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EXCAVATION AT ‘DATHI’S MOUND’, RATHCROGHAN, CO. ROSCOMMON

JOHN WADDELL

ABSTRACT

The partial excavation of the embanked mound and standing stone known as ‘Dathi’s Mound’ at the royal site of Rathcroghan, Co. Roscommon, confirmed that the mound had been cut from a natural gravel ridge. It also revealed the existence of a substantial ditch within the encircling bank thus indicating affinities with the ring-barrow class. No burial was found but radiocarbon determinations date the construction of the monument not, as traditionally thought, to the fifth century AD but to the late first millennium BC or the early first millennium AD.

INTRODUCTION

A general account of the ancient monuments at Rathcroghan, Co. Roscommon, has been published in this Journal (Waddell 1983). Among the various earthworks one, for at least a century and a half, has been popularly believed to be the burial place of the legendary Dathi, the supposed last pagan king of Ireland. This claim of a royal burial mound seems to have been first recorded by John O’Donovan in 1837 in the course of his work for the Ordnance Survey. He was familiar with a seventeenth-century statement which declared that a red pillar stone marked this grave and he duly noted in one of his letters ‘a small enclosure with a tumulus in the centre, and on the top of the tumulus a very remarkable red sand stone which marks the grave of Dathi...’ (O’Donovan 1837, 87, 1848, 205). Almost a century earlier, however, Charles O’Conor of Belanagare had ignored this monument and placed Dathi in the nearby enclosure which he called ‘Relig na Riogh’ or ‘the cemetery of the kings’; this circular enclosure he described as ‘now remarkable for Nothing more than being the Repository of our Heathen kings, especially Dathias, the last of them, whose corpse was carried thither from the foot of the Alps, in the year 425’ (O’Conor 1753). Indeed in 1844, O’Donovan in writing of the standing stone did confess that ‘tradition at present has no recollection of its marking the sepulchre of Dathi’.

Samuel Ferguson (1872) who published a view of the monument thought probable that this ‘little mound’ and standing stone did indeed mark the last resting place of that royal individual and thereafter popular belief in this legend seems to have been widespread (Cooke 1903, 14; Sharkey 1927, 56) though not unanimous. Knox (1914, 36) published an inaccurate plan, called it ‘Dathi’s Monument’ and professed a belief that the identification was erroneous. Whatever about this lack of unanimity, the supposition that here was the royal interment offers a possible explanation for at least too old excavations on the site. Apart from the re-setting of the fallen pillar stone in the mid-nineteenth century (below), the first exploration seems to have occurred in the late nineteenth century and R. A. S. Macalister engaged in some investigation there in 1913 (Macalister 1928, 179).

The monument has been variously described: according to T. J. Westropp (1901, 642) it was ‘a small fort with a foss and a great stone, and others such as O’Donovan, Ferguson and Knox noted a small tumulus in addition, of course, to the prominent standing stone. Macalister dug around the stone in 1913 and reported ‘the mound is not a burial mound at all, but has been scarped out of a much larger easter. There is no trace of any burial under the pillar, and we must infer that this, like the so-called Lia Fail at Tara, was an inauguration stone’. Given the conflicting views on the nature of this monument, limited excavation was undertaken in 1981 with the intention of determining its nature and date. Before excavation it appeared as a very low, embanked tumulus (Fig. 1; Plate 1) surrounded by a centrally-placed standing stone and with opposed entrances in the encircling bank on the east and west. A field-bank skirted the mound and was superimposed on the northern half of the enclosing bank. Clear traces of an old excavation were visible on the south: part of the edge of the mound had been dug away and some upcast had been thrown on top of the adjacent section of the bank. The monument had an overall diameter of approximately 35m. It is situated at about 135m. above O.D. and the local soil is a brown earth on limestone glacial drift. In fact the monument was deliberately located on the northern end of a small, low, trapezoidal gravel ridge some 135m. long and about 30m. in maximum width; it is one of several such ridges (with a north-south axis) on the Rathcroghan plateau. Rathcroghan mound lies on slightly higher ground to the north and the prominent mound of Carnfree is just visible on the horizon to the south-south-east some 5km. away.

