

Jubilee Contribution
University of Bristol Speleological Society

History of the Dig at Manor Farm Swallet, Charterhouse-on-Mendip

By

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The society is very greatly indebted to Mr. M. Jeffries of Manor Farm, and to his family for their friendly welcome to us and their assistance to us on many occasions through the years of our efforts to find the large cave system that must exist here. Our main regret is that we have not yet succeeded in finding the cave for him.

Manor Farm lies at the head of a short but wide valley that runs due south from the south-east end of Blackdown to join Velvet Bottom, the main valley out of Charterhouse, about 300 metres south of the farm house. A stream runs down off the hill to the north, crosses the Lower Limestone Shales to sink over a considerable area south and east of the farmhouse. The swallet is marked by a limestone cliff at its southern end.

The search for the cave there has been a long and varied one. The first to try were the ACES caving club in 1947 and also, it is thought, in 1948/9. The Wessex Caving Club had a go in 1950 and the ACES had another go in 1952 or thereabout. The U.B.S.S. started work on the swallet in 1955.

There was never a discrete sink hole and though the majority of the water went down close to the cliff face the rest went down over an area extending north from the cliff face for at least 30 m. Whenever there was heavy rain in the winter the swallet area would fill up and become a duckpond. The overflow kept on the surface till it reached the lip of Velvet Bottom, where it went down. It did not ordinarily flow into the valley bottom. The swallet stream dries up all but completely in dry weather, though there is usually a pool close to the road at the farm entrance.

The early efforts of the U.B.S.S. took place each year in the now defunct Union Week. The shaft dug was consolidated with wood and corrugated iron sheeting as shoring. When the dig was abandoned during the winter the shaft would invariably fill up with silt washed down from the farmyard: this was the yearly cycle but some depth was gained each year in the shaft sited against the cliff face. In 1961 a massive effort got under way to install large concrete pipes to serve as a vertical access shaft 8 m. deep. But despite a lid on the top of the pipes they filled up to within 3 m. of the surface with fine silt during the winter. However the amount of new fill to be removed was small.

Carbon dioxide accumulation at the foot of the shaft presented a further hazard to the diggers. In 1963, through the kindness of Mr. Jeffries, a supply of air was made available from a small compressor on the farm. Progress then was rapid and a depth of 12 m. achieved before the end of the summer. This was well below the bottom of the pipes. Good shoring was put in and the dig abandoned for the winter. It was now obvious that the pipes had in fact been based on only a tiny shelf of solid rock the rest being supported on boulders, which in turn were supported on the fill which we were intent on digging out. Nevertheless the dig had progressed far enough to allow the water to drain away during the winter without, ordinarily, a static pool forming and making the dig look like a farm pond.

By the next summer only about 3 m. of the dig had been filled up and at the end of the digging that year a depth of nearly 15 m. had been reached. That year we attempted to divert the stream down the valley by channelling it along corrugated iron sheets; this did little more than spread the water over a larger area beyond the cliff face. It was improved upon in 1966 by laying 9 in. glazed pipes to guide the water to the bottom of the shaft. Provision was made for diverting the water down the valley whenever we were working in the shaft.

By the beginning of Union Week 1966 all the previous winter's fill had been removed and we were in new ground. At a depth of 16 m., rocks could be heard bouncing down a slope below, and, after a couple of large rocks had been removed, a man-size hole appeared. The initial rush down the passage discovered was, however, short-lived as the way was blocked after 15-20 m. where the boulder floor met the roof.

After dropping down about 2 m. through the break-through hole one was in the right hand side of a passage about 5 m. wide, sloping down at around 20°. Along the right, west, side ran a narrow rift about 4 m. high with small openings in the roof into an upper series. To the left the roof dropped to about 1.5 m. above the floor, and met it after 15 m.

The stream ran along the left wall and disappeared through a small rift too narrow to follow.

