Excavation of a Small Crannog at Rathjordan, Co. Limerick.

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INTRODUCTION.

Attention was first drawn to this site by the fact that during World War I, when the field was under tillage for four years, great numbers of stone axes were found there. So plentiful were they that one local estimate was that “the full of a box-cart” was obtained from the field. Four of these will be found illustrated in a note published in N.M.A.J. I (1938), 124, and another more recent find from the same field was handed to us at the start of the excavation. (Fig. 2 : 2). The present excavation was originally intended to be merely an exploratory trench to examine the stratification and to see if any clues might be found to explain the presence of the unusual number of axes there discovered. This trench (Trench 3 in accompanying plan) was sited so as to cross the centre of a mound which was scarcely perceptible on the surface of the field. Towards the southern end of the trench a hearth was revealed while the slight irregularity in the field surface was found to be due to the existence of a mound of stones which, rather to our surprise, proved to be the upper portion of a crannóg of simple type. It was decided, therefore, to investigate the whole crannóg. The excavation, which was done with the help of a grant from University College, Dublin, from August 3rd to 22nd, 1946, formed one of the series which have been carried out in the Lough Gur neighbourhood, the lake itself being only two miles distant to the west.

THE SITE.

The site lies in a field adjoining the Mitchelstown-Limerick road via Cahireconlish, in the townland of Rathjordan, about one mile north-west of Herbertstown, Co. Limerick, and is 241 ft. above O.D. Its exact position will be found on O.S. Co. Limerick, 6in. Sheet No. 23 : 50.4 cm. from left-hand margin, 2.8 cm. from bottom margin, immediately west of a well which is indicated on the map. It is situated near the foot of a gentle limstone slope to the east, in a shallow depression which forms an arm of the alluvial flat drained by the Camogue River but separated from its basin to the west by a low rise of ground. (1)

Even at the present day the river is inadequate to carry off the water of a heavy rainfall and portion of the area near the river is subject to flooding, though fortunately for the progress of the excavation the floods of August, 1946, did not inundate the field in which the work was being carried out though the land immediately to the south was covered. At the period when the crannóg was built and most likely for a long time afterwards this low-lying ground must have been a marsh with pools of open water, being later choked by a gradual growth of the peat which to-day largely forms the top-soil.

THE EXCAVATION.

The underlying stratum was yellow boulder clay on top of which was a fine grey clay, extremely tenacious, and in which the points of the upright and sloping timbers which helped to consolidate the crannóg were embedded. Over

1. On this rise, a ridge of boulder clay, are three low barrows, one of which was also excavated in August, 1946, and was found to contain a shouldered Neolithic (Western) pot. (Report forthcoming: O Riordain in Jour. Cork Hist. and Arch. Soc.)
Fig 1. Plan and sections of Rathjordan crannog.
certain areas the grey clay was covered by a thin stratum of dark-coloured lake-mud, which, in turn, was overlaid by a thicker stratum of lighter-coloured mud, brownish-grey in colour and in which were still preserved the flattened and shrunken roots of aquatic plants.

This last stratum was the one on which the crannóg builders began the erection of their mound, commencing by laying a foundation of brushwood consisting of a layer of twigs and small branches up to 4 cm. in diameter. This brushwood was not woven but layers were bonded together by the bundles being laid over each other so that the twigs crossed at all angles. The bundles were anchored in position by light stakes (*populus*) driven at random through them into the underlying grey clay. The pointed ends of about a dozen of these stakes were found still upright in the clay at different places over the crannóg area in the course of excavation. They averaged about 6 cm. in diameter and the length of the remaining portions was about 18 cm. The limits of this brushwood layer were not easily fixed as around its edges it tailed off imperceptibly into the mud but it appeared to cover a roughly circular area about 11 m. in diameter. From the fact that many hazel nuts were found embedded in it, it may be concluded that twigs of this tree were largely used in the brushwood and that the foundations at least of the crannóg were laid in autumn when the nuts were still unshelled.

