

# SOUTH WALES CAVING CLUB



NEWSLETTER No.103 1987

## EDITORIAL

This edition of the Newsletter comes to you with the Committee's best wishes for Christmas and the New Year!

It is a time for reflecting on the achievements of the year and, like Janus, to simultaneously look forward to new and better things next year. In fact next year has prospects of being one of the best yet. Look at the work currently printed in this edition of the Newsletter. New and exciting aspects of O.F.D. are still being revealed as work goes ahead to re-map the entire system. Still more work has been done abroad and this will be covered in a separate special edition due out early 1988. The club is very much alive and well, looking back on a now considerable history and looking forward to new and even better things for 1988.

Events on the eastern edge of the limestone are developing rapidly. It looks likely that one of the world's most interesting cave systems lies under Llangattock. How many of us have walked the old road from the Clydach Gorge to Agen Allwedd and wondered if the same journey might one day be made underground? It is heartening to know that members of SWCG have been instrumental in the exploration of the caves there. The successes at Llangattock have been the result of persistent hard work and a systematic approach to exploration. These qualities are shown in the mapwork in this edition of the Newsletter. Would I be going too far in predicting that, if applied to the Western limestone, such an approach may well give us a spectacular discovery in 1988? I look forward with Great Expectations. Good luck to the diggers!

Very best wishes for Christmas and the New Year.

*Cheers!  
Gary*

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NOTE: Guest/Non member fees for the Headquarters will go up to £2.50 per overnight from January onwards. Still exceptional good value!

# THE CANYON OF SADUM

The Pyrenees are always full of surprises, and my visit there last summer proved no exception. Michel Lauga, an old caving friend, had invited us to stay in his house, high on the hill overlooking the village of Issor. We arrived late in the afternoon after a hot and tiring drive from a caving expedition in Spain, to the most hospitable welcome from Michel and his family. Soon we were sitting on the lawn, the magnificent panorama of the Pyrenees before us, and cool drinks in our hands. It wasn't long before 'Ca speleologie' was mentioned, and Michel revealed that there was the first decent of a local canyon planned for the morrow. It meant a very early start, or alternatively there was a recently discovered cave to explore through a 6m sump. I hate sumps and felt like a lie in, so toyed with the idea of a day sunbathing, but reason prevailed and I opted against the sump.

We rose at 5am, ate a substantial breakfast, and drove off into the darkness at a seemingly incredible speed, eventually taking the road for the Col du Sompfort. At about 6am we drove up a rough track behind the village of Etsaut and passing two cars left by the canyon team, pulled up in a quarried layby. It was still pitch dark, which made changing difficult. Since we had a 2½ hr walk uphill before us, I put my wetsuit, descending gear and rope into my tackle bag and limited my clothing to boots, underpants and a tee shirt. Michel had packed food for the expedition which we shared between us, so our sacks were rather heavy. A quick look at the map in torchlight and we took an obvious track into the trees, disturbing a grumpy badger at his nocturnal foraging.

The path was well made, and we strode along it until suddenly we were confronted by a barrier well laced with barbed wire and surmounted by a sign threatening trespassers with a backside of buckshot. Impasse, Michael consulted the map. A dog howled in a nearby farmstead, but no one seemed to be awake, so throwing our tackle bags over, we crawled through a hole in the hedge and continued uphill. Soon the path became overgrown and nettles and briars raked our bare legs. The path became steeper, more arduous, and after an hours uphill grind we emerged from the woods on the side of the mountain. Michael consulted the map again and asked my advice, but without spectacles I was no help. We climbed higher to obtain a better view. The canyon could now be seen in the West valley! There was nothing for it but to descend and traverse around the hillside to gain the correct path. After half an hours rapid movement we eventually found the Scotch tape left for us by the canyon team. They had ascended to the Pas 'd' Ourtasse (see map) the previous evening and camped out for an 8 am start. By now it was 7.30 am and obvious that we could no longer make the

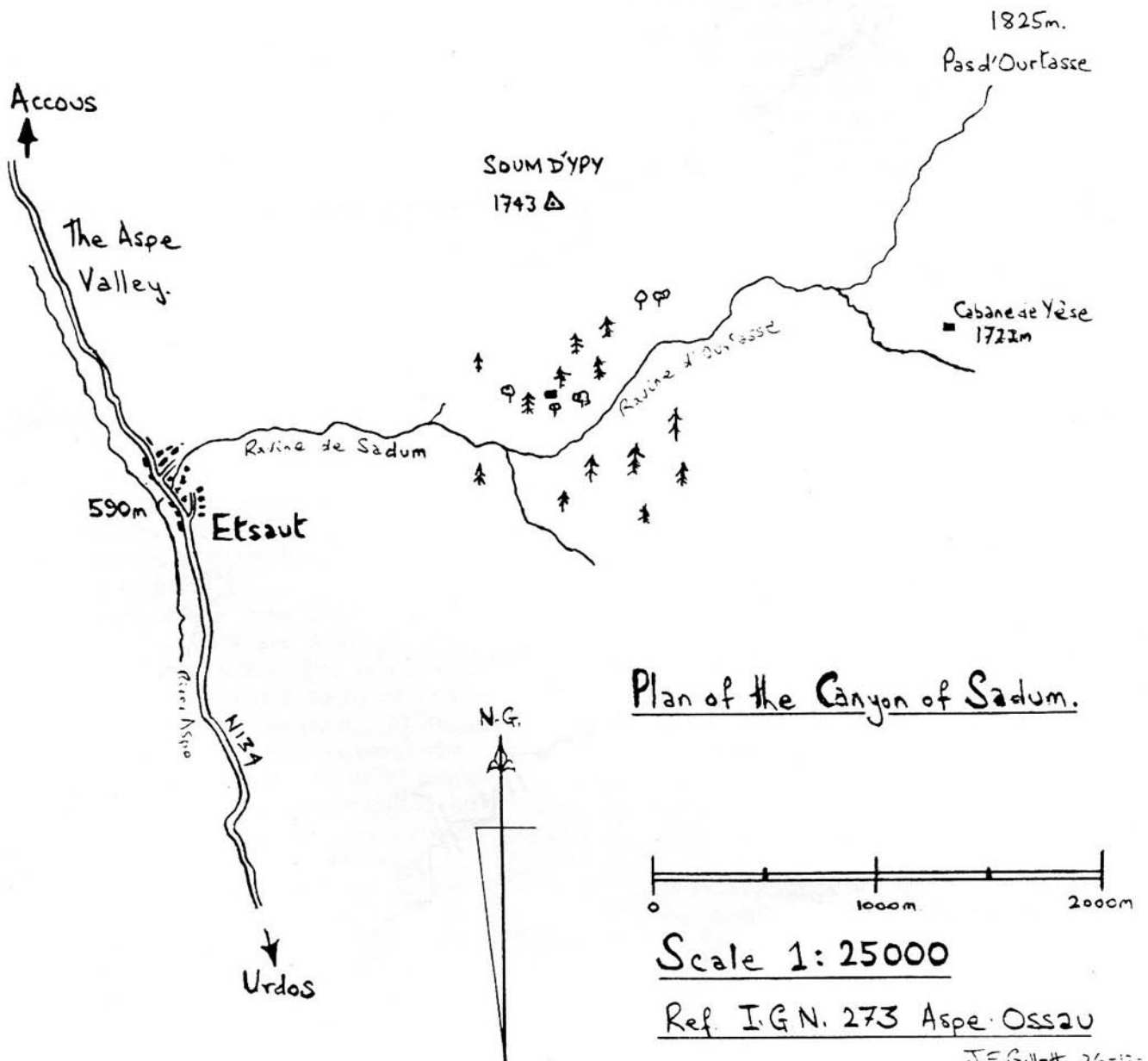
rendezvous, so we climbed uphill until about 9 o'clock and then looked for a way into the canyon so that we could intercept them. Luckily we found a place where it was possible to climb down into the ravine without ropes, so that if we missed the descending team we could still get back out of the canyon. The water at the bottom was at its summer low, but even so presented a fair volume and as we progressed upstream, each waterfall was a serious obstacle. We managed to climb several waterfalls and to clamber over log and boulder piles in the streambed, until we came to a 10m waterfall that defied our efforts to ascend. Here we decided to wait for the others. After changing into my wetsuit, I lay down, quite exhausted and went to sleep.

I awoke in bright sunlight which had penetrated the ravine, roused by a call from above. It was Jean-Claude, the discoverer of the canyon, leading Coco and Pasquale, all well hung with rope and climbing equipment. A spell of hammering to fix bolts and they absailed down to join us. So far they had been in the canyon for three hours, and at one point had had to descend a 40m cascade using two of their ropes tied together. We did not know what we would find lower down and I hoped that there were enough hangers between us and no falls over the depth of our longest rope, but Jean-Claude seemed to have an inexhaustable supply of tape and hangers in his sack. They were all in high spirits and anxious to continue the descent as there was still two-thirds of the canyon to complete. Off they went, leaving Michael and I struggling into our harnesses. We eventually caught up with them about 100m downstream of our entry point, where they were fixing bolts for the descent of a 20m fall. The descent was accomplished without getting wet and the rope pulled down without snagging and then we were on to a couple of spray lashed 5m falls in a narrow rift. A long slide followed, descended in the sitting position, and from then on I lost count of the descents, but we encountered several deep pools at the base of one or two of them which made retrieval of the ropes difficult. As I was the last in line my job was to pull down the ropes, which I did until they ran out of rope at the front or until I became overladen. The excitement of not knowing what was around the next corner was most exhilarating. Several of the falls were technically difficult, one was just like the last pitch of Diccan Pot only a bit deeper, another was off a large shelf into a superb free hang, yet another was down an enclosed rift with the water ricocheting from side to side between the falls. I had never realised what fun a canyon could be. Soon our breathtaking descent petered out into a long tiring section of jungly fallen branches and massive boulders where

the gradient was less steep. Eventually the route passed beneath a small footbridge where we stopped for a snack. By now it was mid-afternoon and I had been on the go for over nine hours. Feeling distinctly middle-aged I found it hard to restart, but luckily we entered a series of deep pools which were most refreshing. Unfortunately my heavy tackle bag threatened to drown me!

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A further tree infested section of low gradient followed until we reached a 25m cascade into a very deep pool. This gave a most hair raising descent, blindly immersed in falling water, aiming for a jammed log at the bottom to avoid drowning. A few more cascades and pools and we were in the village of Etsaut and able to climb out into the square, bathed in hot sunshine. Still clad in our wetsuits, we walked straight to the village bar and Jean-Claude ordered drinks. The first descent of the Canyon of Sadum, 1200m from top to bottom and about 5 kilometres long had been completed.



Plan of the Canyon of Sadum.

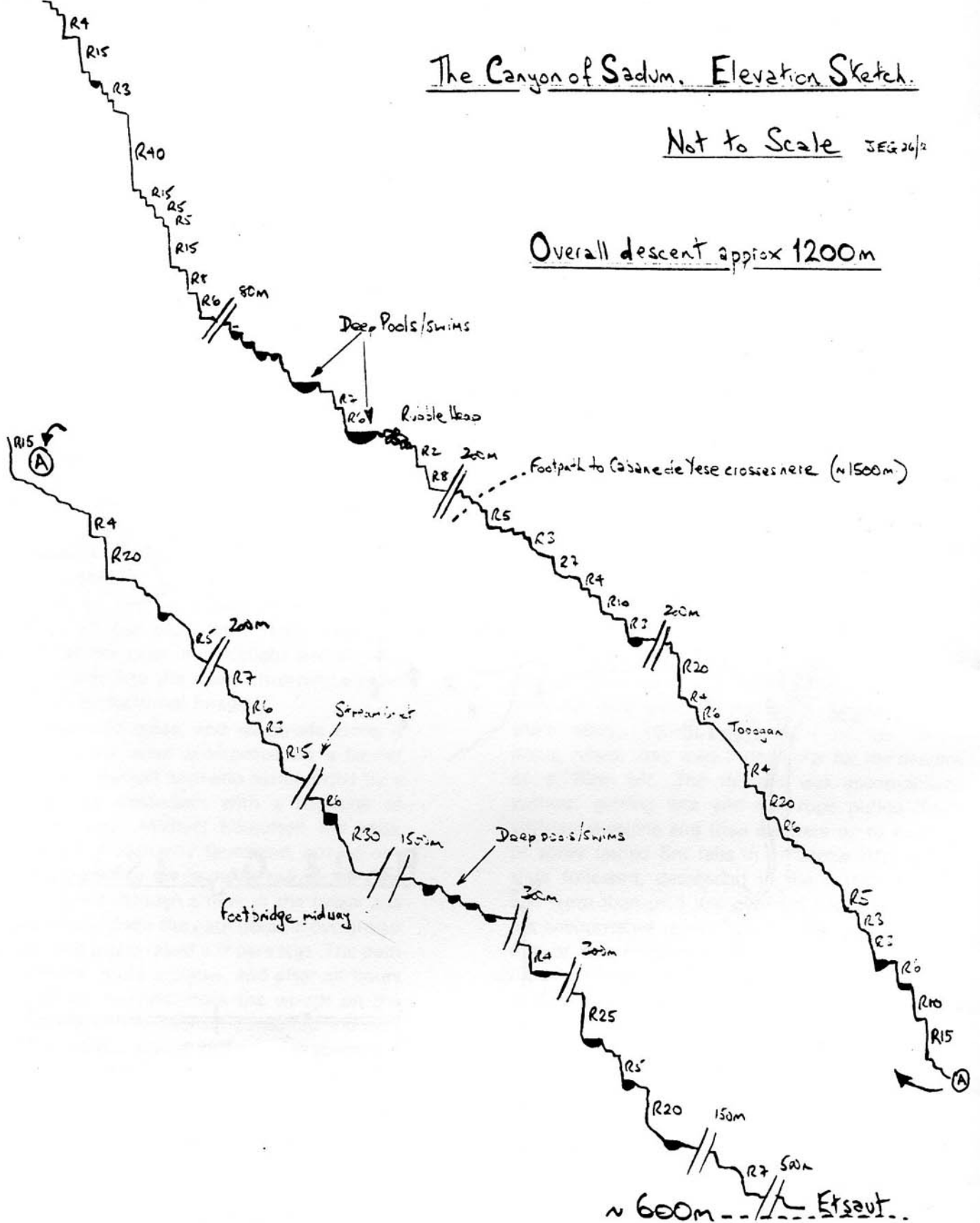
PAS D'OURTASSE.

APPROX 1800m

The Canyon of Sadum. Elevation Sketch.

Not to Scale JEG 26/2

Overall descent approx 1200m



# THAILAND THAMS

Having been lured back by the magic of Asia last summer, I managed to visit a few more caves in Thailand, including the longest, Chiang Dao Cave. I also managed to spend a week in Burma which was quite an experience, although not too successful cave wise. Most of the limestone is in the areas which are 'off limit' to the tourists.

