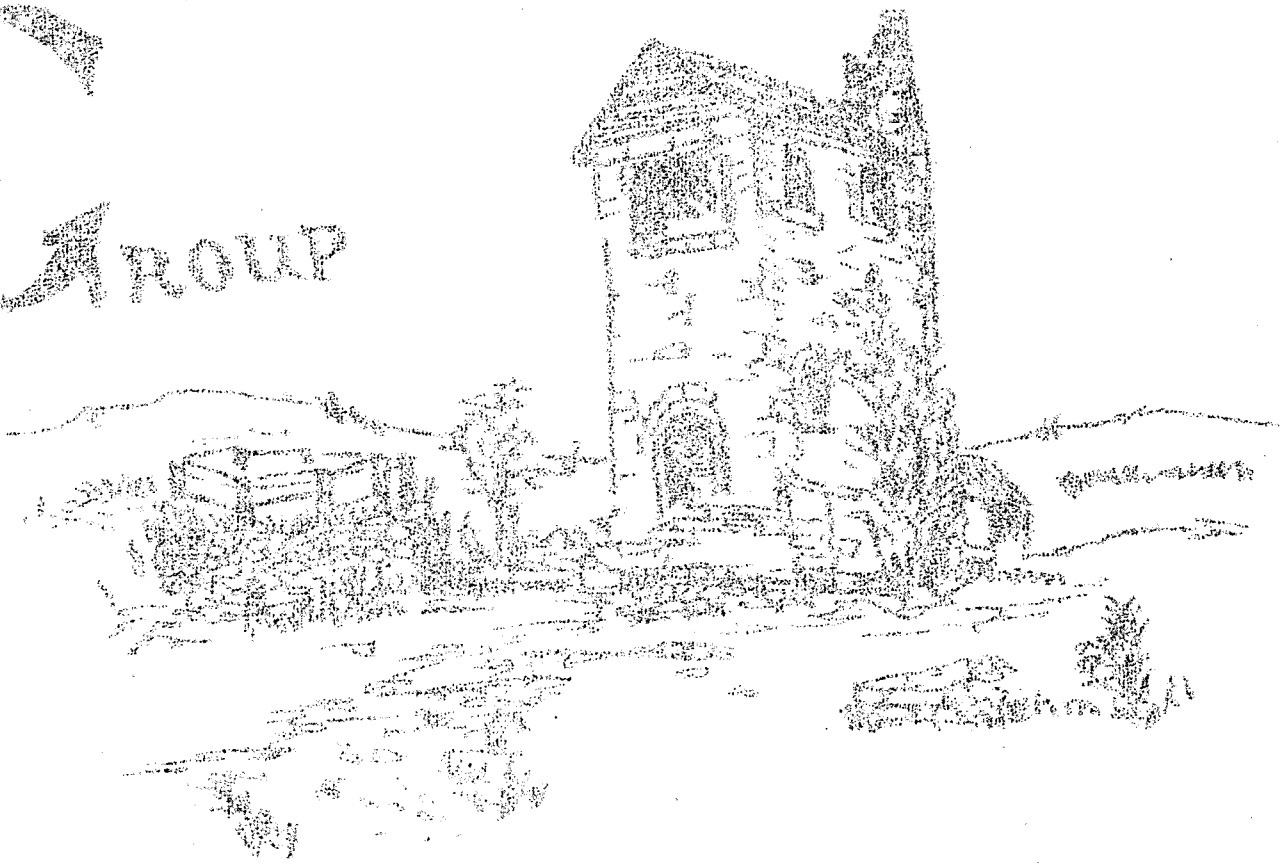
PLYMOUTH CAVING GROUP



NEWSLETTER & JOURNAL

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August, 1972 Number Forty-Five

Editorial		1
Book Review		1
Cave-Dwelling Bats	Dave Curry	2
Secretary News		4
The Bampfylde Mine	Gail Heydon	5
Berry Pomeroy Castle Cave	Brian Lewarne	6
Cave Discoveries of 1971	Steve Poole	7
Devon Cave Register	Steve Poole	7
Prussiking	Paul Hatherley	8
In Search of a Devon Master-Cave	Steve Poole	11
Newsletter Exchanges & Additional	Members	10
Chicken on Sunday	Paul Hatherley	14
Traditional Weekend in Yorkshire	Brian Lewarne	16
Blasting at Bulleycleaves Quarry	Brian Lewarne	18
Meets List		19

Editorial

Activity within the club has been quite high during the recent months - or rather, activity amongst a certain, small minority of members.

Readers will remember that the last newsletter contained a letter commenting on the absence of a large proportion of the club at the recent D.C.R.O. practice. This pattern was continued by the forty-odd members who failed to support the recent "Cave-In".

It is recognized that any club will contain a proportion of 'armchair cavers' - those who pay a subscription to show their continued support of the club and to ensure receipt of the society publication with news of old friends. As a club grows in years (remember our 10th. Anniversary next year) so the number of these supporters will increase, but the proportion of them to active members should not do so. This means that we either need more, new, active members, or that there are a number of members who should be among the 'cavers' but are not continuing to be active.

At one time it could have been argued that club activites were not such as to encourage participation, but, more recently, there have been a number of good trips which have not been fully supported.

I am sure the 'mining section' will, by now, be crying out in protest, and they have reason to do so. Mining has, in recent months, been severely neglected by the club. This would be fair enough if it was an unanimous decision but the enthusiastic miners do feel, justifiably, that they are being neglected.

One very important field which has been hitherto neglected is that of mine rescue. Discussions are now afoot for a mine rescue practice. Details will be circulated as soon as arrangements have been finalised.

Book Review

'Discovering Caves' - Tony and Anne Oldham.
Shire Publications, 1972. Price 30p.

This book claims to describe 39 caves, specially selected as "show caves or caves which the tourist can safely and easily visit". Interested people may recall that this was Tony's excuse when winning the bet that he could enter all the country's show-caves free of charge!

