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THE EXPLORATION OF *BOS* SWALLET, BURRINGTON COMBE, SOMERSET

BY

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NGR ST 47095837
Altitude 178 m AOD
Length 78 m
Depth 42 m

ABSTRACT

Bos Swallet was first explored by boys from the nearby Sidcot School in the 1940's. It was subsequently extended by digging by members of this Society from 1994 to 1996. It is considered to have been formed in parallel to the nearby swallet caves of Rod's Pot and Drunkard's Hole. It may have been an active stream sink until as late as the 18th century.

INTRODUCTION

Bos Swallet is one of a series of swallets on the north side of Blackdown, to the west of the Society's Hut (Figure 1). It was first investigated by the boys of Sidcot School in 1946/7 who had dug into the first chamber of the cave by mid-1947 (Stanton, 1950). However, only a few days later their entrance shaft collapsed.

During their dig the schoolboys noted the presence of bone, flints and pottery and for a number of years afterwards the swallet depression was the site of archaeological investigations (ApSimon, this volume). During this time the cave remained closed and it was not reopened for a number of years. The entrance shaft remained quite loose and the first squeeze has had to be dug out on a number of occasions (see especially Crabtree, 1970 and Venus, 1970). No attempts were made to extend the cave until 1985, when a brief dig took place at the far end of Disappointment Chamber. A small tube was enlarged by blasting, but quickly closed down again and the attempt was abandoned (Anon, 1985).

In 1994, the Society's interest in the cave was rekindled following renewed interest in the archaeology of the site and it was re-entered, the squeeze below the entrance being dug open yet again, and investigated for digging possibilities. A dig was started in the largest hole in the floor of the chamber, where a descending rift was enlarged by blasting. This was remarkably successful and by the end of the 1994 summer season the cave had been explored as far as the Long Rift. The second season, in 1995, saw the Long Rift extended and a parallel rift broken in to. However, progress was much slower owing to the need to enlarge the entire passage by blasting and the work has now (temporarily) ceased until a greater degree of technological effort can be brought to bear.

