PLYMOUTH CAVING GROUP

Journal and Newsletter

No.101. September 1987

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EDITORIAL.

Congratulations to Paul and Mandy Nash on the birth of a daughter, Emma.

The hut has now been erected. Work done to date includes felting the roof, replacement of rotten panels and preserving the same. The tacle store, library etc. have now been moved in so we are no longer at the YWCA. We will need a seperate tackle store as soon as possible- if anyone sees any suitable sheds going or willvolunteer to construct one please let Bob Cawthorne or Mark Vinall know. We need support for hutwork evenings. Present priorities are fixing the windows and lighting.

On of our members, Alex Shepherd, recently spent 14 days underground in Bakers Pit, raising funds for DCRO. This was well publicised on TV and in the papers. Any further donations should go to Alex or to the account Alex Shepherd DCRO, Barclays Bank, Plympton.

So far 1987 has been a good year for cave discovery in Devon. We have explored the longest and deepest cave in Cornwall, and the dig in Joint Mitnor has finally gone into a well decorated chamber and a new bone deposit. Also in Higher Kiln Quarry is another new cave, Crusher Cave, under the quarry floor. This will be described in the next newsletter.

A project now under way is the resurveying of many of the Buckfastleigh Hill caves, including the surveying of the Plymouth Extension in Bakers. Anyone

wishing to assist in this project should contact Bob Cawthorne, Alasdair Neill or Pete Rustage.

A draught constitution of an Association of Devon Caving Clubs has been drawn up by Bill Tolfree. An Inaugural General Meeting will be held on January 30th. Please try and attend this.

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Plymouth Caving Group can be found on most thursday nights at the Breton Arms (smoke room) after 9pm. Members can be found on most other nights in the Wellington, off North Hill.

DIARY.

SEPTEMBER.

8. DCRO Committee meeting, Crest Hill, Buckfastleigh, 7.30pm.
10. Slides and videos. 25 Lipson Road, 8pm.
12-13. BCRA Annual Conference, UMIST Manchester.
15. Two Brothers Adit dig.
17. Hut work. Hut at 6pm.
19. CSCC Meeting, Hunters Lodge, 6pm.
22. Bakers Pit. Meet 25 Lipson Road, 6pm.
24. Bennett's silly games and quiz. Hut at 8pm.
25-7. Possible Mendip trip.
29. Dewerstone. Meet 25 Lipson Road, 6pm.

OCTOBER.

1st. Committee Meeting, 8pm, Hut. Bring a light!
4. BCRA Council Meeting.
6. Radford Cave. 6pm, 25 Lipson Road.
8. Iceland/Norway slides, 25 Lipson Road, 8pm.
10-16. Lundy Island trip.
16-18. Mountain First Aid Course, Dartmoor Training Centre.
13. Hutwork. Meet Hut 6pm.
15. Hutwork. Meet Hut 6pm.
20. DCRO Committee meeting, 7.30pm, Crest Hill, Buckfastleigh.
22. Rescue Training, 8pm, hut.
25. DCRO Mine rescue practice. Meet 10.30-11am, Bedford Square, Tavistock.
27. Marquis mine. Meet 25 Lipson Road, 6pm.
29. Hut work. Meet hut 6pm.

NOVEMBER.

3. Afton Red Rift. Meet 25 Lipson Road, 6pm.
5. Committee meeting, 8pm, Hut.
6-8. DCRO Cave leadership training and assessment.
21-2. BCRA Regional conference, Devon. Details later.
28. CSCC Meeting, Hunters Lodge, 2.30pm.

1988. JANUARY.

30th. IGM, Association of Devon Caving Clubs.

APRIL.

23. DCRO AGM, Crest Hill, 7.30pm.
24. DCRO Cave rescue practice. Venue to be announced.

OCTOBER.

23. DCRO Mine rescue practice.

NOVEMBER.

11-13. Cave leadership training and assessment.

CAVE NEWS.

DEVON.

Marquis Mine. The gare on the entrance has almost been completed by Hugh Browning.

Radford. The cave was broken into in August. The gate has been secured, but work needs to be done on it.

Bakers. The fixed ladder at the end of the drain has been removed as it was not secure.

The lock went missing at the start of Alex's 14 day stay. If anyone knows what happened to it please tell Pete Rustage. Meanwhile a new lock has been fitted.

Berry Head. New DSS discoveries include Bath Berry Cave (15m long) and Rangers Cave (50m).

MENDIPS.

Swildons, Eastwater, and Hunters Hole are all open. The goodwill fee for all three is now 20p.

Nine Barrows, Sludge Pit and Lamb Leer are still closed.

Cheddar Gorge caves. Access is now only in summer evenings (due to bats, goats and grockles). Written permission from Cheddar Caves ltd needed.

Pen Park Hole, Bristol, is likely to be filled in. Access has long been denied.

Fairy Cave Quarry Caves. Negotiations continue.

Pierre's Pot. 500ft of streamway has been found.

Split Rock Quarry, Wells (climbing and SRT practice site)- discussions for access continue.

Brown's Folly Mine. The gates have been removed and then the locks glued up, these have been replaced.

The new edition of Mendip Underground (Irwin and Knibbs) has now come out.

WALES.

Chelsea Hut. There have been problems over overcrowding with outside clubs, mainly due to groups turning up 'on spec'. This has caused considerable friction with some Chelsea members, Advance booking is essential.

Parking. Only people staying at Whitewalls are allowed to park on the track by the hut, leading to Aggy. It had been recommended that people park along the road towards the Clydach Gorge, beyond the NCC notice some hundred yards beyond the cottages. However due to the numerous thefts from cars there it has been suggesteddone can park down the hill from Whitewalls, in sightof houses.

Thefts. Numerous thefts from cars have been reported in many places. PCG members lost a lot of gear at Llangattock. Merthyr Tydfil police have a large quantity of recovered equipment. Please contact them (phone Merthyr Tydfil 2541) if you have lost anything.

Agen Allwedd. Over 1.5km of passage has been found of the southern end of Southern Stream Passage, in Gothic Passage and Priory Road. These end within 500m of Daren Cilau.

Daren Cilau. Various extensions have been reported, including some beyond the St. Davids sump.

White Lady Cave. Croyden CC have found a bypass to the first sump.

OFD. Denise Samuel has resigned as permit secretary as she is moving to France. At present Elsie Little is issuing permits. At least one months notice is needed, apply to SWCC, 1-10 Powell Street, Penwyllt

DERBYSHIRE.

Brightgate Cave and Tearsell Pipe Caverns are locked, permission and keys from Mr. Walker, Brightgate Farm.

NORTH.

Casterton Fell. The CNCC are no longer issuing permits. For access apply to the land agents, Messrs Davis & Bowring, 6-8 Main Street, Kirkby Lonsdale, tel. 0468-71711. They may attempt to charge but CNCC recommend that no payment is made.

Notts Pot. The entrance has collapsed, although an extremely tight alternative exists.

White Scar Cave. The owners want to extend the show cave to the battlefield via a mined tunnel from Long Stop Lake. The NCA etc. have accepted this in principal, but want various modifications to the plan.

Meregill. The NCC have complained about cavers diverting the stream and causing erosion.

Bar Pot. A planning application to construct scaffolding stairways down the pitches to allow access to adventure groups has been made,

CNCC Permit secretary changes- Birks Fell and Mongo Gill- D.Milner, 47 Regent Crescent, Skipton, N.Yorks BD23 1BE.
Penyghent/Dalehead- Jimmy Rattray, 32 Argie Road, Leeds.

The Dave Anderson Memorial Fund has been set up in memory of the CRO controllor drowned in Rowten. Contributions to G. Tutton, Fairfields, Main Street, Ingleton via Carnforth, Lancs LA6 3eb.

The SRT Rigging Guide to the Dales by Elliott and Lawson is now out.

DEVON CAVE RESCUE ORGANISATION.

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR 1986-1987.

	£	£
Balance at 1st April 1986.		£410.59.
INCOME.		
Key Hire	92.00	
Donations	91.00	
Scout Weekend	37.80	
Building Society Interest.	29.40	
		250.20
		660.79
EXPENDITURE.		
Locks and keys	35.52	
Devon Great Consols safety work	40.00	
Afton Red Rift rent	2.00	
Subscriptions	10.00	
Postage.	3.78.	
		91.30
Balance at 1st April 1987.		569.49

Pete Waite (Hon. Treasurer), 24.4.87.

PAUL PLIMMER.

We regret to announce the death of one of one of our members while walking on Dartmoor in May.

Paul Plimmer, affectionately known to many club members as 'Captain Birds Eye' was one of the true Devon caving eccentrics. He was always keen to go caving, dig, walk on the moors and spend much of his time taking scout and other youth parties.

We spent many happy evenings with him, and his two sons who were club members in the sixties.

His dog Snowy was also a character- diving sumps, rifting Afton and finding new cave passage.

His sudden death at the age of 54 is a shock and a personal loss. We send his family in Dartmouth our best wishes.

Bob Cawthorne.

ADDITIONS TO THE LIBRARY.

Caves of Chudleigh and Kingsteignton by CJ Proctor 1987.

BEC.
Belfry Bulletin 413 (July 1987). Daren Cilau, Hunters Hole, Gough's Cave, Dent de Crolles, Virgin Gorda Copper Mine.

BCRA.
Caves and Caving 36 (Summer 1987).
Cave Science 13.3, December 1986. China, Tonga, Evolution of Castleton Caves.

Cerberus SS. 16.6(1986). Caves in Burma, Ardeche show caves.
17.1 (1987). Portugal, Vercors, Agen Allwedd, White Scar Show Cave plans.
17.2 . Agen Allwedd, Coniston Copper Mines.
17.3. St. Dunstan's hydrology, Aisholt Quarry Cave (Quantocks), Dartford Chalk Mine.
Chelsea SS. 29.4(1987). Risca lead mines. Agen Allwedd- Gothic Passage.
29.5
29.6. Agen Allwedd- Gothic Passage and Priory Road.
29.7. Belgium.
29.8. Waterfall Cave (Clydach).
29.9. Daren Cilau, Agen Allwedd.
Index to volume 27.
High 53 (April 1987).
William Pengelly. Studies in Speleology 1.1(1964),1.4(1966).
RFDCC. Minutes of 1986 AGM. Membership List 1986-7.
Newsletter 98. Bailey level, Agen Allwedd, Perseverence Mine.
Trevithic Society. Journal 1987. Caradon mines, Wheal Vor.
Newsletter 58. AGM Minutes 1986. AGM notice 1987.
WSG. 51 (1986/7). Pant Mawr, Lockey Gill Caves, Romania.
52. Pwll Toby, Holloch.
Wessex. Index to volume 18.
19(1987).212. Holes near Tetbury, Gloucs.;
213. Hermit's Cave, Tetbury, China, MRO Report.

