

Czech Speleological Society

2009–2012



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Dear colleagues,

On the following pages you will find information about the Czech Speleological Society members' activities during the period since the last International Congress of Speleology, which was held in Kerville, USA, in 2009. It is certainly not a complete list of all that has been discovered or explored by our members, but only a brief overview of their most important achievements.

This publication follows a tradition of reports published since 1986 on the occasion of the past International Congresses of Speleology. Traditional is also its content, divided into two main sections. The first describes the activities of individual caving clubs, which are the focus of our work. It also describes the activities of all organizational units of our Society – Board, Editorial board, Cave Rescue Service and others. The second section contains brief descriptions of the most important discoveries and research carried out at domestic locations, followed by the reports of the most important discoveries of Czech speleologists abroad.

More information about these as well as many other discoveries and researches by Czech speleologists can be found on the pages of the annual proceedings “Speleofórum”, which we publish on the occasion of the annual meeting Speleofórum since 1982. You can find and purchase almost all of the issues here at the booth of the Czech Speleological Society at the 16th International Congress of Speleology, or later through our website www.speleo.cz.

In conclusion, on behalf of myself and my colleagues, allow me to wish you good luck both in your personal life and in the exploration of karst and caves in all corners of our beautiful planet.

Zdeněk Motyčka
President of the Czech Speleological Society

REPORT ON THE ACTIVITY OF THE CZECH SPELEOLOGICAL SOCIETY IN 2009–2012



BOARD OF THE CZECH SPELEOLOGICAL SOCIETY

President: Zdeněk Motyčka

Vice-president: Milan Geršl

Members: Michal Piškula, Barbora Šimečková, Radko Tásler, Mojmír Závíška, Petr Polák, Tomáš Mokřý.

The activities of the Board included everyday agenda, organization of traditional events, and formulation of conceptual framework towards a more effective function of the Society and its individual components. In particular, the following issues were discussed and implemented:

The Board secured new premises for the secretariat. New web pages of the CSS were launched. In cooperation with the National Museum in Prague, CSS prepared an exhibition “Come Along into the Cave”, presenting the topic of exploration of inaccessible caves to the general public. The exhibition marked the 30th anniversary of the CSS and the 40th anniversary of the discovery of the Amatérská Cave, the largest cave in the Czech Republic. The photographic book *Podzemí neznámé (The Unknown Underground)* was also published on the occasion of this anniversary. Speleofórum, an international meeting of cavers in the Moravian Karst, was held annually with the organizational support of 6–16 Tartaros Caving Club.

In 2010, the CSS signed an agreement with the Nature Conservation Agency of the Czech Republic, enabling CSS members to use and edit data in the United Registry of Speleological Objects Database.

Pavel Bosák, Zdeněk Motyčka and Roman Šebela represented the CSS at the 15th International Congress of Speleology in the USA, where they successfully defended CSS candidacy to host the 16th International Congress of Speleology (to be held in Brno in 2013). An English version of the Report on the Activity of the CSS in 2005–2008 was published in order to promote the CSS. Preparations for the 16th Congress in Brno took place throughout the period.

PUBLICATION ACTIVITIES

In the years 2009–2012, the CSS published four volumes of the Speleofórum journal:

Speleofórum 2009 – vol. 28

Speleofórum 2010 – vol. 29

Speleofórum 2011 – vol. 30

Speleofórum 2012 – vol. 31

Several volumes of the Speleo information bulletin were published each year. Volumes 51 to 59 were published in a printing run of 1,400 issues each.

CSS CAVE RESCUE SERVICE (CSS CRS)

Headed by Roman Šebela.

In 2008–2012, CSS Cave Rescue Service manned two stations, Bohemia and Moravia, with combined staff of 30 rescuers (12 persons in Bohemia, and 18 in Moravia). The team of rescue divers of the CSS Cave Diving Commission operates in close connection with the CSS CRS. CSS CRS is a member of the Integrated Rescue System of the Czech Republic. A Single Rope Technique (SRT) training of Fire Rescue climbing teams is carried out annually.

CSS CRS focuses on the training of rescuers, and on accident prevention within individual Caving Clubs of the Czech Speleological Society. A coordinated practice of the entire CSS Cave Rescue Service, aimed to check its readiness for action, was carried out annually. CRS members participate in international events of cave rescue service organizations.

RESCUE OPERATIONS

In 2009–2012 there were no serious accidents in caves in the Czech republic.

Barrandova Cave (Bohemian Karst) 2 persons – without injury

Rudické propadání Cave System (Moravian Karst) – entry area, 2 persons – one light and one serious injury

THE PSEUDOKARST COMMISSION

Chairman: Josef Wagner

Members: Jan Lenart (7–01 Orcus), Jiří Kopecký, Oldřich Jenka (5–03 Broumov), Jaroslav Kukla, Jaroslav Kukla ml. (4–03 Labské pískovce), Jiří Reil (5–07 Antroherpon), Jakub Šafránek (ČR–SNPČŠ), Jiří Adamovič (Geologický ústav), Petr Jenč, Vladimír Peša (VGM Česká Lípa), Ing. Jan Mertlík (AOPK ČR).

The commission organized national events focused on pseudokarst topics, compiled results of pseudokarst research conducted by individual CSS Caving Clubs, organized seminars and workshops, and coordinated participation of CSS representatives at international events. The commission took part in preparations of excursions for the 16th International Congress of Speleology in 2013, and downloaded pseudokarst sites data into the United Registry of Speleological Objects (JESO) database.

THE CAVE DIVING COMMISSION

Chairman: Jan Sirotek

Members: Jan Herget, Martin Honeš, Michal Piškula, Fraňo Travěnc, Michal Guba, Jiří Hovorka, David Skoumal, Radoslav Husák, Dan Jiroušek, Matin Hóta, Roman Šebela.

The Commission continually updates a list of all cave divers organized within the CSS, including all contact information, qualification records and experience gained at individual sites, and coordinates joint projects of cave divers and the Cave Rescue Service.

THE SPELEOTHERAPY COMMISSION

Chairman: MUDr. Pavel Slavík

The Speleotherapy commission is active intermittently, depending on actual needs.

International events participation:

2011 National Speleotherapy Conference in Turda, Rumania. In addition to presentation of expert lectures and several excursions to speleological sites in Rumania (all of them in salt mines), the purpose of participation in this conference was to try out technical and organizational alternatives for the organization of the regular 14th International Symposium on Speleotherapy. The 14th International Symposium on Speleotherapy took place again in Turda, Rumania on October 4–6, 2012. One of the local salt mines, “mina Rudolf”, was recently adapted for speleotherapy and is also accessible to tourists.

THE COMMISSION FOR WORK AT HEIGHTS AND OVER DEPTHS

This Central Expert Commission was established by the Board in 2009.

Chairman: Wagner Josef

Members: Bohuslav Koutecký, Jiří Augustýnek, Pavel Tásler, Mojmír Závíška, Jakub Wagner, Jiří Antonín.

The Commission organized regular training of “Speleological Techniques Instructors”, who may in need act as qualified personnel with sound knowledge of climbing gear and its use. To meet the needs of the instructors, the Commission published a “Textbook for the instruction of workers about regulations regarding safety and health protection at work, focused on professional competence for safe work at heights and over depths by means of personal protective equipment”.

Based on the concurrence of topics in the areas of work over depths and sports activities using rope techniques, the Commission has recommended to adapt and augment the “CSS safety guideline for speleological activities”.



LOCAL CAVING CLUBS OF THE CSS

The Czech Speleological Society (CSS) comprises 63 Caving Clubs (CC) which altogether organize 1,200 members.

1–01 Český kras

The Caving Club is not conducting research at any site in its territory. Its members took part in several events organized by other Caving Clubs. The Caving Club carried out several excursions to karst sites abroad.

1–02 Tetín

The Caving Club operates at several sites in the Bohemian Karst. By tunneling 7 metres, its members managed to reach more than 75 metres of free space in the Tetínská propáštka II Cave (13-024/B). A 20 m long Passage of Cave-ins (Chodba propadů) with 4 continuations was discovered at the end of the Sump Passage (Sifonová chodba). Harry's Rotunda was discovered in the Portálová Cave (Reg. No. 14-001); the newly discovered space was 21 m long. Caving Club members took part in surface and underground explorations of karst in the vicinity of the Temnice municipality in Slovenia, in speleological and cave diving explorations of the Bue Marino Cave in Sardinia, as well as in exploratory and documentation work of the Loferer Schacht Cave System in Austria. Members also collaborated with the speleological group Minotaurus of the Slovak Speleological Society (SSS) in exploratory and documentation work in the Zugo Cave in the Slovak Karst.

1–04 Zlatý kůň

The Caving Club is dedicated to discovery and exploration of caves in the Bohemian Karst. It achieved significant success in the caves in Petzold's Quarry in cooperation with members of 1–11 Barrandien CC. By the end of 2012, the length of the Petzold's Cave System reached 700 m. Digging continues in the Bonzákova sluj Cave, Malá Panama Cave, and Panama Cave, which had been opened again after 17 years.

1–05 Geospeleos

This Caving Club is also active mainly in the Bohemian Karst. New spaces approx. 100 m long were reached in the Studniční Cave, increasing the total length of the cave to 149 m and depth to 26 m. Digging continued in the Arnoldka Cave, where the level of the lake on the bottom was monitored and recorded, and a two-year project of continuous temperature monitoring via memory-equipped sensors was carried out. Three dives were executed in the Podtraťová Abyss, and fastening of the guide line was checked down to the depth of 50 m. Scientific activities included regular monitoring of physical and chemical parameters of selected springs in the Bohemian Karst and the Moravian Karst territories in cooperation with the Faculty of Science of the Charles University, paleomagnetic studies of the sediment in the Koněpruské Caves and the Mrtvých netopýřů Cave in Slovakia, and paleoenvironmental research of fossil molluscs in the Žichovická Cave.

Caving Club members took part in expeditions abroad: for example in Slovenia – participation in the international expedition Kačna jama; Slovenia, Kanin – participation in the speleological project of the Kóta 1000 group; Turkey, France – a sporting passage through the Pierre Saint Martin Cave System; Mexico – the Yukatan cenotes; Iran – salt caves.

1–06 Speleologický klub Praha

The principal work site of the Caving Club is in the quarry at Chlum in the Bohemian Karst. Prolongation work has been carried out in the Wolf's Look-out part of the Netopýří–Srbská Cave. An entrance to a karst chimney was uncovered in the cave-in at the rear part of the quarry. Further work increased the depth of the cave to 14,5 m and its length to 28 m.

Bat census in the Na Chlumu Caves and on sites of other CSS Caving Clubs was carried out in cooperation with the Czech Bat Conservation Society (ČESON) and the Faculty of Science, Charles University. Members participated in research of the White Nose Syndrome (WNS) in bats.

The Caving Club organizes several regular events: A rope climbing contest “Chlumochod”, a meeting of speleologists in the Bohemian Karst, a photo contest Czech Speleo Photo, expert conferences “Exploration of the Underground”, and the educational event “European Bat Night at the Chlum”.

Caving Club members participate in cave exploration of the Bue Marino Cave in Sardinia on a long-term basis.

1–08 Týnčanský kras

The Caving Club operates in the Týnčanský Karst in central Bohemia. Its activities center on the Divišova Cave, in particular on removal of sediments by hydraulic mining, and also on mapping and photographing of newly discovered spaces. Further sites of active interest are Mechovka and Kočičí zámek. Measurement of microclimatic conditions along with bat monitoring took place at the Jarnice site (Velikonoční Cave and mining tunnel).

The Caving Club organized regular bat census in the Týnčanský Karst territory and its vicinity.

1–09 Niphargus

The Caving Club was reactivated in 2010. Caving Club members finished mapping of the flooded marble mine Milnitz (Germany). They also individually visited underwater caves and flooded mines in Mexico, Germany and Greece. A localization of flooded mining systems in Poland was carried out as well.

1–10 Speleoquanaut

The Caving Club specializes in cave diving at Czech and foreign sites. Several expeditions to Yucatan (Mexico) are organized every year, with focus on exploration and documentation of cenotes and connected underwater cave passages. Toward the end of 2012, the combined length of underwater and dry parts of the K'oox Baal System reached 75,140 m. Bones of prehistoric animals were found during the explorations.

In Slovakia, exploration of the Skalístý potok Caves and Pustá Cave in the Demänovská dolina Valley continued in cooperation with the Slovak Speleological Society.

Exploration of the Bue Marino and Sala Luna Caves in Sardinia continued each year. Measurements of water salinity in sumps and determination of the causes of water density variations were carried out in the Bue Marino Cave. The Southern Branch (Ramo Sud) of the Bue Marino Cave was prolonged nearer to the Codula di Luna Valley, beyond which well-known caves were located with a total length of over 40 km. During the 2012 expedition, three Czech cave divers managed to discover a new sump at the end of the Ramo Sud. Passing through this sump and the discovery of 330 m of dry spaces behind it represent a milestone in explorations of the Codula di Luna area. It opens way towards the creation of a cave system up to 70 km long, which may become the longest one in Italy.

1–11 Barrandien

The Caving Club works in the Nad Kačákem Cave in the Bohemian Karst, where penetrations into new spaces from the Dome of the Atlases were attempted. Further fieldwork goes on in the Pod Javorkou Cave, with total length of 1,700 m and depth of 129 m. An unsuccessful cave diving penetration attempt was undertaken in the little lakes at the end of the cave. Digging and interconnection of individual caves in the cave system of Petzold's Quarry (Petzoldův lom) in cooperation with 1–04 Zlatý kůň CC resulted in achieving the length of 700 m toward the end of 2012. The Caving Club organizes annual events at both the Hungarian and the Slovak part of the Dolný vrch Plateau. Several new caves were discovered and documented on the Hungarian side, for example the Čmeláci Abyss (–30 m) and Společná Abyss (–50 m).

2–01 Chýnovská jeskyně

A large part of the Caving Club activity is permanently focused on cooperation with Cave Administration of the Czech Republic – Chýnovská Cave Administration, and cooperation with local chapter 21/4 of the Czech Union for Nature Conservation. Removal of lampenflora and naturally seeded trees was carried out in the Chýnovská Cave, as well as mowing of grass on the cave grounds and landscaping in the entrance area of the cave.

The Caving Club also conducts exploration and documentation of historical underground in mining districts Ratibořské hory and Stará Vožice. The Rožmberk family vault in the Vyšší Brod Monastery, vaults in a church in Litomyšl, and St. Jiljí Church crypts in Prague were explored. Several historical objects and coins were found during well exploration at the Nové hrady Castle, where a depth of 34 m was reached.

The Caving Club participates in bat research in the Chýnovská Cave, in monitoring of hibernating bats at other sites of the region, and in ringing of birds in hard-to-reach nests using SRT.

2–02 Šumava

The Caving Club explored karst phenomena in active work area of the stone quarry Bližná near Černá in the Pošumaví region. Negotiations to continue speleological work, and to protect and safeguard the karst cave system in the active work area of the quarry took a great deal of effort. Attempts to prevent filling in the access shaft to the Lipno Cave were not successful, and the cave was thus destroyed. Caving Club members undertook several exploratory actions in locations of former graphite mining operations near Český Krumlov, in pseudokarst in the Trojmezenská hornatina Highlands of Šumava, in underground stopes left after crystalline limestone mining near Opalice, and in shaft channel Třísov in the České Budějovice area. Some of the members have been traditionally helping the 6–23 Aragonit CC with fieldwork in a cave in Temné skály.

3–01 Macarát

The Caving Club performed regular visits, checks and maintenance of the Caving Club's historical sites – the Peklo Cave, the old mining works Těšov and the old mining works Jírovic jáma Na zámku – near Hartmanice in the Šumava Mountains. No fieldwork was carried out at these sites. Minor maintenance of surface security at the Těšov site was an exception.

3–02 Jeskyňáři Plzeň

Caving Club members participated in the speleological exploration of the Mesačný Tieň Cave in the Vysoké Tatry Mountains in Slovakia, in cooperation with a Slovak team (the discovery of the Dome of the Giants with a perspective for continuation, restoration of bivouac no. 1 after a foundering of the cave ceiling, and mapping of previously discovered spaces). They

took part in exploration of the Kačna jama Cave System in the Divaški Kras in Slovenia, together with 6–19 Plánivý (climbing of chimneys in the Bukovník Sink and descent into the Benčná jama Cave). Members participated in renovation of rigging in the Kúhlloch Cave in the Dachstein Massive; participated in mining works research in the region of Krušné hory Mountains; cooperated with the Czech Bat Conservation Society in bat monitoring in West Bohemia, cooperated with the Integrated Rescue System of the Plzeňský region, and with the Šumava National Park Administration in registration of historical mining works.

3–03 Šumavský kras

The Caving Club closely cooperates with 3–02. Its members participated in the speleological exploration of the Mesačný Tieň Cave in the Vysoké Tatry Mountains in Slovakia; participated in exploration of the Kačna jama Cave in Slovenia – chimney climbing, mapping, discovery of the Plzeňský rov passage; participated in exploration of the Kúhlloch Cave (Bad Ischl, Austria). Members also organized several climbing training sessions.

3–05 Permoníci

Members continued in exploration of potential cave systems in the Dyleňský Karst area. Entrance area of the Dyleňská Cave was modified and stabilized; water outflow test indicated free outflow into so far unexplored parts of the cave. Members carried out hibernating bat census in wintering grounds of the Karlovarský Region, and monitored status of old mining works in the Karlovarský and Plzeňský Regions.

Caving Club members continued cave documentation in Bavaria, Germany in cooperation with local cavers. A number of members took part in speleological expeditions abroad (Hungary, Slovakia, Italy, Slovenia, and Croatia).

4–01 Liberec

The Caving Club explores caves of the Ještědský Karst; in the Hanychovská Cave they secured a more safe access to the cave, and continued discovery work. In the Rokytka II Cave – Nedobytná Cave the Caving Club members penetrated a rather small space with rich dripstone decorations.