The locals in both countries were intrigued by our Petzl headsets and we could have sold them many times over. They were also amused as to why we should want to visit caves, as to them caves are either used as shrines, or they are bad places to be avoided.

## THE SOUTH

### PHANGNGA BAY

Phangnga features as the secret hideout of "The Man with the Golden Gun" in the James Bond film. It is a small place on the west coast of southern Thailand, 454 Km from Bangkok and 75 Km north of the tourist town of Phuket. The bay itself is on the east coast of the Andaman Sea. The scenery is spectacular. The bay consists of a shallow sea set with a forest of tower karst, some single spikes of rock, others islands up to 1 Km long and several hundred feet high. The area is comparable to the tower karst of China. Many of the towers are adorned with stalactites hanging from the cliffs and are covered with tropical vegetation, the most famous rock is Koh Tapoo by James Bond Island.

The best approach is from the Phang Nga Bay Hotel where boats are available for hire ( 6 for four hours). The boat heads out for the bay through a maze of channels past the mangrove swamps. At the time of our visit (the rainy season) the bay wasn't quite as sheltered as it could have been and the wind was whipping up the waves. Not only did we get soaked from the rain but also from the sea, which made photography difficult as we were continually trying to protect our cameras from the spray. Our first sight of the strange stalactites was on the cliffs of Khao Khian [Written Mountain]. The river became wider as we approached the bay proper. The first single tower was Koh Pan Yee which shelters the Moslem village of KoNomsao which is built on stilts in the sea. Cave development is apparent on most of the islands at all levels up the cliffs, some being pierced through by cave.

The boat actually sails through Tham Nok, a large stalactite-festooned tunnel - our boat broke down at the cave entrance so we had plenty of time to study the cave. There were quite a few Swiftlets flying around; on the famous nearby Pe Pe Islands the Swiftlet colonies provide a supply of bird's nests used for the soup). Our boat was repaired and we sped through the cave and out into the open bay where we passed fisherman's houses built on stilts.

Our next destination was Koh Khao Ping Gun, James Bond Island, with the famous single spike of rock by the beach, Koh Tapool [Ragged Nail]. We landed on the white sandy beach and soon discovered that the island was acting as a wind tunnel, whipping up the sand into our faces and making photography difficult. We hurried to the shelter of a cleft in the rock then went up the steps into the cave. We followed the path round the edge, walking through a group of stal which was in the way. There were quite a few bats in the cave which was also obviously used as a toilet as well as a dump for picnic rubbish.

Although there is plenty of cave development there is little of any decent length, mainly just large fossil caverns. However it is a fascinating area and certainly different from anything I've seen elsewhere.

There are other caves around Phangnga town and the area seems to be largely limestone. Near the town centre is Khao Chang [Elephant Hill], and also Tham Phung Chang and Tham Khao Ngum which is well decorated. Further out on the road to Phangnga Bay is Tham Rusisawan where there are fish in the stream and a chimney open to the surface, with Tham Luk Sua nearby. Out of town on the southern road to Kokkloi is Tham Suwankhuka which contains the largest Buddha in Phangnga.

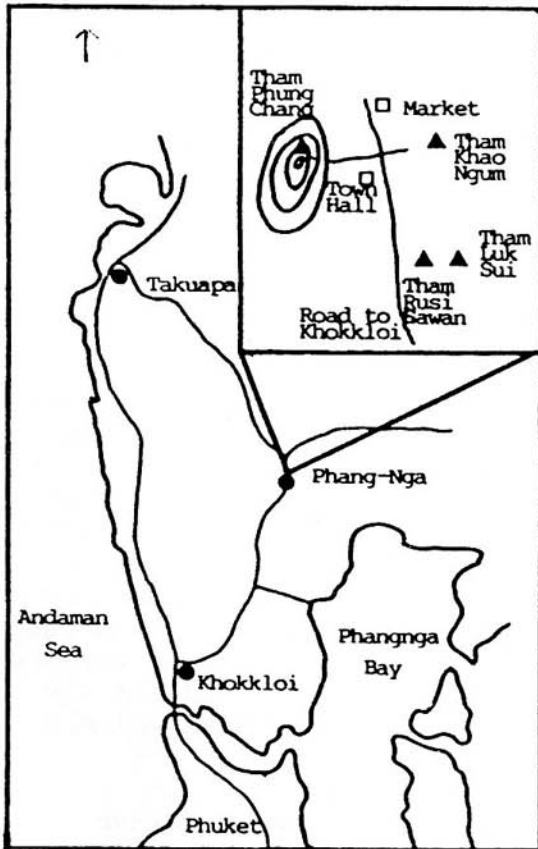
From Phangnga we headed north towards Bangkok, unfortunately missing the caves at Ranong, Chumphon and Phatthalung. Our next cave stop was Khao Luang Cave at Phetburi.

### KHAO LUANG CAVE

Situated in Thongchai sub-district of Muang district in Petchaburi Province. From the town of Petchaburi at the foot of Khao Wung Hill take a side road for 3 Km to the cave. We were lucky enough to

be taken there by a man in his car - we asked him directions and he took us for free.

## Phang.Nga area, Southern Thailand



The cave is described as an under-ground Buddhist temple but is actually a proper cave. The path up to the cave is surrounded by Lantom trees [temple flower]. Steps lead down the entrance shaft where there is much large hanging stal and in the first chamber is the usual row of Buddhas, ten in all. There is also a miniature of Buddha's footprint.

More steps lead down to the main chamber which is very large, about 50m by 60m, and is open to the surface. The shaft is about 70ft and right below it is a tank to collect rain water. The chamber is full of Buddhas, with one huge gold one surrounded by small ones as the main altar. The floor here has glazed tiles. To the side is another row of Buddhas guarded by monkey figures and we were very lucky to see for a few moments the sun pouring in from the shaft illuminating them. There were some huge stalagmites in the centre which had Buddhas placed all over them up to a height of about 30ft. Two nuns sat supervising and wanted a donation. In the corner was a reclining Buddha and an archway led through to another chamber. We were then taken over by three boys with a feeble

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torch who acted as our guides. The next chamber also goes up to the surface but is not so big.

A path led off past some stal columns about 20ft high to another altar set among stal. Steps led up to a gate and another entrance. A very impressive cave indeed. As we walked back down the path outside we kept feeling blasts of cold air so there are obviously more entrances hidden in the undergrowth.

## NORTHER THAILAND

### CHIANG DAO CAVE

Chiang Dao Tham is Thailand's longest cave and probably one of the best known. It is situated in the north of the country between Chiang Mai and Chiang Rai in the mountains of Doi Chiang Dao.

From the village of Chiang Dao a samlor [taxi] will take you for 5 Baht (12p) to the cave which is 5 Km away. The five entrances and resurgence are situated at about 500m at the foot of a steep hill. Because the cave is regarded as a temple rather than as a show cave there is no fee but you are asked to pay a 3B donation towards the cost of the monastery's electricity. A guide with a paraffin lamp came to show us around but we asked if we could go off on our own with our Petzls and he was quite agreeable. We found just shorts and a T-shirt more than adequate as the cave was warm and sandals were fine until a large cave cricket ran across my foot in the dark.

The passages of Chiang Dao are mainly horizontal on two levels and run in two directions - north-south and east-west. The cave can be divided into the main cave and the upper cave.

### MAIN CAVE

- there are basically five series (see survey).

1. The tourist route is lit by strip lighting on 'telegraph poles' and there is a concrete floor as far as A4. The entrance (E1) is reached by a flight of covered steps up from the resurgence, at the top of which is a box for donations. A short passage and a few steps lead to A1, the first altar, which is situated by the E2 shaft and is full of Buddhas guarded by nats [spirit beings] and snakes - all very decorative. This part of the cave is used by tourists and pilgrims and is mainly a large passage 3-6m wide by 3-10m high and is well

decorated. A4 is the end of the paved route and is marked by a reclining Buddha guarded by elephants.

Here there is a notice, in Thai and English "Please, sight-seeing inside have many nature pictures and source of water. Go and come back. It will take about 15 minutes. If you interest please pay for temple's lamp. Thank you!"

Normally in the next section the guide uses a lamp but we were on our own. The passage goes for about 65m to a boulder slope then swings west and continues to the pools and sumps. Needless to say, we stopped here - I didn't fancy a paddle as I wasn't sure what creatures were lurking in the water.

2. Beyond is the active series leading to an up-stream and a downstream sump. There is some dry passage beyond, leading to the final sump which in 1983 had not been passed. The potential here is great; the cave itself is at an altitude of 500m and the hill that feeds it is at 2175m. Exploration should be undertaken at the end of the dry season. Just by the sump is a collapsed shaft which has not been pushed.

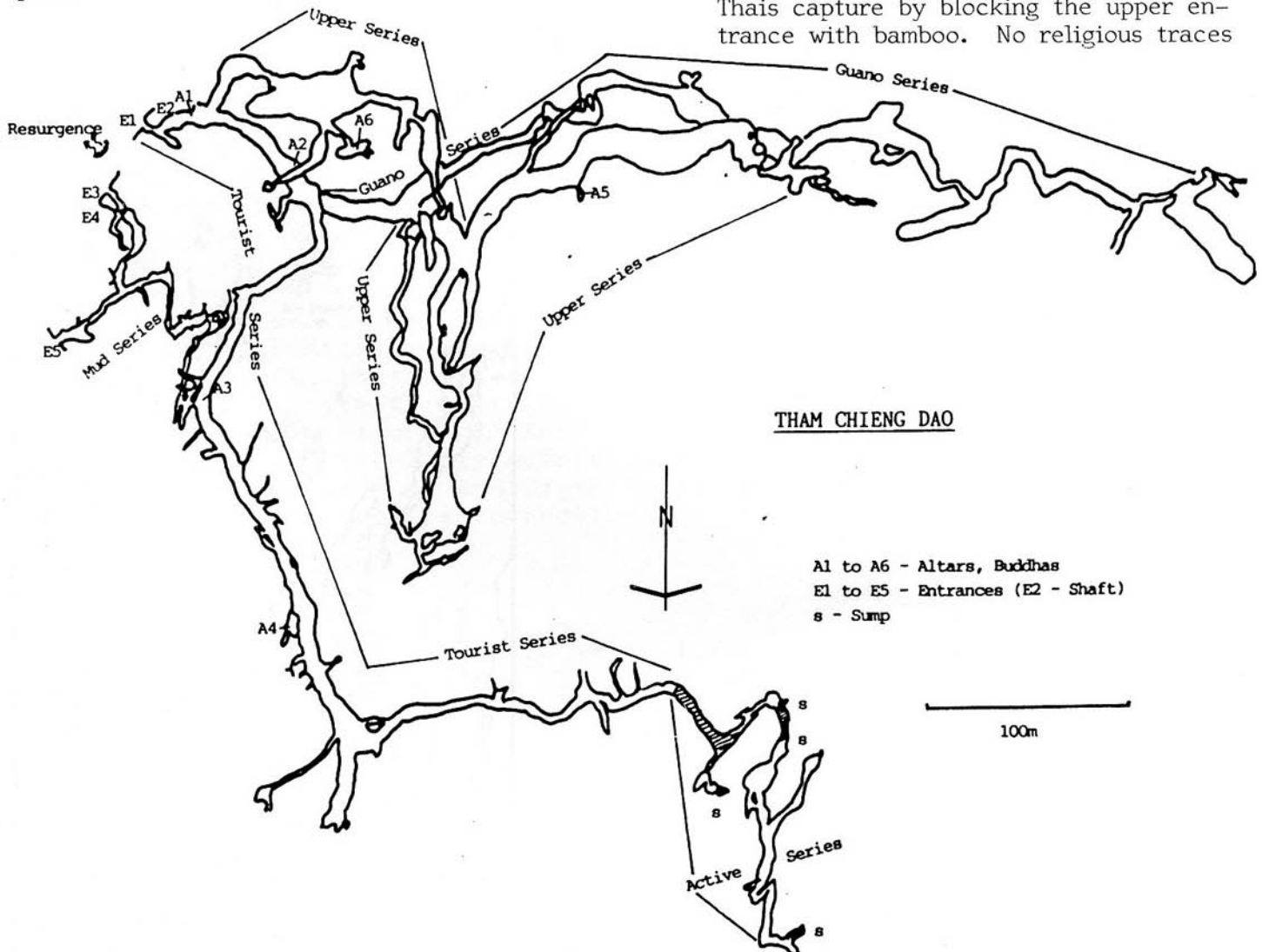
3. The mud route leaves the tourist route at A3 and some small muddy passages lead to entrances E3, E4 and E5, situated a little higher and to the north east of the resurgence.

4. Upper series. A complex collection of passages about 10-30m higher than the other series, all following two directions - S-N and E-W. A series of well-decorated large chambers generally with the S-N series being smaller. The formations seem very old and dry and some are still decorated with flowers and religious images even quite far in. There are many bats here. One section appears to flood in wet weather.

5. Guano series leaves the main tourist passage 20m beyond the *cheddis* of A2. For more than 500m the passage is 5-15m wide and 5-20m high. A stream flows in the rainy season, and there are several holes leading down to a lower flooded level.

#### UPPER CAVE

Reached from entrances E1 and E2 (the shaft). Very large dry ascending passages containing many bats which the Thais capture by blocking the upper entrance with bamboo. No religious traces





noted here. The potential could be great here due to the uphill nature.

Length: Main Cave 4.85 Km  
Upper Cave 0.58 km

The first 400m of the main cave are electrically lit. The main altars are A1 and A6.

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Tham Pha Thai near Ngao (Thailand's second longest cave at 1.18Km) and Tham Tal Tas between Chiang Dao and Fang (third longest at 825Km) were not visited.

There are three main limestone areas in the north:-

- above Chiang Dao
- between Chiang Dao and Fang
- between Lampang and Ngao

The karst can be divided into three types; hills, towers and mountains. The towers around Fang rise to about 100m high. Above Chiang Dao (400m), Doi Chiang Dao rises steeply above the plain (2175m). Its slopes are covered in forest and the summit is often hidden in cloud.

Various leaflets from Thai tourist offices.

Delannoy, J.J. (1982) Un karst tropical de moyenne montagne: les plateaux du Bilaktaung, Central Thaïlande. *Spelunca* (8) Oct-Dec, pp34-37.

