



WESSEX
CAVE
CLUB

FOREWORD

A certain amount of dis-organisation has resulted in this issue of the Journal being about a month overdue. For some time now we have been using the articles held in store, so to speak, at a much faster rate than fresh material was being received, and two articles that were to be published in this issue, unfortunately, have not materialised, so it is imperative that members send us articles, if the journal is to continue to be published.

As mentioned in a previous issue it was planned to give members an up-to-date list of the books in the club library, but this is not yet available. It has been suggested that the books should be kept at the Hillgrove hut, and Com Lawder offered to make a book-case for this purpose. It does seem a great pity that such little use is made of the library, and we thought that if members SAW the books, they would be prompted to borrow them. The Hon Sec would like to have members' views on this suggestion.

The Hut Warden plans to leave Bristol for London in the near future, and will have to give up the work of looking after the two huts. If there is a young energetic member who would be willing to continue the good work, would he please write to the Hon Sec as soon as possible? It has been reported that our landlord at Hillgrove is a little upset about certain work that has been done on the site, and we would remind members that not only should Mr Sealy's permission be obtained BEFORE alterations are made to his property, but that he should be made quite aware as to the extent of any suggested work.

Members living in the Bristol district may have read the reports in the local press of the recent accident in Rods Pot, when a girl fell, while climbing a ladder, and broke her leg. Dr Crook set the leg on the spot, and although the accident happened at a place in the cave not far from the entrance, it was a couple of hours before the U.B.S.S. got the injured girl out of the cave. It is Dr Crook's considered opinion that in the event of a similar type of injury to a caver in the more remote parts of certain Mendip caves, a large party would be required for the actual rescue, and even then it would take quite a long time to get the victim out. To return to the Rods Pot incident, both Dr Crook and Prof Tratman took, (as they thought) all precautions to prevent details getting into the press by warning the students in the party, but they forgot to warn the injured girl. The ambulance officers as is their wont, reported the accident to the press, and we gathered that a reporter was more or less waiting at the girl's bed when she woke in the morning. Hence the "article".

2.

The above explanation is given because, as older members will know, unnecessary publicity can result in a lot of worry to parents, etc., of cavers, and both Dr Crook and Prof Tratman were more than a little upset when they saw the article in the newspaper. It was rather unfortunate that the annual meeting of the Mendip Rescue Organisation wardens was fixed for the same day as that on which the accident occurred. The meeting was held as arranged, but it did seem all wrong holding a meeting while there was an actual rescue on hand.

The club owes Trevor Shaw its thanks for the index included with this issue. This must have meant an awful lot of work, but we know members will appreciate his effort.

TACKLE. The article by Prof Tratman on the manufacture of metal ladders contained a serious misprint. For the word centrifugal, please read centripetal. (Prof Tratman had his leg well and truly pulled over this mistake.) The 'Zinc' method as outlined in the article is not suitable for use with hemp-core steel wire. This **MUST** be all-metal wire. If this is not used, **THE RUNGS WILL SLIP.** A careful examination of metal tackle leads one to believe that a number of people are either ignorant or careless of the correct method when tethering and rolling tackle. Under no circumstances should the "cross over" method (as shown in 'British Caving'), be used when rolling up the tackle. The continual formation of acute angles may weaken the wires, and the same applies to the 'single' tether method of fixing ladders, when the ends are drawn together thus forming a sharp angle. **WE HAVE HAD ABOUT SIX WIRES GO AT THE TOP RUNGS.** Members should be reminded that the tackle should always be examined by at least the leader of any party. We hope to include an article on the use of tackle in the next issue. Three ladders have been withdrawn from use for re-wiring, but another 25ft 'ball' type ladder has been completed and put into circulation. At the moment we are trying to design 'spiders' for the ladders, but so far the operative word is 'design'. Any suggestion?

The owners of Fairy Cave Quarry have now decided to work on the face containing the entrance to Hillier's Cave. Unfortunately, this was destroyed before we could complete the survey of the cave, and only about a third of the ground has been covered. After the report in the last issue was written, another 300ft of passages were discovered, making a total of 1500ft. The manager of the quarry has promised to inform us when it is possible to re-enter the cave.

The cave photography have now been mounted and hung in the Hillgrove hut by Donald Thomson. It would be appreciated if visitors to the hut would try to avoid damaging them. Denis Warburton has not been able to

find time to mount the dinner photographs in the album, and we must thank C.H. Sandford for loaning us his negatives taken on the occasion of the club visit to Steep Holm.

