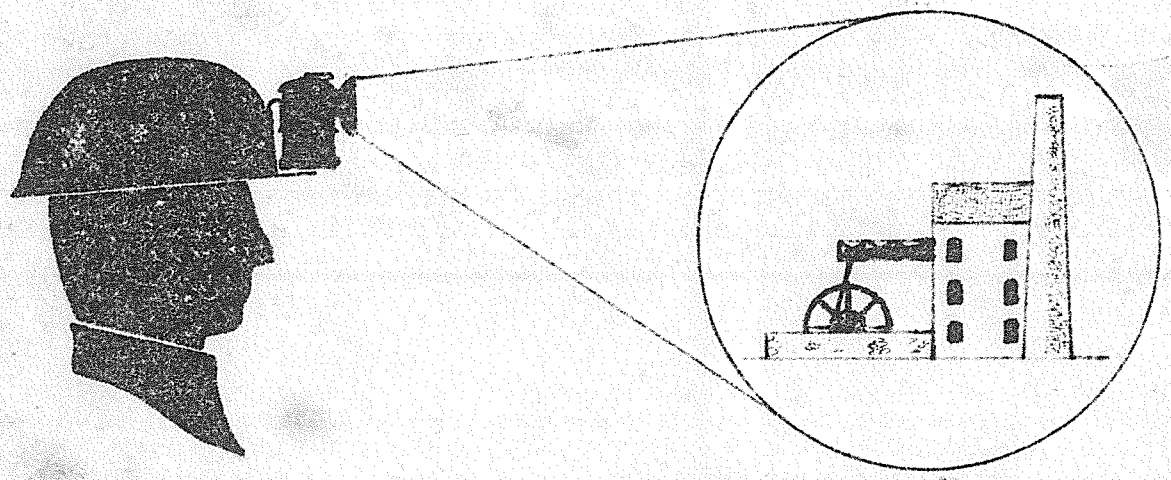
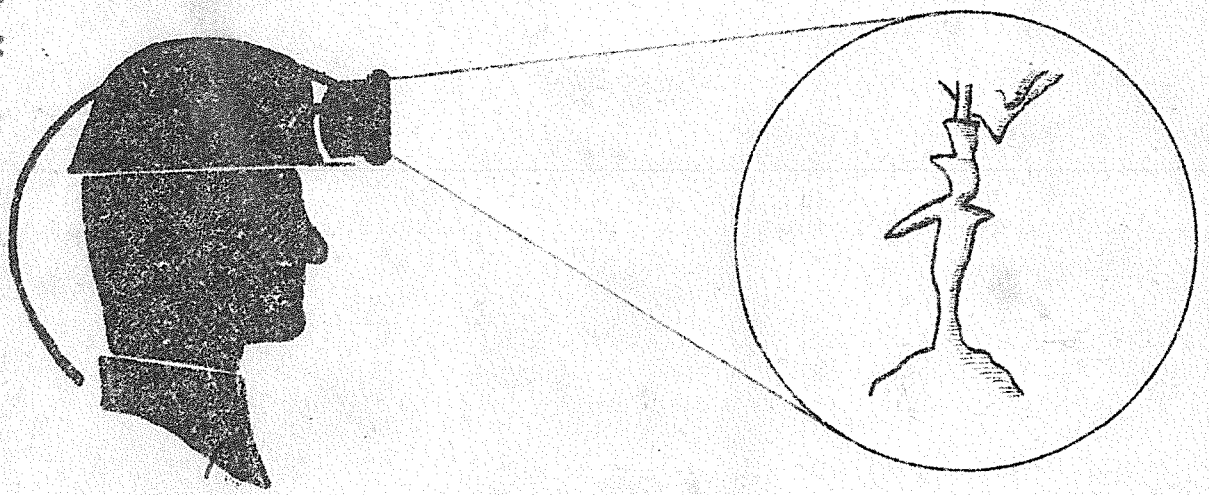
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No. 13.



PLYMOUTH CAVING GROUP.



PLYMOUTH CAVING GROUP.

Newsletter & Journal. Number Twenty-three.

August 1966

Back to Square One!

As most of our members will be aware, the attempts to form a National Organisation for Caving have failed. One of the chief reasons for this lack of success was the intransigent position of the Southern Council who feel that their problems and means of dealing with them, are different to those of our regions. This failure was probably a disappointment to the other regions, the CCPR., and the Government spons r.d Sports Council. This latter body wanted to be able to approach a unified caving fraternity for advice where the collective views of the participating members was required, and to use such an organisation as a means of distributing whatever help was required for Caving in the 70's and 80's when the present generation of 'Politicians' have gone.

Fortunately, action has not been deferred and moves are afoot that may ultimately prove to be of greater benefit to speleology than a National Council based merely on Area Councils. One of the greatest draw-backs to such an organisation would have been the isolation of such bodies as the CRG., BSA., and Pengelly.

More recently, moves have been made to heal past breaches between the CRG. and BSA., with a view to providing joint action on matters of common interest. Similar discussions are afoot regarding the Pengelly. The wheels will, of necessity, move very very slowly at first and we must not expect too much, too soon.

The PCG. welcomes these attempts at cooperation and hopes that eventually some National Body will emerge that represent the collective views of Speleology. All Caving Clubs may not be unanimous in this welcome, but no one can say that They did not have the first opportunity to form such an organisation. It will now be absolutely essential for all Clubs to support the 'National Organisations' to which they are affiliated.

Terry Marston.

(Chairman , PCG.)

Future Meets.

Sunday 21st August 1966.

Bickington Pot

Leader:
Howard Morgan

10.30 Exeter bus from Breton Side.

Saturday 3rd September 1966

Nun's Cross Mine and Tunnel

Leader:
Keith Loze

10.04 Tavistock bus, No.83, from Breton Side.

This meet involves more 'moor walking' than caving and if you are not sure what, or how much, caving equipment to bring please get in touch with Keith.

Sunday 11th September 1966

Yealmpton

Leader:
Howard Morgan

10.05 bus, No.94a, to Yealmpton.

Saturday 17th September 1966

Buckfastleigh

Leader:
Bob Cawthorne

10.30 Exeter Bus from Breton Side.

Sunday 25th September 1966

Polberro

Leader:
Hugh Browning

A 'private transport' meet; details from Hugh Browning, 37, York Road, Paignton.

