

I.

ON FURTHER EXAMINATION OF ARTIFICIAL ISLANDS IN THE
BEAULY FRITH, LOCH BRUIACH, LOCH MOY, LOCH GARRY,
LOCH LUNDY, LOCH OICH, LOCH LOCHY, AND LOCH TREIG.
By Rev. ODO BLUNDELL, O.S.B., F.S.A. Scot.

In consequence of the wish which was expressed at the conclusion of my paper last year, that further investigation be made regarding the lake-dwellings or crannogs in the North of Scotland, I have devoted some considerable time to the subject, especially during the week from 29th July to 5th August, when a sum was placed at my disposal by the Council of this Society, and the Clyde Navigation Trust supplemented that grant by the loan of a diving apparatus gratis.

It will be best to take the different islands examined according as they occur on the map, working from east to west. To begin with the island on Loch Bruiach. This is situated about ten miles S.W. of Beauly, at an elevation of nearly 1000 feet. On the west there is cultivation at present to within two miles, but on the other three sides there is nothing but bleak moor for miles. There is not a tree to be seen nearer than the cultivated land on the west, yet at one time this district was fairly populous, and it was certainly well wooded at the time that the island was built. There are, moreover, numerous prehistoric remains in the near vicinity, including some hut circles half a mile to the east, a very complete stone circle in the village of Bruiach, and two other stone circles a quarter of a mile apart just between Beaufort Castle and Belladrum.

Loch Bruiach is rather more than a mile long by half a mile wide, and the island (fig. 1) is in the small bay on the north shore, from which it is distant fully a hundred yards. At present it measures 190 feet by 110. There are several fair-sized trees growing on it, but these are yearly being washed away in consequence of the loch having been raised a few years ago to afford more water for the mill of Bruiach. I had visited

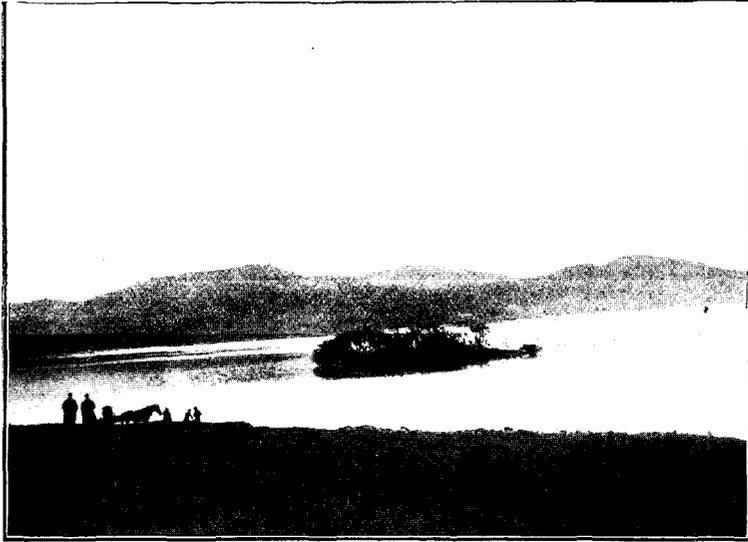


Fig. 1. The Island in Loch Bruiach.

this island on two previous occasions, but in both these cases the water was so high that nothing of the artificial construction could be seen. The offer of the Clyde Trust seemed to make one independent of the height of the water, and accordingly the apparatus was sent by rail to Beaulieu, and thence by cart to the side of the loch. The first eight miles of the road was moderately good and the strong spring cart got the 10 cwt. up the hills fairly easily, but for the last $1\frac{1}{2}$ miles there was nothing but the roughest of peat tracks, so that it seemed quite impossible to get such a

weight to the loch. The great readiness with which Mr Arch. Macdonald offered to place his horses and carts at our disposal in order that we might have a good try, overcame all obstacles, and the apparatus was safely taken to the loch-side. Mr Macdonald, like several others who gave me the greatest assistance in this investigation, would take nothing for his services.

In consequence of the most severe thunder shower that any of the company could remember, the investigation was nearly deferred to the following day, but the serious assertion of one of those present, that he feared that the water kelpies were very angry at the intrusion and had brought on the rain, decided me to start operations at once. Several gentlemen from Beaully very kindly offered to assist at the less responsible positions, and ultimately a most interesting inspection of the island was made. The banks have a slope of 1 in 5, and are composed of stones of fairly even size.

