

# The disclosure of sacred ground: structural developments within megalithic monuments of the Clava group

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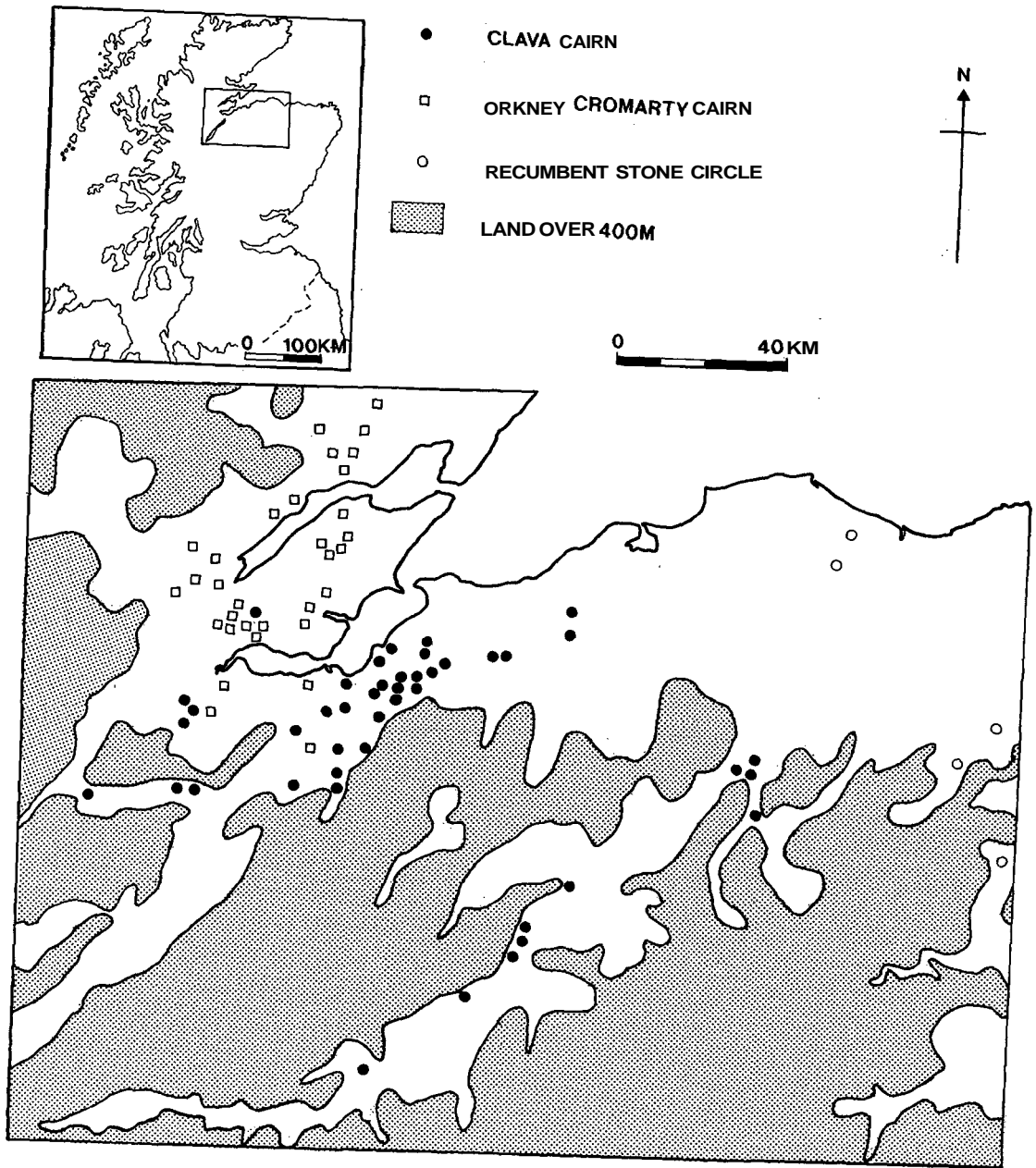
## ABSTRACT

*Only in the Clava group of Neolithic monuments do the conventionally separate traditions of passage-graves and ring-cairns fuse with stone circles and open-air rock art into elaborate standing monuments. The unique combination of these architectural features has led to a variety of speculative schemes aimed at revealing their date and development. However, prior to a recent campaign of research investigations focusing on three cairns at Balnuaran of Clava the monuments were poorly understood. A programme of observations in the field on a large sample of the remaining cairns forms the basis of this new study which proposes a two-phase structural history for a number of the monuments. Subsequently drawing on the results of the recent excavations an overview of the development of the Clava tradition is proposed and considered in relation to megalithic developments in both neighbouring areas and more widely.*

## INTRODUCTION

Excavations within the structure of Neolithic and Early Bronze Age monuments have served particularly to reiterate one point. Frequently they are revealed as composite structures; the ultimate products of lengthy sequences of architectural modifications (Masters 1981, 105-9; Barclay 1989; Bradley 1993, ch 5). Analogies have regularly been drawn with the sequences of contraction and expansion evident in medieval parish churches and cathedrals. The most celebrated prehistoric example remains Stonehenge which had a complex architectural history spanning some 1400 to 1500 years (Alien & Bayliss 1995, 534). Closer to the present study area, the recent excavations within the Balfarg/Balbirnie ceremonial complex in Fife revealed a later Neolithic ring-ditch, which was subsequently buried beneath a composite double ring-cairn, prior to the possible mounding over of the entire structure to form an earthen barrow (Barclay & Russell-White 1993, 119-20). The Clava cairns of northern Scotland consist principally of two distinct structural elements, comprising a ring of upright stones which surround an internal monument of either ring-cairn or passage-grave type (Henshall 1963, 12-39). In a number of specific cases, anomalies recognized by the writer in the architectural composition of the structures and particularly in their relationship to the immediate topography, suggest that the stone circle (if evident) and central cairn were not conceived and built together. Consequently, a case can be made that a number of these megaliths reached their final form as the result of two independent building phases.

