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CONTENTS

Erratum p 19, l 40, ' cave digging ' should read ' cave diving '

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editor..... peter mathews, 155 radcliffe way, northolt, mddx.

E D I T O R I A L

From the Contents one might suppose that the full title of the Group was the Mendip Caving Group and Historical Society. So late is this Journal in being published that it is almost of archival interest.

While under early editorship a number of articles were written. Unfortunately, no effort was made in getting these into print. Even worse, an estimated two thirds of the written accounts and all drawings were lost. After tossing out articles which had become too dated, the remainder were assembled under new editorship together with a new set of drawings - these, in due couse, were lost once again. So the illustrations presented here have been made for the third time. For an editor to show such lack of consideration for their contributor's time and effort is quite inexcusable.

There is a moral in this editorial. When writing articles for MCG journals make sure you keep a copy. Our Journal Editors have a reputation of being quite incompetent.

Profound apologies are given to the reader for the unwarranted delay in producing this Journal. It is a little short of amazing that it appears at all.

To look on the bright side, the next Journal is already in preparation. I wouldn't be surprised to see it out first !

Incidentally, the cover photograph is Predjama.

Peter Mathews
- Editor -

SOME NOTES ON FAULTING

by Joan Goddard

As cavers explore underground systems, they must sometimes ask themselves "Why?". Why does a passage have so many rightangled bends? Why is a pitch in that particular place? Why is the cave there at all? And on the surface too, there are many features which stimulate an enquiring mind. The rocks which make up the countryside have been subjected to numerous pressures and forces which have folded the previous horizontal beds into domes and periclines (pericline = elongated dome), such as Blackdown and Pen Hill, and fractured them into broken pieces of a once continuous sheet. Rivers and weathering agents have then used these structures in forming the differentially eroded landscape which we have now. These notes attempt to give some insight into one of the more important structures, the fault.

Distinction between Joints and Faults

JOINTS may be defined as planes or surfaces along which there has been no visible movement parallel to the plane. Movement may, however, occur perpendicular to the joint surface, thereby producing an open fracture. The term 'joint' is said to have been coined by British miners who thought that rocks were joined together along the fractures in the same way as bricks in a wall !

FAULTS are fractures along which there has been relative movement of the side walls, the movement varying from a few inches to hundreds of miles. Although one tends to think of faults as clean-cut surfaces, in many instances the movement is distributed through a FAULT ZONE. This zone may consist of numerous small faults or it may be a zone of broken (i.e. brecciated) rock or finely crushed and powdered rock.

In order to distinguish between faults or various kinds, some descriptive terms have come into being (see diag. 1). The DIP and STRIKE of a fault are measured in the same way as for normal bedding: on geological maps, the dip is shown by a small tick on the downthrown side with the angle in degrees written in beside it. The FAULT LINE of a straight fault on a horizontal surface will be straight, but where the surface relief is undulating, the fault line will appear sinuous.

Classification of faults

In geological literature there are numerous different classifications, but for our purposes the following two are sufficient.

(a) Classifications based on the attitude of the fault in relation to the surrounding strata:
  (i) Strike Fault - one that strikes (trends) essentially parallel to the adjacent rocks.
  (ii) Dip Fault - one that trends parallel to the direction of dip of adjacent rocks.
  (iii) Oblique or Diagonal Fault - one that strikes diagonally to the strike or dip of the surrounding beds of rock.

(b) Classification based on direction of movement along the fault surface:
  (i) Normal Fault - also known as gravity fault, see diag. 2.
  (ii) Reverse Fault - also known as compressional fault, see diag. 3. When the dip of a reverse fault is small it is termed a thrust fault.
  (iii) Tear Fault or Wrench Fault - a fault along which horizontal or 'tearing' movement has occurred. (diag. 4)

In normal and reverse faults the movement is along the dip slope of the fault and they are known as Dip-slip Faults. In tear faults, the movement is known as Strike-slip. This can readily be seen in diagram 4. Just to complicate matters, the geological history of an area is usually so complex that the faults have been subjected to different forces at different times, and may be the result of a combination of normal, reverse and tear movements.

Faults do not go on forever with the same throw or dip. They die out in a number of ways; for example they may simply split up into a number of small faults or fault splinters, or they may get 'lost' in a layer of weak rock such as shales (diag. 5a). A hinge fault will disappear as the amount of downthrow becomes progressively less towards the hinge or pivot, and the fault gradually becomes a monoclinal fold where the rocks deform by bending instead of by fracturing (diag. 5b).

Criteria for the recognition of faults at the surface

A SCARP is a relatively steep slope of any height; it does not prove the existence of a fault, but it can lead you to suspect one, and therefore to look for further evidence. A fault scarp owes its relief directly to the movement of the fault and is best seen in areas of active fault activity, such as regions which recently have suffered earthquakes (diag. 6a). Giggleswick Scar in the Pennines is a partially eroded fault scarp. A fault-line scarp owes its existence to differential erosion along a fault line (diag. 6b)..

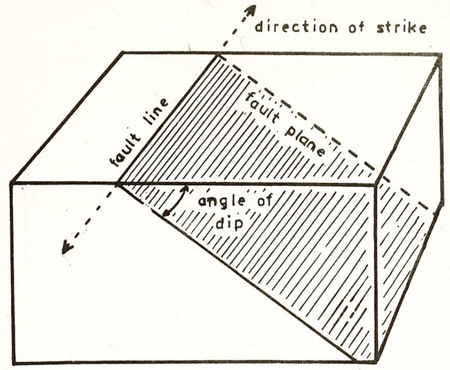
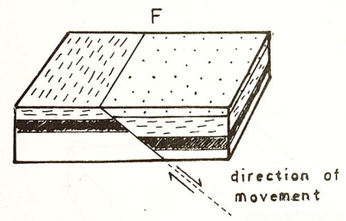


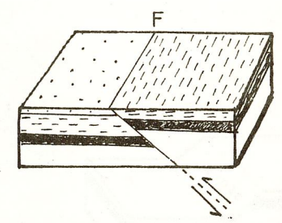
Fig. 1 Descriptive terms

Fig. 2



Normal or gravity fault

Fig. 3



Reverse or compression fault

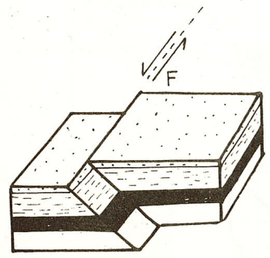


Fig 4 Tear or wrench fault

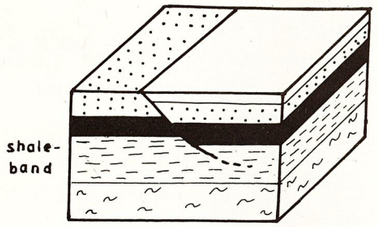


Fig. 5a Normal fault fading into shale

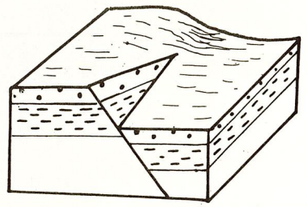


Fig. 5b Fault fading into a monocline

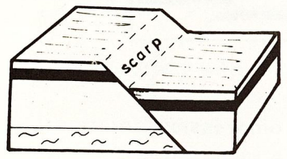


Fig. 6a Fault scarp

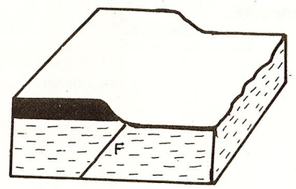
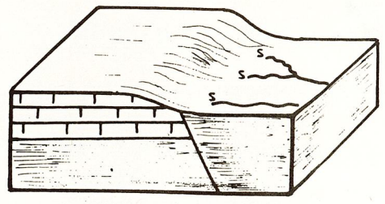


Fig. 6b Fault-line scarp



s - spring

Fig. 7 Springs along a fault line

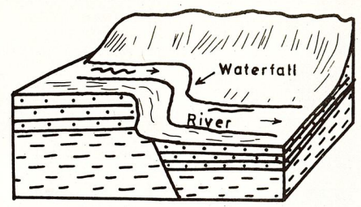


Fig. 8 Waterfall caused by erosion along a fault

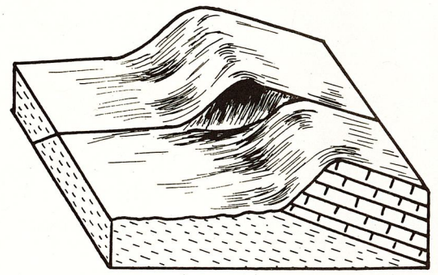


Fig. 9 Displacement of an escarpment ridge by a fault

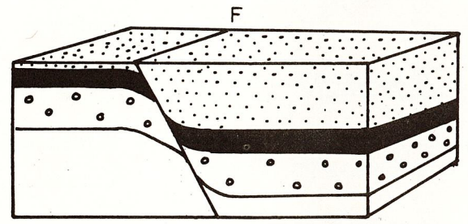


Fig 10 Drag of beds indicating last movement

SPRINGS which occur with a regular alignment may be utilising a fault line in conjunction with porous/non-porous rocks; for example, shale may be brought up against limestone by faulting and give rise to a spring (diag 7).

