

# KUČKA KORITA EXPEDITION 2025

Abbe Hamilton, Katarina Kosič Ficco, Mike Ficco

From Kaženik, a mountain in a dry, remote corner of Montenegro, you can see at once the Albanian Alps to the east and the distant Skadar Lake to the south. Scarce water resurges more than 1000 meters below in two rugged canyons, one more than 10 kilometers away. The mountain is riddled with pits – there must be thousands. It's a daunting environment for a cave explorer. In a sea of leads, each a beckoning surface pit, how could you ever meaningfully explore this environment?

The 2025 Kučka Korita expedition was the latest attempt, when 12 of us (Abbe Hamilton, Riley Drake, Alex Lambie, Morgan Ingalls, John Dunham, Philip Schuchardt, Tommy Cleckner, Dustin Kisner, Irina Tabarana, Mike Ficco, Katarina Kosič Ficco, and Grega Maffi) holed up for two weeks in the karst to follow the hottest leads and most pressing scientific questions left behind on the last expedition, in 2023. Our longest cave, Vručni Snovi (Fever Dreams Cave), did not yield in the direction we expected it to, but the karst continues to lead us on with paleo passages, mummies, staggering biodiversity, and ever-more exciting potential connections. To facilitate exploration and prolong our time underground by avoiding the exit time and a long hike to and from the cave, we established a camp in the cave to enable a much faster push to the leads.

The caves in Montenegro are part of the Dinaric Karst, which spans the east coast of the Adriatic Sea from southern Slovenia down to Northern Macedonia. Parts of this region have been thoroughly explored for hundreds of years, but karst in Montenegro and lands south have only been lightly explored. Inspired by the blank spot on the map, Mike and Katarina Kosič Ficco staged a brief reconnaissance trip in 2017 and found lots of potential for cave discoveries on the plateau of Kučka Korita, particularly on Kaženik, the highest local peak. It was not hard for them to transfer their interest in the area to their caving friends from the United States of America and Slovenia.

The intervening expeditions have been marked by systematic exploration of the karst. This meant that we arrived in 2025, the fifth expedition to the area, ready to explore a constellation of more than 100 unsurveyed cave locations, and a screaming hot lead at the bottom of the longest and most promising cave,

Vručni Snovi, discovered in 2021.

Our caving objectives were to:

- Permanently rig and establish a cave camp in Vručni Snovi, and continue its exploration, survey, and mapping.
- Continue surface evaluations to find new caves, and explore, survey, and map previously identified caves.
- Locate and collect a male specimen of a millipede species that was discovered in Vručni Snovi during the 2023 expedition.
- Sample groundwater and moon milk in the caves on the plateau and analyze the microbiology.
- Collect a sample from Maček Muri, a mummified cat found in Vručni Snovi in 2022 to determine its age through radiometric dating.