We set about digging and shoring the next day, but before any progress could be made the wall of fill, which had been undermined in breaking through, began to collapse. It was a bit of a miracle that no one

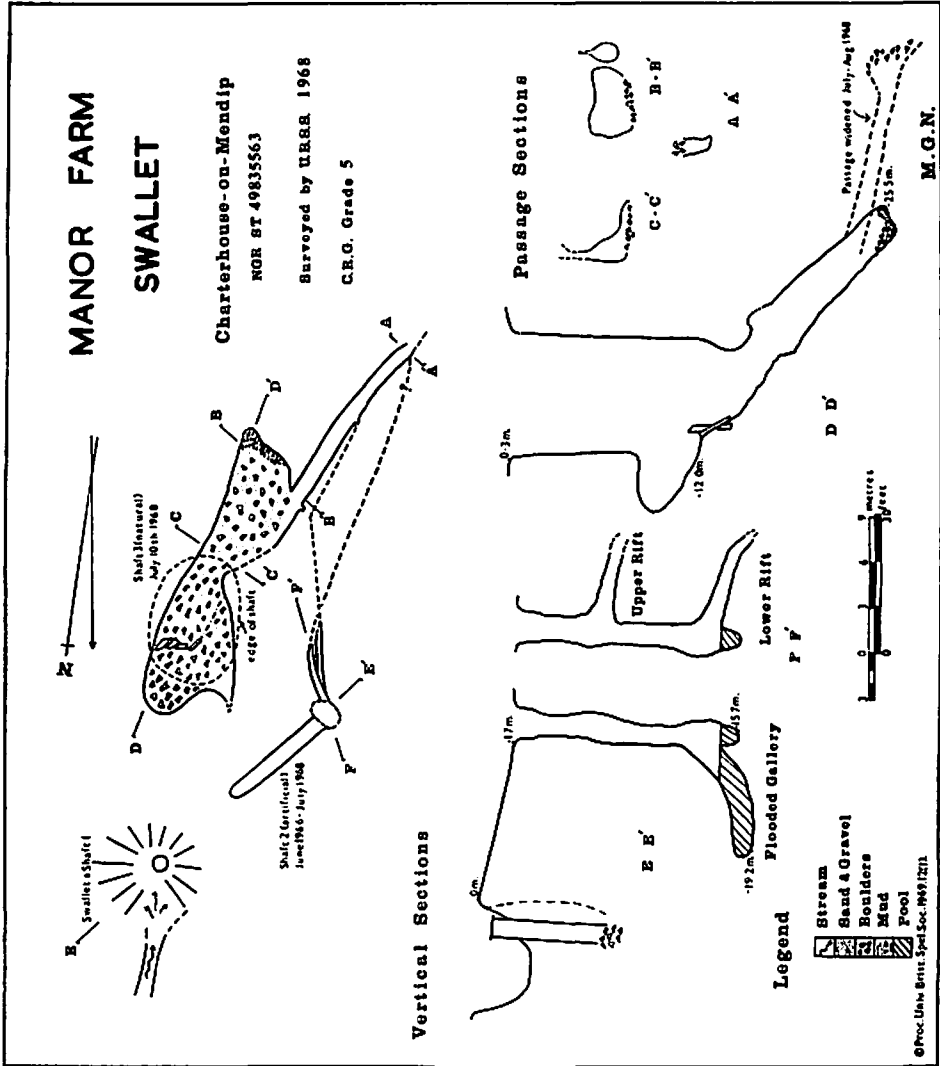


Fig. 10.

was hurt and that all got out. By the following day the lower shoring had disintegrated and the hole was blocked by a meter cube of rock.

We now knew that there was a cave, although we had failed to establish its exact position by surveying!

THE SECOND SHAFT

The concrete pipes were now supporting their foundations, these being completely undermined and exposed. They did in fact disintegrate the following winter causing the pipes to sink by over a metre and tilt. It was therefore decided to sink a new shaft 13 m. down the valley, this position being determined by three persons' memories of the position of the cave and the necessity for leaving an access route from the farm to the cesspit.

