

I.

NOTES OF LAKE-DWELLINGS IN LOUGH MOURNE, COUNTY ANTRIM,
IRELAND. BY ROBERT MUNRO M.A., M.D., F.S.A. Scot.

On the 30th August 1882 I visited and inspected the remains of two lake-dwellings or crannogs, then exposed in the bed of Lough Mourne, in consequence of its partial drainage by the Belfast Water Commissioners, while in the act of converting its basin into a reservoir to supply their town with a constant supply of pure water. Through the kindness of the chief engineer of these works, Mr L. L. Macassey, I was conducted to the sites of the lake-dwellings by his assistant, Mr Andrew Robinson, who, from the very commencement, had been in daily charge of the extensive operations involved in excavating a tunnel over 1000 yards long, the inner end of which extended some 400 yards into the bed of the lake. Mr Robinson had thus unexceptionable opportunities of becoming acquainted with the antiquarian discoveries to which I now wish to direct the attention of members of this Society; while his skilled knowledge as an engineer and love of antiquarian pursuits rendered him a trustworthy authority on all matters of detail as to the physical conditions bearing on these discoveries. I have pleasure in mentioning this, because it is to him I am indebted for the principal facts here recorded. The notes of my visit and the materials supplied to me by Mr Robinson have lain in my possession for nearly four years, and the delay in publishing them arose, in the first place, from a desire I had to secure for some place of public safety a few important relics which in the course of desultory diggings by outsiders had been found on the lake-dwellings. Regarding one object, viz., an iron socketed celt, which I saw in the possession of the finder, a young lad of the name of M'Donald, I was particularly solicitous that it should be secured for the Belfast Antiquarian Museum before further publicity should be given to the investigations; but notwithstanding several letters to this effect which I wrote to Mr Macassey and others,

it appears the relics could not be recovered, and consequently they still remain dispersed, or in the possession of whomsoever happened to pick them up. Since then an account of an examination of these crannogs by the Belfast Naturalists' Field Club, "under the personal direction of Mr S. A. Stewart, F.B.S.E., scientific curator of the Belfast Natural History Society," has appeared in the *Journal of the Royal Historical and Archaeological Association of Ireland* (October 1883). As this account makes no reference to the iron celt, and is moreover accompanied with a plate of plans and sections of these crannogs, which in one instance at least (plan of No. 2 crannog) is not in accordance with my observation of the facts, I feel it my duty, even at this distant date, to recur to the discoveries in Lough Mourne, and record the true state of matters as far as they have come under my own cognizance. At my request, Mr Robinson kindly drew up a report of the crannogs which, although posterior in point of time to my visit, I wish to lay before you now, as it sufficiently, and in my opinion accurately, describes their lacustrine position, structural details, measurements, &c., which require no further amplification on my part:—

SHORT DESCRIPTION OF LOUGH MOURNE AND CRANNOGS FOUND IN
THE BED OF THE LAKE.

“The following is an extract from an old History of Carrickfergus regarding Lough Mourne:—

About two miles and a half north of the town of Carrickfergus is a lake of fresh water called Lough Mourne, literally Loughmor, *i.e.*, the “great Lough.” It covers about 60 Irish acres of land; very little water runs into it, but a stream runs out of it which turns a cotton mill in the driest season. The greatest length is about an Irish mile, and at a mean near half a mile broad; it is said to be the largest sheet of fresh water of the like altitude in Ireland, being 566 feet above the level of Carrickfergus Bay. Its water is supposed to be formed by a large spring near its centre, as there is no appearance of any rising near its margin. This opinion is somewhat confirmed from a place near the centre being seldom frozen during winter, and said to be remarkably deep. The water is clear, and is well stored with eels and pike; we know of no other fish being in it. Some carp were put into it about forty years ago, but none were ever taken. During winter it is much frequented by wild fowl, and though

a fine sheet of water, its beauty is nearly lost, as its shores are entirely destitute of planting. Concerning the origin of this lough, there is the following vulgar tradition, that it was once a large town, when one evening an old man came into it requesting a lodging; and being refused in many houses, he said, "Although it was a town then it would be a *lough ere morn*," and retired to an adjacent hill to witness the coming catastrophe. The people were soon alarmed by the ground sinking, and also rising about their hearthstones, when, lo! in an instant the town sunk, "and like the baseless fabric of a vision, left not a wreck behind." The tradition adds, that since that event the place has been called Loughmourne.

