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Dave Ottewell negotiates a descent in the Upper Gorge of San Agustin Cave, part of Sistema Huautla, in Mexico. Photo by Elliot Stahl.

BACK COVER:

Left: Emily Zuber climbing a 150-foot pit below the Sala Grande on the original route in San Agustin, Mexico. Photo by Elliot Stahl.

Bottom: Rich Hudson in Anthodite Hall, Sistema Huautla, in Mexico. Photo by Elliot Stahl.



16th International Congress of Speleology, Brno, Czech Republic July 21-28, 2013

Art Palmer, NSS 4059

There's no easier way to see the world than to attend an International Congress of Speleology. You are welcomed as a special guest, shown the finest karst regions, and offered cave trips from casual to hard-core. You are among friends. This year's congress in the Czech Republic was a fine example.

Organized by the Czech Speleological Society, this congress took place 40 years after an earlier one in nearby Olomouc, in what was then Czechoslovakia. This accounts for the theme of the 2013 Congress: "Where history meets future." In a broader sense this represents how well the country has preserved its complex history. Cities like Prague and Brno contain a range of architectural styles from medieval to ultra-modern, and in a short walk you can glimpse an entire millennium.

This Congress drew more than 1000 people from 57 countries. The USA supplied the largest number, about 140, partly as a spinoff from the 2009 Congress in Kerrville, Texas. Also, Dr. Pavel Bozák (2013 Congress President) and Zdeněk Motyčka (chair of the Organizing Committee) attended last year's NSS Convention in West Virginia, where they met NSS members, promoted the Czech Congress, and gained experience in dealing with severe weather. As a result, the International Congress enjoyed almost continuous sunny skies.

At least 30 pre- and post-Congress field trips were offered in the Czech Republic and nearby countries. The country contains about 4000 known caves, 14 open to guided tours. All Czech caves are protected by law. The Cave

Administration (under the Ministry of Environment) oversees exploration and research, and provides guide service for show caves. The main limestone is Devonian (about 400 million years old), and the caves typically range up to about 25 million years old and involve one or more episodes of paleo-karst. The most typical cave pattern is a complex maze with large rooms interspersed with narrow zig-zag passages. Some have been formed and mineralized by rising thermal water. Many passages have been opened by digging. Fossils are common, including Cro-Magnon and Neanderthal remains.

The country contains two major karst areas: the Bohemian Karst in the west and the Moravian Karst in the east. The largest in the Bohemian karst is the Koněprusy System, a show cave noted for its paleontology and archeology, including the remains of a 15th century counterfeiting operation. In the Moravian Karst the limestone has been more deeply dissected by erosion, so the caves are larger, with more shafts and stream passages. The largest cave, with 23 miles of passages, is the Punkva-Sloup-Amateur System, which includes the famous Macocha Abyss – a vertical-walled collapse



Map of the Czech Republic: MK = main part of Moravian Karst; BK = main part of Bohemian Karst.

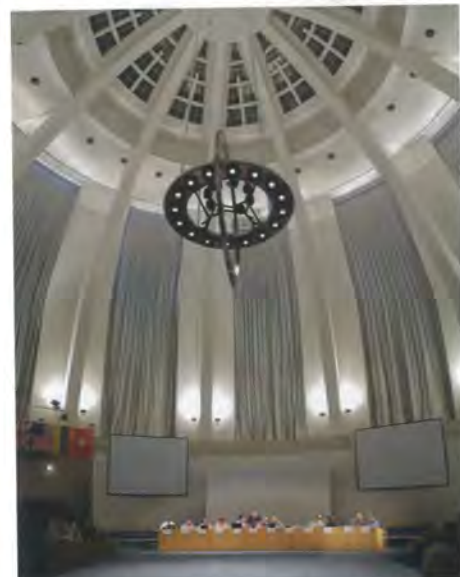
sinkhole entrance 453 feet deep. This cave was the site of a mid-week excursion by all Congress participants.

The formal schedule began with memorable presentations by Drs. Martin Olivia on the anthropology of the Moravian Karst; Derek Ford on progress in physical speleology over the last 40 years since the Olomouc Congress; and, looking to the future, Annette Summers-Engel on microbiology and its recent and projected contributions to cave origin. These and all other major events were heralded by a dramatic burst of recorded orchestral music well suited to the arrival of Wotan or Zeus.