Philip Rahtz continues to make some very interesting discoveries during the excavation of the Chew Valley sites. His present work is a race against the rising waters of the new reservoir, and the site will soon be lost for ever.

Congratulations to Valerie Boarland on her engagement to Miroslav Mijovic.

We welcome the following new member: Captain D.J. Hoare R.N.

HON SEC: Frank Frost. 22 Wolseley Rd, Bishopston, Bristol 7.

HON ASSNT SEC: D. Thomson. 4 St Joseph Rd, Weston-super-mare. Som. 44221.s

HON TREAS: G. Williams. 1 Redhill Drive, Fishponds, Bristol.

HON SEC (London Group): Mrs J.H.D. Hooper. 92 Station Crescent, Ashford, Middx.
Phone Ashford Middx 2168.

The following has been received from Paul Dolphin.

DAVID PRICE

The passing of David Price of the "Gwyn Arms" will be felt as a personal loss by those who were fortunate enough to have been caving in South Wales in the exciting days before the war.

The Gwyn has always been a focal point for cavers, who are treated as friends rather than customers, and many a wet and weary party has spurred on by the thought of David's good fire and warm welcome.

We remember him as a good and true friend, a man who looked you in the eye, and was wise in the ways of rocks.

To his wife and family, as kindly and generous as himself, we offer our deepest sympathy.

P.B.D.

AN 18th CENTURY CAVE-DWELLER

On the northern slopes of the valley above the little village of Croscombe (between Wells and Shepton Mallet), there is a small cave shelter known as "Nancy Camel's Hole". Feeling spelaologically minded, but not inclined to be active, the exploration of this cave seemed a suitable choice for a Sunday morning's outing. With a companion of equal spelaological keenness, I searched the wood (which has been recently felled) for the shelter, and after some time found the entrance at the bottom of a small cliff. The cave proved to be narrow, and not more than about 20ft long, with puddles of water on the floor. The only visible occupant was a Lesser Horseshoe Bat (unringed). On the roof there are deposits which Mr Balch believes are Triassic. Not very interesting cave if judged by appearance only, but its fascination lies in the woman associated with it - Nancy Camel.

Nancy Camel was reputed to have lived in the cave towards the end of the 16th Century and Mr Balch tells us that Dr F.J. Allen of Shepton Mallet excavated there about 1888 and found traces of the occupation.

We decided to pursue our enquiries about the lady, in the village, and to do this it was necessary to visit one of the two pubs. At first, apart from agreeing that Nancy Camel lived in the cave, the "locals" had no recollection of stories about her, but with a little lubrication a fascinating tale began to unravel itself. Each version began "I remember my great-grandfather telling me, etc etc. "

It seems that Nancy Camel lived in Croscombe but was a woman of ill repute and low moral character, and amongst her many misdoings, were the unforgiveable sins of sitting at her front door on Sunday knitting, or on occasions she could be heard chopping wood on Sundays! Shocking behaviour to a very religiously minded community. Eventually public opinion drove her from the village, but being loathe to leave the district she made the cave her home. To the already distressed villagers this was sufficient proof that she was a witch, and it became customary to associate her with the Devil. The well-known expression "Oh, go to H---," was replaced by "Go to Nancy Camel," and this curse has been until quite recently common expression of feelings amongst the Croscombe villagers. The only incident of her life described in detail was when a donkey ventured too near her cave. The "witch" lashed out at it with her whip and in doing so deeply marked a tree nearby. We were told that this could be seen today, and also a tree stump she used to sit on, but unfortunately all the trees have just been felled. The

story ends in her disappearance, obviously having been taken away by the Devil.

We were then invited to visit her grave in the churchyard - a burial place rather inconsistent with the rest of her story. The raised grave, close to the South Gate, was obviously old and all inscriptions were unreadable, but on the flat stone top were visible the imprint of her hob-nailed boots, her knife, and a very large fork.

There are also other familiar stories about the cave. It may surprise readers to hear that a dog once entered the cave and eventually came out at the Beacon on Mendip top completely skinned! This was supposed to run from the cave to the cellars of the last house in the village, which used to be a public house known as "The First In and the Last Out". Tunnels were also reputed to run to Shepton Mallet and Glastonbury.

The pubs were now closing, and our work of research came to an end.

C.H. KENNEY.

"THE MENDIPS"

This book by A.W. Coysh, E.J. Mason, and V. Waite will interest most cavers. The result of joint authorship is often rather unsatisfactory but this is not so with "The Mendips", in fact the style of each of the three writers is so strikingly similar that the book has all the appearance of being the work of one person. The undoubted enthusiasm of the authors for their subject has contributed in so small way to making this a very readable book.

