

STONE CIRCLES AND RING-CAIRNS

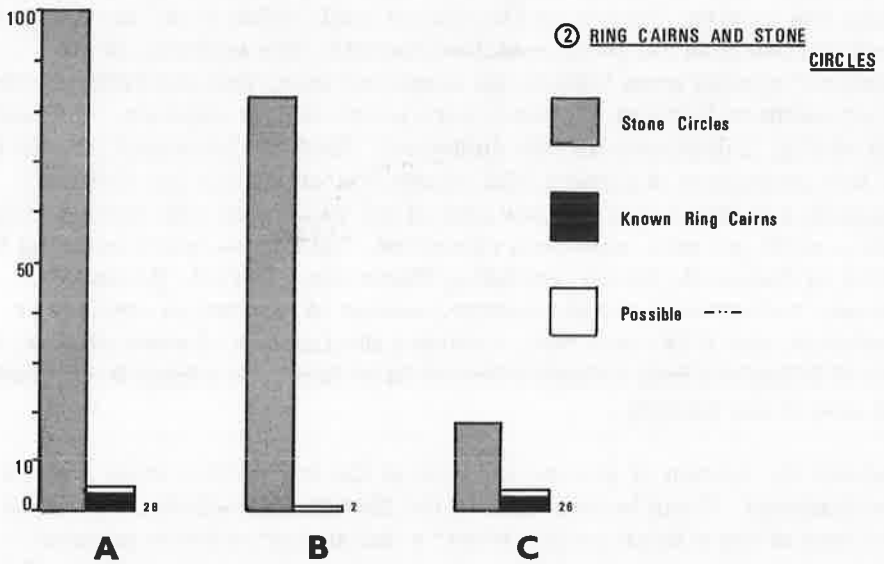
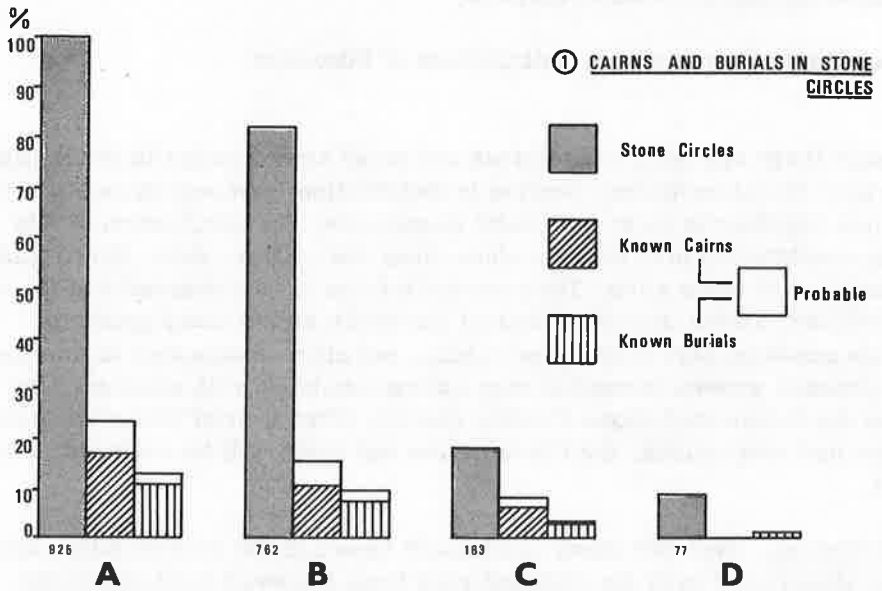
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Although there are many ring-cairns and many stone circles in the British Isles they do not commonly overlap in distribution, and only in one group do they join together to form composite monuments. An examination of this unique combination may provide clues about the origins, date, development and function of these sites. The composite sites to be discussed are found in NE Scotland, known in archaeological literature as the Clava group (or strictly speaking part of the Clava group, for other monuments in this group have passage-graves instead of ring-cairns combined with stone circles) and as the Recumbent-Stone Circles (RSCs). After a brief review of stone circles and ring-cairns, the Clava cairns and RSCs will be analysed in some detail.