Over this brushwood was laid, apparently without much order, a series of large timbers, the longest of which was 1.7 m., the others averaging a metre or so in length and none of greater diameter than 30 cm. A few were flattish planks roughly squared to plane faces, evidently discarded parts of some other structure; the majority were in the round, with, in many cases, the bark still adhering to them. As can be seen from the plan, these timbers, while scattered in haphazard fashion among themselves, are concentrated under the stone mound with a few outliers on the surrounding mud. No systematic plan for keeping these timbers in position had been adopted but three large stakes were found, one to the north, the others to the south of the centre of the stone mound (Trenches 3 and 7), driven into the grey clay. The southern ones sloped to the north at an angle of 40-50 degrees as if designed to counteract the outward thrust of the mound to be heaped over them later; though this inclination may be quite accidental. The northern stake sloped to the west at an angle of 70 degrees and what remained of it was 80 cm. in length and 30 cm. in diameter at its top. It had been forced right through the grey clay stratum until its roughly pointed tip rested on the boulder clay at a depth of 1.5 m. below the sod.

It will be seen from the plan that no large timbers appear under the S.E. sector of the mound (Trenches 4 and 5). In the excavation of this part a large amount of timber was found but reduced to such a pulpy mass and so thoroughly incorporated in the wet mud matrix in which it lay that it was impossible to distinguish any one piece. Perhaps some softer species had been used here than the oak which formed the bulk of the timber elsewhere under the crannóg.

It seems certain that both the brushwood and timber layers were consolidated by a heavy admixture of peat, for the brown-grey mud on which they lay was both dark in colour and more peaty in texture under the crannóg than in the corresponding stratum in a test trench opened nearby.

At this stage in the construction of the crannóg there is evidence of an occupation which lasted long enough for the accumulation of an extensive spread of charcoal near the centre of the structure to the east and below the
stones of the mound which were later piled over it. This charcoal which occurred in the western half of Trench 8 covered an area of about two metres square. On excavation it proved to be a wet pasty mass of charcoal proper, plentifully intermixed with half-charred bits of small branches and unburnt but carbonised bits of a similar size, as if the fires had been lit on a wet surface which prevented the lowest sticks from kindling. In its deepest parts this layer was up to 20 cm. thick, and although it was full of the small angular stones of the mound which had been forced into it from above, there was no sign of any hearth stones nor did it yield a single artifact.

The final stage in the construction of the crannóg was the heaping up on the foundation described above of a mound of stones, roughly circular in plan with slight, irregular extensions to the north and east. Leaving out these extensions, its average diameter was about 8 m.—considerably smaller, it will be noticed, than the brushwood area on which it was centred—and the height of the stones in the centre was about 40 cm. The stones themselves were almost all angular pieces of limestone, fist- or double-fist-size. The top layer was firmly consolidated but in the body of the mound the stones were very loosely packed, showing that the pile had been constructed in one operation and had not grown by successive additions at intervals of time. The interstices contained what at first sight appeared to be whitish sand. Examination, however, showed that the surface of the limestone had decomposed to a chalky substance to a depth of 1 cm. or more and it was this which, scaling off, had given the the impression of a sandy fill.

That fires were lighted on the mound is shown by the fact that the upper surfaces of the stones at the highest part of the mound, and particularly in Trench 3, showed considerable evidence of heat, while charcoal was found in profusion upon them. An appreciable amount of charcoal was also found through the stones to the bottom. Patches on the periphery of the mound in Trenches 4, 5 and 10 were stained with charcoal but this appears to have been due to a wash from the higher levels of the mound as there was not sufficient evidence of burning to suggest that these patches represent hearths.

This ends the first phase in the occupation of the site. Apart from the fact that fires were lighted, there is little evidence for formal habitation connected with it. Animal bones were found—mainly on the edge of the mound. Ox, horse, pig, and sheep (or goat) were represented, ox bones being the most numerous. The total amount was small, only about 14 lbs. of bones were found altogether. As well as the animal bones one human bone was found—a small right femur—probably that of a woman or of a young male. The artifacts ascribable to this phase are a stone axe, a chip of another axe, a long wooden pole, three flints, and a pebble which might have been used for polishing.