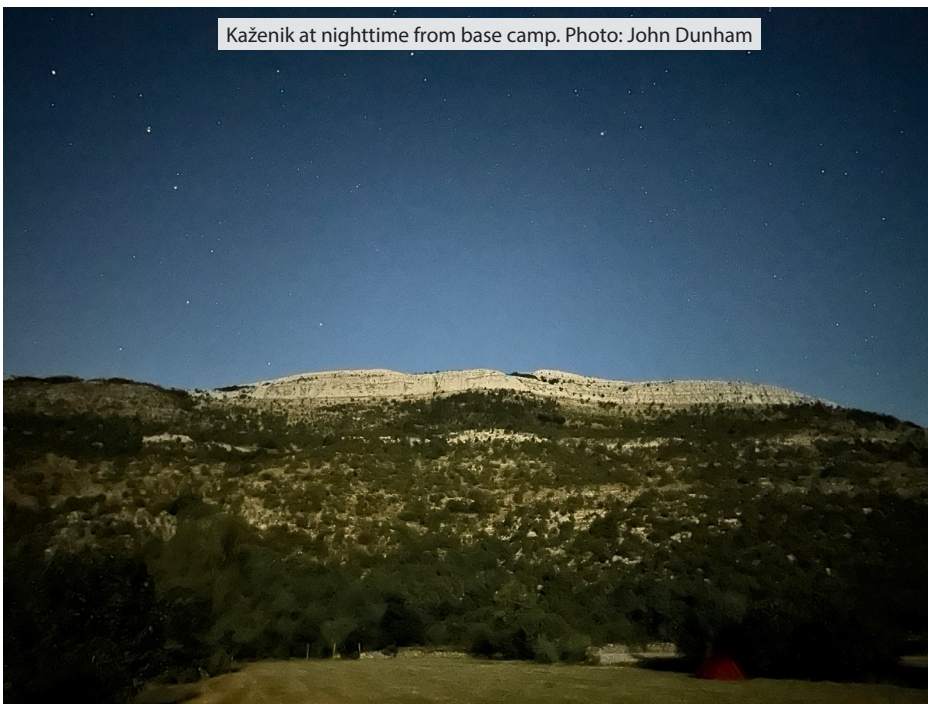
Although we spent more than a week as a line of ants, hauling ropes and supplies up the mountain and down into Vručni Snovi before we had a camp set up and everything rigged, it set us up for quick gains in future years. The entrance is a gorgeous, fluted 33-meter shaft which soon turns into a series of squeezes, meandering canyons and deep shafts. It is only after 250 meters of depth and 1 kilometer of travel that we reach our first water source in the 99 Luft Ballons canyon. Above the 99 Luft Ballons canyon an aid-climb lead led us to a yawning, rubble-floored room where we staged our four-person camp. The cave is a fascinating record of extinct waterways, each overlapping and intersecting in unpredictable ways. We had trouble working two explo-

ration teams simultaneously, as it was frequently hard to guarantee whether the lower team was safe from rockfall. Wind rips through most passages, and we wore puffy jackets under our coveralls when we were not climbing.

Lurking near the camp is Zverko, a ghastly, 200 meters deep, 75 meters wide shaft that was discovered in 2023. Its bottom is full of boulders worn smooth from crashing waterfalls. A large void halfway down on the far side of the drop was the priority lead of the expedition, in addition to several phreatic tubes leading out of the shaft at a higher elevation. Everyone regarded Zverko with some apprehension, even those who had seen it before and were eager to pursue the lead. The roaring air, the evidence of massive waterflow – it seemed like the most obvious way on. Therefore, the cavers were all eager to hit the aid-climb leads and find the way on. Alas, it was not to be: a team of four aid climbed into the majority of the phreatic tubes, and the massive void lead, but none of them went. Conspicuously absent was the strong wind that rips past you when standing at the top of Zverko. Therefore, in the next few years, the difficult task of exploring the vast Zverko shaft will continue with the pushing of both known leads as well as those that remain hidden from our current, limited perspective.

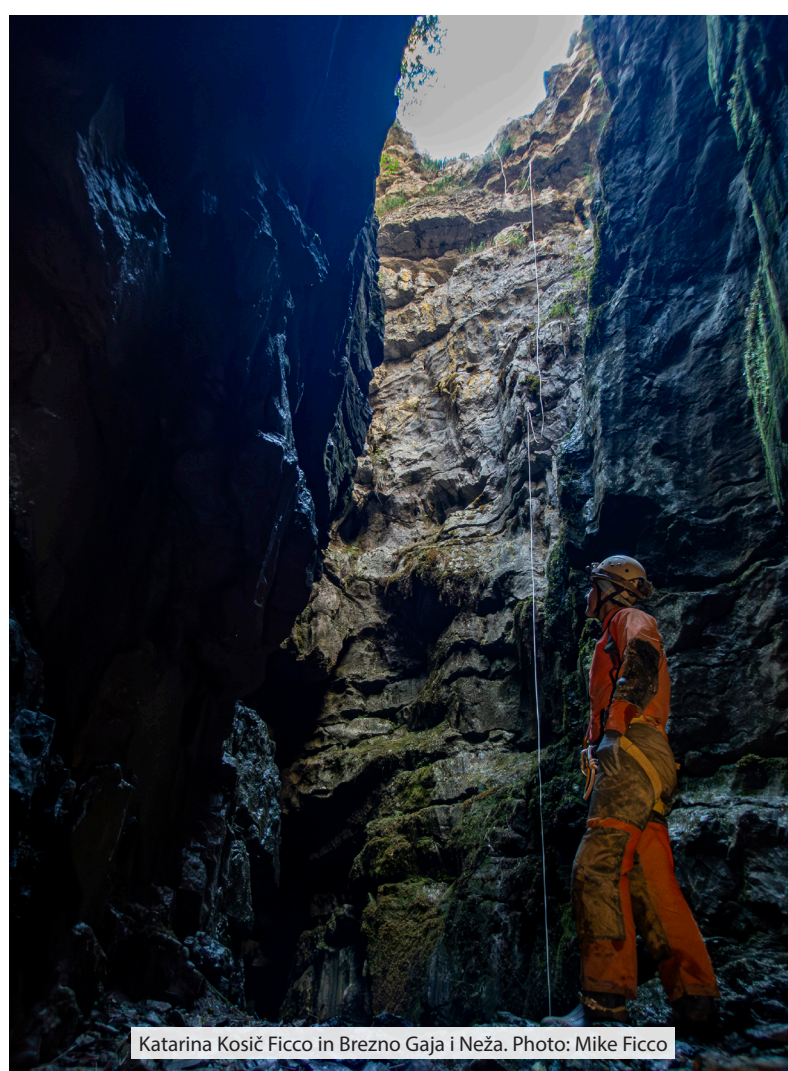
Interestingly, Mike and Katarina, in their hunt for an elusive millipede, found more virgin passage at the bottom of Two-Shot Wonder Shaft. Two-

