

York University Cave & Pothole Club Durmitor 2016 Expedition Report



the **MULU** Caves Project

The **GHAR PARAU FOUNDATION**
Funding British Cave Exploration and Cave Science

BUTTERED BADGER



POTHOLING CLUB

Contents

Intro	3
Aims.....	3
Team	4
Support	4
Permission	5
Travel.....	5
Accommodation	5
Gear.....	6
Bunda Jama.....	6
Rigging	6
Wildlife.....	7
Underground camp.....	8
Diving	9
Tara Canyon	11
Food	16
Weather	18
Day Log	18
Expenses summary	21
Future Prospects.....	22

Introduction

Our 2014 expedition to Durmitor was, without doubt, YUCPC's most successful expedition in terms of the quantity and depth of cave discovered since trips to the Picos in Spain in the 1980's. However, this success of 2014 left us with many fewer leads when we travelled home than we'd had on our way out: YF1 had been pushed to around -300 m where passages all reached dead ends, and Bunda Jama had been pushed to an impressive -622 m, where we'd reached the Blue Lagoon - a large sump pool with no obvious bypass. In light of this success and the accompanying (relative!) lack of leads, a year's break from the expedition seemed in order. Not least because many of the 2014 team had participated on Durmitor expeditions for 3 years in a row (and some for 5), and amazingly fancied using their time off work for other trips too.

Having said that, a 2016 return had been pencilled in even before we'd left the mountain in 2014, and after sharing some photos and stories with Tony Seddon (who'd joined us in 2013), it became clear pretty quickly that he was keen to take a dip in the Blue Lagoon. This led to a somewhat different expedition being on the cards compared with our previous trips, but one that we were extremely keen to take on. Not least because at this point in time there had been no successful cave dive ever carried out in Durmitor (that we are aware of).

Additionally, although we felt that leads were much fewer than previously, it was hardly like there weren't any left. A huge number of entries in the database had "needs SRT gear to check" listed under the "cave potential" heading. We certainly weren't short of dry leads.

It was a shame this year that many of the ever-present members from the previous 3 expeditions couldn't join us, but we arranged a team of 12 with a mix of old and new faces, which we hoped would be (just) sufficient to achieve what we had in mind...

Aims

With the discovery of the (presumed) sump at -622 m in Bunda Jama in 2014, and the willingness of Tony to put himself in said feature, the primary aim of this expedition was to facilitate the first cave dive on Durmitor to explore this sump. This objective itself also required us to set up an underground camp for the first time; not an insignificant task itself given the nature of Bunda Jama.

For years we'd been talking about how nice it would be for a team to head to the Tara canyon where some of the water sinking on Durmitor theoretically resurges. This year a few of the team took this on, and independently arranged a rafting trip down the Tara river with a view to scoping out any speleologically interesting features.

Finally, there was the ever-present list of recorded entrances as well as the not-insignificant un-prospected areas that would easily consume any amount of time that may be left over after/if we'd achieved the objectives above. Topping this list was Braon Prst Jama, left wide open after several pitches.

*"Ah, but a man's reach should exceed his grasp,
Or what's a heaven for?"*

Team

Adam Walmsley (Walmslers)
Alistair Rollinson (Ali)
Andrew Hurlbatt (Andy H)
Andrew Vick (Andy V)
Andrew Wright (Sandy)
Avelina Wright
Catherine Moody (Cat)
Daniel Boothby (Dan)
Mark Sims
Martin Hoff
Rachel Findlay
Tony Seddon



Team photo at camp (Avelina)

Support

Huge thanks go to the Ghar Parau Foundation for their continued support of our expeditions. The grants they provide make a big difference to the kit we are able to buy, and particularly make the expedition more financially viable for our student participants. This year Dan and Ali were recipients of Alex Pitcher awards, for which they are extremely grateful.

As usual, in addition to YUCPC gear, we were also supported by loans and donations from other clubs. We're grateful to the Buttered Badger Potholing Club for their loan of metalwork, Mulu Caves Project for the loan of a Disto, and to South Wales Caving Club for the donation of ~100 m of rope.

Permission

As ever, we are indebted to our friends in ASAK for their help in organising our permission to stay in the National Park, and to the Durmitor National Park for granting that permission. Vojkan Gajović was very organised in obtaining the permission needed from the requisite organisations and giving us all the paperwork we needed in both Serbian and English, meaning that unlike last year we had no confusion over our permission. We are hugely grateful for his help, without which the expedition would not have been possible.

Travel

Ryanair have started a new route, flying between Stansted and Podgorica. This would have been useful for us, but by the time we had got permission confirmed and started to book flights, the cost had become too high.

Instead, most went with Jet2 from Newcastle/Manchester to Dubrovnik. Andy H and Rachel flew with Lufthansa from Manchester to Dubrovnik (via Munich); Martin used Easyjet from Bristol to Dubrovnik.

Mark returned from the expedition a week earlier than everyone else, so got a bus to Podgorica then flew to Stansted with Ryanair. For future trips it may be worth noting that the bus route runs between Podgorica main bus station and Žabljak bus station and takes under 3 hours. Times can be found at www.https://busticket4.me/EN. Bus tickets for this route cannot be reserved at Žabljak bus station; they are simply bought on the bus itself. This may be an issue if a large group want to travel together, as the bus running this route this year seemed busy, and did not have enormous amounts of luggage space. Nominally it is possible to book tickets via the link above, but this has not been tested! Do *not* use <https://www.balkanviator.com/en/bus> for bus times. The times listed here do not match the actual ones!

We used a different taxi company (Montenegro Travel Service) to get between Dubrovnik and Žabljak, as the one previously used wanted to charge twice as much. The service with this new company was very good; no complaints.

Accommodation

This year we added an element of luxury: rather than walking straight up the hill on arrival in Žabljak, both teams spent a night at Apartment Aleksić in the town centre. This allowed the first team to do some food shopping, sort gear and set up autokamp prior to an early walk up the next morning. Given the slightly later timings of the flights this year, it would have been (even more) ludicrous to attempt the shop and the walk up on the day we arrived.