NEW BOOKS.

The Basset Mines by M. Palmer and P. Neaverson. Northern Mine Research Society British Mining 32, 1987. This describes the history and surface archaeology of this major group of mines south of Carn Brea, Camborne.

The Yorkshire and Lancashire Lead Mines.by M.C. Gill. NMRS. British Mining 33, 1987. Mines in the limestone inliers of South Craven, around Skipton, the Forest of Bowland and Bolton.

Caves of Chudleigh and Kingsteignton.by CJ Proctor,1987. A detailed description of the limestone caves between Haldon Hill and the Teign Estuary. Starting with an introduction to the geology, archaeology and geomorphology of the caves, it then describes the caves individually. It includes all known caves and also various sinks and resurgences, and gives evidence of quite large unentered cave systems in the Kingsteignton area. Many of the caves are illustrated by surveys, some of them previously unpublished. The promising new Skullcap Cave at Chudleigh is included.

Caves of East Devon by CJ Proctor 1987. This describes the caves in the Carboniferous Limestone at Westleigh, and also various sea caves, particularly in the chalk at Beer, where some phreatic caves have also been identified.

INDEX TO PCG PUBLICATIONS JOURNAL AND NEWSLETTERS 1-100.

Several members have in the past attempted to index the PCG publications, but they did not complete the task. Their index included references to authors, techniques etc. This index has been compiled to just cover sites, with references to rescue call outs and practices. An attempt has been made to ensure that the original title of a cave has been used, or that in most common usage. I cannot claim however that all names are correct, particularly for the foreign sites. Mine titles are particulaly hard to index, with numerous changes of title and amalgamation or division of setts, so some inconsistencies may appear.

The Newsletters and Journals 1 to 100 and the five Special Publications have been included. Varous other publication, news sheets, rescue reports etc. are not, but may be indexed in the future.

Most of the publications may be referred to in Plymouth Central Library Local Studies Department, and in the PCG Library.

LIST OF PUBLICATIONS.

Newsletter and Journal.

1-3	(1963)	Editor P. Nottle.	36-59	(1971-1974)	Editor Liz Jeanmaire.
4-13	(1963-1964)	Editor TJ Collings.	60-64	(1975-1976)	Editor Miss J. Rodney
14-24	(1965-1966)	Editor RC Bray.	65-78	(1976-1979)	Editor J. Leftley.
25-26	(1967)	Editor TF Barbour.	79-81	(1980)	Editor G. Lloyd.
27	(1967)	Editor Pat Evans.	82	(1981)	Editor M. Bennett.
28-33	(1968-1970)	Editor Dave Curry.	83-93	(1981-1985)	Editor M. Prince.
34-35	(1970)	Editor Bob Cawthorne.	94-100	(1985-1987)	Editor A. Neill.

Special Publications.

1. The Middle Devonian Limestone in South West Devon. By JW Perkins June 1963.
2. Radford Cave. By JF Percival. April 1964.
3. The Caves of Yealmpton South Devon. By RC Bray. December 1964.
4. All That Remains. Ed. R. Cawthorne. 1967, 2nd edition 1969.
5. The Caves of Plymouth and District. By RG Jeffery.

INDEX.

100.3 indicates issue 100 page 3. RP indicates rescue practice
(S) indicates survey or illustration. CO indicates rescue or call out.
Sp Pub indicates special publication.

CORNWALL CAVES.

Empacombe Caves. 18.4, 20.15-17, 49.5,65.8,85.2-3,87.22,SpPub(5).11-13(S).

CORNWALL MINES.

Wheal Arthur. 43.7,60.7,67.18,85.23,87.20,89.10-12(S),90.20-23(S),95.20(S).
Ballowal. 41.11,97.18-20(S).
Wheal Basset, Basset Mines. 17.17,24.6,80.13.
Wheal Bellan. 97.18-20(S).
Wheal Benny. 59.11-13.
Wheal Betsy. 95.28.
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Bosorn and Ballowal. 97.18.
Botallack. 79.24.
Wheal Bramble. SpPub(4).59.
Wheal Busy. 24.5,25.11,27.5,88.7-8.
Calstock. 30.2-3(S).
Callington Consols. 87.24,SpPub(4).11,17-19(S).
Caradon Consols. 79.9(?).
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Castle-an-Dinas. 26.15-17,30.7,91.14.
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Crinnis. 79.9-10.
Danescombe. 30.2-3(S),67.18.
Deerpark. 86.15,SpPub(4).45.
Dolcoath. 15.12-13,16.7-8,17.13-15,17,19.6-7,12,20.12-14,21.17,91.8-9,16,96.15.
Drakewalls. 31.4-6(S),43.7,46.6-8,67.18,80.12,86.11,13-14,35,88.3,26,91.14, SpPub(4).54.
Duchy Great Consols. See Latchley Consols.
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East Gunnislake. 10.7-8,11.2,17.8-9,80.13,87.3-4,88.1-2,SpPub(4).18.
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CORNWALL MISCELLANEOUS.

Empacombe House Well. 100.18-9(S).

DEVON CAVES.

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World's End Caves. 38.31-2.

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Alltycrib. 77.10.
Betws Garmon. 40.28.
Blaen y Cwm. 86.19(S).
Blaenau Ffestiniog (Slate). 77.10.
Bwlch Glas. 77.9-10.
Cae Gwernog. 86.19(S).
Clogau. 40.26,29-30.
Cwm Einion. 77.9.
Cwmystwyth. 77.8-9.
Esgair Hir. 77.10.
Esgair Fraith. 77.10.
Hafotty Manganese. 40.28.
Henfwlch. 77.10.
Llywernog. 77.8.
Parc. 77.10-11.
Parys Mountain. 40.29,77.3-4,84.10.
Sovereign. 86.18(S).
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Wnion. 86.18(S).
World's End Mines. 38.31-2.

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Huglith. 93.6-7.
Mytton's Beach. 97.22.
Perkin's Beach. 97.22.
Rhadley. 93.4-6(S).
Rock. 93.4-6(S).
Sallies. 93.6-8(S).
Snailbeach. 97.22,100.2.

STAFFORDSHIRE.

Dudley Stone Mines. 29.10(S).

CHESHIRE.

Alderley Edge Mines. 96.17-18.

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Blue John Caverns. 52.15.
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Eldon Hole. 63.9,10.
Giants Hole. 7.3,63.8-9,10,80.9,84.11-12,96.16-17.
Jackpot. See P8.
Long Rake Mine. 90.28-9(S).
Mandale Sough. 96.17.
Maskhill Mine. 63.8-9.
Nettle Pot. 84.11.
Oxlow Caverns. 63.8-9,10,80.9.
P8. 38.11,63.8-9.
P9. See Christmas Swallet.
Peak Cavern. 79.6.
Peveril Castle Cave. 52.14.
Treak Cliff Cavern. 30.7.
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Aygill Cverns. 100.20-21.
Bar Pot. 39.24,46.9,64.7-12,65.3,75.7-8,91.29.
Batty Cave. 30.7.
Black Shiver Pot. 64.18-19,75.5,95.13-15.
Borrins Moor Cave. 84.15,85.17.
County Pot. 29.9,71.5-6,85.12-15.
Craftsman's Hole. 100.3.
Crescent Pot. 74.8,91.37.
Daimler Cave. 95.5.
Dale Head Pot. 65.11,74.7-8.
Diccan Pot. 62.14-15,70.2,84.15,97.23,100.21.
Disappointment Pot. 57.7-10,62.2-4.
Ease Gill Caverns. 29.9,79.12,91.39.
Fountains Fell area. 100.3.
Gaping Gill. 26.9,30.9,45.16-18,46.9-12,51.11-13,55.4,57.4,7-10,62.2-4,64.7-12,65.3, 75.7-8,81.9-12,83.8,88.9-11(S),89.7-9,91.12,99.3.
Gavel Pot. 71.7,95.5,99.3.
Great Douk Cave. 81.14,85.20,88.15.
Greensett Cave. 85.21.
Growling Hole. 75.18.
Hammer Pot. 39.23.
Hurtle Pot. 98.4.
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Ireby Fell Cavern. 15.6-7,85.20,97.2-3,23-4,100.21.
Jingle Pot. 98.4.
Jingling Pot. 62.2-4,6-7.
Juniper Gulf. 64.22,68.18.
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Lost John's Cave. 32.5-6,70.4-6,71.3,84.16,99.3.
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Pikedaw Calamine Caverns. 30.9.
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Rowten Pot. 39.11,40.22-5,41.1,43.18,62.6-7,13,81.13,97.23,100.23.
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Swinsto Hole. 40.2,22,65.3-4,75.5-6,18,88.14,91.43,100.20,21
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GB 6. 66.11(S).
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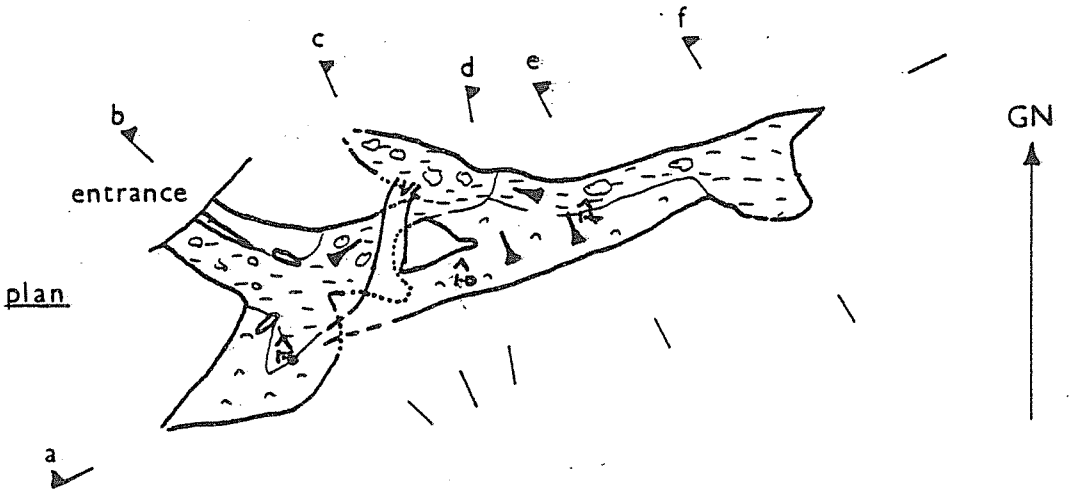
Aiowa Cave. 33.8-10.