Continuous temperature measurements were carried out in the Paledová Cave at Bezděz in the Česká Lípa area; the cave was mapped. Temperature measurements were conducted also in the Ledová Cave and Ledová Abyss at the Buková hora Mountain. Research of sandstones in the Klokočské kuesty area of Český ráj continued. The Caving Club performs long-term bat monitoring in caves and other underground sites of the Ještědský Ridge, particularly in the Hanychovská Cave, Nedobytná Cave and Západní Cave, and in the mines in Kryštofovo Údolí and Panenská Hůrka.

The Caving Club maintains prolific publication and lecture activities. It continued in preparations of resources for the book “Camps and Military Production”, significant part of which will be dedicated to underground installations of World War II.

The Caving Club cooperates with organizations at home and abroad on a long-term basis – with the local chapter of the Czech Union for Nature Conservation attached to the Administration of Protected Landscape Area (PLA) Jizerské hory at maintenance of cave security and as organizers of a Speleology Day at the Panský lom Cave; with Polish colleagues of the Grupa Chiropterologiczna from Wrocław at winter bat census in the caves of the Polom Mountain; in Romania they cooperate with a mining company headquarters in the Rosia Montana region in exploration of ancient mining works up to 2000 years old; in Slovakia with the Minotauros Speleoclub, Speleo Rožňava and the Nicolaus group at karst sites of the Nízke Tatry Mountains.

Caving Club members participated in several expeditions abroad: an expedition to the areas of Gerník and Svätá Helena municipalities in the Banát region of Rumania; and the expedition of 6–14 Suchý žleb to the Manganik Ridge in Montenegro.

4–03 Labské pískovce

The Caving Club prospected, registered and documented pseudokarst phenomena, historical and industrial spaces and relics of surface and subsurface exploration and mining of base metals and lignite in the territories of Lužické hory PLA, České středohoří PLA, and Labské pískovce PLA, in the České Švýcarsko National Park and in the eastern Krušné hory Mountains. The Caving Club participated in bat census at these sites.

5–01 Bozkov

The Caving Club explores and documents sites in Bozkov and vicinity. Its members conducted fieldwork in the Bozkovské Dolomitic Caves, in the Pod Větrnou Abyss, in the Páteční Abyss, in the Loamy passage, etc. Checks of cave entrances, surface explorations, and status photo documentation after torrential rains were carried out in caves of the Vošmenda Valley. The cave was surveyed again in preparation of a 3D mapping. The Na Poušti Cave-in (Železný Brod–Popluží) was newly mapped, and hydraulic mining was attempted, which was supposed to indicate a possible direction of cave continuation. Prolongation work took place in the Tvarožné Díry Cave and Netopýří Mlýn Cave.

Caving Club members presented lectures. The Caving Club gives a Cavers' Ball every year. Three Caving Club members (J. Řehák, S. Řehák and J. Hloušek) participated in the 14th Czech polar glaciopedological expedition to the Spitsbergen. Caving Club members participated in expeditions to the Prekornica region in Montenegro, to the Patkov Gust Abyss in the Northern Velebit in Croatia, and to the Soluňská glova in Macedonia.

5–02 Albeřice

The Caving Club explores karst sites in the Krkonoše Mountains, historic underground sites and old mining works. Monitoring of water level and temperature as well as a regular bat census continued in the Albeřická Cave. A detailed documentation and sample collection for further analysis were performed.

Digging for detailed speleological, geological, archaeological, and palaeontological research of the Medvědí Cave was carried out in cooperation with researchers from the Krkonošský National Park and the Academy of Sciences of the Czech Republic (ASCR).

Principal activity of the Caving Club took place in the Kovárna mine in Obří důl. Access to the Mezzanine on route “B” was opened. Caving Club members performed detailed surface exploration of mines in Obří důl, including detailed survey, documentation, photo documentation, generation of surface plans and assembly of maps.

5–02 Albeřice provided exhibits, their installation and expert guidance during the building of the Museum of Krkonoše Underground in Černý Důl, organized a big exhibition “Eastern Bohemia Underground” in the City Museum of Jaroměř, and took part in preparations for the CSS exhibition at the National Museum in Prague, as well as in the assembly of the publication to commemorate the 30th anniversary of the CSS.

The Caving Club organized traditional expeditions to the Julian Alps. The goal was to take GPS coordinates of previously discovered cave and abyss entrances, and to finish mapping several of them. A 2012 expedition to New Zealand was focused on exploration of the Thousand Acres Plateau (Matiri Range).

5–03 Broumovsko

The Caving Club conducted detailed, thorough fieldwork at various sites in the areas of Ostaš Hill, Teplické skály and Kočičí skály Cliffs, Gory stolowe Mountains, and Supíkovské Cliffs. Fieldwork included geodetic measurements and study of biogenic landforms (root stalagmites) in particular, and also detailed biospeleological studies and geotechnical work (in collaboration with the Institute of Rock Structure and Mechanics of the ASCR).

The Caving Club also supervised various educational events and workshops on the topic of pseudokarst studies, producing a number of publications in local and national periodicals. Publication activities also included lectures and discussions on natural and historical monuments in the Broumov area, and contributions for the local newspaper in Broumov. The Caving Club celebrated its 30th anniversary in 2010. An exhibition “30 years of speleology in the Broumov area” was mounted in cooperation with the Broumov Area Development Agency.

The Caving Club maintains an active contact with the UIS Pseudokarst Commission, collaborates with other CSS Caving Clubs involved with the topic of pseudokarst, and with expert partners abroad in Poland, Germany, Hungary and Slovakia. J. Kopecký Sr. contributes to the production of the UIS Pseudokarst Commission *Newsletter – Nachrichtenbrief*. The Caving Club participated in preparation of pseudokarst activities for the 16th International Congress of Speleology to be held in Brno in 2013.

5–05 Trias

The Caving Club continued their work at all sites within its area of interest. Hibernating bat census was carried out in the Podolská and Páterova Caves in the Železné hory Mountains. Both parts of the Páterova Cave and a connecting passage into the Podolská Cave were re-mapped. The club monitors operations of the large quarry Prachovice and documents found karst cavities. Speleological exploration was carried out in the Muzejní mine in Kutná hora.

The Caving Club maintains an active lecture program. It cooperates with the Barbora Civic Association in speleological exploration of mining works on the Studánka site in the Bylanka watershed, and provides maintenance and disassembly of mine rigging for the graphite mine in Český Krumlov. The club began cooperation with the Minotauros Caving Club of Rožňava, and performed joint trial cave dives at several Slovak Karst sites.

The Caving Club's cave diving group cooperated with 6–09 Labyrinth on prolongation of a ponor in the Stovka Cave in the Moravian Karst, and during expeditions to the French cave Emergence du Ressel, where member A. Ptáček was one of the two divers who passed through the first sump. The length of the ponor was 1,850 m with maximum depth of –83 m.

5–07 Antroherpon

The Caving Club carried out speleological and biospeleological research in caves in the Czech Republic, Montenegro, Bulgaria, Turkey, Bosnia-Herzegovina and Italy.

Several minor abysses (depth from 15 to 45 m) were registered in the Manganik Range in Montenegro. Monitoring of microscopic fungi presence in caves in the Czech Republic continued in cooperation with the Institute of Soil Biology in České Budějovice. The results indicate that caves are abundantly populated with microscopic fungi.

Caving Club members continued search and documentation of root forms mainly in the Jičínská pahorkatina Hills and in Děčínská vrchovina Highlands. A synoptic database of these forms is being continuously updated. Hibernating bat census was performed in selected caves of Prachovské skály.

Two papers were published with the description of new taxa of cave beetles (new genera *Jalzacaphaenops* and *Acheroniotes*, and a new genus *Scotoplanetes aquaculitor*).

6–01 Býčí skála

The Býčí skála Cave in the Moravian Karst is the principal fieldwork site of the Caving Club. Discoveries of new spaces in various parts of the cave were accomplished by means of hydraulic mining. Thus was discovered a space within the Old Tunnel called Dead Snail's Head with floor area of approx. 20 × 12 m and height of 3 to 10 m, with several chimneys in the ceiling. The Svozilova Cave with attractive dripstone decorations was discovered and surveyed. Research was focused on the Barová-Sobolova Cave. The Caving Club organizes regular visiting days for the public, and participates in bat research and census.

The Caving Club organized an expedition to the Capadocia Ikapadokia Canyon and the Taurus Range in Turkey, as well as karst expeditions to Slovakia, Hungary, Romania and Poland.

6–02 Vratíkovský kras

The Caving Club supervised and maintained the Za zahradami Cave, Čmeláci Cave and Okno Cave. Members regularly join expeditions to Temnice in Slovenia, where they participate in exploration and mapping of cave spaces and caverns from the WWI era. The Caving Club continues active collaboration with teams of neighboring clubs in explorations of the Moravian Karst. While digging through a cave-in above the Švýcárna Cave, members entered approx. 50 m of free passages after penetration through a very narrow entrance meander.

6–04 Rudice

The Caving Club performed status checks in Rudické propadání Cave, particularly after torrential rains. Prolongation work was done in the Skalka Sinkhole and in the Tumperk Abyss. Initial cave-in exploration was performed at the new cave-in Tumperk Dvojka in Rudice at the Větrný mlýn. The cave-in was secured by means of shaft rings and concrete beams, surveyed and covered.

6–05 Křtinské údolí

The Caving Club has been taking care of many important sites in the Moravian Karst: the Stará Drátenická Cave (under conservation), Mariánská Cave (under conservation), Nová Drátenická Cave (under conservation), Jestřábí skála–Kanibalka Caves and Výpustek Cave. The club participated in regular bat census at these sites, maintained cave entrances and organized public visits. On the Výpustek site (1131/1), search continued for the legendary Urbánkův Výpustek in the Babická Passage at the Washbasin. Penetration into a 20 m long dome was accomplished.

6–06 Vilémovická

The Kajetánův Sinkhole and Daňkův žlíbek Cave sites were rigged up with fixed ladders. Digging continued in the Vilémovické propadání Cave, where penetrations into several smaller spaces and a dome approx. 25 × 12 m were accomplished.

6–07 Tišnovský kras

No significant discoveries were made in the Králova Cave or at other sites of the Caving Club. Regular bat census was taking place at Caving Club sites. The Caving Club organized a public visiting day at the Králova Cave, and several public lectures.

6–08 Dagmar

The Caving Club members deepened the cave floor in the Cave No. 567 Dagmar at the site Pod Kaplí. Bat monitoring was performed in the cave, and water level fluctuations were mo-

nitored at the bottom of Abyss II. Opening of Mlhův Sinkhole continued, as well as mining in the second ponor of Jedelský potok Creek at the swallow hole V Jedlích, where spring snow melt complicated situation and the ponor was clogged with gravel. Prolongation work continued in the Cave No. 566 U Jedelské cesty and Cave No. 567A V Jedlích.

6–09 Labyrint

Activities of the cave diving Caving Club in the Moravian Karst were focused on status checks of sites in the Punkevní Caves, Čtyřicítka Cave, and Červíkovy Caves (exploration and mapping were carried out there as well), at the Malý výtok of the Punva River, and in the Stovka Cave.

In Bosnia, exploration and mapping of the outflow Krušnica continued; old guide lines were removed. Polygon length reached 950 m, and 112 m maximum depth was reached in the Deep passage.

R. Husák, who participated in a rescue of divers trapped behind a sump in the Zugo outflow in Slovakia, also took part in photo documentation in the Bue Marino Cave in Sardinia.

6–10 Hluboký závrt

The Caving Club operates on sites Hluboký Sinkhole, Meiselův Sinkhole, Krchňa Sinkhole and Sinkhole H 18, and in the Srnčí Cave and Maruška Cave in the Moravian Karst. Opening of the Kombajnérka Sinkhole at the Macocha Plateau has begun; a depth of 10 m was attained thus far.

6–11 Královopolská

A long-term research in the southern part of the Moravian Karst continued, especially in the Ochozská Cave. It focused on regular measurements and evaluation of the lower outflow of karst waters, using an automated measuring station in the Ochozská Cave, manual measurement and sampling, monitoring of drip rhythm irregularities, etc. Club members also conducted fieldwork abroad: near the village of Lopar on the Rab Island in Croatia, they outlined the 8.8 km² territory of the Lopar Karst, composed mostly of Upper Cretaceous limestones. The Caving Club organized visiting days for the public in the Ochozská Cave.

6–12 Speleologický klub Brno

The Caving Club maintains a long-term cooperation with Českomoravský cement a. s., who is a successor in the ownership of the Mokrá Quarry in the southern part of the Moravian Karst, and therefore a partner in the registration and study of karst phenomena at the site. The Caving Club also conducted fieldwork in the Cave No. 14422/B in the Mechový Sinkhole, in the Netopyrka Cave, in Řičánkova skála Cave and at the Hynštova ventarola site. Members of the club cooperated with 6–01 in exploration of the Býčí skála Cave, and with ZO–06 in climbing a chimney and mapping in the Vilémovické propadání Cave and Daňkův žlíbek Cave in the northern part of the Moravian Karst.

The Caving Club also conducts research and documentation of historical underground sites, among other so called “lochy” (typically medieval cellars dug in loess soil). Underground spaces 45–50 m long, with ceilings approximately 5–7 m below current surface, were mapped in Vrbice near Břeclav.

The Caving Club organizes lectures and exhibitions, and publishes frequently.

A group called SE–3 (The three seniors), which is a part of the Caving Club, compiles new discoveries and information from the entire Moravian Karst, and publishes them as an electronic yearbook (a data CD) in the so called SE–3 Series (Edice SE–3).

Some Caving Club members participated in expeditions to caves in the Jánská dolina Valley in Slovakia (Nová Stanišovská Cave), along with colleagues from the Speleoclub Nicolaus from Liptovský Mikuláš.

6–13 Jihomoravský kras

Activities of the Caving Club were centered around the Na Turoldu Cave, which was opened to the public. Several exploratory operations were undertaken in the Liščí Cave, prolongation work and clearing of dumps took place in the Damoklova Cave. Caving Club members succeeded in penetration into a larger space with possible continuation in the Pod Kozím hrádkem Cave. Fieldwork was also carried out in the Partyzánka Cave (in the Pavlovské vrchy Hills) and in the Zámecká Cave.

Caving Club members participated in several international events in the caves of Montenegro, Slovenia and Romania.

6–14 Suchý žleb

Main fieldwork site of the Caving Club was Sinkhole No. 3 at the Harbešská planina Plain, where members cleared a caved-in shaft dug by their predecessors. Penetration into new spaces was achieved; total length of the system was about 300 m. The entrance was secured with concrete shaft rings. Further prolongation work was undertaken in Sinkhole No. 18 in the Kravská díra Cave (about 100 m of new space). Mapping and photo documentation took place in the Svážná studna Cave. Chimneys were climbed and mapped in the Králova Cave, Suchožlebská zadržná Cave, Cave No. 17 and in Kalovy Abysses.

6–15 Holštejnská

Intensive exploratory and prolongation work was carried out in the Sinkhole No. 151 Černý (No. 807), the principal fieldwork site of the Caving Club. Further prolongation work was undertaken in the Cave No. 551, 551/1 Nová Rasovna, Cave No. 518 Holštejnská and Cave No. 517 Nezaměstnaných. P. Kalenda, assisted by Caving Club members, took gravimetric measurements with the goal of checking the potential of the Balcarka Cave, and also gravimetric measurements above the Suchdolská Cave and Pytlíkova Cave in Pustý žleb Valley. The Caving Club organizes annual summer workshop at Holštejn, with intensive fieldwork at various sites.

The Caving Club continued exploration of the Ohnište site, Demänovská dolina Valley and Jánská dolina Valley together with SSS Speleoclub Nicolaus. Penetration into free space from a part called “Molnija” was achieved in the Klíč Cave at the Ohnište site. Two abysses were discovered, one with dimensions approx. 15 × 10 × 10 m with rapelling height of about 9 m, and another with dimensions 5 × 6 m, with height of about 10 m.

6–16 Tartaros

Prolongation work by means of hydraulic mining was carried out in the Nový Lopač Cave. Hydraulic mining of sediments was also performed in the Liščí Cave in the Up and away Passage; new spaces with attractive dripstone decorations were discovered. A 40 m deep vertical continuation with intensive draft was discovered in the West–East Passage. Rigging was repaired in the Vintoky Cave; a passage was dug to the bottom of the Kryšpínova Abyss. Partial revision of a map, and a localization of a large chimney by means of a radio beacon were accomplished in the Ostrovská Abyss.

The Caving Club sustains a long-term cooperation with SSS groups at the Krásnohorská dlhá lúka Cave (Stankovič) and Hradná vyvěračka Outflow; with the group Drienka at the Horný

vrch Hill and in the Na Železnej lúke Abyss; and with the group Aragonit in Ludmila Cave, Kriváňská Abyss – Dychotomia Cave in the Malá Fatra Mountains. Caving Club members participated in an event of the Caving Club Plánivy in the Kačna jama Cave, and in an event of the Caving Club Suchý žleb at Muračka planina Plain in Montenegro. The Caving Club organizes an annual Cavers' Ball and Speleofórum – an international meeting of cavers.

6–17 Topas

The Caving Club conducts fieldwork at sites Horní Suchdolský ponor (Cave No. 75A), Dolní Suchdolský ponor (Cave No. 75B), Kristýnka ponor (Cave No. 12D), Spodní Suchdolská Cave (Cave No. 53) and others. The Caving Club cooperated with 6–22 at the Okrouhlík site. Hydrological monitoring and sample collection during a dye experiment were performed in the Nová Amatérská Cave. Digging commenced in a drain at the lowest point of a sinkhole at the Pestré jíly site, achieving penetration into an 8 m long fissure passage.

Expeditions and excursions:

A five-member expedition to Herzegovina and Montenegro was accomplished; research of the Dobreljska Cave in the Gatačko polje area continued. Approximately 300 m of high river passages with a number of lakes were discovered and surveyed. A new, so far unclassified species of false scorpion (genus *Neobisium*), adapted to dark environment, was discovered in the Nad Vražjim firovima Cave.