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ILLUS 1 Location plan of Clava cairns: neighbouring Orkney-Cromarty cairns and recumbent stone circles are also shown (after Barnatt 1989 and Henshall 1963)

## CLAVA CAIRNS

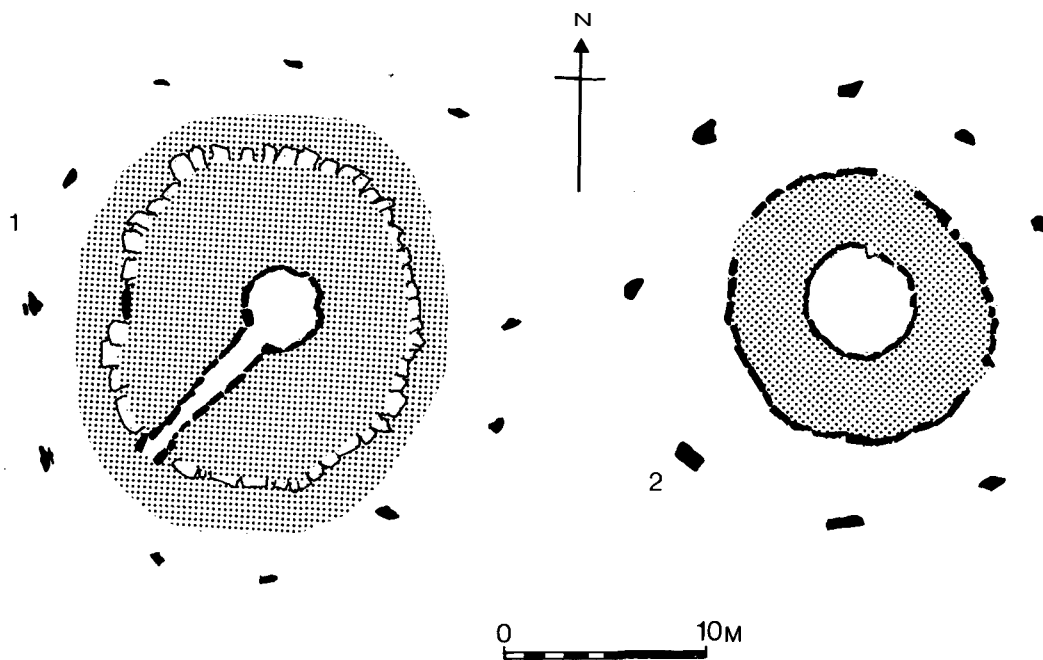
### LOCATION

The Clava cairns are located in two distinct scatters around the Moray Firth: first, on the western coastal plain extending towards the head of the Great Glen and, second, farther inland along Strathspey (illus 1). Forty-eight Clava cairns, comprising 11 passage-graves, 16 ring-cairns and 21 indeterminate sites have been identified in this region, extending over an area of 51 km north/south and 67 km east/west (Barnatt 1989, 92). Nearest neighbour spacing is generally 2-5 km in areas of putative good preservation. All the monuments either occupy or are on the edges of favourable land. Occasionally, the Clava cairns nucleate to form elaborate complexes. This is most pronounced at Balnuaran of Clava where two passage-graves and one ring-cairn are almost contiguous, while eight or more sites are found within a distance of 2 km (Bradley 1996).

### DESIGN

The chambered Clava cairns all belong to the passage-grave series found scattered across much of Atlantic Europe (Renfrew 1981). The 11 Clava examples are a coherent group characterized by a passageway terminating in a circular chamber which was shrouded beneath a round cairn between 9 m and 19 m in diameter (illus 2). The monuments were generally bounded both internally and externally by a chain of large boulders or upright slabs and in a number of cases a pair of parallel orthostats project the entrance to the tomb beyond the kerbed peristalith. Directly abutting the kerbstones of a number of Clava passage-graves are rubble ramps or platforms. On the basis of records from minor excavations at Balnuaran of Clava in 1930 and 1931, Barclay (1990, 29) suggested that the platforms surrounding the Balnuaran and *Corrimony* passage-graves may relate to a later phase of activity associated with the 'closing' of the monuments. However, recent excavations at Balnuaran of Clava have revealed these to be integral to the support of the kerbstones which have little or no sockets (Bradley 1996). In most instances the cairn material has been removed, reducing the structures to foundation plans of orthostats, but where it remains intact, consists largely of water-rounded boulders and cobbles. Today, none of the passage-graves retains a roofed chamber and few have any remaining lintels across the passages. Nevertheless, it is likely that in their original form there existed a semi-corbelled ceiling crowned with a large cap-stone as is evident in the intact vault of Camster Round 100 km to the north (although see Barclay 1992 for an alternative view). The orientation of the passageways is fairly uniform, ranging from slightly east of south to just west of south-west and focuses on important solar and lunar events (Burl 1981a; Scott 1991; MacCarthy 1995). This directional emphasis is reinforced by the arrangement of the kerbstones which are graded to rise in stature towards the entrance-ways.

