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BULLETIN

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The UIS is a non-profit, non-governmental worldwide speleological organization that promotes the development of interaction between academic and technical speleologists of a wide range of nationalities to develop and coordinate international speleology in all of its scientific, technical, cultural and economic aspects.

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COVER PHOTO

Tipan crab (probably a new genus and species)
Photo by Erik CLAES (Belgium)

EDITORIAL

Michal FILIPPI (Czech Republic)
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Dear cavers, speleologists and underground lovers around the world. I am pleased to present the second issue of the Bulletin under my editorship.

When you're trying to decide what to write about in an editorial, lots of different topics come to mind, but none of them seem quite right. Either they lack humour or a connection to the issue's content, or they are mundane ideas with little chance of attracting attention. But this time, I had a simple and clear choice. The first thing that occurred to me was that, in the last issue, I had forgotten to appreciate my predecessor, Nivaldo COLZATO, for his long-standing leadership of the Bulletin.

It is only when you start doing some editorial work that you realise how much time and effort it takes. Nivaldo edited the Bulletin for 12 years. Together with his colleagues, he created a layout and design that didn't need much changing. It is clear and has a timeless visual style. As you may have noticed last time, the layout changes are only "cosmetic", and were made to mark the end of one editing chapter and the start of a new one. So Nivaldo, I admire you for being able to do this job for so long and so well.

Now, let's return to the content of UIS Bulletin issue 68-1. This issue is considered "regular", meaning that it covers the most important news about UIS operations and supported events.

The issue begins with the traditional President's column and continues with information about the International Day of Caves and Karst. There are also reports on past expeditions, projects and events, as well as news from the UIS Bureau and other organisations connected with caves. An interesting and statistically rich article summarises activities related to the International Year of Caves and Karst, which took place from 2021 to 2022. The issue concludes with memorial contributions about Arrigo CIGNA, a renowned Italian scientist and speleologist who is widely considered to be one of the founders of modern scientific speleology.

You will probably notice that expedition reports are written differently. Currently, authors have complete freedom over how they structure these reports, which are often created by condensing lengthy texts. This can lead to inconsistencies and variations in informational value. Therefore, we are considering providing a template for future reports. This is still under discussion, however, and we will provide more information about it later.

That would probably suffice as an introduction to this issue. I wish everyone a wonderful rest of the summer and a well-deserved holiday – hopefully active, with some caving, if possible!

PRESIDENT'S COLUMN

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Dear Colleagues, Dear Friends,

The International Union of Speleology is approaching another important milestone – the first ever UNESCO International Day of Caves and Karst. On this occasion, I hope that we will gather in large numbers in Postojna, Slovenia, and also at other places across the globe, to not only celebrate this day for the first time, but especially to remind the whole world once again of the importance of caves and karst, their vulnerability and the urgent need for their protection.

You can learn more about the entire event on the following pages of the Bulletin, and I would like to extend a heartfelt invitation on behalf of UIS.

The topic of cave and karst protection is also represented in other contributions, which describe two completely different approaches. On the one hand, influencing high-level politicians, on the other hand, education and awareness among the youngest generation.

Both approaches are necessary, but I am personally a bit sceptical of the attempt to influence high-level politicians in UN structures. Firstly, my own experience is that, throughout my speleological and professional career where I have had the opportunity to negotiate with dozens of politicians only a few individuals could be described as visionary and open mind enough to provide useful assistance. Secondly, even if, for example, a UN resolution on karst were to be enacted, it would in not provide a guarantee of global protection for karst areas, as unfortunately we commonly see UN resolutions in other areas being ignored, e.g. in the area of human rights.

In my view, an approach more likely to succeed is the efforts of the UIS Commission for Speleological Education of Children and Youth to educate the youngest generation, because it gives hope that one day they will naturally perceive caves and karst as an environment that is important to protect. In other words, we need to educate the next generation of instructed citizens and, yes, even future “karst aware” politicians.

The International Day of Caves and Karst is a unique opportunity to remind the general public of the importance of caves and karst every year. For this purpose, the UIS Bureau has prepared a new information leaflet (Figure 1), a new version of the IYCK promotional film and is working on updating the IDCK website www.caveskarstday.org. We are, of course open to other ideas so please do not hesitate to let us know your suggestions at any time.

Thank you for everything you do for caves and karst, I wish you beautiful days and hopefully see you in Postojna!



Figure 1: IDCK leaflet.

CELEBRATE THE FIRST INTERNATIONAL DAY OF CAVES AND KARST



Nadja ZUPAN HAJNA (Slovenia)
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On 13 September 2026, the global cave and karst community will celebrate the International Day of Caves and Karst (IDCK) for the first time. Following its proclamation by UNESCO in 2025, this historic occasion marks the beginning of a new annual global tradition dedicated to raising awareness of caves and karst, promoting their protection, and celebrating their scientific, environmental, and cultural importance.

The success of this first celebration will depend not on a single event, but on **the active participation of the global cave and karst community**. We hope that cavers, researchers, and organizations in every country will use this opportunity to present caves and karst to the public, promote their protection, and inspire future generations.

Caves and karst are among Earth's most valuable yet least visible natural environments. Karst landscapes cover almost one quarter of the Earth's ice-free land surface and provide drinking water for more than one billion people. Caves preserve unique archives of geological history, climate change, landscape evolution, biodiversity, and human evolution, while karst landscapes support exceptional ecosystems, cultural heritage, sustainable tourism, and local communities. The International Day of Caves and Karst offers an annual opportunity to communicate these values to society, decision-makers, educators, and young people, while promoting research, conservation, education, and sustainable management worldwide.

The inaugural international celebration will take place in Postojna, Slovenia, from 10 to 13 September 2026, organized jointly by the Karst Research Institute ZRC SAZU and the International Union of Speleology (UIS), with the support of the Slovenian National Commission for UNESCO and numerous partner institutions.

The programme will include the international scientific conference "Explore, Understand and Protect: Towards Sustainable Management of Caves and Karst", bringing together researchers, cave explorers, managers of protected areas, educators, and conservation specialists from around the world. Keynote lectures will address cave and karst protection, sustainable management of karst water resources, geoparks, Indigenous knowledge, and the role of science in conservation.

The programme also includes scientific excursions to several of Slovenia's most outstanding karst sites, including the UNESCO

World Heritage Škocjan Caves (Figure 1) and the Pivka intermittent lakes, the famous Postojna Cave, Planina Cave, Rakov Škocjan, and Cerknica Polje.

The highlight of the programme will be the Official Celebration of the UNESCO International Day of Caves and Karst, to be held on the evening of 12 September 2026 inside Postojna Cave, under the patronage of UNESCO and the honorary patronage of the President of the Republic of Slovenia. Representatives of UNESCO, governments, scientific organizations, protected areas, and the international speleological community will come together to celebrate this historic occasion.

Further information, registration, and the complete programme are available at: <https://izrkp.zrc-sazu.si/en/dogodki/international-day-of-caves-and-karst-idck>

While the celebration in Slovenia will mark the official international event, the International Day of Caves and Karst belongs to everyone. **We warmly encourage all UIS Member Countries, national speleological societies, caves, show caves, geoparks, biosphere reserves, universities, museums, schools, protected areas, NGOs, and local communities to organize their own activities** around 13 September.

UIS Commissions are also encouraged to organize thematic activities, webinars, exhibitions, outreach events, or other initiatives highlighting their fields of expertise as part of the International Day of Caves and Karst.

Events may be large or small, from public lectures, school activities and cave open days to guided cave visits, conservation and clean-up campaigns, museum exhibitions, scientific presentations, cave photography exhibitions, media outreach, and social media campaigns. Every activity contributes to raising awareness of caves and karst and helps communicate their importance to the wider public.

The objective is simple: to help people better understand why caves and karst matter and why they deserve protection.

To demonstrate the truly global impact of the first International Day of Caves and Karst, the UIS will collect information about IDCK celebrations from around the world.

We kindly invite organizers to register their planned IDCK

events with the UIS in advance. Planned events will be promoted through the UIS and IDCK websites and social media. After the celebrations, we also encourage organizers to submit a short report together with a few photographs. These reports will contribute to a global overview of the first International Day of Caves and Karst and will demonstrate to UNESCO and the wider public the worldwide impact of this new international observance. Detailed instructions for submitting events and reports will soon be available on the UIS and IDCK websites.

The proclamation of the International Day of Caves and Karst by UNESCO was a remarkable achievement, but it marks only the beginning of a long-term global initiative. Its future success depends on the enthusiasm, creativity, and commitment of the global cave and karst community (Figure 2).

Every lecture, exhibition, cave tour, school activity, scientific presentation, conservation project, and social media post will help build global recognition of caves and karst and strengthen efforts to protect these unique environments.

Let us work together to make 13 September 2026 a truly global celebration of caves and karst.

We look forward to welcoming many of you to Slovenia – and to sharing your own IDCK events from every corner of the world through the UIS and IDCK websites.

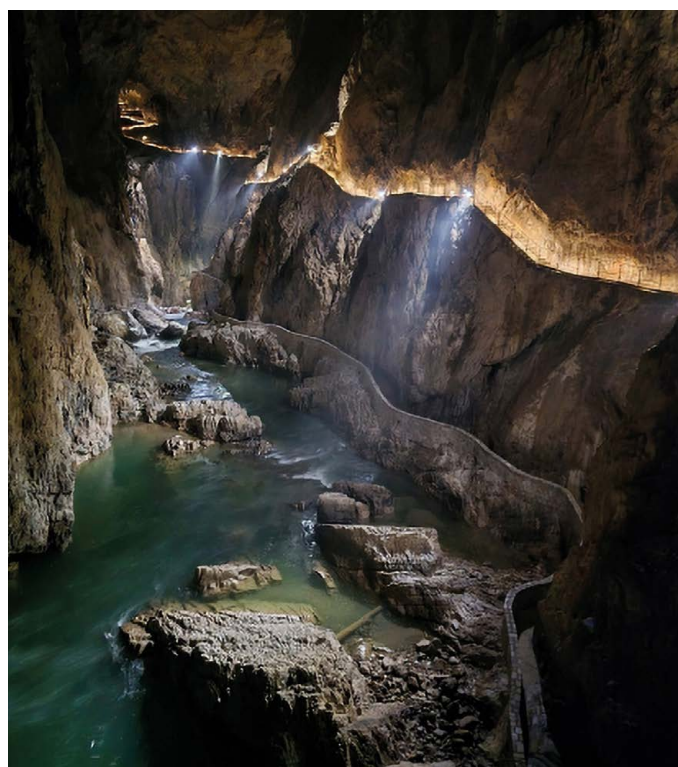


Figure 1: Škocjan Caves (UNESCO World Heritage Site), Slovenia, one of the excursion destinations during the first celebration of the UNESCO IDCK (Photo by Nadja Zupan Hajna).

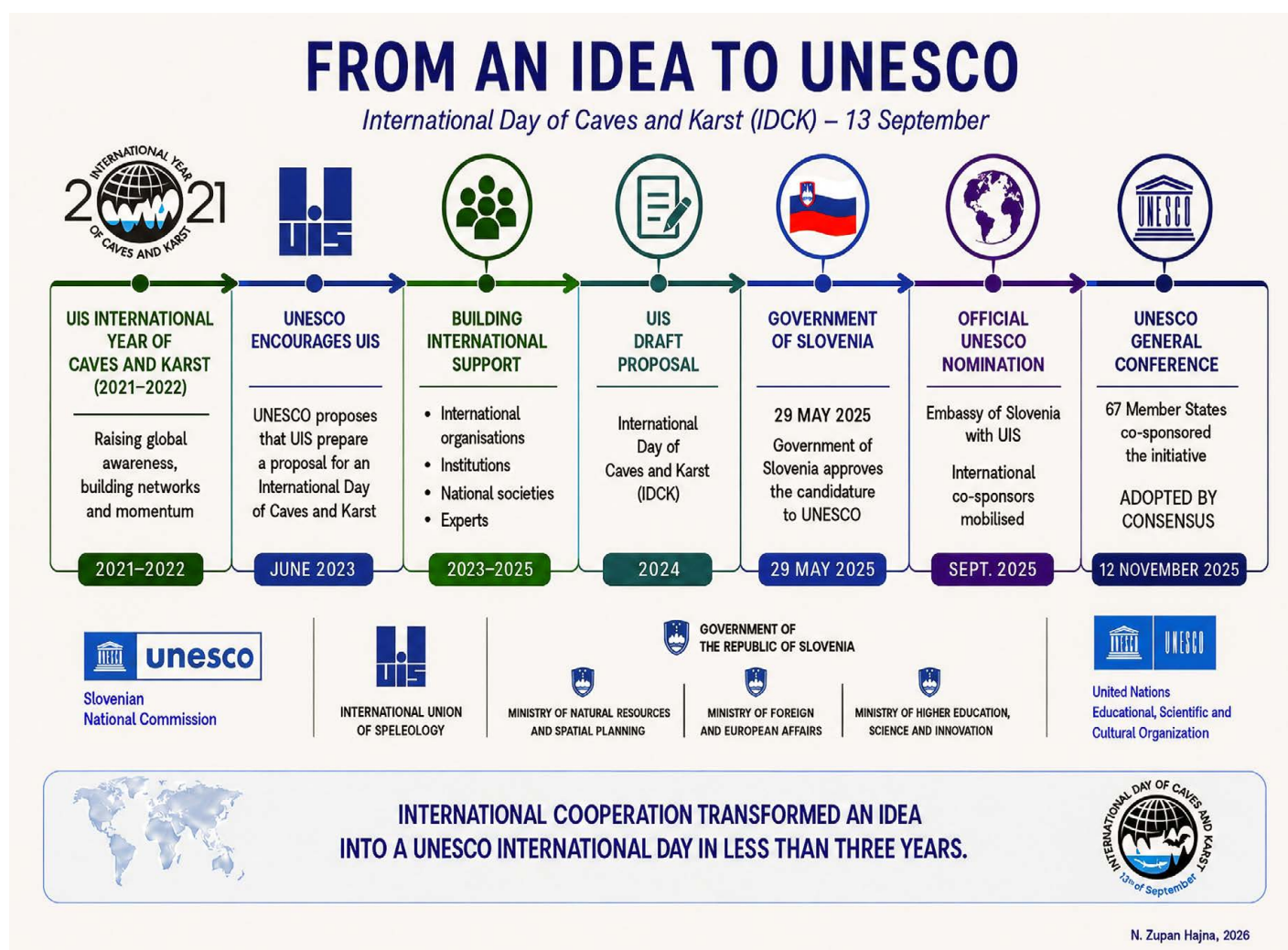


Figure 2: IDCK timeline; Nadja Zupan Hajna.

GLOBAL YOUTH ACTION FOR THE INTERNATIONAL DAY OF CAVES AND KARST (IDCK 2026)

Engaging the Next Generation in Speleology Worldwide

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INTRODUCTION

The International Union of Speleology (UIS) has recently established the Commission on Speleological Education for Children and Youth (Figure 1), whose mission is to strengthen global efforts to engage younger generations in understanding, appreciating, and protecting caves and karst environments.

In accordance with Articles 3 and 9 of the UIS Statutes, the Commission promotes speleology as a multidisciplinary field that integrates science, culture, environmental awareness, and heritage preservation. It seeks to foster international cooperation among educators, researchers, and institutions, while developing educational resources and encouraging responsible engagement with subterranean environments.



Figure 1: Logo of the new Commission.

Within this context, the Commission is leading the Global Youth Action for the International Day of Caves and Karst (IDCK 2026), a worldwide initiative designed to mobilize children, young people, and educators across countries and regions.

THE INTERNATIONAL DAY OF CAVES AND KARST (IDCK)

The International Day of Caves and Karst, officially proclaimed by UNESCO in 2025, will be celebrated annually on 13 September.

This global initiative recognizes the fundamental importance of caves and karst landscapes, which:

- cover nearly one quarter of the Earth's surface;
- provide drinking water for over a billion people;
- host unique biodiversity and fragile ecosystems;
- preserve invaluable geological, climatic, and cultural records.

The first official celebration will take place in Postojna, Slovenia, in September 2026, marking a historic moment for the international speleological community.

GLOBAL YOUTH ACTION FOR IDCK 2026

To contribute to this milestone, the Commission has launched a global educational campaign focused on children and young people.

The initiative aims to:

- promote awareness of caves and karst among younger generations;
- support educators with accessible educational resources;
- encourage hands-on and community-based learning;
- connect local actions into a global movement.

Participants are invited to develop activities adapted to their own local contexts, cultures, and available resources. Suggested activities include educational workshops, creative projects, community engagement actions, and environmental awareness campaigns.

Importantly, these activities are not prescriptive. The initiative encourages participants to adapt, expand, or create approaches that best suit their audiences, capacities, and realities.

EDUCATIONAL RESOURCES AND ACTIVITIES

To support participation, the Commission recommends accessible educational materials developed by the Brazilian School of Speleology:

- Você sabe o que é uma caverna? (for ages 6–10)
<https://www.ebre.org.br/publicacao/voce-sabe-o-que-e-uma-caverna/>
- Cavernantes Mirins: manual espeológico para grandes aventuras (for ages 10+)
<https://www.ebre.org.br/publicacao/cavernantes-mirins-manual-espeologico-para-grandes-aventuras/>

The Commission also recommends a toolkit with a variety of online and printable resources managed by the National Cave and Karst Research Institute:

https://drive.google.com/drive/folders/1epjTbaEfpQn7kRrVd2uPIqtvolyDEoNn?usp=drive_link

These materials provide interactive and visual approaches to introducing cave and karst concepts, including activities such as environmental impact games and creative learning exercises. Additionally, participants are encouraged to develop community-based initiatives, such as workshops on underground pollution, youth-led awareness campaigns, and outreach actions in schools, libraries, and local institutions.

A key opportunity for engagement is Cave Week (1–7 June 2026), coordinated by the National Cave and Karst Research Institute (NCKRI).

Participants are encouraged to:

- organize educational and outreach activities during Cave Week;
- document these activities through photos and videos;
- connect their actions to both Cave Week and IDCK initiatives.

This alignment enables Cave Week to function as a global mobilization phase, contributing directly to the broader IDCK campaign.

GLOBAL VIDEO – A SHARED OUTCOME

One of the main outcomes of this initiative will be a collaborative international video composed of contributions from participants worldwide.

Educators, institutions, and youth groups are invited to:

- record short videos (1–2 minutes);
- present their activities and messages;
- highlight local perspectives on caves and karst;
- ensure proper authorization for image use, especially for minors.

The final video will be presented at the official IDCK celebration in Postojna, representing a collective global voice.

Educators, environmental educators, schools, universities, NGOs, community organizations, biosphere reserves, protected areas, researchers, and speleologists from around the world are invited to participate in this global initiative. Contributions of any scale are valuable and play an important role in building this collective effort.

Further information and participation guidelines are available on the Commission's website:

<https://carstologia.wixsite.com/speleoedu/actions>

CONCLUSION

The Global Youth Action for IDCK 2026 represents an opportunity to build a lasting international network of educational initiatives focused on caves and karst.

By engaging children and young people, we contribute not only to raising awareness but also to forming future generations committed to the protection of these vital environments.

Together, through collaboration and shared knowledge, we can make caves and karst more visible, better understood, and more effectively protected worldwide. Let's keep our motto alive: **Explore. Understand. Protect.** (Figure 2).

ACKNOWLEDGEMENTS

The authors acknowledge the support of the UIS Bureau, Commission members, and partner institutions contributing to the development of this global initiative.

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- MEYER et al. (2023). *Você sabe o que é uma caverna? Sociedade Brasileira de Espeleologia*, 29 p.
- <https://carstologia.wixsite.com/speleoedu/actions>
- <https://nckri.org/cave-week/>



Figure 2: The Commission's motto, "Explore. Understand. Protect.", summarises its educational mission: to encourage young people to discover, understand, and protect caves and karst environments.

2025 TIPAN EXPEDITION, PHILIPPINES

Preliminary Report

Patrick van den BERG (Netherlands), Member of Speleo Nederland, voodoodiver@proton.com

Between March 16 and April 5, 2025 a group of Dutch, Belgian, Swiss, Austrian and Philippine cavers took part in a caving expedition to the Tipan area, part of the Naga municipality in the province of Zamboanga Sibugay on the island of Mindanao in the Philippines. This report describes the expedition objectives and end results.

PREVIOUS EXPEDITIONS

This was the seventh caving expedition to the Zamboanga peninsula, and the third fully devoted to the Tipan area (Figure 1). The expedition site is part of the Naga-Kabasalan Protected Landscape proclaimed under Republic Act 11686 on April 8, 2022. As in previous years, the group explored and surveyed the Tipan cave system and other caves in the surrounding area with permission from the Protected Area Management Board.

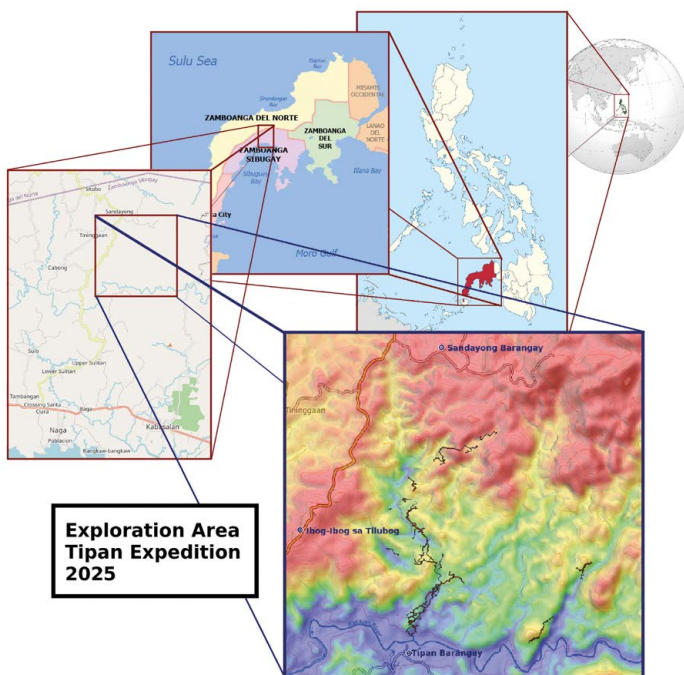


Figure 1: Area of the Tipan cave system, main objective of the Tipan 2025 expedition.

In 2014 Marc MENTENS, a Belgian expat living in Zamboanga, made an open invitation for cavers to come over for initial explorations of the area. Both Belgian cavers from the *Verbond van Vlaamse Speelologen* (VVS) and Dutch cavers from *Speleo Nederland* responded. This resulted in two Belgian (2014, 2016) and two Dutch (2016, 2020) expeditions, and two expeditions jointly organized by Dutch and Belgian cavers (2023, 2024). The 2024 expedition was also described in the June 2024 issue of the *UIS Bulletin*.

EXPEDITION TEAM MEMBERS

This year's expedition had more nationalities than the years before. The core of this year's team were Erik CLAES (BE), Pascal REENAERS (BE), Patrick van den BERG (NL), Martin SCHREINER (AT), Joerg DREYBRODT (CH), Mikko CUEVAS (PH), Lyle X DADULO (PH), and of course Marc and Bing MENTENS as our local liaisons (BE/PH).

