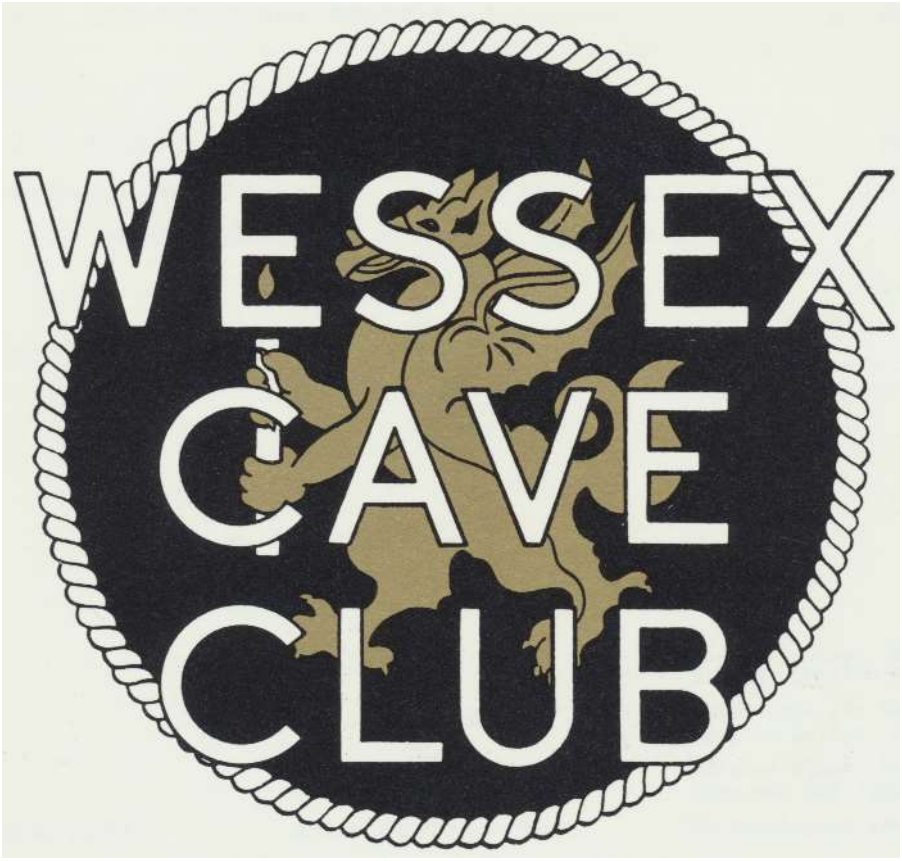
WESSEX
CAVE
CLUB

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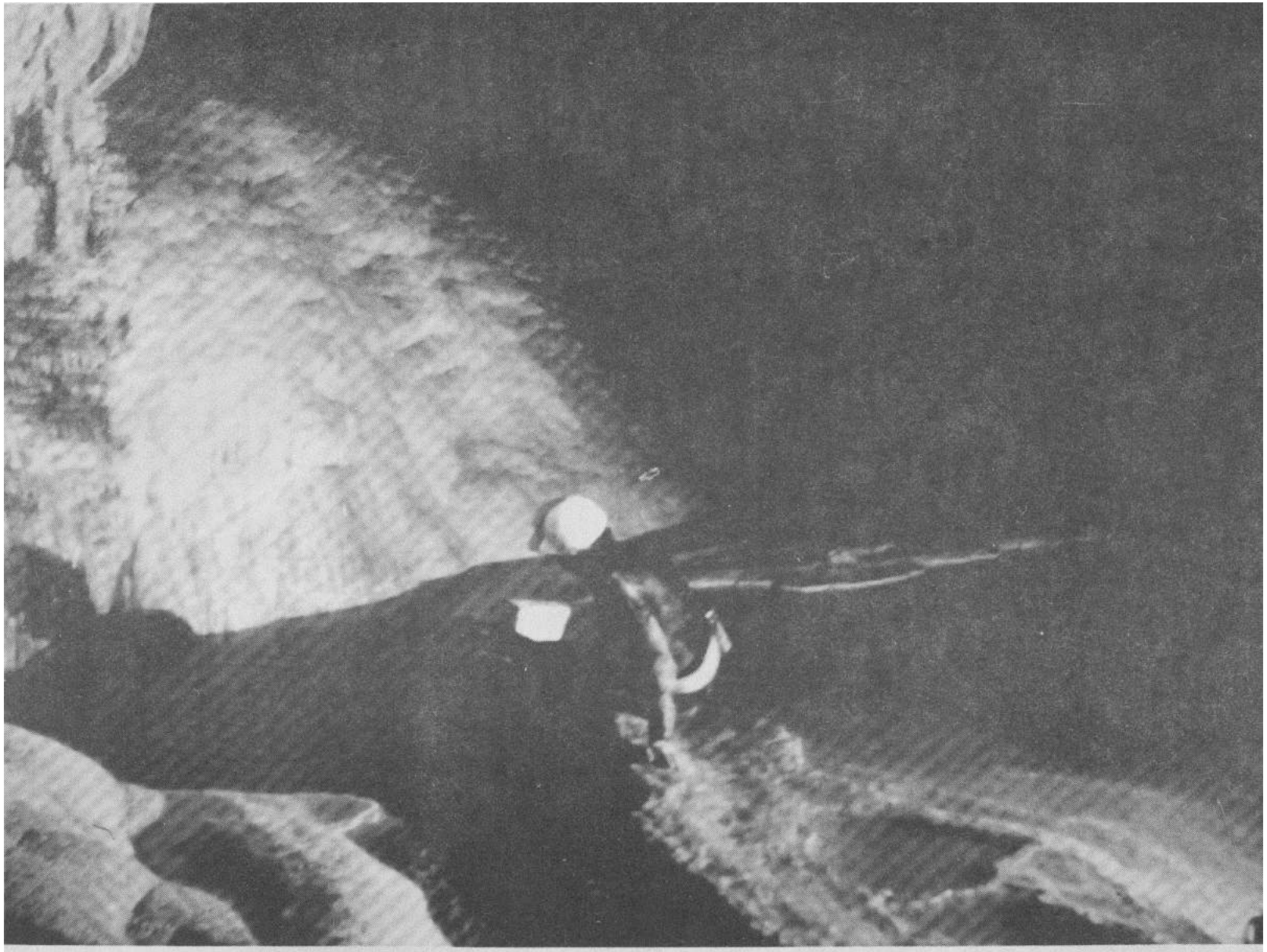
CLUB OFFICERS FOR 1978/79

Hon. Secretary:	R.C. Harper, Top Flat, 12 Atlantic Road, Weston-super-Mare, Avon
Asst. Secretary & General Sales:	R.A. Websell, Fulwell Farm house, Nunney, Frome, Somerset
Caving Secretary:	J. R. Price, 18 Hurston Road, Inns Court, Bristol BS4 1SU
Asst. Caving Secretary (Northern Caves only):	K.A. Sanderson, 11 Pye Busk Close, High Bentham, via Lancaster
Hon. Treasurer:	Mrs. C.P. Newport, 60 Micklefield Road, High Wycombe, Bucks
Hon. Gear Curator:	B. Hansford, 34 Fleming Road, Weeke, Winchester, Hants.
Hut Admin. Officer:	W.J. Ham, "The Laurels", East Brent, Highbridge, Somerset
Hut Warden:	M. Duck, c/o Headquarters (address below)
Publication Sales:	R.R. Kenney, 'Yennek', St Mary's Road, Meare, Glastonbury, Somerset
Survey Sales:	M. Hewins, 31 Badshot Park, Badshot Lea, Farnham, Surrey
Editor:	D. A. Walker, 15 Waterloo Road, Shepton Mallet, Somerset
Hut Bookings:	A. Keen, 11 Tabor Grove, Wimbledon, London SW19
Headquarters:	Upper Pitts, Eastwater Lane, Priddy, Nr. Wells, Somerset BA5 3AX

Journal Price for Non-members: 30p per issue. Postage 30p extra.