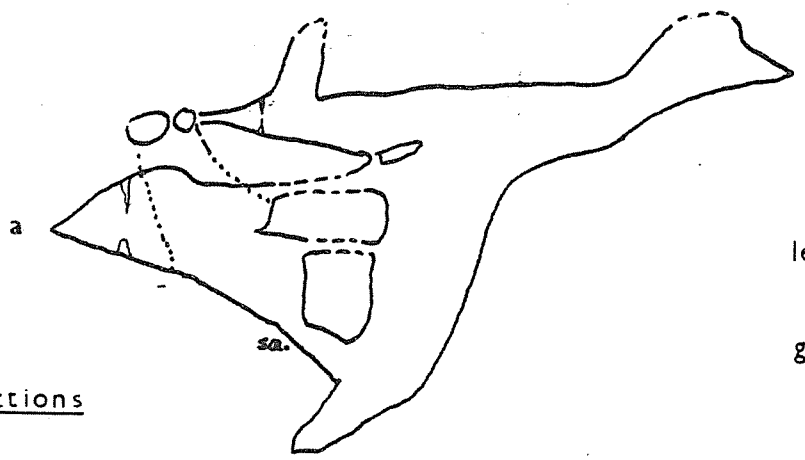
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BOATYARD HOLE, CREMYLL.

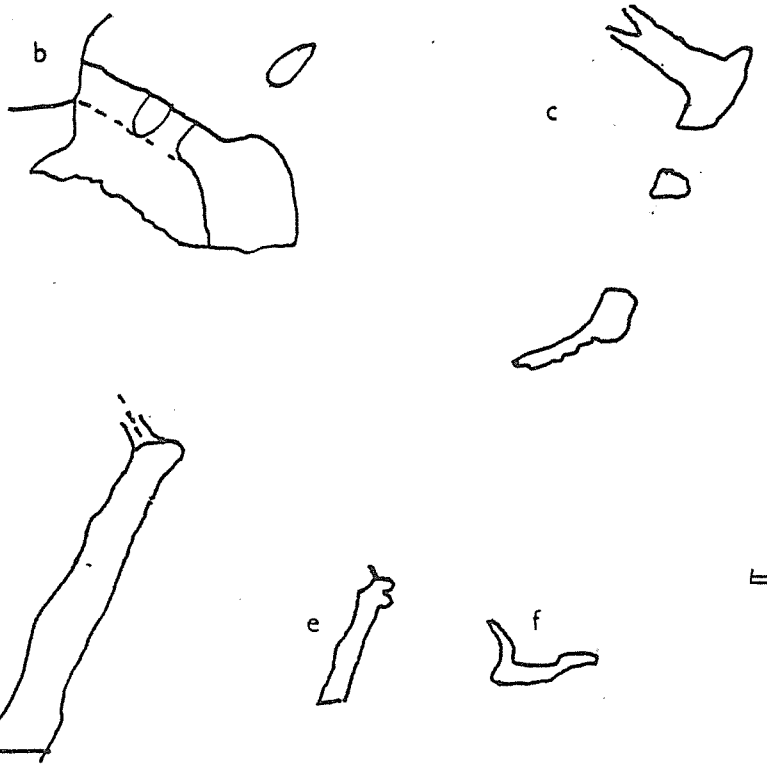
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length 20 m
v.r. 6 m
grade 3C

sections



5 m

BOATYARD HOLE, CREMYLL, CORNWALL.

Boatyard Hole is a new cave which was broken into during work at the boatyard of Mashford Brothers Limited at Cremyll. This was at about the beginning of March 1987. The back of the main slipways consisted of a limestone outcrop containing some inpenetrable holes. This outcrop was quarried back, resulting in the opening of an entrance to the cave.

The cave was explored and surveyed on April 21st by Mark Vinall and Alasdair Neill. It consists essentially of a phreatic rift. The surveyed length is 20m and the vertical range 6m, making it the longest and deepest limestone cave in Cornwall.

The lowest point is a mud choked tube, which must be not far above high water, heading towards the Tamar.

The cave contains some fair formations, various benes probably of recent age, and some bat droppings.

There seems to be some potential for further minor caves in the small limestone outcrops around Cremyll, where nothing has been recorded before.

For access contact Mashfords (phone Plymouth 822232).

Alasdair Neill.

MATIENZO '87.

Quote number one: Matienzo is now 18 years old and therefore old enough to drink. I wonder what MUSS have been doing there for the past 17 years?

Julie and I drove 600 miles in 11 hours from Bilbao and then crept for 4½ hours to the beach at Noja famous for where the expeditions sunbathe or the PCG camps. (whimps). We arrived at about 2.00 and had a good collapse. Several expedition members were also sun-slugging- including cousin in law Carmen.

We then drove up to Matienzo- and it wasn't raining. In severe shock we went straight to the bar. Here Carmen offered us a room in their house for the week- was this an offer we could refuse?

Day one was spent very severely collapsed on the beach. 700 mile drives make you want to sleep or drink beer.

In the evening it was "hunt tomorrow's caving trip", and sure enough Lank Mills (a fellow ex- MUSS/UMIST Chemist) was thinking of a bit of surveying work in Cueva Riano. This is a 5.5 km cave in the Riano valley which is close(-ish) to Cueva Uzueka, and has a connection to it discovered in 1986.

While arranging this and checking that there was nothing difficult, no climbs, squeezes etc., Julie suddenly volunteered to join us. So the party of Lank, girlfriend Liz Walton, Julie and I were to be found changing at around 1.00 pm the following day.

The entrance series is described as 50m of crawl to inlet and 200m to stream. This is insufficient description, as it proved quite tight and unpleasant for both Julie and I, neither of us having done a long (distance or time) trip for some time. In fact we nearly had to give up.20 ft in at a squeeze which my ribs refused to go through. Some gardening was definitely required!

After 1 hour of flat out crawling, hands and knees in stream, shuffle, and occasionally walk we had a small climb to a high level passage which led to a chamber with many exits. We were supposed to cross this, walk 1km or so along big passages and then survey a possible connection to Uzueka. This was not to be; Lank started ferreting. Eventually he came back with the message that he had found a footstep free passage. We decided to explore. It was more or less a passage but boulder fall had amended obvious continuity. Some times we crawled, we had the odd traverse and climb, the occasional walk.

After half an hour of this Lank dived down a sidepassage and discovered 'footprints' - our virgin passage was no more.

It then became survey time. We surveyed our way back. In doing so we saw one or two pretties, including some quite good botryoidal (splash) stalagmites and mud formations.

At one point Julie said "there's a passage here", reply"off you go then"- disappear! When Lank arrived with the compass sudenly there was another 50m of quite new passage. Unfortunately it was only an oxbow of what we had already done. In completing the route back we found another rifty sort of oxbow. We had found perhaps 200m of new passage, or just over half of Radford.

The exit was led by Liz, losing brownie points for every false turn. We had a small delay at one point with Lank kicking rock out of the rifts in the roof looking for a big high level chamber. He didn't find it. Eventually we emerged to sunshine, and ,soon after, beer. We then spent the evening remeniscing and watched Juan (also ex MUSS) plot the survey by computer- very impressive.

The next day we had already decided to look at a small cave in the evening, and spend the rest of the day on the beach. In the discussion Julie complained that what she had seen was somewhat akin to the less salubrious parts of Bakers Pit, and that the 'propagander' of caverns measureless to man had failed. We were then given instructions to find Cueva de Cobrantes, clever instructios like: turn right just before you get to San Miguel and look for four eucalyptus trees. Believe it or not we found it at the first attempt! The walk to the cave was a little disconcerting, along the valley floor and then up a meadow which was the steepest field imaginable, the grass roots nearly stuck out sideways!

The entrance was two or three hundred feet up the side of the valley and is some 20m wide and 4m high. Inside it is bigger. It took us twenty minutes to walk around a rocky floor to lose sight of the entrance. In doing so we passed some amazing fossil stalagmite bosses. We followed the wall for most of the time because the passage was too big for one cell and one carbide. Walking in the middle of the passage gave you severe agrophobia! It was huge- the walls were barely visable the roof lost in haze. This was almost a cave big enough for it's own weather. Towards the end of the passage the calcite floor slopes down sufficiently to become on one side an 80' pitch. We decided to stop at this point where the passage was disected by a gigantic lump of stalagmite. The base was bigger than a Wimpy house and the top was lost in the gloom. We could not tell if it was a stalagmite or a column.

We strolled out amazed at the size of the place, and returned to the car, to the bar, to eat and to plan the next trip...

Howard Taylor was complaining that he seemed to have lost both a day on the beach and a trip to Cueva Agua due to someone else changing their mind; my ears pricked up - 'if Lank isn't needing a surveying party I'll go to Agua'. Lank wasn't so the next day we did together with Kate from MAUUSS (the new university MUSS to distinguish it from the old lags and non student MUSS - very confusing). The usual not very prompt start saw us driving the short distance and then walking alongside the river to the entrance.

No doubt Agua will be described in the next PCG journal. We had a very pleasant three hour paddle, wade, swim with the odd scramble and duly inspected the pretties and the prehistoric altar site at the far end. It's huge- but Cobrantes, although less fun was much bigger!

After a lazy day on the beach we planned the next trip. Some six or seven miles down river from Riano Lank had discovered a huge draughting resurgance. So Steve and I went with him to inspect it. The only snag was that it was part of the main water supply and we couldn't stir up any silt. The upper entrance was a slight squeeze into a low dry chamber, the exit squeeze past a dead deer and then down a rift. This led into a steeply sloping chamber, quite long, one wall being mainly boulders, the other being solid limestone, and at the bottom of the slope- the river. Ten or twenty feet wide, six foot airspace with steady draft, an absolute dream. The snag was the floor was super fine instant disturb silt. Lank found a side passage but it didn't go so we had to leave it undisturbed. Cueva de Boquerones we discovered later was its name - highly illegal!

We then carried on wandering to a cave entrance discovered years ago but not pushed, it ended at 'knee deep water'. In we went, all dressed in dry gear. Two walking size rifts, one dry and the other with the stream. The dry way met the rift, soon we were in the knee deep water. This got deeper and deeper and... soon we were in water of unknown depth, using underwater ledges, chest deep and complaining about the cold. Then after 50m the sneaky thing sumped! We had to abandon it.

