

Badenian and Sarmatian from Locality Ostrovo, Northern Serbia

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The locality Ostrovo is situated in the south-eastern part of the Pannonian Basin, near the city of Pozarevac, Serbia. Investigations are based on palaeontological and petrological studies of core samples and wash residues from the six boreholes in the vicinity of Ostrovo. The presence of Badenian and Sarmatian sediments is determined by the rich association of foraminifers, ostracods, nannofossils and molluscs.

Badenian sediments are transgressive over low metamorphosed schists. Badenian sediments are represented by marine limestones of the reef complex, carbonate-terrigenous and terrigenous sediments. On the basis of rich association of foraminifera and nannofossils, Badenian sediments could be divided into Lower and Upper Badenian.

Sediments of the Lower Badenian are determined in several boreholes in the locality Ostrovo. They are mostly presented by sandstones, sandy marlstones, sandy limestones and limestones. On the basis of foraminiferal association (mostly represented with *Globigerinoides trilobus* and *Orbulina universa*, it is determined that these sediments belong to the upper part of Lagenidae Zone. Rich nannoplankton associations, which belong to nannoplankton Zone NN5 were found there (*Braarudosphaera bigelowii*, *Calcidiscus premacintyreii*, *Coccolithus pelagicus*, *Cyclicargolithus floridanus*, *Helicosphaera carteri*, *Micrantholithus procerus*, *M. vesper*, *Pontosphaera multipora*, *Pyrocyclus hermosus*, *Reticulofenestra producta*, *R. pseudoumbilica*, *Sphenolithus abies*, *S. moriformis*, *Umbilicosphaera jafari*).

Sediments of the Upper Badenian are discovered in most boreholes of the locality Ostrovo. They are represented by the reef complex limestones, conglomerate sandstones and sandstones. Late Badenian age is determined by macro- and microfauna: *Turritella* sp., *Conus* sp., *Borelis melo*, *Elphidium crispum*, *E. rugosum*, *Ammonia beccarii*, *Heterolepa dutemplei*, *Neoeponides schreibersi*, *Asterigerinata planorbis*, *Valvulineria akneriana*, *Globulina gibba*, *Amphistegina* sp., *Hermanites haidingeri*, etc.

Sarmatian brackish sediments are concordant with Badenian sediments and are succeeded by Pannonian sediments. Sarmatian sediments are lithologically very similar in all boreholes. They are mostly represented by the shallow water clastic deposits, and rarely with carbonate sediments.

Grey, compact, massive conglomerates and conglomerate sandstones are determined at the base of the Sarmatian.

Upward follow greenish-grey, compact, partially decrepit, weak laminated sandstones heterogeneous in size, and rarely siltstones in intercalation with grey marlstones and claystones. Weak laminated calcareous sandstones, with macrofauna (*Cardium vindobonense*, *Modiolus incrassatus incrassatus*, etc.), and undeterminable plant remains occur in deeper levels of the boreholes.

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