THE MOUND AND THE STONE

Excavation commenced with the intention of exposing at least two segments of the surface of the mound (which Macalister had claimed to be natural) as well as examining and sectioning the enclosing bank at several points including its eastern entrance. On removal of the humus the exposed surface of the mound, which had a diameter of about 95m., presented no archaeological features (Fig. 2). Stratification here consisted simply of c.10-15cm. of humus on hard stoney gravel, apart from the immediate vicinity of the pillar stone where the gravel was more or less exposed thanks to the activities of countless cattle who favoured the monolith as a scratching post. The gravel of the mound appeared as a compact mass of poorly rolled stones with a little clay, identical to that of other parts of the ridge as revealed by three test pits dug 14m. to the south of the monument. A small 40cm. square test pit dug into the gravel mound to a depth of 50cm. in the north-eastern quadrant (Fig. 2-X) also confirmed Macalister’s statement that the mound was composed of natural gravel.

As far as can be judged Macalister’s 1913 investigation was confined to an area around the standing stone but the extent of his digging here is unknown. The gravel surface as far as it was exposed on the north-east, in the stone’s vicinity, offered no clue. A 4 by 2m. cutting mainly to the west of the pillar stone revealed, beneath the humus, a very hard and compact surface composed of numerous small stones and gritty grey clay, much, if not all, of which seemed to be redeposited gravelly material from Macalister’s diggings. The extent of this excavation was not apparent on the surface here either. Because of the intractable nature of this gravelly material and because the area had been dug not only by Macalister but at least once before in the mid-nineteenth century when the fallen stone was replaced, no further excavation was contemplated here. Today, the tabular standing stone stands 1-80m. above the surface of the centre of the mound (Plate 2); it measures about 1-35m. in width near its base, 50cm. in width near its top, has an average thickness of 25cm., and its broad faces are now orientated east-west. The stone is a red micaeous siltstone of probable Devonian age and several possible sources occur in Mayo and Roscommon within a radius of some 40km. The most likely source is a major outcrop in the Boyle-Charlestown area just over 20km. to the north-west.

BANK AND DITCH

The encircling bank was examined in some detail only on the
Fig. 1. Contour plan of 'Dauli's Mound', Rathcroghan, before partial excavation in 1981.
Fig. 2. General plan.
south-west (Fig. 3). On the north-east it was obscured by a later field-bank built directly on top of it. This was not excavated but the banks were sectioned on the north and on the east. On the south-west the original bank proved to be an impositional feature: it was composed of clay and many small and medium sized stones. In particular its upper levels, varying from small pebbles to occasional boulders up to 50cm across; its edges were irregular without any inner or outer facing (Plate 3). It had a maximum height of about 30cm and was, on average, 3.30m in width. It was flanked by brown loam with few stones and to the north it simply petered out at the western entrance. The brown loam within and without the bank was superficially identical and the initial impression that the mound was simply embanked seemed likely to be true. However, sectioning of the bank and the internal area revealed the presence of a substantial internal ditch. Two sections were cut on the south-west (Fig. 4, W-o; Fig. 3, C-D). Profile C-D is the most informative: layers 2 and 3 form the stoney bank. Between layers 3 and 4 a very thin line of flecks of red oxide with some patches of grey gley (2 to 3mm thick) below represented the old ground surface. No old turf line was apparent. Very small fragments of charcoal occurred sporadically in a 15cm thick area in the lower part of the stoney bank (3.5cm above the old ground surface and at an approximate depth of 25cm below the original summit of the bank, the top of layer 2). A sample of this scattered charcoal was collected from an area about 100cm by 100cm and provided a C14 determination of 1940±70 BP (GR11429). Excavation here between the stoney bank and the mound produced the presence of a broad external ditch cut into the gravel. It had a maximum width of just over 3m and was about 60cm in depth; its sides sloped to an irregularly stoney base about 30cm wide (Fig. 3). Apart from a few stones in the lower part of the ditch, the fill consisted of an homogenous and more or less stone-free clay. While some of the stones near the bottom of the ditch could have collapsed from the bank, those in the very base were firmly set in the natural gravel. Profile W-o (Fig. 4) was cut in a broadly similar sequence; thus here, of course, as Fig. 2 shows, the bank was just petering out — several small stones in the section presumably representing its northernmost point. A very thin layer (3) 5-15mm thick, of brown clay with frequent flecks of iron pan partly below these stones may indicate the original ground surface. This layer, the stones and a thin line of gravel (10-14mm thick — layer 2) overlaid an otherwise more or less homogenous deposit of brown clay-loam (Fig. 5a). Only layer 5 filled the ditch was slightly different, having a heavier putty-like quality but its limits were difficult to determine and it merged imperceptibly with layer 5. The corresponding section on the east (o-E) was the same (Fig. 4) but for an ill-defined deposit of heavier clay (5a) in the upper fill of the ditch and a greater thickness of brown clay-loam in the area of the bank. The latter, in part at least, is due to a later earthen field bank (visible in Plate 1) superimposed on the northern perimeter of the monument. This section of the field bank in turn supported a more recent barbed wire and timber fence which traversed the site (one post of which is visible in the section). On the north this later field bank has also complicated the section of the original bank and ditch (o-N). A narrow 2cm thick lens of grey gley with flecks of iron pan represented the old ground surface but only a regular deposit of gravelly stones and loam (and, possible, a few boulders) could be identified as the likely remains of the bank. As elsewhere, much of the fill of the ditch was indistinguishable from the loam content of the bank; one exception, however, was a large irregular deposit of gravelly material (7) with, above it, a narrow layer of humic material only a few millimetres thick (dashed on section and possible remains of the bank) the section through the bank on the south (S-x) also shows the later deposition of material on the original bank. (The plan, Fig. 2, merely shows the stoney surface of layers 2 and 8 when exposed.) Here, the later, stoney, deposit (8-bb) comes from an old excavation noted by Knox (1914) and also clearly visible in Plate 1. This investigation cut a substantial segment, some 9m across, out of the natural gravel mound and, judging from some fragments of a 19th century glass bottle and a part of a wine glass c.1870 from this disturbed material it may have occurred sometimes in the latter part of the last century. Indeed it is tempting to think that it may have been inspired by Sir Samuel Ferguson's 1872 promulgation of the belief that this monument was the burial place of the celebrated Dathi.