The chapter on caving will be of special interest to members, and although obviously written for the more general reader, contains information that may be new to some cavers. Mason covers the subject of cave-diving extremely well, and I am pleased to see that he "debunks" the popular belief of 'an inch of stalagmite in a thousand years'. I don't think I agree with him when he says that "swallet" is derived from the word swallowed, 'Swallet' is unknown in the east of Mendip 'where the term "slocker" is used to describe a place where a surface disappears underground.

Over.

6.

The account of the discovery of Longwood is not strictly accurate. What really happened was this -. Stride, while still at Sidcot School, became interested in the swallet, and asked permission from the Axbridge R.D.C. to dig there, but as they were not too keen about letting a schoolboy work there more or less by himself, he suggested ,hat as he was a member (affiliated) of the Wessex Cave Club, the work would be under our control. I agreed to this and sent him an official letter to give to the A.R.D.C. Permission having been obtained Stride began his dig, but after a little while we lost touch with him when he left school to go on to Bristol University. Some time later we learnt that he had broken into a cave. In passing, it can be mentioned that several years before this George Williams was rather keen to dig the swallet, but I persuaded him to give up the idea as we considered this part of Mendip to be the territory of the U.B.S.S.

Turning from caving to archaeology it is indeed surprising that no mention is made of Philip Rahtz's important work and excavations in the Chew Valley. His three years' work on the site of the Roman Temple at Pagans Hill, and the more recently discovered sites, soon to be flooded by the waters of the new Chew Valley Reservoir, find no place in this book.

To a photographer, perhaps the most disappointing thing about the book are the illustrations. I have the feeling that most of these were taken with a 35mm camera, and speaking as one who has 'invested' a mall fortune in a Leica and its accessories, I suggest that this is not the most suitable size to use when taking landscapes and such like for reproduction.

The book contains a large number of extracts from other publications, and while a general bibliography is given at the end, I suggest that the book's usefulness would have been enhanced by the insertion of a reference to the actual original in each case.

"The Mendips" is published by Robert Hale Ltd, and costs 18/-

FRANK FROST.

A VERY GREAT VAULT

Most Somerset cavers (and many others) have heard something of the early story of Lamb Leer. They know that it was discovered by miners in the 17th Century, lost, rediscovered in 1879, closed before World War 1 and again reopened 20 years ago. Those who know more than this must forgive me if, for the benefit of those who do not, I clothe this bare skeleton with some flesh.

Our knowledge of the discovery of the Cave is due to Beaumont who visited it in the latter half of the 17th Century. His account makes delightful reading; his direct statements contrast refreshingly with the more lurid writing to which we are more accustomed.

"Its roof is firmly vaulted with Limestone Rocks, having flowers of all colours hanging from them, which present a most beautiful object to the eye, being kept moist by distilling waters ...At the end of this first cavern a vast cavern opens itself. I fastened a cord about me and ordered the miners to lower me down, and upon the descent of 12 or 14 fathoms I came to the bottom."

As far as I am aware there is no direct evidence of the date on which Beaumont made his visit. McMurtie in a paper read in 1880 puts it at about 1660, but does not give his evidence for this date. It is, however quite possible that the date may be later. John Locke, the philosopher, was commissioned by Robert Boyle to make some experiments in the Mendip mines with the newly invented barometer - in his report written in 1666 he says that the deepest mine he could hear of was only 30 fathoms. Lamb Leer is deeper than that and he is almost certain to have heard about it had it been open.

Other evidence comes from Beaumont himself; he reported to the Royal Society in January 1684/5 on the introduction of gunpowder into the Mendips, saying that it had been introduced within the previous twelve months. The entrance shaft now in use, which is almost certainly the original shaft, was sunk with gunpowder. The bore holes can be clearly seen and they are driven from above - they cannot have been made at any other time than during the original mining. I have not been able to check Beaumont's original account of his exploration of the cave. McMurtie says it is in the Phil. Trans. to the year 1770 p 368, while Gough quotes a letter in Proc. R. Soc. for 1681 pl-5. The terms of both quotations are the same. The Beaumont visit thus seems unlikely to have taken place before 1680 and may, have been as late as 1690.

Over.

8.

How long the Cave remained open we do not know. Rutter, about 1775, speaks of it but rather as matter of past interest. It was certainly closed in 1824 when Buckland and Conybear wrote that "in Lamb Bottom is a cavern mentioned by many writers. It is not now open." Thus it seems likely that the Cave was unvisited for more than 120 years, until in 1879 it was reopened. A fresh entrance shaft was dug and a platform erected at the debouchment into the Great Chamber through which visitors were lowered by means of a windlass to the chamber floor. (The windlass is now in Wells Museum.)

