

A survey of crannogs in Loch Tay

T N Dixon*

INTRODUCTION

In May 1979 a survey of the crannogs in Loch Tay was carried out by a team including members of the Dept of Archaeology and the Sub-aqua Club of the University of Edinburgh. The aim of the survey was to locate and plan the artificial islands in the loch, to examine them for evidence of typical crannog features and to assess the potential of the sites for useful environmental and dendrochronological sampling and eventual excavation. Results of the survey were very satisfactory and a preliminary excavation was carried out on a crannog off Fearnan village on the N side of the loch during August and September 1980 (Dixon 1981).

Loch Tay was chosen because it is one of the larger Scottish lochs, with good access, but mainly because Mr Colin Cruickshank of the Physical Education Dept, Edinburgh University, had marked on a 1 in OS map all the obstructions into which he had sailed during sail training with students on the loch. He recognized the obstructions as crannogs after personal examination underwater and reference to a useful local history. *In Famed Breadalbane* (Gillies 1938) records a local tradition that 24 islands were built in the loch at the expense of Alexander I of Scotland, and goes on to locate accurately 12 of the crannogs and one possibly demolished example.

The loch is 24 km long with a maximum breadth of just 1.6 km. The deepest part of the loch is 155 m, about 10 km from the Kenmore (NE) end. It is skirted on both sides by mountains which on the N side rise to the height of Ben Lawers at 1214 m. The SW end is also dominated by mountains, but the NE end is open to Taymouth Park and the valley of the River Tay.

GENERAL REMARKS

Crannogs (fig 1) are artificial islands found abundantly in Scottish and Irish lochs, and occasionally in estuaries. Although there are many references to Welsh and English crannogs these appear to be closer to lakeside sites such as those in the Swiss lakes and none, so far, point to the same type of structure as the Scottish and Irish examples.

Other islands of an artificial nature may be found in Scotland, mainly in the form of duns, but there are differences in structure. Many of the crannogs examined have evidence for a strong internal timber framework, but there are about 350 documentary references to crannogs, so proportionately few have been looked at, and a timber framework may not necessarily be a prerequisite of classification as a crannog. Certainly bedrock is to be seen as part of the foundation structure in more than one case, although this does not preclude the use of timber in the structure. A definition of crannogs cannot at present be too firmly formulated owing to the lack of information available regarding visible structural elements.

*Institute of Maritime Archaeology, St Katharine's, University of St Andrews.

Classification of crannogs into different groups by style, region or period is equally ineffective at the moment for the same reason. The SW of Scotland used to be considered the main area of crannog concentration in Scotland, but this came about mainly because of the study and excavation carried out by archaeologists, especially Robert Munro, in the last half of the 19th century. A survey of Loch Awe carried out in 1973, the Loch Tay survey described here, and study of the documentary evidence, show a crannog distribution in the Highland zone comparable with the highest concentrations in the SW.

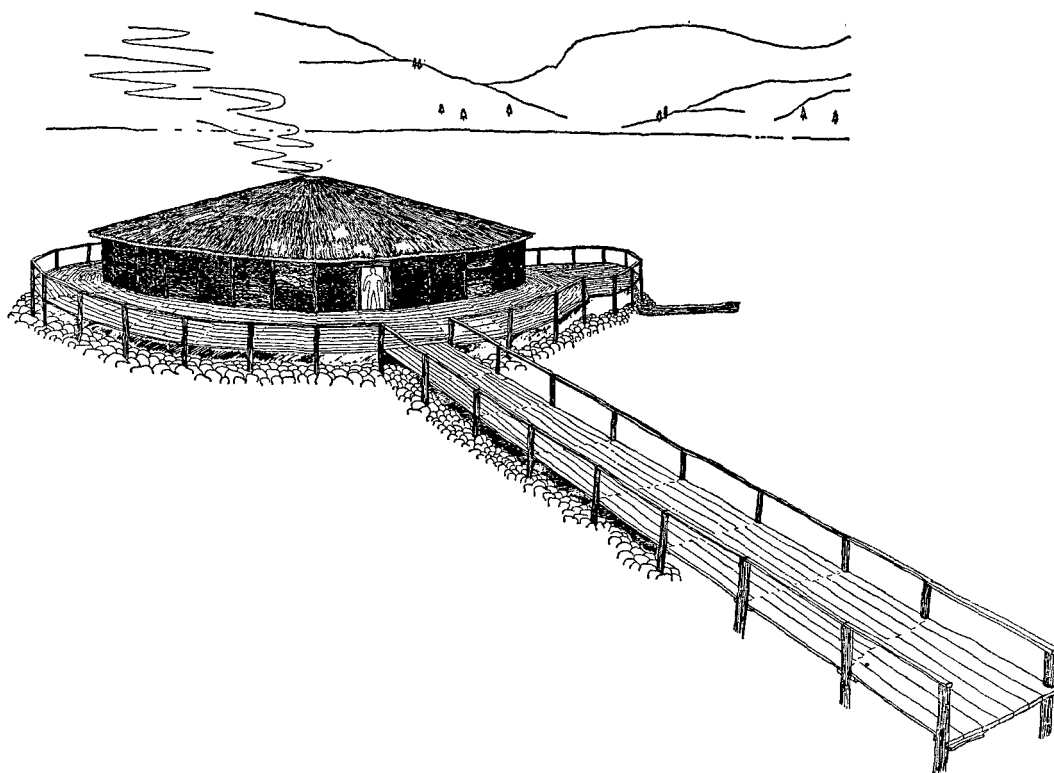


FIG 1 Conjectural reconstruction of a crannog, based on Fearnan (no 3)

Crannogs are remarkable for the length of time over which they were used, whether as temporary or permanent habitation sites. So far in Scotland the earliest dates are for Fearnan Crannog (no 3 in gazetteer) with C14 dates of $595 \text{ bc} \pm 55$ (GU-1323) and $460 \text{ bc} \pm 60$ (GU-1325), and the site off Fearnan Hotel (no 4 in gazetteer) at $525 \text{ bc} \pm 55$ (GU-1322). These compare well with Milton Loch Crannog, which produced a plough stilt dated to $400 \text{ bc} \pm 100$ (K-1394) and a structural timber dated to $490 \text{ bc} \pm 100$ (K-2027). The major part of the evidence from this site suggested to the excavator an earliest occupation during the 2nd century AD, but the crannog was not totally excavated as the lower layers were always under water. Other crannogs date from the time of the Roman occupation, the Dark Ages and throughout the Medieval period. Whether initial construction took place during these times is not known.

Crannogs have been studied by a number of people in the past, often stimulated by the draining of lochs for agricultural land. The first proper assessment was a paper by John Stuart presented to the Society of Antiquaries of Scotland in 1865 dealing with crannogs in the SW and elsewhere (Stuart 1865). However, the major studies were carried out by Robert Munro, with various excavations, primarily of Lochlee, Lochspouts and Buston crannogs in Ayrshire, leading to the publication of *Ancient Scottish Lake Dwellings* in 1882 and *The Lake Dwellings of Europe* in 1890. Although his standards of excavation would not be permissible in modern archaeology, his observations of the basic features of crannogs have been shown to be fundamentally accurate by later excavations.

In the first 15 years of the 20th century an Augustinian monk, the Rev Francis Odo Blundell, examined various crannogs by the use of a diving suit loaned to him by the Clyde Navigation Trust. His work stimulated the British Association for the Advancement of Science to form a committee which sent circulars to all regions in Scotland asking for information relating to crannogs. Blundell investigated many of the replies to the circular, publishing his findings just before the First World War (Blundell 1909, 1910, 1913). For two seasons starting in 1914 a crannog in Loch Kinellan was examined by Hugh Fraser. A number of trenches and pits were opened but work was impeded by water seeping into the excavations. Pottery from the site indicated occupation in about the 15th century AD (Fraser 1917).

Since the work of Blundell no systematic fieldwork has been carried out on crannogs. The few excavations which have taken place have been caused by the draining or lowering of lochs for hydro-electric power schemes. These are Loch Treig, excavated in 1933 (Ritchie 1942); Loch Garry, excavated in the early forties but not reported due to the death of the excavator, Professor Ritchie; Milton Loch, excavated in 1953 (Piggott 1953); Loch Glashan, excavated in 1960 by Mr J Scott and not yet fully reported.

An Edinburgh University MA dissertation, entitled *Aspects of Crannogs of the Solway-Clyde Province* is a useful guide to that area (Savory 1973). A more complete piece of work, by G. Oakley for an MLitt degree from the University of Durham, is to be recommended for its coverage of the material throughout Scotland (Oakley 1973). Research is also in progress by Mrs F Murray of Falkirk Museum on the finds from crannogs.

In 1973 a survey of the crannogs in Loch Awe was carried out by a team of Naval Air Command divers in conjunction with Drs T McArdle and I Morrison of Edinburgh University. Five possible crannogs were previously recorded in the loch but this survey recognized 20 definite examples. Features of these crannogs included middens, harbours, jetties and causeways; evidence of stone and timber construction was also noted.

The chief bone of contention as to the true function of crannogs has been whether occupation was temporary or permanent. Regrettably, no excavation to date has been able to establish through stratification the length of habitation prior to abandonment, but evidence from the Loch Tay excavation is indicating the likelihood of reasonably long periods of occupancy. From this crannog, no 3 in the gazetteer, have come very high concentrations of cereal pollen and weeds of cultivation, and deposits of animal droppings (probably sheep) in a deep layer of bracken and moss which has every indication of having been the bedding material in a byre. Continuing work should give some clues to the length of time this floor was in use.

Metalworking was practised on some sites. Iron slag was found at Buston, Ayrshire (Munro 1882), and from the Loch of Dowalton; Buston also produced a crucible with globules of gold adhering to the inside. Whether these processes were a significant feature of the inhabitants' activities cannot yet be deduced.