We continued our drive and went up into the hills behind the Matienzo valley but SW. where Lank had spotted some closed depressions, closed meaning underground drainage. drainage. They were in a bowl of land perhaps half a mile across. After several dolines had proved fruitless we eventually came across a cave. It was quite pokey and more in sandstone with a limestone roof. As we had not changed a third time we left it for future reference and drove back to the camp.

As it was Friday evening Peter and Carmen were due back from Santander after their

weeks work. I had already suggested a trip with him and once they arrived the planning started. Eventually we settled on joining Lank for the Cueva Riano trip planned for Monday, surveying at the far end passage discovered by Lank and Peter two years previously. This heads towards Cueva Uzueka with which it had already been connected at a different point. We left the bar at about 1.15 as Peter and Carmen's daughter Carolina is only three.

In the ensuing three hours the Guardia arrived and instructed the bar to.... stay open! At one point Juan the expedition leader was jumping on their toes to see if they had steel toecaps! At another Lank was examining the loaded guns, dismissing them as pathetic compared to the machine guns they used to carry...

The party ended in the early hours- nearly dawn. When we, unknowing, came to collect Lank at 11.30 the camp was strangely quiet and deserted. It took us 1½ hours to get Lank behind the wheel of his car, after forgetting / losing boots, helmet, surveying gear, etc. etc.

We eventually arrived at Riano, changed, and were in the cave by 2.00pm having promised Julie and Carmen that we would be back by eight to go out for a meal.

It took 20 minutes to get to the climb out of the stream, and another 10 to reach the chamber which was our previous stopping point and the scene of the discoveries on Monday. The way on was along a straight passage which was not high enough to walk along upright but too high for neat hands and knees slow crawling. Needless to say I was the slowest along this!

The stream in this part of the cave deserves a mention- it resurges in the Riano valley. The other stream, met beyond where our turn off was, flows into the Uzueka system. The Uzueka entrance is on the other side of the valley. The Uzueka drainage is through the hill under the Matienzo depression and into the Secadura valley. Hence: an underground watershed.

However we were looking for a right turn along a passage to a chamber. Neither Lank nor Peter had been this way before as it was a new connection. The previous connection involved an exposed traverse climb at the top of a pitch.

The state Lank was in we couldn't find the passage. We had several backwards and forwards looking upwards and downwards with the occasional lie down for a groan. Eventually we were there, the turning being around the entrance to Catprint Passage.

The connection involved pulling a rope around a loop of rock to lift our ladder and then, at the top of the 15' pitch, a climb of 10' to some more climbs and traverses. After a few minutes this led to the 'Big stuff'. This was Spanish passage at its best, 30? by 50' high, sometimes walking, sometimes climbing up and down over boulder piles. It was huge. Sometimes the roof was barely discernable. It had taken 2½ hours from the entrance.

Eventually we reached our target- a high rift passage, very well decorated with pretties. Stal, columns, helectites, bunches of splash stal: the works. After a couple of hundred metres this led to the surveyed limit: the top of an awkward looking 12' climb down. Beyond this Peter had investigated 50m or so straight on, and Lank a few metres along a sandy crawl to the left. The passage had a draught in it- a good sign.

Straight on the passage was a high rift, with lots of formations. This continued more or less to a point where the floor was blocked by a stal barrier. Beyond this the floor rose and the roof lowered. Eventually we were on a calcite floor and the way on was a crawl past stalactite. Soon the mass of them and columns was the barrier in a 1' high passage with no draught. Lank thought he could remember a similar passage in Uzueka and thought the connection might be made by digging.

We surveyed our way back to the climb. A junction to the right was investigated but did not seem to go. We then set off along the crawl. This was obviously an old water way by the number of meanders. Time was against us so we stopped after a while and started surveying. On the way out we spotted a dry stream bed. A junction high up to the left connected with the passage we were in previously. One thing- the passage still had a draught in it!

At the bottom of the climb we were about 1.2 km from the surface which had taken 3 hours to reach. It was 6pm- Peter and I could be in for big trouble by being more than a little bit late for the meal. The trip back to the big passage did not take more than a few minutes, we then took the 'Bypass', a short cut in which , half way along, Lank discovered a passage off! Then Peter disappeared so I sat

with tape and ammo can 'conserving energy' (euphemism for 'close to knackered') for 15 minutes while they had a ferret about. Result: led back to main passage. After this episode the only slowing up was caused by me creeping along in the rear. In spite of this, having left the 'Bypass' at 6.30 we were down the traverse and ladder, along the stooping bits and through the crawls and stream to the entrance in just over the hour. After the change and the drive back we were in the bar in Matienzo by 8.01 precisely. Hooray!!! no loss of beer tokens.

At the meal we were entertained by Lank teaching Jenny and Carolina, Juan and Penny's daughters, both 3-4 years old, to sing Baa Baa Black Sheep to the assembled, unbeleiving, Spanish audience.

After a very pleasant evening we had to pack for the next part of the holiday was beach based, some 15 miles from Ribadasella, but still not far from the Picos de Europa mountains (home of the Treviso expeditions). We were intent on at least looking at the surface features.....

After two or three days of beach we decided to try and post the postcards (try buying stamps of more than 1 pta denominations - we needed 40s) and then visit the Picos. In the nearby town of Colunga we were successful with the postcards and then a Senorita in a Seat 124 went 'bang' into the back of the Ambassador. No obvious damage but the unlocked hatch back would not open- mucho problemo. Ah-si... After a fair amount of Spanish twitter a Seat garage proved useless but at a second a mechanic undid the lock from the inside, bent the panel straight and we were on our way.

The scenery became more and more splendiferous untill eventually we parked at the foot of the Cares gorge. Very steep limestone mountains on all sides. I suppose in three hours we saw a quarter of it. Amazing- a ledge in the side of the hill 2-6ft wide, the river 50-100 ft below and the top of the gorge 1000 ft above. We took the lower path which eventually led down to a stream. An upper path follows a canal for a hydro-electric scheme. The heat was amazing- after only 1½ hours I had a new suntan line where my trainers were.

We returned to drink copious quantities of anything cool. Then we set off in search of Amieva. Here the MUSS had camped in 1968 and one had married one of the local girls. The road up to the village had the car boiling. After much hopeless questioning it seemed that Chico lived 'at the top of the village'. The road was tight, tortuous and steep. After throwing a boiling car up several one in three hairpins where a slip would mean a crunched wing, I opted for cowardice at the first place to turn round. Then our informant (a hitch hiker) told us the same people did not live there any more...!

We slithered back down the hill to normal Spanih country roads, admired the Roman bridge at Cangas and returned to drink beer at Anis.

The only other caving bit of the holiday consisted of an abortive attempt at a showcave, Cueva el Buzo. It was shut. Only 25 people a day were allowed in. We retired once more to the beach and the bar. There was always another day, another year, manana, manana...

Bob and Julie Cawthorne.

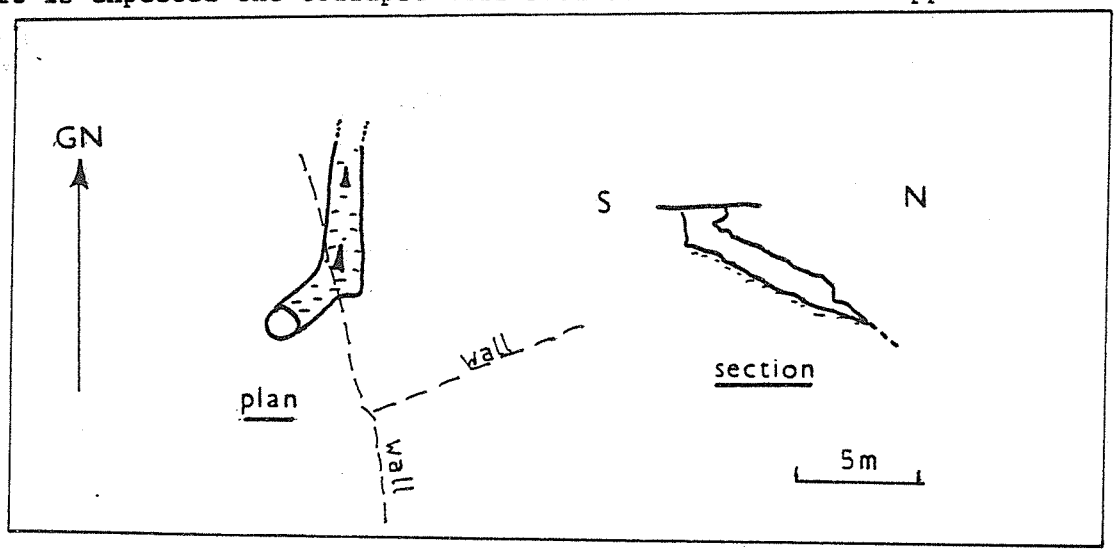
COLLAPSE AT LOWER GOODAMEAVY FARM

At the begining of May we were informed of a collapse into an old mine shaft which had occured on Lower Goodameavy Farm, near Shaugh Prior. Mark Vinall, Mark's friend Dane, and Alasdair Neill went to have a look on May 7th. We were shown the collapse by the owner, Dr. Lunn. A tractor had caused the collapse whilst hedge trimming.

The collapse is at the top of a field leading down to the River Meavy, at grid ref. SX 5286 6510. A vague gulley crosses a field above (once a wood) which may indicate old opencast workings.

There are no records of mining here known, but the Roborough Down Mine (a trial for wolfram during World War II) is a few hundred metres away on the other side of the Meavy. 500 metres to the north there are traces of ancient tin stream workings running off Wigford Down to Hoo Meavy Bridge.

The collapse proved to be a short drop into a cavity sloping north for about 8m; it may continue further but would need digging. It is almost certainly related to ancient mining, but it is impossible to say if there are workings of any extent here.
It is expected the collapse will soon be filled in and capped.



Alasdair Neill.

ODE TO FI.

Oh dear, what can the matter be,
Poor old Fi got locked in the Library,
She was there from six untill half past nine,
Nobody knew she was there.

The door slammed shut and she couldn't open it,
She'd only gone for books for her project,
She rigged up pulleys and rebelays but nothing worked,
Nobody knew she was there.

She tried to get out with much energy and zest,
'Couse she needed ten pints of draught guinness,
And closing time was only one hour away,
Nobody knew she was there.

Outside she heard voices and Fi shouted 'please help me',
'I'm a right wally and I'm locked in here you see,'
So out came Fi-Fi and straight to the pub she went,
She's never going to the library again.

Fiona McWilliam.

SURVEYING CAVES BY MAGNETIC INDUCTION.

