YUCPC DURMITOR 2012



The GHAR PARAU FOUNDATION Funding British Cave Exploration and Cave Science

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Cover photos: Surveying in YF1; The main chamber in YF10 © Mandy Fu

Report by Catherine Moody, Mark Sims and Toby Buxton



Introduction

The Durmitor national park is a beautiful karst landscape, with vast potential for cave systems within its large limestone plateau. The southern side of the mountains has been well explored by caving groups in the past, including YUCPC, resulting in several major caving discoveries. However, until last year, the more remote northern side of the park had been relatively untouched.

A 3-person reconnaissance expedition by YUCPC in 2011 identified a suitable yet remote campsite for further expeditions, close to snow plugs which could be used as a water supply. Initial prospecting found numerous entrances, including several promising leads. One of the major problems on the expedition was a lack of high energy and nutritious food. Consequently, a lot more thought was put into meals for 2012.

With a team of 10 returning to the mountain, a lot was achieved in 2012. A large number of new entrances were found through prospecting, and several new and previous leads were pushed and surveyed.

Aims

The objectives of the 2012 expedition did not really required much thought; they were clear from the results of the 2011 expo, both from a caving and living perspective:

- Take more rope in order to push previously identified leads, in particular YF1
- Further thorough prospecting of the northern areas of the national park
- Bolting and surveying of any significant finds
- To establish a functional campsite for 10 people
- Make careful plans and records of food in order to aid further expeditions
- Personal development of club members

It would have been nice to add photography on to this list, but if you read on you'll see why taking significant amounts of camera kit was not really an option...

Sponsors

In 2012 we were lucky to be granted £400 from the Ghar Parau foundation, which was used to buy all the necessary gear for the expedition. In addition, Mornflake continued their run of generous sponsorship, with 25 kg of tasty granola which was essential for expedition breakfasts.

Thanks also to the Durmitor National Park and to Peca (ASAK) for arranging permission for our stay.





Personnel

Adam Walmsley [AW] Andy Gilmartin [AG] Andy Vick [AJV] Cat Moody [CLM] Chad Bullivant [CQB] Mandy Fu [MF] Mark Sims [MTS] Mike Rippon [MJR] Steve Gilbert [SG] Toby Buxton [TFB]



L-R: MJR, AW, SG, CQB, MTS, TFB, AJV, MF, CLM, AG



Travel

The journey in 2012 was the same as in 2011, based around a WizzAir flight from Luton to Belgrade. The flight is relatively cheap and has a massive 42 kg luggage allowance (32+10 kg)! Unfortunately, this flight implied sleeping the previous night in Luton Airport with its frequent security announcements, then an overnight bus journey the following night from Belgrade to Žabljak. A future expedition would benefit from a full re-evaluation of travel options; however, that's not to say it should definitely be changed. Mark, Toby and Chad travelled out slightly earlier than the main group, but the journey was identical.



Trying to catch some sleep in Luton airport © Mandy Fu; Trying to catch some sleep in Belgrade © Steve Gilbert

Schedule (for the main group):

- Overnight sleep at Luton Airport.
- WizzAir Flight. (Sun 29/7/2012)
 - London Luton (8:25) to Belgrade (12:10)
- Bus from Belgrade Airport to the city center.
- Overnight bus from Belgrade to Žabljak. (<u>http://lasta.rs/</u>)
 o Belgrade (23:30) to Žabljak (08:00)
- From Žabljak, there were taxis who would drive the 10 minutes to the road nearest to Zminje Jezero) for between 5 and 10 euros.
- The walk up to camp from Zminje Jezero is about 6 km with approximately 600 m of climbing. In 2012 this took about 5 hours, with everyone carrying over 30 kg on average.

The return journey was simply the reverse:

- Walk off mountain (leaving at 06:00) to Žabljak via swim in the Black Lake.
- Bus (Sat, 11/8/2012)
 - Žabljak (14:00) to Belgrade (00:30)
- Bus to the airport where we slept overnight
- WizzAir Flight (Sun, 12/8/2012)
 - Belgrade (6:00) to Luton (7:55)
- Then return home *via* train or car.

Travel to Luton Airport was either *via* shared car (airport parking) or by Train (splitting the journey making it considerably cheaper than a simple ticket).



Main costs:

- UK travel approx. £70 by shared car (fuel + airport parking) or train
- WizzAir flight (return) including bags: ~£230
- Overnight return bus to Žabljak €50

Cat and Andy arrived in Žabljak by campervan, having driven from the UK. They came through Croatia (Cat picking Andy up from Dubrovnik airport after an early evening flight) and then to the Montenegrin coast. At the Bay of Kotor, just beyond the ferry boat (which they hadn't taken as they were opting for the scenic route), they came across a brand new road signposted to Žabljak! This new road goes North to intersect the road coming in from Bosnia towards Nikšić, and thus cuts off a large corner, where previously the only option was to go South *via* Podgorica before heading up to Žabljak. Not only does this make things a lot quicker for driving (by approx. 1.5 to 2 hours), but it's possible that a new bus route will also be introduced on this road, opening up possibilities of flying to Dubrovnik instead of Belgrade. Airport taxi services also run from Dubrovnik to Žabljak at a moderate price (€540 return for an 8 passenger vehicle; minibuses are also available). It's also worth mentioning that there were no problems leaving the van in the main Žabljak car park during the expedition after explaining the situation to the tourist information next door.



George the campervan on his way to Žabljak © Catherine Moody

Camp

There were no real questions as to where we were going to camp this year, based on the fact that in 2011 we found only one area that had enough space for the 5 or so tents we needed to accommodate the 10 of us. The location of camp is fairly remote, especially compared to the earlier Durmitor expeditions.

One of the key things we needed to plan for this year was some way of making a relatively lightweight shelter with room for 10 of us, plus some kit, that could (but hopefully wouldn't need to) withstand a reasonable amount of wind and rain. We also needed to cook inside it if necessary, and since we had settled on cooking with petrol, we couldn't easily use a tent as we had in 2010. That's aside from the fact that the 2010 mess tent weighed 20 kg or more. The lightest way we could think of to create a communal shelter was using a tarpaulin. Of course, these are usually pitched in an area with trees, and in treeless Durmitor we were presented with something of a challenge. In the end this was overcome with the use of an A frame, constructed from some miscellaneous tent poles from the container, along with a bit of bent copper pipe and shelf-support constructed by Steve that made up the top section. After a few appalling attempts to put a shelter together using the tarps in the YUCPC container, we had a rethink and bought a



new one which was smaller (4.5 x 6.0 m) and lighter (90 gsm). The tarp used was made by a manufacturer called Toughtop Tarpaulins, and does not contain traditional eyelets which have a tendency to tear out under stress. Small tears are also easily fixed with gaffa tape.

There is a very large boulder in the middle of camp, which was identified as a decent site for the tarp as the land is relatively flat but not enough for a tent pitch. This rock was bolted, and a tensioned line strung from it, over the A frame, and anchored to a rock about 4 m away. This created an excellent 'spine' for the tarp, which could then be lashed down at the edges and (an innovation after too much wincing at the powerful effects of the wind) cross-braced with cord. This created a shelter which proved itself solid under heavy rain and wind more than once in 2012.



Erecting the communal tarp © Mark Sims

Early on in the expedition, a storm drain was dug underneath the tarp followed by a drainage ditch, which turned out to be very useful the following day when the heavens opened. The tarp was large enough for the 10 of us to relatively comfortably fit in for meals when necessary, and could probably accommodate a couple more people at a bit of a push. A couple of smaller tarps were used as a door to the main tarp. All the tarps for the communal shelter were stored on the mountain until the following year. A small thick tarp was used to store caving gear under as protection against the elements.



Camp from a distance © Catherine Moody; Camp © Mandy Fu

There was always someone who stayed at camp each day, to protect belongings from both tourists and animals and also to do snow runs to YF10. Whilst the location of camp nominally lies on a footpath, this path does not appear to get much use and very few people were seen in both 2011 and 2012.



Gear

Given the location of camp and the distance from the nearest road, involving a 5 hour walk up with kit, gear was probably the part of the expo that needed the most planning. Taking into consideration the long walk and not wanting to eat into expedition time by doing multiple gear runs, we were limited to what individuals could carry on a single walk up - approximately 35 kg each. It is likely that more was carried in 2011, and some expo members could undoubtedly carry more, but this is a rough limit in the interests of fairness and expo members' knees. Almost every item we took was weighed and put into a spreadsheet, compiled by Mike, so that we could work out what should take priority and calculate exactly how much the total communal gear would weigh (see appendices).

In 2012 our amounts of rope were based almost entirely on assumption. YF1 could have closed down within a few metres and our other leads could have amounted to nothing. In the end, we chose to take as much as we could within our limits. With a 55 m rope set aside for rescue, we had about 180 m to play with. We took 70 spits, but could only manage 25 hangers and the accompanying carabiners. Because of this much of our rigging relied on the often inventive use of naturals. Taking a drill was never really an option due to the weight of drill batteries; all bolting was done by hand.





Loaded up for the walk to camp © Mark Sims; Hand bolting in YF11 © Mandy Fu

In terms of personal gear, we knew we did not have enough weight allowance for every member to take their own kit. SRT gear was therefore communal, with 6 full kits being taken out. One of these of course had to be set aside for rescue. The justification for this was that there could always be at least one team of 3 prospecting as well as one person at camp and that only two kits are required for shaft bashing. There were a slightly larger number of helmets as these are useful alone for prospecting. Five oversuits and four undersuits made their way to Durmitor, as shaft bashing can be feasibly carried out with just an oversuit. Wellies and wetsocks were never on the cards due to their extraordinary weight, and in any case Durmitor caving is predominantly dry.

