

Diving accident at the Huŕiaca vyveraŕka (Zugó) site in the Slovak Karst

I originally thought that I would not comment on this accident, but several people repeatedly asked me to, so I overcame my innate laziness or rather my general reluctance to comment on this matter and tried to write a few lines. The final impulse was ultimately a request from Jirka Hovorka, whom I greatly respect and who has been passing on his experience to cave diving enthusiasts for many years and who tries above all to promote maximum safety. This, of course, includes prevention and detailed analyses of accidents that have occurred in the past. After all, this area is devoted to quite a lot of space in the courses organized by the ŕSS. So here is a description of the events as I saw them.

On Wednesday, August 13, 2008, our ZO 6-25, together with other clubs, planned to leave for a traditional expedition to Montenegro, the purpose of which was to include a diving exploration of the Jurisko Vreljo site. Thanks to this, I had packed all my speleo-diving equipment in my car the day before. The departure was planned for the afternoon, and we all worked intensively in the morning. Since I had been abroad the previous week and was preparing for vacation, I had a relatively busy work schedule. During a teleconference with foreign partners, my mobile phone rang several times. First from Helena Sedláková, then from Vít Kaman, and finally from Roman Šebela, the head of the Speleological Rescue Service (SZS). Since it was a really important meeting, I did not answer the calls. Roman finally thought of sending me an SMS saying that there had been a diving accident in Slovakia and that something needed to be done. I immediately cut off the teleconference and started investigating what had happened.

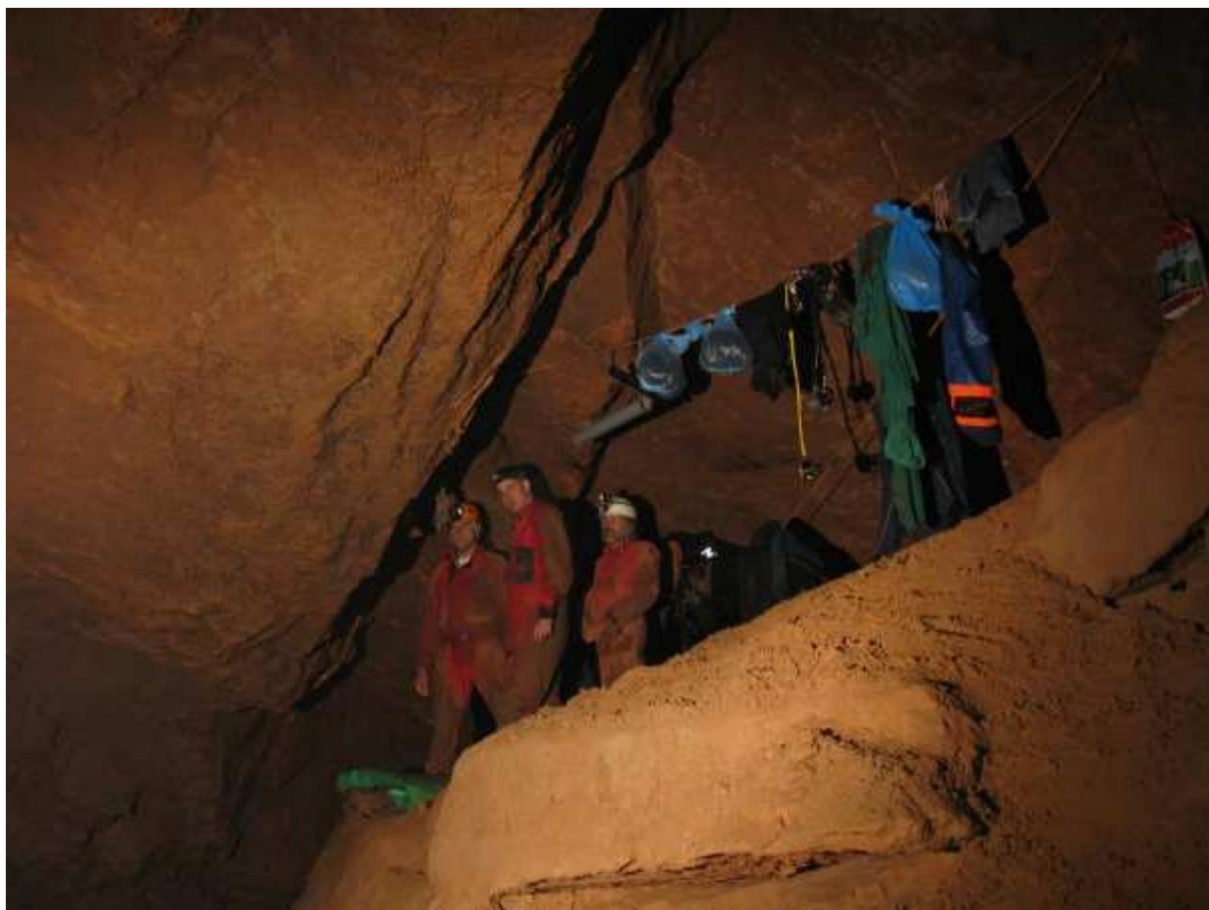
From the phone call with Helena Sedláková, a direct participant in the event at Zugó, I found out that Jiŕí Maté and Aleš Procháška have been missing for a long time after diving into the siphon at the end of the Huŕiaca vyveraŕka cave. Helena asks me to come as soon as possible and dive with her for the boys. I later learned that she first contacted Radek Husák with a request to borrow 2 x 6 l bottles.