The book gives useful information concerning each cave described, such as parking facilities, opening times, length and owner or manager, as well as a short description of the actual passages, which seems to be aimed at people already interested in caving rather than the tourists looking for relief from boredom!

However, reading it, I was rather alarmed and puzzled about the method of selection of the various caves. I expected to see

entries for the established show caves, such as Kitley, Wookey, White Scar, etc., but was surprised to see various others included. Are Tony and Anne seriously advising the inexperienced public to enter Porth-yr-ogof with no warning about the depth of the pool just inside the entrance? They also seem to be encouraging tourists who are unlikely to have any knowledge about good caving behaviour or cave conservation to enter a number of caves without any supervision.

The book also contains a glossary and a list of books for further reading.

Liz Jeanmaire

Cave-Dwelling Bats

Whilst exploring the caves in Devon, one invariably stumbles across a bat suspended upside down from the limestone ceiling. Caves throughout the country provide an ideal bat-roosting site during the daytime and also warmth and shelter to hibernating bats during the winter months.

At present very little is known on the ecology of bats and distribution maps are only recently beginning to take shape. Despite the present detailed studies there is still a great need for information on bats from the amateur caver and it is hoped that this article will encourage members to take more positive action when next they see a bat.

Bat Identification

Most British mammals present few difficulties of identification but, for a person with little or no experience, bat identification can be most difficult for the observer and, perhaps, harmful to the animal.

British bats fall into two distinct families: the Vespertilionidae, comprising 10 species, and the Rhinolophidae or Horseshoe bats (2 species). The latter possess a curious nasal membrane shaped like a horseshoe and this unusual facial characteristic can always be used to identify a bat as one of the Horseshoes. It is then merely a question of noting the size; the Greater Horseshoe has a wingspan of 30 - 35 cms. in flight and, if seen hanging in a cave, measures about 90 cms. from feet to nose. The Lesser Horseshoe bat, however, has a wingspan of only 20 - 23 cms. in flight and measures 6.5 cms from feet to nose at rest. The Horseshoes also tend to sleep with their wings wrapped tightly around their body whilst the Vespertilionidae fold their wings to the sides when sleeping.

If a bat which is not obviously a Horseshoe is discovered in one of the Devon caves, then the obvious chances are that it is one of the Myotis species, e.g. Myotis Natteri (Naterer's bat), M. Daubentoni (Daubenton's bat) or M. Mystacinus (Whiskered bat).

These are all smallish bats with 20 - 25 cms. wingspan. They possesss rather mouselike faces and the fur on the underside is usually much lighter than that on the back. All species of this family have a prominent lobe, known as the tragus, inside the ear

and for the three members of the genus Myotis previously mentionned the tragus is narrow and pointed.

Brief notes to enable recognition of these three species are as follows:-

Natterer's Bat - Ears fairly long and brownish pink in colour. The lips and nostrils are also pink. There is a fringe of fine hairs along the interfemoral membrane - an expanse of membrane stretching between hindlimbs and embracing most of the tail, and the calcar - a spur of cartilage along the outer edges of this membrane, extends halfway from foot to tail.

Daubenton's Bat - Ears relatively short and dark brown or black. The lips and nostrils are pink. There are few, if any, hairs on the edge of the interfemoral membrane and the calcar extends two-thirds of the way from foot to tail. The feet are very large.

Whiskered Bat - Smallest of the three species. Ears fairly long but black or dark brown, as also is the muzzle. There are not distinctive hairs along the interfemoral membrane.

The only other cave-dweller is the Long-eared bat(Plecotus auritus). This, as the name suggests, has enormous ears, joined together at the base across the forehead and which are almost as long as the head and body combined. It has recently been established that another long-eared bat, the Grey Long-eared Bat (Plecotus austriacus) is also a native of Britain but positive differentiation between this and P. auritus is a matter for the expert.

For more detailed information on identification characteristics reference can be made to 'The Handbook of British Mammals' edited by H.N.Southern.

There is one important point to stress here. For the inexperienced it is usually difficult to positively identify bats without handling them. This disturbs the bat and it flies off, thereby using stored fat. During the hibernation period this could lead to their eventual death if cold weather delayed the start of the spring feeding season. It is, therefore, advisable that no attempt be made to handle bats during the basic hibernating season - that is during the period December to Easter. Also bats should not be disturbed during the months of June and July for it is during these two months that the females are nursing their young and there is always a risk of abandonned young.

British bats have few natural enemies but, despite this, their numbers are decreasing in Devon, mainly for 2 reasons: Firstly death from disturbance by 'collectors' and 'recorders', and, secondly, an increased death-rate due to feeding on insects affected by chemical sprays. Research has shown that more bats die of chemical poisoning than insect-eating birds.

Members are asked, therefore, to refrain from handling the bats unless it is really necessary and to pass all records of sightings - with a detailed description - on to Dave Curry.

Dave Curry

The identification notes in this article have been reproduced by the kind permission of John Hooper and the Pengelly Cave Studies Centre.

Secretary News

The Wednesday evening club for Junior Members has now been abolished. Instead, all members will meet on a Thursday evening.

The gate on Radford Cave should be put in position very soon. Keys will be kept by the P.C.G. except for 2 exceptions. Baggator and the Junior Leaders will be able to have the key for a trial year at the cost of £2. All other groups and clubs will have to give, at the very minimum, one week's notice to hire the key. £2 deposit will have to be placed on the key, against loss or misuse. £1.90 will be returned on receipt of the key, the 10p being used for maintenance. The use of the key will be free to all paid-up members of P.C.G.

The next D.C.R.O. practice will be held on the first Sunday of October. The venue is Afton Red Rift Cave. Every member should turn up for this cave rescue practice. You have got over 2 months warning, so there is no need to be somewhere else on that date.

The club has now been informed that the club premises will remain for at least another 2 years! Such is the mechanics of Plymouth Corporation.

The Plymouth Caving Group Annual Christmas Dinner Above Ground is not far away. Ideas for a venue required. How about the Steak Bar above the Waterman's, Buckfastleigh? Also the Annual Christmas Dinner Below Ground is on its way, Any suggestions as to the site of this yearly farce?