GAZETTEER

Seventeen definite crannogs were located in the loch and planned (fig 2). Of these, five are islands with the tops exposed above water level at all time and with established vegetation. Five are just exposed when the loch is at its lowest in summer, although in three cases this may only be

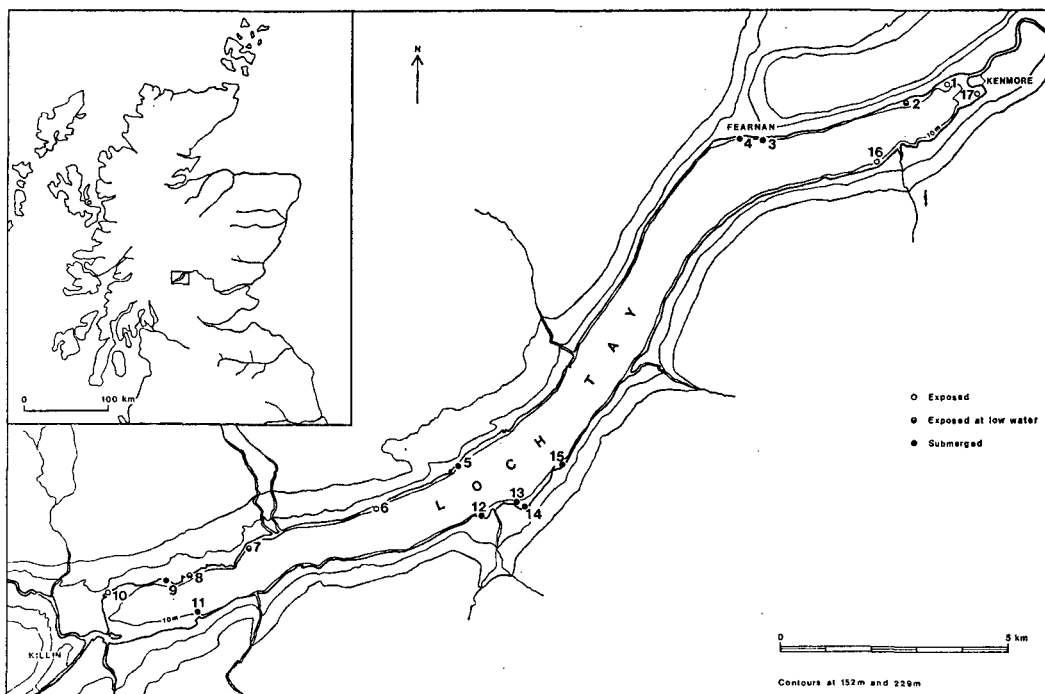


FIG 2 Location of crannogs in Loch Tay

because the top of the crannog was built-up in fairly modern times to support beacons for warning-off boats. The remaining seven are all well submerged and unlikely to be exposed at any normal level of the loch.

The names assigned to islands in the gazetteer are those used by the Ordnance Survey in their latest records. Submerged sites or those with no known names are normally called after the nearest habitation. Popular names or those used in the past are included, but the modern nomenclature is in italics. The numbers before the name accord with those on the location map and plans and will be used when referring to specific sites in the text. Dates are those when the actual survey was carried out.

1. *Priory Island*, Isle of Loch Tay, Eilean Nam Ban (Island of the Women).

NN 766454
Not planned

This is the largest of the islands in Loch Tay and is at least superficially of artificial construction. It is c 70 m by 50 m and oval in shape. The loch to the N and NW is very shallow, 1.5 to 2 m, but slopes down to the SE so that on this side the depth ranges from 3 to 4 m. There appears to be considerable silting at this

end of the loch and the island probably once stood higher above the loch bed than at present. The crannog is constructed of medium to large boulders weighing up to 50 kg.

The island is first noted in a charter signed at Stirling by Alexander I granting it to the monks of Scone Abbey which he had recently founded. This grant was reputedly as a result of the death of Alexander's consort, Queen Sybilla, who became ill and died on the island on 12 June 1122 and was subsequently buried there (Gillies 1938, 118). Later, the island was the fortified home of the Campbells of Glenorchy and ruins of a building, probably erected by Duncan the 2nd Earl of Glenorchy after a destructive fire on Palm Sunday 1509 (*ibid* 35), still stand to a substantial height. No evidence is available for the date of construction of the island but a reference (*ibid* 35) to a Ewan MacDougall of the district has the statement by him 'this island, with 23 more of lesser size was built in the loch at the expense of King Alexander the First of Scotland'. This seems questionable, as the known islands and underwater mounds

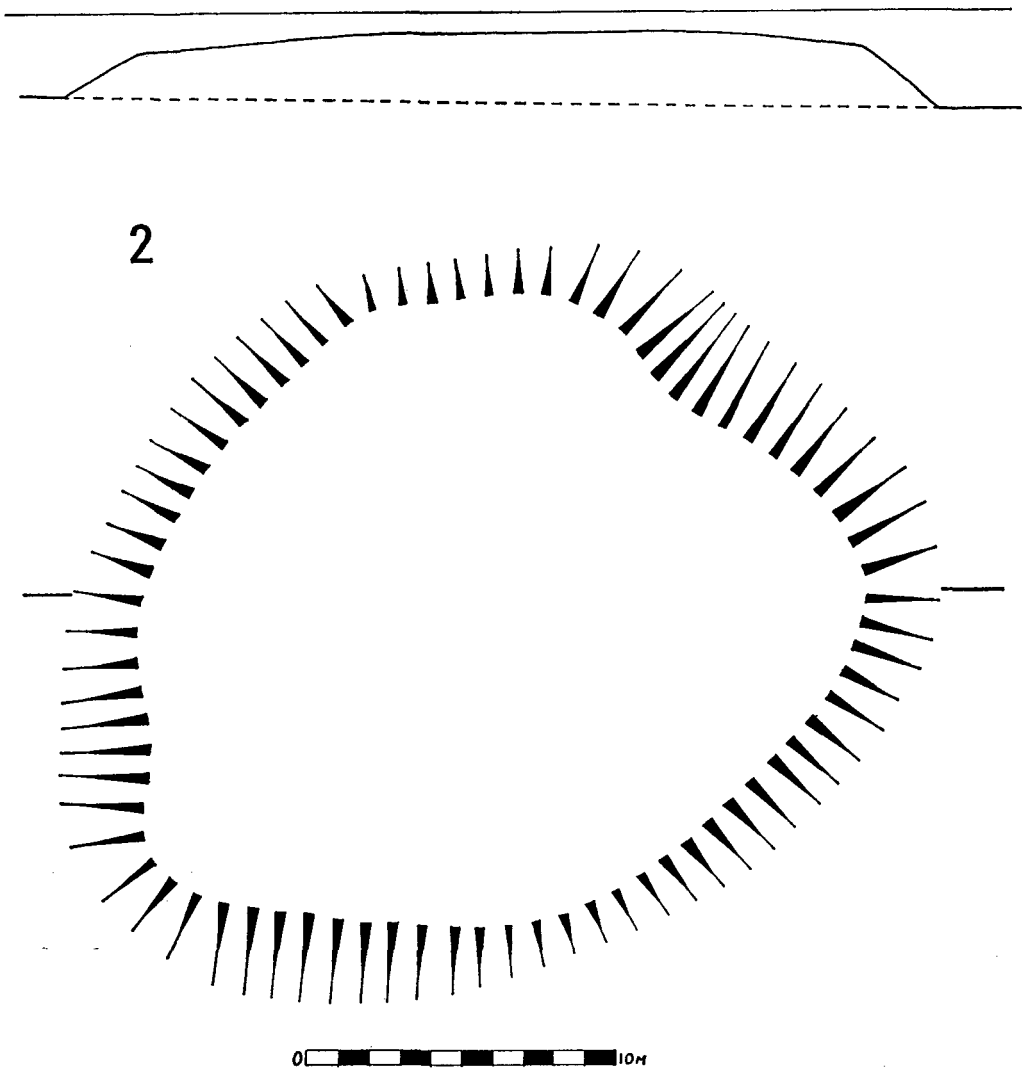


FIG 3 St Mary's Distaff: plan and section

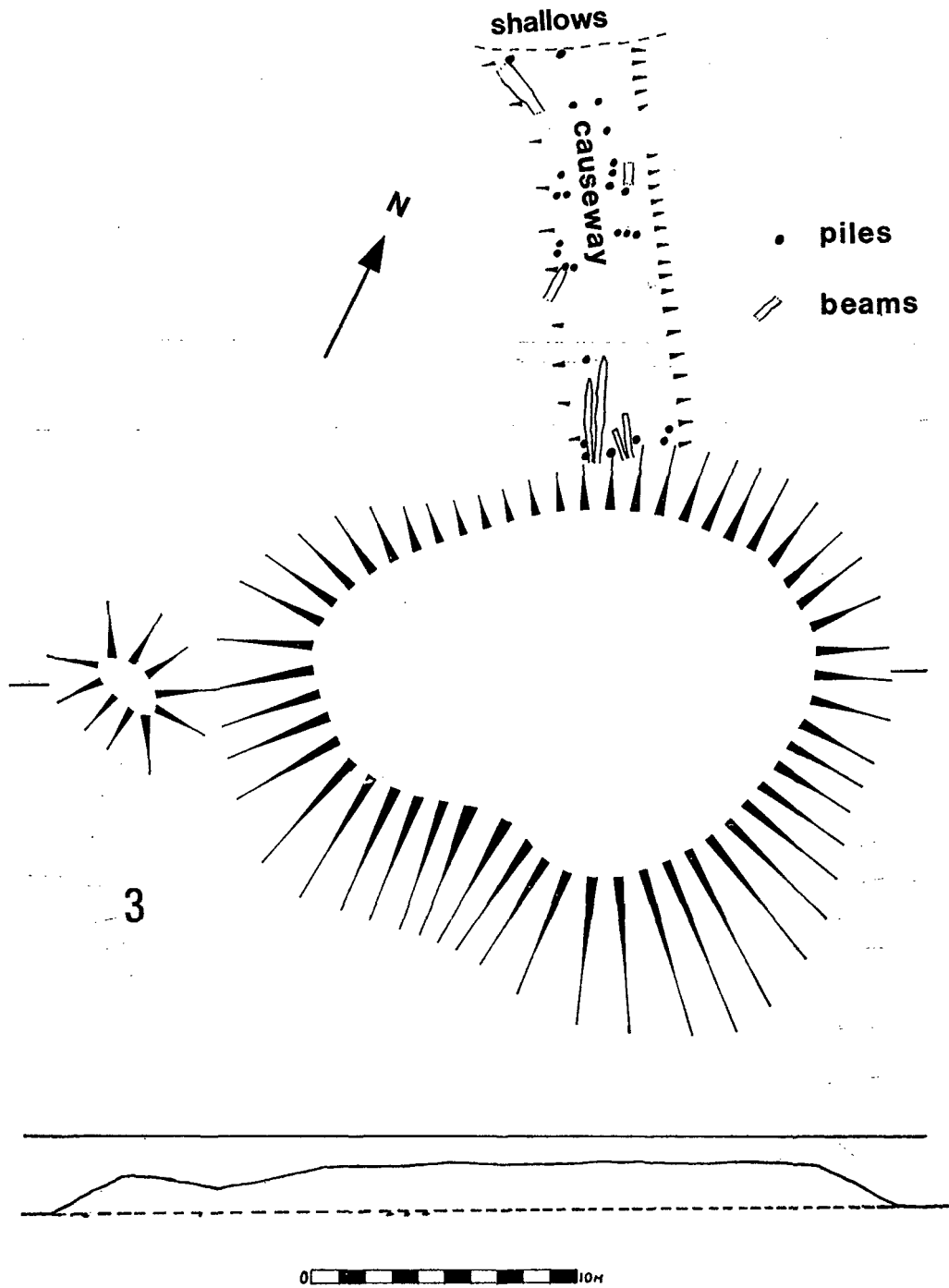


FIG 4 Fearnan: plan and section

in Loch Tay do not have common styles, levels or materials of construction. No structural timbers have yet been noted which would enable dendrochronological or radiocarbon dating of Priory Island.

