



This year's annual General Meeting and Dinner will be held at Cheddar on Saturday October 15th, and particulars of times etc., will be found on page 3.

This is perhaps the one occasion during the year when it is possible to meet old friends, and also members who may be known to you only as names in the "List of Members;" but this year we issue a very special invitation to all members, both new and old, to come and join in the fun. On September 29th we celebrate the 21st anniversary of the Club, and the Dinner will be in the nature of a birthday party, although it will be on the usual lines.

It will be a great help if all members, who can give a lift to others, would let the Hon. Sec. know. This particularly applies to the return journey, as the last bus leaves Cheddar at about 9.45 pm. We hear that several members would have liked to have come to last year's dinner, but decided not to, owing to lack of transport.

This year's gathering must have a record attendance. We hope that each of our affiliated clubs will be represented by at least one of its members.

Sec. Frank Frost, 22, Wolseley Rd., Bishopston, Bristol, 7.

Phone, Bristol 44221.

Treas. G. Williams, 1, Redhill Drive, Fishponds, Bristol.

We welcome the following new members.

M.R. Barrington, 7, Pickhurst Lane, Hayes, Kent.

D.J. Cross, 62, Upper Poole Rd. Dursley, Glos.

F.J. Davies, 8, Brook Rd., Street, Som.

J. C. Leach, 104, Sefton Park Rd., Ashley Down, Bristol, 7.

M.O'C. Lee, Cathedral School Wells, Som.

Affiliated Membership. The Cathedral School, Wells.

Application for Membership.

All applicants for membership who are under the age of 21 are now required to obtain the signature of parent or guardian to the following form.

Wessex Cave Club.

To be signed by the parent or guardian of a Member of the Club under the age of 21.

I hereby give my permission for my _____ * to join the Wessex Cave Club, and I undertake on his/her behalf that he/she will be bound by its rules, particularly Rule 10, a copy of which I have read.

Signed _____ Date _____
(parent or guardian)

* Insert relationship.

Change of address.

A.S. Burlington, 138, Wellington Hill Westbury-on-Trym, Bristol.

Omitted from 'List of Members' (June issue).

C.H. Kenney, Tudor Lodge, Beryl Lane, Wells, Som.

ANNUAL GENERAL MEETING AND DINNER

Saturday October 15th 1955

The Annual General Meeting will be held at the Cliff Hotel, Cheddar, at 3.30 pm. Notices of motions for discussion at the meeting must be received by the Hon. Sec. at least three weeks before the meeting.

The Dinner will be held at the Cave Man Restaurant, Cheddar, 7.30 for 8.0 p.m. Tickets 8/6. Names to the Hon. Sec. as soon as possible, please, and in any case not later than Oct. 8th. We do hope all who can will make a special effort to come along this year, and it is suggested that bookings for accommodation at either of the huts should be made at an early date.

Other Future Events

G.B. Guest Days.

Sunday 16th Oct. Meet at Cave 2.30 pm.

Sat. 3rd Dec. Meet at Cave 3.0 pm.

Names to Hon. Sec. at least a week before the event.

Cave Research Group. Annual General Meeting, Saturday Oct. 29th, in the museum, Wells. On Sunday there will be an open meet for C.R.G. members arranged by the Wessex Cave Club.

Lecture. October 17th. Geography lecture theatre, The University, Bristol, 8.15 pm.

Prof. F.E. Zeuner Ph.D., D.Sc., F.S.A.

"The Rock Tombs of Jericho".

The U.B.S.S. extends an invitation to all W.C.C. members to attend this lecture. Admission free.

THE WESSEX CAVE CLUB. 1934 - 1955

The first meeting of the Club was held at Ashley House, Crosscombe on September 29th, 1934. The six people who were present, C.W. Harris, H. Murrell, J. Duck, N. Clark, K. Griffin and A. Pryor unanimously decided to form a club known as the Wessex Cave Club. A further meeting was held on November 4th, and this was attended by 30 people. Mr. H.E. Balch was elected president, A. Pryor Chairman, C.W. Harris treasurer and H. Murrell secretary. The committee consisted of three district representatives, (Wells, Bristol, Winscombe) and two ordinary members. Rules were drawn up, and the annual subscription was 5/-.

