

THE CAVES OF OUGHTDARRA, Co. CLARE, IRELAND

by
C. A. SELF, K. E. MILLER and O. C. LLOYD

ABSTRACT

A description is given of the caves and resurgences in the area of study, the Oughtdarra Basin on the south-western flank of Knockauns Mountain. It is proposed that both the Basin and caves are sub-glacial in origin. The resurgences are a recent development.

INTRODUCTION

Oughtdarra is a region of very rough scrubland, about 2 sq. km. in area, lying on the south-western flank of Knockauns Mountain. The region is made up from several townlands of which the townland of Oughtdarra is roughly central; for convenience the whole area is referred to as Oughtdarra.

The best views across Oughtdarra are from the south. The top of Ballynalacken Castle is a particularly good viewpoint. At first sight Oughtdarra seems to be a wilderness of bare rock and bushes, descending several cliffed steps towards the sea. On closer inspection two main cliff lines can be discerned, known respectively as the Upper and the Lower Cliff (Fig. 58). The cliffs are separated in places by limestone pavement but the greater part of the area, and particularly the area below the Lower Cliff, is covered by a dense thorn and hazel scrub. Recent land clearance by bulldozer has done little to tame the region and the explorer in Oughtdarra soon learns that the direct route is always the slowest!

The dominant feature of the region, viewed from the Castle, is the Upper Cliff, which follows the 150m. contour in the east of the area and the 120m. contour in the west. The Lower Cliff is less well defined and wanders east-west at about 80m. altitude, dividing the region into two. Almost all the known caves are to be found in the faces of these two cliffs, the majority in the Upper Cliff.

Few of the caves can be followed far; usually they are choked with sediments within a few metres. The caves are strongly joint controlled, some showing a characteristic 'pea-pod' cross-section. Many small rifts in the cliff face appear to be no more than enlarged joints, though some show scalloping on their walls and were obviously formed by flowing water. Other rift-like openings are caused by structural collapse of the cliff face along the joints. The largest of these 'breakdown caves' is known as Leaba na hAon Bhó and it is said that the Vesterman who shall