TEN YEAR ANNIVERSARY OF THE CLUB
TIFFS IN TOWN MARCH 1973
All cavers and friends invited. Don't forget. More news and details later.

The copy-date for the next newsletter is Thurs. Sept. 21st. Amongst other things, the next edition will contain a report on the club's trip to Far Waters.

Club discounts can be obtained from various firms, including diving and climbing gear stockists. Interested members should enquire of committee members.

The 1972 B.S.A. Conference is to be held in Sheffield on 6th. - 10th. Sept. Details from Liz Jeanmaire.

The proposed date for the 1973 E.U.S.S. Dinner is Feb. 3rd. It is hoped to have a well-known cave-diver, Yorkshire cave-explorer and caving film-star as guest speaker!

Liz and Fish welcome all cavers who want to dig in their garden - refreshments provided!

The Bampfylde Mine

The valley of the River Mole, north of Heasley Mill, North Devon, is a beauty spot, familiar to visitors - but how many know that this is the site of the old Bampfylde Mine? Those who climb the hill, west of the Fyldon Road, may come upon the open No. 4 shaft and listen to a stone, echoing in the depths, about 500ft. below, maybe more. Here is mining history going far back into remote times.

Did the Bronze Age people know this area as a source of copper? Possibly, for ancient smelting slag has been found nearby. Certainly there were iron workers recorded in the Parish Domesday Book in the Eleventh Century. At about the year 1300 Nicholas de Welliford was given a grant to work here, but it seems he had no success. Further attempts, without positive results, continued until the sixteenth century when large-scale working seems to have started. An egg-shaped drainage tunnel, 6ft. high and 3ft, wide, recently uncovered (end of 1968) appears to have driven through solid rock without the aid of drills and explosives. Experts believe it to be dated back to Elizabethan times or, perhaps, earlier.

A description of the works at the mine by an early visitor shows the skill of the old miners and the permanent nature of their work. "A deep lobby with perpendicular sides, a carefully executed work let into a vaulted passage about 7ft. by 6ft., lined with smooth masonary of squared cut,stoned and paved in the same manner, with inverted arch. From this sprang another which then split in two by a double arch, one passage gping to the lode and the other to the main shaft by a splayed arch of beautiful construction". What a find this would be for any industrial archaeologist! (It still has not been located.)

A large wooden pump, taken from the old workings, bearing the broad arrow of the Crown, shows that efforts to exploit the richer ore below water-level were being made before the erection of water-wheels. Of these ,four sites can still be seen, also miles of leats made to bring water to work them. On the high ground to the west, a number of shafts were worked by horse-'whims' - a large winding-drum upon a wooden frame, powered by 2 horses walking in a circle underneath.

In due course the main wheel shaft on the west was filled-in, and the water conveyed across the valley by aquaduct to boost the power of the 3 wheels in use there. The depth from which they could draw water was limited by the fact that the amount of water in the surface leats failed to offset the flow into the deep workings; and the coming of the steam-engine was the innovation the mines needed to make them independent of the fluctuating water power of the valley. An old man now living near Brendon recalls that his grandfather once worked the steam engine at No.4 Shaft, where the ruins of the engine house can still be seen in a tangle of bushes and undergrowth. This is the deepest shaft in North Devon.

Transport from the mines was always a difficulty, and the construction of a tramway from the railway at South Molton to Bampfylde and nearby Florence Mines was of great benefit. Many miners took advantage of the line to ride down the valley to North Molton, where they passed their leisure in numerous pubs (now only 2 left.) The return journey in the up-going waggons would get them

back to the mine sufficently recovered for the next shift. Much has been written about the bad working conditions, with the miners portrayed as little more than slaves. In fact, the majority were contractors, known as 'tributors', and mined the ore much as independent contractors in farming and the timber trade operate now. On their skill in assessing the quality of the ore to be mined, rested their prosperity for the coming year. This pitting of wits against Nature, and the general ability of management made them skilled beyond the imagination of the paid workers today.

The mineral veins or lodes worked here consist mainly of copper and iron, with some gold in the upper portions: the most exploited were the Maiden or Peacock Lode and the South Lode, these being within a few feet of each other and making it possible to work both from the same shafts. The descriptive name 'Peacock Lode' was obviously given because the main copper ore, bornite, shows irridescent peacock colours on exposure. The peacock lode was re-named Poltimore as a mark of respect for the Bampfylde who became the first Lord Poltimore. Two other lodes were worked, one to the north and one to the south of the main lode; and another lode to the south showing an iron outcrop was tried, possibly as a separate venture. A copper iron lode one mile to the north was also worked, at Prince Regent Mine, where gold was found in iron.

The large tonnage of iron ore credited at one time to Bampfylde came actually from Crowbarn or Croborn Mine, south of Heasley Mill, where it was got by patching (opencast) methods from two fields, now part of Great Heasley Farm. At that time, about a hundred years ago, Bampfylde, Croborn and Prince Regent were worked under one management, thus confusing production figures for the individual mines. Records show that Bampfylde Mine had been closed in the latter part of the eighteenth century, and, again, between 1820 and 1840, but there after it was in full operation, until finally closing shortly before 1900.

The variety of mineral types found in this area is large: examples of gold; malachite, azurite, tenorite, bornite, chalcopyrite and chalcosite (copper ores); silver- bearing galena; sphalerite (zinc); stibrite (antimony); barite, haematite, limonite, goethite (iron); and pyrolusite (managanese) all being known. Although these deposits may have derived from adjoining sedimentary beds, there is evidence pointing to a hydrothermal origin with mineral zoning similar to some Cornish deposits. This means there might be tin below the copper. Were this proved to be so, exploitation remains a possibility.

Gail Heydon

Berry Pomeroy Castle Cave

Recently, while travelling back from Afton Red Rift, I decided to take a quick look at the state of Berry Pomeroy Castle Cave. The entrance was very clean - all the rubbish that should have been there, had been thrown down the pitch by the usual inquisitive hands, to determine its depth, no doubt!