On the north-east side of the island at one spot alone five large joists were exposed to view. They were about a foot in diameter, and radiated towards the centre of the island. Eight or 9 feet in length could be seen, and they were distant from each other about 2 feet at their nearer end and 4 feet at their further end. A smaller one which was brought to the surface proved to be quite decayed, as were also two of the others, but the remaining two seemed fairly sound at heart. At other points one or two beams were visible, as also a shorter piece which appeared to have formed a strap or tie, binding a couple of the spars together. I made great efforts to secure this, and much regretted to have to return to the surface without it. From Mr Alex. Fraser, Knockbuie, I learned the next day that such ties were not unfrequently to be seen, and that the wooden pin which secured the two pieces would be about 2 inches in diameter. Mrs Hugh Warrand, whose father was tenant of Beaufort, also remembered bringing home to the keeper's house a cross-piece with such a pin in it, and said that when left to dry it crumbled to dust.

An excellent opportunity for observing the construction was afforded about the year 1880, when the late Col. the Hon. Alastair Fraser cut a

section downwards, and large oaken beams were seen lying one across the other (fig. 2), each about 15 inches across, and forming squares the inside measure of which would be about 2 feet.

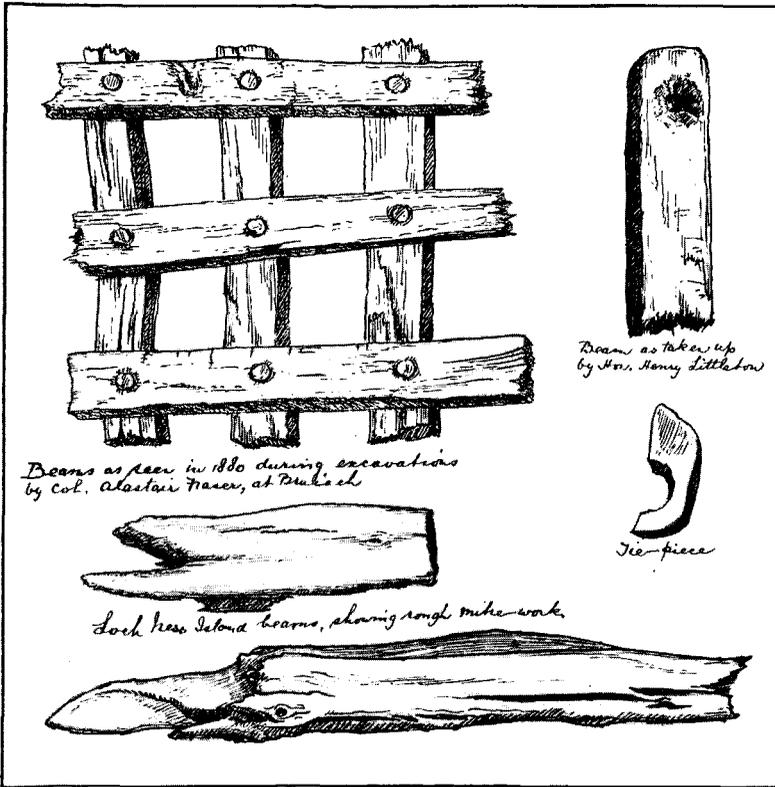


Fig. 2. Beams and their tie-pieces, etc.

To compare this island with that on Loch Ness, the flat flooring of beams which formed so striking a feature in the Loch Ness crannog was not found at Bruich, unless indeed the silt had accumulated more than 8 inches in depth, although I several times felt for this flooring. The

large timbers which lay along the edge of the island in Loch Ness were also absent from the Bruiach one ; but this may be accounted for by the fact that as Loch Ness never freezes, so its island has been subjected to an even temperature ever since it was constructed and is still in perfect preservation, whilst Loch Bruiach is often covered with ice for months at a time, during which the timber would contract, only to expand again in the following spring, and so rapidly to decay. This seems to me to account for the dilapidated condition in which the one island is seen to-day, as compared with the perfect preservation of the other. The usual causeway to the shore exists in both. Another point of resemblance, and one very difficult to explain, is the existence of large masses of vitrified material, some three feet square, whilst smaller pieces lie all over these and many other islands.

Eilean Loch Bruiach figures in later history as the refuge of a runaway pair, whose elopement caused a battle between the Chisholms and the Frasers, in which the lovers—a son of the Chisholm and a daughter of Lovat—lost their lives. In 1590 the island is again mentioned as the residence of the Dowager Lady Lovat ; cf. Mackenzie, *History of the Frasers* ; also the Wardlaw MS.