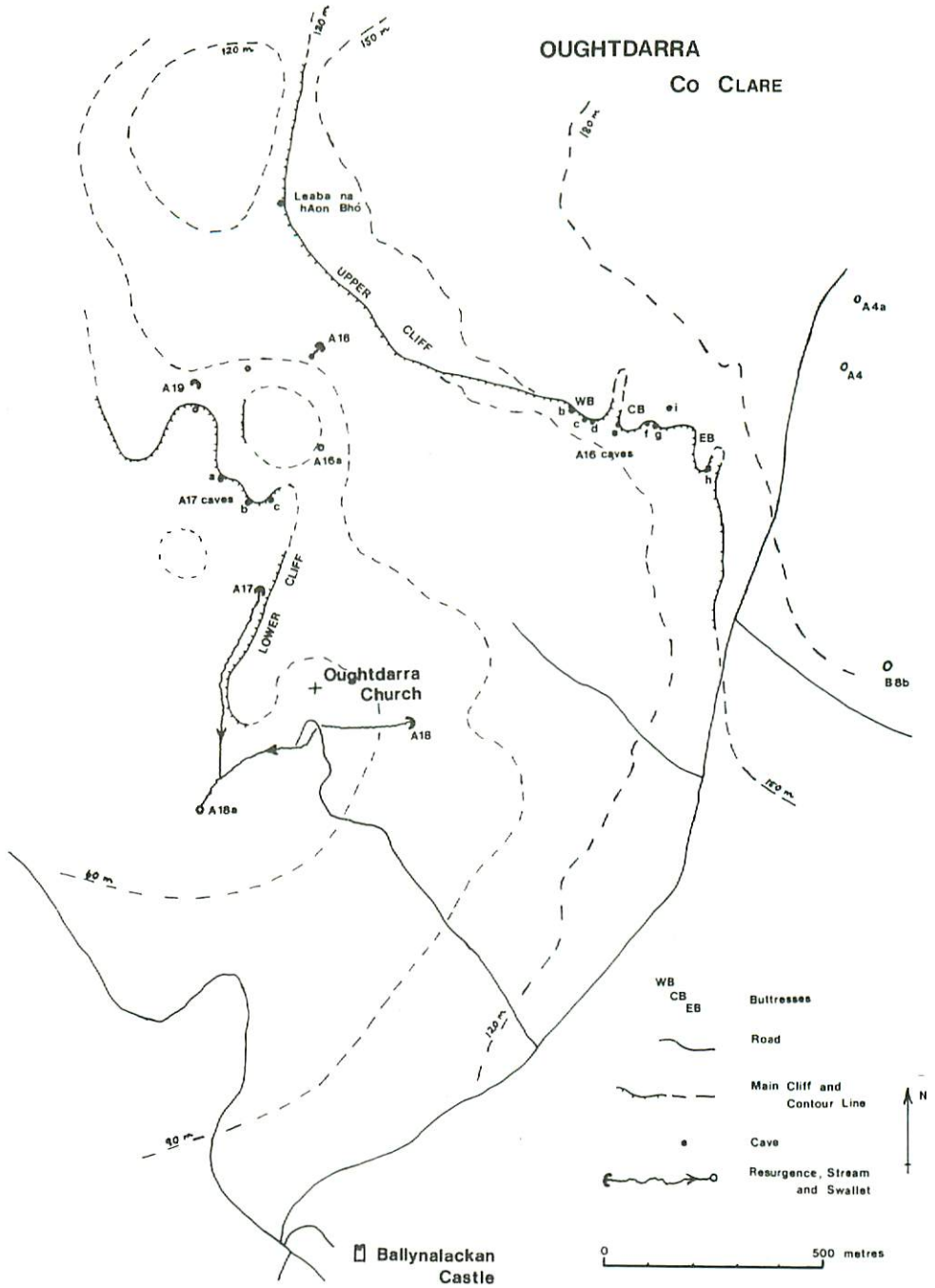


Fig. 58. Geography of Oughtdarra. Based on the Ordnance Survey of the Republic of Ireland by permission of the Government. Permit No. 3541.

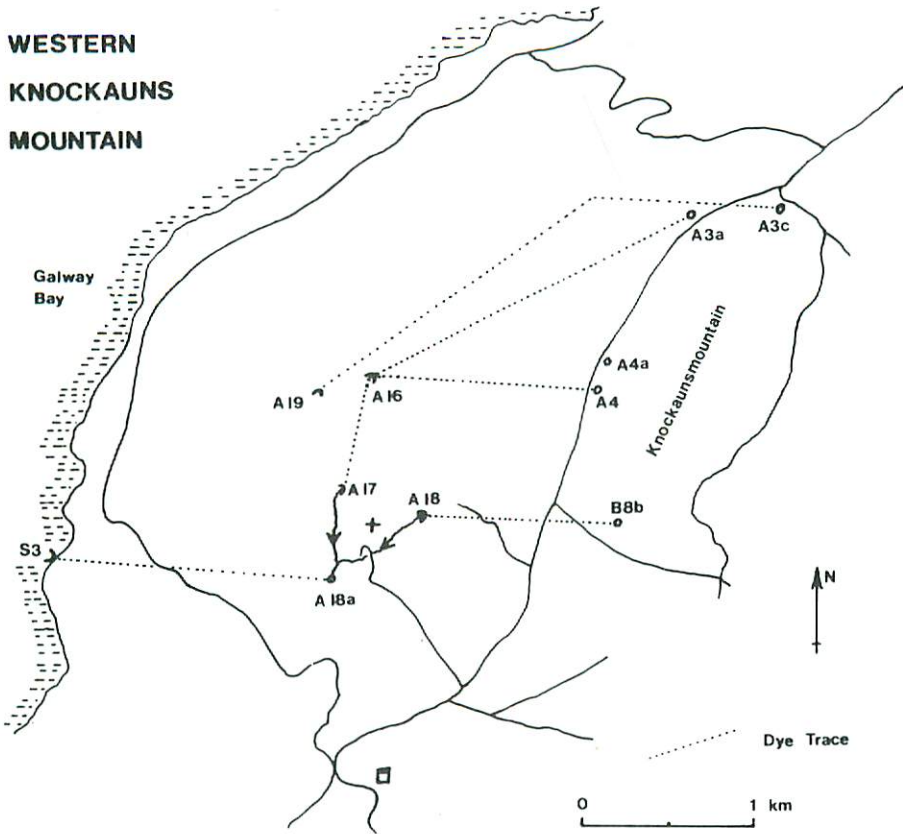


Fig. 59: Hydrology of Western Knockauns Mountain.

strike the last blow for Ireland will come out of it. These minor rifts and collapse openings are not included in the text.