So, leaping down, I did indeed land on a fair-sized pile of miasmic, excrementitious refuse!

Purging the hole of some of this, set me thinking! Here was a job that could be done by some of our juniors. Not only in this minor cave, but in others as well, because I have not yet seen a cave without it needs rubbish removing and spent carbide covered over.

It would also serve the useful function of showing them that there are really other caves besides Radford!

Brian Lewarne

The Cave Discoveries of 1971

Linhay Hill Caves	(4 holes)	totalling	250 feet
Coombesend Chasm		approx.	1000 feet
Denbury Swallet		.....	200 feet
New Caves at Kitley		.....	100 feet

Last year's most enterprising venture was, undoubtedly, the D.S.S. dig at Denbury, which is still heading, slowly but surely, towards a predicted large cave system.

Devon still has many undiscovered systems waiting for someone to unearth. New members should ask well-established cavers for advice on where to dig, and maybe then this year's record will improve. To date, original exploration in both caves and mines has been nil.

Steve Poole

Devon Cave Register

It appears that many people in the club are unaware of the existence of many of the local caves and mines. The above-named register contains details of over 200 small caves and is always available in the clubroom. For the lazy, however, here is a list of the larger ones. Please ask someone in the clubroom about access, etc.

Bakers Pit/Reeds Cave complex	..... approx.	2 miles
Pridhamsleigh/Dog Holes	.....	4000 feet
Kents Cavern (no cavers admitted)	.....	3000 feet
Rabley Cave	.....	1400 feet
Afton Red Rift	.....	1300 feet
Radford Cave	.....	1100 feet
Coombesend Chasm	.....	1000 feet
Pixies Hole	.....	850 feet
Cliffords Cave	.....	750 feet
Bunkers Hole	.....	600 feet
Kitley Show Cave	.....	600 feet
Pigeon Cave	.....	600 feet
Through Cave	.....	600 feet
Rock House Cave	.....	450 feet
Yealmpton Cave	.....	350 feet
West Ogwell Cave	.....	300 feet
Colemans Maze	.....	300 feet
etc.		

Shamefully the deepest cave is probably only 120ft., that is Bickington Pot.However, if you cheat and consider the lake in Pridhamsleigh as part of the depth figure, the sump itself going deeper than any Devon cave.

Steve Poole

Prussiking

Prussiking. The owrd 'Spelunker' comes to mind to begin with. They use the technique a lot in the States. Thoughts permeate through brain membranes - there are revolutionaries in the North that favour ascending acrobatically a rope. After at least a dozen cases of people using the technique I decide Great Britain (Rule Britannia, Britannia rules the waves) could well be on the verge of the greatest switch since Martel's rope ladder (electron to prussikers).

My first experiment with these climbing instruments was in South Wales last year. After a demonstration of how it should be done by James Cobbett, P.C.G. took a turn. The whole thing was a complete failure, but from those first efforts, at least one person decided they were the 'in' thing.

Nothing happened for over 15 miles of electron ladder (or is it a year?) The club continued to make and use electron ladder. Fish continued to prod the club with comments such as "Ladder is out of date", etc., etc., etc., until, finally, the crunch came and a pair of jumars appeared on the scene. Many of the club members had previously treated 'prussik' as a dirty word, but now they became interested or disinterested.

On that first evening the jumars were treated as a toy, with people taking it in turns to make fools of themselves over a 10ft. drop. Only a handful took the game seriously but that was enough. Those who thought ladders were better stuck to ladders and that was that. There were some who thought that prussiking needed a fair hearing.

A prussik practice was arranged. A complete failure, because hardly anyone turned up. Apathy at its worst, or, perhaps, people genuinely not believing in them? Those who decided to stay on the other side of the fence put forward their reasons:
It damaged the rope,
It was too awkward and time-consuming,
There was no safety-line,
Although unable to convert the more conventional members, support was given, and a pair of jumars purchased for the club.

This was the turning point. The idea was to practice prussiking as much as possible and Brixton Quarry was chosen for that purpose. An 80ft. pitch at the east end of the quarry was found to be suitable. Quite a few members reached the stage of ascending this distance in a reasonable time, (although still a lot slower than they would by using an electron ladder). Unfortunately we are no longer allowed to use this quarry, owing to landowner/caver relations. With luck we might be able to use it again soon, but please don't go and ruin everything by going there.

One evening, by hook or by crook, and reasons (and routes) far too complicated to go into, Liz, Fish and I ended up in Hazard Quarry neat totnes. This is a first-class quarry for caves, climbing, abseiling and prussiking. Not many people know about it, so.....NGR 755592 .....Although the farmer does not mind the quarry being used, he likes to know who is where, when and why. Always pay him a visit. He is to be found at Hazard Farm, not 300yds, away, so there is no excuse.

The uarry has a marvellous overhang in one place which extends for 10 feet from the normal fa ce. It was over this that we decided to put the rope. The object of the exercise was to test prussiking on a free-hanging pitch and to see how an over-hang could be dealt with. The former was a complete success; the latter a dismal failure. Unfortunately it was me doing a balancing act 50ft. up and the experience nearly put me off prussiking - I had to reverse the process back down again.

Since that time there have been several more practices and we are getting better. There have been a number of problems but these have been overcome.

It is all very well to have a good technique going up, but how do you get down? Abseiling using the Classic Technique and single krab was dismissed because of the low factor of safety involved. The 'Clog Wales' Descendeur was finally chosen as the best descending device on the British market. This is a modified figure-of-eight design and is very suitable for a caver because it is so simple to use and extremely robust. Club members are now obtaining these. At the moment the club is using the Jumar Prussiker but other devices are on the market. All have at least one fault for a caver:

Jumar - Very expensive (£9 a pair), fairly complex thus inviting failure if muddied. Teeth on the clamp could cause damage to rope. They are superior to other designs in their simplicity in use.

Cloggers - Half the price of jumars. More liable to stick but smaller and simpler to use. The teeth are replaced by ridges, possibly causing more damage than any other type. More suitable for caving than Jumars, being more robust.