The lower levels of the original bank in this southern cutting (layers 2a and 3; S-x) contained very small and scattered fragments of charcoal and these, collected outside an area measuring about 2m by 0.80m, provided an amalgamated sample which provided a C14 determination of 2120±25 BP (GR11220). A third C14 determination was obtained from a sample of charcoal collected near the eastern entrance. A subrectangular area approximately 6.70 by 5m. was briefly examined: on removal of some 25cm. of humic clay of gravel and small stones on the south appeared to mark the end of the bank. Small, scattered fragments of charcoal in the clay and sparse roots of the upper 12cm. of this feature produced a date of 1825±30 BP (GR11430). The detouring of the rest of this entrance area and the trawelling of the exposed surface to a depth of just over 25cm. or so below the present ground surface revealed a featureless expanse of brown clay or clay loam with no indication, at this level, of internal ditch; this area was not examined further.

A metre wide section was cut through the earthen field bank, part of which was superimposed on the northern edge of the site. This cutting, 6m. east of 'Dathi's Mound', merely revealed an homogenous dump construction and provided no indication of date.

FINDS

No artifacts were found which were demonstrably contemporary with the late prehistoric date of the monument. The bulk of finds were inconsequential objects mainly from the surface of the scoured gravel mound: these included bits of cartridge shells, a few fragments of modern glass, a number of iron nails and very small, anomalous, iron fragments, all from the lowest levels of the humus on top of the natural gravel. The surface of the monument had been heavily poached by generations of cattle and, on the gravel mound, all finds had been trodden into its surface. Of some archaeological interest were a bronze pin, two post-medieval pot sherds, fragments of two clay pipes, some thirty small pieces of flint and chert (rooswaste), and a few stone chips. The bronze pin (Fig. 5a) is a medieval stick pin of circular cross-section with characteristic swelling. It is in an extremely fragile condition and its surface is much damaged; its length is 79mm. and its maximum width is 5mm., the irregularly rounded top appears to have been damaged and the upper part of the stem bears a decorative design of shield-shaped motifs and pendant triangles*. It was found on top of the gravel mound in the south-western quadrant, about 7m. south-west of the pillar stone. A somewhat similar pin with a bulbous head comes from a miden at Rosspenna, Co. Donegal (Welsh 1902, 227, Fig. B). Part of the stem of a clay pipe (with the inscription 'OLD ALLEN' within a chevron band) and part of the stem and bowl of another plain specimen (Fig. 5: 2-3) also came from the top of the gravel mound in the north-eastern quadrant as did two small flatware bowls of brown post-medieval pottery (Fig. 5: 7-8). The stone material comprised about a dozen nondescript stone chips and almost an equal number of equally nondescriptive chips of chert. Most of the twenty-six flakes are waste flakes or chips, of brown, or whitish flint, but two are small irregularly made scrapers of brown flint with some very slight retouching, both stray finds in the north-eastern quadrant (Fig. 5: 4-5). One small fragment of whitish flint (Fig. 5e) came from layer 4 beneath the bank in the trench cut through that feature in the south-western quadrant (Fig. 3, C-D) and predates the monument. The rest were all found just below the humus or on the surface of the gravel mound and all but two came from the north-eastern quadrant where they were found either on the gravel mound or the surface of the bank. The impression given by this rather localised
Fig. 3. Plan and section of stoney bank in south-western quadrant.
Fig. 4. Sections.