For convenience the Upper Cliff caves are described first. When viewed from Ballynalacken Castle there appear to be three pronounced buttresses on the Upper Cliff. The best access to the cliff is from above, via a deep gully between the west and central buttresses. This leads directly to Through and Through Cave (A16e), the best landmark on the Upper Cliff. On the Lower Cliff, best approached from Oughtdarra Church, Loop Cave (A17c) is a useful landmark.

There are four major resurgences in Oughtdarra. A17 and A18 lie below the Lower Cliff, while A19 is found at the head of a valley cutting through the Lower Cliff. The fourth and most important resurgence is known as Lackaniska (A16). Lackaniska Resurgence lies in a green meadow between the Upper and Lower Cliffs and is the proven resurgence of Poulomega and Poulagree, major swallets on the western flank of Knockauns Mountain. The water that rises in Oughtdarra soon goes underground again and is next seen at S3, the intertidal resurgence

in Poulsallagh Bay. S3 is better known as the resurgence for the Coolagh River Cave, though the water that resurges there comes from as far north as Pollderreen and Polldubh and from as far south as Pol-an-Ionain and Cregg Lodge Swallet.

Oughtdarra was first explored for caves by members of the Chelsea Speleological Society in 1963. Robbers' Den Cave (Bone Cave), Moonmilk Cave and 'other small caves' were discovered and explored but the subsequent reports in the CSS Newsletter were vague as to the location of these caves. The grid reference quoted for Moonmilk Cave was sufficiently inaccurate for subsequent U.B.S.S. parties to look for the cave on the hillside of western Knockauns Mountain, rather than in Oughtdarra—unsuccessfully of course. The C.S.S. cavers (Mantle 1963) exploring Moonmilk Cave found the way on blocked by boulders just inside the entrance. They returned in 1965, removed the obstruction and explored the cave. In the subsequent report in their Newsletter (Anon 1965) they offered the name Polnangel'de as an alternative, with the comment that they were unable to pronounce it either. The cave was eventually rediscovered by the U.B.S.S. in 1979, and was surveyed by them in 1979 and 1980.

The interest of the U.B.S.S. in Oughtdarra itself was not roused until a local farmer, Johnny Kelleher, informed us that there were resurgences in the area. Dye tests were carried out from the sinks on western Knockauns Mountain and the results published by Trudgill (1971). During the course of these tests several small caves were discovered, though none corresponded with the description of Moonmilk Cave. The explorers however made no real attempt to work out the location of their finds and contented themselves with cryptic comments in the logbook such as, 'Please, Mr. Nixon, defoliate Oughtdarra' (M.D.N. 1971). Oughtdarra remained a land of mystery and evil reputation.

In 1979 a concerted effort was made to find Moonmilk Cave. This having been accomplished the search was extended to include all other recorded sites. These were located and several new sites added to the list. The results are described below.

THE CAVES

The caves are described in order from west to east. The Upper Cliff caves are described first. The grid references quoted are the distances in centimetres east and north from the south-west corner of the appropriate 1 : 10560 series map. All the caves fall within the area covered by Clare Sheet 4, edition of 1915. The code numbers used are a U.B.S.S. convention. Td. is an abbreviation for Townland. Altitude is above O.D.

Caves in the Upper Cliff

YELLOW CAVE A16b
 Clare 4, E. 42.7cm., N. 15.2cm. Total length 10m.
 Td. Ballynahown Alt. 137m.

A black cleft is visible at the tallest part of the Upper Cliff in a large yellowish buttress, the West Buttress. The entrance is an enlarged joint with scalloped sides, about 1.5m. wide. The roof closes down rapidly from a height of 5m. and meets the flat pebble floor.

ROBBERS' DEN CAVE, synonyms Ballynahown Cave and Bone Cave A16c
 Clare 4, E. 42.9cm., N. 15.2cm. Total length 50m.
 Td. Ballynahown Alt. 140m.