As SRT kits were communal, efforts were made to make these as identical and as versatile as possible. Adjustable footloops were taken where possible as well as adjustable harnesses (i.e. not Diggers). Efforts were of course made to bring lightweight versions of individual pieces of gear such as Basics rather than Ascension jammers and omnis rather than steel main maillons. All except one SRT kit had a stop as a descender; this was due to weight considerations as well as their versatility in rescue scenarios.



Food & Water

After the slight malnourishment we experienced in 2011, where there simply wasn't enough food, we didn't want to go through the same again in 2012, so this year a lot more effort went into making sure we'd have enough. Cat put a lot of thought and consideration into to the kinds of food we should take. We wanted foods that would be energy dense, i.e. high in calories and nutrition for its relative weight, but also foods that would be quick to cook and thus reduce the amount of fuel required. In addition, we wanted to have a variety of (tasty!) meals, with different carbohydrates and proteins. Cat did some research and produced a nutritional value table for a range of different foods (see appendices).

Breakfasts

For breakfasts, granola was shown to have more calories than either muesli or porridge (and is generally accepted to be much tastier). Porridge has been a staple on previous expos, but as it also requires cooking, granola was deemed to be a preferable option. In 2011, Žabljak shops were found to stock a small range of breakfast cereal at a massively inflated cost, which seemed to still be the case in the subsequent years. After contacting Mornflake to request sponsorship, which was kindly granted, the 25 kg sack of granola was converted into breakfast bags. These were assembled in the UK and made up using 1 weetabix, 180 g granola, 20 g raisins and 30 g milk powder, all double bagged together in sandwich bags. This amounted to around 1000 calories per bag, only needing water adding to them. It worked brilliantly since it meant there was no cooking required in the morning and so made everything more efficient.

Lunches

As on previous expos, we went for a mixture of bread, salami, pate for lunches, with the main difficulty always being the bread. On day one it's pleasant, day two is tough, on day three your jaws hurt by the end, and day four is a total farce since you have to take a mouthful of water with each bite of bread. Without a huge amount of optimism, we tried freezing the bread in the YF10 snow plug which turned out to work incredibly well. The one thing worth remembering is that the snow plug recedes quite a lot each day, so to last for four days they need to be well buried! Peanuts are a good snack, providing plenty of both carbs and protein. With a ration of a third to a half a loaf of bread, a decent size chunk of cheese/salami, a dollop of pate and handful of peanuts, this works out at not much under 1500 kcal each.

Evening meals

Cat put together some great recipes for evening meals, all based on lightweight high calorie ingredients.

In terms of carbohydrates, noodles have high energy density but are also expensive and would need taking from the UK. Couscous has good nutritional value but is also not available in Žabljak, though might be worth considering taking in future. Brown rice had a highest number of calories but takes longer to cook and so, with similar calorie and carbohydrate levels, pasta and white rice were the optimal choices, with some smash taken to add variety as this can be made up with leftover cooking water.

It is difficult to eat meat on expo due to lack of refrigeration and also due to its expense. Because of this we had to look at other protein sources. By far, the product with the highest density was TVP (textured vegetable protein; dried soya). However, due to the adverse effects this substance is known to have on the digestive system, it was preferable not to be eating it every day. Red lentils, dried beans, cheeses and cured meat (such as chorizo) all have similar levels of protein and calories.



When it came to deciding on recipes, it was decided to have TVP for approximately half the meals, with a variety of other proteins for the rest. There was also a mixture of different carbs and a mixture of tomato/non-tomato meals. Meals were chosen that could be easily made with vegetbables we knew to be available in Žabljak (onions, garlic, courgettes, aubergines, peppers). All meals were cooked using one large aluminium pan (approx. 10 L) and one 6 L pressure cooker. All cooking was done on 2 MSR Whisperlite stoves running on unleaded petrol. Not only was this definitely the most lightweight set-up we could have had, but it was also inexpensive.

Meals were planned in advance with approximate weight of ingredients to give sufficient calories; the aim was for around 3500 kcal per person per day, with approximately 1000 kcal for evening meals which was easily achievable. Recipes, on the other hand, came out of Cat's head and were modified on the fly and recorded lab book style with notes for improvement (see appendices). Meals decided on were TVP spaghetti bolognese, TVP chilli, TVP thai green curry, moroccan TVP, pasta and butter bean pesto, dahl, and mushroom risotto. On Mike's birthday we had custard and ginger nuts as a treat.

Buying food

A large amount of dried food was bought in advance from the UK and transported to Žabljak *via* the campervan (see appendices). TVP and beans were bought from a wholefood shop in York. Several items were bought online. Although a large tub of pesto was a lot more expensive than the corresponding amount from a supermarket it had the overwhelming benefit of being packaged in plastic rather than numerous glass bottles, reducing weight and the chances of damage. Dried mushrooms were cheaper to buy in bulk. Some items could have been bought slightly cheaper elsewhere, but were bought from Shorters website to help make up the minimum order cost. Most other items were bought from the supermarket. We took one tube of tomato puree and one pack of passata per tomato meal in order that there would be something to eat if these were unavailable in Žabljak.

Dried foods brought from the UK and surplus breakfast bags were stored in the campervan. Food runs into Žabljak were done approximately every 3 days, with a team of 2 or 3 going each time, organised such that everyone took their turn. This would involve walking down the mountain in the morning with an empty rucksack (apart from any rubbish that needed disposing of) and then shopping in Žabljak and collecting any food from the campervan that was required for the following few days. This generally equated to a weight of around 25–30 kg each to carry back up the mountain in the afternoon.

We searched the supermarkets in Žabljak for some of the things we brought from the UK to see whether or not they were available.

Water

Despite a great deal of effort in 2011, no running water or even permanent pools of water could be found anywhere near camp. Because of this, we had to rely on melted snow for all our cooking and drinking water. This was collected from YF10 (a 5–10 min walk from camp) in Bernies bags carried in rucksacks, then left tied to bunda on a slope above camp to allow the snow to melt (ground contact is important for more efficient melting).

One of the Bernies bags was fitted with a pipe which went to a Lifesystems carbon filter. The idea was that once snow had melted it would be decanted into this bag; water would then be filtered into a further Bernies bag which was fitted with a tap (using washing machine piping and margarine tub washers) to allow filling of water bottles. Unfortunately, the filter was not particularly successful. Despite moving the top bag to the highest possible location above the receiving bag to try to increase the head of pressure, filtration was painfully slow and the filter was easily clogged, requiring regular maintenance. There was no



way that the demand for water could be kept with this method alone. A polypin that had been taken in the campervan was brought up the mountain and used to replace the receiving Bernies bag. The bag with the tap was then fitted with a "coarse filter" (*i.e.* a pair of tights) to remove large contaminants from the water before going into bottles; the bottled water was then chlorinated.



An initial attempt at filtering water © Toby Buxton

Prospecting

Areas covered in 2012:

Gornja Ališnica

Gornja Ališnica is a broad valley running North-South. To the North-East it joins Donja Ališnica *via* a small steep section. The South East, round to the West sides are very steep. From the West round to the North East the sides are slightly less steep. Looking from where Donja and Gornja Ališnica join, the valley appears to be bisected by a large rib. This is not obvious on the map but appears in the SSW corner as a small protrusion from the ridge. To the East of the rib the valley is either not worth looking at or has been prospected. The Eastern side of the valley has been looked at (YF10 etc), but the very South East end (near a large crack in the cliff) has not been looked at, though does not look promising. Since the camp is based here, it's largely been covered. The majority of Gornja Ališnica was systematically prospected in 2011; the rest was looked at in 2012 but didn't appear to be very promising.

Valoviti Do (S)

A large bowl located north/east of Bobatov Kuk (Durmitor's highest peak). One prospecting trip ventured here in 2012, going over the col from Gornja Ališnica. Unfortunately it's not only a horrible ascent from GA, but also a horrible descent into a boulder field into Valoviti Do (V-Do), which itself doesn't seem to hold much promise. Further NE heading into Biljegov Do does look more promising, but this wasn't looked at in 2012. Being close to the path, it may be that it's already been looked at at some point.



Valoviti Do (N)

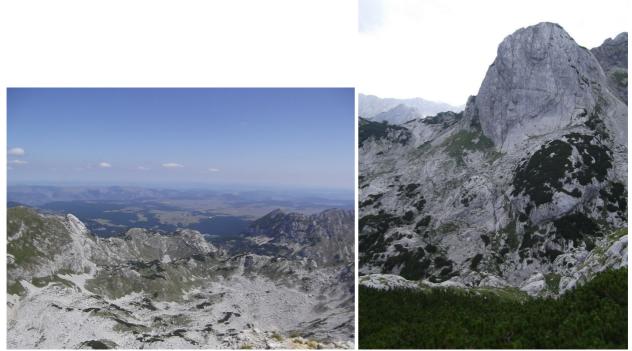
NB. A different area to the one above; this is located north of Gornja Ališnica. Covered in 2012. Some entrances found, some need a return.

Kobilji Do

Kobilji Do (K-Do) is a bowl with very high, steep sides to the South and West and a lower and less steep side to the North where it joins Donja Ališnica. The East side drops away to a valley in a similar fashion to Donja Ališnica. Kobilji Do can be reached from Donja Ališnica over the col just to the West of the large cave mouth on the southern ridge. The bottom of the bowl is filled with boulders. To the south is a long scree slope. The bottom of the bowl and the South, West and North sides and about half way up the scree slope were prospected in 2011.

In 2012 a significant amount of time was spent prospecting the eastern valley regions of K-Do, as well as the ridge that joins Donja Ališnica to the north. After deciding that the area held a lot of promise, a new route into the valley was scouted out; climbing up the slope just to the west of YF1, a channel through the trees can be followed which leads eastward along the ridge towards the col previously used to gain access to the valley. This route cuts out a large amount of descent and ascent as it avoids having to drop back down into Donja Ališnica from camp.