The sessions that followed throughout the week covered science, exploration, mapping,



American participants at the 16th International Congress of Speleology.



Meeting of the International Speleological Union officers in the awesome main hall of the Congress center.



Traditional Czech dancing at the International Congress.

Peri Frantz

history, and karst management and protection. Speleomedia presentations included slide shows, movies, and a strong emphasis on 3-D programs. Many evening field trips were also offered. There was plenty of free time to socialize, tour the area, and visit vendors. Colorful entertainment was supplied by a Czech bluegrass band and traditional dancing. The ever-popular "Speleo Bar" offered relaxed dining and thirst-quenching at reasonable prices. (The Czech currency is the koruna, or crown, each of which is worth 5 US cents, so flashing 100 koruna notes was not as extravagant as it seemed.)

The culminating event was the Saturday-night banquet, where prize winners were announced. The mapping, photography, and art salons contained exceptional entries from many countries. Cartography winners from the USA were Steve Gladioux (Base Camp Section, Fisher Ridge Cave System, Kentucky) and a 3D portrayal of Bull Cave, Tennessee, by Pat Kambesis. Robbie Shone of Britain (presently Austria) won half the photo awards with his imaginative shots of what caving ought to be like.

Winners of the SpeleOlympics represented many countries. These did not include the USA, which instead contributed gray hair. The 30 m rope climb was won by Boštjan Vrvišar of Slovenia (1:23 min); the 100 m rope climb by Ms. Amina Chanyшева of Russia (7:56 min); and the cable-ladder climb by Erik Pott of Sweden (9:34 sec). The obstacle course was negotiated most swiftly by Rob Eavis of Britain. Squeezes were made through gaps as narrow as 14 cm.

The Exploration Team Prize was presented to the Fort Stanton Cave Study Project of New Mexico. The cave now holds the world record for distance from the nearest entrance (18.4 km). Much of this is in Snowy River, a passage floored by a white carpet of calcite, the "world's longest speleo- them" (18 km). The award was based mainly on the care taken in exploration and study, while maintaining strict cave protection. It was described as "... a shining example for all members of the International Union of Speleology." The award included a donation to the project of 100 euros (not crowns). Congratulations!

The evening concluded with a spectacular fireworks display and a wild party of music and dancing that lasted until 3 a.m.

The next International Congress (2017) will be hosted by Australia!



Lower half of the 453-foot-deep Macocha Abyss in the Moravian Karst

Art Palmer

For a daily summary and photo collections, visit:
www.speleo2013.com/ and
www.facebook.com/Speleo2013.

Pre- and post-Congress field trips are described at:
www.speleo2013.com/2-circular/index.html#/1/.

Congress publications and promotional items are available from:
office@speleo2013.com.



Art Palmer



Karlštejn Castle looms over the Bohemian Karst.

Art Palmer

Left: Climbing fixed ladders in Srbské jeskyně, a typical cave of the Bohemian Karst

16th International Congress of Speleology — Czech Republic 2013

John Moses

NSS International Secretary and US Delegate to 16th ICS

Can it already have been four years since the NSS played host in Kerrville, Texas, to the cave scientists and explorers of the world at the 15th International Congress of Speleology (ICS)? Guess we had so much fun at that one that many NSS members (over 140) arrived in Europe in July for the 16th International Congress hosted by the Czech Speleological Society. Most Americans admitted, if asked, that this was their first visit to the Czech Republic but a few old-timers had been on Czechoslovakian caving field trips during the Congress held in Hungary over 20 years ago. Fewer still had attended the Congress held in Czechoslovakia in 1973. Those that had, shared anecdotes about attempting to take candid photos of the occupying Soviet army. The bad times are happily past and the Czechs were welcoming and helpful to the more than 1200 visiting speleologists from 61 nations attending in 2013.

Sessions and meetings were held in the medieval city of Brno's extensive Exhibition Centre. The ICS is conducted under the organization of the International Union of Speleology (UIS), composed of the national speleological societies of the member countries. The NSS represents the United States within the UIS and has a single vote in the General Assembly, which is made up of the member countries' delegates.