The U.B.S.S. has always known this cave as Robbers' Den Cave. The fact that the cave was originally discovered in 1963 and called Bone Cave by the Chelsea Speleological Society has only recently come to light. Tratman (1969) renamed the cave Ballynahown Cave for publication in *Caves of North-West Clare, Ireland*.

Thirty metres east of Yellow Cave a mass of ivy covers the cliff face. At a height of 4m. above the foot of the cliff there is a cave entrance, well concealed by the ivy. The cave is a rift passage, strongly joint controlled, and may be followed north for 15m. and then east for a further 20m. Just inside the cave entrance an opening at floor level, partially obstructed by boulders, leads to the right into a chamber. In this chamber there are large quantities of bones, some of human origin. The Chelsea reported finding a sizeable piece of human jawbone, complete with teeth. These deposits should be left undisturbed, as they may be of archaeological significance. The Chelsea also reported hearing a stream beneath the floor of the Bone Chamber. U.B.S.S. parties have never heard a stream.

ANIMAL DEN CAVE A16d
 Clare 4, E. 43.2cm., N. 15.2cm. Total length 6m.
 Td. Ballynahown Alt. 137m.

Thirty metres east of Robbers' Den Cave there is a very small cave with two low entrances at the foot of the cliff. From the smell it would appear to belong to a badger, so permission may be required.

THROUGH AND THROUGH CAVE A16e
 Clare 4, E. 43.7cm., N. 15.1cm. Total length 43m.
 Td. Ballynahown Alt. 140m.

Through and Through Cave (Fig. 60) is situated on the south-west corner of the central buttress of the Upper Cliff, about 40m. east of Animal Den Cave. A conspicuous entrance is seen 2m. above the grassy slope of the long and deep gully that separates the west from the central buttress. From the gully entrance a small canyon passage leads past a window in the right hand wall and eventually emerges, after 34m., at the foot of the main cliff. The southern entrance lies 12m. east of the corner of the cliff, where the south-facing wall turns north into the gully. There