The size of the island and extensive tree cover made planning impractical during this survey. It has been drawn at 1:10 000 by the OS and the building on the island, referred to as a manorhouse by them, is planned at 50 in to the mile (OS Archaeology Division card no NN 74 NE5). The island is also marked on Blaeu's Atlas of 1769 and is probably one of three settlements indicated in the loch on Mercator's map of 1620.

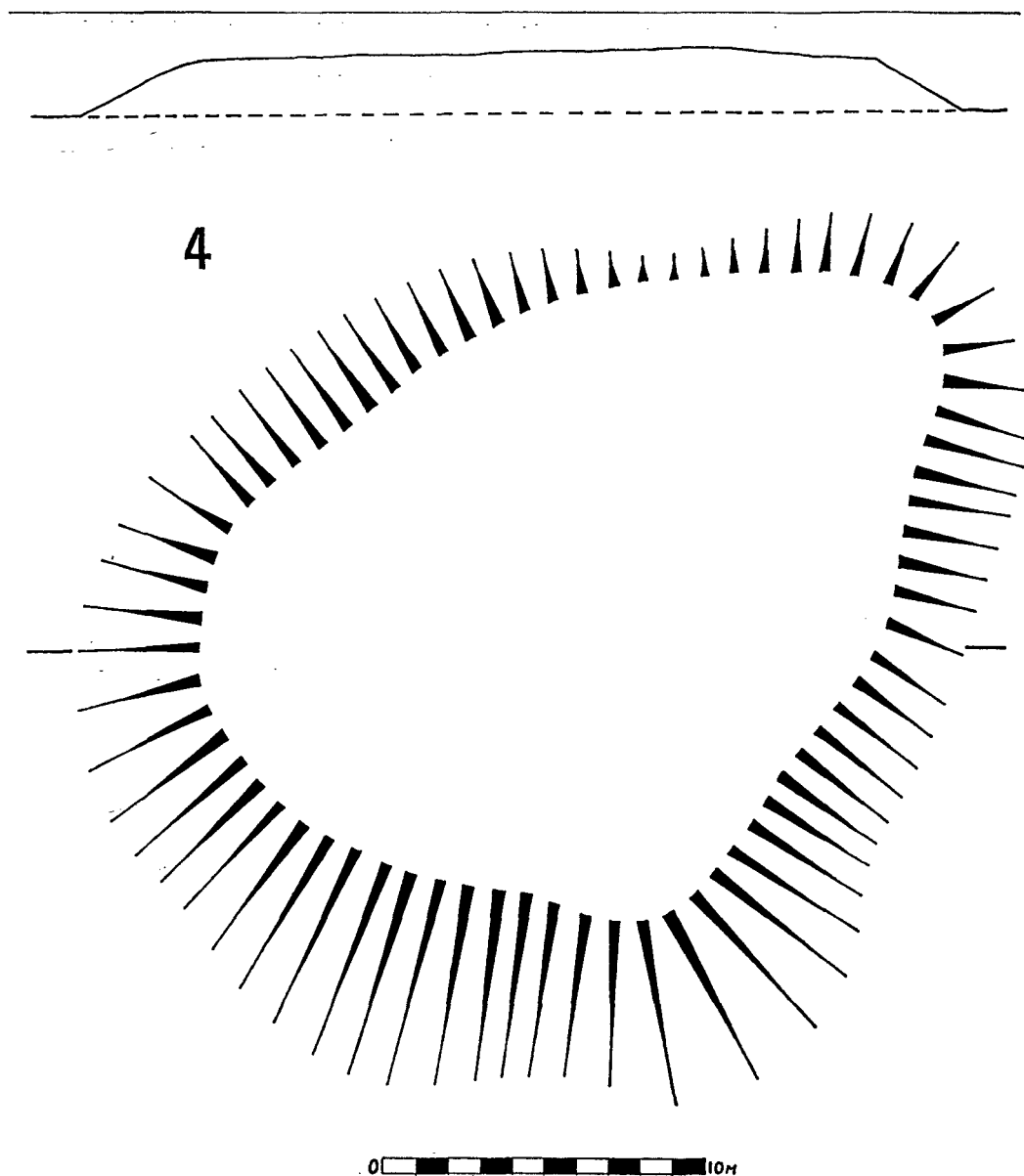
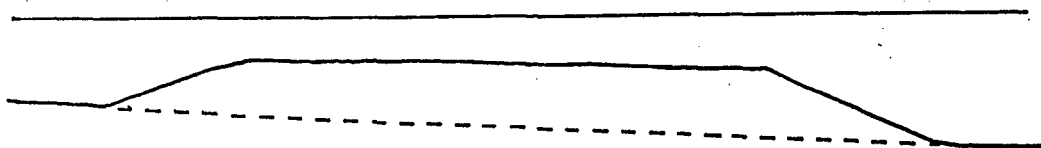


FIG 5 Fearnan Hotel: plan and section

2. *Mary's Distaff* (fig 3).

NN 757450
26 May 1979

This crannog lies about 50 m from the shore near the old steamer slipway at Delarb, Kenmore. It is marked by a pole with a metal fish at the top; an earlier metal girder marker is still lying on top of the mound. The depth of water round the structure varies from 1.8 m to 3.3 m, when the highest point is 0.65 m below the surface. These measurements were taken in the month of May. When photographed from the air three months later the top of the crannog was exposed above the surface.



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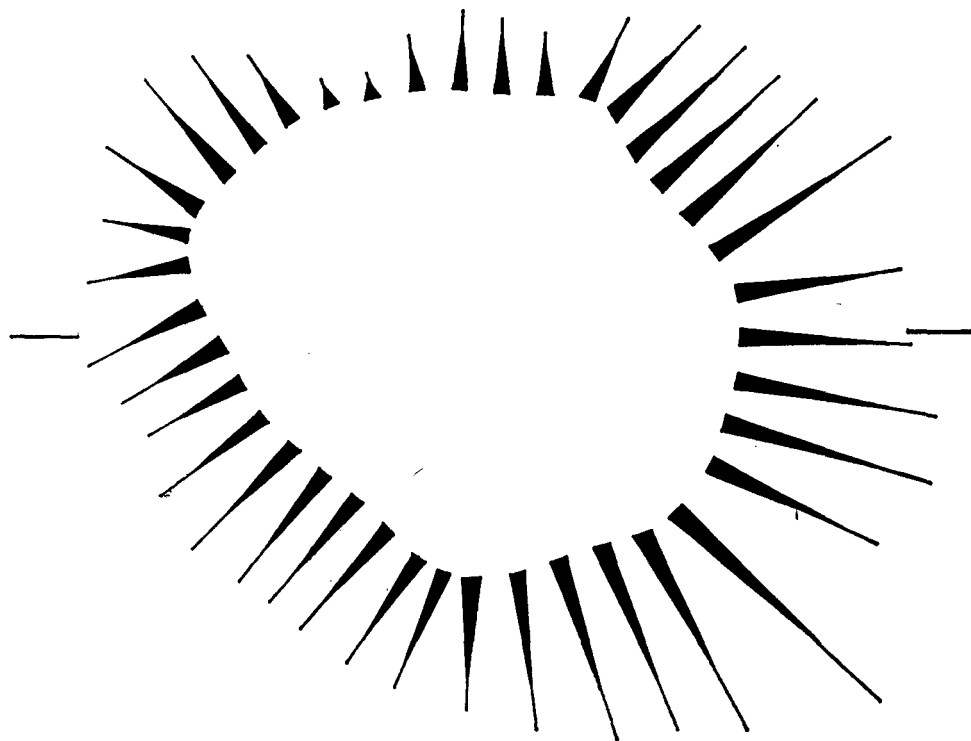


FIG 6 Tombreck: plan and section

There was no obvious evidence of structural timbers but some of the boulders of which the crannog is at least partly composed are very large and in some cases appear to have been building material. The mound is roughly circular with a diameter of 24 m at the narrowest part and 30 m at the widest. The sides of the mound slope fairly steeply, c 1 in 2 (50%), and the top slopes slightly from a depth of 0.65 m to the top edge which varies from 0.7 to 1.7 m.

3. *Fearnan Crannog* (figs 1, 4).

NN 726442
5 June 1979

This crannog lies c 30 m offshore. When examined the highest point of the site was just over 1 m deep, sloping slightly to 1.25 to 1.5 m at the edge of the flat top. The bottom of the crannog was just over 2 m deep on the shore side and sloped down to just over 3.6 m on the SE side furthest from the shore. Just off

