



## Summary

The 1997 Migovec expedition was extremely successful. A further 4km of passage has been discovered taking the cave to a depth of -958m, currently the 5th deepest in Slovenia and the 71st deepest in the world.

Further good relations were made with Slovenians from around the country, collaborating closely to cave together and share the joint excitement of exploration.

Exploration in the deeper parts of the cave was undertaken during three day pushing trips utilizing an underground bivouac at -605m (Hotel Tolminka).

We continued the surveying the old M2 and M16 entrances to replace the data lost since the Slovenians last mapped the caves in the '70s. This year we surveyed down M16 the giant chamber, Galactica to BCRA grade 5c and added it to our current survey.

The exploration has been the subject of a 1 Hour Radio program on Radio Slovenia, and a lecture in the National Caving Conference. Future magazine articles are planned.

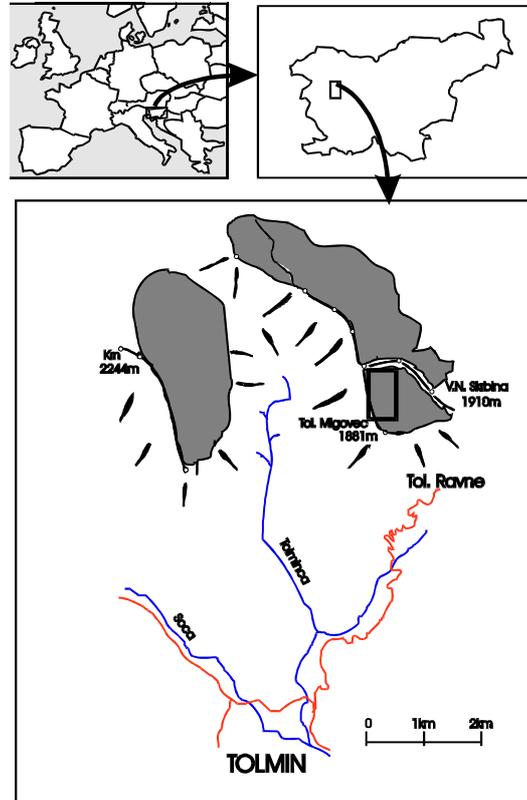
In parallel with exploration, a geological survey was carried out by two IC geology students and a local Slovenian geologist. Data was collected on the surface and at various levels within the cave. The work has been presented as a poster in a recent cave geology symposium in the UK and will be the subject of a future science article.

Many leads remain within the cave at all levels and the cave has now become a focus of interest among the wider international caving community. Another expedition is being planned for next summer.

## Introduction

As in previous years a base camp was set up on the Migovec Plateau (1800m) some 3 hours walk from Tolminski Ravne (900m). The 20 or so inhabitants of this village have now become accustomed to the sudden influx of 'Angloski' cavers during July and August. Good relations have blossomed and their help has proved invaluable. The equipment and food, largely powdered or dehydrated, was carried in rucksacks from Tolminski Ravne to the top camp on Migovec. Re-hydration of food and cavers requires large amounts of water which has posed a problem in the past. Water collection is a major consideration in most caving areas as most of the water drains directly into the caves. This year water proved less difficult to obtain as the weather was unusually wet. Rain water was collected on tarpaulins that fed into a large barrel.

Torn T-shirt Cave (M18) was discovered by expedition members in 1994 and pushed in 1995 to -240m, many leads were left unexplored. The entrance of the cave lies on the Eastern edge of the Migovec Plateau at around 1830m. The entrance series of the cave is narrow and strenuous with several squeezes, pitches and short free climbs. At a depth of -120m the nature of the cave changes, the tortuous, narrow passage breaks into a large 5m diameter horizontal gallery which stretches for 250m. This is a very old fossil passage which means that it is totally dry. The 1996 expedition managed to connect Torn-T to M16 giving an easy entrance into the system. A second level of large passage was discovered down to -300m, Exhibition Road, and an obscure rift off the end of this, Bikini Carwash, was pushed to the head of a large rift. During the following winter the Slovenians descended a number of pitches here, pushing the cave unsurveyed to a potential camp site at -600m. This was the state of affairs at the beginning of our 1997 expedition.



