

MICROPALAEONTOLOGICAL RESEARCH OF THE MIOCENE DEPOSITS FROM BUKOVA GLAVA (NAŠICE) LOCALITY

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Bukova glava locality is situated on the northern slopes of the mountain Krndija, near the town of Našice, within the quarry Našicecement d.d. During the Miocene, this area was part of the intercontinental Paratethys Sea, which covered a vast proportion of present-day Europe and Asia. During April 2019, field research was carried out, and geological column (with detailed sampling) was recorded through the upper open floors of the quarry. Through the geological column, with a total thickness of 58 meters, gray marls alternate with tuffs and limestones with rare clay interlayers. A total of 67 samples were sampled, of which 43 marl samples were processed in the laboratory by the wet-sieving method and prepared for microscopy. So far, six marl samples from the lower part of the column have been microscopic analyzed, and a rich and well-preserved microfossil assemblages has been determined (benthic and planktonic foraminifera, sponges spicule, sea urchin spines and, less frequently, ostracods). The aim of these micropaleontological research is age determination of studied sediments and palaeoecological reconstruction of the environment (depth of sedimentary basin, water salinity, bottom water oxygen content, nutrient content). For this purpose, foraminiferal assemblages were analyzed on standardized samples and benthic foraminifera are determined at species level. Dominant and common species were determined, their ecological/palaeoecological requirements were studied (depth range, mode of life, food preferences), and diversity indices and Benthic foraminifera oxygen index were calculated [2]. A total of 19 genera and 28 species of benthic foraminifera have been identified, and the age determination of the Middle Miocene – Sarmatian is based on the findings of the species *Anomalinoides dividens* (LUCZKOWSKA 1967), *Elphidium hauerinum* (d'ORBIGNY 1846) and *Bolivina sarmatica* (DIDKOVSKY 1957). The planktonic/benthic foraminifera ratios (P/B) [1] range from 10.66% to 49.53% and indicate oscillations in the depth of the sedimentary environment from the inner to the middle shelf. This preliminary research of benthic foraminifera assemblages from the Middle Miocene deposits of the Bukova glava locality will certainly give a more complete picture of Miocene events and palaeoecological conditions in the southwestern part of the Central Paratethys as well as the entire Pannonian Basin System.

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REFERENCES

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