Salewa - Probably the cheapest but not really suitable for a deep pitch. No teeth or ridges, the friction being caused by an acute angle of the rope itself. This, possibly, could give rise to internal damage of the rope by stretching of individual fibres.

Hugh Browning has had the following information from the British Mountaineering Council:
There has been no information to show that prussiking damages ropes but there has been a report of one accident where the outer sheaf of a Kernmantel rope failed when a Jumar was being used, and a climber fell. But it is thought that this is insufficent evidence and the rope was probably damaged. Overheating of a descending device is dangerous only if a nylon rope is being used which has a low melting point.

After hearing of an original method of ascending using a wire we informed Hugh Browning and he immediately got to work on designing one. The idea is to have a length of wire with ferrels spaced along it every foot. Instead of a normal prussiking device, one uses two clamps which rest on top of the ferrel. One then climbs by the same way as a prussiker but the clamps have to be lifted off the wire and onto the next ferrel. This is rather unsafe and will have to be modified but the idea is extemely simple.

This is how things stand at present. Electron ladder is becoming obsolete - there is no doubt about that. The question which arises now is - Can the club be the forerunners in the new techniques? Well, we are trying.

Paul Hatherley

Newsletter Exchanges

As most members must know, we exchange our newsletters for publications produced byother caving clubs throughout the country. This means that we have a fair idea of what other clubs are doing whilst publising our own activities. Other clubs' publications are kept in the Publications cupboard in the clubroom, but, if you cannot find whatever you are looking for, enquire of Kevin Tole, the Librarian.

The societies with which we exchange at present are:
Bristol Exploration Club
Border Caving Group
Cave Research Group
Croydon Caving Club
Devon Speleological Society
Exeter University Speleological Society
Rancaster University Speleological Society
Orpheus Caving Club
Royal Forest of Dean Caving Club
University of Bristol Speleological Society
Westminster Speleological Society

Additional Members

The following members have either joined or rejoined since the list which was published in the April newsletter:

Philip Askey	158, Beaumont Rd., St. Judes.
Chris Deacon	38, Coombe Park Lane, West Park.
Jennifer Gill	14, Lockington Ave., Hartley.
Alan Henshaw	Flat 6, 9, Hillsborough, Mannamead.
Graham Martin	22, Furneaux Rd., Milehouse.
Trevor Penrose	21, Channel Park Ave, Efford.
Paul Plimmer	'Shell House', Lake St., Dartmouth.
Mark Ridley	35, Pentyne Ter., Lipson.
Gary Watts	4, Little Points Cres., Millbrook.
Peter Williams	4, Elphinstone Rd., Peverell.
Alan Wood	60, Glen Park Ave., Mutley.

In Search of a Devon Master-Cave

The origin of most Devon caves is obscure. It is difficult to look at any cave and say it was formed by water entering here, or leaving there. The task would be easier if silting had not been so heavy, as to restrict our explorations to largely horizontal sections of open cave. Surface clues are also rare. Even over caves containing running water, such surface features as shakeholes, sinks and risings are covered with considerable thicknesses of overburden. Due to the great age of our caves, we must also consider that the surface topography may have been greatly modified since the caves were formed.

There is a large body of opinion that Devon caves were formed slowly under more-or-less static phreatic conditions. In recent years I have rejected this hypothesis and now believe they were formed in the same way as caves in any other limestone region, that is dynamo-phreatically with later vadose enlargement. Therefore, at some stage in pre-history, large volumes of aggressive (acid) water must have flowed through our caves. These have since been silted to the local spring level by small trickles of ground water bringing down subsoil to produce localised 'mud-tables'. Later still, surface erosion has planed-down the surface, causing ruckles and talus cones. The reason why many of our holes do not go far is because the way on is completely silted-up. So we must look for caves with active streamways if we want to go a long way and not just round and around in a muddy labyrinth, formed by periods of rejuvenation.

In the past, Devon cavers have discovered caves by searching quarries and roadworks. The list of such entrances totals over 300 but these would be hopeless digs unless geophysical surveying had indicated a nearby system. The slow and laborious rate of such discoveries has forced diggers to try something new. A search was begun for swallets and resurgences, previously considered non-existent. A good many sites are now known, but swallets, on the whole, are no more than seasonal bogs, and risings just muddy issues. Sea cliffs and sea caves have also been examined, as well as a few mines in limestone, and even tunnels and railway cuttings. In brief, few stones have been left unturned, So, where, out of all these sites, with, on the face of it, little encouragement, do we start a dig?

After local knowledge (from farmers, publications, archives, etc.) our next clue comes from the geology of each area. Reading the geological survey memoirs gives a hint to the depth of the limestone; adjacent rocks (whether impervious, etc.); the nature of the rock (whether altered, dolomitised, etc.); and, although scantily, gives some idea of the folding and faulting.

The next important clue can only be obtained after careful thought, fieldwork and a study of a branch of geomorphology. Paleo-hydrology is not such a formidable subject as it may sound. In trying to understand the history of any cave, we must ask ourselves: "Where did the flow of aggressive water come from?"The answer is either off high ground or from a river flowing nearby. Drainage off high ground leaves blind valleys with flat bottoms as a clue, but rivers only cut terraces which are difficult to locate.

No master-cave is known in Devon. As no river runs parallel to any large outcrop (except, perhaps, at Yealmpton) we can rule out this mode of formation. That leaves us limestones next to high grounds to consider. High ground initiates heavy snow and rainfall, consequently producing vast pulses of very useful flood water, which is believed to be the most crucial cave-enlarging agent. The Ashburton limestone belt lies at the edge of Dartmoor with a plateau surface at 400ft. but it is highly altered with risings at shallow depths. Apart from Dartmoor the only other high ground is the Great Haldon Ridge (750 to 800ft.).There we have a belt of tiny limestone patches, extending from Oxencombe to Chudleigh, and, three miles further south, is the massive outcrop at Kingsteignton.