The Caving Club organized two expeditions to table mountains of Venezuela's Guiana Highlands in cooperation with Sociedad Venezuelana Cientos Naturales. They prospected for and documented caves on the table mountains Auyán tepui and Churí tepui, where a spacious, 17.8 km long cave was discovered and named Sistema Brewer. A series of exhibitions presenting the discoveries of quartzite caves in table mountains of the Guiana Highlands was organized in collaboration with the embassy of República Bolivariana de Venezuela. A book *Entrañas del Mundo Perdido* by Charles Brewer Carías and Marek Audy, summarizing the results of underground scientific research of Venezuelan table mountains, was published in Caracas.

6–18 Cunicunulus

The Caving Club focuses on explorations of historical underground. Based on an agreement with the city of Jihlava, it provides maintenance of a part of the underground under the city ramparts. The Caving Club carried out exploration and documentation at various sites, e. g. exploration of the mining tunnel Růženina štola in the municipality Nemojov in the Pelhřimov district. Documentation of underground spaces exposed during excavations, and systematic exploration of cellars under the Freedom Square and adjacent streets was accomplished in cooperation with the city of Jemnice. Caving Club members cleaned out and documented a well under the presbytery in Jihlava; an 11 m long passage was found in the lower part of the well. A cave-in was documented at a silver mining site called Old Mine in Jezdovice municipality. Mining tunnels Ludvík and Babí dřva were explored in Telecí municipality in the Žďárské vrchy Hills area. Brewery cellars with a tunnel were explored in the city of Třešť at the location of a former brewery. The Caving Club checked the current state of former mining sites in a wide area of the Stříbrné Hory Mountains. Mapping of a complex underground encompassing several storeys continued in Hostěradice in the Znojmo district.

The Caving Club held several public lectures and participated in the traditional event Stříbrná Jihlava, organized by the Museum of Vysočina in Jihlava.

6–19 Plánivy

Climbing and exploration of chimneys continued in the Earth Pyramids Dome and elsewhere in the Nová Amatérská Cave; prolongation work took place in the Drain in the Two Big Ones Dome; the main polygon of the Bělovodská Branch was revised. Chimneys I and II in the Dome of the Discoverers were climbed in the Stará Amatérská Cave. An attempt was made to penetrate into free spaces in the west part of the Stacked up Little Dome.

Mining begun in the Above the Pendulum Passage in the Piková dáma Cave; exploration of drains continued above the Blue chimney in the Double Dome in the Spirálka Cave. Measurements with a DistoX apparatus for a more accurate map were taken in the Plánivy Cave. A likely continuation of the Balcarka Cave was found using geophysical measurements. Free space was indicated at depths of up to 40 m, which is the bottom level of the gorge and the Balcarka Cave. At the Ostrovská plošina Plateau, a continuation of the Holštejnská Cave and other conductive zones in the direction to Macocha from Sloup and Šošůvka were discovered by means of a very low frequency (VLF) method.

At the end of August, the Caving Club held a traditional Commemoration of the 40th and 45th anniversaries of tragic events in the Nová Amatérská Cave and Cave 13C.

The group organized further expeditions to the Kačna jama Cave in Slovenia, where the Plánivy group has been collaborating in systematic research with Caving Club Gregora Žiberny Divača for several years. The Plzeňský Rov Passage, a 200 m continuation behind the outflow sump in the Lentilka Abyss, and 300 m of new, spacious passages in the Behind the Looking Glass Passage count among new discoveries. Total length of the Behind the Looking Glass Passage is approx. 1 km; it terminates in another sump. A discovery of 250 m of passages mostly flooded with water followed the passing through a second sump in the Rov človeških ribic. The total length of the Kačna jama Cave was over 16 km in 2012. Caving Club members dug a promising-looking breathing spot called Vitkuv dihalnik. Luckily, members of the Caving Club were present just while the Kačna jama Cave System began to flood, and observed a very strong draught that continued for 2 hours.

6–20 Moravský kras

The climbing section worked on a problem of the Chobot in the Upper storeys of the Glass Domes. Digging in the Cathedral and in the prospect behind Travers continued, as did documentation and photo documentation. Caving Club members entered a free space about 10 m long while opening a fissure in a terminal cavern of the Spiral Chimney. Suchdolský Ponor – an attempt at prolongation in the upper part of the Abyss III.

6–21 Myotis

Work continued in the sinkhole of Cave No. 905B, gaining about 7 m in “Ivošek's little passage”. After penetrating the “cave-in”, a passage 15–20 m long, 1–2 m wide and up to 7 m high has opened. Prolongation work went on in the Cave No. 620 Propáštka at the Verunčina Cave, with no free space gained so far. Removal of alluvial sediments from the Cave No. 901B in the Agris Sinkhole continues since the 2009 spring flood. Caving Club members supplemented and modified a new exposition of the Speleo Museum at the Municipal Office in Vilémovice.

6–22 Devon

Principal activity focused on NW part of the Moravian Karst – the area of the Vavřínecká plošina Plateau and Pustý žleb Valley. The Okrouhlík Sinkhole was reopened: the entrance shaft was secured with shaft rings, and a large amount of rocks and unstable blocks was removed. Fieldwork continued in the 2nd sump of the Okrouhlík Sinkhole. The Dome on

the Edge and Midnight Abyss were discovered, and became the largest cave space under the Vavřínecká plošina Plateau. Watchman's chamber was connected with the bottom of the Midnight Abyss. All chimneys in the newly discovered parts were climbed, including fairly extensive upper storeys in the Chimney above the Sump. Inside the Vertical Maze, a prolongation was successful of the terminal sump of the Sandy Passage into what is probably its rising part. Chimneys in Křišťálová Cave were explored in the Pustožlebská zadržaná Cave. A more substantial advance upward was complicated by the presence of unstable walls with tectonic faults. Caving Club members participated in fieldwork of 6–17 at the Horní Suchdolský Ponor and at the Kristýnka site.

Members performed a geological survey of the Hell's Mouth in the Macocha Abyss, participated in structural mapping of the Macocha Abyss and the Punkevní Caves, and in hydrogeological research – tracer tests at the Křtinský potok Creek. The group maintains extensive publication and lecture activities.

The Caving Club organized several expeditions to the Rettenbach River Valley in the western part of the Totesgebirge Range in Austria; to the resurgence Kühlloch and to the Spiegelwandcanyon Cave, where 100 m of new continuation was discovered after passing through two sumps. Caving Club members further participated in the Kačna jama Cave expedition, an expedition to the Jasanka Cave in the Banát region of Rumania, and to the Dalovica Cave in Montenegro.

6–23 Zbrašov

Caving Club members performed a lot of nivellation fieldwork. They also participated in events organized by other Caving Clubs, for example with 7–02 Hranický kras Olomouc in the Hranická Abyss, or in an expedition to Temnica na Krase in Slovenia, with the goal of prospecting, exploring and documenting caves and caverns from the WWI period. A successful prolongation of the “detached site” Srečkotova jama was accomplished.

6–25 Pustý žleb

Principal sites of the Caving Club were, as in the past years, the Broušek Shaft, providing access to the cave system on the Sloupský potok Creek between the Sloupsko-šošůvské Caves and the Nová Amatérská Cave, as well as to the Jeskyně za šachtou Broušek Caves. Diving exploration of sumps was carried out in Nový Sloupský Corridor. The 1,500 m long Šošůvecký Corridor was discovered behind the 8th sump. The Technical Chimney and the 8th sump beneath it were documented. An attempt to lower the water level in the 8th sump resulted in a decrease of merely 10 cm after 18 hrs of pumping. Dye tracing from Wankel's Little Lake in the Sloupské Caves was also performed.

The Caving Club continued long-term exploration of the vast Dalovica Pecina Cave in Montenegro. Cave diving exploration of the Jurisko Vreljo Resurgence and the Dzerdab Abyss were also undertaken.

Jasanka Resurgence near the Svata Helena municipality in the Banát region of Rumania was discovered, gradually explored and documented. Altogether, 1,290 m of passages were discovered. The new, meandering spaces have attractive dripstone decorations. Total length of the Jasanka Cave exceeds 2 km, making it the longest cave in the Muntii Locveji Mountains. Caving Club members helped with material transport during the Kačna jama expedition, and took radio beacon measurements in the Mesačný tieň Cave in Slovakia.

2012 marked the ninth year of activities of Czech and Slovak Speleological Societies' members at the eastern coast of the Yucatan Peninsula in Mexico. Extensive discoveries of new spaces and interconnections of neighbouring cave systems were made. Interconnection of



Caves under the Broušek Shaft, Big Chimney (Photo by M. Audy)

the 19,850 m long Tux Kupaxa Cave and the 36,741 m long K'oox Baal cave resulted in a 56,591 m long cave system – the fourth longest flooded cave system in the world. In August, group members actively participated in the rescue of divers in the Zugo Cave in the Slovak Karst.

6–26 Speleohistorický klub Brno

The Caving Club continued research at the Závrt u Borovice and Novodvorský ponor sites at the Skalka Plain near Ochoz u Brna. The Caving Club participated in fieldwork of 6–12 Speleoklub Brno at the Mechový závrt, Říčánkova skála, and Hynštova ventarola sites. Entrance closure was repaired at the Cave No. 1410A Novodvorský ponor. Mapping was conducted at the Cave No. 1410B Závrt u Borovice. Members took part in bat census in the Tišnovský Karst, in a fieldwork excursion to the Strážovské vrchy Hills in Slovakia, and in several excursions and fieldwork actions in a historical underground, e. g. clearing rubbish from Stránská Skála and stabilization of caved-in part of a cellar vaulting in Žeravice.

6–27 NP Podyjí

The Caving Club prepared a proposal for a tourist path at the Silberloch mining tunnel site. Long-term monitoring of bat populations, rock block movements, and climate is performed in the Ledové sluje Caves in the Podyjí area. Climate data are collected by means of dataloggers, regularly downloaded and stored in a database of the Podyjí National Park Administration. The Caving Club organized excursions to old mining works of the Jevišov area, and excursions for the Pseudokarst Commission of the CSS, which held a meeting in the Podyjí area.

6–28 Babická speleologická skupina

The principal site of the Caving Club was the Větrná propast Cave. Fieldwork focused predominantly on parts of the cave behind Sump I and Sump III, and on digging an interconnection between Větrná propast Cave and Sinkhole No. 12 Zadní pole. Several fieldwork actions were dedicated to preparation of the Krvavý Sinkhole for insertion of shaft rings. Regular measurements of CO₂ levels and analysis of its origin were performed in the Olejníčkův komín Cave and Sedma Cave. New, detailed maps of the Babická Cave and Sinkhole No. 2 Cave were generated.

Caving Club members made three expeditions to caves in the Jánská dolina Valley in Slovakia, a research territory of the Speleo Nicolaus group.

The Caving Club runs the server www.jeskynar.cz – a portal for the publication of speleological articles and web presentations of speleology groups.

6–30 AGGA Ivančice

The Caving Club was checking mining tunnels and monitoring their affluents, carried out a general survey of the territory, and continued digging of tunnel No. 2. Further checks and affluent monitoring were performed in the Křtinské údolí Valley. Opening, securing and mapping was carried out at the Vystrčená–Olomoučany site. The Caving Club explored a graphite mining tunnel in Čučice in greater detail. Exploration of castle well and vaulted cellars at Templštejn, as well as gravitational anomalies measurement and gravimetry, were carried out at the end of the period.

7–01 Orcus

The Caving Club organized several week-long training courses of speleo-alpinism, a number of lectures and exhibitions, published articles in various newspapers and magazines, and had reports broadcast on Czech national TV and on regional television TIK Bohumín.

The Caving Club was active within the Pseudokarst Commission of the CSS, and prepared pre- and post-congress program in pseudokarst areas for the participants of the 16th International Congress of Speleology in Brno.

Map revision was finished and new spaces discovered in the Cyrilka Cave on the Pustevny-Radhošť Ridge. The length of Cyrilka increased to 535 m. Status check and new mapping were carried out in the Kněhyňská Cave on the Kněhyně Ridge. A significant pseudokarst site with a number of surface pseudokarst forms and underground entrances was localized in the Mazák area on SE slopes of the Lysá hora Mountain. Mapping of the 3rd storey of bat hibernation site Zálužná was finished, and general topographic survey of the old mining works Franz–Franz continued. Regular checks of hibernating bats and WNS spread monitoring were carried out in the caves of the Moravsko-slezské Beskydy Mountains and in abandoned mining works of the Jeseníky Mountains and Oderské vrchy Hills.

The Caving Club organized several expeditions to the Čatyr Dag Plateau, and an expedition Troms 2011 to Norway. A fissure cave system named Crimean Poseidon, with an estimated length of 400 m, was discovered during the Čatyr Dag expeditions to the Crimean Peninsula. Status check of the Emine Bojir Chasar Nižnij Cave System, photo and film documentation, and re-mapping of the upper parts of the cave were also accomplished during the Čatyr Dag expeditions. The Vsetín group continued prolongation work on the Koniar Plain in the Slovak Karst, and in the Chmelová Abyss on the Vršatec Ridge in the Bílé Karpaty Mountains.

7–02 Hranický kras

In 2012, Polish diver Krzysztof Starnawski, equipped with a dual rebreather, accomplished a breakthrough dive into the Hranická Abyss. During his dive on October 1, 2012, he reached the depth of 217 m. He lowered a probe from that level down to the depth of 373 m without reaching bottom. Then he temporarily descended to the depth of 223 m – the deepest point ever reached by a diver in the Hranická Abyss. Total currently known depth of the Hranická Abyss is 442.5 m.

The Caving Club provides diving and technical support for the Institute of Botany and Zoology of the Masaryk University in Brno for data collection and bat monitoring in dry spaces behind the 47 m deep Zubatice Sump (placement of a datalogger for temperature and humidity monitoring into the Auditorium in the Rotunda, placement of an infra-red camera near a bat entrance in the Puklinová Cave, etc).

7–03 Javoříčko

In 2009, the Caving Club organized a reunion to celebrate its 40th anniversary.

The Caving Club continued to dig in the space Behind the Plakát's Dream in the Za hájovnou Cave, where it penetrated into approximately 640 m long free space after a widening of the passageway. The space was mapped. This is the most significant discovery in the Javoříčský Karst since the 1958 discovery of Míru Caves in the Javoříčské Caves. Regular paleontology research residencies for students from the Faculty of Science in Brno took place in the cave.

7–04 Sever

The Caving Club has organized an exhibition about speleology in the Jeseník area at Vodní tvrz in Jeseník in collaboration with local museum of history and art. Exploration activities focused on the Neznámá Cave Na Pomezí, Smrčnické propadání Cave Na Pomezí, Rasovna Cave and Za hájovnou Cave near Vápenná. Mapping of the Liščí Cave and Rasovna Cave continued. In the Liščí Cave, in a place called “Television” it was possible to crawl through narrow squeezes to Kurtovy Domes, which are accessible through the Na Pomezí Cave. Interconnection of the caves gave origin to the longest cave system in the Jesenícký Karst in Rychlebské hory Mountains, over 1.6 km long.

Caving Club members participated in fieldwork in the areas of Suché doly and Demánová in Slovakia, and organized a sporting and educational excursion to the Slovenian Karst.

7–05

The Caving Club performs speleo-therapy in Mladeč–Vojtěchov. It started a campaign in support of speleo-therapy applications in health care. The playground and pool of the Vojtěchov Sanatorium were modified. Exploration of the “V Rachavách” Cave, Moukova Cave and in Mladeč continued. Continuous checks and maintenance were conducted in the “Ve štolě” Cave (speleo-therapy) and in the Kadeřínská Cave, as well as electric resistance measurements at selected sites at Třesín.

7–07 Ostrava

The Caving Club performed a long-term monitoring of water levels in the Pouťová Cave. An experiment to test a theoretical continuation of the Vykopaná Cave was conducted by pumping of 8 cubic meters of water into the cave. The water issued out of the old resurgence. Several excursions and maintenance descents were made into the Slámová sluj Cave with the purpose of checking the rigging and movement of blocks. In wintertime, Caving Club mem-

bers prospected for underground spaces in the Štramberký Karst using an infra-red camera. In the Rychlebské hory Mountains, members of the Caving Club helped with digging in the Smrčnické propadání Cave, and visited the Rasovna, Liščí díra and Roušárka Caves.

Caving Club members visited Grönlingrotta Cave in Norway and Hoverbergsgrottan Cave in Sweden. Along with 1–02 Tetín, 1–08 Týnčany a 6–02 Vratkov they participated in an expedition to the Nová Gorica area in Slovenia, where they prospected for and mapped caves and caverns from the WWI era.

The Caving Club provides annual organizational support for the international rescue service contest Rallye Rejvíz.

7–08 Sovinec

Fieldwork at the Sovinec quarry site focused on prolongation work in the Cave No. 12 (a depth of 75 m was reached at the ponor). Caves No. 4 and 5 were cleaned out and explored. Temperature was monitored year-round in all fissure caves of the quarry (average temperature 5 °C). Census of hibernating bats was performed. Small caves near the waterfall and tunnel entrances were cleaned out during springtime fieldwork at Rešovské Waterfalls and old mining tunnels in the vicinity of Tvrdkov. Regular inspection of the vaulted cellar and moat was performed at the Sovinec Castle, as well as wintertime checks of a bat hibernation site.

A turbine conduit was mapped at the Dlouhá Loučka Chateau. The passage is cca 100 m long, 3 m wide, and has many branches.

7–09 Estavela

Research activity was above all focused on mapping, with the goal of finishing a digital map of the entire Javoříčské Caves System. A mouth of new passage with attractive dripstone decorations, named Advent Passage, was discovered in Březinská Passage in the Dome at the Castle. Fieldwork in the Vojtěchovská Passage focused on the cave-in area in the Olomoucký Dome. Exploration of Ivošovy Caves continued. Main fieldwork in the Central Storeys concentrated on search for so called Panoš' Corridor, hypothetical vast spaces between the Talus Dome and Paničtí díra Cave).