Future Meets (cont.)

Saturday 8th October 1966

Clifford's Cave

Leader:
Keith Loze

8.30 Exeter bus, No.129, leaving from Breton Side.

Sunday 23rd October 1966

Caradon

Leader:
Hugh Browning

Transport is awkward for this meet, so please let Hugh know if you wish to go, to enable suitable arrangements to be made. (Address as above.)

Sunday 6th November 1966

Radford Cave

Leader:
Phil Northfield

Bus leaving the Viaduct above Breton Side at 10.45.

Weekend 19/20th November 1966

Mendip

Leader:
Dave Hobson

Dave does not yet know his new address in Bristol, so names to Hugh Browning please (address as above) as soon as possible.

Saturday 3rd December 1966

Walkham Valley Mines

Leader:
Brian Poole

19.30 Tavistock bus, No.93, arriving Magpie Bridge 10.12

For privately arranged, and extra club trips, please see the notice board in the Clubroom.

Apologies.

The Editor apologies that this edition of the Newsletter and Journal is so late in making its appearence, but like everybody else, he has been involved in exans and his summer job had not left him with much spare time to rush into print.

Congratulations.

Congratulations to everybody who has passed their recent exans and now head for pastures new. Bob Jeffery is going to Leeds, Dave Hobson to Bristol, Bob Cawthorne to Mancester. Valerie Yates starts teaching in Slough.

Phil Nottle has joined the Royal Fleet Auxiliary as a Radio Officer, and is now in the Indian Ocean.

No gossip about anyone else has yet reached the Editor.

Resignations

All the above have had to resign from any offical posts that they may have held. In addition, Brian Poole has had to resign as well. Many of these posts are still vacant at the moment but will be filled shortly. However, the post of Secretary has been filled by :-

Keith Loze,
'Lee Ridge',
233 Ridgeway,
Plympton,
Plymouth.

Tel. Plymouth 37039.

Lecture.

There is a possibility that Radford Cave is in danger, and the Editor has been asked to give a lecture to give facts and information to the local branch of a national organisation. We hope that this will enlist their support should the necessity arise. The Editor is anxious to have as many slides of the Cave as possible. He also wants details of any private work that has been done, ie. new exploration, biological work, etc.

Lost Property

The ladder that was lost on the recent Mendip tri has been located, our thanks to Oliver Lloyd.

Annual General Meeting

The Annual General Meeting of the Group will be held at Virginia House on :-

Thursday 5th January 1967.

'An AGM. for the transaction of business and the election of officers shall be held in January each year, at a time, date and place to be decided by the Committee. All club members shall receive at least fourteen days notice of the meeting, together with the agenda, in writing. Any member desiring any motion to be brought forward at the AGM., shall send the text of such a motion, together with the names of the proposer and seconder, to the Hon. Sec. before Nov.30th. preceding the meeting, so that it may be included in the agenda.

(Constitution; Art.8.)

.....

BSA.Annual Conference

The exhibit that we are preparing for this Conference is progressing. The theme is our local mines, and is centred more, but not exclusively, on our own activities rather than the history and technology of the industry. Unfortunately, it looks rather as though the film that Terry Barbour and Co. were making, has fallen through and may be abandoned altogether.

We are hoping to be able to use a back-projection screen to give a slide show with commentary. If anyone has slides of mines, mining, exploration, etc. we would be very pleased to borrow them. On the same theme, we need similar black-and-white photographs. These should be preferable of full-plate size and on a semi-matt paper. However, if you have the negative we will do all the necessary printing and mounting.

The Conference runs from 9th to 12th September, at Bristol University. If you want to go, contact Keith Doze or any Committee member.

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Cave Surveying

This report published by the Cave Research Group has been revised and brought right up to date. Of greatest importance, is the revision of the 'grading' system and its new form. There is a copy in the library and a review will appear later.

Devon Cave News.

Pridhamsleigh.

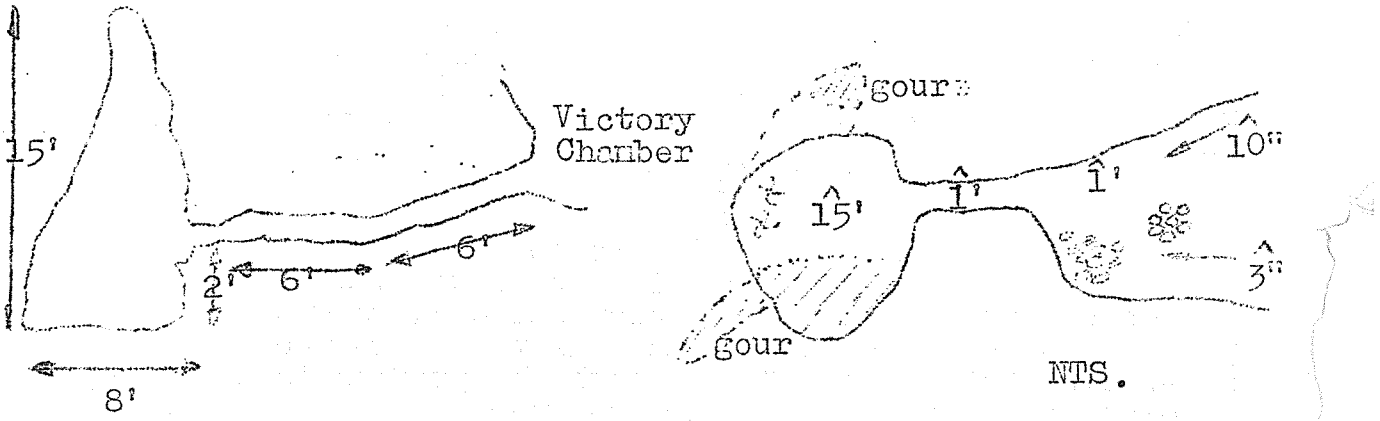
Mike Wooding of the Cave Diving Group visited the Lake, the Deep Well and the flooded rift beyond the Deep Well. The Lake turned out to be 121 feet deep with a sticky mud botton. Mud dislodged from the walls reduced visibility to zero and any search for passages leading off was impossible. The Deep Well was found to tighten to an impassable rift at a depth of only ten feet. The Flooded Rift was not actually dived but as Hugh Browning has pointed out, it looked most promising.