The Beaully Firth.—The next island to be dealt with is *Cairn Dubh* (fig. 3), in the Beaully Firth. It was my intention to use the diving dress as we passed this on our way homewards, but a preliminary visit revealed the important fact that however perfect the apparatus might be, it would be a difficult matter to dive here, as the island at low tide is left high and dry on a sandbank. It is, nevertheless, most difficult of access, for the Beaully Firth is so shallow that even a small boat cannot get up at low tide ; whilst if the visit be made at high tide, there is no small danger of the boat being left on the sandbank, at a considerable distance from the water. Cairn Dubh is situated almost exactly opposite Bunchrew House, in the very centre of the firth. At low tide it stands 3 feet above the sandbank, and measures 135 feet from N. to S., and 170 feet from E. to W. The stones, as usual in such cases, are about one cwt. in weight, with very little small stuff. Some large

stones are to be seen, of which a satisfactory explanation is to be found in the fact that on more than one occasion lighters carrying quarry-stones have gone aground at the cairn, and have thrown overboard part of their stone cargo in order to get afloat again. These angular quarry-stones are, however, easily distinguished from the round boulders of which the island is built. A little investigation reveals numbers of oak

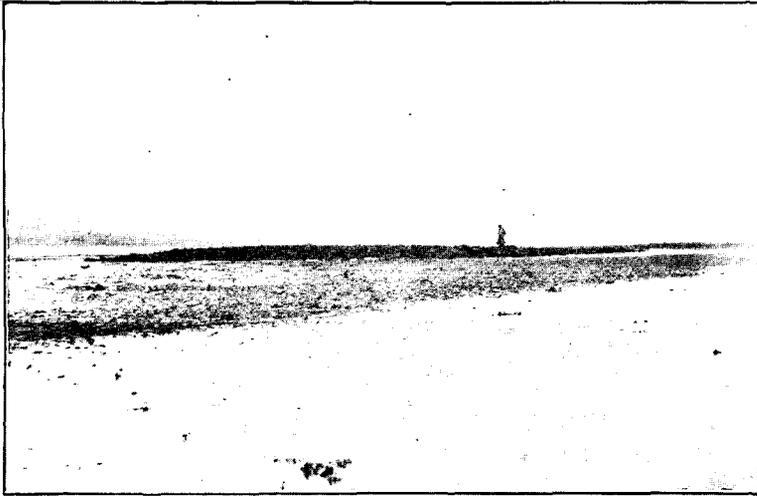


Fig. 3. Cairn Dubh, in the Beaully Firth.

beams running through the rubble building, and at present a fine oak log, 9 feet long and 2 feet in diameter (fig. 4), may easily be seen just below the stones which wedge it in. The end of another spar was broken off by one of the party to afford ocular demonstration to the Inverness Field Club that the oak beams really existed.

Two miles east of Cairn Dubh is *Cairn Arc*, at the very mouth of the river Ness, on the west or left bank; but little now remains of this, although it is mentioned in the old map of 1804, hereafter to be described. Logs of wood have in recent years often been seen there.

The Island on Loch Moy.—At the request of several members of the Inverness Field Club, though rather against my own wishes, I took the diving apparatus to Loch Moy, the island on which certainly promised to be of the very greatest interest. A novel experience here met me, for the water was so charged with peat that I could scarce see my hand in front of me, and I could not at any time see my boots, whilst the



Fig. 4. Oak log on Cairn Dubh.

water-telescope, which in other cases proved so useful an adjunct to the diving dress, did not penetrate the water one foot, as compared with 12 and 15 feet in other lochs. There had been, it is true, a certain amount of rain, but so also had there been at Loch Bruiach and at Loch Lochy, where, all the same, the water was quite clear enough for my purpose. Having satisfied myself that little information could be gathered under water, I went ashore on the island, which certainly bears all the signs of being artificial. Its size is no doubt very considerable, viz. 250 yards by 35 yards, or about two acres superficial. In Mr Stuart's

monumental article on Crannogs in the *Proceedings* of the Society, March 1865, it is classed as "artificially formed of wood, or surrounded with piles," whilst in the text he merely says: "Loch of Moy. An island near the middle, consisting of about 2 acres of ground, on which the Lairds of Mackintosh had a strength."

This is also all that Dr Munro has in his *Ancient Scottish Lake-Dwellings*, but in the *Old Statistical Account* the following description of it is given:—

