THE PROCEEDINGS OF THE OXFORD UNIVERSITY CAVE CLUB

NUMBER 1.

OCTOBER 1962

THE PROCEEDINGS

OF THE

OXFORD UNIVERSITY CAVE CLUB.

No. 1. October, 1962.

CONTENTS.

INTRODUCTION.

The publication of this first number of the proceedings of the Oxford University Cave Club is a milestone in the history of the Club, and it provides a welcome opportunity to record some aspects of the Club's development during its first years.

In November 1957, several students at Oxford, some of them already experienced cavers, called a meeting to discuss the formation of a University Club. There are faint rumours of a caving group at Oxford in the early 1950's, but the present Club was formed as a result of the 1957 meeting.

For the first two and a half years the original members were present to lend their support, and there were enough caves on Mendip, the nearest caving area, to hold their interest. Membership varied between fifteen and twenty-five. More recently, however, there has been a large influx of new members, and the Club has ranged further afield in its search for fresh caves. All the caving areas of England and Wales, with the exceptions of East Devon and Furness, have been visited, and in the summer of 1961, several members formed the heart and soul of the Oxford University Expedition to Northern

Spain. A preliminary report of this interesting trip is included in this paper.

Some of the difficulties of running a caving club among university students have already shown themselves in this article. In the first place, members are drawn from all over the country, and the majority have had no previous experience. Thus a considerable part of the Club's policy has been to provide for beginners. Secondly, members spend only three of four years at Oxford, and so the membership of the Club is constantly changing. This means that those who begin their caving with the Club leave just when they could be ranked as experienced members, so that the number of experienced members is always small. The third difficulty is imposed by the position of Oxford; the nearest caves, those of Mendip, are eighty miles away.

But despite these drawbacks, and despite the multitude of superficially more attractive distractions in Oxford, a growing number of cavers is tackling an expanding speleological field. There is a hard core of experienced and keen 'holers, interested in any chance of breaking new ground, and it is due to their efforts that the descriptions and surveys contained in this paper

have been compiled.

We hope that the appearance of this first number of the Proceedings will convey the thanks of the Club to those whose work has set the Oxford University Cave Club on its feet, and that it will encourage more members to follow in their footsteps. But those who do follow must remember above all that exploration in any field of science does not end with the task of exploration itself. Science increases only when the results of investigations are written down, and it is to this end that these Proceedings are to be published.

Editor.

THE OXFORD UNIVERSITY EXPEDITION TO NORTHERN SPAIN.

A Preliminary Report.

No doubt some of the people who turned their heads to stare as we drove through Oxford at 6.30. pm. on Monday, July 31st, 1961, wondered for a moment or two about our possible doings in Spain during the next few weeks. Even the few people who gave us a send off from our base in Oxford, where they had seen some of our preparations, could not have known that we had been looking forward to and working for the next seven weeks for nearly a year.

Many months had been spent in getting the party of twelve together, and in enlisting support from societies and industrial firms; the generosity of the latter enabled the expedition to take place, and contributed greatly to its success. The last few days were a feverish whirl of checking and packing equipment and loading it onto our two ex-WD. Bedford lorries. Surprisingly we were only half an hour late leaving Oxford. After a night in London we drove on to Dover, crossed the Channel, and by 4.pm. were wondering why we had ever criticised British Roads.

It was as well that we were in no hurry to cross France, for though our

vehicles ran well, we soon found that one of them wouldn't stop. Two long breaks for repairs were made, one overnight near Rouen, and one at Montignac, where we also saw the famous cave paintings of Lascaux and Les Eyzies. We didn't reach the Spanish frontier until late on Sunday evening; too late in fact, for the senior officials had gone home, and we had to spend the night in the no-mans land, between the frontiers.

As we drove along the north coast of Spain the weather broke, and by the time we reached Cangas de Oñis, the town nearest to the scene of our operations, we were quite damp. We lost no time in presenting ourselves to the Mayor and to the barman, and having received permission from one and fortification from the other, we set off the next day for Covadonga, and the National Park of the Picos de Europas, where we were to camp. The road beyond Covadonga was very steep and very rough, and we were very grateful for the pulling power of our lorries. At about 2000ft. we passed into the clouds, and our search for a campsite near Lake Enol wasn't particularly enthusiastic. But through the mist and rain appeared the dim outlines of a large stone-built house, and it turned out to be a Government-owned mountain refuge, similar

to the Youth Hostels of this country, but without the meals service. We decided to stay there for one or two nights, whilst we dried out and established a camp-site; but the weather was so dismal and the position of the Refuge so ideal that we paid another visit to the Mayor of Cangas, and obtained permission to stay in the Refuge for as long as we wished, because we were students. So the "Estudiantes Ingleses" we became, and we were soon objects of great interest to the local populace.

On the Sunday the clouds began to lift and we were able at last to look at our surroundings. The Refuge was built on the side of a wide green valley, with the lake about three hundred to the left, and the deep gorge of the River Dobra about a mile to the right. Across the valley an extensive but thin wood of beech and oak rose up the hillside to about 4000ft.; beyond this was a rough expanse of gorse and bare rock, and beyond this again, about four miles away, the huge cliffs and precipices of the highest peaks towered above large patches of glistening white snow. We had established ourselves in the long verandah built onto the side of the Refuge, where we and our equipment were protected from the weather, and yet open to the air and to the view. We

were also within easy running distance of the lake, an excellent cooling-off place, for even at this altitude of 3700ft. the temperature was generally in the eighties, and quite often in the nineties. We were extremely lucky with the weather; according to the locals, we hit the best spell of weather within living memory. After the first three days we had hardly any rain at all, and as well as the gorse and bare rock, we had to contend with high temperatures when carrying out investigations above ground.