Two club events were arranged, the first a dig at Hywel's Hole, and the other, a visit to Reads Cavern. It is interesting to note that only three turned up for the dig, so it was decided to join with a U.B.S.S. party for a trip down Eastwater.

The new club took a very active part in the work of the recently re-opened shaft of Lamb Leer, and F. G. Balcombe began his dig at the Waldegrave Swallet.

The out-buildings of 'The Grange' near the Castle of Comfort were rented as a club Headquarters early in 1935, and about the same time Branston School Cave Club was elected to be the first club to be affiliated to the W.C.C.

On May 25th 1935 a party of members entered Golgotha Hole and this was descended to a depth of over 300 ft. The dig was a joint effort with the M.N.R.C.

In July the British Speleological Society was inaugurated and two members of the W.C.C. were

elected to the Council.

At the end of the first year of its existence the Club's membership was about 100.

The Club had been sending a single sheet circular at about two-monthly intervals, and No. 8 reports that the name of Golgotha Hole had been changed to Black Cow Hole. Mention is also made of trips to Steep Holm, joint meets with the mountaineering section of the Camping Club, visits to Derbyshire by members, and a visit by London members to Fawkham, Kent, where a subterranean passage (?) was excavated, but which proved to be a dead end.

Half way through 1938 Graham Balcombe turned his interest and energy to cave diving in Wookey Hole, and so led the way to the formation of the Cave Diving Group.

Together with the M.N.R.C. and the U.B.B.S. the Club decided in 1938, to form a Mendip Rescue Organisation. A number of members were doing original work on the caves of South Wales, and in 1937 the Club decided to go ahead with plans for the formation of a Group to cover this caving district. This was followed in 1938 by the formation of an Oxford Group. Other school caving clubs affiliated and in 1939 a mountaineering section was formed.

The Club continued to go from strength to strength, the membership at one time being well over 200, perhaps the largest in the country. This was in no small way, due to the enthusiasm of Hywel Murrell, who had been Hon. Secretary since the formation of the Club. However, in January, 1940, he resigned from the post to join H.M. Forces, and the writer was elected in his place.

The war resulted in a severe curtailment of all caving activities, and in 1941 the Club was given notice to vacate its headquarters at the Grange, and steps were taken to remove the gear, fittings, and other club property to another place on Mendip. Early in 1941 it was decided not to continue to hold regular club meetings, but the Hon Treasurer and Secretary continued to watch over the interest of the club. From time to time members remaining in the Mendip area held informal meetings but it was not until August 15th 1946 that an acting committee met and held a meeting on formal lines. This committee consisted of the Treas. G. Williams, Sec. F. Frost, J. Lander, C. Low, P. Dolphin, K. Humphries and G. Tudgay. The membership was then 56, and there was a balance in hand of £53.

H. Murrell was living in the London district and the London Group was formed towards the end of 1946. The Mendip Rescue was re-formed on pre-war lines, and the search began for new headquarters on Mendip. Gerard Platten came to our help with a gift of a small hut, this was removed from a site near Red Quar to Eastwater, but members still continued to look for a larger building, and success crowned the efforts of P. Dolphin and C. Low who arranged with the owner of Beechbarrow to rent one of his barns to the Club. This barn was in fact a stable, and there was plenty of work to do in removing 'evidence' of the previous occupants. Steps were taken to recover the bunk material, tables and other fittings recovered from 'The Grange' and put into store, but to the committee's dismay it was found that there had been a sale of some of the effects of the premises and our property had been sold with the rest. This meant that the Club had to purchase bunks, tables, chairs to make the new headquarters suitable for use by members.

The subscription was increased from 5/- to 7/6 at the 1947 A.G.M. and it was also decided that the Club year should end on July 31st.