"By actual measurement of the loch, taken on the ice, the greatest length is $1\frac{3}{4}$ and the greatest breadth is $\frac{3}{4}$ of a mile. . . . About the middle of the lake there is an island consisting of about two acres of ground. It lies N. and S. and is nearly the shape of a violin. At the S. end of the island there are the remains of a house, containing four fire rooms, where the Lairds of Mackintosh resided in times of trouble. By an inscription above the gate, it is said to have been built in the year 1665 by Lachlan the 20th Laird of Mackintosh. Adjoining to the house there is a garden, planted with fruit trees and currant bushes. It appears by the ruins still remaining, that there have formerly been very extensive buildings on this island. The remains of a street, the whole length of the island, with the foundations of houses on each side, are still very visible; and in the year 1760 two ovens were discovered, each capable to contain 4 bushels of meal made into bread. In the year 1422 it contained a garrison of 400 men. In those troublesome times when it was necessary to live either in fortified or inaccessible places, the Lairds of Mackintosh resided here constantly except in the winter seasons. At the distance of some hundred yards from this there is an artificial island formed, by heaping a parcel of large round stones upon each other. This place was used for the confinement of malefactors, before the abolition of the jurisdiction power, which was vested in the hands of the chiefs. . . . This place is called Ellan-na-Clach, *i.e.* the Stony Isle."

Many of the traces mentioned above have been obliterated in consequence of the erection in 1824 of a very large monument in stone by

Lady Mackintosh in memory of her husband Sir Aeneas Mackintosh ; but I am able, however, to add a very interesting piece of information that the loch was lowered 4 feet some years ago, so that this mysterious island now stands high and dry. No one visiting it can fail to be struck by the fact that there is a natural beach of sand and gravel all the way round, and on this beach there is scarcely a single large stone. About fifteen yards from the present water's edge the rubble building commences and extends some yards until the island attains the height of 6 feet above the natural sandy beach. In view of the fact that Dr Stuart in 1865 surmised that the island was artificial, and recorded this opinion in the *Proceedings*, it seems, now that this surmise can so easily be verified, that this should be done. In this I have the promise of the assistance of the Inverness Field Club.

Artificial Islands in Loch Garry.—At the invitation of Capt. Ellice of Invergarry I visited the two islands in Loch Garry, both of which have now got to bear the name of Eilean nan Mhuilchean, a name which has been rendered into English as Vulcan's Island. The first which we visited is situated opposite the fourth milestone from Invergarry, and about 200 yards from the south side of the loch, which is here half a mile across. There are remains of a causeway from the S. shore, between which and the island the water is of considerable depth, well over 20 feet. In this case the great mass of stones are just such as a man could carry fairly easily, and they have evidently been brought from the land opposite, being mostly sharp-cornered flags, with very few round stones amongst them. At the S.E. corner, however, a large piece of natural rock may be seen, leading one to suppose that the early builders enlarged for themselves a natural position which suited them. Although the rubble building slopes evenly all round except on one side, yet despite a careful search no wooden beams were visible ; presumably the rock foundation rendered binding material unnecessary. This method of enlarging a natural rock to make it large enough for habitation seems to have been a common practice in the north of Scotland, the well-known island in Loch Arkaig being another example.

Eilean nan Mhuilchean is at present difficult to find except when the water of Loch Garry is very low ; for some years ago the accidental falling in of rocks at the narrow mouth of the loch had the effect of raising the whole volume of water between two and three feet.

The other of the Loch Garry islands (fig. 5) is situated in what is



Fig. 5. Island in Little Loch Garry.

known as Little Loch Garry, an offshoot of the larger loch from which it is separated by the Narrows. This island can always be seen standing about 3 feet out of the water. It measures 20 feet square, and the sides slope gradually until the bottom is reached in about 10 feet of water, as shown in the elevation given in fig. 6. The floor of the loch is muddy and covered with weeds, amongst which long timbers may be seen running from the rubble and embedding themselves in the mud. On the south side at one spot (fig. 7) four of these could be seen, each

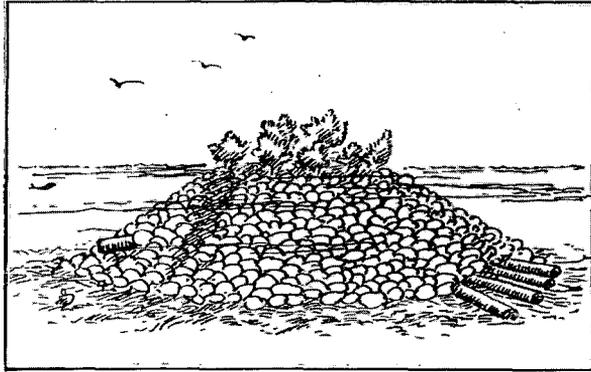


Fig. 6. Elevation of the Island in Little Loch Garry.