Photographic Competition 2nd Prize, Grotte de Gournier, Mike O'Connor

CLUB NEWS Abstracts of the Committee Meeting held 17/12/78

a) Matters arising from the last committee meetings:

i) Tackle: Some new tackle la in the store and more is to be made.

b) AGM and Dinner: Several suggestions were received for the 1979 Guest of Honour and the Hon. Sec. is to contact them.

c) Upper Pitts Progress: Satisfactory progress is being made on the extension.

d) Caving Politics:

i) CSCC: We have paid our sub and received our share certificate from Southern Caving Clubs Ltd.

e) Hon. Treasurer's Report:

i) Publications fund: This is now in the main account.

ii) Sales: The new cupboard at Upper Pitts is installed and working.

iii) Club Accounts: In rough figures Upper Pitts lost £150 during 1977/78 so the hut fees must go up or more people must stay, or both. To encourage more bookings the number allowed in a party was increased from 8 to 12, and the hut fees were increased to 70p per night for personal guests. Casual guests are to be charged £1 per night (at the Hut Warden's discretion) and the facilities advertised in Descent and Caves and Caving.

f) Election of Officers:

Survey Sales Officer: Maurice Hewins (proposed by Dave Walker, seconded by John Ham and elected unanimously).

g) New Members: We welcome the following new members:

Mr. and Mrs. Colin Gillard, 1 Court Farm House, Hillfarrance, Taunton, Somerset
Miss Judith Withers, Caswell Farm, Clapton-in-Gordano, Portishead, Bristol
Ross Stewart, 54 Wallingford Road, Cholsey, Wallingford, Oxon.

h) A0B:

i) A letter of complaint was received about private mail coming to Upper Pitts and being opened without permission. Such actions were condemned.

ii) Plumley's Hole: Dave Morrison wanted club backing to re-open Plumley's Hole in Burrington Combe and the following motion was passed:

> 'The Wessex Committee are in favour of re-opening Plumley's Hole. The Wessex are prepared to undertake this venture either alone or in conjunction with other clubs provided that suitable arrangements regarding safety and insurance are met'.

Abstracts of the Committee Meeting held 14/1/79

a) Matters arising from the last committee meeting:

i) Tackle: The sacrificial tackle is out and being used.

ii) Sales: These are going well with some small ammo cans still left.

b) Upper Pitts Progress: Work on the extension continues slowly as does work on the dampness problem in the ladies dorm. The central heating boiler has been serviced and vacuumed and is awaiting a guard rail.

i) Drainage: The cess-pit lid may have to be repaired as it would appear to be difficult to obtain another one.

ii) Insurance: A new quote has been obtained for the hut and its contents which we will pay so that we are adequately covered. This may have to be increased to cover the real cost of the library and its contents.

iii) Telephone: The possibility of a telephone was raised by Quackers and was turned down on the grounds that it would be too costly to install and the comm. felt no need of a telephone. In an emergency we can be contacted easily enough and anyway most of us come up to Mendip to get away from that sort of thing.

c) Caving Politics;

i) CNCC: The CNCC are opposed to both fixed aids in caves and to the compilation of a bolt registry and have invited our comments. The comm. feel that whilst they agree on the subject of fixed aids a

bolt registry is of value, particularly to the visiting caver from outside the region. This is provided that it is kept right up to date as far as possible.

ii) NCA: We have received two comments from the NCA legal advisory committee on the Occupier's Liability Act in relation to caves and the liabilities regarding fixed aids in caves in the event of an accident due to their failure.

d) Hon. Treasurer's Report: On the 27th Dec. 1978 our current account balance was quite healthy. Carol had received 230 subscriptions and since then several bills had been paid and money transferred to the survey fund. Several large unsettled bills from previous years were affecting budgeting.

e) New Members: Beechen Cliff School had expressed interest in becoming affiliated to the WCC. Joint membership for unmarried couples came in for more discussion.

f) AOB:

i) Mid-week bookings were discussed. The comm. were not in favour unless there was a member in the hut.

ii) A complaint had been received about the state of the hut. This was discussed.

Rob Harper Hon. Sec.
Top Flat, 17 Atlantic Rd.,
Weston-super-Mare, Avon

LETTER TO THE EDITOR

Dear Sir,

Waterproofing Cave Surveys for use Underground (WCC Jour 175 p.117).

In my experience Xerox copies of surveys do not need waterproofing. You put them in your hat and bring them out when needed.

yours, Oliver C Lloyd 19.4.79

FRIDAY NIGHT TRIPS

Friday Night trips for the next few months are:

May 25th	St Cuthbert's Swallet	June 22nd	Goatchurch (candles only)
June 8th	G.B. or Tyning's	July 6th	Mangle Hole

Details from B.E. Prewer, East View, West Horrington nr. Wells, Somerset. Tel. Wells 73757. All trips meet at 19.30.

STOP PRESS STOP PRESS
Over 1km. of new passage discovered in Castleguard Cave

Between 10th - 14th of April a large party sponsored by McMaster University helicoptered in to Castleguard Meadows. A push team of ASS members traversed the top of a pit and broke into virgin passage. A number of leads were pushed to a conclusion but others remain open. The elusive draught appears to come from a tight, difficult, boulder filled passage where this push terminated.

Paul Hadfield, Medicine Hat, 17th April 1979

Caving in Switzerland

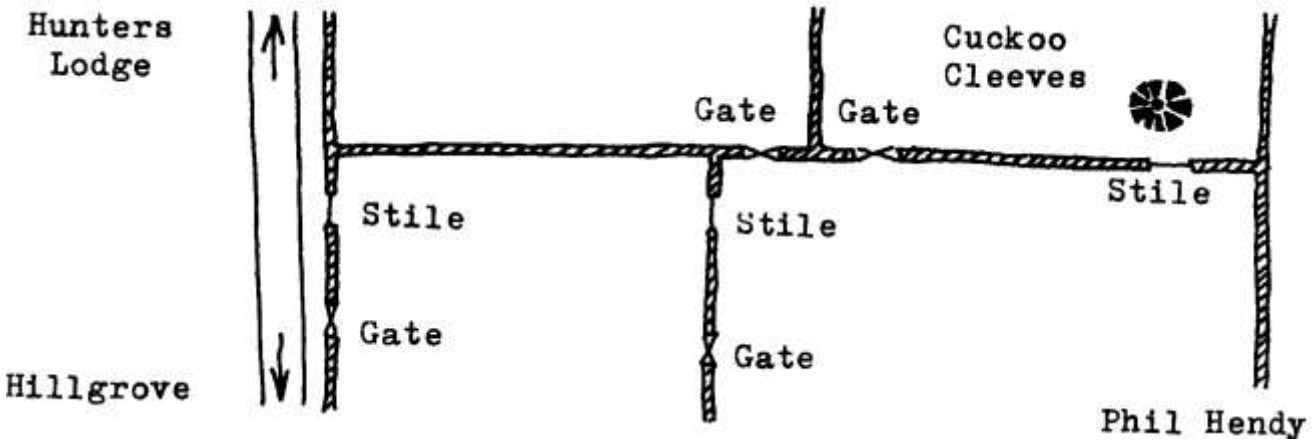
Would anyone who is interested in a club trip to Switzerland with the intention of caving in the Holloch please get in touch with Jeff Price or Dave Morrison (address inside front cover). The proposed dates covering ten days will be 26.12.79 - 6.1.80.

MENDIP NEWS

Cuckoo Cleeves

By the time this is published Fred Davies and helpers from the CSCC should have completed the stiles giving more direct access to Cuckoo Cleeves. Cavers are requested to follow wall lines in order to avoid damaging crops, and if they do use gates, to leave them open or closed as found. Do not park on the verge in front of the gate.

The cave gate will be a steel grid set in a low stone enclosure over the existing drain pipes. The lock will be a large engineering bolt, which may be undone with the appropriate spanner (details to be announced later). As was explained earlier, the landowner has requested that the cave has a lock on it, and the present arrangement is a compromise, allowing any caver ready access to the cave, but keeping it safe from unintended descent by children or livestock. Please bolt the grid back in place after your trip to avoid more stringent regulations being demanded, or even the permanent closure of the cave.



Fairy Cave Quarry

Ken Gregory, the CSS Caving Secretary has written to say that at the moment Fairy Cave Quarry is closed for caving trips, except to Fairy Cave itself. This restriction is due to the fact that Hobbs Ltd. have been informed by the authority responsible for quarry safety that some rock faces are insufficiently stable. The Cerberus committee are attempting to organise the stabilisation of the relevant rock faces and it is hoped that access will be allowed in the next few months.

G.B. Cave

The Ladder Dig is now open again. The UBSS have finished cleaning the formations and have put two new bolts onto the short climb. These are both 5/8 inch bolts and cavers wishing to use them should take down two hangar-plates and a half inch spanner.

Tyning's Barrows Cave

The BEC based team who have been sporadically working on the re-opening of the cave recently succeeded in breaking in through the old entrance. Access details will be given in a future journal.

Toothache Pot

Dave Morrison has stumbled across this previously unrecorded (?) twenty feet deep rift in the Longwood valley. More information to follow.

NEWS FROM THE REGIONS

The North

Casterton Fell Pirating of the caves on this fell is causing a great deal of concern and jeopardising the access agreement between the landowner and the CNCC.

