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INVITATION

to the Meeting of Young Geoscientists

31 March – 01 April 2017

Kaposvár, Hotel Kapos
www.kaposhotel.hu

Useful information:

Accommodation and meals are available only for pre-registered participants.

The talks are open and public.

Official languages of the conference are English and Hungarian.

Registration desk open: from 9:00 am, 31st March onwards

Organisers

Significance of Jurassic early deformation structures in the SW-Bükk Mts.

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Theoretical

Field work in the quarry of Bükkzsérc and at the Patkó Cliffs (SW of Bükk Mts) revealed several types of early, soft-sediment deformation structures in the Jurassic Bükkzsérc Limestone which was deposited in a subduction-related basin of the Neotethys ocean and now appears as olistoliths in the accretionary Mónosbél Complex. These structures include small syn-sedimentary normal faults, ductile shear surfaces and slump folds, both of which were not recognized by previous structural geological and sedimentological studies (e.g. [1]), although these structures have direct implications for the poorly known early deformation history of the Mónosbél Complex and possibly of the Bükk para-autochthonous unit.

The aim of our study was to estimate the Jurassic paleo-stress field for the Mónosbél Complex of the Bükk Mts. by measuring syn-sedimentary faults, and to estimate the paleoslope direction from the slump fold geometries.

In case of the normal faults, the key observations in our interpretation were that the faults are rather characterized by rounded, curved shapes, and that they don't have discrete fault planes. This can be explained by syn-sedimentary deformation in case of which the deformation in soft sediments is limited, while the diagenetic processes may have further effects on fault geometries as well.

Data were rotated back to its paleoposition by the average paleomagnetic data attributed for the Bükk Mts. (e.g. [2]). Based on the back-rotated small-scale deformation structures we estimated a NE-SW extension as the Jurassic paleostress field, while the results of the slump fold analysis showed a SW paleoslope direction. Although these extensional directions match the previous broad estimations, we need to take into account that the olistolith itself could have had further rotation, so in order to finalize our estimations, additional measurements in other olistoliths and direct paleomagnetic data from the Bükkzsérc olistolith are still needed.

The research was supported by the research found NKFIH OTKA 113013 and the ÚNKP-16-1 New National Excellence Program of the Ministry of Human Capacities.

- [1] Németh, N. (2007): Structural features of the quarry at the Patkó Cliffs, Bükkzsérc and its surroundings — *Földtani Közlöny* **137/4**, p. 473-486.
- [2] Márton, E., Márton, P. (1996): Large scale rotations in North Hungary during the Neogene as indicated by paleomagnetic data — *The Geological Society, London, Special Publications* **105**, p. 153-173.

Nothia ex gr. excelsa (Grzybowski, 1898), ‘flysch-type’ agglutinated foraminifera from the Karpatian (Early-Miocene) of Hungary

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Applied

Nothia ex gr. excelsa [1] branched, agglutinated, tubular foraminifera is documented for the first time from the Karpatian (latest Burdigalian, 15.97-17.10 Ma) molasse sediments of the Paratethys. Because of the tectonically disturbed incomplete successions, the foraminifera record of the Karpatian is relatively poor and void, therefore every new information is especially valuable.

In more detail, samples were collected from the vicinity of Acsa village, Cserhát Hills from the succession of an abandoned gravel pit, where the Garáb Schlier concordantly overlies the Egyházasgerge Sand. The studied pit had a highly diverse microfauna, Altogether more than 1500 tests were picked and classified into 48 taxa, notably 44 species of 37 genera belonging to 28 families. More than 500 *Nothia ex gr. excelsa* specimens were analysed for this study.

Uniquely well-preserved specimens were present in both formations, allowing the analyses of the macro- and microstructure of the test using reflected and polarized light microscopes, SEM and Raman spectroscopy. The mineralogical components of the agglutinated grains, the appearance of the protruded aperture with a scalloped-edge, the microstructure of the bilamellar wall, the presence of the calcareous microgranular cement could all be described in detail. Systematic description was given based on isolated specimens and on oblique and horizontal thin sections made from them.