The 16 Clava ring-cairns share close structural affinities with annular stone monuments across the upland zones of Britain (eg Ward 1988; Barnatt 1990) and particularly elsewhere in the eastern regions of Scotland (Kenworthy 1972; Barnatt 1989, 79-91). They are defined by two concentric circles of monumental kerbstones retaining a ring-cairn of small cobbles and boulders (illus 2). As with the passage-graves, the kerbstones increase in magnitude towards the south-west quadrant and may also be surrounded by low rubble banks. The structures are unroofed and have no formal means of access evident today. With the exception of Gask, which has a diameter of 26 m, their external dimensions are closely comparable with the passage-graves, while the enclosed court is generally larger. In a number of cases these spaces are known to have been infilled in prehistory (Piggott 1956, 196; Barclay 1992, 81), a feature apparently still evident at the notably intact Grenish monument.



ILLUS 2 Well-preserved Clava cairns. (1) Corrimony passage-grave and (2) Culburnie ring-cairn (after Henshall 1963)

The Balnuaran Centre ring-cairn appears to be a unique structure with a number of rubble causeways linking the kerb and circle orthostats (Bradley 1996).

One of the greatest concentrations of stone circles in Britain and Ireland is to be found surrounding the cairns of the Clava group. These outer rings are a defining characteristic of the group and can enclose both the ring-cairns and the passage-graves. As with the kerbstones, the circle orthostats were arranged to rise in height towards the south-western arc of the monument where the tallest often stand 2 m to 3 m high. Barnatt (1989, 92) has characterized these as 'moderatediameter circles' noting that they consist of between nine and 13 monoliths placed c 4 m to 8 m beyond the central cairn and have an overall diameter varying between 15 m and 35 m.

The relationship between the two classes of Clava monument is problematic and in the absence of any firm evidence the ring-cairns have been considered as both derivative (Childe 1935, 52; Burl 1972, 35), and as an integral component of the Clava monument complex (Piggott 1956, 196; Henshall 1963, 27; Henshall 1972, 271). However, there is a possibility of forthcoming radiocarbon determinations from recent excavations on two Clava passage-graves and one ring-cairn and these may provide the first solid indications (Bradley 1996).

### THE RELATIONSHIP OF CIRCLE AND CAIRN

This analysis is concerned with the relationship between the central cairn and its enclosing megalithic ring. The association of stone circles with cairns of some description is commonplace throughout the highland zones of Britain and Ireland, but the encircling of chambered cairns is rare beyond the Moray Firth. In general, the evidence for the relationships of stone circles and passage-graves remains

inconsistent, if not equivocal. The 'great circle' at Newgrange in the Irish midlands was originally suggested as either contemporary or earlier than the passage-grave (O'Kelly 1982, 82), although subsequent excavations suggested that it may relate to the later Beaker horizon (Sweetman 1985). Recent excavations at Maes Howe in Orkney revealed a sizeable stone-hole to the rear of the monument, although its relationship to the passage-grave is again unclear (Richards 1992a, 448); while Sharples (1985, 72) has suggested that the encircling ditch and platform are a later addition. Bryn Celli Ddu passage-grave on Anglesey may have been built over the slighted remains of a henge monument and stone circle (Lynch 1991, 91-101, 339), although it has been suggested that this is in fact an earlier phase of the tomb (Eogan 1983). Elsewhere, excavations within the Hebridean stone circle of Calanais have shown it to be earlier than the internal passage-grave (Ashmore 1995, 32). Beyond Britain and Ireland, Kercado in southern Brittany is known to evince a similar arrangement and here the encircling 'cromlech' is evidently a late Neolithic addition (Thomas & Tilley 1993, 237).

#### CLAVA CAIRNS AND STONE CIRCLES

It is apparent that not all the monuments identified as Clava cairns possess stone circles today, although whether this is a product of unrecorded destruction or an original feature is almost invariably unclear. Henshall (1963, 27-8) entertained the possibility that in certain cases a stone circle was originally omitted, these monuments perhaps being either 'unfinished' or 'degenerate'. At Culdoich (NGR: NH 751 437), Milton of Clava North (NGR: NH 752 439) and Delfour (NGR: NH 844 085) only a single tall monolith outside the south-western arc of these cairns is evident today. Extrapolation from the well preserved sites such as the three at Balnuaran would intimate that these were the sole survivors of an originally complete ring of orthostats (Piggott 1956, 190; Henshall 1963, 371, 375). However, following the collapse of the Culdoich monolith in 1982, a resistivity survey in the vicinity of the cairn failed to locate any further stone sockets (Barber 1982). Consequently, the idea that a single 'outlying' stone may have been an alternative to a full ring in certain cases has been advanced (Barber 1982, 34; Scott 1991; Burl 1995, 112). Nevertheless, as Fraser (1884, 330) noted over a century ago, it is 'a general characteristic of these structures that the standing stones are only slightly sunk into the ground'. Recent excavations at Balnuaran of Clava have confirmed this demonstrating that the monoliths need not even be set in the ground at all (Bradley 1996). Excavations at the structurally similar Loanhead of Daviot recumbent stone circle in neighbouring Grampian also found the standing stones to be retained by a combination of shallow sockets and small cairns and it would seem they would have been unable to stand without this supporting rubble (Barnatt 1989, 290). Therefore, the possibility has to be born in mind that an absence of socket need not necessarily equal an absence of monolith. Accordingly, it is conceivable that the large prostrate slab excavated to the north-east of the Culdoich ring-cairn may in fact be a collapsed orthostat. The excavator found it to be lying on 'a dense cluster of stones', but an absence of socket hindered its identification as a monolith (Barber 1982, 33). It would now seem feasible that these stones are the disturbed remnants of a retaining cairn. In summary, although it cannot be formally demonstrated at present, it is suggested here that a full ring was an original feature of those cairns with only one or a few external orthostats remaining.

