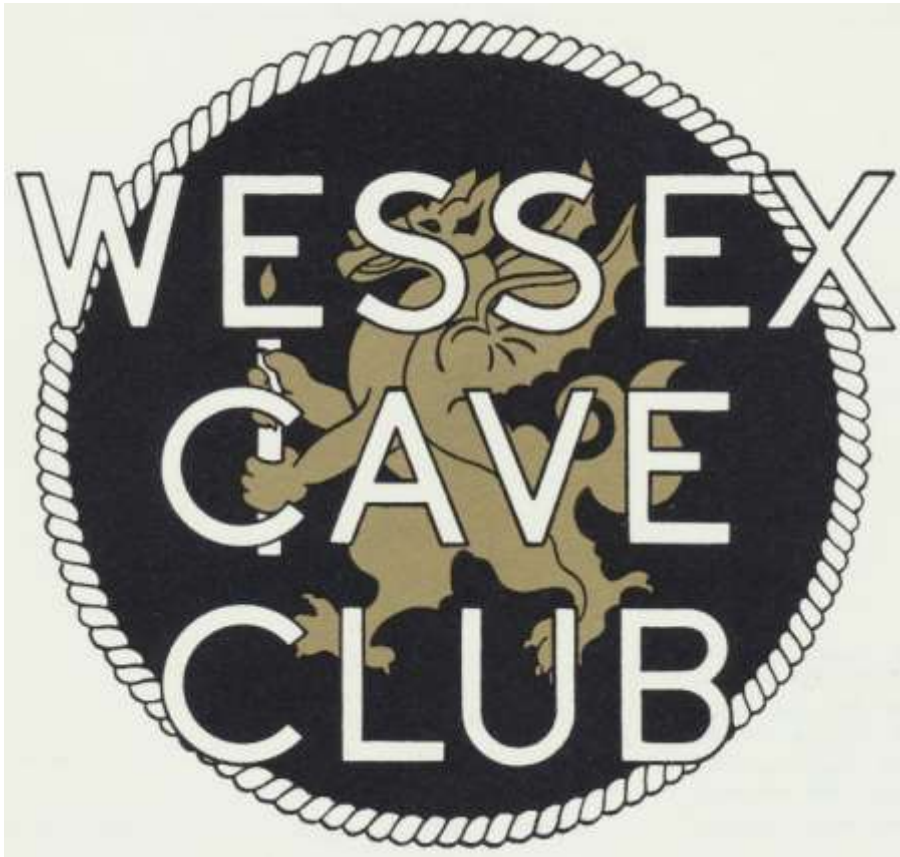

WESSEX
CAVE
CLUB

WESSEX CAVE CLUB

Journal No. 99, Vol. 8. January 1965

CLUB NEWS

Use of Tackle at Weekends

The amount of tackle housed at Hillgrove has now been increased so that sufficient is available for separate parties to descend all the major Mendip Caves at the same time. In future therefore, tackle will be unlocked on Friday evenings and will remain available for members' use until relocked on Sunday evenings. Parties coming from a distance may still book tackle if they wish, as before, when applying for accommodation to the Hut Bookings Officer. Such requirements will be chalked on the hut noticeboard when the hut is opened for the weekend (members should make sure that this notice is erased when the "booked" tackle has been withdrawn). As ample equipment is available for most caves such bookings need not restrict other parties' trips, and members are asked to respect the advance requests of their fellows, whose visits to Mendip are usually on a tight schedule owing to the distance they must travel.

It will be appreciated that now the tackle is more accessible the job of the Hut and Tackle Wardens will be greatly facilitated if members record on the noticeboard details of equipment in use, stating approximate times of its return. This is the method currently used by most parties in any case. In this context too it is a very valuable record of the Club's caving if returning parties enter up details of their trips in the Hut Log Books, including tackle used.

Midweek visitors should book tackle as usual and parties caving away from Mendip should still make a written application for tackle needed to the committee. These bookings must be made well in advance, giving exact details of the amounts of tackle required.

Subscriptions

The Treasurer will be very pleased to receive subscriptions from the 160 members who have not yet paid up for 1964/65. A payments slip is enclosed - please ignore this if you have already renewed your sub.

Donations of Equipment

Earlier this winter Bob Woolley kindly donated and installed a Calor Gas heater in the Eastwater Hut. Members using the hut over the winter will undoubtedly be very grateful for the added luxury of heat, and the Club would like to record its gratitude to Bob. We must thank him also for the heavy pulley blocks which will prove extremely useful at digs.

Recently Paul Weston donated a gallon of liquid soap for use at Hillgrove, and has offered some wire suitable for making ladders. We thank him very much for these useful gifts.

Charterhouse Caving Committee Permits

The necessary forms to acquire permits are available from the Hon. Assistant Secretary, Tim Reynolds. The guests of members, and each member of visiting parties, wishing to descend G.B. and Longwood Swallet must have a permit before entering these caves and a charge of l/- per permit is now payable to the Club. In future more regular visits to these caves will appear on the programme of Club events in order to accommodate the increasing number of non-members who wish to join us on such trips.

Cave Research Group Publications
All C.R.G. Publications are housed with C.H. Innet Homes, Upleadon, Trumpet Ledbury, Herefordshire. All correspondence regarding sales should be sent to this address.

Sale of Old Journals
Roy Staynings reports that the following back numbers ONLY are still available:-

Nos. 78, 79, 80, 82, 84, 87, 88, 91 and 92.

These are obtainable from Roy, address below, price 1/6 each, post free.

New Members
We welcome the following new members to the Club, elected on 13th December 1964:-

G.M. Ferris, 13 Haverstock Road, Knowle, Bristol 4.
K.A. Goverd, 101 Westerleigh Park, Hengrove, Bristol 4.
D.L .Leigh, 97 Hassocks Road, Streatham, London S.W.16.
H.A. Pearson, 29 Abbotsford Road, Redland, Bristol 6.

CLUB MEETS

Please write to the Leader named in all cases if you wish to attend.

Weekend 23rd/24th January "Teach Yourself Cave Surveying" Course for Cave Surveyors, to include lectures and practical work. Details from: Alan Surrall, 216 Evesham Road, Headless Cross, Redditch, Worcs.

Saturday 20th February G.B. Meet at Cave Entrance 3 p.m.
Leader: H.C. Attwood, 155 Goddard Avenue, Swindon, Wilts.
Also Show of Pyrenean Slides and discussion on this year's proposed Club trip to France. Globe Inn, Wells, 7.30 p.m.

Saturday 6th March Film Show The Farnham Group will be showing their films of Swildons & Lamb Leer at Priddy Village Hall at 7 p.m.