Castle Cave - Berry Pomeroy.

Mike Wooding also dived here but could find no continuing passage.

Radford Cave.

On July 10th, a party in the Victory Chamber dropped a lamp down the hole in the floor. Phil Northfield was nominated to get it, as he was smallest. By removing a few rocks and after a bit of a struggle, he reached the lamp, and a new chamber. This chamber is about 15 feet high with floor that was once a pool some 2 - 3 feet deep. There are good examples of dry gours and in one spot some fine crystals.



Baker's Pit/Reed's Cave Survey.

John Hooper is taking orders for copies of the revised survey. It measures 3ft x 3ft 6 ins. and will cost about 7/6d. Names only please to John Hooper,

Hon.Recorder, DSS.,
34 Richmond Road,
Staines, Middlesex.

All he wants at the moment is names so that he can estimate how many to print. Names to him before the first week in September.

The Exploration of Ding Dong Mine - Gunnislake.

by Terry Barbour

The portal of the Deep Adit Level of Ding Dong lies on the Devon side of the Tamar, just downstream of New Bridge.

The Deep Adit Level was initially explored by Graham Douglas and Owen Baker several years ago. Although they made a good photographic report of the level, they got no further in the exploration of the mine than the end of the Deep Adit Level itself, some ¾ mile from the portal. It was this level that was visited by the PCG. during one of its early mining meets.

The way on into the mine would be through Middle Adit Level, and it was here the difficulty arose - getting into Middle Adit in the first place. The Middle Adit Level itself was blocked near the portal, and again near its connection with Thomas's Shaft which had fixed ladders. A descent by ladder or winch down Dyer's Shaft was also impossible, as it had been sealed at the surface. This left an ascent from the Deep Adit as the only route fesible. Dyer's Shaft does not connect directly with the Deep Adit , but with an intermediate level between Deep and Middle; this level was connected to Deep Adit by a rise. This rise lies some 1000 yards up the adit, and when Mick Carter and I first investigated it, there was a helluva lot of water pouring down it. Some

Some timbers had been stacked in the rise, and these we removed almost without incident. One of the lengths of timber had been balanced on top of another; removing the lower one we just missed being impaled by the other, which sank into the thick ochre that covered the ground. Beneath these stacked timbers was hidden a ladder, which Mike started climbing madly. He had got no further than the third rung, when all three rungs broke and we were back to where we started - precisely nowhere, for the ladder was completely rotted away.

On the second attempt we returned with a large party and succeeded in carrying the ladder from Thomas's Shaft to the rise. With this miners' ladder, which was about 15 feet long, we were able to get into the rise proper, where we found more remains of the fixed ladder. Hugh, using these remnants, stulls, and assorted footholds, managed to climb up under an absolute deluge, to reach the intermediate level. At this point Hugh turned back, feeling decidedly uncomfortable in his new dry (damp?) suit - he hasn't worn it since.

On the third attempt we came back well equipped

with the club maypole. Using expanding joint pins, we assembled an 18 ft. length which was attached to the top of the existing fixed ladder. Climbing the ladder so, which had been hung from the top of the maypole, was extremely difficult due to the vast volume of water continuously pouring down the shaft. Only these with some form of wet-suit protection succeeded in reaching the intermediate level.

This level was small in height, but rich in the mud formations, which abound in Ding Dong. After some distance, the way appeared to be blocked, but on closer examination, this proved to be a thin wall of mud and ochre. We put our feet through it and released a considerable amount of water that had been ponded back. This flood wave eventually reached the adit portal and created havoc. The water poured among those of the party who were brewing tea, washing some of their gear away - including, to Dave Hobson's disgust, a tin of creamed rice that he was going to have for tea.

Meanwhile, we had found Dyer's Shaft at the end of the intermediate level. The fixed ladders were in reasonably good condition and we soon had climbed up to the Middle Adit Level. Going along this level, after a while we came to a duck, caused by a roof fall ponded back the water. Past the duck the water was chest deep and damnably cold. Eventually we reached the crosscut which should have connected with Lusconbe Mine. At this point we turned back.

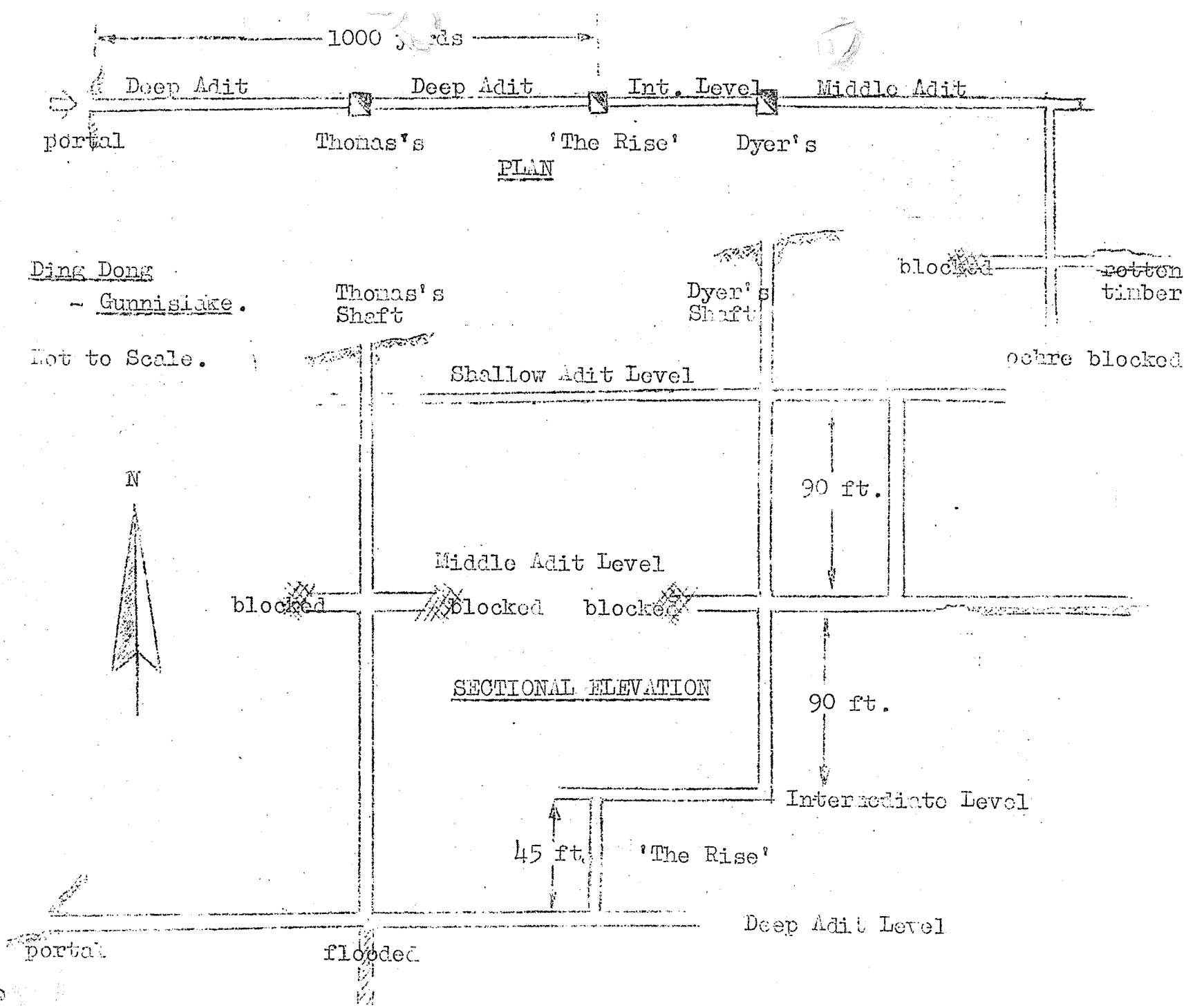
On a later trip, after 'A' Levels, we went back to the crosscut. The connection to Lusconbe was well and truly blocked by a roof fall, and in the other direction continued under dangerous-looking timbers. We decided not to take any chances. Ahead, the Middle Adit continued in a ochre-filled tunnel, with the air space eventually reduced to a mere nine inches, over the ochre. In the end, we were reduced to digging our way through the muck. By this time the air was getting somewhat foul, and we left Ding Dong for another day.