On the return, again in part due to later flights allowing an early morning taxi rather than necessitating a sleep-deprived night in the airport, 10 beds at Apartment Vujisic at Ivan Do were booked for the final night. This provided a good base for sorting out gear after removing everything from autokamp, plus allowed a gear-free trip to the Black Lakes and then into Žabljak for dinner.

Accommodation on the mountain was much the same as in previous years...

Gear

In one respect, arranging gear for this year's trip was a lot simpler than in previous years, as we knew (theoretically!) how much gear we needed to fully rig Bunda Jama, and we knew we wanted to take a fair chunk of extra rigging gear, amounting to whatever we could feasibly squeeze in.

To counteract this simplicity, we had the addition of diving gear as well as gear for setting up an underground camp. Most of the dive kit was driven out from the UK with Tony, and he was also able to take some additional communal gear, e.g. camping gas and some food, to reduce the load for flying. Despite this, four extra hold bags were taken by the early team (making for a cramped ride to the airport). 375 m of 9 mm rope was taken to rig the bottom half of the cave along with the 9 mm that had been stashed in Durmitor; the rest of the cave was rigged from 10.5 mm that had been stored in Bernies bags on the mountain. Additional 10.5 mm rope taken for possible exploration was provided by retired YUCPC rope and a donation from SWCC.

Once again, we set up a "base camp" at the Ivan Do Autokamp, comprising a tent which housed all of the excess gear until it was required to be taken up the mountain. Tony parked his car at Autokamp for the duration of his time in Žabljak.

Three prepaid Montenegrin sim cards were purchased at a stall in Žabljak and placed into spare mobile phones; these proved useful for contact between teams without incurring high roaming charges.

Bunda Jama

Rigging

The first rigging trip down Bunda Jama noticed very little draught, presumably due to the relatively cold temperature outside (see the Weather section below). There was also more water than in previous years on this trip: some water was flowing and dripping down the Expressway, and the Dribble Dome was wetter than we remembered, although with a bit of care it was still possible to get through without getting too wet.

Interestingly, although snow levels on the surface were low, there was significantly more ice and snow present in Bunda Jama itself. The first significant ledge on the expressway had an ice sheet on it, and there was a lot of ice and snow on the large ledge above the final rebelay, unhelpfully covering holes between the jammed blocks. The lowest ice spotted was in the main passage just after the turn off through Half Hour With a Crowbar I, where there was a large (~3 m high) ice flow on the left wall.

The condition of the spits in the top half of the cave (from 2012 and 2013 when we'd hand-bolted everything) was fine, with the only alterations this year being the addition of a deviation anchor on the Dribble Dome, an additional Y-hang rebelay on JIM, and 1 extra anchor for the final drop after Room 101. Much of this section of the cave was rigged on clowns, simply because YUCPC own a lot of them. After getting used to rigging with them, they proved to be very versatile, the only real disadvantage being the difficulty of adjusting rigging. Get those knots right first time, folks!

The anchors placed in 2014 (The Year of the Drill) were through-bolts, used due to a combination of their availability, maximising anchors-per-drill-battery, and cost, and these made up almost all the anchors below The Van. Having seen the atrocious state of through-bolts from this batch that had been placed at Ingleton quarry, we were relieved to find the ones down Bunda Jama looking nice and shiny. Unfortunately they were not without their problems: the nuts had generally stuck on the threads, needing to be nipped undone with a spanner before they would turn by hand. For most of the anchors this was not an issue, but for a significant minority (~10 %), the entire anchor started rotating when the nut was turned, rendering them useless. Other than direct replacements, little rigging was altered in the bottom half of the cave: an additional rebelay was added to the Long Drop, and an additional anchor was added before the Y-hang above The Cake. Pliers would resolve the issue of rotating anchors, but a preferable option would be to use anchors that don't result in this problem!

Rope lengths and existing anchor placements from the 2014 rigging guide were mainly correct, with some notable exceptions being:

- Arbitrary Meet (labelled 19 m, could do with being 23 m)
- Right Hand Gully (labelled 42 m, should be 32 m)
- Resonance Rift (rope 2, labelled 25 m, should be 28 m)
- Post-Bothy Shame (penultimate rebelay didn't appear to exist!)
- Yorkshire Gold (rope 2, labelled 28 m, should be 38 m)

It was generally agreed that for future expeditions, drop-in anchors such as Hilti HKDs would be a better choice of anchor. These have shown to be very good anchors on recent China expeditions, and provide a more battery-effective, strong, fairly cheap solution without needing to unthread bolts from hangers or relying on nuts not sticking to threads. Our current stock of through-bolts can still be put to good use on bolt climbs. *Editors note: with recent use and tests of concrete screws, these may provide an even better solution.*

Wildlife

Of note this year were several observations of a dormouse on and around the balcony on the Expressway. It was seen at the second rebelay below the balcony, in the rubble on the balcony floor and scurrying with ease up and down the pitch up from the balcony. Given its abilities on vertical rock, it should have no problems at all in entering and exiting the cave. Bearing in mind the chewed rope we returned to in 2013, it's worth remembering for any gear that happened to be left on the ground around the balcony or above.

Potentially of more interest was the sighting of a pseudoscorpion on a dry mud ledge at the top of Pure Lube pitch. This is around 450 m below the surface. The individual seen was approximately 8 mm in length, light brown in colour and remarkably feisty. It reacted to being breathed on by raising up and snapping its pincers in a defensive manner. The animal was not collected as a specimen for several reasons, the main one being that no suitable receptacle was available for its transport. This was the only pseudoscorpion seen in Bunda Jama to date.

