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## CLUB NEWS

Most of us like to get on with our caving and find it helpful, from the point of view of safety and socialability, to belong to a club. Otherwise organisations, 'bodies', voting and the rest don't bother us. Most of us do not see ourselves as British cavers or part of an ever-growing recreational and sporting lobby in the nation. Strange, then, that a National Caving Association should be getting off the ground and not surprising that there are several snags. The meeting of the Southern Council of Caving Clubs, held at Bristol on January 10th is reported in this issue of the Journal and the Wessex's views on one of the snags - voting - were presented in the December issue. For years the C.R.G. and B.S.A. have been national bodies representing cavers, but generally on an academic plane. Now that some of the thorny issues of caving, such as access, need national action the N.C.A. will be far more of a cavers' parliament. If it is to be a powerful parliament and one which we feel we can subscribe to and obey in confidence it must not be subject to the personal and regional small-mindedness which so besets caving. As a very powerful club we can be calm and generous over most topics which would raise the ire of organisations feeling less secure. However, it is time that all members had views on the matter and expressed them. Do we need the N.C.A.? Must it be unanimous before decisions are taken? Will small pressure groups deliberately obstruct progress? The Club partly compromised its minority views on voting at the C.S.C.C. so as not to slow progress. Have we only hastened disaster?

Keys are now available for the H.Q. to those who want them. Contact Carl Pickstone at Upper Pitts, having ready a non-returnable deposit of 5/-. The Club will not make much profit on this as the income from keys will have to help pay for the replacement locks when these become necessary. Owners of keys can defend their interests in discouraging the forging of keys as the locks will be changed immediately there is evidence that this has occurred.

The Committee is considering alternative venues for the next Annual Dinner. It is felt that this ought to be held in the Mendip area, probably hiring a hall and a firm of caterers. We are making enquiries. If members have any bright ideas would they contact the Secretary.

The Balch Memorial publication, 'Pioneer Under Mendip', the magnum opus of Willie Stanton et.al. is still being sold. Members who have not yet bought their copies are advised to do so. The price has had to be increased to 12/- as costs of printing have risen. As usual, fortune has smiled on those who bought their copies early, but the early sales have helped us pay off the first part of the bill.

We now have a refuse disposal service at Upper Pitts - the collection being on alternate Wednesdays. Dustmen nowadays are very selective in what they will accept. Please burn all combustible rubbish and reduce bottles to fragments. The work at H.Q. goes ahead slowly, done mostly by people such as Carl Pickstone. All volunteers are welcome and a long list of jobs remains to be done. The supply of Green Shield Stamps and cigarette coupons seems to be flowing less freely. We still need these. Please send all you have to Jenny Murrell, Top Flat, 1 Clifton Hill, Bristol.

A list of future activities appears overleaf. Could we emphasize a plea to all members of the Club to try to attend one club meet annually and if possible LEAD one as well? These trips are essential for beginners. Looking further ahead there is a possibility of trips to the States this year, and to Jamaica next, if enough support is found. If interested would members write to Don Thomson or Jenny Murrell.

We would like to enlarge the Club collection of photographs, especially photos of club events. Tony Phillpott is collecting and collating these. Would you send him copies of interesting or historic photos or negatives.

Jim Hanwell has handed Editorship of the Journal to Malcolm Newson. Jim's efforts have helped make the Wessex Journal a thoroughly respected publication, worthwhile in its own right, let alone as an essential organ of the Club and its news. The new Editor emphasizes that contributions of news are essential - he can follow up the leads but duties in Bristol and shortly Oxford don't allow him to have his ear quite so close to the ground as the redoubtable J.D.H. Otherwise there will be a sell-out to the Karst Police.

#### New Members

M.B. ROBERTS, The Tunnel House, Coates, Cirencester.  
S.T. HOWES, Anlaby, Povey Cross, Horley, Surrey.  
A. HALL, 1 Hazelbury Road, Knowle, Bristol 4.  
P.J. WINTER, 17 Dennar Park, Hengrove, Bristol BS14 9BY.  
H. DARE, 2 Sonia Court, Harrow, Middlesex.  
Mrs. Amanda GOVERD (Joint Member), Longacre, Hursley Hill, Whitchurch.  
J.G. JOLIFFE, 63 The Drive, Wellingborough, Northants.  
R.M. WEST,  
Mr. and Mrs. R.W. DAY, 24 Furnwood, Bristol 5

#### Changes of Address

G. REYNOLDS, 9 Leys Road, Wellingborough, Northants.  
BOB PYKE, 22 Pinner Road, Northwood Hills, Middlesex.

Members are reminded that whilst the Club's third party liability insurance policy covers members and their guests when caving (including free diving short sumps) the policy does not cover them when diving with equipment or in open water. Members should arrange their own insurance cover for such activities.

## CLUB MEETS

<u>Saturday, January 31st</u>	Umpteenth Night Bridge, Upper Pitts.
<u>Saturday, February 7th</u> *	11.00hrs. Swildons - Round Trip Leader: I. Jepson, 7 Shelley Road, Beecham Cliff, Bath.
<u>w/e March 7/8th</u> *	South Wales. Leader: Tim Reynolds, 23 Camden Road, BRISTOL BS3 1QA.
<u>Easter w/e</u>	Yorkshire. Leader: Alan Surrell, 216 Evesham Rd., Headless Cross, Redditch, Worcs.
<u>Wednesday April 15th</u>	Lamb Leer. Leader: P.Gibbs, 40 Hollywod Road, Brislington, Bristol 4.

## PROVISIONAL TRIPS

<u>End May / Early June</u>	Devon. Leader: Dr. D.M.M. Thomson, Pinkacre, Leigh-on-Mendip, Somerset.
<u>Spring</u>	M. Dewdney-York's fancy lightly turns to thoughts of Portland Caves. Oddset, 19, Alfred Place, Cotham, Bristol.
<u>Spring</u> (evening)	Redcliffe Caves. Leader: Jenny Murrell, Clifton Hill, Bristol BS81BN

\* Denotes wet suits and nife cells essential.

## C.R.G. SYMPOSIUM ON CAVE SURVEYING

The Cave Research Group is organizing a one-day symposium in conjunction with the Dept. of Adult Education, Leicester University. It is to be held on March 7th 1970 at Vaughan College, Leicester, starting at 10.30 am. The following papers will be presented:

D. Brook	History and practice of surveying in N. England.
B. Ellis	The Survey Unit - equipment in use at Mendip.
P. O'Reilly	High-speed surveying in Ogor Ffynnon Ddu.
D.J. Irwin	The presentation of surveys of complex systems.
S.J. Collins	Maps to assist the caver.
W. Birchenough	Electromagnetic induction as an aid to cave surveying.
Dr. A.C. Waltham	Cave survey interpretation.
Dr. O.C. Lloyd	Underwater cave survey.
J.D.Wilcock/F.K. Hanna	Panel on computer use in surveying.