TFB.

Important Notice.

Due to an unfortunate mis-understanding and a bit of bad public relations, Ding Dong is closed to all Group members. This will continue until we can patch up this upset.

Members are asked to take note and not to aggrevate the situation by a visit. Presumably this ban applies to all cavers, not just the PCG. since at no time has the Group itself been involved offically.


1000 yds
Deep Adit
Deep Adit
Int. Level
Middle Adit
portal
Thomas's
'The Rise'
Dyer's
PLAN
Ding Dong
- Gunnisiake.
Not to Scale.
Thomas's Shaft
Dyer's Shaft
blocked
rotten timber
ochre blocked
Shallow Adit Level
N
90 ft.
Middle Adit Level
blocked
blocked
blocked
SECTIONAL ELEVATION
90 ft.
Intermediate Level
45 ft.
'The Rise'
Deep Adit Level
portal
flooded

Devon's Future Role in British Caving.

by Antony Sutcliffe.

For some years there has been talk of a National Body to co-ordinate the activities of British cavers. This idea has been strongly supported by some cavers and opposed by others, and the Regional Caving Councils came into existance mainly as the result of the ensuing disputes and dicussions between cavers from the various areas of Britain. Recently, talk of a National Body has subsided, though maybe only temporarily, and a period of improved relations between the various major caving organisations in this country has developed. Especially gratifying developments include the commencement of discussions for closer co-operation between the British Speleological Association and the Cave Research Group and, more recently, the Association of the Pengelly Cave Research Centre was officially approached by the CRG. asking for closer co-operation between these two bodies. The APCRC. replied welcoming this suggestion and inviting the CRG. to hold its 1967 Southern Meeting at Buckfastleigh, which invitation was subsequently accepted. This visit will take place during the weekend of May 6th/7th.

It is not the purpose of this present paper to go into the pros and cons of a National Body, or of the form that it might take. It is even questionable whether anybody in the British caving fraternity could sort out all the complexities of this subject. It is more appropriately a task for a pschycologist with a Ph.D. awaiting the first student who is prepared to adopt 'Play, Exploration and Territorial Behaviour among Potholers' as the subject of his thesis. Some day, however, it is feasible that a National Body might be formed and it is timely to consider, now, the part Devon might play in any such set-up.

At the present time Devon is seen by most cavers as a 'poor relation' of the larger caving areas further north. From time to time cavers from these areas and elsewhere find their way to Devon and usually make for the three largest caves - Baker's Pit, Reed's and Pridhamsleigh. Having seen these it is probable that they never come back. Are these visitors, however, doing justice to Devon, and are even the local cavers fully aware of the potentialities of their own County? The answer in most cases is almost certainly - "No!"

It must be admitted at once that the number of caves in Devon is relatively small and that we have not the area of limestone to make it likely that there will be many major cave discoveries in the future, although without doubt further exciting discoveries will be made from time to time within the County.

Here the disadvantages presented by Devon as a caving area, end, for it is at once apparent that there are other compensations, the most notable being the wealth of scientific interest associated with the caves. Indeed, this is Devon's special

feature. No other British caving area can compete for variety of cave-related scientific interest, and the Devon Caver who does not obtain excitment and pleasure from acquainting hinself with such studies is sadly deprived of most of that which his County has to offer him.

Most of this scientific interest is fairly obvious, though there are other points which are more obsure and have received less attention in the past. It is, perhaps, not out of place to mention a few of the more important lines of study here, and to compare Devon's scientific resources with those of the other caving areas of Britain.

1. The Geological Setting

The caves of Devon are perculiar in being formed in Devonian Limestone, whereas those of Britain's major caving areas are in Carboniferous Limestone. The Devonian period was a time of great vulcanicity in Devon and the limestone is frequently associated with beds of ash - tuff. The Carboniferous Limestone was laid down at a time of lesser activity, although volcanic rocks of this period are sometimes exposed underground, as for example, the 'toadstones' of Derbyshire.

Cave formation is frequently strongly influenced by the structure of the surrounding rocks, the relationship to which is exceptionally instructively illustrated at Buckfastleigh. Here the limestone in which the caves are situated rests on an underlying deposit of tuff. The whole is extensively faulted.

