

A SHORT OUTLINE OF THE SPELEOLOGICAL EXPLORATIONS HISTORY IN THE MORAVIAN KARST TILL 1914

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The Moravian Karst has an extraordinary importance in the history of the men and caves symbiosis, in the history of speleology and its development. Man is living there in a close contact with caves from the earliest Paleolith without interruption. Since the ancient time big holes of caves were leading him into the underground and 'chasms' and it was his vital concern to learn about them.

The first references concerning the karst phenomena do not belong among the earliest here. From 1575 is a notice in the municipal book of the town Boskovice about "river and chasm" – Punkva river and Macocha chasm.

The first information concerning the karst phenomena are from the 17th century, when people were interested in conspicuous caves with big portals and in the chasm Macocha. *Osvald Crolius* in 1608 mentioned the bones from the cave Výpustek and *Boetius de Bodt* mentioned the same in 1609. The earliest preserved inscription in the Sloupské caves dates back to 1650.

The earliest characteristics and conceptions of genesis are preserved in the work from *Martin Alexander Vigsius* "Valli Baptismi alias Kyriteinensis" from 1663. In this religious book he described the sinking and seep of Křtiny waters, the chasm Vokounka, the cave Výpustek and the chasm Macocha and explained their formation "by the hollowing water force and catastrophic shattering of rocky massive."

Johannes Ferdinandus Hertod from *Todtenfeld* gave account about the caves Výpustek, Býčí skála, chasm Macocha, Sloupské caves and others in his medical work "Tartaromastix Moraviae etc.", where he mentioned also the "unicornum fossile" – bones serving for fabrication of medicaments. The depth of the chasm Kolmá he determined on "two Lord's Prayers and two Hail Mary", he mentioned also the lower level. He described also the chasm Macocha and its environ, according to a recite of his friend.

The exploring story of the Moravian Karst started in the 18th century. The first descent to Macocha (-138 m) is documented on the 23rd May 1723, when *Lazarus Schopper*, a Minorite friar, slid down using a punch in the presence of public. But before it he let descent on trial two peasants. On his walk on the bottom he was accompanied by the valet *Johannes Zouhard*.

The Karst was explored also by the imperial mathematician *Johannes Anton Nagel*. In May 1748 "at a highest command" he explored and described the caves Sloupská and Ostrovská and added the drawings from *Ing. K. Beduzzi*. He visited also the lower level, "the ugliest cave he ever had known." In the Stříbrná passage there is an inscription: "Nagel Mathemat. 1748 Austr. Imperatoris Francisci hanc cryptam perlustrabat." Into the Macocha chasm he had let descend two peasants and described it according to their recite.

From all ancient papers stares respect and fear which the explorers of that time had from the horrors of caves.

The work of Nagel as well as the mention about Schopper remained unknown till the 19th century. For a long period as first instructive documents were the works from the late 18th century. In that time the *count Salm* himself, holder of a part of the Moravian Karst, was interested in the exploration of the karst and stimulated to this activity also his collaborators. There were organised the first excursions to the localities, where both the courage and ability were needed as well as a good gear and light. The period of search of the subterranean spaces and their coherences started.

Jan Mayer in 1781 described in "Schriften der Berliner Gesellschaft naturforschender Freunde" the flora, the Devonian fossils, formation of dripstones and sinters, the cave climate, the Pleistocene bones as well as the caves Sloupské.

The descent of *Ing. Karel Rudzinský* to Macocha chasm on 26th June 1784 was very important; he made



Ostrovská cave drawn by K. Beduzzi (in J. Nagel's description, 1748)

its first plan (ground plan, 2 sections) and 3 hand-written reports. He misjudged its depth to 306 m.

Ing. *Karel Sůz* in 1796 at the suggestion of count Salm measured the Sloupské caves including the lower level and the cave *Kůlna* and made the first map of the Moravian caves.

Because of the growing interest, some caves were adapted for visits of choice society (e. g. the *Stupňovítá* chasm in the Sloupské caves in 1786, *Ostrovská* cave in 1792). In 1797 also *Alexander von Humboldt* saw the *Macocha* chasm and said: "I have never seen something more magnificent of this kind". For a visit of *Francis II.* in 1804 the count Salm adapted *Ostrovská* cave (from that visit called *Císařská*).

In that time already rose real ideas about coherences of the caves systems and connection of subterranean streams in the northern part of the karst.

Kristián Karel André for the first time described the karst and its caves in "Patriotisches Tageblatt" in 1804 Brno. Absolon considered him as "the first theorist of the karst phenomenon".