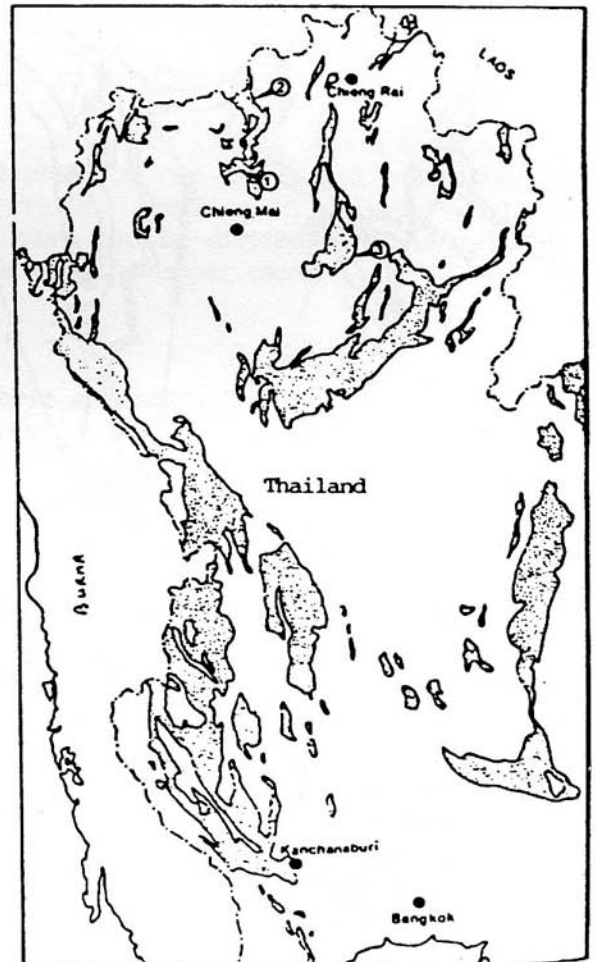
Ockenden, A. (1983) Phang-Nga, Thailand. *Croydon C.C. NI No.42*.

Deharveng, L. & Gouze, A. (1983) Expedition en Thaïlande - rapport Speleologie. *Toulouse*

Dukley, J. (1983) Chiang Dao Cave. *ASF NI. (99) pp9-10*.

Dunkley, J. & Greenfield, P. (1983). Under the Golden Triangle. *ASF NI. (102) pp4-6*.

Von Heinrich Kusch, (1975) Hohlen in Laos, N & W Thailand. *Die Hohle* 26, (4).



SCRATCHING AT SMITHS' BACKBONE.

by

J.K. Peat and R. Peat

INTRODUCTION.

In this article we present an improved survey of the area around the Smithy on the OFD II side of the Cwm Dwr boulder choke. It is shown in reduced form in figure 1. The passages surveyed are not all recent discoveries. Some were omitted from the 1969 survey and some have been discovered since then. They will be described in chronological order of discovery as a series of extracts from the SWCC logbooks. However, the description of passages is clumsy as the original explorers failed to write any names for their discoveries in these extracts or leave any photographs in the available club records. We have resorted to describing a passage with reference to a cross section corresponding to figure 1 and to avoid unnecessary repetition in the text these are placed in square brackets. So [13] refers to the passage at cross section 13. The inevitable poor quality of reduction of figure 1 is unavoidable but areas of the cave system are reproduced at a larger scale in figures 2 to 8. Shaded areas on these figures indicate a passage already shown on the 1969 survey or a passage that has already been described in a previous section in this article. There are three insets shown on the main survey (figure 1) that are included in an attempt to clarify particularly complex areas of cave passages around the Smithy, Fault Aven and Birth Canal Series respectively. Passage cross sections are reproduced at the scale of 1:250 in figure 9.

SANDBANKS AREA:-

'Did you ever make real life into a drama?,' said the Earl, 'Now just try. I've often amused myself that way.'

Lewis Carroll.

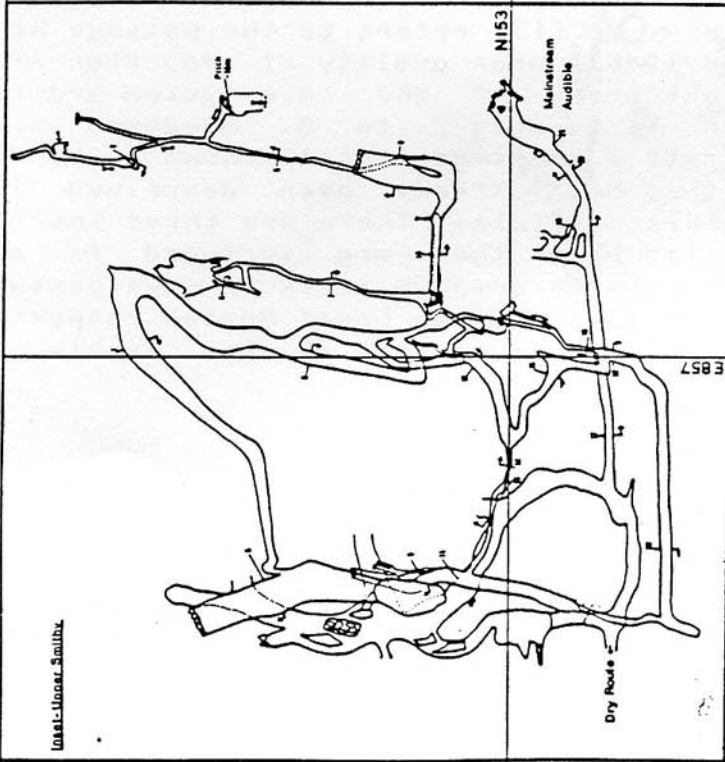
Discovery:-

# OGOF FFYNNON DDU

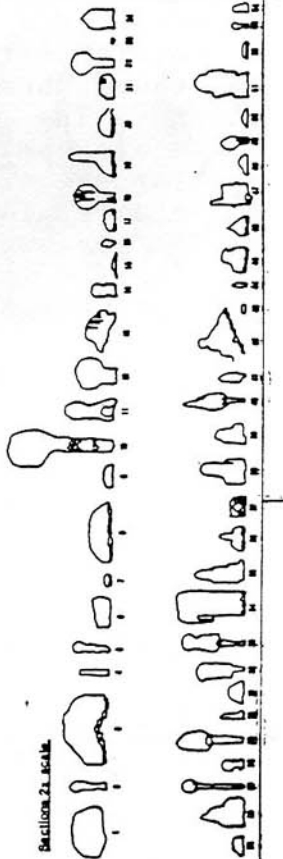
## Upper Smithy, Sandbanks and the Birth Canal.

Surveyed by Bob Peat, Jenny Peat, Ivan Wotton, Trevor Neatherway, Tony White, Toby, Roddy McLeuchlan, and Steve West  
 Drawn by Bob Peat and Jenny Peat. © 1985.

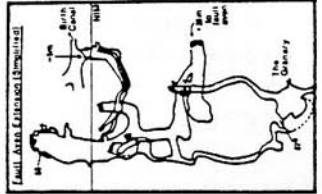
BCRA, Grade 6.



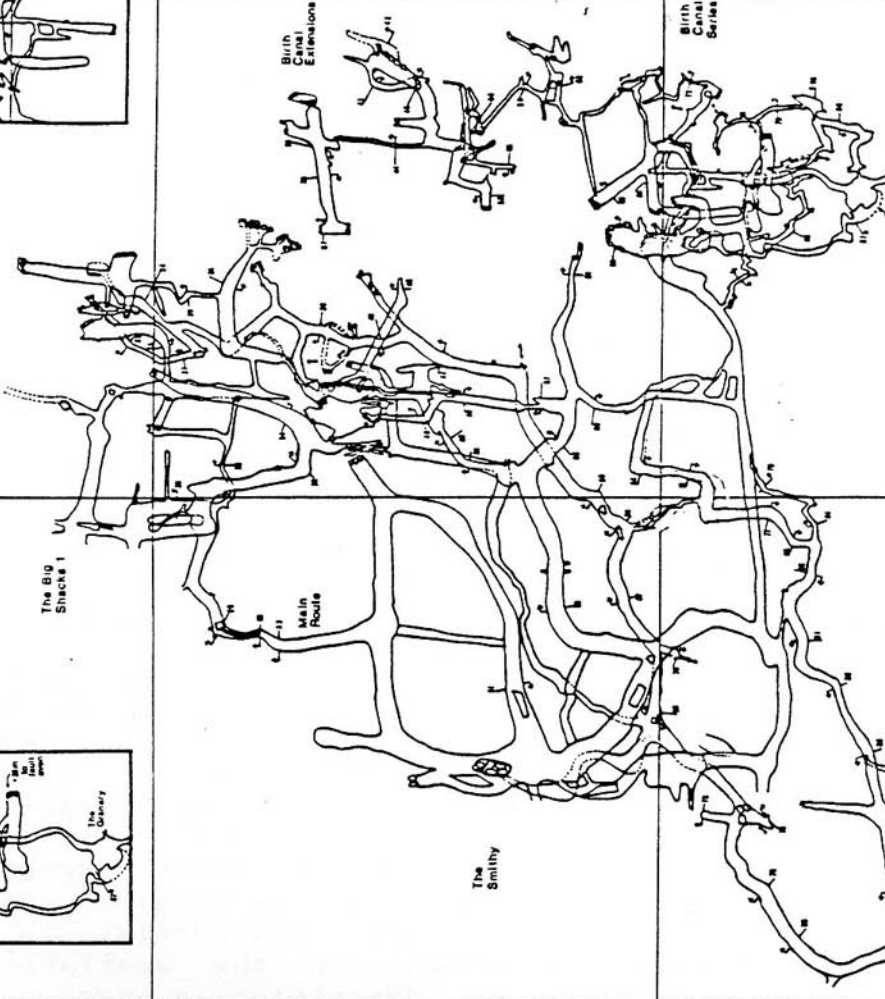
Section 2x scale



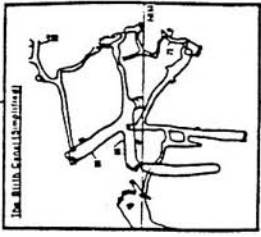
E 856



E 857



E 858



N153

N154

Birth Canal Series

Birth Extensions

The Granary

The Great River Chamber

Main Stream

To the Confluence

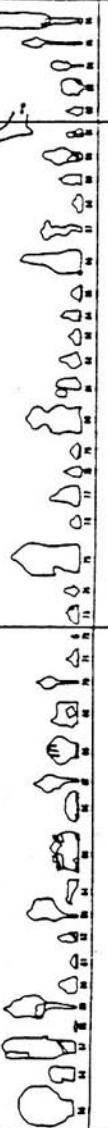


Figure 1

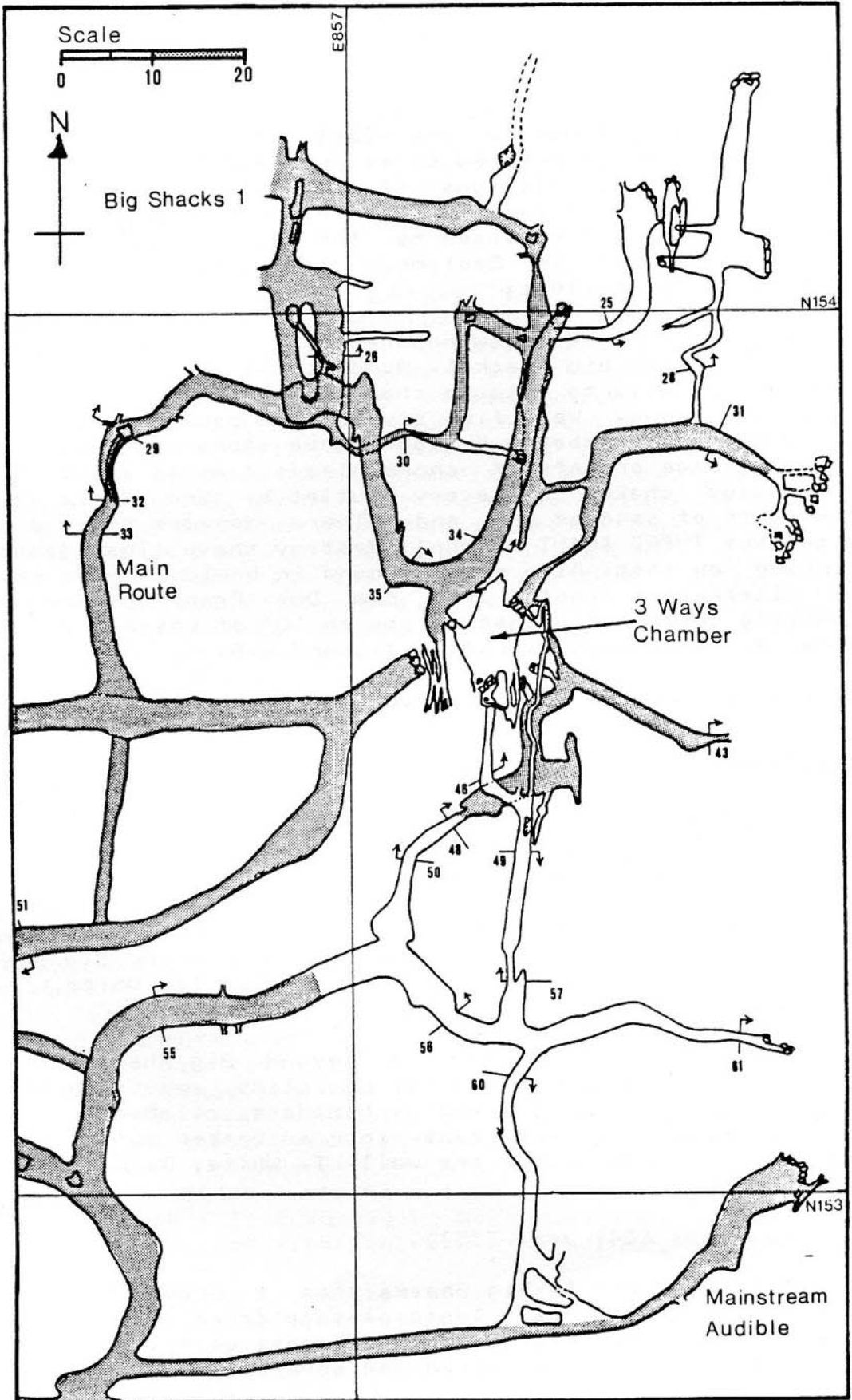


Figure 2 Sandbanks Area.

The passages to the East of Big Shack 1 and the Smithy are commonly referred to as the Sandbanks. They are shown in figure 2. Descriptions of the exploration of passages in this area are particularly scarce in the SWCC logbooks but they were probably first explored by the divers on the original breakthrough trip in September 1966. Several entries, some cryptic, are as follows;

6.5.67 Found a few hundred feet of new passage on the left just beyond Big Shack 1. Muddy crawl (entered by others) leads eventually to a large chamber 50' high by 15' wide and about 100' long. Very fine crystals in pools in side passage. At end of the chamber a boulder choke stops progress. Deserted stream passage on left of choke leads down to about 100' more of passage choked at every outlet by sand. There is a very fine cliff of sand at one end. There appears to be a passage beyond but THERE IS'NT so don't destroy these fine deposits by climbing on them. Also poked around in boulder choke hoping to find alternative route into Cwm Dwr. Frank spent an hour in promising choke but gained access to 10' of passage and another choke. P.O.R., P.R., C.R., F.B., E.I., and K.B.