Questions and comment are welcomed after each paper. The fees are 15/- (inc. morning coffee and afternoon tea), reduced to 10/- for fulltime students. For details and application forms write to:

The Secretary,  
Vaughan College,  
St. Nicholas Circle,  
LEICESTER LE1 4LB

Closing date for applications 28th February.

WESSEX CAVE CLUB SURVEY SCHEME list Nov: 1969

Balch Cave - Plan & Cross sections (2 sheets) .....	8s -	0d
Brownes Hole .....	2s -	0d
Caves of Cheddar Gorge .....	5s -	6d
Coopers Hole .....	4s -	0d
Eastwater Swallet (2 sheets).....	10s -	0d
G. B. Cavern.....	4s -	0d
Goat church Cave .....	3s -	0d
Holwell Cave.....	3s -	0d
Lamb Leer Cave .....	4s -	0d
Longwood / August - Sheet 1 (Complete Cave) .....	6s -	0d
Sheet 2 (Upper series only).....	3s -	0d
Sheet 3 (Section only).....	4s -	0d
Pine Tree Pot .....	4s -	0d
Quaking House Cave.....	3s -	0d
Reads Cavern.....	2s -	0d
St. Cuthberts Swallet Plan with Addendum .....	5s -	0d
Section .....	4s -	0d
Stoke Lane Slocker.....	5s -	6d
Swildons Hole .....	5s -	6d
Ubley Hill Pot.....	3s -	0d
Pate Hole, Nr. Appleby, Westmorland.....	3s -	0d
Threaplands Cave, Cracoe, Yorks .....	4s -	0d
Washfold Pot, Selside, Yorks.....	4s -	0d
Yordas Cave, Kingsdale, Yorks .....	3s -	0d
West Kingsdale System, Yorks .....	5s -	0d
Little Neath River Cave, South Wales .....	5s -	0d

(PRICES ARE SUBJECT TO REVIEW)

The Surveys are posted folded in a 16" x 12" Envelope. The prices DO NOT include the cost of postage and packing the extra cost for this is as follows: -

1 Survey	1s - 0d	5 or 6 surveys	2s - 6d
2 Surveys	1s - 6d	7 to 10 surveys	3s - 0d
3-4 Surveys	2s - 0d	over 10 surveys	3s - 6d

Also available: -      Reprint of Vol. One W.C.C. Journal @ 7s - 6d  
                                  Vol: 8 Supplement (Hillgrove Log Reprint @ 5s - 0d  
                                  Postage and packing 1s - 6d each extra.

Some back Numbers of the Journal are also available at 2s - 6d each Plus postage as for Surveys.

Obtainable from R.A. Philpott, 3 King's Drive, BRISTOL BS7 8JW.

Brenda Willis is in charge of Journal Distribution and can provide back numbers.

## COUNCIL OF SOUTHERN CAVING CLUBS: A.G.M. 10/1/70

If the economic planners of Britain are worried about the decline of regional consciousness in Britain they should have been at this meeting. The 'Wogs Begins at Mangotsfield' brigade were out in force, whether as blatant and defiant speeches from the floor or in the more articulate and specious tones of our better-educated friends. However, not without cause was this display of Southern might - for on many issues views are as different inter-regionally as the limestones which wall the caves. Luckily personality clashes were maintained at a very gentlemanly level by the good work of Chairman Hanwell, who played God the Son to Oliver Lloyd's God the Father at the front.

O.C.L. began with the Secretary's Report in which he welcomed new clubs 'who were beginning to make themselves felt', including the Bath Caving Group, who with the more senior Exeter University Speleos and the Wessex seemed to be the best represented. The Council now has 60 constituent clubs. Attendance at the meeting was around 50 persons! During the year the Committee had sorted out trouble over access to Cheddar caves, produced a handbook (largely thanks to Eric Catherine) and had been represented at a meeting of area planners on the topic of quarrying and caves.

The Hon. Treasurer's Report was then given, after taking breath by ..... O.C.L! Roy Jenkins obviously cannot hold a candle to the wizardry of Lloyd. Who, as Howard Kenney interjected, could have got the books balanced a year early? (the audit had been dated January 1969 by mistake.



' I HOLD THE FUNDS OF SEVERAL  
ORGANISATIONS IN BANK ACCOUNTS  
BEARING MY NAME AND FIND IT  
A VERY CONVENIENT ARRANGEMENT '

- O.C.Lloyd

There then followed over an hour of debate on whether the National Caving Association should include in its constitution unanimous voting or the 75% majority. O.C.L. introduced the view that we in the South were known to support unanimity - in contrast to all other bodies represented on the N.C.A. A lot of debate proceeded before Jim Hanwell was asked to explain just what both terms meant! 'Unanimity' means that a motion is passed if nobody votes against it or abstains in which case they must veto it in which case it doesn't matter but really it does all the time! Yes-friends, it's as simple as that! More seriously, the division between the procedures rests on whether a minority view should be allowed to halt the passage of a motion or merely be obliterated as a couple of raised hands in the 'Voted Against' column.

Don Thomson and Mike York were concerned that minorities should not be over-ruled. Since the main function of N.C.A. would be to sort out cave access the decisions of other regions about access to Southern caves could ruin the arrangements we had already instigated for our own area. We should then have no voting power to influence such decisions without unanimity voting. Laurie Galpin, playing a Michael Foot at the back, kept interjecting that the Mountain Club had instructed him to veto unanimity at the Southern Council. If he hadn't looked so chuffed every time he interrupted proceedings it is doubtful whether Bob Lewis would have drawn his attention to the fact that Southern Council reps on the N.C.A. would then do just the same in favour of unanimity (though Bob's Severn Valley had decided against unanimity). Galpin's attitude explained to all the obstructive power of The Few under unanimity.

The discussion reached Westminster-like degrees of raggedness before Chairman Jim managed to get votes for a proposal that there should be 75% majority rule for all issues except constitutional changes, finance and admission of new members. There was a proposal that unanimity should prevail for these but Don Thomson proposed a (think of a number!...) 90% majority for these - and the amendment was passed. At no stage did L. Galpin (Welsh Nat. member for N. Staffs) exercise the veto.

After tea some discord between the members and Ben Lyon was voiced. In the view of many present he had started to run the British Association of Caving Instructors according to the best laid rules of the Third Reich. The Scouts seem especially alienated since they have their own instructor scheme.