There is no further evidence for the occupation of the crannóg as such and there was no further occupation of the site in general until the lapse of an interval long enough to allow the growth of a layer of peat which encroached on the stone mound from all sides for a distance of two metres inward from its circumference. On this peat two hearths were built, those who used them probably being attracted to the spot by the fact that the slight rise in the ground over the now almost hidden crannóg was somewhat drier than the surrounding bog. Just south of the limit of the stones in Trench 3 was a hearth (Hearth A) on the top of the peat and sunk slightly into it. It was floored with stones somewhat larger than those used in the crannóg; below these was a layer of
charcoal mixed with yellowish clay which was probably used to supplement the stones as a foundation for the fire. In the charcoal beneath the stones a single sherd of pottery was found. Another hearth (Hearth B) in Trench 2, also belonging to a post-peat occupation, yielded nothing. In addition to these definite hearths there was a good deal of charcoal at a slightly higher level scattered on the surface of the peat below the humus all over the crannóg, especially in the adjacent areas of Trenches 1, 2 and 6. Associated with this charcoal were three flints from Trench 1, two of which are burnt.

The remains of still later activities on the site may now be mentioned. In the N.E. corner of Trench 8 there appeared immediately under the humus a paving consisting of a single layer of closely-laid cobbles. Further investigation showed that this paving was portion of a paved track which gave easier access for carts to the well east of the crannóg from a gateway on the roadside to the south. The well—which is about 11 m. distant from the centre of the crannóg is famed locally as a never-failing water supply. When the pump in Herbertstown fails during periods of drought it becomes the main source of supply for the households of the neighbourhood. The paved pathway was obviously a very recent feature since the road from which it leads does not appear on the first edition of the O.S. map.

More doubtful as to date, though clearly later than the crannóg, was another pathway which was first noticed also in Trench 8 where it ran under the paving. It consisted of a belt of yellow clay 1 m. in width at the top, narrowing towards the bottom, and about 20 cm. in thickness. The top of the clay appeared at from 15-30 cm. below ground level. Above it was a thin layer of the same material about 8 cm. thick, up to 1.5 m. wide, and separated from the belt of clay below by a stratum of dark soil 5-10 cm. thick. The clay reappeared in Trench 10 and, by means of a series of trial trenches (not on plan), its course was traced and it was found that it began about a metre south of the well, curved round it westwards, northwards, and, finally, eastwards to end on firm ground north of it, the whole forming a sort of semi-ellipse, the bi-section running across its shorter axis. The clay was stoneless and extremely tough. It was quite sterile and throughout its length showed no traces of post-holes or any analogous features. The surrounding soil showed no evidence of disturbance so that a trench with clean sharp sides must have been cut in the soil and filled with the clay which was then stamped down till it was quite hard. It was clear that the clay belt was also a pathway leading to the well but from the northern side of it. The thin band of similar clay above the path is obviously a repair to its surface, a fresh layer being laid down above it thus sealing off a thin stratum of humus between the two. Two flints were found on the surface of the lower clay belt but, since these may have been thrown in with the material, we are left without any evidence of date for the pathway. It may be noted that the clay path led from the well in the direction of a half-obliterated ring-fort on the opposite side of the road but this cannot be used as an argument of date.

FINDS.

The numbers which precede the objects are those under which they were indexed on the excavation; the numbers in brackets refer to the illustrations in Fig. 2.

20. Stone Axe (2). Of a hard, fine-grained stone, green in colour. The butt is broken and there is a slight chipping of both faces as from usage. Length 12 cm. Found in Trench 4, just outside the edge of the stone mound.
Fig. 2. Finds from Rathjordan crannóg excavation and (2) stone axe found in same field.

9. *Pebble* (3). A stone of soft quality, one end of which is broken off. The broken end is smooth as from use in rubbing or polishing. Length 5 cm.; cross-section an irregular oval, the greater diameter of which is 5 cm. Found in the upper portion of the stone layer near the centre of the crannóg in Trench 1.

1. 15. 17. *Three Flint Flakes*, one of which (4) is illustrated. This is of brownish-white translucent flint. One of the other pieces is white in colour and appears to have been burnt.

