Excavation at Balnuaran of Clava, 1994

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The Clava cairns have assumed a growing importance in discussions of the Neolithic period in Britain and Ireland. This is because they seem to be where so many different architectural traditions meet. For example, the stone circles surrounding the passage graves echo the arrangement seen at Newgrange in the Boyne Valley, whilst the Clava ring cairns have features in common with the recumbent stone circles of north-east Scotland. The presence of rubble platforms against the Clava passage graves recalls field evidence from sites in Orkney, whilst the occurrence of simple decoration associated with so many of these monuments recalls the evidence of similar motifs applied to natural surfaces in Britain and Ireland and, more distantly, the evidence of megalithic art. Such links may have much to tell us about the cultural developments of the later Neolithic period - and perhaps about the long distance connections forged between social traditions in widely scattered parts of the British Isles - but it has been impossible to discuss these effectively because so little is known about the Clava cairns themselves. The 1994 excavation on the guardianship monument of Balnuaran of Clava was intended to supply some of the basic information on which a balanced asessment can be based.

The work had three main objectives:

1. A first aim was to investigate the complex history of excavation, restoration and repair that has affected the appearance of the monuments since the early nineteenth century. This involved the re-excavation of trenches dug in 1930-31, the records of which pose many problems, some assessment of how far the cairns were reconstructed during that campaign and investigation of how the surviving fabric of the central ring cairn had been affected by nineteenth century digging. This process has been complemented by a new survey of the guardianship monument, the first to record all the earthworks on the site, and by a programme of documentary research on earlier plans of the monuments.

2. A second objective was to resolve the structural sequence on the central ring cairn and the south-west passage grave. Were these monuments built over a long period of time, or were they of a unitary construction? Were the stone circles a primary feature of the monuments, or could they have been a later addition? Were the causeways or 'rays' that link the kerb of the ring cairn to the stone circle an original feature of that monument? And were the ramps of rubble piled against the kerbs of both the excavated cairns the remains of older monuments, a structural device to retain the kerbstones in position, or the result of a secondary blocking when the cairns went out of use? Were the carvings applied to components of these monuments a feature of the site from the outset, or had they been created at some stage after these structures were built? We also hoped to establish whether the space between the central ring cairn

and the stone circle had formed the focus for any detectable activities, before, during or after the building of that monument.

3. The third aim was to establish the absolute date of different parts of these monuments by looking for stratified artefacts and radiocarbon samples. This exercise was directly linked to a programme of soil and pollen analysis, undertaken by Professor Donald Davidson and Dr Geraint Coles respectively.

Excavation at the central ring cairn (illustration 1)

This cairn had been affected by earlier excavation. In 1883 the interior was largely filled with rubble, but by the early part of this century it had been removed without record. The distinctive profile of the monument suggested that the original material of the ring cairn was buried beneath the spoil from that excavation. When Piggott investigated the interior of this monument in 1952 he found a thin spread of charcoal and cremated bone together with a shallow feature which might represent the remains of a damaged cist.

The 1994 excavation avoided the central part of the ring cairn. It incorporated a single section between the two kerbs of the monument, extensive investigation of one of the causeways connecting the outer kerb to the stone circle and area excavation in between the ring cairn and this setting of uprights. It included virtually the entire space in between two of the 'rays' and also took in the position of one freestanding monolith.

This work had two main objectives: to use the existence of the ray to build a stratigraphic bridge between the outer kerb of the ring cairn and the circle of monoliths which surrounds the site; and to ascertain the character of any activities which might have taken place in between the ring cairn and the stone circle. The layout of the excavation was also designed to investigate the hypothesis that the line of the causeways might have perpetuated radial divisions concealed within the material of the cairn.

In the event it was possible to establish the chronological relationship between the main structural elements of the site. When the modern surface of the ring cairn had been removed, it soon became apparent that the line of the ray most probably did continue the course of a structural division in the building of the monument. That ray abutted the outer kerb of the ring cairn, although the crucial relationship had been disturbed in the late nineteenth century when the faces of the kerbstones were cleared in order to look for cup marks; in any event the kerb had evidently been dislodged as a result of still earlier disturbance. At the same time, it was clear that one of the monoliths of the stone circle was retained by the material of the ray. Like the kerb itself, it had been bedded in a very slight socket and would not have stood without additional support. It follows that the main structural elements of this monument must have been built together.

