

PALMER'S CAVE: HISTORY AND EXPLORATION

by

A.A.D. MOODY

ABSTRACT

An account is given of the digging and exploration of Palmer's Cave and associated sites from 1945 to 1989 and the nomenclature of the cave is clarified. A survey of the cave is presented.

INTRODUCTION

In May 1945, members of the University of Bristol Spelaeological Society, including Bertie Crook (Anon, 1945), noted two sites near the head of the valley that runs northwest from Tynning's Farm. The more westerly of these is probably Water Valley Swallet, a site that had apparently been dug previously by persons then, and still, unknown. The other, in a small rock bluff across from the farm on the south side of the valley was thought to be an abandoned swallet and its location on the limestone/shale boundary was considered to be particularly promising.

DIGGING AND OTHER INVESTIGATIONS

UBSS work in the 1940s

On 17 June 1945, digging started at that site, initially by excavating a 2 ft deep trench about 10 ft from the swallet entrance. Work was hampered by a shelf of solid rock, so the diggers moved closer to the cliff face where a second shelf at the same level as the swallet allowed deeper progress. Eventually entry was gained to 8 ft of body-sized passage that ended in a small choked bedding plane leading off to the right. The constricted nature of the entry passage prevented a conclusive assessment and with bedrock only a few inches down, the passage could not be enlarged by deepening. The only alternative option was to widen it with explosives so blasting and clearing trips started in August. The cave is not named in the log reports at this stage, being described as the swallet or dry swallet near Tynning's Farm, but by 1947 it appears to be the feature referred to as Bertie's Crack (Anon, 1947).

In 1947, the area around this dig was selected by L. S. Palmer, for a geophysical (resistivity) test (Palmer, 1949). Palmer had two main objectives. Firstly, to check the recently modified Geophysical Meggar Earth Tester and, secondly, to determine whether the constricted rift passage might open out into a cave. For the tests Bertie's Crack was designated as point A and a rock face to the east, in the adjoining field, as point B. During July, a series of traverses were run directly above the dig site over a ten day period, with the measurements being taken by UBSS members and other interested parties. The findings caused considerable excitement as they suggested the existence of "an open bedding plane, horizontal along the N-S line at a depth of about 15 ft" that tilted westwards and was possibly 5-10 ft (2-4 m) high. The measurements also suggested that there could be a passage or rift running north-south, which

might be a continuation of the entry rift from point A. From the results it was concluded that there were two options worth investigating. The first was to continue work at the end of Bertie's Crack while the second was to quarry downwards in a south-westerly direction, "practically parallel to the nearby wall and hedgerow" from point B, presumably in the hope that digging along this line would intercept the bedding passage. On 27 July, work started with the aim of finding the predicted cave passage and a hole was dug in front of a rock face at Tynning's Farm. Unfortunately the log reports are unclear and it is not possible to determine the precise location of this site. It is described as "near Bertie's Crack" (Anon, 1947, p103) and could have been in the same rock face, or alternatively just over the wall at point B. It is also possible that the site at point B has never been dug; this cannot be confirmed at present as the rock face has since become completely buried under stones, soil and brambles. Digging at this site continued into August but by the date of the last log entry on the 16th nothing of significance had been found. Regrettably the crucial next log, UBSS 1947 - 1948 Camp Log '3' was lost prior to 1968.