The area of mountains which had been chosen for examination is part of the Western Massif of the Picos de Europas, the highest part of the Cantabrian Mountains, which continue the line of the Pyrenees along the north coast of Spain. The Western Massif is bounded by two very deep gorges, that of the Dobra on the west, and the even deeper canyon of the Rio Cares to the east. The whole of the area is composed of limestone of Carboniferous age, rather similar to the Mountain limestone of this country, though much more highly folded. The highest peaks, Peña Santa, 8517ft, and Santa Maria de Enol, 8130ft, are part of an enormous wall, standing vertically above the surrounding slopes by as much as 1200ft. The area has been glaciated, and the bare rock surfaces,

usually with well developed clints, contrast with the occasional green, moraine-filled valleys.

Of course, cave exploration was the major part of our programme, and there were plenty of them. Even during our first ascent of the mountain road, when we had stopped to give the vehicles a rest from their bottom gear grind, two cave entrances had been found; yet we never found the time to return to them. Altogether some sixty or seventy caves and potholes were investigated, and about thirty of these were surveyed, generally to C.R.G. Grade 11. standard. To give a correct impression of the types of caves in the area, small ones as well as large ones were subjected to compass and tape.

The largest cave, named Pozo (pothole) Palomera, after the hill on whose flank it lies, was the first one to be shown to us by the shepherds. The entrance was a vertical shaft, which we were told was fifty metres deep; a pretty good estimate, for we found that its depth was 142ft. This led to a system of generally large passages totalling four-fifths of a mile in length. At the bottom of the main shaft, another small pitch leads to a short upstream passage and to a junction; from this a long downstream (but not by any means

all downhill) passage leads north-westwards for about a quarter of a mile. The other passage, from which an enormous volume of water must flow in times of flood, when the snow melts in early Spring, is smaller and shorter, ending in a large chamber and a series of avens. At the end of our stay an extension, with passages cut by pebble scour, was discovered just beyond the first lake.

(For survey see Page 35)

A still more interesting system was first noticed quite early on during our stay, but as it was some distance from the base camp, it was only explored by chance. One very hot day, two of us were feeling thirsty, and thinking that any water found underground would be less likely to be contaminated, we entered this cave, with only one torch and a drinking mug; not the best equipped party for a first exploration. After a maze of entrance passages, with scallop marks showing water flow towards the entrance, a passage more than fifty feet high was reached, and our thirst was forgotten. The huge passage turned out to be only as long as it was high, but a climb into the roof at its end brought us to a large chamber, with several passages leading out of it. One of these led to another large passage, which in contrast to the rest of the cave was

perfectly straight. At this point common sense prevailed at last, and we made for the surface. We didn't find any running water underground, even though we were in the cave for more than two hours, and we had to be content with a drink from the surface. Later a more detailed exploration was made, and this time the party was better equipped. The straight passage we had seen turned out to be a fissure running straight for twelve hundred feet; as much of it involved a tricky traverse along the upper part of the passage, the trip was quite arduous, but well worth while on account of the wonderful formations in the fissure. At the inner end the passage sloped down to a stream, rising from a pool and sinking into the lower part of the fissure; the cave so far described seems to be merely a flood outlet for this stream. The passages found total nearly half a mile.

The third large system investigated was near the village of Covadonga, where a large stream disappeared into the Cueva Orandi, and reappeared at the shrine of Santa Cueva, some seven hundred feet lower. Two trips were made, and about three hundred feet of this depth were surveyed; the deep lakes at the foot of two of the ladder pitches added greatly to the fun.

Many other smaller caves were investigated, and these were of varying types. In the area of the Vega de Comeya, a flat-floored solution valley (polje) two miles in length, there were two groups of caves near the cliffs on the south side; those near the edge of the cliffs, which showed chiefly vertical development, though they did not extend as far as the valley floor; and those in the face of the cliffs, about two hundred feet above the valley floor, which were short and showed horizontal development. There was also a group of small caves in an outcrop in the middle of the valley, probably the various outflows of the same stream at different times.

On a broad time scale, the caves appear to be of two ages; most of the small caves are very old, often with large deposits of soft stalagmite, apparently the result of stalagmite decay. The larger systems are more recent, and both Pozo Palomeru and Cueva Orandi are still in process of active formation.

One of the highlights of the expedition was a five-day camp in the mountains, the objects being to look for caves (of course), to have a look at the effect of altitude on the weathering of limestone, and generally

to enjoy the scenery. We camped at a spring at about 6300ft, on one of the few patches of grass in an area of great expanses of bare rock and scree. There were hundreds of holes of every description; fissures, shafts, caves, the lot; so many in fact that we gave over even counting them, and turned to mountain-climbing instead. The Gran Hoyo de los Pozos (Great Valley of the Potholes) was only one of several large enclosed valleys; these were probably excavated to their present shape by the glaciers which occupied these mountains during the Quaternary Period of glaciation, since when they have been sculpted in detail by the processes of solution. Any former corrie lakes have been drained by the pothole systems which have developed at the lowest points of the valleys. Many of the potholes had become blocked by boulders, the product of frost-shattering, but many others are open,,and this upper area has an enormous potential for new discovery. One cave of special interest was the Cave of the Snow, so called because its main chamber, one hundred feet across, contained about fifty years accumulation of snow, to a depth of thirty feet. (For a survey see Page 36.)

Other work carried out by the Expedition included a record of the flow

temperature, and pH. value of two springs; water tracing (though in this we were hindered by the acute drought); geophysical surveys, using a resistivity meter and aimed at checking the position of underground cavities; meteorological observations adapted to record the conditions of weather at the rock surface, ie., the conditions which affect erosion; and examination of the forms of the rock surface.

Meanwhile, four members of the Expedition were busy in Galicia, investigating the rock carvings there. As many different types of carvings as possible were drawn to scale using a standardised technique, and many were photographed. Here temperatures were even higher than those in the mountains, and it was impossible to work in the middle of the day; luckily many of the sites were close to the excellent beaches of this part of Spain.