After the initial excitement interest in the Cave gradually waned; the shaft, only two sides of which were of rock, fell into disrepair. In 1904 Balch wrote of the "old and tottering windlass" and in 1907 Baker said that "for a long period the cave had been derelict." and that when he visited the cave he "moved with caution hardly venturing to place a foot on the time-worn structure" of the windlass platform - the same platform from which we hung our ladders nearly 30 years later. That the Cave was visited in August 1913 is certain; the party, members of the "Bristol Speleological Research Society" (the forerunner, I am told, of the U.B.S.S.), left behind in the Great Chamber, a covered evaporating tank with the date on the lid. Unfortunately, someone fell over it when the Cave was re-opened and any evidence on the rate of evaporation in the Cave was lost.

As far as I know the Cave remained closed from then until 1934, when a party consisting principally of Digger Harris, Jumbo Baker and Bill Tucknott started to dig in the shaft. Two week ends were spent in January, but on each occasion a rat-hole of an entrance fell in almost immediately. It was not until April 7th that a passable hole was dug and the Cave was re-entered. Ladders were rigged and only Digger went down to see whether the wooden ladder on the other side of the Great Chamber was intact - it was. Next day a larger party, in which I joined, explored the Cave. It was a never-to-be-forgotten trip, the first sight of the Chamber, the climb down the ladder, the sparkle of the Cave of Falling Water. Two other trivial points stick in my memory; a clay effigy near the windlass labelled "Balch" and a profusion of beer bottles - empty (attributed to Bamed and later to be replaced by an equal profusion of beer cans, the undoubted sign that Wilfrid Sharpe had passed that way.).

The pressing problem was how the cave was to be kept open. The shaft was very dangerous (one party had to dig itself out) and eventually it fell in again. It was obviously necessary to gate the cave and make shaft safe. After tricky legal negotiations prolonged until the Summer of 1936, the W.C.C. became joint tenants of the Cave with the

M.N.R.C. and the U.B.S.S. During the Club's August camp that year a concrete platform was erected across the top of the rift and the entrance was dug out again. To keep it open was not going to be easy so as soon as I could get in I investigated the roof above the artificial entrance tunnel leading from the foot of the shaft. I believed that Beaumont's measurements showed that the entrance he used was about there.* I found a rift in the roof which seemed to go nearly to the surface with rock all the way and Jack Duck surveyed down one shaft and up the other to me. That evening it plotted it out and next day we studied the ground and decided on a promising place where Wilfrid Sharpe started to dig and in three feet was through. So now we had a second entrance; we concluded that it was cheaper to gate that than to timber the old shaft, and this was done. After the War we covered the old entrance with soil and rock and it is now quite obscured.)

In 1937 the British Speleological Association (then enjoying national support) held its Annual Conference in Bristol and in order to show the cave to the maximum number of people a cable-way was installed by a party organised by Norman Baldwin and paid for by subscriptions raised in the Clubs It was very much appreciated by B.S.A. members particularly the less active ones. The ride across the chamber was quite an experience and it is a great pity that the rope was not maintained and had to be cut down, not to be replaced.

Meanwhile Jack Duck and Wilfrid Sharpe had been proceeding with their very elegant survey of the cave which was completed by the end of 1937; some others of us had been thoroughly investigating the cave's possibilities.

There was some excitement when a photo of the upper part of the Cave of Falling Water showed what appeared to be a built-up section in the wall opposite the entry. After a tricky climb it was found to be natural. Attempts were made without success to enter what appeared to be openings in the upper part of the Great Chamber and much thought was given to the whereabouts of the fabled "great lake".

In December 1937 we started digging under the arch at the foot of the iron entrance ladder - we soon found ourselves under the passage leading to the old shaft, the floor of which fell in on us, revealing a way into what is, we believe, the natural entrance to the cave. An aven with a precariously balanced rock bridge leads almost to the surface. The 17th Century miners had been there before us and the marks of their boots and knees could be seen in the mud.

I found out this summer that Capt. Nicholls who sank the 1879 shaft also thought that this was where Beaumont's entrance had been.

10.

The next digging was in the passage leading off the Beehive Chamber; this stopped when lack of air and space to put the spoil turned it into a major engineering venture. Another party began to dig in a hole at the lowest part of the Great Chamber where there is a pit leading to a horizontal passage which can take a large volume of water. The war put an end to both these ventures; I hope that someone else will take them up again, particularly the one in the Great Chamber.