During the summer of 1947 the Club acted as hosts to a party of French cavers, and in 1948 there was a Club visit to some of the caves in France. A further Club trip to France was run in 1949, this time to caves in the Pyrenees.

Our President celebrated his 80th birthday in 1949, and at the A.G.M. Hywel Murrell presented him with a painting on behalf of the Club.

The membership of the club had increased to about 150. In 1950 there was a visit to Mendip over the Easter holiday of the Stoke-on-Trent Pothole Club, and the Club visited Derbyshire later in the year to have a joint meet with the A.O.T.P.C. The following Easter was the introduction of the Club's Easter trips to Yorkshire.

A great amount of work had been done at the Club's headquarters, and it came as a shock when we were given notice to vacate Beechbarrow by the owner. All the gear and fittings had to be removed at short notice and were stored in a barn at Hillgrove Farm. Efforts were made to find other accommodation on Mendip, but with no success, and having obtained permission to erect a hut at Hillgrove it was decided to go ahead and purchase a new wooden hut for use as headquarters. An appeal was made to members and this resulted in a sum of £170 towards the cost of the new hut, and the site was prepared and the hut erected early in 1952. In 1953 a tackle hut was also erected on the site.

The last two years have seen a noticeable increase in caving activities of members on Mendip, in fact it would be true to say that there is more being done now than for quite a number of years. In addition the journal has taken on a more ambitious form, and the standard has been increased out of all recognition. To help towards the cost of these improvements the subscription was increased in 1953, to 10/-.

Of the original six who were present at the first meeting in 1934, three are still members of the Club. Included in the three is the founder secretary, Hywel Murrell. We wonder if, when he suggested the formation of the W.C.C. he thought it would still be flourishing in 21 year's time.

Frank Frost.

CUCKOO CLEEVES

The Dig.

The work of re-opening this cave, which has been closed since 1947, was begun on 18.6.55 under the direction of Oliver Wells. For this he had already prepared the iron framework of a shaft 7 feet long, with widths of 23 and 28½ inches. The wooden shuttering for this shaft was made from ash trees averaging 3" in cross section, which I cut from Mendip Lodge Wood. It was not very long before the original shaft had been sufficiently deepened for us to put this new shaft inside it, the top reaching to within 4 ft. of the top of the original shaft, which was in a decayed state. The shuttering was packed tight all round with rubble, except for the lower part of the W. wall, where we expected the

cave entrance to appear. This wall was (and still is) in an unstable condition, because it consists of soft mud and stones. Even in dry weather a trickle of water enters at the NW corner of the shaft, and this is where the mud is most unstable.

Because of this instability of the W. wall we had a number of set-backs, and a great deal of patient and careful underpinning had to be done. Oliver Wells had to relinquish the direction of affairs and the Club Secretary asked me to take them over. Most of the subsequent work was done by Robert Woolley and myself, but we had a lot of help from Derek Ford. After about seven full working days on the dig, during which we had anxious moments with heavy boulders, we entered the cave on 14.8.55 and the first part of the survey was carried out. A note on this survey follows this article.

The Cave.

We found the cave to be larger than we had expected. I suppose we had been getting used to places like Easter, Whitsun and Tankard Holes, not to mention Dallimore's; all of which are in the neighbourhood. After a short boulder ruckle, in which the boulders are not much displaced from their original positions, one enters a dip rift declining at about 30 deg. This leads to a 13 ft. vertical, at the foot of which we found a number of digging implements, which we have presented to the Club. From here the cave goes down the strike to the E. in a wide passage, down the middle of which is a fine canyon, like that in Eastwater, only shorter, but just as steep. Through a pot hole at the end of this the passage doubles back along itself to the W. but soon turns S. again along the bedding.