Work was started two days after the collapse of shaft one. Rock was reached inside 1.5 m. so there would be no shoring problems. The hole was fenced off, a winch installed and the rock attacked with explosives. For the first 3 m. or so we were helped by the presence of a natural open joint, and plastered charges and the odd hand-drilled shot hole gave reasonable yields of rock. This joint petered out and it became apparent that a more efficient means of drilling shot holes was required, and we started hiring a Kango '750' rock drill to make 1 in. diam. holes. This speeded up progress very much, and by the New Year we were nearly 10 m. down. At a depth of 6.5-8.0 m. we encountered a W-E rift, 10-15 cm. wide, which carried a minute stream. The rift was blasted out for 4 m. and was then abandoned.

At a depth of 14.5 m. another, smaller, cross rift was passed and a depth of 16.5 m. was reached exactly one year after starting on the shaft. By this time it was obvious that the shaft was not over the cave because the bottom was below the estimated level of the roof of the cave, so the lower rift was followed. By December 1967 it had been opened up for 6 m. It too was abandoned as it had turned down valley and was becoming difficult to work.

A start was then made on a gallery back towards shaft 1 and by July 6th, 1968, 8 m. of gallery at a depth of 17.5 m. had been made and a band of very broken-up, calcited rock had been reached. This looked very promising for the cave location. The following week on July 10th Mendip suffered the worst rainstorms in living memory. Manor Farm was in the belt of heaviest rain, over 7 in., and the surface flood water swept down the valley partly destroying the fence round shaft 2. The

lower gallery was filled with water and silt. So far 1,200 ft. of "cordtex" and many lbs. of bang had been used and many, many man hours spent on the shaft.

THE THIRD SHAFT

While the storm was at its height a new third shaft opened only 8 m. east of shaft 2. The lower edge of this new shaft was not reached by the flood waters on the surface. It is 6.5 x 8.5 m. across and, at its shallowest, is 12 m. deep. This is at least 6 m. above the level of the cave reached through shaft 1. Solid rock is only visible in places in the walls of the shaft. At the bottom the visible rock walls indicate a passage 6 m. wide. The floor consists of boulders, some very large, and debris, which slopes down and very effectively blocks the passage after 22 m. of which the first 10 m. are in daylight. Just inside the cave one can climb up into the roof on the left into the beginning of a rather loose upper level. The rest of the roof is weathered but fairly solid in appearance.

The flood river did not cover any area of the third shaft. The water that sank at the swallet must have undermined the fill in this shaft and brought about the collapse. At the bottom of the new shaft there were freshly-deposited layers of mud. These indicated that water had collected and risen to the level of the rift on the right, N.W., side of the passage before overflowing.

The rift on the N.W. side of the passage emitted a very strong draught and for this reason it was decided to blast it out. In the ensuing weekends to the end of August 1968 the rift was opened up for 13 m. to a width of 1 m. After 6 m. a small tributary entered from the north. In it were pieces of detonator wire. It also only has a stream when a water trough on the farm overflows. This a characteristic of the lower rift in shaft 2 so that the two must be the same rift. There are about 9 m. between the two known ends; it would be relatively easy to connect them if necessary by a rock-cut tunnel, and use this as an entrance to the cave that it is hoped to find.

At 11 m. along the rift from shaft 3 a small chamber full of boulders was reached. There is a tributary coming in from above. This may be where the upper rift from shaft 2 comes in. The passage continues downwards and is large enough to be passable when the lower boulders have been removed. At this point of digging was temporarily stopped (Sept. 1968) for shoring to be put in to hold the upper boulders from falling. In September the author emigrated to Canada.

The alternative of digging in the mud fill at the lower end of the main passage is also being considered. However the roof comes down

very steeply at this point. A large amount of fill would have to be moved and its disposal presents major difficulties. So in view of the draught from the rift and the enlargement of the rift it would appear best to follow this several metres further in the hope that the roof will become more solid and that an open way on will be found.