Stone Circles. Over 900 stone circles are known in the British Isles, fairly evenly distributed over the highland zone from Cornwall to Shetland and from Yorkshire to Co. Kerry. There is little homogeneity. They differ markedly in their architecture and even more in their contents. About one in seven has a cairn, barrow or chambered tomb inside it and excavations have shown that many of these contained burials. The majority of such 'sepulchral' circles were built in the north and west, and are different from those of southern England, in which burials are almost unknown. The histograms of Fig. 1 demonstrate this dichotomy. Each of Columns A, B and C has a fair proportion of circles with cairns and/or burials but Column D (S England) has fewer than 0.3 per cent of the 77 circles with burials even though over 20 per cent have been excavated. This area, which contains the counties of Cornwall, Devon (excluding Dartmoor), Dorset, Somerset, Wiltshire, Oxfordshire and Shropshire, cannot be ignored as atypical or unimportant, and it is clear that, whatever the function of stone circles, the people of S England held beliefs different in at least one aspect from those of the rest of the country.

Elsewhere the custom of placing remains of the dead within stone circles was widespread. It can be seen that in the British Isles (Column A) about 23 per cent of the circles contain either a definite or probable tumulus. There is, however, one area where the proportion is notably higher. The omission of the counties of Inverness, Aberdeen and Kincardine from the whole of Britain (Column B) lowers the proportion of circles with cairns only from 23 per cent to 18 per cent, though the percentage of circles with

STONE CIRCLES AND BURIALS



AREAS

A BRITISH ISLES

B BRITISH ISLES EXCLUDING CLAVA

C CLAVA INVERNESS ABERDEEN KINCARDINE

D SOUTHERN ENGLAND

Figure 1.

cairns in those three counties (Column C) is as high as 44 per cent. These sites belong to the Clava group centred around Inverness, and the RSCs of Aberdeenshire and Kincardineshire, regarded in this paper as a single group because the stone circles are associated by so many architectural similarities that it is probable that they are culturally linked. It must be pointed out, moreover, that these figures have been purposely lowered, to avoid the danger of over-selection and special pleading, by excluding Clava cairns and RSCs from counties adjacent to the three above, and by including all circles in the three counties even though they do not belong directly to the Clava-RSC group.

This geographical group, then, with its high proportion of cairns appears to be distinctive even within that large variety of stone circle with probable burials. When examination is restricted to stone circles which contain ring-cairns then distinction becomes uniqueness, for it is virtually only within the Clava group that such monuments occur (Fig. 1). In the whole of the British Isles there are twenty-eight stone circles which have definite ring-cairns (Fig. 2). Of these, twenty-six belong to the Inverness-Aberdeen-Kincardine group. If this were not proof enough of the exclusive nature of the Clava stone circle/ring-cairn association it must be added that the two remaining ring-cairns also belong to this enclave though not in the three counties; they are the Moyness Clava ring-cairn in Nairn and the Three Kings stone circle in Northumberland, a four-poster of Scottish type, both of which have architectural affinities with the main group. The rest of Britain does not possess one definite ring-cairn in a stone circle. Fig. 2 shows twenty-two other possible sites, only four of which do not belong to the Clava-RSC group.

Ring-Cairns. It must be stressed that these Clava sites do not reflect the distribution of ring-cairns as a whole. Nor, without over-elaborate taxonomies, is it possible to distinguish between a ring-cairn like Gask (INV 32), with a diameter of 88 ft and a central stone-lined space about 39 ft across, and an enclosed cremation cemetery like Bannside, Lancs. (Collingwood, 1910), which is 72 ft in diameter with a central stone-lined space 48 ft across. It may well be that architectural criteria are inappropriate and that significant terms for these sites will have to be based eventually on chronological, geographical or artefactual data. For the moment a ring-cairn can be defined as an approximately circular bank of stone with a central space which is never much more than half the diameter of the cairn itself. The exclusive association of stone circle and ring-cairn in the Clava-RSC group makes it possible that it is within the group itself that the origins of these ring-cairns may be sought, and an attempt is made here to show the