Saturday 13th March Hilliers Cave Meet at Fairy Cave Quarry, 3 p.m.
Leader: Dave Berry, 1 York Place, Bristol 1.

Saturday 20th March Visit to Stone Mines. near Bath. Meet at Bath Bus Station 3 p.m. Leader: Will Edwards, 91 Rookery Road, Knowle, Bristol 4. Note:- Will Edwards has very kindly offered to arrange one or two private trips to these mines if any member is interested and cannot make this date. Please write to him direct.

Saturday 27th March August Hole Meet at Gave 3 p.m.
Leader: Roy Staynings, 8 Fanshawe Road, Hengrove, Bristol

Saturday 3rd April Lamb Leer Meet at Gave 3 pm.
Leader: Carl Pickstone, Rush Common House, Abingdon, Berks.

Easter - Yorkshire Further details from: Nick Hart, 80 Ridgeway Road, Long Ashton, Bristol.

Whitsun - South Wales. Date changed to 12/13th June, the week-end after Whitsun.
Details from: Oliver Lloyd, Withey House, Withey Close West, Bristol 9.

Saturday 27th March Lost John's, Yorkshire. Leader: Phil Davies, Morley, Silver Street, Nailsea, Som.

Wessex members are invited to the following meetings:-

U.B.S.S. Meetings, held at 8.15 p.m. in the Geography Lecture Theatre, University of Bristol, entrance in University Road.

Monday 1st February

"An Account of some recent Archaeological Research in the Bath District" by Mr. J. Wedlake, FSA.

Monday 8th March

Presidential Address "The Great Cave Niah, Sarawak".

M.N.R.C. Winter Lectures, 7.30 p.m. in the Museum, Wells.

Saturday 13th February

"Photography Above & Below Mendip" A.H. Hagan.

Saturday 6th March

"Bat Research" with ultrasonic recordings. J.H.D. Hooper, B.Sc.

Hon .Secretary: J.D. Hanwell, "Chaumbey", Wookey Hole Lane, Wookey Hole, Wells.
(General Club Policy)
Hon. Asst. Secretary: T.E. Reynolds, Yew Court, Pangbourne, Berks.
(Membership applications, cave keys, C.C.C. Permits, Survey Scheme)
Hon. Treasurer: Mrs. B.M. Willis, 3 Derwent Lodge, St. Philip's Avenue, Worcester Park, Surrey.
(Subscriptions, Accounts)
Editor: C.J. Hawkes, 147 Evington Lane, Leicester.
(Journal Material)
Hut Bookings: P.N. Riches, Priory Cottage, Chewton Mendip, Bath. Phone 357.
(Hillgrove & Eastwater Bookings, Mendip tackle bookings)
Activities Secretary: C.R. Hobbis, Warren Lodge, Long Ashton, Bristol. Phone: L.A. 2127
(Offers to lead trips, Requests for trips)
Publication & Badge Sales: R.J. Staynings, 8 Fanshawe Road, Hengrove, Bristol 4.
(Copies of old Journals, Reprint Vol. l, Supp. to Vol.8, Badges, Ties)

THE CHANCES OF EXTENSION AT LONGWOOD SWALLET

T. Atkinson

The writer has just finished a field study of Longwood Swallet, Charterhouse. The full results of which he hopes to publish elsewhere. As is often the case in work of this type, several points from which the cave might possibly be extended were noted, and it is with these that this article is concerned.

The development of the cave is briefly this. Water flowed into swallets at or close to the present active ones, and also into choked swallets which are presumed to exist above the ends of the large passages of the Upstream Series of August Hole. The streams from both these sources conflowed at Fault Chamber, from which they ran southwards into Fault Grottoes. Evidence in the Upstream Series, the Wet Way, and in Fault Chamber itself, shows that there was a stable water table at 460-70 ft. O.D., the altitude of the horizontal passage on the right in Fault Chamber. Thus, for a time, the cave passed into the phreatic zone at Fault Chamber. Other evidence shows a later water table at 400-15 ft. and a still later one at 310-25 ft. The former was at the altitude of the stream passage from Fault Chamber to the Pots, and of the roof of the big rift passage 150 ft. further downstream. During the period when the water table stood at the 400 ft. level the phreatic water in this rift passage flowed into the upper end of the Oxbow, and thence to the boulder choke at the Oxbow's downstream extremity. At the end of this stable period the water table dropped to the stream passage below the lower end of the Oxbow (310-25 ft..), then again to a level below the lowest point of Reynolds Passage, where it now stands. Thus the development of the cave was characterized by three successive stable water tables at 460-70 ft., 400-15 ft., and 310-25 ft. O.D.

The development of other Mendip caves has been influenced by, and has itself greatly influenced, the position of stable water tables. By the nature of the close inter-relation between cave and water table, the best places to dig in Longwood Swallet are close to past stable levels.

Half-way down Fault Chamber a passage leads to the right for 80 ft. 40 ft. along it, it is possible to pass upwards over a stal bank to the Fault Grottoes. At the southern end of these are two short passages choked with jagged limestone fragments derived from local collapse. The Fault Grottoes are part of the large passage, partially choked, which leads south from Fault Chamber, parallel to the fault which can be seen below Swing Pitch. Removal of this choke material could well lead onwards into a continuation of this passage. More promising, but more heavily choked, is the end of the 80 ft. passage mentioned above. This is at 460 ft. O.D. and on the main route of the water. Removal of the choke of sand and local collapse debris should give access into either a continuation of Fault Grottoes as above, or an up-and-down stepping water table passage, which should continue for some way.

Farther down the cave, in the Oxbow, the main path of the water was into the boulder choke at the far end of the passage. The Oxbow is a part of a down step of the passage below the water table,

and it is quite likely that the boulders have fallen from a rift passage by which the water was lifted back up to the water table at 400 ft. O.D. Again, clearing of the boulder choke will probably give access to an up-and-down stepping passage.

Unlike the first and second water tables, the prospects at the downstream end of the known passages of the third (310-25 ft.) water table are not good. The continuation will probably be small and tight, like the last sections of the stream passage. The end of Reynolds Passage is too close to the present water table to be very promising.

More interesting are two inlet passages which will require maypoling or climbing techniques to be entered. The first is at the head of the waterfall in Waterfall Chamber. Here, a passage 10 ft. high was seen by the writer from the top of a maypole in 1963. On that occasion the lip of the waterfall was unfortunately too loose for safe maypoling. However, my imagination has been fired and I should like to know what is at the top, though probably there will only be a couple of hundred feet of tight rift passage!

A slightly more certain bet is the hole in the roof which can be seen at the upstream end of the large rift passage in the Downstream Series of August Hole. The large size of the phreatic part of the rift, and the fact that the water from the present stream passage would have been an under fit in the Oxbow indicate that this hole is a past inlet. It could be gained by piton climbing. Where it goes is impossible to say. It could either be a completely new inlet, ascending to the valley floor downstream of the present entrance, or it might simply lead to the lower end of the Great Chamber, where water obviously flowed at one time. There is only one way to find out!