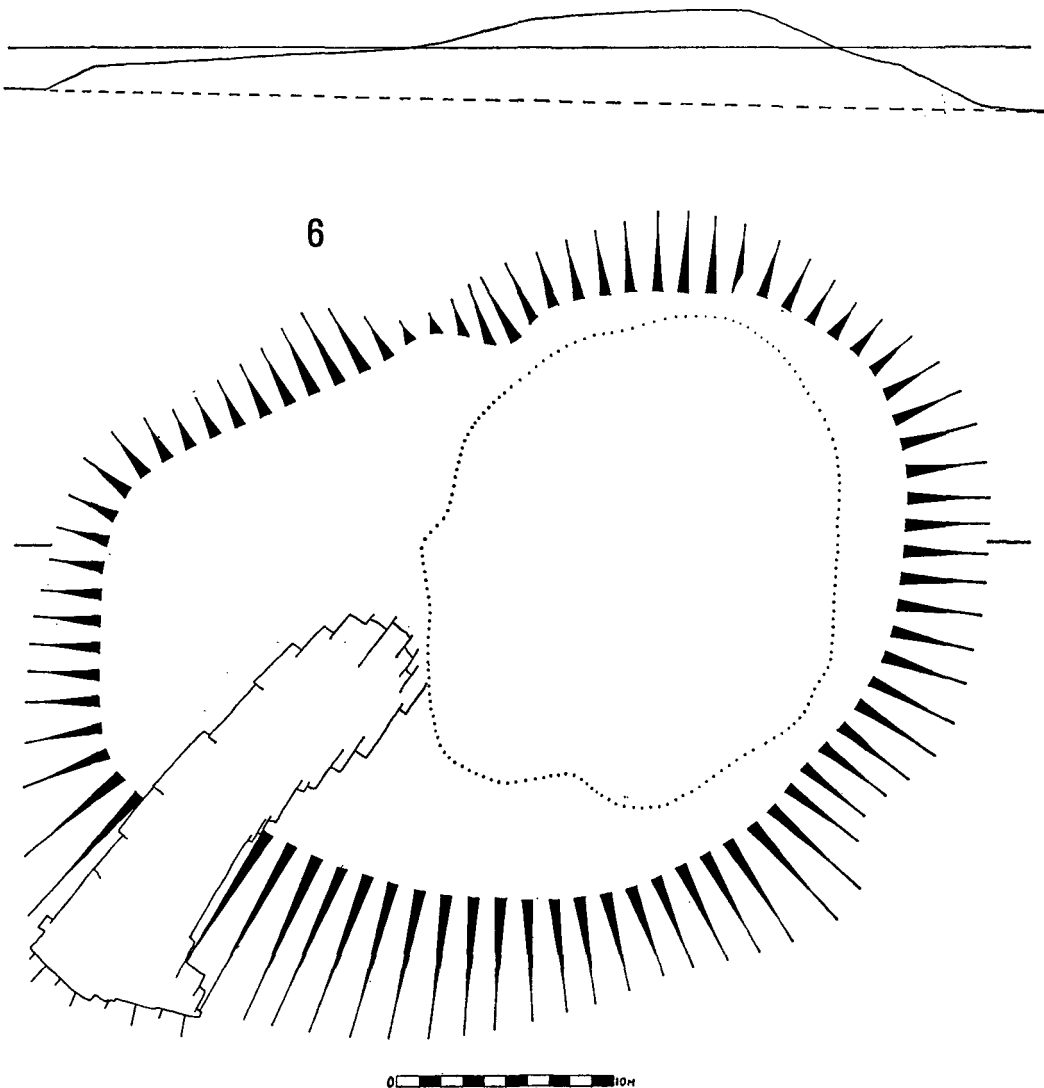


FIG 7 Eilean nam Breaban: plan and section

the main crannog on the SW is a smaller circular feature which is now, if not in earlier times, joined to the main mound by a small neck of boulders. This smaller feature is c 7 m in diameter. The stones joining the two structures may be accumulated spill from each of them. In the angle to the S where the two mounds meet are the remains of at least four softwood piles and one of oak, and also what appear to be two or three softwood planks. The oak pile was sampled with a view to dendrochronological dating but had too few rings to be of use. A radiocarbon date of $460 \text{ bc} \pm 60$ (GU-1325) was obtained. The softwood piles had been abraded until level with the sand and gravel of the loch bed. On the N side of the main crannog are two rows of oak piles running between the crannog and the shore. These piles must at one time have carried a causeway for access to the crannog. Another oak pile on the top of the crannog was sampled. It also

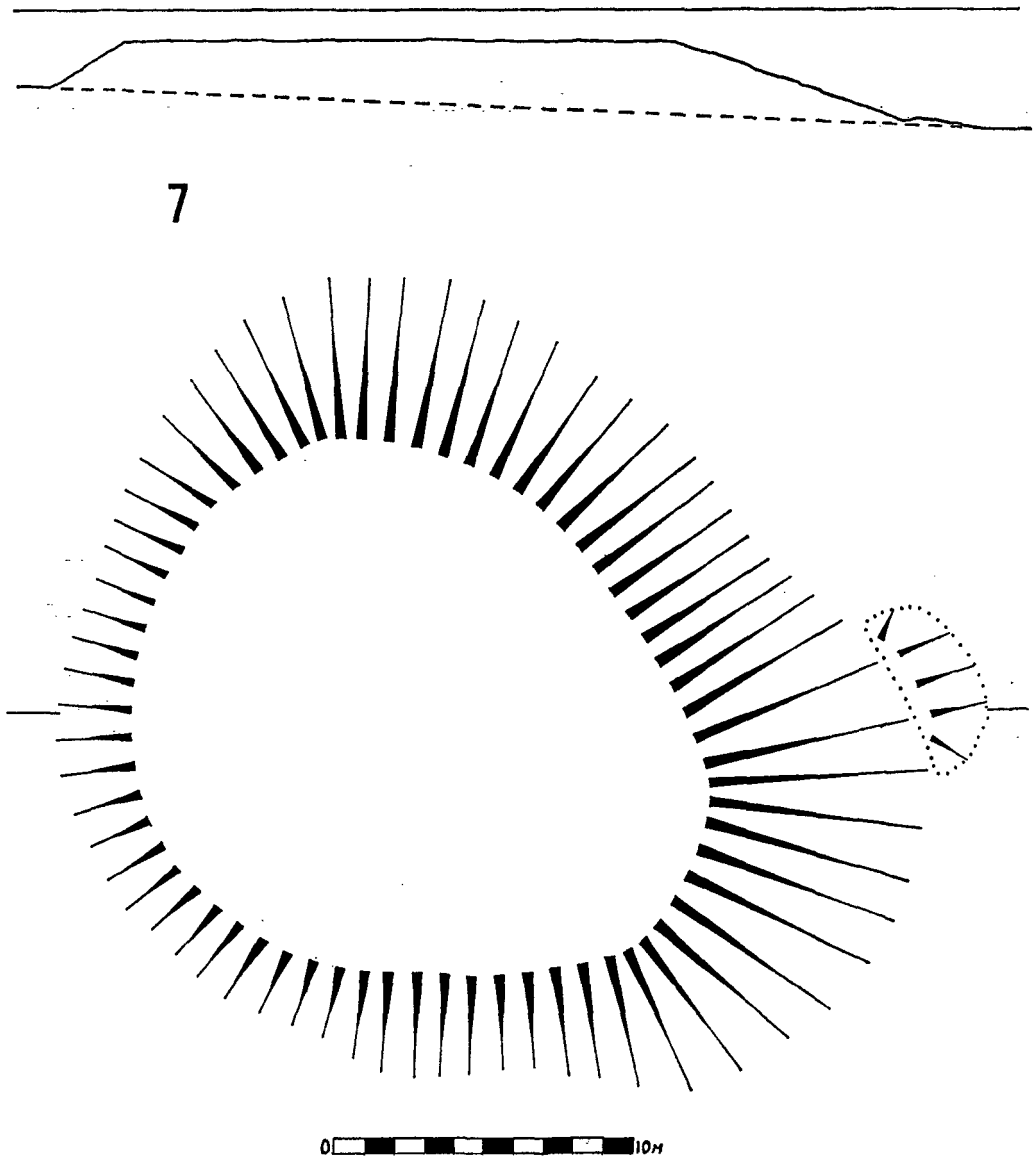


FIG 8 Milton Morenish: plan and section

proved to have too few rings for ring dating but gave a radiocarbon date of 595 bc \pm 55 (GU-1323) making this crannog the earliest dated example in Scotland. Subsequent excavation has proved substantial remains of the occupation layers with excellent preservation of organic material (interim report: Dixon 1981).

4. *Fearnan Hotel Crannog* (fig 5).

NN 721443
26 May 1979

The crannog is just off the pier at Fearnan Hotel c 50 m from the shore and not far from the previous example, no 3. The roughly circular mound is 33 m in diameter at the widest and 28 m at the narrowest with the highest point 0.89 m below the surface. The highest point appears to have been built up, probably to hold a marker post, and the main part of the top area lies 1.11 m below the water, sloping down to 2 m at the shallowest point on the loch bed towards the shore, while the deepest point is 4.5 m at the bottom edge furthest from the shore.

Timber piles can be seen on the top of the mound. One of these was sampled and gave a radiocarbon date of 525 bc \pm 55 (GU-1322). An oak plank was also sampled although it was from near the crannog base and not directly on the mound. A beam with a mortice slot was recorded some 10 to 15 m from the crannog and may well be related to it.

5. *Tombreck Crannog* (fig 6).

NN 659371
10 June 1079

This crannog lies 30 m offshore to the E of the outlet of the Allt an Tuim Bhric burn below Tombreck Farm. It is smaller in diameter than most of the other Loch Tay crannogs, 22 m along the greatest axis and 16 m along the shortest, but has just as much depth of material. The highest point is 0.89 m below the water surface and the bottom edge is from 1.68 to 3.81 m deep. Within 1 m of the deepest

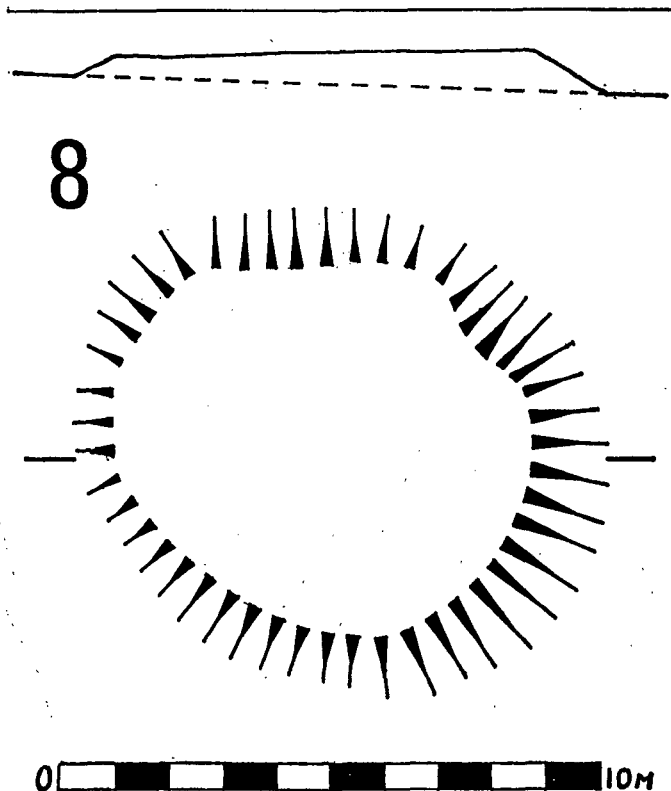


FIG 9 Milton Boathouse: plan and section

edge of the crannog can be seen three substantial worked timbers, two of which may be vertical piles. Many of the stones of which the mound is superficially composed are massive and may be the remains of buildings.

6. *Eilean nam Breaban* (Island of the Boot Soles), Ellan a Brippan, Ilane Brebane, Isla Brebane (fig 7; pl 1a).