The delegates nominated and elected the following UIS board or "Bureau" for the next four years:

President: Kyung Sik Woo, Republic of Korea; Vice President Administration: George Veni, United States of America; Vice President Operations: Efraín Mercado, Puerto Rico; General Secretary: Fadi Nader, Lebanon; Adjunct Secretaries: Christian Dodelin, France; Jean Pierre Bartholeyns, Belgium; Nadja Zupan Hajna, Slovenia; Giovanni Badino, Italy; Stan Flavel, Australia; Nivaldo Colzato, Brazil; Zdeněk Motycka, Czech Republic; Mladen Garasic, Croatia

The Bureau conducts the business of the UIS between this Congress and the next. Dr. George Veni was unanimously re-elected to his position as Administrative VP of the UIS. While a country may have no more than one Bureau member, within the UIS, Puerto Rico is considered a separate nation.

The General Assembly also approved a revised International Union of Speleology (UIS) code of ethics. Delegates were asked to acquaint their national organizations and individual members with its existence. The UIS Code of Ethics covers:

- general caving in your own country;
- caving expeditions to foreign countries;
- future development of show caves;
- adventure and geo- and eco-tourism

For more see www.uis-speleo.org/index.php?option=com_content&view=article&id=57&Itemid=67

One of the significant decisions made by the Assembly during its final session is the venue for the next Congress in four years. Only one formal bid, from Australia, was received for the next ICS. At the closing ceremony, the UIS flag was passed from the Czech Congress committee to the Australian.

AUSTRALIA WILL HOST 17TH INTERNATIONAL CONGRESS

In 2017 (during the southern hemisphere winter), the Australian Speleological Federation will host the next Congress west of Sydney, New South Wales (NSW). The region boasts more than 2000 caves in about 100 karst terrains. The world-class show caves of the Jenolan Karst Conservation Reserve (located in a World Heritage Area) are believed among the oldest known caves. The caves at Wellington, Yarrangobilly, Wee Jasper and Wombeyan karst conservation reserves are of significance

from geological, biological and paleontological perspectives. The outgoing UIS president, Andy Eavis, recommended that each potential participant start a personal fund and put in one Euro (about \$1.30) a day.

EXPLORATION AWARD

A highlight for the Americans present was the UIS exploration award. Among the awards made at the banquet, the Fort Stanton Cave Study Project (FSCSP) Team (an NSS project) was named as the winner of the 2013 prize in exploration. A plaque will be sent to the team and the award included a cash prize of 100 Euros. "Excellent exploration is conducted with excellent science and follows top standards for cave protection. The Fort Stanton Cave Study Project stands as a shining example for all members of UIS to follow." This was the first US project to be named in this award.

The US national delegate, who is also a FSCSP board member, accepted the award on behalf of the team. Other Fort Stanton project participants present were asked to stand and be recognized. Citing the most significant cave exploration projects which have taken place between the 15th ICS in 2009 and this year, the honorable mentions included the Hang Son Doong Cave project in Vietnam (world's largest cave passage) and the K'oox Baal, Mexico underwater cave (4th longest underwater cave in the world).

CAVING EXCURSIONS

There were numerous pre and post Congress field trips and excursions. US cavers found their way into caves in Ukraine, Slovenia, Slovakia, as well as the Czech Republic.

Over 60 visitors participated in the "Moravian Caves & Karst" field camp. This karst terrain is a short drive from Brno in a belt of Devonian limestone 2 - 6 km wide and 25 km long. With about 1100 caves surveyed in the Moravian region, daily trips were offered to a dozen of the premier "wild" caves, including a few normally closed to recreation. Four person cabins and the group dining room were located at the Jedovnice tourist camp. The caves were within a 30 minute drive of the camp by shuttle bus. A sampling of a few of these follows.

The caves offered many Americans a new experience or two. Notable are the use of extensive fixed aids throughout the caves. Multiple flights of heavy steel ladders were used in caves, some over 100 meters deep. Ladders appeared very new and some not so new. Also, cables were tightly bolted from side to side in passages over deep water. Hold onto the upper cable and move your feet along the lower! One American termed the cables "commando lines",



NSS Honorary Members at the ICS

Bill Frantz



Exposition Hall

Pumps and heavy hoses were in place to control water levels in siphons. Some of the current exploration is being done by "hydraulic mining" with high pressure water to remove sediment fills. Extensive passages have been tunneled through solid limestone to provide access or to bypass siphons.