I now come to what is perhaps the most interesting chapter in the history of this most interesting cave. Prof. Leo Palmer acquired a "geophysical megger" and brought it to Mendip in 1938 to see if it could be used to predict the presence of caves. He chose the area above Lamb Leer for his trials because he would be able to compare his findings with Jack Duck's Survey. He found that he could locate the passages with reasonable accuracy but he also found a quite unexplained cavity adjoining the Great Chamber and of much the same size.

The War prevented anything being done about it and it was not until 1946 that we examined the wall of the chamber on the left facing the ladder, the side on which the predicted cave was supposed to lie. At the junction of the wall and the stalactite which covered the mound of clay and boulders on that side we found a small hole. Prodding inward and downward met with no resistance so we broke away some of the floor and started to dig and three of us, Aubrey Glennie, Ruth and I have dug there every summer since, assisted by a number of others. We found we were under a wide arch, clay filled. We soon came upon rock forming the left wall of our tunnel which turned us gradually to the right. The roof was getting steadily lower and as we seemed to be turning into the side of the arch we decided to abandon that part when we were in 30ft. We then broke through the rock to the left 10ft inside which gave us a dog-leg in our tunnel but thereafter we have continued almost straight with beautifully water worn rock on either side.

At 20ft we struck a point where water was seeping in which tended to flood the passage. It was decided to cut a trench through the bank outside to drain it and this was done by Glennie and a party of C.R.G. members. Even so we found conditions pretty bad each September with the mud so sticky that progress was very slow, and we came to the conclusion that the only time when it was worth digging was early July. Last year we had a strong party but made less progress than we should because at 35ft we were getting CO₂ in such quantities that the candle would not stay alight. So this year I took down a blower made from a 5 gallon varnish drum which proved most successful in keeping a plentiful supply of air at the working face. We also had 50 cotton fertiliser sacks (28lb size) kindly supplied by Messrs Fisons Ltd. These

proved easy to drag down the passage and were taken out each night, washed and dried. With these arrangements progress was better than in any previous year and we ended 52ft from the entrance. Here we were able to dig upward with rock only on our left until there was nearly room to stand so we have great hopes for next year.

Many serious cavers have caves in which they are particularly interested, to which they return from time to time for further work. So it has been for me with Lamb Leer. It is difficult to say why. The cave has none of the liveliness of a Swildons, nor has it, apparently, the intricacies of an Eastwater. It has, however, the Great Chamber and it has its legends which suggest that there may well be a good deal more still to be found than we know now. I hope that perhaps this writing may stimulate others to take an interest in this venerable cave.

H. MURRELL.

FUTURE EVENTS: Holwell Cave. Members interested in a visit to this cave, should write to C.H. Sandford., 49 Kensington Rd, Weston-super-mare, Som.

G.B. "Guest Days".

Sunday June 13th: 11am at cave.

Tuesday Aug 3rd: 2.30pm at cave.

Saturday Oct 2nd: 3pm at cave.

* Names to the Hon Sec at least a week before the event. we have to remind members that it is not possible for their friends to be included in the list sent to the U.B.S.S., and that there is a charge of 1/- per head payable to the University member in charge of the party.

SLIDES

Gerard Platten kindly let the Wessex Cave Club have his slides of Mendip Caves on permanent loan on condition that on request from G.P., these slides would be available to other cavers. Unfortunately, while on such a loan to a London caver, the slides suffered serious damage, and we regretfully inform members and others, that we now have less than a dozen left.

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Bulletin 14.

THE CAVES OF MALTA

by

T.R. SHAW

Unlike Gibraltar and Majorca, Malta cannot be regarded as one of the main cave areas of the Mediterranean. It does have a speleological history, however, in which stories associating its caves with the myth of the Cyclops and of the nymph Calypso are intermingled with the fact of the shipwreck on that Island of the Apostle Paul. The author ably describes a number of the caves located on both the island of Malta and its adjoining island of Gozo, some of which were supposedly used by all three of the above mentioned personages.

Malta cannot be regarded as one of the main cave areas of the Mediterranean, to the same extent as Gibraltar and Majorca. Nevertheless there are a number of caves in the island; fifteen can still be located definitely, and it appears from the older books that at one time as many as 38 were known. A few of these are known to have been quarried away; others may have collapsed, and it is possible that different writers may have described individual caves under several names.