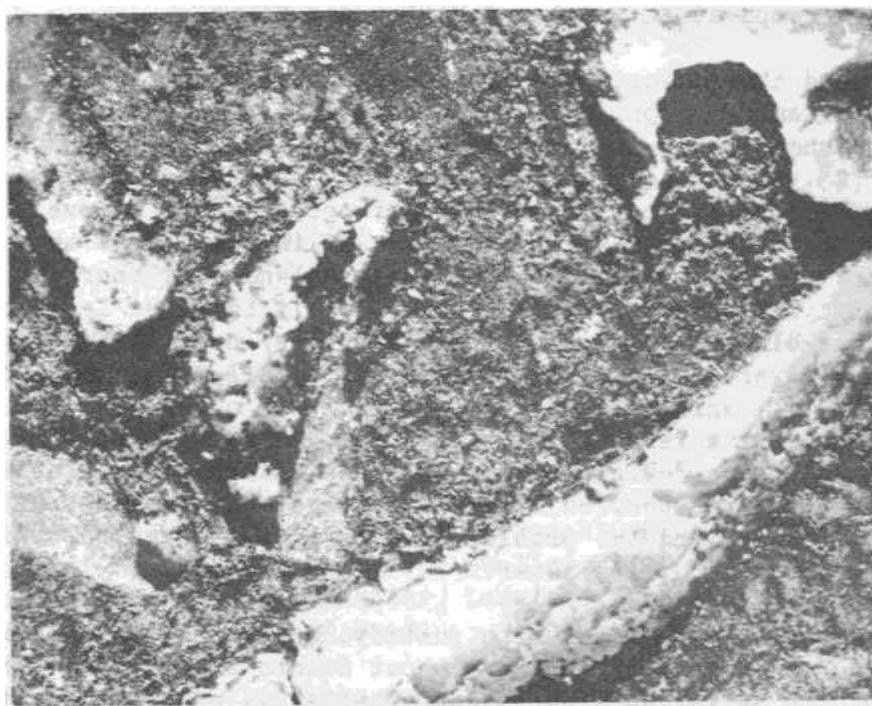
The C.S.C.C. then decided they could afford to act as hosts for the N.C.A. in October. Oliver was elected as Hon. Everything again, everyone approving enlightened despotism in a world as obviously and inherently anarchistic as cave politics.

Under 'Any Other Business' we had the most cogent speech of the afternoon. Howard Kenney gave details of how the formation of a limited company by the C.S.C.C. could secure, by purchase, the access to any cave which was offered for sale. In spite of a

quotation of £10,000 for Stoke Lane the Committee was instructed to investigate further. Poseidon here we come!

Access worries to Box stone mines were eased, as were those about a bog on Priddy Green, (one can just imagine a demonstration against that one!). However, the question of access to G.B. brought exchanges between the underprivileged Severn Valley (Bob Lewis) and Tony Knibbs of the Charterhouse Caving Committee. The latter asked if those who wanted better access to G.B. would wait until the U.B.S.S. (one representative present!) had sorted out the licence clauses relating to leadership, digging etc.

The meeting ended well after 6 pm., and the more stropky members went away to start work on a new caving magazine called 'Dissent'.



Continuing the caving quiz material started in the last Journal with cave shapes this photograph may test you. Is it an aerial of Mendip in the snow?

In fact it shows that the siliceous fossils you see protruding from cave walls are at least partly eroded themselves (see pitting on white areas). Since they are insoluble in most conditions they must have been eroded mechanically. Why do they still protrude?

## In Defence of Suunto Surveying

by

Peter Standing

Two rather unfavourable reports on Suunto surveying instruments have appeared recently in Mendip caving literature. Wigley (1969) has compared the performances of Suunto and Brunton instruments in surveying a cave in Pocohontas County, West Virginia, whilst Ellis (1969) has given the results of surveying an experimental closed traverse with Suunto instruments, a prismatic compass and an Abney Level, and the Survey Unit. My colleagues and I have been using the Suunto instruments for over a year now in the Little Neath River Cave and elsewhere. We consider them to be far superior to the R.A.F. hand bearing prismatic compasses and Abney Level previously used by the U.B.S.S. Although I have not run any controlled trials of Suunto instruments I feel that the results of a year's practical experience of them may be of more value to the reader than the short comparative trials of Wigley and Ellis.

Wigley used the expensive Tritium lighted Suunto compass (KB 14/360 RT) and clinometer (PM 5/360 PCT) which cost £10. 10s. (£10.5) each. We have used the cheaper non-illuminated models KB 14/360 R (£6) and PM 5/360 PC (£8. 10s) which can be read easily under the light of a Nife headlamp. With a little practice it is not necessary to remove the lamp from one's helmet even for the clinometer. It is quite true that Suunto compasses must be read in a horizontal position and that there is some loss of accuracy in taking bearings along steeply inclined legs, but this is equally true of prismatic compasses unless they have a pivoting prism. Averaging out forward and back bearings along such legs reduces possible errors considerably and of course the surveyor can often overcome the problem by including a vertical limb in his traverse. Fogging of the eyepiece interior caused Wigley to abandon his underground trial after only 6 legs but it has occurred only once amongst our two sets of Suunto instruments. Fogging and the problem of waterproofing can be overcome by modifications I shall outline later.

Ellis seems more concerned with justifying the use of the survey unit than with enlightening Mendipers about Suunto surveying. I have no experience of the survey unit but accept that it is a more accurate method of cave surveying than hand-held instrumentation. However, Ellis' own figures show total misclosures of around 1% for all three methods tested and a margin of error between the Survey Unit and Suunto instruments of only 0.2%. If his test figures were infallible I would accept a 0.2% loss of accuracy in favour of the much greater speed and versatility that hand-held Suunto instruments offer over a tripod system. In practice I have obtained misclosures well below 1% and similar results have been reported from the north.

Three modifications can be made to make Suunto instruments more suitable for underground work:-

1. The circumference and central vent of the perspex cover should be sealed with Araldite or other adhesive. This will prevent water getting under the cover (which occurred in Wigley's test).
2. A small piece of clear book covering or some similar transparent material should be stuck over the eyepiece chamber with Evostick. This seals off the eyepiece and prevents water and mud from getting on to it. Since it is flush with the surface it can easily be licked clean if necessary.
3. The leather cases provided are not suitable for repeated immersion and are best replaced with home-made neoprene ones.

Finally I would urge all surveyors to try Suunto instruments for themselves. They are not the perfect answer to cave surveying but their small size and robust structure make them ideal for survey under difficult conditions. The speed with which they can be read is important if time is at a premium, e.g. on a diving trip or an expedition, and their accuracy is more than adequate for a Grade 5 survey.

#### References

- Wigley, T.M.L., 1969, 'Field Test Report: Suunto Compass and Inclinator',  
W.C.C. Jnl. 10, (125), 382-4.  
Ellis B.M., 1969, 'The Suunto Compass and Clinometer'  
S.M.C.C. Jnl. 4, (7), 8 - 10.

#### Water Tracing Begins Again

Tim Atkinson is at present doing the analysis on a new series of Lycopodium spore traces - this time to try and sort out the catchment divide between the north and south flanks of Mendip in the central area. The swallets traced were Blackmoor (Nordrach), Pine Tree Pot, Waldegrave, Vonpitt Farm, Bowery Corner and Vee Swallet. The risings monitored were Wookey, Rodney Stoke, Cheddar, Langford, Rickford, Compton Martin, Sherborne, Harptree and Chew Head.

It is important that this demarcation is made - it was very important at the time of the Nedge Hill pollution trouble. The underground catchments do not always correlate closely with the surface contours.

Tim has been delayed in the tracing programme by the slow times recorded for spores to emerge after last January's Hillgrove trace. The results are to be published as usual, first in the journal and later as part of an occasional publication of the club or with some academic journal.