"A few observations on this extract may not be out of place here. The lake is really about 4 miles due north from Carrickfergus; is 90 statute acres in extent, and its old water level 593 feet above Trinity low-water mark. Its extreme length is $\frac{3}{4}$ of an English mile and mean breadth about $\frac{1}{4}$ of a mile. The depth of water in the lough varies a good deal; about $\frac{2}{3}$ of the whole area, principally at the southern and western sides, averaging about 12 feet deep, the remainder varying from 20 to about 60 feet. In fact, the maximum depth might be taken at 50 feet, as it was only in a few places that the lead indicated over that depth. The statement that very little water runs into it is hardly correct, as a considerable quantity runs in from springs in the immediate vicinity and on the margins. In fact, so far as we have yet lowered the water and exposed the bed of the lake (and there are about two-thirds of it dry) no springs have been met with. The bed of the lake exhibits a wonderful variety of formations as revealed by our tunnelling operations:—Boulder clay, basalt, black shale, limestone, greensand, black clay, interspersed with very large flint and limestone boulders, and some black stone or basalt boulders as well. The overlying stratum forming the bed proper of the lake is dull black clay, with limestone boulders; this clay is quite impervious to water. On the south, west, north, and part of the north-east sides of the lake, there is a deposit of mud varying in depth from 4 to about 15 feet deep, and of a very treacherous character.

"Regarding the crannogs, nothing, I believe, was known of their existence beyond mere conjecture. It is stated, however, that occasionally, when parties were boating on the lough, they could see houses in

the bottom, and it is quite possible they could have seen them on a calm day, seeing that the first was about 11 feet and the second about 15 feet below the level of the water. The first intimation we had of their existence was when we commenced to drain off the water by means of a tunnel we are driving under the lake, and on the second or third day after they appeared I rowed out to the first one, and made as close an examination as circumstances would allow. The appearance it presented to me was that of a thickly planted grove of young trees half burnt down, and with one or two cairns of stones in the centre. As the water receded from the crannog, and with boats pulling about, a number of the longer piles or stakes round the outside were broken down, some of the pieces I saw lying about measuring from 6 to 9 feet in length, and from 4 to 8 inches in diameter. The distance of crannog No. 1 from the shore is about 80 yards, and it seems to have been connected with the same by a gangway or footway, as a number of piles driven in an irregular manner can be seen from the shore to the edge of the crannogs. These piles were, with one or two exceptions, broken off at the surface of the mud or bed of the lake, and some were only found after digging for them. They were sunk in the ground to varying depths, and had apparently been roughly pointed, which leads me to infer that they were driven down intentionally by some means. The site of the crannogs and the area round them was covered by piles driven in at random, the outer ones forming an irregular circle about 60 feet diameter. The piles were not placed in concentric rings, but promiscuously, and when outside the immediate site of the crannog they have been evidently placed as a precaution against danger, as they could serve no other purpose. Regarding the formation of these crannogs, no very great care seems to have been taken in their construction, the whole concern being of the rudest description. A number of piles have been driven down, but not connected together in any way. Bundles of twigs, furze, heather, &c., have been bound up and placed between the piles, the whole covered with stones, gravel, and some soil.

“At this crannog were found an iron hatchet, part of a cannon, a hammer-stone, a rubbing-stone (supposed to have been used for grinding), two small urns, and part of a large crucible. A number

of charred bones, teeth, the remains of what I take to be hazel nuts, and a considerable quantity of cinders, charred wood, &c., were also found. A large number of flint flakes, scrapers, and one or two arrow-heads were found in the immediate neighbourhood of this crannog; and a large quantity of flint chippings, and some scrapers, &c., were picked up on the crannog itself. I may here state *en passant*, that in the shore of the lake near this crannog the largest numbers of flints, both worked and unworked, were found. On the east, north, and part of the west sides a few flints were found, but only one or two had been chipped.

“*Crannog No. 2.*—This one is constructed somewhat differently from No. 1, and a good deal more care seems to have been exercised in its erection. There have been only a few piles driven into the bed of the lake on the immediate site of the crannog, but a considerable number have been driven outside at random. The sizes of the piles and structure of this crannog are much the same as those of No. 1. It has evidently been formed by depositing a large number of stones on the bed of the lake, covering these over with bramble and heath. On the top of this mass of bushes a number of horizontal timbers are placed, forming a sort of rectangle, and the beams are roughly mortised into each other, some at the ends and some near the centre, into a vertical pile. Judging from the appearance of these horizontal beams, I should say they are oak, but this opinion must not be accepted as decisively certain. On the top of these piles and cross timbers or beams a great number of stones have been deposited. The diameter of the entire mass is only about 25 feet.

“There has not been much of importance found on or about this crannog, but owing to the level of the water not much exploration could be carried on, and I may say that *nothing* has been done to it since you were over here. A quantity of decomposed bones was picked up at this place. My attention being first directed to a substance resembling *Vivianite*, discovered when digging along the line of gangway at No. 1, I had some pieces analysed, and got exactly the same result as given in your book.¹ There were a number of very fine greenish-

¹ *Ancient Scottish Lake Dwellings*, p. 88.

coloured crystals inside some of the bones which I yet have in my possession."