J. Horký in his articles in 1815 described the caves Sloupské (he presumed the connection of their waters with *Macocha* chasm and *Punkva* river), caves *Císařská*, *Výпустek*, *Jedovnické propadání* and hydrography of the *Holštejnské* valley. That were the results of the explorations of count Salm's circle.

On the 27th August 1808 for the first time *H. Salm* in company of his assistants descended to *Macocha* chasm using the rope ladder, for the first time with

lights, with the aim to explore caves on its bottom. They measured with a line the depth with a result of 154.98 m; Salm was drawing at the bottom. The same Salm in 1811 tried for penetrating to *Macocha* from the *Punkva* outflow against the stream using a raft. He managed to get as far as 70 m to siphons.

J. Hornisch in 1838 explored and described the cave *Ochozská* in the southern part the karst.

In the 19th century started the exploration and valuation of the karst phenomena based on geographical, geological and hydrologic researches. *Karel from Reichenbach* in 1834 completed the first geological map of *Blansko*, executed the levelling measurements and predicted cave systems under the *Ostrovsko-Macošská* plateau.

In the mid-century a cartographer *Karel the Knight Kořistka* pursued hypsometric measurements in the karst. He determined the orographic-hydrographical itemization which is used up to the present day, helped to explain the underground hydrography and to calculate hypothetical depths of the vertical caves.

Dr. Jindřich Wankel, Absolon's grandfather devoted all his life to the exploration of karst. In 1858 he established in *Blansko* a "caenozoic laboratory", constructed the first skeleton of *Ursus spelaeus* from the caves Sloupské and avarted extraction of bones for the spode production. With his collaborators (*A. Mládek*, *A. Medritzer*, *K. Špaček*, *V. Sedlák*) he started the period of "obstacles surmounting". In systematic excursions they descended the chasms, penetrated on water streams to the half-siphons and

prolongated most of caves. They explored particularly the caves Rasovna, Jedovnické propadání, Sloupské, Ochozská, Císařská, Katerínska, and Macocha chasm and the Punkva river outflow, Ostrovská chasm, Výпустek, Býčí skála and Némčická cave mine. They completed 20 maps of caves. The study of the caves' filling led Wankel to paleontological and archaeological excavations; he was called "Father of the Moravian prehistory". From his actions are to be mentioned: the descent to the Macocha chasm on the 21st August 1856 with prolongation to the subterranean river Punkva (the depth was fixed almost exactly on 137.88 m with the help of barometer); on the 19th July 1857 the penetration to the Punkva river outflow the 80 record meters far (there is a red cross up the present day); the first map of the cave Jedovnické propadání drawn by A. Medritzer in 1860; a find of the first human skeleton among the Pleistocene mammals in the cave Býčí skála in 1867-8; the excavation of the gloriol "burial of the Hallstatt Magnate" in the same cave in 1871-73.

The archaeology allured to the Moravian Karst a prehistoric commission from the Imperial Academy of Sciences in Wien (Vienna). From 1879 led *J. Szombathy* the explorations of the cave Výпустek and in 1883 of the cave Žitného.

From the mid-19th century in the Moravian Karst worked *Martin Kříž*. Besides the known localities he



The Macocha chasm
(by *J. Alt 1850*, property of *Blansko Museum*)



Resurgence of the subterranean Punkva river
(by *J. Alt 1850*, property of *Blansko Museum*)

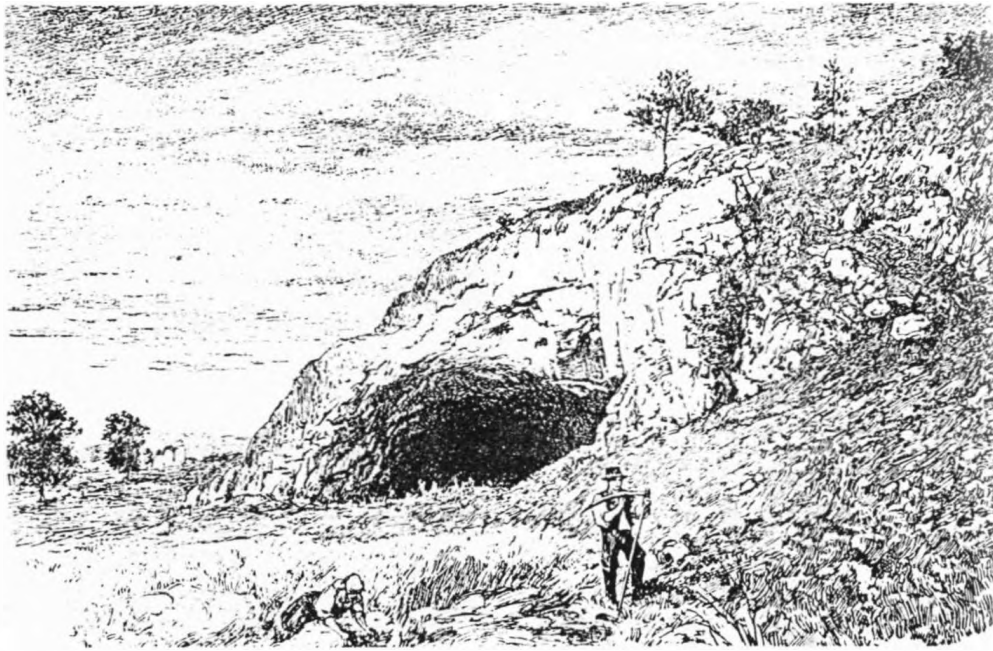
concentrated on searching and documentation of many till that time unknown caves which he systematically documented and for the first time also photographed. He marked out a levelling network, solved the hydrologic and genetic problems and through the study of cave filling he got to archaeology. He made the greatest discoveries in the caves Kůlna and Kostelík (Pekárna), he dug in Sloupské caves, he collected a lot of information and put together collections for museum. With *F. Koudelka* they completed an extensive compendium in two volumes "Průvodce do Moravských jeskyní" (A guide to the Moravian karst caves. Žďanice, 1900 and 1902).