## The Ruritanian Karst Hydrology Expedition to England, 1969

by Dave Drew

To most Ruritanian cavers the little country of England, lying between Ireland and France, is simply an obscure west European state about which little is known. Ruritanian expeditions venture further and further afield yearly, and many of our cavers have driven across the country en route to the major caving areas of North Wales and Sutherland. England itself has been regarded as largely unrewarding to the speleologist.

This past summer my wife and I and several very experienced caving friends decided to spend three weeks investigating the caving possibilities of England. Before departing we perused the geological map of Britain in the Reader's Digest Atlas (apparently one of the few attempts made by the government at Mapping their country). To our delight we discovered several areas of limestone shown on the map though in many cases they were located in remote, inaccessible areas in the far north of the country. Finally we elected to visit a small area of limestone upland near the west coast fishing town of Bristol. This area, known locally as the 'Mendips', seemed to us a promising district in which to begin our search for caves. Before departing for England we wrote, requesting information, to the few local people of whom we had heard - men such as Dr. Buckland, Dr. Boyd-Dawkins and Mr. Rowse. However, in no case did we receive a reply, this presumably being due to government censorship of letters.

Forty-eight hours of hard driving brought us to the province of Somerset and, by dint of following obscure country tracks not marked on our Reader's Digest map of Britain, we managed to find our way on to the plateau-like summit of the Mendip Hills. The landscape here was indeed totally unlike anything to be seen in Ruritania. The bleak, treeless, waterless tableland stretched away in all directions, empty save for a few isolated dwellings, the inhabitants of which obviously scratched a meagre living from the stoney earth. Little wonder that the English have taken such little interest in their caves!

After a day in the area it became obvious that we would need the services of a local guide were we to find any cave entrances. Driving from the hamlet of Priddy we noticed a small, rather tumble-down hut a short distance from the road, and close to the local inn. Seeing smoke rising from the chimney and supposing this to be some sort of workers' communal dwelling, we decided to seek help there. Once inside and having overcome our initial revulsion at the pervasive odours of stable food and having accustomed our eyes to the gloom, we could make out several unkempt and ragged figures huddled around a primitive stove.

They seemed dazed and half-asleep - doubtless due to the effects of the near raw spirits the peasants consume. When we finally made it understood that we wished to visit caves

they exhibited signs of considerable apprehension, backing nervously away from us.

Seeing little hope of help from this quarter we moved further along the road to a second, much more impressive commune. This had the appearance of being brand-new and was presumably part of a Government rehabilitation scheme. However, all the workers in this building were still asleep when we arrived and it was mid-afternoon before we finally roused one man and persuaded him to act as our guide.

Thereafter we made excellent progress as our guide took us to many cave entrances on the plateau top, and large springs at the foot of the hills. Of the caves visited, two especially linger in the memory. The first, located in the fields near Priddy, was surrounded by a quaint stone round-house, the functions of which were unknown to us.

An enormous stream poured into a pipe at the base of this Structure but we contrived to find a dry entrance a few feet above the sink into which, after several hours' digging, we were able to lower ourselves.

The cave proved negotiable via a viciously tight crawl through boulders, barely 30cm. high in places. A considerable stretch of such exhausting passage lead us back to the torrent flowing in a narrow passage. After what we estimated to be 4km. of such tortuous progress the passage roof abruptly lowered and we were forced to immerse ourselves in the icy torrent to pass the obstacle, only to be confronted just beyond with a yawning black abyss at our feet, into which the stream poured. We dropped stones into this awesome pit but failed to hear them land - thus deducing the chasm to be at least 200 metres deep. Recognising our limitations with such a small party we made our weary way back to the surface, having been underground some 18 hours. Our guide had likened the huge shaft to a well and thus we named it the 'Well' in English dialect.

A second cave visited, lying further to the west in the hills was curiously located in a large hollow in rough fields,, The entrance was completely covered with another puzzling house, but in this case a great iron gate sealed the entrance and incredibly a second padlocked gate could be seen inside! At a loss to understand the reason for these structures we interrogated the guide, but he could only babble incoherently about something called a 'Waterworks' of which he seemed in great fear. Eventually we came to realise that a 'Waterworks' must be a legendary monster which the local peasants believe to inhabit this cavern. Laughingly we assured our guide that no such beast could exist and, determined to allay his dread, we fetched our digging equipment and began to demolish the house to prove there was no 'Waterworks' inside. However, this had the opposite effect to that which we had intended - for, crazed with fear, our guide raced away across the field and we did not see him again. In the event our efforts proved fruitless, for having removed the gates it was apparent that the small, nearly vertical cave entrance below was far too restricted to permit the entry of a man, let alone the egress of

the legendary 'Waterworks'!

Shortly before the end of our visit to England we alighted upon a most remarkable scene. Close to the new Government communal dwelling we perceived three men apparently engaged in excavating a vertical shaft through solid limestone and using laboriously primitive methods.

Greatly intrigued by this, and offering them a packet of Ruritanian cigarettes to win their confidence, we asked them what they were doing. One of their number, a local schoolmaster, could read and write and thus by means of sign language and diagrams he gave us to understand that they intended to drive their shaft to the centre of the hills thereby encountering enormous galleries through which they could walk to emerge at one of the springs at the foot of the hills. Much amused, we moved on.

Thus ended our visit to England. Needless to say we shall return again next year with a larger and better equipped team and hope to be able to report further exciting finds in this remote outpost of speleology.

(We have great pleasure in publishing this fine report which originally appeared in the official magazine of the Ruritanian tourist agency 'InJoke' - Ed.)

## Some Styrian Caves

by Derek Tringham

The small caves in the vicinity of Gams in rural mid-Austria were subjected for two weeks to the concentrated attention of six members of Surrey University's potholing club.

Our main hope for speleological success had been in the Bergmandlloch where Austrian cavers had passed the squeeze which previously blocked progress upstream. On the first excursion we found this squeeze led into a rift chamber, well decorated, with deep water and a four metre waterfall cascading from above. This was easily chimneyed and with high hopes we turned a corner in the narrow passage. There was a way on but stal blocked the way. A couple of raps with a piton hammer removed the obstruction only to reveal a couple of metres of stream passage. A tight 'S' bend was immediately followed by a 99% blockage of the passage by the heavily stalagmited rift walls. Explosive would be the only way to beat this obstruction - a strong draught indicated that this might be worthwhile. The two of us who had remained in the cave then hastily retreated in the wake of colleagues who had previously left with stomach pains.

The next day we returned to try and find a high-level bypass to the block. Although we could climb to a height of fifteen metres the only possibilities were horizontally with hammer and chisel or on upwards with trained limpet dwarfs! We possessed neither, so after sightseeing in the recently-explored upper passages (see Wessex Journal 119, 10, 148/9), we left the cold, wet, tufa-slime covered but worthwhile cave.

There followed a day of cave-hunting in a nearby gorge, where steep slopes and loose boulders nearly claimed one of our members for chamoix fodder. He failed to watch three hurtling boulders and limped back complaining that 'he would have been alright if they hadn't hit a tree and changed route'.