All too soon it was time to think about getting back to England. The archaeologists returned to the base camp, and together we de-laddered the caves and packed our equipment. On the morning of September 14th. we left the Refuge, but we had gone only three miles down the mountain road when the brakes began to give trouble again. After a repair session we did manage

about fifty miles that day, but most of the night, for the drivers anyway, was spent once again in checking the brake system. After this we idled our way across Spain, enjoying the low cost of living, and then crossed France in forty-three hours, which allowed us a very necessary day in Boulogne for yet more repairs. The hot weather continued; 99°F. in mid-France in late September -- but when we reached Boulogne the clouds were gathering, and England was shrouded in mist. We were home! On Thursday, September 21st, we recrossed the Channel and drove back to Oxford.

Perhaps the best proof of our enjoyment is that we all want to go back. But whether we do or not, the Picos de Europas, and this expedition to them, will always be among our brightest memories.

It is hoped to publish a detailed report under the auspices of the Cave Research Group. It is also expected that there will be more O.U. Cave Club forays to this area, and that their work will be published in future numbers of these Proceedings.

SOME WORK IN YORKSHIRE.

A Mix-up in Lancaster Hole.

In March 1960, three members of the Club were taking their first look at Lancaster Hole, with a 1946-vintage survey as their guide. In the section beyond the Graveyard and Stump Cavern, not marked on this plan, one of them came across a low crawl which seemed little frequented. He followed it and came to a small stream passage, leading to a pitch which, he decided, had not been descended. However, there was no time to bring in the necessary tackle, and the descent had to be left for the time being.

In March 1961, a much larger party was available, and it was decided to fill in some of the gaps in the 1948 survey, by the British Speleological Association, of the Graveyard section. Two parties were formed to do this; the first to look at the continuation of the gully in the Graveyard itself, and the second to investigate the crawl visited the year before. The first party had a good start, and when we (the second party) passed through the Graveyard some four hours later, we could see that they were still at work. At no time

did either party see or even hear the other; we went past the gully thinking that the first party must have discovered quite a lot of passage.

At the entrance of the crawl we left some of the tackle we were carrying, and got down onto our stomachs. The crawl was not, however, particularly difficult, though there were one or two low spots; generally it was floored with wet sticky mud. The stream passage too was low where we reached it, but downstream it gained height, until near the pitch it was possible to stand upright. A ladder was rigged on a long belay, and after a tight squeeze in the lowest part of the passage we were able to climb down. Our enthusiasm was quickly tempered, however, by the realisation that we were not the first down; someone had beaten us to it, and very recently too.

From the small chamber at the foot of the ladder a short boulder slope and a climb through a sharp-edged pot led down to a narrow fissure passage. This quickly became a narrow tube, lined with soft black mud, and with a gravel floor; a gloomy place indeed! Beyond a double bend the roof came down to within three or four inches of the floor, but we managed to find a soft spot in the gravel, where we could dig a way through. The effort was hardly

worthwhile! A few feet further on was a still dark pool, quietly defying us. A quick dip proved that there was no hope of diving it, as it was very narrow, and our intrepid hydrophiliac, with the water up to his ears, proved that the roof came down uncompromisingly into the water. Rather wet, we withdrew to the foot of the ladder for a breather, noticing on the way a small chamber above and to the side of the passage.

The ladder climb itself is very easy, but it requires quite a struggle to get through the squeeze at the top; one must be very supple and not too large. Leaving the ladder at the entrance of the crawl, we now set off upstream. Here the passage was wider and much higher as far as a right-angled bend where a pile of mud and rock had fallen from an aven; beyond this it became tight again. At another bend, a bedding plane in the roof led away to the left. One of us climbed up to this, but his light went out, and as we were all feeling the cold we decided to return. We made a rapid estimated survey, and on the way through the crawl we measured it with a "stick of known length" -- he was just about six feet long -- and found it to be about 240ft long.

After a short rest we made for the surface, where we heard with interest

the report of the other party. They had followed their passage from the Graveyard as far as a pitch, which one of them had descended. He had followed the passage below for a short distance, but had turned back where the roof had become too low. Above the pitch, meanwhile, the others had found a low crawl, which had led them to a series of large passages ending in a deep canal. A strong draught in these passages seemed to indicate that there might be something beyond the canal, and so accordingly a party was organised for the following day to survey the passages and if possible to cross the canal.

To make sure that a survey was produced, it was decided to begin at the Graveyard and work inwards; surveys on the return journey result only too often in no survey at all. The trickle of water in the gully passes through a short bedding plane and falls into a high narrow stream passage. We surveyed round several bends as far as the entrance of the crawl, opening on the right-hand side of the stream passage. In the crawl itself surveying was much easier, as we could manage legs of up to thirty feet. We passed one or two low spots, but it wasn't until we reached the end of the crawl that we realised where we were. We had tackled the same passage as on the previous day,

from the opposite end, and had failed to recognise it. We knew now, of course, who had beaten us down the pitch, and at least we could put away the surveying equipment.

Despite the knowledge that the passage and the canal were far from new, we pressed on through the boulder choke to the large but muddy passages beyond. These descend steeply to the water, which is very clear and difficult to see. Our resident swimmer embarked on a blown-up inner tube, and floated precariously round the corner, but on the other side of the pool there was only a small inlet passage, completely blocked by a stalagmite flow. A trickle of water hissed down from the roof, eighty feet above, but no other passage was visible.

About halfway back to the "T" junction, however, a small trickle of water was noticed on the left-hand side, and one of the party climbed up to a low bedding plane. This had a floor of very soft mud, except where the trickle had cut a narrow rectangular furrow; marks on the mud showed that someone had been before. After about 50ft. the passage forked, and the previous explorer had turned right. A dig in the soft mud of the left-hand fork gave access to twenty feet more of passage, but when it became necessary to dig

our man turned back:- there is just about room to turn -- towards relative comfort. But this must be the muddiest passage in the caving world; the poor bloke got stuck in his own dig, and eventually fell out of the passage, completely plastered with mud, onto the heads of those below. If anyone particularly likes digging through soft mud, he might be encouraged by the draught which blows from this passage, apparently the same one felt in the boulder choke towards Stump Cavern. The mud is similar to that near the sump below the Graveyard, and also covers the walls of the large passage above the canal; it appears to be deposited under water, in which case a rise of at least 50ft. in the level of the canal is indicated.

