

# 4th International Volcano Geology Workshop



**IAVCEI**

International Association of Volcanology  
and Chemistry of the Earth's Interior

Commission  
on Volcano Geology



## Eastern Transylvania, Romania

October 8-14, 2017

### "Challenges of mapping in poorly-exposed volcanic areas"

A number of questions arise to be addressed during workshop:

- whether, to what extent and how the lithostratigraphic approach is applicable in poorly-exposed and/or extinct/old volcanic areas;
- which kind of map units – petrographic, lithological, facies, etc. – should be defined and used during different stages of mapping activities;
- what is the significance of "formation", as the basic lithostratigraphic unit, and how can it be objectively defined, recognized and mapped in poorly-exposed volcanic areas;
- whether and how the volcanic facies concept can be involved and integrated with the lithostratigraphic approach in mapping activities in poorly-exposed areas;
- how and to what extent morphological features can be used in defining and separating map units in old volcanic areas still preserving such features;
- whether and how geophysical information can be used and integrated in the definition of map units in poorly-exposed volcanic areas.

#### **LOCAL ORGANIZING COMMITTEE:**

*Institute of Geodynamics Sabba S. Stefanescu:*

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#### Organisers & Sponsorship



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*Institute of Geodynamics  
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# **4<sup>th</sup> International Volcano Geology Workshop, Eastern Transylvania, Romania**

**October 8-14**

## **FINAL FIELDTRIP PROGRAM**

### **Day 1 (October 8<sup>th</sup>): Arrival and transfer to Băile Tuşnad (O'Zone Hotel)**

- 10.00-AM: Departure from Bucharest (meeting point in the Otopeni Airport);
- 10.00-2.00 PM (4 hours): Travel by bus Bucharest- Braşov-Rupea (ca. 250 km);
- 2.00-3.00 visit of Rupea castle built up on a huge debris-avalanche block, dated at 6.8 Ma and box lunch;
- 3.30-5.00 PM: visiting quarries in the Perşani alkali basaltic monogenetic volcanic field on the Bogata valley;
- 5.00-7.00 PM: Bogata Valley-Băile Tuşnad;
- 7.00-7.30 PM: check in O'Zone Hotel, Băile Tuşnad;
- 8.00-9.00 PM: Welcome speech and dinner (O'Zone Hotel, Băile Tuşnad).

### **Day 2 (October 9<sup>th</sup>): field-trip in the South Harghita Mts. visiting Ciomadul volcano and its environs**

- 8.00-8.30 AM: breakfast (O'Zone Hotel, Băile Tuşnad);
- 8.30-10.00 AM: introduction to the Călimani-Gurghiu-Harghita volcanic range; (Conference room in the O'Zone Hotel, Băile Tuşnad);
- 10.00-10.45AM: travel Băile Tuşnad- Ciomadul craters saddle (stop 2.1);
- 10.45-11.00AM: short introduction on Ciomadul volcano;
- 11.00-12.15AM: visit at the N-Mohoş swamp outcrop with explosive products of both Mohoş (phreatomagmatic) and Sf. Ana craters (plinian) (stop 2.2)– 20' + 20' easy walk + 35' site visit and discussions;
- 12.15-1.15 PM: visit the Sf. Ana crater including an easy walk around the crater lake (stop 2.3);
- 1.15-2.00 PM: stop at the Köves Ponk dome viewing point, discussing its age and box lunch (stop 2.4);
- 2.00-3.30 PM: visiting spectacular post-volcanic features at Balványos (stop 2.5);
- 3.30-4.30: travel to, and visiting a road-side outcrop on the way back from Balványos to Băile Tuşnad (debris flow and pyroclastic flow deposits of Ciomadul volcano (stop 2.6);

- 4.30-6.30 PM: Travel to Băile Homorod via Băile Tuşnad and Miercurea Ciuc (ca. 90 km);
- 6.30-7.00 PM: check in Lobogó Panzió, Băile Homorod;
- 7.30-8.30 PM: dinner.

**Day 3 (October 10<sup>th</sup>): field-trip in the North Harghita Mts. - with focus on Vârghiş volcano – and southern Gurghiu Mts.**

- 8.00-8.30 AM: breakfast (Lobogó Panzió, Băile Homorod);
- 8.30-9.45 AM: travel and visit pre-debris-avalanche lavas (ca 5.4 Ma) along the Vârghiş valley at Selters active quarry (partly on poor quality dirty road) (stop 3.1);
- 9.45-10.15: stop at Căpâlniţa viewing point with a panoramic view on the Vârghiş volcano as seen from the SW(stop 3.2);
- 10.15- 11.00 AM: travel Căpâlniţa – Brădeşti - Ivo valley outcrop;
- 11.00-11.30 AM: visit Ivo valley outcrop in block-and-ash-flow deposits of the Vârghiş volcano (stop 3.3);
- 11.30-12.15 AM: travel to the Harghita Mădăraş ski resort area;
- 12.15AM-1.30 PM: panoramic view on the sector-collapse depression of the Vârghiş volcano; outcrop of pre-collapse lavas (stop 3.4); box lunch (alternative);
- 1.30-2.00 PM: travel to the Zetea dam; box lunch (alternative);
- 2.00-2.30: visiting outcrops of debris avalanche deposits at the Zetea dam; walking across the dam with panoramic view on the Southern part of the Gurghiu Mts. (stop 3.5);
- 2.30-3.15 PM: travel to the Liban Pass and visiting a quarry with lavas of the Ostoros volcano (stop 3.6);
- 3.15- 4.00 PM: travel to and visiting the Chilieni quarry with panoramic view on the northernmost Harghita volcanoes, on the Gheorgheni Basin and on the fold-and-thrust belt of the East Carpathians (stop 3.7);
- 4.00-4.20: travel toward Bucin Pass: stop at a point between Joseni and Borzont villages with panoramic view on the Gurghiu Mts. (stop 3.8);
- 4.20-4.50: travel to and visiting a small quarry (before Bucin Pass) in Seaca-Tătarca lavas (stop 3.9);
- 4.50-7.15 PM: travel to Reghin via Bucin Pass, Praid, Sovata;
- 7.15-7.40: check-in Marion hotel in Reghin;
- 8.00-9.00 PM; dinner (Marion hotel, Reghin).