A sightseeing trip was made to the Beilstein ice cave, where a lot of boulder moving resulted only in cold fingers. There were considerable draughts. The ice was far superior to that seen the previous year and the cave was agreed by all to be well worth the long walk, though our drivers had doubts about the experience's value as far as their cars were concerned! We saw many shakeholes en route there and together with the passage sizes in the Beilstein there must be considerable potential in the area.

The next three days of the holiday were spent in the Happelseeloch vicinity where we found a system of great character after baling out the static sump which was the previous limit of exploration. The system was surveyed and photographed. Despite wet-suits it was very cold and arduous out of all proportion to its length. The only water present in the cave was static, although a powerful stream resurges through boulders thirty metres

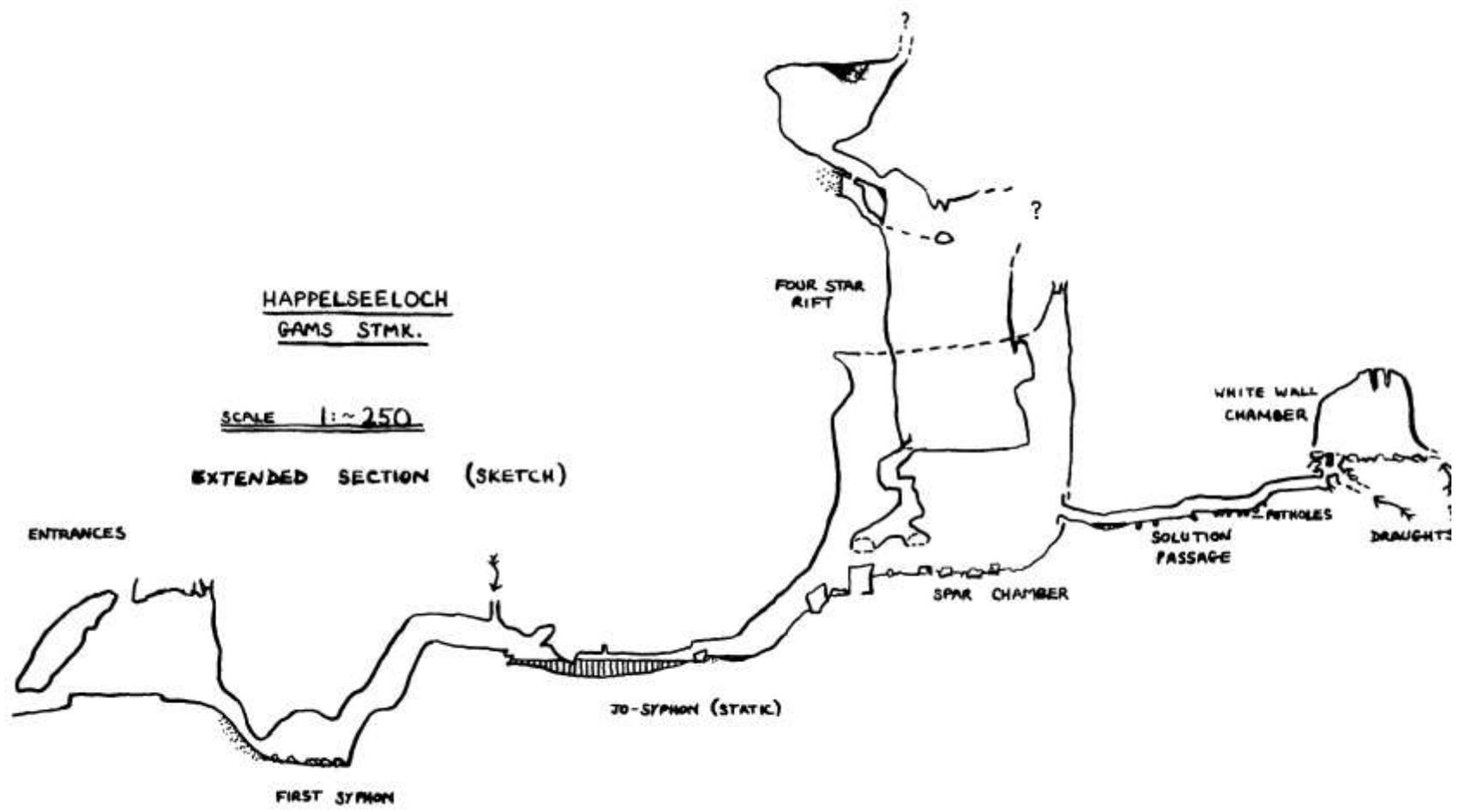
below the entrance. Two squeezes were notable, one of which the author was able to negotiate (collecting a nose full of grit in the process) and one which stopped him. To Charles Yonge fell the honour of being the first person to negotiate this 'four star' squeeze into the rift chamber, while that into white wall chamber was first passed by Zeppy Flack after masterful piton hammer sculpting by your author ('They also serve.....'). The squeezes take first prize for excitement in the cave, though the duck/sump comes a close second. The solution passage crawl was also rewarding, being a completely unexpected classic, with 10 cm. diameter, 50 cm. deep potholes drilled all over the polished, scalloped floor. This passage and the section between Spar Chamber and the first siphon showed evidence of strong water flow and we were thankful that the weather was settled. From the inner parts of the cave a sump rescue would be impossible. The sketch plan and extended section show the cave's features, excepting the fine dog's tooth spar found in Spar Chamber.