Montenegrin pseudoscorpions are surprisingly well-studied, with over 40 species having been discovered, at least three of these from Durmitor. Due to their isolated habitats,

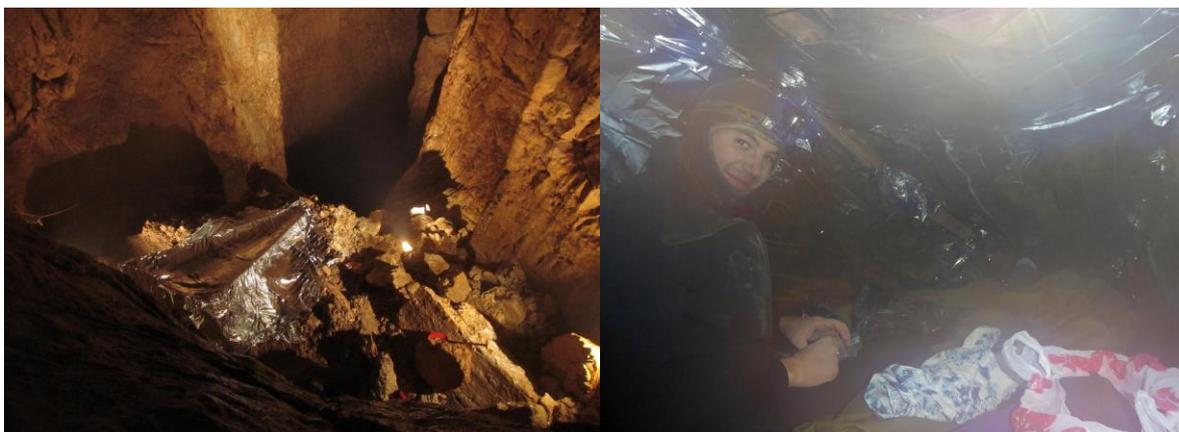
European pseudoscorpions are known to be highly diverse and show a high degree of endemism. Most known species have been described from collections made in relatively low-lying and accessible caves. It is therefore quite possible, even likely, that the species observed in Bunda Jama is as yet undescribed.

Underground camp

To facilitate the dive, an underground camp was set up near the bottom of the cave. This was problematic because no obvious camping spot had been noticed in 2014. Based on vague memories of the few who had been there, we speculated that we may be able to create something on The Cake. This rudimentary shelter, named “The Ritz”, was constructed using cord and space blankets, and furnished with many roll mats, 2 sleeping bags and 2 bivvy bags. It was occupied by Mark and Adam after their rigging trip to the bottom and later by Tony and Martin after the dive.

The ground at The Cake proved to be far from flat, so the shovel (bought at a hardware store in Žabljak) that had been carried down the cave with a fair amount of cursing turned out to be invaluable for levelling the ground, which luckily was almost all hard, dry mud. Unfortunately, the mud rapidly turned thixotropic when landscaped, making the whole platform quite wobbly and this was found to be a real problem when any weight was placed on it, as it slowly sank into the floor. This last sentence does little to convey the feelings of Mark and Adam after having spent a couple of hours and a lot of energy creating what proved to be a large area of almost liquid mud, which the rest of the team were relying on being a suitable camp site. Luckily when a person’s weight was spread out on the roll mats, the thixotropic floor wasn’t overly problematic.

We were unable to rig the cord from opposite walls, so two tensioned lines were set up, attached to ~2 m high ~1 m spaced bolts on one wall, and around a boulder 3–4 m away on the ground. 8 foil blankets were used to make the walls and ceiling of the shelter, attached together with parcel tape. Despite their somewhat fragile nature they proved effective at keeping the water out, and at keeping a reasonable amount of heat in. Using OK sleeping bags inside bivvy bags in the shelter was a good way of keeping the sleeping bags clean, and they proved just about warm enough.



The view of The Ritz from above (left, Martin Hoff) and the luxurious interior (right, Walmsers)

Diving

From a very temporary dive base the sump continued in a southerly direction with a gently sloping floor of silt over boulders.

After a little over twenty metres from dive base, and at around 8 m depth, the passage turned slightly south of east. This probably marks the limit of visible passage the previous year, and the end of the Blue Lagoon pool.

Around thirty five metres into the sump, and with some useful visibility, the silty boulder floor dropped away into a space of uncertain depth. The line was belayed here at a depth of 12.4 m. Previous investigation had confirmed that the limit of airspace was reached a short distance beyond this; so at this point the dive stopped being, essentially, a swim in a muddy lake, and was transformed into a proper cave dive.

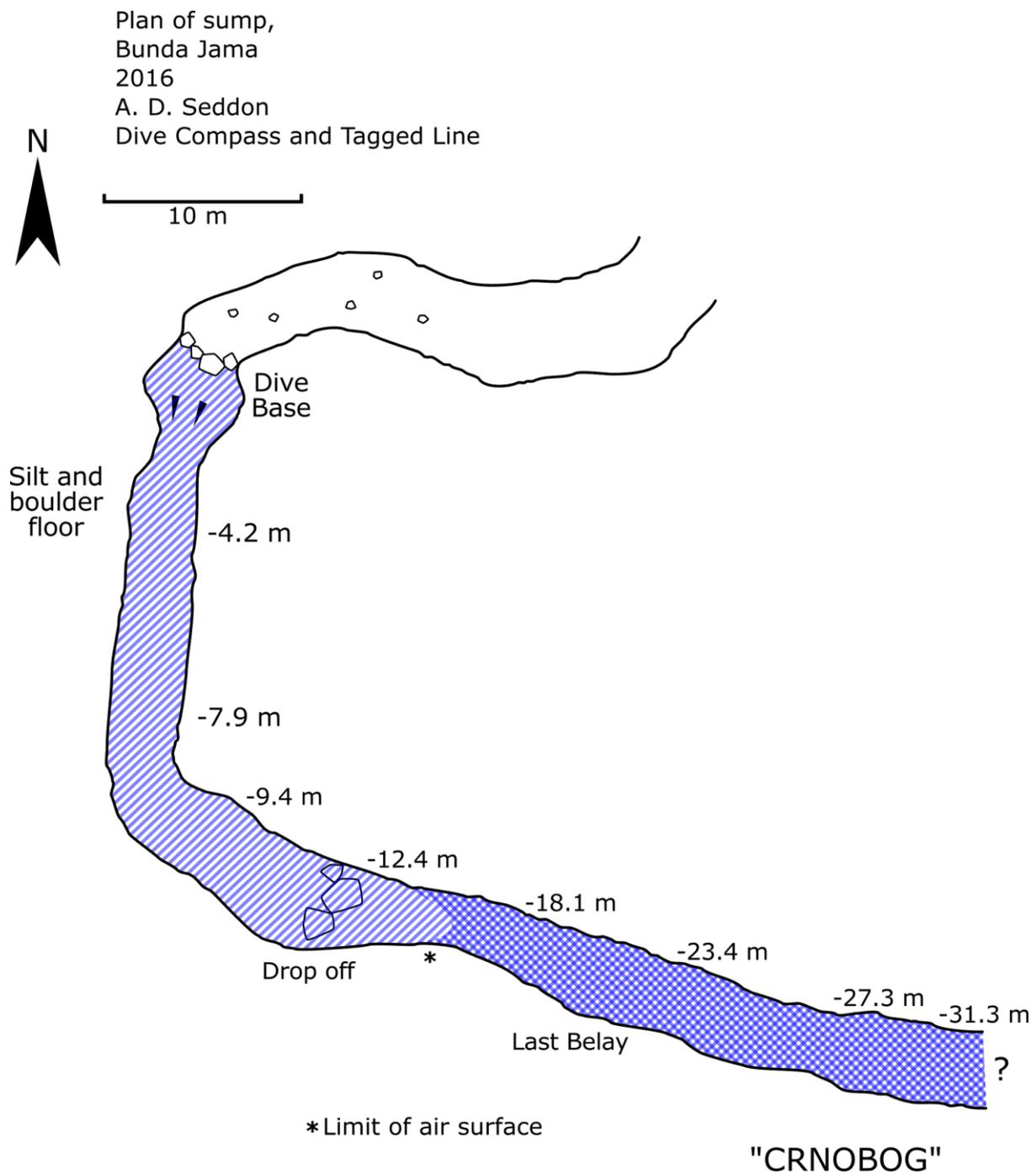
The dive line was belayed to a good natural thread on the true right wall, around fifty metres into the sump. This was the last belay found. The following thirty metres saw the diver swimming in the roof of a moderately large passage, around three to four metres wide, with no floor in sight.