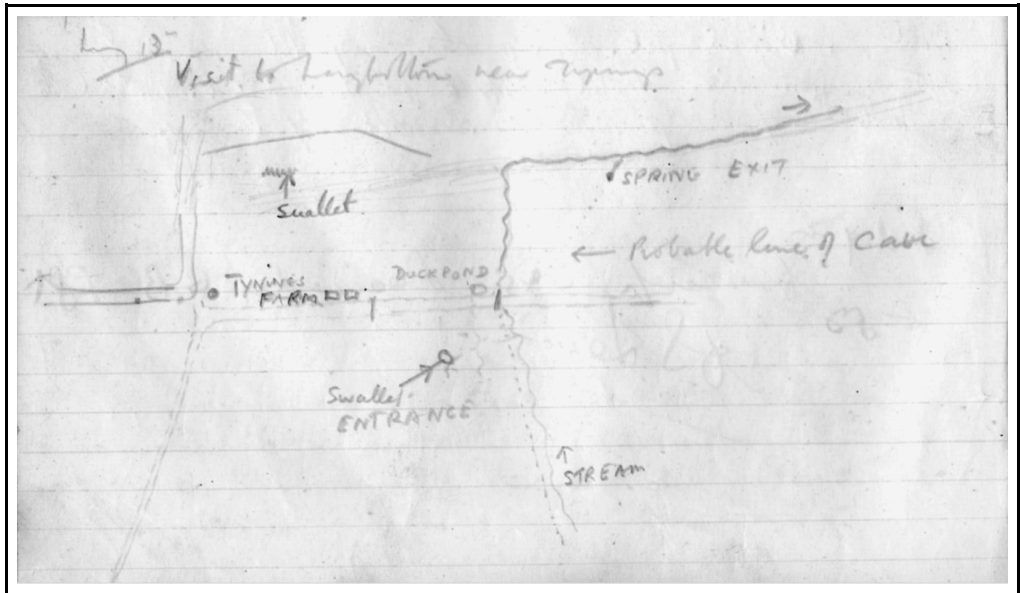


Figure 1. Sketch map of the Tynning's Farm area taken from page 64 of the UBSS Camp Log '1' 1943 - 1946. South is up the page. The more southerly swallet is Bertie's Crack, the more northerly is Water Valley Swallet.

The Old Westonians dig, 1957-1960

The next confirmed work was by the Old Westonians Speleological Society (OWSS) in May 1957 (Buttery, 1959). Working out from the cliff, presumably by Bertie's Crack, a 12 ft long, 4 ft wide trench was excavated. When this proved fruitless the trench was refilled and in November a new dig was started further along the cliff. Digging downwards, a narrow mud choked rift was revealed below a layer of flat broken rocks. After clearing the rift to a depth of 5 ft and finding it was too confined to work, the top of this passage was then followed under the cliff face by engineering a 20 ft long tunnel through the overlying shale. The aim of this work

was to find a larger section of the rift, but during October and November 1958 forward progress was temporarily halted by the instability of the roof and left wall. A further very optimistic report appeared in the 1960 *Spelio* (Fowler and Harrison, 1960), stating that the rift had developed an "S" bend and was widening at the dig face. However, there are no reports of continued work after this time.



Figure 2. David Heal of the OWSS digging in Palmer's Cave in 1960.

Photo: R. Harrison.

The Axbridge C.G. dig, 1968

In 1968, members of the Axbridge Caving Group (ACG), including Bob Burgess, inspired by some "fairly ancient photographs" became interested in a narrow rift, at Tying's Farm (Anon, 1968b). They were granted permission by the landowner to use explosives at the site for a trial six month period after which they had to continue digging or fill it in (Anon, 1968a). In the ACG log, trips are recorded on the 25th February and the 2nd of March, with a charge being placed on the first trip and inspected on the second. Unfortunately the explosion was found to have had little effect and there are no further reports. The information given is very brief but the site is likely to have been Bertie's Crack and John Chapman (*pers. comm.*) has stated that they did not go underground but just used explosives at the entrance. This work would have been unnecessary at the OWSS cave and it is possible that the entrance to this site had become buried by this time so that the ACG may not have known about it. However, it is worth noting that Tony Jarratt, an ACG member at the time, was certainly aware of the OWSS find by 1985.

Success in the 1980s

The next phase started in April 1985, when Pete Moody and the author visited Bertie's Crack and were given permission to dig providing the entrance was gated. By this time, the cave had become partly back-filled and was less than half the length quoted in the 1977 Complete Caves of Mendip (Barrington and Stanton, 1977). On 17 April it was completely cleared by removing a variety of debris including bottles, boots and a sheep skeleton. Progress beyond this point proved very hard work as it involved backing out of an upward slope with every bucket. Tony Jarrett then drew our attention to the OWSS survey which appeared to be a better prospect. The location of the OWSS cave was marked as being between low walls. Its location was not obvious but by working left along the cliff face from Bertie's Crack, a hole was eventually located beneath a piece of old corrugated iron covered in rubbish. Clearing this, we dropped into a sizeable bedding passage, about 1.5 m wide by 0.75 m high, which terminated after about 6 m in a tight, choked rift, a much more promising digging prospect. Over the years, the digging sites in Tynning's Field have been known by a variety of names including: Tynning's Field Dig, Tynning's Field Swallet, Bertie's Crack, Palmer's Cave, Palmer's Dig and also as Longbottom Swallet (Shaw, n.d.) therefore to avoid further confusion with the nearby Tynning's Barrows Swallet a decision was made to adopt one of the alternative names and refer to this site as Palmer's Cave.