A lot of the rock in K-Do is in large solid chunks, unlike the scree and boulders often seen elsewhere in Durmitor. The eastern side of K-Do, beyond the scree slope, is dominated by a huge vertical crag, Obla Glava. At the foot of this crag is a large bulging outcrop of rock which is largely covered in bunda, dubbed "the whale". In the valley floor are several more outcrops, whilst the southern side of the valley contains several outcrops and canyon-type features. The rough, uneven terrain as well as the sheer quantity of solid limestone means that despite a significant amount of time and manpower, we have only scratched the surface; there is still a lot more prospecting and shaft-bashing to do in K-Do.



V-Do, as seen from Bobatov Kuk; The dominating peak of Obla Glava, with the bunda-covered "Whale" below © Catherine Moody



Sirni Do

An area lying North-East of Valoviti Do (N). Covered in 2012. Some entrances found, some need a return.

Katava Novosela

This lies on the footpath heading north out of Donje Ališnica. One trip headed this way in 2012, largely to see what the ground was like in the more northern regions. A few entrances were found that need kit to return. Looking towards the regions further north, there was far too much tree coverage to be able to prospect.



All entrances logged and marked in 2012

Areas for 2013:

Korita

Whilst most of Kobilji Do itself was prospected in 2012, the area extending across to Korita was not, and given the density of entrances found in Kobilji Do it should probably be a priority for 2013.

Skrapa

The edge of Skrapa represented the NW limit of the prospecting in 2012 in this area, so it is probably worth a team heading further NW to see what the area looks like.

M. Rutulja

Similarly to Skrapa, M. Rutulja lies just outside the limit of the 2012 prospecting. This area in general doesn't seem to hold the same promise as Kobilji Do, but it's certainly worth looking at.

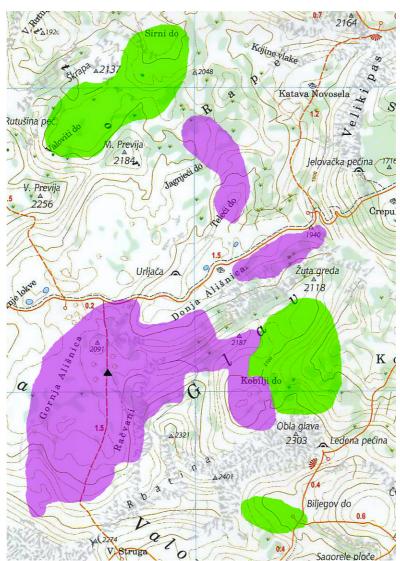


Kotac

This is an enticing steep-sided bowl N of M. Rutulja. Who knows if it's any good, but it certainly looks intriguing.

Biljegov Do

This is a bowl lying between V-Do and Obla Glava. It was visited in 2012 and looks like it may be promising but it was not prospected.



Part of Durmitor, showing regions that have been systematically prospected. Those in purple show areas covered in 2011; those in green show areas covered in 2012. The location of camp is denoted by a black triangle.



Major finds

YF1

Located at the eastern end of Gornja Ališnica, only 5 mins walk from camp, YF1 was one of the main priorities for this expedition. An enormous shakehole, with a giant snow plug about 30 m down, it had been left after 2011 at the start of a large steeply descending snow tunnel.



The YF1 shakehole © Mandy Fu

In 2012 the cave was pushed and surveyed over several trips to a depth of 133 m before running out of rope part way down a pitch. The route is mostly through snow, with rock often visible on one side of the passageway. At around -100 m there was a breakthrough into a large chamber with a steep slope of snow and several potential ways on. The route that was chosen was down a hole in the snow close to where the previous pitch landed. There are several open leads still in YF1, including a window through the snow into a large opening that could be seen from the final pitch. Given that a return is definitely on the cards regardless, none of the other routes were pushed in 2012.

2012 trips to YF1:

31st July: pushing (SG, TFB, AJV) 3rd August: surveying (SG, MF); pushing (MTS, AG) 4th August: surveying (SG, AW); pushing (CQB, CLM)

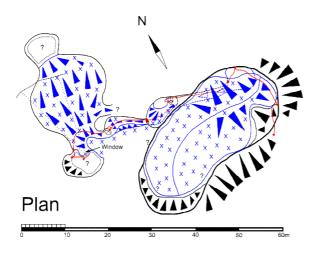
5th August: entrance surveying (SG, AW, MTS); derigging (MTS, AJV, MJR)





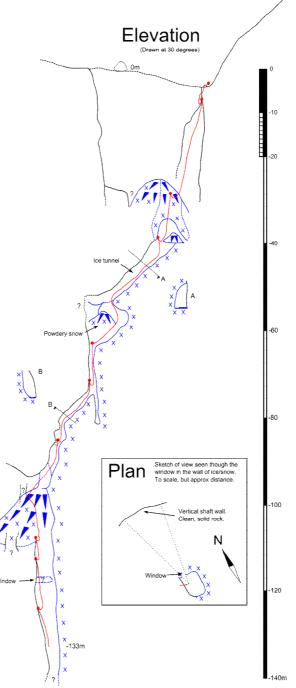
The entrance snow tunnel; Descending into the main chamber; AW in the main chamber; Ice formations; The view from the end of the rope © Steve Gilbert





YF1 - JVC Pot

Location: N 43.14341 E 19.03819 Altitude: 2079 m Length: 229m Depth: 133m Surveyed 2012: Steve Gilbert, Mandy Fu, Adam Walmsley





Located in Gornja Ališnica (South-East), tucked into a corner of the cliff. It contains a large snow plug which was used as our water source throughout the expedition. In 2011 entry had been sought down one side of the snow plug. On returning in 2012, a way on was found further round the snow plug, and following a traverse along a rock wall underneath the snow, a way was found down a steep snow slope into a sizeable chamber. The cave was predominantly horizontal with 3 ways on from the chamber, all of which terminated, though two of these ended at an aven, one of which was drafting.



Entrance; Ice column in the main chamber © Mandy Fu

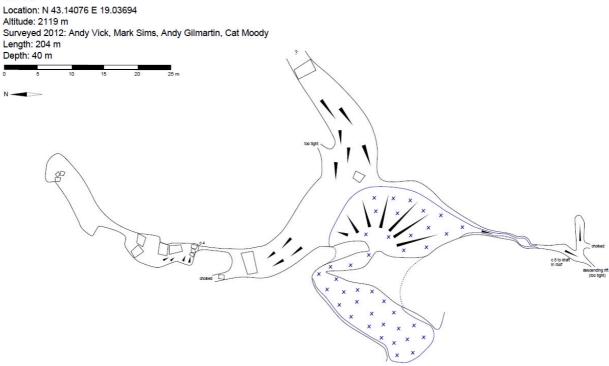
Trips to YF10:

5th August: pushing (MTS, AJV, MJR) 6th August: pushing (MF, AG); surveying (MTS, AJV) 10th August: surveying (AG, CLM)





More ice formations in a side passage; The boulder slope in the main chamber © Mandy Fu



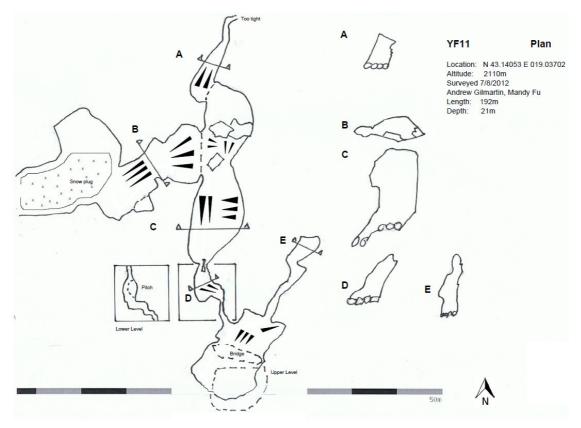


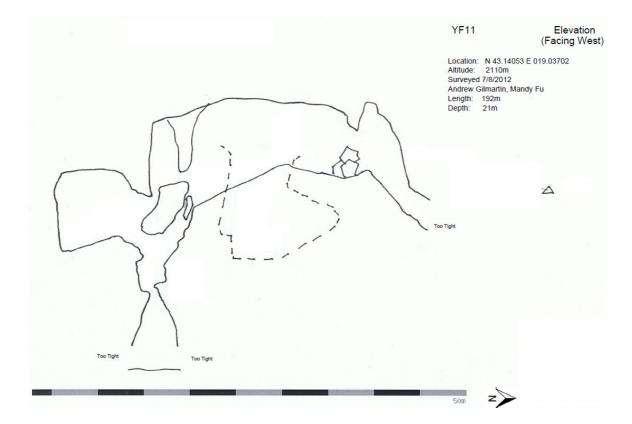
Located a few metres from YF10. This was looked at in 2011 but thought to be a no-goer unless the snow level dropped, assuming any progression would be downwards. A return by AG and MF found a way up away from the snow plug into dry passage which continued into a few sizeable chambers followed by a pitch. This was pushed by TFB and CLM but found to terminate. The survey shows that this pitch is very close to the drafting aven in YF10 and the draft felt in both caves may well be emanating from each other.