Research of pseudokarst and historical underground in the Svitavy area continued, particularly exploration and mapping of an old graphite mining tunnel at Svojanov.

Some group members collaborated with members of 7–05 on research of cave system in the Rachava Massiv. During the research, polygon was measured with the DistoX instrument and data processed with PocketTopo software.

7–10 Hádes

The Caving Club explores mainly mines and historical underground. It performed a survey of the mining district Andělská Hora and Suchá Rudná for the company DIAMO s. p., a survey of old mining works in the cadastres Zlatohorsko and Příčná hora Mountain, and mapped the mining works "Srnc". The Caving Club annually organizes an event "Hádesácké lano", with fieldwork at different sites.

7–14 Ludmírov-Štamberk

The Caving Club dug through into a cave 18 m deep and 55 m long at the Srdečko site. A slate mining tunnel was explored in the Raková municipality. Dye experiments were conducted on the underground stream of the Ponikva River. Fieldwork at a site near St. Nicholas continued as well.

THE MOST IMPORTANT DISCOVERIES IN THE CZECH REPUBLIC IN 2009–2012



Caves under the Broušek Shaft, a rocky bridge in the Pondělní Dome (Photo by Z. Motyčka)

Cave systems connected to the underground flow of the Sloupský potok Creek – new explorations and discoveries in 2009–2012

Tomáš Mokřý

Members of the CSS achieved new discoveries in the Jeskyně pod šachtou Broušek Caves, a part of the Amatérská Cave in the Moravian Karst. The caves, more than 5,100 m long, are located between the Amatérská Cave and the lower level of the Sloupsko-šoňuvské Caves. In 2009, exploration started at the 9th sump in the Passage to the Gulley. This sump was discovered back in 2000, but access to the sump is very muddy and narrow in places. Water level in this sump decreased by about 1 meter and enabled access to the space behind without any diving equipment in winter of 2008. During the winters of 2008 and 2009, a complex affluent system about 60 m high and 400 m long was found, which is probably well connected with the old outflow parts of the Sloupský potok Creek at the Pustý žleb Valley.

In July and August 2009, two substantial pumping attempts were made to bring down the water level at the 8th sump, located 700 m from the entrance of the Caves under the Broušek Shaft. A 1,500 m of free space was discovered beyond this sump in 2008, but there are low sections in the sump and diving there is very dangerous. Research beyond the sump has to continue, but easier access to these parts is needed.

Exploration behind the 2nd sump started in 2010. These parts were discovered in 1989, but the passage itself is not well known. The new sump (No.11) was found close to the 1st sump. It probably leads to a complex groundwater system between the 2nd sump and the source of the Sloupský potok Creek. The 3rd sump is crucial for understanding the underground flow of the Sloupský potok Creek. Year-round high water level does not allow pumping to bring down the level at the 8th sump. Systematic research of water levels commenced at the Šošůvecký Corridor. Throughout 2010, accurate measurements of altitudes between the hydrological objects were taken, and temperature, chemical composition and water conductivity were measured as well. These data are important for interpretation of the complex groundwater situation of these caves.

In 2012, a new project was started to bypass the 8th sump in the Šošůvecký Corridor. Several pumping attempts were made in 2011 to bring down water level in the sump, but all of them were unsuccessful. A complex project was prepared to tunnel above the 8th sump, because other ways how to penetrate into new caves behind this sump proved impossible.

A general hydrological research of the Amatérská Cave continued in 2012. We hope that it will yield further interesting information contributing to new interpretation of the complex hydrological situation in the outflow parts of the Sloupský potok Creek.

References:

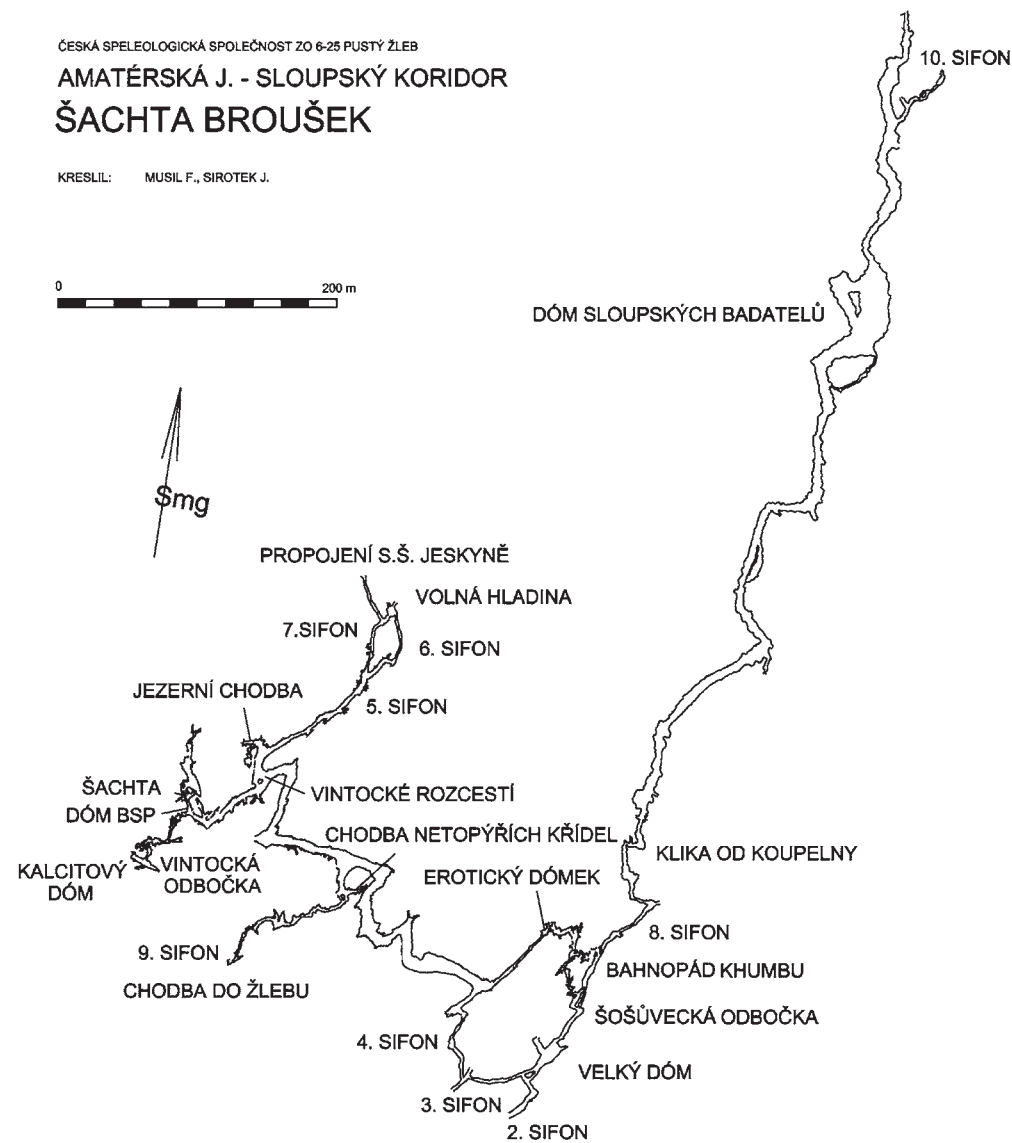
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ČESKÁ SPELEOLOGICKÁ SPOLEČNOST ZO 6-25 PUSTÝ ŽLEB

AMATÉRSKÁ J. - SLOUPSKÝ KORIDOR ŠACHTA BROUŠEK

KRESLIL: MUSIL F., SIROTEK J.

0 200 m



A general map of the Jeskyně pod šachtou Broušek Caves

The Okrouhlík Cave – a discovery of the biggest cave space under the Vavřínecká plateau, an important contribution to the topic of drainage of the SW part of the Moravian Karst

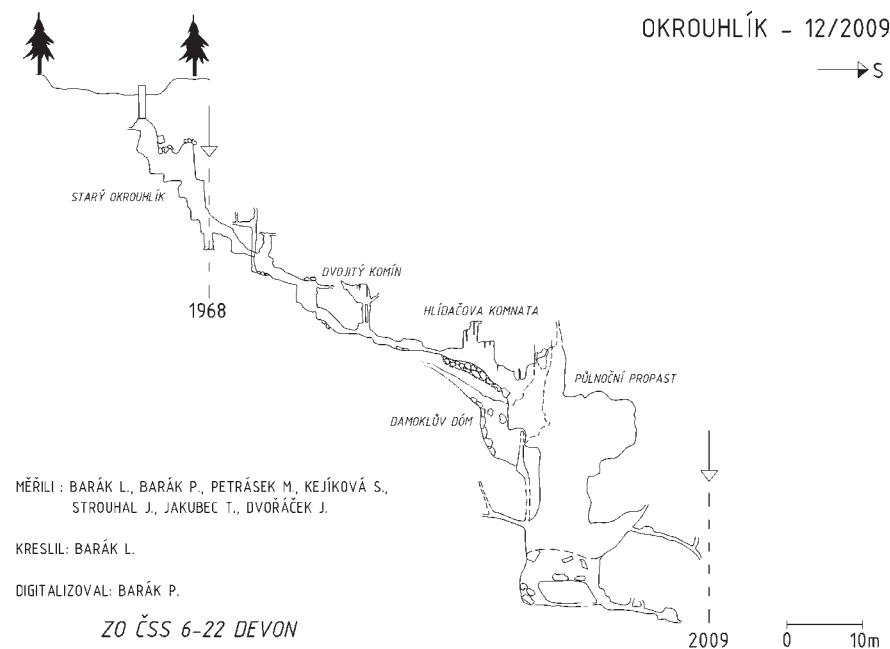
Petr Barák

The Caving Club 6–22 Devon started research of the Okrouhlík Cave in the Moravian Karst in May 2008. During the 2009, members of the group explored a new 183 m prolongation of the cave. The cave was deepened down to 72 metres from original 18 metres of depth. Půlnoční Abyss, the biggest abyss ($17 \times 11 \times 36$ m) under the Vavřínecká plateau, was explored. This cave is very important in the matter of the west tributaries of the Amatérská Cave – the longest cave system in the Czech Republic.

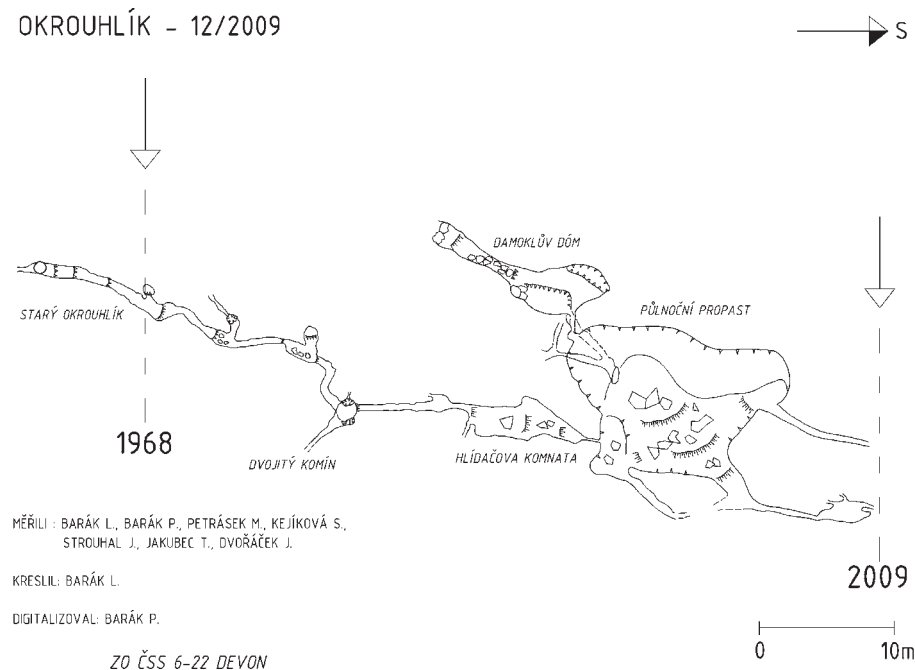
Direct distance from the Okrouhlík Cave terminus to the Constant resurgence in the Amatérská Cave is 1200 m. Denivelation between the two points is 75 m. This is an important contribution to the topic of drainage of the Vavřínecká plošina Plateau, and could lead to further prolongation of the Amatérská Cave system perhaps by several kilometres.

The Devon Caving Club explored the new 219 m prolongation of the Okrouhlík Cave during 51 fieldwork actions in 2010. The Dome on the Edge, with dimensions of $10 \times 13 \times 5$ m was the largest cavity. Maximum depth was 81 metres under the Vavřínecká Plateau.

A geologically important discovery of tectonic contact of limestones with non-karst rock was made during the research. The total length of the cave increased up to 461 metres in 2012.



Full blown section of the Okrouhlík Cave, a state on December 2009



Ground plan of the Okrouhlík Cave, a state on December 2009

References:

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- Knížek M., Bruthans J., Kamas J., Audy I., Kahle V., Lejska S., Dostál I. (2010): Nové poznatky o proudění suchdolských vod v Moravském krasu na základě stopovacích zkoušek. – *Speleofórum 2010*, 29: 136–143. Praha.

New Discoveries in the Za Hájovnou Cave (Javoříčko Karst, central Moravia)

Miroslav Vaněk

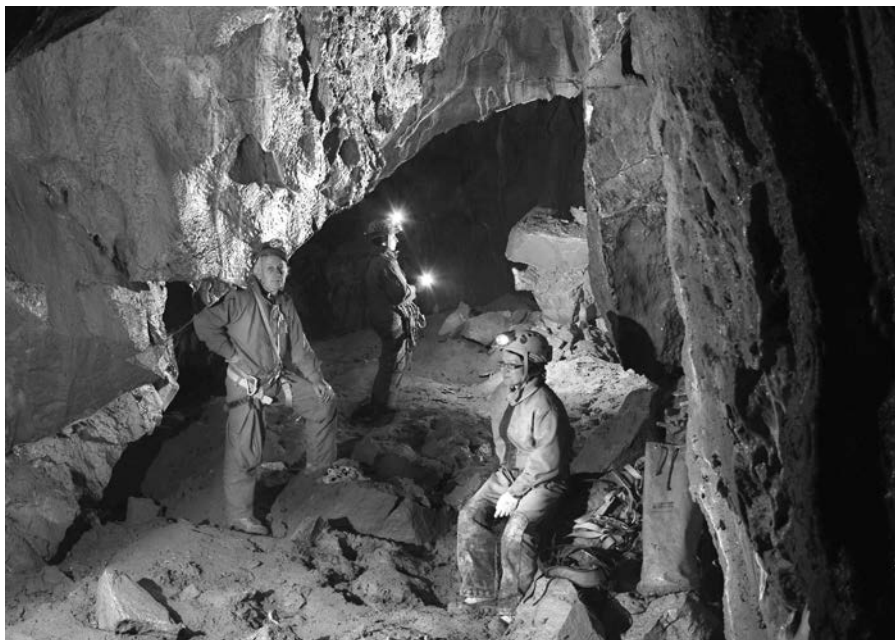
The Za Hájovnou Cave is located in the Javoříčský Karst, on a hill called Paní Hora Mountain (elevation 485,5 m). Investigations in the Cave have been carried out since 1983 by the cavers of the Caving Club Javoříčko. Three significant discoveries were made during the exploration of this cave.

Velikonoční jeskyně Cave (–60m) was discovered in 1997. A horizontal passage with rich dripstone decorations, named Birthday Passage was discovered in 2000. The passage terminated in a small chamber named Plakát's Dream, which continued into a low passage entirely filled with sediments. Sediment mining in the passage commenced in 2006, and a free space $10 \times 2 \times 5$ m was discovered. Further digging led to the greatest discovery in the cave's history in July 2011. The cavers discovered the Steamboat Dome, $15 \times 15 \times 7$ m with gorgeous dripstone decorations. A passage from this dome led into a 10m deep abyss, and from there into a complex of passages and chimneys and to the largest dome in the newly discovered space, 30m long, 13m wide, and 17m high. The total length of the newly discovered space is 641 m.

