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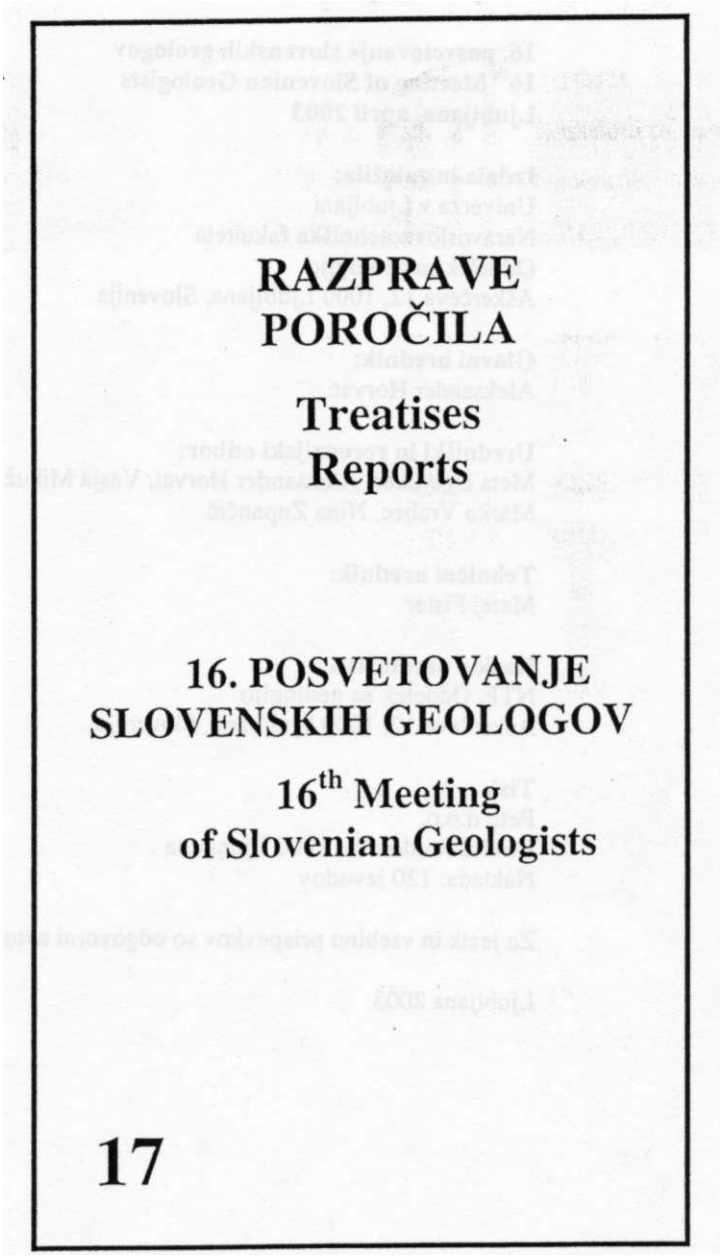

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the hask nf calculated "cultural enrichment factors". Preliminary chronostratigraphy with the aid of '"Cs indicates accumulation rates of less than 1cm annually. Elevated trace element concentrations in the sediments accumulated in the past fifteen years show that atmospheric deposition of pollution and acid rain deposition is still altering the geochemistry of this region.

BADENIAN ECHINOIDS FROM THE MT. MEDVEDNICA AND THEIR ECOLOGICAL NICHES

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During the Karpatian period, territory of Northern Croatia was to great extent subject to the regional transgression of the Paratethys. Along with the increase of salinity, at the end of the Karpathian, and particularly during the Badenian, echinoids became the important part of the benthic communities. Irregularia are more abundant, and better preserved, due to their mode of life, while fragments; of regular sea urchms can be found as bioclasts in clastic sediments.

Irregular echinoids from the Badenian sediments at localities Bizek and Borovnjak in Si W Mt. Medvednica were studied. Genera: *Clypeaster{ 6 species),* *Echinolampas* **(2 species),** *Scutella* **(2 species),** *Schizaster* **(1_ species),** *Heteroclypeus* **(1 species)** *&ndSpatangus (I* **species), were determined,** v :: \ - •

Medium-sized to large tropical sand dollars.predominate in sandstone, and Lithothamnium limestone at Bizekquarry in Mt **Medvedmca ;.Jheir appearanc and within different rnicrofpssU, communities, indicate their, tolerance - to .different environmental--conditions. The; following taxa .were, determined:.** *Ciyp.egst¡er scillae^* **Desmoulins,** *C. cf. sardiniensis* **Cotteau, C.** *campanulatus Schlptheim, C. pentadactylus* **Peron et Gauthier, G** *pyramidalis***Mihelinand***[Scutella subrotundata* **Leske. Number of specimens decreases in argillaceous sediments and marls. Associated microfauna are composed .of .b(enthic foraminifers, with predominance;of epifaunal taxa- herbivore, or filter-feeders. Only species** *Clypeaster* **cf.;** *sequenzai Vaáasz.* **and** *Scutella* **cf.** ***vindnhnnensis*** **T.anbe** were **found in nearshore sandstone at Borovnjak. Medium-sized cassiduloids** *(Echinolampas lecointrae* **Lambert and** *E.* **cf.** *wrighty* **Gregory) have been determined from localities Bizek and Borovnjak, in association with predominantly miliolid foraminifers.** *E. cf. wrighty* **is always accompanied with sand dollar** *S. cf.****yindobonensis*** **in highly energetic environments at Borovnjak. ..... , ... ,.„'.'**

Heteroclypeus **was found in** *Lithothamnium-Wmestone* **at Bizek quarry, preferring medium to high energy water conditions.**

Sputungus **sp. collected from grey marls at Bizek quarry lived in deeper, low-energy water, shallowly buried within corallinaceans. Deep-water benthic foraminifers** *(Cibicides, Cibicidoides),* **sponge spiculas and well preserved molluscs predominate in these sediments.-**

Several specimens of *Schizaster parkinsonl* **Defrance associated with numerous infaunal foraminifers (predominantly** *Elphidhan)* were **collected from sandstone** and **argillaceous sandstone at Borovnjak locality. Planctonic foraminifers have not been found at this locality, and benthic community is ra:hcr poor, indicating the oscillacions in salinity (appearance of brackish oslracod** *Neocyprideis),* **and rather turbulent ncarshorc water conditions.**