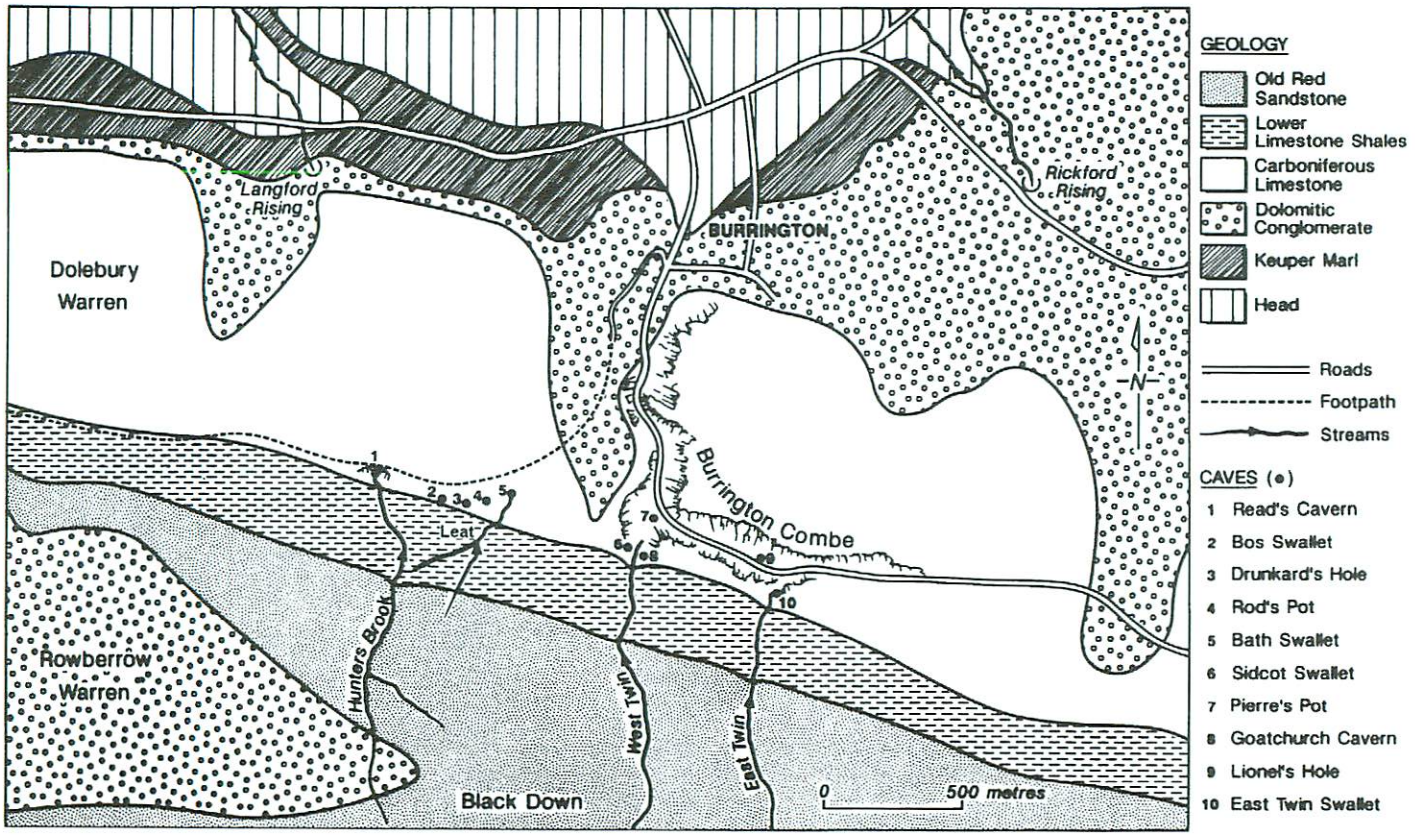

Figure 1. *Geology of the area around Bos Swallet (after Williams & Farrant, 1992).*

DESCRIPTION OF THE CAVE

The cave is remarkably steep, being only 78 m long, in total, but 42 m deep. From the entrance wriggle through boulders, a steep bedding is followed to a narrow tube, 2.5 m long, the first squeeze. Beyond the tube the passage enlarges briefly in a short horizontal passage before a second, shorter, tube which opens out into the first chamber (Disappointment Chamber). This is some 10 m long and 3 m high. The way on is down the largest of the holes in the floor. This leads down to a tight squeeze and then to the head of the first (7 m) pitch which drops into a roughly circular domed chamber, containing a good display of calcite formations. It has a boulder floor, and the way out is down through the boulders, either directly below the pitch or, better, on the north side of the chamber and along into a horizontal passage, with a flat roof which has one large phreatic pendant. There are two holes in the floor of this passage which are too tight to enter. Beyond this and a boulder bridging the passage a further squeeze leads to the head of the second pitch which is about 5 m long. The base of this pitch is a small chamber formed in a significant shale band and containing a good display of differentially eroded fossils. The passage continues, but leads almost immediately into a cross rift, the Long Rift. To the right (south) this leads up-dip into a small chamber with avens in the roof and to the left (north) downwards to the terminal dig and a final too tight to enter parallel rift.

14 mm holes, to take M8 rawlbolts, have been drilled at the pitch heads, but hangers have not been left in place.

GEOMORPHOLOGY AND HYDROLOGY

Bos Swallet is an abandoned swallet cave which was formed by a stream draining from the northern side of Blackdown. It is located on the boundary of the Lower Limestone Shales and the Blackrock Limestone. The features presented and probable evolution are similar to that described by Williams and Farrant (1992) for Drunkard's Hole, which is only a short distance to the east and Rod's Pot, slightly further east. All three caves show a mixture of steeply inclined vadose trenches formed generally on a set of joints oriented on 015°N, linked by horizontal strike passages possibly representing successive phreatic levels.