NN 641362

5 June 1979

This island, which is near the N bank of the loch, is exposed all year round, and in May to a height of c 2 m. It is artificial but an outcrop of natural rock, which can be seen underwater on the W side (pl 1a), has provided a solid foundation. The island is c 50 m in diameter with c 3 m of water on the S side and c 1 m on the shore side. The actual shape of the crannog is, as Croftmartaig Crannog (no 16), substantially

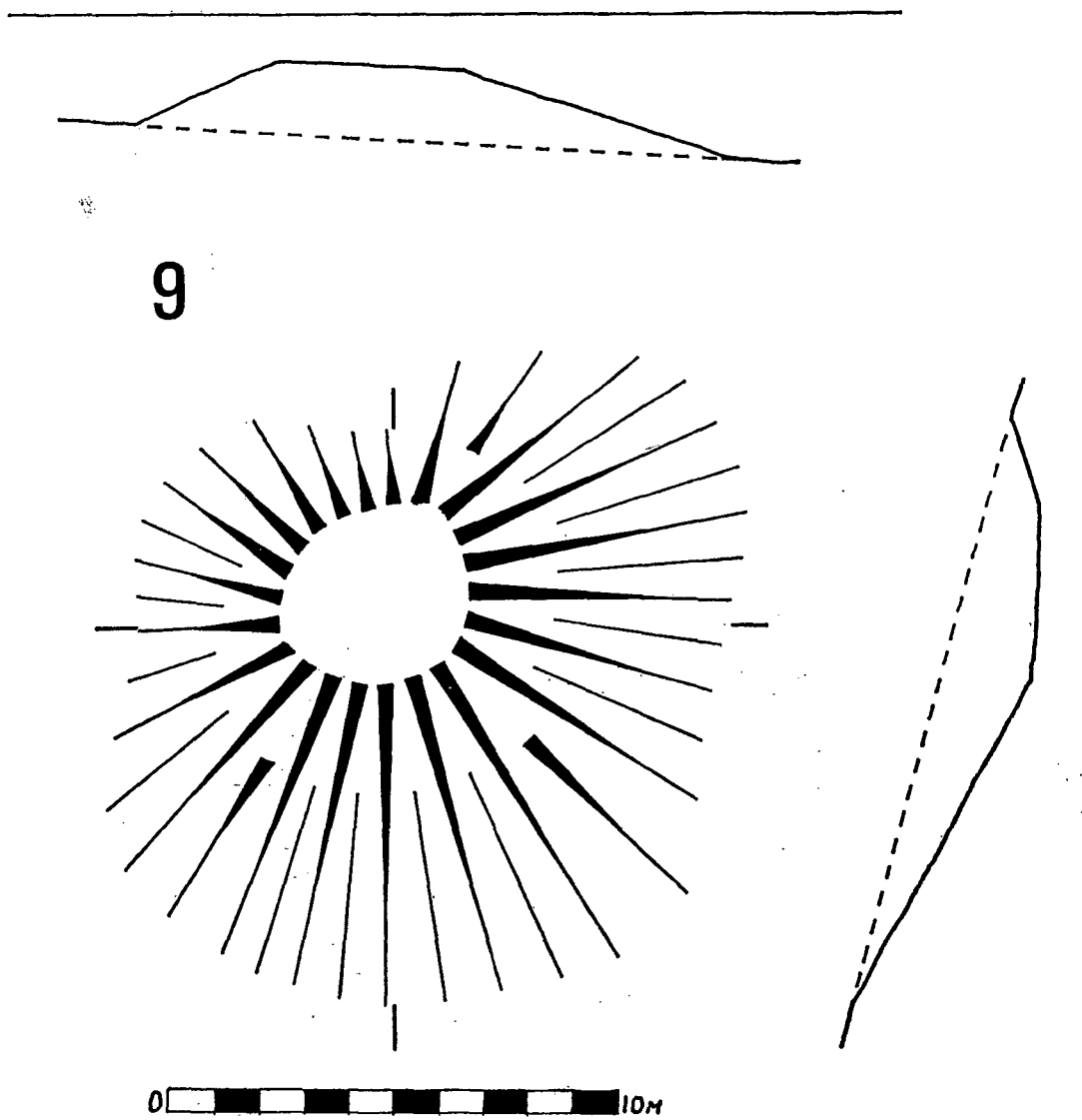


FIG 10 Morenish: plan and section

different from the structure seen above water. The mound extends to the SW beneath the surface for c 20 m, giving a roughly circular shape to the whole crannog. No timbers were noted associated with the crannog. Gillies (1938, 38) refers to a charter of 1526 transferring superiority of the lands of Carwhin from Haldane of Gleneagles to James Campbell of Lawers. The island is here referred to as Ila Brebane. He refers to another charter of 1546 in which it is called Ilane Brebane. In Blaeu's Atlas of 1769 it is shown as Ellan a Brippan and in Mercator's map of 1620 this island is the most likely candidate for the central of the three sites marked in Loch Tay. On the W side of the island a stone alignment may be the remains of a wall possibly dating to this period.

7. *Milton Morenish Crannog* (fig 8; pl 1b).

NN 613353
25 May 1979

This crannog lies c 50 m off the N shore, and the top is just exposed when the water level is low (pl 1b). It is slightly oval, measuring 30 m across the greatest axis and 24 m across the shortest. The bottom edge is from 2.42 to 4.55 m deep. A small area of stones 6 m by 3 m extends from the E edge of the base of the crannog but this may be slip from the steeply sloping side of the mound. Just to the N of the bottom edge of this extension is a large oak beam with a mortice hole cut in it.

8. *Milton Boathouse Crannog* (fig 9).

NN 600347
31 May 1979

This is a stony mound only c 0.6 m high and lying c 25 m off the N shore of the loch. It is roughly circular with a diameter of c 10 m, making it the smallest crannog in the loch. The highest point is c 0.75 m below water level and the bottom edge is from 1.06 to 1.64 m deep. It is possible that this crannog has been silted-up to a great extent and more of the structure might be located by probing. In this depth of water and so close to the shore the crannog would offer little protection.

9. *Morenish Crannog* (fig 10).

NN 595346
24 May 1979

The top of this crannog is almost circular with a diameter of only 5 m. The squarish base is 17 m across the widest point and 13 m across the narrowest. Its apparent small size is belied by the fact that it is one of the deepest of the Loch Tay crannogs with the top c 1 m below the surface and the bottom edge from 1.7 to 5.6 m deep. Why this crannog should be constructed on such a steep slope, 1 in 4 (25%), when all the others in the loch, except possibly no 2, are on very slight slopes is not clear, although silting may well have changed the profile of the loch bed in this area.

10. *Eilean Puttychan*, Eilean Sputachan (Island of the Little Spout) (fig 11).

NN 582343
25 May 1979

This peninsula lies c 100 m W of Killin Pier, at the westernmost end of the loch. The loch is very shallow here due to extensive silting which has resulted in what was once an island becoming a peninsula. The mound is c 45 m in diameter and stands c 4 m proud of the water at the highest point. The whole mound is in very shallow water with c 1 m depth on the E side at the deepest point. Gillies (1938, 38) refers to a tack of 1568 by which Sir Colin Campbell of Glenorchy let lands of Morenish Wester to Patrick Campbell, brother to Duncan Campbell of Glenlyon. The yearly rent was to be 'a sheaf of arrows, if required' and the new tenant had powers to set six small nets around the island and to erect a stable on it. He also had to make his residence on the island or on the land of which it was a part. This is probably the westernmost of the three settlements shown in the loch on Mercator's map of 1620.

11. *Firbush Crannog* (fig 12).

NN 602339
23 May 1979

Lying c 100 m off Firbush Point, this crannog is c 15 m in diameter with the highest point c 1.3 m below water level. The bottom edge is fairly even all round, the deepest point being 3.23 m below the surface and the shallowest c 2.8 m. On the bottom edge, particularly in the S and the SE, various timbers can be seen. The ends of many round timbers projecting radially from the centre of the crannog are exposed for a distance of over 6 m. Three distinct layers can be distinguished:

- i. Thin branches c 0.15 m in diameter roughly in two layers overlying larger timbers.

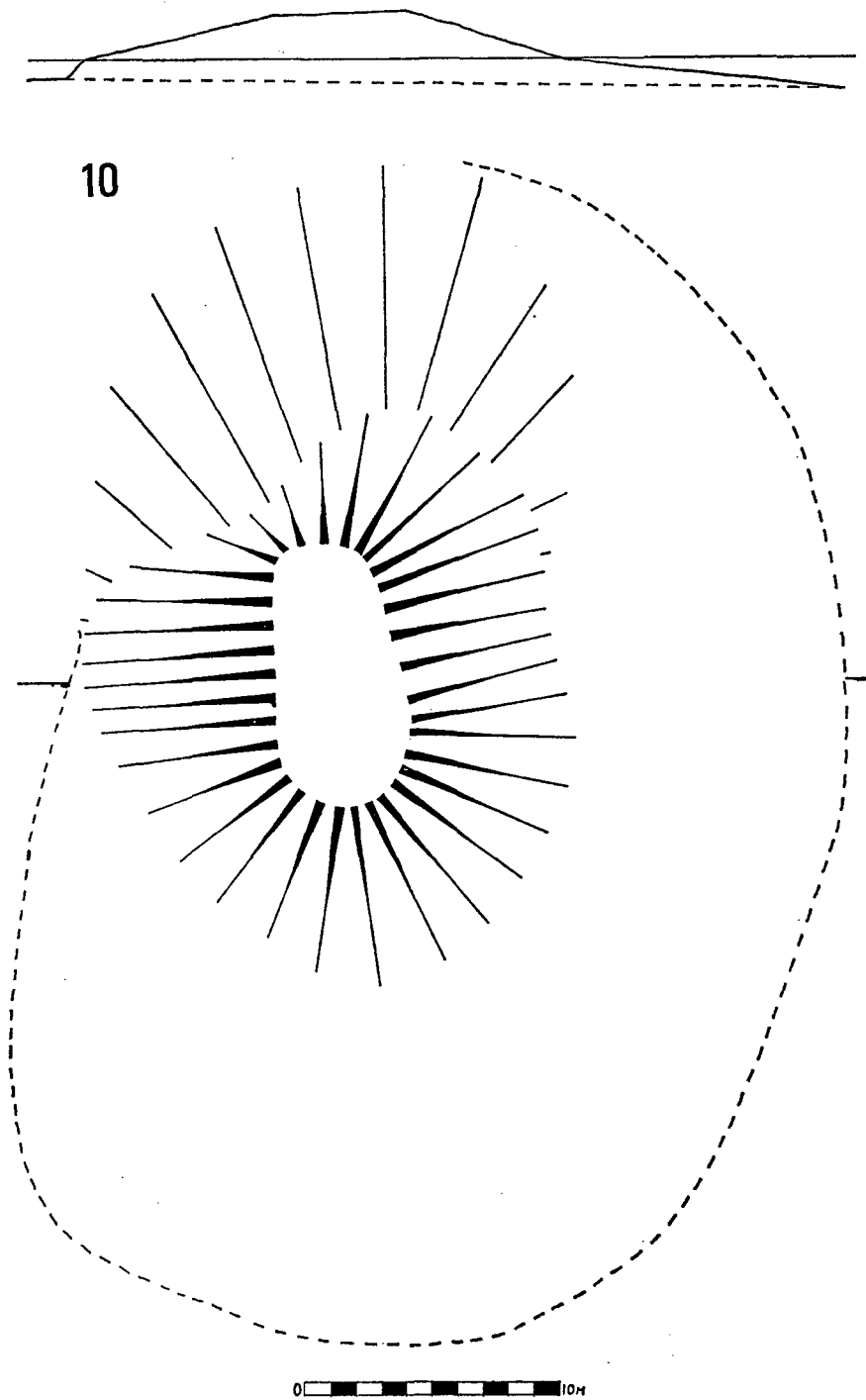
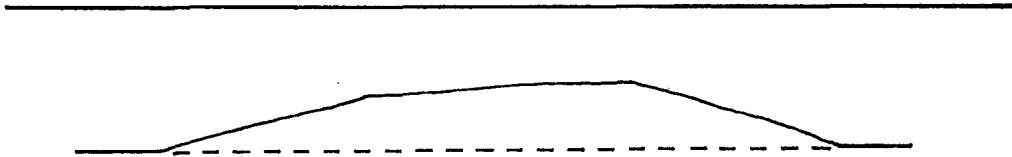


FIG 11 Eilean Puttychan: plan and section

- ii. Large timbers c 0.4–0.5 m diameter lying horizontally and projecting from beneath the stones of the crannog.
- iii. Horizontal branches c 0.1–0.15 m diameter lying at right angles to the large timbers below and in front of them. Evidence of cutting with a sharp tool can be seen on these branches.