STREAMS will follow lines of weakness such as faults and joints. Where a river valley exhibits a particularly straight course, especially through geologically complicated country, fault control may well be the reason - as in the Vale of Neath in South Wales. Sudden changes in a stream profile (rapids or waterfalls) will be due to a resistant bed of rock - present possibly as a result of faulting. This phenomenon can also be seen in the Vale of Neath at the Upper Clun Gwyn Fall on the Mellte River near Ystradfellte (diag. 8). A visit to the series of three waterfalls on this stretch of the river is a worth-while way to spend a non-caving afternoon.

DISPLACEMENT OF OUTCROPS is another feature dependent on the presence of faulting. Where a hard rock such as limestone is expressed topographically as a ridge or scarp, a dip fault will displace the strata, as well asthe scarp or ridge, as happens at the Cotswold scarp. (diag. 9) Such displaced or offset scarp features show up particularly well on aerial photographs.

SUDDEN CHANGES IN THE NATURE OF ROCKS. In Malhamdale, Yorkshire, the Mid Craven Fault runs approximately through the fields between Malham Village and the Cove. North of the fault is massive limestone which gives rise to the impressive scenery of Malham Cove, Gordale Scar and the limestone pavement above the Cove. South of the fault the rocks are shales, thin limestones and occasional sandstones of the Yordale Series which give a more gentle landscape. The Mid Craven Fault is a large structure running from near Pately Bridge to Ingleton.

Criteria for the recognition of faults underground

Distinctive features such as slickensides, grooving, breccia and mylonite frequently accompany faults. These features - if correctly identified - are conclusive proof of faulting.

SLICKENSIDES are scratches or striations parallel to the direction of the last movement along the fault, resulting from friction along the fault plane. Some faults may show many slickensided layers, in each of which the striations show different trends. This occurs in zones where different movements have taken place over a long period of time. It should be added that due to the rapid erosion by cave water, slickensides are rarely found in caves, except perhaps in collapse caverns in dry climates.

DRAG (diag. 10) is a common feature of faults and can be seen in cave walls, cliffs and road cuttings. The movement indicated by the direction of the drag indicates the most recent of the fault's movements.

FAULT BRECCIA consists of angular rock fragments ranging from a inch to several feet in diameter, or even greater. The fragments are usually all of the same rock-type and are characteristically associated with a more finely crushed matrix. The wall opposite Swing or Fault Pitch in Longwood/August System shows a good example of brecciated rock.

MYLONITE is more difficult to recognise in the field as it is characteristically a dark, fine-grained rock, the brecciated structure being apparent only from microscopic study. It may look rather like slate. A further development of the same process leads to the rock along a fault zone being pulverised to a fine-grained clay.

MINERALISATION is a process which frequently affects faults. The original rock may be replaced by minerals in solution, for example Quartz, Calcite or mined minerals, such as Lead.

STREAM PASSAGES and chambers in cave systems are frequently fault controlled (and joint controlled, too). The Main Chamber and Fault Pitch in Longwood/August System, and some of the Dan-yr-Ogof passages being good examples.

Such a rapid review of faults and fault features can only serve as an introduction to the subject. Elementary books about geology and geomorpholo will expand these notes.

FURTHER READING

British Caving - an introduction to Speleology
2nd edition - 1962
pages 11-15

Principles of Physical Geology - by Arthur Holmes
chapters on Faults and Joints

The River Scenery at the Head of the Vale of Neath - by F. J. North 1949

CAVING IN SOUTH EASTERN BELGIUM

by Vic Ingraham

The main caving areas in Belgium are located in the south east of the country near the border with France and Germany, in the Ardennes forest and the surrounding area. The following report deals mostly with Liege and Namur Provinces.

The southern part of Liege Province along the Ourthe River has three main caving areas. The first limestone encountered as one travels south along the Ourthe lies just past the town of Tilff, about 15 miles out of Liege. Here, a syncline of limestone cuts across the valley at right angles, forming steep cliffs on either side. This syncline is very well-marked, and at its axis on the east bank there can be seen the entrance to the Grotte de Tilff, a resurgence carring a large stream. The cave entrance is about 50 feet above the road, but the stream passes under the road and appears just above the water level of the Ourthe. Cavers have negotiated the connection between the upper entrance and the resurgence, but it is very tight. The cave evidently drains a large part of the plateau above, and has a very good stream passage, ending after about 1,600 feet in a long sump. A diver's attempt to pass the sump ended after about 120 feet, where a larger and more powerful stream custs across the sump. (The resurgence of this stream has not yet been located.) On the west bank of the Ourthe the syncline continues, and there is another cave in its axis. This cave is about 1,000 feet long, heavily silted up with mud throughout its length. It does not normally carry a stream, and floods in rainy weather. The position of its entrance seems to suggest that at one time, before the Ourthe had cut its valley through the syncline, both caves -- the Grotte de Tilff and this cave -- were joined in one large system, draining along the axis of the syncline and surfacing in a lowland area about a mile away from the present resurgence. If this theory is correct, it would also offer some explanation for the three underwater resurgences along this same stretch of river. These resurgences may have drained into the same area, but were cut by the river and thus the base level for ground water has effectively risen and drowned them.

This same syncline of limestone continues along the eastern plateau. There are a large number of sinks or swallets on the plateau, and it shows good potential as a caving area, though until 1967, no caves had been discovered. In the summer of 1967 I spent a week camping on the plateau digging several of the sinks and, after five days, an entrance was opened up in one of them. On exploration, the cave was found to be 180 feet deep and over 300 feet long. A small stream was found at the bottom, and we assumed that

it drained into the nearby Ourthe valley. After this discovery, a Belgian clu Les Calcaires, became interested in the plateau. I joined the group and wor was started on systematically exploring the entire area. Several other swallets were found and many good digs chosen. We started work in a sink about two miles from the previous discovery. A shaft was made, and severa large pieces of stal floor were found. Unfortunately, the digs ran in several times, and soon became too dangerous to continue. A draught was detected which issued from a narrow crack at the bottom of the shaft. The large piec of stal suggest that the sink marks a collapsed chamber.

On one side of this sink, a space between two large boulders was noticed, and work began to open it up. After digging for three days we found a low passage which led to a small chamber, with a rift ten inches wide at on side, opening out below to a pitch. The chamber was very unstable, and whe an attempt to widen the rift only succeeded in nearly bringing the roof down, the dig was abandoned and the entrance sealed. It was named Le Trou de Fu

At this point, the data we had gathered from several coloration tests suggested the presence of a master cave for which the Grotte de Tilff was the resurgence. The small stream found at the bottom of the first cave we had discovered - le Trou Victor - was traced to the Grotte de Tilff, over two kilometres away, and several other streams had been traced from the Vallon de la Chawresse to the same resurgence (see map). The second discovery w had made - Le Trou de Furet - was again dug in view of the new theory. A horizontal shaft ten feet below the old entrance was made, and we succeeded in reaching the pitch. The cave proved to be a disappointment, as it was onl a hundred feet deep, and ended in a sand choke. This last development occurred early in 1969, and work is still continuing to find a way into the ma cave. If a link can be established, it will have the potential of becoming the deepest cave in Belgium.

The second area of limestone encountered as one progresses south along the Ourthe is near the town of Comblain-au-Pont. There are several small caves in the vicinity, and many interesting topographical features. Some of the limestone is vertically bedded along the river: as the river erod its channel, it left huge slabs of limestone standing like dorsal fins along the bank. Some of these are over 100 feet high, and less than 12 feet thick. Am the notable caves here is the Grotte de Steinlain; the entrance is about 100 fe above the present river level, though the cave appears to have been a resurg at one time. It is about 300 feet long.