I talk her out of the guerrilla action and insist on launching a major rescue operation. I take responsibility for the diving part and ask Helena to organize the "dry" part in cooperation with Slovak cavers.

A carousel of phone calls begins. After an agreement with Dan Hutŕan (a very experienced cave diver from Prague), we contact Michal Megela from Rimavská Sobota, a Slovak cave diver who is able to arrive at the accident site first. We agree that I will set off for Slovakia first and Dano and other divers will leave later. From the SZS warehouse, Roman Šebela brings me 2 sets of 2 x 7 l modified to so-called hip flasks, which we purchased as permanent equipment for the SZS warehouse for the purposes of rescue operations. After an agreement with the other members of the expedition, we agree that the originally planned crew of my car will set off with me as ground support. We manage to set off from Brno around 3:00 p.m. I am on the phone almost continuously the entire way. The Slovak side refuses to officially ask the Czech side for help.

Due to this, it is not possible to officially involve the SZS in the event and obtain the support of the integrated rescue system. The firefighters are ready to provide all assistance in the form of support for the entire event. In the early evening, disinformation even comes from the Ministry of the Interior that both divers have already been rescued.

Michal Megela has arrived at the site in the meantime. He claims that someone decided to wait for the siphon to clear and only then dive. I talk him out of this, in my opinion, absurd idea (visibility will never be good in a siphon with such narrow passages anyway), and send him to the cave. We arrive at the site at 9:30 PM. The passage through the meadow is blocked by journalist cars (Slovak television is already in full formation here). Next time, it would be like immediately closing the access roads, similar to the rescue operation at Bŕŕí skála, and ensuring trouble-free access for all those in need.



Tetínský dóm, place where divers change clothes, photo František Musil

The Hujiaca vyveračka cave is located below the Plešivecká plain near the village of Kunová Teplice. Petr Kadlec from the Tetín Group takes care of us on site and briefly introduces us to the situation. He lists what central units and compressors he is able to provide, but that is not important at this moment. A doctor from the Mountain Rescue Service is also on site, with whom I consult the hypothetical state of both missing persons, if they are alive in the dry part behind the siphon. We agree that the biggest problem will probably be hypothermia and that it will probably not be possible to transport them immediately underwater. Based on this information, we put together a waterproof barrel with makeshift bivouac equipment behind the siphon. It should be noted that we put together its contents from our personal belongings. All the facilities on site are zero! There is no lighting or technical equipment provided here, and what is worst of all, there are no cavers to help us carry our things to the siphon. How providential it was to take the other participants of our expedition with us (two other cars are already on the way and another team of divers is leaving from Prague and Brno).

The official leader of the rescue operation is Ivan Raýko from the Mountain Service. I report our arrival to him, but his reaction is somewhat surprising. He says that they have not yet decided on diving and that they are considering using divers from the Mountain Service from Poland. I convince him of the need for a quick intervention and prepare to enter the cave. Petr Celý and Janek Gajdošík from our group help me with the transport, and we are accompanied by the well-known Slovak caver Jaroslav Stankovič. We reach the Tetín Dome relatively quickly, where we meet Miš. Helena is waiting by the siphon.