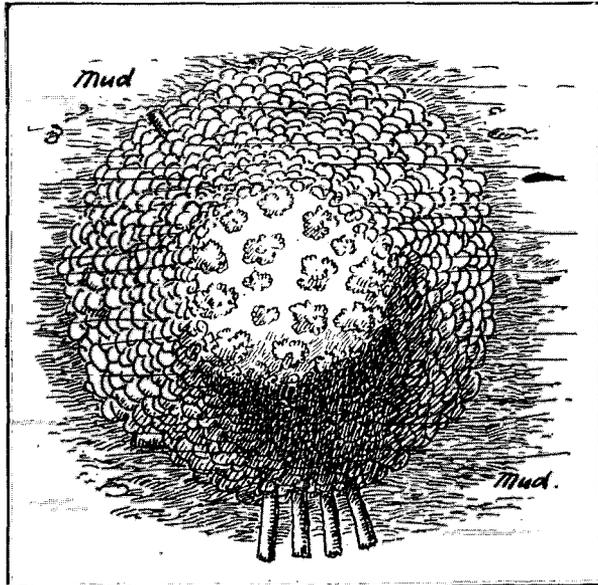


Fig. 7. Plan of the Island in Little Loch Garry.

about 3 feet from the other at their nearest end, and splaying out to 5 and 6 feet at their furthest ends. As much as 8 feet of these beams was visible. On the W. and N. sides more beams could be seen, but these were mostly single or in pairs. The rubble building extends 50 feet round the island, and then comes the floor of the loch, which is composed of mud and gravel, no natural rock being visible. The stones



Fig. 8. Island in Loch Lundy.

of which the island is composed are on an average about a hundred-weight, no very large stuff being visible, nor very small stuff either.

Loch Lundy.—Very similar to the first of the Loch Garry islands is the island of Loch Lundy, three miles east of it. This island is famous in local lore as the abode of Ailean na leine ruaidhe, Allan of the Red Shirt, a notorious reiver of the Glengarry sept. His misdeeds are almost numberless. Towards the end of his life, in the days of his failing strength, he is said to have engaged a mason to construct a mysterious hiding-place for him near Loch Lundy, the secret of which was to be revealed to no one. The mason successfully performed the task, and

presented himself to Allan for payment. The Red-shirt hero having satisfied himself that the workman had faithfully performed his task, paid him the money, but as he was leaving and was already some yards distant, Allan let fly his arrow, which struck the mason to the ground, whilst Allan, surveying the dead body, quietly remarked that a secret can never be safely kept that is known to more than one. This island (fig. 8) measures 40 feet by 35, and is situated about a hundred yards from the shore, as is invariably the case with these islands. It is composed of

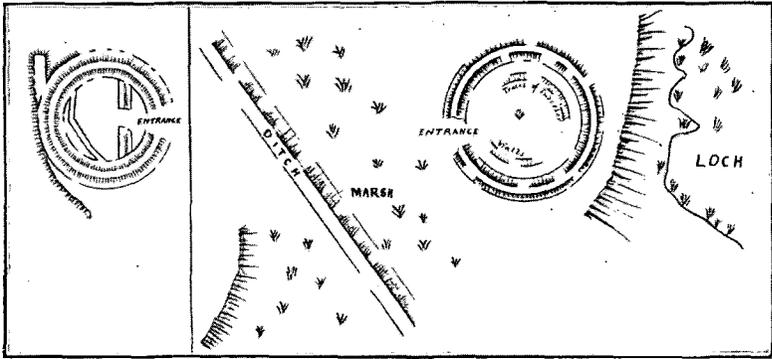


Fig. 9. Plans of two circular constructions named Rath Fion near Loch Oich.

flat stones, and stands 3 feet 6 inches out of the water. No woodwork could be detected about it, though the difference between it and two natural islands in its immediate neighbourhood is very striking.

Loch Oich.—Here the name Eilean MacMulchan occurs in connection with an island undoubtedly artificial, and of which the heavy timbers may easily be seen. This island has additional interest from the proximity of two ancient circular constructions of which the name is given on the Ordnance Map as Rath Fion. Since these structures are so far unrecorded, I have copied for illustration plans of them (fig. 9) made by Mr James Ross, Inverness. They are within a quarter of a mile of the island, and distant from each other about 120 yards. The larger of the two has an internal diameter of 64 feet; the walls are

about 10 feet in thickness, and there are traces of interior walls about 5 feet thick. The smaller structure, which lies to the east of the larger, is 48 feet in its internal diameter, the walls being 12 feet thick at the base and the interior walls about 3 feet thick. Both structures are of the usual drystone building.