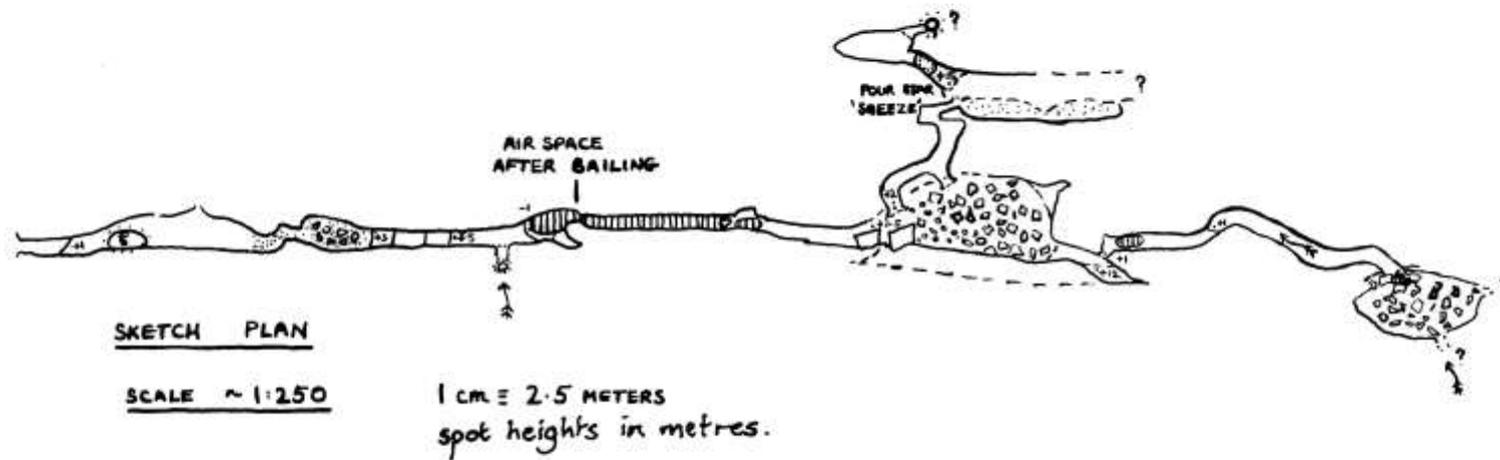
Leaving the Gams vicinity, and the farmer who had let us sleep in his hay-barn for a week, we moved about fifteen miles southwards to the well-known Frauenmauer area of the Hochschwab plateau. The fanatic explorer of the Frauenmauer-Langstein cave systems, Mr. Illmeyer, had unfortunately chosen the only bivouac spot at the cave entrance to build his retreat and despite a diplomatic request to sleep in his gated-off area he would not allow it. We therefore slept two nights on a wooden walkway built on to the cliff face. This was acceptable, save for the disconcerting passage of his refuse through the air about one's ears. It is a pity that he has been allowed to gate off what is the equivalent of our National Trust property. However, he has improved parts of the system with paths and the argument is two sided. The Frauenmauer-Langstein system is a very big, dry (for the most part) and uninteresting cave. In two days there we visited the second bivouac and were only prevented from going further by the loss of a chronometer in a pool. This lost us time (excuse please) and no-one was willing to go into the system again once we were outside.

This was the finale to our trip and we ferried the gear down for the homeward journey. We were pleased to have had the Austrian caver Josef Flack with us (from Graz) and we also made contact with cavers from Eisenerz. We found many other entrances not mentioned above and a 'super-diveable' resurgence. Climbing could be the secret to success in many systems - even in the Happelseloch the only unexplored part was a horrible traverse deemed impossible without drilling bolt holes. It was a fine achievement by Brian Fiveash to free climb the upper (four star) rift to a height of 20 m. in an attempt to bypass this traverse.

All in all the usual cliché conclusion of all caving expeditions - 'worthwhile'.

Members: Chris Byng-Maddicks, Brian Fiveash, Roger Howells, John Pickett, Charles Yonge, Derek Tringham.





## MENDIP NOTES

by Schizomycetes

There's still holes where you find them!

It takes water from St. Cuthberts but a few hours to reach Wookey Hole. The day may come when we can do the same trip. Recent advances at both ends of the system, first the passing of the Cuthbert's sump and then, with the seventies three days old, the discovery of 2000ft. (610m.) of dry passage in Wookey Hole raised the hopes of all would-be through trippers. However, while the Cuthbert's end is following active streamway the Wookey end is in upper series dry passages. The Cuthbert's exploration is by now well documented (Belfry Bulletin and Mendip Caver). The discoveries on January 3rd. at Wookey were made by John Parker, assisted by Brian Woodward.

Parker dived along the route to W.19 followed by Savage and was gone over 30 minutes. Woodward followed and they emerged into air and thence from the water into a series of chambers which Parker thinks twist around to face virtually south again. Facts are as yet sparse but this journal hopes to carry the full Wookey story next issue to continue the saga begun by Dave Savage.

If an upper series can be found in St. Cuthbert's 2 there may be hope yet. The termination of the new Wookey discoveries is near enough to Ebbor Gorge to make the astonishing work of Crummock of even greater significance!

### Karst Police Not Caught Napping

The arrival of D.C. Furd, announced in the last Journal, did not go unnoticed by the K.P. In fact the Bob Bignell (ex Bristol Geography Dept. photographer) has been sent to Hamilton in order to gain the lever we need. A member of the Club, Bob has been able to secure employment in Furd's Geography Department.

Of course this did not go unnoticed by Furd, who dispatched Charlie Brown to the prairies to keep a watch on Drew. All in all the karst espionage scene is hotting up. Watch these pages as the K.P. gain ground in the professional hydrology world.

### Westbury-sub-Mendip Quarry

The news from this direction at present is mostly classified, while most of the material found in the bone-bearing deposit is unclassified. Leaks suggest that here may be one of the most significant Pleistocene sites in our area and perhaps nationally because of the great age suggested by the fauna.

## Pollution on Mendip

For those who are following the 'To pee or not to pee' argument about cavers polluting streams a useful reference is by J.R. Holsinger in the first volume of the International Journal of Speleology, pages 75 - 89 (1964). This describes the organic pollution of a cave in Virginia from seeping water leaking from a septic tank. If this form of disposal is that proposed for any Mendip caver-bogs there is evidence that by concentrating, both in time and space, the danger is aggravated.

In the case of salmon disease and the G.B. area, it would seem that Bristol Waterworks is neglecting the fact that water in the area is proved to flow out at Cheddar. Can fishermen confirm that the reservoir is strictly for pike - not salmon? Does the Yeo/Axe have salmon?

## Stand Back - it's the Press

November 27th.'s rescue from Rod's Pot was not perhaps unusual in that the local press covered it in 'Yet Another Rescue' style. However, when the reporters are there before the rescuers one wonders how they get the tip-off! Perhaps cavers could train a special team of news men to actually effect the rescue. Then as well as photographing the team entering and leaving and drinking most of the tea they could help out.

In connection with the same rescue it was reassuring that the parents of one of the rescued sent £5 to the rescuers and this is being forwarded to the M.R.O. Some just drive away!

## Christmas and the Wessex

John Wileman reports that the Club fielded at least seven party-goers during the Mendip festive season. From their base at Upper Pitts these sober gents (Messrs. Jepson, York, Pickstone, West, Surrall, Candlin and Wileman) together with Maggie Holland made up a large portion of the hard core of party-goers. There was even a hard core of booze - the same barrel being seen at two parties at least.

Rich West had to be carried from one celebration..... he'd broken a coccyx (bone) and asserted that the pain was quite severe (or words to that effects).

A rescue from the 20 on the Saturday, however smoothly performed, tainted the season with activity underground for at least three of the group. Many members of the Club called at Upper Pitts during the holiday and received a glass of Spanish brandy, grossly overpriced at 4/- per litre. Not surprisingly, no-one asked for the second glass.

No caving article seems complete these days without statistics, so here are the facts about Christmas:

1. The Hunters dispensed 300 gallons of bitter in four days. 2. 60 gallons were taken out by cavers. 3. 18 gallons were given a good home by the Wessex. 4. The Brum Cong (Surrall, Candlin, Wileman) returned 3 empty barrels and two bootfulls (Cortina) of empty bottles to the Hunters. 5. No Wessex Member is known to have honked. 6. Jepson's Christmas pud (with bottle rum) was eaten. 7. The nights were long and boozy while the days were short and boozy. 8. The roaring log fires threw out so much heat that the M.R.O. were nearly called out to a nasty case of heat exhaustion!