When examined by me these crannogs had been exposed for several months, and already visited by hundreds of people, who appeared to have *carte blanche* in the way of excavating and appropriating whatever relics might be picked up. The first, or No. 1 crannog, which was easily accessible on foot, was very much disturbed by the repeated "howkings" of visitors. Its form, as determined by the remains of upright piles, was irregularly circular, but nowhere exceeding 60 feet in diameter. Included within it were four small separate elevations, composed of a few stones, clay and burnt twigs interspersed with ashes and bits of charcoal. Neither of these elevations had as large a diameter as 10 feet, and they only required one turn over of the spade to reach the undisturbed bed of the lake. Digging in the spaces between and around these so-called islets, I found only fragments of burnt sticks forming a thin layer over the true mud-bottom of the lake. There was no semblance of a fascine structure or other artificially constructed island, like those solidly built islands so numerous recorded and described in other parts of Ireland and Scotland. The "bundles of twigs, furze, heather," &c., referred to by Mr Robinson as being placed between the piles, were not of such a character and magnitude as to support the theory then in vogue, that these structures were solid islands, and might be accounted for on the supposition that they were remains of some kind of huts. Heather was often used in the structure of primitive huts. The opinion which I there and then formed was that this lacustrine habitation was a true *pfahlbau* or pile-building, over whose wooden platform had been placed four hearths, constructed of incombustible materials, such as stones and clay, which would be most readily at hand. During the conflagration which had destroyed the entire wooden superstructures (of which final catastrophe there appeared to be little doubt from the amount of burnt faggots that lay scattered over its entire area), the materials of these hearths would ultimately drop down to the bottom of the lake, still, however, retaining their relative position, and so present the appearance of

low mounds over the bed of the lake, with poles penetrating them. Examples of crannogs having more than one fireplace, have been frequently noticed in the course of our Scottish investigations, as, for instance, that of Lochspouts, Ayrshire, where there were three circular and neatly constructed hearths of stones and clay situated on different parts of the island surface. Of the relics found on No. 1 crannog, I possess a small fragment of a clay crucible, and among those enumerated by the writer of the article in the *Journal of the Royal Historical and Archæological Association of Ireland* are "two small stone crucibles." It would therefore appear that these lacustrine inhabitants practised the art of metallurgy, which would entail at least one fire-proof furnace, and thus the large number of fireplaces on so small an area might be possibly accounted for. The piles in the gangway, which extended only halfway to the shore, were simply driven in like stakes, and there was no subaqueous wooden framework to which they could be attached. But this would be unnecessary, as the substance of the lake bottom was of so firm a consistency that a series of piles merely driven in would be sufficiently unyielding to support a gangway.

Both crannogs were situated along the western margin of the lake, but No. 2, being 350 yards farther up and 150 yards from the shore, was deposited in deeper water than No. 1. After the drainage of the lough had proceeded to the extent that no boat could be used, the former became practically inaccessible to visitors, owing to the great body of soft mud which surrounded it. Hence it was less disturbed than the previous one, and bore much the same aspect and appearance which it presented when first seen emerging from its lacustrine abode. Mr Robinson's mode of access to this crannog was by laying two broad deal-boards flat on the mud, each of which was capable of bearing the weight of his body, and while he stood on the inner he placed the other a pace or so in advance, and then transferred himself to it, and so on successively till the island was reached. But this exploit looked to me more ingenious than practicable, and my efforts to imitate him soon stopped, especially when, after showing some symptoms of inability to maintain my equilibrium, I was solemnly warned that if I once stepped off the boards, the only chance of saving my life was to lie flat and

motionless in the mud, as otherwise the slightest struggling to extricate myself would only hasten my speedy and complete disappearance. The prospect of such a termination to my antiquarian enthusiasm was by no means comforting, and indeed reduced my hopes of being able to set foot on the crannog to a very low ebb. Out of this dilemma I was fortunately assisted by one of the workmen, who kindly proffered his aid. He suggested the plan of using three boards, by means of which two persons could traverse the mud together. The experiment was tried, and to my great delight the feat of reaching the crannog, as well as the return journey, was successfully accomplished. I must, however, acknowledge that during its progress never was human life more dependent on the skill of a fellow-creature than mine. My obligations to the Irishman were, however, satisfactorily squared on the principle, which he naively stated, that the life of a man in these parts was only worth a few shillings.