Other single timbers can be seen around the base of the crannog.



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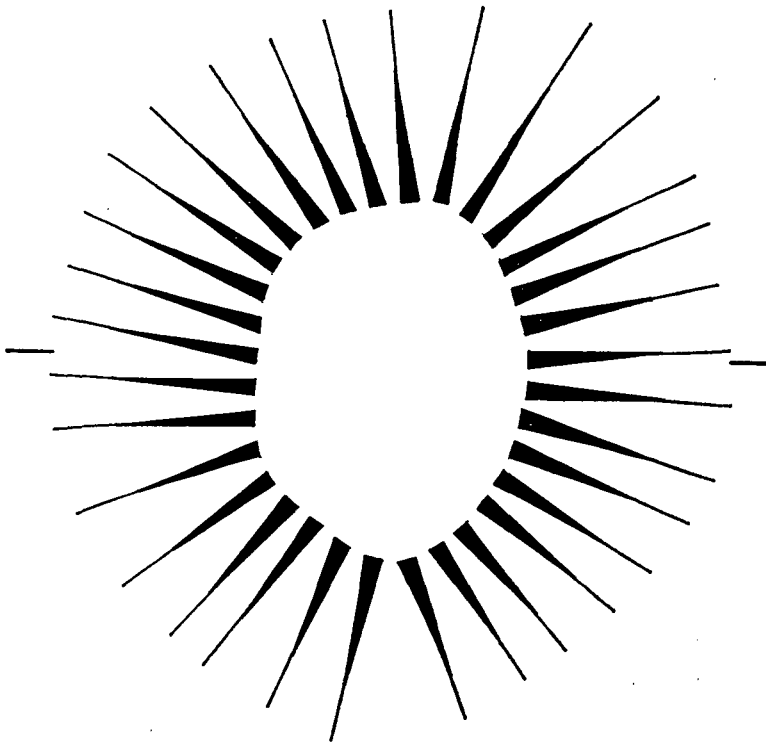


FIG 12 Furbush: plan and section

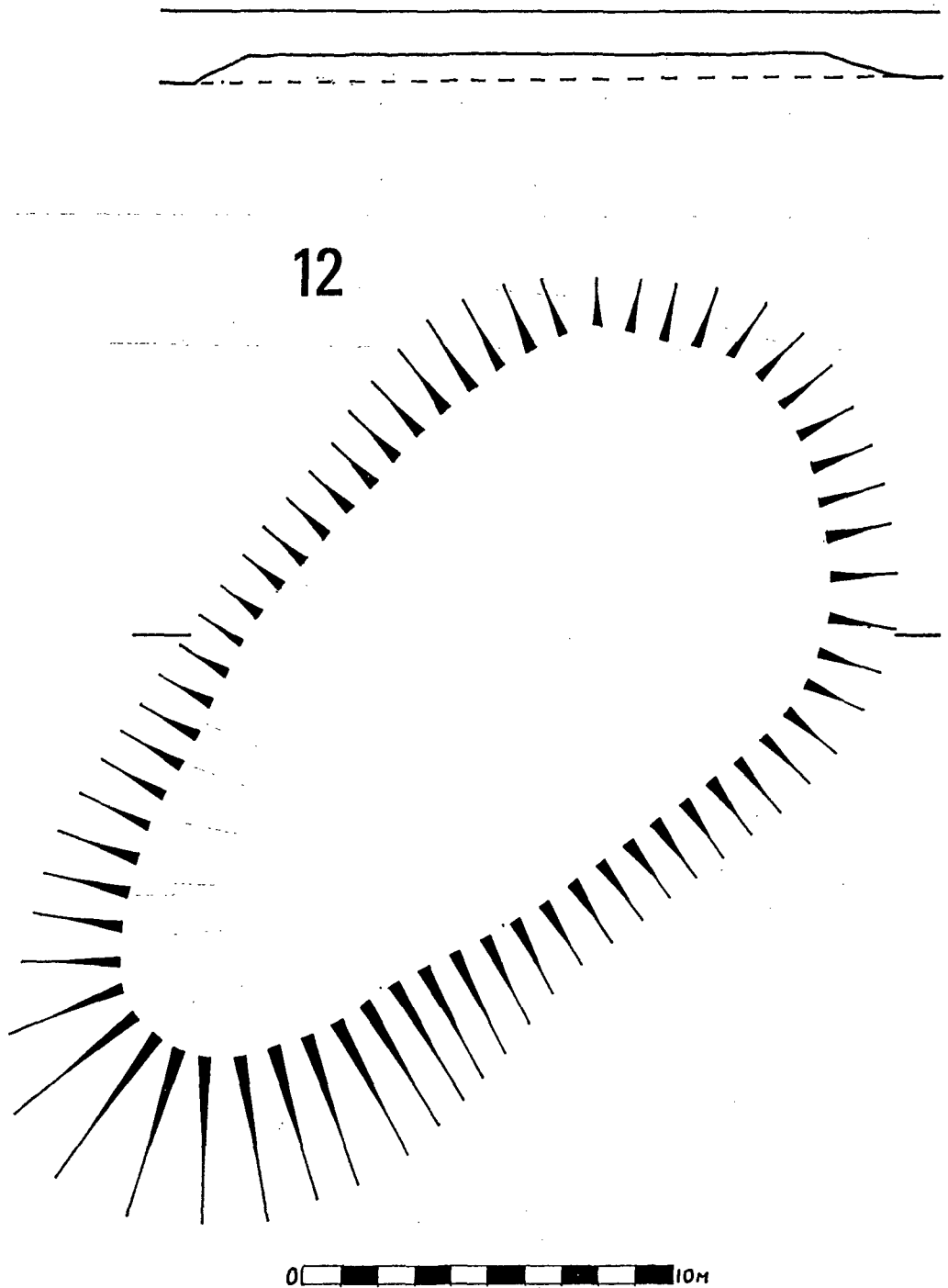


FIG 13 Craggan: plan and section

12. *Craggan Crannog* (fig 13).

NN 664360
25 May 1979

This crannog is elongated with a N-S axis, and is c 15 m from the end of the pier at the Craggan Boys' Brigade Centre. The top of the crannog at the S end nearest the shore comes to within 0.5 m of the surface and is exposed in summer, while the bottom edge at this point is c 1.5 m below the surface. At the N end the top of the mound is c 2 m below the surface, dropping down steeply to c 3.75 m at the bottom edge. The crannog is c 30 m long and c 16 m across. On the top of the mound, among and projecting from the boulder make-up, can be seen oak timbers which appear to be part of the structure. These include horizontal beams and vertical piles.