(N.B. Most probably passages Big Shacks to [31].)

12.5.68 Pathfinding from Smithy area towards Marble Showers route South of Smithy forced until ladder pitch and climb dropped us to the end of Big Shack 1. T.M., A.M., J.V.O., M.C., and C.F.

(N.B. No idea about this one!).

20.5.67. On 13th May, found about 200' of passage and a fair sized chamber off passage leading from Big Shack 1 to Smithy (about 50' from Big Shack 1). T. White, and R. Radcliffe.

27.5.67 At junction just beyond Big Shack 1 on way to Smithy went up passage opposite, up climb and into the large passage blocked at the end by boulders, climbed up to roof level, through choke and came into a chamber 30'x20'x30' high with water trickling down one wall. T. White, R. Radcliffe, and Martin Farr.

(N.B. Passages [34] and [35]).

21.11.67 OFD II Big Shacks area - About 500' of very well decorated but very loose passage found just off the main route (just S. of Big Shacks). Access gained by climbing an aven. About 100' height gained and several avens remain to be climbed (at the top) M.F., and M.C.

(N.B. No idea about this one unless its Upper Smithy).

### Descriptions;

To the east of Big Shacks 1 a sizeable passage soon diminishes to a hands and knees crawl and squeeze over fallen blocks to enter a large rift passage. This passage trends N-S and is developed along a major fault line aligned along E8572. At most times of the year a stream enters from the roof to disappear immediately through the boulders on the floor. The source and destination of this water is unknown although it must drain the area to the immediate East of the SWCC cottage but South of Tull Gwynt Oer (Jopling 1981). Continuing South along a sandy floor a passage is passed on the right that quickly leads back to the main route [30].

On the left at this point is a 2.5m high sandbank which can be carefully traversed to enter a large passage that quickly ends in a substantial boulder choke [25]. However, this route should be avoided to preserve the sandbank which is composed of laminations of fine sands and is a potential site for scientific interpretation by a sedimentologist. The main rift passage soon becomes blocked with fallen boulders and in wet weather water enters from the roof, runs down the West wall and sinks in the bouldery floor and collects to form the stream at [30]. A short passage to the left leads to a chamber floored with white sand containing dried pools of red encrusted calcite [31]. To the East the route becomes blocked with boulders and/or white sand on what appears to be another N-S fault line. Immediately before the choke a short inclined tube after gaining 7m height, allows an entry into a sizeable boulder choke of dubious construction but aligned along the fault. The rock here is particularly sharp, snags wetsuits, is light grey in colour and is highly rich in fossils (large Crinoid segments). It is quite distinctive and forms a barrier to further exploration in a number of passages in this area of OFD II. On entering this type of rock the passage usually diminishes to sharp tortuous avens or very thin sinuous rifts. Returning to the crystal pool chamber a small passage [28] can be followed Northwards to a large passage blocked with boulders. It is possible to follow an awkward route back to the 2.5m sandbank [25]. Progressing West and then South from [31] the chamber blocks with boulders with a choice of routes:

(1) An obvious route through a series of small tubes off the left hand wall of the chamber intersects a much larger passage after descending a 3m pot. This passage is filled with sand and can be followed in two directions either by walking or crawling depending on the extent of the sand filling. To the East the tube becomes blocked with sand [43]. To the West an

inlet cascades down a small aven in the South wall. The layers of sand lining the walls of the aven testify to the fact that these tubes were all once completely filled with sand [48]. The source of this water is also unknown although it may originate from streams in the Upper Smithy. Continuing South [50] this passage enters Sandbanks. The most distinct features of this area are the large size of the passage [55] and the high banks of laminated sands and red clays exposed by the downcutting of the present day stream. To the East the passage is probably still large but less sand has been removed. A chamber is soon entered that contains some calcite drip formations. These have been formed by calcite deposition in pot holes in the sand floor. In other examples, subsequent removal of the sand floor has left the formations hanging like ice cream cones from the walls. These formations were studied in detail by Bull(1974). There is also a very fine false floor [57]. To the right a passage [60] can be followed down a short climb to connect with Mainstream Audible whereas the original passage continues until it meets a fault and becomes blocked by large boulders [61].

(2) Only a few metres from the obvious route in (1) a small inconspicuous tube can be followed up a tortuous rift and round several sharp bends until it intercepts a larger rift following a fault [49]. To the South the rift is deep (~ 10m) as indicated by the intriguing black holes that can be seen through the concretion of boulders and stones that form the floor. After three short descents the bottom of the rift is reached at the junction with Sandbanks [57]. To the North [46] the passage eventually diminishes to a flat out crawl around a double right angled bend before entering Three Ways Chamber at floor level.

#### UPPER SMITHY.

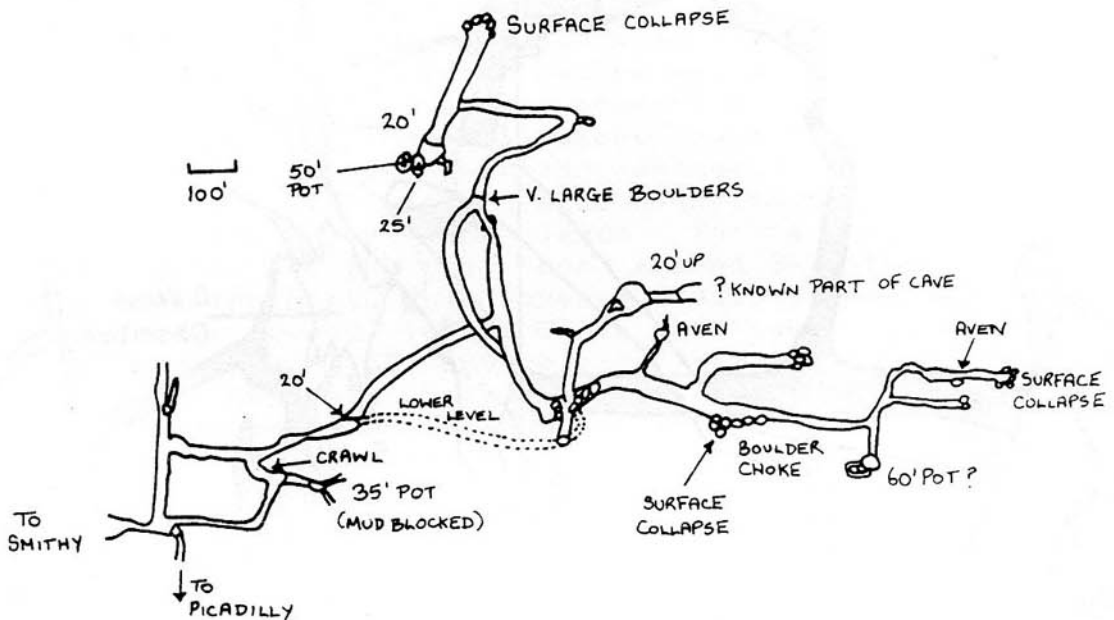
#### Discovery:-

The next phase in the exploration of this particular area of OFD II occurred in June 1972 with the discovery of an extensive series of large passages in the limestone above the Smithy. The following accounts from the logbook recall its discovery and exploration:

4.6.1972. OFD II High level series just South of the Smithy examined:-

The 50' pot shown needs laddering. The sound of a large stream can be heard! Is it the Main Stream or Cwm Dwr stream? The 20' pitch just before it also needs rigging cause its pretty airy. A boulder choke with a very strong draught was broken through leading to 300-400' of passages and a 60' pot

too wide to free climbed. This needs laddering. The nearby aven was looked at but proved too tight after about 30' the water falling from this aven sinks down the 60' pot. M. F., M.W., and Clive Richards.



11.6.1972. The 50' pot shown in high level Smithy series was laddered, 60' ladder was used and descent was made. However, the pitch was 80-90' but it could be seen that the bottom lay on the natural bridge at the N end of the Smithy. The 60' pot was laddered and proved to be a blind 45' solutional shaft. The only exit was a small impassable rift. M.F., M.C., T.M., and P.O.

#### Description:

The survey of these discoveries is shown as an inset in figure 1 and more clearly in figure 3. The shadowed passages show the relationship of the lower levels previously described to the new series above. The Upper Smithy can also be conveniently split into two distinct regions; a lower level of small tubes joined by rifts, and an upper level which has a different character and is generally large.

#### (a) Lower Levels:

The series is best described starting from Three Ways Chamber. The roof of this chamber is generally solid rock except in the Western wall where a short climb interconnects with known cave [34][35] and the NE corner, where there is a



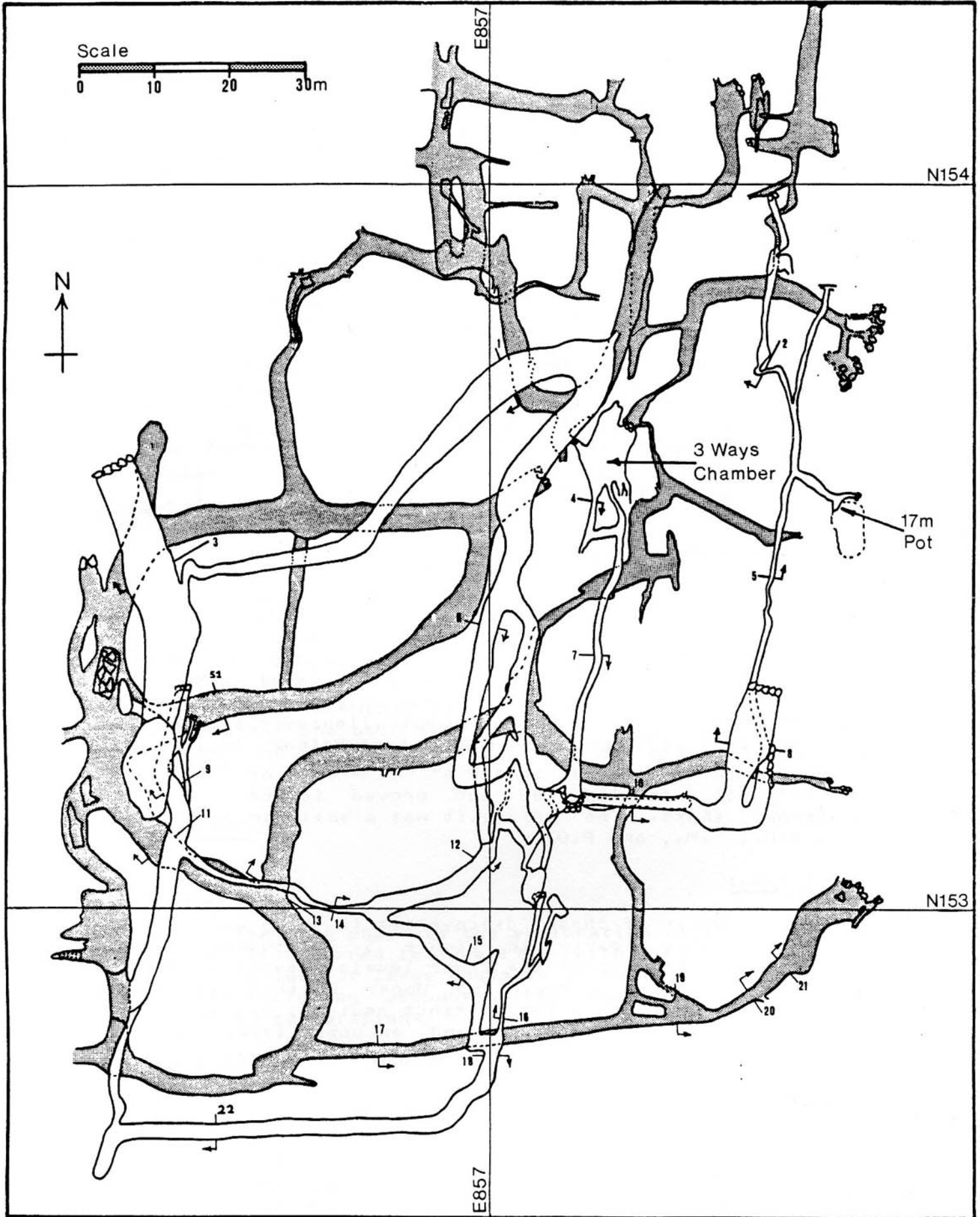


Figure 3.      Upper Smithy Series.

series of avens that become wet in high water conditions. The floor is a calcited boulder pile which suggests that the chamber was formed by roof collapse into a larger passage below. This is possibly the Northern continuation of the passage out of the Smithy [51] that chokes at 85711536. To the South two small passages [4] join in a rift that, in places, can be followed at roof and floor level [7] until it enters a chamber. At the far end of the chamber is a boulder pile and a rock bridge that is associated with the levels above. To the East a rift full of boulders can be followed to an aven with a small stream. The delicate roof prompts a fast exit. It is also the floor of the high level passages above [10]! To the West of the chamber small interconnecting passages lead to a 10m high aven. It has a clay floor and also connects to the upper level. An alternative junction leads to a tubular passage characteristic of the type found around Selenite Tunnel [12]. Above and to the North this passage presents the easiest route to the upper levels. To the South this tube can be followed after clay crawls [15] and calcite formations [18] to a point at coordinate 85641526 where it becomes blocked with clay. The vadose development impressed upon this tube [18]-[22] turns North just before the clay blockage and opens out halfway up an aven that is overlooking the dry route. The vadose development is associated in part with a small series of passages entering at [16]. After only a few metres this passage splits. To the left an inclined crawl over small boulders terminates in a choke; to the right is a pothole that can be descended to a small chamber floored with clay.

Another small vadose type of passage intersects the tube at [14]. This route is taped off as the initial bouldery floor soon becomes covered across the whole passage width with a fine crystal pool. The passage continuation on the far side of the pool can be visited by following the route of the original explorers. In the SW corner of the Smithy a climb offers a short cut to the Dry Route avoiding Sandbanks. A rock bridge half way along can be climbed on the right to a platform. Climbing the Eastern wall of this platform there are some avens and a passage that heads North until sand and white calcited boulders block the route [9]. A small passage off to the right connects to the other side of the crystal pool.