When writing these notes originally I decided to make no mention of

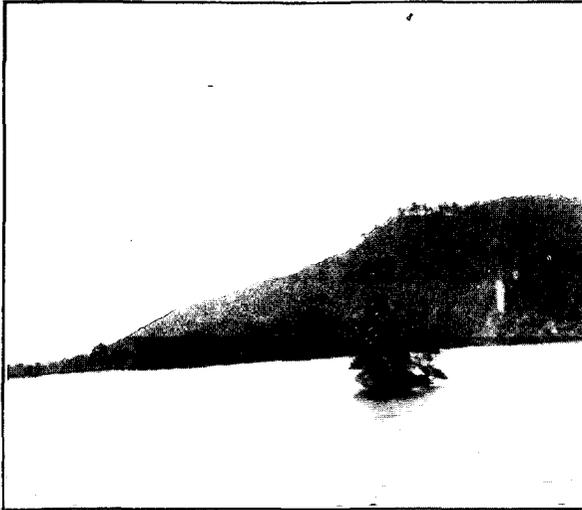


Fig. 10. Island in Loch Oich.

two other artificial islands in Loch Oich, one of which is known as Eilean Dreinachean. I had no doubt about their artificial construction, but considered it prudent to attribute them to the time when the Caledonian Canal was being made, although they are indeed ten times as large as anything that would be needed in the way of a cairn to guide the passing vessels. However, in reading the Parliamentary Report of 1804, in which the country is described through which *it was intended* to make the canal, I found these three islands all distinctly mentioned. The passage seems of sufficient interest to give it in full:—

“The bottom of Loch Oich consists of several deep hollows, separated by shoals extending across the loch. The first and greatest hollow is at the east end; in the middle of it is 26 fathoms water, with less depths towards the sides. The next hollow to the westward has 11 fathoms water in it where deepest, and is separated from the former by a shoal,



Fig. 11. Eilean Dreinachean in Loch Oich.

on the middle of which is a small island with trees on it; on this shoal there is only 9 feet water where deepest on the N. side of the island and 4 fathoms on the S. side thereof, from thence are gradually less depths as you approach either the island or the shore. The next shallow lies opposite the River Garry; here the loch is very narrow, owing to two points of land extending from the opposite sides: between these points is only 6 feet water, and from 9 to 12 feet both to the eastward and westward. A small hollow of 7 fathoms water lies close to the old

Castle of Glengarry, and at the east end of this hollow, near the middle of the loch, and opposite Glengarry House, lies another small island with trees on it.

“On the south side of this last island, the loch is all shoal from the entry of the Garry River to the point south of the old Castle; at this point another or third shallow lies across the loch, over which is only 10 feet water; and from thence a long hollow of from 21 to 7 fathoms water extends to near the west end, where between the two westernmost points is a shallow across the loch with a third small island on it; over this shoal there is 12 feet water on the south side of the island, and 9 feet on the north side, and to the westward of this last shoal is a basin of from 13 to 5 fathoms water. The whole of the bottom of this loch is soft mud, and therefore good anchoring ground.”

Loch Lochy.—The day following my paper to the Society on Eilean Muireach in Loch Ness, a letter appeared in the *Scotsman*, signed by Mr David MacRitchie, F.S.A. Scot., in which he drew attention to the island said to have been built by Lachlan Mor Mackintosh in 1580. Mr MacRitchie gave the quotation from the *History of the Mackintoshes* as follows:—

“In the year 1580, in order that he might subdue the insolence of the Lochaber men, Mackintosh caused an island in the loch, commonly called Loch Lochy, to be constructed, which was called Ellan-darrach, that is, the oaken island, for it was built upon oaken beams; and while he was engaged on this, he had 2500 men along with him in Lochaber, from the 29th day of May to 21st day of August. In that island he placed a garrison, and whilst it was there all the people of Lochaber were very submissive to their superiors, but as soon as the island was broken down they relapsed into their wonted rebellion and mischief.”

After some remarks on the efforts of Mackintosh to exercise jurisdiction in Lochaber, Mr MacRitchie continues:—“Owing to the fact that Mackintosh’s oaken island in Loch Lochy was broken down, there may be few traces of it left at the present day. But if these exist and can be

identified, it would be interesting to compare their characteristics with those of the Loch Ness crannog."

Some clue to the position of Eilean Darach is afforded by the following passage in Dr Fraser-Mackintosh's *Antiquarian Notes* :—

"One day the late Colonel Cameron, of the historic family so long in Clunes, asked me if I had ever heard of Eilean-an-Toisich, or sometimes called Carn-ic-an-Toisich, to which I replied that I had not only heard of it, but had long been in search of it, and hoped now to know where it was. Colonel Cameron then informed me that in his youth, on a remarkably fine day, being in a boat in the Bay of Clunes along with a very elderly man, full of tradition, the old man bade him look closely towards the bottom, when he observed several large hammer-dressed stones, as also logs of timber, like joists. He was further told that before the canal operations these remains were often visible on calm days, but since then only occasionally ; and the old man had himself been informed by older people that that was all now remaining of an artificial stronghold put up by the Mackintosh to keep the people in order, hence Eilean or Carn-an-Toisich. Colonel Cameron told me that the wood he saw was very like oak. He further stated that as the level of the loch had been much raised since the occasion, he doubted whether it was now possible to see anything."