In that time in Býčí skála were digging also *Alexandr Makowský* (in 1874) and *Jan Knies* (in 1879).

The tourist and national-history interest in the caves was ascending. The Sloupské caves where for the first time on the 30th July 1881 *M. Kříž* fitted the electric lighting in the *Ěliščina* cave with dripstone decoration were opened already for a long time. On the 1st October 1882 the Brno section of an Austrian Tourist Club opened a new view point above Macocha chasm. In 1889 *J. Sedlák* discovered the Šošůvské caves, which his holder *Broušek* prolonged and opened for public in 1894-1912.

Richard Trampler in 1891-97 completed a significant monograph on Macocha chasm and her second lay-out without descending to the bottom. On the other side *A. Podroužek* in 1894 descended to Macocha three times and made there the first 6 photographs.

In the 20th century in the Moravian Karst started a period of a modern speleology: the geological and



Entrance of the Sloupské cave (in: "Austro-Hungarian Monarchy in writing and pictures", 1897)

geographical sciences were used in connection with a latest technology and systematic collective application. The experts started to penetrate into hypothetical caves through barriers till that time insuperable – water siphons, cave grounds, rocky massives. As one of the first in the world applied all these methods consistently Prof. *Karel Absolon*. Already as student from 1897 he explored and prolonged the Sloupské caves and in 1901 started his series of modern explorations and subsurface explorations in Macocha chasm. Speleologists worked in well equipped underground camps, in 1905 they spent in the chasm the record 8 days. They descended on rope ladders, used the telephone, compass, theodolite, barometer, camera, acetylene lamp and floodlight, folding ladder and folding boat. Absolon concentrated especially on the discovering of caves by the subterranean Punkva river and its collecting channels between the Sloup, Holštejn, Macocha and outflow of Punkva river.

From all caves and shafts in sinks and swallow holes he tried to penetrate to this system. He initiated in speleology using of rod, colorimetry, "smoke-making" of draughts, diving in diving suits, exhaust of deep siphons, sinking of shafts and galleries punching with the help of drilling machines, explosive works and rails transport. He aimed at a complex exploration using a rank of science lines.

Shortly after the establishment of a Caves section of the Natural-historical Club in Brno he led its members at the excavations in the canyon Pustý žleb,

where they found the Punkevní caves on the 29th September 1909. Already on 14th May 1910 the electric lighting was fitted there and they were opened for public. In the same year was opened the Kateřinská cave which was discovered also a year ago.

A new steel ladder installed in Macocha in 1913 sped up the work on the connection with the Punkevní caves which was accomplished on 30th January 1914. On the 3rd April visited Macocha chasm *E.A. Martel* with his wife and later also *Jovan Cvijič*.

After this glory the strong "four" – *K. Absolon, V. Ondroušek, K. Divíšek* and *V. Brandstätter* – concentrated on the penetration to the Macocha chasm by the "Water route" on the Punkva river. That was the most demanding technical exploit of discovery in our speleology. But it happened only in 1920–1933 and therefore does not belong into this outline.

From that time the knowledge of the Moravian Karst considerably changed. Only after the death of Absolon his greatest hypothetical discoveries were brought to life. Today there is the longest Czechoslovak cave system Amatérská cave – Punkevní caves, long more than 30 kilometers, for public are opened four caves, there is functioning a speleo-therapeutical medical institution, a research station of the Czechoslovak Academy of Sciences and many workplaces of the Czech Speleological Society.

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