At eighty metres from dive base, and following the gently sloping roof at a depth of 31.3 m, the safe limit for the kit used (small pendulum rebreather using 38% nitrox in a pair of 4 litre cylinders) was reached. With no solid line belay available, the diver reeled in the line, taking basic survey details en route.

The line was secured at the last line belay.

In the diver's opinion the sump pool intersects an active drainage route around the forty metre mark, where the boulder floor (probably derived from relatively recent roof collapse) ends. At this point visibility improves and there is a sense of being in a significant phreatic zone. It appears that the chance of this sump being a short and easy dive leading to further dry passage, is small.

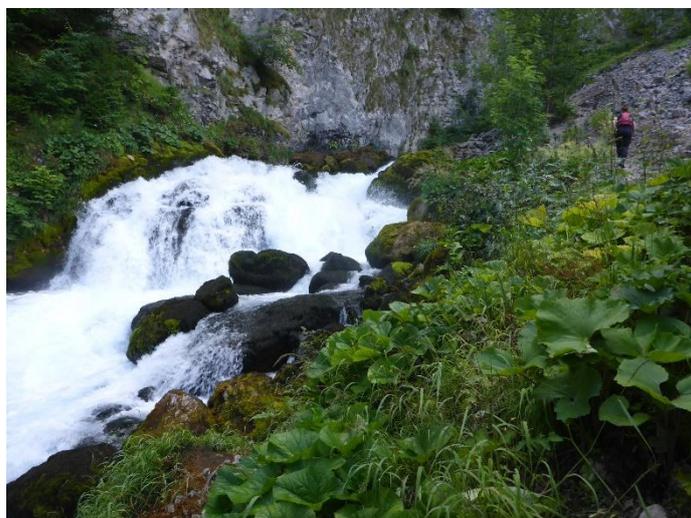
The diver has chosen the name Crnobog for the sump: the first element of the name can refer to the Black Lake which may be the resurgence for this cave; in itself the word crno (black) also refers to the dark and rather forbidding nature of the void above which the diver was swimming; and Crnobog was the name of the Black God of the old Slavic population of the area, a very suitable deity for this site.



Tara Canyon

A secondary aim of some members of the expedition was to traverse the Tara Canyon, in order to investigate any resurgences or entrances along the river and to assess the viability of a further expedition to the canyon. This was organised by Avelina and she was joined by Cat, Rachel and Cynthia Bowring, a friend of Avelina, who met the group at the Drina Tara rafting centre. Although this trip was organised independently of the main expedition, there was overlap of the members and the results of their trip are undoubtedly of interest to future YUCPC trips to Durmitor, so a record of their trip is given below.

We entered the river at Splaviste, not far upstream of Đurđevica Tara, the big road bridge that crosses the canyon. Shortly after setting off, we reached Vrelo Ljutica (YS0); this is the river depicted in David Rose's photograph that helped motivate the trip to the canyon. Although a reasonable way upstream of the Durmitor massif, this resurgence carries a huge flow of water and our guide, Kris, told us it was "the shortest and fastest river [in Europe?]". There is no cave to speak of here; the water springs from under boulders at the base of a fairly sheer slope. This feature is on the true left of the Tara river and likely carries a reasonable proportion of Durmitor's water.



Vrelo Ljutica resurgence, logged as YS0 (David Rose)

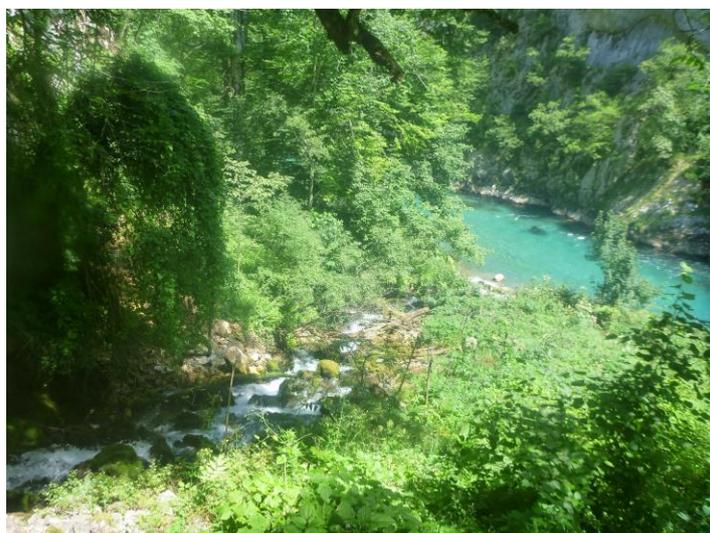
There are many springs along the length of the canyon, predominantly on the (true) right hand side, but most that we spotted appeared to emanate from scree/boulders rather than any cave entrance. Many are marked and named on the walking map. One on the left hand side was marked as YS2. This was constituted of water percolating through rocks over a width of several metres. It was followed upstream for ~30 m to the source; above was a dry river bed suggesting the water resurges higher up in wet weather.