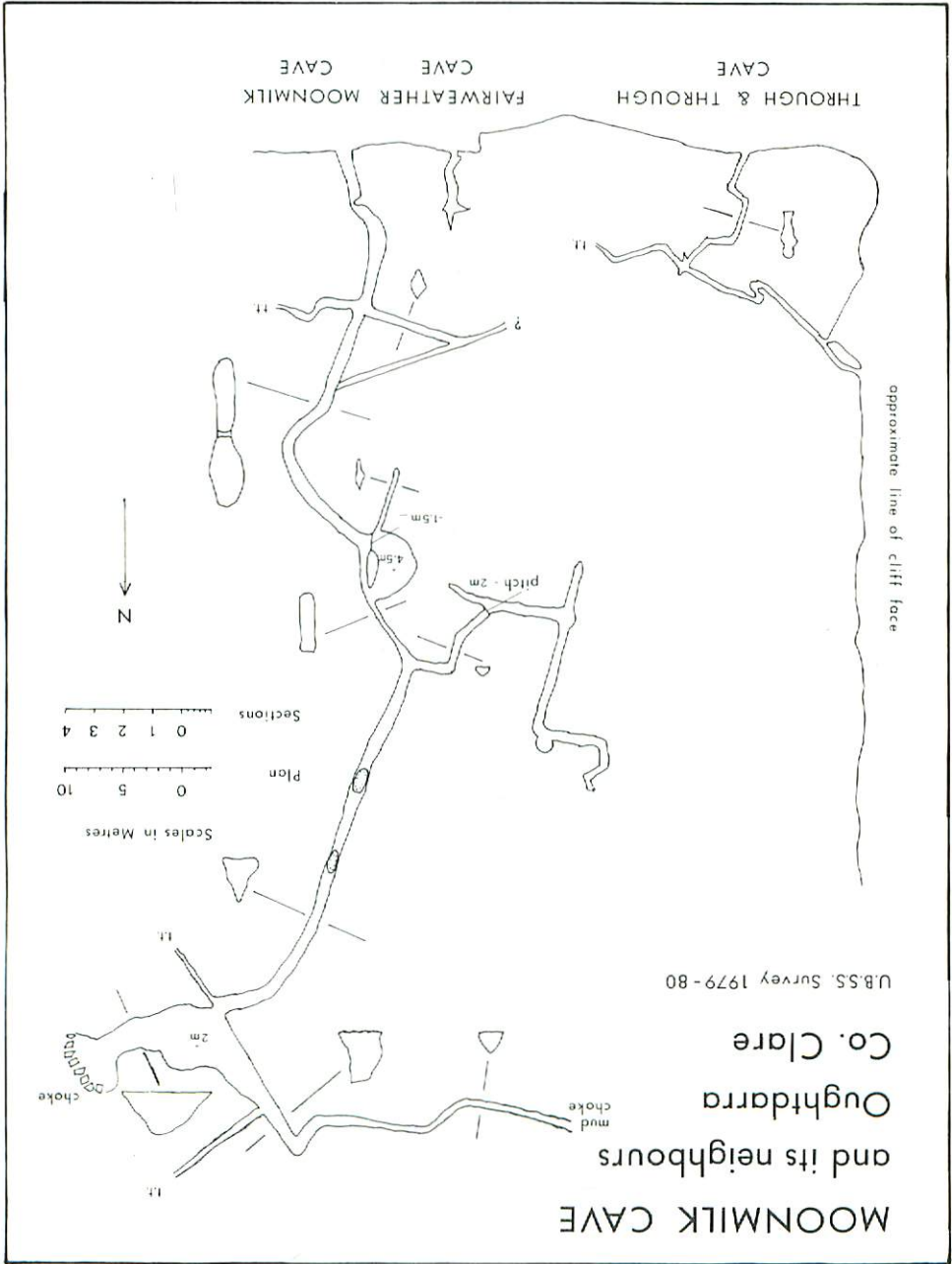


Fig. 60: Survey of Moonmilk Cave and associated caves.

is often a strong draught between the two entrances. A small side passage, on the north-east side of the main passage, has no appreciable draught. Though this side passage cannot be followed for more than a few metres it is running directly towards a side passage in Moonmilk Cave, which lies about 10m. to the east. Typically the size of the main passage is 2m. high by 0.4m. wide. For most of its length this rift has a boulder fill in its lower half and moonmilk on its walls.

FAIRWEATHER CAVE

A16f

Clare 4, E. 44.4cm., N. 15.4cm.

Total length 7m.

Td. Ballynahown

Alt. 137m.

The cave entrance lies at the foot of the cliff, 25m. east of the south entrance to Through and Through Cave (Fig. 60). The entrance is low, leading to a drop of 2m. into a rift chamber crossed at its northern end by another rift. At this point the walls of the cave are covered with dazzling white moonmilk. All the rifts close down quickly, including the upper one at the end, which has the appearance of an aven.

MOONMILK CAVE, synonym Polnangel'de

A16g

Clare 4, E. 44.5cm., N. 15.4cm.

Total length 250m.

Tackle required: ladder 2m., belay 20m.

Td. Ballynahown

Alt. 140m.

Moonmilk Cave lies 10m. east of Fairweather Cave. The entrance is very well hidden by a thorn bush, 3m. up from the base of the cliff. An awkward climb on grass-covered rocks gains a narrow ledge by which the entrance may be approached. The entrance to the cave (Fig. 60) is characterized by moonmilk-encrusted boulders. After 5m. a tight squeeze must be made past a boulder to gain a canyon passage, whose walls are thickly encrusted with moonmilk. Following this canyon, the first junction occurs 15m. from the entrance. The small passage to the right quickly becomes too tight. The passage to the left also becomes too tight, though it can be followed far enough to infer that it connects with Through and Through Cave.

The canyon continues straight ahead and deepens to a maximum depth of 4m. In this part of the cave there has been substantial removal of sediments. The floor of the canyon is muddy and an intermittent shelf of moonmilk occurs at half height. In the northern part of the cave the moonmilk shelf is the floor of the passage, the sediments remaining undisturbed underneath.

Forty metres from the entrance there is a small chamber down to the left. From the foot of the chamber a small tube can be followed to the south but soon becomes too small. The canyon continues past the chamber and has as its floor the moonmilk shelf described above; it is correspondingly less tall. The passage now forks.