## Exploration

Once the initial surface setting up had been completed we made underground preparations for exploration. This involved re-rigging, surveying and bolting the cave to the new limit of exploration. The old worn ropes on the entrance series were replaced with a durable new rope to accommodate extensive use. The pitch series beyond Bikini-Carwash was resurveyed and the rigging was improved to support our 'remote camp' based siege exploration. The camp, Hotel Tolminka, was set up and equipped for a comfortable three man or emergency four man squad. The stream-way section before Hotel Tolminka (Warriors for Mig) was re-rigged and surveyed.

The first exploratory trip was to look beyond the wet pitch after the bivouac. The water was followed to a stream-way crawl which became gradually smaller and wetter. The unpleasant nature of this lead led to a closer inspection of alternative routes. A dry bypass was found at the bottom of the pitch, Cold Feet Passage. This was then rigged with all the available rope down approximately 150m to the top of a pitch.

The following trips continued pushing this lead, descending in a 70° bedding plane fault, which was later confirmed to be the major fault of the area, to a small sump at -958m, Good not Grand. Once this lead had been exhausted the course of the water was followed which disappeared over a ledge at -800m. During a

series of trips this wet way was rigged down to a dangerously wet pitch ,FA999, at -930m. It was decided that other alternatives would be investigated before this route was pushed any further.

A hole in the floor at -700m, Rameses, was our next push. The obvious way on was found to lead back into Cold Feet Passage. However by following the sound of water through an obscure crawl to the side, a waterfall and pitch series was discovered. This broke into a significant fault off which many pitches and horizontal passages led. This complex has only been partially explored to date and will be the main focus of exploration next year.

In parallel with this deep exploration a number of high level projects were undertaken.

- The destination of the draft at the North end of Hot Line was investigated. The crawl at the end, Goody Bag, was followed to a blind pitch, The Belfry. The pitch lying in a passage west of 'Hotline' was traversed into a large looped horizontal passage with no ways on, Lost City. A significant draft down a pitch in Hotline, at the junction with M16, was followed down two pitches back into M16, Woft passage.
- The source of the draft in Hotline was traced as far as Mig country at which point it was lost. Gladiator's Traverse and Mig country were found to be a single huge void. Smoke testing and aid climbing will be needed to locate the draft further.
- A number of the most promising pitches in Level II were dropped. Titanic currently leads into a pitch series the limit of which is a pitch head at -500m. This series contains the magnificent 85m pitch, Britannic. The other pitches investigated off Level II have been found to be blind.
- Bat's Hit passage, a lead found through a boulder choke in 1996 in M16, was followed up. This led to a number of large chambers with rifts going off them. Many of these either led back into M16 or went to tight inlets. The whole complex was surveyed.
- M16 was re-surveyed down to Galactica to replace data lost since the original Slovenian exploration. M2 survey data has been recreated by extrapolating data off a large format survey.
- Exhibition road was systematically searched for missed leads. Using a powerful light an aven was found which could lead to a higher entrance. An obscured rift, Skala, off the end of the passage leads to an impressive flowstone cascade and an eye hole into a 10m pitch with an obvious passage at the bottom. This remains an open lead.

## Scientific Work

In parallel with exploration a geological survey of the massif was conducted by members of the caving club. This involved recording bedding plane dip and strike vectors at grid locations on the surface and within the cave. Combining this with the cave survey builds up a picture of the structural control on the cave. A discussion of this work has been presented in a recent cave science symposium.

## Techniques

Solar panels were successfully used this year for all battery charging. The power from two solar panels was stored in a 12V battery. This source was then transformed to enable the charging of batteries of differing specifications. CB radios with a single wire were used to enable communications between cave and surface. A number of problems were encountered and will be tackled next year, in particular cable strength. It is planned that this technology will be integral to logistics and safety within the increasingly remote parts of the cave.

## Expedition Members

Florence Babolat, Colm Carroll, Jim Evans, Mark Evans, Jan Evetts, Andrej Fratnik, Simon Gaberscek, Alva Gosson, Clewin Griffiths, James Hooper, Paul Huggins, Rob Lea, Oliver Mann, Zetko Matkaz, Iain McKenna, Hugh Penney, Michael Playford, Dejan Ristic, Mike Rogerson, Rok Stopar, Dave Wilson, Sarah Wingrove, Tim Wright, Anthony Woods

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