The third area, 23 kilometres south-south east of Liege, is near Remouchamps. Close by is a feature known as the Vallon des Chantoirs, or Valley of Sinks. This is a large dry valley taking six large streams. Severa long geological reports have been written about the area because there is a surprising lack of resurgences for the volume of water it takes. It is possibl that the water empties directly into the ground water circulation, though I ha seen few examples of this elsewhere. There is a good potential for digging here; many of the active swallets remain to be dug, and the known caves are relatively short. A notable cave nearby is the Grotte de Remouchamps, 2,100 feet long and carrying a large stream called Le Rubicon which issues from the cave.

With a Belgian club, Le Chercheurs de la Wallonie, I worked on one of the sinks in the Vallon des Chantoirs. In the dig, we found a grenade and a rusted pistol, but, alas, no cave.

Ramet, a town about twenty kilometres south west of Liege, has some small caves; but it is of interest primarily because of the prehistoric remains found in them. One cave of special interest here is the Grotte de Rose. It has many fine formations, and is well worth visiting, though small. It has a lid, and the key can be obtained from the museum belonging to the Chercheurs de la Wallonie near Ramet.

By following the Meuse River south-south west from Liege for about 65 miles, one reaches the town of Mont-sur-Meuse. On the plateau above this town are located some of Belgium's deepest caves. There is a hostel very near the caving area; it is called the Refuge Norbert Casteret. This provides an excellent base-camp for any foreign club visiting Belgium, as it is situated near the deepest and most interesting caves.

The main caves here are the Trou de Bernard, the Trou de l'Eglise, the Trou de Corde, and the Trou de Weron. These are all swallet caves. The Trou de Bernard is the deepest known cave in Belgium, over 120 metres deep. The entrance is in the bottom of a sink about a mile from the Refuge. An entrance pitch, 30 feet deep, leads to a second pitch of 25 feet; this gives access to a deep rift passage that descends 50 feet to the top of a 60-foot vertical pitch. At the bottom of this, a steep sloping passage leads to a maze of smaller passages that eventually arrive at the sump. The cave, like many others in the area, is liable to severe flooding after heavy rain.

This report has dealt with several of the caving areas in the Liege and Namur Provinces, but there remain many other interesting sights that, for lack of space, cannot all be mentioned here. Any further information or surveys of Belgian caves can be obtained by contacting the major clubs in the chosen area.

For example: The Societe Speleologique de la Wallonie,
174 Rue Sainte-Walburge,
Liege.

3/69

THERE IT IS, WHERE IT IS - DEVON, DARTMOOR AND ITS MINES

by Agro Pyrem Repens

From the freezing sub-zero blizzards of Alaska's North Slope to the burning heat of Australia's desert, from the swirl and churn of the waters of the Continental Shelf to the dusty oil rigs of Libya, from the undersea mines such as Geevor in Cornwall to the Dene Holes in Surrey, from the china clay of Cornwall to the Welsh and Midland pits; mining in its entirety presents a vast number of contrasts and yet forms one of the basic sources of food and wealth of industrial society and emotive activity.

Prospecting has progressed from the visage of the doddery old gold prospector's pan to the various methods of chemical analysis and tracing, to the magnetometer and to electromagnetic methods used in conjunction with the aeroplane, and finally to the satellite. Yet there still rings true the old Cornish saying "There it is, where it is" and it is still probably true that the 20th century individual can still make a strike.

Having revelled, or in many cases wallowed, in the wonders of Devo caves such as Afton Red Rift, Cooper's Hole, Baker's Pit and Pridamsleigh, David Shipman and I decided to follow in the footsteps of our forebears Janet Day and Mike Butterly of Chelsea, who were at college before us, and see wh the mines of Devon had to offer us.

As far as mining is concerned, one immediately associates the West Country with the Cornish china clay and tin, but Devon has its part to play too it being one of the most minerally rich areas in the country. Mining is a subject of contrasts . . . . . Devon and Dartmoor too. Devon owes its miner wealth to the geological nature of Dartmoor, which consists basically of a huge granite dome, topped with such tourist spots as Hay Tor and Yes Tor. It is round the edges of this dome in particular that mineral deposits abound, the Teign Valley alone having been mined for eighteen different minerals at on time or another; the more common being iron, tin, lead, copper and barytes.

Many people prefer Exmoor to Dartmoor because there is more to catch the eye . . . . . Whereas Dartmoor, on top at least, strikes one with thoughts of bleak, bare and barren terrain leading to the conclusion of how lucky those Princetown ravers are to be protected behind those strong, sturdy walls . . . . . "through the hawthorn blows the cold wind".

But around the edges of Dartmoor, away from the rush of the ices an the screaming toddlers, in the streams and dusky undergrowth lies another face; and it was this aspect, in our rambles in search for mines, which we grew to appreciate.

Some miners in the past toiled away on the bleak slopes of East and West Vitifer Mines: but today there only remains a few open cast trenches and two ominous and badly-fenced shafts which neither of us dared venture down. (Apparently Mike Bond of D.S.S. has been down recently, one being about 60 ft and the other 90 ft). Other miners worked in small, beautiful gladed valleys and all that can be seen of their work today are a few mounds of overgrown rubble, perhaps the odd wheelpit (alas, without the wheel) and sometimes the short tunnel or adit (often neck deep in water and ending a collapse).

We would get hold of map references of these mines from books (in this case often incorrect), from D.S.S. or Mike and Jan, read up what information there was on them, and then go and see for ourselves.

We often had surprises. For example, at one reference near Princetown, we could find only a bog, and at Yarner mine we spent more time dodging the gamekeepers and the ants, than finding the rubble and remains of what we concluded to be a wheelpit. Furthermore, from various sources - emanating, we believe, from Pete Cousins of Chelsea - we learnt "There's a hole on Combe Down", or rather a tunnel . . . . . 50 feet long which took us three hours to find.

But to talk about Dartmoor like this would be to present a completely false picture . . . . . it has its contrasts.

The Golden Dagger Shafts (not far from Vitifer) are well worth the visit and the descent if one has the time. The same goes for Wherl Caroline and Haytor Iron Mine. Haytor Iron Mine we found to be very easy but most interesting, consisting basically of two entrances, an upper and a lower one, both of which could be entered unaided. The mine comprises two huge chambers and a short amount of passageway which at the most was only ankle deep with water.

Hyner and Great Rock Mines are well worth a visit too, (but I forget which mine is called which). These are now the only mines which produce micaceous haematite, which forms a basis for paints (though we did visit two others who worked the same mineral, and East Vitifer was said to contain an uneconomical form). We found the manager most co-operative and spent several interesting hours wandering through the many passageways which the miners have hewn out at various levels. Micaceous haematite has been worked here for many years, and the hill into which the two mines run is riddled with routes. It is possible to enter the mine at one side of the hill and, by juggling with the levels of the passages, to come out the otherside. This is supposed to be a very good trip which we hope to do sometime.

All in all we found this to be a very good way of enjoying and getting to know more about Dartmoor, but although it is a very mineral-rich place little mining is carried out there. Why? As one old miner told us, it seems

that the only time anyone turns to Dartmoor is when the country badly needs metals as in the last two wars, and then they get it. (This is borne out by the fact that one mine we visited, though overgrown, had buildings in which the machinery was still quite intact). The old miner's explanation is probably true, but the basic reason - most likely - is the difficulty of getting the miner or their low grade when they are obtained. One cannot quote Mark Twain's observation that a mine was a hole in the ground with a liar at the top (Diggers !!?? . . . . . apologies) as far as Dartmoor is concerned; nor can one blame our Government's financial attitude towards mining as being allergi because it is not as far as incentives are concerned, especially when compare with certain other nations (e.g. Burma which taxes 99% income from mining!) Probably the only thing to do is to wag the knowing finger to the future; to poin to the fact that low grade ore mining on the grand scale is, in many cases, gradually becoming 'the thing'; to say that several American and Canadian concerns are roving their eyes over Dartmoor, and to say that uranium is shortly to be worked there. All in all, the mining future for Dartmoor at any rate may be a little more rosy.

THOSE MERITORIOUS SPELEOLOGUES OR YUGOSLAVIA 1967

by Peter Mathews

The exploration of Postojnska Jama (jama = cave) greatly influenced the early days of modern caving. Without doubt the Slovenian Karst proved the stimulus for early cave studies. The main interest lay then, as it does today, in the complex of caves and underground water courses that comprise the source of the Ljubljanica.