At a more detailed level it was possible to establish how the monument had been constructed. The old land surface included a scatter of charcoal, most probably from the initial clearance of the site before the structure was built. The core of the ring cairn was made up of enormous flat blocks, some of them glacial erratics, which formed a level raft beneath the later monument. The inner kerb was then constructed and the space between it and the blocks was filled with rubble. The same probably happened with the outer kerb, but as this had been displaced it was impossible to investigate their relationship without damaging the monument. The kerbs would not have have been necessary until the upper filling of the ring cairn was added, as this was the only material that would need suporting. In the excavated area it consisted of a mixture of boulders and larger blocks with a break in its composition extending along the same axis as the external causeway. Although the same division could be detected in section, there was no revetment wall along this line.

The material of the ray showed a preference for slabs in its lower levels and boulders towards the top. There was no clear distinction between the two deposits, and again this feature was certainly not a wall. Both kinds of material were used to build the section extending as far as the monolith, but beyond it only boulders were employed - there was no evidence that the two sections of causeway were of different dates from one another. It is possible that similar material had once been used to build a ramp against the outer face of the ring cairn, but this area had been badly robbed. On the other hand, a thin layer of sandstone slabs could still be traced just outside this kerb and since no stones of similar dimensions could be found inside the monument it seems unlikely that this was material that had fallen from the cairn. Because so little survived it was impossible to establish the relationship between this ramp and the causeway, but it is likely that they were built at the same time.

In summary, it seems as if this part of the monument was organised about an axis extending from the stone circle to the centre of the ring cairn. The discovery of a fourth ray surviving as a low earthwork outside the excavated area suggests that this arrangement was quite common. The excavated alignment conected the only piece of conglomerate in the stone circle to the one piece of this material in the inner kerb of the ring cairn. Where the ray met the outer kerb we found the greatest concentration of cup marks. Some of these would have been concealed by the material of the ray and probably by that of the ramp.

The area in between the ring cairn and the stone circle had been very badly disturbed by trees, some of which are shown in photographs taken in 1931. This made excavation difficult, but repeated cleaning revealed only two features in this area. The most prominent was of course the monolith, which was ringed by a low mound of earth and stones. This may have helped to stabilise the upright, but it was actually bedded in a substantial socket and packed with a filling including further boulders. Although the mound may have been a prominent feature of the site, it probably consisted mainly of upcast. Because the stone had to be propped during excavation, it was not

possible to investigate very much of its socket. Even so, fragments of charcoal were found within its packing.

The main focus of activity was between this monolith and the unexcavated ray. It was in this area that nearly all the artefacts were found. These consisted of sixty pieces of worked flint and quartz. Their distribution seems to focus on a rectangular setting of flat slabs. Below this feature and extending into the area around it was a more compact distribution of fragments of cremated bone and pieces of charcoal. This material resembles the deposit found in 1952 in the centre of the ring cairn and a similar deposit from a monument of the same type at Culdoich. There was no sign of a burial pit and, as on those sites, it seems likely that the material was spread on the original land surface.

Two sets of samples were taken from the central cairn. One group, which will be studied for soil micromorphology and pollen, came from the buried soil beneath the heart of the ring cairn. The other was from the land surface sealed by the ray.

Lastly, the excavation also encountered a section through the ray dug by Kathleen Kennedy. This was an extremely irreguar trench which had extended beneath the earthwork into the fluvio-glacial gravel where it revealed a large erratic. It is clear from Kennedy's records that she regarded this as a component of the prehistoric monument. Again this trench is shown in a photograph taken in 1931. As at the south-west cairn, it is clear that Kennedy did not understand the geology of the site.

Excavation at the south-west cairn (illustrations 2 and 3)

Two small areas were excavated, one inside the central chamber and the other on the external ramp just north of the entrance to the monument.