I hope that I have convinced the reader that there are worthwhile prospects of further exploration in Longwood Swallet. If I have done so, I must remind him that permission to dig there can only be granted by the Charterhouse Caving Committee. There should be no unauthorized digging, as this may jeopardise the position of caving clubs with Bristol waterworks.

HILLGROVE LOG BOOK - THE SUPPLEMENT TO VOL.8

P.M. Giles

Unfortunately for the more distant club members the Journal has, so far, failed to explain more than by a cursory mention the appearance of a supplement to its many and varied pages. Although it is hoped to make a small profit from the sale of this publication it was not produced solely to swell club funds and so, for those members desiring more information about the Journal's new offspring before parting with their money, here is a short introduction.

The subject is the Hillgrove Log Books from 1954 to 1963, and its object is to preserve the more useful information contained in them and make it available to a wider audience. In the original books the useful information is intermixed with “routine” caving trip records and details of the ritual paintings of the Hillgrove Elsan. Pruning was, therefore, necessary, but was kept to a minimum so as to retain the atmosphere of a log book, the editorial criterion being that if an entry was concerned with work done or observations made in connection with Mendip caves it was copied out in full, otherwise it was omitted. Any sketches attached to the "in" entries were also reproduced. (Unfortunately the standard of some of these in reproduction is not as high as it might have been and for this we must apologise. Better ones will, of course, appear in the reprint!) The result, despite an almost overwhelming desire during the editorial and production stages to scrap the whole darned thing, is a quarto (journal) sized publication of over 100 pages including an index. Thanks must go to Tim Reynolds for a monumental typing effort, and to Nick Hart and Phil Davies who, with a few brainwashed members of the Journal Production Team duplicated it.

Financial considerations ruled out the possibility of a free issue to all members, but a “first edition” of 200 copies has been duplicated. The title "Supplement to Vol.8" seemed the best solution to a rather tricky problem and saved the club from starting yet another series of "Occasional Publications". Members who wish may bind it in with Vol.8, and an index is provided.

As the last A.G.M. agreed that spare Wessex Journals could be made available to non-members this will also apply to the Supplement and Bryan Ellis has kindly offered to handle "outside Sales" of this publication, as he does for many other clubs.

In conclusion, if anyone has any comments on the Log Book Supplement or wishes to correct any errors in it, would they please use this Journal as a medium. This will allow everyone to hear of amendments and help keep club records accurate.

The Supplement costs 6/- post free and is available from:- R.J. Staynings, 8 Fanshawe Road, Hengrove, Bristol 4.

LETTERS TO THE EDITOR

"Dear Sir,

With reference to your latest Journal in which you have an article by a Mr. D. Thomson. Mr. Thomson claims in this article to have met a party of our members in Afton Red Rift Gave, Totnes, who were ''Laughing like maniacs as they emptied their spent carbide over mud formations". When the committee heard of this we were naturally rather anxious to find out if this were true and if so take some disciplinary action. However, on speaking to the leader of that party we find the claim to be not completely true. That they were laughing was quite correct, but that is no sin. That they were emptying their spent carbide (on to an old established carbide-dump) was also quite correct. But that they were emptying it over mud formations is quite untrue, for there are no mud formations in this particular cavern (Cascade Chamber). Of this I am quite certain because I have visited this cave on many occasions and the only place I have ever seen mud formations there was in the Mud Hall passages.

To close may I suggest that in future before printing such slurs which may not only affect the reputation of the club concerned, but caving as a whole, you should edit your material more thoroughly.

Yours faithfully,
Roger L. Hooper
Hon. Secretary, Plymouth Caving Group.

Donald Thomson replies

"The only point about which Mr. Hooper and I appear to be in dispute is as to whether or not the deposits his members were damaging can properly be termed mud formations. I make no apology for my comments because I think that all formations in caves, whether of calcite, rock, or mud, should be treated as worthy of conservation. In the study of the geomorphology of caves, mud deposits may be as significant as rock, and certainly more important than calcite.

"It does depress me a bit to see the secretary of a caving group, backed by his committee, and with more than a hint of injured dignity, defending the actions of his muck-spreading members with the statement that the Cascade Chamber contains "an old established carbide dump". I wonder what people like Oliver Lloyd (who has been scrubbing the old established carbide dumps off the walls of Swildon's for ten years) will make of this? I doubt if the Devon Speleos will accept it, as we know they support the efforts of cave preservation groups.

"I feel sure the Editor of the Wessex Journal will not in future refrain from printing anything merely because it is controversial.

"The NSS News (Vol. 22 No. 9 of Sept.1964), the journal of the National Speleological Society of America, quotes a nice little aphorism, from the Huntsville Grotto Newsletter: "Leaving carbide in a cave is out, carrying it out is in."

"Dear Sir,

With reference to the Wessex Cave Club Journal No. 92 of Vol. 7 (the issue of November 1963) I should like to point out a few inaccuracies in the account by Mr. A.D. Oldham entitled "Caves and Mines of the Bristol District". I feel it my duty to make known these errors, petty though they may appear, to at least one person other than Mr. Oldham himself, for obvious reasons. I have considerable personal knowledge of the area in question, and am saddened to find erroneous statements in a journal of such high standing in the caving world.

I make no apology for the apparent time lapse since the publication was released, since I have only of late studied this particular article.

Butchers' Cave NGR ST.5608:7836
The "cave" is not of natural origin, as the shot-hole grooves in the rear wall testify.

King's Weston Quarry Cave NGR St. 5471:7749
Mr. Oldham has clearly not "seen for himself" and has taken as "gospel" the report of the Aces Speleological Group on this cave. The entrance pitch is of course only seven feet deep, whilst the second vertical is at least fifteen feet from lip to floor.

Greater Ochre Cave NGR ST. 5472:7742
The passage continues beyond the constriction mentioned for approximately twenty feet (not over 150 feet, as the description implies). There is no terminal chamber of such dimensions as are suggested in the account, the total depth being certainly greater than ten feet.

Bat Den (Dundry)
The main heading runs northwards, and not southwards, from the entrance. Fantastic compass error?"

"My deepest apologies for having troubled you, in particular.

Yours,
R.G. Lewis"

"Dear Sir,

It is with great pleasure that I acknowledge the fact that Mr. Robert G. Lewis (of the Severn Valley Caving Club) has now not only decided to enter into literary battle with me, but has taken this prodigious step under the auspices of the Wessex Cave Club Journal.