The river first rises on the slopes of the Sneznik (a mountain 30 km. S.E. of Postojna) and flows intermittently as a small stream (the Trbuhovica). After disappearing below ground at Prezio, it emerges again as three springs in the valley of Loska and flows N.W. under the name of the Loski Obrh along the Losko Polje. A polje is a large karstic depression sometimes miles across; it has no specific origin and is thought to be due to general tectonic collapse.

At the northern end of the Losko Polje, the river sinks in the Golobina Jama at Dane. Two kilometres later it resurfaces at the southern end of the Cerknisko Polje as the Jezerski Obrh. During the summer months the stream only flows as far as the sinks in the centre of the polje. Also flowing into these sinks is the stream from Krizna Jama and further downstream the Cerknisk Bistrica which drains the Bloska Planota (plain). Heavy autumnal rains flood the polje each year, and the water sinks further downstream at Velika Karlovica - this cave has been penetrated downstream and a point reached only 200 m. from the upstream sump of Zadnja Jama from where the river reappears once more as the river Rak.

The Rak flows only briefly on the surface along the bottom of the Rakova Kotlina (basin) in the national park of Rakov Skocjan - this is a beautiful wooded valley spanned in two places by natural rock bridges. Downstream the Rak disappears into Tkalca Jama and is not seen again until it joins the Pivka in Malograjska (or Planinska) Jama. From here the two rivers flow as one, the Unica.

The Pivka, which is also a source of the Ljubljana, rises at Zagorje (15 km. south of Postojna). The river flows overland until it reaches Postojna where it sinks in the lower galleries of the cave. After getting horribly lost in the vast complex of passages which make up Postojnska Jama, it makes a brief show at Pivka Jama (really a part of Postojnska, but you have to pay again to get in!) and is not seen again until it takes on the name of the Unica at Malograjske Jama.

The Unica continues flowing northwards across the Planiska Polje a eventually sinks in small fissures at Ivanje - the river continues to the mai sink at Pod Stenami only during very wet weather. The underground passag here are very tight and can only be followed for a short distance. However, dye tests have proved the connection between the Unica and the springs at Vrhnika from where the river flows above ground the rest of its way as the Ljubljanica.

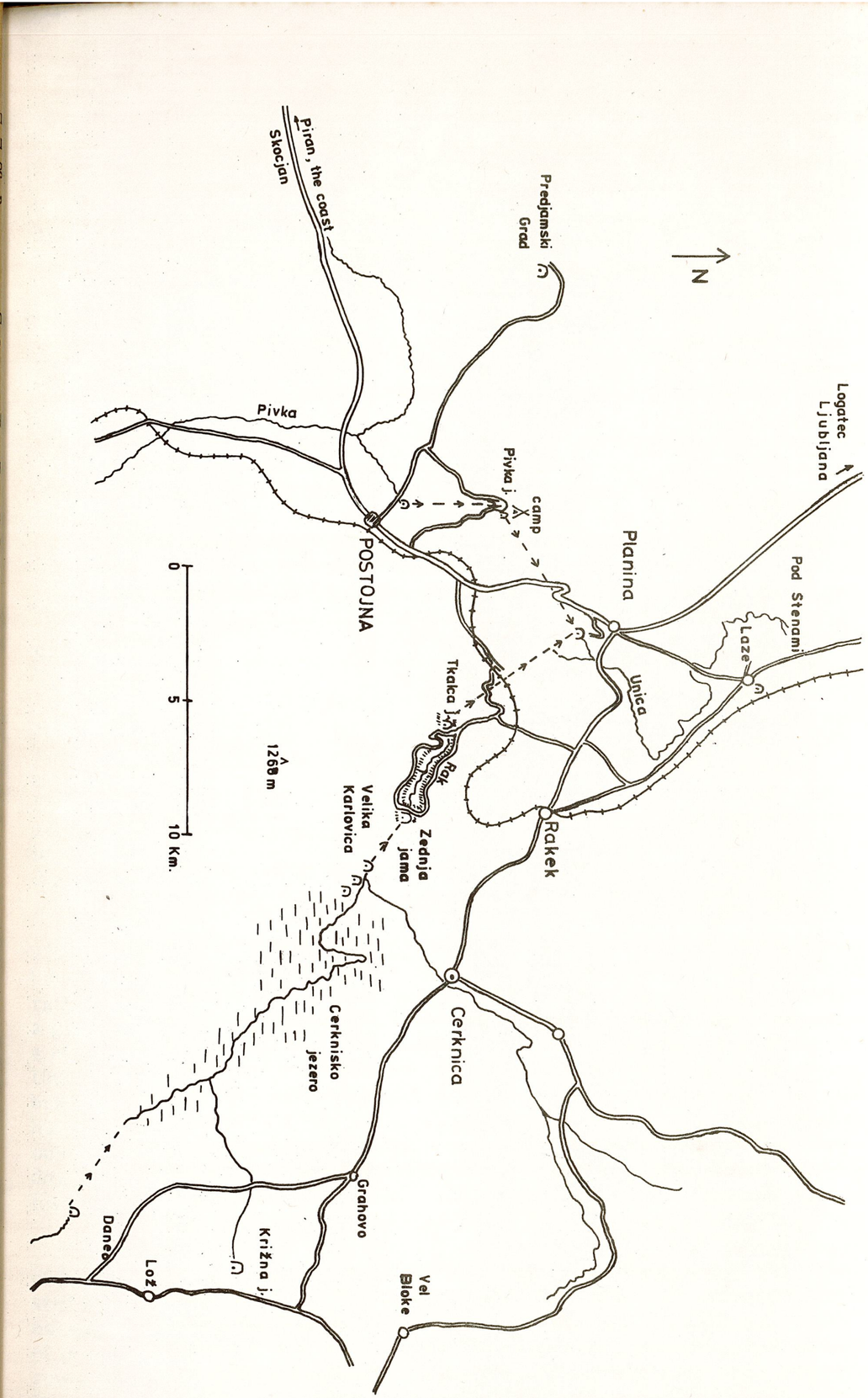
Between Vrhika and the Planinska polje there are only two places wh one may meet up with the Unica. They are the 700 ft deep Hudicevo brewno (Gradiscnica) near Logatec, and the Logarcek jama near Laze.

Pottering in Postojna . . . . . it was a rather weary M.C.G. that emer on their first morning in Yugoslavia and started pitching camp. For, our arrival the previous night coincided with a violent thunderstorm - luckily, v were able to take-over some spare chalets in the camp site and so slept in comfort. The first afternoon was spent in a wander around the town and thi included a visit to the Institute for Karstic Research, where we met Dr. Ra Gospodaric, a professional caver! Our visit to the shops reminded us of al the things that we had forgotten - many foods to which we were accustomed were unavailable; the only things in tins were sardines and the only things n in tins were dried beans apart from Slivovika (a violent plum brandy) which kept in bottles.

The afternoon was concluded with a potter around the jama. There already many excellent descriptions of this cave, which is a good excuse fo not writing another one. Although a visit to this cave is a must for everyon it is, like so many Slovenian caves, impressive almost to the point of bored Big chambers full of formations are all very well, but they all look the sam after an hour or two.

Strange Happenings . . . . . we went caving in Tkalco Jama.

The following day after picking up Rado from the Institute and forget Mike Lovell in the square, we made our way to the Rakov Skocjan. On arri we made our way down a steep path to the floor of a huge doline that we had noted a couple of days before while looking for a nonexistent campsite. The gigantic entrance hall, fronted by a natural rock bridge, provided an extren impressive start to the cave. But, these grandiose beginnings were soon le behind and the passage closed down to a 'small' tunnel 20 ft high and 30/40 across. Signs of flooding were very much in evidence; we reeled off boulde coated with new super slip mud and reeled again from the stench of decayin fish. After reeling along for twenty minutes we reached another local phenomenon . . . . a log choke! Shortly after climbing through this we re a sizable chamber containing a large lake. Rado was keen on plumbing the in order to complete his survey of the cave - after much splashing around,



bottom was reached at 30 ft. However, interest was soon centred on a crack on the other side of the lake and about 25 ft. above the surface. Mike Nightingale was the first one to reach the crack and found himself in a new gallery. He was very quickly followed by everyone else (but not until he had fixed up a ladder). A short distance in a roof traverse avoided another log choke and entry was gained into a chamber containing a clear pool 'Mendip Lake'. From here a choice of routes led through the roof to an unpleasant stony crawl. A short drop into a low but finelyscalloped passage led to a mud slide which descended into a further chamber also containing a small lake. Two short tunnels that led off from this both sumped. A climb was also attempted to a high level passage but this was choked after a short distance. A muddy aven near the entrance to the new series was also climbed to a narrow crawl, but lack of time prevented further exploration.