We mostly focussed our attention on the true left of the Tara, that being the side adjacent to the plateau. The steep sides of the canyon and abundance of trees made spot-holing tricky, so despite best efforts we were mostly limited to what could be seen along the shore. A few dry entrances spotted along the riverbank were investigated over the two days but these turned out to be little more than alcoves (YS1, YS3, YS4, YS6). Some higher level entrances were seen in the downstream part of the canyon (day 2) but these were on the right side, not the left.

At Radovan Luka, our stopping point for the first night, we had hoped to meet with Ognjen, a Bosnian caver with whom we had been in contact prior to the expedition. He had suggested he could speak with the local hunters there who may know of some cave entrances, but unfortunately he was unable to make it that evening.

The second day, we had three particular targets in mind that were marked on the walking map. The first was a spring on the left hand side and secondly, slightly further downstream was a spring on the right hand side which also showed the symbol for a cave entrance. The third was a cave entrance marked high on the left side. All of these are in the section of canyon closest to the main Durmitor massif.

Target one: the left-hand spring (YS5). This had water resurging from boulders along a sizeable width (~50 m). At the most downstream end, a “proper” river took the main flow of water. Above this, a dry river bed appeared to continue steeply up the hillside for some considerable distance but was not pursued. At the upstream end of the spring, a small cliff face just above the resurging streams showed promise. Flowing water could be distinctly heard under the base of the cliff, and following a scree slope up along the base led to a drafting entrance. A steep downward slope quickly led to a small puddle/sump, above which a ~3 m climb to a person-sized window gave access to a small chamber. Loud water could be heard beyond but widening of the passage would be required to continue exploration as there was no passable way on.



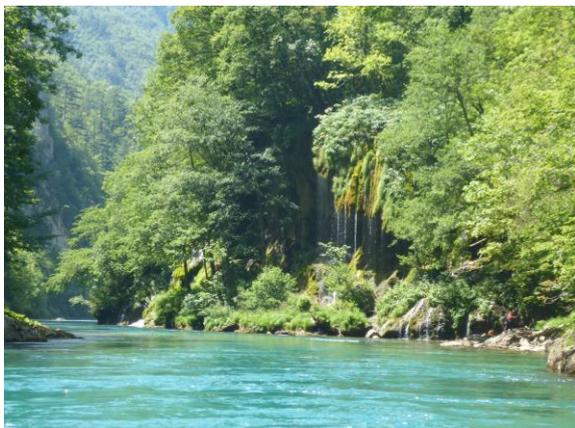
The resurgence logged as YS5 (Cat)



The steep downward slope in YS5 (Avelina)

NB. On return to the UK, comparison of various GPS data with the walking map and Google Earth suggest this isn't actually the spring marked on the walking map, or perhaps the spring is marked in the wrong place, and is actually further downstream than shown on the map. Where the spring is marked on the map is similar in location to YS3. Google Earth shows a stream bed here but perhaps this only runs in high water levels. The spring that we investigated can be seen on Google Earth further downstream. Incidentally, additional investigation of satellite images shows an intriguing area slightly further upstream, where a (seemingly dry) stream bed, masked at river level by foliage, leads uphill towards an apparent cliff face. The point where the bed joins the river, and the cliff face, have been marked in the database as YS8 and YS9 respectively, as they may be worthy of brief investigation if anyone makes a return to the canyon.

Target two: the right-hand spring/cave (YS7). This is marked on the map as Sige Bajlovica, which is the name given to the picturesque waterfall entering the canyon. Following this water upstream for a few minutes (beware of snakes) leads to the large cave entrance from which the stream resurges. The cave is known as Bučavica and the entrance is approximately 20 m wide and 10 m high. Although many rafting guides stop and take tourists to the impressive entrance, Kris was not aware of anyone having ever actually entered the cave, owing to the fact that exploration requires one to swim across a bitterly cold lake. Obviously, that didn't stop us, and we even persuaded Kris to follow. After ~40 m of swimming, a powerful waterfall is reached and one can exit the water onto flowstone. A sharp climb up through a small window to the right of the waterfall leads to an ~8 m thrutchy, popcorny climb up to a shelf beside the top of the waterfall, which did not look like it had been previously climbed. A couple of metres upstream of the lip, the water is seen to emanate from an enticing sump pool, ~5 x 3 m across. The depth is unknown but there appears to be a way on upstream ~2 m below the surface.



The Sige Bajlovica waterfall (left) and the start of the lake (right, both Avelina)



Rachel at the Bučavica sump pool (Avelina)

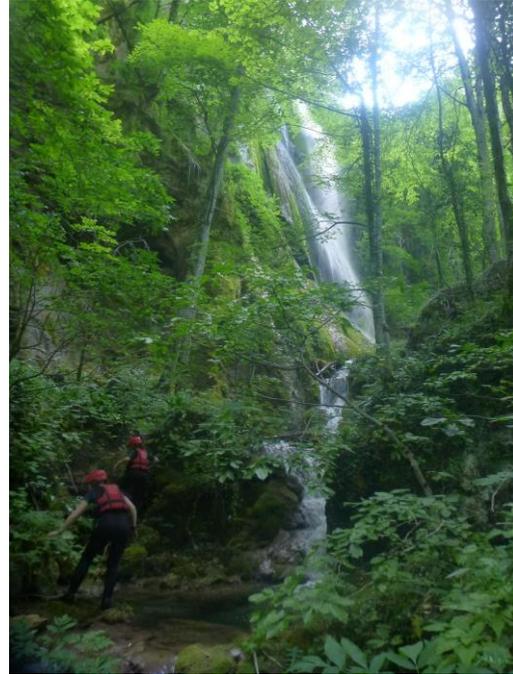
According to Kris (and corroborated by Voja), the water from Durmitor is known to resurge on both sides of the Tara river (reference needed! Kris said he had read this in a book about the canyon but could not remember any details), so this sump could be connected to the plateau. Kris said he was keen to do an exploratory dive at some point in the future; if he does he will let us know what he finds.