The team was joined by scientists Dr. Daniel HUSANA, Dr. Grace BANAAY, Eugene LOGATOC, and Julie Aiza L. MANDAP, all from the *University of the Philippines Los Baños* (PH), and also Eric C. MAXWELL from the *University of Alabama* (US).

Apart from these core team members, also many Filipinos took part (some of them in Figure 2), most of them being employees of the *Department of Environmental and Natural Resources* (DENR).



Figure 2: Partial expedition team (Photo by restaurant employee).

Behind the scenes the team also received a lot of support from Governor Dr. Ann K. HOFER (Figure 3) who graciously provided us with security details, and base camp facilities. Transportation to the various cave sites had been arranged by the mayor of Naga, Rino O. DELOS REYES. DENR employees also prepared breakfast and dinner for the whole team, which was all greatly appreciated!



Figure 3: Visit to governor Dr. Ann K. HOFER (Photo by governor's staff).

EXPEDITION OBJECTIVES

The 2025 expedition set the following objectives (Figure 4):

1. dive through several sumps to connect several different caves previously surveyed;
2. survey unexplored Tipan cave entrances identified in 2024;
3. identify and explore other cave entrances in the area;
4. assist with academic research;
5. photo documenting all surveyed caves;
6. support local organizations and caving infrastructure.

The biggest difference with previous expeditions to the Tipan area was the goal to dive through different sumps which added to the logistical complexity of this year's expedition.

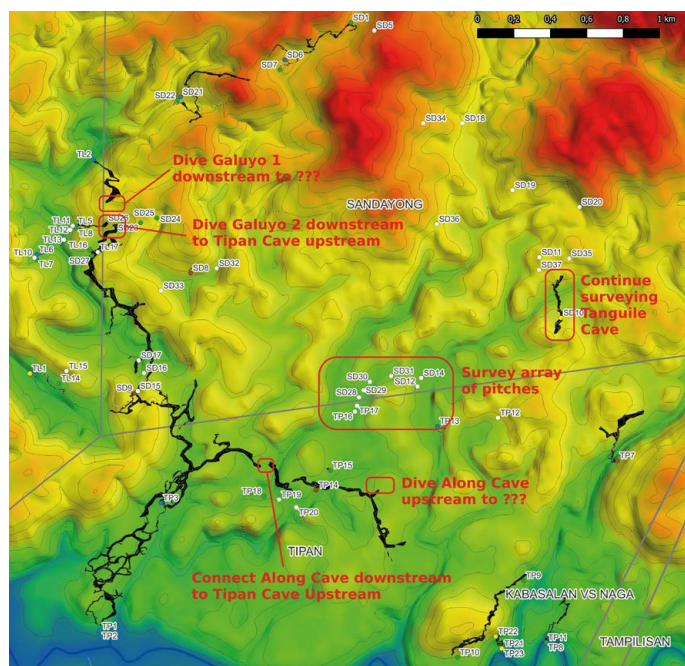


Figure 4: Overview of Tipan 2025 Expedition objectives.

BASECAMP

The team stayed at the *Ibog-Ibog sa Tilubog* family park in barangay Tilubog again, just like during the previous two expeditions (Figure 5).



Figure 5: Basecamp at Ibog-Ibog sa Tilubog (Photo by Eric C. MAXWELL).

The park has a marvelous view, a good restaurant, and some nice spots to camp, making it an obvious choice to return to this year. The park also has several covered terraces which we could use for equipment storage, eating and drinking, but also for briefings, and processing of biological specimen and survey data (Figure 6).



Figure 6: Processing biological specimens at Ibog-Ibog sa Tilubog basecamp (Photo by Erik CLAES).

The first day at basecamp was spent on camp and gear setup. Because additional time was needed for setting up diving gear, the team decided to first go and survey the big lead which it had found on the last day of last year's expedition: Tanguile Cave.

SURVEYING TANGUILE CAVE

In the last week of the previous year's expedition, the team got some GPS coordinates from DENR rangers of a new cave entrance they had found, which was named Tanguile Cave (code SD10). Because there were no more unsurveyed big leads, the team decided to check it out on the very last day of the expedition, expecting to find just another hole in the ground without a continuation. However, after rappelling 25 meters (Figure 7) the team found a big chamber, with wide passages going both up- and downstream. This was very promising! After surveying as much as we could on our final day, we left with a big lead for the next expedition.



Figure 7: Marc MENTENS descending the entrance pitch of Tanguile Cave (Photo by Erik CLAES).

Returning to Tanguile was quite an ordeal on our first day. It was close to two hours hiking through a dense limestone jungle, both hot and extremely humid because it had been raining for a couple of days. People falling all the time because of very muddy and slippery slopes, as well as spikes and sharp saw tooth leaves and vines everywhere when people tried to get a grip trying not to fall. And to top it all off, giant angry ants combined with a continuous barrage of incoming mosquitoes.

After arriving at Tanguile Cave one team surveyed upstream and the other one downstream. The upstream team was finished after just 110 meters of wriggly swimming passage, ending at a very steep and muddy slope impossible to climb (almost below the SD35 pitch we found out later). The downstream team had more luck. A traverse needed to be bolted (Figure 8), but the passage kept on going!



Figure 8: Martin SCHREINER crossing the traverse in Tanguile Cave (Photo by Erik CLAES).

After this first day in Tanguile, two more trips were made to the cave, both to continue surveying and for photo documentation by Erik Claes. Unfortunately, the cave became extremely muddy further downstream. Everything was mud, including the ceiling and each and every stalagmite and stalactite along the way. Surveying became a continuous struggle, trying to move around through thigh high mud. After the third trip it was decided to leave the rest of the cave to survey either from a yet to be found new entrance further downstream, or a future generation... The downstream part of the cave was now extended by an additional 1,351 meters, and plotted on the map now seems to lead directly to the array of pitches (Figure 9) that were surveyed later during the expedition.

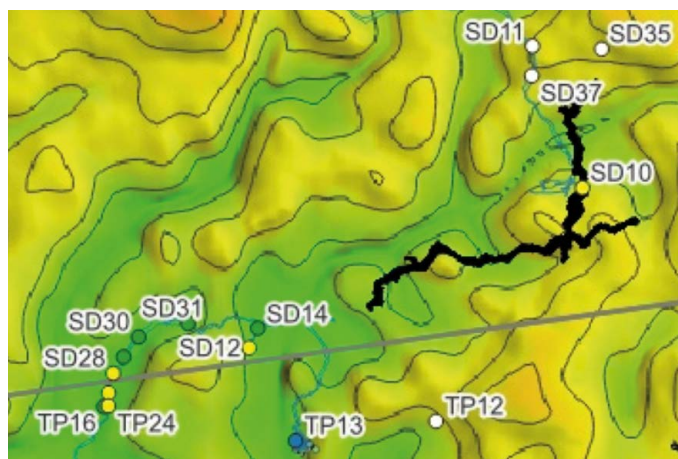


Figure 9: Surveyed Tanguile Cave slowly crouching towards the to be surveyed array of pitches.

SUMP DIVING

The main non-academic objective of this year's expedition was diving through several sumps the team had encountered during previous expedition and trying to connect different caves together. A total of four sump dives (Figure 4) were made:

1. dive Along Cave upstream;
2. dive Tipan Cave east branch upstream;
3. dive Galuyo 2 downstream;
4. dive Galuyo 1 downstream.

ALONG CAVE UPSTREAM

The first dive the team did was diving the upstream sump of Along Cave. Unfortunately, this sump was extremely muddy, even without disturbing the water. Getting into the sump meant wading through above knee-deep mud first, making the visibility problem even worse (Figure 10). There was also no current to alleviate this problem, meaning searching for a path forward could only be done by touch. This touch contact was also the only little spatial awareness the diver had, combined with the angle and slack of the dive reel line.

After searching the sump for about 10 minutes a continuation was found by diver Patrick van den BERG at a depth of about 5 meters. It took a while to find this continuation because it was not in the obvious location, but right next to where the diver entered the water, meaning the passage took a sharp turn to the



Figure 10: Cave diver Patrick van den BERG returns after making a successful connection to a new chamber (Photo by Erik CLAES).



Figure 11: Cave Diver Patrick van den BERG ready to dive the sump between Galuyo 2 and Tipan Cave (Photo by Erik CLAES).

left. After about 30 meters with a maximum depth of 5 meters the sump surfaced in another very muddy room, expanding from approximately 3 meters to 5 meters wide, about 10 meters long, and 8 meters high. Unfortunately, the continuation was up a 6 meter high and very steep and muddy slope on the right. Climbing up there would need two divers prepared to dive in these conditions, with one of them carrying digging equipment to try and make a path upward, and the other one to look after the other one's diving equipment. Because of this complexity we decided to leave this continuation for a later expedition!

After plotting the continuation on the map, it looks like it is going to connect to an array of pitches yet to be explored (Figure 4), just like Tanguile Cave. This could explain the extreme mud levels found in this passage.

TIPAN CAVE EAST BRANCH UPSTREAM

The second dive was the very plausible connection between the Tipan Cave east branch upstream sump and the Along Cave downstream sump (Figure 4). Again, the sump was very muddy, but this time the team at least knew where to find the continuation. After about 60 meter at a maximum depth of 9 meters, Patrick van den BERG surfaced in Along Cave. Tipan Cave and Along Cave were now officially connected!

GALUYO 2 DOWNSTREAM

Tipan Cave was now connected to Along Cave, and the team wanted to further expand Tipan Cave by making an upstream connection in the north branch to the Galuyo 2 downstream sump (Figure 4). To do this it was decided to dive from the Galuyo 2 sump because it was far easier to get too, especially with diving equipment.

What made the Galuyo 2 sump remarkable was the bamboo platform floating on top, as well as remnants of its previous iterations. It was used by locals for eel fishing (Figure 11). Visibility was around 1 meter which made it significantly better than during the two previous dives, but still not good enough

for a winning photo in an underwater photograph contest... The sump itself was a lot bigger than the previous two which made finding the continuation a bit more time consuming. However, after a while the way forward was found and after that it was all a breeze. There was even an actual piece of rock sticking out somewhere which could be used as an honest-to-God tie-off point!

After about 60 meters with a maximum depth of 9 meters, Patrick van den BERG emerged in the sump of the Tipan north branch. This means the Tipan Cave is now expanded even further!

GALUYO 1 DOWNSTREAM

Galuyo 1 is the cave that a jungle river (no name on any maps) disappears into (Figure 12). After following the river through 450 meters of cave passage it disappears into a 20 meter wide sump. This downstream sump is only about 140 meters away from both the Galuyo 2 downstream and the Tipan northern upstream sump, and extrapolating from the surveyed passages on the map (Figure 4), it likely connects to the sump between the two. However, when diving between those two sumps no obvious side passage was found going towards Galuyo 1, but this could not be ruled out either because of the poor visibility.



Figure 12: Galuyo 1 entrance river (Photo by Patrick van den BERG).

When arriving at the sump it turned out to be one big trash pile clogging the 20 meter wide and 40 meter long surface of the sump. Lots of tree trunks and bamboo, but also a lot of plastic, drums, and all kinds of other stuff washed into the cave (Figure 13). This would not be easy to dive!



Figure 13: Clogged sump in Galuyo 1 (Photo by Erik CLAES).

The surface of the sump was completely covered, but the team hoped it would be possible to dive through underneath it all. To facilitate this a big rock was thrown into the sump to use as a tie-off point at the bottom of the start of the sump. That way, the line would stay clear of all the wood on top.

Diver Patrick van den BERG followed the cave line straight down to the rock on the bottom at about 6 meter depth, and started looking for a way forward. However, visibility was completely non-existent. It wasn't even possible to read the numbers on the dive computer holding it against his dive mask. This made it very difficult to find the correct way forward in this sump. After swimming about 15 meters Patrick found that there were even logs at the bottom at 7 meters which had to be pushed away to continue. Continuing would mean a very high risk of creating a "line trap" (when laying cave line, it may slide in unwanted places -trap- which are not big enough for a diver to pass when following the line back out) in between all the wood lumped together. It was therefore decided to break off the dive.

When exiting the cave again, it suddenly started to rain heavily, turning the gentle stream into a torrent very quickly. Everybody was glad the dive was called off! These two experiences made the team realize it was foolish to try and attempt to dive the sump starting in Galuyo 1. Searching for an upstream connection in Galuyo 2 or Tipan would be a much wiser approach.

IDENTIFY AND SURVEY OTHER CAVE ENTRANCES

During previous expeditions an array of pitches had been identified between downstream Tanguile Cave and upstream Along Cave. These entrances had not been surveyed because of no noticeable air flow and more promising leads elsewhere. After encountering problems in continuing both downstream Tanguile Cave and upstream Along Cave passages, the team now hoped to find a bypass to one or both of the caves through one of these pitches (Figure 4).

A total of nine pitches (SD12, SD14, SD28, SD29, SD30, SD31,

TP16, TP17, and TP24) were rigged and surveyed (Figure 14). Unfortunately, most pitches quickly came to a dead end. Some kept on going with multiple side passages, but in the end all passages ended in boulder chokes, impossible to pass without extensive digging. This meant no bypass had been found to either downstream Tanguile Cave and upstream Along Cave. Additional prospecting for new entrances will need to be done if the team wishes to pursue this goal further.



Figure 14: Patrick van den BERG entering pitch SD28 (Photo by Erik CLAES).

ACADEMIC RESEARCH

Dr. Daniel HUSANA and Eugene LOGATOC were both part of the previous two Tipan expeditions. Because of the interesting finds on those expeditions (more on that later), the science team this year was expanded with Dr. Grace BANAAY and Julie Aiza L. MANDAP, both mycologists from the *University of the Philippines* Los Baños (just like Daniel and Eugene), as well as Eric C. MAXWELL from the *University of Alabama* (US). The science team worked mostly autonomously but did rely on information from the survey team on interesting locations for specimen sampling, as well as assisting in reaching harder to get to locations.

This year's findings related mainly to cave fauna and mycology, but also new information on samples from previous years was shared with the group.

CAVE FAUNA

Dr. Daniel Edison HUSANA is a professor of natural environmental studies with his main focus on cave and aquatic ecology. He is also an experienced crab and cave fish taxonomist. During the expedition Daniel primarily teamed up with Eric C. MAXWELL to collect various cave fauna samples. Eric is a biology student with a particular affinity for freshwater fishes, salamanders, isopods, and cave fauna.

During their stay Daniel and Eric documented over 50 species in the Tipan Cave system, most of which are very likely to be undescribed. Eric was particularly excited about several species of troglomorphic isopods (Figure 15), with different species being apparently restricted to different micro-habitats within the cave.

They also discovered some new cave-adapted cockroaches, silverfish, pseudo-scorpions (Figure 16), and millipedes (Figure 17). One of the (non-troglomorphic) spiders they observed commonly



Figure 15: Cave adapted isopod found in Tipan Cave system (Photo by Eric C. MAXWELL).



Figure 16: Cave adapted pseudoscorpion found in Tipan Cave system (Photo by Eric C. MAXWELL).



Figure 17: Cave adapted millipedes found in Tipan Cave system (Photo by Eric C. MAXWELL).

in the cave near bird nests may be the first record of that family in the entire Philippines.

Learning more about the cave fish which were collected during the previous expeditions and that Daniel currently is describing was also an important objective of this expedition. They were able to implant a few dozen fish with *Visual Implant Elastomer* (VIE) tags – basically rubber tattoos that fluoresce under ultra-violet light (Figure 18).

These will be useful for estimating the population size of the fish in this cave system, as well as hopefully enabling them to determine how far throughout the cave they travel. There is some question about the interaction between fish living outside



Figure 18: Daniel HUSANA implants a VIE tag in a cave fish in Tipan Cave (Photo by Eric C. MAXWELL).

of the cave versus inside the dark zone, and hopefully these tags will help them answer some of those questions. Daniel also collected tissue samples from the cave fish that will be used for doing genetic sampling next year.

MYCOLOGY

Julie Aiza L. MANDAP explored the presence of fungi both inside the cave and in the surrounding forest. Limited only to species visible to the naked eye she found diverse fungal species growing inside the cave, typically on guano, dead wood, cave walls, among others (Figure 19). It was interesting to see some species known to grow outside of caves continue to thrive in the absence of light. This might explain why some usually pigmented species appear pale or washed-out inside the cave. Afterwards, some of these collected species were successfully cultured in the lab, which worked by mimicking the cave's dark and humid conditions.

In the surrounding forest, as expected, more fungal species were observed predominantly basidiomycetes then ascomycetes, and a few slime molds (not true fungi). Those species that were difficult to spot due to their minuscule size and features had to be looked at under a microscope (Figure 20) to determine all phenotypes. Along with genetic traits, these are crucial for proper fungal identification.

Specimens collected were preserved in dehydrated form (Figure 21), and some tissue samples were processed for long-term storage to serve as reference archives for biodiversity documentation, environmental monitoring and conservation efforts.



Figure 19: Fungi found inside Tipan Cave (Mucoraceae – and Xylariaceae) (Photos by J.A.L. MANDAP).



Figure 20: Myxomycete spotted near Tipan Cave entrance (Photos by J.A.L. MANDAP).

NEW INFORMATION ON THERMAL SPRING MICROBIAL MATS FROM PREVIOUS EXPEDITIONS

During the 2023 Tipan expedition, a thermal spring with microbial mats was found in one of the caves (see EuroSpeleo Projects 2023-02 report). Samples that were taken during both the 2023 and 2024 Tipan expeditions (see June 2024 issue of the UIS Bulletin) were sent away for DNA analysis (Figure 22).



Figure 21: Assorted fungal specimens, substrate materials collected from diverse habitats within the Tipan Cave system and its surrounding environment (Photo by J.A.L. MANDAP).

This year the team learned that the analyses so far reveal 989 species of which about 97% are still unknown to science. There are many interesting species present including archaeobacteria and other bacteria from various extreme habitats.

It was also found out that the pH of the water changes over time: it was acidic in March 2023 and was basic in March 2024. These changes affect the microbial community, as there was a significant change in the microbe composition. This finding is very interesting because it affects the dynamics of the cave.

OTHER SCIENTIFIC UPDATES ON SPECIMEN COLLECTED DURING PREVIOUS EXPEDITIONS

The variation of some fish samples collected during the two previous expeditions is quite tricky (see EuroSpeleo Projects 2023-02 report and June 2024 issue of the UIS Bulletin). Therefore, it was decided to lump the cave fish population (Figure 23) into one species for now until DNA analysis evidence has been completed (planned to do 2026 in USA).

A crab collected in 2024 (see Cover Photo) is also a new species, probably a new genus.

PHOTO DOCUMENTATION

Erik CLAES (Figure 24) was the cave photographer during our expedition, just like on the previous two expeditions.

Apart from expedition life above ground, all important features in the Tanguile Cave were photographed, as well several surveyed pitches and Galuyo 1 (Figure 25). Also, additional photos have been made in the caves from which the different sump dives initiated, as well as pre- and post-dive photos.

FUTURE PLANS

Apart from digging projects and sump diving there are currently no big leads left. That means next year there will definitely be more cave diving as well as checking out some smaller leads.

The team hopes however that DENR rangers in the meantime will find new entrances in the Naga-Kabasalan Protected Landscape in which the Tipan Cave system is situated. There are bound to be hundreds of additional cave entrances in the area,



Figure 22: Pascal REENAERTS and Daniel HUSANA observing and documenting the microbial mats on the cave floor next to the hot water spring before collecting samples (Photo by Erik CLAES).



Figure 23: *Barbodes n. sp.* Found in the Tipan cave system (Photo by Erik CLAES).



Figure 24: Erik CLAES at work at the Tipan main entrance (Photo by Lisette de GRAAUW).

hidden away in the dense jungle vegetation. We are sure some of them will open up to tens of kilometers of unexplored cave passages. The team can't wait to set their boots in there, but it relies on input from the knowledgeable rangers to be able to maximize survey time and minimize prospecting time.

ACKNOWLEDGEMENTS

The expedition team would like to thank Governor Dr. Ann K. HOFER for her generous support of this expedition, as well as for her warm welcome and hospitality. Without her support, this expedition would not have been possible. We would also like to express our gratitude to Mayor Rino O. DELOS REYES of

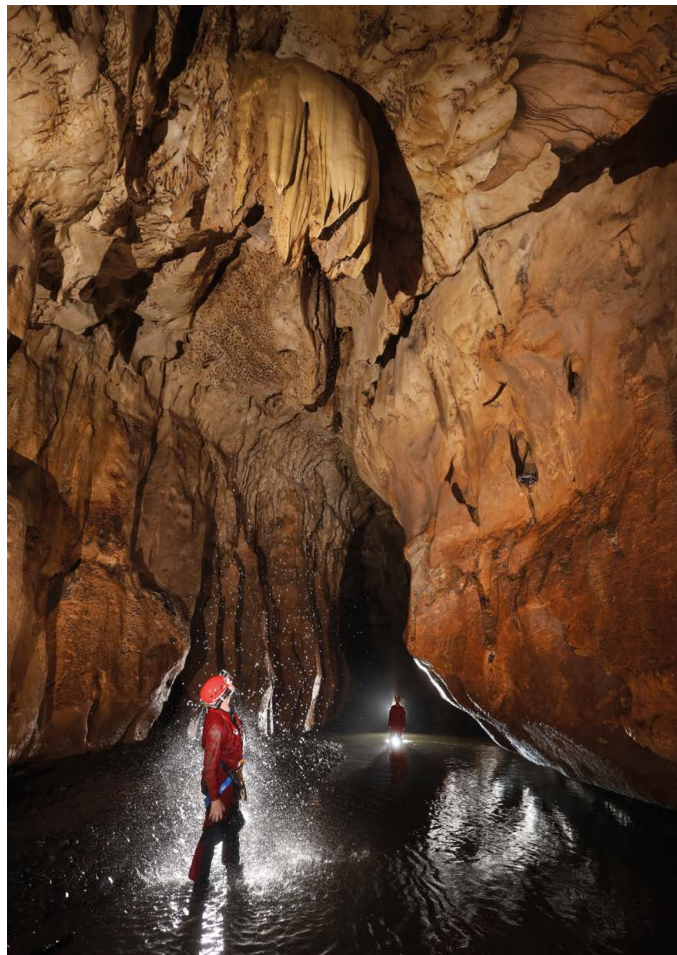


Figure 25: Martin SCHREINER in the main Galuyo 1 passage towards the sump (Photo by Erik CLAES).

Naga, for arranging all transportation during our stay. Special thanks are also extended to Dante A. OPORTO, former Assistant Regional Director for Management of DENR Region IX, for his invaluable support. Although he is no longer with the DENR, his assistance was instrumental to the success of this expedition. To the Barangay Officials of Tilubog, Sandayong and Tipan for assisting in the different site explorations.