Entrance; Large chamber, with the way on highlighted; climbing up the snow plug © Mandy Fu





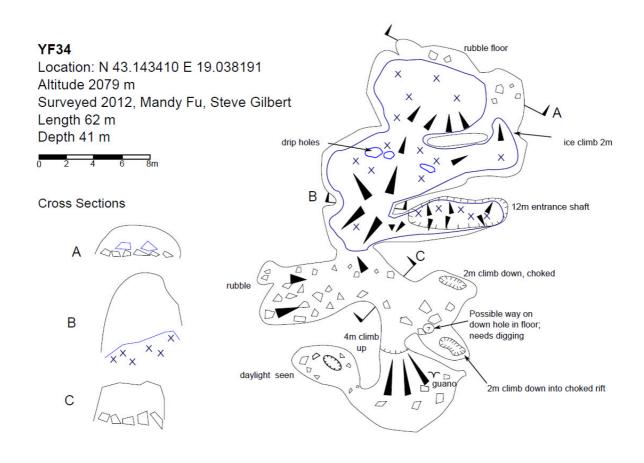




Located on the rib at the western end of Gornja Ališnica. Two trips were made here; an initial exploration then a return for surveying. The entrance pitch drops into a chamber with multiple ways on, all of which terminated. One of these is down a snow slope where a number of large ice formations were found.



Snow slope; Ice formations © Steve Gilbert



Expedition diary

A summary was made of what each expedition member did on each day.

Date	Personnel	Activity
26/07/2012	MTS, CQB, TFB	Walk up to camp
27/07/2012	MTS, CQB, TFB	Prospecting W of 2012 limits in Gornja Ališnica
28/07/2012	MTS, CQB, TFB	Prospecting Valoviti Do (S) (to Concoction Pot)
29/07/2012	MTS, CQB, TFB	Set up tarp and water for camp
30/07/2012	SG, AG, MF, AW, AJV, CLM, MJR	Walk up to camp
	TFB, CQB	Guide for others + food carry
	MTS	Camp
31/07/2012	SG, AJV, TFB	Pushing YF1
0110112012	MJR, MTS, MF	Shaftbashing in Gornja Ališnica (SW ridge)
	CQB, AG, AW	Prospecting in Gornja Ališnica (N)
	CLM	Camp + job interview
01/08/2012	SG, MF, TFB	Shaftbashing in GA (SW ridge)
01/00/2012	MTS, MJR, CLM	Shaftbashing in GA (SW ridge) + CLM job offer!
	CQB, AG, AW	
		Prospecting + bull attack
02/08/2042	AJV MTS SC CLM	Camp Food run to Žoblick
02/08/2012	MTS, SG, CLM	Food run to Žabljak
	MF, AJV, TFB	Shaftbashing in GA (SW ridge)
	AG, AW, CQB	Shaftbashing in Green Zone (2011 report map)
	MJR	Camp + trench construction
03/08/2012	MF, SG	YF1 surveying
	MTS, AG	YF1 pushing
	AW	YF1 back-up and bilberry picking
	CLM, MJR, TFB, AJV	Prospecting K-Do ridge
	CQB	Camp
04/08/2012	MF, AG	Food run to Žabljak
(Mike's	CQB, CLM	YF1 pushing
birthday)	SG, AW	YF1 surveying
	AJV, MJR, TFB	K-Do prospecting (inc. finding new route)
	MTS	Camp
05/08/2012	MTS, AJV, MJR	YF1 de-rigging then YF10 pushing
	SG, CLM, TFB	Prospecting in K-Do
	CQB, AW, AG	Shaftbashing Green Zone + prospecting Sirni Do
	MF	Camp
06/08/2012	SG, CLM, MJR	Shaftbashing K-Do ridge
	MF, AG	YF10 pushing + YF11 pushing
	AJV, MTS	YF10 surveying
	CQB, AW	Scouted Vodeni Do + prospecting Kojine vlake
	TFB	Camp
07/08/2012	MTS, CQB	Prospecting Sirni Do
	TFB, CLM	YF11 pushing + YF9 pushing
	MF, AG	YF11 surveying
	AW, MJR, AJV	Food run to Žabljak
	SG	Camp
08/08/2012		
00/00/2012	TFB, MJR, MF	Prospecting K-Do
	CLM, SG, AJV	Shaftbashing in K-Do
	AG, CQB, MTS	Shaftbashing in Sirni Do
	AW	Camp



SG, AJV, TFB	Prospecting K-Do				
MTS, MF, MJR	Shaftbashing on K-Do whale				
CLM, AW, CQB	Walking (Bobatov Kuk, Ice cave + K-Do)				
AG	Camp				
SG, MTS	YF1 surface survey (evening)				
SG, TFB	Shaftbashing YF39				
MTS, AJV, AW	Prospecting K-Do				
MF, CQB	Shaftbashing YG5				
AG, CLM	YF10 surveying				
MJR	Camp				
	MTS, MF, MJR CLM, AW, CQB AG SG, MTS SG, TFB MTS, AJV, AW MF, CQB AG, CLM				

Expedition costs

As a student club, we always strive to keep expeditions as cheap as possible.

For 2012, communal costs were as follows:

Item	Total cost	Cost per person
Gear	£453.09	£45.31
Food from the UK	£109.81	£10.98
Shopping in Montenegro	£273.49	£27.35
Total (minus GP grant)	£436.39	£43.64

Most people got travel insurance through Dogtag who assured us that we would be covered for expedition caving. This came to approximately £50 pp.

Thanks to the Ghar Parau grant, the expedition fee came out as just £43.64 per person to cover food and gear. On top of travel costs (approx. £350 pp) and insurance, this totals at a main cost of around £450 each for the 2 week expedition.

Most members also had additional costs for personal camping and caving equipment bought for the expedition.

Looking ahead: 2013

YF1 is by far the biggest lead from the 2012 expo, at -133 m and still going, along with having multiple leads further up. This will therefore be a high priority for the 2013 expedition. There are also many entrances that we didn't have chance to visit with SRT gear (see appendices) along with multiple areas that were identified but have not yet been prospected. We believe we could cater for more people in terms of camp space and cooking facilities so will aim to have around 15 people as the best compromise between manpower and logistics.

Appendix: Gear spreadsheet

Item	Number to take	Individual weight / kg	Total weight / kg
Prospecting Kit			
Compass/Clino + peli case	1	1.3	1.3
GPS	3	0.5	1.5
Tape measure	1	0.4	0.4
Radios (per pair)	3	0.4	1.2
Nail Polish	8	0.05	0.4
Maps/Logbooks etc	1	0.8	0.8
Mapcase	3	0.072	0.216
Pens Pencils	10	0.02	0.2
AA batteries	60	0.03	1.8
AAA batteries	60	0.015	0.9
777770000000		0.010	0.0
Tents etc.			
Toby (1m)	1	0.8	0.8
Mark (and Andy G)	1	3	3
Mandy (and Walmsley)	1	2.4	2.4
Andy V (and Cat)	1	2	2
Mike (and Steve G)	1	3.7	3.7
Chad (1m)	1	1.5	1.5
Tarp pole	2	1.181	2.362
Large tarp	1	2.43	2.43
Small tarp	2	0.5	1
Repair Stuff (* see right)	1	1.3	1.3
Pegs, Cord/Bungee for tarp	1	1	1
Living			
Stove (Wisperlite)	2	0.55	1.1
Expo Pan	1	1.9	1.9
all singing wind shield	1	0.25	0.25
metal bbg sgewers + tin foil shield	1	0.1	0.1
stove spares kit	1	0.1	0.1
extra to upgrade fuel bottle size	1	0.03	0.03
Cooking Utensils (all)	1	0.5	0.5
Brekkie bags	132	0.25	33
Petrol can	1	0.5	0.5
Water Filter	1	0.5	0.3
Bernies bags	8	0.7	1.12
Funnel	1	0.14	0.2
Mini snow rake	1	0.2	0.2
Toilet kit(bogroll, alcoholgel, lighter)	4	0.215	0.215
Camp Hand Sanitizer	4		
Chlorine/lodine tablets	-	0.25	0.25
	1	0.2	0.2
Snow Shovel	1	0.6	0.6
Pressure Cooker	1	2.4	2.4
Toby's battery charger	1	0.1	0.1

Coving/Choft Deching			
Caving/Shaft Bashing			
Bothy	3	0.55	1.65
Rope (some will be as rescue, 55m)	235	0.08	18.8
Sling	7	0.06	0.42
Sling (120cm, 1")	5	0.12	0.6
Rope Protector	5	0.2	1
Screwgates	30	0.07	2.1
Hangers + bolts	25	0.16	4
Spits (some will be as rescue)	70	0.02	1.4
Bolting Kit (one will be as rescue)	2	1.5	3
Communal First Aid Kit	1	0.6	0.6
Tacklesacks	1	0.6	0.6
Cord	50	0.01	0.5
Stop+2 krabs	6	0.44	2.64
Omni	6	0.086	0.516
Croll	6	0.135	0.81
Cowstails +2 krabs	6	0.3	1.8
Safety link+footloop	6	0.281	1.686
Hand Jammer + krab	6	0.26	1.56
Chest tape	6	0.12	0.72
Harness	6	0.54	3.24
Pulley+oval	6	0.16	0.96
Extra Pulleys for rescue	3	0.056	0.168
Tibloc	6	0.038	0.228
Spanner	6	0.058	0.348
Oversuit	5	1.4	7
Undersuit	4	0.8	3.2
Helmet+light	7	0.62	4.34
knee pads	3	0.4	1.2
Crowbar	1	0.75	0.75
Small set of lead gear	1	0.4	0.4
×			
Entertainment			
Travel chess	1	0.1	0.1
Cards	1	0.09	0.09
Carcassonne	1	0.355	0.355
Carcassonne expansions	1	0.2	0.2

Appendix: Nutritional information

Item	Kcal /100 g	Carbs g/100 g	Protein g/100 g	Time to cook	Comments
Pasta	353	79	11	10 min	
Rice	352	76	9	10 min	
Brown rice	362	76	9	20 min	
Noodles (egg)	346	70	12	3 min	Relatively expensive
Cous cous	376	77	13	Hot water	
Bread	265	51	10	n/a	Perishable
Smash	336	75	8	Hot water	Reckons 30 g serving; lots of water required
Porridge	370	62	10	3 min	
Muesli	375	65	12	n/a	
Granola	428	62	9	n/a	
Red Lentils	370	58	27	20 min	
Dried Beans	340	62	22	Varies	
TVP	345	35	50	Pre-soak	
Cheese	365	0	23	n/a	Perishable
Peanuts	570	21	25	n/a	
Salami/chorizo	455	2	24	n/a	
Pâté	320	5.6	8.8	n/a	
Milk powder	365	53	36	n/a	
Pesto	637	1.2	3	n/a	69 g fat

NB. Values from a variety of sources and therefore approximate.