1. Humus.
2. Bank: fine stoney dark brown earth 7.5 yr 3/2.
2a. Bank: dark brown clay loam with stones 10 yr 3/2 or 4/3.
3. Old ground surface (with section S-X dark brown loam 5 yr 3/2).
6. Stoney gravel with boulders and some brown loam 10 yr 5/2.
7. Ditch: gravelly deposit with small stones.
8. Humus with large stones.
9a. Stone free loam 10 yr 4/3.
△ C14 sample.
Fig. 5. Miscellaneous finds: 1. Bronze pin
7-8. Post-medieval pot sherds.

Plate 1. Aerial view of ‘Dathi’s Mound’.

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Plate 2. Standing stone from west and south.

Plate 3. Stoney bank from west.
Plate 4. North-eastern quadrant from east.

Plate 5. ‘Ratherghan Mound’ and enclosure (53) from north-west.
distribution is that these flints represent some activity somewhere in the vicinity (perhaps to the north or east) and perhaps found their way onto the monument as part of the material from the now degraded field bank on its northern perimeter. A number of fragments of bone were also found - all but one trodden into the surface of the gravel mound mainly in the north-eastern quadrant. In two dozen cases these were small unidentifiable pieces of animal bone or merely stray teeth of horse, cattle and sheep or goat. However, five minute and unidentifiable fragments of burnt bone were found, also stay finds at two points on the gravel mound surface, about 75cm. apart and about 2m. north-east and east of the standing stone. The largest fragment of bone recovered was an unburnt fragment of the proximal end of a horse radius, found at a depth of 18cm. below the surface in the end of the stone bank at the southern side of the eastern entrance. If not somehow trodden into the remnant of the bank at this point, this bone could conceivably have been incorporated therein during its construction.

**Palaenological Evidence**

Both the alkaline quality of the local limestone soils and the nature of the monument (in which materials were redistributed in the construction of the bank and the ditch) suggested that it was an unsuprising site for any attempt at pollen analysis. However, it seemed desirable to try even a partial assessment of the contemporary environment of the area. A small number of samples were studied by Mrs. Margaret Cruickshank who contributed the following report:

**Pollen Analysis (Table 1)**

Gravely limestone boulder clay is the soil parent material and two profiles have been analysed as representative of the area. In addition, other soil samples from the ditch infill have been analysed. The soils show no sign of leaching into B horizons, were all base rich, with a high pH in all horizons. Root penetration is deep. Organic carbon contents are low in all but the surface soil samples - and this even applies to the ditch infill, which might have expected to receive enough surface drainage to be waterlogged (this could reduce decomposition of any plant litter grown in or falling into it, so giving a higher organic content; apparently this has not happened).

The pH of 6.9 and 7.6 is high; pollen is well preserved in much more acid soils, with a pH of about 5 being the upper limit. Pollen analysis of mineral soils is not so commonly attempted as it is in peat bogs and lake deposits. Such work as has been done, starting with the pioneering studies of G.W. Dimbleby in the late 1950s, has concentrated on acid soils, from which a history of the vegetation on that site can be inferred. But the situation is quite different in high pH soils, because pollen seems to be decomposed by the greater microbiological activity with which such soils abound (Dimbleby 1957). Of the enormous amounts of pollen falling on the surface, very little may remain and earthworms are usually active and tend to redistribute the pollen through the soil profile. The result tends to be a small residue of rather decomposed material from which some of the less resistant types will be absent. This residue will be distributed in an homogenous way through the soil profile, rather than concentrated in the surface horizons as it is in more acid soils.

Only four samples were collected from the monument, each with a duplicate, in acceptable quantities for analysis (approximately 15 gms. in each sample). The samples came from the trench through bank and ditch in the western quadrant; sample 1 from the upper part and sample 2 from the lower part of the fill of the ditch, sample 3 from the old ground surface beneath the bank and sample 4 from the bank itself (Fig. 3, C-D). In the absence of continuous samples through the bank and ditch infill, the samples analysed cannot be placed in any profile sequence.