The top of this outcrop represents an ancient wave-cut platform at 350ft., and a layer of marine flint-clays overlies the limestone. Three deep valleys have drained the south-western slopes of Haldon, being the Moor Brook, Kingswood and Coombesend gorges. The last two are misfits, that is, the trickles of water flowing down them could not have cut such deep vales. Moor Brook, however, discharges a vast quantity of water for its length and the reason for this is simple.

When sea-level fell from 350ft. to a lower level, the drainage off this corner of Haldon took the easiest route, eroding into the limestone rapidly along the centre of two synclines. At some later stage(s) this drainage took an underground route(s) and the lower reaches of the valleys did not cut down any more, Meanwhile, a small stream had cut back, headward, through soft (but insoluble) slates and shales, and eventually captured the headwaters of the limestone valleys. This can be proved by constructing long-valley profiles and seeing the elbows of capture in Moor Brook with their associated wind-passes.

Accepting then that great volumes of water once took a subterranean course of over two miles, then we have a potential site for, at least, a small master-cave.

The whole area (1½ miles wide) has been carefully searched for digs and, as a result, Coombesend Chasm was discovered (at 300ft.), as well as several active swallets, one of which sinks into the side of a leat. Fairwater Spring is a nature reserve lying 50yds. off the limestone at 50ft., issuing out of concrete pipes in clay. Nearby, an ancient resurgence cave has been quarried without trace, originally called Rydon Cave.

D.S.S. have detected three huge cavities near their 'Leat Sink Dig' by Geophysical methods. These are probably complex swallet caves, formed by streams draining off the impervious marine clays and then sinking, as at Coombssend Chasm. Many more must lie waiting to be detected. I am, at present, digging Kingswood Swallet, which sinks on the same fauolt as that which is responsible for the formation of Coombesend Chasm.

The only limiting factor against getting into the master-cave may be a mud-table, but I hope that the present-day streams have been powerful enough to have sluiced the way clear.

If anyone is interested in helping with the dig, their

assistance will be appreciated.

Steve Poole

References

1. Rev. Polwhele - 'History of Devonshire' 1798
Page 16. "But of all the springs of Devonshire, the waters of Kingsteignton seem to have the strongest iron impregnation. At Bella-Marsh, in the parish of Kingsteignton, is a chalybeate which has had, and continues to have, some reputation. A stream of water, called the Mole, the source of which is on Whiteway Estate, in Kingsteignton, buries itself in Kingswood, a part of Lindridge, in Bishopsteignton, and, after running a mile and a half underground, rises again near the town of Kingsteignton, forming a part of Fairwater Spring, which turns the Kingsteignton Mills. To ascertain the fact of its taking a subterranean course, Mr. Templar has, more than once, thrown bran into the Mole at the place where it sinks underground, and then rode to Kingsteignton town, where he has seen the bran emerge. The Fairwater stream, which drives three mills, was never known to fail, even when all the springs in the neighbourhood were exhausted, and is, perhaps, the most pleasant as well as wholesome of the waters in Devonshire. It is peculiarly soft and sweet. It is colder in summer than any other spring in Kingsteignton or the ddjoining parishes, and, in winter, there is not an instance of its freezing. In the hard frost of 1739 and 1740, when all the rivers were frozen up, Fairwater ran on, the same warm current, open and transparent."

2. Ussher - 'Geological Survey Memoirs' 1913
"At about half a mile north of Kingsteignton church a pond is shown on the map, here the drainage of the valley emerges, having taken a subterranean course in the limestone below Whiteway Barton. A swallow hole near Whiteway Barton takes the tributary drainage of the small valley on the west of that place."

3. Chris Reynolds 'D.S.S. Newsletter, 1965'
Rydon Cave
"This cave is situated in an active quarry just north of Kingsteignton, When visited in August one climbed up a rubble slope in an obvious, but much shattered, entrance. The rubble had filled the entrance when the quarry floor had been at a higher level, and beyond it lay a small chamber about 8ft. wide, 10ft. long and about 8ft. deep. In the floor, a hole dropping down between a couple of boulders entered through the roof of a lower chamber, about 10ft. long, 5ft. wide and 10ft. high. When this chamber was visited, it was floored by one large boulder that had been displaced from the roof by blasting. (This chamber is very near the working face and it is possible to talk with people on the surface.) A number of solutional tubes left the chamber in various directions but were all too tight to enter, Under the fallen boulder there was a rift-like crack in the floor which was filled with clear water. This had been sounded by the quarrymen and was reported to be 14ft. deep. The level of the water is presumably the same as that of the large rising nearby.

However, it appears that most of the cave has already been quarried away and probably 300 to 400 feet of man-sized passages has been quarried away in the last 4 years. Originally there was

a main passage about 100ft. long, ending with the above-described chambers, and a rising passage branching off. Traces of the latter remain high on the cliff face, about 150-200ft. from the present entrance. One stalagmite, 2'6" high, has been kept and several holes have been filled in. It was also reported that drilling in one part of the quarry floor had indicated holes at 20ft. deep. The management hopes to quarry deeper and use pumps to lower the water-table, and this may allow access to passages at present flooded."

Chicken on Sunday

This sad story begins on a cold but clear day, six months ago. It was 23rd. January and Brian Lewarne, Andy Leftley, Rod Jones, Fish and myself were making friends with a herd of cows, in a field, a quarter of a mile north of Stoke St. Michael. It was 10.30a.m. and we had just driven up from Plymouth to do a photographic trip in Stoke Lane Slocker, the original hole of Mendip. By 11o'clock we were changed and ready to go underground.

The cave is liable to flooding and the water-level that day was quite high. This did not worry us too much, because the farmer from Stoke Bottom Farm (where 5p goodwill fee is always paid) informed us that "it would not rain today". The sky was blue, anyway, and that was enough for us.

The entrance tube was almost impassable, with water building up to the roof when someone passed through. With this difficulty over, we made our merry way (boring) down the streamway. A few hundred yards later, the notorious sump was reached.

What a dismal state it was in! The liquid mess filling the sump was distinctly grey in colour. Floating on the surface were various layers of substances, with a trend towards organic matter!