The Nova Ameratska (New Amateur) Cave is entered through a 100-meter artificial tunnel along the wall of a narrow, wooded karst valley. Visitors hike in from the overlook of the much-touristed Macocha Abyss. At 17 km, it is the longest Czech cave and forms a hydrologic unit with several other caves totaling 35 km. The original explorers had to pass several siphons to reach a surveyed point where they planned the new entrance. The tunnel entrance slopes downward gradually to a passage which is still frequently sumped. Pumps are used to lower the pool and regain access. Upstream of the sump, passage is borehole-sized with speleothems and frequent side passages. Several of the entries along the eastern wall of the main passage lead into The Labyrinth. This is a section of the cave best undertaken with an experienced guide, as it lives up to the name. The base stream for



Petzl Stop descender damaged on a horizontal traverse between rebelayes

the cave and its neighbors is the underground Punkva River. At the time of the excursion, the Punkva waters could only be seen at the bottom of pits in west side leads from the main passage.

The Býčí Skála (Bull Rock) Cave is a major system most noted for the archeological and paleontological discoveries, some of which are still ongoing. One writer states that, "the cave has always been known." Excavations removed paleolithic artifacts for display in museums. The Nazis covered the front floor of the cave with a concrete slab for aircraft parts manufacture.

Along the "Dry Valley" within sight of the entrance to the Balcarka Cave is the artificial 25 meter shaft into the Propadani Lopace (Ponor of Lopac). One of the guides for the group's excursion pointed out the metal memorial plaque at its entrance. Her boyfriend had died at the outflow siphon in a tragic cave diving accident some years earlier. The fixed entrance ladder ends in a short climb onto a metal grating over the upstream sump. From there it was follow the water, interspersed with short sections of dry passage, down climbs and ladders to the bottom sump. Attempts to push the cave continue but the excursion cavers routed for the nearby show cave of Balcarka, where the surface gear was stashed.

Balcarka Cave is a show cave in the northern end of the Moravian Karst offering guided tours (in Czech with English subtitles) lasting about one hour. A large shelter entrance along the face of a prominent hilltop was known for centuries before a local explorer made the breakthrough. Shortly after WWI, well-decorated rooms and passages were found which were sufficient to attract commercialization. Rooms in the cave were named after prominent figures of the era (Woodrow Wilson, Marshal Foch) who may or may not have ever visited. The trails and stairways in the cave were maintained to a high level. The exit of the cave provided ready access to the cave's pub/coffee shop.

The deepest SRT trip was a multi-pitch 130 meter drop into the Macocha Abyss. The Abyss is the most famous and symbolic of the features of the Moravian Karst. It was first descended in 1723. The bottom of the drop is within the window of the commercial Punkva Caves and contains tourist amenities such as rest rooms. Two UK cavers (happened to be ladies) made the drop but didn't bring any cash with them. The ladies' room attendant demanded her 5 Czech crowns (about \$0.25) prior to entry.

Rudické Propadání (Rudice Ponor) was one of the most popular caves of both the Moravian Karst tour and evening trips during the Congress. Two ways in were offered -- the "Traditional" on 15 steel ladders to the stream level at -113 meters and an SRT route right down the incoming stream from the swallow hole. One SRT trip leader found that his Petzl Stop descender was torqued and bent beyond use by the horizontal traverse between the last rebelayes.

When following the ladder route, the last



Adjustable squeeze for the speleolympics

ladder climb of about 20 meters drops through the roof of Hugo's Dome to the far side of a deep lake. The noise of the waterfall on the far wall makes communication difficult. The photographers set up shop here immediately. The guide led on downstream and we made our first acquaintance with the "commando line." The bottom cable was a few inches below the surface of the deep pool, giving it a walking on water feel. There were no missteps and we continued downstream to a dome containing the most noted speleothem in the cave, the Fountain, which again inspired the photographers. Cave photographer Peter Bosted explained that he photographed there 24 years earlier and was curious to see how this year's shot compared. The Fountain contains a 1920 wooden ladder, long covered by calcite, which continues to accrue year-by-year.