Having thus determined the position of Eilean Darach as in Clunes Bay, it occurred that some of the old maps might show its exact position. By the kindness of Captain Ellice of Invergarry, I was enabled to see the very interesting collection of old maps at Invergarry House, but could find little to the purpose until I hit upon the map of the proposed Caledonian Canal drawn in 1804, which shows that before the canal was made and the loch raised the 11 feet which the canal required, the contour of the loch at this point was very different. West of the present Clunes there was a convenient and snug bay, just such as would afford shelter to such a construction, whilst, to my great surprise, a small island was actually marked within this bay, though, indeed, no name was given.

As I knew that this map of the proposed canal was made from an older one, compiled in 1746-1754, and now in the British Museum, I applied to the authorities for a tracing of the neighbourhood of Clunes Bay. This older map is part of the original Ordnance Survey which was begun at Fort Augustus immediately after the rising of 1745, and being found of so great utility, was later extended to the whole kingdom. The tracing was sent to me at Clunes just in time for our investigations. It, however, does not add anything to our information, and does not even show the island marked in the map of 1804.

Mr Charles Mackenzie, factor for Lochiel, had kindly spent much time in working with a small boat which we had sent him from Fort Augustus, and a water telescope, and expressed it as his opinion that the island marked on the plan was the only likely situation, for the other two spots where he had seen a small amount of rubble stone were either too exposed or in too shallow water. Accordingly the diving dress was got in order, and I went down in great hopes that I had identified Eilean Darach. I found indeed a considerable quantity of loose rubble, just such as would have been used for such a purpose, but the main portion was natural rock, to which, however, the rubble may have been added to increase the size of the island. The stumps of old trees were still pretty numerous, but of oaken beams I could see none. After forty minutes' careful investigation I returned to the surface fully satisfied that nothing more could be gleaned in that direction. Mr E. M. Wedderburn, who had previously conducted the work of sounding Loch Lochy for the Lake Survey, next took a turn at the diving dress, which he assured me he found very comfortable. He could, however, only confirm my remarks as to the presence of a good deal of rubble and the absence of wooden construction.

On the following day we were joined by Mr MacRitchie, F.S.A. Scot., whose letter to the *Scotsman* will be remembered, and Mr Bartholomew. In front of Clunes House we had a careful examination of the plans and other evidence, and the conclusion at which we arrived was, that

the island which we had examined was the site of Eilean Darach, that the island had been enlarged, and that the island hitherto unnamed had been named from that enlargement. It is indeed difficult to suppose that Mackintosh omitted to make use of an island already at his disposal, and just in the position in which it was wanted.

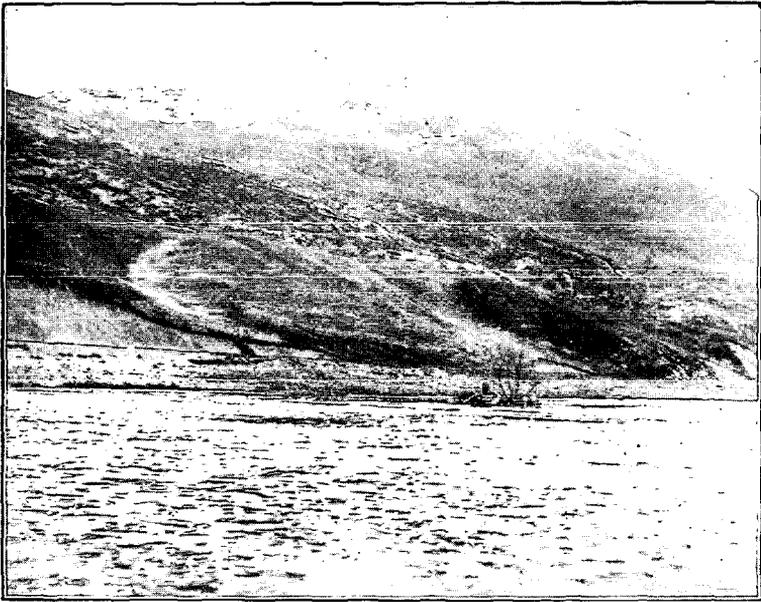


Fig. 12. Island in Loch Treig.