I have little to add to Mr Robinson's description of this island. Its entire surface was occupied with a heap of stones, which gave it the appearance of a cairn. Digging underneath these stones, we came upon beds of heather and brackens interspersed with stones; but it was not possible to explore deeply, owing to the oozing of water. A few beams rudely mortised near the margin, and one or two long ones directed inwardly, were all the evidence of a complicated wooden structure that I saw. The plan of this Crannog, which appears in the *Journal of the Royal Historical and Archaeological Association of Ireland*, with its marvellous array of symmetrically arranged beams, like the rays of a sunflower, is simply incomprehensible to me.

In looking over Mr Robinson's report, the amount of depression of the crannogs below what was the final level of the lake, viz., 11 feet 6 inches for No. 1, and 15 feet for No. 2, appeared to me so extraordinary, that I wrote to him so as to leave no doubt about its accuracy, and also directed his attention to some other points of interest bearing on the general question of submergence. The following is his reply:—

Glenfield House, Carrickfergus, March 29, 1883.

DEAR SIR,—Regarding the outlet from the lake, which formed a gully from 20 to 25 feet deep, I forgot to explain that, when we made some cuttings along its

course, the appearance of the material gone through would lead us to infer that this part of the valley has been gradually silted up, and as a natural consequence would raise the level of the water in the lake after the crannogs had ceased to be inhabited, so that in this way the apparently alarming submergence of the crannogs would be accounted for. Another thing I might here state is, that to the eastward of the lake there is a natural valley, which looks as if it had at some remote period formed the natural outlet or overflow from the lake; but whether or not there is any great quantity of alluvial deposit here, I cannot say with any degree of certainty, as I did not have any excavations made for the purpose of determining this. Another theory might also be started as accounting for the present water level of the lake, compared with what it seems to have originally been. There are a number of stories current among the old inhabitants that the water can only be raised to a certain level and no further, as there are a number of porous spots round the west shore, where the water would disappear. Might it not then be argued, with some degree of confidence that at some period or other, however remote, one or two of those swallows or crevices in the limestone may have existed, and been in operation below what is now the water level of the lake, and at or about the level of the crannogs, but that, owing to some natural cause or other, these openings may have become choked up, so that the water being raised was of course compelled to find another outlet? I should be inclined to place more reliance on this theory than on the silting up.

I may also mention a story I heard since I sent you particulars last. At the land end of the approach or gangway to crannog No. 1, it is said that there was formerly in existence a rude stone causeway, but that the large stones forming the same have since been nearly all removed. This causeway was popularly known as "Flannigan's Walk." As for the truth of this statement I cannot vouch, but Mr M'Dowell, the schoolmaster, says it is quite true.

Regarding the iron celt, M'Dowell has promised to let me have it, so that it may ultimately reach you for the engraver's hands yet. I send you herewith the sizes of celt. I am sorry I could not get hold of the urn which Sloan picked up, as at the time you were over here last I believe he had sold it to a member of the Belfast Naturalists' Field Club.—Very sincerely yours,

ANDREW ROBINSON.

Among the relics was one very remarkable object to which I have already incidentally alluded, viz., an iron socketed celt, with a loop at one side for fixing a handle, and of which I have here a pen and ink drawing (fig. 1), also from the pen of my obliging correspondent.

Bronze celts, with a socket and loop, are of course very common, but specimens made of iron are extremely rare in the British Isles, and

indeed only exceptionally met with in the museums of Europe. This is the only one hitherto recorded from a British or Irish lake-dwelling, and is, moreover, both as regards form and size, almost unique. It is $6\frac{1}{8}$ inches long and $3\frac{1}{4}$ inches broad immediately above the cutting edge. The diameter of the socket is $2\frac{1}{2}$ inches, and this breadth is continued for about two-thirds of its length, except where the loop-hole

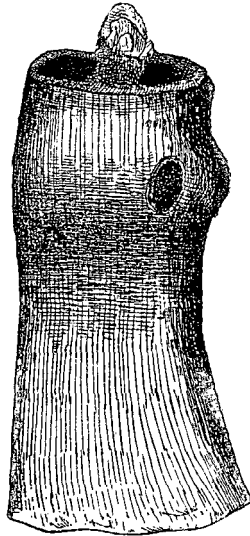


Fig. 1. Iron socketed Celt, found in Loch Mourne
($6\frac{1}{8}$ inches in length).

causes it to bulge outwards. In addition to the relics enumerated by Mr Robinson, a complete canoe was subsequently found in the lake. It was a single tree, dug out, and measured 12 feet long. I fancy the *urns* referred to by Mr Robinson are merely the *stone crucibles* mentioned in the Report of the Belfast Naturalists' Field Club, which, if made like the portion of clay crucible in my possession, might be readily mistaken for small vessels of the former character.