The first siphon fills the passage a short way downstream. Nearby, a side passage leads to several dubious-looking ladders for climbing into a high-level hands-and-knees crawl. The walls are marked with rapid-flow scallops. The crawl goes up and over the siphon to the passage continuation. These included the largest passages and rooms yet seen in the cave. Another siphon marked the end of the excursion. The return to the surface was celebrated at the nearby dual-use caving club house and tavern.

Sessions at the Congress terminated briefly for the midweek excursion into the Moravian Karst -- groups went either to the Punkva Caves or to the Sloup-Šošůvka Caves and followed with a group lunch at the pub near the Macocha Abyss overlook. Both of these show caves are hydrologically part of the Punkva River system.

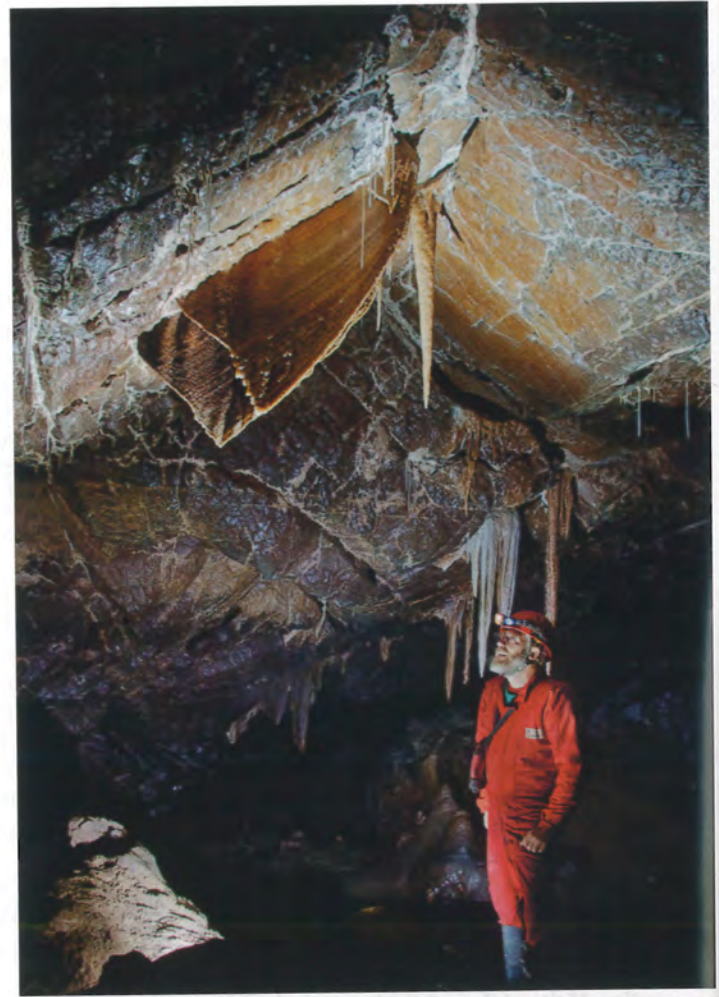
Organizers of the Congress were concerned about the potential transmission of the WNS fungus back to home countries from Europe. I donated my oversuit and boots to the "speleo bazar" for local sale. Thanks to the Czech Speleological Society, organizing committee and the many hospitable folks we met during this very excellent 16th ICS.