Work in the chamber posed certain problems because the nature of the 1931 excavation was not known in any detail. Nor was it clear from older accounts whether any stratified deposits still remained in this area. This was particularly troubling as the main objective of this work was to identify Kathleen Kennedy's 1931 excavation, to reopen her trench and to sample any undisturbed layers through which it had been dug. Thus work on an extensive scale was not an acceptable option.

Kennedy's records are less than clear about the position of her excavation. No plan survives, although we have a brief written summary of her results and a rather schematic drawing which records the layers in the chamber and the profile of several of the orthostats. On the basis of that information we examined an area in the southern part of the chamber and here we found two features that correspond precisely to elements mentioned in her written summary: a shallow disturbance extending across most of the chamber floor which had been filled with sand, and a deep, narrow trench filled with sand and rubble at the foot of two of the orthostats. The layer of sand corresponds to an area of superficial disturbance shown in a photograph of the 1931

campaign, whilst the deeper trench is seen in another photograph taken at that time. Unfortunately, these pictures show such limited areas of the chamber that it was impossible to identify their subject matter until our own work was complete.

Kennedy claimed that she had found a complex series of floors inside the south-west chamber, but in this she was mistaken. A lens of sand survived beneath the deposits laid down to protect the site, but below this was an organic layer rich in charcoal which sealed a level of sandy gravel. The latter was not part of the chamber floor as Kennedy supposed. In fact it was the surface of the fluvio-glacial gravel which underlies the monument. Nor were the other two layers correctly identified in 1931, as investigation of these deposits by Professor Donald Davidson showed that they were the remains, not of the chamber floor, but of the old land surface on which the cairn had been built. His work suggests that the layer of charcoal resulted from an episode of clearance, most probably when the monument was built. This interpretation will be tested by soil micomorphology and by a programme of pollen analysis. Two tiny fragments of cremated bone were found in the chamber, one on the old land surface and the other in the filling of Kathleen Kennedy's trench.

Work outside the cairn was much more straightforward. It established that the kerbstones had not been set in sockets when the monument was built. In fact they leaned back at about ten degrees from the vertical, a feature that they share with many of the kerbstones which escaped the 1931 restoration of the monument. The ramp was of unitary construction, but contained more quarried slabs in its lower levels and more boulders of local origin towards the surface. It seems to have held the kerbstones in place, as Audrey Henshall originally suggested in her account of the Clava cairns. There was no evidence for the two levels of rubble described in Kennedy's account and she may have been correct in distinguishing between the built structure which remains in position today and the rubble that had fallen from the cairn, which she replaced. Certainly, the rebuilt monument includes boulders of a different size from those in the excavated area. A few fragments of worked quartz were discovered in the material of the ramp, and soil and pollen samples were taken from the ground surface on which it was built.

This work also established that the decoration was an integral feature of the monument. Cup marks were identified at the base of two orthostats in the chamber at a level where they would have been masked by the floor and by the upper part of the buried soil. The decoration where the chamber meets the passage was more complex than is usually supposed and includes at least three circles of the type found on natural surfaces in the landscape. Close examination of the structure of the chamber also showed that some of the slabs used to built the corbel had been carved during, or even before, the creation of the monument. Up to twenty cup marks were identified on these slabs and also on top of one of the orthostats of the chamber. Most of these carvings were on the upper surfaces of the stones.

Summary

The 1994 excavation at Balnuaran of Clava achieved all its main aims. It shed light on the modern restoration of the monument and on the nature of the largely unrecorded excavation undertaken in 1931. It suggests very strongly that both the south-west passage grave and the central ring cairn were unitary constructions and it has provided four exposures of the Neolithic land surface that can be investigated for environmental evidence. Equally important, the excavation has produced samples of well stratified charcoal which will help to date these monuments. Where problems of interpretation still remain, it is easier to suggest how they might be solved, and those proposals form the basis of another paper.

Illustrations:

1. Excavation on the central ring cairn before the stone structure was dismantled. Note the position of the setting of slabs outside the cairn and the distribution of artefacts, charcoal and cremated bone

2. Outline plan of the excavated areas of the south-west cairn, showing the extent of the work carried out in 1931

3. Outline plans showing the position of the 1994 excavation on the south-west cairn, and the extent of further work envisaged both there and on the north-east cairn.