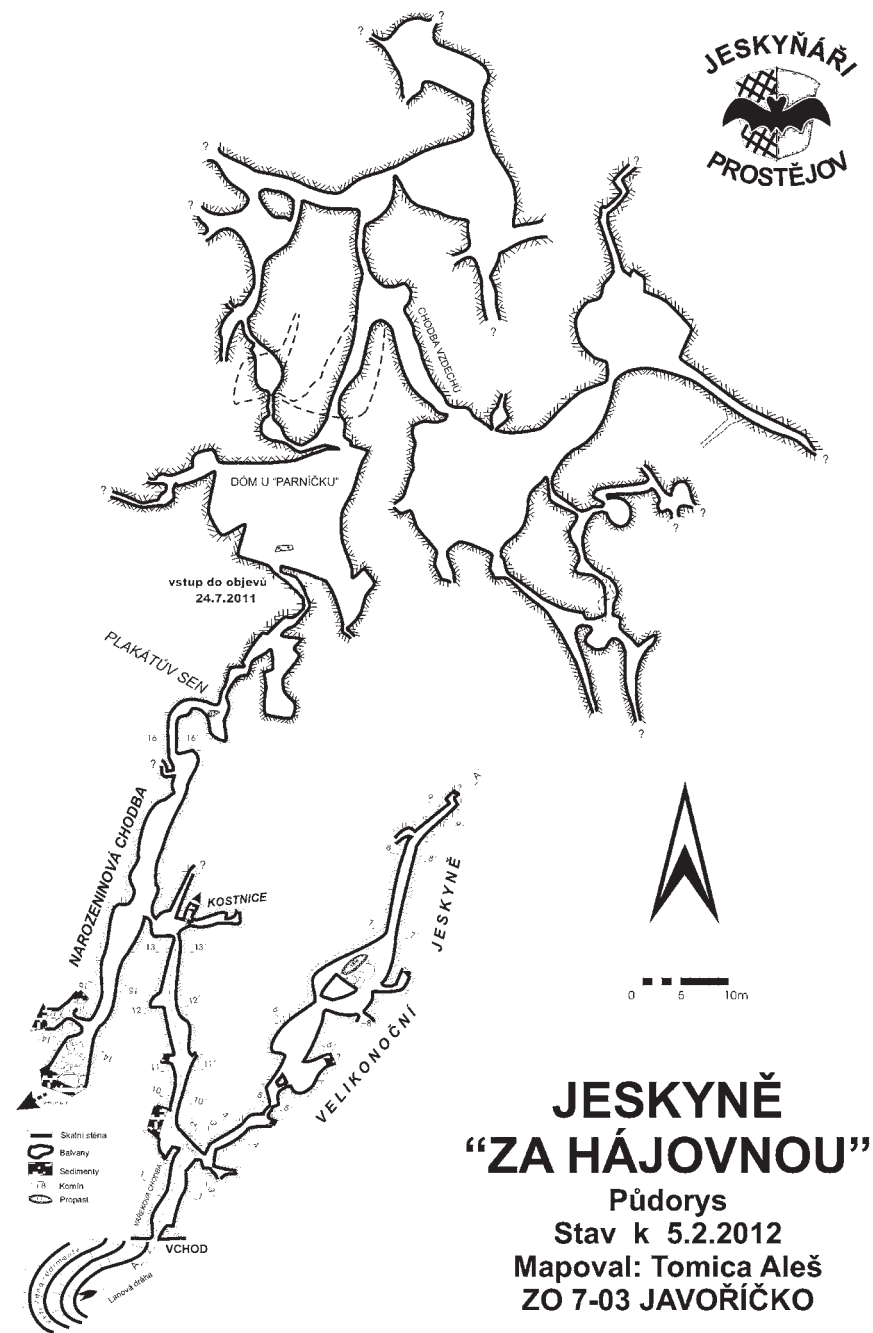
The new spaces offer promises of future continuation and likely represent the most important discovery in the Javoříčko Karst during the last 50 years.

Reference:

Vaněk M. (2012): Nové objevy v jeskyni Za Hájovnou v Javoříčku. – *Speleofórum*, 31: 58–61. Praha.



Passage in the chasm (Photo by J. Ircing)



The za Hájovnou Cave, state on February 5, 2012

New discoveries in the Petzold Caves in the Bohemian Karst

Zdeněk Mengler, Luděk Vlk and Mojmír Závíška et al.

Strongly karstified section of the Lower Devonian Kotýs Limestone was quarried out in Petzold's Quarry, located on the left bank of the Berounka River between the Srbsko and Karlštejn municipalities. Members of Caving Clubs 1–04 Zlatý kůň and 1–11 Barrandien began systematic exploration of six small caves, remaining in the eastern part of the quarry. The caves are of phreatic morphology, formed mostly by corrosion in the mixing zone of the adjacent Berounka River flood-water and karst water.

The Petzold's Quarry contains a few important caves like the V suti Cave (29 m long), the Skulina Cave (105 m long), the 16 m long Petzoldka Cave, and the 11 m long Komín se třemi vstupy Cave. The whole system was named the Petzold Caves after interconnecting of the above mentioned caves. A lot of fieldwork was organized in 2011 to prolongate this system, and to clean it of soil, sand and stones. Beautiful sites with small karst decorations were found. In 2012, further exploration was focused on two new caves opened through vents of warm air flowing out and forming ice flower around the silts. The Večerní Cave and Klíčová Cave were further prolonged and interconnected. Additional fieldwork in the Petzoldka Cave and



Petzold Caves as of December 31, 2012

Komín se třemi vstupy Cave opened a new connection to the Skulina Cave. Other activities focused on the new upper part of the quarry wall and the new Za jívou Cave. This cave was interconnected with the Petzoldka Cave as well. The total length of the system was 658 m at the end of 2012.

References:

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 Mengler Z., Vlk L., Závíška M. (2012): Objevy v Petzoldových jeskyních v roce 2011. – *Speleofórum*, 31: 47–49. Praha.
 Vlk L., Závíška M. (2013): Nové průzkumné práce a objevy v Petzoldových jeskyních. – *Speleofórum*, 32: 31–33. Praha.

Prolongation in the Na Javorce Cave in the Bohemian Karst in 2009 and 2010

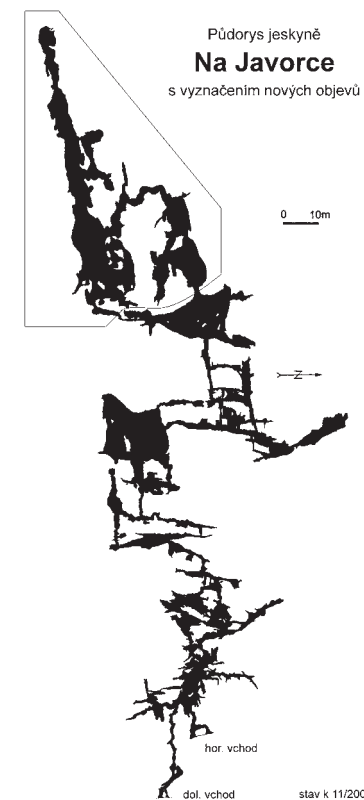
Jiří Dragoun, Jiří Novotný and Jiří Vejlupek

New spaces in the cave of essentially fissure character near the historical Karlštejn Castle are discovered every year. During 2009, a new space was discovered and named Stínadla. It is formed by a number of small passages, chimneys and abysses. The cave has beautiful dripstone decorations, such as curtains and helictites. The most robust and tallest chimney, located above a place called Bivouac, was climbed up to the height of 50 m where it is blocked by stones.

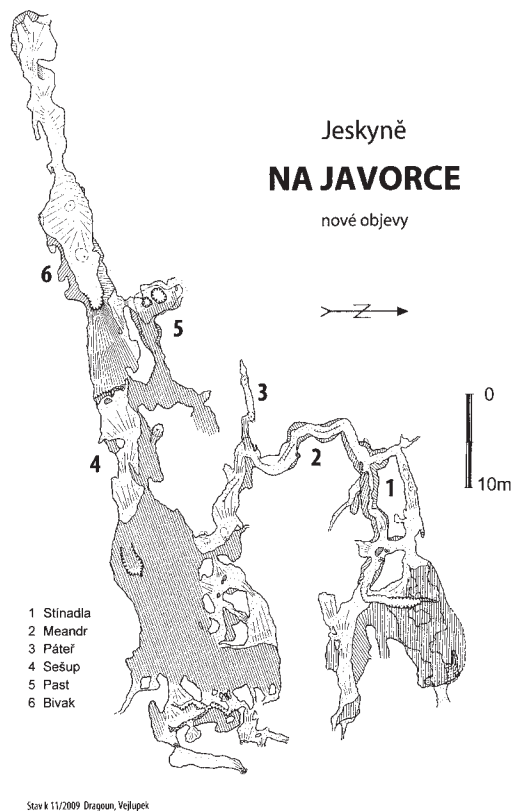
Through the Above the Bivouac Chimney, the Žbluňk Abyss was entered in 2010. There are two lakes (4 × 1.5 m and 2 × 1.5 m) on its bottom, with depth of 9 m measured by plumb line. The cave was extended up to the length of 1,634 m, the depth was 120 m plus 9 m measured below the water level of the lakes. The Na Javorce Cave became the deepest cave in the Bohemian Karst in 2010.

References:

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 Dragoun J., Vejlupek J., Novotný J. (2009): Překvapení pod Javorkou. – *Speleofórum*, 28: 33–35. Praha.
 Dragoun J., Vejlupek J., Novotný J. (2010): Jeskyňe na Javorce – Stínadla. – *Speleofórum*, 29: 28–33. Praha.



Na Javorce Cave, Bohemian Karst – plan with location of new discoveries, the state on November 2009 (Mapped by working group Javorka, drawing by J. Vejlupek)



Na Javorce Cave, Bohemian Karst, new discoveries – plan, the state on November 2009 (Mapped by working group Javorvorka, drawing by J. Vejlupek)

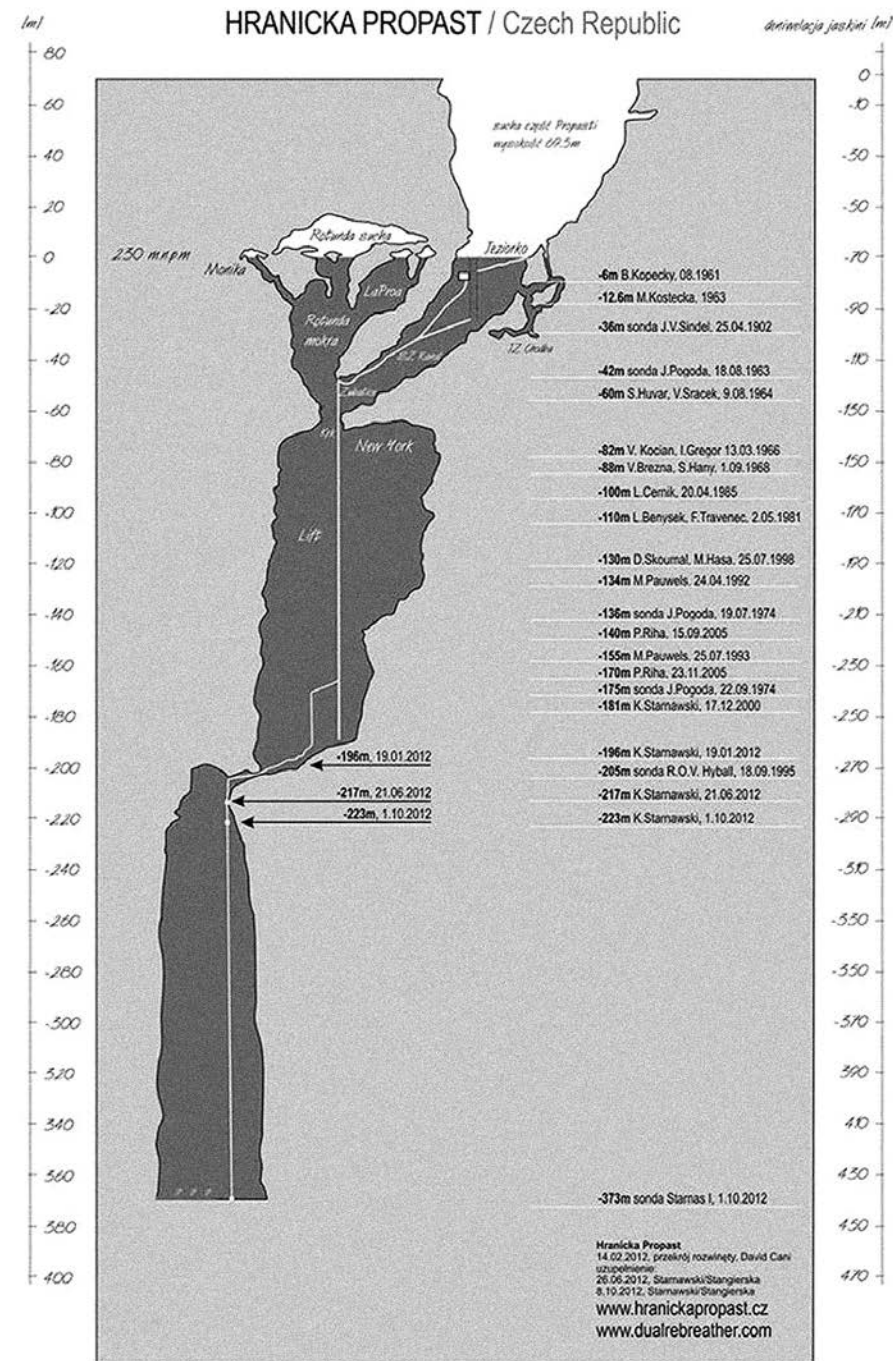
The Hranice Abyss: a prominent progress in exploration in 2012

Libor Čech

Polish diver Krzysztof Starnawski has been participating in the exploration of the Hranice Abyss since 1997. He reached the depth of 217 m during his dive in the Hranice Abyss on October 1, 2012. From this point, he let down a probe to the depth of 373 m without reaching a bottom. Then, he shortly descended to the depth of 223 m – the deepest point ever attained in the Hranice Abyss by a diver. The depth reached by the probe (373 m) indicates that, after adding the depth of the dry part of the abyss (69.5 m), the total known depth of the Hranice Abyss is 442.5 m. The diver used a rebreather for his 8 hours and 45 minutes long dive. Other attempts to measure the depth of the flooded part of the Hranice Abyss are being planned.

Reference:

Čech L. (2013): Hranická propast – od historie k výraznému pokroku v průzkumu v roce 2012. – *Speleofórum*, 32: 5–9. Praha.



A section through the Hranice Abyss, a situation after the dive of October 1, 2012 (Author D. Cani)

THE MOST IMPORTANT DISCOVERIES ABROAD



Cueva Muchimuk, Světlna Dome (Photo by M. Audy)

Tepui — speleological expeditions to the quartzite caves of Venezuela Sistema Brewer – the longest quartzite cave of the world

Marek Audy and Charles Brewer-Carías and Richard Bouda

During 2009, four expeditions were sent into the Guiana Highlands table mountains (tepu) in Venezuela under the aegis of the SVCN (Sociedad Venezolana Cientos Naturales). Cavers from Venezuela, the Czech Republic, Slovakia, Croatia, Canada, the United States and Austria participated in these international expeditions. A revision of the main polygon of the Crystal Eyes Cave (Cueva Ojos de Cristal) was completed on the Roraima tepui.

The international team discovered the Colibrí Cave, formed by a labyrinth of old dusty passages. The scientific activities on Churí tepui focused on dating of opal biospeleothems. Using the Th/U method, the age of a sample 10 cm in diameter was determined to be 408,000 years (Lundberg and Brewer 2009). Photo sensitive microorganisms and photokarren from the portal of Cueva Brewer were also researched (Lundberg and McFarlane 2009).

An important continuation from others hydrological systems was found on Churí tepui. Sistema de la Araña (consisting of the caves Cueva Araña, Cueva Cortina and Cueva Eladio) has reached the length of 4 km.

At the end of the expedition, Czech-Slovak team has found entrance into a new cave. A gigantic, several kilometers long tunnel continued under the entrance abyss. The gorgeous, spacious cave was named Cueva Muchimuk, after the name of a legendary pterodactyl hiding in a cave on the Chimantá tepui. Cueva Muchimuk has later connected the caves Cueva Brewer, Cueva Diablo and Cueva Colibrí. The cave system was named Sistema Brewer. With its total length of 17.8 km, it has become the biggest quartzose sandstone cave in the world.

SISTEMA BREWER longitud: 17,8 km

CHURÍ TEPUÍ - MACIZO CHIMANTÁ
ESTADO BOLÍVAR, VENEZUELA

Exploración y mensuración:

Ch. Brewer Carías, Ch. Brewer Capriles, F. Mayoral,
A. Tovar, L. A. Carnicero, F. Tamayo, A. Chumaceiro,
E. Wallis, A. Chacón, C. Barrio, R. Guerrero, F. Delgado,
J. Brewer, B. Williams, V. Marcano, J. Mesa,
I. Elorco, H. Bior, SVCN/Grupo Espeleológico de la Sociedad
Venezolana de Ciencias Naturales, Caracas

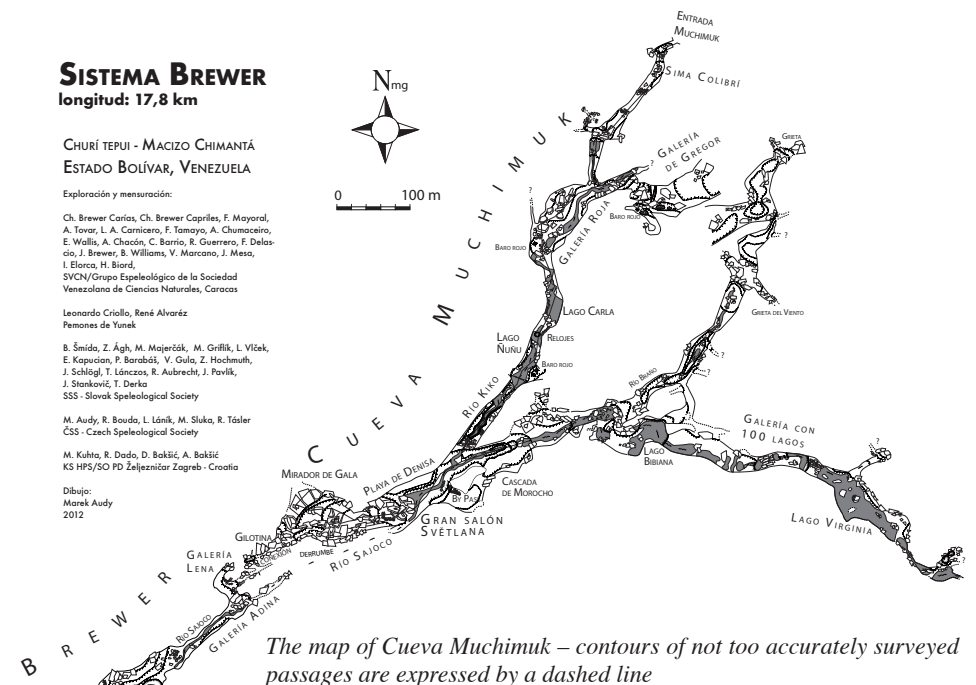
Leonardo Criollo, René Alvaréz
Pemones de Yunek

B. Šmída, Z. Ágh, M. Majerčák, M. Griflik, L. Vitek,
E. Kapucian, P. Barabás, V. Gula, Z. Hochmuth,
J. Schlägl, T. Linczós, R. Aubrecht, J. Pavlik,
J. Stanković, T. Denko
SSS - Slovak Speleological Society