Birks Fell Cave Following the rescue last year when two clubs had gone down the cave without permission and had become trapped by flood water at the same time that a member was injured, much diplomacy has had to be exercised to keep the cave open. The UWFRA are to put a cable through the entrance crawls.

Washfold The farmer is gripping the catchment area so the water in these caves now rises very fast.

Wales

Otter Hole The new permit secretary for this cave is: Peter Capper, Dunraven, Clearwell, Coleford, Glos. In order to get the key you must send with your request 2 sae's and a £2 deposit.

Dan-yr-Qgof The ladder at the end of the Long Crawl has been removed. Visitors must now bring their own (5m) ladder.

Poacher's Cave (Ogof o'r Herweliwr) This is a new cave in North Wales situated upstream of Ogof Hesp Alyn. Most of the digging was done by Derek Brandon but someone came along and 'poached' the dig while he was on holiday/ill in August and hence the name. The cave is half a mile long and well decorated with an active streamway.

Ystradfellte The camping site at Cwm Porth Farm has been discontinued. The National Park and Forestry Commission are trying to find another one in the area.

Pant Mawr Pot On Sept. 30th 1978 a caver suffered broken rib after a maypole collapsed during use in the Graveyard area of the cave. The nice shiny go-anywhere Range Rover ambulance from Glyn Neath got bogged and had to be towed out!

Derbyshire

Giant's Hole There has been a roof fall near Poached Egg Passage.

Access We have up to date information on this somewhat complex subject. Anyone wishing to know more should contact the Caving Secretary.

DIARY DATES

BCRA Summer Meeting and AGM 9th June 1979 at the Crown Hotel, Matlock, Derbyshire.

BCRA National Conference 15th/16th September 1979 at UMIST, Manchester.

International Speleological Congress The next ISC will be held in the last two weeks of July 1981 at Bowling Green, Kentucky. This is about thirty miles South-west of Mammoth Cave.

25th November 1979 The closing date of the Grand Mendip Digging Challenge - BEC v WCC. A barrel of ale is to be bought by the losers. The challenge covers all new passage found between 26th November 1978 and 25th November 1979 on Mendip and over fifty feet long.

Wessex winning to date with Rich Websell and Trevor Faulkners' find in Longwood/August upstream of the Swing Pitch entry to the streamway, and Pete Moody and Alison Hoopers' extension a high level passage in the Swildon's II streamway.

ON GETTING INTO AND OUT OF LONGWOOD SWALLET

Alan Clarke

It was with some confusion that I read the news about the change in water conditions at Longwood/August Hole (Journal 175 page 60). The warning is a stern one indeed and does not seem to be designed to be ignored as time goes on. If the pumps stop “automatically”, and flood waves can happen “suddenly”, then it is not at all clear what the caver needs to do in order to “take care”. A much more comprehensive statement of what is actually going on here seems to be required. Will a big stream suddenly treble in volume or a tiny one increase a hundredfold? On 9th July 1976 a ‘Friday Night’ party, not wearing wet-suits, found the 50ft chimney and the Tunnel much wetter than expected judging from the size of the stream outside. If the pumps had suddenly stopped, how much more water would there have been? Phil Hendy mentions in his Hon. Secretary's report for 1978 that the flooding will be “no worse than before the Bristol Waterworks existed”. I doubt if there could have been anybody in the cave in those days to verify this, as I am told the abstraction from the springs goes back to the old Axbridge RDC days, and may even precede the discovery of the cave between 1944-47.

Now most of us know that it should be possible to find another entrance to the system. On page 110 of 'The Complete Caves' it is stated that the Dry Gallery of upstream August Hole "ascends to a boulder choke very near the surface". In that much maligned volume 'The History of Mendip Caving' Peter Johnson says on page 99 that "the boulder choke is very close to the surface ... so close in fact that the first survey showed it to be sticking into the air!" and further on that "digging at the surface above this 'back door' was carried out by the UBSS from October 1955 - March 1956".

The projected elevation on Sheet 1 of the MCG survey indicates that the top of Dry Gallery is only thirty-six feet below the valley floor, further up-valley from the footbridge. Of course, radio location methods are capable of placing this precisely today, as has recently been done for the Stoke IV Aven (Journal No. 173). I would be interested to know the reason for the quite recent excavation in deep soils just a few yards upstream from the footbridge. This position however, is much nearer the top of Wet Gallery, shown on the survey as sixty-four feet below the surface above. Dry Gallery cannot be too far from the large leaning and ivy hung tree growing on the stream bank. There is no sign of the old UBSS dig hereabouts. If the vagueness of this is noticed, I can only confess that it was obtained by a certain amount of pacing up and down the overgrown valley floor, hindered by my two young boys who could not understand why we should linger in this spot, and who slowly grew greener and more dishevelled from contact with the trees.

In the North, and in Wales, alternative entrances to cave systems are not unusual, and I am surprised that this prospect on Mendip has been neglected for so long, especially as the Priddy Green dig gave rise to much effort in 1959: now it may soon be the turn of Stoke Lane Slocker. When the inevitable dissension has died away (remember the 1974 tunnel to Wookey 9?) I hope that a dig into August Hole might be seen by some as well worthwhile, in some ways more so than some of the efforts in past years. The 1965 project to re-open Cow Hole drew much support from the very fact that there was known to be a cave below. Techniques have changed a lot since then, and one has only to compare 'Main Dig' Reservoir Hole, with the precarious top part of Cow Hole to appreciate the sense of solidity and security that stone walling, solid packing and cementing can bring to a dig. An entrance through Dry Gallery would not detract from the fine sporting value of the present entrance series, but make possible what would then become, until Blackmoor 'goes' to Cheddar, the longest 'daylight to daylight' round trip on Mendip.

November 1978

NORTH AMERICAN DIARY - 2

Paul Hadfield

It was Friday night on the last weekend in July 1978 that I made the long journey south from Medicine Hat, Alberta, to Bozeman, Montana. From there the following morning, everyone having successfully made the rendezvous, we headed south yet again towards Yellowstone. A little way past 'Chico' hot springs we left the main road and headed up for the trail head to Mill Creek Cave. A delightful seven mile walk through pine forests, stands of aspen and green alpine meadows still colourful in their summer coats of lilies and indian paint brushes, took us to the cave. En route we had passed substantial limestone exposures where several promising holes could be seen, but my queries were all answered to the effect that there was so much 'going' cave, why bother looking for more!

Mill Creek Cave is the first, that I've visited in North America that unreservedly earns the 'British Water Rat's Seal of Approval1. There are at least three streamways within the cave, and, as yet, it is neither fully mapped nor explored. This visit led us via a 500ft 'Blue Pencil type' crawl to a classic streamway of cascades and waterfalls, necessitating three climbs up fixed ropes and numerous other aquatic obstacles. Our objective was the survey and exploration of a less well known part of the cave and some way up the streamway, which eventually sumps about half a mile upstream. A tricky climb led us to a short dry section, followed by a 40ft pitch into a large gallery with another independent streamway running along its length. These waters originated chiefly from a hole high in the roof of the gallery and also from a slot in the wall some distance below and downstream of the hole. An awkward wet climb got us into the slot and the narrow vadose rift above, and a few yards of tight going led to the current end of exploration. From here we started surveying in the tight wet rift passage, with at one point a 6ft duck with limited air space. Eventually the cold started to get through to us and I set off to explore, mainly in order to get warm. After a few hundred feet of tortuous wet, rift I discovered that our stream was merely the overflow for a much larger stream, which I presumed was the one which we had seen, crashing out of the roof in the large gallery. My attempt to follow the water upstream was thwarted by the force of the water in the tight conduit and the cold which had already somewhat depleted my reserves. I therefore retreated to the overflow point and traversed up in a high rift which led me to a series of wedged boulders and hence into a small chamber. From here a short climb and walking sized passage soon reached more crawl way which in turn gave way to a wide bedding plane inclined at about 10° to the horizontal where a strong cold draught through the 9 inch gap gave an indication of what, was beyond. At this point I turned around and returned to the others to call them up to show them my find. However, such had been the energy sapping effects of the cold water that no one felt like pushing the squeeze so it remains for another day.

Our exit from the cave, having reversed the 500ft crawl way was via yet another stream which emerged from a large arched entrance in the rock immediately opposite our initial point of entry. I was impressed by Mill Creek Cave and shall undoubtedly return for another trip, and should any reader find themselves fortunate enough to be in the area they will find that the time taken for a trip to the cave will be well rewarded.

Two weeks after the Mill Creek trip I was back in Montana again, this time to revisit Pine Coulee Cave where on my last visit I had successfully forced the sump and had reached but not dived Sump 2. On this occasion three of us, Mike Beer, Ed Klein and myself went through Sump 1 (This was not only Mike's first dive in a cave, it was the first time in his life that he had used a bottle so he was getting a really traditional initiation!).