At an estimated depth of 139 ft. a flat roof chamber is reached, which appears to have some phraeatic passages leading off it near the top; but these have not yet been entered by us. The cave is mainly determined by dip rifts running S. and by strike rifts mostly running SE. Wherever a rift follows the bedding or the true line of strike it is nearly vertical, but these South-Easterly strike rifts are steeply inclined against the bedding. This is particularly noticeable from a point 210 ft. below the entrance as far as the end of the cave (250 ft. below entrance). At the former point one can turn to the W. and climb for about 170 ft. up one of these steeply inclining rifts. Another further down can be climbed up a very nice staircase, with a small but pretty stalactite curtain at the top. There are not many formations to be seen in this cave, except in the Grotto, but it was a great pleasure to see none that had been broken, no litter, no piles of spent carbide, or any of the other things that deface the more frequented caves.

At a point 228 ft. below the entrance the rift closes down, and one squeezes along its floor, where some digging has been done, for 12 ft.; but it opens up after that, and one has to leave the floor, where it is too narrow, and climb up into the roof. This narrow roof traverse, into which the Staircase opens, is continued to the end of the cave, where it is joined by a dip rift and a narrow aven enters the roof. A small final chamber is formed just here, 485 ft. from the entrance. A small stream enters it from the S. running against the bedding and turns sharply down the strike rift, which is too narrow to follow. This stream can only be pursued some 20 ft. towards its source, after which the rift becomes too tight and the stream appears to emerge from a sump.

The entrance has been gated temporarily; I feel sure Club Members will approve of this step, even if

it restricts their entry, until such time as the work of exploration and photography, but above all of making the entrance safe, has been completed.

This is a Club Dig, not a private one, and so I don't feel I have the right to thank Members who have helped. But here for the record are the names of some of them; Oliver Wells, Oliver Lloyd, Robert Woolley, Derek Ford, Phil Davies, H.C. Attwood, Tony Burleton and Mark Lane.

Oliver C. Lloyd
22.8.55

A NOTE ON THE SURVEY OF CUCKOO CLEEVES

On 14.8.55, when we first entered the cave, Robert Woolley, Tony Burleton and I surveyed the first 261 feet of the cave. We used a spirit filled army compass and a knotted rope of 12 ft., while the angles of declination were guessed. I later checked some of these angles with a clinometer and found them to be reasonably accurate. On 20.8.55 Robert Woolley, Mark Lane and I completed the survey with the help of Phil Davies. This time we used the same compass but a linen tape and a home-made clinometer consisting of a mounted protractor with a lead weight on a thread. On both occasions the distances were measured to the nearest foot and the bearings to the nearest 5 deg. For the latter part of the survey a C.R.G. Grade 4 accuracy is claimed, for the former Grade 3. The Grotto is sketched in; it is really much more extensive.

Oliver C. Lloyd.

MENDIP NOTES

In Eastwater Swallet.

At the "First Bold Step", where one crosses the top of Harris' Passage from the hole at the foot of the Dolphin Ladder Pitch onto a flake of rocky there used to be a long wedge-shaped boulder, which was a useful taking-off point. This boulder had never been secure, about 4 years ago the end of it was observed to drop about 30 degrees, and at about the end of June this year it was reported to have fallen out altogether. It was always useful to have a rope at this point; it is now almost essential. An alternative is to use a 50ft. ladder instead of a 35ft. and pull the end of it down into Harris' Passage.

In the Black Hole Series, Swildon's.

On 9.7.55 a party led by Phil Davies went to explore a rift to the N. of "Calcutta", a name Stanton gave to the passage leading to the Black Hole. The estimated depth of this rift is about 47 feet, and it has two components: an upper Eastern and a lower Western, connected half-way down by a tube. The former is generally 12 ins, and the latter from 12 to 18 ins. wide and can be climbed without ladder. The walls and floors are covered with mud, which flows down the latter and drops into a very small stream, which enters at the bottom of the N. end, sumping at the S. It has been called the "Mud River Rift". It is not known in what way, if any, the trickle at the bottom connects with the "Priddy Green" Stream.

Easter Hole.