Appendix: Food taken from the UK

Item	Quantity	Source	Cost
TVP chunks	2 kg	Alligator (York)	£6.20
TVP mince	3.4 kg (+ 600 g used on training weekend)	Alligator (York)	£10.24
Kidney beans	1.5 kg (+ some used on training weekend)	Alligator (York)	(beans £11.23 total)
Butter beans	2 kg	Alligator (York)	(beans £11.23 total)
Risotto rice (Chef's larder)	2 kg	Shorters (Online)	£3.70
Pesto (Chef's Larder)	400 g	Shorters (Online)	£8.47
Smash	2 kg	Shorters (Online)	£7.05
Dried mixed mushrooms (Chef's brigade)	400 g	Shorters (Online)	£8.79
Red lentils (Natco)	2 kg	Shorters (Online)	£3.34
Beef stock cubes	60	Shorters (Online)	£4.08
Delivery		Shorters (Online)	£5.50
Thai green curry paste (Mae Ploy)	2 x 400 g	Rafis (York)	£4.50
Coconut milk powder (Maggi)	400 g	Rafis/Tesco	Approx. £4.00
Raisins	500 g	Tesco	Approx £1.50
Dried apricots	1 kg	Tesco	£4.99
Tomato puree	8	Tesco	Approx. £4.00
Passata	8	Tesco	Approx. £2.72
Milk powder	2 x 454 g	Tesco	£2.30
Teabags	Unknown	Tesco	-
Herbs and spices	-	Various	-

Appendix: Recipe notes

Spag Bol #1

800 g TVP mince briefly soaked in 5 stock cubes. 5 diced onions sweated in water (no oil as shoppers forgot to buy). 1 bulb garlic, 2 diced courgettes, 3 diced peppers. All above chucked together in expo pan with 3 x passata, 1 tube tomato puree, 1 handful organo, 4 handfuls mixed herbs, 5 extra stock cubes. Simmered til veg cooked.

2 kg pasta cooked in 2 x 1 kg batched in pressure cooked. Took ages to come to pressure! Couple of mins at pressure then cooled.

1st batch used enough water to cover pasta – too much. 2nd batch approx. half covered – not enough!

Verdict: Toby – very nice. Mark – it's had a profound effect on my digestive system. Andy – could have been more tomatoey. Had some Bolognese left over – finished as starter the next day. No pasta left.

Dahl #1

1 handful of cumin seeds roasted in pressure cooker. 1 kg lentils, 5 onions (diced), $\frac{1}{2}$ bulb garlic – all cooked in pressure cooked with enough water to cover and brought to pressure with approx. 10 tsp garam masala, 3 tsp ground coriander. Lentils not quite done – put back on with one box passata. Brought back to pressure for 1 min then added another sprinkle of garam masala, 1 box passata, $\frac{1}{2}$ tube tom puree. Simmered for a bit.

2 kg rice cooked in expo pan. Simmered for ages but still a bit crunchy. Next time, try in pressure cooker.

Verdict: Yummy but add some salt next time.

Thai green TVP chunks #1

750 g TVP chunks, soaked in 2 chicken stock cubes and couple spoonfuls of thai green paste. 4 diced courgettes pre-cooked with chunks in pressure cooked for ~3 mins (done in 2 batches). Approx. 300 g of thai paste fried for a couple of mins then added chunks, courgettes, ~200 g powdered coconut milk and water. Simmer for a few mins. Mind blowingly hot! Lots more normal milk powder added. No aubergines cos shoppers bought cucumbers instead (?!)

2 kg rice cooked in pressure cooker (2 batches)

Verdict: Still very hot! "Best TVP meal I've ever had". Finished just about everything.

"Chorizo" and butter bean stew

5 onions, diced and fried with 1 bulb chopped garlic. Added 4 thin salami sausages (cut into chunks), 5 diced peppers, 1 kg butter beans (soaked and pre-cooked in pressure cooker), 3 packets passata, 1 tube tomato puree. Sprinkle of chilli powder to make more chorizo-ey. Simmered for a bit and added some salt. 1 kg pasta cooked in pressure cooker. Leftover water used to make smash (~400 g). Needed lots more water to make smash.

Verdict: Toby – fucking delicious. Tasty tasty, nom nom.

TVP Chilli

5 onions (diced), ½ bulb garlic fried in oil with handful of chilli flakes. 4 diced peppers added. ~700 g TVP mince briefly soaked in 5 beef stock cubes and water then added to expo pan with 3 x passata and ½ tube tomato puree. 750 g kidney beans cooked in pressure cooker (15 mins?) then added to pan with 5 beef stock cubes and sprinkle of chilli powder. Simmer.

1 ½ kg rice in pressure cooker (2 batches)

Verdict: Tasty, good heat.

Mushroom risotto

4 diced onions, 1 bulb chopped garlic fried in oil in expo pan. Added 2 ½ kg risotto rice and briefly fried. Added chicken stock (some taken from 8 stock cubes and lots of water), ~300 g dried (mixed) mushrooms soaked in water and chopped smaller (NB. Easier to break up when dry!) Added to pan and water used as stock. More water added and cooked til cooked. Bag of sweetcorn added and heated through.

Verdict: Yummy, but a bit too much - not quite finished. Took a while to cook but worth it.

Pudding: 6 sachets of Birds instant custard powder, 2 litres water. 20 ginger nuts.

Moroccan TVP stew

500 g TVP chunks soaked in water, ground ginger, cinnamon, honey (~1 tbsp) and 1 tbsp tom puree during the day. Cooked in pressure cooker for couple mins (2 batches). 5 diced onions and ½ bulb garlic fried in oil. 2 aubergines diced, salted and added to fry. TVP added plus 1 x passata and water. Extra honey, ginger and cinnamon added to taste. Added 750 g chopped dried apricots and couple handfuls raisins.

1 kg pasta + ~400 g smash.

Verdict: Yum. All eaten rather quickly! Fruit is good. Should have had more?

Pasta pesto

500 g butter beans in pressure cooker. 2 kg pasta cooked in expo pan – water drained and used for ~200 g smash. Beans and pasta mixed with 800 g green pesto. All eaten quickly!

Pudding: Custard + ginger nut + few apricots each.

Verdict: More! 250 g pasta each next time or more smash.

Chilli #2

5 onions, 1 small bulb garlic, 5 peppers fried with generous sprinkle of chilli flakes. Unknown quantity of TVP mince (800 g?), 10 beef stock cubes, 3 passata, 1 tube tom puree, generous sprinkling of chilli powder. 750 g kidney beans cooked in pressure cooker for 15 mins. ~500 g butter beans pressure cooker, 15 mins). All simmered in expo pan – overflowing!

1.5 kg rice in pressure cooker.

Verdict: tasty. Slightly too much? Toby disagrees, he likes leftovers for pudding.

Thai green #2

750 g TVP chunks soaked for 1 day in 2 chicken stock cubes and ~2 tbsp curry paste. ~100 g paste fried for couple mins. Small amount of water added then 4 diced aubergines fried. Added ~200 g coconut milk powder and more water. TPV chunks pressure cooked for couple mins then added to pan. Simmer. Still v hot! Lots of normal milk powder added.

1.5 kg rice in pressure cooker (2 batches).

Verdict: v good. Intermediate hotness would be preferred i.e. between #1 and #2. All eaten.

Dahl #2

5 diced onions fried with small bulb chopped garlic and handful of cumin seeds in oil in expo pan. Meanwhile, lentils (1 kg) cooked in pressure cooker with enough water to cover plus approx. 10 tsp garam masala, 3 tsp ground coriander – brought to pressure and cooked for a couple of mins. Transfer to expo pan, add 2 boxes passata, ½ tube tom puree. Simmered (for quite a while as lentils still crunchy – pressure cook longer)

2 x 1 kg rice in pressure cooker.

Spag Bol #2

~100 g mixed dried mushrooms broken into smaller pieces, soaked in pressure cooker with 800 g TVP mince, 5 beef stock cubes and 4 L water. 5 diced onions, 1 bulb chopped garlic fried then 5 chopper peppers added and fried for few mins til mostly cooked. Added TVP/mushrooms, 3 x passata. 5 stock cubes, 2 tubes tomato puree, mixed herbs (5 handfuls) and oregano (3 handfuls). Simmer.

2 x 1 kg rice in pressure cooker

Verdict: Better than last time.