All eight samples were prepared initially and pollen recovery was poor, but the duplicates were similar. A second attempt on one each of the four samples, with the addition of a constant amount of exotic spores proved more successful in recovering fossil pollen and allowed a comparison of the concentration of pollen in the four samples. The samples were not dried in advance of preparation in the manner advocated by Dimbleby. From each 0.63 gms. was weighed, the exotic was added (Lycopodium tablets as supplied by Jameson) and 10% hydrochloric acid added to dissolve the tablet and any calcium carbonate present. The sample was then dispersed thoroughly in 4% tri-sodium ortho-phosphate to disperse the clay; this was aided by the insertion of an ultra-sonic probe for two minutes. Then, larger and smaller fractions than the pollen were removed by sieving; this leaves the size fraction 10-125μm behind. It has been found that the use of the probe greatly improves the dispersal of clay, so that it can be removed through the 10μm sieve quite quickly and effectively, leaving very little behind to be further concentrated by removing the silica with 40% hydrofluoric acid. Finally the sample was acetolysed to remove cellulose and then mounted in silicone oil. Two microscope slides were traversed completely and counted, using x10 eyepieces and x40 objective. While much of the pollen was in a rather poor condition an attempt was made to record the particularly degraded pollen as the count proceeded (Dimbleby 1957, 20) refers to the sort of observation which were made. All samples contained charcoal and other plant material, but in three samples there was little pollen (see table). It must be remembered that coarser and finer plant debris could have been present, but removed by sieving. The results are presented as pollen counts and then as % of total pollen. The count totals are based on the complete counting of two slides. Sample 1 contained the most pollen, and 2 had the least. There were four times as much pollen in 3 and 4, but in neither could the concentration be regarded as high. Sample 2 contained the most charcoal, but all samples had more charcoal than pollen. The order of the samples in pollen concentration per gm. is the inverse of the % deteriorated; the richest sample had the least deteriorated and vice versa.

**Sample 1** is the upper sample of the ditch infill. The high concentration is interesting - much higher than in the upper sample in the bank. The pollen is largely non-treec in origin, involving herbs of open habitats, such as pasture (grass, sedge, heather, dandelion (Liguliflorae) and plantain). The little pine could have been blown in a considerable distance; it is not sufficient to necessarily have a local origin. Two rather fresh grains of fit (Abies) were found in the trial sampling, but not in the main analysis. This tree did not grow in Ireland during the post-glacial until it was planted during recent centuries. Some of the grass pollen was rather large, >35μm, i.e. the lower limit for possible cereal pollen. It was noted that almost all of this was in poor condition. In all the pollen groups recorded, the pollen showed a wide range in preservation, and overall this sample has the least % deteriorated among the four samples.

**Sample 2**, the lower sample of the ditch infill, contained very little pollen, the least of all the samples, but it had the most charcoal. It had the largest % of deteriorated pollen, and this applied equally in all the types found. The common pollen types are the same as in the bank samples 3 and 4.

**Sample 3** was taken from a suspected old ground surface where the pH is 7.6. Pollen concentration is low, but is four times that in 4. Since we do not have a continuous profile, it is difficult to know whether this is a high concentration in the profile, confirming the supposition of an old land surface. The pollen types are generally similar to those of 4. One third of the count was recorded as deteriorated and this seemed to affect all types equally. Sample 4, from the bank, contains less pollen than 3, and vastly less than 1, the upper ditch sample.

The very contrasting pollen concentration in the two upper samples requires explanation. As the ditch is at a lower elevation, it could receive a greater percolation input by surface drainage and perhaps have a slightly wetter surface which might trap more pollen than the drier bank, and the possibly wetter conditions might aid preservation. Sample 1 has the lowest % deteriorated pollen and was observed to contain
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Charcoal pollen % is charcoal counted as average pollen size units; these are expressed as a % of total pollen count. This only refers to charcoal between 10 and 125 μm sieve limits.

Pollen exotic % means fossil pollen counted as % of the input of a constant amount of exotic (Lycopodium tablet containing 10850 ± 200 grains). This converts into the last column where confidence limits are not given.

Two groups within the Family: Compositae were recognised - the Liguliflorae and Tubuliflorae types.

