

GUIDE TO THE GEOLOGICAL EXCURSIONS  
OF THE XXXVI ANNUAL MEETING OF THE GEOLOGICAL SOCIETY  
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Excursion I A (19. IX. 1963)

The excursion was devoted to the hydrogeological, geochemical and balneotechnical (as well as balneotherapeutical) problems of mineral waters of Szczawnica.

Excursion I B (19. IX. 1963)

During the excursion were shown outcrops of andesite dykes of Mt. Bryjarka at Szczawnica, as well as Quaternary terraces of the Grajcarek stream valley.

Excursion I C (19. IX. 1963)

The members of the excursion visited a clay pit at Krościenko, which exposes Pliocene clays and gravels with abundant and well preserved plant remains (references: Szafer 1946-7, 1950, 1954; Klimaszewski 1948; Birkenmajer 1954a, 1958a).

Excursions II A (20. IX) and III A (21. IX. 1963)

The programme of the excursions included outcrops of the Podhale

Palaeogene (flysch) near the southern contact of the Pieniny Klippen Belt at Szaflary, stratigraphy and tectonics of the Pieniny-, Branisko-, and Czorsztyn Series, as well as the problem of the relation of the Upper Senonian Mantle (Jarmuta Beds) to the Klippen Series between the village Szaflary and the Szaflary quarry. Later on, at Krempachy, has been demonstrated a section of the Pieniny Klippen Belt including strongly disturbed tectonically klippen of the Czorsztyn Series, as well as Dogger-, Middle and Upper Cretaceous members of the northern zone of the Klippen Belt, referred now to the Magura Series. Similar problems were also discussed at Dursztyn, where the excursion had finished. For more informations on the subject dealt with, the reader is referred to the papers by Birkenmajer (1963a, c).

#### Excursions II B (20. IX) and III B (21. IX. 1963)

The programme for the excursions included stratigraphy and tectonics of the Jurassic-Cretaceous members of the Czorsztyn-, Niedzica-, and Branisko Series. Furthermore, have been discussed the problems of the relation of the Upper Senonian (Jarmuta Beds) and Palaeogene deposits to the Pieniny Klippen Belt.

The points of observations were: the group of klippen of the Czorsztyn Castle (for more information — see Birkenmajer 1963a, c), the section of the Dunajec River Gorge at Niedzica, the hill of the Niedzica Castle, and the klippen at the village Niedzica (o.c.).

#### Excursions II C (20. IX) and III C (21. IX. 1963)

The programme of the excursions included stratigraphy and tectonics of the Magura Series Palaeogene, the tectonic position of the Jarmuta Beds (Upper Senonian) and the Variegated Beds (Cenomanian-Campanian), tectonic structure of some klippen of the Branisko Series near the contact with the Magura Palaeogene, structure of andesites of the Mt. Wzar, as well as some hydrogeological problems.

The points of observation were: Huła on the Dunajec River (Submagura Beds, Lower Eocene — see Birkenmajer 1962c), Ciechorzyn near Czorsztyn (Frydman Beds, Lower Eocene — see Birkenmajer 1963f), Brzeziny near Czorsztyn (Jarmuta Beds — see Birkenmajer 1963a, Pl. XIV, Fig. 3), Mt. Wzar (see the preceding summary by S. Kozłowski), Krościenko (Branisko Series and Magura Palaeogene — see Birkenmajer 1958a; Horwitz 1963; Bogacz, Węclawik 1962, 1963), Łąkcica and Tylmanowa (N of Krościenko — see Bogacz, Węclawik o.c.).

#### Excursions II D (20. IX) and III D (21. IX. 1963)

The programme of the excursion included stratigraphy and tectonics of the Czorsztyn-, and Niedzica Series, tectonic and stratigraphic position of Jurassic and Cretaceous members associated with the Jarmuta-, and Variegated Beds, as well as geological, petrological and mineralogical problems of the andesites. The history of the XVIIIth century mining of ore-bearing veins was also presented.

The points of observations were: Mt. Jarmuta, east of Szczawnica (references: Małkowski 1958; Birkenmajer 1958b; Małowski 1962; Matras 1959; Wojciechowski 1955), and the vicinity of Jaworki (Homole Gorge and Krupianka stream — see Birkenmajer 1963a).

**Excursion II E (20. IX. 1963)**

The excursion started from Szczawnica and its members climbed a tourist path up to the highest peak of the Pieniny Mts. (Trzy Korony, 982 m a.s.l.). The programme of the excursion included mainly stratigraphy and tectonics of the Pieniny-, Branisko-, and the Czertezik Series.

**Excursion III E (21. IX. 1963)**

The excursion was devoted to the fresh water Neogene deposits of Domański Wierch and Orawa (see the preceding summary by M. Łańcucka-Środoniowa), as well as to the klippe of the Branisko Series and its mantle (Jarmuta Beds). The following points of observations were visited: Miętusztwo (Domański Wierch) and Stare Bystre, Lipnica Wielka and Chyżne.

**Additional Excursion (22. IX. 1963)**

The additional excursion was organized for a part of the members of the annual meeting to show the exposures of the Tithonian lumachelle at Rogoźnik (Czorsztyn Series — see descriptions by Birkenmajer 1962 c, 1963 a) and, afterwards, the members of the excursion floated down the Dunajec River Gorge (in the Pieniny Mts., from Czorsztyn to Szczawnica) in wooden rafts, enjoying magnificent landscape and good, shining weather.

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