Three phreatic levels can be identified in Bos Swallet, at elevations of 166 m, 148 m and 142 m AOD. The lower two of these have been identified in both Drunkard's Hole and Rod's Pot, the lowest level in the two caves, (at 127 m AOD) being below the known end of this cave; although a series of perched sediment false floors in the Long Rift may indicate intermediate stages. The highest, 166 m AOD, level has not been identified in the other two caves.

The remarkable concordance between the features in these three caves, located close together, may indicate that they have a common origin. It is postulated that the same stream was responsible for the development of all three caves and that it switched back and forth between the three caves in a fairly random fashion over time. Bath Swallet has not yet been explored to a sufficient extent to be included in this discussion. Alternative explanations might include the presence of three or four parallel active streamways, though these would have had to be very small given the overall size of the catchment, or the possibility that the features might represent local hydrological perching on shale bands or prominent bedding planes. This is unlikely given the steep dip and the fact that the caves appear to be formed at different

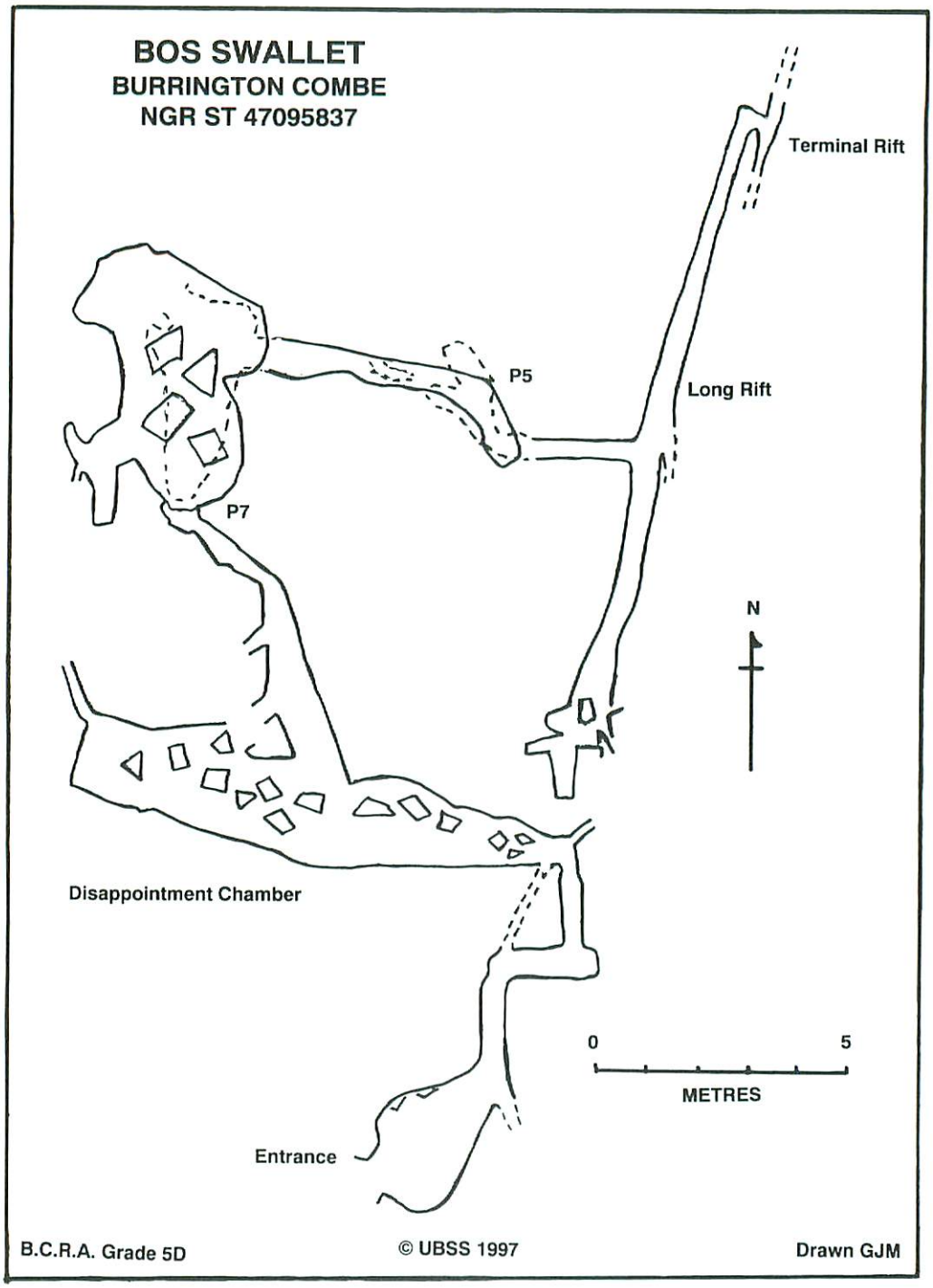

Figure 2. *Plan Survey of Bos Swallet.*

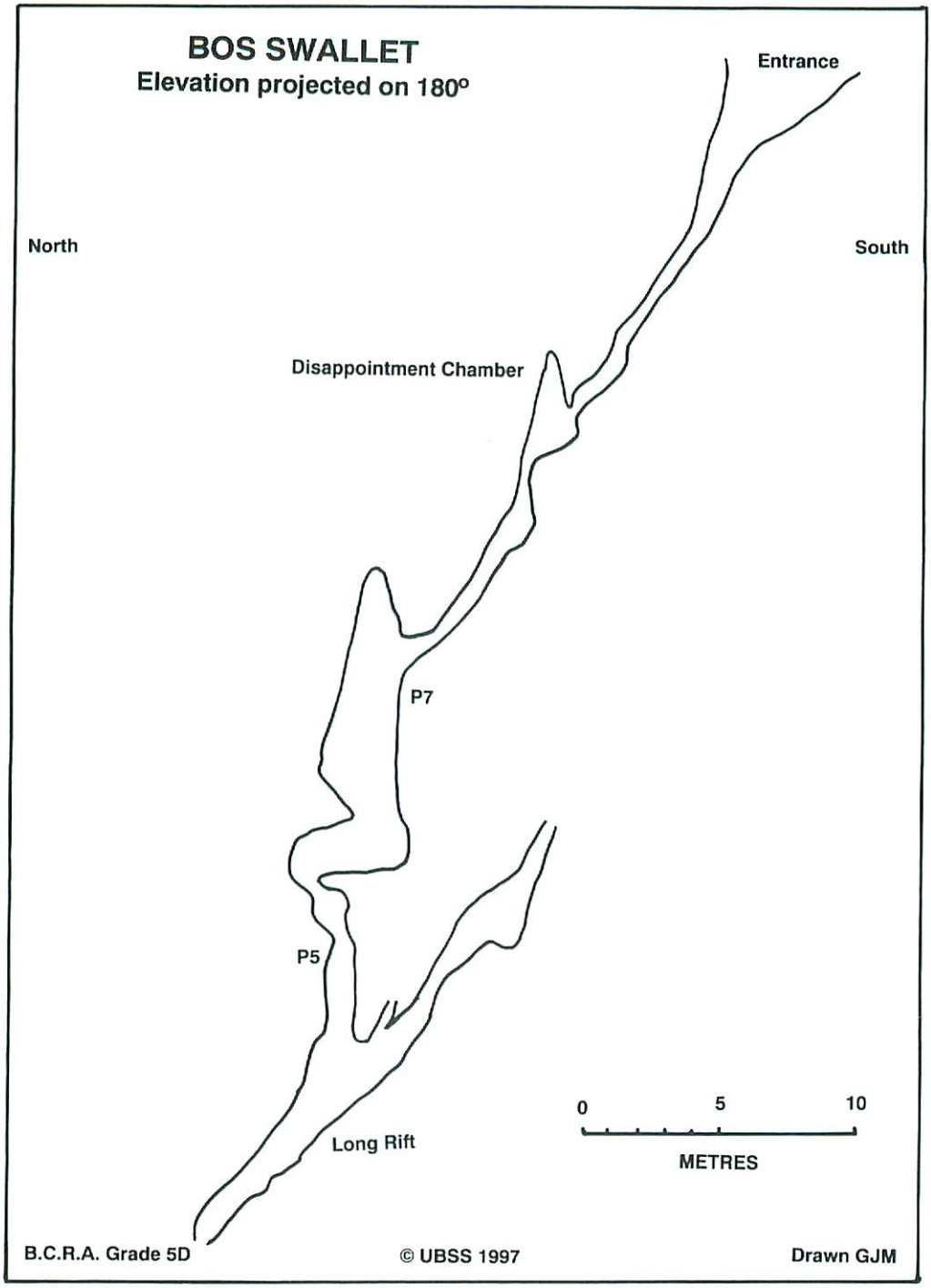

Figure 3. *Elevation of Bos Swallet.*

horizons; Bos Swallet was formed at the very bottom of the Blackrock Limestone, the others are in slightly higher beds.