Kaženik at nighttime from base camp. Photo: John Dunham





"The Opera House", a new discovery in Vručni Snovi. Photo: John Dunham



Katarina Kosič Ficco in Brezno Gaja i Neža. Photo: Mike Ficco



Mushrooms for dinner tonight! Photo: Philip Schuchardt



Filling water at the Korita spring. Photo: Abbe Hamilton



Shot Wonder is a 55 meter shaft located at the bottom of Zverko that leads to the current deepest point of the cave. Squeezing through a pile of massive boulders, a crawlway leads to a small 7m pitch that appears to continue. Additionally, a high lead, possibly an overflow tube, appears to continue at the bottom of Two-Shot Wonder. The white powder on the ceiling of the high lead hints of airflow and possible continuation. Happily, plenty of other leads went gangbusters in Vručični Snovi. We added 1,278 meters of new passage, for a total cave length of 2,781 meters. Our survey found us an alternate route to camp, and a horizontal paleo passage that jogs off uphill, perhaps towards a second entrance.

The microbiology work led by Riley Drake may help to explain some of the cave's other mysteries: She took water samples and extracted bacterial DNA from eight water sources in the cave and compared the similarity of microbial communities between sample sites. One

hope is that by comparing the microbial composition and community structure in each water source, we can predict the hydrologic relationships between water flows in a cave where their relationship and connectivity is not obvious. Her analysis is ongoing as of publication.

There is a surprising amount of macrofauna evidence in such a deep, dry cave. Mummified bats litter the camp room and passages throughout the cave – who knows how many centuries of natural deaths these specimens represent? We found scat, too large for a rat, at an improbable depth of 100 meters. The mummified cat, however, may be Vručični Snovi's greatest mystery. Named Maček Muri after the cat from a beloved Slovenian children's book, the sandy ball of skin and fur blends into its surroundings. The cat mummy was found on a previous expedition, curled up peacefully in an alcove between two drops along the route to camp. But how did it get there? Certainly not down the multiple free-hanging shafts we our-