Acknowledgements

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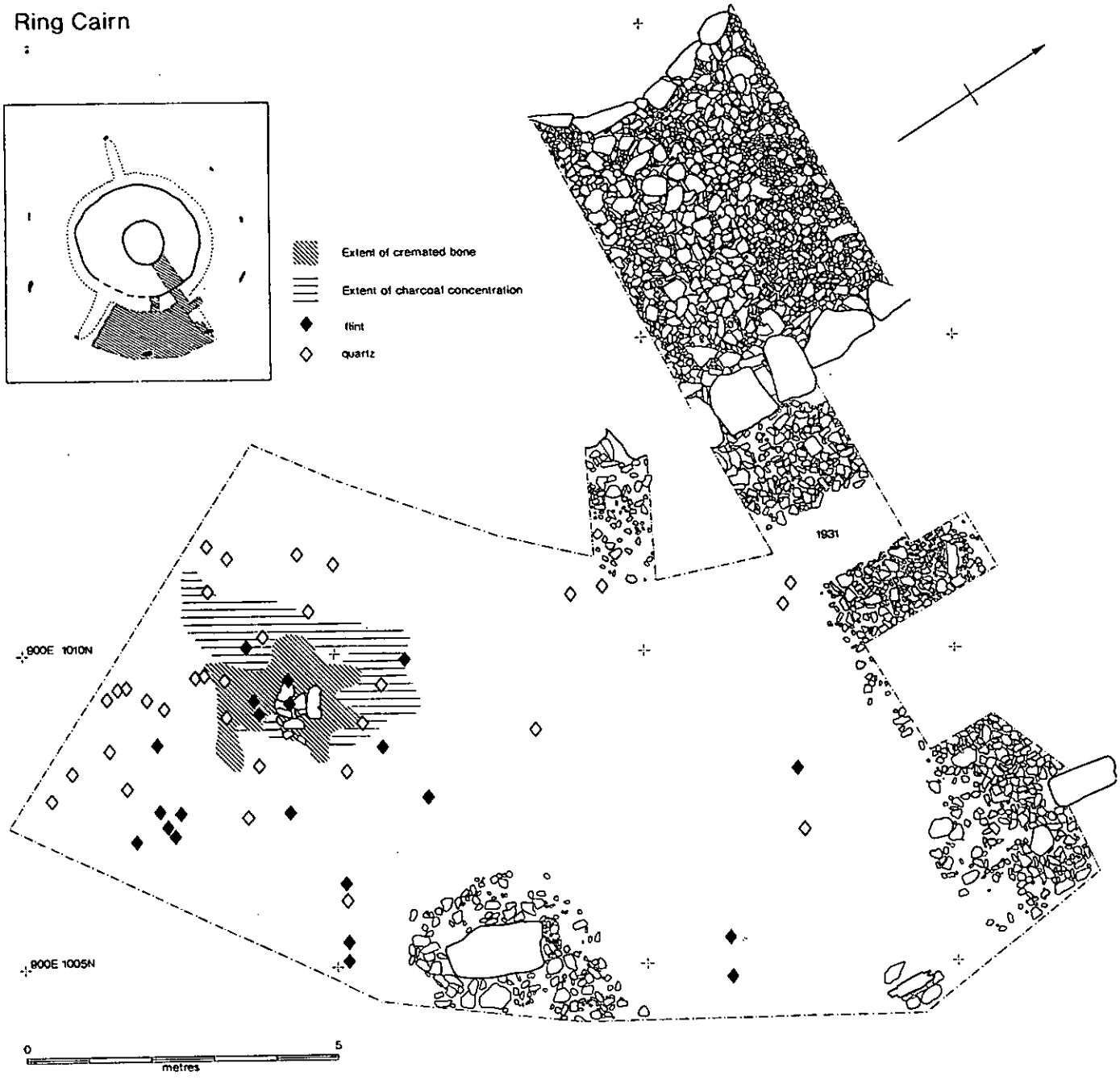