M. Audy, R. Bouda, L. Látník, M. Sluka, R. Táler
ČSS - Czech Speleological Society

M. Kuhta, R. Dado, D. Bakšić, A. Bakšić
KS HPS/SO PD Željezničar Zagreb - Croatia

Dibujo:
Marek Audy
2012



The map of Cueva Muchimuk – contours of not too accurately surveyed passages are expressed by a dashed line

References:

- Audy M., Tásler R., Brewer Carías Ch. (2008): Tepui 2007 – Sistema de la Araña. – *Speleofórum*, 27: 44–49. Praha.
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New discoveries in the underwater cave systems in Riviera Maya, Mexico in 2009–2012

Zdeněk Motyčka and Daniel Hutňan

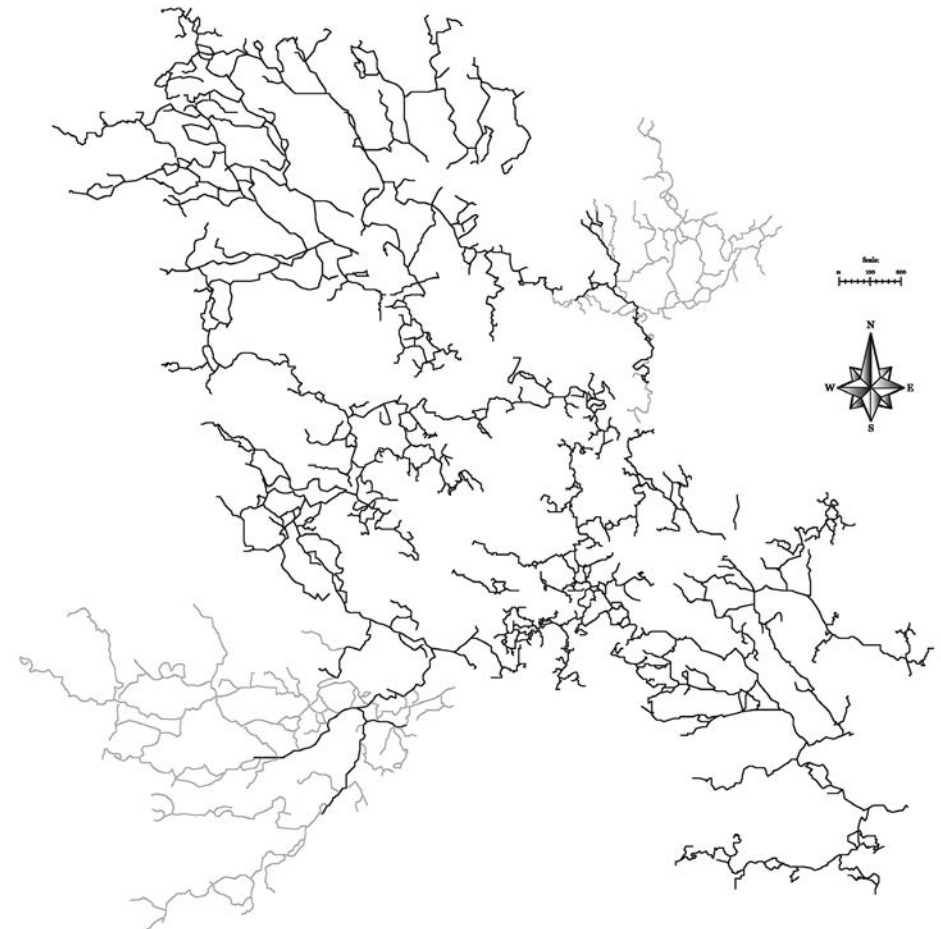
Detailed exploration and remapping of the Tux Kupaxa Cave System, which is located near the south end of the K'oox Baal Cave, was the main goal of the expedition in 2009. Cenote Tux Kupaxa was discovered in 1998, but unfortunately, no information or map regarding the cave length was preserved. Another cenote located nearby, the Sac Xiquin, was soon connected to the Tux Kupaxa and fully mapped. 12,828 m of passages were mapped and 2,017 meters of new space were discovered within a single month. The 15,138 m long Tux Kupaxa Cave became the eighth longest underwater cave system in the Yucatan.

Two more expeditions took place in 2010. The first expedition has discovered ten new cenotes in the area south of the well known K'oox Baal Cave, owing to a forest fire which had destroyed a large part of the jungle the year before. Our attention was at first directed to an easily accessible cenote, located approximately 200 meters from the road, which begins as an expansive dry cave, where we have found the remains of charred palm leaves left after the first visitors. We named it Banana Candle Cave (Ha'a Kak) due to their similarity to banana leaves. The first two exploring groups have gradually discovered 2 km of passages and dived into the Muk Wakal, another one of the new cenotes. The third group initially tried their luck in a beautiful, large cenote, but when they failed to find the continuation of the entrance dome, they carried their equipment to a more distant, smaller cenote located right by the path. They named it Under the Path Cave (Kot Be) and gradually discovered 1.5 km of passages there. We were able to connect the two above mentioned caves to the known K'oox Baal Cave System the next week. In the meantime, we have discovered additional 1.5 km of space in the cenote White man (Sac Xib), located the farthest away from all the new ones, and again were able to connect it with the K'oox Baal. Since the biggest one of the 10 new found cenotes containing a big lake did not lead to the desired continuation, we were also turning our attention to the remote but beautiful complex of three cenotes with several lakes and long dry sections. We have decided to name it the Jaguar's Paw (Balam Tsa'l) because of the number of jaguar's paw prints left in the dust. The very first dives brought discoveries of unexpectedly large halls with beautiful dripstone sceneries. A connection of the new cave to the cenote Kot Be meant that the Balam Tsa'l also became part of the K'oox Baal. We have spent the entire final week of the expedition gradually discovering and surveying additional kilometres of passages and giant domes, at times reaching 8 m height and over 20 m width. We have discovered a total of 3.6 km of passages in the Balam Tsa'l, bringing the total length of the K'oox Baal system to 28.6 km.

The second expedition in the fall was a miniexpedition of two members, whose main goal was to find connection between the K'oox Baal Cave System and the Tux Kupaxa cenote located nearby. The pair began with a detailed survey of the sections discovered during the spring between Kot Be and Muk Wakal. They were able to penetrate through a set of low crawls

to the west, into a larger continuation. They discovered and mapped 2.3 km of new space, bringing the total length of the K'oox Baal to more than 30 km. The total reached 30,933 m. Although the newly discovered passages were pointing towards the Tux Kupaxa Cave System, the connection between the cave systems was not yet found.

Two expeditions took place in 2011. The first pair turned their attention to the parts that have been discovered in fall 2010 with a clear objective – to find the connection between K'oox Baal and Tux Kupaxa, because according to the map they were located within 20 meters of each other! They were trying their luck from both sides in turns, finding over 1 km of new passages, but the connection eluded discovery in the maze of narrow channels and crawls. The second group started their exploration in the cenote Kot Be, where many undiscovered



A map of the K'oox Baal Cave System, situation at the end of 2012 – grey-marked parts were discovered in 2012 (surveyed and drawn by CSS and QRSS members)

branches could be found in the northwest direction. Gradually they discovered that year's first hundred meters of new passages. The third pair headed to the cenote Balam Tsa'l, where a massive, nearly 4 km long passage was discovered the year before. The site promised many new continuations. During the first three dives they found more than 500 m of passages on the western side. However, the passages began to look more like tumbled domes, which were necessary to swim over or around, which unfortunately was not always possible. The same character was known from virtually all tunnels headed west, which suggested the possibility of extensive fracture zone that lays in the NW–SE direction along large part of the cave. For that reason, further exploration in this direction had little value. In the course of the second week, the first pair kept up extreme dives on the edge of human abilities in order to achieve the connection between K'oox Baal and Tux Kupaxa. Alternately they dove from the cenotes Muk Wakal, Tres Estrelas and Side Mount and squeezed through many other straits, but sadly without success. The second group completed survey of the northwestern part under the cenote Kot Be and moved to join the third group at the cenote Balam Tsa'l. Together they explored and mapped all unexplored branches from the main passage. Altogether they added additional 2 km of passages to the length of the cave, mainly flat channels, the general shape of local caves, but rich with flowstone decorations in places. The last week of the expedition, the first pair resigned on finding the connection, and focused all their efforts on the southernmost part of the K'oox Baal Cave System, where we left off a year ago on the doorstep of new unknown tunnels and domes. Considerable distance from the entrance now required the use of diving scooters and additional tanks. From the last point reached in 2010, massive passages continued for almost 500 m in almost an identical profile, before we were forced to return due to the time restraint. The same length was also gained in a substantial left branch, but the end was not reached there either. The most interesting thing about these newly discovered passages was their very unusual SW to SSW general direction. Additional half kilometre of passages was discovered in various branches and parallel passages. Several dives were also devoted to the exploration of a significant passage extending out towards the well known passages of Tux Kupaxa. Nearly 300 meters of passages were discovered there. The exploration ended in a narrow but high meandering passage that eventually led into a fissure. Due to the complicated access we did not continue exploration of this passage. As it later turned out this passage was significant for further exploration. During the three week's expedition we discovered and mapped 7 km of new space, and the total length of the K'oox Baal reached 36,634 m.

The second expedition also tried to find the connection between the systems of K'oox Baal and Tux Kupaxa. During the 12 days, we gradually discovered and mapped 1,460 m of passages in three new cenotes – Glasses (Tan Ich), Passion (Numya) and Sac Ktu Cha. They were mostly again small, narrow channels and crawls, but some places were large, with beautiful decorations. Finally, on December 9th, we connected the 19,850 meters long Tux Kupaxa Cave and the 36,741 meters long K'oox Baal Cave into one cave system! Thus originated the 4th longest underwater cave system in the world with total length of 52,591 meters.

In 2012, two expeditions were organized as usual. There was a 1,300 m long cave located in the cenote Chun Che Chen east of the K'oox Baal Cave System. As in the case of Tux Kupaxa, the Chun Che Chen was first discovered in 1998. As we did not have maps of the cave, we decided to measure again the entire polygon and draw a map of the area. Another reason for re-mapping of the entire area of the polygon was its location less than 100 meters from the end of the K'oox Baal Cave. During mapping we found extensive sequences in several different parts of the cave. Three large tunnels in the newly discovered section led north, and inside we gradually discovered 5 km of new, very rugged and diverse space! Great halls alternated with narrow constrictions, austere rock tunnels with chambers richly adorned by flowstone decorations. During the following week after several dives in extreme constrictions we finally managed to connect the Chun Che Chen to

the K'oox Baal, thus increasing the length of the K'oox Baal to over 60 km! The remaining time of the expedition was devoted to exploration in the southern and southwestern parts, first discovered in 2010, where there were still great passages left undiscovered even after the discoveries of 2011. The only complication was the great distance from the entrance leaving limited time for survey due to the transportation of large quantities of cylinders. Despite that we discovered additional 2 km of new huge tunnels during five dives and the length of the K'oox Baal reached 64,600 m! At the end of the expedition we organized several trips into the jungle with the goal of finding a new entrance, which would facilitate an easier access to the southernmost part. After a few days we found a great cenote with several lakes, and after the first dive in one of them, we reached the K'oox Baal without a problem. We decided to call this cenote Shaman EK after a sign on the corner of the property. The second expedition started survey in the cenote Shaman EK, the closest entrance to the southeast part of the cave. More than a 3 km ride over a very badly maintained road greatly prolonged the transport of diving materials. The initial underground exploration through large tunnels provided first kilometers of discoveries. Unfortunately the tunnels abruptly ended and we had to continue systematic survey of all branches. The idea of easy continuation south was quickly reduced to a slow crawl through narrow passages. The attempts on the north side ended the same way. Free passages continued only westward to 1.5 km from the cenote Shaman EK. In the end, we were able to discover another 9,000 m and two new cenotes during the two weeks. The total length of all the underwater parts of the cave increased to 73,600 m. Including some dry sections, the total length of the K'oox Baal System reached 75,140 m!

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K'oox Baal Cave System (Photo by R. Husák)

The Nyx and Aither Abysses (Maganik Range, Montenegro)

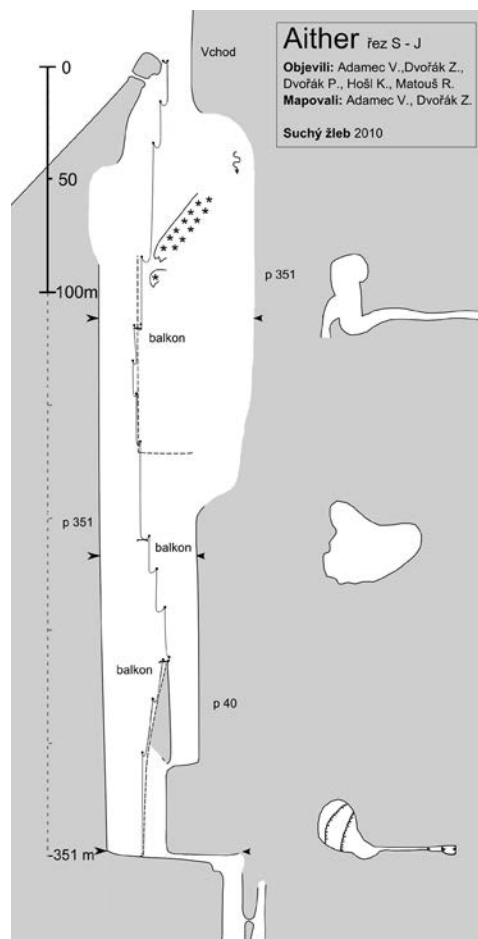
Zdeněk Dvořák

A new series of expeditions of the Suchý Žleb Caving Club to the Maganik Mountains in the central part of Montenegro started in 2009. Two new caves were discovered during two expeditions, both of them significant because of the depth of their shafts. The first one, the Nyx Abyss, discovered in 2009, reached the depth of 622 m with the total polygon length of about 1 km. The main shaft of the system (having the same name) is 429 m deep and reached the 10th–11th position among the world's deepest verticals. The uncertain position is caused by two different depth values reported for the Bojim Bojim Shaft in the Medúza Abyss – 420 or –450 m.

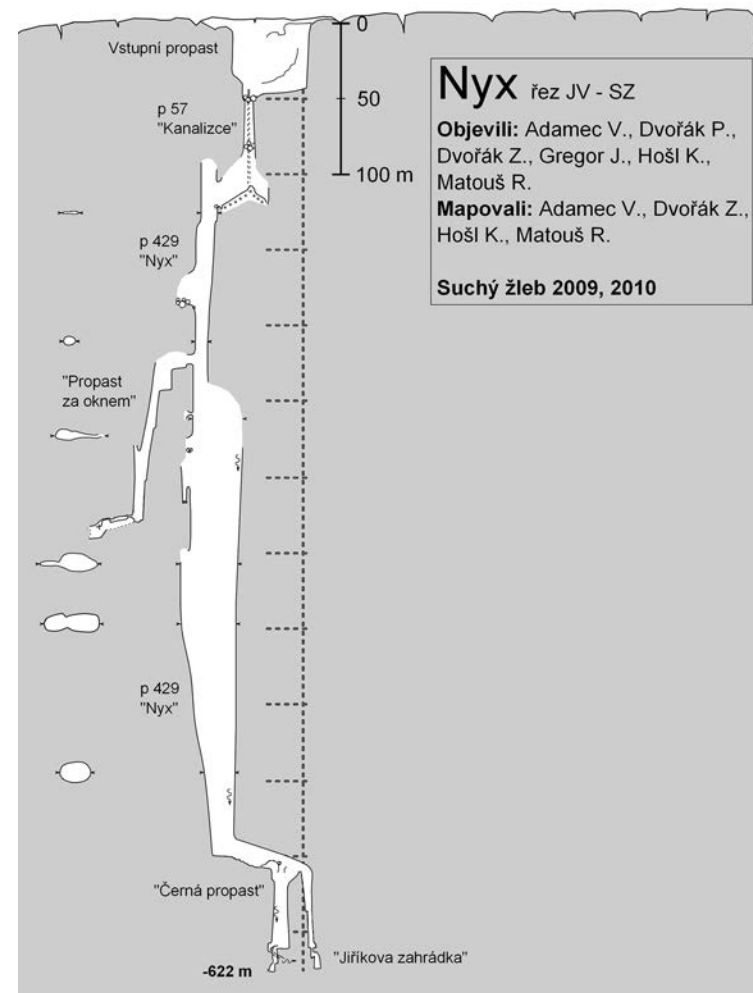
The Entrance Abyss in the Aither Abyss falls directly to 351 m and after adding a short prolongation, which has not been surveyed yet, the total depth can be estimated at 380 m.

Reference:

Dvořák Z. (2011): Nyx a Aither. – *Speleofórum*, 30: 82–87. Praha.



The Aither Abyss, N–S cross section



The Nyx Abyss, SE–NW cross section

“Czech” cave over one kilometre deep (Maganik Range, Montenegro)

Václav Adamec, Vít Baldík and Zdeněk Dvořák

After many years of activities in the Orjen area in Montenegro, we moved further inland to the Maganik Range near Nikšič, to a close proximity of the Mrtvice Canyon. The 2011 and 2012 expeditions yielded additional results.