#### PREVIOUS STUDIES

The notion that Clava cairns may not be unitary structures is certainly not original. Over a century ago a local schoolmaster believed the monuments to be essentially stone circles (Henshall 1963, 12-

13). Accordingly, the central cairns were regarded as secondary insertions. Prior to a recent programme of excavations at Balnuaran of Clava, the structure of only two Clava cairns had undergone published archaeological examination. However, at Corrimony the excavation strategy was not designed to investigate this relationship (Piggott 1956, 183–4) and at Milton of Clava North the limited extent of the trenches ensured that the relationship remained ambiguous (Sharpies 1995, 4). As a consequence of this, considerations of their structural sequence have remained largely guesswork until very recently. Although burdened by a lack of clear evidence, Henshall (1963, 31; 1972, 271) suggested that the stone circles were an integral and primary feature of the Clava group. Conversely, Burl (1976, 161) argued that some may be composite structures, while the lack of concentricity evident between the circle and cairn at Gask is taken as an ‘indication that the ring-cairn may have been inserted inside an ancient sanctuary’ (Burl 1995, 133). The only firm evidence pertaining to this relationship has been provided by recent excavations on the well preserved trio of monuments at Balnuaran of Clava (Bradley 1996). These investigated the relevant relationship on both the Balnuaran North-East passage-grave and Balnuaran Centre ring-cairn. In each case stratigraphic bridges linking the two structural elements suggest that the megaliths are unitary; the central cairns were constructed in concert with their surrounding stone settings.

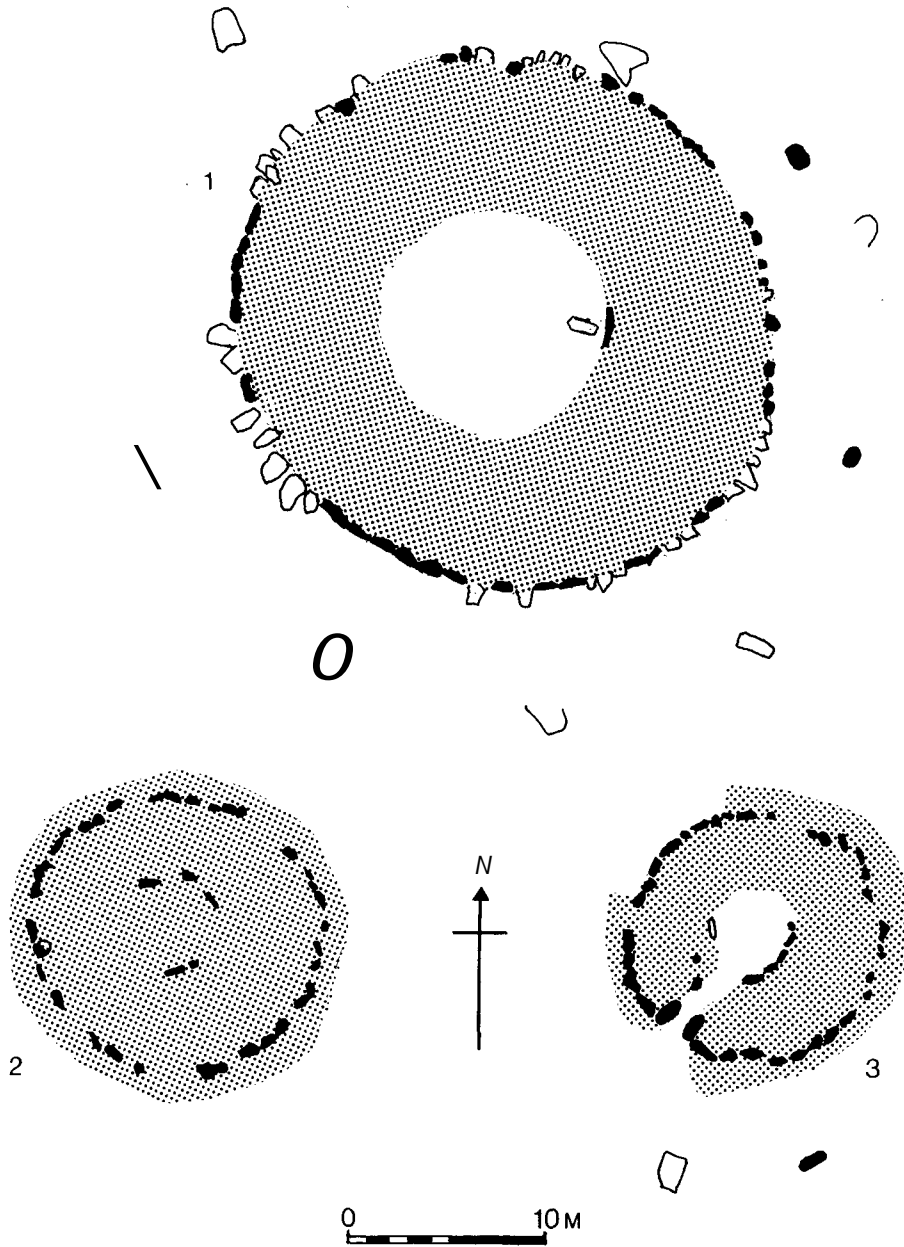
## FIELD OBSERVATIONS

Described below are observations made in the field (Sept 1994–Sept 1995) concerning a number of Clava cairns. The evidence may be divided between two categories of monument: those with evidence of stone circles and those without.