Ring Cairn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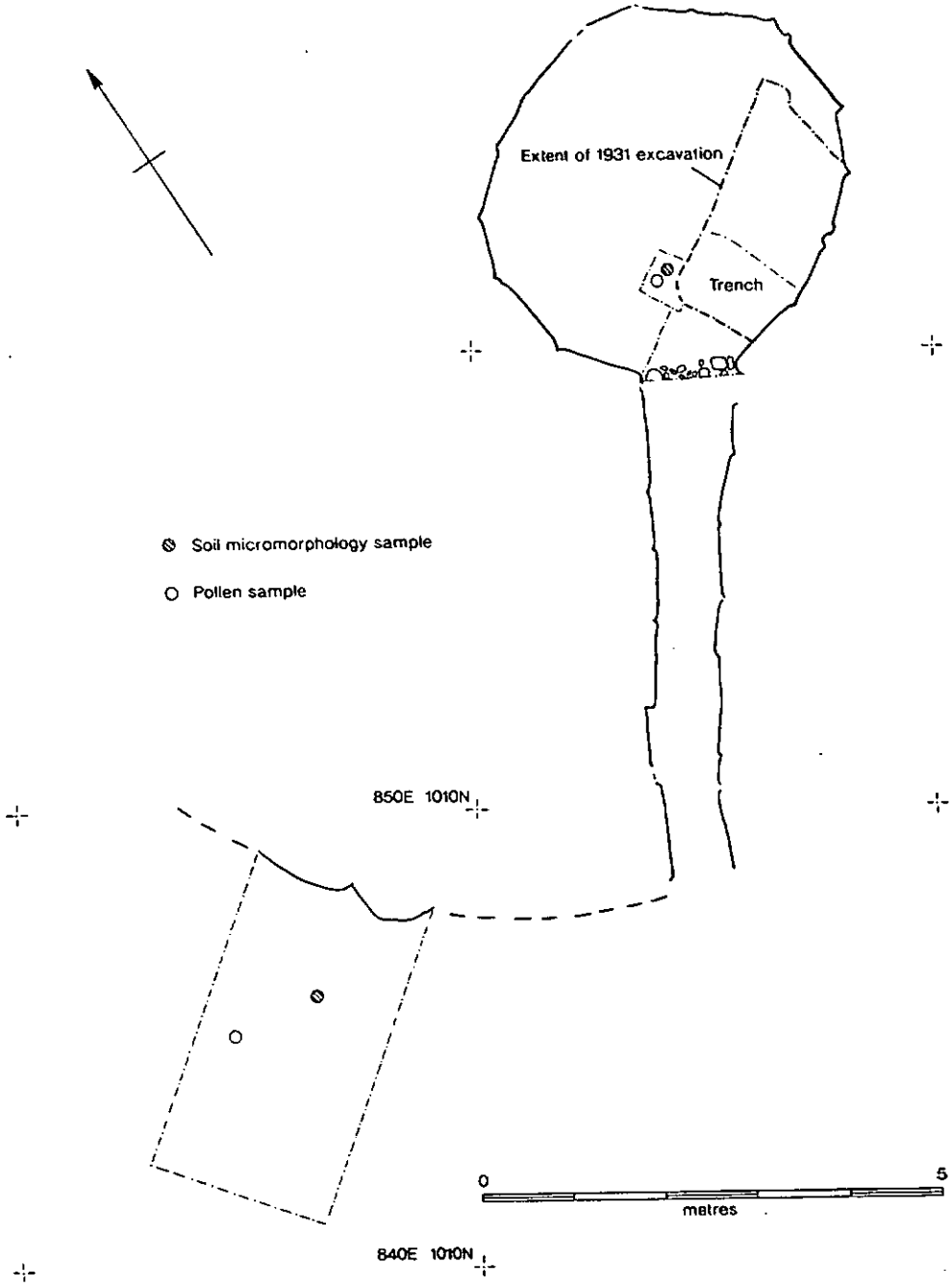
South West Cairn



Balnuaran of Clava