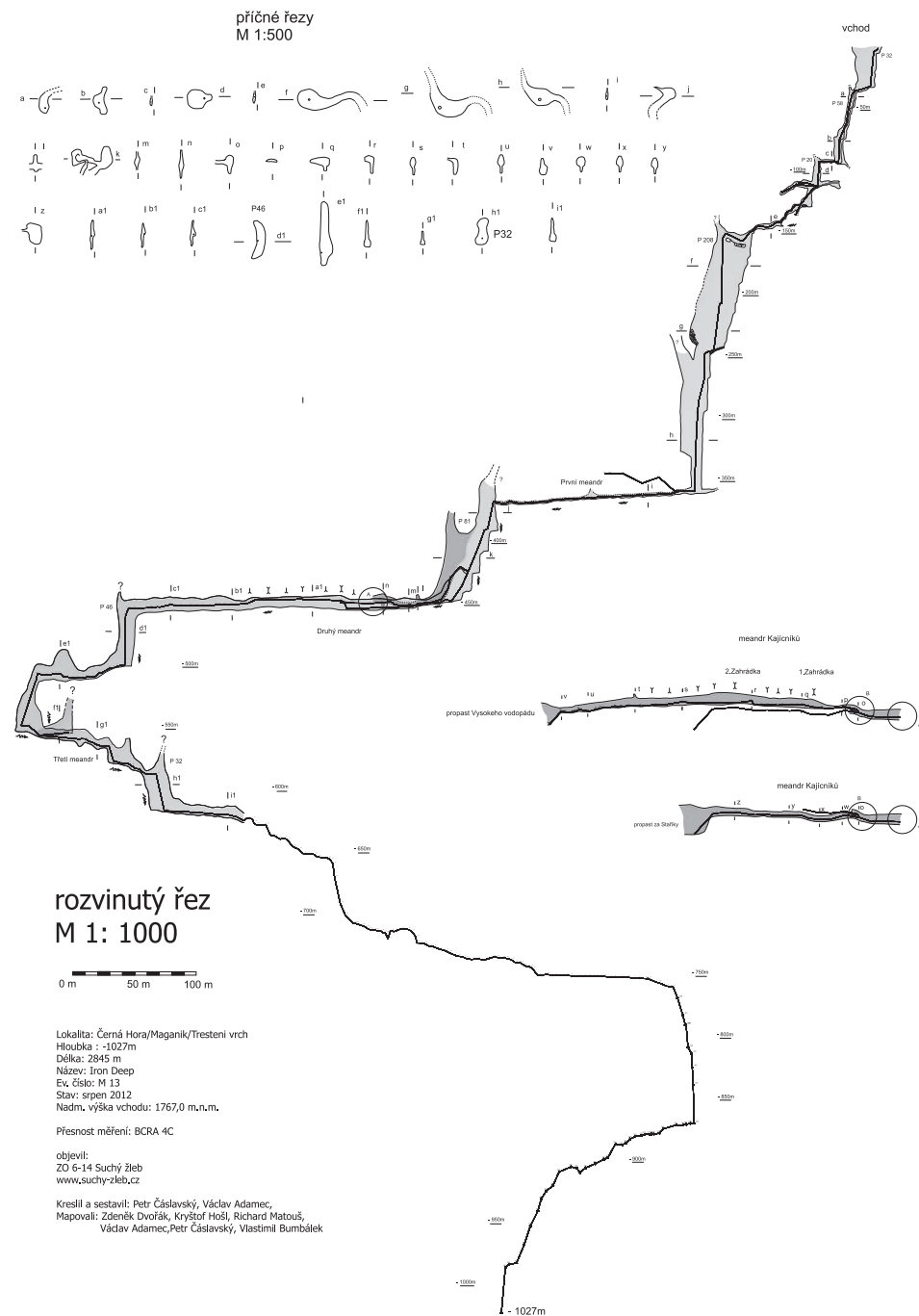
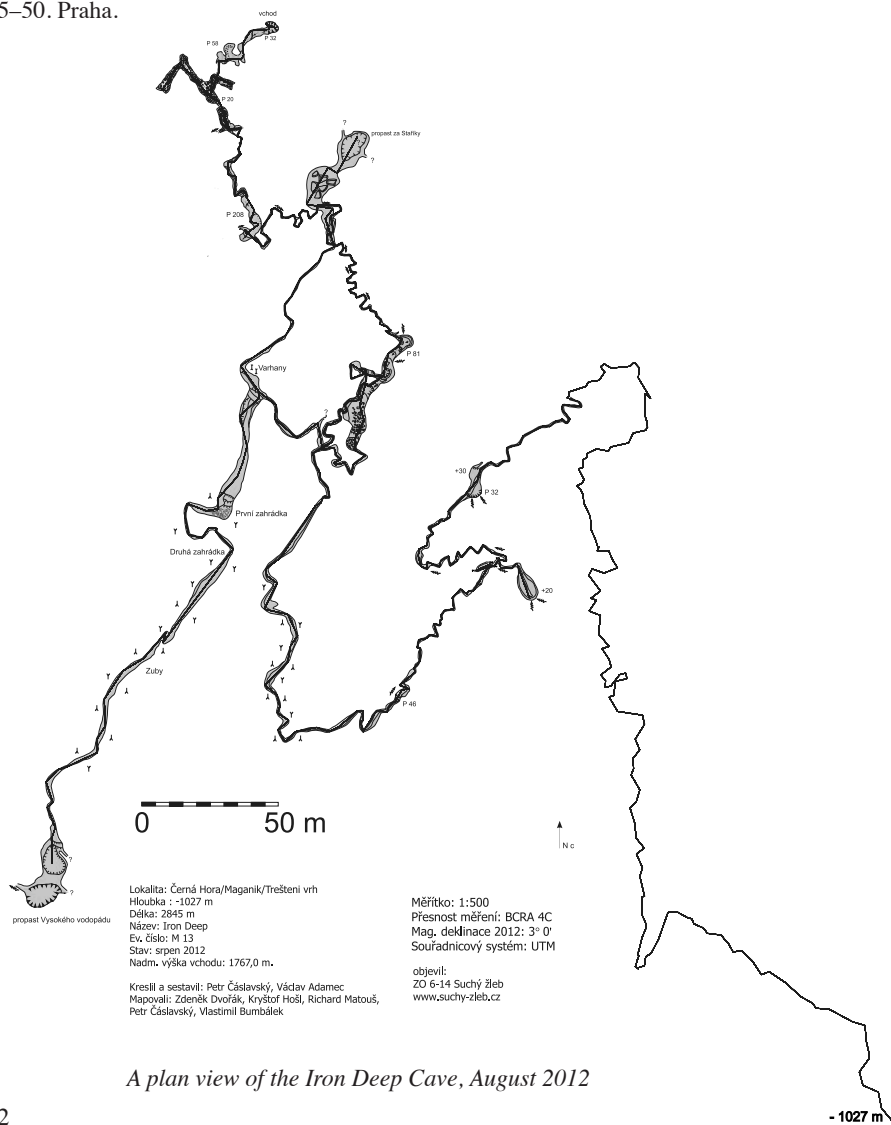
The **Pod medvědicí Abyss**, found at the Trešteni Hill in 2010, is a typical vertical shaft in limestone (–200 m). For the first few dozen metres, the cave follows relatively narrow cracks. Then, it gradually widens into a regular throat of a giant meander terminated by a high firm cone. A short distance behind it, the meander narrows into an impenetrable fissure.

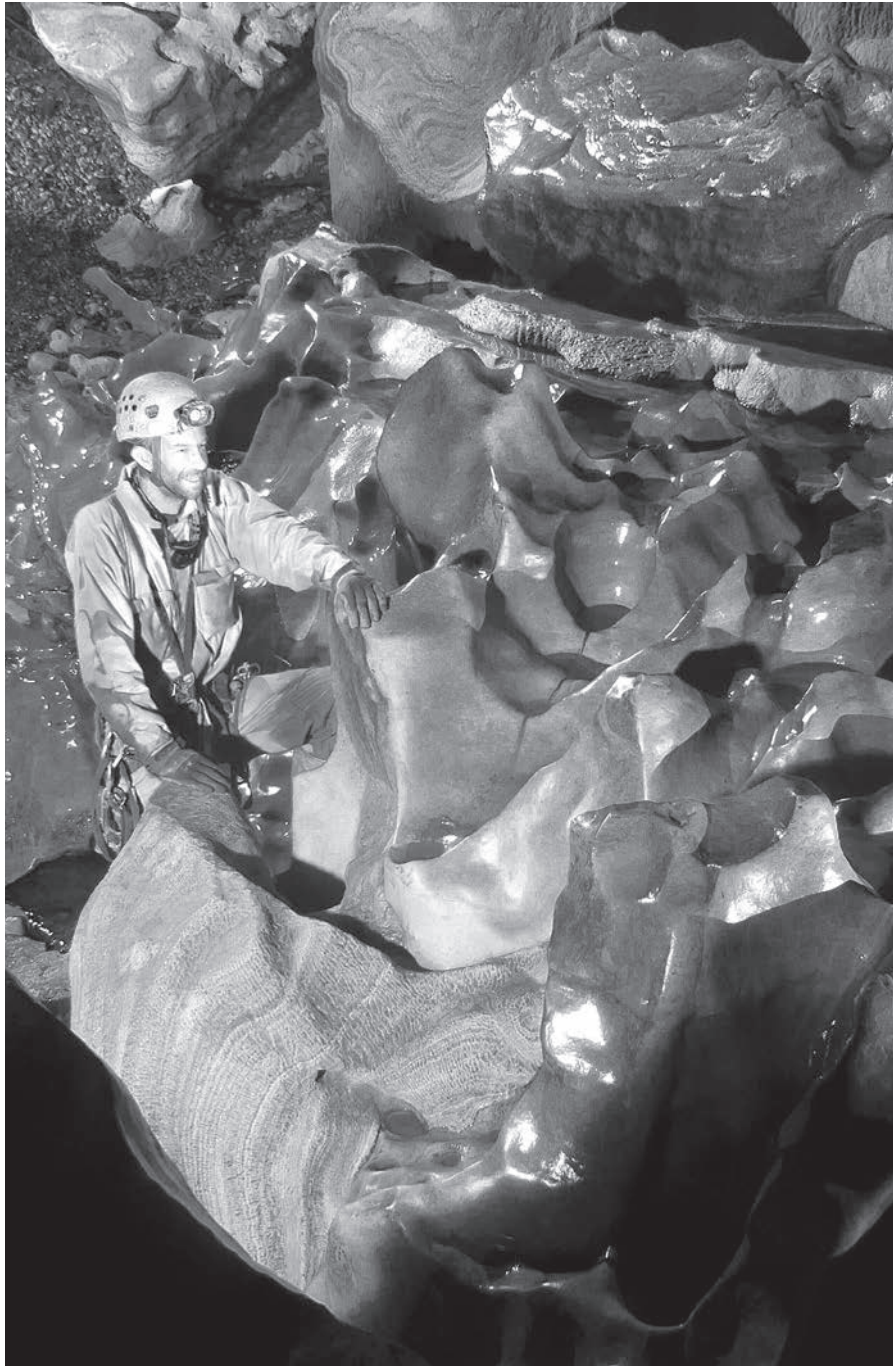
The **Iron Deep Cave** was discovered during the 2011 expedition. We penetrated only a little below the depth of 500 m then, but reached below the magical limit of 1 km the following year. The combination of flat-lying limestone beds with dark intervals and vertical jointing gives rise to abruptly alternating vertical/horizontal tracts. The entrance tract rapidly falls (through a step-like chasm 200 m deep) down to a level of –350 m. A narrow meander in dark grey limestones suddenly passes to a cascade 80 m deep whose width is augmented by an old tributary passing through a monumental chimney. The following meander is horizontal, somewhat higher and much better passable at the upper level. Further upstream, several horizontal passages hundreds of metres in length and younger vertical branches were found with surprisingly rich flowstone decorations. At a depth of 500 m, the cave becomes steeper and enters limestone of a different habitus. The depth of meanders, locally interrupted by chasms,

rapidly increases. At the depth of 700 m, the cave bends into a chasm 100 m deep. Here, sheer cascades mark the end of the hitherto known part of the cave, eventually forming a pipe 5 m wide and 37 m deep, draining several small streams. The cave then continues with an inclined joint perpendicular to canyon walls. A parallel fault with a resurgence was also mapped in the close proximity of the Mrtvice Canyon about 1 km away. It has not been ascertained yet whether the cave finally opens to the canyon itself or merges with horizontals and proceeds to the main Jame resurgence several kilometres downstream. The presently surveyed length of the cave is almost 3 km, and its depth is 1,027 m.

Reference:

Adamec V., Baldík V., Dvořák Z. (2013): „Česká“ tisícovka na Maganiku. – *Speleofórum*, 32: 45–50. Praha.





Kačna jama Cave – Polished rocks in the Labirint (Photo by E. Csaba)

window and a few interesting chimneys above the Slabeto Lake were left for the next time. Our international team mapped the active outflow passage of the Ozki rov, which terminated by a cave-in. For the first time, we visited parts around the Saturn Abyss and completed digital mapping of the Hojkerjeva dvorana. The total length of the Kačna jama Cave was over 16 km in 2012.

On the surface, we dug a promising-looking breathing spot called Vitkuv dihalnik. At the end of 2012 we reached the depth of around 10 m. Luckily, we were present at the place just while the Kačna jama Cave System began to flood, and observed a very strong draught that continued for 2 hours. This gave us hope that the digging would lead to the lowest level of the system, and could be eventually used as a diving gear transport shortcut.

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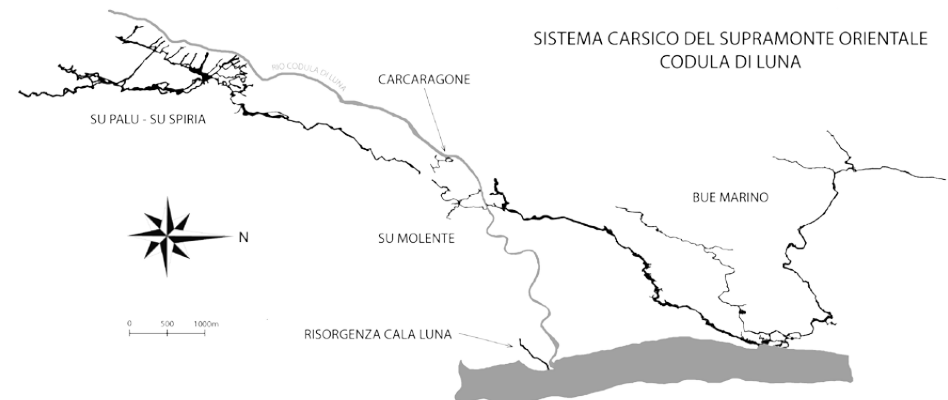
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Expeditions Sardinia 2009–2012

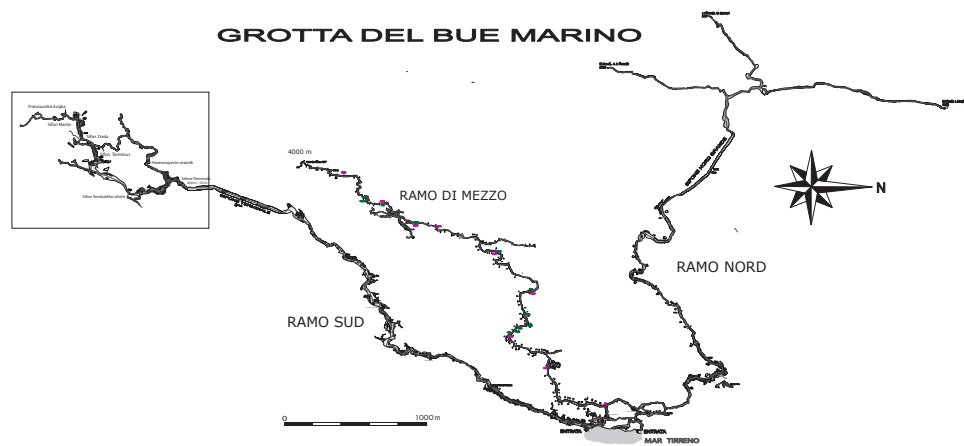
Daniel Hutňan, Karol Kýška and Lukáš Falteisek

Czech, and lately also Slovak, cave divers have been involved in the discoveries in the Grotto del Bue Marino Cave System in the last 25 years.

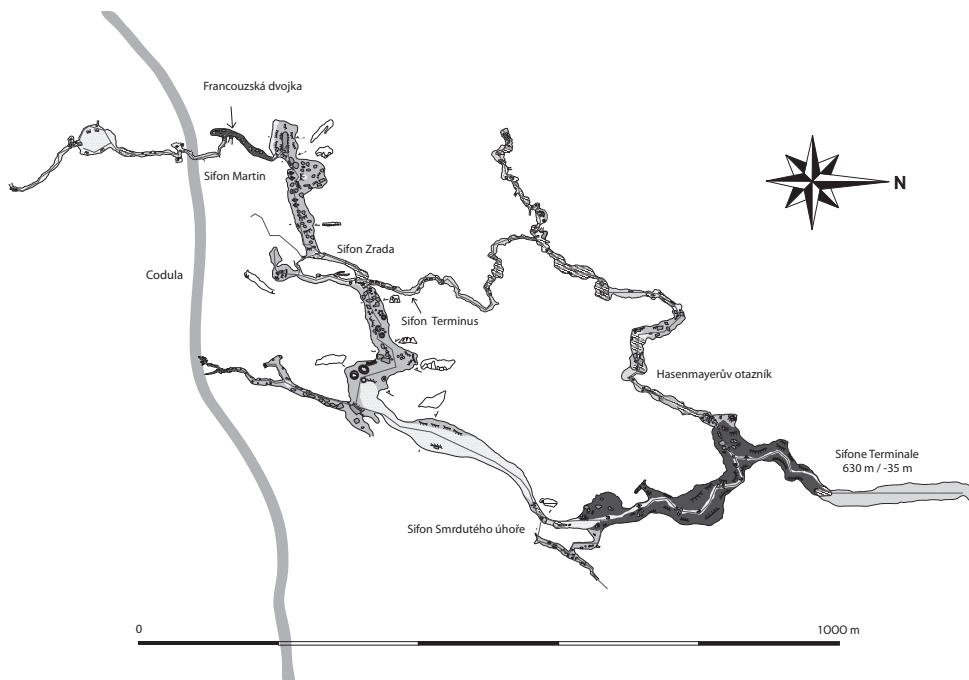
Cave divers of the Caving Club 1–10 Speleoanaut participated in mapping and exploration of the submarine spring Cala Luna on Sardinia Island in 2009. The cavers completed the exploration of all end points of the main passage as well as the branching passages and localized



Cave systems of the Codula di Luna Valley (after Leo Fancello, supplemented by D. Hutňan)



Grotto del Bue Marino Cave – a general map with highlighted sections past the Terminal Sump (D. Hutňan et al.)