Since conventional radio is useless underground, magnetic induction has for many years been used both for depth determination and position finding, and for communication between surface and cave. The equipment and techniques described here are very closely based on thosedescribed by Smith and Stevens (1974) and can be used to locate the position of a transmitter in a cave. Other more sophisticated systems have been built, including the Molephone and Ogophone, which feature voice communication but these are expensive and require much experience to construct succesfully. This equipment can be built for a total cost of about £30, the single most expensive item being the wire for the transmitter and receiver coils.

If an alternating electric current is passed through a wire coil a magnetic field will be set up. Any other coil placed in this field will have an electric current set up in it in sympathy, unless the coil is in direct line with the magnetic lines of force in which case no current flows. If the transmitter coil is placed in a horizontal position in a cave and a receiver on the surface then rotation of the receiver in a vertical plane untill the signal dissapears (Nul) will show the direction in which the axis of the transmitter lies (the point on the surface under which the transmitter lies). If this direction is found from several positions then the intersection of the lines shows the position of the axis of the transmitter coil (see figure 1). When over the axis the coil can be rotated through 360° with no signal being received.

Depth finding can be done in a similar way, with the coil being rotated around a horizontal axis a known distance from the transmitter axis unti a null is obtained. The angle of the coil to the vertical, $\emptyset$, is measured and the depth calculated using the formula

$$H=d(3/4.\cot\emptyset\pm\sqrt{9\operatorname{cosec}^2\emptyset-1}).$$

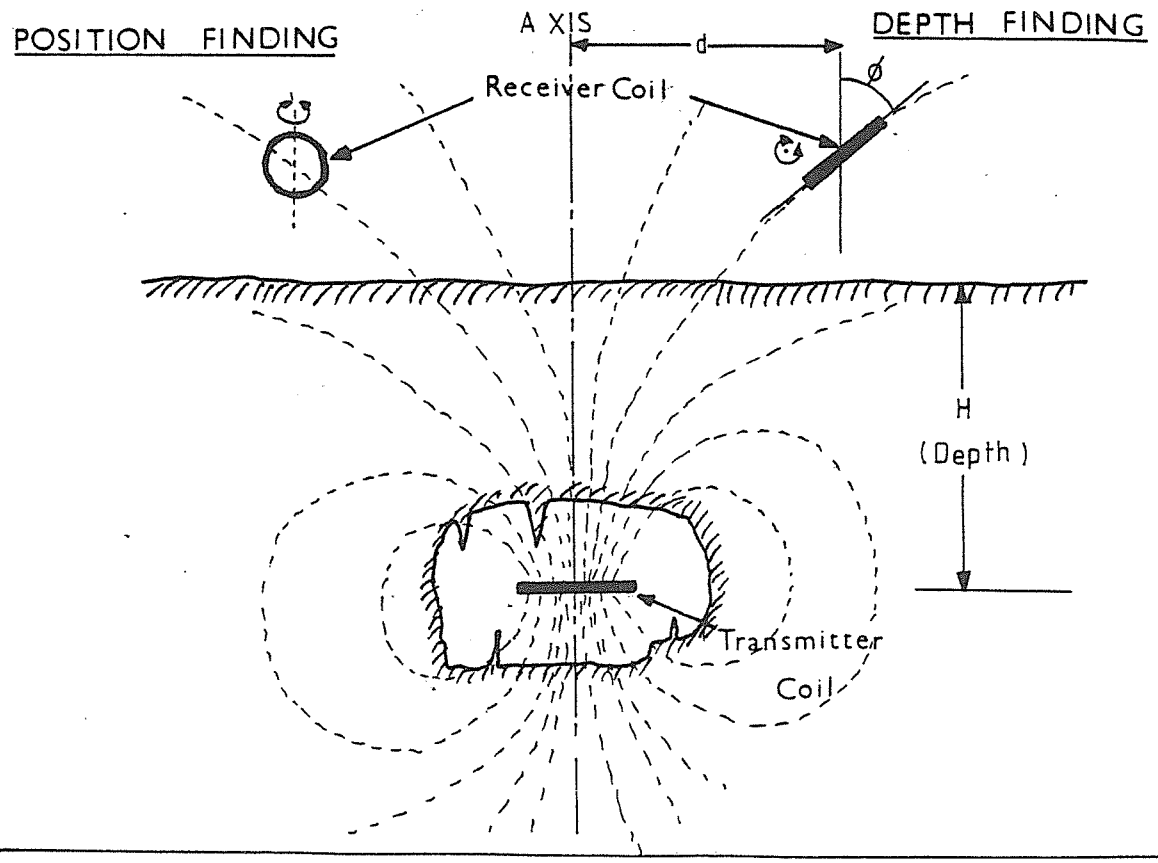
where H=depth and d is the distance from the receiver to the transmitter axis.

If $F=3/4.\cot\emptyset\pm\sqrt{9\operatorname{cosec}^2\emptyset-1}$,

Then $H=dF$.

By drawing a graph of F for different values of $\emptyset$, the depth of the transmitter can be obtained quickly and easily.

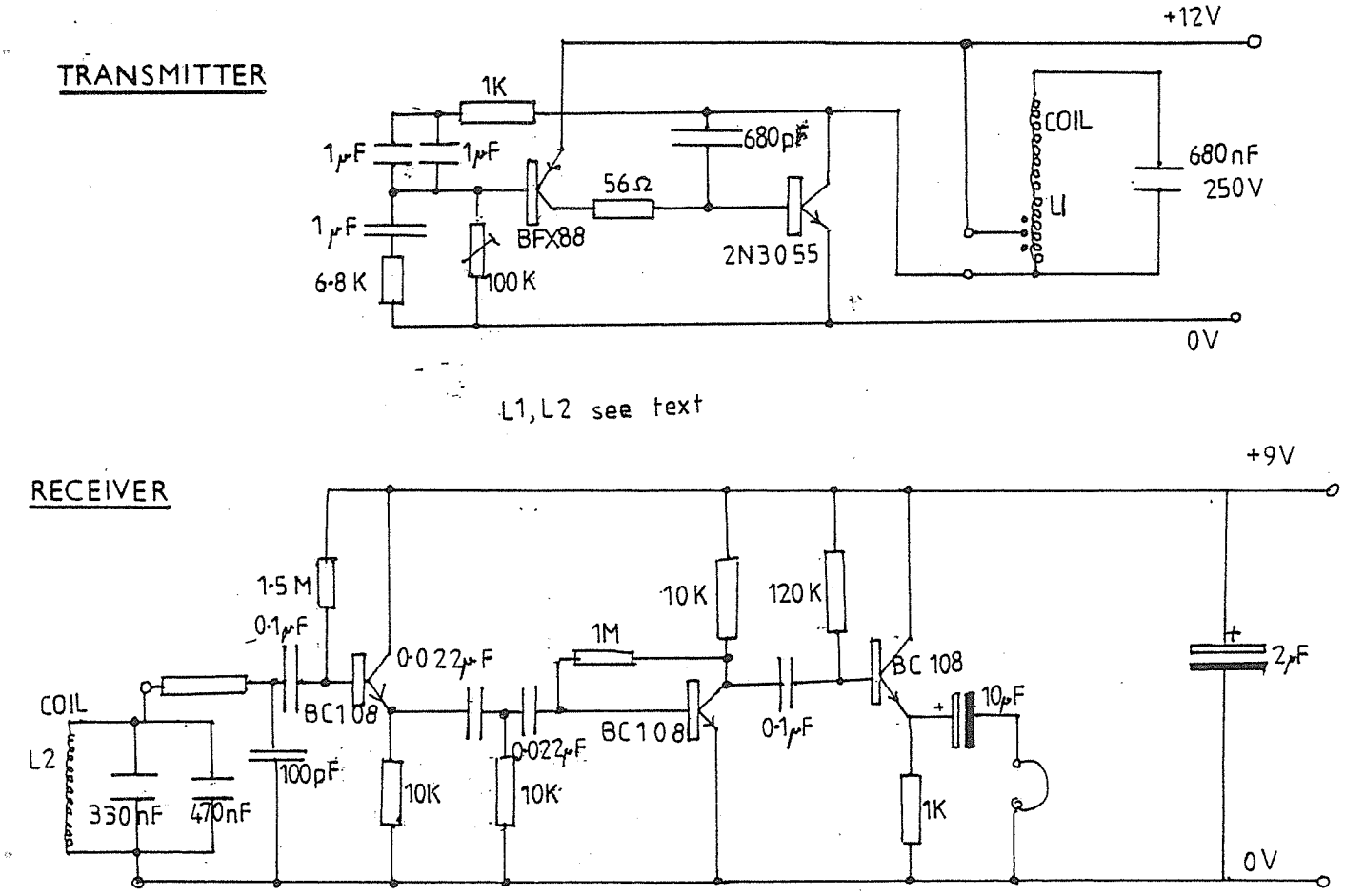
Figure 1. Magnetic Field Generated By The Transmitter Coil and its Use For Position And Depth Finding From The Surface.



The range of the equipment is limited to about 100 feet; the power of the magnetic field decreases very rapidly as you move away from the transmitter (an inverse cube relationship).

The electronics for both transmitter and receiver were constructed on tag board for ruggedness, housed in metal boxes and connected to their coils by screened wire. Coils were wound on circular formers made from 1" wide curtain track. The transmitter coil had 100 turns of 22 SWG enamelled copper wire on a 40cm diameter former with taps taken off at 3, 4 and 5 turns. The receiver coil consisted of 283 turns of 30 SWG wire on a 56cm diameter former. A wooden bar containing a protractor and plumbline were stretched across the receiver coil to determine angle Ø in depth measurements. The 2N3055 transistor in the transmitter was mounted on a simple heatsink. Both electronics and coil on the transmitter were heavily waterproofed as the high humidity in caves will degrade them. A 12V car battery powers the transmitter and a 9V PP3 battery the receiver.

Figure 2. Circuit Diagrams For Transmitter and Receiver.



In use the transmitter should be set up to be dead horizontal using a spirit level. The transmitter produces a 2kHz signal pulsed at 2 to 5kHz. This is heard in the receiver headphones as a series of beeps. When position finding mark out the lines along which the signal disapears with pegs, then go to the point of intersection of these lines. Then find the place where the receiver can be rotated 360° with no signal being heard. The better the headphones and the less wind and trafic noise then the easier this is.

Reference.

Smith & Stevens, 1974. Inductive Loops and Cave Surveying. BCRA Journ. 1.1.

Jerry Drake.

LOCATION SURVEY IN JOINT MITNOR.

