

## VI.

## A SOUTERRAIN AT LONGFORGAN IN PERTHSHIRE.

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How many souterrains once existed between the Forth and the Dee is an open question. How many have been discovered in the last fifteen hundred years is also an open question, but between fifty and sixty have been recorded. Of these no less than forty-six lie within about 20 miles of Dundee, and together they form an impressive concentration immediately north of the Tay. It is true that five of the forty-six are just outside the boundary of the modern county of Angus, and that one is as far away as Barnhill near Perth, but it is accurate enough to describe them all collectively as the "Angus group" of souterrains. They have been the subject of a recent investigation.<sup>1</sup>

A souterrain, the identification of which is described below, was recently discovered at Longforgan in Perthshire. It falls into the "Angus group," and its significance in the distributional pattern of souterrains may be explained briefly. The souterrain-builders of Angus settled in some force on the fertile lands along the coast and in Strathmore, though they did not despise the lower slopes and the more attractive valleys of the Sidlaws. This is not the place for elaborate distributional detail, and the immediate point comes out clearly on a distribution map of the known souterrains of Angus. It is this. If there is anywhere a gap to be filled, an area where on general grounds one might forecast the discovery of souterrains, it is along the slopes above the Tay between Dundee and Perth, in the foothills which rise above the Carse of Gowrie. Between the three souterrains in Dundee (Balgay, Camperdown and Dryburgh) and that in Perth (Barnhill) the only souterrain recorded to date is that which was found at Fowlis Easter in the 18th century. It was reasonable to expect that a few more examples would come to light in the 20-mile stretch of country between Dundee and Perth. Not the least interesting aspect of the souterrain recently discovered at Longforgan is that it helps to fill a gap in the distribution map of known souterrains, a gap which probably never reflected anything more than a combination of chance and antiquarian activity.

<sup>1</sup> F. T. Wainwright, *The Souterrains of Southern Picthead* (forthcoming).

## DISCOVERY.

The Longforgan souterrain came to light during the building of a new house, now called "Wemyss" and owned by Mr D. M. Fenton, in Castle Road, Longforgan. The builders were laying the foundations of the south-west corner of the house when they noticed a wall sunk 3 or 4 ft. into the undisturbed soil. This puzzled them. It also puzzled Mr E. A. Urquhart, a local resident, who saw it and wondered what it was. But for Mr Urquhart's watchful eye and keen interest the discovery might have remained unrecorded. Fortunately, he mentioned it to Mr D. B. Taylor, who at once thought the wall looked like the end of a souterrain. Mr Taylor telephoned me, and I drove to Longforgan immediately (8th April 1955). What I saw is shown in Pl. XV, 1.

## SITE.

The village of Longforgan is about  $15\frac{1}{2}$  miles from Perth and rather more than 6 miles from Dundee. It is marked on Ordnance Survey one-inch, six-inch and 25-inch maps and plans (Scottish Popular Edition Sheets 57 and 64, Perthshire Sheet LXXXVIII NW, and Perthshire Sheet LXXXVIII 5 respectively).

The souterrain is about 150 yards west of Longforgan Church, on the north side of Castle Road. As is explained above, the end of it now lies beneath the south-west corner of the house called "Wemyss." Its full National Grid Reference is NO 307299, and its position is accurately plotted on the location map at fig. 1. Its position in relation to "Wemyss" is indicated in the plan at fig. 2.

The ground level shown in the section at fig. 3 has now been altered by the banking-up of the new garden, but it is clear enough that the souterrain is about 150 ft. above the present sea-level. The 100-foot contour runs some 175 yards to the south, and the Tay is about  $1\frac{1}{2}$  miles away. Between the souterrain and the river there is a wide expanse of flat lowlying ground which in earlier days cannot have been much more than a swamp. The souterrain stands on higher and therefore drier ground. It was built into a large mound of vivid red sand and gravel, which means that, as is usual with these structures, it was extremely well-drained.