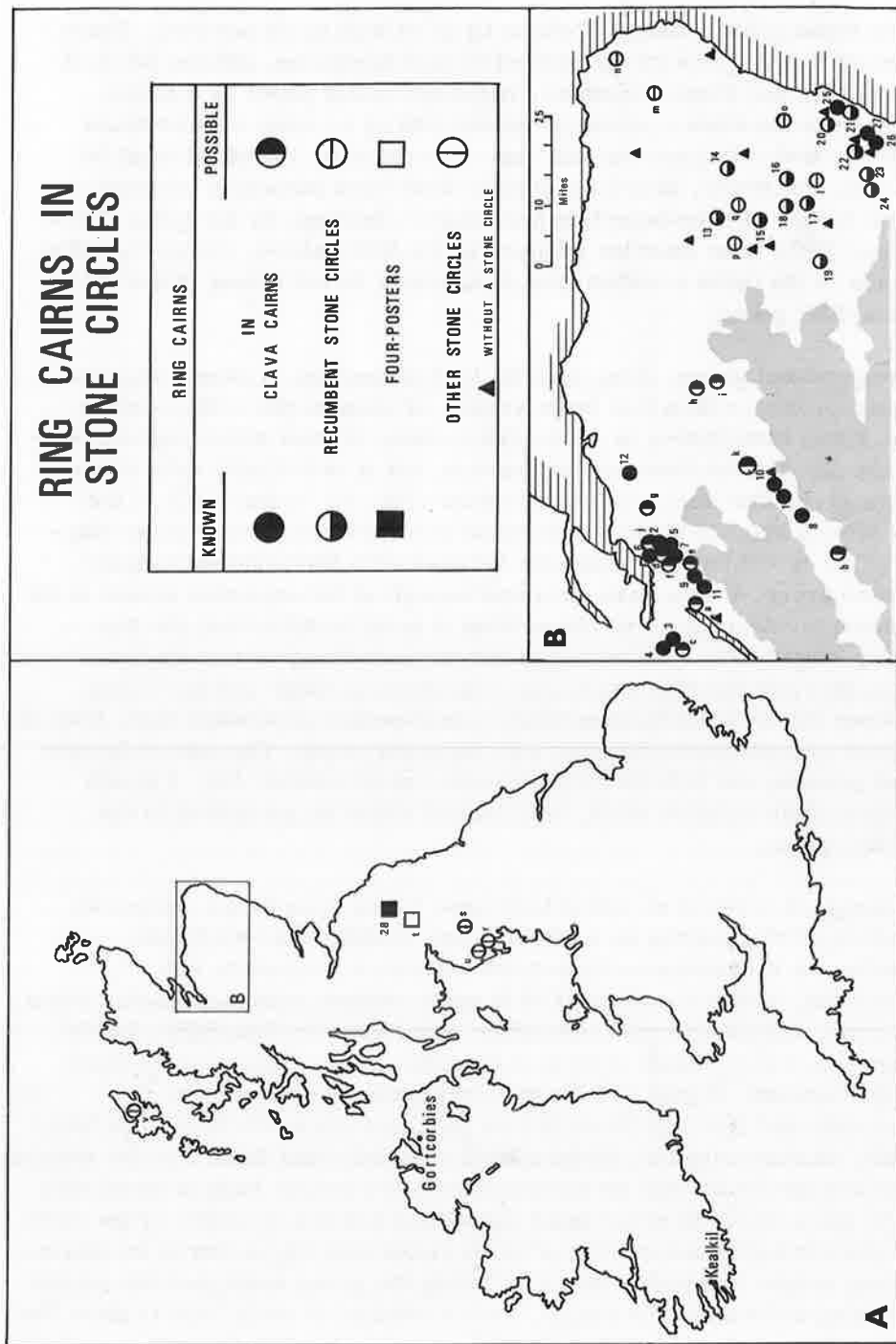


Figure 2.

derivations of the Clava ring-cairns and RSCs from the Clava passage-graves, and to discuss their limited distribution, tentative dating and function.

The Clava Cairns. The presence in Inverness-shire and adjoining counties of Ross-shire, Nairnshire and Banffshire of passage-graves and ring-cairns surrounded by stone circles is a phenomenon almost unique in Britain (Fig. 2). These circles possess the peculiar characteristics of having their stones graded in height with the largest usually in the SW quadrant, and surrounding one or more burials. Some of the Clava cairns have been systematically excavated (Piggott, 1956). Within the Clava group, passage-graves and ring-cairns cluster together, the Balnuaran group having seven or eight sites within three-quarters of a mile. The idea that the ring-cairns might have developed from the passage-graves, although once accepted, has diminished in popularity. The writer is inclined to favour it for architectural reasons.