Býčí Skála (Bull Rock) Cave



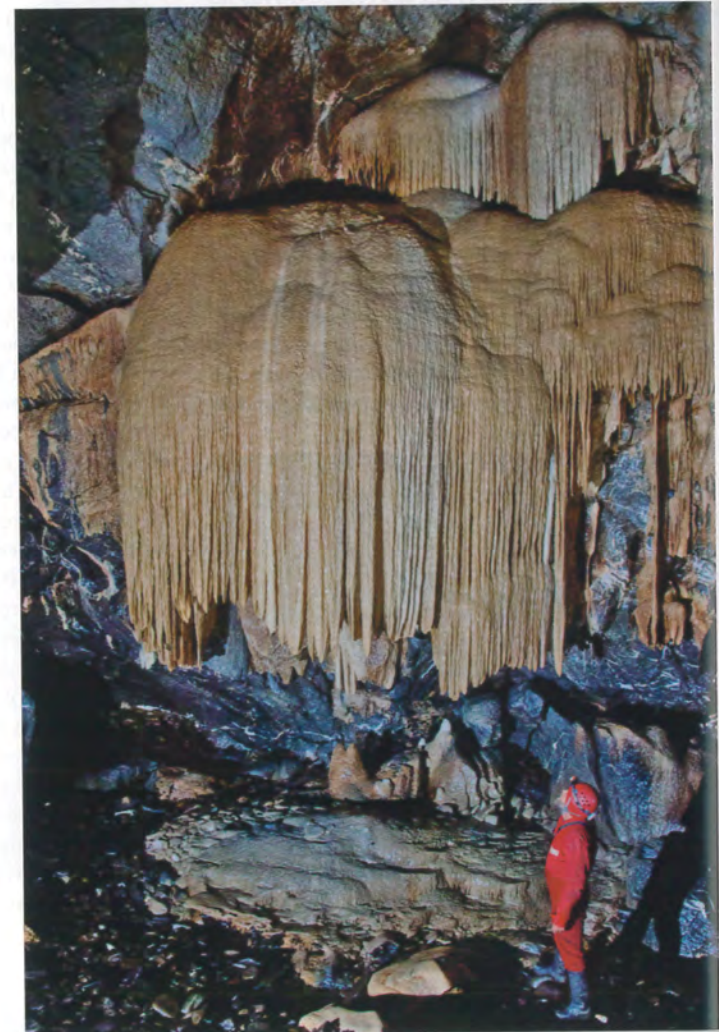
Above and below: Nova Ameratska (New Amateur) Cave



Above and below: Peter Bosted in Nova Ameratska (New Amateur) Cave



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CAVING IN THE MORAVIAN KARST CZECH REPUBLIC

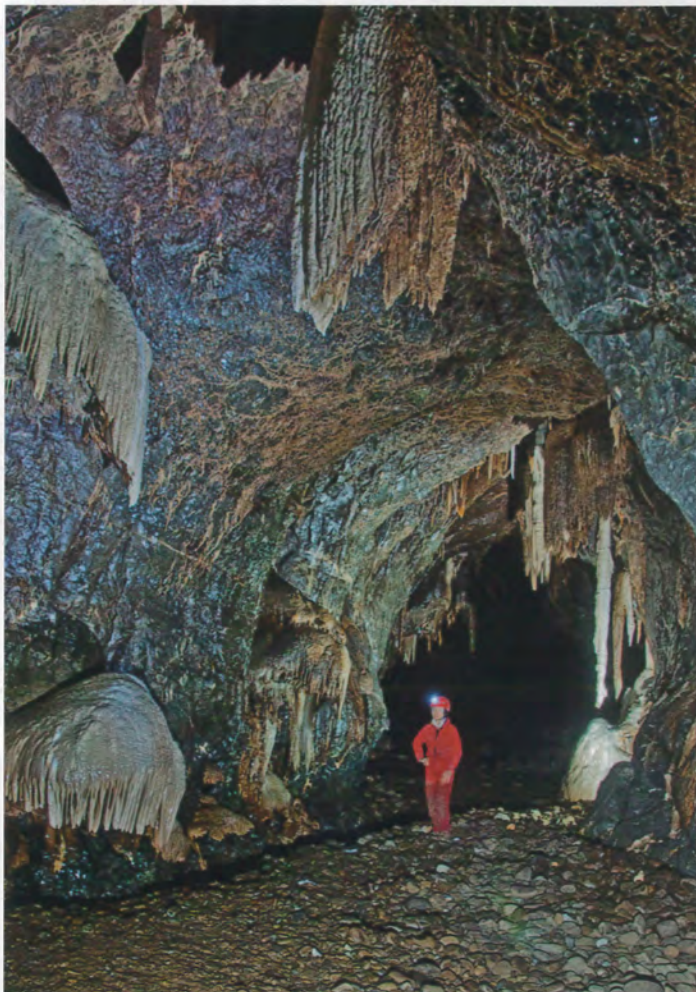
Photos by John Hargreaves



Býčí Skála (Bull Rock) Cave



Nova Ameratska (New Amateur) Cave



Annie Guiraud in the Old Amateur Cave (above and below right)