## EXCAVATION AND EVIDENCE.

The builders had already erected their brick foundations and had cleared out the area of the souterrain when I saw it on 8th April 1955. The walls of the passage had been removed for several feet, but the end was still visible (Pl. XV, 1). It was less rounded than is usual, but its character was beyond

doubt. The wall stood to a height of nearly 4 ft., and the width of the passage at floor level was about  $7\frac{1}{2}$  ft. The wall was a normal souterrain wall: it consisted of large glacially-rounded boulders surmounted by smaller boulders and split flagstones (Pl. XV, 2). These were wedged, pinned, and corbelled inwards in the traditional souterrain manner. Corbelling is not usually very pronounced in the lower courses of a souterrain wall, but the edges of the top flagstones projected 11 or 12 ins. inwards from the face of

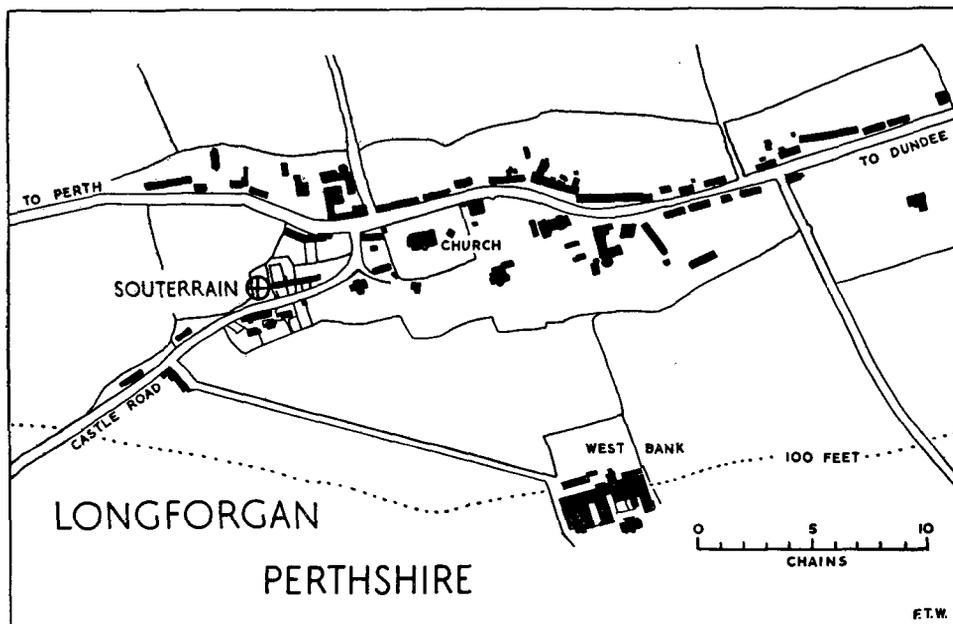


Fig. 1. Location Map. (Based on the Ordnance Survey 25-inch Plan, Perthshire Sheet LXXXVIII 5, with the sanction of the Controller, H.M. Stationery Office.)

the bottom course of boulders (Pl. XV, 2). One might guess that the walls had once stood at least 2 ft. higher, making them 6 or  $6\frac{1}{2}$  ft. high originally. The upper courses and the roof had disappeared before 8th April and, what is more important, before the builders hit upon the structure. The floor of the passage was roughly paved, but the paving-stones had been removed before the builders erected their brick foundations. About 15 ft. of the souterrain lay within the area excavated by the builders and, from parts of the walls still embedded in the sides of their trench (fig. 2), it appeared that the souterrain was swinging slightly to the west and also that its average width was between  $6\frac{1}{2}$  and 7 ft. That the souterrain should be wider at the end than elsewhere arouses no surprise, for what has been called the "terminal bulge" is a characteristic feature of souterrains in this area.