5. *Wooden Pole* (8, 8a). A long slender pole of yew was found in two parts partly embedded in the stone layer in Trench 4 and extending to the south beyond the limits of the crannóg. Since the gap between the two parts was only a few centimetres and since the two portions lay almost in line, it seems likely that they were originally one. The total length of the pole is about 3 m. while its thickness varies from 4 to 6 cm., but since the wood was soft and partly decayed, it is probable that its original thickness was somewhat greater. The pole when found was less bent than shown in drawing 8. Near the northern end of the shorter piece was a notch (shown in detail, 8a) which has the appearance of having been abraded by rubbing—possibly by a cord or a pliable piece of wood. It is not easy to suggest a use for this object with any degree of confidence. It is too long to have been a bow. It may have been used as a spring for a trap or snare. (1)

1. Various devices for catching birds and animals are dealt with in a recent paper by R. U. Sayce, "Traps and Snare", *The Montgomeryshire Collections*, 49 (1945), 37-73. Many of these devices are operated by a spring in the form of a bent stick.

**FINDS FROM POST-CRANNÓG OCCUPATION.**

4. *Potsherd* (7). This fragment of pottery is important because it was found in definite association with the hearth in Trench 3 and, as has been noted, this hearth was built on peat which had grown over the edge of the crannóg. The sherd is small (about 3 cm. in greatest dimension), buff coloured, and contains a considerable amount of limestone grit. It was very soft and in its wet condition when found and had to be handled with great care. The average thickness is about 5 mm. but at one corner is increased to 8 mm. around a grit which projects on the back of the sherd. The ornament consists of a series of parallel lines of decoration which is similar to cord ornament but does not seem to have been made with cord but rather by means of a series of short stabs to simulate impressed cord. Because the fragment is so small and does not include a rim, base or any other portion of the pot which would indicate its shape, nothing definite can be said as to type of pot to which it belongs. Cord-ornament, or ornament simulating cord, occurs on various types of pottery—Neolithic B, beakers, food-vessels and urns. It must be said that cord ornament is extremely rare on the extensive Neolithic-Early Bronze Age series at Lough Gur. The texture of the Rathjordan fragment does not agree with this series and is even less in accord with beaker fabric. Its thinness does suggest comparison with beaker, though the coarseness of the paste is more characteristic of food-vessel. In any case we do not wish to argue in favour of a close dating, but it does, however, remain true that to whatever point in Bronze Age times we date the sherd the crannóg must appreciably pre-date it to allow for the growth of the intervening layer of peat.
1. General view of site from east.

2. View of excavation from south, showing hearths A and B.

3. Trench 10, showing clay path.

Excavation of Crannóg at Rathjordan.
6, 11, 12. **Three Flints.** One is portion of a hollow scraper, the second is a small, thin, irregular flake of grey flint which was used as a scraper. The remaining flint is a small chip. All three come from the post-crannóg peat in Trench 1. Numbers 6 and 12 are white and appear to have been burnt.

16. **Axe Chip (5).** This chip of a greenstone axe was found in the humus north of the crannóg in a trial trench cut to trace the course of the clay path. It was not associated with any structural remains.

2, 3. **Two Flints.** These were found on the surface of the clay path in Trench 10. One is an unworked flake of greyish-white, translucent flint; the other is a rough point of orange-brown translucent flint.

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**DISCUSSION.**

The Rathjordan crannóg was built of successive layers of different materials—brushwood, timber, peat and stones—in order to provide an artificial island in an area of marsh and pools of open water. In the method of its building, in the materials used and in the environment which conditioned its construction it is similar to other crannógs investigated in Ireland. But when we come to compare it with the large examples of Early Christian times such as have been revealed for us by Dr. Hencken’s excavations at Ballinderry I,(1) Ballinderry II(2) and Lagore we are struck by the contrasts. The first and most striking difference is that of size; the Rathjordan site is not only smaller than these but is smaller than much less imposing sites, such as that at Craigywarren, Co. Antrim,(3) Further, the Rathjordan crannóg differs from those quoted in that it possessed no trace of houses nor evidence of formal habitation.