This discovery of 300 ft. - although minor - provided an excuse to visit a local trout farm for a celebration meal - but not before we had picked up Mike Lovell, whose absence had only just been noticed.

Nineteen Lemonades. . . . . a visit to Logarcek

We said goodbye to Rado, as he was off on holiday, and continued caving with Andrej Kranjc. Following a rather active night (trouble with the water again!) we set off with Andrej for the village of Laze. He we stopped at what serves as the Hunter's and settled ourselves in the caver's back room. But the order wasn't one that you might hear on Mendip - 'Nineteen lemonades and a beer' - who spoilt the order? Not, as you might suppose, Pat or Simon; it was Robbie Charnock who continued to down beer - he really saved us from disgrace that day: he didn't go caving either!

The cave entrance was soon found in a nearby wood above the village. This time entry was down a 70 ft. shaft; at the top this was about 15 ft. across but it soon opened out into a large chamber. The pitch led us into a dry and rather homely series. The route we followed was quite complicated and meant a great deal of splitting up of the party. However, we all managed to arrive at a chamber in which a small window led to the second pitch down to the main cave. Until now we had been working on the assumption that this pitch was 17 m. deep but a cry from the first down, Andrej, 'Please I am nine metres short', sent us hurrying back for more ladder. Once at the bottom of the ladder, we found ourselves in a huge passage that continued in both directions. We turned to the downstream or northern series as we were interested in the water level in the lower sections of the cave.

The passage in which we now found ourselves, although open and devoid of boulders, was very heavy going; literally, for the floor was made up of very stiff clay. Our boots were soon lost in large clods and quite some effort was needed to extract them from the floor. The path we followed along the middle of the passage led along the tops of steep clay ridges. And as we followed the route from ridge to ridge, we risked a slide of ten feet down the steep sides into pools of liquid mud.

After dragging ourselves along for 600 ft. or so we emerged in a rift chamber at right angles to the passage from which we had just emerged. W quickly crossed this chamber and struggled through a 'tight squeeze' (the smallest section of cave encountered - only two feet wide!) This opened into a second cross rift which, in turn, led once again into open passage.

Our route through the passage was along steep-sided clay ridges for further 500 ft. before it gradually opened out into a gigantic chamber. The walls and roof disappeared into the darkness and were hidden even from the light of magnesium. Across the floor of the chamber ran a small stream - although normally this flows as a strong river. Our crossing of this chambe might be better imagined as Beau Guest in the Sahara except the 30 ft. high dunes were not sand but piles of mud. Once across this chamber we followe the way on down to the sump; deciding what a fine sump this was and what a good thing droughts were, we walked through. On the far side we continued following the passage and eventually reached the second sump, this had neve been passed. Our opinions of droughts were confirmed; dinghies were inflated and a party of four plus Andrej paddled through. They continued to t final sump surveying the newly discovered passage on the way.

In the depths of the night some very tired cavers surfaced after a mo enjoyable twelve hour trip.

A Few Days Off

Of course, not all our time was spent underground. Two excursions were made to the coast at Opatija and Piran; most people preferred the latte The part of the coast is notable for its submarine resurgences. These are felt rather than seen - by swimmers who choose the wrong place for a dip; they find themselves not in the warm brine but in the icy cold currents of a freshwater rising.

A 'don't miss it' sort of place on the way to the coast is Skocjanske Jame. It has far fewer visitors than the caverns at Postojna and is neither a extensive nor as well decorated as its more famous counterpart. The cave i entered at the bottom of a large doline; an artificial tunnel leads into a dry a rather poky upper series. Only one stop was made for photographs, at a fin bank of rimstone pools. Then suddenly ! first impressions of the river pas are difficult to put into words: we turned a corner and found a sort of Chedd Gorge with a roof on. About halfway up, the vast passage is spanned by Han Bridge and from here can be seen one of the best cavescapes anywhere. In b directions along the Gorge the walls merge into the darkness, and high above roof is only dimly visible. Thundering along, 200 ft. below, is the river Re we found it shrouded in mist and looking quite evil. We left this most impre view and continued on our way through the remainder of the cave, finally co out into the fresh air by way of a huge archway at the bottom of a steep-side valley. Through the bottom of the valley the Reka flows on its way to the ca During very wet weather the limited capacity of the final syphon causes the water in the cave to backup and the level in the cave may rise by over 150ft.

Yet another way to lose an afternoon is to visit the castle in a cave at Predjama - the castle fronts a massive entrance situated halfway up a steep cliff. The first castle was built at the end of the 15th century and to get in meant a climb up a rope ladder. This castle was built by a robber-knight by the name of Erasmus. During times of siege he obtained supplied through a series of passages that emerged in a wood above the castle. These caves were also used as the headquarters for a partisan newspaper during the last war. The present castle dates from the late 16th century and is built in front of the old fortress. Below the castle is another interesting series of interconnecting passages - about two miles in all.

Messing About on the River . . . . . a visit to Krisna Jama.

We arrived one day at the entrance, complete with guide, and found the place to be a vaguely disused showcave. From information gathered in Postojna we made the rash assumption that in addition to our own pair of dinghies, we would find a fleet of threeman boats in the cave. The fleet turned out to be four. Losing a few volunteers, the remainder of our party nipped down to the first lake. And those good at arithmetic were soon to spot that the threeman boats were only twoman boats and there were only two of them: the other pair of boats was already in the cave with a couple of Germans. Leaving behind the boat that didn't float we set off in the other - at this stage our party of fourteen was a little cramped in a pair of rubber dinghies and one boat. It was soon found that a hairy traverse could be performed around the first lake, a ferry service was set up on the second, we waded across the third, swam the fourth, sank in the fifth, drowned in the sixth and turned to piracy in the seventh, where we met up with the two Germans; quickly outnumbered them and made off with one of their boats. Just as well really as shortly after that one of the dinghies sprang a leak. Despite all this we managed to blunder our way on to the fifteenth lake and the island of Kalvarij. This was a dense forest of stalagmite bosses and columns and were the most beautiful we were to see during our stay in Slovenia.

The cave is quite magnificent and, I feel, one we should all like to visit again under less chaotic circumstances. Although described as a long series of lakes it really consists of long river passages interrupted at intervals by stal barriers: the water flowing over these was shallow but usually just navigable. The passages are in true Slovenian style - a bit like railway tunnels. The roof is about ten feet clear of the water most of the way but, at one point, drops to less than four, the passage width being fairly consistent at twenty feet. The first part of the cave consists of nearly a mile of river passage with a few side tunnels. At Kalvarija, which was the limit of our exploration, the passage divides into two. Each branch continues for a further mile before reaching its upstream sump.

Small World . . . . arriving back at our vehicle one day in the main squa at Postojna, we found a piece of paper under the windscreen . . . . it wasn't a parking ticket but 'Never fear, the Mendip Caver is here'. We wer even more horrified to pop back to the campsite and find the Oldhams encam opposite, enroute to Roumania. They joined us for dinner that evening at th Motel Proteus. The dinner was in honour of Andrej for all his help and also Pat and June who were leaving us to continue (?) their honeymoon (?) in peace (?).

Planina Jama . . . . time was now passing quickly and we set off on our last caving trip. This consisted of an attempt to pass the final sump in Planinska Jama. The sump had been passed only once before during a sever drought at the beginning of the century, but the exploration of the new passag was not completed. No diving for us, we were hoping to emulate the early explorers and paddle through like gentlemen. Our four gentlemen, Mike Br Bryan Pittman, Roger Wallington and Mike Nightingale made an early start Andrej. Their trip involved a paddle across the largest underground lake in Yugoslavia - getting on for half a mile long. Their paddle was in vain, the entrance to the sump was found to be about four feet below water level.

During the course of the day the rest of us got up - ending up eventua outside the cave. With nothing better to do, we inspected the confluence (joining up) of the Rak and the Pivka at the large lake.

In the course of our weejee trip we spotted large numbers of proteus. This is probably the best place to see them, particularly as the cave itself i very easy. The proteus is closely related to the salamander except that it h no eyes or pigment. They grow up to a foot long and look roughly like pink lizards, i.e. quite revolting, but they are delicious on toast.