### CLAVA CAIRNS WITH STONE CIRCLES

The Clava ring-cairn at Gask (NGR: NH 679 358) occupies a small step in a hillside, commanding sweeping vistas to the east over Strathnairn. The considerable diameter of the ring-cairn (Gask, at 26 m is 9 m wider than Balnuaran Centre) and its oval plan distinguish it as an atypical member of the Clava group (illus 3). The largely intact south-eastern quadrant of the outer kerb skirts the very perimeter of the break of slope on which it has been constructed. Immediately beyond the kerb, the ground begins to shelve. This determines that the south-eastern portion of the surrounding stone circle has been erected noticeably downslope. It is in fact *below* the ring-cairn, to the extent that a sizeable monolith (c 1.7 m high on the outer side and c 1.1 m high on the inner side) fails to reach above the adjacent and substantially smaller kerbstones just upslope (illus 4). This renders it invisible from the opposite side of the monument detracting from what otherwise would have been an impressive stone ring. While the central cairn rests on a broadly level foundation therefore, the ring of monoliths does not. This distinction suggests that the monument is not of one build and that the architects of the stone circle, constrained by the earlier location of the ring-cairn, were compelled to locate portions of it downslope.

The passage-grave at Dalcross Mains (NGR: NH 779 484; illus 3) lies in the low hills overlooking the Moray Firth and the western coastal plain to the north. The monument is further raised above the local topography by its positioning on a circular hummock generally 1 m to 2 m wider than the passage-grave, beyond which the ground slopes downwards for several metres before leveling. While a small quarry abutting the kerb has clearly altered the micro-topography around the north-western arc of the peristalith, the remaining circumference appears quite undisturbed; 5 m beyond the kerbstones only two stones of the outer ring remain, one of which has fallen. It seems significant that the single remaining upright monolith is standing outside the only arc of the monu-



ILLUS 3 Plans of (1) Gask, (2) Tullochgorm and (3) Dalcross Mains (after Henshall 1963)

ment where the ground does not shelve steeply, and consequently would appear to have secured a firm and level foundation. The large collapsed monolith, 'probably more or less over its original position' (Henshall 1963, 374) is located both below the cairn and on the slope, and it is clear that the remainder of the outer ring, when originally in place, would have been similarly placed. At



ILLUS 4 Gask, facing south: the kerbstones forming the outer perimeter of the turf-covered cairn run through the centre of the photograph before bearing off to the right; note the downslope positioning of the standing stone, centre left

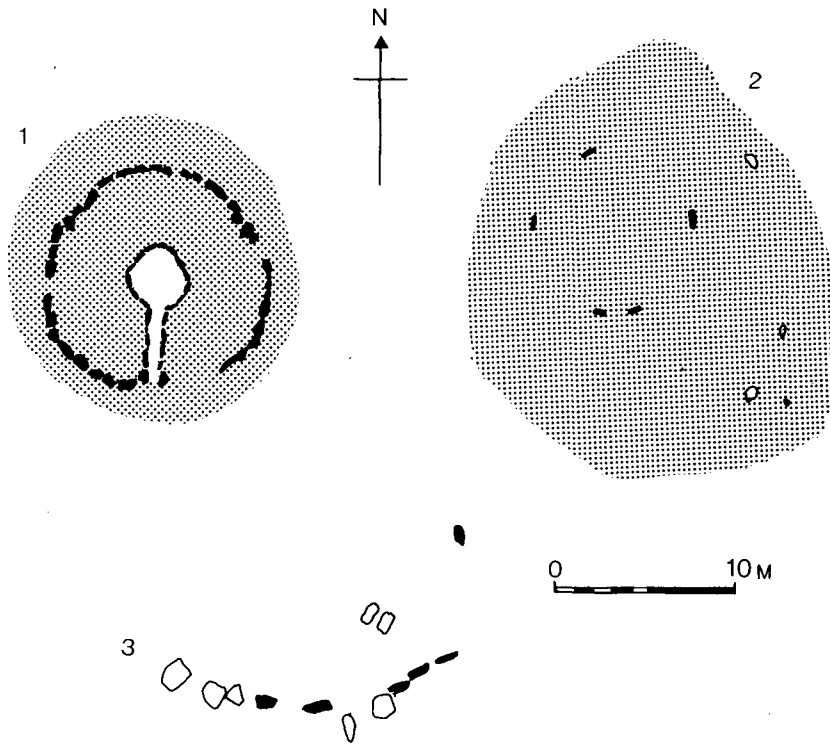
Dalcross Mains therefore, the diameter of the hummock was simply not sufficient to serve as a platform for both a passage-grave *and* an encircling ring of uprights. Again, as at Gask, it appears that the anomalous downslope position of the monoliths surrounding the central cairn was dictated by a choice of site unsuited to this later adaptation of the monument.

A similar, although less pronounced relationship between a monument and the local topography is evident at Tullochgorm (NGR: NH 965 214; illus 3), a cairn of indeterminate Clava type in Strathspey. Although lacking an outer ring today, antiquarian records suggest the presence of one prior to agricultural improvements<sup>1</sup> (Henshall 1963, 386). A small flat-topped rise in an otherwise sloping field provides a natural platform lifting the cairn above its immediate surroundings. Consequently, the ground immediately beyond the southern kerb is substantially lower than around its upslope northern arc. Again, it appears that the circuit of the surrounding stone circle would have been significantly inclined, lying below the level of the cairn on the downhill side. It is important to emphasize that at Gask, Dalcross Mains and Tullochgorm, the two structural elements of the monument do not both rest on a slope. In each instance a broadly level foundation has been chosen for the (earlier) cairn while the circle was draped around it in conformity with the local topography.