The caves were first mentioned in 1647 by F.F. Abela in his book "Della Descrittione di Malta". No particular cave is named but the author speaks of the discovery in the hollows and fissures of the rock of enormous bones, which were regarded at that time as remains of the Cyclops, an ancient race of giants supposed formerly to have lived in Sicily: "But lastly what further testimony can we desire the habitation here of the Cyclops, without the need of borrowing from the ancient scriptures, involved in the obscurity of time, than that given us by the gigantic bones found in Malta, and their hollow burial-places cut in the living rock"

The first book to contain a general account of several of the caves was written more than a hundred years later by G.F. Abela, and published as two folio volumes in 1772, under the title "Malta Illustrata". It includes descriptions of twelve caves, but several of them are small sea-caves and of very little interest.

Then in 1804 several cave references appeared in a history written in English by one of the Knights of Malta, Louis de Boisgelin de Kerdu.

This book, "Ancient and Modern Malta", was followed in 1840 by Miegé's "Histoire de Malte" which contained considerably more information than its predecessors. Since that date numerous guide-books and small histories have appeared, but they contain very little that had not been written before.

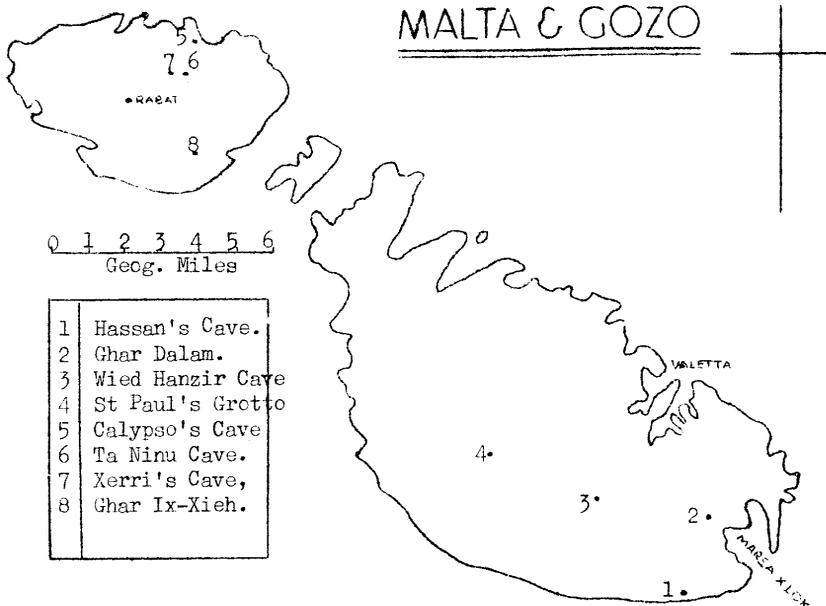
In general the caves are very small by comparison with European or American standards, and to some extent this can be attributed to the waterless state of the island. Between May and September no rain falls at all, and in winter the water sinks almost immediately into the porous limestone. At the present time no permanent rivers or streams exist, though the formation of the gorge-like valleys which intersect the island in all directions is often attributed to a period of greater rainfall in the past. The caves themselves appear mostly to have been formed by phreatic action when the land lay very much lower relative to the water table.

The largest cave in Malta is Hassan's Cave or, as the natives call it, "Ghar Hassan" ('Ghar' being the Maltese word for a cave). The entrance lies in a high sea-cliff of Oligocene coralline limestone near the south-east corner of the island, a few hundred yards from the Royal Naval Air Station at Hal Far. The level of the cave is over a hundred feet above the sea, and it is reached from the ground above by a ledge along the cliff face. There are in fact two other entrances further east along the same cliff, but they are quite inaccessible from outside and one has been railed off for safety by the authorities.

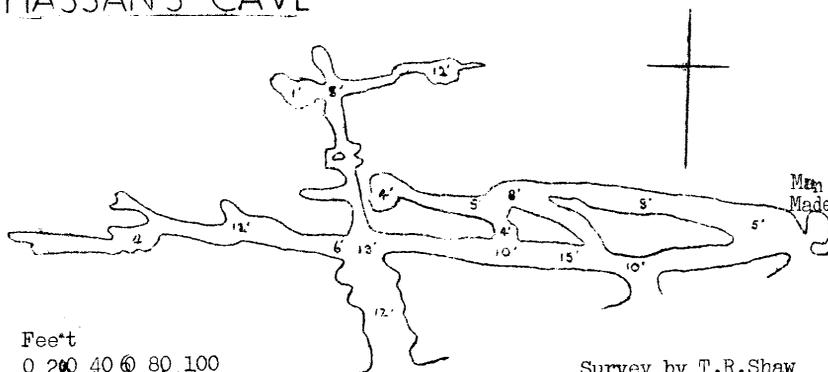
The total passage length amounts to 1270ft, the general shape of the cave being a rectangular network as shown in the accompanying plan. A broad passage extends from the main entrance and after a few yards it is crossed by another at right angles. To the right the tunnel runs parallel to the cliff face and emerges eventually at the second and third entrances. By the larger of these there is a low chamber some 40ft by 30ft, lit entirely by daylight, and from the back there extends another passage nearly parallel to the first and interconnected with it in several places.