Initial tests of the magnetic induction device described above were carried out in Joint Mitnor Cave, Buckfastleigh. A strong signal was heard through 15m of rock. The position of the nul signal was located to within a 30cm radius. This was checked by a tape and compass survey, which showed an error of only 1.5m- probably due to the compass. After this success use was made of the equipment in surveying parts of Baker's Pit Cave.

Jerry Drake.

LOCATION SURVEY IN BAKERS PIT CAVE.

Following the trials in Joint Mitnor, the same equipment was used to locate two points in Bakers. One point was in the Hanging Pool in Glorious Devon Series, the other in the Plymouth Extension south east of Brain Chamber. The purpose of these were to check the existing survey, to check the recently started survey of the Plymouth Extension, and to gain further experience in the use of Magnetic Induction equipment.

The survey was carried out on August 12th. The surface party consisted of Pete Rustage and Fiona McWilliam, the underground party Jerry Drake and Alasdair Neill with some help from Ashleigh Phillips. As there was no means of communication direct to surface, a timetable was made taking a guess at the time taken to get the transmitter and car battery to the two points:

Leave surface	1400
Switch on transmitter in Glorious Devon Series	1500
Switch off in Glorious Devon	1545
Switch on transmitter in Plymouth Extension	1715
Switch off in Plymouth Extension.	1800.

The carry to Glorious Devon Series proved fairly easy, and it was possible to quickly return to surface to determine that the transmissions could be picked up, so the transmission times were lengthened to 1 hour and the Plymouth Extension times were changed to 1627-1727. The carry into Plymouth Extension took longer than anticipated so the actual timetable worked out at:

Left surface	1400
Switched on in Glorious Devon	1421
Switched off in Glorious Devon	1527
Switched on in Plymouth Extension	1642
Switched off in Plymouth Extension	1742
Left the cave	1843.

The location in Glorious Devon Series proved to be within a foot of that indicated on Hooper's survey (1966 edition), and the depth of 17.8m±1.3m gives an approximate elevation of 66m or 217ft, whilst Hooper gives an elevation of 215ft.

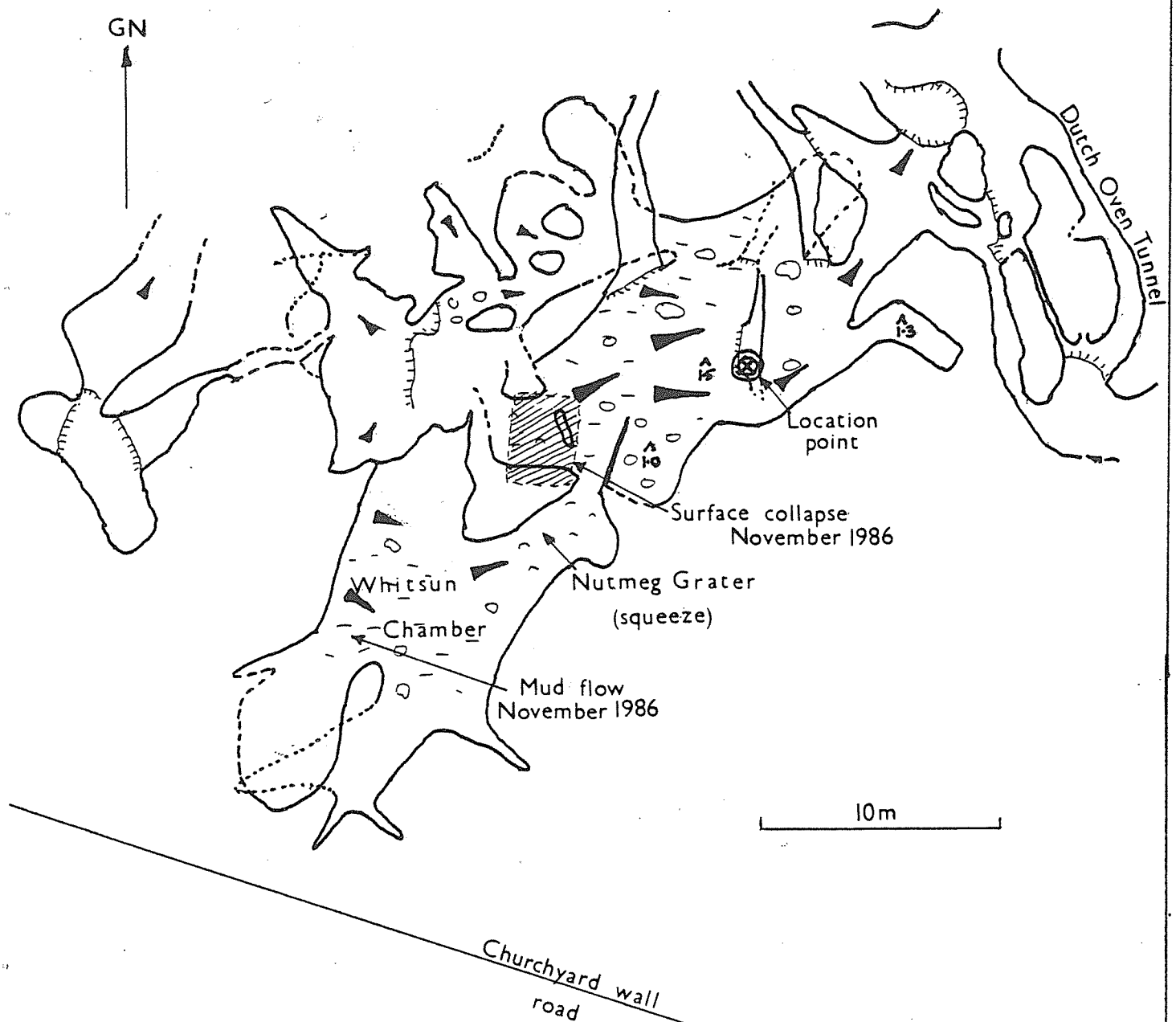
These indicate that the centreline survey by Hooper is fairly accurate to this point. A detailed resurvey of the immediate ares, however, suggests that Hooper's detail is not very good. This was also born out by a resurvey made a few days later of the area around the stream at the top of the Drain where there are a number of passages not surveyed by Hooper.

The exact relationship of the surface collapse in the graveyard (which occurred in November 1986 and has since been filled in) to the cave could be determined by this survey.

Thetransmission point in the Plymouth Extension was located on surface on the south side of the road, 38m west of the Lynch Gate. The depth was 6.6m ±1.5m, giving an elevation of about 75.6m. This point has not yet been reached in the underground survey. It is close to an old entrance to the cave.

Alasdair Neill.

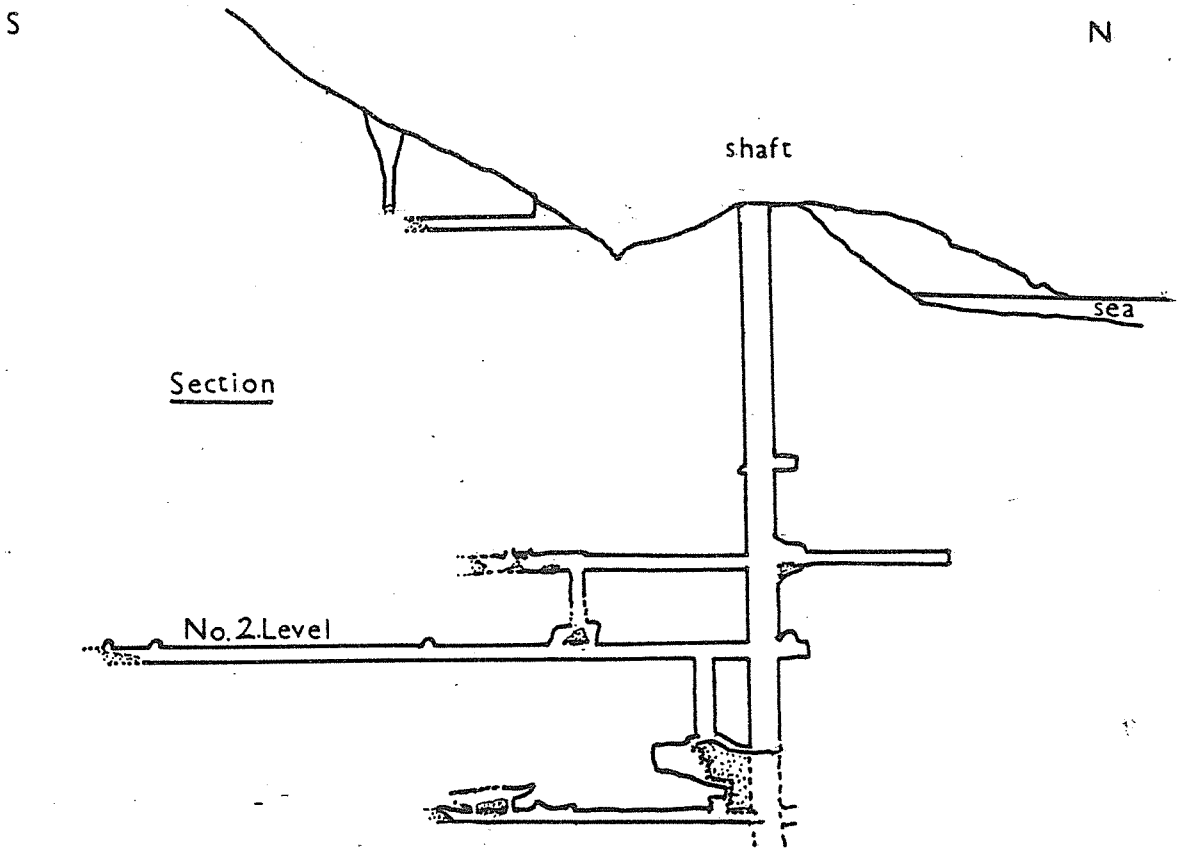
PART OF GLORIOUS DEVON SERIES, BAKER'S PIT CAVE