We are deeply grateful to the DENR officials who worked tirelessly behind the scenes to make the expedition possible, both before and during our fieldwork. To Atty. Ernesto D., Adobo, Jr. (Undersecretary for Legal and Administration) who visited the team during the expedition and committed his support to such noble undertaking. To Ma'am Marie Angelique C. GO (OIC-Regional-IX Executive Director), George E. LAOLAO (Provincial Environment and Natural Resources Officer of Zamboanga Sibugay), Dennis N. CATALAN (Community Environment and Natural Resources Officer of Kabasalan), Reynaldo C. CUARESMA (PENRO, OIC-Chief, Technical Services Division), Georgina L. FERNANDEZ (Protected Area Superintendent/Chief, Conservation Development Section). Of course, we are also immensely thankful to all DENR PENRO Sibugay personnel who assisted throughout each day of the expedition. Therenice N. GOMERA, Airra Jhanine S. ABRAJANO, Queenie N. GOMEZ, Irish Claire M. TRAGICO, Jay Mark C. DINOPOL, Jino O. SALVADOR, Ronilo O. BLANCO, Ajenabone S. ENDONG, Shariff Alsaddam C. HASIM, Randy J. VAILOCES, Alberto C. ABALLE, Aljune E. LEOGAN, Ana Michelle J. TALITOD and Christine J. L. JUHAILI.



Figure 26: Tipan 2025 Expedition support team (Photo by Erik CLAES).

Finally, we extend our heartfelt thanks to the Armed Forces of the Philippines, Provincial and Municipal Police, the LDRRM of Naga Municipality. We especially acknowledge Corporals Mark D. BABIA, Raymond C. DIAZ, Alden Rey O. CAGUMBAY, Jessel C. BUGAS, Ronnel PENIDA, and Jose Dennis LABANG Jr.; Privates First Class Glyn R. ABIABI; Privates Fretchel Vann PASCUA, Eduardo B. ABARRACOSO, Jimuel A. CADAY, and Rey D. HUMILID; CAAs Julito OGLOS, Melvin ATIG, Jopie SOLATORIO, and Guillermo ALFROQUE. Your support and cooperation are greatly appreciated (Figure 26).



KHAOPHUTONG KHAOTHAKHANUN SPELEOLOGICAL EXPEDITION

Expédition internationale de spéléologie – Kanchanaburi 2024 : stage de formation aux techniques de progression sur cordes – février 2024

Expédition parrainée par l'Union Internationale de Spéléologie et la Fédération Française de Spéléologie
(janvier–avril 2024)

Didier RATEAU (France), président du club éponyme,
responsable de l'expédition, vice-président de la
Commission des relations et expéditions internationales,
Fédération Française de Spéléologie (2023–2024),
rateauminer@orange.fr

REMERCIEMENTS

Chers Chaiporn Siripornpibul, Russarint Sirapattarapureenon et l'équipe de la DMR, et Chaayasit Krusorn, nous vous adressons nos remerciements les plus sincères pour votre aide précieuse dans nos relations avec les rangers des différents parcs nationaux. Votre expertise et votre dévouement ont été essentiels à la réussite de nos initiatives. Nous tenons également à exprimer notre gratitude à nos partenaires fabricants et distributeurs de matériels, dont les coordonnées figurent en dernière page de ce rapport. Votre collaboration et votre soutien ont joué un rôle clé dans le succès de nos projets. Un merci spécial à l'Union Internationale de Spéléologie et à la Fédération Française de Spéléologie, CREI, pour leur aide inestimable apportée à cette action internationale. Votre engagement envers la communauté spéléologique est profondément apprécié. Nous adressons également notre reconnaissance au Comité Départemental de Spéléologie d'Indre-et-Loire pour son soutien financier, sans lequel nos efforts n'auraient pas été possibles.

Nos remerciements vont aussi à Come Tong, chef adjoint du village de Ban Mong Kala, aux moines de Wat Tham Kiriwong, et enfin, aux rangers dévoués du parc national de Lam Khlong Ngu. Votre accueil et votre assistance ont grandement contribué à enrichir notre expérience.

Avec toute notre gratitude
L'équipe Khaophutong Khaothakhanun

DMR – Department of Mineral Resources, Thailand
CREI – Commission des relations et des expéditions internationales

Association Spéléo Khaophutong Khaothakhanun
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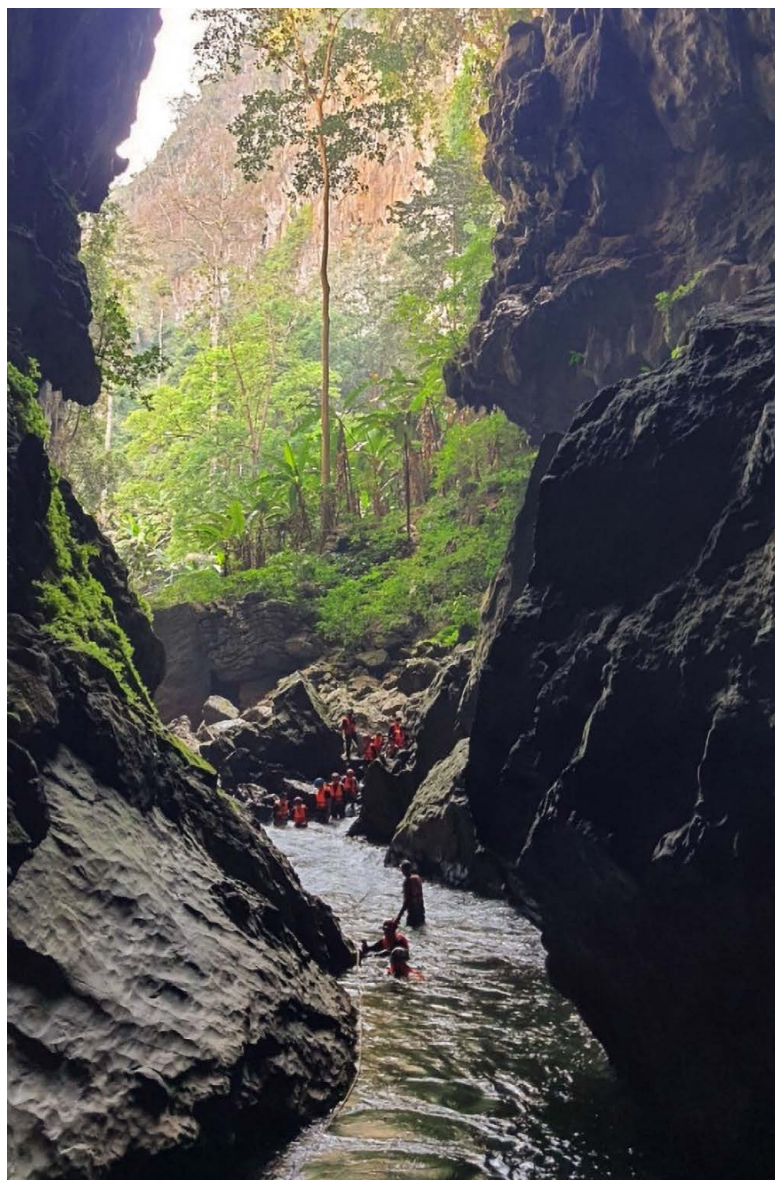


Figure: Tham Nok An Aen 2 Porche Aval (Photo by Etienne Fabre).

PRÉAMBULE

Au cœur des paysages luxuriants de Kanchanaburi, là où la nature se déploie dans toute sa splendeur, se cachent des merveilles géologiques qui n'attendent que d'être explorées. C'est dans cette région que notre club, l'Expédition spéléologique Khaophutong Khaothakhanun, a établi son terrain d'aventure et de savoir.

Février 2024 a marqué un tournant dans notre quête incessante de connaissance et de partage. Nos stages de formation, ancrés dans la richesse des parcs nationaux de Sai Yok Yai et Lam Khlong Ngu et dans l'authenticité du village de Ban Mong Kala, ont été le théâtre d'un échange culturel et éducatif sans précédent.

Ce rapport est le récit de ces jours où, main dans la main avec les villageois et sous le regard bienveillant du chef adjoint Come Tong, nous avons écrit une nouvelle page de l'histoire de la spéléologie en Thaïlande. Il témoigne de notre engagement envers la préservation de ces sanctuaires souterrains et de notre volonté de transmettre une passion qui défie les frontières et les générations.

TRAINING TEAM



Figure: Didier RATEAU – Leader (Photo by Chaiporn SIRIPORNPIBUL).



Figure: Etienne Fabre – Guide de Spéléologie (Photo by Didier RATEAU).

PREAMBLE

In the heart of Kanchanaburi's lush landscapes, where nature unfolds in all its splendour, lie geological wonders just waiting to be explored. It is in this region that our club, the Khaophutong Khaothakhanun Speleological Expedition, has established its field of adventure and knowledge.

February 2024 marked a turning point in our relentless quest for knowledge and sharing. Our training courses, anchored in the richness of the Sai Yok Yai and Lam Khlong Ngu National Parks and in the authenticity of the village of Ban Mong Kala, were the scene of an unprecedented cultural and educational exchange.

This report is the story of those days when, hand in hand with the villagers and under the benevolent gaze of Deputy Chief Come Tong, we wrote a new page in the history of caving in Thailand.

It is a testament to our commitment to the preservation of these underground sanctuaries and our desire to pass on a passion that defies boundaries and generations.

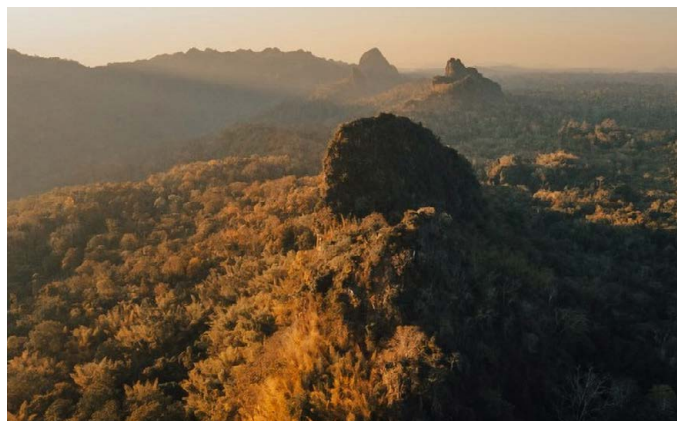


Figure: Dorsale dévonienne Srinagarindra National Park – Ban PakMueang (Photo by Alexis RATEAU).



Figure: Arbre à miel espèce rare et remarquable. Koompassia excelsa (Photo by Didier RATEAU).

INTRODUCTION

Depuis plusieurs années, notre passion pour l'exploration souterraine nous a conduits dans les profondeurs mystérieuses des grottes de Thaïlande.

Au fil des expéditions, nous avons tissé des liens d'amitié avec des géologues thaïlandais, partageant avec eux le frisson de la découverte et le respect de ces écosystèmes souterrains.

Ensemble, nous avons franchi des labyrinthes de stalactites et navigué à travers des rivières souterraines, éclairant notre chemin avec la lumière de notre enthousiasme et de nos lampes frontales. Ces trois dernières années ont été marquées par un engagement profond : transmettre notre savoir (partage des connaissances).

Nous avons mis en place des stages de formation aux techniques d'exploration de grottes, ouvrant la voie à de nouvelles générations d'explorateurs, animés par la même soif d'aventure et de connaissance qui nous anime. Chaque plongée sous la surface est une promesse d'unité avec la nature et de camaraderie, une aventure qui continue de sculpter notre être au même titre que l'eau façonne inlassablement la roche.

En 2023 :

Formation spécialisée en topographie et cartographie des grottes (Sai Yok National Park).

Utilisation de l'outil **DistoX** pour des mesures précises.

Focus sur la **maîtrise des techniques de relevé** pour une documentation détaillée des systèmes de grottes.

En 2024 :

Formation étendue sur **10 jours** pour les géologues de la **DMR (Department of Mineral Resources)** et de la **DGR (Department of Groundwater Resources)**.

Apprentissage des **techniques de progression sur cordes**, essentielles pour évoluer en sécurité dans les environnements verticaux.

Rappel de l'étalonnage du DistoX et de son utilisation in situ.

Le stage a permis aux participants **de découvrir et d'apprendre** la base des compétences clés en spéléologie, principalement pour la progression dans les verticales. En février 2024, notre club a eu l'honneur de poursuivre son œuvre éducative dans la magnifique région de Kanchanaburi. Nos rencontres se sont déroulées dans les parcs nationaux de Sai Yok Yai et Lam Khlong Ngu, ainsi que dans le village accueillant de Ban Mong Kala. Le temple Wat Tham Mong Kala Kiriwong offre des cavités avec de grands porches offrant une ombre apaisante. Nous remercions encore les moines qui nous accueillent régulièrement depuis 2017.

Grâce à l'amitié chaleureuse et à la collaboration du chef adjoint Come Tong et des villageois, nous avons pu offrir une expérience immersive à nos participants. Les formations pratiques, enrichies par la connaissance locale et l'expertise de nos géologues invités, ont permis à chacun de s'initier aux subtilités de la spéléologie avec une approche respectueuse de l'environnement naturel et culturel unique de cette région.

Ce rapport détaille les événements, les apprentissages et les moments de partage qui ont marqué cette période riche en aventures.

INTRODUCTION

For several years, our passion for underground exploration has led us into the mysterious depths of the caves of Thailand.

Over the course of the expeditions, we have forged friendships with Thai geologists, sharing with them the thrill of discovery and respect for these underground ecosystems.

Together, we traversed mazes of stalactites and navigated through underground rivers, lighting our way with our enthusiasm and headlamps. The past three years have been marked by a deep commitment: to pass on our knowledge (the sharing of knowledge).

We have set up training courses in cave exploration techniques, paving the way for new generations of explorers, driven by the same thirst for adventure and knowledge that drives us. Each dive below the surface is a promise of oneness with nature and camaraderie, an adventure that continues to sculpt our being in the same way as water tirelessly shapes rock.

In 2023:

Specialized training in topography and cave mapping (Sai Yok National Park).

Use of the DistoX tool for accurate measurements.

Focus on mastering survey techniques for detailed documentation of cave systems.

In 2024:

Extended training over 10 days for geologists from the DMR (Department of Mineral Resources) and the DGR (Department of Groundwater Resources).

Learning rope progression techniques, which are essential for safe climbing in vertical environments. Review of DistoX calibration and its use in situ.

The course allowed participants to discover and learn the basic caving skills, mainly for progression in verticals.

In February 2024, our club had the honour of continuing its educational work in the beautiful Kanchanaburi region. Our meetings took place in the national parks of Sai Yok Yai and Lam Khlong Ngu, as well as in the welcoming village of Ban Mong Kala. The Wat Tham Mong Kala Kiriwong temple offers cavities with large porches providing soothing shade. We would like to thank the monks who have welcomed us regularly since 2017.

Thanks to the warm friendship and collaboration of Deputy Chief Come Tong and the villagers, we were able to offer an immersive experience to our participants. The practical training, enriched by the local knowledge and expertise of our guest geologists, allowed everyone to learn the subtleties of caving with an approach that respects the unique natural and cultural environment of this region.

This report details the events, learnings and moments of sharing that marked this period rich in adventures.

SITUATION, GÉOLOGIE

Situé à 250 kilomètres au nord-ouest de Bangkok dans la région de Kanchanaburi, l'Amphoe Thong Pha Phum, dont fait partie le village de Ban Mong Kala, est le centre administratif et commercial. Le secteur est marqué par de spectaculaires massifs permien, où les altitudes dépassent parfois 1000 mètres, entaillés par les rivières Kwae Yai et Kwae Noi et le canyon de la Mae Nam Khlong Ngu.

Pour compléter le parcours, de formation l'exploration et la topographie de Tham Nok Han Aen 2 avec les rangers, une partie des gigantesques galeries jalonnant le canyon du Mae Nam Khlong Ngu sur plus de 30 km suivant une fracture, encaissée dans les massifs du permien supérieur d'une puissance de 200 m à cet endroit. (*Formation de Um Luk – carte géologique Ban Muang Song Tho 1/50000 – édition 3-RTSD-4738 2011*) et au contact à l'est de la formation Bong Ti beaucoup plus résistante et moins soluble (*karst de Khao Bo Ngam*).

National Park Lam Khlong Ngu – Amphoe Thongphapum. Datés de 230 à 280 millions d'années, les massifs rencontrés se présentent sous forme de hauts plateaux à des altitudes variant de 700 à 900 mètres, recouverts d'une forêt primaire luxuriante et difficile d'accès, où il n'existe pratiquement aucune piste.

Dans la plupart des cas, il est impératif d'obtenir une autorisation pour y pénétrer. Nous y avons rencontré beaucoup d'éléphants, et ces derniers sont redoutables ! Les karsts d'altitude sont percés de profondes cavités avec des puits atteignant 200 mètres, le plus long réseau actuellement en cours d'exploration se situe dans le National Park de Srinagarindra et dépasse 5 kilomètres.

Les résurgences se trouvent à la base du Permien et sont difficiles à trouver (suivre les éléphants ! Qui vont s'y abreuver) puisque a de rares exceptions l'eau se perd immédiatement dans une couche datée du Jurassique pour créer une zone épi karstique complexe dans les vallées, souvent engluée par des embacles et des argiles provenant du lessivage des sols à la saison des pluies (activités agricoles).

Pour terminer, le CO₂ est très présent et il convient d'être très prudents. De nombreuses cavités hypogéniques sont en cours d'études, il s'agit d'un phénomène régional au contact de la faille dite des trois Pagodes. De nombreux autres gaz sont en cours d'analyse et l'activité hydrothermale est très présente.

Il est à noter également la présence de nombreuses mines anciennes dans cette région, où nous avons pu observer différentes minéralisations, avec parfois des dépôts « per descendum ».

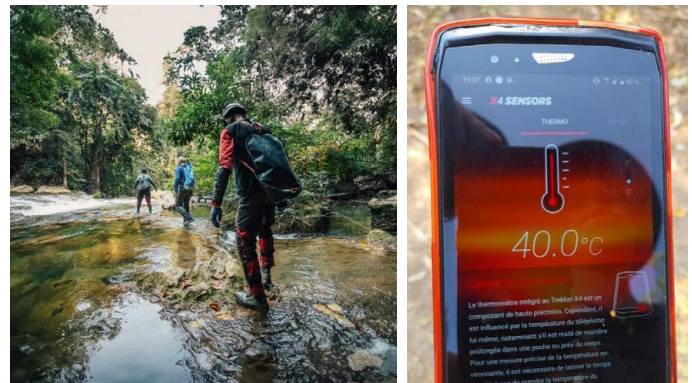


Figure: Lam Khlong Ngu National Park (Photo by Alexis RATEAU).



Figure: Lam Khlong Ngu National Park – Tham Saohin (Photo by Alexis RATEAU).

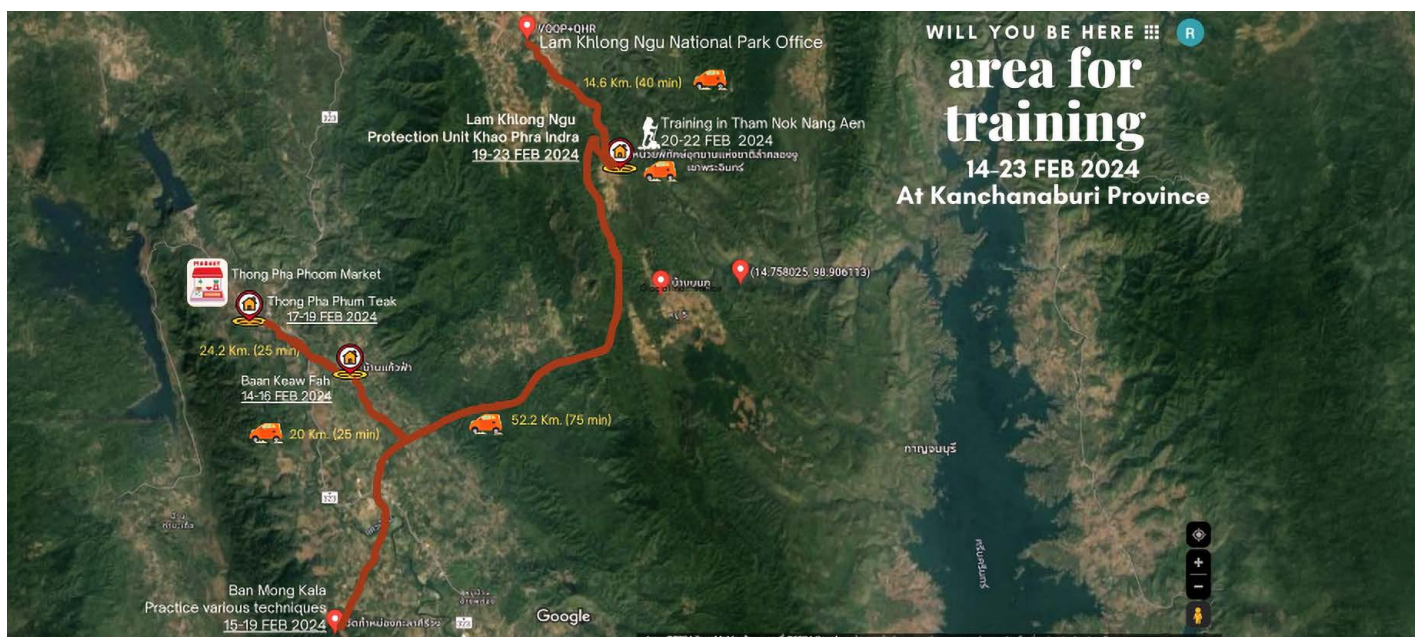


Figure: Zonage des emplacements du stage de formation dans la province de Kanchanaburi : Extrait de Google Earth (Photo by Russarint Siripattarapurenon).

THE TEAM OF THAI CAVERS



Nen



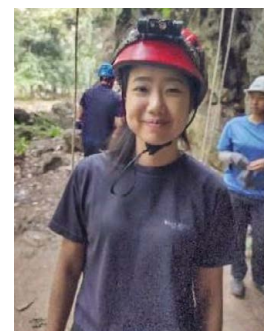
Kittipong



Fern



Pat



Dream



Paeng



Chaiporn



May



Sueb



Park



Max



Sprite



Tat



Bank 1



Bank 2



Ya



Nun

DGR/DMR

Participation de quelques rangers occasionnellement (Lam Khlong Ngu National Park). Ce sont les noms des stagiaires.

De gauche à droite : Nen (Kotchapan Loedtawiwong), Kittipong (Palee), Fern (Chutikan Sittikot), Pat (Phyatharine Sopitthammakul), Dream (Jeamliga Duangkeawroen), Paeng (Russarint Siripattarapureenon), Chaiporn (Siripornpibul), May (Jutamas Junpanghern), Sueb (Itsara Phromta), Park (Surachet Saengsawang), Max (Weerachon Unsen), Sprite (Piyaporn Hinsaeang), Tat (Patinya Uttha), Bank 1 (Thiengthum Chaweenuon), Bank 2 (Narongrit Boonchaiwong), Ya (Suriya Pantawan), Nun (Naruenat Kangwanwong).

PLANNING DU 14–23 FÉVRIER 2024 (DMR – DEPARTMENT OF MINERAL RESOURCES, DGR – DEPARTMENT OF GROUNDWATER RESOURCES)

14 février 2024, 9 h 00 – 14 h 00 : Départ du personnel du Department of Mineral Resources (DMR) de Bangkok pour le district de Thong Pha Phum, province de Kanchanaburi. Du 14 au 17 février 2024, séjour au Ban Kaew Fah Resort. Du 17 au 19 février 2024, séjour au Thong Pha Phum Teak.