“I am even more delighted that a person of the calibre of Mr. Lewis can take an interest in a modest series of caves such as those of the Bristol Area, after his immense success in Cowsh Aven, Swildons IV. However, I beg to point out the following:-

Butcher's Cave: This cave clearly shows signs of phreatic hollowing at certain points in the roof and consequently it must obviously be of natural origin. I would agree that shot holes are present in the cave, but I think Bob Lewis must agree that these are of a recent date!

Kings Weston Quarry Cave: It is clearly impertinence on the part of Mr. Lewis to suggest that I have not “seen for myself” as I frequently visit this cave (amongst many others) whilst officiating as a professional cave guide. For him to cast aspersions on the "Aces Speleo Group" is unmitigated heresy as the work done by this group of cavers was second to none. I am now beginning to wonder if Mr. Lewis has even visited this cave himself! I stated that the entrance pitch is 12ft, and 12 it is, no more, no less, and certainly not 7 ft. Consequently I challenge Mr. Lewis to a "Public Measuring Contest", where a jury of 12 fair and unbiased cavers can witness the depth of this pitch. With regard to the second pitch, if somebody has removed a pile of stones from the base then it may well be just nearer 15 ft. than 12 ft.

Great Ochre Cave: Alas, a well-known member of the Severn Valley Caving Club (whose name I need not repeat as it was mentioned in the W.C.C. Journal No. 92) solemnly assured me that: (a) he had excavated and discovered a new passage; (b) with great danger to life and limb he had explored it; and (c) it was 150 odd feet long. I have since found that only the first two statements were correct and that in (c) he did grossly, and at my expense, exaggerate. I do publicly admit that I was daft enough to be caught out by a S.V.C.C. member. The figure of 10 ft. for the depth of this cave is reasonable and until a survey is published cannot be disputed. It is rather interesting to note that when the Severn Valley Caving Club plagiarized my "Caves and Mines of the Bristol District" and published it with no acknowledgements to the W.C.C. Journal or myself, they also quoted 200 ft. as the length of this cave.

Whilst discussing "Caves and Mines of the Bristol District" I do not think that it would be out of place for me to list a few further additions:-

Kings Weston Down Quarry Cave: There is a 15 ft. long connection between the upper chamber and the lower chamber, with a small chamber in between, in which it is just possible to turn around. It is very tight and should only be attempted by the smallest and most agile of persons. Permission to visit should be sought from: J.B. Bennett, Esq., City Engineer & Planning Officer, Cabot House, Deanery Road, Bristol 1.

St. Vincents Spring: The lower shaft has since been examined during a drought. At the bottom is a small chamber with a mud floor which may repay digging.

Cave 14: This has been located with the assistance of two climbing colleagues, Geoff Mason and Ian Adams. The cave can be readily reached with a 40 ft. caving ladder from the cliff top (it was visited by a small party of Wessex Members on the evening of 16th December last). This cave is still very much the same as Tratman's original description and is now called "Corpse Cave" after a nearby climbing route.

Cave 13: This is now called "Mercavity Gave" and was being excavated by members of the S.V.C.C. By persistent digging all the way they have doubled the length of the cave. The small cave below is called "Percavity" and has also been dug by Bob Lewis amongst others.

Caves No. 4: (ref: W.C.C. Journal No.70, p.126, "Lost Caves").
These caves are in the same valley as No. 3, but 100 ft. nearer the river and only 15 ft. from the top of the cliff. They both open out on to a wide, grassy ledge. The largest of the two caves consists of an entrance 12 ft. wide by 3 ft. high. This leads to a passage 1-3 ft. high and 5 ft. wide that is 24 ft. long. The passage continues into the hill, but is too tight to follow. The other "cave" is a small hole on the same ledge, 24 ft. to the left (south). It is barely 6 inches high, but looks very diggable.

Cave No. 3: Upper Cave is now 6 ft. longer!

"I have many larger snippets of information to hand and these will take the form of an article for a future W.C.C. Journal.

Yours very truly,

A.D. Oldham"

THE DIG AT BLACK ROCK RIFT

W.I. Stanton

The late Victor Painter, when head guide at Gough's Cave, used to speak darkly of a vast cave near Black Rock Gate in Cheddar Gorge, but never vouchsafed any detailed information. Like the Mascalls Wood Cave it appeared to be only a legend. I was therefore much intrigued when one of the Cox's Cave guides, Sonny Hardwidge, mentioned that he knew of a cave at Black Rock, and persuaded him to show me the entrance. It is a few feet above road level on the left bank of the Gorge, about half way from Black Rock Gate to Bone Hole, and when I first saw it there was only a low bedding plane nearly choked with rocks. Sonny said that it was blocked up around 1910 by the Mendip Hunt to exclude Foxes, but that before this the brothers Gough used to wriggle in and out collecting stalactites to sell as souvenirs in Cheddar. “O1d Roger King used to talk about it a lot” he said.

Digging began on October 25th 1964, when in the hour between dusk and dark about a ton of rocks was removed by a keen group of Totty Potters. It became possible to see in about 10 feet to a group of small, undamaged, stal curtains, but the bedding plane was not negotiable and clearly never had been. An impassable vertical crack a few inches wide and 6 feet deep was uncovered in the floor.

On the evening of November 18th Nick Barrington and I continued the dig, breaking up giant rocks with a sledge-hammer by the light of our beady eyes. The vertical crack proved to extend some 15 feet parallel to the road, and another was revealed branching off it at an acute angle and leading back to the group of curtains already mentioned. Neither was passable. The giant rocks were in fact broken and fissured solid rock occupying the space between the two cracks. There was no sign of water action anywhere, and we became suspicious that the "cave" was no more than a series of cracks opened by the lower part of the bluff breaking away and sagging towards the valley bottom. This opinion was confirmed by two more afternoons rock-smashing, during which the entrance archway as seen from the road began to develop majestic proportions. On December 2nd we directed final curses at R. King and the midget brothers Gough and abandoned the dig. The vast Black Rock system is as much a mystery as ever.

The entrance to Black Rock Rift is at 513' O.D. Our thanks are due to the tenant farmer, who lives at Charterhouse Warren Farm, for allowing us to complete the work.

MENDIP NOTES

Cheramodytes

Your scribe has been receiving letters from correspondents. Perhaps he may be allowed to let them speak for themselves.

From Tony Morrison, 18.12.64
Tony is now in Lima making Adventure Films for the B.B.C.
"We found quite an enormous cave, about 700 yards long with a lake over 200 yards long at the end. At the end of that there was a terrible passage half under water, and then - guess? - a sump - impassable. All this was at about 10,000 ft. in the Bolivian Andes, and like all good stories was gold plated, but we didn't find the treasure. I only hope that it appears to be exciting on the film; most of the shots will be of crawling, or boating. The boating was the eeriest thing I have ever done in a cave - quite strange to be in a tiny rubber dinghy, at the end of 200 yards of line and still not able to see the end of the chamber. Very strange place, in gypsum I believe, with very dense cold water beautifully clear and blue. I'll show you some stills when I get back."