That's the End Folks . . . . well not quite, most people stopped off a Salzburg to go down the mines on a log shute.

Our transport was two 15 cwts: an Austin J2 and a 2500 Commer. T former had only tyre trouble and with the latter it was possible to do seventy without any bolts holding the carburettor on. The day after our return, Bria Hillman managed to burn out the coil on this vehicle and was stranded for ho on the North Circular.

...../.....

The Complete Karst

Mike Brace	Pete Mathews
Robbie & Pam Charnock	Ken Newcomb
Chris Fry	Mike Nightingale
Brian Hillman	Bryan Pittman
Dave Hodby	Mike Quartermain
Sheila Killingback	Pete & John Virgo
Simon Knight	Don Vosper
Mike Lovell	Roger Wallington
	Pat & June Walsh

Special thanks are due to Brian Hillman and Dave Hodby for organising us so well.

I suppose a word ought to be said about our strange sounding title. After our adventures in Logarcek Cave, Andrej presented us with a monograph dealing with it geomorphology and exploration. The book was, naturally, in Serbo-Croat but had an English summary in the back. The opening lines of the latter begin " Those meritorious speleologues ....". Such a lovely phrase, we couldn't leave it out.

Three Men Down a Jeskyne - Czechoslovakia 1968

by Peter Mathews

The Road to Praha

The three were Pete Mathews, Ken Newcomb and Don Vosper and ou visit took place about a month prior to that of the Russians. We left the German autobahn near Nuremberg and sped along the narrow roads leading the frontier. We passed through the last German town of Waidhaus and disappeared into the dark pine forest. From here we were on our own and for the last few kilometres we had the road completely to ourselves. The James Bond image was complete as we crossed the frontier into Rozvadov under the eye of an armoured helicopter.

The journey was made in Ken's new car - a smart bronze Hillman Californian with fastback, blue windows and Union Jack. Poor Ken was horrified as we set off along the road . . . gedonk! splunk! boink! bump! cobbled roads. But, these same roads were to seem like motorways when returned two weeks later after visiting Slovakia where the roads are more doubtful.

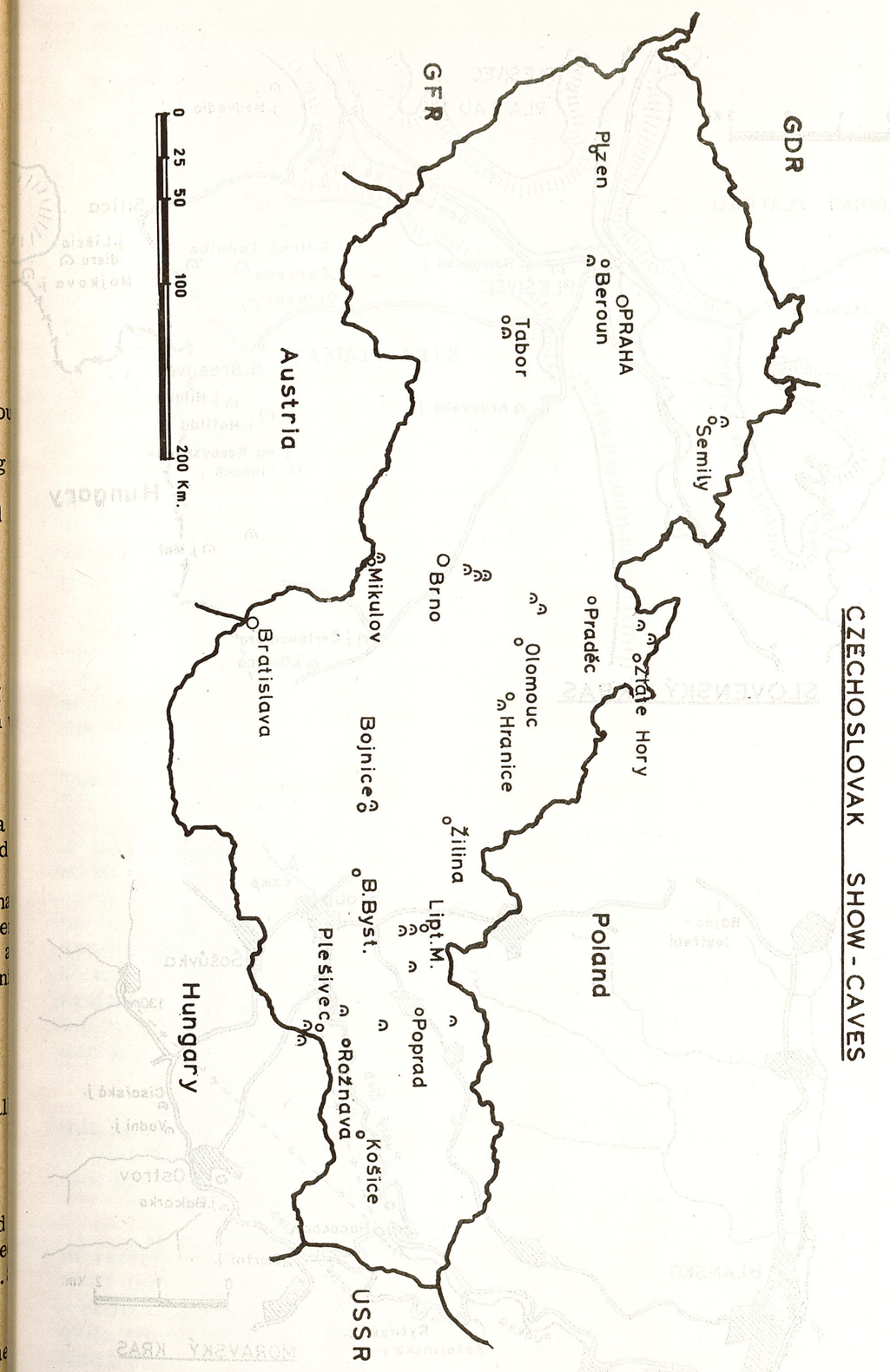
First place of note was Plzen, famous for its beers but otherwise a dreary, industrial town. Next we visited Beroun (20 km SW of Prague) and the Bohemian Karst. There are numerous caves in this karst area which extends as far as Praha, but most of them are quite small and only of archa logical interest. The most famous cave in the area and the longest in Bohe is the show cave at Koneprusy. This was discovered by quarrying in 1950 a totals 2½km of passage. It is formed in three levels in thinly bedded Devon limestone. The main attraction as far as the tourist is concerned are the cave roses. These form in a similar manner to cave pearls but the upper crystal layers break away to form petals.

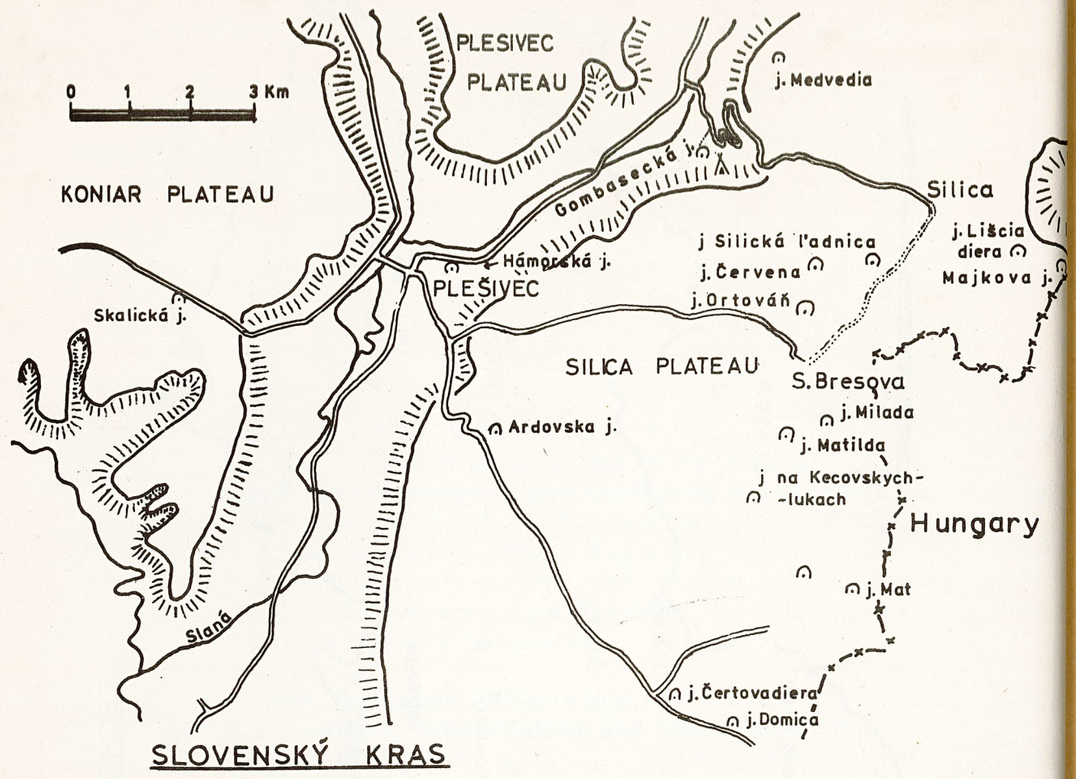
This is not the only limestone area in Bohemia and numerous, smal caves can be found in the delightful hills near Susice in South Bohemia.

