Cave Notes

Poulnaggllum, E2 Tributary, Co. Clare, Ireland

O.S. 6 in. to 1 mile.
Clare, sheet 4.
E33.4 in., N.15.8 in.
Td. Coolmeen.

Length—1,800 ft.
Entrance altitude—900 ft.
Tackle required—20-ft. ladder, short tether, 15-ft. handline.

Introduction

The swallet E2 is one of the most northerly of a group situated along the shale limestone boundary on the eastern side of Slieve Elva. The water draining into the swallet has been traced into Branch Passage Gallery in the Poulelva-Poulnagollum cave system (fig. 49). The stream can be followed underground from a point 150 ft. south from the swallet for a distance of 1,800 ft. At this point the water sinks among boulders.

The inlet in Branch Passage Gallery has been explored for some 980 ft. upstream, 300 ft. of which have been surveyed to C.R.G. grade 4. The passage becomes increasingly tight, wet and low. There would seem to be some 600 ft. separating the two surveyed ends. The E2 passage may well pass over Branch Passage Gallery West as the latter and the lower part of E2 are in the *Productus giganteus* bed while Upper E2 is at a higher level (fig. 50).

Description

The following account is complementary to the survey and the bracketed figures refer to sections of the cave passage on the survey. The relation of upper E2 to Branch Passage Gallery is shown in fig. 50.

The entrance consists of a hole some 2 ft. in diameter through the collapsed roof of the cave above a drop of 9.5 ft. into the streamway. Upstream the water emerges from a rift too tight to follow. Downstream the passage is some 3 ft. wide and 5 ft. high for 160 ft. and is characterised by flowstone over rock shelves which confine progress to a flat out crawl (1). A tributary on the left is then met. This is a narrow rift about 6 in. wide which seemed, when the survey was made, to carry as much water as the main passage. The shelving ends at about this point and it is possible to stand. The passage is a typical canyon with slight T section in the flat roof (2).

200 ft. further on the stream enters a high chamber at a point 10 ft. from the floor. A handline is useful. The chamber has many similarities to Vertical Feature type a, (Ollier and Tratman, 1956, fig. 25). The roof is along a single bedding plane until this point when the stream leaves the chamber through the opposite wall at a lower level and follows a meandering canyon passage for 50 ft. (3). The roof level then falls again and the passage becomes low and the floor highly scalloped (4). The projections from the floor are jagged. The height of the passage remains virtually constant for a further 460 ft. the width varying between 2 ft. and 15 ft. (5).

A drop in the floor level of 2 ft. occurs immediately prior to a tributary joining the main passage on the right hand side. This provides only a trickle of water. It was followed for about 150 ft. before becoming blocked with mud. It is 7 ft. high and 1.5 ft. wide.

The stream follows a canyon passage (6) for 160 ft. with much moonmilk formation on the walls. The water then enters a second chamber at a point 16 ft. from the floor. The chamber (fig. 49A) is about 30 ft. high and measures 12 ft. by 8 ft. A ladder and short tether are required to make the descent to the floor which the stream leaves through a tube, 1.5 ft. high, at the opposite side. An oxbow, some 25 ft. long in the form of a high, narrow rift, bypasses the tube and the stream then continues along the rift.

The passage continues high and narrow (7) until it opens out into a third chamber with again much moonmilk covering the walls. The passage is large (8) for some 140 ft. until there is a sudden drop in roof level and the stream enters a low canal with smooth floor (9). This continues until widening into a chamber which is blocked by boulders at the farther end (10). The stream sinks between boulders at the right of the section. The way on is either through a low squeeze between boulders at floor level or by climbing 6 ft. into a hole in the roof and then between boulders rejoining the streamway some 20 ft. further on.