Table 1. Pollen analysis results, 'Dathi's Mound', Rathcroghan, Co. Roscommon.
some very fresh pollen. These points and the presence of fir and cereals, all contribute to the opinion that this sample includes some recent pollen, but could also contain old pollen that has survived a longer time. The lower concentration in 4 might be because the bank is drier by being slightly higher; this could increase oxidation, which would aid pollen decomposition. The high % of *Polypondium* and relatively high % of *Caryophyllaceae* are interesting as these have been considered by Dimbleby to be survivors in old soils on account of their resistance (Dimbleby 1957, 25). In the case of hazel, which is also characteristically common in old soils, its presence here could be due to very high inputs of hazel early in the post-glacial (Godwin 1958, Pennington 1965). These should not be regarded simply as soils of very great antiquity, i.e. early post-glacial, but they contain material which could have sunk to an origin - this is quite common. For more pollen in 4 was classed as deteriorated than in 1, and this together with the low concentration/gm and the high % *Polypondium* could point to active decomposition in 4.

Turning now to sample 3, it is difficult to assess this as evidence of an ‘old ground surface’. Dimbleby (1961) and other workers have found that pollen can be very rich in the surface few inches of acid soils, because it is preserved well and not moved down by earthworms. However, the high pH of 6.6 could mean that any initial high concentration has been lost by decomposition, leaving only the most resistant behind; and, it might not have been concentrated on the former surface if earthworms and decomposition had been active at the time of burial. While observing that 3 has four times as much pollen as 4, we must consider whether this is due to severe depletion in 4 or the richness of 3. Perhaps the matrix involves both of these. A profile of samples through the bank would have helped the evaluation of the concentration at this particular level. The pollen types that have survived in 3 could reflect both their resistance to decomposition and also the relative inputs of the various types of pollen initially; one could not infer the vegetation from the pollen content of 3. Any archaeological evidence for the old surface would be important.

In sample 2, the very low concentration is associated with the highest % deteriorated, and with the highest charcoal content. The pollen types are again the survivors of decomposition, and similar to the types found in the bank samples. It would seem possible that erosion from the bank has contributed to the ditch infill, and this could in effect have moved the pollen from the bank into the ditch, so the similarity is not surprising. It does not seem likely that the pollen described above material was brought from elsewhere to fill the ditch.

While little work seems to have been done on pollen in high pH soils, the results do confirm what other authors have found. Dimbleby’s work suggested that a count of 200 grains was an acceptable total to discover most of the types present, and he also advised counting the whole slide. In other words, this count can be regarded as indicating the pollen assemblage present, but it does not mean that this indicates the vegetation from which the pollen was derived. This advised total was reaches in only two counts; to achieve it in the others would require the preparation of much more material and at greater cost. The substantial % of deteriorated pollen appears to be characteristic of soils of high pH. There may be a suggestion of greater pollen concentration at the ‘old ground surface’, but this is due to the residue of a once very pollen rich buried surface or the poor conditions for preservation in the upper part of the bank? Is it possible that soil was dug out to excavate the ditch and create the bank? Pollen could be redistributed by this activity, as it could also by later erosion of the bank and deposition in the ditch. There could have been a great overall loss of pollen that originally entered this site; the residue could have been redistributed by earthworms and along root channels. It is not possible to use this to infer past vegetation.

* * * * * 
Margaret Cruikshank

Identification of some of the charcoal recovered (from the same location as C14 samples GrN 11220 and GrN 11429 - the lower levels of the stoney bank in the southern and western quadrants) has revealed that just over 70% of the identifiable fragments were of *Fraxinus* (Ash) and *Carylus* (hawthorn Quercus* (oak), *Almus* (elder), *Ulmus* (elm) and *Rosaceae* including *Crataegus* (hawthorn) were also represented. Needless to say, these samples cannot be claimed to give any reliable indication of contemporary local vegetation either.

**Conclusions**

This limited excavation confirmed Macalister’s claim that the low circular mound had been scarped out of an esker ridge and the parts of the surface of this mound which were exposed revealed no archaeological features. A few minute fragments of burnt bone were found on the surface of this gravel mound just north-east and east of the standing stone. It is, of course, impossible to say if these fragments ever had any connection with some bone deposit near the stone (which, it will be remembered, had been disturbed on at least two occasions in the past). Before excavation ‘Dathi’s Mound’ appeared to be an embanked *umulus*. However, the discovery of the substantial internal ditch indicates the monument has close affinities with the ring-barrow class. The more or less homogenous and remarkably complete clay fill of the ditch was a puzzling feature: the absence of sitting, of any extensive collapse from the external bank and of clear traces of weathering of the sides of the ditch all combined to give an impression of deliberate filling. One minor detail may be significant: a narrow deposit of stoney brown loam, part of the tail of the stoney bank in section C-D (Fig. 3: layer 2), overlay the fill of the ditch (layer 5). As already mentioned, the dark brown loam of the ditch was virtually identical to the loam content of the bank and here only the stonier quality of this small portion of layer 2 served to distinguish it from the ditch fill on which it rested. Unfortunately, this hint of bank collapse on a filled ditch was not repeated in any other section and the question of the deliberate filling of the ditch remains unsolved.