15 – 19 février 2024 : Apprentissage du matériel, réglages des harnais, notions de résistance – (Atelier de nœuds) : passage des bifurcations et des conversions, perfectionnement des techniques de montée/descente, réglage individuel du matériel, harnais, longues – (Atelier de nœuds) : révision du passage des nœuds + notion d'irréprochabilité, lecture de l'itinéraire – (Atelier de nœuds) : concept d'irréprochabilité, lecture de l'itinéraire, évacuation et dégagement d'un coéquipier en difficulté – Installation du matériel et pratique de la descente en rappel depuis la falaise rocheuse de Ban Mong Kala, district de Thong Pha Phum – Exploration d'une petite cavité, karstologie. (Tham Ngu Kiriwong, nouvelle grotte) – Apprentissage du logiciel de création de cartes de grottes 2D et 3D. Temple Wat Tham Mong Kala Kiriwong. Ban Mong Kala, district de Thong Pha Phum, province de Kanchanaburi

19 – 22 février 2024 : DMR Team se déplace à Lam Khlong Ngu National Park Protection Unit (Khao Pra In)

20 – 22 février 2024 : Étude des grottes, karstologie et topographie de Tham Nok Nang Aen

23 février 2024, 8 h 00 – 13 h 00 : DMR staff Depart from Kanchanaburi Province to the office in Bangkok



Figure: Ci-dessus, sur les photographies différents ateliers de travail – Tham Walee (Photo by D. RATEAU).

RAPPORT JOURNALIER

5 février : Préparation du matériel, réception de l'équipe thaïlandaise et réunion préparatoire. Dîner chez des amis.

6 février : Rencontre avec les gardes du parc national de Lam Khlong Ngu et au village de Ban Mong Kala avec le DMR et le DGR (itinéraire de 6 h 00).

Nous avons quitté Kanchanaburi vers 8 h 30 après un petit-déjeuner rapide au Blue Star, puis sommes allés voir l'emplacement de notre séjour près de Ban Mong Kala, nous avons rendez-vous avec les dirigeants des rangers du parc national de Lam Khlong Ngu vers 13 h 00.

M. Kunagorn Boonkasong, chef du parc national de Lam Khlong Ngu ; M. Jatudech Rancharoon, chef adjoint du parc national de Lam Khlong Ngu. Nous discutons des différentes possibilités de bivouacs dans la jungle aussi près que possible de nos zones de recherche.

Ils nous informent que les éléphants ne sont pas dans la région, heureusement cette année, ils se sont déplacés vers le nord à environ trente kilomètres.

Les discussions porteront principalement sur nos mouvements « in situ ».

Vers 14 h 30, nous sommes partis pour Ban Mong Kala, où le sous-chef du village Come Tong nous attendait à la fin de la journée. Vers 17 h 00, Sunanta nous appelle notre ami. Ven, tong nous attend, on y va, ils sont en plein travail avec la récolte du manioc. L'objectif de la réunion est de fixer ensemble la zone où nous allons équiper une falaise pour le parcours de trajet des Thaïlandais.

Vers 18 h 40, enfin des nouvelles de Chaiporn : ils sont allés voir le bivouac et, ne voyant aucune eau là-bas, décident de louer un séjour à Ban Putoei ! J'annule donc le rendez-vous avec Come Tong vu l'heure, le DMR revient à Bangkok et nous reportons notre réunion avec les moines à demain à 15 h 00, nous pourrions enfin agir !

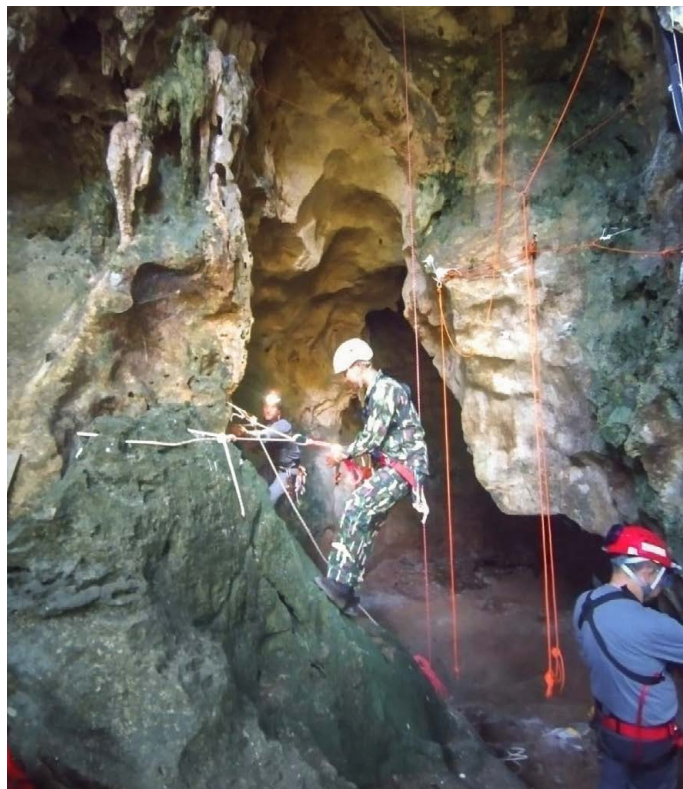


Figure: Ci-dessus, sur les photographies différents ateliers de travail – Tham Walee (Photo by D. RATEAU).



Figure: Ci-dessus, réunion de préparation avec les rangers (Photo by rangers).

Étant donné le changement de date d'arrivée du DMR le 14 au lieu du 12, nous allons adapter le programme, de plus ils doivent partir le 23, notre équipe arrivant le 22, l'exploration de Thaï Saohin avec les Thaïlandais est compromise pour eux, sans bivouacs sur place et devant la grotte, nous ne pouvons pas les emmener une journée !

Nous orienterons certainement le reste du parcours sur Tham Phu Toei, plus facilement accessible en un jour ou deux.

Une longue journée de conduite et d'attente interminable se termine devant un bon petit plat bien assaisonné. Enfin, le soir, je reçois un e-mail avec un programme totalement modifié et incompatible, je le modifie à nouveau et enfin ce sera 4 jours sur la falaise, puis Tham Nok Han Aen, plus facile d'accès.



Figure: Les agriculteurs ont répandu la récolte de manioc sur une zone de séchage de Ban Mong Kala (Photo by D. RATEAU).

7 FÉVRIER BAN MONG KALA

Journée d'attente chez le chef adjoint du village Come Tong, l'objectif est d'aller rencontrer les moines, le stage se déroulera sur une falaise dans l'enceinte du temple du village.

8 FÉVRIER 2024 BAN MONG KALA – ETIENNE, DIDIER TPST = TEMPS PASSÉ SOUS TERRE : 5 H

« Après de nombreux jours à chercher les autorisations nécessaires et quelques heures de préparation méticuleuse du matériel (sans parler de psychopathes vu le temps à remplir en attendant la collecte des réponses des différents acteurs), nous commençons enfin à installer l'équipement du « porche de l'école » à l'entrée de Tham Walee (commune de Ban Mong Kala). Nous choisissons de commencer tôt pour profiter de la fraîcheur du matin. Nous avons arrêté notre activité sous la chaleur accablante du début d'après-midi. Le site est vraiment royal : à l'ombre toute la journée, avec des bancs frais, des toilettes à proximité et toute une série de configurations possibles. Cinq lignes ont été installées. Trois sur le bord du close, une ligne de montée, une rampe avec une ligne de descente complètement vide relativement facile d'accès et une troisième corde pleine de cordes vides pour effectuer des manœuvres depuis le sol comme la conversion, le passage d'un nœud... À l'intérieur, il y a déjà deux lignes avec des bifurcations et des déviations à achever le lendemain. Tout a été installé sur des mouillages amovibles (pulse, AN, AF) pour un impact minimal sur ce site autrefois utilisé par les moines pour méditer, même si nous avons été préalablement autorisés. Ensuite, regardons le matériel, l'organisation et la programmation. » (Étienne Fabre)



Figure: Tham Walee in action (Photo by D. RATEAU).



Figure: Tham Walee in action (Photo by D. RATEAU).

9 FÉVRIER DIDIER, ETIENNE, TPST : 5 H

« Ajout d'équipements au « Porche de l'école » à l'entrée de Tham Walee (Ban Mong Kala). Commencez assez tôt pour profiter de la fraîcheur. Deux lignes supplémentaires de hauteur moyenne sont installées, ainsi qu'un tas de petites lignes pour pouvoir manipuler l'équipement, peut-être les nœuds ou faire des verticales peu impressionnantes pour nos débutants. Nous recevons la visite des moines. (Nous sommes dans le domaine d'un temple bouddhiste Wat Tham Kiriwong.) » (Étienne Fabre)



Figure: Ci-dessus, visite des moines (Photo by D. RATEAU).

10 FÉVRIER PROSPECTION : 4 H; TPST : 4 H, ETIENNE, DIDIER

(Secteur jamais visité pas de cavités connues ou mentionnées, l'intérêt est d'envisager une exploration en première pour nos stagiaires)

Dans le cadre d'une recherche de cavité pour les stagiaires, une belle entrée est aperçue après quelques heures de recherches, - mais nous ne sommes pas autorisés à y aller par les deux jeunes occupant une des plus proches habitations. A revoir absolument accompagné de Sunanta ou Chaiporn pour les traductions. Avec la végétation il est difficile de dire s'il s'agit de plusieurs porches superposés sur un même accident subvertical ou d'un même

porche énorme. Dans tous les cas ce que nous voyons n'est pas douteux, la section de l'entrée visible dépasse la dizaine de mètres carrés sur un accident tectonique bien visible ! La butte n'est pas très grande en superficie mais détachée du massif. Les perspectives bien que limitées sont enthousiasmantes. Pointage approximatif sur google earth (« Gros Tham à voir » cf. : PJ). En faisant le tour de la butte nous sommes attirés par quelques reliefs très faciles d'accès, à quelques dizaines de mètres de la route et à l'ombre ! Pas grand-chose sans grimper plus haut. Nous pointons un petit trou et faisons une visée ce qui nous permet de battre le record de la plus petite cavité inventoriée de Thaïlande avec un développement de presque 7 m (« tham 1 » cf. : PJ). Nous poursuivons la prospection en nous rapprochant d'une extrémité basse du massif où nous apercevons sur les photos satellite un petit lac. Malheureusement une barrière (gros trait rouge sur la photo) nous empêche d'atteindre notre but. Nous poursuivons quelques pistes et apercevons tout un tas d'escarpements avec potentiellement de nombreuses entrées. La plupart du temps il est assez difficile d'être certain qu'il s'agit bien d'entrée de cavité par l'effet des ombres portées et surtout de la végétation qui peut totalement recouvrir des parois de 40 à 60 m de hauteur dans cette zone (cf. : PJ : « prospect du 10 »)



Figure: Ci-dessus, visite des moines (Photo by D. RATEAU).

15 FÉVRIER ETIENNE, DIDIER – TPST : 7 H (STAGE JOUR 1)

Après 3 jours de préparation les stagiaires sont bien au rendez-vous et ils sont exactement deux fois plus nombreux que prévu. Rien d'anormal nous sommes en Thaïlande ! Enfin si, ils sont au rendez-vous avant l'heure prévue, ça c'est louche. En fait c'est très simple, ils sont plus nombreux et ponctuels tout simplement parce qu'ils sont ultra motivés ; ça fait plaisir. Nous démarrons avec le réglage des harnais et ajustement des longes neuves. Mise en place du descendeur, mini descente d'un mètre, demi-clé, clé complète. Premières montées pour aller se longer sur une main courante vers 4 m de hauteur, sauf qu'il sont tellement motivés que ceux qui n'ont pas encore de corde libre vont s'essayer à remonter dans un autre secteur sur 3 lignes qui elles mesurent 10 m environ il vont nous improviser (globalement avec peu de succès) la conversion. Enfin, certains vont surtout attendre qu'on finisse de faire passer les premiers sur les ateliers faciles avant d'aller les décrocher... Trois rangers sont présents mais leur planning étant chargé ils participent juste quelques heures.

Vu que nous n'avons que 11 équipements (dont celui de Didier et 18 stagiaires, on est sympa, on s'adapte, nous faisons passer

les équipements à ceux qui regardaient et c'est reparti. Vers 13 h pause repas, puis quelques petits réglages supplémentaires du matériel et on s'attaque à la topo. Nous faisons une belle session d'étalonnage de plusieurs DistoX, pour compléter la semaine consacrée à la topographie de l'année précédente.



Figure: Ci-dessus, La main courante basse (Photo by Didier RATEAU).

16 FÉVRIER BAN MONG KALA, TPST : 8 H (ETIENNE, DIDIER)

Départ vers 8 h après un solide petit déjeuner – session falaise-calibration DistoX-topographie de Tham Dao Ruang, situé dans l'enceinte du temple.

Nos stagiaires sont deux fois plus nombreux que le nombre d'équipements individuels disponibles, on passe beaucoup de temps à régler du matériel. De plus, il y a beaucoup de mouvement donc certains vont s'atteler à des agrès avec des pédales ou des longes pas vraiment adaptées à leur taille ou fréquemment des harnais pas suffisamment serrés. Piqûre de rappel, démonstrations et on s'attaque à une ligne avec passage de fractionnement à la montée et main courante à 11 m de haut puis descente. Le fond de la poche du pantalon d'Etienne se décolle et le smartphone finit 11 mètres plus bas HS. Les cordes de toute petite hauteur (2,5 m) sont utilisées par les uns pendant que les autres font la ligne plus haute avec passage de fraction-



Figure: Ci contre porche de Tham Walee avec son ombre presque rafraîchissante (Photo by Didier RATEAU).

nement. Vers 13 h pause repas puis on passe à la topo sur un autre site à proximité (Tham Dao Ruang-cavité vue en 2019 et déjà topo Losuwan Sunanta D. RATEAU). Nous débutons avec deux groupes (un Etienne l'autre Didier) qui étalonnent chacun un DistoX. Nous réalisons une topo sous topodroid avec pointage GPS de l'entrée. Quelques visées, un peu de dessin et nous arrêtons la séance à leur demande pour éviter le coup de fatigue avec la chaleur écrasante vers 16:00 h (nous avons un choix de cavités en premières notamment Tham Ngu Kiriwong reconnu sur 150 m et – 55 en 2019 avec C. rognon, G. Jouillerot et Pida –Khao, (guides Karen) Sunanta Losuwan, projet mis de côté car étroit et boueux trop compliqué au vu du nombre de stagiaires).



Figure: Ci contre Tham Dao Ruang Groupe topo a Didier (Photo by Didier RATEAU).

17 FÉVRIER BAN MONG KALA, TPST : 8 H (ETIENNE, DIDIER)

Nos amis Thaïlandais sont toujours là et motivés. Encore un petit rappel pour les réglages harnais/pédale et le positionnement à la montée. Petite démonstration des conversions monté descente, descente montée pour qu'un maximum de personnes puissent manipuler sur les petites lignes (interdiction d'avoir les pieds à plus d'un mètre de hauteur) pendant que d'autres font de la progression avec passage d'agrès sous surveillance encore indispensable. On commence avec ceux qui ne sont pas encore montés par la ligne fractionnée soit trois personnes. Puis on travaille le passage de fractionnement à la descente. Le temps que tout le monde passe il est déjà 13 h. On observe une nette progression du niveau des stagiaires en cette fin de matinée ! Les lignes de petite hauteur ont été utilisées durant toute la matinée, ils ont donc bien brassé et cela commence à se sentir sur l'ouverture des Croll par exemple, les demi-clés, clés complètes... La grande majorité des stagiaires a intégré les conversions. L'après-midi, comme à l'accoutumé, on passe sur de la topographie. Nous évoquons à nouveau l'étalonnage. Nous montrons comment étalonner sans la plaquette d'étalonnage en marquant des points sur les parois de la grotte. Puis nous montons à Tham Dao Ruang terminer les relevés et le dessins pour nos deux équipes.

Nous allons ensuite à Thong Phaphum à l'hébergement des stagiaires sur les ordinateurs pour le post traitement des relevés. Nous voyons rapidement comment exporter la polygonale sur google earth. Nous générerons aussi un plan, une coupe, une

projection et un 3D sous Visual topo et regardons quelques options comme la proximité entre plusieurs points, extraire la position d'un point en X, Y, Z... Nous exportons ensuite le dessin au format DXF, regardons comment le gérer sous Illustrator grâce à la gestion des calques. Nous regardons aussi comment générer un PNG détourné, et le superposer à la polygonale sur google earth, puis le transformer en KMZ pour archivage.



Figure: Tham Dao Ruang (Photo by Didier RATEAU).

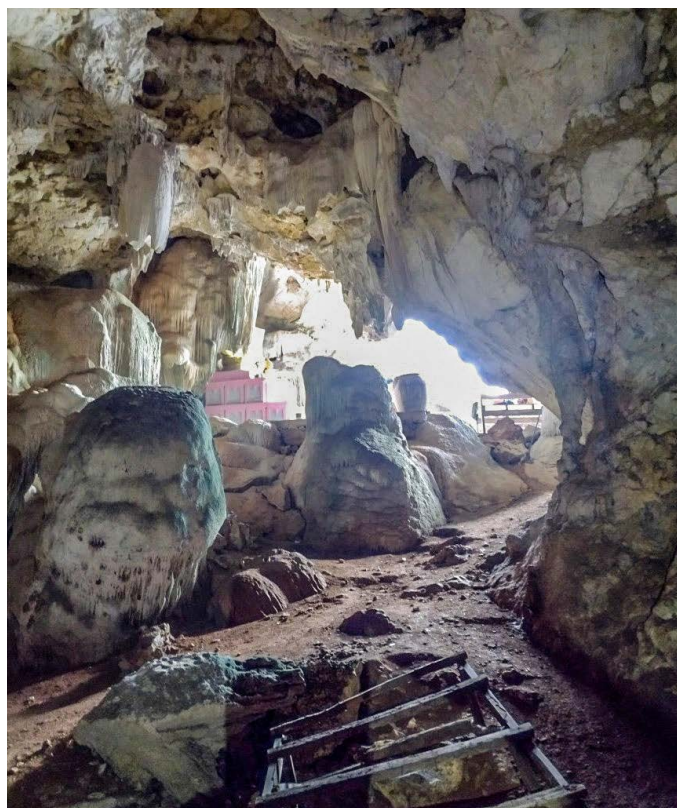


Figure: Tham Dao Ruang (Photo by Didier RATEAU).



Figure: Tham Dao Ruang (Photo by Didier RATEAU).

18 FÉVRIER BAN MONG KALA, TPST : 4 H, ROUTE : 3 H TRI MATOS : 2 H (ETIENNE, DIDIER)

Toujours dans le porche de Tham Walee nos stagiaires vont prendre un peu plus de hauteur. Certains ont dû repartir à leurs obligations (DGR) et nous nous retrouvons avec 14 personnes ce qui va laisser un peu plus de temps de pratique à chacun. Montée sur pan incliné exigeant de bonnes capacités de placement avec passage de deux déviations et un fractionnement. Une fois en haut, main courante et descente avec deux fractionnements. Nous avons à peu près tout le temps 4 stagiaires en action sur ces lignes. Pendant ce temps les autres vont réviser les conversions et on introduit le passage de nœuds montée et descente. L'atmosphère est assez chaude dans la partie supérieure de la grotte (CO_2), le parcours est plus exigeant, la fatigue se fait sentir un peu plus tôt et nous prenons la pause repas fourni par la DMR comme tous les jours et délicieux, toutefois avec la chaleur nous partageons avec Etienne un plat et finissons le second le soir, une fois tout le monde passé vers 12 h. Après le repas Etienne déséquipe et nous plions et faisons un pré-tri du matériel.

Nous terminons donc très tôt, et prenons la décision de retourner à Kanchanaburi pour ranger tout le matériel qui ne sera pas nécessaire à la partie expédition à venir. Etienne achète un smartphone d'occasion pour pouvoir faire de la topo et quelques photos et nous repartons à Ban Mong Kala.



Figure: Ci-dessus stagiaires a l'œuvre (Photo by Didier RATEAU).



Figure: Left Dream au Fractionnement (Photo by Didier RATEAU).

19 FÉVRIER TRAJET VERS LAM KHLONG NGU 5 HEURES DE PISTES ET ROUTES

Nous passons demander les autorisations de bivouaquer dans un monastère (Wat Tham Phu Toei ou nous connaissons les Moines depuis de nombreuses années) pour la partie expédition qui débute dans quelques jours, et allons-nous installer dans le gîte (rare sur le secteur) repéré en janvier a Chalee a quelques kilomètres du Head quater des rangers de Lam Khlong Ngu et conseillé par ces derniers. (propre sympathique avec internet) (<https://maps.app.goo.gl/AxWpFwoQo6xy46oz8>)

Comme convenu les stagiaires nous rejoignent vers 15 h. Il ne leur à pas échappé que c'est l'anniversaire de Didier et ils viennent avec un gâteau et des bougies, l'attention est sympathique ! Nous discutons beaucoup de la partie technique du stage, un petit bilan est dressé et nous discutons des perspectives. Demain ce sera topographie dans Tham Nok han Aen, du moins c'est ce que nous prévoyons.



Figure: On the road again... – Le soleil se couche sur le Massif de Khao Tha Khanun (Photo by Etienne Fabre).



Figure: Wat Tham Phu Toei – Un moine du temple Wat Tham Phutoei distribue le repas (Photo by Alexis RATEAU).

20 FÉVRIER LAM KHLONG NGU – THAM NOK HAN AEN (ETIENNE)

Etienne va rejoindre les stagiaires qui ont un gîte de groupe à quelques centaines de mètres, rien ne se déroule comme prévu suite à une décision nouvelle des rangers et nous faisons le tour qui est habituel pour eux avec une interlude topo d'un peu moins de deux heures, c'est vrai que en cette saison ils organisent des visites et ont peu de temps à nous consacrer. L'importance du nombre de participants et juste un encadrant ne permet pas de faire plus.

Ces derniers nous transportent dans la benne d'un camion. Equipés de gilets de sauvetages nous descendons dans la fenêtre Karstique la plus en amont (Tham Nok Han Aen1 Swallow Cave) et sommes accueillis par des milliers d'oiseaux ayant recouvert le sol d'environ un centimètre de déjection depuis la dernière crue, c'est dire ! Le porche de la galerie amont (malheureusement pas au programme du jour bien que prédéfini avec le chef des rangers depuis 15 jours et lors de notre visite en janvier spécialement pour cela !) mesure environ 60 m. La rivière débite entre 3 et 4 m³/s.

C'est le niveau d'étiage ! Nous nous jetons dans une eau à 19° bientôt un saut de 5 mètres qui rebute quelques stagiaires, mais Chaiporn du haut de ses 69 ans n'hésitera pas. Les marques de crues sont impressionnantes (troncs à 30 m de hauteur). Plusieurs départs seraient à explorer. Le groupe reste en admiration devant les concrétions surdimensionnées.



Figure: Tham Nok Han Aen 2- (Photo by E. Fabre).

Un système perte-résurgence (recouplement de méandre) serait à tester à l'aide d'un conductimètre et/ou une mini coloration et s'il s'agit d'un affluent et non d'un recouplement de méandre le potentiel est très important au vu du débit ! Une cheminée mesurée à 95 m de haut pourrait recouper un étage fossile, à voir depuis le haut. La rivière étant 25 m plus bas à cet endroit, le canyon souterrain mesure donc 120 m ! On est dans la démesure tout le long avec des galeries de 40 à 60 m de haut pour une largeur de 25 m à 50 m ! Le canyon se prolonge en aval pour se perdre dans Tham Toutche, puis un siphon la suite reste à explorer...