Beyond the crossroads the entrance tunnel narrows considerably, then turns right into a rift passage as far as the final chamber. A small circular tube continues for some 16ft and then that too closes.

Evidence of phreatic solution is clear all through the cave. Maximum width occurs everywhere at the principal bedding plane which persists throughout the whole cave, usually a foot or so above the floor. Most of the joint planes are open for some distance above the passages, and in many places semi-circular channels can be seen meandering across the otherwise flat roof.



HASSAN'S CAVE



5' Figures denote roof heights.

The name Hassan's Cave is derived from the legend that the cave was used as a refuge by an Arab of that name when his countrymen were expelled from the island. A small circular chamber has been excavated by hand near the eastern entrance and is shown as Hassan's actual dwelling. He is said to have kept a small boat at the foot of the cliffs, a hundred odd feet below, and his only means of reaching it was by swarming up and down the face on a vertical rope.

No prehistoric bones have been recorded from Hassan's Cave, but about 1865 several trial trenches were dug by Leith Adams, a zoologist who was serving as a doctor with the garrison. He tells an amusing story of the Maltese people who used to stand watching the excavations and trying to make out their purpose. One afternoon he surreptitiously dropped a Spanish dollar on the shovelful of earth, and next moment it lay with the soil on the heap. He picked it up quite casually and put it in his pocket, and soon the spectators, whispering to each other, walked off. Next day when Leith Adams returned, he found that not only had his own trench been continued down a further four feet, but that several other excellent floor sections had been made by them in the hope of finding money!

Ghar Hassan is the only cave in Malta in which I was able to find bats. A number of them used to frequent an inaccessible fissure not far from the main entrance, and though they used to squeak lustily at every approach I could never get close enough to identify them. I handled a number of *Miyotis myotis* (Bechstein) - that bat referred to by Casteret as a Murin - and on one wall were sets of quintuple scratches where their claws had perhaps slipped in their attempts to alight.

Another of the larger caves, Ghar Dalam, is frequently mentioned in the literature, on account of the enormous masses of prehistoric animal bones and pottery that have been unearthed there. This cave also is situated in the south-eastern corner of the island, 600 yards from Birzebuggia and the shores of Marsa Xlok. The entrance has been gated by the government Museum Department, which has built a house above to contain some of the relics and provides a guide to show visitors round the cave.

The first 250ft consists of a straight passage at right angles to the valley outside, some 20ft wide and varying in height from 12 to 27ft. It is in this section that the remains have been discovered and the floor consists of a mass of trenches of different depths running into each other and flanked by complete sections of fill left as controls. At one point is a strange mushroom-like stalagmite whose upper half continued to increase in size after the bottom was protected by the earth.

The bone deposits were first noticed in 1865, but the first large scale

excavations were not made until 1892 (Cooke, 1894). More work was done during the first World War and in several of the succeeding years, and in 1917 considerable interest was aroused by the discovery of what were thought to be two molar teeth of Neanderthal Man. No other human remains earlier than the Neolithic period have ever been found in the islands, and the identification of these teeth has not been universally accepted.

Beyond the ossiferous section of the cave, the passages become much smaller and a number of narrow tunnels branch off in different directions. The continuation of the main entrance passage is almost blocked by a line of immense boulders fallen from the roof, but it is possible to scramble over these and down the other side to a low bedding chamber whose roof is intersected by some meandering roof channels, like miniature editions of those in Hassans Cave.

On the opposite side of the valley and in line with Char Dalam is a wide cave entrance, but the passage beyond is totally blocked with earth. It has been suggested that the two caves were formed as a continuous passage beneath the water table at a time before the valley bottom reached its present level or perhaps before it existed at all. Then as the channel was cutting downwards it eventually broke through the top of the cave passage which then acted as a collector for all the bones and rubbish being swept down the river.

The little cave at the junction of Wied Hanzir and Wied il Kebir, in the centre of Malta, is very different to the two preceding ones. It is quite small, not more than 76ft long, and at least part of it has been excavated by hand in the soft rock. The Entrance lies a few feet above the valley bottom and has been shaped into a rectangular doorway 7ft wide by 5ft high. Inside, it opens into a chamber 48ft by 27. It is highest in the centre where a fissure in the roof appears to be natural, but the walls have been cut back artificially, and both sides have been decorated by vertical ribs a little less than a foot wide and separated by recesses of about the same size. At the farther end of the chamber the pick marks on the walls cease and a natural passage continues for 26ft before being completely blocked by a boulder choke.