#### (B) Upper Levels:

Access to the upper series is by way of a slippery 5m climb [12] into a continuation of the phreatic tube that is a prominent feature of the Western section of the Lower Levels. The passage contains a few straws and after only twenty metres joins a much larger passage at roughly about the middle of its accessible length. To the North this passage initially descends but soon reaches a complex region of breakdown that is passed by climbing steeply over fallen blocks. A passage is passed on the left that has a clay floor and leads back to the

main junction [6]. The passage at the top becomes lower and wider with solid roof and walls and a breakdown floor until shortly after a bend in the passage the route appears to terminate at an overhanging wall of boulders. In wet weather a stream can be heard running underneath the NE corner of the chamber and a short climb up the right hand wall gives access to two small passages containing the initials M.F. from the original exploration. Several digging trips have been made to this area but the streamway remains elusive. After a short traverse the main passage continues as a pleasant tube [1] of large dimensions until it joins an impressive major conduit [3] comparable in size to the Piccadilly area of OFD II. To the North this passage quickly runs into a substantial gritstone choke that draughts strongly and is probably very close to the surface. To the South the passage descends steeply (10m pitch) into a breakdown chamber. An obvious steep descending passage leads to the top of a series of pitches that drop directly into the Smithy.

Returning now to the Main Junction and proceeding South the passage can be followed to an area of breakdown associated with the lower levels that are clearly visible below. Crossing a rock bridge a wide rift can be followed by traversing on a false floor of jammed boulders [10]. Extreme care should be taken as in one place the floor consists of a 4 metre square area of delicately wedged boulders with a visible 3m drop into the aven below. At this point on the left a tight rift can be followed for 10m around a left bend where it joins a small stream. Continuing upstream a short sandy climb leads to more rift passage which can only be followed for a few metres more due to awkward projecting ledges.

Continuing over the wedged boulders the passage ascends to join a large roof tube. The left passage rises steeply to a gritstone choke [8], whereas straight on the passage narrows and enters a boulder choke. Crawling over and under boulders close to the left hand wall the passage drops away into a small passage of different character. A small vadose canyon (4mx1m) [5] can be followed to a passage containing a stream. Downstream almost immediately the water cascades down a 17m pot into a chamber. The Eastern wall of the chamber is developed along a fault and there is no obvious way on. Upstream an unpleasant passage can be followed by traversing [2] and crawling over boulders partially buried in white sand until the stream is seen to enter from an aven. Continuing North the passages soon become blocked with sand and boulders. The aven is developed in a light, grey limestone that is extremely sharp due to a high density of protruding fossils. It can be climbed but after 10m it becomes too tight.

#### FAULT AVEN EXTENSIONS SERIES.

Almost a year elapsed before activity in the Fault

Aven Series produced a discovery that was later to provide a link with Mainstream Audible.

Cancelled weekend (Believed to have been scheduled for 9th-11th March 1973) Taking advantage of the fact that the ordinary members went on a swan to the Marché Commun to see a few smashed up farts. The COMMITTEE crept quickly into OFD and finished a pegging route up the West wall of Fault Aven. Meandering mainstream type passage at high level descended gradually to the Granary. Chocolate papers wrapped around small pebbles were recovered at the bottom of this aven on the way out. A high level fossil inlet series finished at two separate gritstone chokes. Possibilities still exist for further passage. Estimated extent so far 100,000 barrels. (This is the passage which may be spotted at the far side much too far away to ever reach [POR. 1969 p.11 Fault Aven Series]). M.C.D., R.H., E.W., and P.C.

### Description

On a later trip to this series N.Christopher and W. Little surveyed part of the discoveries and their original survey is shown in figure 4. We have surveyed the rest of the extension at the foot of the 18m pitch and this is shown in figure 5. The Granary is an aven 200 feet high that can be reached by a small passage leading off the First River Chamber (Hall 1984). This passage continues North out of the Granary and rises steeply to a choke. A short climb beneath boulders in the Granary floor, enters a tight rift containing an active stream that can be followed to the Mainstream, downstream of the First River Chamber. Approximately 30m above the Granary floor is a fault guided passage that has been bisected by the later formation of the aven. The Eastern continuation of this passage is the one referred to in figure 4. At the bottom of the 18m pitch the passages are generally large but very shattered and in places extensively filled with white sand. The Northerly limit of what was once a major route now ends in a substantial gritstone choke [65]. A fossilised Stigmaria characteristic of the Millstone grit formations outcropping to the South of Penwyllt was found close to the Rocking Stone (figure 5). This implies that the chokes were once open to the surface at this point. The passage beyond the 'Rocking Stone' (unmistakable when found !!) is a 1m wide rift containing several deep holes that have to be traversed at roof level. It continues a further 200m in a Northerly direction to a mud filled chamber and also connects with the Birth Canal Extensions to be described later in this article.

### BIRTH CANAL SERIES.

#### Discovery:

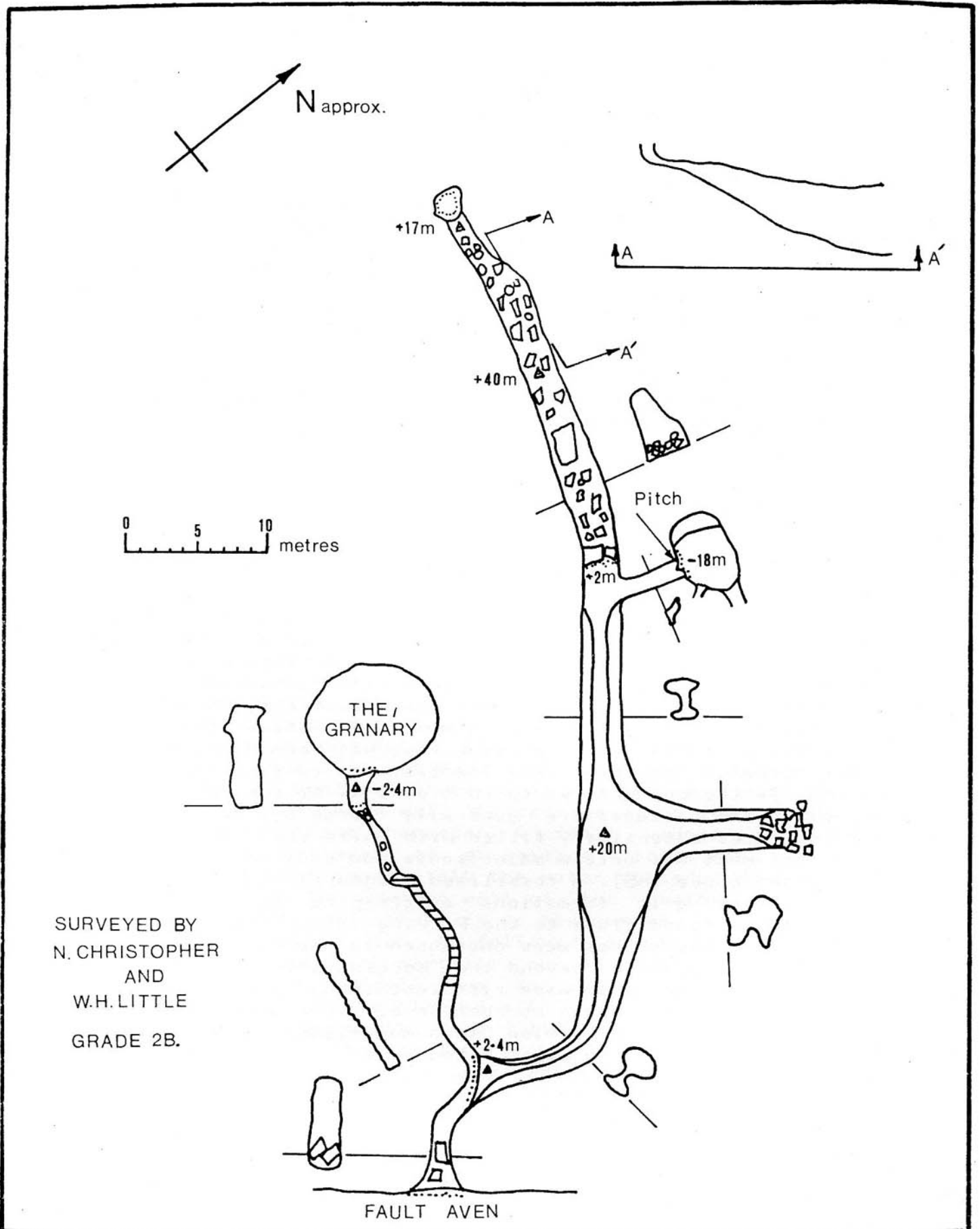


Figure 4

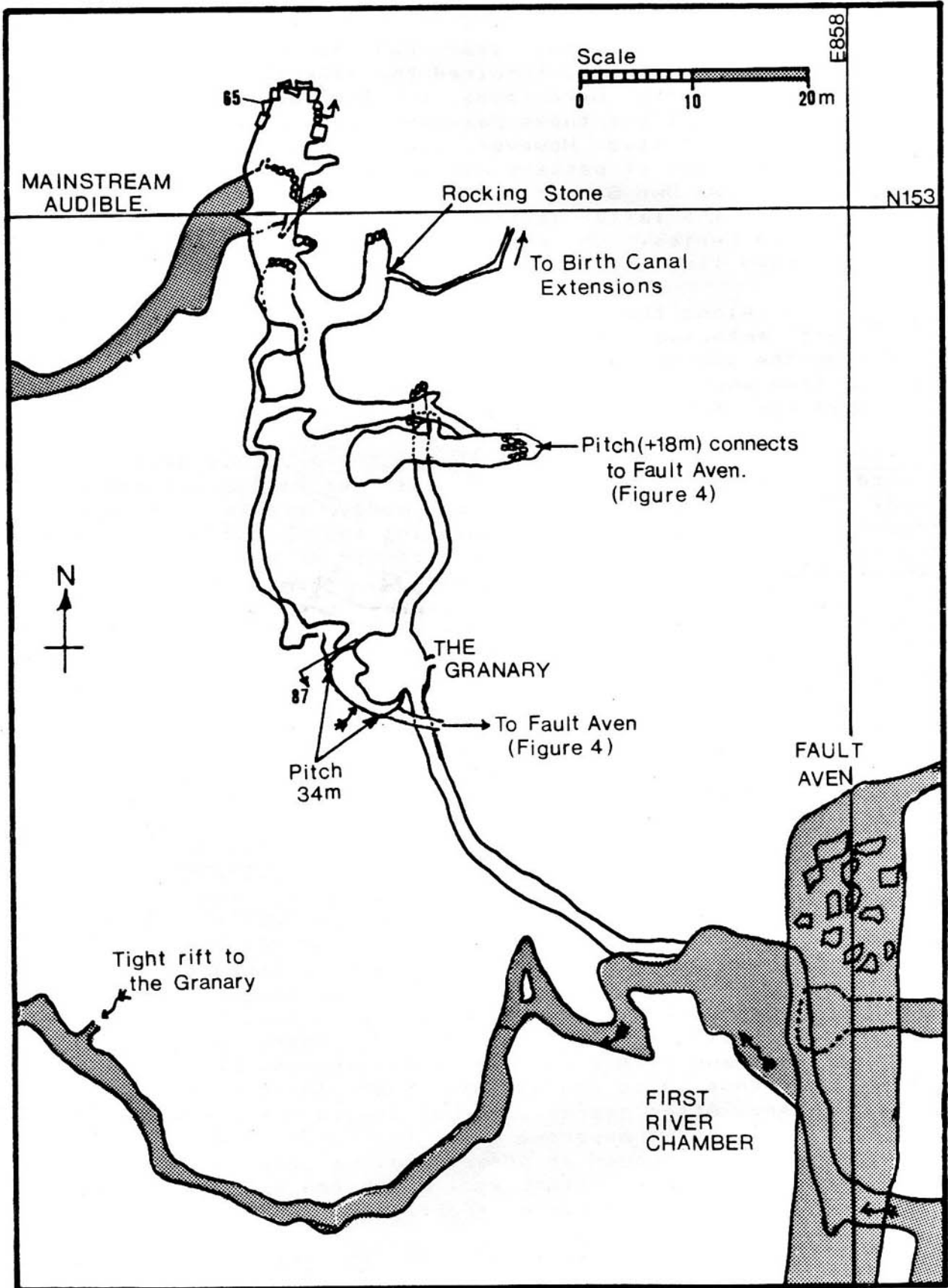


Figure 5    Fault Aven Extension

Once again a further year had to pass before the passages around the Smithy inspired the attention of cavers. A number of discoveries were made to the West of the Smithy during this interval but these passages still remain unsurveyed and infrequently visited. However, over a period of only 4 days several hundred feet of passage was discovered in what we shall call the Lower Cwm Dwr Stream Series (12-4-74), and the Birth Canal Series. The latter series created a link with the Fault Aven Extension Series. In the words of the original explorers the time passed like this:-

12-4-74 Along the dry route to the confluence if one turns left entering some sandy passages which are not at present on the survey. A small tight squeeze was negotiated for 150 feet from where someone had given up, which ended 30 feet above a stream. M.W., P.F., and K.H.

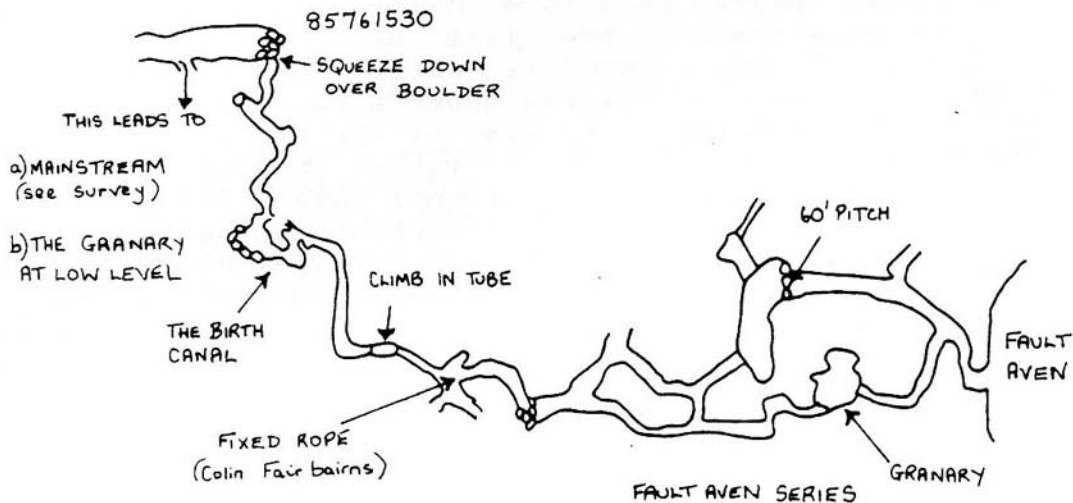
13-4-74 Whilst in search of the previous days tight squeeze and stream, a further 400 feet of virgin passage was found. This mainly consisted of muddy crawls and small standable chambers. However, displaying superb mud and Glennie formations. A 20 foot aven was ascended to a small solution tube which terminated after a further 20 feet into a large chamber boulder choked at each end. However, upon further examination of the chamber a passage was noticed about 15-20 feet high on one wall, unfortunately a very smooth water worn overhang prevented climbing. M.W., P.F., SAM.