The survey of the passage below the Graveyard is reproduced on Page 37. The Gully in the Graveyard itself is tributary to a narrow stream passage entering from a south-easterly direction, which was not investigated. It has several sharp bends, and it slopes downwards as far as the Mud Aven, which the survey shows to be immediately below the second hollow in the floor of the Graveyard. For a short distance the passage is roomy, with a flat gravel floor and several stalagmite pillars, but the roof drops abruptly to within three

feet of the floor close to the junction with the crawl. Beyond this point the small stream has cut a narrow vadose trench in the bottom of a small bedding-plane; this becomes very narrow close to the pitch, which consists of two cylindrical shafts, with fluted sides, opening from the bottom of the passage; the vadose trench continues in the roof. The stream falls down the first shaft, and a dry descent of 25ft. can be made to the flat rock floor. At the far end of this chamber a few blocks have fallen from the roof, but to the left of these is a 10ft climb through two deep cylindrical pebble-scoured basins. Below, a short phreatic tube, with a gravel floor, leads to the terminal sump. The extent of the mud on the walls of this passage suggest that the water here rises no more than 10ft, unlike the canal beyond Stump Cavern.

The crawl consists of a phreatic bedding-plane, from two to six feet wide and one to three feet high; two or three bell-chambers in the roof have apparently been formed by solution under pressure. The passage has been half filled with sand and mud, which has since been partially excavated. In places this mud is covered by a thin calcite floor from which rise small stalagmite pillars, similar to those in Stump Cavern immediately above, and in one of the

small chambers there is a large calcite column. The whole passage slopes down towards the stream passage, and may at one time have drained the far end of Stump Cavern.

AYGILL HOLE.

There were one or two beautiful Spring days in March 1961, when even to hardened 'holers the call of the hills was louder than that of the caves. Thus it happened that a day which could have been spent caving was spent on the surface. But before you condemn this sacrilege, let me say that by evening our consciences were growing uneasy. Just before midnight we succumbed to temptation, and set off to investigate a few shakeholes near Bull Pot Farm.

There was a bright moon, but though we found plenty of shakeholes, but they didn't look particularly interesting, so we wandered over to the deep valley of Aygill, to lok at the sink there. This is without doubt a hopeless proposition, but close by, under a low cliff, there was a small shaft, and we climbed down. On one side, through a gap in the boulders, a small chamber could be seen, and

hopes were high as we dug out the obstructions and at last climbed through. A quick tour of the cave was made; quick because it wasn't very big; and, our consciences salved, we called it a day, or rather a night, and went to bed.

On the following day a survey party was formed to measure up our "find", and we spent several hours pushing into odd corners. The twelve foot shaft leads to a small bedding-plane floored with boulders, with a narrow slit on the lower side through which we had dug the previous evening. This leads into a small chamber, 10ft × 8ft × 5ft, with two passages leading on. In the right-hand corner a smooth narrow inlet passage can be penetrated for about ten feet, after which it becomes very tight. The other passage enters a narrow rift, six feet high, which becomes more roomy,,and descends in steps to a low crawl and to the final chamber, apparently formed in a mud and gravel deposit which quickly showed its instability. There are three extensions to the cave, all on the left- hand side; coming back from the final chamber, the first is a bedding-plane crawl to an aven, the second a series of holes round a jammed boulder perched on the edge of an eight foot pot, and the third, high up at the end of the high rift, leads to a series of chambers and crawls. The first

of these chambers is an aven, eighteen feet high, with three passages leading out; of the two inlet passages, one enters a boulder chamber close to the surface, and it is said that an entrance to the cave can be made here at times. The third passage leads to another boulder chamber, with beyond it a very low crawl to a fissure passage, where further progress is blocked by a large rock flake. Beyond this flake the passage drops abruptly and becomes much larger; unfortunately there seems to be no way of passing it, and even if this were possible, from the character of the rest of the cave it is probable that the large passage would be very short. Again, this section is dangerous on account of the boulders which form one side of the passage; the underside of the mass of boulders filling the Aygill valley.

Though this cave is small, with less than 150ft. of passages, it is complex and interesting. It lies close to the Dent Fault, which in this area determines the western limit of the Mountain Limestone block, and is developed in rocks which dip towards the north-west at an angle of 30°, a rare occurence in this area of predominantly horizontal rocks. Though most of the rock is dark in colour, and the passages are full of sharp edges, the inlet passage

in the main chamber is developed in light-coloured rock, and has smooth, water eroded sides. This passage extends downwards, and through a small hole in its floor a chamber can be seen at a lower level; unfortunately we were able to put a hand through only, and we could not move the boulder which blocks the hole. There arefew formations; those near the 8ft. pot have been broken by recent movement of the boulder perched above it. (Survey, Page 38).

The stream sinking by the entrance did not appear in the cave, neither is it heard, though it probably flows in the cave in times of flood. Normally it sinks through the deposit of boulders on the valley floor, but as it does not reappear in the Aygill valley, it must flow southwards into Bull Pot and so to Leck Beck Head.

We realise that these visits are by no means the first to the cave, but as we know of no description, or even any mention of its name, we take the liberty of including it here.

BOUTHER GILL CAVE.

Snow on the ground provides an excellent chance of finding cave entrances, which show because the draught melts the snow over the entrance. So Easter Tuesday, 1961, saw two of us looking at sinkholes near Hubberholme, in Wharfedale. We were following Bouther Gill, a small stream which has cut a deep cleft in the southern side of the main valley, when we noticed a sizeable cave entrance at stream level, from which a small stream flowed. As we didn't know of any record of this cave, we clambered across the stream and passed into the warmer atmosphere of the underground.