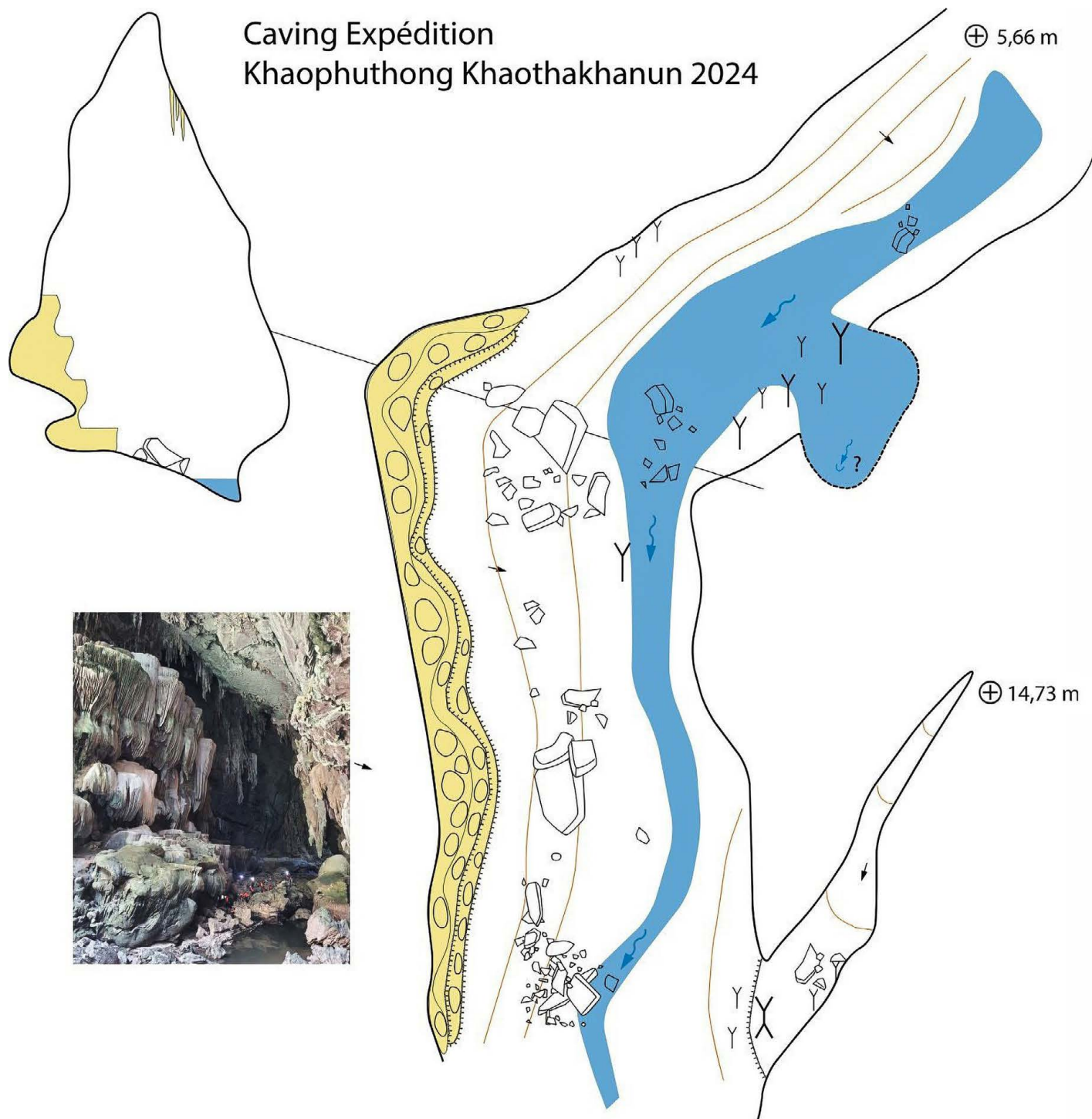
Figure: Tham Nok Han Aen ci-dessus (Photo by Ph. Crochet)

21 FÉVRIER RETOUR A KANCHANABURI ET COURS EN SALLE POUR ETIENNE

Report topo. Nous consacrons cette journée à l'export et au traitement des données topographiques acquises la veille.

- Export pour report automatique sous google earth
- Export pour spéléométrie sous Visual topo et petites combines bien utiles...
- Export pour retravailler le dessin sous Illustrator (grosse demi-journée même pour un petit trou)
- Positionner le dessin sur google earth
- Transformer le dessin reporté en KML pour un bon archivage (à noter échelle oubliée note de DR)

Caving Expédition Khaophuthong Khaothakhanun 2024



Tham Nok Han Aen 2

Lam Khlong Ngu National Park

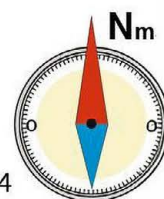
Cha Lae, Thong Pha Phum District, Changwat Kanchanaburi

Survey by : DMR Team Department of Mineral Ressources

Draw : Etienne Fabre mise a jour 05/2024 Didier Rateau

47 P
98°51'36.26
14°49'46.03

⊕/⊖ 10 le 20/02/2024
△ 438 m



21 FÉVRIER LAM KHLONG NGU, CHALAE TRAVAUX PRATIQUES EN SALLE-RETOUR À KANCHANABURI POUR DIDIER QUI DOIT RÉCUPÉRER LE RESTE DU GROUPE DE L'EXPÉDITION À VENIR. (COURS 8 H ETIENNE ROUTE 5 H DIDIER)

Certains terminent leurs notes de la veille. D'autres refont avec l'aide d'Etienne de l'étalonnage, de la topo fictive à la Guest house. Nous rédigeons aussi un tutoriel pour se rappeler des étapes à suivre pour refaire l'ensemble. Ce dernier est très détaillé jusqu'au démarrage d'une nouvelle topo sous topodroid et un peu plus succinct par la suite: Participation occasionnelle des rangers qui a cette époque sont très occupés à préparer les chemins dans le National Park.

Prendre conscience des matériaux magnétiques sur son équipement; vérifier le niveau actuel de fiabilité du DistoX; appairer un DistoX; étalonnage du DistoX; démarrer une nouvelle topo; géoréférencer l'entrée; prise des mesures; activation et utilisation du triple shot de station à station et LRUD ; générer plan et coupe; à peine un peu de dessin; revenir à un point pour démarrer une nouvelle galerie; export pour report automatique sous google earth; export pour spéléométrie sous Visual topo et petites combines bien utiles; export pour retravailler le dessin sous Illustrator, notion de calques ; positionnement du dessin sur google earth; transformer le dessin reporté en KML pour un bon archivage. Etienne est ensuite invité à la soirée de clôture ! Didier étant redescendu à Kanchanaburi pour accueillir l'équipe.



Figure: Salle de cours a Chalae – Salle de travail pour la topographie (Photo by Etienne Fabre).

22 FÉVRIER LAM KHLONG NGU

Conclusions

Un stage préparé depuis un an ne se déroule pas toujours comme prévu! Nous avons convenu avec le chef des rangers des dates en 2023, préparé un dossier, des plannings pour finalement tout modifier sur place au jour le jour. Malgré les nombreux retards, changements de plannings, changement de Chefs dans les Park Nationaux, avec parfois de grosses baisses de moral, nous avons été agréablement surpris par la motivation et la volonté des

stagiaires. Même avec un nombre non prévu de 18 stagiaires (initialement 10 prévus depuis 2023) le résultat est positif et c'est l'ouverture vers un second stage qui peut se dérouler en France sous l'égide de l'EFS.

L'objectif serait de former les éléments qui se détachent du lot au diplôme d'initiateur de spéléologie, ainsi pouvant transmettre leur savoir aux autres avec notre soutien habituel lors de nos expéditions. Remercions encore nos soutiens, et nos partenaires, merci à Croque Montagne, et au C.D.S Indre et Loire, Aventure Verticale et sa jeune équipe dynamique sans qui cette aventure se serait avérée difficile.

A training course planned for a year doesn't always go as expected! We had agreed on dates with the head ranger in 2023, prepared a file and schedules, only to have to modify everything on the spot, day by day. Despite numerous delays, schedule changes, and changes of leaders in the National Parks, sometimes accompanied by significant dips in morale, we were pleasantly surprised by the motivation and determination of the trainees. Even with an unexpected number of 18 trainees (initially 10 planned since 2023), the result is positive, and it opens the door to a second course that could take place in France under the auspices of the EFS (French Speleological Federation).

The objective would be to train the most outstanding individuals for the caving instructor certification, enabling them to pass on their knowledge to others with our usual support during our expeditions. Let us thank again our supporters and partners, thank you to Croque Montagne, and to the C.D.S Indre et Loire, Aventure Verticale and its young dynamic team without whom this adventure would have been difficult.

Pour l'équipe
Didier RATEAU responsable de l'expédition



Figure: Un rangers de Lam Khleng Ngu participant au stage de formation (Photo by Didier RATEAU).



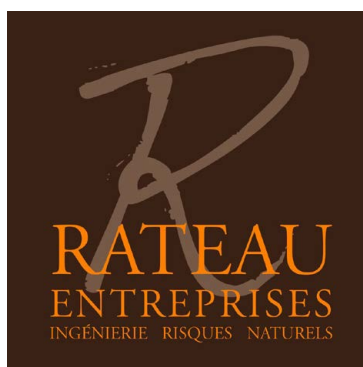
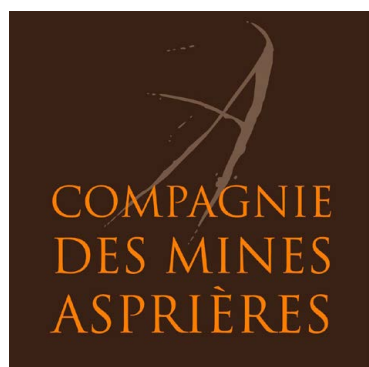
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SPELEOLOGY ENGAGEMENT AT UNEA-7

Advocacy for Karst Ecosystems in Nairobi

Bärbel VOGEL (Germany), *President German Speleological Federation, President UIS Karst and Cave Protection Commission*, b.w.vogel@gmx.de

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INTRODUCTION

The German Speleological Federation (VdHK) has been committed to cave protection beyond its regional scope since an inquiry from an EU parliamentarian in 2008. Despite a partial success, the declaration on cave protection did not pass the EU Parliament at that time. To stay informed, the VdHK became the first speleological association to join the European Environmental Bureau (EEB), the largest umbrella organization of environmental associations in Europe. The VdHK was initially active in its Water Working Group, where the European Cave Protection Commission now collaborates. Its current focus is the International Policy Working Group. Through a UN conference in Bonn in 2011 and the EEB, the VdHK became aware of opportunities for advocacy at the United Nations.

PARTICIPATION

The United Nations system allows participation of civil society in two areas: sustainable development and environment. It is organized by the Economic and Social Council (ECOSOC) and the UN Environment Program (UNEP). Since 2020, the VdHK has been officially recognized as an NGO in both areas, granting it access to conferences and online meetings, which it can also make available to non-members.

THE UNEA-7 AGENDA IN NAIROBI

In 2025, the seventh session of the United Nations Environment Assembly (UNEA-7) marked a historic milestone. For the first time, at the request of the Republic of Indonesia, a resolution on karst ecosystems was negotiated. The VdHK, as the only accredited association for caves and karst within the UN system, was actively involved in the negotiations. Bärbel VOGEL, VdHK President, was named as the contact point for the Karst Resolution for the NGO Major Group.

From the beginning of October 2025, the VdHK informed all speleological associations worldwide and accompanied the negotiations online. A specially formed transnational working group represented this Federation's interests. Ana K. CELIS (Mexico) and Dr. David B. WECHULI (Kenya) were appointed to represent the VdHK in Nairobi.

Ana K. CELIS landed in Nairobi on November 30, 2025, to attend the core of the political process: the in-person negotia-

tions of the **Open-ended Committee of Permanent Representatives (OECPR)**, scheduled from December 1 to 5, 2025. The on-site engagement immersed her in a formal and structured negotiation protocol which included final intensive talks.

Each day, national delegations gathered for three-hour formal negotiations, reviewing the draft resolution line by line. Civil society participants, including the VdHK, could deliver brief oral statements. During the first week, the negotiations among member states on karst ecosystems proved highly controversial. Although karst makes up 16% of the ice-free earth's surface and 10% of the world's population depends on water from karst areas, only 6.9% of global karst areas are protected and the topic has not yet gained traction in global environmental protection. The VdHK's core advocacy message in every intervention was to seek formal acknowledgment of the role of speleology within the resolution's text.

Subsequently, Ana K. CELIS attended the 21st Global Major Groups and Stakeholders Forum (GMGSF) on December 6–7, 2025. A key strategic realization crystallized: most civil society participants had little to no prior familiarity with karst landscapes or speleology. This refined the VdHK's core message to serve a dual purpose: educating and persuading member state delegates while simultaneously building bridges with the wider civil society. The VdHK's strategy was to frame every oral intervention as a foundational introduction to groundwater and karst and cave geoecosystems.

The official **UNEA-7 session** commenced from December 8 to 12, 2025. Two days after, despite compelling scientific data, diplomatic priorities led Indonesia to formally withdraw the Karst Ecosystems resolution. In their closing remarks, the Indonesian delegate explicitly acknowledged and thanked the speleological community for its active engagement during UNEA-7.

The VdHK also organized a **Side Event** on December 11, 2025, titled "Karst-aware decisions for a sustainable planet: Bridging Science and Policy." The live-streamed event featured presentations, a keynote from a representative of the Indonesian Ministry of Environment and Forestry, as well as a panel discussion with members of other UN Major Groups and a representative of the IUCN. Bärbel VOGEL introduced the topic and spoke about the invisible and irreversible karst geoecosystem. Ana K. CELIS was invited to speak at an IUCN-led side event

on transboundary water cooperation, and David WECHULI presented at a side event on invasive species, focusing on white-nose syndrome in bats.

CONCLUSION

The VdHK expressly thanked Indonesia for being the first country to address this gap in global environmental protection with a resolution at the UN level.

Despite the setback of the resolution withdraw, the VdHK considered its engagement successful. Within just nine weeks, it was possible to introduce the topic of karst to many delegations. An English-language website with informational materials, www.karst-aware.org, was created and accompanied by a social media campaign. For the first time, a side event centered on karst ecosystems was organized at the UNEP Headquarters in Nairobi, Kenya. For the Global Environment Outlook 7 (GEO-7), the most comprehensive report on the scientific assessment of the world's environment, a speleologist – Bärbel VOGEL – was involved for the first time, enabling numerous references to new scientific publications on karst.

An example from Switzerland showed the importance of national cooperation. The Swiss Society for Speleology managed to establish a direct line to their delegate in Nairobi, arguing that without cave research, no one can obtain data on caves and karst. Subsequently, Switzerland strongly advocated for giving cave research an appropriate place in the resolution. Most delegates were previously unfamiliar with the term “karst”. The VdHK viewed generating so much attention in such a short time as a great success and committed to continuing its work to anchor karst landscapes at the UN level, preparing together with Indonesia and all speleological associations for UNEA-8 in two years.

DIALOGUE WITH POLITICS: PROTECTION OF THE GYPSUM KARST IN THE SOUTHERN HARZ

Towards the end of the assemblies, Ana K. CELIS met with representatives of the German Federal Ministry for the Environment in Nairobi. Germany pursued a resolution on the environmental impacts of mining at UNEA-7, underscoring its commitment to sustainable resource management. In this context, the VdHK pointed out the special significance of the gypsum karst in the Southern Harz, where even protected areas are threatened by mining. In its New Year's greetings, the VdHK called on all relevant authorities to jointly apply for UNESCO World Heritage status for the gypsum karst in the Southern Harz. UNEA-7 had shown that the world could be looking at the Southern Harz.

ACKNOWLEDGEMENT

The VdHK expressly thanked the following speleological associations for their financial support: British Caving Association, British Cave Research Association, Committee of Conservation and Science of the National Speleological Society of the USA, and the Italian Speleological Society. Thanks also went to participating cave photographers, designers Klein and Neumann, and cave researchers from numerous countries.

FURTHER INFORMATION

www.karst-aware.org

Visit the VdHK YouTube Channel:

Online Session: Why the UN is talking about karst and why cavers should care. Recording: https://www.youtube.com/live/74Z8MIDajaQ?si=PS_AO2dGK_cm6ZSH

UNEA-7 Side Event – Karst-Aware Decisions for a Sustainable Planet Bridging Science and Policy. Turning knowledge of the hidden geoecosystems into sustainable action. Recording: https://youtu.be/O0XoGH_cWxI?si=liRU1CgIsS4YvTA6



Figure 1: A historical landmark: The first negotiation on karst ecosystems within the UN system, Ana Celis in lower left corner (Photo by Sonia Goicoechea).



Figure 2: VdHK representatives Ana K. Celis and Dr. David Wechuli with the Indonesian delegation, the proponent Member State of the landmark Karst Ecosystems resolution (Photo by VdHK).



Figure 3: Embracing a multi-perspective dialogue at the VdHK UNEA-7 Side Event: Karst-Aware Decisions for a Sustainable Planet (Photo by Bernhard ZLANABITNIG).

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RESULTS AND ADVANCES FROM THE INTERNATIONAL YEAR OF CAVES AND KARST: 2021–2022

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INTRODUCTION

The International Year of Caves and Karst (IYCK) was proposed by then International Union of Speleology (UIS) President Dr. Kyung Sik WOO at the 50th anniversary celebration of the UIS in 2015. His proposal was accepted by the UIS General Assembly and planning began to conduct the IYCK in 2021. The purpose of the IYCK was to organize a global program that would teach the general public, scientists, land managers, educators, governmental decisionmakers – everyone – about the great importance of caves and karst to humanity and their vulnerability to damage and destruction.

The next UIS Bureau was charged to build partnerships, organize, and promote the IYCK. While initially planned for 2021, the COVID-19 pandemic prevented most in-person meetings and programs that year, so the International Year was extended to 2022 to allow more in-person gatherings and activities. Most of the IYCK's preparation is documented in detail in reports of the UIS Bulletin, starting with the declaration to organize the IYCK in 2015 with volume 57, no. 2, to 2024, volume 66, no. 1. They can all be downloaded from <https://uis-speleo.org/index.php/uis-bulletin-bi-annual-newsletter-2/>. Veni (2025) describes the history and basic results of the IYCK. This report briefly reviews how the IYCK was organized and then focuses on a summary of the events that were conducted and some of the results have advanced appreciation for and understanding of caves and karst.

IYCK ORGANIZATION AND PARTNERS



Figure 1: International Year of Caves and Karst logo.

After creating the IYCK logo (Figure 1) and the motto, Explore, Understand, Protect, the UIS IYCK committee began seeking organizations to partner with the UIS to support the IYCK. No fee or special status was needed to be a partner, only the willingness to promote the IYCK in whatever way is possible for the organization. At a minimum, posting the logo on websites, publications, and social media was suggested. The organizations ranged from local to international. Many of the partners were branches of local to national governments. Most were non-governmental and some were influential in local to international governance.

Outreach began with organizations in UIS member countries, and speleological partner organizations like the International

Show Caves Association. The majority of the partners were speleological organizations, but for the IYCK to be effective, we needed to send our messages beyond speleological circles. Our next step in outreach was to contact organizations that benefit from or are somehow related to caves and karst but may not realize it or understand how important that relationship is.

A great example of non-speleological partners includes 21 UNESCO (United Nations Educational, Cultural, and Scientific Organization) Global Geoparks from 10 countries that were highly supportive of the IYCK. Other notable examples include Flora and Fauna International, International Science Council, International Union for the Conservation of Nature, and a variety of geology, geography, and water research and conservation organizations. Other non-speleological partners included universities, national parks, museums, privately owned companies, and even one monastery. In total, 263 organizations from 53 countries, with 21 being international organizations, joined the UIS to promote the IYCK.

All partners were encouraged to organize events to celebrate the IYCK. The pandemic complicated these events initially, but most were redesigned and held online as classes, conferences, lectures, videos, workshops, news media and social media postings, and websites. In fact, while the pandemic was tragic, it helped the IYCK. Virtual meetings occurred before COVID-19, but they were few and uncommon. The onset of the pandemic made them common, and meetings and lectures that would formerly have been attended by only a few people in a room were attended by hundreds of people around the world and watched by even more people later as videos saved on YouTube.

All partners were asked to announce their events on the IYCK website to gain international attendance, but also to inspire other organizations with ideas for events they could plan for their areas. When each event was over, the partners were asked to send short reports for the website that discussed the number of people who attended and any notable news or results, and links to news media and other reports, as well as to videos that people around the world could watch and learn from.

REVIEW OF IYCK EVENTS

At the end of the IYCK, nearly 900 events were posted on the website. But there were also many events that were still listed as announced with no reports on if those events actually occurred. It took almost a year of searching websites, social media, and

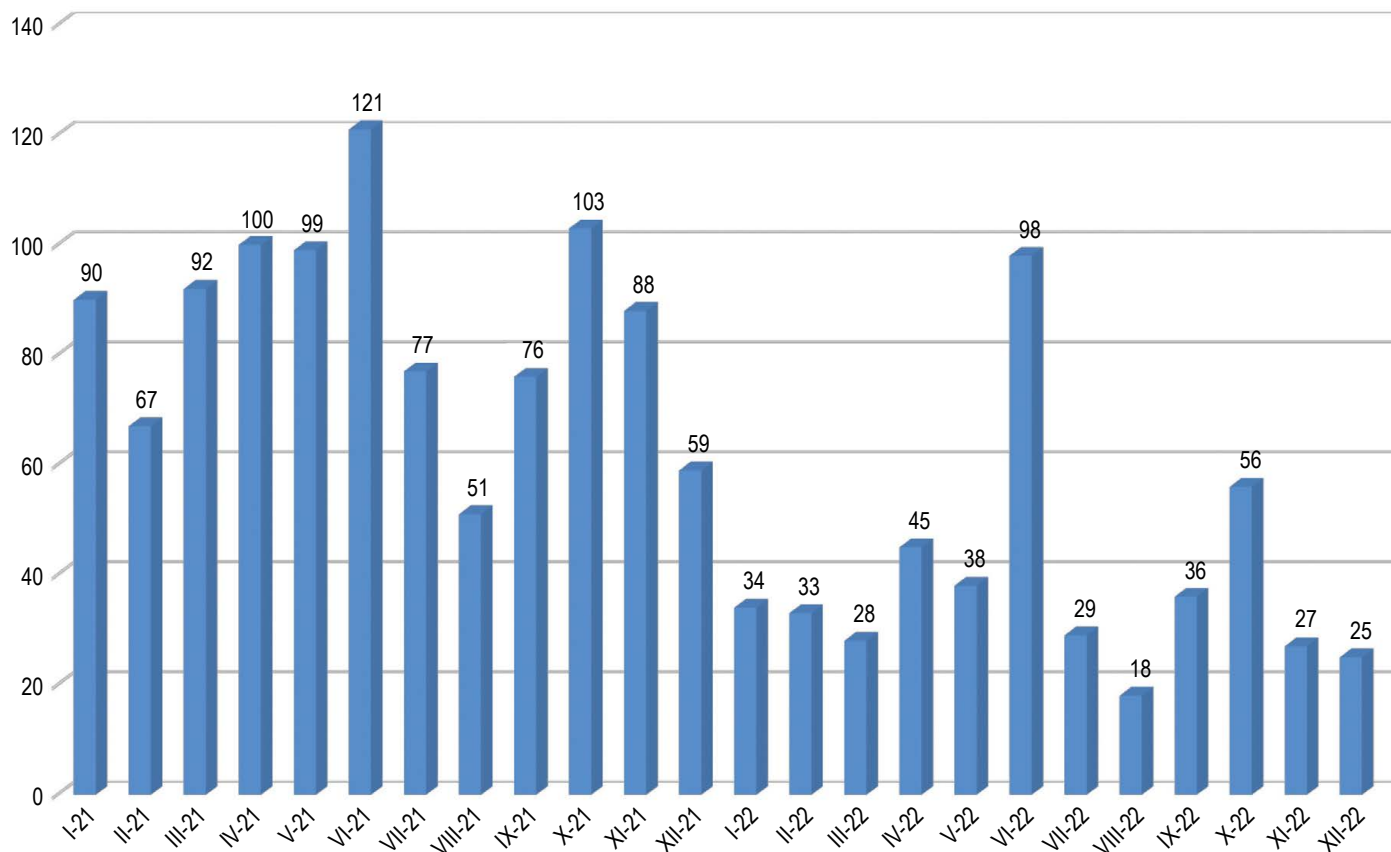


Figure 2: Number of IYCK events per month, January 2021 – December 2022.