Figure 3. *The entrances in 1985. Palmer's Cave is in the centre of the walled enclosure; Bertie's Crack is just behind the central figure..*

Photo: A.A.D. Moody

Both Bertie's Crack and Palmer's Cave were gated during May 1985 with the help of Pete Hann and other members of the Wessex Cave Club (WCC). As explosives were needed to

enable progress to be made at the end of Palmer's, a trial was made in early June when an extremely well-tamped 50 gm charge was set off to assess noise levels. The conclusion was that the slamming of the gate made more noise than the explosion. The following week, a larger charge was applied and by the end of the next clearance session it was possible to see past a blockage to about 2.5 m along a wide bedding passage of unknown height. It emitted a good draught and formations could be seen, but the hoped for breakthrough did not occur until 3 July when a small bedding chamber was entered. Disappointingly, this was only a minor find, with a small decorated blind rift on the right. The main passage divided into two narrow rifts at the end of the chamber. Although these led further underground, they both choked after a short distance. Of the two, the left-hand one was more promising as it appeared to open out into a bedding passage choked with slabs. These were cleared on the next trip and the passage was found to terminate in a mud choke after a couple of metres. The poor air quality indicated that the draught had either become blocked or lost. In early September, work to open out the final bedding revealed two open possibilities; one a blind side passage in the floor to the left and the other, continuing further into the cave, was a narrow rift, 10 cm wide by 1 m high, estimated at 3 m long. During the remainder of 1985, this rift passage was gradually enlarged to create a man-made, barely body-sized tube. Progress was very slow due to the extremely hard nature of the rock, but finally on 19 January 1986, a cross-rift forming a T-Junction was reached. Unfortunately neither direction was passable. The left-hand rift was thought to be an inlet, while the one on the right, although only 10 cm wide, was more promising as it sloped away and appeared to offer a possible route on. Work continued, first to improve conditions by creating sufficient space to turn around at the T- junction thus avoiding having to back out along the tube. Once this was achieved further trips started to open out the right-hand rift, but with difficult progress attention also turned to other sites within the cave. The right-hand rift at the end of the bedding chamber was investigated but proved to be choked, narrow and requiring explosives. The floor of the blind side passage was excavated by digging and blasting creating a 4 m deep pot and work continued at this point until 1989. It is not clear when enthusiasm for Palmer's Cave finally waned but when we returned to survey the site in 2011 as part of the Society's Cheddar Catchment Survey Project the entrance had again become buried. The survey indicates that the cave is trending southeast and possibly heading towards Drunken Horse Inlet in Tynning's Barrows Swallet.

DESCRIPTION OF THE CAVE

Two caves are located in a rock bluff south of Tynning's Farm. The small circular entrance in the rock face at the western end is known as Bertie's Crack and the entrance is protected by an unlocked grill gate. This is a 4 m long small rift passage which becomes too tight and chokes.

The larger cave, Palmer's Cave, is found at the base of the cliff, to the east of Bertie's Crack. This is gated with a large flat sheet of metal. The cave is 33 m long, 10 m in depth and is situated at an altitude of 244 m AOD.

Directly below the entrance, a bedding passage, 1.5 m wide by 0.75 m high, with a choked trench in the floor, can be followed down dip for 7m. Ahead, the passage narrows to a section of rift before opening out into a small low bedding chamber, where there is an impassible, decorated blind rift on the right. A short distance beyond this the chamber splits into two rifts, with the narrower right-hand one choking almost immediately. Over to the left, a wider