Partial filling, at least, has been noted at a number of burial monuments. A small ring-barrow at Oran Beg, Co. Galway, had a small deposit of burnt bone placed on the bottom of the internal ditch (Delaney 1970) and a similar monument at Grannagh, Co. Galway, is reported to have contained a number of cremation deposits in its ditch (Raftery 1981). Another ring-barrow at Carbury, Co. Kildare (Site A) contained a deposit of cremated bone in the filling of the ditch about 10cm. above the bank, some 65cm. from the top of the ditch fill (Willmott 1938). The ditch of a Bronze Age mound at Carrowbeg North, Co. Galway, yielded four unburnt burials of Iron Age date which had been placed on about 15cm. of primary silt and covered by over 50cm. of secondary fill (Willmott 1939). This practice of deliberately filling a ditch is known at an earlier date too. The ditch surrounding a pit containing a Collared Urn burial at Gortcorbies, Co. Derry, had been filled with stones (May 1947) and the very shallow penannular ditch enclosing a Cordoned Urn burial at Urbaileag, Co. Antrim, may also have been purposefully filled though there is some uncertainty on this point (Waterman 1968). Thus it seems that the deliberate filling of the ditch at ‘Dathi’s Mound’ is a possibility but it must be emphasized that nothing was found to prove this beyond doubt and just under one-twelfth of the circumference of the ditch was excavated.

Two of the radiocarbon dates obtained (1940 ± 70 BP and 2120 ± 25 BP: GrN 11429 and 11220) came from amalgamated samples of scattered charcoal recovered from the lower levels of the stoney bank. This charcoal is presumably secondary, perhaps transported to the monument from elsewhere, and certainly incorporated in the lower bank during its construction. When calibrated (according to Pearson et al 1986) these two dates at three standard deviations (99% certainty) do overlap and suggest a date in the last two centuries BC. The third C14 date of 1825 ± 30 BP (GrN 11428) which comes from a scatter of charcoal on top of the bank raises other possibilities. Again, at three standard deviations,
this date, when calibrated, at first glance suggests some re-use or refurbishment of the monument early in the first millennium AD (in the third or second centuries), but it and GrN 11429 also overlap. If GrN 11220 is then excluded as too old, a possible construction date for the site as late as the third century or even the early fourth century AD emerges. Neither of these two possible late prehistoric dates for the monument, towards the end of the 1st millennium BC, or in the early centuries AD, are in agreement with the traditional 5th century AD date.

APPENDIX

A note on the Rathcroghan monuments

In 1983 I was able to list forty-nine monuments in the Rathcroghan complex. This, I thought, could reasonably be defined as a concentration of certain types of earthworks just on or above the 400 foot contour on the eastern end of a broad, elevated, limestone plateau. Since then a number of additional monuments have been identified and, no doubt, further investigation will reveal yet more. Since 1983 Herity (1983, 1984) has attempted a survey of a selection of monuments in a rectangular swathe of mid-Roscommon and, in an approach reminiscent of the work of H.T. Knox, has examined some of the Rathcroghan sites and no less than one hundred other monuments in over thirty square miles of supposedly topographically homogenous countryside. Knox, by the way, was the first person to examine Rathcroghan in any detail and relied to a considerable extent on the work of an anonymous colleague sometimes referred to as the ‘Field Antiquary’ who was, in fact, Sergeant Patrick J. Lyons of the Royal Irish Constabulary (Waddell 1987). Knox tended tolard his sometimes useful accounts of specific earthworks — as at Rathcroghan — with discursive comments on other monuments in the locality and elsewhere.