15-4-74 Returning to the unclimbable climb in the extensions adequately equipped with a climber and goodies in the form of Colin F. Unfortunately, no cracks skyhooks etc. prevented the ascent. However, after playing cowboys for five minutes perched on a ledge Colin F. succeeded in lassoing a small stal boss. Whereupon with a makeshift harness and two waistlengths he succeeded in prussiking up and scrambling into the passage which terminated in a boulder choke after 60 feet.

However, it appeared diggable so Colin then tied several knots and loops in the rope for P.F. and I. Five minutes digging yielded in another large chamber choked at one end however open t'other, whereupon we discovered FOOT STEPS in the clay. It was then obvious someone had been in this part before, although only having a brief look around. There were several virgin passages and climbs which went for several 100 feet in various directions. Also one gigantic shaft which we assumed to be the Granary. After discussions outside in the pub with M.D. and E.H. it is now apparent that this is a connection with Fault Aven Series although at present not a feasible trip due to various impossible climbs etc. which can only be laddered from F.A. Series. To be surveyed shortly. M.W., P.F., and C.F.

28-5-1974 M.C.D., P.C., and SAM. To check Mike Wares route to the Granary confirmed.

Very rough sketch plan, directions poor (i.e. bloody awful). Suggest the name "Birth Canal" for muddy tight squeeze-collapsible skull would be an advantage and its a c\*\*\* M.C.D.



#### Descriptions:

##### (a) The Lower Cwm Dwr Stream Series.

The series discovered on the reported trip (12.4.74) is shown in figure 6 and is to be found in the limestone beds immediately above the Lower Cwm Dwr stream just before it joins Mainstream at the Confluence. At a point where Sandbanks joins Mainstream Audible [19], a flat out crawl over cobbles leads after some stooping sections [64] to a larger section where the infilling has been removed by an invading stream [71]. On the right an awkward passage soon connects with a well known part of the cave that takes an active streamway [63]. However, continuing South [77] after 20m a junction is met. On the left a pleasant passage can be followed that becomes filled to the roof with clay and calcite [78]. Just before this blockage a small passage on the right has been pushed for approximately 100m of truly revolting passage until progress was halted by a fallen block. This passage is virtually full to the roof with a glutinous red, liquid clay.



It was not surveyed but the general direction was East. Shortly after the junction and proceeding West [82] a small pothole in the right hand wall connects with the passage between the Dry route and the Smithy above. Continuing West the passage gets progressively bigger until it emerges 8m above the floor of the Eastern wall of the dry oxbow which bypasses the Lower Cwm Dwr stream. Under a fallen block [90] is a small series of interconnecting rifts that lead to the Lower Cwm Dwr stream beyond [95].

#### (b) The Birth Canal Series,

The Birth Canal Series (figure 7) can be entered by sliding down an inclined slab of rock in the South wall of the Mainstream Audible boulder choke. A series of small clay filled muddy tubes lead to a small chamber with a stream issuing from a crack in the left hand wall. The upstream continuation of the water is passed on several occasions throughout the series. Sliding under a fallen block is only a foretaste of the delights to come as the Birth Canal squeeze follows immediately [72]. It is a short but awkward rift followed by a left hand vertical bend into a small tube filled with dry clay. This passage intersects a larger rift passage that can be followed to a 5m greasy chimney. However retracing ones steps for a short distance a small passage in the left hand wall can be followed around a short squeeze to meet the stream once again. A complex of small muddy tubes lead to the Birth Canal Extensions to be described later [62][54].

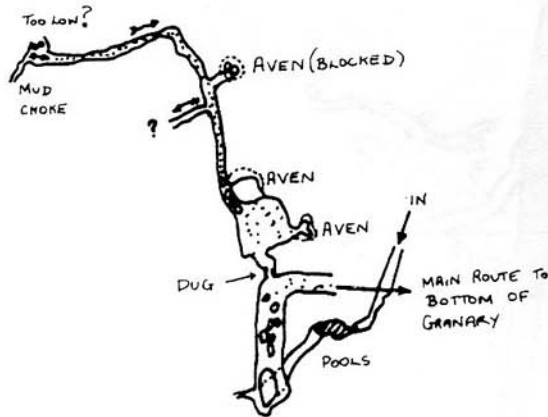
The greasy chimney can be climbed to a small clean washed tube that quickly enters a large chamber. These larger passages end in chokes [66]. The Western choke [68] can be passed in the floor of the left hand wall but the passage soon fills with red clay. An overhanging 5m climb in the Southeast corner of the chamber is the link with the Fault Aven Series Extensions (figure 8).

#### Further Discoveries.

With renewed interest in the area it wasn't long before other discoveries were made:

19-8-1975

Cwm Dwr / OFD II Trip to retrace Mike Wares connection via "Birth Canal" with the Granary led to a thorough look around the maze of crawls in the area, a small hole on one bend was looked in to reveal a 'big black space', so a dig was started in the floor. After 5 mins. a passage and a chamber with an obvious way on, another crawl for about 200 feet to where it choked with mud. Pete Cardy, Ann Franklin and Gareth Davies.



This logbook entry refers to a small series of a passage in the right hand wall just before the Mainstream Audible choke (figure 7) [74]. It is important as it leads to the Granary and therefore provides an escape route out of the Mainstream in the event of a flood. The passage is probably the origin of the name Mainstream Audible as when high water conditions occur within the cave the roar of a stream can clearly be heard. The source of the noise issues from an inaccessible rift that is passed over while progressing along the small gritty maze of passages that lead to the Granary [85]. It is unlikely that this is Mainstream. Soon a stream is met that disappears in the bouldery floor after a short but unpleasant duck. This stream is the downstream continuation of the stream in the Birth Canal Series. The passage becomes easier and sand filled [88] and emerges 3m up the wall of the Granary. A short sandy crawl in the left hand wall [86] is the beginning of the extension described above. The stream encountered in this area is once again the Birth Canal drainage.

Since 1975 interest in the area slowly dwindled and although there have been many trips into the Birth Canal mainly for its curiosity value there are very few logbook entries. It was obvious to certain people that what was needed was an accurate survey and hopefully this article will fulfil that need.

23-8-1975

Another trip to the area near Lower Cwm Dwr stream in OFD II visiting many passages not on the survey to produce a sketch plan to aid any further survey work. Details with R.A.H. Pete, Ann, SAM, Bob.

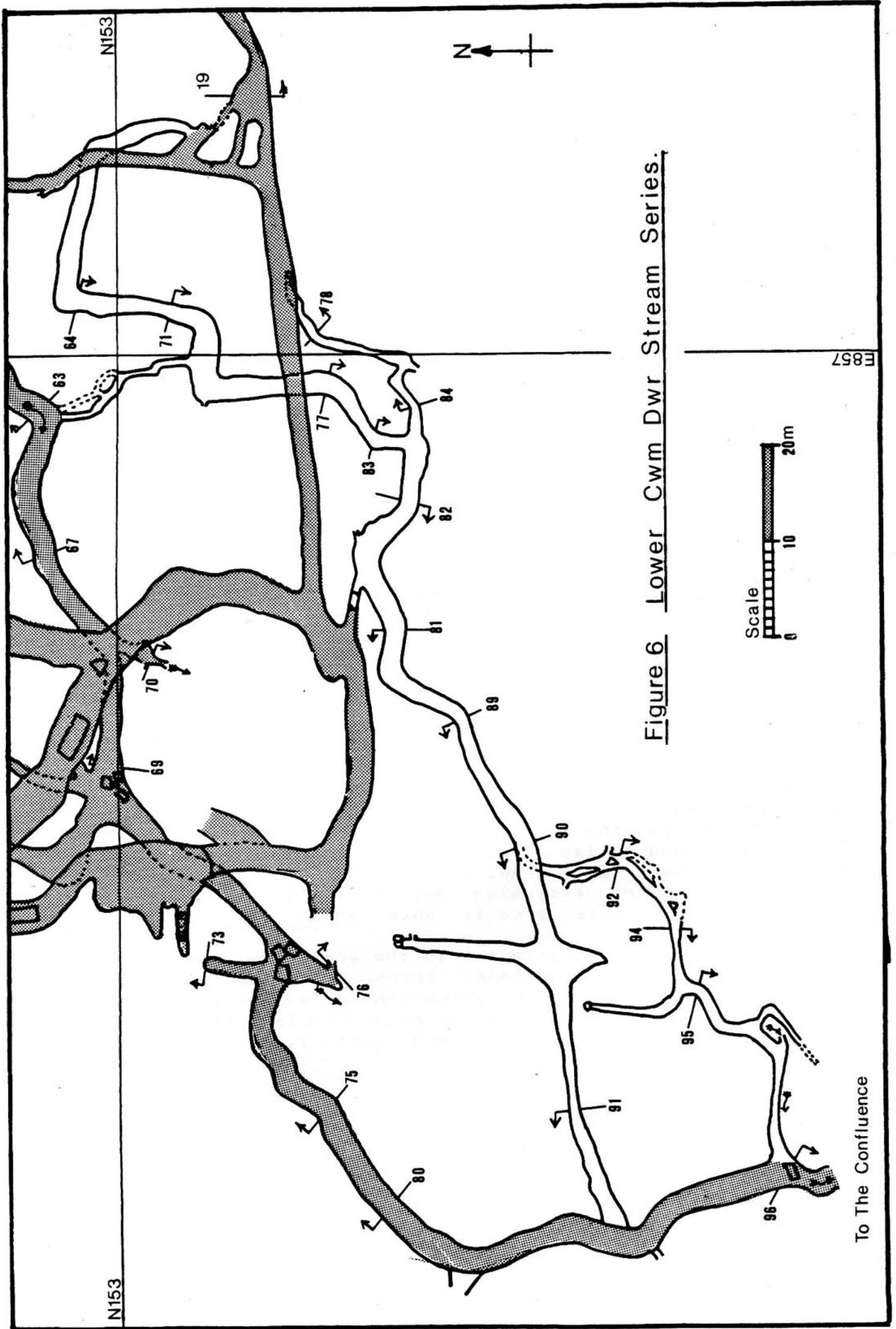


Figure 6 Lower Cwm Dwr Stream Series.

To The Confluence

E857

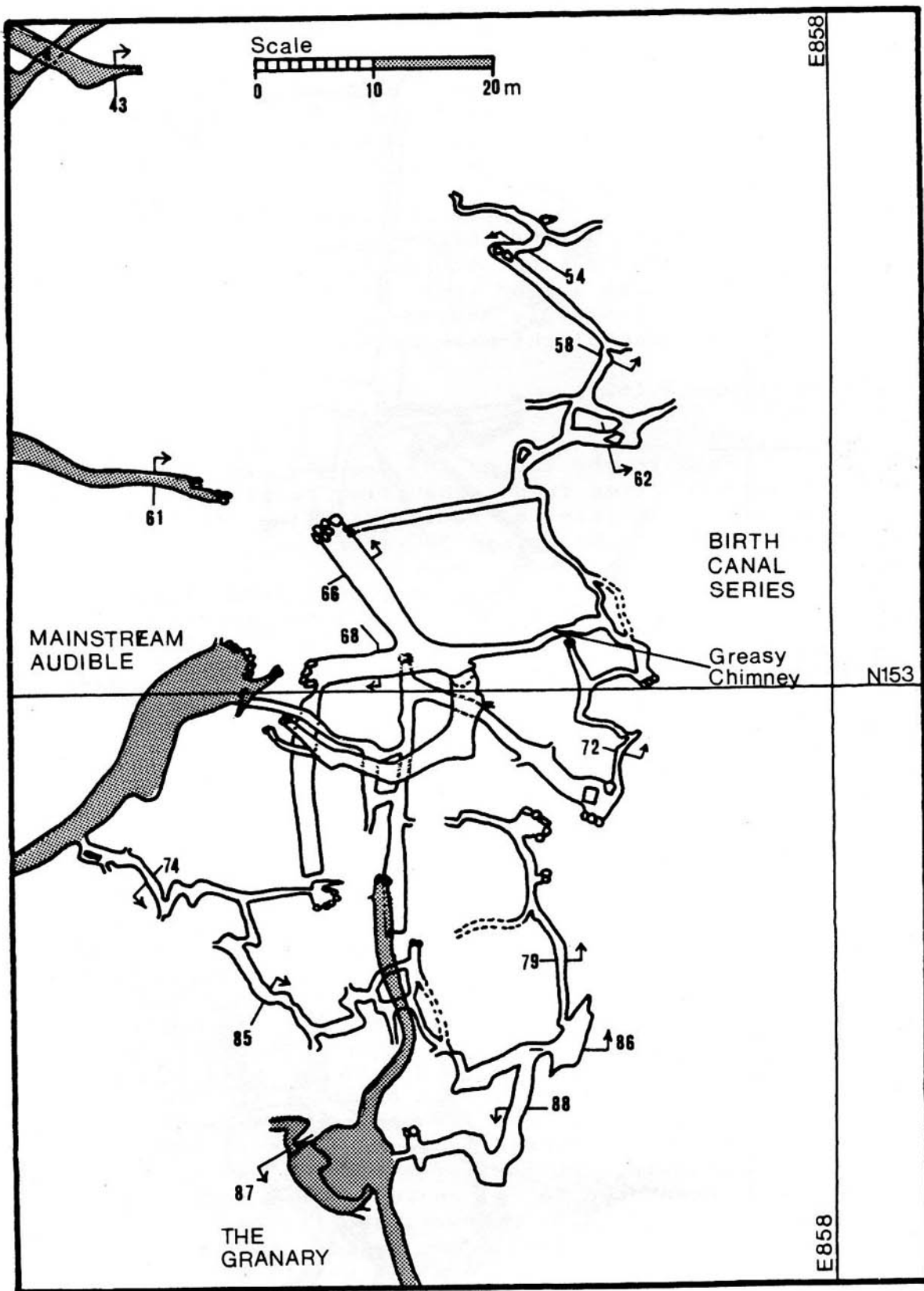


Figure 7

Birth Canal Series

8-5-1977

Birth Canal Series, Boulder at the end of the nasty traverse passage above the fixed rope removed only to find passage blocked by clay fill. M.F., S.B., and P.F.

27-12-1982

Returned with crowbar and hammer to the small tubes in the far extremes of the Birth Canal Series. Removed a good deal of sand and a large boulder to enter a sizeable chamber on the right with a sand roof! To the left is a rift blocked with sand and a steeply ascending passage that is developed on a fault and soon blocks with boulders. Jenny and Bob Peat.