#### CLAVA CAIRNS WITHOUT STONE CIRCLES

The passage-grave at Avielochan (NGR: NH 908 167) rests upon the western end of a quite steeply sided knoll in the bottom of Strathspey. Its circular plan, graded peristalith and southerly orientation





ILLUS 5 Plans of (1) Avielochan, (2) West Town and (3) Culduthel (after Henshall 1963)

clearly identify it as belonging to the Clava tradition (illus 5). However, it lacks one vital hallmark: a stone circle. Much of the perimeter of the monument follows the very edge of the natural rise it is placed upon, and it seems clear that the absence of a stone circle is not merely the result of unrecorded destruction. Arguably, the very siting of the cairn on the edge of a sharp incline would have precluded the construction of an outer ring (illus 6). The micro-topographic location of this structure poses the following question. If the stone circles represent an original feature of the Clava tradition, then why was this passage-grave constructed on the summit of a mound where the erection of an outer setting was almost certainly impossible? As at Gask, therefore, it appears that a stone circle was not conceived as part of the original design of the monument.

The probable Clava cairn at Culduthel (NGR: NH 662 417; illus 5) stands on a knoll at the head of the Great Glen. Its relationship to the local topography is similar to that of Avielochan. Again, graded kerbing is partly situated on the edge of a steep incline. No evidence for a stone circle is recorded, nor would one have been likely on the steeply sloping available ground around the cairn. Unfortunately, however, only vestiges of the monument survive and the local topography may have been modified by later human activity. One further cairn appears relevant from a written description: West Town (NGR: NH 622 325; illus 5). Not far from Culduthel at the head of the Loch Ness, it appears to be a Clava ring-cairn and is located 'in a region of hummocky moorland . . . The cairn appears to be about 6ft [1.83 m] high, but as it seems to be built on an outcrop it is probably actually less' (Henshall 1963, 386). Here again, it seems a natural rise has been exploited to accentuate the structure, with the ground falling away beyond its perimeter. There is no evidence for an enclosing ring of upright stones (Henshall 1963, 358), and the description suggests that the reason may have



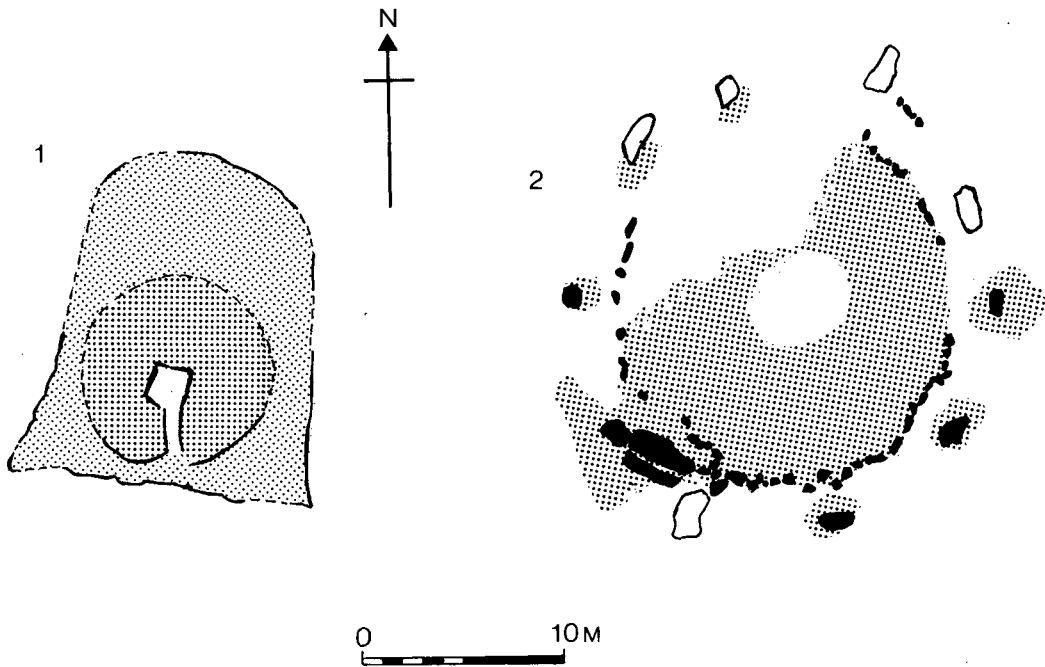
ILLUS 6 Avielochan, facing north: the ranging rod is standing by the kerbstones forming the outer perimeter of the monument

been prohibitively uneven topography. Accordingly, at Culduthel and West Town a similar case to that of Avielochan may be proposed: their locations were selected prior to the development of the stone circle tradition. Of course, erosion may have altered the micro-topography around some of these cairns to an unknown and possibly significant extent. However, at Gask this question is not an issue since the crucial monolith is still standing and no antiquarian accounts of its movement or re-erection are known.

## DISCUSSION

### MEGALITHIC DEVELOPMENTS

The purpose of the foregoing field descriptions has been to draw attention directly to two factors. First, a significant number of those few Clava cairns where no stone circle is recorded occupy sites where the construction of an outer ring may simply have been unfeasible. Second, at a number of other sites, the central cairn is placed on a level foundation while the stone circles are draped around the monument, rising and falling at the command of the topography. To these observations two further points must be added. Site visits to 30 of the 48 Clava-type cairns demonstrated (where preservation allowed) that the above monuments are all anomalous. In all but the few exceptions discussed above a level foundation had been selected for both a cairn *and* a circle and in no cases were they both on a significant slope. Accordingly, it can be surmised that the downslope portions



ILLUS 7 Plans showing (1) the primary round cairm at Tulach an-t'Sionnaich which was subsequently altered to form a larger heel-shaped structure (after Davidson & Henshall 1991) and (2) Loanhead of Daviot recumbent stone circle (after Barnatt 1989)

of these monuments occurred as a function of local topography and were not considered a desirable or intended outcome of their design. Finally, while there is solid evidence of Clavacairns without stone circles, there is nothing firm to suggest the existence of Clava circles without a central cairn.