Taking the left fork, a small tube may be followed with walls, roof and floor disgustingly slippery with moonmilk. After 16m. a small chamber is entered at roof level. Tackle is needed for the descent of only 2m. to the floor of the chamber, as the drop is too slippery to be climbed.

unaided. The belay for this pitch is a thread through the false floor at the junction with the main passage. At the far side of the chamber a cross rift is entered. To the left the rift quickly becomes too narrow, while to the right a small passage, strongly joint-controlled, becomes choked after 20m.

Back at the main canyon, the right hand fork is the major passage and is roughly triangular in cross-section, the floor being the moonmilk layer. Two holes in the floor, both about 3.5m. across and 1.5m. deep, must be crossed. The passage ends in a chamber at whose far end a boulder choke blocks the way on. At the entrance to the chamber a small passage leads off to the right but rapidly becomes too tight. A large passage leads off to the left and this can be followed for 35m. It gradually becomes filled with mud, until the way on is blocked by a mud choke; a side passage to the right, shortly after the chamber, soon becomes too tight.

In wet weather the main canyon fills with water to the level of the moonmilk shelf, so that swimming progress is possible in places where sediments have been removed. A small stream runs south along this passage towards the entrance. The small chamber 40m. from the entrance fills to the roof with water and a lake forms at the foot of the pitch in the left branch of the cave. Progress is generally easier when the pools and lakes are present.

The Chelsea report of 1965 noted many draughts in the cave, particularly from the pitch branch towards the entrance. U.B.S.S. parties have not recorded any appreciable draughts. Both Chelsea and U.B.S.S. members agree that scalloping on the passage walls indicates an original flow to the north.

IVY CAVE

A16h

Clare 4, E. 45.7cm., N. 14.1cm.

Total length 15m.

Td. Ballynahown

Alt. 140m.

At the eastern end of the Upper Cliff, where the cliff turns to the south, a deep gully enters from the north. The buttress on the western side of the gully is covered with ivy and a small cave passage can be followed to the buttress face from a rift-like entrance in the side of the gully. The passage follows first the east-west and then the north-south jointing direction.

RUBBISH CAVE

A16i

Clare 4, E. 45.1cm., N. 15.7cm.

Total length 12m.

Td. Ballynahown

Alt. 154m.

Above the Upper Cliff there are numerous small bluffs. In one of these, located a short distance to the north-east of Moonmilk Cave, a small cave entrance can be seen. A low crawl over domestic rubbish becomes lower still until daylight can be seen, but not reached, from a small re-entrant in the face of the bluff.

Caves in the Lower Cliff

LYSACHT'S CAVE

A17a

Clare 4, E. 34.0cm., N. 14.0cm.

Total length 10m.

Td. Oughtdarra

Alt. 80m.

Lysacht's Cave, named after a recluse, is a large black cleft in the Lower Cliff. It is clearly visible from the south-west, where a large bank of glacial moraine in the middle of the lower plateau, to the west of A17, makes a good observation point. The cave becomes choked after 10m.

GOAT CAVE

A17b

Clare 4, E. 34.8cm., N. 13.4cm.

Total length 20m.

Td. Oughtdarra

Alt. 80m.

Goat Cave is well hidden by brambles in a slight groove in the cliff face, 50m. west of Loop Cave. A rift passage is followed with a short drop half way along its length. The cave ends at a choke in which there are many bones present. This choke should be left undisturbed, as the bones may be of archaeological interest.

LOOP CAVE

A17c

Clare 4, E. 35.5cm., N. 13.4cm.

Total length 7m.

Td. Oughtdarra

Alt. 80m.

Two flood channels run south and south-west from Lackaniska (A16), cutting through the Lower Cliff. At the end of the southern channel a small cave entrance can be seen high on the east-facing buttress. A small passage can be followed through the buttress to a south-facing ledge. The cave then loops back into the cliff and becomes impassable.

THE RESURGENCES

There are many more small springs in addition to the four main resurgences described below. The system of description is the same as that used for the caves except that, since none of the resurgences can be penetrated, there is no need to quote length.

LACKANISKA RESURGENCE

A16

Clare 4, E. 36.6cm., N. 17cm.

Td. Ballynahown

Alt. 107m.

The three streams of Lackaniska emerge from the foot of a bank of moraine and flow south across a meadow. Under normal conditions the streams sink into a muddy hole after a short distance. The water is next seen at the flood resurgence A17, from whence it sinks again to resurge finally into the sea at S3.