Terminal section of the Ramo Sud and the course of the Codula di Luna Valley (D. Hutňan et al.)

the perspective places for the next discoveries coming. Using the side holding of the cylinders could step forward into a very extreme and low ceiling space. The total length of the cave has reached 1,622 m. The total extended depth is 35 m.

Mapping of the submarine spring Cala Luna was essential to the completion of underground hydrological survey of the right side of the Codula di Luna Valley. Dye tests have shown that the Cala Luna Cave serves as the drainage of the Su Palu-Su Spiria Cave System, the longest system in Sardinia. Along with the Grotto del Bue Marino Cave it offers great prospects for underground explorations in the Supramonte Range.

A detailed speleological research of the Grotto del Bue Marino Cave dry parts, led by the Caving Club Praha in cooperation with the Tetín Caving Club, focused particularly on the area between the 12th and the 17th sump of the northern branch (Ramo Nord). About 1 km long section accessible without diving, called “the dry part”, approaches the sinking streams of the Codula Fuili Valley on one side, and the Su Orcu Cave on the other side. During the 2007 and 2010, five expeditions surveyed the fragments of the upper fossil floor progressing along the main passage of the “dry part” for approximately 800 m at the height of 12–25 m. Approx. 80 m long branch, facing the Codula Fuili Valley, has been found about 100 m behind the Dead Bats Passage. For its high probability of continuation it counts among significant discoveries. Continuation of the long-term survey of the Grotto del Bue Marino Cave System was the principal goal of the Expedition Sardinia 2011. Twelve cave divers from the Czech and Slovak Speleological Societies discovered 1,200 m of cave passages and carried out the geophysical survey along the length of 2 km. They also made the historically longest dive of Czech cave divers: 4,000 m in one direction without surfacing. The Grotto del Bue Marino Cave System reached a total length of 22,000 m.

Sardinia 2012 – a connection under the valley was discovered.

The southern branch of the the Grotto del Bue Marino was prolonged nearer to the Codula di Luna Valley, behind which well-known caves are located with a total length of over 40 km. The efforts of Czech and Italian speleologists to interconnect subterranean spaces in the right and the left sides of the valley had been unsuccessful until 2012. Three Czech cave divers discovered a new sump at the end of the Southern Branch (Ramo Sud) on October 10, 2012. Passing through this sump and the discovery of 330 m of dry spaces behind it represent a milestone in the exploratory works in the Codula di Luna area. It opens way towards the creation of a cave system up to 70 km long, quite possibly the longest in Italy.

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Spitsbergen 2010

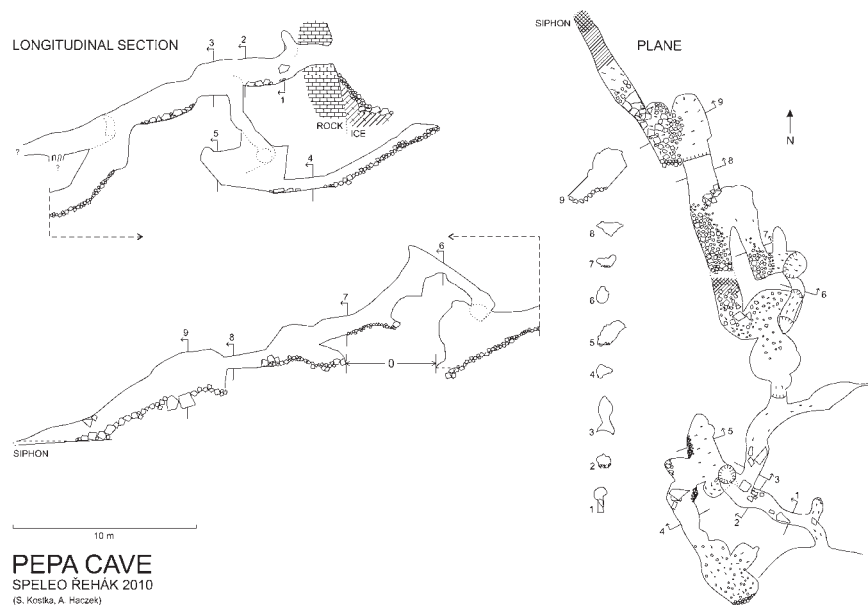
Josef Řehák, Stanislav Řehák, Jan Hloušek, Szymon Kostka and Anna Haczek

The 14th Glaciospeleological Expedition of the SPELEO – Řehák Company to the south Spitsbergen glaciers documented both known and new ice caves on the glaciers of Renardbreen, Scottbreen and Recherchebreen in the Belsund area. Another area was the Torellbreen Glacier and the ice caves based on thermal resurgence near the foot of the Raud Mountain. An 82 m long karst cave in limestone, discovered there, was explored and documented as well. The last traditional site was the Werenskiöld Glacier, where cavers managed to enter the central drainage system. In accordance with the new national parks legislation, all the equipment and commissary from the field and all the field stations were taken back to the Czech Republic.

This expedition was the last one of a research programme of long-term monitoring of glaciers inner drainage changes, registered at the Svalbard Science Forum for the years 1993–2010. The expedition was held in honour of the late Josef (Pepa) Řehák senior, the main organizer and the founder of the Czech polar glaciospeleological expeditions to Spitsbergen, who passed away in 2008. In 2010, the expedition members fulfilled two of his big dreams – to discover a karst cave and to enter the central drainage system of the Werenskiöld Glacier.

Reference:

Řehák J., Řehák S., Hloušek J., Kostka S., Haczek A. (2011): Špicberky 2010. – *Speleofórum*, 30: 43–49. Praha.



PEPA CAVE
SPELEO ŘEHÁK 2010
(S. Kostka, A. Haczek)

The plan, schematized section and the cross section of the limestone Pepa Cave by the foot of the Raud Mountain, south Spitsbergen

Czech–Iranian research in salt karst (Iran): Project NAMAK in the period of 2009–2012

Michal Filippi, Jiří Bruthans and Ondřej Jäger

Geological research conducted by the NAMAK team continued by measuring surface erosion, sediment and water sampling and characterization of several salt diapirs. Ethyl alcohol was successfully used to measure the brine discharge on and around the salt diapirs. Strong rains during the stay on the Jahani diapir provided a good insight into the salt karst evolution and specific knowledge about the dynamics of the continuing processes.

Discovery and documentation of the Evžen's Coffee Cave on the Mesijune diapir counts among the most important speleological results. This cave includes one of the largest natural salt domes in Iran and probably also in the world, 70 m long × 30 m wide × 35 m high. Another new cave named Shahrazad (450 m long) was discovered and documented on the Darbast salt diapir. Several abysses (Goat Abyss, Puzzle Abyss and Shaft Abyss 324) and caves (Non-Goat Cave, Tchula's Lair Cave) were also documented on the Jahani salt diapir. New cave passages with combined length of more than 1.5 km were documented.

The explorers attempted to connect the Upper Entrance Cave with the 3N Cave on the Namakdan diapir. They were able to pass through the cave-in at the end of this cave's known spaces, and discovered about 50 m of new spaces consisting of a small dome continuing into a small passage terminated by an inaccessible low channel. Unfortunately, the area is formed from very unstable sediments with many fresh collapses. High risk and low probability of success led to the decision to cease prolongation efforts in this cave.

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Dome By the Octopus in the 3N Cave, Namakdan, Iran (Photo by M. Filippi, Š. Mikeš)

Evženovo kafičko
(délka 235 m, denivelace 45 m)

Solný diapir Mesidžún

Mapovali (25.3. 2009):

Ondřej Jäger
Michal Filippi
Qasem Mahdavi

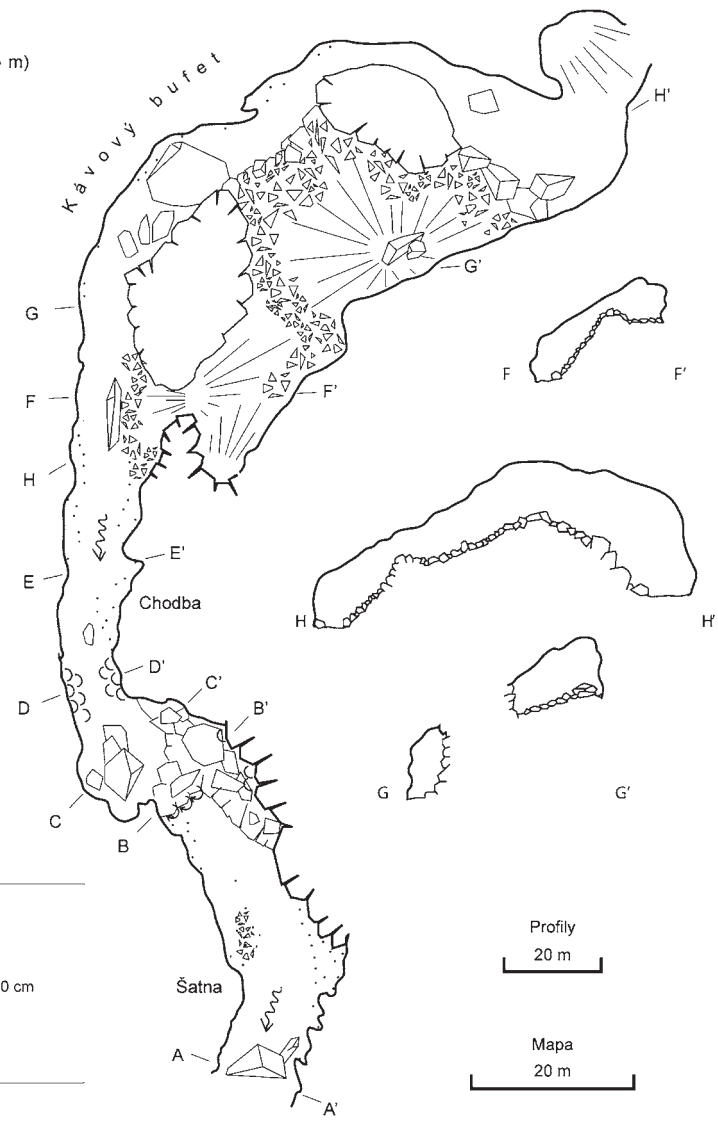
Zakreslil:

Ondřej Jäger



Legenda:

- obrys jeskyně
- sintry
- kameny a bloky nad 10 cm
- směr toku
- chodba pod převisem
- svahy



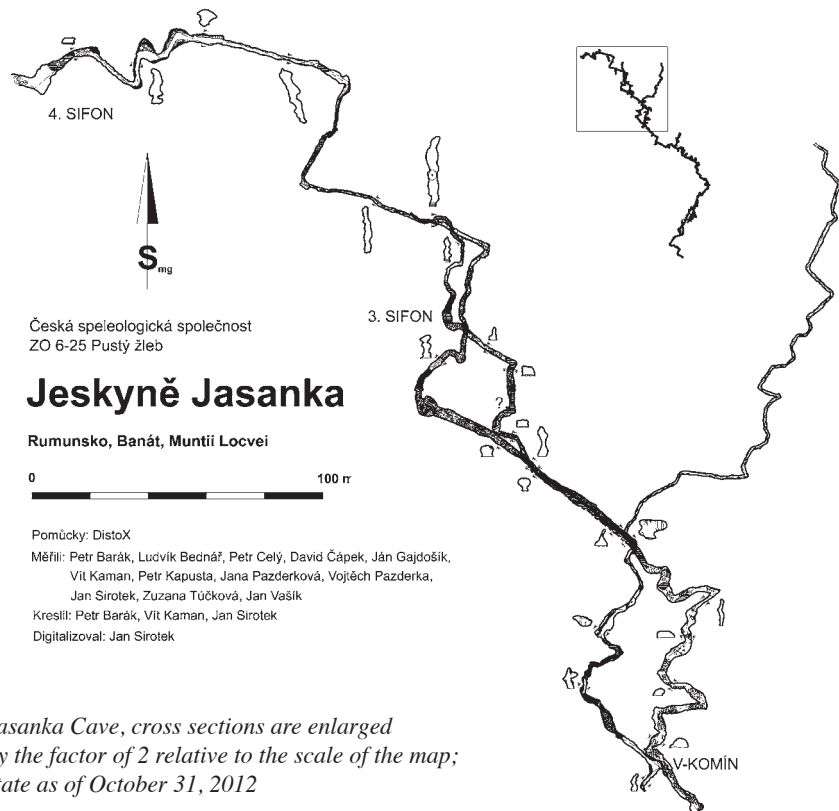
Map of the Evžen's Coffee Cave, Mesijune diapir, Iran

Expeditions to the Banát Mountains, Romania in 2011–2012

Vít Kaman, Jan Sirotek, Petr Barák and Vojtěch Pazderka

Three expeditions were organized to the Romanian karst mountains of Muntii Locvei in the vicinity of Santa Elena village in 2011. We took advantage of dry autumn weather and favourable water conditions in the Jasanka Cave spring. The cave itself was explored in 2008. Applying promising results of the previous expedition's diving explorations, we successfully pumped down the water level in the terminal sump. We explored 40 m of new cavity terminated by the third sump, which stopped the first exploration. During the second expedition, we pumped this sump as well and reached 246 m of new space. The third expedition focused on survey of the newly explored parts. We did geophysical survey of 1,292 m of the newly discovered passages. The cave is significant because of its multi-level drainage system of the Deal Coroneanti Hill.

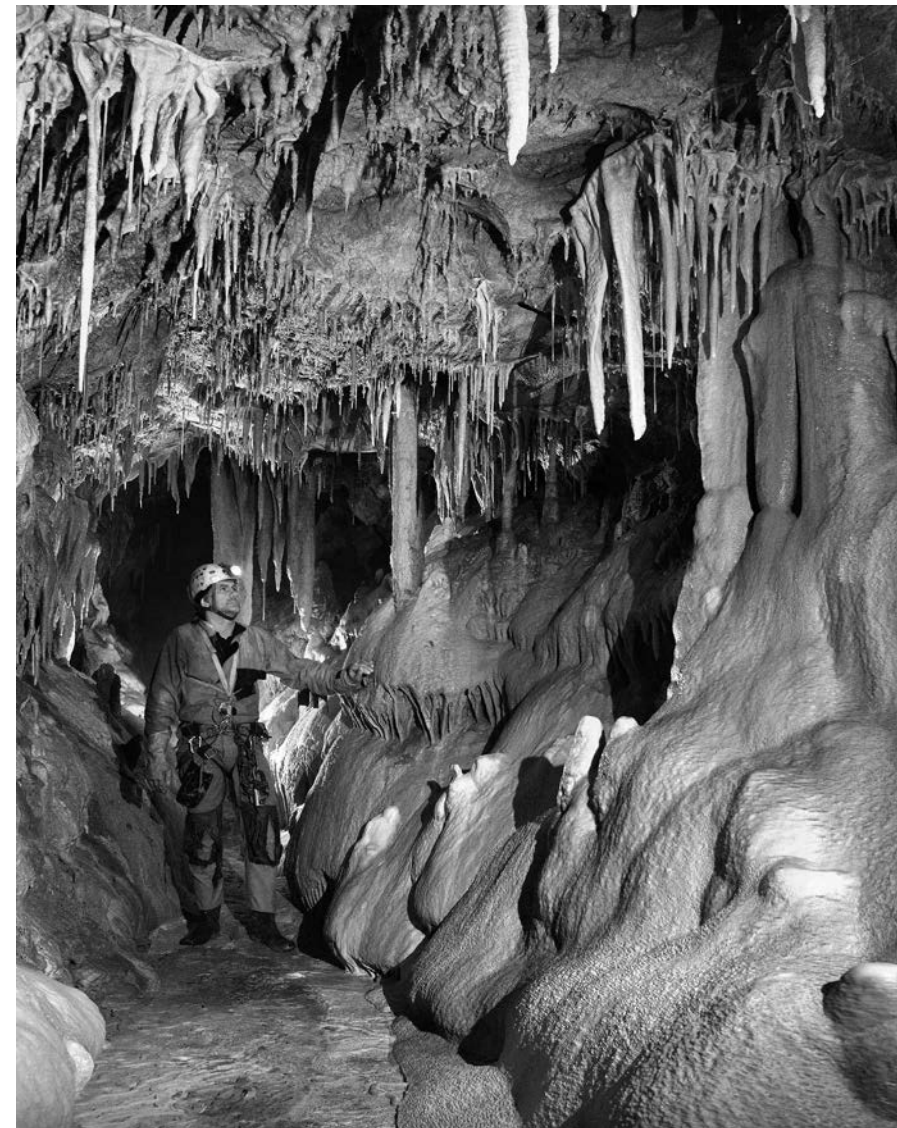
We visited Romanian Banat three times during the year 2012. Our autumn expedition to the Jasanka Cave near the Svatá Helena village was the most successful. We explored 600 m of new continuation in the upper level above the V-chimney. The new spaces have attractive decoration and a meandering character. The total length of the Jasanka Cave exceeds 2 km, making it the longest cave in the Muntii Locveji Mountains.



*Jasanka Cave, cross sections are enlarged
by the factor of 2 relative to the scale of the map;
state as of October 31, 2012*

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Kaman V., Barák P., Pazderka V. (2013): Banát 2012. – *Speleofórum*, 32: 75–77. Praha.



*Newly discovered part in upper level
of the Jasanka Cave, Romania (Photo by Z. Motyčka)*

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Web page: www.speleo.cz

The first page ??? Iron Deep Cave, cascades at
-400 m (Photo by P. Čáslavský)



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