Bearing these points in mind, a sequence in the development of the Clava megalith building tradition may be suggested. Reconciliation of the evidence presented here with that recently obtained from excavations at Balnuaran of Clava suggests that the stone circles represent a *later but overlapping* tradition with that of cairn construction. In other words, older monuments such as Gask and Dalcross Mains were altered to conform to the new priority of an outer ring of upright stones, while at Avelochan among others, the unstable and erratic topography may have prohibited their erection. Alternatively, the absence of a circle at any site may simply have resulted from the abandonment of that monument by the time the tradition had developed. Elsewhere, later structures such as Balnuaran of Clava North-East and Centre were conceived which from their very foundation incorporated the outer ring of standing stones.

When considering these modifications, it is instructive to place the Clava cairns in their wider regional context and consider megalithic developments in adjacent areas. The Orkney-Cromarty group of passage-graves are immediate neighbours to the north whose distribution extends southwards from the Orcadian archipelago as far as the Moray Firth. Radiocarbon dates from four of these monuments in Caithness and one in Sutherland place their initial construction and use in the first half of the fourth millennium BC (Davidson & Henshall 1991, 83). Structural excavations within a small sample have provided interesting parallels whereby passage-graves originally beneath round cairns subsequently had their external appearance altered through additional architecture. It seems

these embellishments transformed primary circular cairns into 'heeled' or 'horned' monuments as at Tulach an t'Sionnaich (NGR: ND 070 619; illus 7) and Canister Long (NGR: ND 260 442) respectively (as well as quite possibly at Camster Round [NGR: ND 260 440] and Tulloch of Assery A [NGR: ND 068 618]). While cautioning against generalization, Davidson & Henshall have further suggested that 'all [Orkney-Cromarty] chambers were first built with round cairns, and that other forms are the result of later additions designed to elaborate the external appearance or to enlarge the monument. Thus an added straight fa9ade or crescentic forecourt produced respectively a heel shaped or a short-horned plan' (Davidson & Henshall 1991, 55 ; see also Richards 1992b, 73-4).

Scattered throughout much of the Grampian region, the recumbent stone circles are the main group of megaliths lying to the east of the Clava cairns. Architecturally they share many affinities with the Clava group, consisting of ring-cairns enclosed by graded stone circles, but with the additional feature of a large prostrate block placed between the two tallest pillars of the outer ring which was physically linked to the internal cairn (illus 7; see also Burl 1995, 94). A lack of clear evidence has hampered the dating of these complex structures although they have often been attributed to the Early Bronze Age, and considered to post-date the Clava tradition (Burl 1976; Ruggles & Burl 1985). All the Early Bronze Age artefacts recovered from these sites, however, can be argued to represent *termini ante quos* (Barnatt 1989, 91), and more recent suggestions have placed their construction earlier in the third millennium BC (Shepherd 1986; Burl, pers comm). Inadequately published excavations undertaken at Strichen and Berrybrae in the 1970s and 80s yielded Neolithic sherds from the central area of the former and probable Grooved Ware sherds and a flint leaf-shaped arrowhead from the latter (Hampsher-Monk & Abramson 1982; Burl 1979). The interpretation that these monuments are the product of two independent building phases with the ring-cairn element significantly post-dating the stone circle and redefining its function has also been posited (Kilbride-Jones 1935; Burl 1976; Shepherd 1986). Excavations at Midtown of Pitglassie (Shepherd, this volume), however, have demonstrated that a tradition of ring-mound funerary monuments was already established in the Grampian region by the first half of the fourth millennium BC, broadly contemporaneous with the onset of the passage-grave tradition in Caithness and Sutherland. The ring-mound at Midtown of Pitglassie is closely comparable with the ring-mounds or ring-cairns found within some recumbent stone circles and may also have been surrounded by a setting of upright stones. Hence it is conceivable that some of the ring monuments enclosed by recumbent stone circles may be significantly older than suspected. Accordingly, it is arguable that in a number of cases a recumbent stone circle may represent a structural addition to a primary ring-cairn. This may be supported by investigations at Loanhead of Daviot in 1932 where the excavator noted that the builders of the internal ring-cairn actively levelled the site: 'a quantity of rubble was thrown down here, and then over this was spread a layer of soil, upon which rested the remaining stones of the inner ring. *No attempt had been made to level the ground outside the inner ring*' (emphasis added; Kilbride-Jones 1935, 172-3). Therefore, it would seem that when the ring-cairn was planned, the stone circle was not.<sup>2</sup> Several sherds of 'Western Neolithic' pottery were found beneath the ring-cairn and provide a *terminus post quem* for its construction (Barnatt 1989, 91, 289-91). A Beaker sherd (possible N1/D) was also recovered from below the pavement linking the cairn and circle and may indicate remodelling of the monument at this time. Elsewhere, Henshall (1972, 273) has drawn attention to the ring-cairn at Clune Hill which seems to be earlier than the adjacent recumbent stone circle which it may partly underlie, an opinion corroborated by recent field observation. The relationship between the monument and its topographic setting evident at Gask can be paralleled at Esslie the Greater recumbent stone circle (NGR: NO 717916) where the ring-cairn occupies the entire end of a level spur in an otherwise sloping field. Consequently the outer circle occupies an uneven 'upslope-downslope' position around

the central cairn (field observation). Again, the appearance is that the stone circle was not a feature of the original design and was added at a later date.