The cave proved to be quite interesting. The clean-washed stream passage, about six feet high and two feet wide, wound on for some distance, becoming higher and generally narrower after some thirty feet, though not so as to make progress difficult. An 8ft. waterfall provided a sporting climb, and above it the passage continued, now tighter, with correspondingly deeper water, and about ten feet high, with a narrow bedding plane in the roof. A small chamber, its floor under two feet of water, was passed before a deeper pool, with mud floor and a low roof above, made further progress in the clothes we were

wearing impracticable. From beyond, however, came the sound of falling water, and we withdrew to don more suitable attire for the swim.

After lunch we trudged through the now deep snow to the cave again. We were soon through the low section, and we found ourselves in a large chamber, about thirty feet long and twenty-five feet high, completely occupied by a deep pool. The stream fell from a narrow fissure in the roof, but there was no possible way on. A little disappointed, we once again withdrew, making a survey as we went. (See Page 39.)

Below the waterfall the floor is remarkably clean-washed, and above it there are only a few small pebbles, where the rate of water flow is less. The floor of the final chamber is of thick mud, and mud also occurs near this pool, but above water level, in shallow fissures out of reach of the stream.

Near the entrance there is a bluish-white soft deposit, occuring both as a flow and in spherical nodules, and above the waterfall a soft black deposit, occuring once as a roof flow, but more often on the cave walls, was found.

The terminal chamber contains a stalagmite flow, coming from an aven in the roof, and at several points there are straws, some of them 18" long.

AFTON RIFT CAVE? TOTNES, DEVON.

For those who, prior to caving in Devon, consult "Britain Underground", the first cave mentioned, Afton Rift Cave, is dwarfed in length of description by Baker's Pit Cave, on the same page. The "deep narrow winding rift, with vivid red dripstone", would perhaps be uninteresting to the Devon caver, but the outsider, who has already experienced that "Britain Underground", with all due respect to its undoubted usefulness, is not the most accurate of oracles, might take a look. A small group of cavers associated with the Oxford Club did take a look, and the following is an account of their interesting findings.

Afton Rift, as described above, is a deep narrow rift, about 120ft in length. There is a high but rather narrow entrance, half blocked by a boulder. The floor for the first 20 to 30ft. is of gravelly clay, but this gives way to a rift extending downwards, 5 to 15ft. in depth; about 40ft from the entrance the cave begins to slope downwards, quite steeply in parts, levelling off at about 100ft from the entrance, and a little further on closing to the narrow crack which was the end of the cave. Through this crack the rift appeared to

continue for another twelve feet or so, before finishing quite abruptly. But whether it did finish so abruptly, instead of continuing round some invisible corner, was not at all apparent, and so an attack was made on the narrow crack.

This obstruction soon became known as the Keyhole, (see Survey, Page 4c.) from its general shape, wider at both top and bottom than in the middle. The bottom was tried first, but it proved impossible, even with a large hammer. So the upper part was tried, and after several attemts, using a hammer in a limited space, a way was forced into the rift beyond. The key to the keyhole had been found, and the door opened onto another 800ft of new passages, making Afton Rift, the sixth largest cave in Devon, and perhaps the most interesting of them all.

The main passage is of course the continuation of the same rift from the old cave, and it continues to wind in the same manner. After about 35ft. it opens out into a small chamber, 8ft × 6ft × 5ft, and already there are more formations, mostly stalactites and curtains. Beyond the chamber the rift winds on for another 60ft., before opening out into the Flower Cavern, so called from the formations there, resembling gypsum flowers, but probably formed of

aragonite. The floor here is of loose boulders, with one wedged between the walls under which it is necessary to pass: it appears to be quite safe. Two small openings at the side of the cavern lead nowhere, but another one, close to the roof, looks more promising, but has still to be explored.

Beyond the Flower Cavern another 40ft. of passage leads to the Cockpit, a small round chamber with a large boulder on which one must perch on entering. A small passage behind this boulder has yet to be explored. Twenty feet further on, the Vault is reached by a downwards climb, and from this chamber there are two side passages as yet unexplored; one of them might connect with the Lower Series. Just beyond the vault the rift deepens to 15ft., and water can be seen at the bottom; this is in fact part of the Lower Series. Again the rift winds on for another hundred feet or so, and then opens out into the final chamber, Cascade Cavern, taking its name from the large flowstone deposit on one wall. Stalactites and stalagmites abound, and on another wall there is beautiful red curtain. There are also one or two pools, but no running water. A small passage above the Cascade has still to be explored, and in another corner is the beginning of the Lower Series. The total length of the new section

is 275ft,

The Upper Series begins just before Cascade Cavern, where a passage goes off to the right. Again this is a rift passage, and mud on the walls makes the going difficult. But after only a few feet it becomes a crawl, the Conduit, where some of the fine stalagtites had to be broken to allow the explorers to pass through: here at last there was some running water. After this the rift continues, slpping steadily upwards to a low chamber with two tight holes at the far end. Through one the passage could be seen to continue, and the other proved passable with a lot of effort. Again the passage sloped upwards, though now wider and lower, leading through a small chamber, 3ft. high, and through a short section which had to be dug out, to the end of the Series, a low, muddy chamber, without a single formation, and therefore named Dismal Hall. There is a narrow side passage which winds upwards for about 40ft., ending in a choke, and another at the Elbow requires excavation. The total length of this Series is 230ft.

The Lower Series begins in Cascade Cavern, and slopes gradually downwards, passing at one point underneath the Main Passage. This section contains some very good formations; a widening of the rift contains a beautiful red and

white cascade. Beyond this a stalactite, with a stalagmite underneath, marks the entrance to a sloping chamber, from which a short passage on the left leads to the 'Oubliette? a round chamber with smooth walls and no formations. The main passage leads on to a junction, where its continuation is crowded with stalactites; the left-hand passage leads down to Mud Cavern, the lowest point of the whole cave, where any water in the system must sink. Close to the entrance another passage leads upwards past the stalactite blockage in the main passage, containing itself many fine formations. After a short crawl the rift begins to rise steeply towards the small hole in the roof which is the present end of this Series. Near the Mud Cavern a passage leads off for about 30ft. in the direction of Cascade Cavern. The total length of these Lower Series measured so far is about 250ft.