Praha

At six o'clock that evening we pulled into the outskirts of Praha and stopped at the 'Campsite International'. This was a fine place and containe large numbers of help-yourself fruit trees. Incidentally, most roads in C. are lined with fruit trees - a delicious place in summer.

The following day we rose early and rushed round Praha, or Prague you prefer. Architecturally we found Prague full of interest. It includes e thing from gloomy medieval ghettos to an ultramodern sport's stadium whic the largest in Europe. From there we set off for Brno.





MORAVSKÝ KRAS

Chynovska Jeskyne

Chynov Cave is only a few minutes from Tabor along the Brno road. It is the only cave in the area and is altogether a bit of a freak. For a long time its 550 metres of passages made it the longest cave in Bohemia. The cave was discovered in 1863 by a workman from the nearby quarry. He lost a hammer down a small hole and in recovering it, discovered the cave. His descendants still look after the cave which is the oldest show cave in the C.S.S.R.

In essence the cave consists of a complex series of steeply descending solutional passages in a small outcrop of Silurian limestone.

There is not a single formation in this cave but the wildly sculptured passages more than make up for this. The colours found in this cave are quite unique and range from the purest white to dark greens and blues. The colours are formed in narrow bands only a few inches wide and the general appearance leads to the alternative name - Painted Cave.

Our visit was quite splendid, we were completely spoilt by the guide who insisted on dressing us up in funny hats and all the old clothes he could find. The trip, partially by candlelight, lasted about an hour, after which we signed the visitors book. Other than E.K. Tratman et al in 1964, we were the only other visitors from England.

The Moravian Karst

For the greater part the caves are associated with two valleys which intersect the complex backbone of Devonian limestone hills near Blansko. One is heavily wooded (Pusty Zleb) whilst the other in sharp contrast is quite barren (Suchy Zleb). Higher up on the plateau near the heads of the valleys numerous streams reach the limestone and disappear below ground. There are several large caves connected with these sinks the largest of which are the Sloup - Sosuvka and the Barlcarka systems. The combined rivers reappear again 4 km later in the lakes at the bottom of the Macocha Chasm. From here the river flows through the Punkva River Cave before finally reaching the surface as the River Punkva.

We found the Moravian cavers to be very intensive diggers. Perhaps this is because they receive so much encouragement from the local karst museum in Blansko. We saw trenches cut to avoid low formations in the roof. Every side passage and digging prospect seemed to have been well attacked.

Of all the digs we were told about, the one at 13C seemed the most incredible. Near the high level sinks digging led to the discovery of a deep shaft and a large river passage. Unfortunately, the latter sumped after only a short distance. The water was traced to Macocha. And, the job seemed quite simple; drill a few shot holes in the roof, blast a bit of airspace and then move on to the next bit. Several tons of dynamite and two kilometres later they are still at it.

The Moravian cavers were also among the first to take up cave digging. This they did with some considerable success before the First World War.

Sloup - Sosuvka Caves

Quite close to the village of Sloup is another swallet whose waters fe the Punkva River Cave. Near the Hrebenac Rock (a free standing limestone pillar), the Sloup stream disappears under a limestone cliff and close by is the entrance to the showcave. The cave comprises 4km of horizontal passa formed on two levels. The two levels are interconnected by a number of shafts the deepest of which is the 90m deep Nagel Chasm. After our trip wh lasted nearly two hours, we emerged from Sosuvka Cave nearly a kilometre down the road - obviously not a trip for a wet day.

The cave is very well decorated and shown to its full by well thought out lighting. This we were to find is something generally true of caves in C.S.S.R. During the course of our visit we struck up an aquaintance with a friendly party of French speaking orientals. It turned out they were from Vietnam - needless to say they were from the North !

Balcarka and Katerina Caves

Our visit to Balcarka lasted about an hour during which were were suitably impressed by its richly decorated passages.

The tour of Katerina cave was fairly short as this is essentially a monothalamous cave about 100m across. The main chamber is strewn with large boulders. The only 'pretties' in the cave occur in two small side passages. Of these the recently discovered Bamboo Grove contains scores of columns a few centimetres across but 3-5m high.

The Punkva River Cave and Macocha Chasm

First we visited the Macocha, following the sign post along the footp from Pusty Zleb. The walk up was steep, took half an hour and it poured wi rain the whole time. At first we were delighted to find an ale house at the t but were less happy when we noticed the road behind it which we could have driven up. However, when you get to the top, the view is breathtaking. Th chasm is about 100m across and 138m deep; it is the biggest shaft in the country. At the bottom we could see the deep green lake which is the sourc of the Punkva. We also saw dozens of tiny figures emerge from a gap near bottom and we wondered how they got there.

Even though it was still only 8 o'clock in the morning, we found it a l of a struggle to get through the crowds outside the entrance to the Punkva R Cave. We were conducted through a dry series and suddenly we were in da light. It wasn't a special short trip, but we were at the bottom of the sheer cliffs of the Macocha. After the ooh's and ah's and our own clicking of cam we moved on to the river passage where we got into boats. Powered by ord car starter motors, we cruised along at about 3 knots. A particularly beautiful side passage provided a brief respite before we returned to the bo for the final cruise to the entrance.

Low Tatras, Liptov Karst and Demanova Cave

From South Moravia we went north into Slovakia and Liptovsky Mikulas on the edge of the Low Tatra Mountains. For it is here one can find Czechoslovakia's most famous cave, namely the Demanova System. The Liptov Karst covers some 400 sq.kms. of blue-grey limestones and dolomites of the Middle Trias which cover the northern flanks of the Low Tatras. The original karst plateau is considerably dissected into numerous parallel mountain ridges and valleys, the biggest of which is the Demanova Valley itself. The cave is formed on nine levels each of which coincides in height with one of the terraces on the side of the valley. There are several entrances to the system two of which are used as show caves. A long walk up the valley side afforded us a fine view and brought us to the entrance of the Dragon Ice Cave. Czechs must be very fond of music - there were loudspeakers slung from the trees every few yards (most of the music came from cracked 78's). Although the visit to the cave lasted over an hour, very little of it was spent in the ice section. We rushed in to view a few weary ice formations and were pushed out quickly and the insulating doors closed behind us. Judging from the poor condition of the formations, they must have a bit of a job keeping the cave temperature below freezing point through the summer months. The remaining tour of the cave was rather dull and seemed to centre around a section of cave wall covered with smoky initials some of which dated from the 13th century.

The Slobody (Freedom) Cave, although high up on the side of the valley, was quickly reached by chairlift. Chambers with names such as Violet Dome, Rose Dome, Enchanted Lake and the Gallery of Suffering follow one after the other. These chambers are considered to be some of the finest examples of stalagtite decoration. They are still in a very active stage of development, and many are in deep, crystal-clear pools. The cave also boasts some extremely fine river passage but this is not open for ordinary tourist trips.

In Liptovsky Mikulas we made a short but enjoyable visit to the local karst museum. It was our intention to meet Dr. Anton Droppa who is the most prominent figure in cave exploration and research in Slovakia - he was on holiday in Italy. A tour of the museum is most worthwhile for a small section is devoted to each cave in Slovakia. The prize exhibits are from the cave of Domica. The collection of pottery from this cave is so delicate that it seemed barely possible that it could have remained in such perfect condition for thousands of years.

The High Tatras

From the Low Tatras we moved further north into the High Tatra Mountains. This is a main tourist area and naturally we found it fairly crowded. Our tour took us to the Polish frontier and to Belanska Cave. Essentially this consists of a steeply ascending rift laid out in such a manner that parties are led up one side and down the other which is cunningly laid out to look like a new passage.