"For a cave which is S.S.S.I., isn't it about time something was done to reduce the pollution of this cave?" .....,I'll stick to that remark!

The smell alone was enough to put off a caver - and that takes a lot of doing! Nevertheless, one by one we passed through into the marvellous world of Stoke Lane II.

All that is, except one. That one person, wisely or unwisely, decided against going through. Before we all start laughing at this person, I must explain the marvels of this sump. To get to the sump itself, one has to squeeze along a rift underwater, taking care to keep a nostril or two above the water. This can be difficult when there are things floating about on the surface. This leads into a small airbell, no more than 18" high. One has to stoop with knees bent and left hand grasping a projection on the wall. If you are the first to go through, the right hand has to be stretched under the wall in front of you to feel an airspace on the far side. Once one person is through, the accepted technique is to help the next caver to the far side by grasping the diver's right hand. This can be quite an eerie experience, being in Stoke

Lane I and having your hand grasped, under water, by a caver in Stoke Lane II.

Anyway, going back to our efforts, Fish went through, followed by Andy and myself. Then it was Brian's turn. Fish felt through for his hand, grasped it, gave the necessary squeezes and waited. ..... (5 minutes time lapse) ..... but nothing happened. Another squeeze of hands, and brian let go. Stoke Lane II, just beyond the sump, is lacking in air-space. In fact, on this occasion, it was less than 6" and one tends to get cold if one hinders here. Fish's shivering body floated by Andy and myself, and I was volunteered to take his place to get Brian through the sump.

I was given the same treatment for an equally long period of time, before having to give up due to a disrupted metabolism - or something! Rod came through and told us the problem and then went back. The cold tends to have a numbing affect on the brain and it was still not clear who was doing what, why or when and if they were doing it, or not, or something dependin if the dog barks and the cow moo's - squeak! All of a sudden I feel in a silly mood, so there will be a short commercial break whilst I get back to normal!

Have fun at Kitley Caves
Visit the scintillating Tiffs in Town
Admire the past at Morwellham
Enjoy a drink at the Bucaneer Inn
Purchase your groceries at Edgar Reed's Stores
It's a caver's life in the teaching profession
Meet your caving friends at the Watermans
Spend your Mendip nights at the Belfrey

That's better. Now, back to the continuing saga. Fish went back through the sump to see what was happening and another time lapse occurred. Later, Rod returned to inform us that Brian and Fish were going out. Stoke Lane echoed with the sound of a very long and loud chicken crow!

Having suitably shown our feelings to the sump, we made our way down the streamway to the first of the very large chambers. Rod spent an hour here, taking many photographs with his £250 Nicon F camera, which was taken through the sump in an ammo can. We then made our way down to the other chamber and had a look at the good, old Queen Vic formation. This is, probably, the most remarkable of all the formations in England. Many photographs were taken here, the large chamber being the most interesting, requiring nine electric flashes to light it up!

We came straight out after this without any mishaps. The water level had dropped considerably by now and the entrance tube contained only a tricKle of water.

Brian and Fish were ready and waiting for us, so we changed and left for Plymouth, paying a visit to Stoke Bottom Farm to tell the farmer we were out , on the way.

Paul Hatherley

Meet Report

Traditional Weekend in Yorkshire — 27th. and 28th. May

Members present: Liz and Fish, Kim Smith, Paul Hatherley, Brian Lewarne

Two cars slowly made their way out of Plymouth on the evening of Friday, 26th. May. One, a Morris Traveller, held three sinister looking characters; namely Fish, Liz and Paul. The other, a Sunbeam Alpine, held two wild-eyed, evil-looking creatures, Brian and Kim.

Both cars had one thing in common - they were headed for Yorkshire. Their mission - to drink as mush coffe as possible in the time available, then to return to Plymouth.

The two cars did not travel up together, consequently we arrived at Settle in Yorkshire at different times early on Saturday morning. We had both stopped on the way up on the motorway for coffee, even so, on arrival in Settle, I had one thing in mind - sleep. Consequently, when daylight came, it was to find my car parked on the outskirts of Settle, with its' contents asleep, and Liz's car in the centre of Settle, with its' contents asleep in a nearby house. I awoke at 7o'clock and decided to start looking for the others. We finally found the parked Morris and we made for the nearest coffee shop. At about 10o'clock, thinking they would be awake, we went back to the house; the curtains were still drawn! At about mid-day, and several cups of coffeee later, we contacted Fish, who was wandering around the car. To cut a long story short, we decided that Paul, Kim and myself should immediately pitch the tent in a nearby field and then all meet down in the cafe for coffee.

When all were present it was unanimously agreed that no-one was in a fit state to go caving that day but first thing Sunday morning, we would set off and 'DO' Gaping Ghyll. For the rest of Saturday we wandered around Settle buying things and drinking coffee, visiting a local pub in the evening, of course,

After a sound sleep and a hearty breakfast, we drove as far as ~~Ingle~~ Clapham where Fish, Paul, Kim and myself changed into wet-suits and prepared for the long walk up to Gaping Ghyll Main Shaft, some 2.8 miles further on across country. We took with us, in addition to our normal lighting, a couple of carbide lamps contained in an ammo can together with 2lb. of chocolate. Being a particularly awkward type I decided to take an extra accumulator. At no time while we were underground did wearing two accumulators hinder my progress. In fact, I shall make it personal standard practice to repeat this when visiting Yorkshire again.

To resume the text, we set off up the valley, past the lake, through Clapdale Wood, keeping Clapham Beck to our right all the time. Walking up Clapdale Drive, we gained the entrance to Ingleborough Show Cave. We stopped here for a rest and our last drink. Then, passing the show-cave entrance, (where I gave an involuntary shaudder) we passed the Beck Head and walked up through Trow Gill onto Clapham Bottoms. We were now 1300ft. above sea level with quite low cloud above us. We passed the entrances to Bar Pot, Flood Entrance Pot and Disappointment Pot on our left, finally

arriving at Gaping Ghyll Hole.