NB. Several online sources state the spring/cave as being on the left bank of the Tara; we can confirm it is definitely on the (true) right...!

Target three: entrance on the left. Despite several pairs of eagle eyes, this cave marked on the map was not spotted from the water, presumably due to the abundance of trees on the cliffs obscuring our vision. The size/potential of this entrance therefore remains unknown.

Just upstream of this area is Susica, translated as “dry river”, which enters from the left (south). At the confluence, water was actually flowing from Susica, but it may be dry further up since it becomes depicted as a dashed rather than solid line on the walking map. The walking map also shows a path running most of the way along this river; in future it may be worth trying to use this to prospect along the valley.

Beyond Susica are two waterfalls on the left bank of the Tara, Vrelo Nozdruc and Vrelo Sige Jovičaća, which may come from springs above. The second was taller and had a significantly greater flow. Neither appeared to be sensibly climbable from below, but both have paths leading to the top of them on the walking map, so may be worth investigating more thoroughly in future.



Vrelo Nozdruc (left) and Vrelo Sige Jovičaća waterfalls (right) (both Cat)

It's worth mentioning that on return to the UK, a blog was discovered (<http://destination-rivieres.org/en/navigations/tara-river-the-grand-canyon-of-europe/>) with an intriguing photo copied here.



The interesting photo from the blog linked above!

None of us saw this entrance, but contact with the blog writer suggests that is because the entrance is further upstream than Splaviste, where we entered the river. "It's between Dobrilovina and Splaviste. From Dobrilovina, follow the road downstream and you'll reach a camping and rafting place (I don't remember the name). Start rafting from there. It's a bit downstream." They also suggest that the entrance may be too small to enter, but are not sure since they are not cavers..... Worth a look? Further caves in this upstream section are also described here (in Serbian):

<https://ekozona.wordpress.com/rijeka-tara/rafting-tara-river-rijeka-tara-splavarenje/>

So, what is the viability of a return to the canyon? Prospecting was not as fruitful as we had hoped, but there are some sites near the Durmitor plateau that could be worthy of a revisit in the future, and a further attempt to make contact with the hunters near Radovan Luka may also be worthwhile. Unfortunately, access to the majority of the canyon is only really feasible by river; the terrain is too steep and wooded to gain access from above. The only road access point to the areas of interest is at Radovan Luka. An exit by foot could be possible via the path along Susica but it is still a long walk from the nearest road. Further exploration at canyon level would likely require hiring a guide for a day's traverse between Radovan Luka and one of the many rafting companies near the Bosnian border.

Due to the terrain along the canyon, we had some problems getting coordinate fixes on the Garmin GPS. In some locations we failed to get a fix at all; in others the accuracy is poor. Coordinates in the database are from a mixture of the Garmin GPS, Panasonic FT4 cameras and comparison of the walking maps with Google Earth; derivation and confidence in their accuracy are noted in the database to aid any future visitors.

Food

Quantities of food are always difficult to predict with changing teams. Recipe cards were modified for new team numbers based on quantities from previous years, but this year the team did not eat as much as on previous expeditions. The reason for this is unknown but likely to be a combination of multiple factors: the lack of a Toby; Mark and Walmslers getting old and not being able to consume as much; more frequent gear/shopping runs to Žabljak resulting in late café lunches and decreased evening appetites; late trips causing people to be too tired to eat; the exceptional quantities of chocolate that found their way to camp and underground....?

Most meals had a significant quantity of leftovers, which were often consumed for breakfast/lunch the next day and sometimes even had to be disposed of. Relatively little bread was eaten over the expedition. Breakfast bags were also less popular than in previous years, and having accounted for one per person per day, a significant quantity were left over and either taken back to the UK with Tony to keep him fuelled, or given away to random confused tourists. Given the lack of guaranteed Mornflake sponsorship (we were declined this year so had to buy all the granola), it may be worth rethinking the breakfast situation for any future expeditions.

Our mate "Ross" (the waiter, who in 2014 recognised us from previous trips and had his photo taken with us) was nowhere to be seen at Restaurant Durmitor, much to everyone's sadness. Since he had chosen a new path, so did we, discovering a new restaurant further

down the road, Zlatni Papagaj (translation: Golden Parrot). This was dubbed “The Parrot Place” and served very nice, reasonably priced food including a “Pizza Sandwich”. It was frequented for lunch by teams on shopping/gear runs to Žabljak and also visited by the whole team on the final night before leaving.



Ross!

Happily, and remarkably, Ross was later discovered by Cat, now working in a cafe at Durdevica Tara.

True to tradition, a watermelon once again made an appearance on Durmitor. Good old Walmslers! Pancakes were also created on the final night courtesy of Avelina and Sandy.



The 2016 watermelon (left) and Sandy preparing pancakes (right)

TVP was bought from Holland and Barratt, brown lentils and top-up spices from Freshways in York, and the rest of the UK food was from local supermarkets (Tesco/Asda).

Weather

We were sadly not blessed this time with wall-to-wall sunshine, as had often been the case in previous years. In fact, the first week was particularly lousy. The team on the first Friday had an exceedingly grim walk up in a full blown thunderstorm and downpour, getting soaked to the skin despite full waterproofs. Several of the team were extremely cold when reaching camp at around 7 pm; something to bear in mind on future trips. At camp, Andy V was able to collect ~150 L of water just from run-off from the tarp and from shovelling hail. In these storms, peoples' tents varied from dry, through damp, to drenched. Due to the bad weather, it was decided to delay the first caving trip in favour of surface activities, as the prospect of returning from a long and tiring trip to cold and wet equipment was deemed unwise, not to mention the problems of finding the way to/from Bunda Jama in the dense cloud before the path had been properly marked. It was almost a week before the weather was good enough for any clothes to properly dry. The second half of the expedition was better, with the morning sun often making an appearance, though afternoon storms were still a regular occurrence.