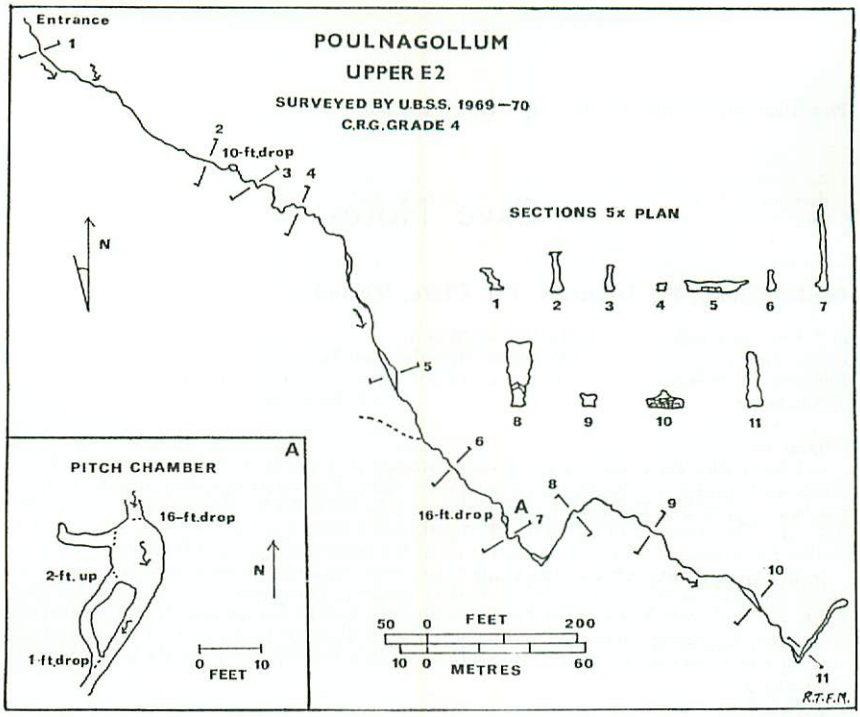

Fig. 49

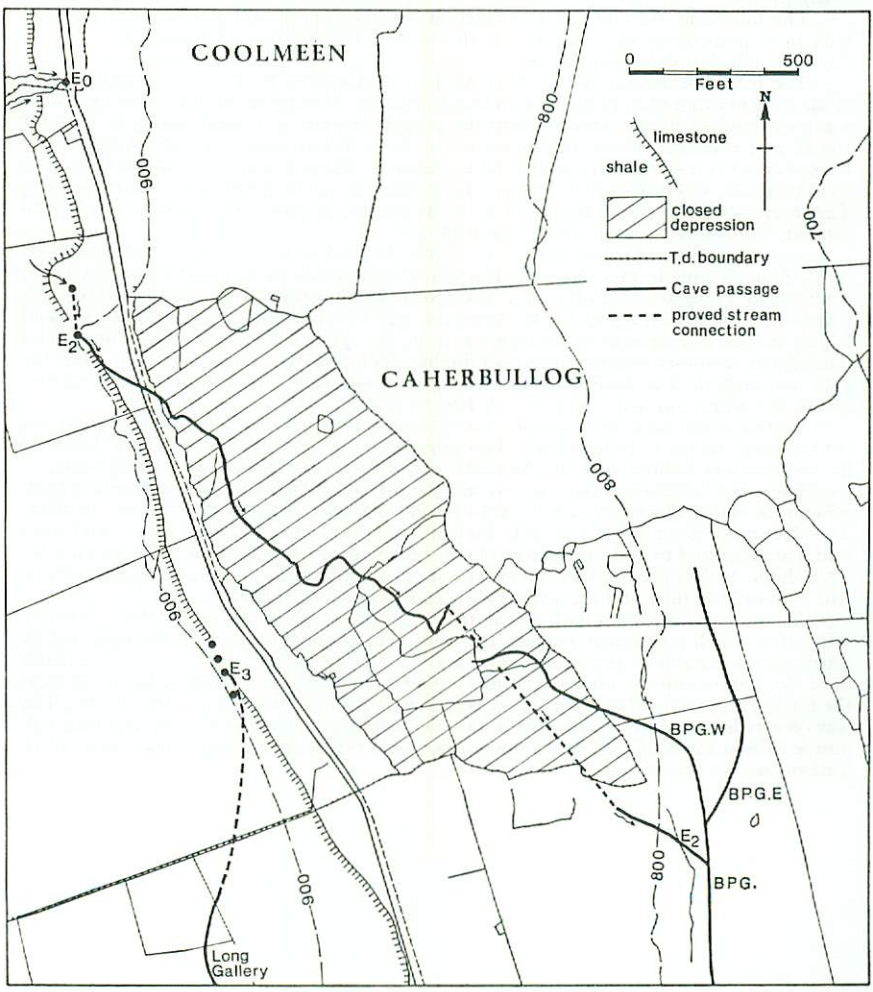

Fig. 50. Based on the Ordnance Survey by permission of the Government of Ireland. (Permit No. 1562). Cave data added.