Final thoughts on food:

- Breakfast bags (180 g granola, 1 weetabix, 20 g raisins, 30 g milk powder) = WINNER. Just about right (average verdict). NB. 1000 kcal.
- ~65 g TVP pp per meal might be optimum? Top up with bread/rice/pasta if required
- Next time bring a garlic crusher
- expo pan lid and back of mess tins work ok as chopping board
- 1 extra trangia pan turned out to be useful for mixing smash etc
- snacks: not prunes. Yes to eurocreme, jam, peanuts, orange juice powder, apricots (latter from UK, rest from Žabljak)
- ¹/₂ an apple a day every now and again went down well (as did watermelon)

<u>Available in Žabljak:</u> Chicken stock cubes Random puddings (angel delight, blancmange type things) Tomato puree passata

Not available: Beef stock cubes custard lentils tea bags dried fruits

Appendix: Personal expenses

Item	Cost	Category	Person
Water filter	£38.01	Gear	Mark
Shovel	£22.00	Gear	Toby
Tank Connectors	£4.90	Gear	Mark
Spare filter	£26.56	Gear	Mark
TVP + beans	£27.67	Food	Cat
2 mm cord	£14.50	Gear	Cat
General food	£40.93	Food	Cat
General food	£17.81	Food	Cat
Raisins	£2.85	Food	Cat
Tarp	£31.62	Gear	Cat
First aid stuff	£32.35	Gear	Mark
Bothys	£73.44	Gear	Mark
Chlorine tablets	£20.06	Gear	Mark
Tick remover	£2.48	Gear	Mark
Emergency blankets	£5.07	Gear	Mark
Vitamins	£2.50	Gear	Mark
Curry paste	£4.50	Food	Cat
Nail varnish	£2.07	Gear	Cat
Nail varnish	£3.58	Gear	Cat
Rope protector	£16.55	Gear	Mark
Tent cord	£9.90	Gear	Mark
First aid stuff	£32.35	Gear	Mark
4mm cord for tarp	£1.79	Gear	Toby
Boyes - nailvarnish and lighters	£1.58	Gear	Toby
A-team TVP	£6.76	Food	Toby
Morrisons - shit kits and a-team food	£9.29	Food	Toby
Bull dog clips (for rope protectors)	£3.99	Gear	Steve
Cord (for rope protectors)	£1.50	Gear	Steve
Clips (for rope protectos)	£2.50	Gear	Steve
Gaffa tape	£4.00	Gear	Steve
Batteries	£25.00	Gear	Andy V
Pressure cooker	£44.99	Gear	Andy V
AAs + AAAs	£4.56	Gear	Toby
Fine permenant markers	£6.50	Gear	Steve
2 x pairs of tights	£3.70	Gear	Steve
Dust sheet	£3.00	Gear	Steve
Tubing	£7.00	Gear	Steve
Impact adhesive	£2.50	Gear	Steve
Taxi	£7.94	Shopping	Steve
Тахі	£7.94	Shopping	Walmslers
Taxi	£6.35	Shopping	Mark
Taxi	£7.94	Shopping	Chad
Taxi	£3.97	Shopping	Mandy
Food	£4.76	Shopping	Mandy
Bus	£1.19	Shopping	Mandy
Food	£13.72	Shopping	Mandy
Rope	£2.54	Gear	Steve
Food	£2.78	Shopping	Cat
Bus	£2.38	Shopping	Steve

Food Food	£31.75 £37.99	Shopping Shopping	Steve Mark
Food	£47.25	Shopping	Mike
Food	£7.80	Shopping	Mike
Taxi	£7.94	Shopping	Mike
Boarding passes	£1.91	Shopping	Mike
Food	£2.10	Shopping	Walmslers
Food	£7.80	Shopping	Walmslers
Petrol	£3.29	Shopping	Walmslers
Food	£0.32	Shopping	Walmslers
Food	£60.42	Shopping	Andy V
Food	£5.95	Shopping	Andy G

Appendix: Total expo costs

			Expo Costs			
Person	Total Expenses	Gear	Food	Shopping	Total	TOTAL
Toby	£45.98	£45.31	£10.98	£27.35	£43.64	-£2.34
Mark	£308.51	£45.31	£10.98	£27.35	£43.64	-£264.87
Chad	£7.94	£45.31	£10.98	£27.35	£43.64	£35.70
Steve	£79.30	£45.31	£10.98	£27.35	£43.64	-£35.66
Cat	£148.31	£45.31	£10.98	£27.35	£43.64	-£104.67
Andy V	£130.41	£45.31	£10.98	£27.35	£43.64	-£86.77
Andy G	£5.95	£45.31	£10.98	£27.35	£43.64	£37.69
Walmslers	£21.45	£45.31	£10.98	£27.35	£43.64	£22.19
Mandy	£23.64	£45.31	£10.98	£27.35	£43.64	£20.00
Mike	£64.90	£45.31	£10.98	£27.35	£43.64	-£21.26
TOTAL 10	£836.39	£453.09	£109.81	£273.49	£436.39	-£400.00

Ghar Parau:

£400.00

Appendix: 2012 Prospecting data

The table below lists all entrances discovered in 2012. For the most up-to-date information on all leads, go to http://durmitor.yucpc.org.uk/data.php?sort=1

Name	Alternative name	Date found	Personnel	Lat.	Long	Elevation / m	Accuracy / m	Length / m	Depth / m	Marking	Directions to entrance	Description of potential	Draft
YG1		27/07/12	CQB, MTS, TFB	43.13963	19.02992	2100	5	3	5	YG1	Gornja Alisnica rib. SW side of ridge halfway up.	Potential. Past entrance chamber a narrow slot heads down (would want oversuit) to possible turning to the right.	ND
YG2		27/07/12	CQB, MTS, TFB	43.13699	19.02808	2197	3	4	8	YG2	Above rib in Gornja Alisnica in area between top of rib and large rock butress. Found in a depression containing small snow plug. Rift entrance, snow met part way down.	Rift climbed down to snow. Apparently choked at both ends. May change with snow levels but unlikely.	ND
YG3		27/07/12	CQB, MTS, TFB	43.13671	19.0281	2212	3	7	2	YG3	Below large butress of rock that contains YG4 above rib on S side of Gornja Alisnica	No way on. Choked with boulders	ND
YG4		27/07/12	CQB, MTS, TFB	43.13634	19.02834	2240	4	3	5	YG4		Threw rocks down. Continue bouncing for 4-5 s out of sight. Worth a return. UPDATE [02/08/12 AJV, MF, TFB] Way on becomes too tight after 2 m.	
YG5		27/07/12	CQB, MTS, TFB	43.13533	19.02842	2284	4	17	10	YG5	Gornja Alisnica. (the one on the far RHS - there are others across the ridge	Low slot on left far end of chamber. Ceiling looks stable. Possible window have way down slot but not certain it goes. Needs oversuit. UPDATE [10/08/12 CQB, MF] Explored the flat out slot - a muddy crawl peppered with bat guano. Closes down after 3 m. No way on.	ND
YG6		28/07/12	CQB, MTS, TFB	43.13436	19.04896	2102	4	5	4	YG6	On the end of the ridge from Concoction next to the path	No way on. Choked with boulders	ND
YG7		28/07/12					4	1	10	YG7	By the path from [_?_] side of Valoviti Do	Rocks fall at least 3 s so defo get an SRT kit down. Possible horizontal progression	ND
YG8		28/07/12	CQB, MTS, TFB	43.13526	19.04633	2123	5	5	5	YG8	Edge of Biljegov Do. Off the path son an obvious limestone pavement.	Potential horizontal progression	ND
YG9		28/07/12	CQB, MTS, TFB	43.13542	19.04621	2116	5	3	14	YG9	Northern side of ridge between Valoviti Do and Biljegov Do. ~100 m from path in area of solid rock also containing YG 8 & 10	Too far to see down. Rocks sound terminal. Need to make sure with rope.	ND
YG10		28/07/12					5	5	10	YG10	NE side of ridge between Valoviti Do and Biljegov Do. Most North-Easterly in line of shakeholes (YG8 & 9)	Stones stop at ~8 m down. Needs gear to descend.	ND
YG11		03/08/12	AJV, CLM, MJR, TFB	43.1444	19.04712	2116	4	15	18	YG11 O/	Prominent double shake hole. Main entrance down	Crack in side of skaehole leads to scree slope through a slight constriction (care). Leads to	S

Name	Alternative name	Date found	Personnel	Lat.	Long	Elevation / m	Accuracy / m	Length / m	Depth / m	Marking	Directions to entrance	Description of potential	Draft
											4 m climb into hole *without* arch entrance	climb or crawl to chamber. Left here down a scree slope leads to pitch. Initial scree slope also leads here but is blocked. Pitch leads to choked chamber with no way on.	
YG12		03/08/12	AJV, CLM MJR, TFB	, 43.14445	19.04685	2122	5	10	25	YG12 OX	Top of ridge between Donja Alisnica and Kobilji Do. Southern side of ridge further down from YF[?]5	Large shaft, potential ways on at bottom. Needs rope. Adjacent shaft also needs rope to check out. UPDATE [06/08/12 CLM, MJR, SG] Shaft continues down past snow plug. Possibble way on up boulder slope on left, but roof very loose. Small crawl at bottom of snow plug leads to small chamber. No way on. Adjacent shaft: no go.	ND
YG13		03/08/12	AJV, CLM MJR, TFB	43.14462	19.0468	2119	4	15	8	YG13		Steep gully (loose, care!) into shakehole, leads to obvious arch entrance in SW wall. Follow round to rleft where a hidden rift/hole goes nowhere.	S
YG14		03/08/12	AJV, CLM MJR, TFB	43.145	19.047	2109	5	2	5	YG14 OX	Slit below bushes in small clearing.	Can see rubble floor at bottom of 5 m (ish) shaft. Requires rope to check for way on. UPDATE [08/08/12 AJV, CLM, SG] No go.	ND
YG15		03/08/12	AJV, CLM MJR, TFB	, 43.14481	19.04854	2104	3	2	4	YG15 O/	Small rift on S side of ridge that divides Donja Alisnica from Kobilji Do. Further down from YG11 etc in a similar but smaller area of exposed rock	Needs rope to determine if there is a way on. Not hugely promising. UPDTATE [08/08/12 AJV, CLM, SG] Resriction looks too commiting (sqeeze feet first horizontally over 2 m drop. Unknown holds on return for feet). Ie did not enter. Instead poked video camera + toch down on leki pole.	S
YG16		03/08/12	AJV, CLM MJR, TFB	43.14466	19.04912	2088	5	40	7	YG16	Southern side of ridge between Kobilji Do and Donja Alisnica	Passage seen to continue below boulders at foot of chamber. Worth a quick dig UPDATE [08/08/12 AJV, CLM, SG] No way on. Cool bit of cave though. Interesting formations.	ND
YG17		12/08/04		43.14633	19.05038	2073	4	5	12	YG17	NE end of ridge on Nside of K-Do. Big gully, go to adjacent gully to S. Bottom sink-hole (dug out). Entrance is 2-3 m above this in wall.	Rift at base needs descending but tight. Needs rope? Hammer might help.	S
YG18		05/08/12	CLM, SG, TFB	43.14238	19.04687	2085	5	4	4	YG18 OX	Kobilji Do, N of giant scree slope	Chamber with rubble floor. Small person-sized sloping slot down to left from climbing entrance. No way on.	ND
YG19		05/08/12	CLM, SG, TFB	43.14403	19.04892	2065	5	9	7	YG19 OX	SE side of valley overlooked by big cliff. On steep ground high up. 100 m NE of mouth/roof entrance (not marked)	Crap. Prospecting extremity	ND
YG20	Bunda Jama	05/08/12	CLM, SG, TFB	43.14288	19.04815	2028	5	20	40	YG20	in line with the large rib of solid rock that comes down from Obla Glava, further down Kobilji Do	Large hole with snow plug floor. Numerous gaps between the snow and rock, as well as a rift descending in the SE corner UPDATE [09/08/12 MF, MJR, MTS] Backed up rope at top of shakehole but climbed down to snow easily. Sling used for rebelay at first squeeze through boulders to traverse over rift in snow.	G