### LETTERS TO THE EDITOR

Department of Geography,  
The University,  
BRISTOL BS8 1SS.  
January 7th. 1970.

Dear Sir,

Whilst lauding the Journal for its publication of the wisdom of such gentlemen as Dr. Stanton and The Atkindrew, I feel the more sceptical caver may find himself wishing that they would stop reacting to certain magic words, such as 'water table' and 'hose pipe', in each other's prose. This caver, however prosaic and Anglo-Saxon, may want to know what the hell it's all about? Well, lad, it's roughly this.

1. Water flows into a mass of limestone.
2. Water flows out again at a random point. The only systematic force operating on it is gravity.
3. In Carboniferous Limestone it cannot react to gravity by flowing in all directions at once. Instead its route is guided by geological weaknesses such as joints, bedding planes (both strike and dip) and faults.
4. The water converts these fine weaknesses into conduits by erosion. As this goes on there is a rationalisation of these routes so that a few large conduits are formed at the expense of many smaller ones. These do not heal up but may become silted, or they may only function in flood. If they have been formed by percolation water, as distinct from swallet water, they may remain very small and transmit water very quickly. Colour these 'hosepipes', children.
5. More and more of these master conduits are filled completely with water the deeper one goes in the rock, because the routes are fewer or because the limestone is sealed beneath by other rocks. The zone beneath which all is water-filled is not very even and the conduits are very distinct. Thus it is rude to call it a water table because this refers to softer, porous rocks where, in this zone, water flows past and around each mineral grain in a continuous mass. This is what The Atkindrew sayeth.
6. Dr. Stanton merely says that the top of this flooded zone is a god place for you to colour in 'caves' (though he still likes to call it a water table). The caves are there

because in this zone the water tends to move laterally and become rationalised into a few large conduits. When these are less flooded we can get into them. Luckily they all seem to be formed at about the same levels and we make the non-sequitur that they formed at the same time.

7. Both parties notice that there are steep sections in caves, usually near the swallet, and less steep ones, usually near the resurgence. This is simply the most probable profile between the two limiting points - swallet and resurgence. There are thousands of other routes and in each cave system the shape can only be described as regular at a ridiculously large scale of drawing. The graded profile is an unnecessary and outmoded concept.
8. The reason that Ubley Hill Swallet drains so fast to Rickford is that it is a small passage - it is percolation water and not a true swallet, and has never been abandoned in favour of a larger conduit. The conduits which link Rickford to the Blackdown swallets must be small too - though uncle Dave concluded that Rickford 'is the more maturely developed rising'. Though he got the spores out in double quick times he neglected that the chemical behaviour of the rising shows no large swallet additions occur (hardness is virtually constant). Rickford rises quickly in volume in flood but the additions must be of hard percolation water of the Ubley Hill type, not diluted swallet water, which all goes (on chemical evidence and the traces of Tratman) to Langford, though taking a much longer time. The 'Squire's Well' resurgence above Rickford is also hard enough (270 ppm) to be percolation water too.

And so people, it's all very perplexing. One thing is certain, - if you dig a quarry and hit water in any form it will fill your quarry to a certain level, and this level will be the same all round your quarry. But now it's back to problems of the coffee-table and the continuation of my education with these wonderful people.

Yours sincerely,  
Sir Afternoon Burrington-Combe.

Nottingham University Students Union,  
Speleological Expedition 1970,  
Portland Building,  
University Park, NOTTINGHAM.

Dear Sir,

In Journal No. 126 you reviewed 'Exploration 1968', the report of our 1968 expedition to the Picos de Europa, northern Spain.

I should like to point out that we are having another expedition this summer, taking eighteen people including a team of cave divers. There are many big sumps in the area.

Surveys are now available to cover the report. Five cave surveys and an area plan cost two shillings, plus sixpence postage. The report itself is available at three shillings, plus same for postage. Both can be bought from me at the above address.

Yours etc.  
James S. Cobbett, Expedition Leader.

## Reviews

### 1. Pioneer Under the Mendips, by William Stanton, Wessex C.C. Occ.Pub. 1 ( 1) , 1969.

There have been people who set out to write the history of Mendip caving and in most cases they have failed. One cannot help deciding, after reading William Stanton's biography of H.E. Balch, that here is all the history of Mendip caving, the more excitingly and interestingly described by being linked to the life story of the man who started it all. One suspects that all the cave diving, scientific archaeology and refined limestone hydrology which have followed him are merely recording the impersonal progress of technology rather than representing the genius of individuals. As Jim Hanwell says in the Introduction, 'In many senses his knowledge of the subject along with his love of the Mendips have not been equalled; indeed, considering the meagre resources at his disposal and the difficulties of the age in which he lived, it seems unlikely that they ever will'.

Although recent weeks have produced exciting cave finds on Mendip, to read of the first exploration of Swildons, Eastwater and other caves now taken for granted is an exhilarating experience. Stanton's excellent prose, subtly augmented by delving into Balch's own records and those of other early workers, maintains interest throughout this large (123 pages) publication. Stanton, like many others who were encouraged and stimulated by help from H.E.B. is rightly eulogistic about the far-sightedness of the master. Indeed, Balch's views on topics such as water tracing, catchment delimitation and the Swildons Water Rift are almost eerily correct. As a present-day victim of the academic rat-race one wonders if rushing round Mendip with Land Rovers full of spores amounts to nil without the wealth of local knowledge obtainable from a bicycle!

However, Stanton is the more faithful to Balch for revealing some of his shortcomings. For example, many have wished that H.E.B. had excavated and recorded archaeological finds with more care. Some considered that he exercised too much paternal power over exploration on Central Mendip. However, few would deny that we are concerned with hard work and flair rather than with strict methodology or prestige-seeking.

Balch is immortalized by the fruits of his endeavours, collected under one roof at Wells Museum. How much better to leave such a fine and instructive collection to posterity than to endow a dogs' home with a fat cheque! There are references too for Balch's seven books and over sixty papers.

It seems surprising that one man's life could span so many activities and witness such exciting discoveries. H.E.B.'s longevity is put in perspective by the story of him being advised to leave Swildons on account of his age (then 54) by a youth called Tratman!

It is fitting that the Wessex Cave Club should publish this work. Four of its members carried the coffin of their President to its rest in 1958. In the twelve years since his death the Wessex has been in the van of the expansion of caves and caving. Twelve years is not a long time to produce a biography of such a person as Balch and its high quality doubles the strength of the tribute.

The illustrations are masterful - considering the age of the material, and the print is effectively handled. The quotations and reproductions of notebooks makes the volume an important primary source for geographers and historians of Mendip alike. It is certainly an encouragement to all who wish to 'search and learn'.

M.D.N.