Loch Treig.—The artificial island in Loch Treig (fig. 12), which is the last that falls to be described in the present paper, was the first that I visited in connection with the proposed investigation. I would indeed have taken the diving dress to it, but I was satisfied that a careful investigation of it could be made with the water telescope. The island is situated in a small offshoot of Loch Treig, separated from it by a neck of land which Mr. Kenneth Macdonald, town clerk of

Inverness, suggested might have been formed by a landslip at a date posterior to the building of the island. The first piece of wooden construction was found at the S.W. corner. Here two beams were found lying flat on the floor of the river-bed; they were much decayed, and do not appear to be in their original position. Ten feet distant from these, a spar about a foot in diameter was seen. One end of this spar

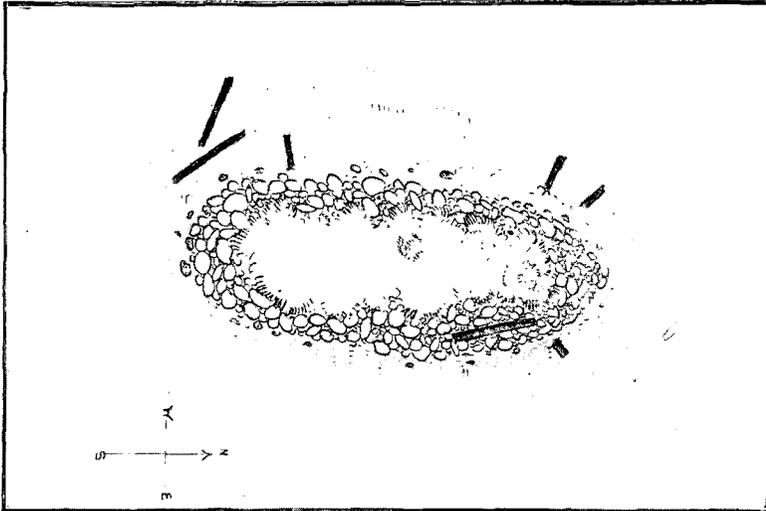


Fig. 13. Plan showing position of wooden beams in Keppoch's Council Island in Loch Treig.

extends outward 3 feet into the river, and the rest is hidden under the rubble building. At the N.W. corner one or two pieces of timber may be seen (fig. 13) almost covered with stone work, although at other points of the island there are signs that it has suffered considerably from the heavy spates which must often cover it all over. For instance, at the N.E. corner a long beam was found, which had been laid absolutely bare; it was 9 feet long and was 15 inches thick at one end, tapering to 8 inches, and was an ordinary trunk with the branches lopped off.

At right angles to this one, a second spar was found, of which only a couple of feet could be seen; the rest appeared to run a great way into the rubble building. The relative position of these two was such as to suggest that they had originally been coupled together. The size of the island at present is 40 feet by 18, nor could it at any time have been much more than 60 feet by 30, the sides of the rubble construction being visible all round.

The floor of the river is here composed of a sediment of mud through which at one spot the solid rock is just visible. This no doubt accounts for the selection of the site, which otherwise would be most unsuitable. If the rubble construction were exposed to the full force of the river Treig, it is incredible that it could stand there long. But if, as seems probable, there was a low ridge of natural rock in the middle of the river, the waters of which passed on each side in a stream 12 or 15 feet deep, then this ridge could without difficulty have been heightened. Indeed the banks of Loch Treig being very steep, without any sheltered bays, such as are generally found in other lochs, the early inhabitants seem to have used the natural rock in the middle of what is now the river as being secure from the storms of wind and wave which rage with almost incredible violence in the exposed situation in which Loch Treig is placed. This island, which I visited at the suggestion of Sir John Stirling Maxwell, has long been known as Keppoch's Council Island, from the fact that Ronald Og, Chief of Keppoch, used to meet his clansmen there when he was in hiding in the cave above Loch Treig on account of the part he had taken in the insurrection of Sir James MacDonell of Islay.

In order to stimulate an interest in the artificial islands of our northern district, I published accounts of several of these islands in the *Inverness Courier* and in the *Oban Times*, with the result that the Inverness Field Club are quite willing to undertake some excavations in this direction, whilst many persons have sent me notices of other islands which it is hoped to investigate in following years. These include the islands in Loch Ruthven, Loch Meiklie, Loch Laggan,

Loch Crunachan, Loch Arkaig, and Loch Quoich, besides others further afield.

It only remains for me to record my thanks to the Council of the Society for the sum which they kindly placed at my disposal, and also to the many friends who during the course of the summer assisted me in these investigations. Foremost amongst these is the Clyde Navigation Trust, who, as already mentioned, gave me gratis the complete diving outfit, and sent a first-rate man along with it, whose wages they later most generously paid.