Alan Fincham and Bob Lawder have done more work here. The greater part of the cave consists of an intricate vertical route through a boulder ruckle 55 ft. deep, ending in two choked intercommunicating rifts in solid rock. More recently one of these obstructions was removed giving passages to a total estimated depth of 85 ft. In spite of extensive "gardening" the boulder ruckle, particularly the upper 20 ft., is still unsafe and must be treated with great respect. Cavers are advised not to explore it unaccompanied by one of the Members who has worked there.

Paradise Regained.

Exploration of this new series in Swildon's Hole has been continued and a few side passages and an ox-bow have been found. No further work has been done on the terminal rift, where running water was heard.

Tankard Hole.

Between 30.7.55 and 6.8.55 Mike Grimmer, Bob Lawder, Brain Prewer and Fred Davies opened up a new cave in a deep shakehole to the S. of the road from Hill Grove to the Hunter's Lodge Inn (31/556499). A shaft through clay and rubble about 12 ft. deep leads on its Western side to a rather dangerous boulder ruckle, which has been penetrated to a total depth of about 40 ft. This hole has not officially

been named, but it is now usually known as "Tankard' Hole".

Weighting Sump Luggage.

Parcels of clothing which are ferried through the sump in Swildon's often have to be weighted with rock or lead to make them less buoyant. Relief parties of sherpas who remove tackle, which has been dumped by weary Black-Holers on this side of the sump, will find their task lightened, if they remove these rocks before taking the bags out of the cave!

Pitons.

The piton is becoming to the caver what the screwdriver is to the engineer. A note in the Hill Grove log-book records that:

"Pitons have various uses:-

1. To stir soup.
2. Opening tins.
3. Cutting string.
4. Occasionally to belay ladders, etc., "

In a different handwriting is appended to this:-

"And by the look of some of the previous pages, to write with".

THE CAVER'S KITCHEN

There are some occasions underground, when it is essential to have some form of stove, to provide hot food. On others it is a very welcome luxury. I do not intend to discuss the problem of the most suitable food, but merely to indicate and compare the various practical ways of heating it.

The choice of stoves is difficult; I visualise the ideal cooker for this purpose. The stove together with enough fuel to boil one pint of liquid for each member of the party, and a two pint saucepan should weigh not much more than one pound. Fuel, stove and saucepan should be compact and easy to pack. The assembled cooker should be reasonably rigid when set up on a flat surface; cavers have large clumsy boots. Neither fuel nor stove should be adversely affected by water, mud or hard usage. Fuel should be cheap, not evaporate or be explosive. Heating should be rapid, lighting of the stove easy. It should have few or no working, mechanical, or precision parts; these may give trouble when most needed. No single stove satisfies all these ideal requirements, the cavers choice will probably be influenced by what he already has or can borrow, or perhaps what comes cheapest. In every case absolute reliability is essential and simplicity desirable.

I have recently made some tests designed to compare the heat output of various types of fuel, used in different stoves, and to compare the time and cost to produce an equal thermal output.

The basis of these experiments is very simple. First, the fuel capacity and the total burning time of the stove were measured, the only other data necessary is the time taken to boil one pint of water. The initial temperature in each case was

10°C; approximately that of cave water. In all the tests standard conditions of room temperature and draughtlessness were observed. A standard two pint, light weight aluminium saucepan was used with a lid; it weighed 3¼ ozs.

By means of these few simple measurements and precautions it is possible by equally simple calculations to compare the efficiency of the various stoves, and the relative cost of different fuels used in them. The results in some cases are liable to considerable variation under altered conditions, and are not meant to be applied directly to cave use.