When these rocks were mapped recently, it immediately became apparent that cave formation was greatest at the base of the limestone and that in some places the tuff even formed the floor of the cave system. Reference to this completed map showed that there were several places where the tuff-limestone boundary outcropped on the surface, yet where no cave openings had been detected, and subsequent geophysical work indicated the existance of further cave chambers, at present unknown, at one of these places. (1). The opening of these chambers, under controlled scientific conditions, will take place at a future date.

Long after the close of the Devonian there occurred another geological event which was to provide, indirectly, another type of cavity for exploration by present day cavers. (2). This was the emplacement of the Dartmoor granite, during Permo-Carboniferous times, and the mineralisation which is associated with it. The richness of variety of minerals to be found in the old mine workings associated with the granite of Devon and Cornwall is very great, though for the most part this mineralization did not affect any limestone and the mineral lodes can only be encountered in artificial workings in rocks other than limestone. Buckfastleigh, the closest caving area to the granite, provides a minor exception to this, with some iron and manganese minerals naturally exposed in Baker's Pit Cave, though there are no mineral deposits to be found in Devon caves comparable with the fluorite deposits of some Derbyshire caves.

2. Sea Caves

Most of Britain's major caving areas are situated away from the coast and thus do not possess any sea caves, which show features quite different from those of inland limestone caves. In Devon we are fortunate in having extensive stretches of rugged coast line with some fine active sea caves. So far these have received relatively little attention from cavers and offer a fascinating line of study for those prepared to explore the coast by boat. An area which has received some attention is the stretch of coast-line to the south of Berry Head, near Brixham.(3) Here, at one point, (Sea Cave 2) it is possible to row a boat into complete darkness under the headland. In Durl Head Cave (most easily accessible from the cliff top) an extensive boulder beach is exposed at low tide and stalagmite formation is taking place down to sea level. Dr. D.H.Dalby of Imperial College, is making a studying of liverworts growing in the mouth of this cave.

The sea caves in the Plymouth area are being exanined by Robert Jeffery . (4)

3. The Geomorphological Setting.

The geomorphological setting of Devon's caves is quite unique and it is astonishing that so little attention has hither-to been given to the history of the formation of these caves based on a study of the past history of the water tables of the areas where they are situated.

Devon's caves are exceptionally well fitted for such studies, for a number of reasons. In particular, all are situated at a relatively low altitude (Less than 300 ft. A.O.D.), close to either the coast or to rivers, and there is no evidence of any tectonic or isostatic disturbance since long before Pleistocene times. From a study of old sealevels and river terraces, the history of the water tables of the various limestone masses of South Devon is either already known or could be worked out from further study. The same precision of dating cannot be obtained in caving areas such as Yorkshire, which are situated at a relatively high altitude away from the sea.

Preliminary studies indicate that most of Devon's caves were formed below the water table - ie. under phreatic conditions - and were not drained of their water until Pleistocene times. Some of the caves actually underlie river terraces:- notably the Buckfastleigh system underlies the 270 ft. terrace of the River Dart; and Eastern Torrs Quarry Cave, Yealmpton, underlies the 100 ft. terrace of the River Yealm. (5) & (6). The Ash Hole at Brixham contains a deposit of micaceous sand in its lower level, probably derived from material carried from Dartmoor by the River Dart at a time when this river flowed into the sea near Brixham; and the caves in Chudleigh Gorge occur at a number of levels apparently related to old water tables. The caves around Plymouth offer special scope for study owing to their proximity to the exceptionally fine series of raised shore-lines preserved along the coast of the Sound.

It is hoped that a Ph.D. student from the Department of Geography of Oxford University will commence a study of the relationship between Devon caves and past water tables, under the supervision of Dr. Marjorie Sweeting, within a year or two, and some exciting results may be expected.

4. Palaeontology and Archaeology

The palaeontological and archaeological importance of Devon caves has long been recognised. One of the Oreston caves was the first to be scientifically investigated in Britain as long ago as 1817 and it was at Brixham, in 1858, that Pengelly and others found human artifacts sealed beneath a stalagmite floor in association with the remains of mammoth and woolly rhinoceros and thus proved, in the face of prevailing religious views, that man was of greater antiquity than had previously been accepted.

There are four really important cave sites in Britain, of which two are in Devon. These are Kent's Cavern at Torquay and Tornewton Cave at Torbryan. The other two are Minchin Hole, Gower, where ossiferous cave deposits occur interbedded with beach deposits in an old sea cave; and Victoria Cave at Settle, Yorkshire.

The importance of Kent's Cavern as an archaeological site is well known. The earliest deposits in this cave probably go back to the Middle Pleistocene and are among the earliest fossiliferous cave deposits in Britain. (Mammalian fossils of even earlier, Lower Pleistocene, age were found at Dove Holes in Derbyshire at the beginning of the present century, but unfortunately, this site was subsequently destroyed by quarrying activity.) Remains of rare animals have been found in Kent's Cavern, notably Cave Bear, (all other bear remains in British caves are of Brown Bear,) Sabre-Tooth Tiger and the rodent Pitymys gregaloides.

Tornewton Cave is remarkable for the great sequence of deposits, totally nearly 30 ft. in depth, excavated from this pothole-like cavity. Excavation showed, at the bottom, sterile water laid deposits; then the 'Glutton Stratum' deposited at a time when the climate was cold and the cave was occupied by bears; then the 'Hyaena Stratum' deposited when the cave was occupied by hyaenas, as shown by occasional remains of Hippopotamus, during an interglacial period; and finally the 'Reindeer Stratum' by which time the climate had become cold again and man had appeared on the scene. These deposits are interpreted as representing the Penultimate Glaciation, Last Interglacial, and Last Glaciation respectively, and are the most complete sequence yet found in a British cave. Several animals new to the English fauna list turned up in the various layers here, including Cynaonyx, an otter related to the Clawless Otter of Africa, the Steppe Lemming, Lagurus (previously unknown nearer than Hungary) and the White-Toothed Shrew, which occurs on the Isles of Scilly but was previously unrecorded from England, so that it has always been a puzzle how it got there. (7)

Devon's great palaeontological richness is, to some extent, explained by its geographical situation, for, as the Pleistocene ice sheets advanced and retreated, (reaching, at their greatest extent North Devon and the Scillies) there alternated in Devon a succession of mammalian faunas characteristic of both warm and cold climatic conditions. At sites such as Tornewton Cave, the remains of animals from succeeding periods become buried together in successive layers. Further north, remains of interglacial mammals become less common (although hippo remains have been found as far north as Durham), and further south, on the Continent, the cold species gradually disappear. The woolly rhinoceros, for instance, just managed to get around the end of the Pyrenees into Spain, but throughout most of that country only warm species are present.