The Dobsina Ice Cave

The Slovensky Raj (Slovak Paradise) is a region of delightfully wooded hills between Poprad and Roznava. Cavingwise, it boasts one of the finest ice caves in the world. But to reach it requires a stiff mountain walk lasting as long as the tour of the cave itself (just under an hour). The ice is 30m thick and a stairway leads through it to the lower chambers. The lighting is almost entirely by mercury lamp and this is effective in giving the translucent blocks of ice an appropriate greenish glow. Our attempts to photograph this were largely unsuccessful apart from a few shots taken by available lighting.

The South Slovakian Karst

This is made up of massively bedded Triassic limestones and comprises the largest karst area in Czechoslovakia - some 800 sq.km. of which a third is in Hungary. The plateau slopes from a height of 700-800 m. in the north to 400 m. in the south where it is lost in the Hungarian Plains.

The deep gorges of the river Slana and Stitnick trisect the original plateau. Of the three remaining smaller plateaus only the Silica Plateau contains any noteworthy cave systems. A few steep roads lead up to the top of the plateau, the surface of which is broken up by numerous gorges, dolines and potholes - the deepest of thise is the Brazda (204m. deep).

Gombasek Cave

The northern slopes of the Silica Plateau rise steeply to a height of 250 m. Hidden away in the woods at their foot, is the showcave of Gombasek. Of the cave's many attractions, we particularly took to the girl who showed us round. We were also impressed by some fine 3m. long straws. Gombasek is a resurgence cave although today only a small stream is active. The stream comes from sinks high up on the plateau to the south. Of these, Silica Ice Cave is the largest. It is a small cave at the bottom of a deep gorge and throughout the summer it remains just cool enough to prevent the loss of its ice formations.

Our stay in South Slovakia was spent in the comfort of chalets in a campsite all of a minutes walk from Gombasek Cave.

Domica Cave

Domica Cave is located very close to the Hungarian frontier and some 10km. SE of Plesivec. It connects with the Hungarian cave of Baradla (Aggtelek) to form a system totalling twenty kilometres of passage. Quite a unique feature of the cave is the underground frontier which is closed by a heavy iron gate to prevent through trips.

The usual tourist trip includes a tour of the old dry series followed by a boat trip along the stream passage. At the time of our visit the water level in the Styx was too low to be navigable - we were just a little put out by this as it had been raining buckets for the previous two weeks. By way of consolation, we did a private trip to a series not usually visited by tourists. It was claimed to be the finest decorated part of the cave but we were not greatly impressed.

Domica is of considerable archaeological interest and many New Stone Age artifacts have been recovered. Some of these, such as the pots displayed in Liptovsky Mikulas, are in almost perfect condition; in one grotto, several pots can be seen cemented into the formations. Religious ceremonies were performed in one of the largest chambers. The chamber also contains some mysterious figures scratched into the wall and a particularly obscene stal formation which played a significant role in fertility rites.

Although we did not visit the Hungarian end of the cave, we did learn that this is relatively dull. Domica Cave was discovered in 1926 whilst Aggtelek, which has always been open, has suffered from centuries of vandalism.

Ardova Cave

The entrance to this cave is a narrow fissure in a prominent outcrop near the road between Plesivec and Domica. During our preliminary inspection of the entrance Ken climbed up to look at an alternative way in. In order to judge its depth, he tossed a stone down and smashed his lighter which was being used by Don 5m. below in the lower entrance. The system was thought to be about 500m. long. It is almost entirely horizontal with frequent right angle bends and junctions in its spacious passages.

Izbica Cave

In the Velka Fatra Mountains near the village of Harmanec (10km. NW of Bansca Bistica) we visited the cave of Izbica. Yet again we were in for a thirty minute slog up the side of the mountain. This time the effort was well worth while. The cave contains a number of gigantic collapsed chambers linked by relatively small passages. The most beautiful part of the cave, so we thought, was a series of rimstone pools and stal banks all of which were of the purest white. Although Izbica is a relatively little visited cave, it is much more worthy of attention than some of its more famous counterparts.

Hranice Aragonite Cave

Immediately south of the town of Hranice on the bank of the Becva is one of Czechoslovakia's many large spas. The entrance to the small cave is within the grounds of the spa hospital. It is notable for a number of unique crystal deposits which have been found there. Luck wasn't with us for heavy rain had swollen the river and rendered the entrance to the cave impassable.

There are several other caves near Hranice, the best known of which are Zbrasov and Sipka. Another karst feature just outside the town is the 115 metres deep Hranice Chasm.

Mladec and Javoricko Caves

These two caves are features of the Drahan Plateau, a low range of hills approximately 25 km. NW of Olomouc (the home of Good King Wenseslas).

Mladec was inhabited during the Stone Age. A later dweller was the brigand Bocek who built a castle over the entrance to the cave.

According to the popular story he was buried alive in the cave when his castle was sacked.

The small village of Javoricko suffered a similar fate to Lidice - the village was burnt down during the war and the entire male population was shot. Today a memorial park is laid out on the site of the old village. The footpath through the trees leading away from the park is signposted 'Jeskyne'.

Javoricko Cave is rather more attractive than Mladec. But, we were astonished to find that nearly everything in sight was bright green. Indeed I cannot ever recall seeing so much vegitation growing in a cave; the cave was not improved at all by its luxuriant growths. At one stage our guide went to great lengths to point out some rare and interesting formations. What they were I think we will never know. Javoricko Cave was peculiar in that apart from its rich vegitation it was also one of the few caves illuminated entirely by tungsten lighting. Many Czech caves are lit by mercury lamps. These give a cold blue light which is more attractive for cave illumination. They also give out more light in the ultraviolet and it seems possible that this accounts for the cleaner appearance of those caves using this type of lighting.

Other than caves, we also visited the castle of Bouzov which is very close to Javoricko. The castle was very intensively restored during the last century. Although the castle is not particularly impressive from the outside its furnishing and interior decoration make it well worth a visit.

The Road Home

Coming westwards across Czechoslovakia, we noticed the gradual improvement in the roads and also the increasing amount of traffic. We spent a further day in Prague and then it really was time to leave. Our exit point was Cheb. But not wishing to change any money at the frontier we stopped at our final restauracia to rid ourselves of surplus cash. And so in a rather alcoholic state, we drove across the border into Germany.

Appendix

The Journey

This can be broken down into the number of nights we stopped at each place as follows:

Prague (Campsite International) (2), Sloup (3), Liptovsky Mikulas (Demanova Valley) (1), High Tatras (1), South Slovakia (Gombasek) (2), Hranice (1) and Prague (2)

We found it very difficult to plan how long any stretch of road would take as the roads are so unpredictable. Road works are nothing less than major and may stretch over the whole road for twenty or thirty kilometres at a time. Diversions are also quite numerous and can be very long. Pot-holes several feet deep and large boulders in the road are not uncommon (night driving is at your own risk). Again anyone attempting to repeat the tour is reminded that we had a fast car. Added to this our small party wasted a mimimum time in general mucking about and we were never up later than six a.m.

Petrol

Garages usually sell only two grades of petrol 85 and 91 octane - don't laugh these are only a recent introduction, previously they used to be 72 and 84 octane. By careful planning, or sheer luck, we were able to pop into a large town whenever our fuel gauge read 'empty'. Here we were able to fill up on 96 octane petrol (there are less than 20 garages stocking this throughout the country). Although petrol vouchers are supposedly necessary for this top grade petrol, we found no real advantage in buying them.

Maps, guidebooks etc.

These are very cheap and most easily obtained from one of the large bookshops in Wenseslas Square in Prague. A map costing 1/6d. in Prague sells for 15/- in London.

Currency

Everyday currency is the Czech Crown and officially these are worth about 20 to the pound. A special tourist rate of exchange enables one to get 38 Crowns to the £1. Holders of tourist visas must buy a minimum of 50 Crowns per day. If an official letter of invitation is available, then a business visa may be obtained without any such currency restrictions. Unofficial or private exchanges of currency are illegal, but common, and do not count towards the 50 Crowns. For private exchanges a rate of 70 to 110 Crowns to the pound seems fairly usual. Crowns may neither be imported nor exported. They can be exchanged back at the frontier but the exchange rates are very poor. It is clearly well worthwhile to plan for a slap-up meal on the last day.

A second form of currency is the Tuzek Crown. It is worth about twice as much as the ordinary Crown and is used for purchasing restricted goods such as cars, spirits etc.

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