The Lackaniska Resurgence contains shale debris which must have originated on Knockauns Mountain and been carried through caves. However the reaction of the resurgence to heavy rainfall is sluggish. When the resurgence is in flood the whole meadow can be inundated

and flowing water can be heard up to 200m. north of the moraine, higher up the hillside. If this is the same water, then the true resurgence is to the north of Lackaniska. The area is heavily overgrown with thorn bushes, which make a detailed study difficult.

Dye tracing (Trudgill 1971a) has been successful to the east and the central of the three springs from both Poulomega (A4) and Poulmagree (A3a), major swallets on the western flank of Knockauns Mountain. Poll Ballynahown (A4a) has not been dye tested. It is possible that the water in the western of the three springs comes from a different area (Fig. 2).

From Lackaniska meadow there are two flood channels, one to the south and one to the south-west. In the southern channel there is a flood swallet (A16a) at Clare 4, E. 36.8cm., N. 14.5cm.; water can occasionally be heard here, flowing beneath the surface. In the other channel there are two flood swallets, at Clare 4, E. 33.5cm., N. 15.7cm. and at Clare 4, E. 34.8cm., N. 16.8cm.

OUGHTDARRA WEST RESURGENCE

A19

Clare 4, E. 33.5cm., N. 16.3cm.

Td. Oughtdarra

Alt. 88m.

A19 is a flood resurgence at the head of a small dry valley, 300m. to the west of Lackaniska. The water resurging is peaty and the resurgence contains shale debris, but the only successful dye trace has been from the small swallet A3c on Knockauns Mountain to the north of Poulmagree (Fig. 2).

OUGHTDARRA RESURGENCE

A17

Clare 4, E. 35.0cm., N. 11.4cm.

Td. Oughtdarra

Alt. 58m.

A17 is a flood resurgence for the water seen at Lackaniska. There are at least two resurgence points in a small gully, from whence the water runs off to the south, to sink in a muddy hollow (A18a) at Clare 4, E. 33.7cm., N. 7.8cm. The water is not seen again until S3, the intertidal resurgence in Poulsallagh Bay, though it must pass very near to the turlough on the north side of the coast road in Td. Ballyryan.

The resurgence A17 reacts rapidly to flooding, turning a peaty brown and throwing out shale debris. Though once heavily overgrown this area has recently been cleared for grazing.

OUGHTDARRA EAST RESURGENCE

A18

Clare 4, E. 38.7cm., N. 8.0cm.

Td. Oughtdarra

Alt. 73m.

A18 is a permanent resurgence depositing tufa, the water flowing west past a farm to join the stream from A17 before sinking at A18a. The stream at B8b on south-west Knockauns Mountain (the Duggan's Well stream) has been successfully dye traced to A18 (Fig. 2).

DISCUSSION

The region here called Oughtdarra is a basin cut into the south-western flank of Knockauns Mountain. The most important feature is the Upper Cliff, the northern margin. Other cliff lines, including that of the Lower Cliff, cross the floor of the basin. Apart from these cliffed steps, the ground descends gently south-west to the sea.

The Oughtdarra Basin has many glacial features: deposits of moraine are widespread and there is also a well marked glacial trough to the north-west in the vicinity of Leaba na hAon Bhó. However the Oughtdarra Basin is unlikely to be a glacial cirque for a number of reasons. Cirque development is normally on north- and east-facing slopes, for reasons of decreased summer melting and enhanced winter accumulation. But in Co. Clare this local accumulation of ice seems to have been relatively unimportant, compared with the massive inflows of glacial ice from the north. The low-lying Oughtdarra Basin, cut into the south-western flank of Knockauns Mountain, seems more likely to be the result of sub-glacial plucking on the lee slope of the hillside beneath the main body of ice: the same process that on a smaller scale produces roches moutonnées. A proper geographical survey is now needed, as the study on which this paper is based was little more than a search for caves.

The caves of Oughtdarra are all to be found in the faces of cliffs, most of them in the Upper Cliff. Scalloping on the walls of Moonmilk Cave suggests that the original flow of water was to the north. This is peculiar, as both the dip and the current surface topography would assist drainage in a southerly direction. Assuming this northward flow is correct two possible explanations are offered.