Vintoke Cave



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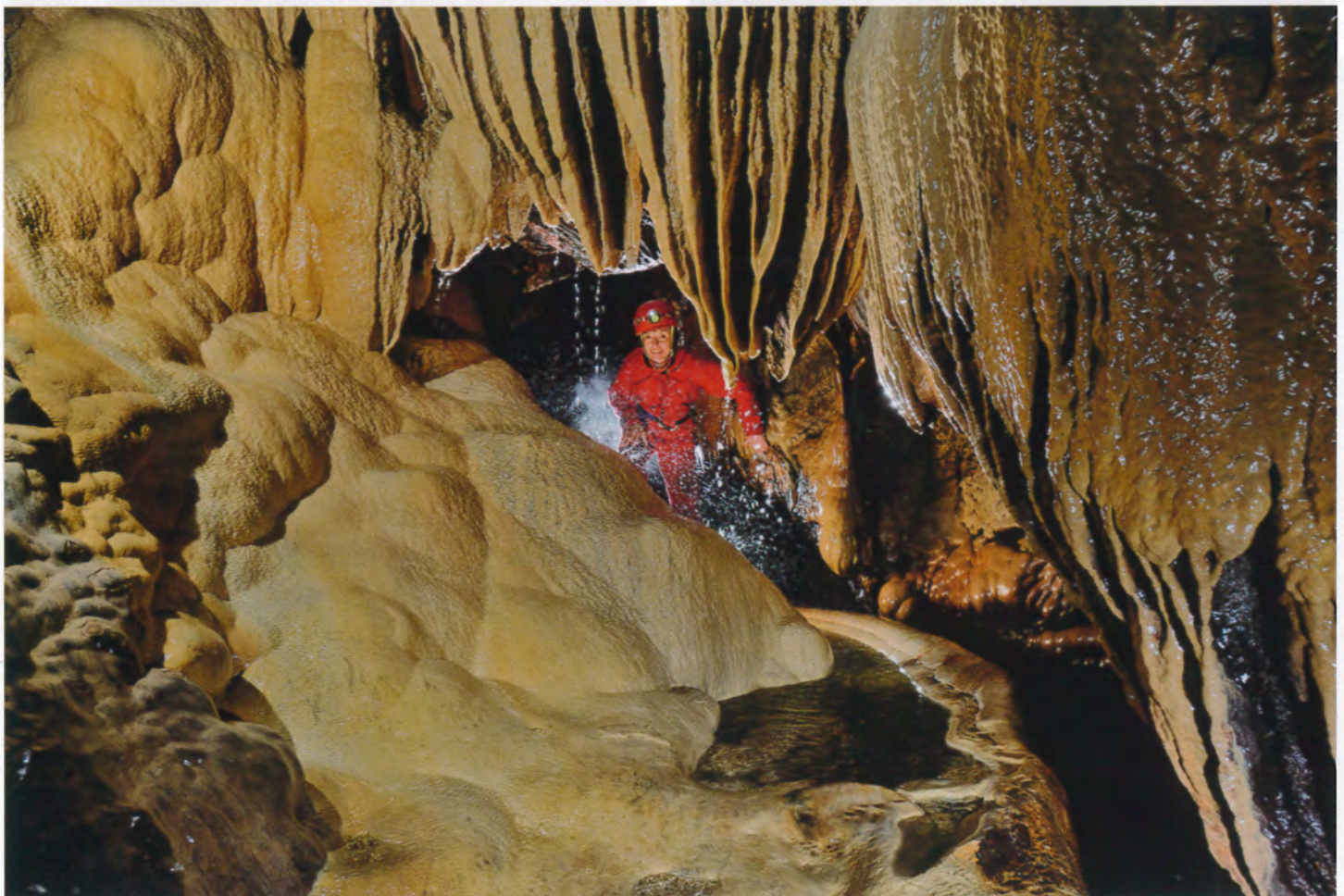
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French cave photographer Philippe Crochet attended the Moavarian Karst pre-camp with wife Annie Guiraud, pictured left and above in Rudické Propadání, and below in Býčí Skála Cave.