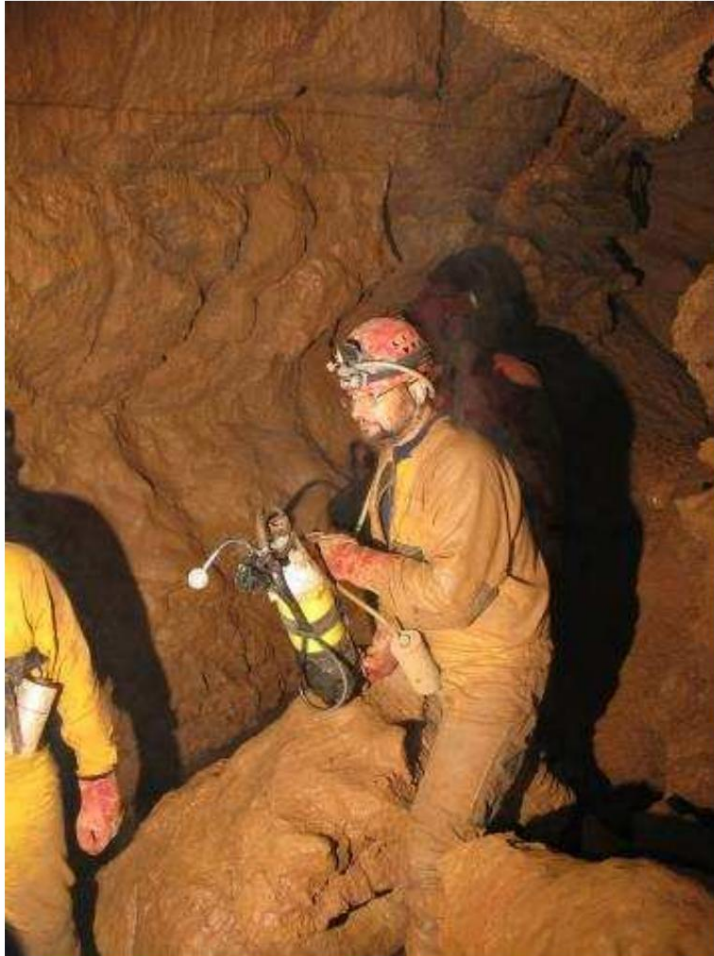
Miš did not manage to get any further. He explains the situation in the siphon to me. After the Standa Bílek breakthrough 15 years ago, the then passable path was blocked due to attempts to blow up the siphon. A team of divers from the Tetín Group allegedly found a new path underwater in the right part of the siphon after manipulating limestone blocks directly in the siphon. Miš's description does not correspond to the description from Helena Sedláková.

There is confusion in the guide lines in the siphon. Supposedly for "pious" reasons, an old line belonging to Standa Bílek has been left here, which leads to an impassable profile. Miš and I agree that we will go into the siphon together. I will try to penetrate both straits, he will wait for me in front of the first strait. Visibility is

about 0.5 – 1 m, but it drops very quickly, especially in the straits. In front of the first strait, there is apparently a spare bottle with an automatic regulator lying loose. I manage to swim through the first strait without any problems. Behind it hangs another bottle with an automatic regulator and two lines lead from there, both broken. Since this does not correspond at all
Based on Helen's description, I decide to surface and discuss the whole thing again.

Helena had meanwhile climbed to the surface. The Slovak team, consisting mainly of firefighters, had meanwhile managed to stretch the field telephone all the way to the siphon and at the same time completely smoke out the areas in front of the siphon.

I call Helena and discuss the underwater situation with her. After she advises me to continue searching by feeling for a line about a meter down the left, I finally decide to use my own intuition. We agree that for safety reasons it will be necessary to remove all the guide lines from the siphon and stretch a new one.



Transporting bottles to the siphon, photo František Musil

We return underwater. Gradually, I hand Misha a reserve tank and both lines rolled up across the first strait. Visibility drops to zero in the meantime. I tie up my own drum and look for a continuation in the crack on the bottom. Objectively, I must say that if I had come across a similar place during an exploration dive, I probably wouldn't have pushed forward. Feet first, after a few simple exercises, I manage to fall through the strait into an already larger corridor where I can swim comfortably. After about 2 meters, I come across a guide line. I swim along it, to the free surface in the dome behind the siphon. I try to contact the missing divers by calling loudly. I succeed in this and in a while I am with them. They are bivouacing in the dry part of the dome. They look like they are in exceptionally good physical condition. They take turns sleeping, doing exercises and eating sweets at regular intervals. I find out that they don't have enough air to return, according to their message they are able to return via the siphon. We agree to wait for the transport of replacement cylinders.

On the way back in the siphon, I tidy up the lines so that only one leads out. In the second strait, I get stuck and struggle for almost five minutes to manage to pull myself through. It's really tight. After surfacing, I inform the rest of the team about the situation behind the siphon. I contact Dan Hutýan by phone, who has arrived in the meantime together with Radek Husák, Martin Honeš and Míra Manhart (all experienced cave divers). We agree that Dano and Radek will go into the water, bring the guys spare cylinders and accompany them back in the siphon. The transport of the diving equipment is mostly provided by the rest of the participants of the Medýza expedition, who have arrived in the meantime. Photo documentation (František Musil) and video documentation (Roman Grošek) are taken of the event.