Pressure Stoves

Pressure stoves fall into two main classes; the type that needs priming and pumping, and the type that does not. The former was represented in my tests by the Collapsible no. 96 Primus, dry weight 1 lb, 10ozs. and costing £2.11.6. The latter type of pressure stove was represented by the No. 8 Optimus weighing 1 lb.7ozs. of nearly the same size and costing £2.5.0. Pressure stoves in my opinion are not entirely suitable for the purpose. Their disadvantages besides the initial expense, are their weight, the liquid nature of their fuel, which is liable to spill or evaporate, which in the case of petrol is explosive and more important the possibility of mechanical failure. The pump plunger may become worn, the filler cap washer may deteriorate or become muddy, causing a pressure leak. The jet may become obstructed to an extent beyond the powers of even a carbide lamp user to clear. In general, the Optimus suffers from fewer disadvantages than the collapsible Primus, which has no fewer than 12 separate parts which may become lost amongst boulders or in mud. The Optimus is lighted directly

from a carbide lamp, it needs no pumping it is easier to control the heat output. The Primus can be used like an Optimus with petrol, but the lack of safety valve makes it hazardous, moreover the rapidity of heating is not appreciably greater, the expense is not favourable.

It is a matter of personal opinion whether the advantage of cheap fuel and the rapidity of heating by the Primus outweighs all its disadvantages. The problem is sometimes even more personal. Some people have absolutely no trouble in getting them roaring away, but others! They are to be seen at times enveloped in sheets of flame, uttering shrieks of pain, as a trail of burning methylated spirits runs slowly but inexorably down their arm. They succeed eventually, having used the whole supply of spirits and half the available paraffin, they emerge from the struggle with triumphant sooty faces, less eyebrows.

For details of comparative performance of the two stoves refer to the table at the end of the article. It will be seen that one pint of paraffin burned in the Primus will, under ideal non-stop conditions, boil 66 pints of water at a negligible cost. The Optimus may be filled with either a highly refined petrol (lighter fuel), or a low grade fuel such as white spirits. Any intermediate grade of petrol may be used, so long as it contains no lead, as is found in commercial petrol. Rapidity of heating is directly proportional to the grade of fuel used, but the total heat output seems to be constant for an equal volume of different fuels.

Liquid Methylated Spirits.

Various types of liquid methylated spirit stoves are available, the "pad" type proves relatively inefficient when compared with the "Express" type, which

consists of a central open reservoir of fuel, surrounded by a wick. The spirit is lighted directly; presently the fuel drawn up by the wick is vaporised and passes through numerous small holes to burn quite fiercely. The stove weighs only 2 ozs. and costs 1/6. Two main disadvantages are obvious, the wick must be kept dry, and the fuel carried independently of the stove. The recent use of polythene bottles has minimised the risks of portage. It has been noticed that unless the reservoir is filled to the mark, the initial vaporisation does not occur. Any unburned fuel cannot easily be saved, and the stove must of course be packed away from the food; this applies even more to the "pad" type of cooker. (See table for details).

Solid Methylated Spirits.

This fuel can be obtained in airtight and waterproof tins, either as "Canned heat" weighing 4 ozs. costing 4d. or as "Tommy cookers" weight 6 ozs. price 2/3d. Neither heater used singly is capable of even boiling water, in the relatively large saucepan such as I used, the heat being dissipated as fast as it is supplied. A maximum temperature of 98½°C was recorded in both cases "Canned Heat" taking 22 minutes to reach this, and the "Tommy cooker" 11½ minutes. Usually 98½°C is quite high enough for general use, but if the source of water is uncertain, boiling is essential. A tin of soup placed over the "Tommy cooker" can be heated fairly rapidly, boiling is not necessary. Three tins of "Canned Heat" used simultaneously will boil a pint of water in 7½ minutes, and in actual practice have proved quite satisfactory for use underground. When the "Tommy cooker" was used with a smaller saucepan, boiling point was reached in 12 minutes, giving a cost of over 4d a pint as compared with 1½ d a pint using "Canned Heat".

Both these heating units have their application underground, the one is obviously more expensive than the other, but fuel can be transferred from one tin to the other quite easily. The simplicity of its use makes it fool proof and fulfils my earlier ideals. Even if it does get wet no harm results. Four "Canned Heat" tins can be packed into the saucepan (enough to boil 12 pints of water), the whole outfit of saucepan, stand and fuel weighs only 1 lb 4 ozs. "Canned Heat" could be left underground as emergency supplies, without fear of deterioration. Various other sources of the fuel may be known of by the reader.