(See figure 8 [62])

11-10-1985

Trip to the top of the Granary via the Birth Canal. Considerable time spent exhausting possibilities in the Fault Aven Series. Mainly a familiarisation trip preliminary to survey. SAM, Pate, Maggy and J-Lister.

More recently however, on 6-7-84 Steve West and Bob Peat were successful in adding a further 220m of passage to this collectors piece. Returning to the small muddy tubes in the extremes of the Birth Canal [54] a tight aven was climbed to 4m where it became blocked with large boulders. However, on closer inspection there appeared to be open passage above. After struggling with a crowbar for well over an hour the boulder constriction was finally removed and they entered a small but comfortable roof tube. The Birth Canal Extension Series lay ahead waiting to be discovered (Figure 8).

To the East the passage becomes blocked with sand but to the West the passage can be followed to a breakdown chamber with several small rifts leading off but these all close down rapidly [53]. Hidden behind a fallen block is a rift leading to a sharp crumbling aven with visible passage above. However, the rift turns back above itself and then intersects a much larger passage infilled with thick red clay. A curious formation is "Smiths Legs", here the mud is distinctly laminated and has been twisted into a structure like a Swiss Roll. There are two rolls each of about 10 cm diameter and approximately 1m long. The passage here is decorated with calcite but this has been taped off as it chokes immediately [52]. Continuing NE the large passage can be followed over extensive breakdown to a choke formed on what appears to be another NS fault [42]. However, shortly after Smiths Legs, on the left, is a revolting muddy passage that trends North [44]. After traversing a large pool of still water another large passage is met but this soon chokes in all directions [37]-[39]. On a subsequent trip R-Mclaughlan climbed the sharp crumbly aven and established a connection with the 'Rocking Stone' in the Fault Aven Extensions above. This passage has

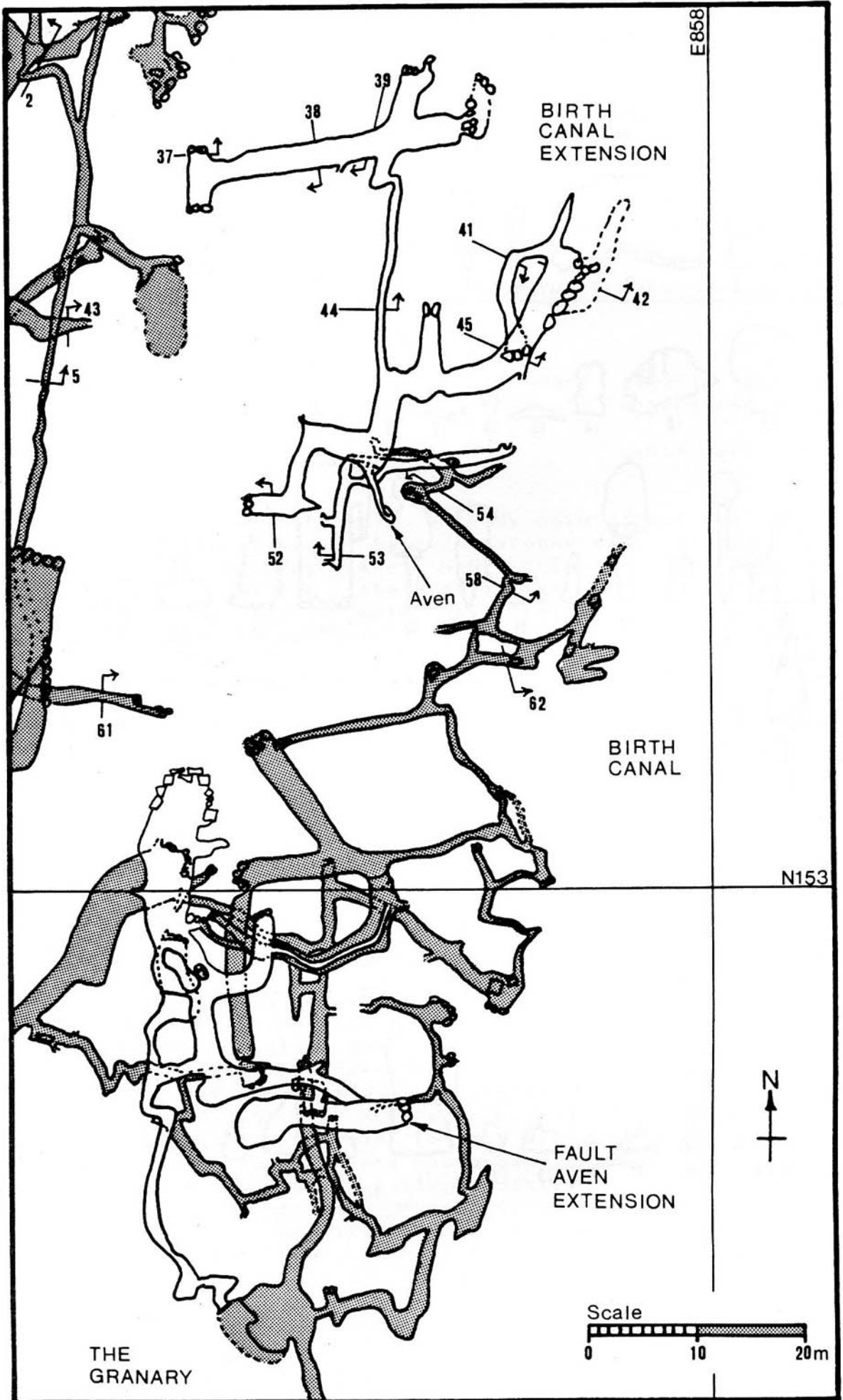
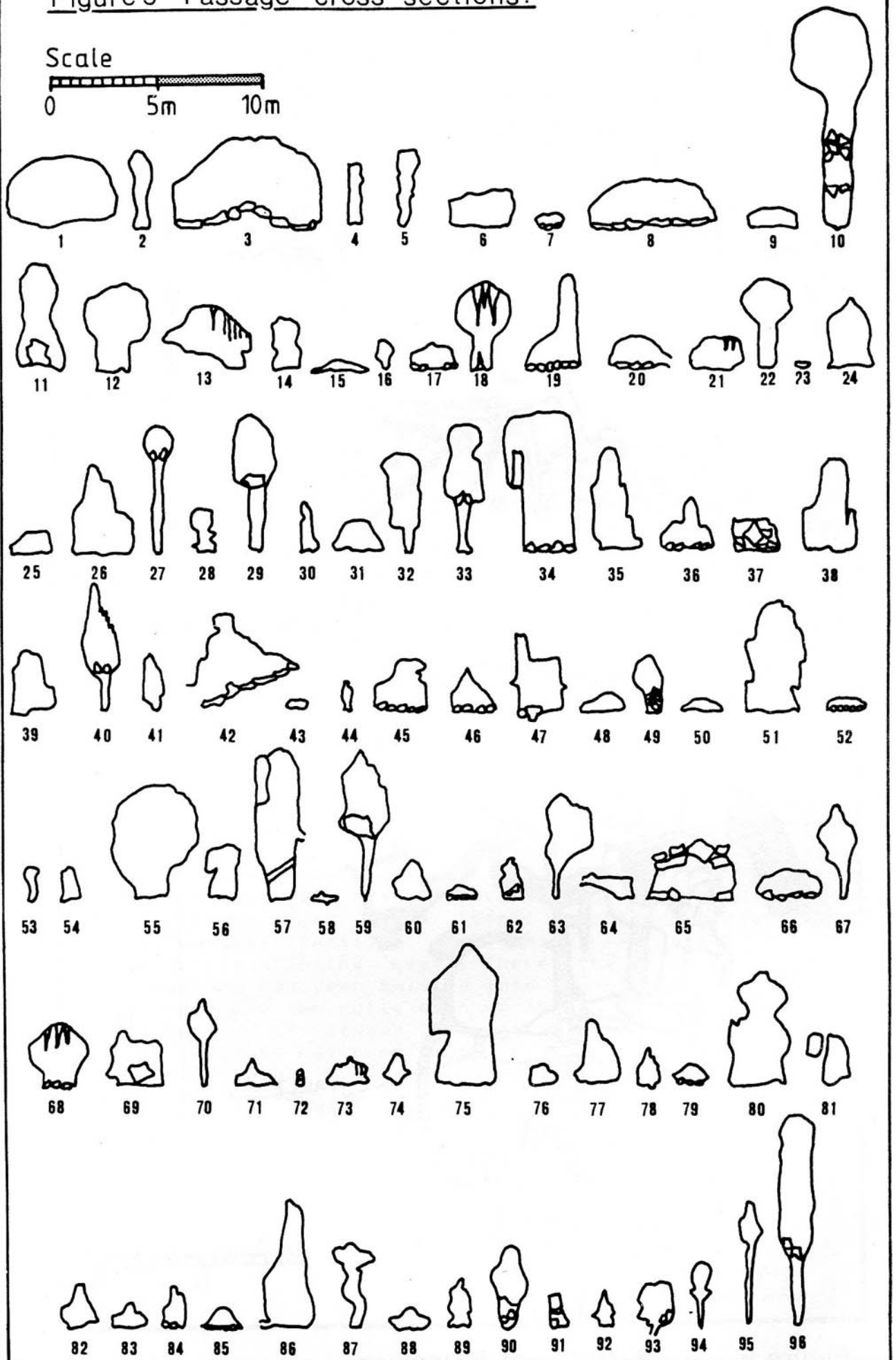


Figure 8      Birth Canal Extension

Figure 9 Passage cross sections.



not been surveyed.

SPECULATIONS ON THE RELATIONSHIP OF THE SURVEYED PASSAGES TO THE GENERAL DEVELOPMENT OF OFD.

I'm afraid I can't put it more clearly, 'Alice replied very politely' for I can't understand it myself to begin with."

Lewis Carroll

Several authors have already pointed out that a number of E-W oriented passages have undergone considerable phreatic development, whereas the N-S oriented passages show predominantly vadose characteristics (O'Reilly et al.). Stratford (1984) for example, has traced a phreatic roof tube originating in the Northern limit of Creek Alley (Nyth Bran Series) through Bagpipe Chamber to the Big Chamber Near The Entrance where it can no longer be followed due to large scale breakdown. Similarly, Jones (1980) recognises a tube that goes 'from the Crevasse, down Pendulum, across the Nave, past the Trident, along Selenite, down Midnight and along the Traverses to Marble Showers where it seems to be lost'. There are also a number of tubes traceable through the upper reaches at the Northern end of Lugubrious Passage that coalesce in Moonlight Chamber. In the Western corner of the chamber at roof level a phreatic tube passes over the top of the Skyhook in Midnight and forms the Great Oxbow Series. These tubes turn North into chokes immediately prior to the pitch into the Lower Oxbow Extensions. A possible Westerly continuation of the Great Oxbow system may be sought in the series recently discovered above the aven in the Northern extremes of the Marble Showers Series (McLaughlan 1984). However, proceeding South from this pitch another tube is joined (that may or may not be associated with the Great Oxbow System) that can be followed West until it passes over the top of the 60 foot pitch into the Marble Showers Series and then quickly chokes. Further examples can also be found in the Northern Lights Extensions (Peat et al. 1985). Notably Ferrets End and Tiptoe Traverse which join and trend West towards Peats Playground.

Considering now the passages described in this article then similar trends are apparent, the large passages in the Birth Canal [68] and Birth Canal Extension [38][45] are E-W oriented as are the sediment filled tubes around Mainstream Audible [21], Sandbanks [31][48][55] and Smithy regions. The high levels in the Upper Smithy Series consist of a part of a major E-W passage [8][10][11][3] contemporary with the large passages around Top Entrance but truncated and blocked at the



Easterly end. The large gritstone choke at [8] draughts strongly and is probably close to the surface. The phreatic origins here are evident from the thin layer of red clay that covers the walls and from the passage shape represented by [8] and [1] (Figure 9); although in places this form has been modified by vadose entrenchment [10]. At the Western end [3] it could be speculated that the passages developed as a phreatic lift with the Smithy below. The upper levels at [3] also represent the highest point in this area of the cave and the measured coordinates suggest a vertical displacement of 90m between the upper levels and the Confluence. This corresponds to the thickness of the Holkerian zone of the Dinantian limestone (Seminula S2) in the area of Penwyllt (Christopher et al. 1977) and puts the passages in the top of the S2 or the lower beds of Absian stage. This implies that the chance of further discovery of large passage above this series is small. The passage at [3] is remarkably similar in size, shape, infilling and geological sequence to another, as yet unsurveyed series of passages, that are known to exist above Piccadilly. It is not unlikely that these two series are one and the same passage truncated by the downcutting of the valley adjacent to the SWCC cottages. The phreatic network can also be traced through the lower levels of the Upper Smithy Series (Figure 3, [12][15][18] to [22]). The continuation here is unknown but the most likely place to look is high in the roof of the dry oxbow to the Lower Cwm Dwr stream (figure 6, [96][80]).

There are several clear examples of vadose development occurring along the N-S direction particularly in the Eastern section where the limestone beds are disturbed by faulting. On the surface these fractures are clearly visible in the Cwm Dwr quarry. The effect of the fault that runs roughly coincident with N8572 can be seen at all levels in the limestone from the Upper Smithy through to the Lower Cwm Dwr stream [7][49][57][34]. Slightly East another fracture roughly coincident with N8575 cuts off the E-W development at all levels. Once again the vadose development in the Upper levels of the Upper Smithy run parallel to it [2][5], the 17m pot is aligned along it; it is visible near Mainstream Audible choke [21], and the high level passage that is bisected by the Granary is aligned along it [65] to [87]. The Birth Canal allows this fault to be passed where the phreatic development is resumed despite the fault [66][68][38][52]. The stream in this series as well as the Cwm Dwr stream are presently eroding channels that are predominantly N-S in orientation. Finally a prominent feature of the area is the vast quantities of white sand that have been deposited. Christopher et al. (1977) have presented evidence implying that the region between Marble Showers and the Smithy lies in a shallow N-S inclined synclinal fold. This feature combined with the extensive faulting and the hypothesis that passage development is confined to speleogenetically favourable beds provides an ideal settling tank for water bourne deposits. In contrast there is no

evidence whatsoever of the vast amounts of moonmilk that are present in Northern Lights (Peat et al. 1985) and around Top Entrance (Heathcote, 1977). The passages developed in the highest beds of the S2 limestone around the Smithy region contain only a thin covering of a thick red clay derived from erosion of the sandstone outcrop to the North.

### PERSPECTIVES

'Would you tell me please, which way I ought to go from here?' 'That depends a good deal on where you want to get to,' said the Cat.