From Alan Hemmings
Writing from Clifton College on 9.10.64. "Mr. & Mrs. Hares are leaving the Mendip Gate Cafe this month after having been there since, I think, 1926 ..... Every caver who has paid them a visit will know how sympathetic they have always been, not only in providing caver-sized meals of high quality, but in allowing mud into their place - this being a really remarkable thing. Many other kindnesses have come to cavers through them, and although Mr. & Mrs. Hares will have left Burrington for Wrington just before the date of the A.G.M., I feel that we should send something to assure them of our gratitude."

From W.E. Inder
He is the Hon. Sec. of the caving club at Queen's College, Taunton. "I .thought it would be of some interest for you to know that the two cave systems in Quaking House Cave are now joined. When the Queen's College Cave Club visited Quaking House today (31.10.64) they were able to enlarge the dig and send one of the smaller members through. The rather tight passage can be enlarged to form a still rather tight squeeze. Although we were the first club to send a member through, a great deal of credit must be given to other clubs who have worked so well on this complete system."

From Cave-Beetle
"Several people have shaken wise heads at the Permanent Gating of caves and muttered 'too expensive'. Willy Stanton, however, has a bit of a bug about this and with an expenditure of 8/- on cement and sand - a lot of it was left over - and £2.13s.6d. on

ironwork, a sheet of steel cut to size, 2 bolts and a bit of chain; he has built a wall of limestone and lidded in Totty Pot. If treated with reasonable respect this should far outlast wire fences and it looks neater. Build the wall higher, it keeps out cattle and provides artificial pitches. What has friend Roger got to say to that!"

From a London Correspondent, 23.11.64.
"It was very exciting to see the great man, striding to and fro upon the stage as he spoke. Casteret gave a detailed description of his discovery and exploration of La Grotte de la Cigalere with his wife in the 1930's - it was not very scientific I gather because of their lack of equipment. Then he told of being approached by Belgium and France, which led to the expeditions of 1953-5. The film was made by one of the cavers of 1955 and was a little difficult to follow - they seemed to go up first, and then down to re-emerge!

"Then came a short introduction to Le Gouffre de la Pierre St. Martin - truly an amazing cave. This film was rather more professional. At the bottom of the great plunge or whatever you call it was the grave of someone who fell earlier. Later on in the film the body was exhumed and brought to the surface in a cylindrical coffin. Besides the exploration down river there was also an attempt by frogmen to go up river, but it failed. The aim I gather was to see if these caverns could be flooded and used in a hydro-electric scheme.

"The audience was either French or French-speaking, as when Casteret made some jokes everyone roared with laughter (except me!). They were all youngish, with a few verging on the scruffy but all very attentive and obviously fascinated. The place was packed."

From Ray Deasy
Ray is caving secretary of the M.N.R.C. He is writing about Lamb Leer, 21.10.64. David Turner, one of our members, has recently completed a climb to an inlet passage 30 ft. directly above Valentine's Shelf. Unfortunately there is only 8 ft. of passage open, but digging could yield good results. Again the entrance to this inlet is a ledge about 3 ft. wide and 5 ft. long and gives an extremely good view of the main chamber from a new angle. We are also 15 ft. approximately higher than the main pitch."

THE SEQUENCE OF DEVELOPMENT IN SWILDON'S HOLE

Derek Ford.

This article is by way of a "Thank you" to the many Wessex members who helped in the work upon which it is based. It is intended to highlight some of the genetic features crawled over or clung to in the course of a trip. Little attempt is made to give the argument behind the sequence - the script is long enough already. The broad findings support those first suggested by Willy Stanton *, with the additions and modifications to be expected from more detailed investigation.

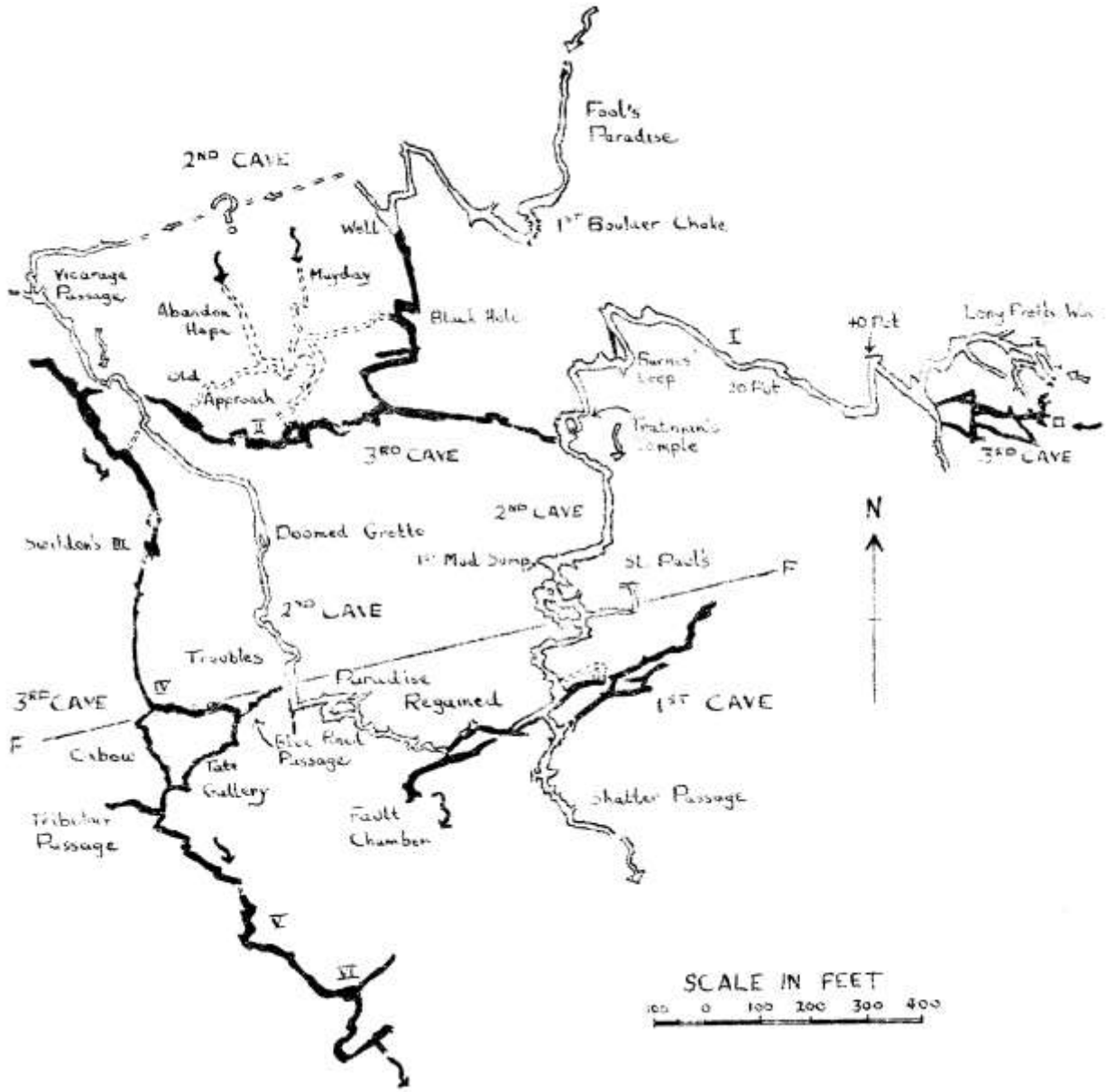
Features of the Geological Structure.