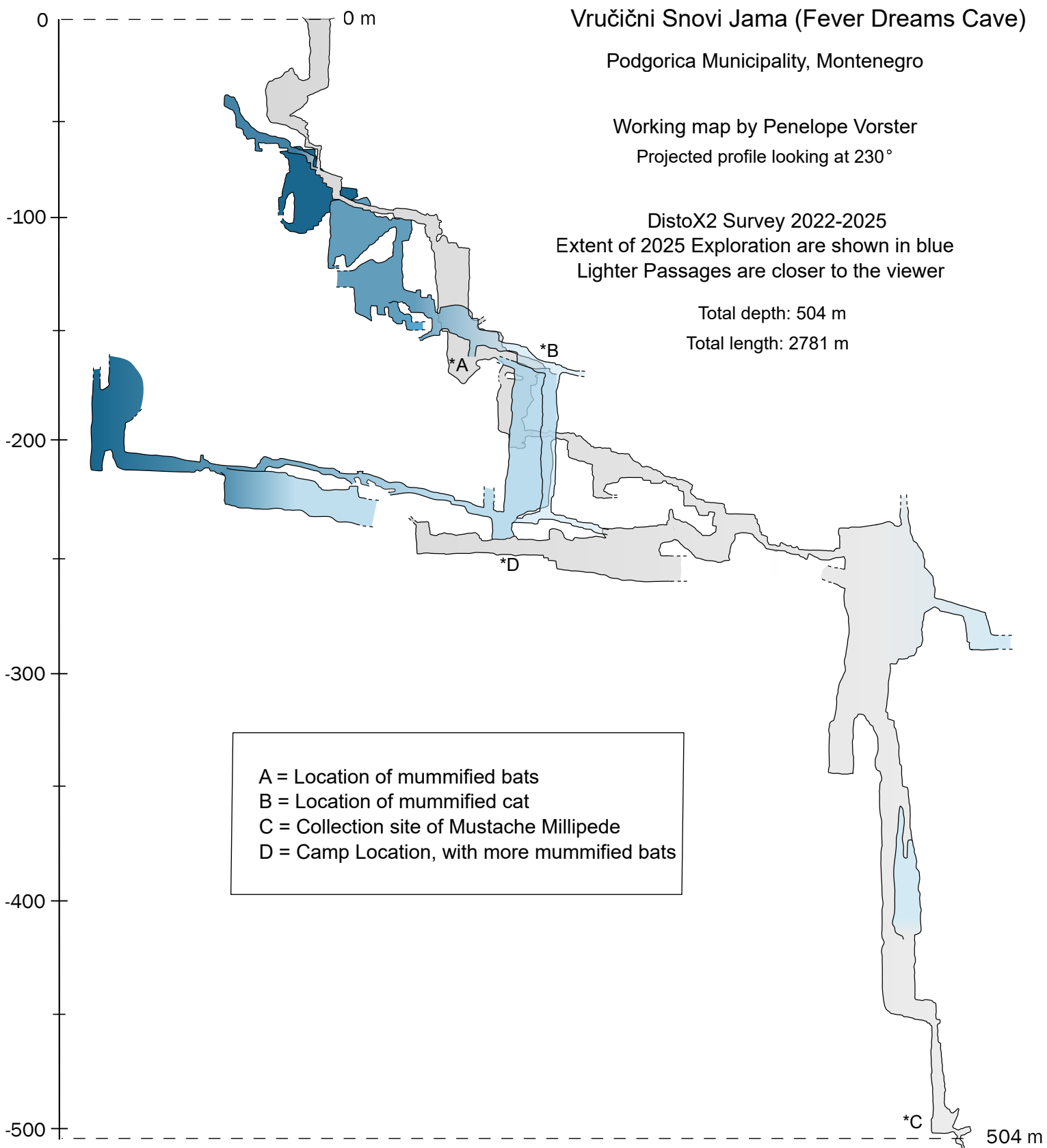
selves traversed. We were reluctant to disturb its slumber, but our curiosity to know its age prevailed. We removed a well-hidden paw for radiometric testing. The dating is still in process.

Although our custom bait of rotten chicken, bleu cheese, and decomposing logs failed to summon a male millipede at the bottom of Zverko, we were happy the bait stayed sealed until its intended deployment! Biological surveys, conducted by Katarina Kosič Ficco, did yield potentially one new species of beetle, and extended the range of another, which hadn't been documented since the 1970s.

Outside of Vručični Snovi, we surveyed six caves to completion, and left several others continuing. These amounted to about 1000 meters of total surveyed passage. So far, it seems as though dead-bottom 20-to-40-meter pits are the rule in this area, and going caves like Vručični Snovi are the exception. Each cave we mapped had exciting, unique features: hanging gardens of moss, natural bridges, and intriguing animal bones and insects – even a live owl! Many had high paleo leads that may be probed in future bolt climbs. One of the more interesting caves that was left continuing is Brezno Gaja i Neža. This 20-meter-diameter shaft initially appeared to end at the bottom of a 30-meter entrance pitch, however additional pushing revealed two separate going leads, both left at the top of undescended rope pitches with strong airflow.