Passage-Graves. There are eleven certain passage-graves, ten with stone circles around them, Avielochan being the exception. As far as can be determined from their present state the diameters of several of their stone circles are close to 77 ft (INV 17, 30, 26) and ROS 13 is 76 ft. Yet the internal cairns at these sites differ in size, being about 50 ft, 46 ft, 41 ft and 41 ft respectively. Statistically that four passage-graves have stone circles with diameters so similar is unlikely to be fortuitous, particularly as the six other known diameters range from 60 ft to 104 ft. The four all lie W of the River Nairn. Far E of the Nairn there are only two passage-graves but five ring-cairns the stone circles of which are over 80 ft. The greater number of large ring-cairns in the E is explicable if the ring-cairn is a form of megalithic monument that developed from the passage-grave and shared all its features except the passage and the corbelled roof and which evolved with the outward spread of people after a primary settlement at the head of the Great Glen. In most passage-graves both the cairn and the stone circle are circular although the fact that sometimes they have different centres suggests that they may have been built at different times. Six cairns are circular, one is elliptical and three are flattened towards the SW (Thom, 1967). Of the seven stone circles whose design can be reasonably reconstructed six are circular and one (INV 9) is elliptical. This, however, is not necessarily an exception as it was reconstructed in 1881 and its present shape may not be correct. Thus it is generally true that in passage-graves both cairn and surrounding stones are of the same layout, for only at Druidtemple (INV 30) is the ellipse of the cairn not repeated in the stone 'circle'.

In the ring-cairns this is not the case. Of the seven 'circles' three (INV 28, 49; BAN 3) are elliptical, and two are flattened (INV 6, 48). Of the fourteen cairns only five were circular (INV 6, 29, 34, 48; BAN 3). At Balnuaran of Clava, Centre (INV 8) the outer kerb is circular but the inner setting is flattened towards the south. Three cairns are elliptical, four are flattened and two are simply irregular (INV 14, 23). In these monuments, then, not one has both cairn and stone setting of the same shape and in the majority of sites it is the standing stones that are regularly laid out and the cairn that appears to be asymmetrical. It cannot be assumed that this indicates a different date of construction for cairn and circle unless there is also a pronounced discrepancy in their centres. But such geometrical developments may point to a later period than the simpler passage-grave designs (Cowan, 1969).

Ring-Cairns. There are thirteen certain ring-cairns of which only West Town (INV 50) does not possess a stone circle. These are more numerous in the E than the passage-graves. Far W of the Nairn there are six passage-graves but only two far to the E. The three certain ring-cairns to the W (INV 14, 19, 23) are all less than 50 ft in cairn-diameter whereas of the four in the E three are very large (INV 29, 34; NRN 6). Ring-cairns were frequently larger than passage-graves (Table 1), their cairn-diameters ranging between 36 ft - 90 ft against 32 ft - 52 ft at the chambered tombs. Their centre-spaces also were bigger, 14 ft - 35 ft against 10 ft - 16 ft. This may have been one reason why the passage-grave was abandoned in favour of an open ring-cairn for in a chambered tomb the size of the central space was necessarily limited by the builders' ability to corbel and roof it. Yet despite this major alteration the ring-cairns share so many architectural and geographical features with the Clava passage-graves that it is probable that the two were intimately related: they intermingle in the central area; they both have central spaces for burials; burials were normally unaccompanied by grave-goods; both had noticeable kerb-stones; kerb-stones were graded in height, the tallest being in the SW quadrant; both types of site were in low-lying positions; both have cup-marking; both have stone circles. The most economical hypothesis from such homologous traits is that one form is descended from the other.

Not only are the kerb-stones around the ring-cairns graded in height towards the SSW but the stone circles also, often of between 8-12 stones. Yet although grading was customary in both the kerb-stones and the circles, it was not invariable. At Gask (INV 32) the kerb-stones are 2 ft 9 in - 4 ft high and more eye-catching than the cairn they enclose. At Tordarroch (INV 48) they are 2 ft 6 in - 5 ft high. At Grenish (INV 34) the SW kerb-stones were

carefully selected. They were 4 ft tall and the cairn-material was heaped flush between them and the central space so that the impression would be of a great stone-lined enclosure surrounded by standing stones. This is an indication that the stone circle was becoming of greater importance than the cairn.