Solid Fuel.

Solid fuels fall into two classes, the metaldehyde "Meta" type and the "Profol" or "Esbit" type. Packets of Meta and Profol contain 20 tablets of the fuel; five bars of the former and four of the latter were needed to boil one pint of water. The fuel is added in small quantities as necessary. A packet of fuel weighs 3-4 ozs. Details of time and cost will be found in the table. Metaldehyde fuel may with impunity be immersed in water, but "Profol" begins to disintegrate after a few minutes. The salvaged remains will however burn reasonably well, although igniting them may be difficult.

A simple but rigid support combined with wind shield can easily be made, to suit the particular type of saucepan and stove being used. For ease of packing the support should be so constructed as to fit either inside or around the saucepan. Tests indicate that the efficiency of solid fuels, solid and liquid methylated spirit burners, may be reduced by 20%, if the flame is blown about by only a light unshielded draught. To use the fuel efficiently,

the support should be made so that it holds the saucepan 1¼ inches above the burning solid fuel or methylated spirit burner, and two inches above the initial level of the solid methylated spirits. A further 10% increase in efficiency can be obtained in the case of solid fuel, if a simple forced draught burner is made.

Cost of fuel seems at first a major consideration, but because of the only occasional and special use, for the majority of cavers, the importance is minimised, and one is prepared to pay for the luxury; of course only up to a point. Efficiency and simplicity are far better guides when choosing a stove. I think that all relevant facts have been compared, and most of the disadvantages set out. The figures reveal that paraffin used in a Primus is most efficient and least expensive, but it tops the list of disadvantages. Experience shows that the Optimus is suitable for large expeditions underground, provided that the disadvantages are known and suitable precautions taken. For the small party the "Canned Heat" outfit has proved its effectiveness and is without doubt absolutely foolproof; moreover it comes fairly high in the list of efficiency and low in the expense column.

TABLE

Stove Fuel	Capacity	Burning time	Cost of fuel	To boil 1 <u>pint water</u>	
				time in mins.	cost in pence.
Primus Paraffin	8 fl.oz	80 mins	pint 3d	3	1/22
Optimus Lighter fuel	4 fl.oz	44 mins	pint 4/-	5¼	1¼
White spirits		95 mins	pint 1/-	12	3/10
Express Meth. spirits	3 fl. oz.	30 mins	pint 1/4	7½	6/10
Tommy Cooker		75 mins	tin 2/3	12*	4
Canned Heat Unit of 3		60 mins	3 tins 1/-	7½	1½
Meta	pkt. of 20 bars	36 mins	pkt 3/3	9	10
Profol	pkt. of 20 bars	35 mins	pkt 2/-	7	5

* small saucepan used.

Phil Davies.

HILLIER'S CAVE

Members will recollect that this cave was discovered during quarrying operations and first explored by David Penrose and other boys of Midsomer Norton School. These boys continued their exploration and managed to pass the Third Boulder Choke. Early in August they found the water so low in the so called West Sump, that it was possible to get into a new part of the cave. Penrose informed me of the new discovery and, in company with Jim Swithenbank and his brother Colin, I visited the cave the following weekend (13.8.55).

We found that it was possible to pass the sump without getting very wet; on the other side the way on was up a steep slope, well mud covered. (A high water mark about 30 ft. above the sump gave one food for thought). At the top of the slope was "The Squeeze", and although this was no obstacle to the other two, we had to remove several projections before I could get through; and even then it was very tight. A passage to the left led to a boulder choke, this being the limit of the first exploration. We have called the small chamber from which this passage runs, Norton Chamber.

On climbing through the boulders we found ourselves in a chamber (Yorkshire Chamber), and my companions climbed the steeply sloping side to about 60 ft. above the floor, and there found evidence (tree roots) that it was not far below the surface. We returned to the bottom and discovered a pitch of about 20 ft. leading downwards through the floor. A climb down brought us into the Mud Passage, which has signs of having been water filled. It may well be that it is completely filled with water under more normal conditions.