Name	Alternative name	Date found	Personnel	Lat.	Long	Elevation / m	Accuracy / m	Length / m	Depth / m	Marking	Directions to entrance	Description of potential	Draft
												Popping through a window to a 3 m long ledge led to another window to a pitch. Rocks rattled for 10 s. Can see 15 m into next chamber and 10 m down. Very promising draft! Used 40 m rope. Needs spit to descend pitch.	
YG21		05/08/12	CLM, SG, TFB	43.14321	19.0491	2016	6	8	4	YG21 OX	Rocky trench running at 40 degrees in middle of valley below cliff. NB about 50 m SE from here there's a crappy entrance (about 3 or 4 m drop into soil/rock floored chamber). Block blocking entrance.	Two connected chambers. No way on.	ND
YG22		05/08/12	CLM, SG, TFB	43.14246	19.04901	2022	5	15	10	YG22	Vertical line of cliff	Needs revisit with oversuit and possibly rope to [_?_] connection and possible way on	G
YG23		05/08/12	CLM, SG, TFB	43.14232	19.04705	2077	5	2	6	YG23	In Kobilji Do valley near large rib of rock. Small hole in rock. Fairly near where the valley begins to slope down towards the plain.	Rocks clatter a lot. Oversuit and probably rope required for descent (possibly too tight)	S
YG24		05/08/12	CLM, SG, TFB	43.14303	19.04702	2067	3	3	4	YG24 OX	Below big cliff in valley middle. Near boulders and trees, ie nondescript.	Dead end	ND
YG25		08/08/12	MF, MJR, TFB	43.14158	19.04934	2062	5	15	16	YG25	On É side of 'whale' part way into Kobilji Do	Needs rope to explore fully. UPDATE [09/08/12 MF, MJR, MTS] Went down S side into chamber/aven with light entering from above. Floor appeared choked around snow. W side seemed choked ~8 m below level of snow plug, but did not reach floor to check properly. Could not check N end due to a massive precarious piece of snow which hopefully will not be there next year. Worth a return.	ND
YG26		08/08/12	MF, MJR, TFB	43.14159	19.04945	2063	5	8	8	YG26	Directly below YG25 ~5 m. Hole with car-sized rocks balanced precariously.	Needs *careful* descent	ND
YG27		08/08/12	MF, MJR, TFB	43.14205	19.04916	2068	6	2	6	YG27	NE side of Kobilji Do 'whale'. Small shaft on NE side of choked gully. Fluted sides.	Leads to rocky floor. Not very promising.	ND
YG28		08/08/12	MF, MJR, TFB	43.14218	19.04894	2055	4	15	12	YG28	At end of choked gully on NE side of Kobilji Do	Much of shakehole is choked but rope is required to look at S corner where snow slopes	ND

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											'whale'. Large shakehole with snow plug.	down. UPDATE [09/08/12 MF, MJR, MTS] Pitch/slope at back of snow plug leads to choked floor. No way on.	
YG29		08/08/12	MF, MJR, TFB	43.14125	19.04906	2073	5	10	11	YG29	Largest of 3 shakeholes in a line	Needs rope to descend UPDATE [02/08/12 MF, MJR, MTS] Window leads to loose pitch head. Throwing rocks down results in rumbles from loose scree. Care!	ND
YG30		08/08/12	MF, MJR, TFB	43.14174	19.04825	2102	6	15	30	YG30	Far end of prominent rift on top of Kobilji Do 'whale'	Big rift. Needs kit.	ND
YG31		08/08/12	MF, MJR, TFB	43.14167	19.04825	2097	6	2	15	YG31	Just south of YG30 in prominent rift on top of Kobilji do 'whale'.	Hole that makes lots of cool noise :-) Hidden slightly in rift.	ND
YG32	The Blowhole	08/08/12	MF, MJR, TFB	43.14162	19.0483	2093	6	12	15	YG32	prominent rift on top of	Large hole with snow plug. Rift/boulder area to S has 1-2 interesting minor ways down (probably into same cave/rift) that may be worth descending.	ND
YG33		09/08/12	MF, MJR, MTS	43.1422	19.04893	2060	5				Seen & marked from YG28. Mahoosive cave entrance seen from afar. Entrance is a bearing of 50 degrees from the marked location about 200-400 m away. Large archway entrance on SW wall of cliff		ND
YH1		31/07/12	AG, AW, CQB	43.14346	19.0219	2313	3	3	3	YH1 '12	Top of ridge.	Digging - remove large rock and some others to find chamber and way on to master cave.	S
YH2		31/07/12	AG, AW, CQB	43.1441	19.02306	2270	4	3	4	YH2 OX	In most northerly of line of shakeholes with permanent snow plugs. Slot on E wall behind snow.	Termination	ND
YH3		31/07/12	AG, AW, CQB	43.14439	19.02346	2254	5	5	5	YH3	Near top of Gornja Alisnica near view point.	Blocked by snow. No way on.	ND
YH4		31/07/12	AG, AW,	43.14481	19.02489	2224	4	5	5	YH4	Near viewpoint on Gornja Alisnica ridge.	Termination, would need excessive manpower.	ND
YH5		31/07/12	AG, AW,	43.14477	19.02577	2186	4	2	6	YH5	3/4 of way up hill	Probable termination. Needs rope to descend.	ND
YH6		31/07/12	AG	43.14563	19.02549	2171	5	5	5		Low archway at bottom/side of shakehole	Way on has potential. However, ceiling looks loose. Extreme caution required to avoid collapse.	ND
YH7		01/08/12	AG, AW, CQB	43.14946	19.02262	2270	4	35	10	YH7	Area 1, rocky landscape. Small shakehole, small snow plug, loose rock.	Termination. Possible digging potential.	S
YH8		01/08/12	AG, AW, CQB	43.14761	19.02797	2102	4	5	5	YH8	Near camp on bowl, N edge of Gornja Alisnica	Marked out of interest for info. Water channels clearly flow into shakehole, but does not retain the water. Dig out snow & rocks below?	ND

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YH9		01/08/12	AG, AW, CQB	43.14755	19.02915	2071	4	2	1	YH9	Path near Gornja Alisnica	No way on. Choked with boulders	ND
YH10		02/08/12	AG, AW, CQB	43.15281	19.03248	2168	4	3	4	YH10	Green area. S side of hill ~30 m from ridge	Termination. Very limited digging potential. Sharp rock.	ND
YH11		02/08/12	AG, AW,	43.15488	19.03156	2081	4	4	9	YH11	Top of promised land	? Who the dickens knows? Snow plug is deep but a space leads down into oblivion. Needs rope & a determined person.	ND
YH12		02/08/12	AG, AW, CQB	43.15518	19.03208	2062	5	8	2	YH12	In green bowl. Like a Pillar Holes type cave in the middle of limestone pavement	Unknown, it may go under the pavement.	ND
YH13		02/08/12	AG	43.1556	19.03242	2058	3	1	7	YH13	Green area, centre of bowl.	Potential way on. Needs rope. Rocks rattle for 2 s.	ND
YH14		02/08/12	AG, AW, CQB	43.15593	19.03369	2070	4	5	8	YH14	First Chad excitement of expo. Middle of green area.	Chamber at bottom of shaft. Who knows where it goes? UPDATE [05/08/12 AG, AW, CQB] Termination	ND
YH15		02/08/12	AG, AW, CQB	43.15624	19.03401	2061	5	2	10	YH15	Bottom centre of green zone	Potential. Requires rope, gloves, kneepads.	ND
YH16		02/08/12	CQB	43.15589	19.0346	2050	4	7	5	YH16	In the middle of bowl in green area. Snow at the bottom of rift.	Unknown. Could not get down.	ND
YH17		02/08/12	AG, AW, CQB	43.15534	19.03372	2065	4	3	1	YH17	In the salad bowl.	Through trip! Small tunnel leads to other side of rocky outcrop.	Н
YH18		02/08/12	AG, AW, CQB	43.15438	19.03402	2073	4	3	10	YH18	Side of green bowl nearest camp	Snow plug at bottom: possible way around. Require rope to reach snow plug.	ND
YH19		02/08/12	AG, AW, CQB	43.15437	19.03411	2068	4	2	2	YH19	Fruit bowl. Cave took our chimp's arm!	Snow plug but stones tinkle for \sim 1 s therefore the Chimp thinks it is worth marking.	ND
YH20		05/08/12	AG, AW, CQB	43.15767	19.03853	2024	4	2	10	YH20	Sirni Do, past area marked as promising in 2011.	Needs rope. Worth looking at 3 adjacent rifts too - probably not as promising as YH20 but need gear.	ND
YH21		05/08/12	AW, CQB	43.15839	19.03947	2016	3	5	30	YH21	Upper section in middle of Sirni Do.	Will need SRT to see. Nice shaft. UPDATE [08/08/12 AG, CQB, MTS] A proper good shaft with mostly solid limestone. Bird shit everywhere. Termination but there is an aven at the bottom which may come from somewhere else.	ND
YH22		05/08/12		43.15893			5	3		YH22	Frying pan'	Needs further exploration.	ND
YH23		05/08/12	AW, CQB	43.15792	19.04001	2022	4	7	5	YH23	S rim of 'frying pan'	Termination (completely snow plugged)	ND
YH24		07/08/12	CQB, MTS				4	4	6	YH24	SE side of Sirni Do just below tree level.	~5 m drop to snow. Probably terminates at rubble floor beneath but cannot check without rope.	ND
YH25		07/08/12	CQB, MTS	43.15782	19.03887	2027	4	3	6	YH25	Near S side of Sirni Do in obvious line of shakeholes/rifts	Climb down to snow plug. Rocks thrown down sides do not continue. Likely termination.	ND

