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Volcanologic evolution of the Visegrád Mts and zeolite mineralization of the Csódi Hill

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The Visegrád Mountains are located to the northwest of Budapest, along the southern side of the Danube Bend. They belong to the initial calc-alkaline volcanism of the Western Carpathians. The volcanic activity started about 16 million years ago in a shallow subaqueous environment which rapidly changed to subaerial. The first volcanic products are typically garnet-bearing volcanoclastic and massive rocks with dacitic-rhyodacitic composition. In contrast, the later activity produced various pyroclastic units with a mainly andesitic composition. The erosional remnants of the Middle Miocene volcanic complex enable to study the whole volcanic structure, from the subvolcanic level through the pyroclastic deposits and exposed subvolcanic rocks and widespread epiclastic units as well.

Field trip stops

Holdvilág creek (Pomáz)

The deposits of the earliest volcanic activity are revealed in the ravine. The volcanoclastic sequence consists of phreatomagmatic units with accretionary lapilli and pumiceous, submarine, syn-eruptive mass flow deposits as well as subaerial ignimbrite in a higher stratigraphic position.



Volcanoclastic sequence in the Holdvilág creek

The laccolith of the Csódi Hill (Dunabogdány)

The quarry of the Csódi Hill is a well-known mineralogical locality in Hungary which is famous for its garnet-bearing dacite together with the contact zone and hydrothermal zeolites (chabasite, stilbite, analcime) and a variety of calcite forms.



Chabasite, stilbite and calcite crystals from the Csódi Hill

Hiking tour to the viewpoint of Prédikálószték Hill

Climbing up to the top of the hill (639 m a.s.l. above the Danube river bed which is at 107 m a.s.l.) first we will pass by the Rocks of Vadálló kövek which consist of resistant, exposed andesitic block-and-ash flow deposit and subordinately interbedded fluvial sediment. Going further to the viewpoint of Prédikálószték and looking around from the hilltop, a panoramic view to the andesite lava dome of Szent Mihály Hill and the Danube Bend is unfolded. Imitated by tectonic movements, the U-shaped Bend has formed since the Pleistocene by fluvial downcut, and it was inherited partly to an exposed Miocene half-caldera related to a sector collapse of the main volcanic edifice.



Rocks of the Vadálló-kövek



Panorama from the Prédikálószték Hill

Information about the field trip

Number of participants: maximum 45 people.

Registration fee covers bus transportation, printed guide book and lunch packet.

Arrival back to Budapest in the late evening hours.

The viewpoint of the Prédikálószték can be reached by climbing up on steep slopes to the peak along hiking trails. The whole hiking tour is about 8 km long.

Hiking boots or trekking shoes are recommended.

Please bring your hammer if you want to collect samples.

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