At the end of Mud Passage we climbed an upward sloping passage for about 30 ft. and discovered a

choke of boulders. Even Jim and his brother could not at first get through, but after a lot of hard work they managed to wriggle past the obstruction. I followed, and as I crawled over a large boulder I felt it tip. We found ourselves in another small chamber, and as time was getting on (our tummys were protesting) we made a quick examination of the chamber and decided that, if there was a way on, it would be downwards through the floor.

On the return journey Jim slipped through the tight spot, but, when I tried to follow, my bottom-half jammed. Managing to get back out I wondered what had gone wrong, bearing in mind the fact that I had got up through the hole. I then remembered the moving boulder and my companions, using some strong-man stuff, altered the angle of the boulder and I shot through. We quickly crawled through the passage, now no longer having a floor of virgin mud, and made our way to The Squeeze. This time I could not get through unaided, and there was an undignified episode, Jim pulling from one side and Colin pushing from the other.

As we got near to the entrance of the cave we could hear the sound of falling water, and found water up to 2ft. deep in places where there had been none on the way in. There had been a heavy thunderstorm on Mendip, and the entrance shaft was acting as a main drain for the road outside the quarry.

Frank Frost.

"CAVE SICKNESS"

In 1944, at Camp Gruber, Oklahoma 35 soldiers visited a storm cellar while on manoeuvres. There was no door to the cellar, but the men put a blanket over the opening and built a fire of rotten boards from the ceiling and of strips of bark and chips of wood from the logs which supported it. Within a week or two every one of them had succumbed to an attack of pneumonia, which was not very severe and which had features which distinguished it from all other kinds of pneumonia. The cause was not established.

In 1947 a similar kind of pneumonia affected 21 out of 25 men and boys who were engaged in a "treasure hunt" in a disused chalk mine in Arkansas. This was reported by Washburn and others (1948), who were so struck by the resemblance of this epidemic to that which occurred at Camp Gruber, that they called it "Cave Sickness". It is evident that to a non-caver a storm cellar does not differ materially from a chalk mine. After anything from 4 to 13 days digging in these chalk mines the victims developed a sort of cold with fever, followed by an acute pneumonia, the characteristic feature of which was that an x-ray picture of the chest looked like a snowstorm. The disease ran a benign course, however, and after about a week they all got better, though many were left with a troublesome cough.

Washburn and his friends were quite unable to demonstrate the cause of this outbreak, but Grayston and Furcolow (1953) have since shown it to be due to an infection by a fungus called Histoplasma capsulatum. They collected a series of 13 outbreaks of the same type of pneumonia (including these two) and in every case showed not only that the victims had suffered from an infection by this particular fungus, but the

the fungus was still present in the place where the infection had taken place. These were often enclosed spaces, such as farm buildings or an old school room, or even a hollow tree, and were often contaminated by the excreta of pigeons, in which of course fungi love to grow, or other rotting material. This particular fungus is not widely distributed. In America the area affected is rather limited, the chief centre being the States of the Middle-West. In this country the fungus is practically unknown, only about one case of human infection having ever been reported in which the Histoplasma was proved to be present.

A similar disease has, however, been reported from South Africa. (personal communication) among students who went caving in the Makapan Caves. It first came to the notice of the South Africans Institute for Medical Research in March 1953, when 3 students developed pneumonia after exploring an unfrequented section of these caves. Since then the Institute has collected some 30 cases - nearly all in students. Indeed, the opinion has been expressed, that this may be said to be an occupational hazard in students. But though the epidemics resemble so strongly those described by Grayston and Furcolow, they have never been able in South Africa to isolate the Histoplasma from the air or soil of the caves.

So far no cases of "Cave Sickness" seem to have been reported from this country.

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- References: Washburn et al. (1948).
Am. J. Pub. Health, 38: 1521.
Grayston & Furcolow, (1953).
Am. J. Pub. Health, 43: 665.

CUCKOO CLEEVES