Once again luck was with us and I passed Sump 2 with an 80ft dive. This got us into 700ft of virgin cave passage which led after a breakdown room to Sump 3. However having left our bottles and line at Sump 2 we did not feel like diving there and then, and our support party was waiting on the other side of Sump 1 so we made a jubilant exit. The next trip to Pine Coulee will undoubtedly be to push Sump 3, which to date looks like the most unattractive of the sumps, but who knows!

My first visit to the Andy Good Plateau at Crowsnest, Alberta was a solo affair that was aborted by the weather. However, earlier this month I joined a trip organised by Pete Thompson to the area and made my acquaintance with 'Yorkshire Pot'.

This cave is well named despite the word 'pot' having as Pete puts it "unfortunate connotations" in Alberta. From the surface Yorkshire drops down to -580ft in a handful of pitches and from there goes down to deeper than -1,100ft, via a series of short drops in the far reaches known as the Seven Steps Series. This was the objective of Pete and the main party. My main objective, however, was to visit Green Pool Sump which is regarded as the most promising place in the cave for an extension. Mike Boon, some years ago, free dived about 10ft into it and reported a large passage continuing on down. It was my intention to take a look and size up the place for a dive. In reality it turned out to be a large inviting sump pool at -930ft some distance from the foot of the entrance pitches, definitely a prospect. Having made this decision Eoin Finn and myself headed out, leaving the others at Bloodstone Passage to continue their trip to the bottom. All being well, early October should see us back on the plateau with a strong team of sherpas for the Green Pool dive.

A fortnight later I was back in Montana again, this time headed for Glacier National Park, regarded by many to be 'The' most beautiful part of America. I can't really say I appreciated this as I piloted the V8 at high speed across the Blackfoot Reservation and around the southern boundaries of the park in appalling weather to make a rendezvous with Jim Chester at West Glacier. The mountains were sensed only by the steep gradient of the roads and as a black looming presence in the darkness. It wasn't until Sunday when the 'Going to the Sun' road over the Logan Pass had been cleared of snow and I drove eastward after a weekends' caving that I was able to appreciate the scenery. Magnificent is not too strong a word to describe it. The 'Going to the Sun' road winds across cliff faces where the view is never less than awe inspiring. The mountains are stark and bare and when I saw them, with a dusting of snow, hugely impressive. The aretes and ridges are straight out of picture books as are the cascades of water like 'Bird Woman Falls' that tumble off the flanks. I shall definitely be back, for so far in this wilderness there are only three known caves. Two of them, Poia Lake and Algal Cave contain respectable streamways, whilst the third is only a 700ft tunnel full of pack rat shit.

Algal (or Tunnel) Cave was our objective for the weekend, situated some hundred yards below the tunnel on the Logan Pass in West Glacier. We spent a cold miserable afternoon in the cave whilst Jim, with a portable chemical laboratory, did painstaking chemical tests on the water of several pools just inside the entrance where he had found two new types of cave life. Unfortunately a combination of factors led to the tests being by and large unsuccessful. However, sufficient experience was gained I feel to ensure that the next efforts will give more positive results.

The following day we returned with the intention of diving the sump at the upstream end of the streamway. From the entrance about 500ft of rift involving some traversing and climbing leads to a tricky climb up some flaky rock and a point where the entrance rift intersects that of the main drain. At this point the water is thundering past some 40ft below and it goes, so I am informed, to a point where the rift peters out. So far no resurgence has been found. Upstream we soon met the water in a Swildon's sized passage at about half a Dan-yr-Ogof volume. The sporting nature of the streamway is spoilt to some extent by the friable nature of the rock which even at water level has a disconcerting habit of breaking off with no warning and dumping you in the streamway. At one point a 25ft climb out of the stream leads to a rift which bypasses a sumped section.

Beyond this there are a couple of very damp and entertaining climbs indeed, and only too soon we were brought to a halt by a 35ft waterfall. An extremely dodgy climb up away from the water followed by a tricky traverse is the route around this obstacle. However, due to the volume of water we decided to abort the trip. If we had got to the sump the chances of diving it were pretty slim, on the lines of trying to get a cork back into a foaming champagne bottle. As Jim so concisely put it "There's no point hanging your ass out for nothing!"

So with yet another Montana cave having earned the 'The British Water Rat's Seal of Approval, we headed out and home.

Medicine Hat 19.9.78

THE 'GNU GNOLE' OR 'WHY DID WE BOTHER?'

Menace-sub-Mendip

May we announce a new route in Swildon's? One which creates a new round trip and gives untold delight to the tiger caver. Are you suitabily titillated? Let me tell you about it.

Being precluded by my girth and advancing years (though not as old as John Ham) from being one of those whose speleological expertise and hatred for mankind lead them to dig out even smaller and more remote passages, I was looking for a gentlemanly dig when, during one of our trips down Swildon's I espied a gnole.

Enter Tony Perrett., stage left.
"Is thissa gnole I see before me?"
"Yeah, thassa gnole".
"Rather small though?"
"Thassa cos issa leedle gnole".

After a few minutes of this scintillating dialogue Tony, disdaining a rope, clambered 18 inches up a rocky crevice, peered through and reported a long passage which seemed to open out at the other end.

That settled it. We would return and open up this new series of passages. A week later we were underground again complete with coal hammer, etc. and attacked the stal cemented boulders barring our way. We were about an hour and a half into the job and going well when there came from the other end of our new passage the flash of a caving lamp. I set off to investigate and soon found myself lying in the passage looking out at Tony. I suppose it was a bit ambitious to look for the Great Chamber of Swildon's within a hundred feet of the entrance but you never can tell.

Where is the new hole? At the back of the chamber containing the second drop in the beginning of the Wet Way is a passage with a mud floor. The far end of this passage is now open and joins the Dry Way at the top of Jacob's Ladder. We can therefore offer a new shorter round trip. Down the two drops, through the Gnu gnole, back up the Dry Way and off to the Hunters. No more than a quarter of an hour of drinking time wasted.

The more ambitious will probably use it to bypass the hard bit of the Wet Way without braving the perils of the upper section of the Dry Way.

Before naming this magnificent route may I draw attention to the great efforts made on this dig by Tony Perratt of Cerberus, the sacrifices of my wife who leant me the coal hammer, and the unfailing support of my Y fronts. I therefore name this hole Perratt's Passage? The Gnu Gnole? I dunno.

Sort un out this sent

CHARLETON WOOD CAVE, SOMERSET N.G.R. ST 676247

Jeff Price

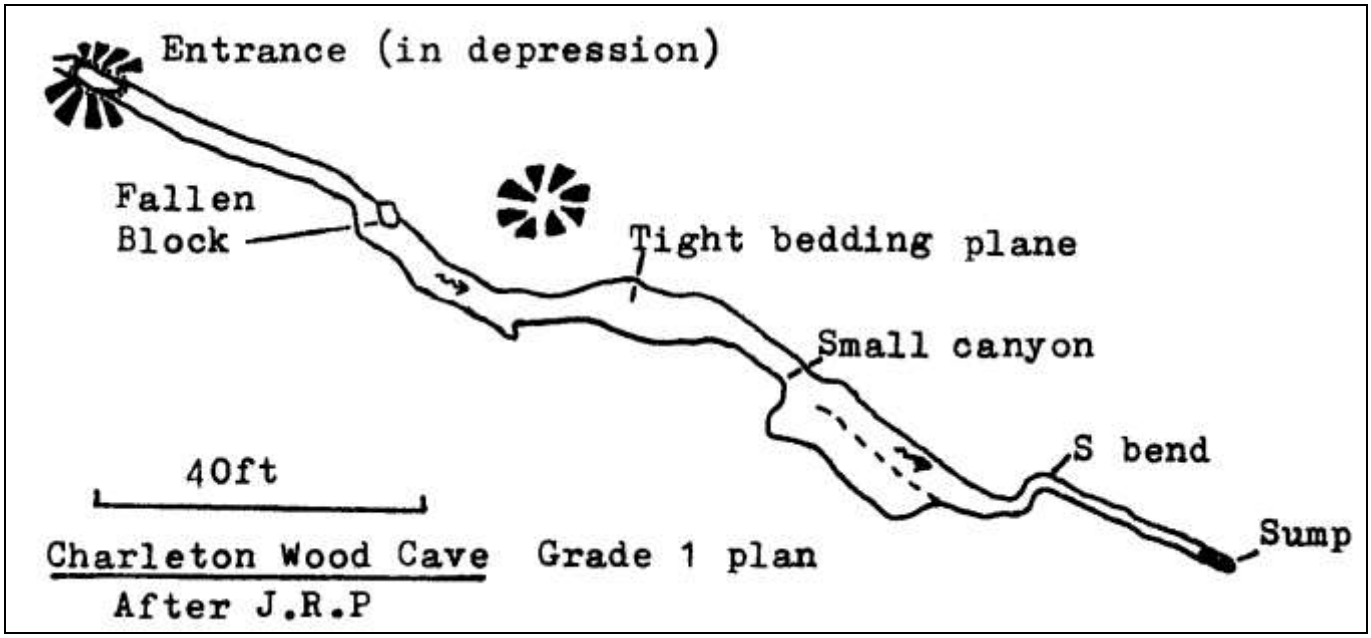
On Saturday 12th August 1978 1 found myself with Dave (Tuska) Morrison and Colin and Claire Williams looking for caves at Charleton Wood, near Charleton Horethome on the B145 between Wincanton and Sherbourne. After half an hour or so we were at the entrance of a small uninviting cave. Tuska had heard of the site from an old college friend who works for the landowner and had been there the day before with Chris Hannam. The day was fairly cold as we changed into our damp caving kit and set off into the cave. Colin and Claire followed me while Dave delayed as long as possible by sitting at the entrance.