#### **Day 4 (October 11<sup>th</sup>): Scientific session (Marion hotel, Reghin)**

- 8.00-8.30 AM: Breakfast (Marion hotel, Reghin);
- 9.00-10.00 AM: Formal registration of participants;
- 10.00-13.00 AM: Invited talks;
- 1.00-2.00 PM: Lunch;
- 3.00-6.00 PM: Offered talks and Poster session;
- 6.00-7.00 PM: Discussions;
- 7.00-8.00 PM: Dinner.

#### **Day 5 (October 12): field-trip along the Mureş gorges with focus on interfingering volcanoclastic sequences originating from Călimani and Gurghiu volcanic centers**

- 7.30-8.00 AM: Breakfast (Marion hotel, Reghin);
- 8.15-9.45 AM: travel From Reghin to the Toplița ski resort area;
- 9.45-10.45 AM: panoramic view on the Călimani Mts. (as seen from the South) and on the northernmost occurrence areas of the Fâncel-Lăpușna (Gurghiu Mts.) volcanoclastic deposits; short explanation of the features seen from the viewing point (stop 4.1);
- 10.45-11.15 AM: Visiting outcrop of Sărmaș basalts in contact with post-debris avalanche Calimani volcanoclastic deposits (stop 4.2);
- 11.15- 12.30 AM: travel to and visiting outcrops of reworked products of the Fâncel-Lăpușna formation (Gurghiu Mts.) near Toplița (stop 4.3);
- 12.30 -12.45 AM: travel to Ciobotani;
- 12.45 AM – 1.15 PM: visit of outcrop exposing debris flow deposits of the Fâncel-Lăpușna formation (Observation: direct access to the outcrop is a bit difficult) (stop 4.4);
- 1.15-2.00 PM: travel to Lunca Bradului bridge (across Mures valley);
- 2.00-2.30 PM: Visiting outcrop of primary Fâncel-Lăpușna block-and-ash-flow deposits at the Lunca Bradului bridge (stop 4.5);
- 2.30-3.30 PM: travel to Sălard (5'), box lunch and viewing outcrops in a thick sequence of Rusca-Tihu basaltic andesite block-and-ash-flow deposits (stop 4.6);
- 3.30- 6.30 PM: travel to the Răstolița dam and visiting a thick sequence of outcropping post-debris-avalanche Rusca-Tihu formation volcanoclastics and lavas (stop 4.7);
- 6.30-7.00 PM: travel to the next outcrop (Răstolița, road branching to Iod);
- 7.00-7.20: short visit of an outcrop with debris avalanche deposit of Rusca-Tihu volcano at Răstolița (Iod road branch) (stop 4.8);
- 7.20-8.00 PM: travel to Reghin;
- 8.30-9.15 PM: dinner (Marion hotel, Reghin).

**Day 6 (October 13<sup>th</sup>): fieldtrip in the Northern Călimani Mts. and Bârgău Mts. area (AM) and final informal discussions (PM)**

- 8.00-8.30 AM: Breakfast (Marion hotel, Reghin);
- 8.45-11.00 AM: Travel to Colibița dam via Bistrița-Prundu Bârgăului
- 11.00- 11.45 AM: visiting outcrops of Rusca-Tihu debris avalanche deposits near the Colibița dam (stop 5.1);
- 11.45-12.05 AM: travel to the “great sill” quarry at Colibița;
- 12.05-12.45 AM: visiting the “great sill” at the Colibița quarry (stop 5.2);
- 12.45 AM-1.15 PM: travel to the Mureșenii Bârgăului (village exit) sills on the main Bistrița-Vatra Dornei road;
- 1.15-2.00 PM: visiting roadside outcrops of pre-volcanic sills intruded in flysch deposits; box lunch (stop 5.3);
- 2.00-2.45 PM: travel to Tihuța Pass and viewing the beautiful landscape of the “Subvolcanic zone” of Bârgău and Țibleș Mts.; arrival to the Dracula Castle Hotel;
- 2.45-3.15 PM: check-in Dracula Castle Hotel;
- 4.00- 7.00 PM: informal round-table discussions on the future activities of the IAVCEI Commission on Volcano Geology; proposals for the next VG Workshop;
- 8.00-11.00 PM: farewell dinner with “Dracula show”.

**Day 7 (October 14<sup>th</sup>): Departure**

- 7.00-7.30 AM: breakfast (Dracula Castle Hotel)
- 7.30AM-5.30/6.30 PM: travel to Bucharest Otopeni Airport (ca. 10-11 hours drive by bus depending on traffic and weather)
- 8.00-12.00/12.30 AM: travel to Cluj-Napoca Airport (ca. 4-4.5 hours drive by car)