Devon is ideally situated geographically to show these remarkable changes of fauna corresponding to climatic changes during the Ice Age, which become progressively less spectacular as one travels north or south away from our County.

Most bone deposits in British caves are of late Pleistocene date only, because caves are quickly destroyed by erosion so that caves of an earlier age are seldom preserved. It is only where the cave-bearing limestone has been buried by later deposits and subsequently re-exposed by erosion, that earlier remains are found. The Triassic mammal deposits known from some South Wales fissures have survived by this means.

It is remarkable that hitherto no fossiliferous cave deposits of Tertiary age have ever been found in Britain, although they are quite common on the Continent. Should such deposits ever be found in the future, it is not unlikely that it will be in Devon. Ideal conditions would seem to prevail in the limestone quarries near Kingsteignton, on the edge of the Bovey basin. Here, Oligocene lake deposits rest unconformably on cavernous Devonian limestone, though whether these caves are of Oligocene or Pleistocene age is uncertain. So far no fossils of any sort have been found in the deposits filling these caves.

Archaeological remains have been found in many of Devon's caves, notably Kent's Cavern and the Brixham Cave. Another important site is the Ash Hole, Brixham, where a magnificent Neolithic polished axe was found recently by the Brixham Museum Society. Sectioning of the stone of which it was made showed it to belong to Petrological Group XVI, that is to say that the material of the axe came from the Camborne district of Cornwall. Another Neolithic axe of this Group was found in one of the Torbryan Caves about 80 years ago.

There are several important archaeological sites in Chudleigh Gorge and at Torbryan, where recent excavations by Phillips, Rosenfeld and Zeuner produced a Mesolithic site (Three Holes Caves) and the foundations of a 14th Century secret chapel built against the mouth of a small cave.

Devon's reserves of palaeontological cave

deposits is undoubtably considerable and there probably remain a fair number of unexcavated archaeological sites, so that many exciting new discoveries may be expected in the future. These deposits should, however, be conserved and not excavated unless full facilities exist for their careful excavation and subsequent publication of a report.

5. Cave Biology

Although the present day vertebrate fauna of Devon caves is of limited variety compared with that of the Pleistocene, a few cave dwelling species, notably bats, foxes and badgers, still make their homes underground there. Greater and Lesser Horseshoe Bats are the most commonly seen species of bat, as a result of their hanging from cave roofs, but there are also less common species which retreat to the more restricted parts of the caves. The bat population of Devon caves has been a subject of study by the John and Winifred Hooper, of the Devon Speleological Society, for over 15 years, during which time they have obtained much important information about their habits and their life span. Bats find their way around underground by listening to the echoes of their own ultra-sonic squeaks, which can be converted to the audible wavelengths with the aid of suitable equipment. This subject is being studied by several bat workers in various parts of Britain at the present time. (8)

Bats are, however, extremely sensitive to disturbance and there is concern over the decrease in the size of the colonies of some species which has been observed during recent years in different parts of Britain. The study of bats, except by a few serious workers, is to be discouraged.

The invertebrate cave fauna of Devon is relatively sparse, especially when compared with that of some French and American caves. This partly because of Britain's northern position and partly because Devon lacks streams in her caves. These caves are without habitats of the quality and magnitude available in, for example, the newly discovered extension to Dan-yr-Ogof in South Wales. One especially interesting troglobitic invertebrate does however, occur in Devon, and is restricted to this County. This is the blind amphipod Niphargus glenniei, found in many of the caves at Buckfastleigh, Pridhamsleigh and North Devon.

Although caves are not generally places of great botanical interest, since green plants cannot grow in the dark, the entrances of some Devon caves have recently been the site of important studies on the growth of plants under reduced light, by Dr. D.H.Dalby of Imperial College. He has given special attention to the lichen growing round the mouth of Reed's Cave, Buckfastleigh (a species of Lepraria, not yet identified) and the liverworts in Durl Head sea cave, and also to the mosses and ferns growing under the lights inside Kent's Cavern.

Fungi are the only plants which can grow in complete darkness and these are sometimes found underground in Devon caves, as for example in Reed's Cave where there is extensive growth of fungus on some formations. Samples of these have been

cultured and found to be common forms of Aspergillus and Penecillium. It is not known how recently these fungi have developed in this cave.

Conclusion

The preceding survey of features of scientific interest associated with Devon's caves touches only on some of the more important points and cannot, of necessity, be exhaustive. There has been no mention at all, for instance, of the variety of calcite formations in Reed's Cave and of the conditions which led to their growth. It is true that we lack a good stream cave in Devon and that our finest stalactite cave (Reed's) is quite small, but the scientific variety which is ours is surely unsurpassed in any other British caving region.

It must be this which is to be foremost in our minds when considering Devon's future role in British caving. Although the rewards for the cave explorer coming to Devon are poor by comparison with other caving areas, those for the caver who is prepared to look closely at what is there are rich indeed.

It is not surprising, in view of this, that Devon is attracting increasing numbers of researchers to work on the scientific problems associated with its caves. Interesting results are coming in rapidly from work already in progress, yet many more problems still remain to be tackled.

From all this Devon's place in British caving immediately becomes clear. It could fulfil, better than any other caving area, the role of a 'School of Speleology' where those concerned with caving could be introduced to the principles of cave studies, and thus help to reduce some of the damage which is currently accidentally taking place underground as the result of trial and error caving. Such a 'school' should be directed at those concerned with caves and their preservation, including County Naturalists' Trusts Secretaries and County Planning Officers and should not be used for the popularisation of caving which is already being carried out excessively elsewhere.

If such an image can be established among the British caving fraternity, then the idea that Devon is a 'poor relative' of the larger caving areas will at once disappear and the County will acquire a position of its own, which is unique not only in Britain, but in the world.