Lewis Carroll.

If the observations concerning the E-W trend in the phreatic development of the cave system are correct then there are two regions where passages remains to be discovered and so strengthen the proposed hypothesis. The first is the area to the N-E of the Birth Canal Extensions to close the missing link between Northern Lights and the Great Oxbow Series in the East with Upper Smithy and the large passages in the Birth Canal Extensions to the West. There are a number of draughting rifts and a chamber with a sand roof that may repay digging but progress will be slow due to extensive faulting and the large amounts of sand infilling. Comparable amounts of sand infilling are to be found in "Half a Det Dig" (85981558) and the Lower Oxbow Extensions (Geh 1987) indicating a possible site for an attack at the link, from the Eastern end. However, there is always the suspicion that the highest levels have been destroyed by the downcutting of the valley behind the cottages. A useful surface feature is the old tramway up to the Weighbridge quarry as it marks a boundary between the valley and the steeply rising gritstone scarp. All known high level passages are to be found to the South and East of this tramway. Finally, two interesting features are the puzzle of the formation of Big Shacks II and the existence of Cwm Dwr Jama with its cross passages at Dripping Aven and the Cwm Dwr Jama choke.

The second region to remain elusive, despite extensive effort by a number of determined cavers, is the area to the West of Cwm Dwr Jama and North of Hoel Eira. This forms the link with anomalies like the Annexe, and the Rawl which have a large passage size. Evidence that passages must exist in this area was demonstrated admirably by the appearance of a 20m pothole adjacent to the Stump. Further insight into this region would be gained if Upper Piccadilly and Tapioca were surveyed and radiolocated for depth. The most recent success to penetrate into this area was the discovery of Easter Series by Haydn Rees and Alan Richardson in 1984.

In summary the area is a rich site for original exploration and scientific investigation but a good deal of the backlog still remains and progress in understanding the system will not be achieved until this is complete.

### THE SURVEY.

The survey was drawn at 1:500 scale from measurements obtained using a Suunto compass and clinometer and a Fibron metal reinforced tape. Angles were recorded to +0.5 degrees and distances to +0.01m. All passages shown have been surveyed and corrected to produce a self consistent drawing. The survey was corrected by first selecting the largest possible loop to minimise the closure errors and then correcting all the inner loops to fit. Errors did not exceed 5% and a book of original data and corrected coordinates is available. The position of the Grid is approximate until an accurate traverse of the cave between accurately known surface coordinates is achieved (Davies M., 1980). It was fixed in this case to be consistent with the Grid of the 1969 survey in the Smithy region. Correction is merely a mathematical exercise when accurate coordinates for the origin are available. The origin was marked with a suitably concealed redhead bolt and yellow washer. Its position is at the tip of a large boulder at the junction of Sandbanks with the Smithy (85671530). Unfortunately an attempt to radiolocate the origin on the surface failed as it lies close to the edge of a cliff on the millstone grit to the South of the cottage.

There are still a few omissions for anyone with the enthusiasm to continue and any communication unravelling the history of the area or comments on our misrepresentation of the logbooks will be gratefully received by the editor. For the figure concious 3976m of passages were surveyed of which 2533m had not been recorded previously.

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# THE MARBLE SHOWERS AND THE GREAT OXBOW EXTENSION.

I first visited the Oxbow Extension Lower Series some ten years ago, when it involved going up the "Skyhook" and down the awkward ladder pitch 100 metres further on. The idea of surveying this area was suggested by the fact that it seemed strange it was necessary to go up and then down fairly close 15 metre pitches to get there - did a horizontal route exist?

A start was made a few(!) years later in 1984 and the assistance on that trip was supplied by a couple of embryo cavers in the shape of Steve Goulding and Ian Rolland. It must have made some sort of impression on them, as they are both still caving and I am told that Ian is getting quite good. The trouble with surveying is that one thing leads to another and moving slowly, noting passage details always produces yet more unsurveyed passage. What was going to be a quick job turned into a long term digging, climbing and surveying exercise involving a fair number of club members.

An initial survey of the Lower Series and the area from the Skyhook towards what is now the way to Northern Lights, led to a dig being started by Haydn Rees in the furthest point west, at the base of a boulder filled aven. This followed a rising solid left hand wall with a rather loose pile of rocks on the other side. Haydn did one of his dry stone wall jobs and made the place much nicer to crawl into, and one day, when I wasn't there of course, John Lister, Annie Peskett and Nig Rogers broke through into a high rift passage running south. They wandered down to the large muddy pool at the end, quite impressed by what they had found, before it slowly dawned that they had been there before!. It was the passage at the base of the first "wide traverse" pitch one meets in the Upper Oxbows, which we had descended a few weeks previously. This resulted in the name of Deja Rue, which the ever enlarging survey showed to be within 3 metres of a low muddy crawl running south from the base of the "usual" pitch down into the Lower Series.

Digging this from both sides, we could soon hear each other scratching away and after a couple of sessions the connection was made, yet again when I wasn't there. The disbelievers were confounded by the accuracy of the survey and we had a quick route into the Lower Series which led to further exploration. This soon produced a "Lower" Lower Series of small immature rifts heading north, which end at a boulder choke with a small stream, now known to originate in Northern Lights.

The main source of water in the Lower Oxbows is a sump, which discharges a considerable volume of water in all weathers. We attempted to lower the water level by digging out the downstream gravel floor and tried to persuade Rob Parker into the rather tight rift from which it issues, but little progress has been made on this interesting feature.

Meanwhile Nig had been working at the northern end of the passage shown on the original survey as "Sand Fill Deeply Cut Down" which in fact ran some 50 metres further than drawn. He found a way round the side of the heavily calcited choke at the end, which holds back the muddy pool in Deja Rue, into Sand Fill

Extension, an area of small rift passages containing a stream, which again were very close to the Lower Series. This was proved when Bob Peat and I established the link at Handshake Squeeze, which was slightly enlarged after a rather nerve racking misfire caused by a break in the wire about 3 metres from the charge!.

The main Upper Oxbows and the bits at the bottom of the two Big Holes were investigated next, along with the various chimneys up from the Traverses. A horrid little crawl heading north, which took far longer to survey than the drawn up results suggest, produced a vintage Krab and leather belt at the end, presumably a relic of the original explorers, Gary Jones and Alan Jackson. Rob and Julian Walker climbed the superb "rocket silo" aven near the top of the pitches down to Marble Showers, only to find it capped with grit and blind.

Roddy McLauchlan had been doing a long term bolting ascent in the Marble Showers area, just upstream from the base of the big pitches from the Oxbows Extension. He gained access to a parallel high level rift running north, which came out in the roof of the chamber at the top of the Marble Showers passage, with a tantalising continuation on the opposite side. A bold effort by Paul Quill got them over into yet another new section of cave, later called Merthyr Vale by one visitor with a black sense of humour, due to a self digging gravel funnel in the large main passage.

This area again proved to connect with the Lower Series when Rob Parker crawled down an unlikely looking hole to find a climb down a pitch into an aven which no-one had ever thought of looking up!. The northern limits draught well and the end of Beetle Drive also sports wildlife, so it would appear to be relatively close to the surface.

We had one of our nastiest moments at the top of the entrance climb into this bit, when a LARGE boulder (the survey station!) which we had all stood on in turn, rolled over as the last member of the party stepped on it. It pitched him down the slope and then rolled slowly over his legs, amazingly without serious injury. Visions of a stretcher rescue from this area made the blood run cold, but the shaken victim, a remarkably robust member of RFODCC, made it out under his own steam, although he had some very colourful bruises the next day. Anyone thinking of visiting this area should note that the rope left on the 15 metre pitch has now been there a long time and should be considered very dodgy.

Sometime previously Sam, Roddy and I had dug at the far west of Marble Showers, in what came to be known as Half a Det Dig after my only other slightly embarrassing misfire effort. This was given up after it got a little too exciting, staring up a half empty aven to grit boulders levitating 5 metres above your head. Getting to this dig involved chimneying up into the top of a rift and then crossing a hole in the floor. One day we decided to look down the hole and found the continuation of the rift containing a small stream, which was surveyed downstream, but due to the constricted, meandering nature of the upstream bit, it was done to Grade 2 only.

Following the largest of the three stream inlets in the large chamber crossed by Paul Quill led to Lazy Surveyor Inlet, more new rifts and tight keyhole passage which interconnect with Merthyr

Vale up an impassable rift and end very close to the Lower Series in the small chamber at Trevors Wimp. Problems on this trip with the chain boy and surveyors assistant resulted in another name - Mutiny Junction.

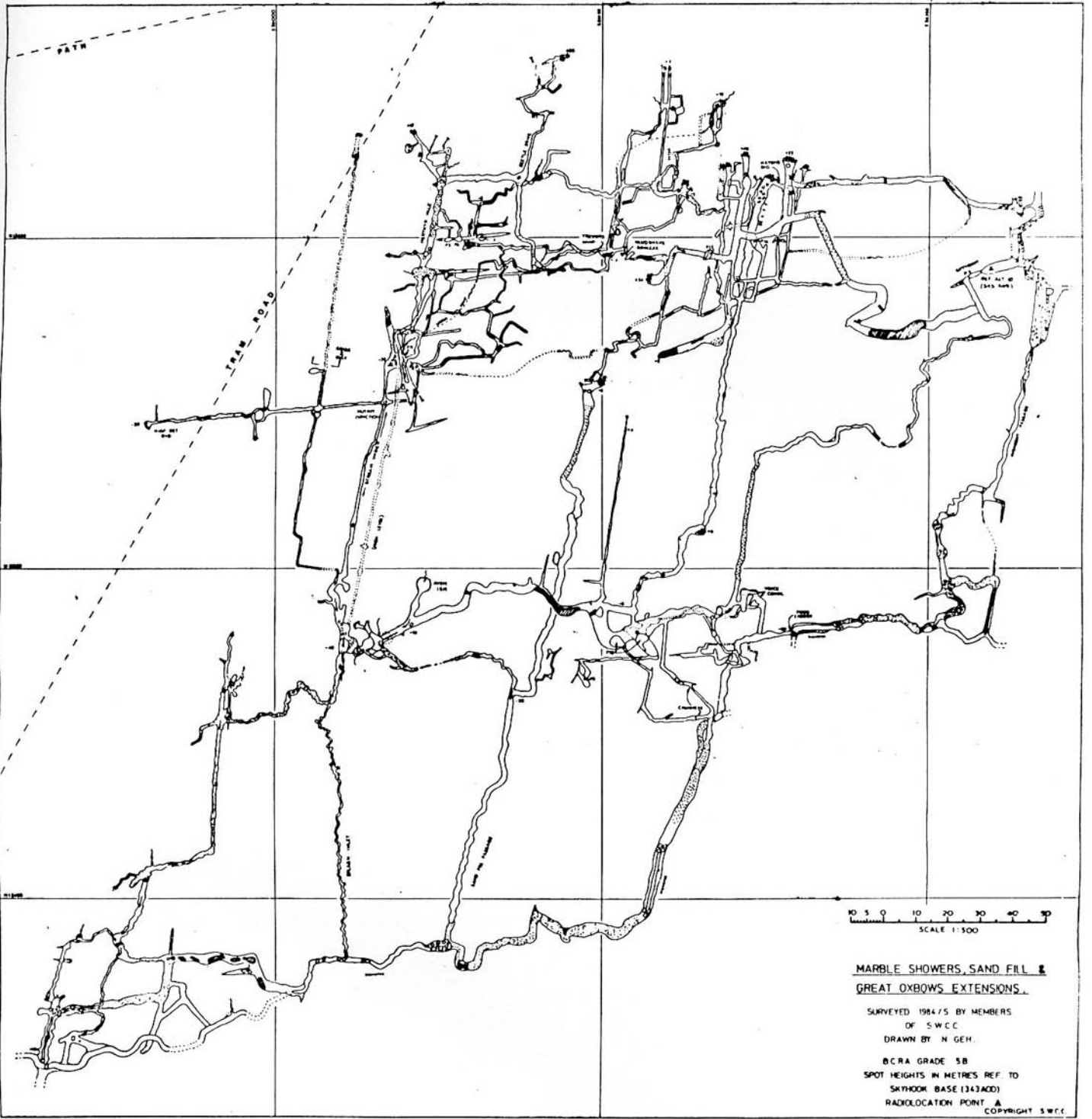
Bob and Jenny Peat have carried out various water tracing exercises which you can read about in detail in the Northern Lights article in Newsletter 100. Simply, the stream from Lavender Way appears briefly near Haydns Dig, reappears in Sand Fill Extension, disappears down a rat hole too tight for even Clive Gardener and then reappears again as one of the three streams in the chamber near Mutiny Junction. It is characterised by the moonmilk deposited along its path.

The stream from the sump in Northern Lights is found in the "Lower" Lower Series, flows under Trevors Wimp and down a Bob Peat special, Wormway, to emerge under the pitch in the same chamber. Interestingly, this stream carries no moonmilk with it. The third and largest stream is the water from the Lower Oxbows sump which manages to cross over the stream mentioned above. All three merge and shortly after they are joined by the Half a Det stream fall into Splash Inlet and thence to the mainstream.

The new survey proved parts of the O'Reilly original to be quite accurate, whilst other bits were the right shape but misplaced by up to 20 metres and obviously owed a lot to memory and artistic licence. Thanks to Bob, Jenny and Andy Bell, two points were radiolocated. The Skyhook was fixed with reasonable accuracy only, due to the steeply sloping surface above, but the chamber at the north end of Marble Showers gave a good fix. Both these tied in well with an accurate backbone survey of OFD 2 done by Peter Harvey, which he kindly extended to the Skyhook.

The total passage length surveyed was 3650 metres, of which 2330 was new. The Swindon SS survey of Nyth Bran gave a similar result, so it makes the official length of OFD look fairly conservative. Tim Stratford has been keeping score but I believe the recent additions in Cwm Dwr Upper Series, Birth Canal, Oxbows, Nyth Bran and Northern Lights must have added around 10,000 metres to the total.

Of necessity, the size and quality of the survey accompanying this article will make it difficult to understand as it is quite a complex maze. However, it is available in the library at 1:500 and has been added to the new OFD survey being drawn by Clark Friend. Thanks to all those who found new cave and then helped me survey it. I apologise for the time they have had to wait to see the results - perhaps if they hadn't mutinied.....



10 5 0 10 20 30 40 50  
SCALE 1:500

MARBLE SHOWERS SAND FILL &  
GREAT OXBOWS EXTENSIONS

SURVEYED 1984/5 BY MEMBERS  
OF SWCC  
DRAWN BY N. GEH.

BCRA GRADE 5B  
SPOT HEIGHTS IN METRES REF. TO  
SKYHOOK BASE (343000)  
RADIOLOCATION POINT A

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