A misty day at camp (left) and a soggy autokamp (right, both Cat)

Day Log

Day	Personnel	Activity
Weds 13 th July	Cat, Andy V, Andy H, Rachel, Martin, Mark	Arrived in Žabljak to apartment, set up autokamp, ate pizza.
Thurs 14 th	Cat, Andy V, Andy H, Rachel, Martin, Mark	Walked up to Gornja Ališnica, set up camp
Fri 15 th	Cat, Andy H, Rachel, Martin, Mark	Gear/shopping run to Žabljak, got drenched in thunderstorm
	Andy V	Camp, collected ~150 L of water from hail / tarp run-off
Sat 16 th	Cat, Andy H, Rachel, Mark, Andy V	Marked path to BJ, sorted and moved rope to entrance
	Martin	Camp

Sun 17 th	Andy V, Martin	Gear/shopping run, via BJ on way down
	Mark, Andy H, Rachel	Rigged to RH Gully
	Cat	Camp
	Avelina, Sandy, Walmslers, Dan, Ali	Arrived in Žabljak
Mon 18 th	Mark	Gear run to/from autokamp
	Cat, Andy V	Rigged to Enigma Rift/Room 101, carried bags in for Resonance Rift
	Martin	Photos & bag shuttle to Dribble Dome
	Avelina, Sandy, Walmslers, Dan, Ali	Arrived at camp
	Rachel, Andy H	Camp
Tues 19 th	Mark, Walmslers	Rigged to Pure Lube
	Rachel, Dan, Ali	Bag shuttle to pitch up
	Sandy, Avelina, Andy H	Gear/food run
	Cat, Martin	Camp
	Andy V	Camp, then down to Autokamp
	Tony	Crossed border into Monty
Weds 20 th	Tony	Arrived, walked up & down
	Andy V	Walked up with Tony's diving kit
	Dan, Ali	Walk down/up with Tony's diving kit
	Sandy, Andy H	Rigged to the top of Long Drop
	Mark, Walmslers, Martin	Camp
	Cat, Avelina, Rachel	To Bosnia/Tara Canyon
Thurs 21 st	Tony	Sorted gear, walked up
	Andy V, Martin	Gear run from Žabljak
	Ali, Dan	Gear/shopping run via BJ on way down
	Mark, Walmslers	Rigged to bottom, set up U/G camp
	Sandy, Andy H	Camp
	Cat, Avelina, Rachel	Tara Canyon
Fri 22 nd	Mark, Walmslers	Return from BJ victorious

	Cat, Avelina, Rachel	Tara Canyon
	Everyone else	Packing dive kit, resting, gear shifting
Sat 23 rd	Mark	Skived off home
	Walmslers	Down with Mark, back up with girls
	Cat, Avelina, Rachel	Returned to camp with shopping
	Dan	Camp
	Tony	To bottom of BJ and diving
	Martin	To bottom of BJ and camping U/G camp
	Andy V, Sandy, Andy H	Gear to the bottom & back out
	Ali	Gear to Resonance Rift
Sun 24 th	Cat, Avelina, Walmslers	To bottom, removed kit from The Ritz
	Dan, Ali	Collected bags from the Van
	Tony, Martin	Back to surface
	Andy V, Andy H, Sandy, Rachel	Camp
Mon 25 th	Andy V, Andy H, Tony, Dan, Ali, Walmslers	Took gear down to autokamp
	Cat, Avelina, Sandy, Martin, Rachel	Camp
Tues 26 th	Andy V, Andy H, Rachel	Derigged up to the bottom of JIM
	Walmslers, Sandy, Tony	Bag hefting from Deja Vu
	Martin, Dan, Ali, Walmslers	Photos on JIM
	Cat, Avelina	Camp, then setting up balcony and bag hefting
Weds 27 th	Martin	Žabljak
	Rachel	Camp
	Walmslers	Camp dig, bag hefting from BJ
	Ali, Dan, Sandy, Avelina, Andy H, Andy V, Cat	Derigging and bag hefting, feeding rakija to sheltering Czech students.
Thurs 28 th	Andy H, Walmslers, Rachel, Cat, Sandy, Avelina	Gear to Žabljak, vodka with Polish guys at autokamp
	Martin, Dan, Ali	Trip to Ice Cave and path de-marking

	Andy V	Camp
	Tony	Set off back to UK
Fri 29 th	Ali, Dan	Gear to Žabljak
	Walmslers, Martin	Camp
	Sandy, Avelina, Cat, Andy V, Andy H, Rachel	Ridge raiding Bezimeni Vrh
	Mr Watermelon Head	Camp Dig
Sat 30 th	Everyone remaining	Down hill to apartment, Crno Jezero, food, mega gear sort, bed
Sun 31 st	Everyone remaining	Taxi to Čilipi, fly home

We also had a visit from Voja and friends on the 23rd; unfortunately most people were still underground or too tired to drink their vast quantities of rakija.

On the 27th, as well as some Czech students who briefly sheltered from the rain in the gear tarp, we had a brief visit from Ognjen, the Bosnian caver. He had hoped to stay a couple of days but on the way up, got a phone call from his boss telling him he needed to work the following day so instead unfortunately left after about 20 minutes....

Expenses summary

Flights were more expensive than previously, partly due to having to book relatively late after permission was received. The lack of sponsorship from Mornflake this year meant food was also a little more than anticipated. However, the purchase of a drill for less than expected combined with the generous donations and loans of equipment from other clubs meant that the gear cost was kept to a very modest total.

	Total	Per person
Travel (including UK travel, flights, Dubrovnik taxis and Zabljak taxis)	£5,087 (estimate)	£424
Subsistence (food, autokamp, Zabljak accommodation etc.)	£926	£77
Gear	£361	£30
TOTAL	£6374	£531

Future Prospects

Other than the ongoing sump at the bottom of Bunda Jama, there remain a number of leads throughout the cave. The most obvious of these is a large obvious junction in the roof just before the Yorkshire Gold pitches, where a significant quantity of water enters from a big space 10 - 15 m above the passage floor. A bolt climb up this from the downstream end of Cheap Chocolate Šlag is certainly feasible. There is also the significant inlet just upstream of the Eyehole, which again would require a bolt climb. The narrow nature of the rift at the base of this passage may give the climb an air of pessimism, but it's worth noting that Bunda Jama certainly appears to be the minor inlet at the junction where the two passages meet. Also of interest is the source of the water at the pitch above The Cake. It is hard to gauge the relative quantities of water here against those further up the cave, but the plan view of the survey doesn't immediately suggest this water is simply the water that disappears at Blunder Pot... Last but certainly not least is Doyle Dig: situated at a relatively accessible depth near some pretty huge development (Château de la Shock), and also heading in a totally different direction than the explored cave, it is not worth ignoring. And the first two digs were passed with little difficulty.