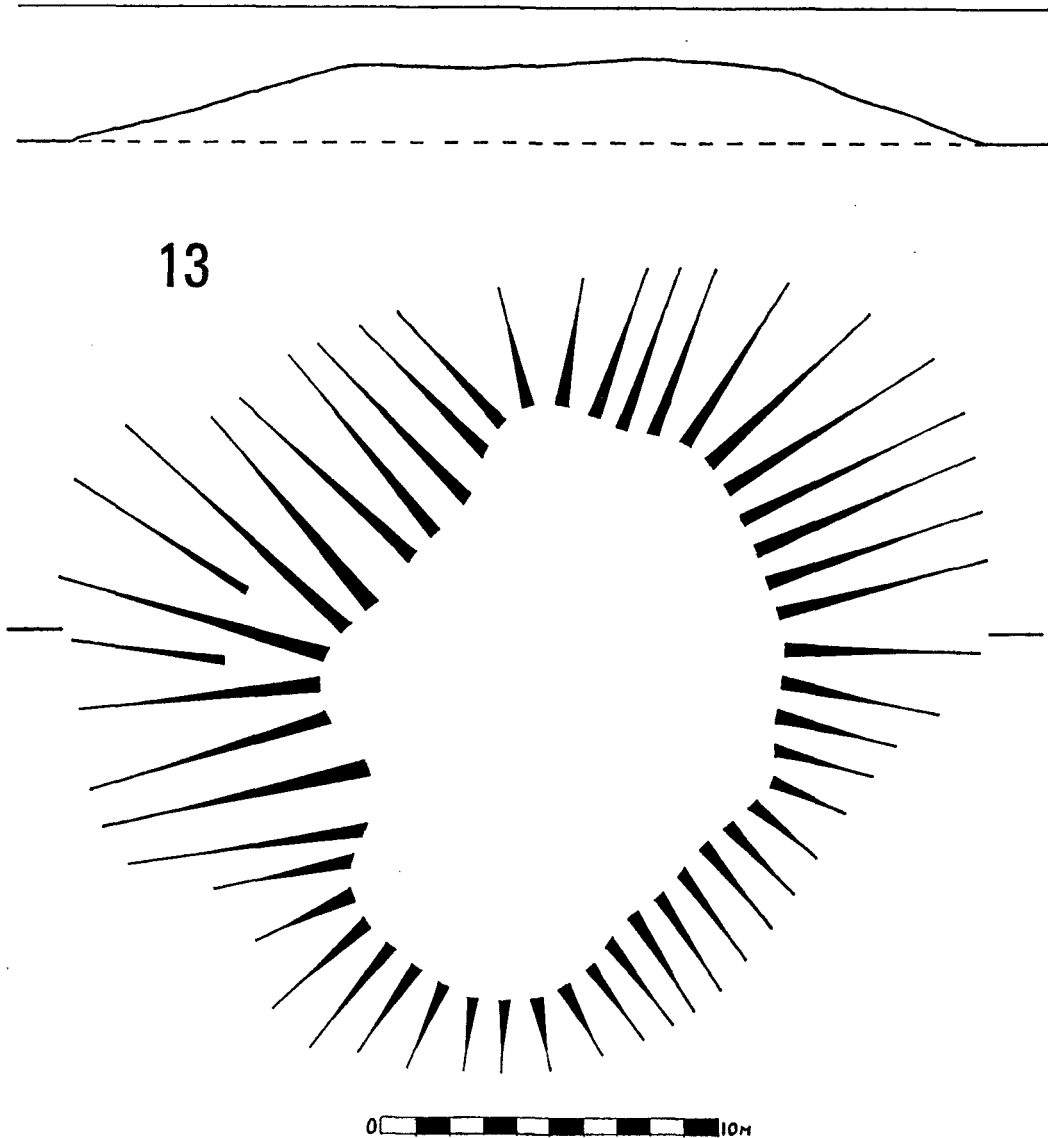
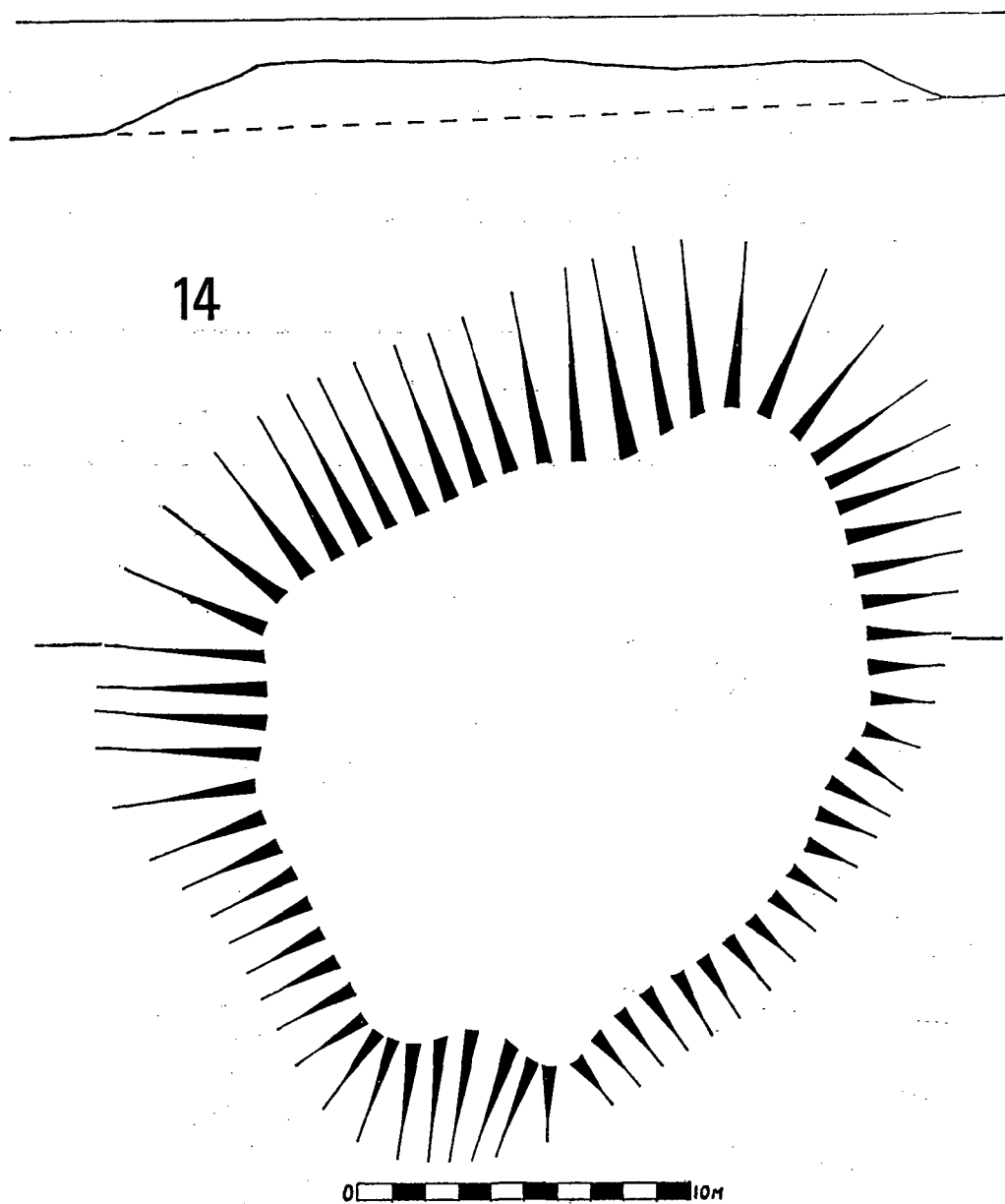


FIG 14 Dall Farm: plan and section



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FIG 15 Dall Farm South: plan and section

13. *Dall Farm (North) Crannog* (fig 14).

NN 672363
3 June 1979

There are two crannogs c 150 m apart and c 50 m offshore at Dall Farm of which the more northerly lies substantially deeper than that to the S. The N crannog is oval with the longest axis c 30 m across and the shortest c 24 m. The top of the mound is c 18 m by 13 m the highest point being 1.5 m below the surface, sloping down to 3 m. The bottom edge of the crannog is at a depth of 3.2 m in the S and 5.4 m in the NW.

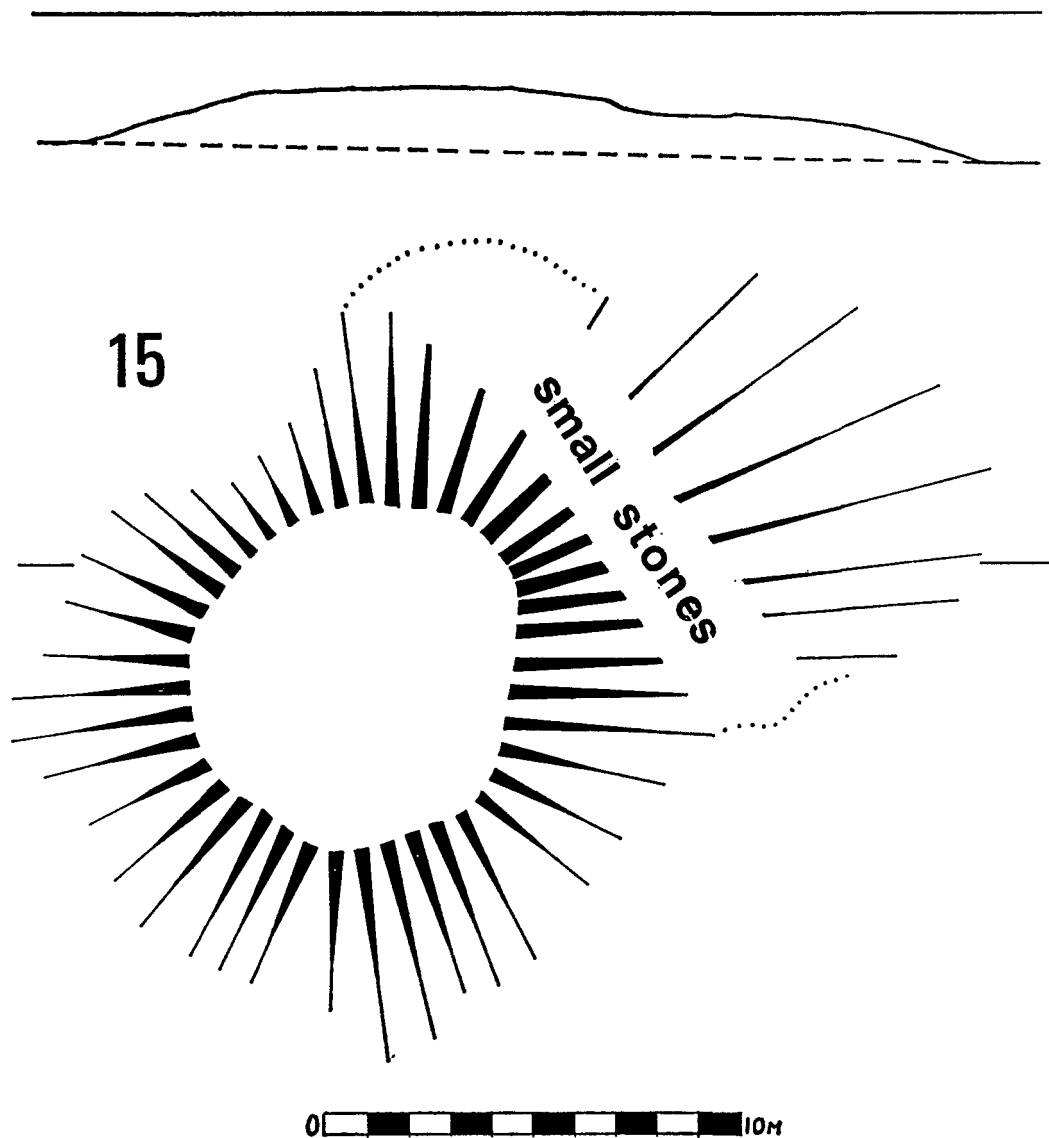


FIG 16 Old Manse: plan and section

14. *Dall Farm (South) Crannog* (fig 15).

NN 674362
1 June 1979

This crannog is also 30 m by 24 m but the top is 22 m by 17 m sloping from 0.75 to 1.5 m below the surface. The bottom edge varies in depth from 1.6 to 3.8 m. On the top can be seen timbers among, and projecting from, the stones which constitute at least the outer fabric of the crannog. Between some of the timbers was a scatter of burnt bone in a deposit of organic material apparently consisting of bracken and moss.

15. *Old Manse Crannog* (fig 16).

NN 682371

3 June 1979

This crannog is c 70 m directly out from the jetty of the old manse and church just N of Margbeg. The mound is roughly rectangular on a NE-SW axis, 22 m by 14 m, with a bulbous extension to the W, but the top area is roughly circular and towards the E end of the structure. The bottom edge varies in depth from 2.8 m in the S to 4.2 m in the N, and the top edge varies from 1.8 to 2.2 m with the highest point of the top 1.74 m below the surface. The bulbous extension to the W is c 2.6 m below the surface and is delimited from the main top area by a band of much smaller stones than those in the rest of the crannog surface. Directly beneath these smaller stones was a layer of small pieces of wood and organic debris. The extension may represent the remains of a pier or other feature.