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YH26		07/08/12	CQB, MTS	43.15744	19.03864	2032	3	3	10	YH26	Bottom of scree slope, walking into Sirni Do. S edge close to YH20.	Vertical shaft, 5 m down from bottom of shakehole, needs rope. Cannot tell if it goes on. Rocks thrown down [?] rubble.	ND
YH27		07/08/12	CQB, MTS	43.15762	19.03843	2028	4	3	7	YH27	Between YH20 & YH26	Probably terminates below ledge. Needs rope.	ND
YH28		07/08/12	CQB, MTS	43.15807	19.03842	2027	5	27	15	YH28 OX	On mound in middle of Sirni Do near YH20. On grassy area next to trees.	Open shaft. Rocks bounce down for ~ 5 s. Well worth a return. UPDATE [08/08/12 AG, CQB, MTS] Termination at the bottom - rubble heap, no window on the way back up.	ND
YH29		07/08/12	CQB, MTS	43.15815	19.03897	2017	5	10	20	YH29	On mound in Sirni Do near YH20 and YH28. Large hole opening out below.	Rocks fall a significant distance and make a big echo. Needs gear and worth a return. UPDATE [08/08/12 AG,CQB, MTS] Termination.	ND
YH30		07/08/12	CQB, MTS	43.15794	19.03882	2013	5	7	5	YH30 OX	Next to YH29. Looking from in, a nice depression in the bowl of Sirni Do.	No way on unfortunately. A shaft leads into the aven, takes water.	ND
YH31		07/08/12	CQB, MTS	43.15893	19.04068	2008	3	5	15	YH31	if you are blind. You would probably fall in anyway.	Huge snow plug at the bottom of a large shake hole. Very good prospect, hole over ledge of snow, really needs a look.UPDATE [08/08/12 AG, CQB, MTS] Descended down NE side of snow (rigged from large thread on SW side). Snow met wall below but an open space was visible to the S. The gap between snow & wall would need to be widened, but gets larger beyond.	ND
YH32		07/08/12	CQB, MTS	43.15894	19.04006	1996	5	2	8	YH32	Centre-ish of Sirni Do. Not far from YH22. Just S of drop to lower area. Large shakehole.	Snow at bottom slopes down against wall. May well terminate but worth a look if near by.	ND
YH33		07/08/12	CQB, MTS	43.1586	19.03783	1991	4	1	7	YH33	N side of Sirni Do	Large (20 x 20 m) area of rifts that interlink. Snow plug present in one.	ND
YH34		09/08/12	AJV, SG, TFB	43.142	19.05028	2016	8	9	7	YH34 O	Below and a bit to the right of the 'whale' end (~100 m @ 120 degrees)	Full circuit of entrance, no obvious way past snow plug. Not promising.	ND
YH35		09/08/12	AJV, SG, TFB	43.14219	19.05044	2018	4	3	5	YH35 O	20 m @ 110 degrees from YH34	Needs rope. Way on is marked on plan. Looks good.	ND
YH36		09/08/12	AJV, SG, TFB	43.14215	19.05053	2020	5	7	7	YH36 O	20 m at 120 degrees from YH35. 2nd Gully from end of the 'whale'.	Two possible ways on. Needs rope. Definitely revisit please	ND
YH37		09/08/12	AJV, SG, TFB	43.1418	19.05054	2032	5	15	10	YH37 O	Uphill from YF36	Impressive but looks a bit narrow at possible way on.	ND
YH38		09/08/12	AJV, SG,	43.14158	19.05048	2042	4	10	35	YH38	S side of Kobilji Do, further down the valley from the 'whale'	Needs rope to check for continuation. Likely to be choked at bottom.	ND
YH39		09/08/12		43.14079			6	8	4	YH39 OX	Rock overhang at the top of grass slope at foot of big prominent cliff (Obla Glava)		ND
YH40			AJV, SG,	43.14131	19.05017	2052	4	4	15	YH40	60 degrees and 120 m	Needs rope for rift. Sling/crowbar needed to	S

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		09/08/12	TFB								from foot of Obla Glava. Small chamber under big rock.	pull out choked boulder from pitch head.	
YH41		09/08/12	AJV, SG, TFB	43.14173	19.05016	2040	3	5	13	YH41	Valley on S side of Kobilji Do further down valley from the 'whale'. Rift entrance surrounded by small trees.	Looks choked but will need rope to check.	ND
YH42		09/08/12	AJV, SG, TFB	43.1414	19.05078	2045	4	4	4	YH42	Near all the rest. Below Obla Glava 230 degrees on south side of Kobilji Do on flat ridge	Needs rope. Rift	ND
YH43		09/08/12	AJV, AW, SG, TFB	43.14166	19.05073	2034	3	10	39	YJ43	Kobilji Do shoulder near AW1	Way on, window, snow, hole, tinkle tinkle.	ND
YH44		10/08/12	AJV, AW,	43.14231	19.04994	2009	7	3	5	YH44 O	Under Obla Glava, 206 degrees to ridge. South side of Kobilji Do under 'whale'. In long rift with snow plug at N end	Melted snow hole on W side needs rope to descend	ND
YH45		10/08/12	AJV, AW, MTS	43.14265	19.05069	2002	5	3	4	YH45 O	130 degrees from Zuta Greda. SE edge of gully near large flat slabs of lovely lovely limestone	Needs rope to descend. Probably choked. Snow plug at bottom.	ND
YH46		10/08/12	AJV, AW, MTS	43.14306	19.05058	1983	5	10	5	YH46	Kobilji Do, S side, approx 202 degrees from Obla Glava	Way on is tight & sharp but promising. Proper water-worn meandery passage	ND
YH47		10/08/12	AJV, AW, MTS	43.14312	19.05091	2015	4	8	4	YH47	Between boulders under natural arch in Kobilji Do	Chamber appears to choke on all sides. Small hole at bottom, but probably not worth digging	ND
YH48	Subway	10/08/12	AJV, AW, MTS	43.14346	19.0509	1972	4	5	6	YH48		Needs rope to descend N shaft. Dig required to access other rift sections.	ND
YH49		10/08/12	AJV, AW, MTS	43.14321	19.05064	1981	5	2	6	YH49	Kobilji Do. Quite a few rocks around it	Snow plug with hole in leads to rocks. Takes water - may be way on. Could do with snow digging out	ND
YH50		10/08/12	AJV, AW, MTS	43.14322	19.05066	1982	4	2	6	YH50	Kobilji Do. Trees/scrub almost obscure entrance	Needs gear to get down. Slight enlargement before snow is reached. Cannot tell beyond that.	ND
YH51		10/08/12	AJV, AW, MTS	43.1432	19.05054	1973	5	2	3	YH51	Kobilji Do underneath massive boulder	Snow plug covers entire hole	ND
YH52		10/08/12	AJV, AW,	43.14332	19.05052	1972	5	2	2	YH52	Kobilji Do. W side of gully	Needs digging. Can see through gaps to snow. Drafts strongly but inconsistently - likely to be from other entrance above. Maybe worth a dig	S
YH53		10/08/12	AJV, AW, MTS	43.1438	19.05092	1970	5	3	5	YH53	Kobilji Do	Choked. No way on.	ND
YH54		10/08/12	AJV, AW,	43.14395	19.05085	1987	6	7	7	YH54	Kobilji Do. Rift behind boulders in hollow.	Rift with snow plug at bottom. Any continuation would be down past snow.	ND
YI1			AW, CQB	43.16118	19.05228	2170	4	3	6	YI1	Next to path, Vodeni Do.	Probable termination (muddy bottom).	ND

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		06/08/12											
YI2		06/08/12	AW, CQB	43.15788	19.04959	1977	5	6	3	YI2	Bottom of Crvena Greda.	Possible digging potential - snow plug.	ND
YI3		06/08/12	AW, CQB	43.1576	19.04867	1930	5	3	5		Bottom of Crvena Greda, SW of YI2. Next to what is a more obvious place for a cave. Plenty of shade here.	Cannot really tell. At the bottom of shaft is a sloping snow plug. Would need SRT to tell.	ND
YI4		06/08/12	AW, CQB	43.15561	19.04851	1959	5	3	8	YI4	On path in bottom of Crvena Greda.	Rock thrown down lands on snow, so unknown. Would need SRT to have a look down.	ND

K	эy:				
	K	Key:	Key:	Key:	Key:

Entrance marking

O = not descended

O/ = descended, still has potential

OX = terminated

Draft

ND = Not detected

S = slight

G = good

H = hoolie