High up on our list for exploration this year was Braon Prst Jama, but the manpower required to achieve our aims down Bunda Jama meant there simply wasn't time to visit it. Wide open after several pitches down and located almost 250 m ESE of the Bunda Jama entrance (the opposite direction to the known Bunda Jama development), it remains an enticing prospect. Although it will likely need some persuasion initially, Subway (>200 ENE of Bunda Jama) offers similar potential. And let's not forget all the other entrances we've logged over the years, or the significant areas still awaiting prospecting teams. Also sitting on some distant backburner is YF1. Did we push the obvious ways on to conclusions? Certainly. Did we find enough cave to explain the draught that manages to keep 200 m of snow from being blocked? Debateable. Did we exhaustively search for continuations other than the obvious ones? Almost certainly not.

YUCPC are unlikely to mount another diving expedition in the near future, due to the amount of gear and manpower required for such an operation. However, if another team wished to take on the challenge we would be glad to offer help in any way we can.

Back above ground, the area beyond the northern limits of our previous prospecting, closer to the canyon (and road!), is worth a look. Has anyone been before? Does it look like there are caves? Is there a suitable campsite? These are all questions in need of answers.

Appendix: Prospecting data

GPS Reference: YS0	Other Name: Vrelo Ljutica	Directions to entrance:	Way on/Termination:
Date 21 Jul 2016	Marking None	True left of Tara Canyon, next to walking path. Coordinates from CLM's camera but match with Google Earth.	Wide (~5 m), fast river resurging from rocks. No visible entrance.
Location: N 43.13753	Revisit grade: 0		
E 19.30071	Accuracy: 0 m		
Personell: CLM, RCF, AW, CB	Draft: ND		
Length:	Depth:		
GPS Reference: YS1	Other Name:	Directions to entrance:	Way on/Termination:
Date 21 Jul 2016	Marking None	Left side of tara just above river level. Couldn't get a GPS fix; coordinates are from camera, but cave is actually likely to be further downstream.	Tube into hillside quickly terminates; no way on.
Location: N 43.17627	Revisit grade: 0		
E 19.24674	Accuracy: 0 m		
Personell: CLM, RCF, AW, CB	Draft: ND		
Length: 6	Depth: 0		

GPS Reference:	YS2	Other Name:		Directions to entrance:		Way on/Termination:	
Date	21 Jul 2016	Marking	None		South (left) side of Tara. GPS fix.		Water appears to be resurging from hillside through foliage/rocks. Water ~15 m wide. Current resurgence ~20 m up from river. Dry river bed above; actual resurgence higher in higher water?
Location:	N 43.21706	Revisit grade:	1				
	E 19.12719	Accuracy:	3 m				
Personell:	CLM, RCF, AW, CB	Draft:	ND				
Length:		Depth:					
GPS Reference:	YS3	Other Name:		Directions to entrance:		Way on/Termination:	
Date	22 Jul 2016	Marking	1		2 smallish holes spotted ~10 m up cliff face by side of Tara (LHS).		Bottom hole goes nowhere, but someone has visited before and marked with a circled 1. Entrance ~2x2 m. Upper hole unknown.
Location:	N 43.22800	Revisit grade:	0				
	E 19.04364	Accuracy:	7 m				
Personell:	CLM, RCF, AW, CB	Draft:	ND				
Length:	4	Depth:	3				
GPS Reference:	YS4	Other Name:		Directions to entrance:		Way on/Termination:	
Date	22 Jul 2016	Marking	YS4		Left side of Tara, just up from beach. NB. GPS from shore.		Tube quickly terminates
Location:	N 43.23169	Revisit grade:	0				
	E 19.04358	Accuracy:	12 m				
Personell:	CLM, RCF, AW, CB	Draft:	ND				
Length:	5	Depth:	2				

GPS Reference: YS5	Other Name:	Directions to entrance:	Way on/Termination:
Date 22 Jul 2016	Marking YS5	Just upstream of water joining Tara on LHS. Cave in side of overhanging cliff, true right of resurgence. Just downstream of YS4 and just upstream of YS6. Couldn't get GPS fix; coordinates taken from pinpointing main resurgence on Google Earth	Water resurging through rocks across wide area; most have no accessible cave but a little draft. Dry entrance part way up scree slope. Steep slope down to small inaccessible pool. Above is a 3 m climb up through a small window into a small chamber. No passable way on but a strong draft and the sound of loud water ahead. Would require tool/explosives to proceed.
Location: N 43.23245	Revisit grade: 1		
E 19.04337	Accuracy: 0 m		
Personell: CLM, RCF, AW, CB	Draft: G		
Length: 10	Depth: 4		

GPS Reference: YS6	Other Name:	Directions to entrance:	Way on/Termination:
Date 22 Jul 2016	Marking None	8 m up from river on a sheer face, adjacent to the river on south (left) side. Coordinates inaccurate (not near river).	None; alcove.
Location: N 43.23978	Revisit grade: 0		
E 19.04633	Accuracy: 22 m		
Personell: CLM, RCF, AW, CB	Draft: ND		
Length: 3	Depth: 2		

GPS Reference: YS7	Other Name:	Sige Bajlovic a/Bu?av ica	Directions to entrance:	Way on/Termination:
Date 22 Jul 2016	Marking	None	True right of Tara. Follow cascading water upstream to ~10 m high, ~20 m wide to waterfall. To the right, climb up through entrance. Coordinates are approximate, sharp calcited/popcorny section to the top gained from the walking map/google earth.	Large entrance resurgence. Swim ~40 m of the waterfall. Enticing looking sump ~5x3 m. Looks like way on ~2 m below surface, depth unknown. Requires diver! No dry continuation found.
Location: N 43.23863	Revisit grade:	2		
E 19.02750	Accuracy:	0 m		
Personell: CLM, RCF, AW, CB	Draft:			
Length: 50	Depth:	10		