The head of Swildon's Hole is at the junction of the cave-forming Carboniferous Limestones and the impervious Shales which underlie them. The beds dip westwards at 17^{O} - 19^{O}. Downstream as far as the 20ft. Pot, the caver is walking along the transition beds which mark the junction. Further parts of the cave are entirely in the limestone.

The cave may be divided into two along the line marked "F" in Diagram 1. To the south is a fault zone, part of the major "Priddy Fault" mapped by the surface geologists. It extends to Rodney Stoke. In the cave, the fault zone is marked by a complex of fractures, many of which were torn wide open and later filled with vein calcite. The main Fault itself is seen at Tributary Passage, Swildon's IV; in Fault Chamber, Paradise Regained, and at the Overhang in Shatter Passage. At the latter place, it is marked by a belt of rock, 24ft. thick, that was reduced to rubble and subsequently recemented. Vein calcite is particularly well seen in lower Damascus. The many fractures of the fault zone presented readily penetrable lines of weakness for groundwater and it was in them that the first cave developed.

North of the line "F", cave passages are guided by joints which do not fall into any simple pattern and by particular groups of bedding planes. The planes have been the more important. As the caver follows Swildon's down to Sump II, he is moving through successively younger strata, higher above the Shale junction. Of the many hundreds of bedding planes that he passes, only a few have been notably opened by groundwater. The opened ones are usually close together, in a group of two or three, after which there are many feet of no opening, (the cave follows joints), until another group is encountered higher up the stratigraphic column. Bedding planes have tended to force the cave steeply downwards, (down the dip of the rocks), whilst the water used joints to climb upwards again, This accounts for much of the up-and- down work in exploring Swildon's. The outstanding instance is found in II - at the lift. Overhang and Mayday Passages, the caver is in one group of bedding planes: from there he may, (and the water did), climb 35ft straight up, to the higher planes which guide the Old Approach Passages.

* W.I. STANTON 1957. "No end to the darn place". Wessex Cave Club, Journal 4 (64) p.254.


Fool's Paradise
2ND CAVE
1ST Boulder Choke
Well
Vicarage Passage
Mayday
Abandon Hope
Old Approach
Black Hole
I
40 Pit
Long Drop
Furnace Loop
20 Pit
Pratman's Temple
3RD CAVE
2ND CAVE
Doomed Grotto
Swildon's Hole
1ST Mud Dump
St. Paul's
F
2ND CAVE
N
Troubles
Paradise Regained
3RD CAVE
IV
1ST CAVE
F
Cabbow
Tate Gallery
Bone Hall Passage
Tributary Passage
Fault Chamber
Shatter Passage
V
VI
SCALE IN FEET
100 0 100 200 300 400

Development of the Cave - The "First Cave."

Looking at a topographic survey of the cave, most of we Swildon's enthusiasts divide it up according to the sequence of discovery: we think St. Paul's, Paradise Regained and Double Trouble as different because they were found at different times. Geomorphologically, they are not. Diagram 1 organizes the cave in terms of the history of its development. It may be thought of as three distinct systems, ("First", "Second" and "Third"), developed to successively lower water tables, Passages marked in dashes were comparatively short-lived diversion channels, (or "capture passages"), created by the falls of the water level.

At the time of the First Cave, the surface drainage basin was only about half of its present size, extending no further north than, approximately, the line of Nine Barrows Lane. The stream sank about 200 yds. down the valley from its present site, directly into the fault zone.

Underground, we only know a little of the First Cave. This is the Southeast Tributary Passage, Sidcot Passage, Candy's Calamity and Fault Chamber. These parts comprise a mainstream passage and tributaries descending the dip, crossing Shatter Pot and climbing straight up Fault Chamber to exit, presumably, via the silt-choked chimney which U.B.S.S. found at the top. All the known passages of the First Cave are phreatic, (sub-water table); the contemporary table is estimated to have been at 550-600ft. O.D. Thus the bottom of Fault Chamber was 90-140ft. below the water surface. It would have been quite a problem for cave divers.

Late in the history of the First Cave, a new route to Fault Chamber was opened, via Greasy Chimney. It was scalloped in the appropriate direction.

Contemporary with the main stream of the First Cave, but quite independent of it in source and destination, were a series of remarkable little phreatic tubes which Phil Davies and I once tried, abortively, to explore, On account of their impracticable size, we called them "chipolatas". The. chipolatas descend bedding planes in the fault zone, converging upon one another or diverging. Moving from Fault Chamber to Blue Pencil Passage, the caver passes one entering on the north side at every jog of the principal passage. There are others in St. Paul's, converging on the First Mud Sump, (that north of the Pearly Gate). The largest is seen by those who struggle to the very end of Damascus. The chipolatas played a part in the formation of the Second Cave.

The First Capture.

The 550-600ft. water table was destroyed when the level of the outlet spring was lowered by erosion in the Somerset Moors. The lowering worked upstream through the underground system. In the known cave, it created Shatter Passage, which intercepted and diverted the S.E. Tributary water away from Fault Chamber. The water table was slowly lowered to a dry weather level of 483ft. O.D. at Shatter Pot. Several diversion passages were developed at the lower end of S.E. Tributary. Change from phreatic to vadose conditions as the water level

fell in them is illustrated by the two shafts which drop from Keith's Chamber to the Airless Oxbow. The higher one has smooth walls, lightly pocketed, characteristic of erosion in a complete water fill; the lower one is rough-walled and pot-holed by a past waterfall.

The Second Cave.