Stone Circles. The most important of their traits is that of being graded in height, often towards the SSW. The origin of this may be related to the position of the passage-grave entrances and it does not follow that the earliest of the circles were so graded. At least five sites have circles or cairns which are not markedly graded (Doune of Dalmore; INV 17, 30, 45, 49), three of which are near the head of the Great Glen, perhaps the primary area for settlement. There are other sites whose stone circles are now so ruined that it cannot be proved they were ever graded. Many of the circles have, or had, twelve stones. In their present dilapidated state it is presumptuous to be dogmatic about the number of stones but it is possible to make estimates at sixteen sites. Three seem to have been enclosed within eight stones (INV 19, 37; ROS 13). Three may have had ten stones (INV 14, 16, 48). The remaining ten probably had circles of twelve stones, a greater proportion than if the choice of number had been random. As circles of twelve stones are also frequent among the RSCs of Aberdeen this is another indication of the direct relationship between the two areas.

Cup-Marking. There are nine Clava sites which have these enigmatic markings. They differ from the RSCs inasmuch as at the Aberdeenshire monuments the cup-marks are placed on the circle-stones thus emphasising the importance of the circle, whereas at the Clava sites the cup-marks are more usually found on the kerb-stones of the cairn. Seven of them have kerb-stones marked, usually between SE and SW. This reaffirms the idea that with these sites the stone circle was still generally only a feature surrounding the major monument rather than an object of importance in itself. Although no proof exists that cup-marks must be linked with a cult of the dead it is a presumption made stronger by their presence not only in the passages of the two Balnuaran chambered tombs but also on the underside of the probable capstone at Corrimony. At Tordarroch the kerb-stone may have had its markings on its inner face out of sight of the living world. It seems, therefore, that cup-marking was closely intermingled with burial in the Clava group.

Burials and Finds (Henshall, 1963, 29, 39). The major difference between the circles of this part of Scotland and those of S England is that the Scottish sites contain burials, although, of course, the ceremonies within

the English circles may have been directly connected with death and with burials that were to be made elsewhere. Within the Clava group recorded burials are very varied and show no consistency either in the passage-graves or in the ring-cairns. There were traces of inhumations at Balnuaran of Clava, NE (INV 9) and Corrimony (INV 17) and at Daviot (INV 28) where the excavators found a cist containing a skull and 'other remains'. Cists may also have existed at INV 8 and 30 where cremations were discovered. Burnt bones had been scattered about the central space at INV 8 and 21, laid in the central space at INV 10 and 30, and placed in a pit at INV 37. At INV 17 the inhumation had been placed partly on a 'floor' of slabs. Other traces of ritual are detectable in the quartz pebbles strewn about the chamber floor at Druidtemple (INV 30). Much broken quartz had been scattered during the cairn-construction at Corrimony (INV 17). No quartz has yet been found in any of the ring-cairns though it was discovered in the small cairn at Clava discussed later. Quartz is noticeably rare in British stone circles outside the regions of Inverness, Aberdeen and Perth. At least eleven of the fifteen circles with quartz pebbles in them (see p. 46) belong to the Clava tradition, and the presence of quartz, though not common, must be considered another diagnostic of this group.

The group is notoriously lacking in finds either of pottery or other artefacts. At Corrimony a fragment of a burnt bone pin was found. This is the only object recovered unless the lost sherds from Balnuaran SW and a 'clay urn', also vanished, from Moyness can be considered. The Balnuaran pottery has been illustrated (Lauder, 1830) and may have been related to the flat-rimmed ware which has been recovered from several Aberdeenshire RSCs and from associated sites in Perthshire. But this type of pottery seems to have had a long life from the Late Neolithic into the Middle Bronze Age. Dating, therefore, is difficult. If the Corrimony pin was a skewer-pin it might be related to those listed (Atkinson, Piggott and Sandars, 1951, 142-4) whose associations generally suggest a date nearer the end of the 3rd millennium BC than the beginning. The possible flat-rimmed ware from Balnuaran could have the same sort of dating if the affinities with bucket-shaped urns are accepted (Morrison, 1968). Similar ware has been found at the RSCs of Old Keig and Loanhead of Daviot, at the latter in association with AOC Beaker sherds, and also at Croft Moraig, Perthshire together with Western Neolithic pottery (Piggott and Simpson, 1971, 10). An early 2nd millennium BC date is possible. Although the almost total absence of finds makes any judgement on the primacy of the passage-graves subjective, it would seem that their situation around the head of the Great Glen, their more symmetrical design and the apparently standardised diameters of some, combine to suggest a more homogeneous group than the disparate ring-cairns, and one from which the

latter could have evolved. The converse is unlikely, as is the possibility of the independent development of the two groups, because of the many uncommon architectural features they share. One may even assume that at least some of them had been built by the end of the 3rd millennium BC.