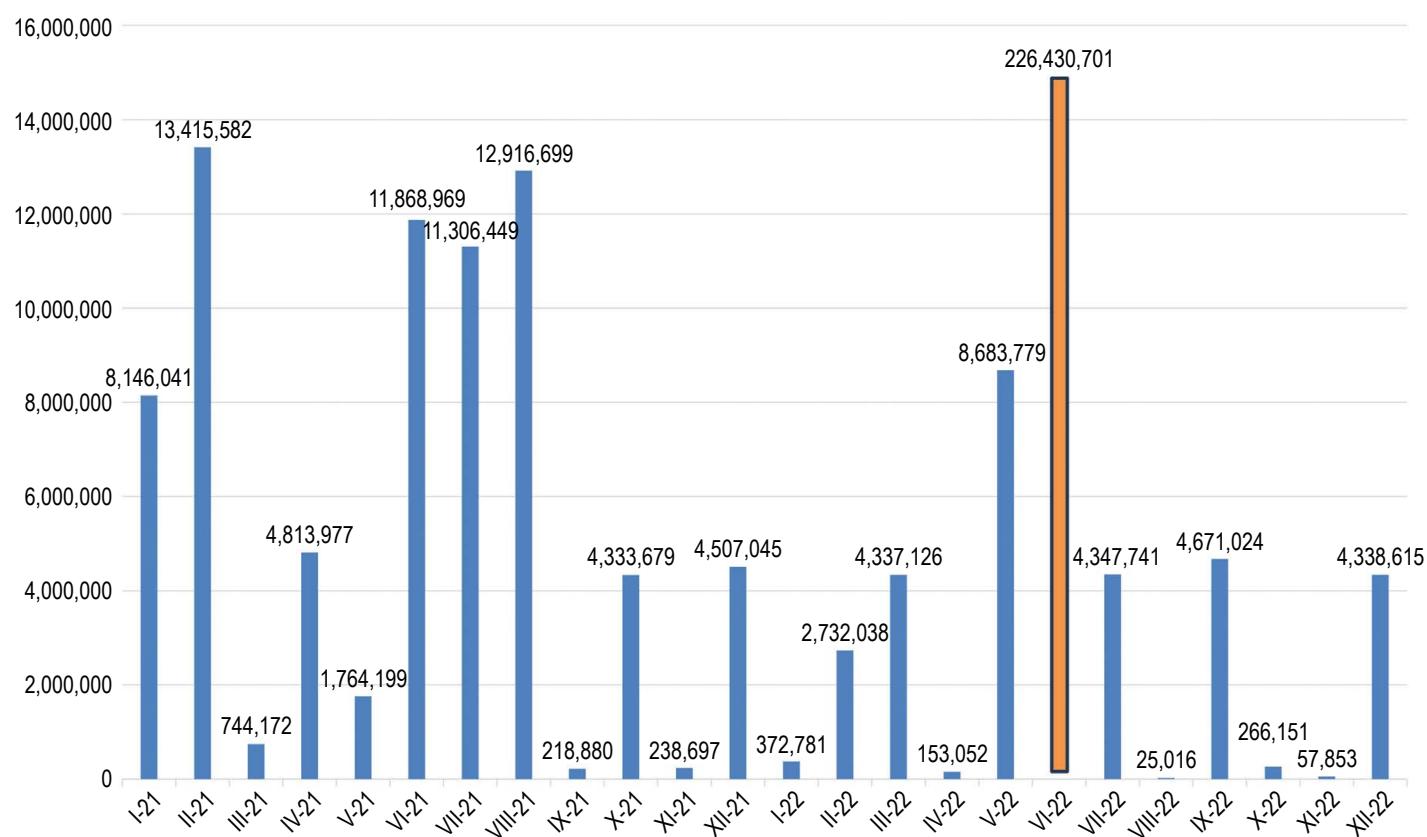


Figure 3: Number of IYCK events attendees per month, January 2021 – December 2022; June 2022 shown schematically for better visualization of the other months.

Table 1: IYCK events and attendance per country.

Country	Number of Events	Attendance	Attendance/Event
Argentina	8	19,671	2,459
Australia	7	10,808	1,544
Austria	27	2,672,898	98,996
Belgium	1	287	287
Brazil	59	4,126,054	69,933
Bulgaria	4	5,210	1,303
Canada	50	36,395,580	727,912
Chile	10	26,338	2,634
China	57	217,562,507	3,816,886
Colombia	4	10,477,287	2,619,322
Costa Rica	1	190	190
Croatia	3	33,840	11,127
Cuba	1	500	500
France	30	24,079	803
Germany	13	24,420	1,878
Greece	12	10,719	893
Hungary	8	39,249	4,906
India	13	8,189	630
Indonesia	3	260	87
International Organizations	72	10,591,827	147,109
Israel	1	422	422
Italy	140	37,982,804	271,306
Japan	8	11,140	1,393
Laos	1	4,000	4,000
Macedonia	3	2,180	727
Malaysia	16	43,655	2,728
Mexico	166	496,426	2,991
Morocco	2	150	75
New Zealand	9	2,866	318
Philippines	8	58,700	7,338
Poland	38	43,595	1,147
Portugal	14	9,855	704
Russia	139	1,324,246	9,527
Serbia	11	41,007	3,728
Slovakia	5	55,808	11,162
Slovenia	18	27,678	1,538
Spain	310	1,698,501	5,479
Sweden	1	36,200	36,200
Switzerland	2	4,900	2,450
Thailand	1	2,000	2,000
United Kingdom	28	204,418	7,301
Usa	185	6,599,576	35,673
Venezuela	1	276	276
Totals	1,490	331,221,566	222,296

other reports, as well as contacting the organizers, to get reports and details.

Some of the reports did not include attendance numbers and those had to be estimated. Additionally, 247 events were accidentally lost when the website was saved to an archival website. Most of those were probably recovered, but it is important to note that the number of attendees and events are minimum estimates. In the end I counted 1,491 events and announced that in Veni (2025) and elsewhere, but in preparing this report, I found one event was recorded twice, so the actual final and correct number is 1,490. Figure 2 shows the number of events that occurred each month.

More than twice as many events occurred in 2021 (1,023) than in 2022 (467), almost certainly due to loss of energies and the call of other important needs and obligations. Nonetheless, 2022 saw more than one IYCK event each day, and many were significant activities. Both years followed the same general trends, with April–June being the most active months, followed by major declines into August, with many people away on vacation, increases into October, and declines with end-of-year holidays.

The total attendance of the IYCK events was 331,221,566. As with the events, previously reported attendance was wrong due to errors in the spreadsheet used to track the events. Attendance does not record the number of individuals. Some individuals attended multiple events. Attendance records the number of contacts made, recognizing the value of people being contacted repeatedly by the IYCK, learning more about caves and karst each time.

IYCK events were organized in 43 countries on all continents except Antarctica. Table 1 lists the total attendance at events in each country, number of events held in the country, and average attendance for each country's events. International events are those conducted by international organizations and attended by people from multiple countries and are not assigned to the countries where they were held.

Spain organized the most events (310) and China had the highest attendance (217,562,507) for their events. While the countries with the most events and highest attendance were among the most populous, that did not occur consistently. The consistent results appear in the column with the average attendance per event. The countries with the five highest average attendance were those where there was greater use of the news media and other online services.

Figure 3 illustrates the number of event attendees during each month of the IYCK. Data for June 2022 are shown schematically in orange so the numbers for the other months can be examined more easily. A televised news media event that month, seen by 200,000,000 people in China, was the most highly attended IYCK event. Even without that event, June 2022 would have had by far the highest monthly attendance at 26,430,701. Beyond that, there is little correlation between 2021 and 2022 attendance, or attendance and the number of events. For example, August had the fewest events of 2021 but the second highest attendance.

Table 2: Type of IYCK events, total attendees, and average number of attendees per type of event.

Type of event	Number	Attendance	Attendance/ Event type
Event type	8	19,671	2,459
Art contests and projects	30	91,998	3,067
Books and other publications	104	30,951,726	297,613
Caver training sessions	34	116,613	3,430
Celebrations	106	2,196,730	20,724
Classes	41	31,031	757
Conferences	80	109,566	1,370
Exhibits	90	542,338	6,026
Field trips	92	537,986	5,848
Fund-raising programs	2	723	362
Laws or other government actions	8	10,339,030	1,292,379
Lectures	380	1,402,967	3,692
News media reports	54	269,090,134	4,983,151
Podcasts/news media interviews with speleologists	29	6,829,072	235,485
Proclamations by governments recognizing the IYCK	9	3,962,625	440,292
Research and exploration/survey expeditions	35	265,460	7,585
Restoration projects to clean and repair caves and karst areas	102	485,353	4,758
Social media sites celebrating and providing IYCK information	147	875,188	5,954
Videos created on caves and karst	77	2,259,417	29,343
Websites	32	509,919	15,935
Workshops	41	90,815	2,215

Table 2 lists the 20 categories of IYCK events and provides the total number of each event type, the total attendance for each event type, and average number of attendees for each event type. Some average attendance numbers may seem high, but include people who learned about caves, karst, and the event through the news media and social media. This table is not just of historical value but offers insights on the types of events that will reach and be of greatest interest to the most people when organizations now plan public education events on caves and karst.

It is clear from Table 2 that the most frequently organized event types do not generally attract the most attendees. Public lectures were the most common type of event, with double to triple the number of the next four most offered events, yet they had the 14th lowest average attendance. As shown in Table 1, the events with highest attendance were those that were in the media and online. In descending order of attendance, news media reports, laws and other governmental actions, government proclamations recognizing the IYCK, books and publications, and podcasts and news media interviews had about one to two orders of magnitude higher average attendance than the other 15 types of events.

Some of the data in Table 2 cannot be overly generalized and need individual assessment. For example, average attendance for classes and fundraising programs were far lower than the other types of events. With classes, the lower number was the result of limited classroom space and a focus on individualized instruction. In contrast, low attendance for fund raising was likely due to little public interest and understanding of why raising money for caves and karst is important – something the IYCK should help to change.

Based on direct and indirect information, news media reports on IYCK events were low because, like with fund raising, the news media did not see the value of reporting on caves and karst, and because some organizers did not remember to contact the media or know how to engage them. For example, most events that removed trash from sinkholes, cenotes, and caves that require no special skills or equipment to enter, where the public could have assisted, were conducted generally by cavers only, which attracted little or no media attention, as well as being a lost opportunity to directly show the public how easily caves and water supplies can be polluted.

ADVANCES FOR SPELEOLOGY

The above limitations of the IYCK are not mentioned to criticize any group or individuals. The IYCK was a learning experience for the global speleological community, and this report identifies areas of public outreach where we all can improve to better advance the world's awareness of caves and karst. It is also crucial to say that events with only a few attendees were successes. Any one person inspired at an event could become a major positive influence in cave and karst exploration, science, management, or in many other ways.

Consequently, most advances for speleology will not be seen for years and even decades. Many will require children, thrilled by what they learned during the IYCK, to grow and become those future leaders (Figure 4). Additionally, societal change, and changes in laws and regulations, are slow processes. Nonetheless, eight laws and government actions to protect and study caves were enacted during the IYCK. The most significant was a national cave protection law in Colombia. But while these occurred during the IYCK, and prompted by the IYCK, most were the results of years of work by local and regional speleologists.

Selecting special events to discuss among 1,490 excellent and valuable activities is difficult, but three deserve special mention for their importance in advancing speleology. The UIS attempted to gain United Nations or UNESCO recognition to make the IYCK an official event of one or both organizations, but that was not possible. However, the UIS was invited to celebrate the IYCK at UNESCO Headquarters in Paris, France. That was the first time speleology was presented to leaders from countries around the world as a topic of vital national interest. It was an opportunity for the UIS leadership to meet with those leaders and encourage their continued interest and expand it into support within their countries and beyond. That celebration led to the second special event, when UIS was invited back to UNESCO Headquarters for the first United Nations Groundwater Summit in December 2022 where relationships were strengthened and built with more international leaders.



Figure 4: Children like these, showing their certificates for completing lessons on bats at Russia's Yangan-Tau UNESCO Global Geopark, will advance speleology in the years to come because of the IYCK. Photo courtesy of Yangan-Tau Global Geopark.

These two events added substantially to years of previous effort and contributed to two important actions in late 2025. First, the United Nations Environment Assembly considered a major proposal by Indonesia for cave and karst research and protection. Like most first-time proposals, it was not successful. However, it was the first time the United Nations considered a proposal on caves and karst, great progress was made on educating the international delegates about caves and karst, and the delegates from Indonesia and their supporters from speleological organizations and other countries gained useful insights to improve the proposal and present it again at a future Environmental Assembly.

Second, in November 2025, UNESCO voted to approve a proposal by Slovenia to officially recognize 13 September of every year, which is the day the IYCK was celebrated at UNESCO Headquarters in 2021, as the International Day of Caves and Karst. This tremendous achievement assures that caves and karst will be celebrated around the world annually, and recognized at the highest levels for their importance to humanity.

CONCLUSION

The IYCK was a great success. Despite the challenges of the pandemic and limited resources, the UIS and its partners were able to reach and teach over 330 million people in at least 43 countries about caves and karst. But the work of the IYCK is far from over. By the end of 2022, the world's population was 7.6 billion, which means about 7.3 billion people had not been reached by the IYCK. But the IYCK was a tremendous starting point that led to the International Day of Cave and Karst and other valuable programs and proposals.

As the UIS now proceeds into a new era for speleology, with increasingly closer international connections to people and organizations outside of the caving community, opportunities to Explore, Understand, Protect will grow. Patience will be needed, and it will be important to include non-speleologists in our work and vision. But as we expect others to join us, we need to be prepared to join them and see the value of their work and vision too.

I wrote above that three IYCK events deserve special mention. The third was the creation of the Solidarity Speleomarket by Spain's Villacarrillo Speleology Group. Its purpose was to raise funds through sales to help children with cancer and blood-related diseases. I expect that everyone reading this report understands the great importance of caves and karst, but also see how many other things are important too. As we speleologists become closer members of the world's international communities, we should prepare to support them as they support us, which will lead to a better world for everyone.

ACKNOWLEDGEMENT

The IYCK was a program of the UIS and was only possible by the dedicated support of thousands of speleologists and other friends from around the world. On behalf of the UIS and its IYCK Committee, I thank them all.

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UIS HISTORY BOOK

National Honorable Mention

José Ayrton LABEGALINI (Brazil), *UIS Past-President*
2001–2005, ja.labegalini2@gmail.com

The International Union of Speleology (UIS) was founded on September 16, 1965, in Ljubljana, in what was then Yugoslavia (today Slovenia), at the closing General Assembly of the 4th International Congress of Speleology (ICS). At that time the first Statutes were approved, and the first Bureau was elected.

The history of the first half-century of the UIS's existence was recorded in the book **"Fifty Years of the UIS 1965–2015"** (LABEGALINI, J. A. et al., 1st ed. – Postojna, Založba ZRC/UIS, 2015, 524 p.). With the organization of the 19th International Congress of Speleology (ICS) in Brazil, whose central theme was the 60th Anniversary of the UIS, by mutual agreement between the author and the event organizers, this book was updated with ten more years of UIS history and during the event its updated edition was launched, but with the title **"Sixty Years of the UIS 1965–2025"** (LABEGALINI, J. A. et al. – 1st ed. – Brasília, DF: Instituto Chico Mendes – ECMBio, 2025, 832 p.).

The 60th anniversary of the UIS was celebrated during the 19th ICS, an event which took place between June 20 and 27 of 2025. The major anniversary celebration took place on July 21st, and the printed version of the book (**Sixty Years of the UIS: 1965–2025**) was launched and autographed. The book was published and funded by ICMBio in Brazil; it can be downloaded from the UIS website <https://uis-speleo.org/index.php/sixty-years-of-uis-1965-2025/>.

Since the printed version of the book was in limited numbers, its distribution during its launch was restricted, but some copies were reserved to be sent to institutions and some old speleologists, co-authors and friends of the author who didn't have the opportunity to attend the event in Belo Horizonte. One book was sent to former student Jadson Porto, now a Full Professor at the Federal University of Amapá (UFAP) and an Editorial Advisor of the Brazilian Federation of Academics of Sciences, Letters and Arts (in Portuguese: Federação Brasileira de Acadêmicos de Ciências, Letras e Artes – FEBACLA), situated in Nova Iguaçu, Rio de Janeiro.

The Book was presented to the Federation and analyzed by a specific committee; as a consequence, the author was honored with a William Shakespeare – Honorable Mention for Fine Arts and Literature (Honor bestowed upon Brazilian authors for publishing a book in a language other than Portuguese), while the UIS was honored with a Certificate of National Honorable Mention, dated as February 25, 2026, signed in Nova Iguaçu – RJ, Brazil, by the President of FEBACLA, Prof. Dr.h.o. Dom Alexandre da Silva Camêlo Rurikovich Carvalho. A copy with the translation of parts of the certificate is below; the original certificate will be taken to the UIS archives in Postojna next September.

Although FEBACLA brings together academics from the sciences, literature, and arts in a general way, it does not have speleology as its specific field, but it does have an editor who is also a speleologist, Professor Jadson Porto, on its board of advisors. The National Honorable Mention awarded by FEBACLA to UIS signifies recognition of the importance of UIS worldwide, on the part of this Brazilian national organization; while the William Shakespeare Commendation signifies recognition of the importance of the book's content, that is, the record of the recognized organization's history, both for UIS itself and for the international speleological community.

In informal exchanges of messages between Professor Jadson and his old friend, the book's author, the latter asked about the reason for the nominations, to which Professor Jadson replied: "Dear friend, I don't know who so recognizes the importance of the UIS for international speleology and the importance of your book for the UIS, but I do."



Certificate of National Honorable Mention awarded by FEBACLA to UIS, on February 25, 2026 (A4 size)

*The ... FEBACLA, in recognition of the significant scientific, environmental, and cultural contribution made to humanity, awards the **NATIONAL HONORABLE MENTION** to UIS, on the occasion of the celebration of its 60th anniversary.*

This tribute highlights its remarkable work in promoting speleological research, international scientific cooperation, and the preservation of subterranean ecosystems, contributing significantly to the advancement of knowledge and the appreciation of the world's natural heritage.

FEBACLA expresses, through this distinction, its admiration and institutional recognition for a trajectory marked by commitment to science, sustainability, and environmental protection.

ARRIGO CIGNA (1932–2026)

The Most Important Italian Speleologist of the 20th Century

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Arrigo CIGNA first became interested in speleology in 1948, at the age of 16, when a science teacher at the Gonzaga High School where he was studying suggested a speleology course to the students. Curious about every scientific aspect, CIGNA immediately raised his hand to enroll.

As soon as the course was over, together with some of his classmates, he founded the Gruppo Grotte Gonzaga, which shortly thereafter gave rise to the rebirth of the historic Gruppo Grotte Milano.

He thus found himself part of a very active group of young cavers who, in the following years, carried out important explorations and surveys not only in Lombardy, but also in Trentino, Liguria, Abruzzo, Apulia, and Sardinia.

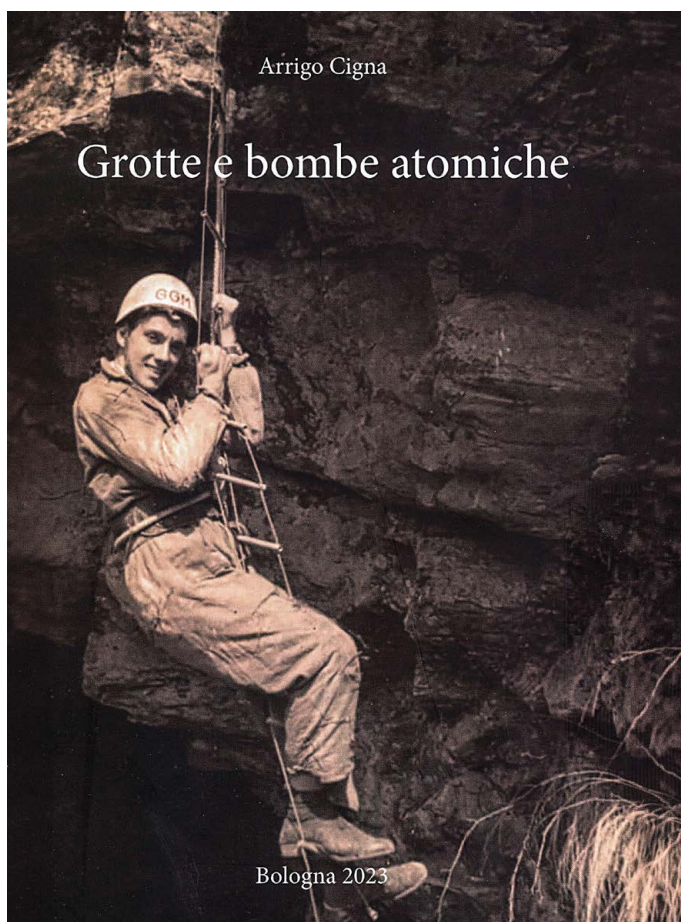


Figure 1: Cover of the book “Caves and Atomic Bombs (2023)”: photograph from the early 1950s of the last century which portrays Arrigo as he is about to descend a well on “modern super-light ladders” (Photo: Cigna Family Archive).



Figure 2: Bologna 2003, Atrium of the Cappellini Museum of the University of Bologna: 4 presidents of the SSI (Paolo FORTI, Arrigo CIGNA, Mauro CHIESI and Giovanni BADINO) during the ceremony of laying the plaque to commemorate the centenary of the foundation of the Italian Speleological Society which took place in that place in 1903 (Photo: SSI Archive).