Introduction of the 483ft. water table imposed great strains on the hydraulic gradients through the rock, adjusted as they were, to a much higher water level. Eventually, the S.E. Tributary was eliminated and a quite new cave created north of Shatter Pot. This was formed by two streams. The equivalent of the modern main stream was able to sink further up its valley, abandoning the First Cave. Following bedding planes at the Shale junction, it opened the Long Pretty Way down to the 40 Pot. From the 40, it probably went straight on west, rejoining the known cave via a stalagmite-blocked hole in the roof a few feet downstream of the 20 Pot. Oliver Wells has tried to get into this old passage from both ends but it is well sealed and probably very small because it was soon abandoned for the modern route.

The water continued its westward way below the 20, opening a passage that is now the roof of I until, at Barnes' Loop, it encountered the stabilised 483ft. water table. At and below the Loop, the main stream cave became fully phreatic for the duration of the Second Cave: (the main stream route was phreatic above the Loop for only a short, initial period when passages were too small to take all the water and allow air in, too. Some pocketings remain from this initial period.) A sub-water table position is the reason why the channel has a meandering course below the Loop. Nevertheless, it was purposeful. The water was turning away from a westward bearing dictated by the dip, to head south for the large, pre-existing cave at Shatter Pot. It opened the Blasted Boss passage and St. Paul's, which meanders particularly because here segments of the earlier, west-trending, chipolata passages were used (uphill or down), as an alternative to forcing a channel through vestigial openings. Via the Second Mud Sump, the main stream rejoined its old course at the mouth of the Airless Oxbow.

A stream draining the land north of Nine Barrows Lane was drawn into the underground system for the first time. It created the great, abandoned, loop of passage that has been pieced together during the past fifteen years of exploration: Fool's Paradise - Vicarage Passage - Double Trouble - Paradise Regained, reaching the pre-existing cave at Fault Chamber junction. There are many interesting features. The route reached the stabilised water table at the 1st. Boulder Choke, Fool's Paradise: (the actual height here is 540ft, not 583ft. the increase representing the water gradient upstream from Shatter Pot. This gradient is very similar to the mean figure for active Swildon's II and IV, suggesting a similar climate in Second Cave times. Other evidence indicates that Second Cave floods were about the same size as the modern ones.) Note that passage gradients slacken

immediately below the Choke; the Helictite Wall area must have looked rather like II between Creep II and Sump II.

We do not know this loop between the head of Vicarage Passage and the Black Hole area. I think that the upstream connection is probably made in the vicinity of Well Chamber. West of there, the stream was drawn far away from its Fault Chamber destination and 70 - 90ft. below the contemporary water table, because it was caught in a series of particularly penetrable bedding planes. It was only able to escape from this structure-dictated course at the bend immediately north of the Pot in Vicarage Passage. If you make a straight line from that bend to Fault Chamber junction, you will see that the remainder of the loop does not deviate far from it. It is a very economical tunnel. Its first parts, (south half of Vicarage Passage), used some chipolatas to reach a great joint, one of the most prominent in the cave. This was climbed eastwards, (Glistening Gallery), to a second of comparable size, (Doomed Grotto - the Troubles). The stream had returned to the water table, which is why this section is so flat. There are evidences of several past sumps as well as the modern ducks; it was the "Buxton's Horror" of its day. There is also an isolated vadose trench, cut through a local rise in the floor. The banged squeeze is close to the middle of it.

South of the first Trouble the joint petered out. The stream encountered more chipolatas, followed them down to Wright's Dig, 40ft. below the water level, and then used others to jog up and down, but mainly up, to Fault Chamber junction.

The passages between Shatter Pot and Fault Chamber junction were opened by a First Cave stream flowing west; arrival of Fool's Paradise water <u>from</u> the west, reversed the direction of flow, superimposing new scallops upon those of First Cave days. This is the explanation of a noted occasion when Howard Kenney, assisting Willy Stanton and me in the area, asked "Which way is the scalloping going today?"

Fault Chamber itself, the first great effluent, was now a backwater. Evidence of this is the fine, deep, pocketing at its entrance, the product of sluggish water spilled off the Paradise stream.

<u>The Second Capture</u>.

After an active history that must run into many thousands of years, the water table fell again and the Second Cave was abandoned in its turn. The new lowering, which eventually stabilised as a water table at approximately 410ft. in II, reached the known cave via V and VI. There is little detail evident in these muddy and depressing downstream places. The first diversion of known Second Cave water occurred when the lowering was expressed as a big, new chamber at the junction of Tributary Passage and the main stream in IV, Fool's Paradise water was diverted to this via Wright’s Dig, (just

south of the entrance to Blue Pencil Passage), also forming the roof level passage down Tate Gallery. A second major diversion started at the south end of Vicarage Passage and headed straight for the Tributary Passage chamber, opening up the downstream end of II, Swildon's III, the Arch and high level oxbow sections of IV. The modern stream route in IV, which meanders away from the oxbow, developed later as a low level capture. A calcite-cemented ramp of pebbles at the head of the oxbow shows that the stream could climb up into it with great force. Connoisseurs of mud should not miss the great deposits further down the oxbow, laid by backed flood waters soon after the passage was abandoned by a through stream.

The next capture opened the Lloyd-Kenney dig between Vicarage Passage and II; this added the section between Vicarage Bend and Creep II to the headward-growing Swildon's II. Then Abandon Hope developed as a fourth capture, which first fed the Old Approach Passages and later forced a route that developed II between Duck I and the Approach passages outlet.

A fifth capture created the north end of Mayday Series and the passage between Calcutta and the 11 ft. Overhang. From here, as noted, the water climbed 35ft. upwards to join the course opened by the Abandon Hope water. This 35ft. climb was a very unstable feature. It was eliminated by forcing a route through lower Mayday and the passages between 11 ft. Overhang and Kenney's Dig. Passages of this route are largely vadose and indicate that the water fell 60 - 70ft. very rapidly.

The Black Hole and the Well, feeding to Priddy Pool Stream and Sump 1, were the final diversions of the Fool's Paradise - Shatter Passage stream. All earlier captures were now abandoned but they had constructed II, III, and most of IV in a remarkable fashion - the piecemeal addition of passage segments to the upstream ends of pre-existing ones. The junction of any two segments is usually marked by some sort of obstacle, such as Sump I, Duck I, Creep II, Duck II.