Developments. If the primacy of the Clava passage-graves at the head of the Great Glen is considered feasible it is then possible to see three separate developments from them:

(a) Ring-cairns in the same area derived from them and sharing their architectural features.

(b) Small kerb-cairns, unaccompanied by any stone circle, at the SW end of the Great Glen in Argyll. These may have been derived from the stone-lined central space of the ring-cairns.

(c) Recumbent-stone circles in Aberdeen and adjacent counties. These have all the Clava architectural traits. Unlike (b) the emphasis was upon the stone circle while the ring-cairn was comparatively unimportant. Such circles may have affinities closer to the passage-graves than to the Clava ring-cairns.

Kerb-Cairns (see p. 8). Here it is necessary only to reiterate the similarities between these cairns and Clava sites. The small cairn at Clava is only a few yards from the three great Balnuaran cairns. Some of its features demonstrate that it is closely related to the earlier cairns (the graded heights towards the SW-S, cup-marks, central pit, quartz pebbles). What is particularly interesting is its remarkable similarity to sites in Argyll as well as its general affinity with others in Perthshire and Ireland. At Clava the circle of fifteen close-set stones is flattened towards the NNE and the tallest stones are between SE and SW. There had probably been an inhumation in the central pit where quartz pebbles had been scattered. The close comparison between the diameters of such cairns as Strontoiller and Monzie, which average about 15 ft, and the central spaces of Clava passage-graves and ring-cairns, which average 13 ft and 22 ft respectively (Table 1), is apparent. The contiguity of stones is comparable with the Clava stone-lined interiors.

Several of the southern kerb-cairns have standing stones by them. Such outlying stones are unknown in Inverness but common along the SW coasts of Scotland. They were possibly derived from the custom of placing outliers by stone circles both in Cumbria and even in some of the henges of Wessex. A distant example of a small ring-cairn with one tall standing stone abutting it like a headstone is Llyn Eiddew Bach I, Mer. (Bowen and Gresham, 1967, 88). Nor are quartz pebbles common in the stone circles of Inverness or

Aberdeen.

From these analogies it seems that it is not far-fetched to perceive that one development from the Clava passage-grave was the construction of these small kerb-cairns based on the model of the central space, retaining not only its diameter but its graded height of stones. In this the sites are totally dissimilar from the Aberdeenshire RSCs for the kerb-cairn builders deliberately eschewed the stone circle and reproduced only the Clava central feature. A site which may be the antithesis of these small and presumably late cairns is the one free-standing stone circle at the head of the Great Glen, Torbreck (Fraser, 1884, 355). It is also small, only 17 ft in diameter, but with large stones from 4 ft high at the NE rising to 7 ft at the SW. Its affinities are manifestly with the Clava group. Its development can be explained as a process that extolled the stone circle but was indifferent to the cairn.

Recumbent-Stone Circles (Fig. 2). These have been analysed in detail by the writer (Burl, PSAS, forthcoming) and only matters related to the Clava tradition are discussed here. It has been suggested that the RSCs of Aberdeen and adjoining counties are developments from the Clava passage-grave and that the recumbent stone is a counterpart of the original lintel-stone over the passage entrance. That the circles are more closely related to the passage-graves than to the ring-cairns of Inverness is reinforced by a comparison of their diameters (Table 1).

Table 1. Diameters of Circles, Cairn-Kerbs and Centre-Spaces

Group	No. Known	Total	Diameters		
			Biggest	Smallest	Average
<u>Clava Passage-Graves</u>					
Circles	9	703'	104'	760'	78'
Cairn-kerbs	10	430'	52'	32'	43'
Centre-space	9	114'	16'	10'	13'
<u>Clava Ring-Cairns</u>					
Circles	15	1369'	120'	67'	91'
Cairn-kerbs	15	801'	90'	36'	53'
Centre-space	10	221'	35'	14'	22'
<u>Aberdeenshire RSCs</u>					
Circles	57	3866'	108'	34'	68'
Cairn-kerbs	17	753'	62'	17'	44'
Centre-space	11	172'	28'	9'	16'

The ring-cairn inside an RSC is closer in size to a passage-grave cairn. The platforms of RSCs, not known in an Inverness-shire ring-cairn, are also explicable as vestigial imitations of a passage, and the RSC, therefore, appears to stand in the same relationship to a Clava passage-grave as does a Clava ring-cairn.