We found ourselves in a passage roughly 3ft square with a slight stream in the bottom of it and after 40ft we encountered a stone block across the passage but by crawling to the right we were able to pass it, all except Dave who became stuck as usual We left Dave and carried on.

By now it was clear from the mud and stream debris we were in a new part of the cave as we crawled on another 20ft to where it was beginning to get quite tight in places. We shouted to Dave, who was still stuck, to fetch the crowbar while we took our cells, helmets and thick sweaters off. Dave returned some ten minutes later clutching his crowbar which was passed forward and I started to dig away the mud. After fifteen minutes or so we had removed enough to squeeze through to a small canyon shaped passage going for about 20ft to a choke. However on the left was a passage about eighteen inches square which I followed for about 30ft to a tight 'S' bend which neither of us could force. Leaving the crowbar at the furthest point reached we exited, planning to bring a small thin person down the following day.

Accordingly on the 13th Pete Moody and Alison Hooper pushed on for an extra 30ft to a very tight area and a minute sump.

The cave is interesting geologically, being in a very thin band of oolitic limestone between Fuller's Earth and Forest Marble. Because this area is outside the well-trodden regions where cavers are recognised any visitors are asked to obtain information from Tuska beforehand.



LIME KILN DIG [OPEN CAST METHOD] PROGRESS REPORT NO. 1

Barry Gay

During early March of 1978, the Site Management with a strong supporting team moved in to start work at the old Lime Kiln site in Eastwater Drove. For those not familiar with the site, a very brief description will suffice. It would appear that originally the area was worked for walling stone, and there is also an indication of an old lime kiln. The typical small quarry shape so often, seen in a limestone district is still apparent with, of course, its share of the ubiquitous rubbish and detritus that is always present in such places. In one corner a deep excavation existed and it was into this that the team initially started to dig.

Organisation of the digging was strict, the Site Management ensuring that the team was working hard and efficiently at all times. It was during this period where most of the spoil was being moved by line and bucket to an upper level that an increasing respect was noted towards the Welfare Officer who appeared to be capable of moving heavy objects with an ease that was deceiving to the eye. One member of the team was heard to observe that it would be most unwise to take a liberty or anything else with this particular member, and that, in future, this should be borne in mind. After much hard work hand-digging through assorted rubbish, rock and clay to the bed rock, it was decided by the Site Management that excavation was in the wrong place.

It would be appropriate at this stage to elaborate a little on the unique methods of digging and back-fill devised by the Site Management to overcome the problem of a restricted area. As had been noted, the spoil from the first excavation was raised to a high level and spread on the adjacent flat ground. By so doing a clear space was left where further spoil could be deposited from the adjacent face being worked without lifting to a higher level. In a concentrated effort a trench was cut forward by this method of cut and fill for a distance of sixteen feet horizontally at which point the Site Management again decided that it would not be advisable to break into the system from this ascending rift.

As a certain amount of water-worn rock had been exposed in the rift the Site Management, in consultation with their advisers, agreed that all horizontal excavation should cease, and that a vertical approach would be more appropriate. The reason for this radical change was apparently brought about by the intensive research of the Team's professional advisers based at the Hunterian Institute who had reason to believe that water does not follow an ascending course but tends to gravitate downwards. This assumption was elegantly proved when an experiment was conducted at the Institute in which the Site Team were also able to participate. Suitable glass vessels were used into which was poured a liquid having a specific gravity slightly above that of water and being coloured for ease of recognition a pleasant translucent brown. After a relatively short space of time the Team had proved to their own satisfaction that a liquid does have the ability to flow downwards under gravity through the most diverse and irregular passages. It was observed that certain members of the Site Team had reservations on this matter and are understood to be continuing experiments with large quantities of the appropriate liquid in an endeavour to obtain a more constant recording over a longer period.

This decision to excavate vertically, although simple in concept, was not in application, and did in fact require the use of explosives to ease the way down the very small rift it was intended to follow. After many charges and a considerable amount of labour by the Team, a passage and a small chamber were blasted slowly out of the solid limestone to a depth of approximately fifteen feet below ground level. Once again the Site Management called a halt for a reappraisal. At this juncture there appeared to be a divergence of opinion within the Team when the Site Management decided to follow a small rift in the upper section of the excavated area. This was eventually cleared and blasted out for a small way but did not appear promising and was therefore not pursued.

It was now becoming apparent, even to the Site Management, that the excavation had fallen sadly behind the projected programme and that the labour was becoming exceedingly scarce due to the continuing demand at the Institute for skilled craftsmen and artists. It was therefore reluctantly decided to close the

Site during the holiday recess pending a further investigation with the landowner concerned to extend the open cast operations in the adjacent field. A spokesman for the Team said that a report on progress will be released as soon as any new information is to hand.

The Site. Photo by Beth Yates

BIDDLECOMBE RIFT CAVE

Pete Moody and Alison Hooper

Biddlecombe Rift Cave is high on the east side of Biddle Combe some 1,000 yards upstream and 200 feet aboth Knapp Hill Swallet. Situated near the Biddle Fault the cave is well positioned to provide the key to the local master cave. Promisingly, a local legend tells of a fire being lit in the cave entrance and smoke being seen to issue from a hole on the other side of Horrington Hill.

The cave is much drier than the Yochib and cavers will not find a wet suit necessary when exploring even the furthest reaches of the cave, though protection is required against the gorse needles inches deep in the entrance crawl. Beyond the crawl a chock stone must be squeezed past before entry to the first main rift is gained. The rift is 20ft high and descends steeply for 30ft until it becomes very narrow and chokes, a crawl at floor level however leads to the top of a second parallel rift. The rift is impassable to the left but to the right a mud pot enables the caver to reach the floor of the rift where, when we first visited the cave, a continuation could be seen beyond the mud blockage.

Returning to the cave in May 1978 we managed to dig through the choke in a few hours and made a discovery which nearly doubled the length of the system. Beyond the choke the rift rapidly increased in size and we were able to walk 15ft to where a cross rift was intersected. Unfortunately only the right hand branch went any distance and that only 6ft into a hopeless looking flooded choke. The search for Mendip's answer to Rock and Fountain continues.

