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ABSTRACTS
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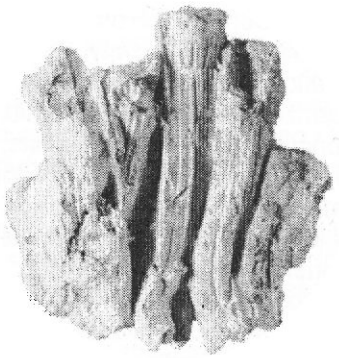

SOCIETY FOR SEDIMENTARY GEOLOGY (SEPM)
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Rudists in Campanian Transgression on Lateritic Sediments, Gornje Orešje, Northern Croatia.

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On the flanks of Medvednica Mountain, in Gornje Orešje Quarry, transgressive deposits on nical-rich laterite soil were characterized by rudist findings. A fossil community of clay-dominated deposits consists of abundant gastropods and corals with juxtaposed rudists.

In contrast to Donje Orešje (Polšak, 1979) where rudists are the dominant fossil remains, rare findings of radiolitids, hippuritids, and the genus *Colveraia* characterized this locality. Gastropods, which are mostly represented by the genus *Actaeonella*, and corals (*Cunnolites*) are the most abundant macrofossils. Microfossils are rare miliolids. According to the macrofossil assemblage the age of transgressive sequence is Campanian.

The laterite soil through weathering processes produces clayey sediments rich with macrofossils. Within vertical a succession, which is few meters thick, first appear radiolitids, followed by hippuritids and *Colveraia* (Fig. 1). The succession is covered by grey colored Upper Cretaceous carbonates, where no terregenous influence is detected.

This succession suggests that, according to the rudist appearance, transgression on lateritic soil was slow. Also, absence of corals on Adriatic Carbonate Platform (Polšak, 1982) during the Late Cretaceous (Löser & Steuber, 2002), implies that rudists probably preferred carbonate environments without terrigenous influence.

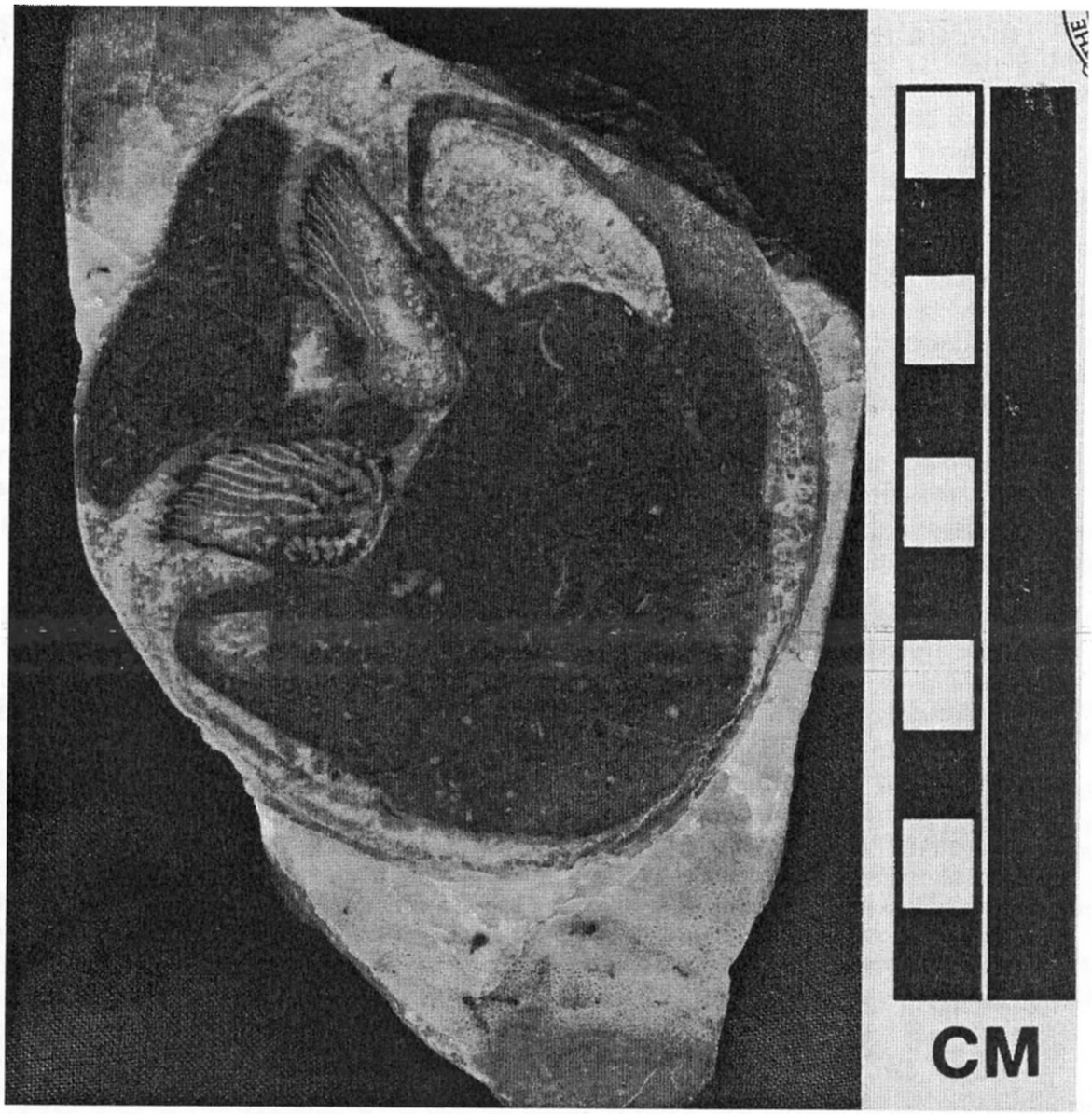

Figure 1. *Colveraia* sp. at Gornje Orešje locality.

References

LÖSER, H., AND STEUBER, T., 2002, Corals and Rudists in the Cretaceous - A Palaeogeographical Comparison of Species Richness and Abundance Patterns: Sixth International Congress on Rudists, Rovinj 2002, Abstracts and Excursion Guidebook, Institute of Geology, Zagreb, p. 35.

POLŠAK, A., 1979, Stratigrafija i paleoekologija biolititnog kompleksa senona kod Donjeg Orešja (Medvednica, Sjev. Hrvatska) Stratigraphy and Paleogeography of the Senonian biolithitic complex at Donje Orešje (Mt. Medvednica, north Croatia): Acta Geologica IX/6, v. 42, 231 pp.

POLŠAK, A., BAUER, V., AND SLIŠKOVIĆ, T., 1982, Stratigraphie du Crétacé Supérieur de la Plate-forme Carbonatée dans les Dinarides Externes: Cretaceous Research, v. 3, p. 125-133.