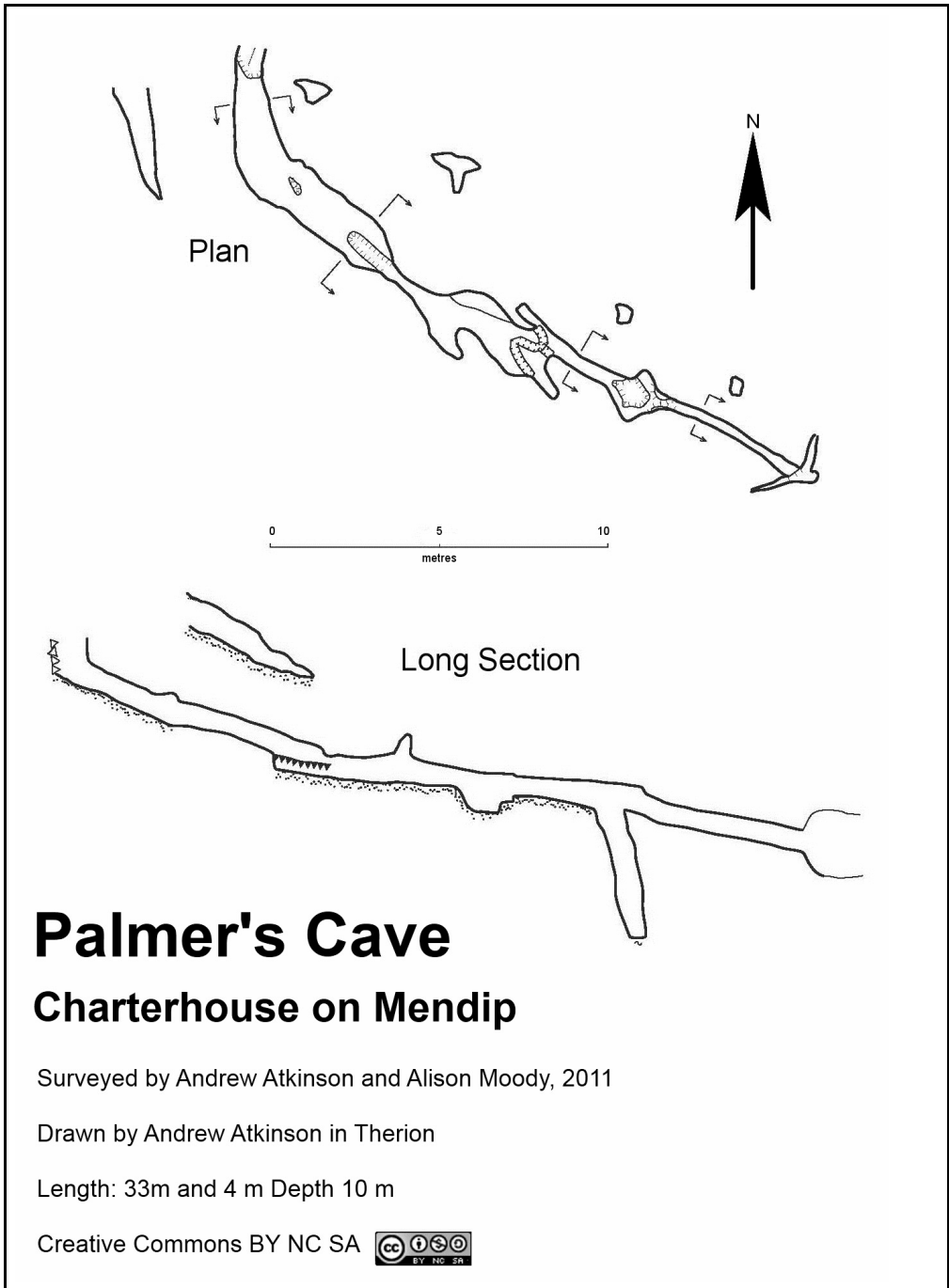


Figure 4. Survey of Palmer's Cave and Bertie's Crack.

continuation enlarges after a few metres at the head of an excavated pot. This 4 m deep pot is blind with only a small mud-filled rift leading off at the bottom. After crossing over the pot, the route on is a very narrow rift that has been enlarged with explosives to create a 5 m long body-sized tube. This is easiest to negotiate head first and breaks out at a T-junction formed by a cross-rift where it is possible to turn around. This point marks the end of the cave as from here the passage in both directions is impassable, to the left is an impenetrable rift, while the extremely narrow descending passage to the right has only been enlarged for a short distance. Access to both sites is controlled by Mrs Reaks at Tynning's Farm.

NOTES ON THE SURVEY

The survey was carried out by the author and Andrew Atkinson on 12th November 2011 using the modified Leica A3 laser measuring device known as a DistoX and a Compaq PDA to collect the data. The numbers were produced and the drawings generated using the freeware program 'Therion'. When in good calibration ($\Delta < 0.5$) the centreline would be equivalent to BCRA grade 6 (Day, 2002). However, for reasons unknown the DistoX would only calibrate to $\Delta = 0.7$. On checking the accuracy by taking 2 forward readings, with the instrument on opposite axial rotations, and a reverse leg, it was found to be within 0.5 degrees for the forward legs and about 2 degrees difference for the reverse leg. These should be within 0.5 degrees with a good calibration. As the cave is short this was taken to be acceptable. The survey is claimed to be to grade 4d.

ACKNOWLEDGEMENTS

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A.A.D. Moody
Fountain Cottage,
Priddy Green,
Somerset,
BA5 3BE
aadmoody@talk21.com