This extension to Afton Rift totals so far nearly 800ft., and with the already known cave, the length comes to 900ft. Several passages still have to be explored, especially in the Lower Series, and these ought to bring the total length of the cave to more than 1000ft. Already Afton Rift Cave is among the largest caves in Devon, warranting the classification, "Difficult", on

account of the Keyhole and one or two other climbs in the new section.

Since this first exploration was made, other cavers have found their way through the Keyhole, and the local Press have even published an article with photographs. It is to be hoped that these people will respect the beautiful formations, which must be unique in that they are as yet unmarked.

If any Caving Group has any material which they would like to publish, we might be able to help. Please contact the Secretary.

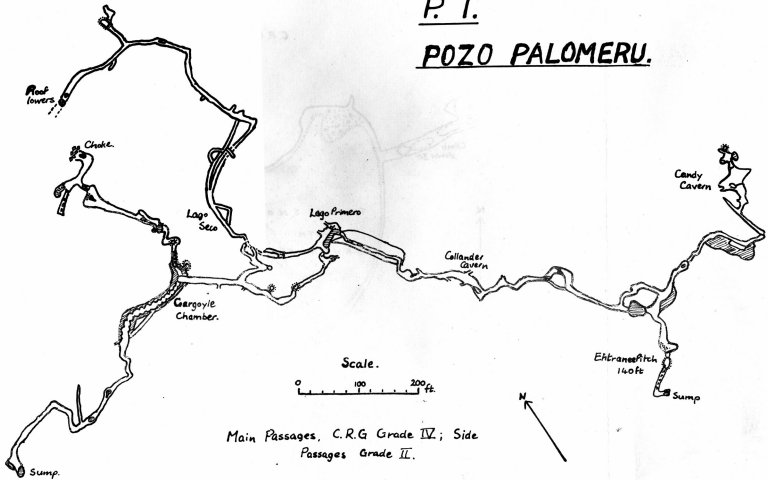
Tim Cooke, Brasenose College, Oxford.

Number 1.
Proceedings of the Oxford University Cave Club, October 1962

Edited by W. J. Crompton, St Catherine's Society, Oxford.

P. 1.

POZO PALOMERU.



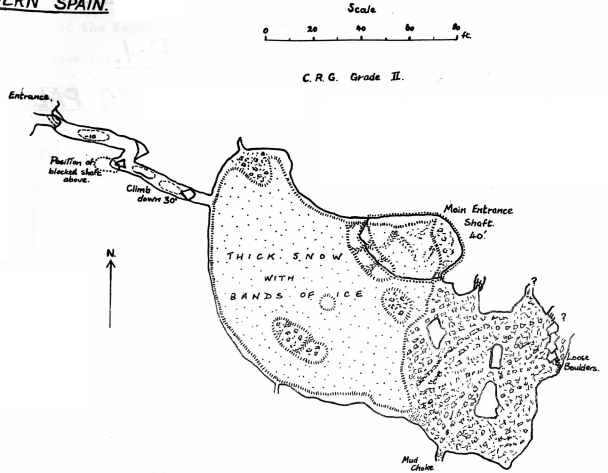
Main Passages, C.R.G Grade IV; Side Passages Grade II.

Below: Surveying in the Main Passage of Pozo Palomeru.

C. 15.

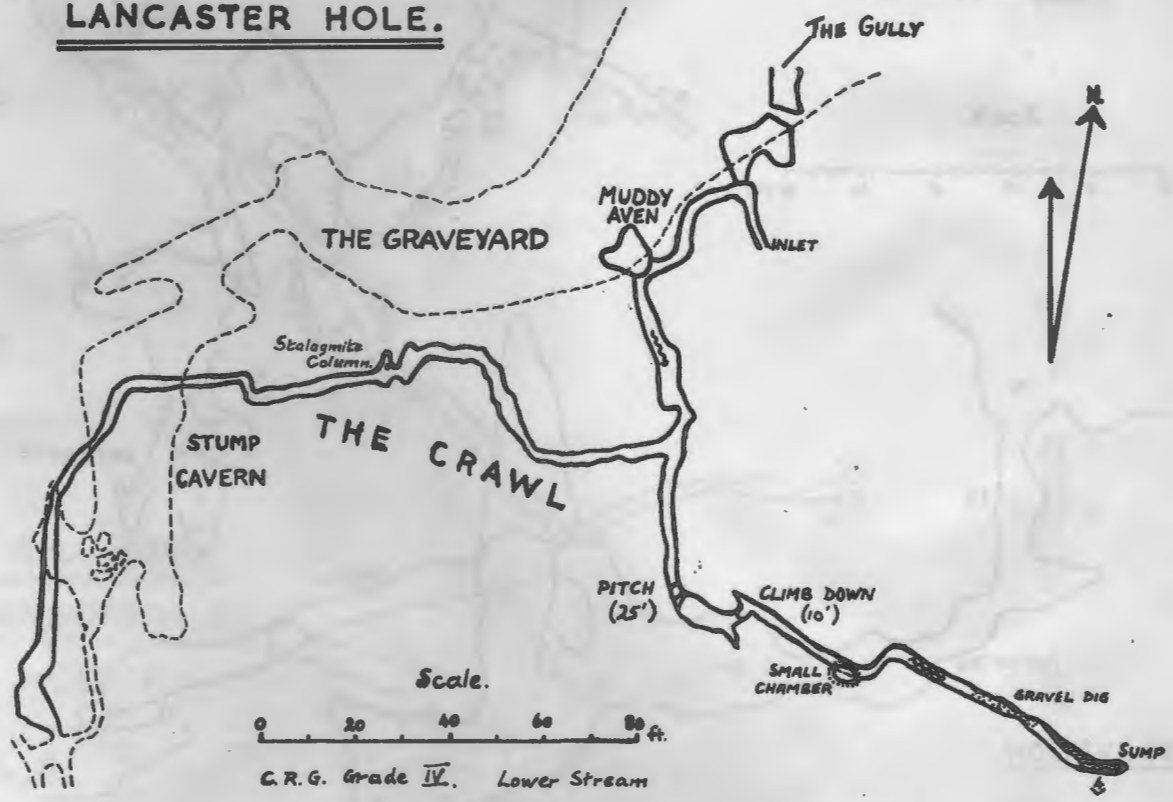
CAVE OF THE SNOW.

