

THE QUATERNARY SEA-BOTTOM SEDIMENTS IN THE KVARNER REGION
OF THE NORTHERN ADRIATIC

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SUMMARY

Origin, composition and distribution of the sea-bottom sediments, with regard to their granulometric properties and percentage of carbonate and siliceous components, have been investigated. Sampling was carried out by R/V "Vila Velebita" on 30 oceanographic stations of the Kvarner region. According to the associations of the accessory heavy minerals it was possible to delimitate a new geochemical province.

RÉSUMÉ

On a recherché l'origine, la composition et la distribution des sédiments marins par rapport à condition granulométrique et à la formation des composants des carbonates et des silicates. L'échantillonnage a été effectué dans 30 stations océanographiques de la région du Kvarner (Adriatique septentrionale) au cours de la croisière hivernale de B/R "Vila Velebita". Selon l'association de minéraux lourds, il a été possible de délimiter une nouvelle province géochimique.

INTRODUCTION

Recent investigations of Adriatic marine sediments¹⁻⁴ have much contributed to the better knowledge of complex sedimentological relations in the Kvarner region as a near-shore part of the Adriatic shelf. These relations can be characterized as products of mutual interaction of geotectonic, climatic, eustatic and biologic effects during past and present geologic age.

MATERIALS AND METHODS

The sampling was performed by Peterson dredge on 30 oceanographic stations during winter "Vila Velebita" cruises in the Kvarner region. Sedimentological investigations include determinations of granulometric composition (sieve analysis and areometry), determination of carbonate content, analysis of the mineral composition by optical methods and qualitative X-ray diffraction analysis.

RESULTS AND DISCUSSION

Quaternary detrital carbonates (limestone and dolomite) predominate among the sea-bottom sediments of the Kvarner region compared to silicious sand which has a subordinate role. Carbonates, granulometrically defined as sandy silts and clayey silts, were formed by glacio-fluvial activity and subsequently retransformed by postpleistocen transgression. Silicious material (resistants) derived from Alpine crystalline massifs and partially from clastic and igneous rocks of the Dinaric region. Recent (carbonate and silicious) sediments are products of biological activity of the littoral and nerithic biocoenoses.

According to our investigations based on regional distribution of heavy mineral associations, prevalent part of Kvarner region should be incorporated into the new geochemical province called "the Kvarner province".

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