The group of monuments at Carnfree and Rathcroghan are considered by Herity to be the ‘two focal areas’ of his larger complex. Their elevated position and the presence of certain combinations of burial and other ritual sites do serve to distinguish each of these two groups from the rest of the ancient monuments in the vicinity. However, his assertion that the whole 100 sq.km. study area has some special significance is difficult to accept: it does not have a clearly definable topographical character and represents but an arbitrarily delineated fraction of the rolling limestone countryside of Mag na Ai or Maeharte Chonnacht which more or less stretches from Roscommon town to Elphin and from Strokestown to Castlerea. While the name Cruachain in early Irish literature may refer to the area of a royal site (now popularly known as Rathcroghan) it may, on occasion, be used in a wider sense of this rolling pasture land called Maeharte Chonnacht (Hogan 1910, 311). The traditional limits of this particular part of County Roscommon have been recorded by John O’Donovan: ‘It extends northwards as far as Lismacoojil in the parish of Kilmacumiskey; eastwards to Falc; in the parish of Killuckin; westwards from the bridge of Castlerea; and southwards to a hill lying two miles and a half north of the town of Roscommon. The natives of the parish of Baslick call a hill in the townland of Drighagh, in that parish, the navel or centre of the Machaire or plain of Connaught...’ (O’Donovan 1851, 87). It is true that there are no concentrations of ritual monuments like those at Rathcroghan outside Herity’s study area but his assertion (1983, 121) that the density of monuments is otherwise lower beyond this rectangular morsel of the county is questionable too. He notes eighty-one ringforts in his area but an examination of an adjacent 100 sq.km. area to the east (to Strokestown) or to the north-east (to the village of Croghan) will reveal in excess of one hundred ringforts in either area along with several burial mounds, one or more standing stones and other monuments.

The concentration of monuments at Rathcroghan is distinctive but undoubtedly there are other monuments in the general locality and further afield connected in some way with sites in the complex. However, to claim that the monuments in a much larger and ill-defined area have some particular collective archaeological significance does little to advance our understanding of Rathcroghan and, indeed, obscures an already fairly hazy picture.

A number of sites may now be added to the forty-nine monuments at Rathcroghan listed in 1983. Herity has noted an are of a possible circular or oval enclosure to the south of Rathcroghan mound (1983, 130). Not marked on his published map nor present in his list of monuments, it nonetheless may be a significant site. It deserves at least to be numbered for, if ever complete, it would have delimited the immediate environs of the great mound and may have had a diameter of 400 to 500 m. Herity has also drawn attention to two other monuments: a small mound, possibly a burial mound (his Tobarrogh 12) and a small ring-barrow (his Glenballithomas 20) north-east of the ‘Muckloughs’ and south-west of ‘Oweynagat’ 11. More recent aerial photography has also revealed the remains of a circular enclosure, of ringfort proportions, a short distance south-east of Rathcroghan mound. It is just detectable on the ground and seems to have an overall diameter of just over 40m. It lies some 400m. from the great mound (Plate 5: 53).

Following the enumeration adopted in the 1983 schedule of monuments, these additional sites may be listed as follows:

50. Are of large enclosure? south of ‘Rathcroghan mound’?


52. Ring-barrow north-east of the ‘Muckloughs’.

53. Enclosure. Plate 5.

NOTES

1) Excavation took place from June 22nd to July 23rd, 1981. Three persons were employed and additional assistance was provided by archaeological graduates and undergraduates mainly from University College, Galway. The excavation was funded by the Office of Public Works on the recommendation of the National Committee for Archaeology of the Royal Irish Academy. The grant was administered by the National Parks and Monuments Branch of the Office of Public Works.

In the excavation sections, soil colours are indicated with the Munsell Soil Color Chart (1975 ed.) notation.

2) The monument, in State care, is marked ‘Dathair’s Stone’ and ‘Knockannagor’ on the current 1:10560 O.S. sheet 22; it is located 7.5cm. from W., 17.8cm. from S., NGR M 80 83, in Glenballithomas townland.

3) A local resident, Mrs. Nora Scott, recalled this excavation. As a child she remembered a cart load of timbers being brought from Castlerea to support the stone while digging took place around it but she had no idea of the extent or duration of this work.

4) When O’Donovan saw the stone in 1837 he gave its height as 7 feet. Today it stands 1.80m (5ft. 11ins.) above ground-level and the difference of just over 30cm. between these two figures may indicate that it was replaced that much deeper in the ground. O’Donovan (1844, 24) noted that it had been knocked down by cattle. It was clearly replaced by 1852 when Brash and Windle visited the site (Brash 1879) and Ferguson’s 1872 sketch shows it as it is today.


6) Though considerably damaged, the pin shows no trace of bronze disease. After cleaning with industrial methylated spirits, it has been consolidated and protected with a coating of micro-crystalline wax.

7) Herity (1983, 125, 131-2) confuses the natural cave and souterrain identified at least since the time of Charles O’Conor of Belanagare, as the famous ‘Oweynagat’ with two natural limestone fissures or ‘caves’ a short distance to the north.
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REFERENCES