Left: In the Main Chamber of C. 15.



LOWER GRAVEYARD SERIES,

LANCASTER HOLE.



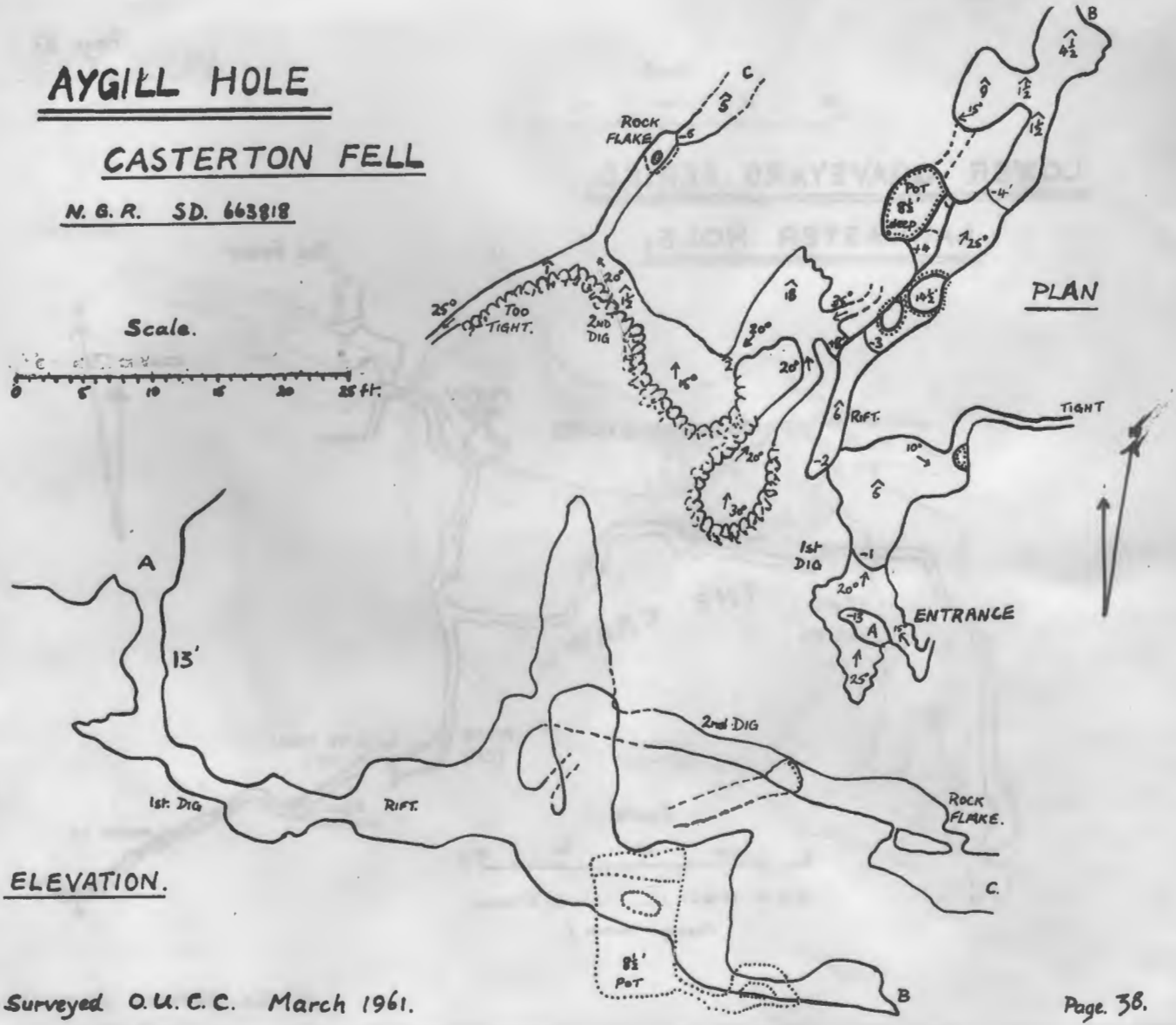
C.R.G. Grade IV. Lower Stream
Passage Grade I.

O.U.C.C. SURVEY. March 1961.