The first suggestion is that the caves are very old, at least pre-glacial, and were formed before the Oughtdarra Basin was brought into existence. This assumes that there was high ground to the south, where now there is the dry Coolagh River valley. In this case one would expect fewer caves and a dendritic pattern of passages. This pattern is typical of north-west Clare. Instead, the caves of Oughtdarra are joint controlled networks.

The other possibility is that the caves were formed during glacial times by meltwater from ice residing in the Oughtdarra Basin. Sub-glacial streams would enter the limestone to produce a joint maze of phreatic passages. A study of the cave sediments would provide conclusive evidence for or against this theory. In late glacial times there must have been some modification of the cliffs to account for isolated fragments such as Through and Through Cave, Loop Cave and Ivy Cave. These caves have entrances in the faces of the cliffs and exits in the gullies that broach them.

To the north of Oughtdarra, in Td. Crumlin, a search has been made of the hillside, where the caves of Oughtdarra could have made their re-appearance. No caves were found but this does not disprove the theory, that the original line of drainage was to the north-west, towards

Galway Bay. The other alternative, that the scalloping indications are spurious, should not be overlooked. In this case the caves would represent abandoned, high level channels for water sinking on Knockauns Mountain. A more detailed study is obviously needed. If such a study is undertaken, it would be worth looking also at the small remnants of caves on the coast in the intertidal zone. At Poulcraveen (S2), a cave broached longitudinally by the current sea cliff, moraine lies against the cave wall and glacial striae cut across cave solution features (Trudgill 1971b). Other cave remnants can be found in the lower part of the dry Coolagh River valley and in the lower part of the Caher River valley at Fanore.

The caves of Oughtdarra commonly have on their walls the unconsolidated stalagmitic deposit known as moonmilk. This is to be expected, as the caves are damp with percolation water and yet have relatively low humidity, being near to the surface. Rapid evaporation, perhaps associated with fungal activity, causes the mineral load of the percolation water to be deposited as moonmilk, rather than as crystalline calcite. Robbers' Den Cave and Goat Cave would merit further archaeological study; these are the only caves so far found in the western Burren of archaeological significance.

The series of springs and sinks of the present swallet water draining through Oughtdarra quite obviously is immature. The water is seen above ground for only a short part of its route from Knockauns Mountain to the coast and, in time, even this will cease. The streams will find a lower route and the only springs seen in the area will be of local percolation water.

SURVEY NOTES

The surveys of Through and Through Cave and of Moonmilk Cave were done with a metric fibron tape and hand-held Suunto compass and clinometer. Distances were taken to the nearest 0.1m., compass bearings and clinometer to 1°. The compasses were checked for their personal errors. The surveys were drawn by protractor and rule.

ACKNOWLEDGEMENTS

The authors would like to express their thanks to Janet Cooper and Geoff Riding for their assistance in the survey of Moonmilk Cave. Their effort was definitely 'beyond the normal call of duty'. Pete Smart gave very useful geomorphic advice, which is incorporated in the Discussion. Johnny Kelleher deserves our special thanks for his unfailing hospitality at his farmhouse in Oughtdarra. In addition we must thank him for telling us where all the water went; our dye tests proved him right every time.

REFERENCES

- ANON 1965 Ireland '65. Part Two. *Newsletter Chelsea Speleolog. Soc.* 8 (2), 20-26.
- MANTLE, R. 1963 My Irish Diary. *Newsletter Chelsea Speleolog. Soc.* 6 (1), 1-5.
- M.D.N. 1971 *Irish Diary. Univ. Bristol Spelaeol. Soc.* April, 1971, 5.
- TRATMAN, E. K. 1969 Miscellaneous Caves and Springs. *The Caves of North-West Clare, Ireland*, Newton Abbot, p. 206-207.
- TRUDGILL, S. 1971a Underground Water Tracing, N.W. Clare, in Cave Notes. *Proc. Univ. Bristol Spelaeol. Soc.* 12 (3), 299-301.
- TRUDGILL, S. 1971b Poulcraveen, Co. Clare, Ireland, in Cave Notes. *Proc. Univ. Bristol Spelaeol. Soc.* 12 (3), 293-295.