Throughout much of the above history, the main stream, (Swildon's 1 - St. Paul's), continued to flow to Shatter Passage because it lay a long way from IV and downstream II, where the new water levels were breaking the old hydraulic system. At the time of the fifth capture into II, it was first diverted. An old chipolata route was re-opened to turn water into the First Mud Sump, (which Stanton and Kenney once probed), and, via terra incognita, to discharge it downstream of Duck 1. Water level fell to 470ft. making the Mud Sump a true, watery, sump area. In flood, water still went through to Shatter Passage and was now able to introduce the only large-sized stream detritus seen in the Second Cave - the pebble shoals which fill the low level oxbow in St. Paul's. (No appreciable amounts of coarse material could be carried into St. Paul's, Paradise Regained, Double Trouble or Vicarage Passage during the heyday of the Second Cave because it was filtered out at phreatic climbs further upstream. The few pebbles that can

be seen have come from S.E. Tributary or the chipolatas. I am afraid that the party working at the head of Vicarage Passage may have to dig their way through such a filter, but this is not certain.)

The First Mud Sump route of the main stream was then abandoned for the modern course from Tratman's Temple to Sump 1. The long sequence of captures was complete and most of the known cave now existed. In its lower parts, the only newer routes have formed where little dribbles of water sank underground from the Priddy valley, creating such places as Blue Pencil Passage and Priddy Green Sink. Passages in the Third Cave were still very small, however, and a great deal of work remained to be done before the modern conditions came into existence.

Pondings in St. Paul's and Paradise Regained.

When the active streams of the Second Cave were diverted, the passages between First Mud Sump and Wright's Dig became backwater ponds, occasionally refreshed with flood surcharge that the new routes couldn't handle. These ponds could not be drained dry through their bottoms for a long while; they have left many interesting traces.

The biggest and longest-lived pond was associated with the lowest place, Shatter Passage. The entrance to this deep loop was so badly choked because still-water sediments had so long to accumulate there. Shatter Passage Pond spilled over to the Second Mud Sump, (which could be considered a lingering vestige of it). Here, solution at the pond water surface cut the remarkable flat roof on the St. Paul's side and some good pocketing on the other. The water ultimately joined the main stream at First Mud Sump.

A second big pond stretched west of Fault Chamber and spilled over into Wright's Dig. Its early water level is beautifully marked by a horizontal corrosion notch at the "climb-over" 60ft. north of the dig. Later, lower levels are shown by obvious dry sump conditions at the U-Tube and other places and by the many little vadose trenches that start and stop so mysteriously in dry places of the Second Cave.

The ponds were eventually drained through many little channels. Hawkes' Dig and one that I once found under stalagmite at the entrance to Fault Chamber are the largest. I wouldn't bet tuppence on the chances of a dig in any of them.

Entrenchments and Deposits in the Third Cave.

Evidence of the history of Swildon’s is most abundant in the Third Cave because it is newest and so best preserved. Details that cannot be discerned in the earlier caves appear here. Quite independent of the lowerings of the water table, it seems that cave forms

were multiplied by complex changes in the volume and solvent capacity of streams. These changes make a rhythm which, in a vadose environment, goes:- Stage 1, powerful stream cutting a big trench with potholes: Stage 2, reduced stream cutting a slot in the Stage 1 floor, destroying the potholes: Stage 3, deposition of stream gravels by a yet weaker stream: Stage 4, streams dry up altogether; the dominant activity is stalagmite deposition from seepage waters: Stage 5? - renewed weak stream erosion. Then the whole sequence begins again, with a new trench being cut through the choked remains of the earlier one. The modem stream is at Stage 5, but the validity of this is uncertain; the weak flow may be an effect of clearance of the land, etc. by Man. The rhythm, which is represented by three cycles in Swildon's Hole and at least seven in St. Cuthbert's Swallet, must be a product of climatic change in the later part of the Ice Age and in post-ice times.

Thus, in Swildon's 1 most of the passage area consists of three successive Stage 1 trenches, one below another. The earliest was aimed at the First Mud Sump, (470ft. temporary water table). The caver sidles through this trench 100ft. north of that sump. Between there and Trat's Temple it is quite lost, buried by stream gravels, (Stage 3)? the stalagmite icing of several Stage 4's. This fill was never cleared because when next a powerful stream flowed in the cave, it was directed at Sump 1 and the St. Paul's route was abandoned.

Evidences of a Second Trench are preserved at many points between the 20-Pot and Sump I. The 30 - 40 scoops or niches in the walls at 4 - 12 ft. above the modern floor are remains of its potholes. The biggest remnant is now transformed into a grotto on the north side of Double Pots. The start of the climb to Trat's uses another big one. Almost all of the gravel which once filled the Second Trench is gone.

The Third Trench shows all the features. Its big potholes are deeply slotted by Stage 2 water. The climb from higher to lower Double Pot uses one such slot; this has reduced the plunge that drives the potholing mechanism so that the Double Pots, (and all other big ones), are probably quite out of action today.

Many parts of the Trench can be seen to have been infilled with collapse and stream pebbles, locally re-enforced with stalagmite. Remains include the delicate cornices, (false floors), at the bend below the 40-Pot and immediately upstream of Barne's Loop. Below Trat's, the trench was largely filled by stalagmite alone; it is being vigorously eroded today.

The record in Upper Swildon's is not too clear because the evidence has been well and truly tramped in. The Long Pretty Way is the oldest part and shows two defunct trenches. The Middle Dry Way was an early capture from it. The Wet lay dates only from Third Trench times. It has been eroded head wards, starting with a 20-25ft. waterfall into

Water Chamber which is now reduced to the 12ft. Pot, 120ft. upstream. The stalagmite all over the top of the Pot and at the Forty is particularly good evidence of the recent stage of "no streams".

In Swildon's II a fine phreatic roof passage was cut "between Creep I and Vicarage Bend before the water table fell to the modern level. The stream has entrenched it 30ft, (Second and Third Trenches). At the upstream end of Tate Gallery, (IV), these two trenches are represented by a sharp change in the size and definition of scallops at 10-15ft. up the walls. The curious pothole fragments for which the Gallery was named survive from the Third Trench. They were cut apart by the ensuing periods of low stream flow and by solution in backed-up flood water. Throughout II and IV, the clay and pebble banks which rise 3-5ft. above the present floor are the remains of the last period of gravel deposition. The modern stream has still to uncover most parts of the Third Trench floor: flooded potholes by Vicarage Bend and Tributary Passage show that the water level has been lower.

In the Black Hole Series, there are remains of only the First and Second Trenches, (best seen in Well Chamber and the Black Hole or at the bottom of the Hole itself). It appears that the modem stream captured the Black Hole water above ground before the time of the Third Trench. This is part of the reason for the abundance of stalagmite in the Series. Since Second Trench days there has been no great flow of water to destroy it.- or to remove the fallen rock that indicates a dying cave.

Swildon’s Hole is justly noted for its .formations. Though few are "dead" in the conventional term, I do not think that the larger ones are very active today. Many are being eroded by trickles from the sources that formed them - all within reach of a stream are being destroyed. Whether this change of activity can be entirely attributed to climate or is in some way a result of clearance of the original forest, I am unable to say.

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