On the whole, certain related trends may be discerned in the development of monumental architecture in the eastern regions of Scotland. While the physical form of these structural elaborations remained regionally distinct ('horns' or 'heels' in the Orkney-Cromarty cairns, graded stone circles in the Clava cairns, or graded stone circles with a prostrate stone in recumbent stone circles), in each case primary round monuments were being provided with a formally constructed external space or 'forecourt'. It seems particularly appropriate that these external zones were established on Clava cairns using stone circles rather than alternative forms of outworks. It should be remembered here that the grading of the Clava circles mirrors the grading of their boulder peristaliths. Therefore the graded rings of monoliths may be seen as monumental outward projections of their predecessors, the graded kerbstones.

This interpretation would seem to concur with an existing understanding of the development of megalithic architecture in western Europe. In a recent discussion, Thomas has declared that the forecourt, 'a symbolically laden space which at various sites has revealed hearths, pits and deposits of animal bones and stone axes, is one of the critical developments of the second phase of megalithic architecture' (Thomas 1993, 85). An unambiguous example of this phenomena has been recorded by excavations at Isbister on Orkney where a *hornwork* was added to an oval or round tomb at a date sufficiently later for the original cairn to have slumped. A cache of finely worked items including polished stone axes and a mace head was recovered from the forecourt (Hedges 1983, 23-4). Elsewhere in the Orkney Isles other demonstrably secondary outworks include platforms around both Taversoe Tuick and Quoyness as well as a hornwork at *Midhowe* (Davidson & Henshall 1989, 62), while investigations at Mid Gleniron I in Wigtownshire have explicitly demonstrated the incorporation of two ovate cairns into a trapezoidal long-cairn headed with a crescentic forecourt (Corcoran 1972). Excavation has also revealed that these transformations may be associated with the blocking of access to the interior of the monument, perhaps permanently replacing a closed ritual space with an open one (Sharpies 1985, 72; Richards 1992b, 74).

#### CEREMONIAL DEVELOPMENTS

It has been suggested that three separate traditions of megalithic architecture in the eastern regions of Scotland were pursuing similar trajectories. In the Clava cairns, the recumbent stone circles and the Orkney-Cromarty cairns originally circular structures were gradually being transformed through the provision of monumental extensions. It would seem these cairns were being architecturally tailored for developments in external ceremonial action. If so, these modifications can all be considered alternative and indigenous design solutions to the matching requirement of a container, stage or frame for the action and performance of public ritual (Fleming 1972). Accordingly, the importance attached to hidden 'private' practices performed within the concealed depths of a passage-grave, solely in the presence of the ancestors, may eventually have been displaced by 'public' open-air rituals enacted within a formal arena before a larger living audience (cf Kinnes 1981, 84). It should be noted that in eight of the better-preserved Clava cairns, Barnatt (1989, 92) has identified a carefully planned increase in the distance of the monoliths from the central cairn towards the south-west. This would seem to be an architectural device designed to enlarge this activity zone directly before (in the case of the passage-graves) the entrances. Again, these social developments appear characteristic of wider trends identified in the Neolithic funerary traditions of western Europe, constituting 'a fundamental realignment of the significance of sepulchral architecture: from presencing the dead, the emphasis had shifted to situating and locating the living subject.' (Thomas 1993, 93).

These extensions of the sacred ground delimited by funerary monuments to incorporate uncovered zones with visual access to all, may have been translated into other ceremonial monument forms through time. Sharpies (1984; 1985; see also Barclay & Russell-White 1993, 178) has identified a similar shifting emphasis from 'closed' to 'open' in the Orkney Isles during the first half of the third millennium BC, whereby the importance of passage-graves may have been superseded by open platforms or even henge monuments and rings of upright stones. Moreover, in the Irish midlands, the Late Neolithic/Beaker phases of passage-grave sites at both Newgrange and Knowth also witnessed the construction of timber circles, probably at a time when annular earthwork enclosures were being established throughout the Boyne valley (Mount 1994, 434–5, 442; Eogan & Roche 1993). Again, it would seem that expansive arenas were supplanting hidden vaults as monumental contexts for the performance of ritual and ceremony. Accordingly, a link may be drawn between the appearance of these new purpose-built arenas across the northern regions of the British Isles and the open-air precincts appended to earlier megalithic chambered tombs.

## CONCLUSION

A few years ago Barclay reiterated the 'dangers in considering combinations of features as representing the development of unitary monuments; such an approach may lead us away from an appreciation of the changing nature of complex monuments and the relationships of a number of monuments over time as new features are added to or replace those already there' (Barclay 1990, 31). This is clearly a point of great importance. Yet, as the excavations at Balnuaran of Clava have demonstrated, there is perhaps a danger of reading complex structural histories into the most unitary of megalithic constructions. This paper, however, has seen the pursuit of an alternative approach to excavation in an attempt to untangle the complexities of a prehistoric monument building tradition. Specifically, it has been emphasised that in the context of regional field survey, the micro-topography of the site area may usefully be considered in interpreting the structural sequence of complex megalithic monuments.

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## NOTES

- 1 Considered unlikely to be the remnants of a stone circle (and omitted from the plan presented here) are two adjacent glacial erratics (cf Henshall 1963, 386). Neither are earthfast and their diminutive dimensions hinder their identification as monoliths. If they do not derive from field clearance, one may possibly be a displaced kerbstone.
- 2 Conversely, the original excavator considered the ring-cairn to have been a later feature on stratigraphic grounds (Kilbride-Jones 1935, 178-9). However, if the south-western perimeter of the ring-cairn had been remodelled to include a rectangular paved platform, a recumbent stone and a ring of uprights, then the resulting stratigraphy may not be relevant to the interpretation of the primary construction sequence.

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