



Original scientific paper

Distribution of benthos at Jabuka, an islet of volcanic rock (Adriatic Sea)

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Abstract

Background and purpose: The Adriatic Sea region is mainly built of mesozoic limestones. Exceptions of magmatic origin are the two islets Jabuka and Brusnik, and a small part of the Vis Island. Jabuka remained poorly explored due to its lonesome offshore position and inaccessibility of its shore. Benthic communities zonation and spatial distribution of biota had not been studied so far.

Materials and methods: Transects were surveyed by SCUBA divers along the vertical walls. Qualitative analysis of benthos was performed through divers' records, specimen sampling, photography and video recording. The biological material was processed by standard methods. Regarding the importance of the Jabuka from the biogeographical point of view, a list of taxa identified is presented.

Results and conclusions: On the Jabuka cliffs, the marine flora and fauna are very diversified. About 300 taxa have been identified so far, more than 150 being noted for the first time in the area. The foraminiferan *Discoramulina bollii*, and the bryozoans *Aplousina filum* and *Buffonellaria divergens* had not been previously noted in the Adriatic Sea. Five benthic communities were identified along the rocky walls from the supralittoral zone to about 60 m depth, some of them exhibiting a belt-like distribution. A noticeable feature of these assemblages is the microhabitat co-occurrence of species typical from particular depth zones and/or habitat niches. Considering the considerable biotic interest of the Jabuka Islet, a protection status should be given to its terrestrial and marine parts.

INTRODUCTION

In the Adriatic Sea most islands and continental shores are formed from Mesozoic limestones. Only the offshore islets Jabuka and Brusnik, and a small intrusion at the Vis Island are of magmatic rocks (13). The augitic diorite rocks of Jabuka (28, 29) were formed about 200 million years ago, in the Triassic period (3). At present the cone-like islet is located in the central part of the Adriatic Sea (43°05,5'N, 15°27,9'E) protruding from a flat bottomed sedimentary basin about 180 m deep. Due to its blackish rocks it is well visible from far away (Figure 1). Its magnetism anomaly has been known to navigators long ago (51). It is about 250 x 100 m wide and 96 m high. The islet relief is very steep, typically vertical aerially and below the sea level. At the base of cliffs at 40-55 m depth, the substratum changes to boulders, cobbles and pebbles on a sand base. The islet's offshore location results in extreme exposure to wave action.

Initial research (geological and mineralogical) did not commence until the mid 1800s due to the islet's inaccessibility (42). Shortly before World War I it was transversed by profile no. 4 of the joint Austrian-Italian Cruises