However, such a project as this cannot flourish without the help of the local caving fraternity whose assistance is needed to locate features of scientific interest and to help receive visitors to the County. Both these tasks can be highly rewarding.

Caves, however, are delicate and their scientific interest can be quickly destroyed if they are carelessly explored. Devon's future as a studies area depends on responsible guardianship by all those who enter its caves. It is the respon-

sibility of the secretaries of all its caving clubs to look after the scientific interest of their members and thus to ensure minimum accidental damage, whether it be the destruction of formations, the disturbance of a bat colony or the poisoning of a Niphargus pool with spent carbide.

Investigations to find out whether any further cave properties can be brought under the guardianship of the Devon Trust for Nature Conservation, (as was Higher Kiln Quarry, which now houses the Pengelly Cave Research Centre) are urgently needed.

Meanwhile, it is gratifying to find that the potentialities of Devon caving do not approach exhaustion. The time has arrived, however, where instead of looking for more caves we should look more closely at those we already have. If this is done, then there is work in Devon for at least another century and the future of the County as a centre for caving would seem to be assured.

AJS.

(4th August 1966.)

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The Redmoor Adit
- Callington.

by Dave Hobson.

A few weeks ago, Hugh Browning, Terry Barbour, Howard Morgan and myself, had a most unsuccessful filming trip to Gunnislake and found ourselves with the best part of a day with nothing planned. We decided to make preliminary exploration of the Redmoor Adit , near Callington.

The portal of the adit is to be found about a half mile SW. of Kelly Bray station, and is very conspicuous, being easily seen from the road. We were fortunate in meeting the ex-underground manager, who was now the land owner, and not only did he give his permission, but also supplied details of the workings themselves. Apparently, the mine was last worked during the war.

The Deep Adit provided us with a fairly luxurious trip, as the water was only knee deep in most places. About 300 feet in, there is a short timbered section, and here a fungus has grown, showing a marked resemblance to Hugh's beard. We pressed along the crosscut to No.2 Lode, via a well decorated adit, festooned with many fine stalactites.

On No.2 Lode we found the first inclined plane which after rising for about 20 feet led into a large, chamber-like stope, with a hole and oreshoot in one corner dropping back to the adit. Two ways led off from here, one you could walk into, and the other involved a fairly easy traverse. Being the PCG. we chose the traverse and in the process sent various pieces of scrap iron hurtling back down to adit. Beyond the traverse we found a level leading to the main stope at the bottom of the engine shaft, which, unfortunately, is blocked above adit.

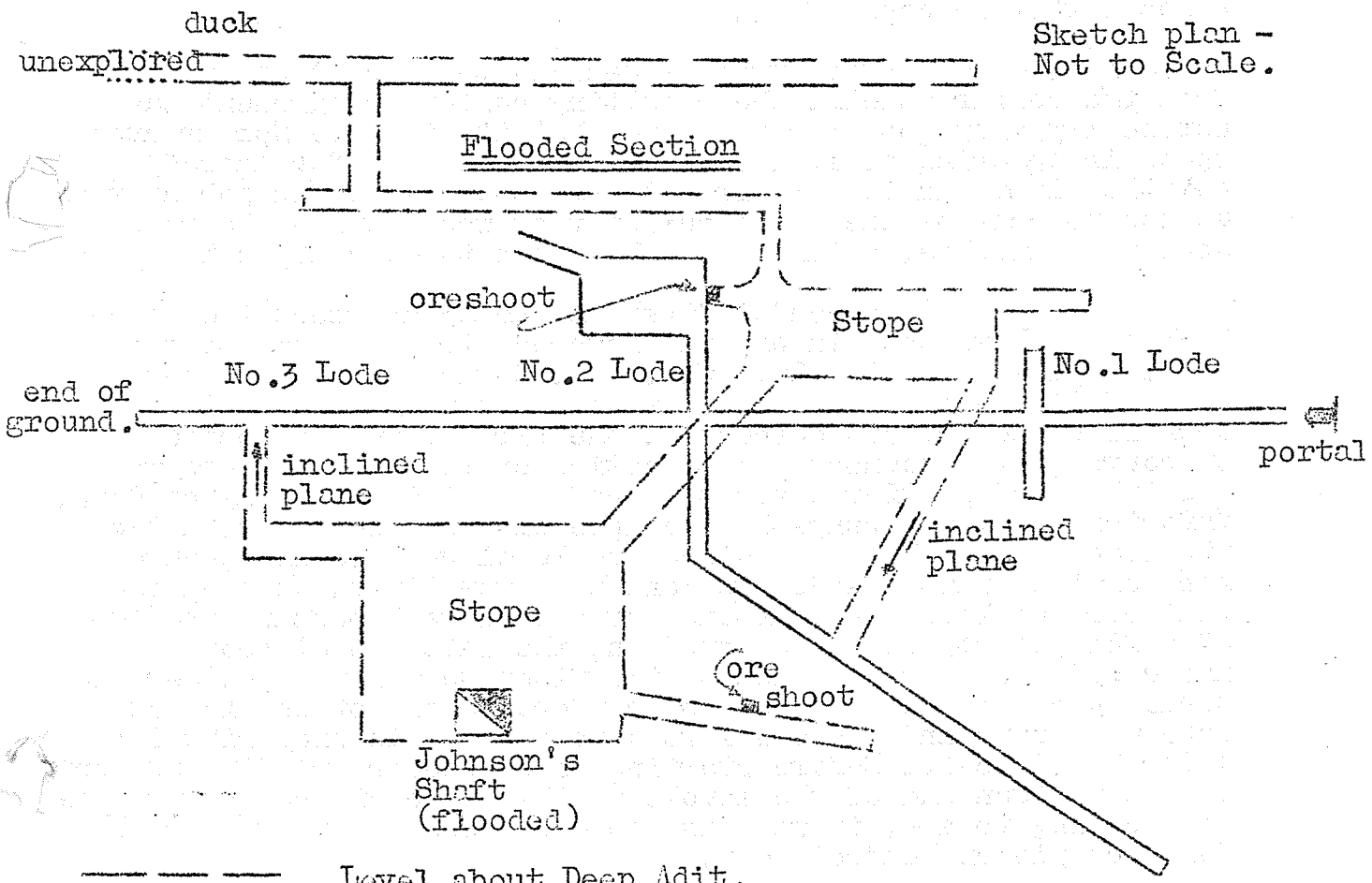
A stoped passage which ran towards the portal was explored next. The timbers, which had fallen in places, were soon acclaimed by one of the more sadistic members of the party. The passage beyond this led only to an oreshoot, which may provide us with a rise into the 10 fm. level. On the other side of the engine shaft stope, an inclined plane took us back to the adit, near No.3 Lode and the end of the ground.