Petzl Pulse removable bolts saved lots of time and money in our exploration. When every cave survey begins with setting a rope, it was invaluable to be able to quickly set and then later remove all hardware when we finished the survey. We also experimented with 3D mapping with LiDAR, and generated 3D landscapes of several sections of caves. The resulting fly-throughs serve as proof-of-concept for an engaging, immersive way to depict details of a passage that might not lend itself to photography or removal.

The weather cooperated: 2025 was an uncommonly dry year in Korita, and wildfires ravaged the mountain up to just weeks before our arrival. We followed burn scars among the beech and pine down into sinkholes, and smelled the singed logs as the winds shifted at the bottom of pits. We only got rained out one day out of the whole trip, a welcome rest day after days of heavily-laden hikes up the ridge and descents into pits. I found the wildlife of the karst to be delightfully unexpected and bizarre: cave-dwelling corvids, black and white adders, neon-colored lizards that flitted away underfoot. I was the first-ever Kučka Korita expedition caver to be





stung by a scorpion while digging the latrine pit (review: like a bee sting). We took care to shake out our clothes before changing when exiting the caves.

A substantial part of our time in Korita and our neighboring base camp village of Poprat was spent on diplomacy with the small but growing local population. Many are farmers, and spend at least part of the year working away in the valley below. The locals we met were extremely hospitable, and curious about the potential for tourism and reliable water sources in our karst exploration. Water is extremely scarce, mostly coming as snowfall and stored in concave-roofed stone cisterns.

“Have you found any water?” was the first question people asked us, trans-

lation apps in hand, when they saw us in local restaurants or the trickling municipal spring, where we would wait for hours every couple of days to collect the water we would need to cook, drink, and wash. Nothing to speak of yet, we would say.

The spring is the only water source for the three surrounding villages. Its low yield, exacerbated by drought, reduced the recharge of water containers to a painfully slow rate. Despite the local people being very patient with our large group arriving with over 60 litres of jugs to be filled, we often decided to give them priority and let them refill first, as while this is a vacation and a choice for us, it is a reality and an everyday chore for them and their families.

The water scarcity has not stopped the recent proliferation of vacation cottages on the plateau. The Ficcos have cultivated strong relationships with local families over the years. Previous expeditions had the base camp on the pastures and meadows owned by our local friends. But this year, we upgraded, as George and his son Nikola generously offered us the use of their three-room weekend house.

Our Dvorac Poprat (the name we chose for our upgraded basecamp) made a significant change in our day-to-day chores and saved us from having to set up a tarp that usually served as the central part of the camp. It enabled us to have a comfortable space to hang out and reminisce on past days' activities, as well as enter and process data. It also protected us from the weather, which often destroyed the main tarp during previous expeditions, and protected our kitchen, food, and expedition supplies from livestock and wildlife. We camped in the back pasture, an immaculately grazed expanse dotted with crocuses, shadowed by the mighty white flank of Kaženik. The Mediterranean climate dwindled into a crisp autumn during our stay. Cowbells jingled every morning and sunset as local women moved the livestock from their pens to pastures. Despite our substantial language barriers, our neighbors made us feel like honored guests when they feasted us with home-grown potatoes and beef, and copious amounts of rakija. Katarina, Grega, and Nikola, who served as our translators, conveyed us wild local legends of ghosts and soldiers and buried treasure – some things are universal.

The Kučka Korita plateau is an extreme land, stewarded by tough but generous people. Perhaps fittingly, the secrets of its karst are hard-won and slow to yield. We made wondrous discoveries, and caravanned off the mountain, motivated to continue the work in the next go-around in 2027.

Expeditions like this require a lot of time and resources to make happen, and we wouldn't have been able to do it without support from our sponsors and family including: National Speleological Foundation, National Speleological Society International Exploration Fund, The Awesome Foundation, Društvo za raziskovanje jam Ljubljana, Nittany Grotto, Tommy Cleckner, Zorica Obid Kosič, Herman Kosič, and the communities of Poprat and Korita. ■