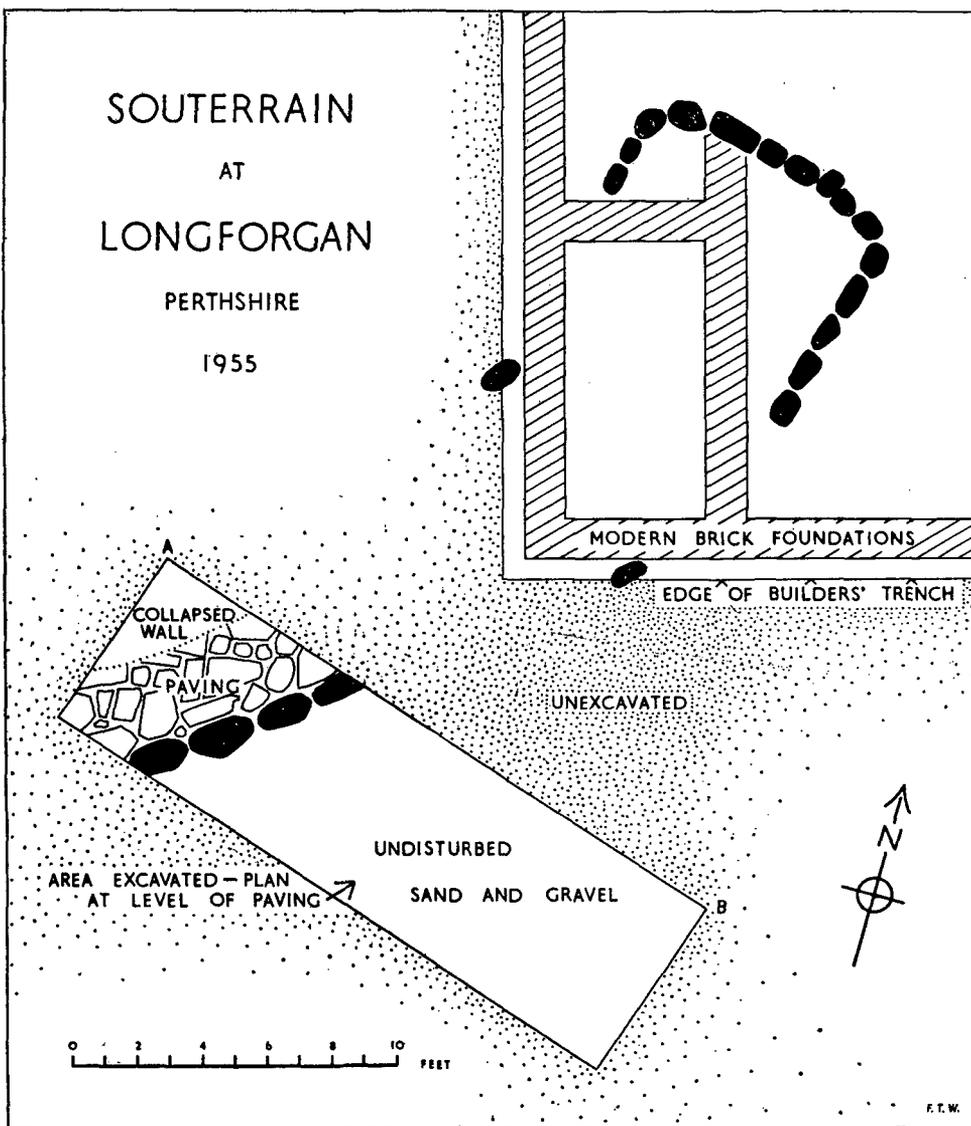


Fig. 2. Plan of souterrain and excavation at Longforgan.

Little more information could be gained from an examination of the mutilated structure as it appeared on 8th April, but it was reasonable to hope that at least a clearer section could be obtained if a trench were cut across the line of the souterrain outside the area disturbed by building operations. Therefore a one-day excavation was arranged for 10th April. Its object was to check tentative conclusions by obtaining a definitive section across the main passage of the souterrain. The task was more arduous than our drawings might suggest, for the area available for excavation was limited, and a heap of earth and rubble had to be removed before even the modern ground level was reached. Although the area opened covered only 120 sq. ft., we were glad to have a large gang of willing volunteers who could be employed in short strenuous shifts.

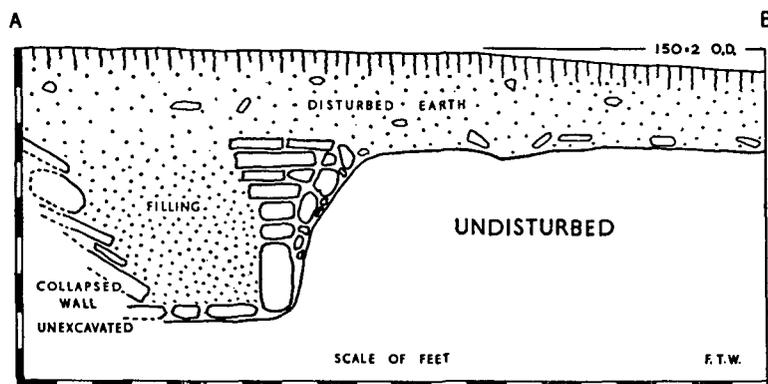


Fig. 3. Section across souterrain at Longforgan.