Comparison is, therefore, invited with a crannóg of earlier date than these, the Late Bronze-Early Iron Age example at Knocknalappa, Co. Clare,(4) and here we find that though there are differences the similarities are more marked. Knocknalappa crannóg is considerably larger than that at Rathjordan; it was built in a lake, on a slight natural rise of the lake bottom, and not in a marsh, but it also gave little evidence of formal habitation other than charcoal spread as at Rathjordan, and the materials used for building the crannóg are similar, a stone layer being a feature of the Knocknalappa structure. It has been claimed for Knocknalappa that it “was made purely as a refuge in case of danger,”(5) Because of its small size and because of the comparatively ease with which it could be reached from the neighbouring dry land such a claim cannot be made for the Rathjordan example. It appears more likely that it served some purpose connected with a seasonal activity such as fowling in the marsh and on the water in its vicinity. It may be objected that a site which was quite near the edge of the marsh had little advantage for any purpose over one on the dry land adjoining, while its construction entailed a considerable amount of labour. The answer may be that the site may have served as an observation post affording those who used it an unobstructed view of the marsh. If the dry land was covered with bushes and trees a considerable amount of clearing would have been necessary to obtain such a vantage point and this was avoided by building in the marsh itself. Nearness to spring water may have been a factor in the choice of the site. We would suggest that the Rathjordan Crannóg is but an elaboration of the hearths in the bog at Rockbarton, west of Lough Gur, for which was postulated “a seasonal occupation probably for the purpose of fishing and fowling and for the collection of wild
berries for food."(6) It is difficult to give more precision to the suggestion of a "seasonal occupation." We have, however, noted that the crannóg was built in the autumn as shown by the hazelnuts on the brushwood and, though the site was presumably used during a number of years, it may have been built in preparation for the arrival of some migratory game, such as geese, that reached the area in late autumn. Similarly, that the seasonal occupation at Rockbarton was also, at least in part, autumnal is indicated by the identification of hazel nuts, elderberries and raspberries (or blackberries).

The archaeological significance of the Rathjordan site lies in the fact that its builders, possibly prompted by somewhat different, perhaps wetter, local conditions, were not content with the construction of simple hearths as at Rockbarton but provided themselves with a crannóg and that this crannóg must date from an early period. As we have not committed ourselves to a close dating for the pottery sherd from the hearth in Trench 1, we cannot closely define the date of the crannóg. We have, however, indicated a Bronze Age date for the sherd and since this comes from a hearth built on peat which had grown to a depth of 30 cm. over the crannóg, the date of the latter must be placed well back into the Bronze Age. The other finds are not such as to make closer dating possible. Stone axes and flints not of distinctive forms may date to very varying contexts but it may be remarked that axes of coarse-grained stone, of similar form to those from Rathjordan, and re-used chips of axes are characteristic of the Neolithic and Early Bronze Age habitation sites at Lough Gur. The stone axes found in such large numbers in the course of tillage at Rathjordan may be attributed with probability, though not with certainty, to the people whose crannóg and hearths we have investigated and such an abundance of axes is again indicative of an early date.

This site antedates the majority of Irish crannógs hitherto explored(7) and gives important early evidence of the crannóg tradition which, with further accretions and impulses, was to have such a long life in the country. We do not think it necessary to invoke distant cultural connections to explain the Rathjordan crannóg; we consider it to be rather a response to necessity and geographical environment. The "food-gathering" activities which we have postulated as a reason for its building are paralleled by the basic economy of Mesolithic times which has been shown to have strong reminiscences of the Neolithic B culture but it is hardly necessary to argue in favour of direct continuity to account for this site.

One result of this excavation is that studies of the distribution of crannógs based mainly on the more readily recognised sites in lakes must be regarded with caution since we have seen that a crannóg such as this, when covered with peat, may have little or no surface indications to proclaim its existence.

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1. *P.R.I.A.*, 43 (1936), 103-239.
2. *P.R.I.A.*, 47 (1942), 7-76.
5. Raftery, op. cit., 59.
7. Another early site (attributed to the Neolithic B people) is Island MacHugh, Co. Tyrone, excavated by Mr. O. Davies. The island, "which probably was just appearing above the lake before they settled on it . . . had a foundation of branches and sand pegged with short piles." *U.J.A.*, 5, (1942), 16. At Lough Enagh, Co. Derry, the lowest levels of the island settlement were also Neolithic. (*U.J.A.*, 4 (1941), 88-101).