2. Transactions of the Cave Research Group of Great Britain, Vol. 11, No. 3, Published, November 1969.

The latest issue of the Cave Research Group Transactions contains several papers which seem likely to become of key importance in the scientific study of limestone terrains. Of these, probably the most important is Dr. H. Roques' paper on 'A Review of the Present Day Problems in the Physical Chemistry of Carbonates in Solution'. The paper was originally written in French and has been ably translated by Roly Barrington and R.G. Picknett. Earlier work, especially that of R.G. Picknett in an earlier issue of Transactions, has achieved a fairly full description of the chemical behaviour of solutions of pure calcite at equilibrium at 10 degrees Centigrade, the temperature at which most British cave waters are found. Dr. Roques introduces briefly the way in which chemical description of the solution of limestone may be given in terms of equilibrium relationships between the ions present. He then goes on to treat two problems which to date have received comparatively little attention in a speleological context.

Firstly he considers the effect of small amounts of magnesium carbonate on the equilibria of the calcite solution, and shows that the solubility of calcite is increased by the presence of small quantities of foreign ions. The second topic takes up most of the rest of the paper. It is the kinetic relationships of solution and the precipitation of carbonates. The method employed is to break the process into three principal chains of reactions, and to determine the rate-controlling step in each chain. Thus the overall process may be treated in terms of processes taking place at the gas/liquid interface, processes in the liquid itself, and processes at the solid/liquid interface. The principal tool used in the analysis of the first and last processes is the Theory of Mass Transfer. Unfortunately, one of the features of this theory is that the rate of transfer of, say, calcium carbonate across the solid/liquid interface, or of carbon dioxide across the gas/liquid interface, is dependant in part upon the spatial configuration of the system. Thus the rate of transfer of CO<sub>2</sub> into or out of a drop of water is very different from the rate after the drop has fallen and spread into a thin film on a cave floor. It can therefore be calculated only for specific examples. However, it is possible to estimate rates of processes and to thereby identify the rate-controlling steps.

In carbonate deposition the rate-controlling step appears to be the nucleation of solid crystals from the ions in solution, a conclusion which explains the absence of tufa from risings which are frequently supersaturated with CaCO<sub>3</sub>. In solutional processes two cases may be distinguished. In situations where very aggressive water is placed in contact with solid carbonate (e.g. rain water on bare rock), reaction is very swift, becoming almost complete in a matter of hours. The rate depends on the kinetics of CO<sub>2</sub> exchange with the air and upon chemical reactions in the liquid. However, where water is already charged with dissolved carbonates and close to saturation, the rate control is the rate of migration into the solution of Ca<sup>+++</sup> and CO<sub>3</sub><sup>=</sup> ions from the solid limestone. This conclusion is borne out by the results of field investigations, which

have shown that the rate of pickup of calcium in underground streams is surprisingly constant, at about 1 part per million per 300 metres, and is more or less independent of the concentration of the solution.

It seems a pity to have to carp about the editing of such an excellent contribution as Dr. Roques', but there are numerous minor misprints and one glaring error in diagram labelling (p.151). Many of the misprints are in mathematical equations, and it would seem that proof-reading by someone who could follow the maths with ease would be an improvement.

Space does not permit a full review of the remaining papers in the issue. The two chemical papers - 'Notes on the Chemical Investigation of Cave Waters' by L.G. Bray, and Roger Stenner's "The Measurement of Aggressiveness of Water Towards Calcium Carbonate" both contain useful data. They are chiefly important, however, for their description of new techniques. Stenner describes, and extensively tests and evaluates, a method of determining the aggressiveness of a water by taking duplicate samples and adding powdered calcium carbonate to one of them. In addition, the appendices to his paper describe analytical techniques for determining all of the components in solution in the CO<sub>2</sub> - water - CaCO<sub>3</sub> system. Similarly, Bray's paper contains not only valuable results on the relations between different properties in water samples from Dan Yr Ogof, but also a description of the analysis of Ca<sup>++</sup> and Mg<sup>++</sup> in solution using the reagents EGTA and DCTA.

The three remaining papers are geomorphological and climatological. P. Ashmead writes on 'The Origin and Development of Caves in the Morecambe Bay Area', giving an account which will obviously be valuable to future workers in the area. J.D. Hanwell and M.D. Newson each contribute short summaries of their forthcoming Occasional Paper on the climatological and geomorphological implications of the July 1968 Floods on Mendip. Their general conclusion is that severe flash floods of this kind are likely to be more frequent than has previously been thought and that each such flood may have a devastating effect upon the arrangement of deposits - especially underground.

Those who seek to interpret cave deposits in terms of climatic phases of the Pleistocene should therefore beware!

T.A.

Sheet 76, Bath and Wells, - reprint of first edition Ordnance Survey, One Inch Map, David and Charles, 13/-

In the mixed deal of quality that David and Charles give Mendip this is an outstanding ace. For those tracing geographical changes between 1817 and today, or those needing 'an old map' for the wall, or even the kinky few who prefer route-finding without polychrome aids, this is a magnificent acquisition.

The immediate impression is of the west and central Mendip ridge, hachuring being a far more impressive way of showing steep slopes than contours. The plateau surface is also well brought out, being almost devoid of relief symbols. Caves are not shown. Transport enthusiasts will find turnpike roads, railways and canals which no longer grace the landscape, while the industrial

archaeologist (see a review below) will discover mines and workshops in plenty on East Mendip.

The range of the map - from Banwell in the west to parts of Wiltshire in the east is far more convenient for Mendipologists than the newer O.S. sheet division which cleaves us in twain.

Stan White

Geological Survey of Great Britain, 1:25000 (2½ Inch) Cheddar - Sheet ST45

The Geological Survey has seen fit to endow the area with a map with which one can position oneself relative to the stone walls, tracks and farm buildings and find out exactly which rocks should lie at one's boot end. Anyone who has tried to do this with the One Inch geological map will now be wearing thick glasses or digging for caves on the Old Red.

The map is superb for teaching, showing the classic anticline structure of Blackdown, the G.B./Manor Farm/August Longwood group of karst features, Cheddar Gorge, Burrington Combe and a lot of mineralisation.

The dip arrows are clearer than on the One Inch, as are the long tongues of Dolomitic Conglomerate. For those of you who live nearer Bristol the Clevedon/Portishead area is also done, while for those going north the Edale/Castleton sheet has some magic light blue Carboniferous Limestone upon it.

Gordon Crummock

A Register of Environmental Research of the Mendip Hills, Somerset

Compiled by S. Trudgill and F. Courtenay, Geography Department, University Bristol 8, price 1/- plus postage.

This pamphlet contains the interests and addresses of 50 research workers on Mendip. That the number should have reached this level is reason enough for publishing the list, but when one thinks of the problem of preserving the natural environment of Mendip it is essential that those listed should contact one another. There are probably few other regions of Britain which have been so devotedly studied and it is fitting that about 20% of the names on the list should also appear on Wessex membership lists.

M.D.N.

Cambrian Caving Council Handbook, 2/6d., compiled by N. Christopher

Essential property for those who use the Severn Bridge extensively and a useful addition to the regional handbooks. Isn't the cover a little misleading in its glossy, fresh approach?

M.D.N.

Note:- Some people have not received Wessex Handbooks - there was a hiatus between the posting date and the receipt of extra copies. Members 'left out' should get in touch with Don Thomson.