Random switching between a multiplicity of sinks has been observed elsewhere, for example at the Doolin Road Sink in Co. Clare (Mullan, 1989) and at St. Cuthbert's Swallet on Mendip (Stenner, this volume). The stream now sinks in Bath Swallet all the time, but there is some evidence that *Bos* Swallet may have prior claim to it. The presence of the highest rest level in this cave only (though the entrance to Bath Swallet is at about the same level) indicates that it may have been the first of the series to be formed, the others only being initiated when the local water table had fallen to about 150 m. It is also quite likely that the stream sank in *Bos* Swallet in fairly recent times. ApSimon (this volume) considers that there was a small but significant stream sinking here in Beaker times and it may be that this was the case until it was diverted by the artificial leat that now takes the water to Bath Swallet.

Tratman (1963) believed that the leat was dug to supply water for mining operations. However, mining activity in this area appears to have ceased before the end of the eighteenth century yet the 1931 edition of the Ordnance Survey 1:2500 map for this area shows this water-way extending as far as the Hunter's Brook. While little trace of this structure can now be found at the point at which it began, it can still be followed beyond Bath Swallet and into the edge of the wood to the north east. It is possible that this was the water supply for Mendip Lodge, which according to Knight (1915, p. 237) was drawn from the Hunter's Brook, causing it to run dry in all but the wettest weather. Thus it may have been constructed after about 1790 (*ibid*). If this was so, then it is necessary to explain why the water was taken around the east side of the wood, rather than by the more direct route around the west side, below Dolebury Camp. It is possible that it was simply easier to dig a trench around this route along the contour, or even that it did in fact utilise an earlier trench dug by the miners, but it is equally possible that the longer route was taken in order to maximise the supply by capturing the line of swallets, from Bos to Bath.

The line taken by the trench may help in explaining this contention. It runs west-east almost exactly at the head of the Bos Swallet valley. Immediately south of this valley is an area of boggy ground. When this valley was surveyed early in 1994 it was possible to trace its continuation across the line of the trench and into the bog. Thus the trench would certainly have collected more water at this point and, more importantly for this discussion, a reasonably stable source of water for this swallet, the bog feeding the Bos Swallet valley from the south, may well have existed as late as the 18th century.

No evidence has, as yet, been adduced from this cave which might suggest how old it is. Williams and Farrant (1992) follow Tratman (1963) in considering that in Drunkard's Hole and by implication Rod's and Bos Swallets as well, the main development occurred during the last interglacial between 120 and 70 ka. This is echoed by ApSimon (this volume) who suggests a late Pleistocene age for the inception of the swallet depression.

NOTES ON THE SURVEY

The survey was carried out on the 12th of June 1997, using Suunto instruments read to the nearest half degree and a Fibron tape read to the nearest centimetre. The data was reduced using the shareware program "Compass", which was also used to prepare the line survey. The passage detail was entered by hand. The survey is considered to be to B.C.R.A. Grade 5D (Ellis, 1988).

ACKNOWLEDGEMENTS

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