A trench 20 ft. long and 6 ft. wide was opened as near as was practicable to the foundations of the new house. It is shown in plan at fig. 2. As it turned out, the souterrain swung to the west more strongly than seemed likely and, since the trench could not be extended, it proved impossible to cut a section right through both walls of the souterrain. One wall and part of the floor are shown in plan at fig. 2 and in section at fig. 3, but the other wall lay outside the limits of our trench. Artistically this is unfortunate, but archæologically it is no great loss. The wall seen in section at fig. 3 survived to a height of nearly 5 ft. Its bottom course consisted of large glacially-rounded boulders, and its upper courses, which were corbelled inwards, were of smaller boulders and split flagstones, the latter frequently laid lengthwise across the line of the wall. These are all normal features of souterrain construction, as are also the wedging and packing of smaller stones between the back of the wall and the face of the souterrain-builders' trench. The paving, too, was normal: it was rough and crude in execution,

and it consisted of flagstones and of glacially-worn boulders, the latter with their flat sides turned upwards. The boulders, large and small, were carried to Longforgan by glacial action, and the souterrain-builders probably found them lying around in considerable numbers. The flagstones, on the other hand, would seem to have been quarried and worked, though possibly at no great distance from where they were used as building material.

The wall which lay outside our trench had collapsed, and it was not possible to remove the fallen stones. There was no sign of a roof in position, but the corbelling of the walls implies the existence of a heavy slab-roof such as may be inferred for most souterrains and such as may still be seen at Airlie I and Pitcur II. It is interesting to note that the roof had been removed, possibly in antiquity and certainly with care. If the roof had not been removed with care, the huge roof-slabs would have fallen into the souterrain. The deliberate de-roofing of a souterrain has been noticed at Ardestie, Carlungie I and Carlungie II, and it may be inferred at other sites.<sup>1</sup> The filling of the Longforgan souterrain consisted of thick black earth which, apart from the debris of the collapsed wall, contained only a few small stones. There was no trace of stratification, and the most reasonable inference is that the souterrain was filled up in a single continuous operation very soon after its roof was removed. This phenomenon, too, is paralleled at other souterrain sites in the area. The general direction of these and similar clues is towards the suggestion that the souterrain-builders continued to occupy the site of their settlement after they had demolished the souterrain itself. But the evidence from the single trench at Longforgan will certainly not support such far-reaching conclusions, and the possibility is raised here only because it is of importance in the wider study of souterrains, and because it ought to be considered whenever a souterrain is examined.

Similarly, the single trench at Longforgan produced no clear evidence of surface structures. With an eye more imaginative than observant it would be possible to see odd stones as fragmentary traces of paving, and even to see one slight depression in the level of the undisturbed sand as a hollow where a boulder had once stood (fig. 3). Such things may well be, and the possibilities were closely examined, but it should be stressed that none of these details seemed either significant or convincing in the field. The soil above the undisturbed sand had been repeatedly churned up, and it is unlikely that traces of surface structures, if any had ever existed at this point, would have survived in a recognisable form within the limits of our trench. It is fairly certain, of course, that there were surface structures attached to the souterrain at Longforgan, but it would be unjustifiable to suggest that any evidence of their existence appeared during the excavation of 10th April 1955.