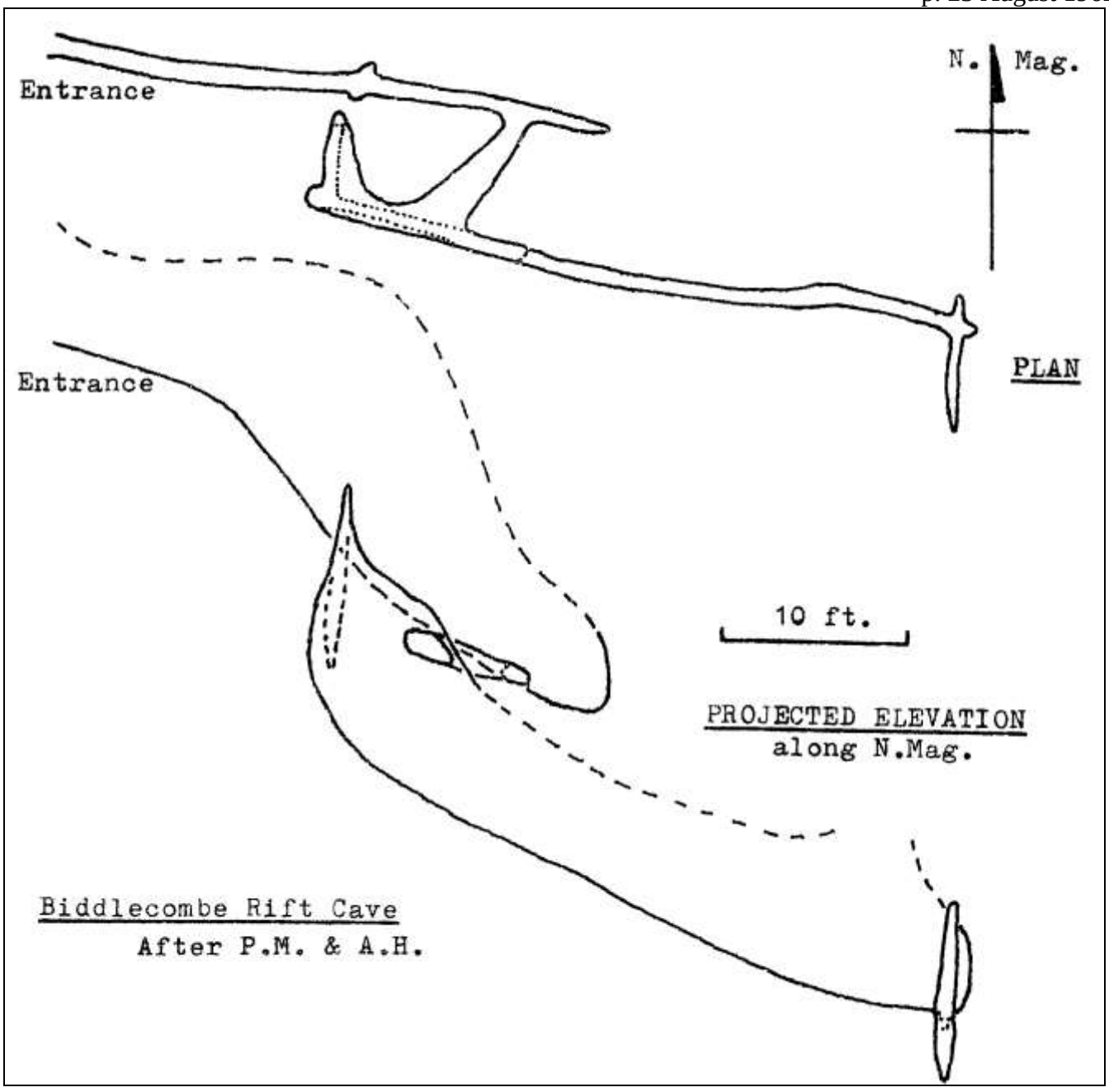
Further Notes:-

On the three occasions when we visited Biddlecombe Rift Gave and the nearby Symonds Mine we saw Greater Horseshoe bats. Two bats had been ringed by Roger Ransome, one in October 1972 at Wookey Hole and the other in January 1975 at Grey Gables Mine, Combe Down. Except for the sighting of the Wookey Hole bat in December 1972 again at Wookey Hole, neither bat had been seen since they were ringed. Please remember that Greater Horseshoe bats are an endangered species and care should be taken not to touch or disturb them.

Prospects of extending the cave further are not good. A draught was detected both when we dug through the choke and again when the survey was done. If any 'open' way exists it must be in the roof of the second rift near the cross rift. Unfortunately it is only a few inches wide some 8ft above the floor. The cave was surveyed to BCRA Grade 5 using the Wessex hand held Suunto clinometer and compass and Fibron tape.

Reference:-

Tucker J.H Some Smaller Mendip Caves BEC Caving Report Vol. 2
p. 23 August 1962



A PULSE WAVE TEST AT CHARTERHOUSE

In May 1978 a pulse wave test was conducted at Bristol Waterworks Charterhouse source, at the head of the Longwood valley. The test was primarily for Bristol Waterworks to assess the effect of the pumps at Charterhouse shutting down and releasing spring water into the swallet stream entering the August/Longwood Cave System. The pulse was also to be studied by the Department of Geography at the University of Bristol (now operating under the name of SINK) to determine the phreatic volume of the Longwood to Cheddar conduit.

The water at Charterhouse is derived primarily from the Lower Limestone Shales where it is abstracted by pump sets in a deep spring chamber. Some water is also collected from springs in the Old Red Sandstone. The water is pumped to supply the areas of Shipham, Yoxter, Charterhouse and Blagdon. This source is important because it yields a large volume (up to 4 Ml/d) of good quality water at a high elevation (reducing pumping costs). Originally the springs would have contributed to the swallet stream entering the August/Longwood Cave System. The depleted flow in this stream is now maintained mainly from higher springs in the Old Red Sandstone and from through flow on the Blackdown slopes. However, in common with the other Blackdown streams there is a rapid and flashy response to rainfall due to the development of saturation overland flow on the wet peats and a corresponding increase in the channel length.

The Geography Department liaise with Bristol Waterworks on a regular basis, and it was as a result of a SINK gauging station downstream of the Charterhouse sources that a sub-surface leakage of water from the spring chamber became apparent. When Bristol Waterworks pumps were shut off increases in the discharge of the swallet stream were noted which were independent of rainfall and often in a regular pattern. This water was not in fact recorded by the official Bristol Waterworks overflow gauge. Historically the pump sets rarely shut off, however, work is being carried out to improve the treatment system at the Station and as a consequence, more frequent and irregular shut-downs could occur. These may cause sudden increases in the volumes of water entering August/Longwood and could therefore cause problems to cavers. In fact apocryphal accounts of flash floods in the cave with not a cloud in the sky may relate to occasional previous stoppages of the pumps.

The Test Procedure

The test was carried out on 23rd May, 1978. At this time there was insufficient water in excess of supply requirements at the spring to provide a flood wave. However, west of Charterhouse there is a Bristol Waterworks borehole in the Lower Limestone Shales. This is not generally used because it degrades the spring. The borehole pump was, however, pressed into service to provide an increment of about 4 Ml/d for one hour in the discharge of the swallet stream.

In order to assess the effects within the cave system and to gauge the pulse in the Lower Longwood streamway, a party of U.B.S.S. cavers were stationed below the junction with Tributary Passage near the climb to the Oxbows. At the Cheddar resurgence the SINK gauging station behind the Cliff Hotel was constricted to increase sensitivity and Geography students monitored the First and Second Feeders and the standing water level in Sayes Hole. An automatic water sampler was installed on the lake outflow at Cheddar to take samples every 2 hours for tracer dye analysis.

The borehole pump was switched on at 12.30 providing 35.0 l/sec, the discharge at the SINK gauging station upstream of Longwood increasing from 3.1 to 31.7 l/sec in a period of minutes (Fig.1) (Note the errors in discharge measurement are probably between 5 and 10%). At 12.45 408 ml of 20% Rhodamine WT solution were injected at the gauging station. Most of the pulse bypassed the Longwood entrance blockhouse and sank at the timbered flood sink as a spectacular pink cascade. The pump switched off at 13.30 and discharge at the sink returned to its previous level by 14.00.

The pulse rapidly passed through the cave system and was detected in the streamway by the oxbow at 12.50 (Fig.1). The stage (water depth) increased to a plateau at +0.09m by 13.15. However, after starting to decline at 13.40, the water level rose again to +0.10m at 13.50, before falling exponentially to +0.02m at the end of observations. Tracer concentrations in the pulse at the cave sampling site rose gradually from 13.08 and then steeply to a sharp peak at 13.22 before declining rapidly to yield a very long tail. There was a minor shoulder on the tail at 13.55 following the previously mentioned increase in stage.

At Cheddar observations were continued until 22.30 on 23rd May. No evidence of the arrival of the pulse was detected either in these observations or on the stage recorder during the following weeks. However, dye was detected in the water samples commencing 20.35 27th May (Fig.2). Concentrations increased via a shoulder on the 27th to a plateau by 0.00 on the 30th continuing until the automatic sampler failed during the afternoon of 30th May. Dye was still present in hand samples until 20th June 1978. Dye recovery was 76.09g +10% (compared with 81.6g injected) and can be considered complete.

The week prior to the pulse test Bristol Waterworks had test pumped the Charterhouse borehole, discharging pumped outflow into the swallet. A step test commencing 7.00 on 16th May and ending at 19.00 caused a very small stage rise at Cheddar between 12.00 and 14.00 and a fall between 0.00 and 5.00 on 17th May. While on the 18th the pumps were started at 8.00 and switched off at 20.30 resulting in an increase at Cheddar at 12.30 and a decrease at 1.00. The stage increments at Cheddar were less than 0.005m and are consequently at the limit of detection of the installed water level recorder (Munroe IH 109). However, the delay is remarkably consistent between the tests varying between 4.5 and 5.0 hours.