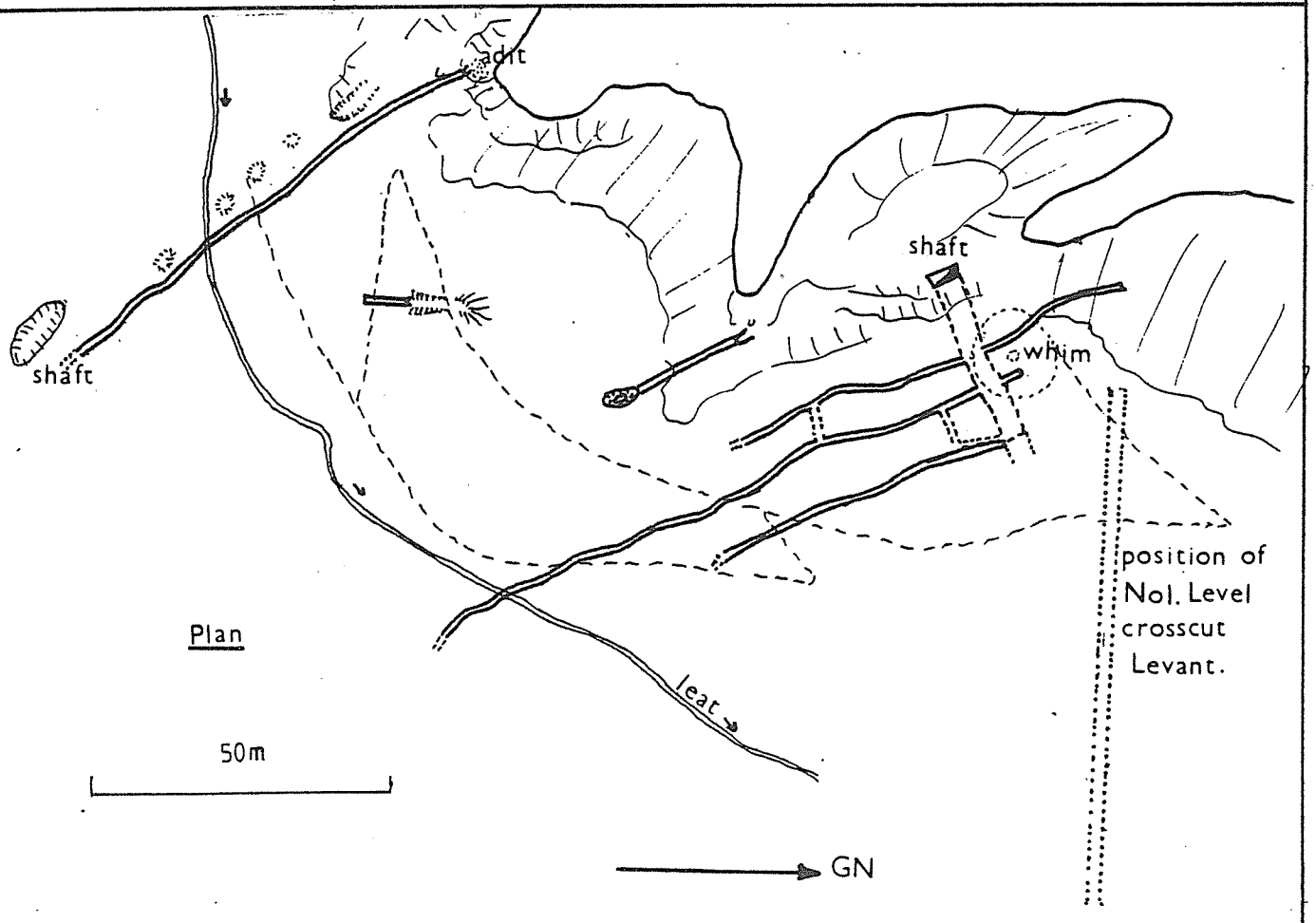


Based on survey drawn by
John Hooper 1966

Modifications by A. Neill Aug 1987

WHEAL UNITY– REVISED PLAN





WHEAL UNITY.

On August 8th another visit was made to Wheal Unity (see newsletter 98), the shaft being descended by Jerry Drake and Alasdair Neill.

On No.1 level the winzw was crossed with a lifeline. The level beyond went about 5m under a stope to a muddy blockage. The level can be seen to continue beyond.

From the bottom of the shaft a crawl had previously been followed to a loose hole onto a drop. To descend this we had to keep the rope well clear of the lip to prevent it collapsing. We eventually managed to achieve this by jamming several timbers against the roof and belaying off them- not particularly secure. A descent of about 6m down a narrow stope followed, the only way on being a crawl under timbers and de deads. This immediately led to a narrow pitch of about 6m, one wall being deads. A belay was improvised from an old timber jammed between the walls of the stope. This popped out when weight was put on it, so it had to be placed against a wall of deads.

At the bottom a level led both ways. One way led to a boulder blockage, the continuation of the shaft. The draught seems to come from here; the Levant No.1 level crosscut must lie just beyond. The other way the level runs about 50m, passing under a stope, to a complete blockage. This proved very disapointing. The total depth reached is about 100m (330ft).

Later that day Andy Bennett attempted to dig the entrance of a blocked adit about 100m SSW of the shaft. Probably not much more work would be needed to enter this.

Alasdair found another adit below this one in the cliff. This extends 100m to a collapse, probably corresponding to an open shaft on surface. It seems an attempt has been made in recent years to clear through this block, a shovel and wheelbarrow remaining. There seems to be another adit above this on in the cliff, but it would be very difficult to reach.

A. Neill.

SOUTH WALES JULY 31 - AUG 2nd.

On friday everyone met at the Lipson Road outdoor pursuits centre at 6'ish. I would like to point out that at this time everyone was still sober, well everyone but George anyway! However, after travelling for all of five minutes a refreshment stop was called for; after leaving the off-licence we were on our way again. Andy, Lynn and myself decided that we would put on some entertainment for Jerry et al (in the other car). Please see figs. i-iii. (nb. George would like the negatives).

fig.i

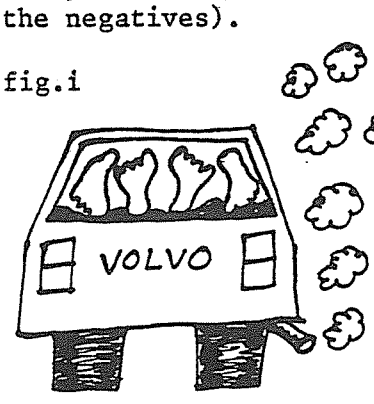


fig.ii.

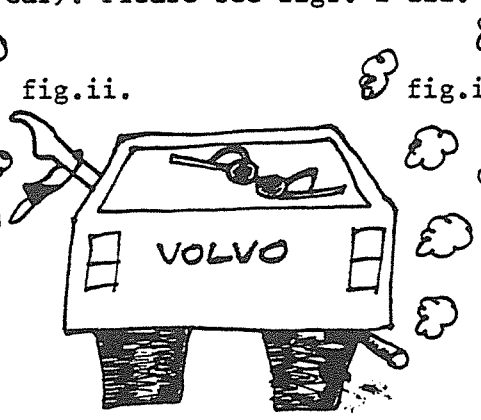
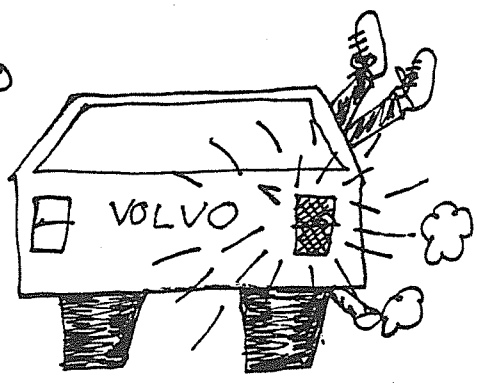


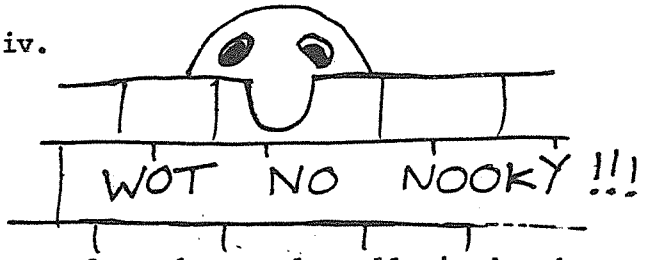
fig.iii.



After a few cans more and a wee drop of vodka we arrived at a pub somewhere near the hut, but god knows where because by this time my blood was 90% alcohol (the other 10% had called it a day and gone on holiday). In th PCG distances are stated in terms of alcoholic consumption and not miles. South Wales is 4 cans of Tennants Super and 1/4 bottle of Vodka away (can we go to the Shetland Isles next time?).

And so to the SWCC hut, but wat did we find.... something worse than Jaws... worse than an atomic bomb.... even worse than Alasdair's caving undies.... SEGREGATED ACCOMODATION!!!! (gasp, shock, horror). Please see fig. iv.

fig.iv.

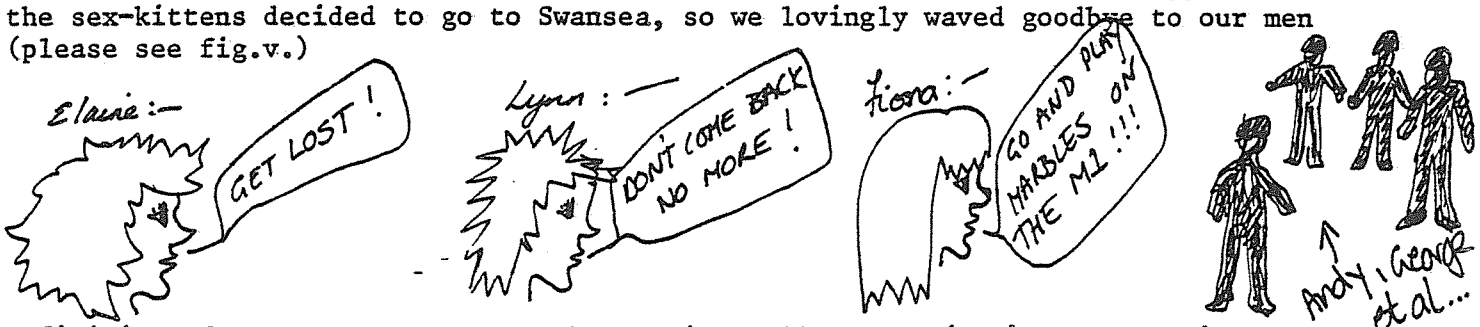


Saturday- after the usual small sized and nutritionally balanced breakfasts that you associate with pre-caving preperations, the RNEC and the PCG were ready for a good roll in the mud and lots of grovelling around in tight squeezes; as well as a bit of caving. There was much admiration of Andy's rubber wear and Lynn's big and baggy red oversuit (Thundergrounders are Go!!).

Ali, George, Scouse and Scouce's friend were the lucky winners of the 'Who's taking Fi caving competition', we did a through trip from OFD Top Entrance to Cwm Dwr. OFD has just about every cave characteristic that you could possibly imagine- a pretty mega cave. George found the exit the hardest bit but after having Ali's welly water poured over him he got out really fast!

