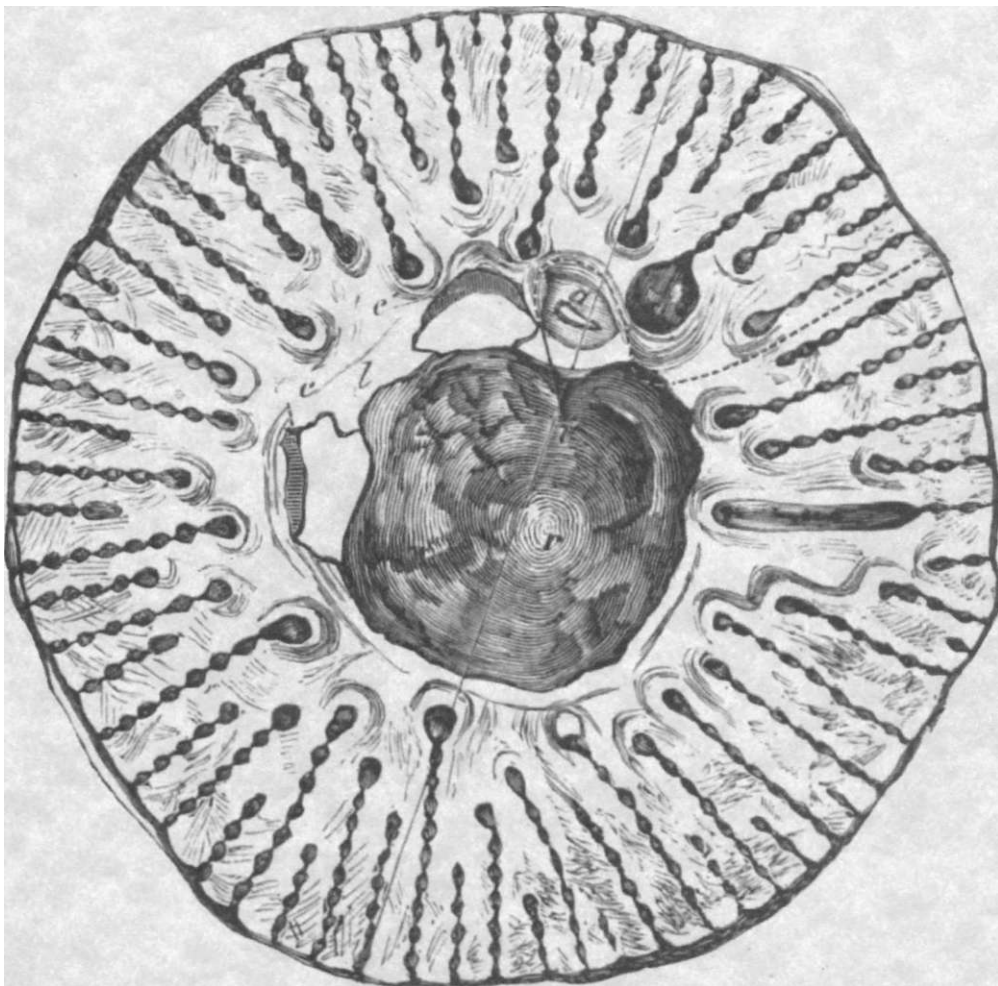


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Cenomanian and Turonian in western part of Hvar Island). *Geološki vjesnik*, **33**, 49-57; Mamužić, P., Polšak, A., Grimani, M. & Korolija, B. (1982): Geološki stup kroz naslage cenomana i donjeg turona u središnjem dijelu otoka Cresa (Geological column through Cenomanian and Lower Turonian in the middle part of Cres Island). *Geološki vjesnik*, **35**, 65-70), and presumably imply a regional character of this facies.

P12. Campanian Rudist-bearing shallow-water deposits of Northern Croatia and Slovenia

Alan Moro¹, Aleksander Horvat², Vlasta Čosović¹, Josip Benić¹, Jasenka Sremac¹ and Vladimir Bermanec¹

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In northern Croatia (Medvednica, Kalnik and Žumberak Mts. with D. Orešje, G. Orešje, Sv. Martin and Brašljeva localities) and in the northeast Slovenia (Pohorje Mt. with Stranice locality) a Campanian (Pleničar, M. & Šribar, Lj. 1992. Le Récif de rudistes près Stranice (NO de la Yougoslavie). *Geologica Romana*, **28**, 305-317; Moro, A., Čosović, V., Benić, J. & Dokmanović, J. 2010. Taxonomy of rudists from the Campanian transgressive Sediments of Brašljeva, Donje Orešje and Sv. Martin, Northern Croatia. *Turkish Journal of Earth Sciences*, **19**, 613-633) shallow water sequence overlies basement rocks (Triassic and Jurassic sediments).

Two developments of shallow water sediments are present. At Stranice and G. Orešje localities, clay-rich marly sediments successively pass into limestones. Within rudist communities, individuals of radiolitids, vaccinitids, hippuritids and hippuritellas occur at Stranice locality, while in G. Orešje locality specimens of hippuritids, vaccinitids, plagiptychids and radiolitids are present. Second development, of D. Orešje, Sv. Martin and Brašljeva localities, starts with limestones which could vertically pass into marls with nannofossils or in limestones with pelagic fossils. Rudist fauna comprise generally vaccinitids, while other rudist could be minorly and sporadically present.

The depositional setting of localities may be considered as a result of sea-level rise which resulted with flooding of the paleorelief. Different facies development are probably the result of more or less pronounced paleorelief conditions which could outcome in the specific rudist communities.

P13. When X-rays fail: A new grinding tomography method for low density contrast samples

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The tomography of fossils is based on the production of numerous sequential high resolution pictures (tomograms) that form the base for a later three dimensional evaluation. X-ray CT proved to be the most successful method in tomography but has limitations in low density contrast samples (e.g. carbonate shells in limestone). Here, we describe a technique that can produce high resolution, true color images in limestone samples.

The method is based on automatic serial grinding and serial scanning. The working process starts with embedding the samples in a mold with epoxide resin. The hardened block is then polished by a precision surface grinding machine. After each polishing step, the surface is scanned in a water quench by a custom built high resolution scanner. This method provides a maximum resolution of 2400 dpi (horizontally) and 10 um (vertically). Sample sizes can vary between 1 mm³ and 15 x 15 x 30 cm. The productivity of this method is linked to resolution and sample size, and varies between 5 and 38 tomograms per hour. The main advantages of the method are: fast production of true color and high resolution tomograms, capability of processing samples of various sizes, as well as multiple samples in one block. Apart from 3D shape reconstruction of fossils with DICOM software (OsiriX), sedimentary structures, fractures and porosity; the outstanding image quality makes even new applications possible such as the quantitative evaluation of paleobiological entities in reefs (e.g. spat density), or volume based calcite / aragonite ratio measurements, among others.

P14. Stratigraphy of Jurassic-Cretaceous rudist genera

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