Results

1. Evaluation of Potential Danger to Cavers

With the low water level at the start of the test, the pulse did not cause a hazard at any of the accepted danger points within the cave. However, this would not necessarily be the case during the winter where very much higher discharges occur naturally in the swallet stream. Certainly a 0.09m rise in water would be sufficient to close an acceptably 'large' air gap in the flooded streamway crawls completely. Cavers must allow greater safety margins than previously, particularly on sporting flood trips. Of particular concern is the problem of someone stuck in a squeeze, for instance at Wet Chimney or below the Showerbath. It is clear that in such situations prompt liaison with Bristol Waterworks by those involved will be needed to ensure manual override of the automatic pump cut-off.

2. The Pulse in the Cave

The pulse was transmitted rapidly through the cave system, as would be expected given the high gradients involved. It was transmitted more rapidly than was the dye (based on first arrival times) as kinematic waves travel faster than the water which produces them. The double form of the wave suggests that there were two major routes through the cave different travel times. As the Showerbath was dry the slower route may be via the upstream series from the sinks just above the access path to Long-wood. Using the area under the time/concentration curve and the dye mass injected, the discharge in the lower streamway can be calculated. It was 38.5 l/sec compared to 31.7 l/sec determined from the swallet gauging station. Some additional inputs may therefore be present, perhaps from leakage upstream of the highest known sink (as indicated by the 3.0 l/sec difference between the gauging structures) or through the Lower Limestone Shales.

3. The Pulse at Cheddar

The very long dye travel time to Cheddar is of interest. The first arrival travel time was 87 hours, compared to the Mendip Karst Hydrology Project spore travel time of 20 hours carried out under high discharge conditions. It is clear that very large differences in travel time between high and low flows will be of considerable importance for the prediction of swallet pollution at springs. The shape of the pulse is

very flat indicating considerable dispersion of the input dye pulse. In this test part of this flattening is due to the short duration of the pulse, as can be seen by the presence of a significant tail on the dye curve for the cave sampling site. A second reason for this could be that the total volume of the conduit includes considerable dead space short-circuited by the main flow path. Dispersion into this volume attenuates the dye peak, but the slow release of dye from this temporary storage maintains the dye concentration in the spring. It is intriguing to speculate on the nature of this storage - does it represent solutionally enlarged fissures adjoining the conduit, or merely a large cross-sectional tube with solution pockets? It is even possible that it could be a series of free air surface channels separated by deep large volume sump pools, such as we already know for part of Wookey Hole. The pulse wave helps in our interpretation here because if there was a significant vadose section in the Longwood to Cheddar conduit the pulse would be only marginally faster than the dye in arriving. This is clearly not the case, the pulse taking only 4.5 to 5 hours to arrive, equivalent to a dye travel time of about 5.50 to 6.25 hours. However, this delay must represent vadose passage otherwise pulse transmission would be instantaneous. If we obtain an estimate of velocity for the stream passage we can determine the amount of vadose passage beyond the Longwood sampling point. The velocity from the injection site to the Oxbow's sampling site was 533.5 m/hour using the time to peak of the dye pulse (this is a better estimate of mean travel time than time of first arrival and is used here instead of the pulse centroid because of the unsteady discharge conditions which were partially responsible for the dye tail). The cave continues to fall steeply to an estimated 157m depth and the travel time for this 100m length will thus be about 10 minutes, giving a total mean dye travel time of 47 minutes to the end of the cave. The gradient from here to Cheddar is 0.0118 (using the straight line distance) and assuming that velocity is proportional to the square root of slope (from the Manning equation) this would give an estimated vadose velocity at this gradient of 95.4m/hour. This estimate is higher than that calculated for the pool sampling site in the cave (using cross sectional area and discharge) of 4.9m/hour, but is greater than the mean travel time to Cheddar of l6.3m/hour (using the dye peak). It is therefore probably a correct order of magnitude figure.

Now given the 5.5 to 6.25 hour lag at Cheddar and subtracting the travel time to the known end of the cave the length of vadose streamway may be determined as between 453 and 525m. If we now guesstimate that cave passages are two times the straight line distances point to point only some 9% of the conduit to Cheddar is air filled. The simplest form for this vadose/phreatic ratio would be exactly the sort of thing found in the Swildon's streamway and Wookey Hole - a looping tube with the tops of some loops cut off by vadose trenches - Swildon's luckily is more vadose than phreatic whereas Wookey is more phreatic, and similar to Longwood.

What sort of passage size does the phreatic segment represent? As the pulse wave is transmitted instantaneously in the flooded sections, whereas the dye takes the average travel time of the water, the volume of water discharged between arrival of pulse and dye equals the volume of the conduit. Unfortunately we do not know whether the Longwood conduit feeds directly to Cheddar without junctions, or whether the whole of the Cheddar discharge passes through the Longwood conduit. Clearly these are extreme cases and the true volume may be calculated using some intermediate discharge. The Cheddar and Longwood discharges are 590 and 3 l/sec respectively, giving volumes using 99 hour difference between pulse and dye first arrivals of $2.10 \times 10^5 m^3$ and $1.07 \times 10^3 m^3$. These correspond to straight line conduits of 9.98 and 0.72m in diameter. As the Gough's Cave/Long Hole/Great Oones conduits are about half the diameter calculated, then the underground conduit may well be twice the straight line length. The abandoned Longwood conduits are, if anything, larger than the calculated volume, perhaps an indication of the reduction in Longwood flows since the start of abstraction. It is important to remember however, that conduit diameter is also controlled by the duration of active solution, not just discharge.

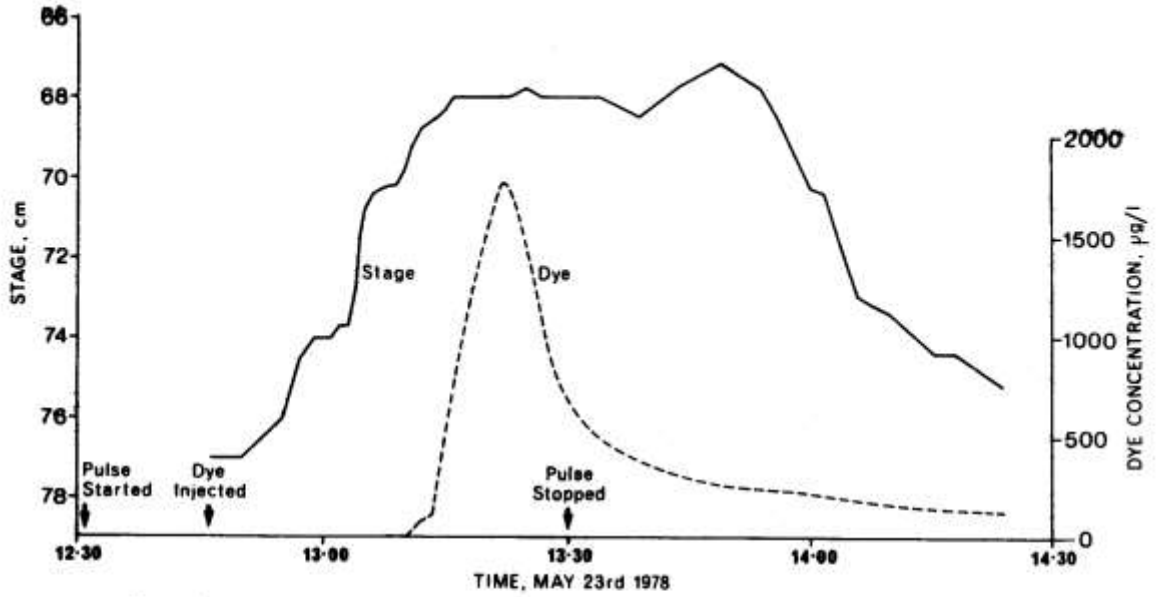


Fig.1 Stage and Dye Concentration at the Lower Streamway Sampling Site; Longwood Swallet