Meanwhile, Arrigo had enrolled at the university to study physics, and his keen interest in all types of science prompted him to immediately begin research in caves: his first article, when he was just twenty years old, on the propagation of radio waves in cavities, appeared in 1953, followed by others on underground meteorology, the luminescence of stalactites, the physical chemistry of underground water, and more.

Thanks to his publications, in 1960 Arrigo CIGNA was the youngest of the speakers at the “First International Varenna Symposium” on the filling deposits of caves.

While studying physics in Milan, Arrigo met Giuseppe OCCHIALINI, a distinguished physicist, professor, and talented caver. The latter took a liking to the young student and enlisted him in explorations of the Antro del Corchia cave in 1955. That same year, at the age of just 22, he was elected to the council of the Italian Speleological Society for the first time, marking the beginning of his career in leading roles in speleology, first in Italy and then worldwide.

Meanwhile, Arrigo also began a promising research career at the National Committee for Nuclear Energy (CNEN, later ENEA), specializing in radiation protection. He continued to conduct research in this field throughout his life, rising through the ranks within his laboratory, quickly becoming director of the laboratory, a position he held until his retirement. In this same field he held leadership positions in international organizations (IAEA) and was president of the Union Internationale de Radioécologie from 1994 to 1998.



Figure 3: Early 2000s: Arrigo CIGNA prepares to enter the narrow entrance of a cave in the Saudi Arabian desert (Photo: Cigna Family Archive).

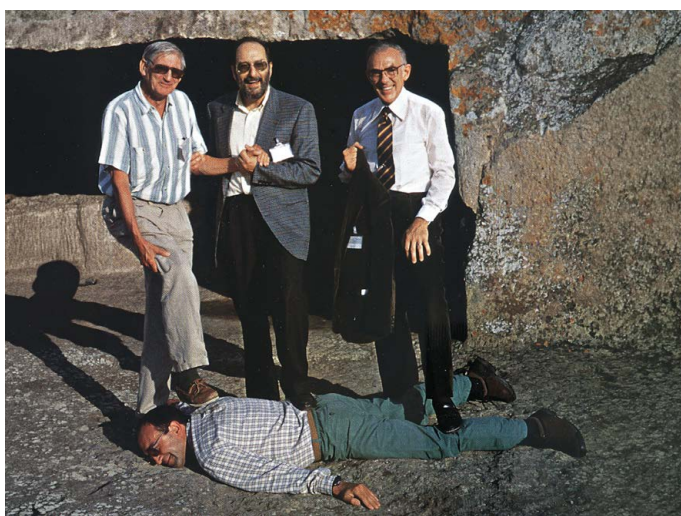


Figure 4: Postojna, during the celebration of the first 50 years of the UIS: three former Presidents (from left: Hubert TRIMMEL, Paolo FORTI and Arrigo CIGNA), jokingly, hold the new Adjunct Secretary of the UIS, Giovanni BADINO, under their shoes (Photo: SSI archive).

In 1970, drawing not only on his extensive speleological activity but also on his scientific authority, he was elected President of the Italian Speleological Society, a position he held until 1979. During this period, he worked tirelessly to promote the important role of scientific research in speleology and to publish and disseminate its results. To this end, he encouraged Italian participation in national and international conferences and the publication of reports, which would serve as a forum for exchanging information on speleological research and exploration. Since 1965, the Proceedings of the SSI had been published annually, and since 1970, a quarterly newsletter has been launched, which also included technical and scientific reports. In 1979, however, he decided to replace these two publications with the journal “Speleologia,” the first truly national biannual journal, which published articles on major explorations and research. Furthermore, the previous year saw the publication of the Speleology Manual, a comprehensive manual for which Arrigo acted as coordinator. It was divided into chapters dedicated to the various technical, operational, and scientific aspects, written by the leading Italian specialists of the time.

Arrigo, thanks to his extensive international scientific relations, also contributed substantially to strengthening the role of Italian speleology worldwide. His constant presence at the International Congresses of Speleology, which have been held



Figure 5: International Congress of Speleology in 2022, Le Bourget du Lac, France: Arrigo Cigna attending the ceremony of closure of the Cave Time Capsule (Photo by M. Parise).

every four years since 1953, was fundamental. Arrigo attended almost all of them, starting with the second one, held in Bari in 1958, gaining recognition not only for the scientific papers he presented, but also for his ability to mediate and bring together speleologists from different cultures and countries. Essentially for these reasons, in 1973, during the International Speleological Congress in Olomouc, he was elected President of the International Speleological Union (UIS), which had been founded eight years earlier in Postojna, thanks also to his active contribution.

Even after ending his term as President of the SSI in 1979 and the UIS in 1981, Arrigo CIGNA continued to contribute to both associations, actively participating in their main official events. He also intensified cave research, ranging from meteorology to ecology, pollution, and the study of underground radon. Beginning in 1989, Arrigo dedicated himself to the increasingly important topic of show cave conservation, becoming a global expert in environmental monitoring. At the international level, he worked to establish scientific coordination among the world’s show caves. It is not a coincidence that in 1990 he curated the first Congress of the International Show Caves Association (ISCA), followed by numerous others. Among these, the 1998 conference in Sardinia and the 2006 conference in Bermuda are noteworthy for his direct involvement in their organization. On the topic of show caves, he was among the main proponents of the “Carta di Frassassi,” a programmatic document setting out the basic conservation principles to be implemented for the touristization of caves, and published a large number of works dedicated to the management and environmental monitoring of tourist caves. In 2022, Arrigo, now almost ninety, had the opportunity to actively participate in his last International Speleology Congress in France, giving an opening address alternately in English and French, and a similar closing address, both of which were greeted with a standing ovation from all the national delegates. Also in 2022, the Proceedings of the National Congress in Perugia (1978), held almost half a century earlier and previously unpublished, were published. The typewritten drafts, after a series of vicissitudes and changes, were fortunately preserved in Arrigo’s vast scientific library... Arrigo’s last monograph was published in 2023, edited by the Italian Speleological Society. It is a series of diary entries entitled “Caves and Atomic Bombs,” written for his family in 2015, in which he recounts some of his adventures as a researcher and speleologist. An updated list of all his publications has been added to this work in print.



Figure 6: Belo Horizonte, Brazil, 2025: Paolo FORTI standing at the entrance of the hall of the International Congress of Speleology dedicated to Arrigo CIGNA (Photo by J. LABEGALINI).

CIGNA's writings span a virtually uninterrupted span of over 70 years: Arrigo began publishing in 1951, and his last published work to date was published in 2023. He has over 400 publications, but almost all of them focus on just two topics (speleology and radiation protection), which, not coincidentally, are also cited in the title of his autobiographical book, concisely and accurately titled "Caves and Atomic Bombs." Of course, for those unfamiliar with his immense love for speleology, it might seem curious to note how the latter has actually surpassed, albeit slightly (49% to 46%), nuclear physics, which was his real profession! Finally, in 2023, Arrigo, as he had long promised, donated his entire extensive speleological library to the "Franco Anelli" Documentation Center of the Italian Speleological Society, which today can arguably be considered the largest speleological library in the world. Unfortunately, in 2025, due to his deteriorating health, Arrigo was unable to attend the International Speleological Congress in Belo Horizonte, Brazil. However, given the general esteem in which he is held by the entire world of speleology, the organizers decided to honor him, the only living speleologist, by naming one of the conference rooms after him. Certainly, even after his passing, Arrigo will be remembered and will live on through his brilliant research and discoveries and, even more so, the organizational structures he managed to establish in both the speleological and radiation protection fields. However, for those of us who, for decades, have had the fortune of sharing with him, dreams, passions and, at least in part, some achievements, there will remain the regret of not being able to calmly discuss with him on a daily basis scientific research or speleological organizations to be created or, much more often, to be improved.

ARRIGO CIGNA'S SPELEOLOGICAL PUBLICATIONS

CIGNA's writings span a span of 70 years: Arrigo began publishing speleological papers in 1953, and his last printed work to date dates back to 2023. Karst and speleology were the topics he addressed most throughout his long life, even surpassing his publications on radiation protection. However, if we consider that radiation protection was his profession for over 40 years, while speleology, at least theoretically, was merely a hobby, it's easy to understand why, for Arrigo, the exploration and subsequent study of caves were by far the most important thing.

A careful examination of his works also reveals his remarkable ability to work as a team player at the local, national, and especially international levels: in fact, he held important elected positions in the speleological field for many years. Finally, from a scientific point of view, some of his contributions will forever remain fundamental milestones in the history of the evolution of knowledge in the karst speleological field.

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A TRIBUTE TO A FRIEND – ARRIGO CIGNA

José Ayrton LABEGALINI (Brazil), UIS Past-President
2001–2005, ja.labegalini2@gmail.com

Nivaldo COLZATO (Brazil), UIS Vice President of
Operation 2022–2025, nivaldo@karinaetiquetas.com.br

The first time Arrigo and I met was at the 9th International Congress of Speleology (ICS) in Barcelona, Spain, 1986. Unfortunately, I did not have the opportunity to attend the 10th ICS in 1989 in Budapest, Hungary, while Arrigo was not present at the 11th ICS in 1993 in Beijing, China. However, in 1997, during the 12th ICS in La Chaux-des-Fonds, Switzerland, Arrigo was instrumental in Brazil's selection as the host of the next ICS, which was called SPELEO-BRASIL 2001.

In 2001, during the 13th ICS in Brasília, Arrigo was one of those who nominated me to run for the presidency of the UIS and supported my candidacy. That's where a friendship began and lasted for more than two decades, until his death in March of 2026. I knew little about his academic and/or scientific career, but I knew him very well as one of the pillars supporting the idealization of UIS.

José Ayrton LABEGALINI (Brazil)
UIS President 2001–2005

The first time I met Arrigo was at the 12th ICS (La Chaux-de-Fonds, Switzerland, 1997), when he supported the Brazilian proposal for the next ICS. During that 13th ICS in Brasília, Brazil, 2001, we became closer due to his effort to elect José Ayrton LABEGALINI as UIS President. However, our true friendship began during the 14th ICS (Kalamos, Greece, 2005), when I could understand how important Arrigo was to the UIS and to global speleology.

In 2013, during the 16th ICS (Brno, Czech Republic), the combined pressure from him and LABEGALINI, among others, "forced" me to run for the position of Adjunct Secretary of the UIS. Arrigo's support, was therefore instrumental in enabling me to become a UIS Bureau Member. During the twelve years I served on the Bureau, he consistently encouraged me and valued my work, both in my general contributions to the UIS and in my role as Editor of the UIS Bulletin.

Thank you, Arrigo. Your friendly and sincere manner, combined with your constant concern for the present and future of the UIS, are part of your legacy that should be followed by all those who value and work for the benefit of our institutions.

Nivaldo COLZATO (Brazil)
UIS Adjunct Secretary 2013–2022
UIS Vice President of Operations 2022–2025

Arrigo was the second president of the UIS, serving two consecutive terms (1973–1977 and 1977–1981). Although belonging to the “old guard” of the UIS, he always supported the modernization of the organization and its adaptation to the new times; as a Past President of the UIS, he was always a member of its Advisory Council. We will not detail his life at UIS, as he himself did so, in his own words, in chapter 10.2 of the book *Sixty Years of the UIS 1965–2025*, but we can attest to his love for UIS, whether in the examples he gave, in past experiences, in the support he requested, in the firmness of his decisions, in the rectitude of his attitudes, in his adaptation to modernity, in the temperance of his advice, or in the friendship he offered.

In 2022, during the second session of the UIS General Assembly, at the 18th ICS, in Le Bourget-du-Lac, France, Arrigo, already with impaired mobility and speech, asked for a short time to say goodbye to the speleological community and the UIS, because he didn't know, and neither did we, if he would still be alive in 2025, when the next ICS would be in Brazil; however, there was a general consensus that even if he were alive, he would not be able to undertake another transoceanic voyage.

The 19th ICS took place at the ByFly Minascentro Convention Center in Belo Horizonte, Brazil; the seven auditoriums used for the congress presentations were renamed to honor important speleologists in the history of the UIS or the Brazilian Speleological Society (SBE); six of them had already passed away, and the seventh, although still alive, was no longer in good enough health to be there. This was a way of making Arrigo present at the 19th ICS. Not the largest, but the most sumptuous auditorium at ByFly Minascentro was named as Arrigo CIGNA Auditorium during the week of activities of the congress; this was a tribute from two Brazilian friends, that was proposed, accepted and agreed upon by the entire Organizing Committee of the 19th ICS.

On March 7, 2026, his heart stopped beating. Two days later his body was turned to dust, but he continues to live on in the memories of those who lived with him, and his soul has certainly already joined with that of Bernard GÈZE, Vladimir PANOS, Reno BERNASCONI, Hubert TRIMMEL, Giovanni BADINO, Adolfo ERASO, Andrej MIHEVC, and so many other UIS Bureau Members who lived with him and/or shared tasks at UIS.



Arrigo CIGNA with José Ayrton LABEGALINI discussing the first edition of the book FIFTY YEARS OF THE UIS 1965–2015, in the library of the latter at his home in Monte Sião, MG, Brazil, in a picture taken on July 14, 2011. (Jean-Pierre BARTHOLEYNS).



Arrigo CIGNA with Nivaldo COLZATO in the bar of the 16th ICS, (Brno, Czech Republic, 2013) after the nomination of the latter to the UIS Bureau, but before his election as Adjunct Secretary. (Archives of Nivaldo COLZATO).



In front of the cave painting panel at Lapa dos Desenhos, in the Peruaçu Caves National Park, in Januária/Itacarambi, Brazil, from left to right are: Nivaldo COLZATO (Brazil), Efrain MERCADO (Puerto Rico), Arrigo CIGNA (Italy), Adolfo ERASO (Spain), José Ayrton LABEGALINI (Brazil), Jean-Pierre BARTHOLEYNS (Belgium); the picture was taken during the pre-congress trip of the 31st Brazilian Congress of Speleology, when the UIS Past-Presidents (CIGNA and ERASO) were invited together with other foreign friends to visit the Peruaçu Valley.

MINUTES OF THE UIS BUREAU MEETINGS

Ángel A. ACOSTA-COLÓN (Puerto Rico)
Adjunct Secretary, angel.acosta2@upr.edu

Online (Zoom), 18 November 2025, 16:00–19:00 (Central European Time)

Minutes:

Ángel A. ACOSTA-COLÓN; Revised by Johannes MATTES

Attendance

President	Zdeněk MOTYČKA
Vice-President of Administration	Mario PARISE
Vice-President of Operations	Mladen GARAŠIĆ
Secretary General	Johannes MATTES
Treasurer	Nadja ZUPAN HAJNA
	Ángel A. ACOSTA-COLÓN
	José María CALAFORRA
	Allan Silas CALUX
Adjunct Secretaries	John GUNN
	Val HILDRETH-WERKER
	Marc MENTENS
	Nathalia Vanessa UASAPUD ENRÍQUEZ
	Andy EAVIS
Past Presidents	José Ayrton LABEGALINI
	George VENI
Guests	Bärbel VOGEL (President, UIS Cave Protection Commission; President, German Speleological Federation)

AGENDA

1. Opening Session

President welcoming introduction / Approval of Agenda
(Z. MOTYČKA)

First Bureau meeting after the UNESCO decision and the Brazil Congress. Discussion on how to take advantage of this decision globally.

2. Review Action Items of previous UIS Bureau Meeting

a) IDCK Updates (N. ZUPAN HAJNA)

A major achievement was reported, with around 60 sponsoring countries. Costa Rica and Morocco spoke enthusiastically in support of the IDCK, while several Member States submitted written statements due to time constraints, and the previous Director-General of UNESCO spoke in favour of IDCK.

Next major event in Slovenia for the first IDCK celebration:

- Organization of events and identification of co-sponsoring funding sources.

- Slovenian National Commission for UNESCO call, 1 December, for possible co-funding of IDCK event in Slovenia.
- Two-day conference planned, focusing on topics such as the sustainable use of caves and karst.
- Celebration of the first International Day of Caves and Karst launched by UNESCO.
- A major celebration planned at Postojna Cave on 12 September evening.
- To be livestreamed on YouTube.
- Additional local events involving speleologists, communities, scientists, managers, and other stakeholders.

Nadja will prepare a proposed budget by 1 December of conference and celebration in Postojna for call of Slovenian National Commission for UNESCO.

Zdeněk suggested discussing promotion throughout the year with UIS members and delegates and publishing two articles.

Nadja reported that meetings have been in Postojna since September, including discussions on the proposal. There are initiatives to invite the UNESCO Director-General, and establishing a smaller committee group for the celebration event. She emphasized encouraging local communities to organize local celebrations globally.

A proposal was made to send a letter of gratitude to the delegations and countries that supported the IDCK proposal.

Bärbel noted that the website should show the co-sponsoring countries and list events happening around the world.

Nadja explained that permission from UNESCO is required and that UIS must wait before listing countries and publishing the document publicly.

The proposal includes a budget from UIS. Bureau members would act as speakers, with topics such as sustainable use of karst and tourist caves. Possible challenges related to caves were noted, as well as the idea of a performance by a well-known public figure. Discussions with the Mayor of Postojna are ongoing.

Zdeněk proposed possible dates of 11–13 September for the conference, celebration, and cave visit.

Nadja suggested a possible field trip to nearby countries in the week before/after and on the day before the event near Postojna.

A question was raised about whether 10 September should be the date of the next in person meeting of the Bureau.

Val asked how global promotion of IDCK should be handled: centrally by UIS or individually by members.

Nadja raised the question of who would be part of the organizing committee.

Zdeněk and Nadja proposed a meeting at the beginning of December to discuss next steps. A possible committee would include Nadja, Zdeněk, Mario, Val, John, and Andy.

Nathalia supported the idea of strong promotion and noted that Colombia has already started planning a celebration.

Zdeněk thanked Nadja for her work on IDCK.

George suggested involving UNESCO media to help promote IDCK.

Nadja noted that UNESCO faces challenges in promotion and often relies on individuals to take the lead.

DECISION 1: The UIS Bureau agreed to proceed with preparations for the first official International Day of Caves and Karst (IDCK) celebration in Slovenia, provisionally scheduled for 11–13 September 2026 in Postojna.

DECISION 2: A small organizing committee for the IDCK celebration will be established, provisionally consisting of Nadja Zupan HAJNA, Zdeněk MOTYČKA, Mario PARISE, Val HILDRETH-WERKER, John GUNN, and Andy EAVIS.

ACTION 1: Nadja ZUPAN HAJNA to prepare a detailed IDCK budget proposal by 1 December 2025.

ACTION 2: Zdeněk MOTYČKA and Nadja ZUPAN HAJNA to convene an organizing meeting in early December 2025 to define next steps for the IDCK celebration.

b) ECOSOC Application and UIS Engagement in the United Nations (Z. MOTYČKA)

Zdeněk introduced the topic of the UN Economic and Social Council and questioned whether UIS should engage at this level, noting that UN processes can be distant from UIS's core activities.

Bärbel argued that the UN provides frameworks for engagement on sustainable development goals and environmental issues, both of which are directly related to caves and karst, and that UIS should be involved.

Zdeněk stated that he did not see clear benefits and did not believe UIS needed to engage at UN level.

Bärbel countered that without political engagement, caves risk being lost. She cited German experience, where engagement with government helped change laws for cave protection. She argued that UIS needs to engage economically,

scientifically, and technically.

George referred to UIS Article 3, emphasizing that karst protection and sustainable development are part of UIS' core activities.

Johannes asked what concrete steps and outcomes would follow membership, cautioning that UIS should proceed carefully.

Bärbel explained that, in the German Federation, letters of support are written and working groups follow debates and meetings, providing information. She outlined the role of major groups and stakeholders (NGOs, industries, etc.) and mentioned parallel working groups focusing on goals such as water resources (Goal 6) toward 2030.

Nadja expressed concerns based on her experience as past president and treasurer. She noted that at UN level, expert opinions are often requested, but NGOs usually act as observers without decision-making power. Without governmental backing, funding, or diplomacy, impact is limited. She emphasized that UIS lacks funds for travel and would need volunteers willing to work without financial support. She suggested focusing efforts at local government level instead.

Zdeněk agreed, stressing that UIS should focus on local members and use IDCK as a tool for karst protection, educating from the bottom up rather than starting at high political levels.

Bärbel responded that local engagement is part of UN processes and that UIS faces no obstacles, citing German Federation experience. She noted that the EU will vote with most countries and that the German Federation will seek support for Indonesia's draft resolution.

John highlighted advantages: a UN resolution could amplify national-level voices for caves and karst. He expressed willingness to volunteer time and support IDCK and the German Federation's efforts.

George noted that approval processes can take two years, but membership in UN environmental programs carries few obligations. UIS could conduct and report its activities through the Karst and Cave Protection Commission, be valuable by being present in discussions, and providing expertise when caves and karst are mentioned.

Val emphasized the lack of information and awareness about caves and karst in large infrastructure projects (e.g., the Maya Train) and argued that being present in discussions is vital, particularly regarding karst water issues.

Bärbel suggested a possible solution via the UIS Cave Protection Commission, possibly involving government representatives. She raised questions about representation and use of existing materials.

Nadja thanked Bärbel for her dedication and suggested assigning this task to the Protection Commission, while verifying feasibility.

George noted that UIS representation could be limited in scope and statements.

Zdeněk proposed to postpone the decision to the next Bureau meeting.

- c) **Updates: UIS website & social media:** member countries, delegates, ICS proceedings, documents, Bureau members, UIS awards, etc. (M. GARAŠIĆ, N. UASAPUD, J. MATTES) Mladen reported that the website has undergone numerous updates. The UIS 60th Anniversary Yearbook will be uploaded. Members were asked to email him with any corrections.

Ángel requested website statistics.

Nathalia agreed to look into this.

Nadja reported approximately 200 Facebook shares and 100 Instagram shares.

ACTION 3: Mladen GARAŠIĆ and UIS Webmaster to update the UIS website with IDCK-related information once UNESCO approval is granted, including co-sponsoring countries and global events.

ACTION 4: Nathalia UASAPUD ENRÍQUEZ to review and provide website and social media statistics.

- d) **UIS Bulletin** (Z. MOTYČKA)

Zdeněk reported that a new issue is planned before Christmas, with an editor assigned (Michal FILIPPI, filippi.m@seznam.cz). John will review the English of approximately 100 pages.

John asked about the expected level of English revision, noting that full verification would be time-consuming. He suggested dividing the document.

George requested circulation of the document in Word format to allow editing.

Zdeněk confirmed that reports and articles are circulated in both PDF and Word formats.

DECISION 3: The UIS Bulletin will be published around the beginning of 2026, with Michal FILIPPI appointed as editor, and with language review coordinated separately.

ACTION 5: John GUNN to coordinate the English language review of the upcoming UIS Bulletin, in cooperation with the editor.

3. Report on 19th ICS in Belo Horizonte (A. CALUX)

Allan presented a preliminary report:

- Participation of the Brazilian Speleology Society (BSS) and CECAV.
- 324 volunteers, mostly supporting the scientific program.
- Numerous sponsors, including mining companies.
- 1,228 registered participants from 55 countries.
- 23 vendor stands.
- 442 papers (279 oral presentations, 163 posters).
- Two assemblies.
- Seven exhibitions in six cities, with around 2,000 visitors.