The other passage from the first inclined plane was to prove more sporting. It led us to water, which was knee deep initially - then chest deep..... Howard soon began to wish that he had a wet suit, while the three of us wallowed on, oblivious to the discomfort. The water was so cold that Howard had to turn back, and a yell from Terry revealed that a rip had appeared in his wet suit. One drive, with an airspace of 12 inches ended after a few hundred feet while the other gradually lowered to a duck. The main trouble was that the water was out of our

depth, and the walls were too far apart to hang on to. The result was absolute chaos, with flooded airspaces and everybody wondering where their next breath would come from. After some 20 feet of "sport" we saw the passage continuing for at least another 30 feet without relenting. Here we turned back, and next time we will need to take our inner-tube dingies and tow ropes. With these, this should render the duck a fairly simple and straight forward obstacle.

Redmoor Mine.

Sketch plan - Not to Scale.



Level about Deep Adit.

Deep Adit.

So there for a time exploration rests, but we still have the prospect of a higher level and a shaft beyond the duck.

DH.

Skinners Engine Shaft
- Gunnislake Clitters.

by Hugh Browning.

(Continued from N1.22 page 15.)

Having fitted the wire rope onto the winch drum, we decided that it was high time that we had another crack at Clitters. Thus, Sunday 6th March found us at Gunnislake with yards of rope, krabs and anyother clanking status symbols that we could find.

On this trip we decided to descend by winch from the collar itself. The resulting pulley arrangement was not really very good for the rope, but it did make for greater speed in lowering as it was no longer necessary for anybody but the first man to work from the 45 ft. level. His job at the 45 was to control the small pulley that would guide the rope down the underlie, until it was his turn to descend as last man.

I descended first to the 45 and sent the harness back up to Dave Goodwin who was lowered straight down to the rubbish pile above the 200 ft. level. Howard Morgan was next down, followed by myself. We put in a piton and hung a ladder down into the 200 and descended. the first thing to locate was, of course, the downward continuation of the shaft. There was a fairly good platform over the shaft and ladders going on down. Unfortunately, the rungs have completely corroded away, although the sides are still good. Since the level we were in appeared to fork on the eastern side, we went that way first. We soon found that our two levels were formed by a passage bypassing the top of a flooded stope. As we moved on, the water level soon increased from mere puddles on the floor to waist deep. Here we turned back in the interests of comfort as all of us did not have wet-suits and there was work to be done in preparing for a further descent. Before starting work however, we did push on to the western end of the level. On this side of the shaft there was nothing to see, it was just more or less a straight drive for a couple of hundred feet.

We had hoped to dig through the rubbish pile in order to pass the winch rope through for the next stage of the decent. This was not possible however, as the rubbish was at least 12 feet thick, even at its shallowest point. As time was pressing, we drilled a rawlbolt hole for a pulley in case we should decide to guide the rope around the obstruction. This would have been undesirable however, as it would subject the rope to severe bending, and such treatment can seriously shorten the life of any wire rope.

We completed our ascent without difficulty from our point of view, but the winch operators had had a lot of trouble due to various shortcomings in the design.

Before we learnt of the winch difficulties however, we were informed of another - the Police. It seemed that two of them had turned up to see what we were doing and had informed the surface party that permission from the Duchy would be necessary for further exploration. They could not recall the underground party though, because we did not have the telephones with us. A rather unfortunate end to an otherwise successful trip.

The winch has since been further modified and is awaiting testing. The Duchy Land Steward has been approached but has, as yet, been unable to grant access; moves are still afoot however.

The party was:-

Dave Goodwin, Howard Morgan, Bob Jefferys, Hugh Browning, Roy Atkin and one of Roy's friends.

HJB.

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Meet Reports.

Kithill Great Consols Mine 30th July.

Leader. Dave Hobson.

Party.
Hugh Browning, Keith Loze, Roy Atkin, Howard Morgan, Brian Poole and Miss Pat Evans.

This meet had originally been intended for Rednoor, but as preliminary exploration of Rednoor showed it to be quite small, the meet was switched to a mine at Kit Hill which had already been explored by Bob Jeffrey's party in February. (See Nl.No.22)

We arrived on Kit Hill early on the Saturday morning, amid thunder, lightning and other delights of an English summer. Soon Hugh arrived and some of the party were surprised to see pieces of the winch in the sidecar. (It must have slipped my mind; I really meant to tell them.) We changed and walked up to the shaft, a circular hole about five feet in diameter, and

began the hazardous business of rigging up the winch. Eventually, all was ready, and I soulfully thought that the leader would be first down, but then up jumped Roy and volunteered to descend. He was so keen, that it wasn't fair to stop him, and after three attempts we finally got him down.

Unfortunately, no one was so keen to go down next, so, trying extremely hard not to think of cables snapping and Pierre St.Martin, I krabbed on to the winch wire. Then I found the first snag; Hugh had left the seat in the clubroom, but had bodged up one with a haversack. The trouble was that the seat was in a most awkward position for sitting on. Gingerly I stepped off the ladder into nothing. I recovered consiousness a few seconds later and was quite surprised to find that nothing had broken, and even more surprised to find myself enjoying the descent.

The others all came down the same way, except for the winch operators, Hugh and Howard, who used ladders. We went on into the mine to the second 20 ft. winze which gave an easy pitch for most of us. More or less following the path of the previous meet we discovered nothing new, except that one of the ore shutes shown on Bob's plan was found to connect with a small shaft which could be free-climbed. A flooded winze near the end provided the laughs when I fell in, closely followed by Hugh and Keith.

We used the ladders back to the surface, except for Pat who was tired, Hugh who wanted to play on the winch and Roy; these were all winched up.

After a good days caving, we collected the tackle (about 5 tons of it I should think,) and headed for home.

DH.

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Hon. Editor:-

R.C.Bray,
51, Dale Gdns.,
Mutley,
Plymouth.

Tel. 62201.