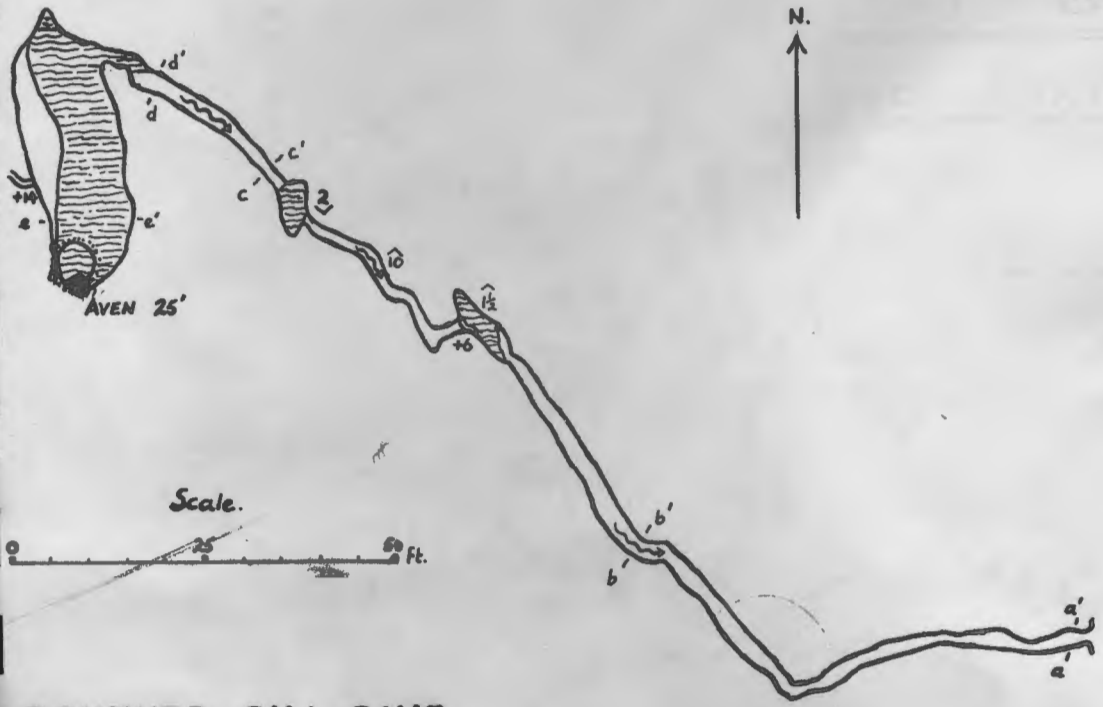
AYGILL HOLE

CASTERTON FELL

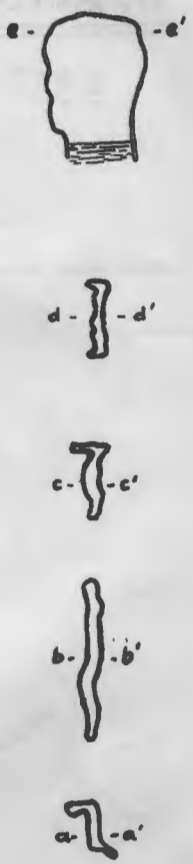
N. G. R. SD. 663818



Surveyed O.U.C.C. March 1961.



SECTIONS



BOUTHER GILL CAVE,

WHARFEDALE.

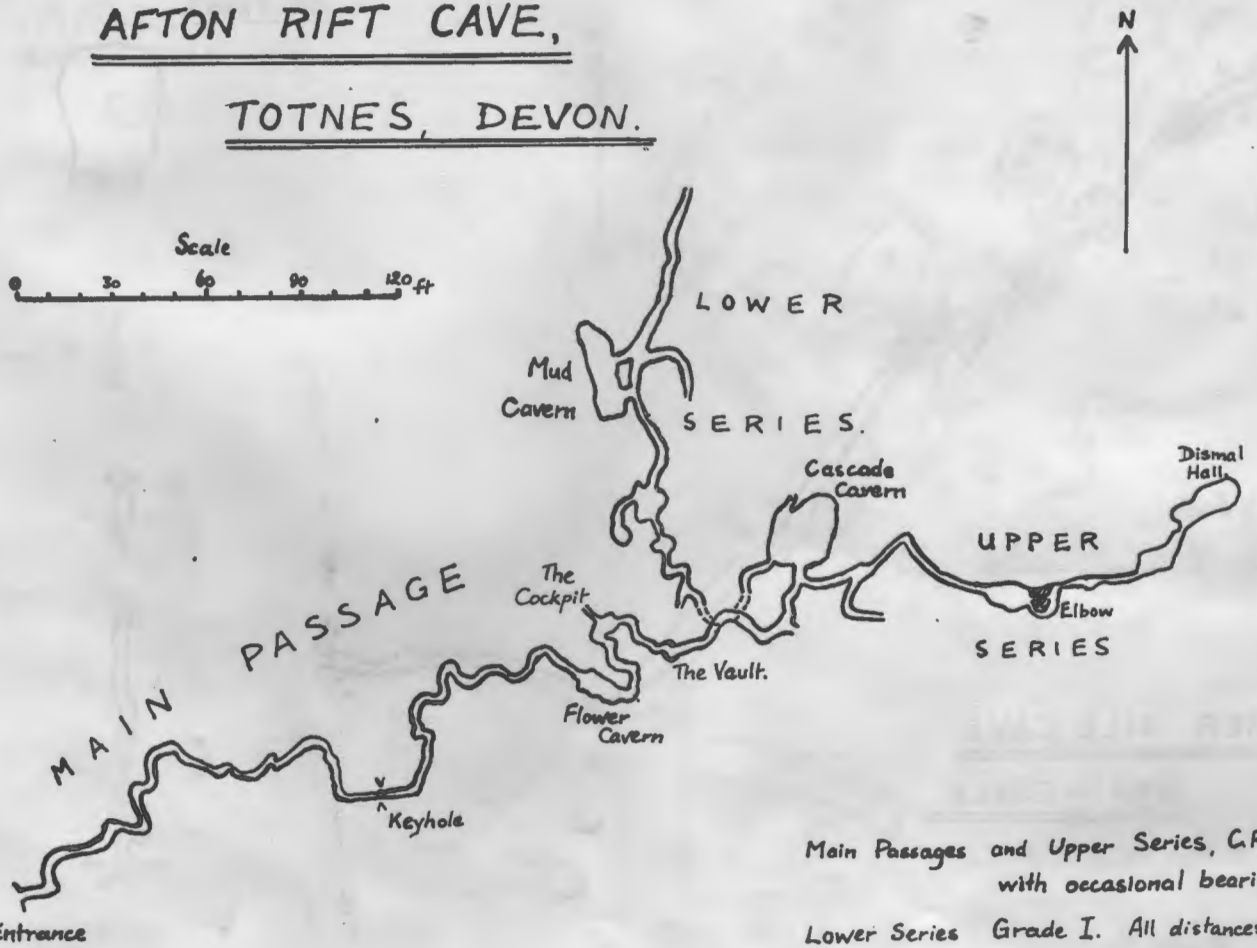
N. G. R. SD. 910778.

C. R. G. Grade II.

O.U.C.C. SURVEY. March 1961.

AFTON RIFT CAVE,

TOTNES, DEVON.



Main Passages and Upper Series, C.R.G. Grade II, with occasional bearings.

Lower Series Grade I. All distances measured.

Explored and Surveyed by J.R. Duckworth, A. Horsley, 1961.

Bid.