After 110 ft. the passage makes a sharp bend to the north-east. The floor level has been dropping gradually and the passage becomes some 20 ft. high (11). The stream drops down a 12 ft. cascade (the roof also dropping), and then flows on among boulders to the final chamber, there being again a drop in roof level. The water sinks under the right and left hand walls of the chamber which is 12 ft. in diameter and is 7 ft. high. A squeeze between boulders at the left of the chamber leads into a loose boulder choke with no apparent way on.

Flood Risk

The 160 ft. of passage from the entrance floods to the roof after heavy rain. Much of the cave floods badly but the larger passage below the ladder pitch does not apparently fill to the roof.

The Survey

The cave was surveyed to C.R.G. grade 4. The instruments used were a Suunto hand compass read to 1° and a metal reinforced linen tape read to the nearest inch. Vertical drops were measured wherever necessary.

The writer would like to thank his fellow surveyors E. Brown, C. Thomas, Miss D. M. Last and P. F. Godfrey for their help.

R. T. F. MARSH.

Poulcraveen, Co. Clare, Ireland

Td. Doolin. Clare 6 in. to 1 mile Sheet, 8A. S2 in Tratman (Ed.), 1969.

Poulcraveen and Poulsallagh have been briefly discussed as caves invaded by the sea (Tratman (Ed.), 1969, p.207). The conclusion was that they were not part of the other active systems studied. The Poulcraveen site, (S2), was studied afresh over Easter and in July, 1970. The aim was to map and describe the cave and to investigate its relationship to the present sea level and the surrounding glacial drift in order to suggest its mode and date of development (*fig.* 51).

It was found that there was a meandering canyon passage sliced through longitudinally from north to south. Thus, in the present sea cliff, there are remnants of the former east side of the cave. The plan locates these. The numbered sections show loops and oxbows (8–12, 13), short roofed sections (3, 6–7) and avens with roof pockets and wall pockets, typical of phreatic development (5–7). One aven was explored by maypole, but was found to be plugged by glacial drift at the top. There is a distinct domed roof pocket, (9) and a wall pocket (14). The rift, (7–8), narrows and is impassable. Subdued scallops are found on the recognisable portions of the cave wall, seen from (1–15), excepting the seaward cliff sections and outer overhanging walls of (5–7), (8–12) and (2–4). These are sea pitted joint faces.

It is difficult to be certain of the direction of the scallops and the cave now has no active stream in it. However, the water probably flowed down dip from north to south, because the floor, where seen, dips that way at 3°. The lowest part of the solid floor seen is at the south entrance to the main loop. This loop appears to be an oxbow as it is smaller than the arch cave section, unless the main cave was closing down at this stage. At the south end of the cave wall, (14, 15, 16), the subdued scallops, flutings and wall pockets merge into a face that is cut across by glacial striations in juxtaposition with a bank of calcareous glacial moraine. The striations, preserved under the moraine, indicate a southerly and upward direction of ice movement (*pl.* 25B).

From the evidence set out above, it is clear from the phreatic roof features that the cave was not originally excavated by marine erosion. It has all the features of a typical Clare canyon passage formed by a fresh water stream.

It is also clear, from the evidence of the moraine resting on the cave wall and the striations formed by glacial erosion which cut into cave features, that the cave formation pre-dates the last epoch of glacial erosion. Coupled with the glacial smoothing of the top of the arch section, the indications are that the cave has been sliced through longitudinally by glacial erosion of the cliff (*pls.* 24B, 25A).

The conclusion is that Poulcraveen provides the first unequivocal example of a pre-last glacial cave in N.W. Clare.

In considering the substantial case of Poulcraveen, other sites may now be considered for a pre-last glacial age. At Poulsallagh, (S1), north of the short section of winding canyon passage previously described, (Tratman, *op. cit.*, *p.*207), there is a wider section of cave on the cliff top. This is 6m wide, 5m high and 25m long, closing at the landward end. There are flutings and subdued scallops on the walls. Although there are no striations