Retzius, 1783) and *Marthasterias glacialis* (Linnaeus, 1758) - species of wide ecological distribution, inhabiting different types of bottom. *Marthasterias glacialis* (Linnaeus, 1758) and *Coscinasterias tenuispina* (Lamarck, 1816) are known as predators in the shellfish farms in the Bay of Boka Kotorska [6]. *Astropecten aranciacus* (Linnaeus, 1758), *Astropecten irregularis pentacanthus* (Delle Chiaje, 1825) and *Astropecten platyacanthus* (Philippi, 1837), all widely distributed [7], were numerous. Two thermophilic species: *Hacelia attenuata* (Gray, 1840) and *Ophidiaster ophidianus* (Lamarck, 1816), constitute new records for the Bay. They are known to inhabit the southern Adriatic Sea, where impact of warm Mediterranean current is strong. They were found on hard substrates, i.e. bedrock and cliffs, from shallow water up to 30 m, in the outer part of the Bay.

Our one-year investigation confirmed the presence of 8 out of 10 species of sea stars that had been recorded from Boka Kotorska Bay, about half of the species known from the Montenegrin shelf. While previous investigations relied on sampling by trawl net, grab and dredge, which are forbidden today, our research was based exclusively on scuba diving.

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