I have not been able to find any reliable description of the cave, but a short article by the Rev. J. Farrugia appeared a few years ago in the "Times of Malta". He supposed that the large boulder just outside the cave and half blocking the entrance indicated that it was inhabited at one time by prehistoric man. The decorative ribs and other markings on the walls he thought were added later when primitive Christians used the cave as a church. One of these wall markings is a five-pointed star incised on one of the ribs; and near the entrance there are a large number of small crosses cut similarly in the rock.

Another of the more interesting caves in Malta is completely artificial - St Paul's Grotto, where the apostle is said to have lived for three months after his shipwreck on the island. A church has been built over the grotto, in Citta Vecchia, and a statue in white marble placed in the cave itself. The rock of the walls is a soft limestone and the miraculous property has been attributed to it of growing again wherever the stone is cut away. And as this rock was supposed to be supplied by St Paul it was in great demand, being valued as a cure for fevers and all kinds of snake bit. At one time this stone, known as "pietra della grazia", used to be sent out not only all over Europe but as far as India and the East.

Also in and around Citta Vecchia there are several series of catacombs, but they are outside the scope of this article.

The smaller of the Maltese islands is called Gozo and lies about four miles to the north-west of Malta itself. It contains several small caves in the Miocene coralline limes tone, one of great antiquity and the others discovered within the last century.

Overlooking Ramla Bay on the north coast of Gozo is Calypso's Cave. It is reputed to be the very same cave as was occupied by the nymph Calypso in the fifth book of Homer's *Odyssey*. The entrance is low, however, and not very easy of access, and the interior of the cave consists of a series of low crawlways between shattered chambers floored with angular fragments of rock. It certainly cannot be imagined as the home of a self-respecting nymph, although several of the early writers, who had possibly never visited the place, repeated the legend without comment. Sir Walter Scott, who passed near the cave on his way to Malta shortly before his death, was by no means complimentary when he described it in his diary.

Two of the Gozo caves are found within a few hundred feet of each other in the village of Xaghra, and both were broken into accidentally when the villagers were sinking wells.

The first, discovered in 1888, is known as the Ta Ninu Cave from the local name of the property, and lies a little to the west of the parish church. The cave consists of only two chambers reached by a flight of steps from the yard above, but it is well furnished with stalactites. The roof is studded with straws, many of them now broken, and in places it is joined to the floor by stalagmite columns several inches thick.

The other cave in Xaghra is called Xerri's Cave. It was discovered in 1924, and the name of the cave is now displayed over the door of the owner's house. A set of regulations is hung inside the building,

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including one which forbids the visitor 'to damage the inside of the Grotto' with the optimistic requirement that he must 'make good any damage done'.

The cave itself is some 30ft below ground and is reached by a spiral stone staircase. It consists of a succession of passages about six feet high arranged at right angles. At one point a low tunnel branches out from halfway up the wall and extends for 15ft into the side of a well, presumably the well from which the cave was discovered. The calcite formations occur in separate groups in this cave, the largest being at the end farthest from the entrance stairway - a fine stalagmite flow and a number of stalactites and curtains, many of which will ring when struck. There are also a small number of helictites.

The most interesting formation and one which has still not been satisfactorily explained, is a group of thin-walled calcite tubes formed round hanging roots. In some of these the original roots have disappeared completely, and in others there remains only a decayed fibrous substance. In section these formations are not simple tubes, as might be expected, nor do they resemble a woody skeleton; but their structure is in fact very complex. In the typical case it consists of two concentric shells of calcite joined together on one side either by a single partition or by another tube; while in other specimens there are several internal tubes, irregularly arranged within an outer shell.

An interesting legend is associated with two small shelter caves overlooking Wied Mgarr ix-Xini in the south-eastern corner of Gozo. It is near this spot that the first settlers in Gozo are reputed to have lived, and their chief is said to have administered justice in an open shelter cave called Ghar ix-Xieh. A few yards away is another cave, El Habs, now partly walled up and used for housing goats, where the prisoners are supposed to have been kept.

Most of these caves in Malta and Gozo have been described recently in "Cave Science", the journal of the British Speleological Association. These references are given at the end of the article together with a short selection from the bibliography of the Maltese caves.

There is still opportunity for more work underground in Malta, and particularly in the lesser known island of Gozo.

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