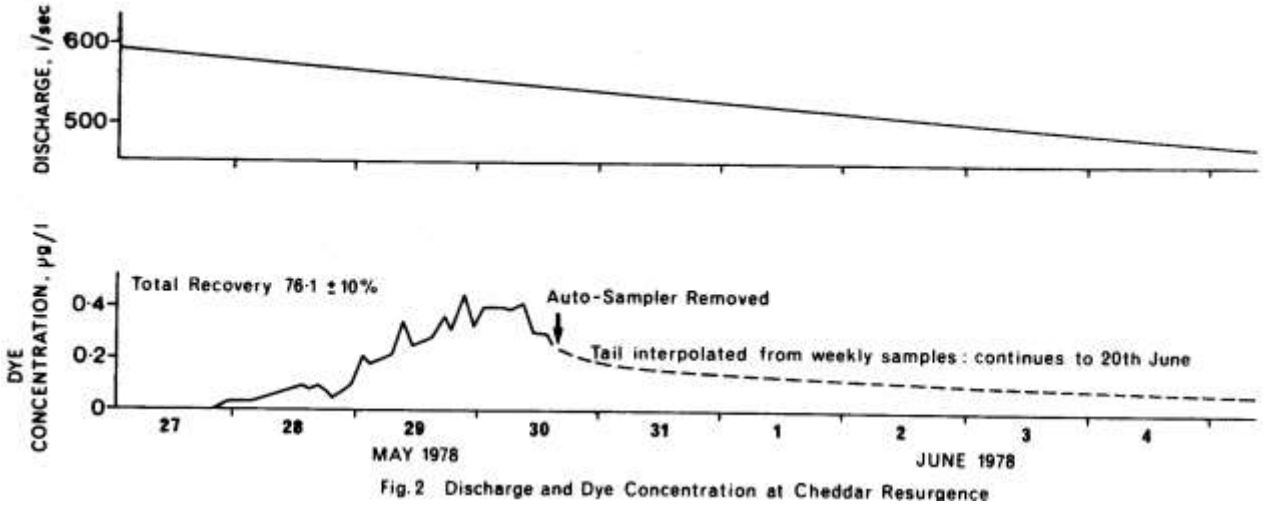


Fig. 2 Discharge and Dye Concentration at Cheddar Resurgence

Conclusions

The test has alerted both cavers and Bristol Waterworks to the problems of pump shut-down at Charterhouse. However, it also yielded useful information which suggests that the major part of the Longwood conduit is water filled and therefore has limited potential for further long sections of streamway to be discovered.

Acknowledgments

We would like to thank Bristol Waterworks Company and Wessex Water Authority for permission to carry out tracing tests at Charterhouse. Bristol Waterworks Company also permitted the synchronised pumping of water for the test pulse wave, making the experiment possible. Thanks are also due to those who assisted with the field work; Hans Freiderich, Duncan Braidwood, Chris Smart, Thawley Sweetman and Phillippa Fowler.

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Autumn 1978

SURVEY SALES

Alterations to the list published in WCC Journal No. 167

Additions:-

Cave	Scale	Date	Grade	Price
Flower Pot (Mendip)	1:200	1974		10p
Sludge Pit and Nine Barrows (Mendip)	1:200	1974	5C	55p
Quaking House Cave (Milverton, Devon)	1:100	1963		30p
Carlswark Cavern (Derbysdhire)	1:600			25p
P8 Cavern-Jackpot (Derbyshire)	1:800			10p

Price Alterations

Mendip	New Price
Blackmoor Flood Swallet	15p
G.B. Cavern	35p
Longwood/August	70p
Swildon's Hole	70p
Thrupe Lane Swallet	10p

Yorkshire

Sunset Hole (Chapel-1 e-Dale)	15p

Orders to Maurice Hewins, 31 Badshot Park, Badshot Lea, Farnham, Surrey. Please send 40p to cover postage. If this is too much, a refund will be sent. Unfolded copies of the larger surveys cannot be guaranteed unless a cardboard tube is sent with the order. Please note that the surveys of the more frequented Mendip caves are kept at Upper Pitts for sale.

SSSI REVISION PROGRAMME. PROPOSED CAVE SSSI - CSCC AREA

G. Price and R. Whitcombe

1. Cheddar Catchment This includes Manor Farm Swallet, Longwood Swallet/August Hole, Rhino Rift, G.B. Cave, Tyning's Barrows Cave, Gough's Cave, Cooper's Hole, Long Hole, Reservoir Hole and associated caves. Note: This is part of the Cheddar catchment covering an area of approximately 9 sq. km. and includes all the major influent caves between Tyning's Farm and Velvet Bottom and all the associated active and fossil resurgence caves.

2. Wookey Hole Catchment This includes Swildon's Hole, Eastwater Cavern, St. Cuthbert's Swallet, Wookey Hole Cave and associated caves. Note: This is part of the Wookey Hole catchment covering an area of approximately 10 sq. km. and includes all major and some minor feeder caves in the Priddy area between Priddy village and the Hunters Lodge.

3. St. Dunstan’s Well Catchment This includes Stoke Lane Slocker and Fairy Cave Quarry with associated caves. Note: This is part of the St. Dunstan’s Well catchment covering an area of approximately 4 sq. km.

4. Thrupe Lane Swallet Note: This is a small area covering the known extent of the cave only.

5. Lamb Leer Note as 4.

6. Holwell Cave Note: As 4. This is included for reason of being a small isolated cave in Devonian Limestone and is the only known British cave where anthodites, a special crystal form, occur.

7. Banwell Bone Cave Note: This is included for reason of containing a Pleistocene assemblage of well-preserved mammalian bones assigned to 21 species. The area is to cover the known extent of the cave and extended to include Banwell Stalactite Cave if possible.

8. Bleadon Cave Note: As 4. Included to be a representative example of Western Mendip caves.

9. Pinetree Pot Note: As 4. This is included as an example of the isolated truncated fossil caves found on Central Mendip. Hunter’s Hole is thought to be a better example and should it not be possible to include this in the Wookey area it will be substituted for Pinetree,

10. Burrington Combe and Blackdown This includes Read's Cavern, Rod's Pot, Sidcot Swallet, Goatchurch Cavern, Lionel's Hole etc. Note: This is part of the Rickford/Langford catchment covering an area of approximately 1.5 km. This is a borderline case and may have to be excluded.

REVIEW

CAVES OF SOUTH WALES BY TIM STRATFORD [SWINDON SS]

The longer one remains active the more guide-books one is likely to read and the more critical one's appreciation. Let me begin then, by stating that this guide is a welcome addition to the collection of any caver active in the district. Mr Stratford has produced a necessarily original booklet (sold in Bristol at £2.75) which describes in much greater detail than the precedent 'Caves in Wales and the Marches' (l0s/6d. in 1967) the major systems of which 91 seem to exist, including Otter Hole. I was pleased to see that Craig-a-Ffynnon, whose spelling and therefore pronunciation appear to confuse Mr Stratford as much as they do the rest of us, also finds a space.

Having dispensed with the usual niceties and falsehoods ("Welsh caves are remarkably well preserved despite the fact that there are fewer access problems than anywhere else in Britain"), we proceed to the real substance of the guide, set out traditionally by district. This is where the author may be seen to falter, though one has to look carefully.

The South-East: This consists mainly of Otter Hole, given Grade V. The description is not bad but tends to convey unnecessary detail; the drainage pipe inside the entrance is not a permanent feature and the 2nd Choke is treated vaguely - as unguided first time explorers will soon discover. In my opinion the grade of severity is not objective.

Clydach Gorge: The detail is adequate though a more precise section on the further reaches of Craig-a-Ffynnon would have been valuable.

Llangattwg 'Scarp: Mr Stratford finds squeezes everywhere! In addition to the justifiable squeezes in Darren Cilau there are two (flat out) in the entrance passage of Agen Allwedd, another entering Southern Stream Passage, yet none it seems in the 4th Choke or Coal Cellar (isn't somebody in for surprises?)! Anyone "climbing to the top of the 2nd Choke" in Aggie deserves to get lost and the fixed rope beyond the Keyhole Chamber traverses is not known to me (which is not to say much of course). Of special interest is the encouragement to view the selenite "from beyond the tapes". Generally I consider this part of the text very poor.

Central Northern Outcrop: No major systems are excluded but the list of "Lesser Sites" is abbreviated to a hopeless extent. In particular, the deepest cave, Ogof Garn-y-Bica, is neither listed nor described.

Sychryd Gorge and Hepste: This is a masterpiece of misinformation. We see Blaen Hepste Holes plurally described as CDG finds but at the grid ref. of SVCC's Blaen Hepste Hole, not a dive and of the same length. CDG also get credit for Moss Risings (found by J. Wintle and named by this reviewer).
I don't understand how such things can happen by accident!

Ystradfellte: This is tolerably covered - from which I personally draw inference on the author's caving habits.

Swansea Valley: Ignoring DyO, which some of us find an 'access problem', this portion of the guide is quite presentable, though it's odd to see SWCC controlling a Wessex discovery! No attempt is made on a description of the OFD2-1 connection (too tight?) and one notes with interest that permits are required for entry to all parts of the cave. On the other hand, parties making an exit from OFD1 don't need a cave leader, certificated or otherwise.

Gower and The West: Generally the text is an improvement on the old guide but some minor sites and all caves on Caldy Island are overlooked although named.

I look forward to a revision of this guide - with a different proof-reader and/or typist - I should have been unhappy about the misprints. That apart, it isn't a publication which threatens to disintegrate after the hallowed fashion of Thornber's P.U. and looks well set to become the new ‘bible’ for South Wales.

R.G.L.