Pre-dive briefing by Radka and Dan, photo František Musil

In Tetínský dóm, I explain the underwater situation to Radek and Dan. In the end, we agree that it would be best if each of them accompanied one of the boys back. In the meantime, our team sets off on a journey to the surface, where we arrive around 6 a.m. It is lightly raining and there is still no facility for drying overalls. The situation is saved by the Samaritans, who have a miniature shelter where they serve hot drinks, soup and bread. We sit and wait for news from the cave. Journalists and local and national politicians, including the Minister of the Interior, Robert Kališák, are crowding around.

Meanwhile, Dano and Radek easily overcome the siphon, hanging from the bottles. The boys quickly jump into the water and set off on their way back. Radek goes first, together with Jirka, and they overcome the straits without any problems.

Aleš fights in the strait and gives Dan the signal to return to the dome. However, the experienced Dano uncompromisingly insists on moving out and in the end the two of them overcome the strait. In the Tetín dome, the boys are given lessons and instructions for the first time during the entire duration of the event. The transport team brings the first part of the equipment out of the cave.

Meanwhile, cheers erupt on the surface and celebrations of the successful rescue operation begin. Beer, champagne and plum brandy are flowing. Eager journalists are running around everywhere, trying to lure interviews. The key ones are then given to them by the rescuers themselves after climbing out of the cave. Both are in good physical and mental condition. In

Martin Honeš and Míra Manhart head out to the cave in the afternoon to transport the remaining diving equipment left behind from behind the siphon. By evening, everything is out.

So what remains is an attempt to reconstruct what actually happened during the diving event. The actual penetration of the siphon was preceded by several dives during which the divers moved rock blocks to clear the path through the siphon. According to Jaroslav Stankovič, the divers showed an exaggeratedly fierce effort to re-cross the siphon. Two guide lines were installed in the siphon, plus Standa Bílek's old line was left there. During her own siphon expedition, her goal was to document the dome behind the siphon. This went according to plan. On the return trip, Jiří Maté went first, as he had problems climbing through the strait. Aleš

Procházka tried to "help" him by cutting the guide line, because he thought that Jiří was tangled in it. Jiří eventually crossed the strait, but Aleš did not succeed. Jiří waited for Aleš after surfacing, but he did not return. He therefore concluded that Aleš had returned behind the siphon and was waiting for dry land. After an agreement with the others, they decided to return to the siphon after a few hours and, after the water had cleared, Jiří was supposed to make another dive to return for Aleš. This actually happened. However, Jiří did not tie up the broken guide line while crossing the strait (allegedly there was another problem here), but he still got to the other side of the siphon. Here, together with Aleš, who was fortunately there, they decided to wait for the rescuers to arrive.



Waiting on the surface, photo František Musil

As I mentioned at the beginning of this article, accidents are important for us to learn from.

I have tried to compile a list of points where there has been a serious failure or violation of the principles of safe cave diving (not to mention the CSS safety directive):

- None of the divers had the appropriate qualifications or experience for diving in such complicated conditions. • There was no documented plan for the diving event, and there was no precise description of the flooded areas. This made it much more difficult for rescue divers to find their way in low visibility.

- The rule of a single guide line was not observed. Leaving old and damaged guide lines and installing new ones at the same time is extremely dangerous, especially in locations with a risk of reduced visibility (e.g. Teplica 1994). There are no religious or historical reasons here. For the sake of completeness, the installation of fixed guide lines is reserved according to the safety directive only for those who have the qualification of Experienced Cave Diver.
- During the resolution of the crisis situation, the guide line was cut without ensuring its preliminary closure.
This is a cardinal mistake.
- The diver who managed to get back across the strait was supposed to return for his partner immediately. The reasoning that he was okay behind the siphon might have been wrong.
- A major rescue operation should have been called immediately after the incident. The victim's colleagues were risking their friend's life with their decision. The first call for a rescue operation came more than 12 hours after the problem was discovered!
- Waiting for the siphon to clear (in specific conditions) and postponing the rescue operation was not place.
- When the second diver re-immersed, he did not ensure the recovery of the guide line in the siphon.
He was actually diving without a guide line. This is another inexcusable mistake. Furthermore, there was a complete lack of a scenario in case this diver did not surface either.
- The rescue operation was called in a very non-standard manner. As a result, the necessary transport and facilities were not provided, and neither the members of the SZS nor other participants were insured in the event of an accident. • The location was not secured against
obstruction by unnecessary persons.

The whole event was subsequently widely reported in the media, which I do not want to comment on, nor on the organization of the rescue operation on the Slovak side. However, I would like to take this opportunity to thank everyone who participated in the rescue operation voluntarily, without any claim to any honorarium or compensation for lost time. Without them, Jiří and Aleš would never have reached the surface.

In Brno, January 9, 2008

Jan Sirotek

Chairman of the Czechoslovak Cave Diving Commission