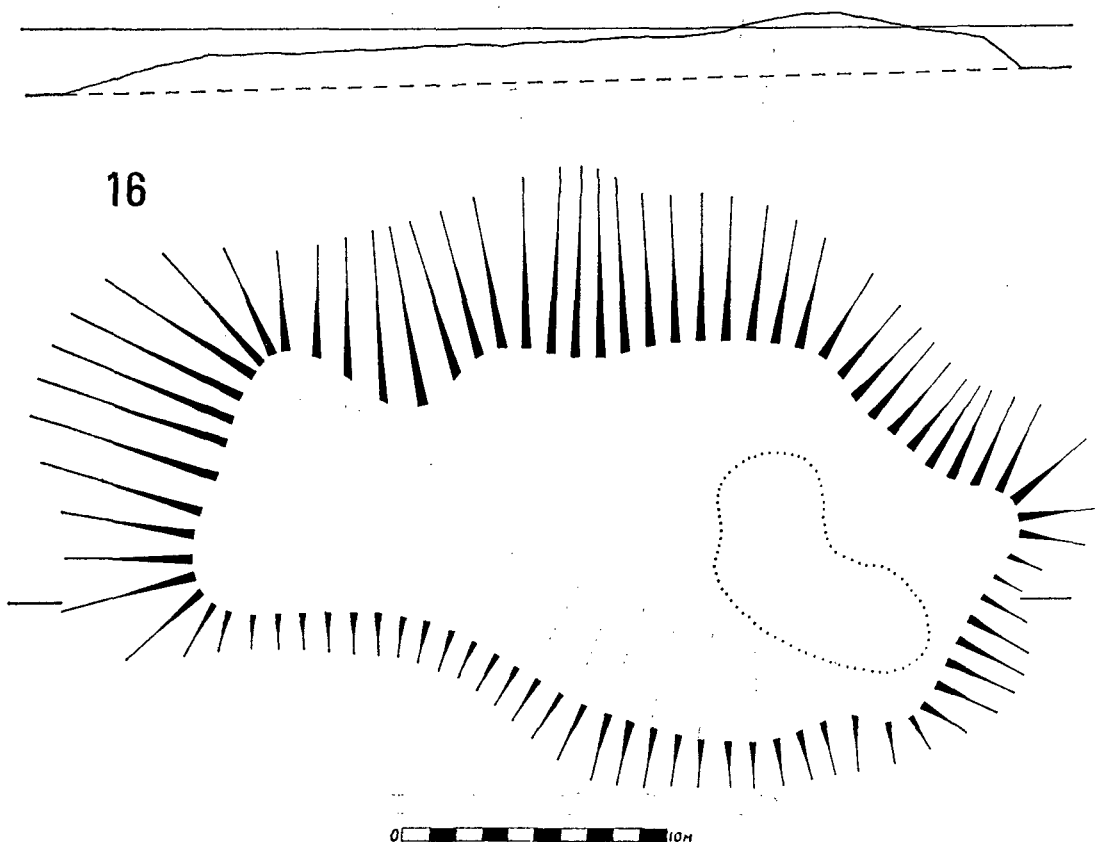


FIG 17 Croftmartaig Island: plan and section

16. *Croftmartaig Island* (fig 17; pl 2c).

NN 751437

28 May 1979

Part of this crannog is exposed all year round, but the exposed area belies the true shape of the structure. The area above the surface is roughly circular, standing no more than 1 m clear of the water, while underwater the mound extends to the SW almost the same distance again; the SW end is flattened (pl 2c). The exposed area measures c 25 m along the long axis and the whole crannog is c 42 m long by c 26 m wide. The underwater section may be an addition, or the original structure which has been added to, the join being seen as a narrowing across the waist of the mound. Alternatively, the lower SW area may have been some form of pier or small harbour for landing and mooring boats. On the S and E sides the water is

c 1.5 m deep while on the N and W sides the loch bed slopes down to c 4 to 5 m. Some traces of timbers were seen on the loch bed on the N side of the island but not definitely directly associated with the crannog.

17. *Spar Island*, Spray Island, Spry Island (fig 18).

NN 773452

1 June 1979

This island is exposed all year round and stands to a height of c 3 m above the average water level at the E end of the loch. Above water it is 40 m by 15 m, the long axis running E-W. Modifications in shape and size were carried out by the Marquis of Breadalbane for a visit by Queen Victoria in 1842. Remains of a

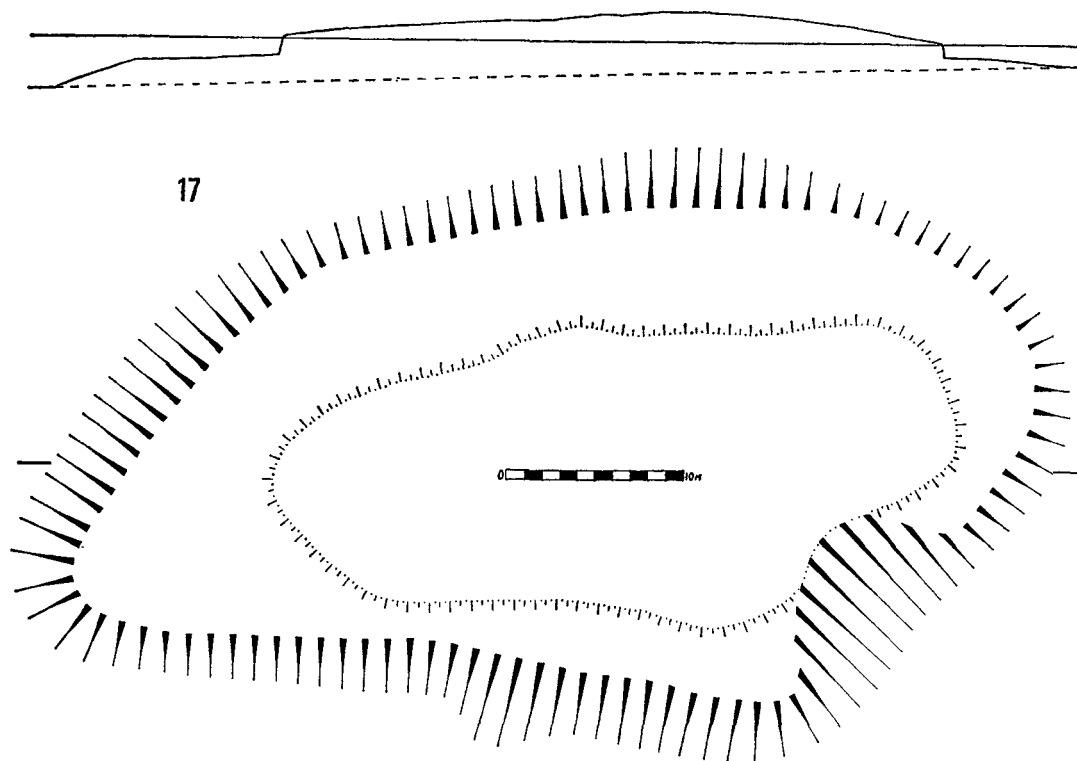


FIG 18 Spar Island: plan and section

wall can still be seen on the W side dating from these modifications, and mature trees planted then still flourish here. The composition of the island shows it to be artificial but no timbers could be seen which were definitely of the original structure. The water is 1 to 1.5 m deep on the SE and NE sides and c 3 m deep on the NW and SW. This is an area of fairly rapid silting so the top of the mound may once have been higher above the loch bed than at present. This island was planned at 25 in to the mile by the OS and also appears on Blaeu's Atlas.

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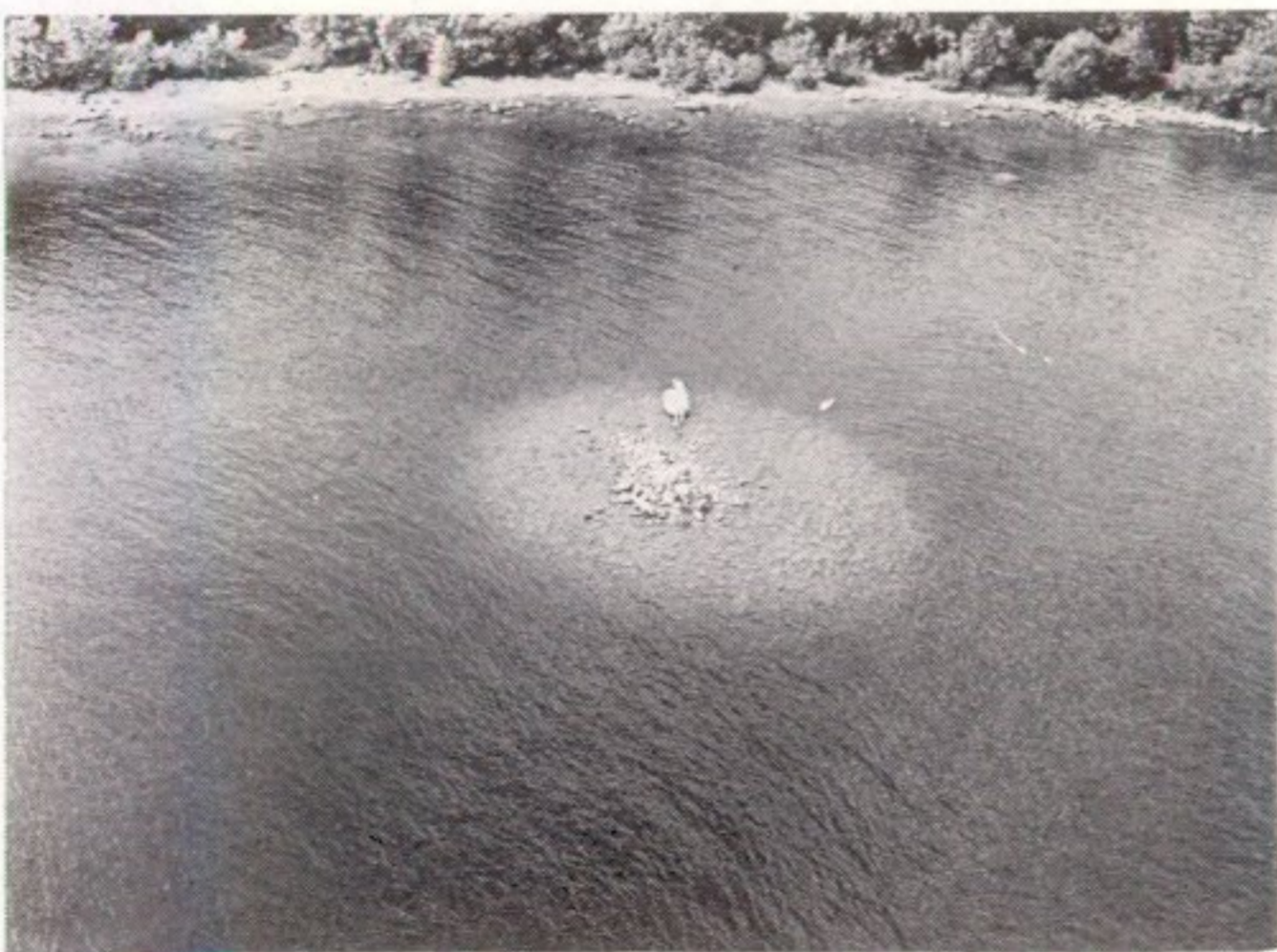
Outdoor Centre. A special thanks is due to the divers and archaeologists who worked in very cold and trying conditions but stayed cheerful and efficient throughout.

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a Eilean nam Breaban crannog (no 6): aerial view



b Milton Morenish crannog (no 7): aerial view



c Croftmartaig Island crannog (no 16): aerial view