Finances:

- USD 66,776.19 from registrations.
- USD 3,958.46 in UIS fees.
- Total revenue: USD 1,188,296.92.
- Total expenses: USD 1,114,990.14.
- Balance: USD 73,306 (to BSS).

The complete report will be available in the coming months.

4. Review of Finances (N. ZUPAN HAJNA)

Nadja reported a balance of EUR 39,758.81 and USD 50,739.12 on UIS bank account.

Countries with pending membership fees were noted.

It was reported that there was an issue regarding the payment for the UIS booth. The amount was transferred from the UIS treasury to the company responsible for setting up the space, but the funds were returned to the UIS account. Allan and José AYRTON contacted the company, which informed them that it had received the payment and clarified that no amount was owed by UIS or by the congress, thus resolving the matter.

5. UIS Bureau internal functioning (J. MATTES)

a) Decisions of the Executive Committee since the last Bureau Meeting

Johannes requested that Bureau members respond to requests in a timely manner and presented the Executive Committee decisions since the last meeting in Belo Horizonte.

UIS patronage: Cave and Karst Expedition from 10–23 October 2025 in Maros Pangkep Geopark area, & International Seminar on Cave and Karst Management & Protection on 28 October 2025 in Makassar City

UIS patronage: 5th IC of Speleology in Artificial Cavities *Hypogea 2026*

Formal UIS support: ICEK Karst Science Award

b) Vote on the Members of the next Advisory Committee

Johannes proposed continuation of the current Advisory Committee:

Members of the previous Advisory Committee (alphabetic order):

- Pavel BOSÁK, Czech Republic
- Andrew EAVIS, United Kingdom
- José Ayrton LABEGALINI, Brazil
- Friedrich OEDL, Austria
- Paul W. WILLIAMS, New Zealand
- Kyung Sik WOO, Republic of Korea

Zdeněk asked for confirmation of Friedrich OEDL'S continuation. Johannes, Andy, and George supported this. Nadja suggested retaining OEDL and adding Paolo FORTI.

DECISION 6: The UIS Bureau confirmed the continuation of the current Advisory Committee, including Paolo FORTI.

ACTION 6: Johannes MATTES to ask the newly elected

members of the Advisory Committee if they are willing to continue their service.

c) **Update: Working Group on UIS Neutrality**

Johannes reported that the neutrality group, established by the UIS General Assembly, is active and is expected to submit its official request within a few months.

6. UIS Commissions (M. PARISE)

a) **List of Commissions for UIS website**

b) **Cave Rescue Commission request**

c) **History Commission request**

d) **French Federation request regarding Bibliography Commission**

Requests, among others, from the Cave Rescue Commission (creation of a sub-commission), History Commission, Biology Commission, and the French Federation regarding the Bibliography Commission were noted.

Mario stated he would address these items in the coming days and reply to all emails within the week.

Zdeněk emphasized the need for an updated list of commissions for the website and noted the workload involved in maintaining individual commission webpages.

Johannes noted that many commissions are requesting either individual websites or updated information on the UIS website.

ACTION 7: Mario PARISE to respond to requests from UIS Commissions (Cave Rescue, History, Biology, Bibliography, etc.) and to work toward an updated list of commissions for the UIS website.

7. Call for Speleological Event Support

(M. PARISE, Z. MOTYČKA)

Zdeněk explained that typically one to two calls are issued per year. No call will be opened for the second half of 2025. A call may be opened for 2026.

Johannes noted the workload involved in managing calls and applications.

Mario proposed opening the call if approved by the Treasurer, with Allan and Marc assisting.

Nadja stated that costs of IDCK celebrations must be clarified first.

Zdeněk proposed allocating EUR 3,000 for a call in May 2026, with a possible second call reviewed later.

Mario suggested reviewing the situation in November after the celebration.

Johannes agreed to circulate the call for May with full support of EUR 3,000.

DECISION 7: A Call for Speleological Event Support will be opened in May 2026, with a maximum budget of EUR 3,000, subject to confirmation of IDCK-related costs.

ACTION 8: Johannes MATTES to circulate the Call for Speleological Event Support in May 2026 (EUR 3,000), and to Mario PARISE, Allan CALUX and Marc MENTENS to prepare the call and manage correspondence related to applications.

8. UIS Relationship with Regional Organization and Countries (J. MATTES)

Johannes reported correspondence with several countries regarding address changes and website data.

Nadja noted that Montenegro still needs to pay its first membership dues.

9. UIS Relationship with International Organizations: ISC, SCGES (N. ZUPAN HAJNA, J. MATTES)

Johannes reported attending the annual SCGES meeting with Nathalia, noting plans for a directory of projects promoting gender equality.

Nadja and Johannes also attended an ISC Geounions meeting, where plans for the next ISC conference in Beijing in October 2026 were discussed.

10. Attendance of future speleology events

- a) UIS Biology Commission Conference, beginning of December (no date fixed, yet), online
- b) Middle East Speleology Symposium (MESS5), Notre Dame University in Louaize, Lebanon, 15/17 April 2026
- c) Hypogea 2026, Tbilisi, Georgia, 22–26 September 2026.

Mario is organizing Hypogea 2026.

Mladen will attend MESS5 in Lebanon.

Nadja: noted that the International Karst School in Postojna may focus on CO₂ in karst.

Marc: mentioned an event in Vietnam in December.

George: reported the Geological Society of America Convention in San Antonio, Texas, will include a special session honoring past UIS Vice President Dr. Alexander KLIMCHOUK.

11. Any other business

George: requested adding an invited Bureau member from the next UIS Congress organizers (Romania).

Johannes confirmed that Bogdan will be invited and that correspondence with Romanian delegates has already taken place.

12. Venue and date of the next UIS Bureau Meeting

Next meeting: 26 February, same time (16:00 CET / 11:00 PR time).

13. Closing (Z. MOTYČKA)

Zdeněk thanked all participants and closed the meeting.

MINUTES OF THE UIS BUREAU MEETINGS

Allan CALUX (Brazil)
Adjunct Secretary, ascalux@gmail.com

Online (Zoom), 26 February 2026, 16:00–19:00 (Central European Time)

Minutes:

Allan CALUX; Revised by Johannes MATTES

Attendance

President	Zdeněk MOTYČKA
Vice-President of Operations	Mladen GARAŠIĆ
Secretary General	Johannes MATTES
Treasurer	Nadja ZUPAN HAJNA
	Ángel A. ACOSTA-COLÓN
	José María CALAFORRA
	Allan Silas CALUX
Adjunct Secretaries	John GUNN
	Val HILDRETH-WERKER
	Marc MENTENS
	Nathalia Vanessa UASAPUD ENRÍQUEZ
Past Presidents	Andy EAVIS
	George VENI
Guests/Invited Adjunct Secretary	Bogdan ONAC

AGENDA

1. Opening Session

President welcoming introduction / Approval of Agenda (Z. MOTYČKA)

Zdeněk opened the meeting by thanking everyone for their presence, particularly Bogdan ONAC, who would participate in the meeting by providing new information regarding the preparation for the upcoming International Congress of Speleology. He also informed that the meeting agenda was extensive and that, should it not be possible to address all items within two or three hours, some topics would need to be postponed until the next meeting. He then handed the floor over to Johannes MATTES to serve as chair for the session.

Before beginning with the agenda, Johannes clarified that it is customary for all UIS Bureaus to include a member from the country responsible for organizing the next congress. Since there is currently no Romanian member on the board, the Bureau has the prerogative to extend an invitation. He noted that Zdeněk had already consulted Bogdan beforehand regarding his availability, and he had responded positively. Thus, with no further questions to be resolved, Johannes proceeded with the meeting

agenda, the summary of which follows below.

2. Information about 20th ICS and election of Invited Bureau Member

(B. ONAC)

Bogdan began his presentation by expressing gratitude for the invitation to join the UIS Bureau, noting that, on this occasion, due to professional commitments, he would not be able to attend the entire meeting. Subsequently, the presentation on the current status of the organization of the 20th ICS, which will be held in Romania in 2029, commenced. The main points of emphasis were:

- The official event website has already been created and is gradually being updated;
- The core of the organizing committee has already been formed. All key positions have been filled, except for the Logistics Coordinator, who should be someone affiliated with the School of Business and Management. This position will likely be decided at the end of April, following a series of meetings that Bogdan will personally conduct in Cluj;
- Invitations to sponsors have already been sent;
- A call for volunteer participation was made, and over 250 people have registered, most of them from outside Romania;
- Templates for excursions and field trips have been created and are currently being organized by the Romanian Speleology Federation. Bogdan will hold a meeting with federation representatives to ensure that everyone has understood the template, in order to standardize the description of all field trips;
- In May of the current year, meetings are scheduled in Cluj with the President, the Vice-President, and the Head of Research of the University that will host the 20th ICS;
- The organizing committee is working to ensure that participants incur the lowest possible costs, particularly regarding accommodation. The organization is seeking to make student housing available, which offers 800 places at a very low cost; meetings are planned with the organizing committee, especially with Joanna, Emilia, and Tudor, and a trip is being planned to Cluj and the surrounding region. He expects to bring more news soon.

Subsequently, certain members of the Bureau raised questions and offered remarks, which are briefly presented below:

Zdeněk thanked Bogdan Onac for his presentation and praised the progress of the organization, stating that he was genuinely surprised by how much had been accomplished in such a short time. He informed that the Bureau should visit Cluj approximately in the summer of next year, and inquired whether it would be possible to arrange this meeting so that the Bureau could

become acquainted with the event's venue. It was answered that yes, there would be no problem, provided the visit took place between May and mid-July 2027.

Nadja asked whether the event would receive any kind of support from the Speleological Institute in Cluj, and Bogdan clarified that it would, as there is already a letter of support from the institution. However, he noted that, unfortunately, none of its members had volunteered to join the organizing committee, and therefore the institute's role in the congress organization was still not entirely clear.

After clarifying the doubts, Johannes explained to Bogdan that, when inviting someone from the host country to join the UIS Bureau, the expectation is that this person will serve as a liaison between the Congress Organizing Committee and the UIS Bureau; that is their main function. Bogdan then expressed his willingness to participate in Bureau meetings, and stated that, should he exceptionally be unable to attend, Tudor could represent him, as the representative of the Romanian Federation of Speleology, if it is of interest to the Bureau. Accordingly, Johannes opened the vote, and Bogdan was unanimously approved as Invited Adjunct Secretary.

DECISION 1: Bogdan ONAC was unanimously approved as Invited Adjunct Secretary.

At this point, Andy shared his perspective on Bogdan's participation in the Bureau, which, in his view, would be simply to maintain contact, without any other demands being made of him. He added that, even if Bogdan could not attend periodic meetings, as long as he kept the Bureau informed about the progress of the ICS, that would be perfectly acceptable.

3. Review Action Items of previous UIS Bureau Meeting

a) Vote on UIS Engagement in United Nations (Z. MOTYČKA)

As a follow-up to the discussion at the last meeting.

This item had already been discussed in the previous ordinary meeting, held on November 18, 2025; however, no resolution was reached. In order to provide further information for decision-making, Zdeněk and George sent letters to the Bureau members presenting arguments regarding the advantages and disadvantages of UIS's involvement in ECOSOC, which were duly assessed beforehand.

In this context, Johannes initiated the voting, with the following result:

- Votes in favor: 5
- Votes against: 4
- Abstentions: 2
- Absent voters: 1 (Mario Parise)

Given this outcome, it was approved by a simple majority that UIS will submit an application for participation in ECOSOC, with the documentation being prepared by George, pending only a few additional pieces of information to be obtained from Nadja. It was decided not to determine the representatives at this time, although Nadja expressed support for John, a member of the Karst Protection Commission, and George and Val volunteered.

DECISION 2: The application for UIS participation in ECOSOC was approved by simple majority.

ACTION 1: George will prepare the documentation, gathering the missing information that will be sent by Nadja and Allan, and will make the submission.

- b) **UIS website:** 1) updated list of UIS Commissions and 2) 60 years of UIS Book by José Ayrton (M. GARAŠIĆ)
- Continuing with the agenda, Johannes initiated discussions regarding the UIS website, noting that the listing of commission representatives was not updated since the last ICS. Mladen clarified that Jasmina, who is responsible for this task, had made several other updates to the website, such as uploading the complete version of the UIS 60th Anniversary Commemorative Book, the UIS Bulletin, among others, but had not updated the commission page. Johannes explained that he had been receiving recurring complaints from members and believed that eight months after the congress should be sufficient time for this update to have been completed. On this matter, Zdeněk remarked that the delay might be due to Jasmina comparing the lists, whereas she actually needed to completely replace the names using the document Mario had prepared and sent in December 2025. Everyone emphasized the importance of completing this update as soon as possible, and Mladen undertook to reinforce this request with Jasmina.

Finally, John requested clarification about UIS's preference regarding the hosting of commission websites – whether it would be better for them to be independent or hosted on the UIS website. Zdeněk replied to John that because of the present situation with managing of UIS website, he personally encourage UIS Commissions to maintain their own pages hosted on their own domains.

DECISION 3: Members of the Bureau expressed the importance of website updates being made as soon as possible.

ACTION 2: Mladen will contact Jasmina reinforcing the updates, particularly the updated list of UIS Commissions and Mario should inform the committees about this decision.

c) UIS Bulletin (Z. MOTYČKA)

Zdeněk initiated this topic by stating that the latest edition of the UIS Bulletin had an unusual length due to the extensive congress report and the activities of the commissions published therein. This resulted in an excessive workload, which should not be repeated in future editions. He remarked that, in the near future, certain changes must be made regarding the management of the bulletin, particularly because submissions do not adhere to the journal's guidelines, and even the commissions fail to do so correctly. The same applies to the low-quality photographs; another issue concerns links, which sometimes work and sometimes do not. John, George, Ángel, and Nadja commented that articles not following the correct format should not be accepted, that the guidelines need to be rewritten, and that an Editorial Committee must be established.

In summary, it was concluded that the UIS bulletin is facing challenges due to a lack of adherence to submission guidelines, resulting in difficulties for the editor. The current guidelines are not user-friendly, leading to issues with formatting, image quality, and broken links. To address these problems, a simplified style guide with clear instructions, including word limits and preferred file formats, is needed. The bulletin should include simple guidelines for authors, specifying the required format for submissions. The possibility of increasing the number of bulletin issues per year is being considered, with a decision to be made based on the workload and the bulletin's length. An editorial board is proposed to assist with the bulletin's production, with volunteers being sought from the Bureau.

Finally, Zdeněk informed that the deadline for the next volume will be on April 30.

ACTION 3: The UIS President together with the Editor of UIS Bulletin will prepare suggestions for the composition of the Editorial Board which should be composed of volunteers from the Bureau itself.

d) Official Requests by UIS Commissions (M. PARISE)

Due to Mario's absence, Johannes gave a brief presentation on the status of the UIS committee requests, of which the following stood out:

- Luciano's Culture and History Commission request is still open, and Mario has promised to respond to it soon;
- The French Federation request regarding Wikicaves was sent in mid-October, and Mario has not received a response from Bernard CHIROL despite sending two letters.
- Philippe HÄUSELMANN'S request for the Sub-Commission on Survey and Mapping website to be hosted on the UIS website has not been resolved. This item prompted various discussions regarding who has access to the UIS website's username and password, where this hosting would actually be located, among other matters. Mladen was assigned the responsibility of resolving all these issues in coordination with Jasmina and Rodrigo SEVERO.

DECISION 4: Due to the various challenges reported in relation to the UIS website, it is necessary to have greater control over hosting, user accounts and passwords.

ACTION 4: Mladen will contact Jasmina and Rodrigo Severo to clarify operational issues related to the UIS website.

4. Review of Finances

(N. ZUPAN HAJNA)

Nadja presented a detailed financial report. In summary, the points presented were:

- Financial Status Update: The balance on the UUS account is 39,353.74 euros and 50,749.47 US dollars as of the end of January.
- Membership Fee Invoices and Updates: Invoices for membership fees have been sent to 48 member countries. Kyrgyzstan and Mongolia are no longer members. Serbia's membership fee has increased to 120 euros.
- Pending Approvals: Nadja requests approval for the continued

payment exemption for Lebanon, Ukraine, and Venezuela due to their challenging circumstances. Confirmation is also needed on Colombia's current payment status.

- Colombia Membership Fee: Colombia should pay 50% of the fee, which is 30 euros.
- Payment Exemption for Certain Countries: Request for approval to exempt Lebanon, Ukraine, and Venezuela from payment until the situation improves.
- Duration of Payment Exemption: The exemption will be in place for three years until the next Congress, unless circumstances change.
- Financial Status of Member Countries: Bulgaria and Lithuania have outstanding payments for two years. Greece and Brazil have underpaid in previous years.
- Debt Collection Efforts: Invoices for outstanding dues have been sent to Greece, Brazil, and Montenegro.

5. UIS Bureau internal functioning

a) Decisions of the Executive Committee since last Bureau Meeting (J. MATTES)

Johannes began this discussion by stating that the number of requests decreased during the month of December, but that several of them remain open. He mentioned that it has been necessary to draft and send numerous emails and emphasized the need for the individuals responsible for the actions to actually carry them out, so that the General Secretariat does not become overburdened. He also requested to be copied on all official requests so that he can perform the appropriate follow-up.

Then, Johannes reported that four patronage requests were approved by the Executive Committee, namely:

- "60th Speleological Symposium" in Poland (Cracow, 16 to 18 October 2026)
- Slovak Cave Administration: "Research, Utilization and Protection of Caves. 16th Scientific Conference" (Liptovský Mikuláš, 6 to 8 October 2026)
- Tetide APS: Hidden Bussento Expedition (Italy, 26 July to 9 August 2026)
- Man and Karst 2026 (Syracuse, 13–19 September 2026)

b) Proposal by the Working Group on UIS Neutrality, headed by F. Nader, St. Näff, and Ph. Häuselmann (J. MATTES, Z. MOTYČKA)

Proposed amendment to UIS statutes:

The UIS maintains neutrality in all matters not concerning its purpose. It shall not engage in, endorse, or support any political or religious activities, organizations, or other systems of thought.

Regarding this topic, Zdeněk designed some considerations, among them: 1) that the modification needs to be approved by a General Assembly; 2) that it needs to be adjusted with the law of Slovenia (once it will be registered there).

Nadja suggested the following text: *The UIS maintains institutional neutrality in matters not related to its scientific and speleological purpose and shall not engage in or support party-political or religious activities or organizations.*

Johannes expressed his concern with the use of the expression "thought system", to which George explained that the discussion related to the thought system concerns non-political but important agendas, such as gender prejudice, and other things. The matter has been postponed to the next meeting.

6. IDCK Celebrations: Plans and Timeline for the Postojna Conference

(Nadja ZUPAN HAJNA, Zdeněk MOTYČKA, Mario PARISE, Val HILDRETH-WERKER, John GUNN, and Andy EAVIS)

Nadja made a brief presentation on the progress of the organization of the celebration, of which the following points stand out:

- Preparations are underway for the first International Day of Caves and Karst celebration in Postojna, Slovenia, scheduled for September. The event will be co-organized with the Karst Research Institute and local community, with financial support from the Slovenian National Commission for UNESCO and other sources. The program includes a conference on sustainable cave and karst management, excursions, and a celebration in Postojna Cave, with keynote speakers and a registration fee of 100 euros.
- The International Day of Caves and Karst will be celebrated in Postojna from September 12th to 14th. The event will include a ceremony in the Postojna cave, with speeches from the Slovenian president and other dignitaries, followed by excursions to nearby caves. The organizing committee is tasked with finalizing the program, designing promotional materials, and preparing for the live streaming of the event.
- The UIS meeting is scheduled for September 9th, followed by a conference on September 11th and 12th. Accommodation will be provided in apartments near the conference venue, with a reception planned at Postojna Cave. The committee will meet in March to finalize arrangements, including a call for abstracts and a celebration with a focus on attracting younger generations through social media.
- The celebration of the **International Day of Cave and Karst** will be held in Postojna, Slovenia, with invitations extended to various dignitaries and organizations. The budget for the event is a concern, with potential sponsorship from the Karst Research Institute, Slovenian UNESCO Commission, and Postojna Cave. The organizing committee will discuss the event details, including the cultural program and potential excursion on September 10th.

The following suggestions were also made:

- That each member of the Bureau recorded a video with a brief speech;
- Production of a film about UIS and IYCK
- That advertisements are made on UIS social media;
- That the event is broadcast live on YouTube;
- That the countries that are organizing their own event send reports to the UIS;
- That an IDCK flag is elaborated.

ACTION 5: A meeting will be held in April, led by Nadja, with a small commission to deliberate on the necessary actions.

7. Speleological Event Support

(M. PARISE)

Decision from last meeting: Call for Speleological Event Support in May 2026 (EUR 3,000)

In the absence of Mario, Johannes reported that a call for speleological event support will be opened in March with a deadline, probably in late May, offering 3,000 euros. Mario will coordinate with Allan, Mark, Zdeněk, and Johannes regarding organization and text.

ACTION 6: Mario will finalize the call document for event support, which will be distributed by Johannes.

8. UIS Relationships with Regional Organization and Countries (J. MATTES)

Johannes reported that there are not many updates to be made regarding the relationship between the UIS and the national organizations of the member countries. There were some requests for address update and France's request on Wikicaves. With no more updates, we moved on to the next topic.

9. UIS Relationships with International Organizations: ISC, SCGES (N. ZUPAN HAJNA, J. MATTES)

It was just reported that there was an online meeting with the International Science Council, and the International Standing Committee for Gender Equality in Science will meet in April.

10. Attendance on future speleology events

The following members of the Bureau, commissions or past Presidents of the UIS will participate in the events listed below:

- a) Middle East Speleology Symposium (MESS5), Notre Dame University in Louaize, Lebanon, 15/17 April 2026
Mladen Garašić and maybe Johannes Mattes.
- b) 33rd International Karst School "Classical Karst", Postojna, 15–20 June 2026
Allan Calux.
- c) First official celebration of the International Day of Caves and Karst (IDCK), Postojna, Slovenia, 10–13 September 2026
Allan Calux, Andy Eavis, Ángel A. Acosta-Colon, Johannes Mattes, John Gunn, José Ayrton Labagalini, Marc Mentens, Mario Parise, Paul Williams, Paolo Forti, Pavel Bosak, and Zdeněk Motyčka.
- d) Man and Karst 2026, Syracuse, 13/19 September 2026
No one for now.
- e) Hypogea 2026, Tbilisi, Georgia, 22/26 September 2026
Mario Parise and maybe Zdeněk Motyčka.
- f) Research, Utilization and Protection of Caves. 16th Scientific Conference, Liptovský Mikuláš, 6/8 October 2026
Zdeněk Motyčka and Pavel Bosák
- g) 60th Speleological Symposium, Cracow, Poland 16/18 October 2026
Maybe Zdeněk Motyčka.
- h) NSS Convention, July
George Veni.

11. Any other business

It was informed that there is a new email for social media, namely: uisspeleo.media@gmail.com and that there is a meeting of the IDCK Committee scheduled for April 10, at 2 pm.

12. Date of the next (online) UIS Bureau Meeting

The date of the next Bureau meeting has been set for 14th May, 16 h (Central European Time).

13. Closing (Z. MOTYČKA)

UIS President Zdeněk Motyčka ended the meeting thanking everyone for their participation and closed the meeting.



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