Ukraine Gypsum Cave Postcamp

text and photos by John Hargreaves

I was thrilled that following the wonderful experience of the Moravian Karst camp and the International congress in Brno I was able to go to the post camp in the Gypsum karst of the Podolie region of the Ukraine. I wanted to see these caves that had gypsum formations. What I didn't realize before going was the extent and mazelike structure of these caves. We had the opportunity to visit several caves each of which was in the area of a particular speleology club that managed, surveyed, and mapped their particular cave. We started with the one that was a short walk from where we were staying with our host Volodynyr Kompaniyets. They had established a summer home as a cavers' camp with multiple beds and a dining room large enough for all of us to gather for some great home-cooked meals that his wife prepared for the group. His daughter Iryna had gone to college in England and so was our primary translator for those of us who didn't speak Ukrainian. The nearby cave was Mlynky, which had an entrance just a short walk up the hill from where we were staying. First though, we stopped across the street at the Chortkiv "Crystal" speleology club house to meet our guides and look at the map of the cave. This cave had an impressive mapped passage length of around 50 km. Looking at the map it was apparent that the cave was formed mostly of numerous fissures running roughly SW to NE with occasional cross passages linking them up. The first section of the cave was fairly muddy but we soon progressed beyond that and got to see plenty of the drier sections. I asked how they managed to navigate through some of the more mazelike sections and was told members of their club start learning the map of the cave at around age 12. After showing proficiency with a map they are taken



Flowers in Atlantyda



Optymistychna-Theresa Marie franca Moniz

on trips until they can lead them without getting lost. Our first trip did not reveal a lot of formations or the gypsum crystals that I was looking forward to seeing but it was a very enjoyably introduction to the gypsum caves and we would be back to this cave in particular.

Next though we drove to the Khmelnytski region of the Podilskyl district. Here we were to visit the Atlantyda cave. This cave was discovered while quarrying gypsum so the entrance is in a quarry wall. This cave was apparently more hydrologically active as the passages didn't follow the fissures in line quite like they did in Mlynky and this meant that there were several much larger rooms and "galleries" that were very impressive to see just for the scale. The cave covers an area of over 4000 m² and has a volume of over 11000 m³. Once more on our schedule we were only able to see a small amount of such a large cave but it was impressive. Especially so as I got to see the gypsum "flowers" I had looked forward to seeing.

The next day we did some sightseeing and visited a couple of tour caves, the first a gypsum cave called Cryshtaleva Cave. This cave showed similar SW to NE fissure patterns to Mlynky cave but had lighting and a trail installed. There were even numerous souvenir and gift sellers around the parking area. The cave itself was quite impressive with lots of gypsum formations and I bought a DVD that shows these very well; unfortunately it is in Ukrainian so I cannot tell you what the narration says. The next tour cave we headed to was a different kind of cave.

First though we stopped at a museum. The Borshchiv Museum of Regional Ethnography had some good exhibits of the history of the region and included many items that had been found in or around the cave. Next we went to the cave itself, Verteba Cave, where we were shown items of pottery, stone tools, etc. that had been found along with human remains and animal bones. There is a path through the cave and a nice display using statues and re-creations of some of the pottery excavated to show how life for



Optymistychna-Lyuda Rasskazoa



Atlantyda-Theresa Marie Franca Moniz



Optymistychna-Allan Richardson

the people sheltering in the cave may have looked during the late stone age to bronze age.

We took a break from caving to visit a couple of fortresses in the region, the Khotyn fortress over the Dnister river and the Kamenets-Podolsk fortress, both very impressive medieval-style structures with a rich history going back a long way, including the times when the Ottoman Empire had fought huge battles trying to conquer the region. We were also told these were the locations used to shoot several movies.

After our break from caving was a visit to Optymistychyna cave. Once more a close look at the map revealed the classic SW to NE fissure structure I was starting to recognise as being typical for the gypsum caves of this region. It was much harder to see though as the map was huge. This cave had been mapped for a total length of 238 km. Once more on our limited schedule we only got to see a small portion of such a large cave but it was certainly worth the visit.

Our final caving outing was a trip back to Mlynky cave but this time we headed to some passages that Volodymyr told us were some of his favorites because of the beautiful formations and sure enough there were some fantastic gypsum crystals and flowers

to see.

All too soon it was time to pack up our cave gear and head home. I hope I get a chance to return to the Ukraine where not only were the caves wonderful to see but



Optymistychna

the friendliness of the cavers who showed us around and invited us to their club houses for drinks and stories in the evenings, made the trip truly memorable.



Volodymyr Kompaniyets, our host at the fortress



Red gypsum in Atlantyda



Left: Atlantyda and Below: Optymistychna