The Bradford Pothole Club were operating the winch this time and the waiting time was ¾hour. So, while we were waiting and watching this amazing piece of machinery, we drank some soup.

The water level was high; so high that they ~~xxxxxx~~ were undecided whether or not to continue operating the winch. This, coupled with the fact that the winch scaffolding had come loose and was in danger of collapsing down the shaft had made us all feel rather, how shall I say, ... ECSTATIC! Finally, it was our turn. Fish went first. I remember that, as he had his hands clapsed togethher as he disappeared from sight - clapsed as if he were making a final, almighty plea for mercy!

Then, I found myself next in the queue (Idon't remember whether it was I who selected that position, or that a sudden rush from in front to behind me created it!) Anyway, I made my way towards the suspended 'seat', feeling like one about to walk the plank. I sat in it and was secured by very loose straps.

The winch lurched into action and the ground level disappeared from sight. My mind was full of thoughts:

"What if the cable snapped?"

"What if the Main Chmaber should decide to do a Cheddar Gorge on me?"

"Should I have brought a whole chicken and not just one leg to eat?"

"My God, we have gone down a long way, a whole 10 feet. Only another three hundred and twenty-five to go."

After I had reached the edge of the overhang, I looked down and saw one of the most beautiful sights I have ever seen. My fear went immediately and I sat back and enjoyed that unequalled journey down the Main Shaft: the roar of the water; the spray in my face; the majestic size of the shaft and the tiny spots of light moving around below me.

When we had all reached the bottom, we made our way towards the S.E. Passage and continued along a dry passage until we reached Bar Pot. Here we met another party going up the pot via a ladder. We took the opportunity of taking a rest and having some chocolate. We set off again, making quick work of Short Henslars, finally arriving at Disappointment Pot Junction. We were now entering the Master Cave proper and twice we passed through long, striaght, phreatic passages or corridors, for they were 12ft. high in places and about 6 or 7 feet wide.

Eventually we reached the ladder at the bottom of Far Country. Here we ate some more chocolate and resumed our trek into Far Country. The cave was beginning to resemble Baker's Pit, the farther in we went; with its low, muddy crawls. We next came to a small hole at floor level, called the Blow Hole. One had to ooze one's body through a hole about 15 inches in diameter. Once the head was through, the body had to be bent vertically through 90 degrees for about 2ft., then bent horizontally through 90 degrees into a low chamber.

This low chamber opened out into a large hall. On further investigation, this proved to be the top of Echo Pot. To pass this

obstacle we needed a rope or ladders, neither of which we had with us, for, before us, yawned a massive hole, the bottom and far side of which were indeterminate. I wouldn't like to guess at its depth.

We made plans there and then to make a return visit in July, armed with ropes, etc., to travel beyond this point.

All adequately refreshed, we made a start on the return journey; through the Blowhole, down the ladder and back to the streamway. It was here that Paul went ahead and carried on to Disappointment Pot Junction. Fish made a quick detour down the streamway to point out more of those long, straight, water-formed passages, ending in a sump.

We returned to Paul at the junction, ate some more chocolate and continued on, back through Short Henslars, under Bar Pot to the Main Chamber. There was a queue waiting to go up the winch and hot soup being handed around. Fish made the suggestion that one of us should keep our place in the queue while the rest accompanied him along the East Passage. Paul 'volunteered' to stay. The East Passage is at the other end of the Main Chamber from the winch. We clambered up a boulder slope, entered the passage and made our way to a chamber, similar in size to Main Chamber, called Mud Hall. We entered at the top of the hall. Fish made a quick descent, had a look around and we returned to Paul, over an hour after having set off. He was, by then, getting a bit worried. Being the only one left in the Main Chamber, he did not know whether to go and look for us or call out the Dave Curry Rescue Organization (D.C.R.O.)(This was a fine example of Paul's maternal instinct starting to operate!)

After some more soup, we duly made our ascent up the winch.

This was to be the one and only trip of the weekend, as the Alpine developed a flat battery, amongst other faults, and we left the following day.

Only one other incident deserves mentionning. We decided to visit 'The Shoes' public house after returning from Gaping Ghyll, in the hope of having a singing evening. We got more than we bargained for, as the CravenPOthole Club turned up and sang some dreary Northern ditties, most of which we did not know. Not to be beaten, we piped up with songs we did know. We were no match, however, for such a 'harmonious' group with a biassed piano on their side, and we promptly withdrew at closing time.

All in all, it was a successful trip, enjoyed by all.

Brian Lewarne

Blasting at Bulleycleaves Quarry

On a visit to Baker's Pit Cave about a month ago, I went to exit the Lower- Stream series via Bulley-cleaves Quarry and found, to my disgust, that the exit was nearly totally blocked. Daylight was filtering through a hole about 6 inches wide and a foot high. I very carefully pushed away the rubble and poked my head out. Sure enough, the Kingston Mineral Co. Ltd. had blasted away that

huge slab of limestone that had hung so temptingly above for the last year or more.

We all know the extent of blast damage in the cave and, except for a few more cracks appearing in the extension, the situation remains the same as before. If the exit is checked before you enter the cave, there is no reason why it should not be used in an emergency or merely to keep a record of its condition.

Personally, I would not advise taking a large group of people through it. I am led to believe that it is OFFICIALLY out-of-bounds, including the Lower Stream Series as a whole.

Realistically, it it a matter of personal choice and common sense. So, if you do intend using it, check it and learn by my mistake.

Brian Lewarne

Meets List and Useful Dates

12th. &13th. Aug.	Mendip Weekend	
20th. Aug.	Napps Cave	10a.m. at Clubroom
27th. Aug.	Western Shaft, D.G.C.	
	Rescue Practice	10a.m. Clubroom
3rd. Sept.	Afton Red Rift	10a.m. Clubroom
8th. & 9th. Sept.	B.S.A. Conference	Sheffield
23rd. & 24th. Sept.	C.R.O. Conference	Settle
1st. Oct.	Afton Red Rift	
	D.C.R.O. Pracrtice	
