

## Archaeometric study of rock types from the Early Iron age mound grave in Regöly

Dóra Kürthy, György Szakmány, Sándor Józsa, Géza Szabó  
Eötvös University, Budapest, Hungary (dora.kurthy@gmail.com)

Regöly is located in the northern part of Tolna County in Hungary, at the confluence of Koppány and Kapos Rivers. The mound on the Strupka-Magyar land was discovered in the summer of 2011 and according to the archaeological finds it was built in the Early-Iron Age. Rock fragments together with artefacts were mixed with soil and deposited in the middle of the structure (Szabó & Fekete, 2011).

The goal of the research is to study the rock fragments, which are present at the site: list them into types and characterize them from the petrological point of view in order to outline the most probable provenance of the raw materials. Macroscopic description, polarizing microscopy, scanning electron microscopy (SEM-EDX) and X-ray powder diffraction (XRD) analysis were used to achieve this goal.

During field work 4074 stone artefacts were examined. According to macroscopic observations 8 main lithotypes were defined and based on the different attributes (colour, mineral composition, fabric) 27 subgroups were determined.

Based on macroscopic observations 140 representative specimens were selected for thin section analysis. Detailed petrographic analysis modified the previously established groups: 7 main and 17 subtypes were determined. The main rock types in decreasing frequency are the following: carbonate rocks, granite, sandstone, rhyolite, quartzite, basalts and basaltic pyroclastics.

Based on literary data the probable provenances of the rock types, which are present at the site are the Velence Mountains for granites, Tihany peninsula for the siliceous subgroup of carbonate rocks, Polgárdi-Kőszérhegy for rhyolites, Zamárdi for the one subgroup of the sandstones, the Balaton Highland for basalts, basaltic pyroclastics and the other subgroup of the sandstones and the Velence Mountains and/or Tihany Peninsula for quartzites. The presumption for the first four provenances has already been proven, after rock samples have been collected and examined from those territories.

Our results show that the possible provenances of most of the rock types are to the N-NW of Regöly, within 100 km (Fig.1).

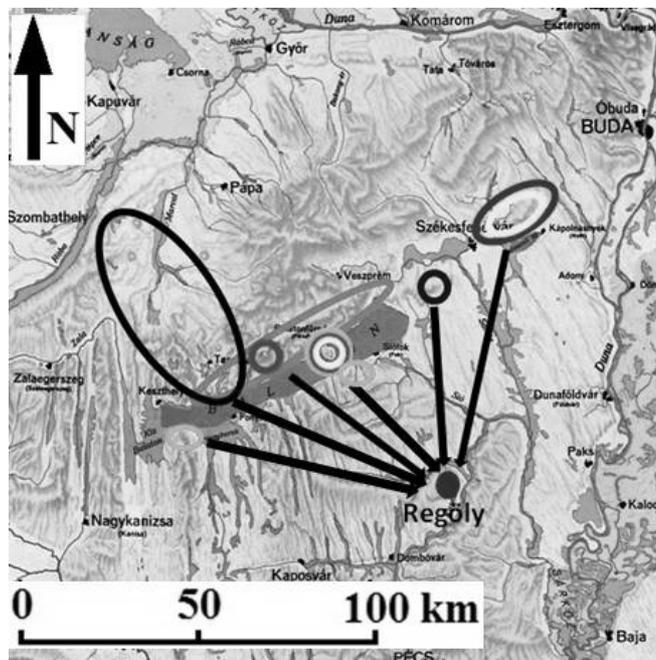


Fig.1.: The possible provenances of the rock fragments from Regöly mound; carbonate rocks: pale blue; granite: red; sandstone: green; rhyolite: dark blue; quartzite: yellow; basalt: black; pyroclastics: pink

Szabó, G., Fekete, M. (2011): *Wosinszky Mór Múzeum évkönyve* 33: 15-106. (In Hungarian)