<sup>1</sup> For details of other sites mentioned in this report, and for tentative explanations of features noted, see F. T. Wainwright, *op. cit.*

## CONCLUSIONS.

The structure discovered at Longforgan is undoubtedly a souterrain and, as is usual with souterrains, it occupies a well-drained site. In its general character it seems to fall closely into line with other souterrains in the area. Only parts of the last 30 ft. of its length were examined, and the details of its plan are therefore unknown, except in so far as they are recorded in fig. 2. Where the main entrance lies, and whether or not there were subsidiary entrances, are matters for speculation only. We may assume that the main passage was curved in a great arc or semi-circle, but this assumption, though tentatively supported by the evidence of the last 30 ft. as shown in fig. 2, is largely an inference from the common form of souterrains as they are known elsewhere. Of the length of the main passage nothing can be said, except that it was greater than 30 ft. The average length of a souterrain in this area (*e.g.* Ardestie and Tealing III) is about 80 ft., but some of them (notably Carlungie I and Pitcur II) are very much longer. The width of the main passage was probably between  $6\frac{1}{2}$  and 7 ft., and this is normal. Normal, too, is the "terminal bulge" at the end of the main passage. An internal height of 6 or  $6\frac{1}{2}$  ft. may be inferred, again largely from other known examples, and also a roof of massive stone slabs which would stretch across the corbelled walls and bind them together. As the section in fig. 3 suggests, it is almost certain that the roof of the souterrain protruded above what was then the surface of the ground.

Constructional details seem to be entirely normal: the crude paving, the devices of pinning and packing, the flagstones laid lengthwise across the line of the wall, the curve of the main passage, the width, the inferred height, the corbelling, and the "terminal bulge." There was no clear evidence of surface structures attached to the souterrain, but the existence of these ought to be assumed, though not necessarily in the area which was examined.

The roof of the souterrain had been removed, possibly in antiquity, and the passage seems to have been filled up with earth at the same time. One is free to speculate, without adequate evidence, upon the possibility that the souterrain-builders continued to occupy the site after they had demolished the souterrain. That is to say, it is possible, though unproved, that Longforgan is yet another site at which there was what has been called "post-souterrain" settlement. This question is one of major importance in the study of souterrains and souterrain-builders, and it is instinct with archaeological and historical implications of the greatest significance. For the present it must remain an open question in respect of the souterrain site at Longforgan. Vague hints and an absence of contradictory evidence are no substitutes for positive evidence, and it is a fact that we cannot say either

when the Longforgan souterrain was de-roofed or if that operation was followed by another phase of occupation.

Perhaps one should not expect too much from a single trench. There were no small finds such as the brooch which enlivened a similar excavation at Carlungie II and which, incidentally, provided a sound basis for chronological argument.<sup>1</sup> The trench at Longforgan provided nothing to which a date could be given, but we shall not be far wrong if we assume on general grounds that the souterrain was built within a hundred years of A.D. 150. It belongs to the "Angus group" of souterrains and, as is explained above, it helps to fill the curious distributional gap between Dundee and Perth.

The Longforgan excavation produced one quite unexpected result. Among the visitors on 10th April was Mr Angus MacLeod of Longforgan, who mentioned that he had seen an underground passage at Invergowrie some years ago. Mr MacLeod's information was checked, the site of the destroyed structure was visited, and by 25th April it was possible to affirm that the last remaining traces of a souterrain at Bullionfield, Invergowrie, were removed during a road-widening operation about ten years ago. Details will be published elsewhere, but the first reference in print to the Bullionfield souterrain makes an interesting and appropriate conclusion to a report on the Longforgan souterrain. To Fowlis Easter and Longforgan we must also add Bullionfield. The distributional gap between Dundee and Perth is gradually being filled.

*Acknowledgments.*—I am greatly indebted to Mr D. B. Taylor, whose archaeological acumen ensured that the Longforgan souterrain should not remain unrecognised and unidentified; to Mr D. M. Fenton, owner, for his willing co-operation; to Mr H. H. Martin, architect, for facilities too numerous to mention; and to the proprietors of the *Dundee Courier and Advertiser* for an excellent photographic record, here represented only by Pls. XV, 1 and XV, 2. But in the last resort the success of an excavation depends upon the skill and enthusiasm of those who wield the spades and trowels, and to the members of his gang an excavator can never hope to express the full measure of his gratitude and appreciation.

<sup>1</sup> F. T. Wainwright, "A Souterrain Identified in Angus," *Ant. J.*, xxxiii (1953), 65-71.



[Photo: Dundee Courier and Advertiser.]

1. The end of the souterrain at Longforgan.



[Photo: Dundee Courier and Advertiser.]

2. The construction of the wall in the souterrain at Longforgan.

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