And so to the pub. Jerry demonstrated the art of mountaineering to get to the loo and everyone else demonstrated the art of getting legless. And so to bed.....
.....said Zebedee.....boing.....boing.....

Sunday- being very tired/hungover/still drunk/bruised...(tick where applicable) the sex-kittens decided to go to Swansea, so we lovingly waved goodbye to our men (please see fig.v.)



Definition of Swansea- even worse than caving welly-water (you've heard of'Restaurant at the end of the Universe', now meet 'Rubbish Dump at the End of the Galaxy'). Talk about architectural suicide.

Back at the ranch the chaps were emerging from the cave (another OFD II- Cwm Dwr through trip for some, while George, Ali and Scouse wandered around all sorts of obscure bits of OFDII), and after being fed and watered we were on our way back to Plymouth.

Special thanks to Elaine and Jerry for driving.

Cast: Andy Bennett, Elaine Mercer, Pete Rustage, Lynn Beattie, Jerry Drake, Mike, Ali Neill, George Davies, Scouse and his mate but nobody can remember his name, RNEC (Tim, Paul and Andrew(the one who splits), Fiona McWilliam.

Written and Produced fy Fiona McWilliam.

JOINT MITNOR CAVE, BUCKFASTLEIGH.

Joint Mitnor Cave lies in Higher Kiln Quarry, at grid ref. SX 743664, to the south of the extensive Baker's Pit- Reeds system. So far the southern part of the sheet of Devonian limestone on Buckfastleigh Hill has only yielded short caves, but there are indications that much remains to be found. Geophsical work in the 1960's by Bristow suggested a substantial system behind the quarry, but more recent work suggests his technique just picked up soil features. In the 1970's Thorman identified an anomaly suggesting a system under the quarry floor in front of Rift Cave. This may be similar to the recently discovered Crusher Cave. In the last few years work by Dr. Peter Grainger and others from Exeter University has shown geophsical anomalies behind Joint Mitnor which indicate that a number of chambers at least exist (see the last Studies in Speleology). Untill recently no serious attempt was made to follow up these indications, although an extension to Rift Cave was thought to correspond to part of Bristow's 'Geophysical Series'.

All the caves of the area are primarily phreatic, underlying a terrace (former valley bottom) of the River Dart lying at about 82m above present sea level.Since the Lower Pleistocene the Dart has downcut to a level of about 30m a.s.l, draining the caves. Minor vadose streams of percolation water have since caused very minor cave development and modification, and extensive speleothem formation has ocurred.

Joint Mitnor Cave was probably broken into during quarrying sometime in the nineteenth century. It was explored in 1936, and in 1939 by Messrs. Joint (Squeak), Mitchell and Northey, who's names give the name its title, and Reed. A large entrance chamber was found to end at a boulder slope containing bones. Over the next twenty years excavation proved this to be a talus deposit, which had entered through a former surface opening, containing bones of rhinoceros, elephant, deer, hyaena, and other animals. This was dated at about 100,000 years old, from the warm Ipswichian Interglacial. This is probably the best of such sites in Britain. It is of great scientific importance. Since the end of these excavations the site has been made into a scientific demonstration site, controlled by the William Pengelly Cave Studies Trust.

In 1984 members of the Plymouth Caving Group commenced to dig a tunnel from the base of the palaeontological excavations in an attempt to get beyond the talus deposit. This was pushed for 8m following a minor vadose channel cut in sediments, ending where volcanic tuff underlying the limestone was eached. A boulder ruckle was encountered here, from which the stream and indications of a draught seemed to come. This dig was filmed by the BBC and broadcast as part of the "Devon's Underworld" programmes. Over the next two years attempts to penetrate the ruckle were made, not getting far as it proved pretty unstable. Chemical persuassion was needed but not used as it was thought it could damage the talus deposit.

At the same time a further dig was carried out by Peter Rustage and Alasdair Neill in a tight passage leading off the entrance chamber. This leads to a narrow draughting rift, not yet pushed.

In 1987 'Spike' Parsons and Felton Vowler and others from Bideford Community College CC and North Devon Police CC had a look at the boulder ruckle and persuaded the WPCST to apply to the Nature Conservancy for a licence to use explosives on the site (an SSSI). This was granted and the boulders were banged by Roger Burt and Mike Bond (Devon Speleological Society / PCG). This enabled the North Devon cavers to make a route up through the boulders into a small chamber at the beginning of August. This route draughts and is still unstable.

This chamber contained numerous bones, so Dr. Andrew Currant of the British Museum was asked to investigate before any further work was done. He visited the site on August 22nd. The bones proved to be of the same species as in the original talus deposit, although containing a larger proportion of juvenile species. The only new find was the wingbone of a bird. It has been suggested that the bone deposit entered by a seperate opening to the south west of the entrance talus, but this cannot be proved untill further work is done. The end of the entrance talus can be seen at one end of the chamber. At the other end is a steep passage extending two or three metres to an apparent boulder blockage. This cannot be entered untill a full study of the bone deposit has been made. It is thought this is the way the bone deposit entered. Both deposits seem to be related to a NW-SE trending rift.

Andy gave us the go-ahead to cross Bone Chamber (the new chamber) to enter a low bedding plane in the south east wall. This was dug into on August 23rd by John Milborrow (North Devon) and Andy Bennett and Alasdair Neill (PCG). This entered a new chamber up to 3m high, August Chamber, containing some fine formations which are extremely vulnerable. A number of ways led off. A passage over a flowstone bank becomes too tight and should not be approached as it contains some fine formations at the start. A climb led to a tight passage, Flakey Way. This was pushed the following week by Alasdair Neill for about 4m to a bend. This needed some work with a lump hammer to pass. A very tight squeeze immediately beyond has not yet passed but there seems to be a choke just beyond.

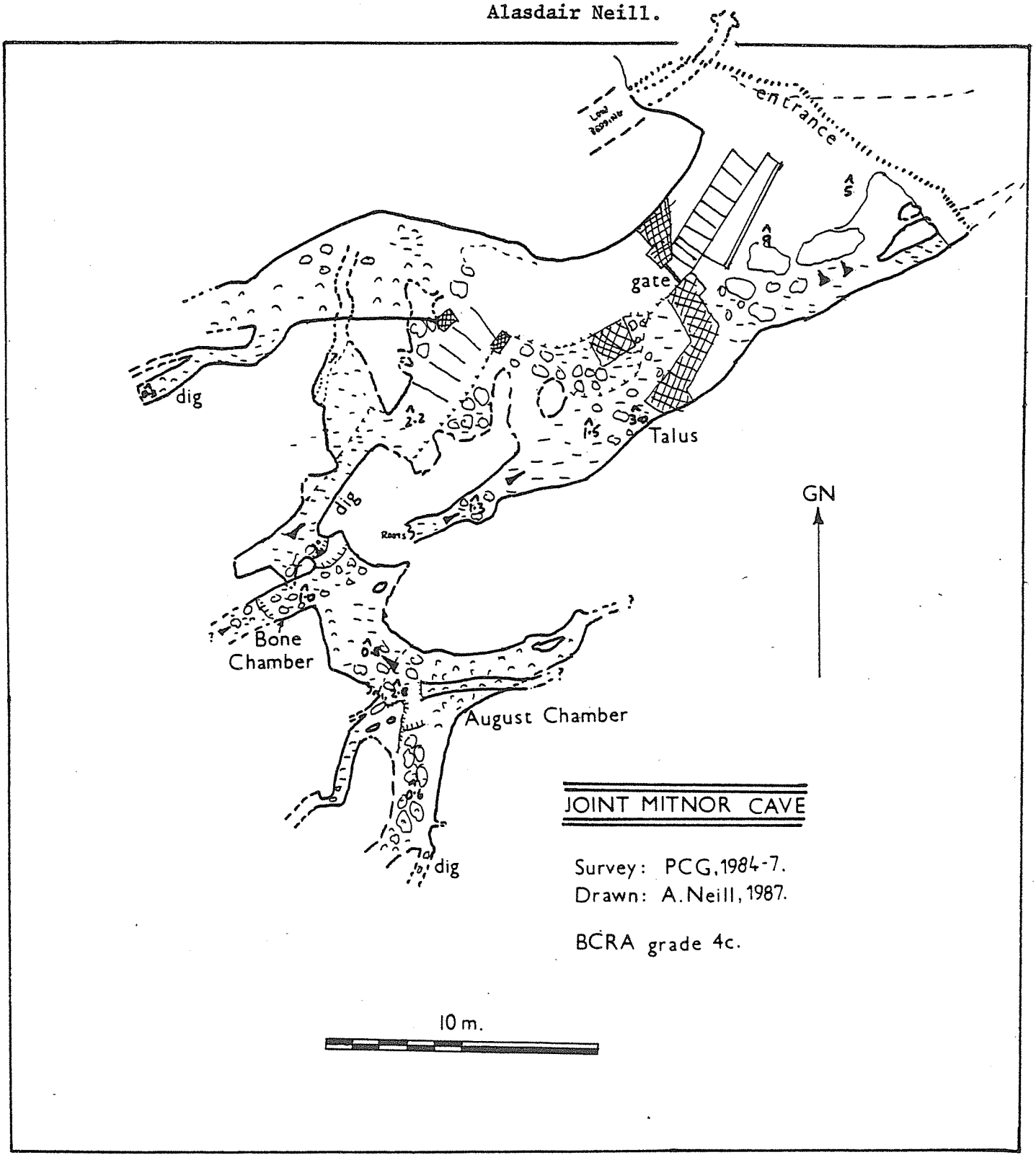
At the beginning of September George Davies and Alasdair Neill began to dig the end of a bedding plane running south from August Chamber. This split; the left hand route route leads to a small rift but the floor (volcanic tuff) is having to be removed before the rift can be entered.

On the 8th September a passage was noted in the roof of August Chamber. This was subsequently entered; it is tight and progress would mean destroying some nice formations so it has not been explored fully.

Future plans include the enlargement of the original dig to allow easy access for scientific work on the bone deposit, and investigation of other leads around the quarry. Digging off August Chamber must be restricted as all debris will have to be carried right out of the cave, needing considerable manpower.

References. Joint Mitnor Cave. WPCST Occas. Pub. 1.5,1982.
A. J. Sutcliffe, 1960. Joint Mitnor Cave.
Trans. Torquay Nat. Hist. Soc, 13.1-28.
C. Bristow, 1966. A New Graphical Resistivity Technique for detecting Air- Filled Cavities. Studies in Speleology 1.4.

Alasdair Neill.



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