The greatest problem is that of establishing the original architecture of the circles. Some have been utterly destroyed. Most, like Wantonwells or Kirktown of Bourtie, have been catastrophically damaged. Even where the stones of the outer circle survive as at Rothiemay or Easter Aquhorthies the smaller kerbs and stones of the cairn have been removed. Nevertheless twelve circles still possess unequivocal ring-cairns and six more have probable remnants (p. 47). They are never as conspicuous as the ring-cairns of Inverness-shire. Although Cairn Riv had a cairn perhaps 3 ft high, the majority were lower, sometimes being a simple spread of stones like the Clatt sites or North Strone. It is the stone circle that is the dominant feature. Kincardine RSCs like Garrol Wood and Raes of Clune tend to have ring-cairns distorted in shape and incorporating the recumbent stone on their circumferences. But even these circles share the following traits of the Clava cairns: stone circles often of twelve stones; comparable diameters; stones graded in height; tallest stones in or adjacent to the SW quadrant; cup-marks; burials, which are restricted to the central space.

Like the Clava cairns the RSCs almost invariably contain burials. From the reports of 19th century explorations and more recent excavations at Old Keig and Loanhead of Daviot there develops a consistent pattern of cremations, always in the centre spaces, often in pits as at Ardlair and Hatton of Ardoyne, or as scattered ashes at Sunhoney, but never elsewhere on the site although there are sometimes wide areas of burning beneath the ring-cairn. Dating is only a little easier than for the Clava cairns. The earlier belief that RSCs belonged to the later Bronze Age was based on the apparent affinities of flat-rimmed ware at Old Keig and Loanhead of Daviot with Covesea ware, but now that it has been discovered in Neolithic contexts (Piggott and Simpson, 1971) it can be regarded as a NE Scottish form of Late Neolithic - Bronze Age ceramic. Other finds of Beaker (Kilbride-Jones, 1935) and urns (Coles, 1905) are chronologically compatible, and a date within the first half of the 2nd millennium BC would be acceptable for these RSCs.

Ring-Cairns. There are also in the area some ring-cairns without stone circles. Their distribution (Fig. 2) and unimposing size suggests that they may be later and simplified versions of RSCs where, except at Raedykes NW and SE (KNC 5 and 6), the stone circle has disappeared. The areas in which

they are found are peripheral to the main RSC region, generally to the east and south. Dating evidence indicates a relatively late period. At Clune Hill (KNC 2) the ring-cairn is probably earlier than the adjacent RSC, an apparent contradiction except that the RSC seems to be very late from its diameter, size of stones, recumbent and shape. The Raedykes circles are small, the cairns varying between 22 ft and 32 ft. Only two of the four have a stone circle. At the Sands of Forvie (ABN 8) a small four-stone setting lay within a ring-cairn associated with flat-rimmed ware. Its coastal position is far from the central RSC area. Sundayswells (ABN 9) would present a problem with its early AOC Beaker were it not that the central area had signs of earlier disturbance. It is possible that the Beaker and some urn sherds were deposited together, the Beaker representing a relic from an earlier period. Greystone near Alford, Selbie Hill, Easter Clune and Dummuies Hill had no finds. Cairnmore had a handled Food Vessel (Clarke, 1970, 248), perhaps as late as the 15th century BC.

Outside the regions immediately affected by the Clava tradition there are very few stone circles surrounding ring-cairns, itself some confirmation that the Clava ring-cairns did indeed derive from the passage-graves. At Loch Roag, Lewis (Stuart, 1860) a stone circle held an eccentrically-situated cairn whose 6 ft central cavity may be the result of disturbance rather than be the vestiges of a ring-cairn. As the centre of the cairn is at least 8 ft away from the centre of the circle it is probable that the cairn and circle are of different periods and do not present a single-phase monument (RCAMS, 1928, 27, no. 90). The large circle at Brats Hill, Cumberland (Dymond, 1881) appears on plan to have five ring-cairns inside it but each of these once had 'a dome of five larger stones' at their centres covering cremations, and the present depressions, like Loch Roag, are probably the results of mid-19th century excavations. Fourteen miles to the S, on the crown of a hill overlooking the waters of Duddon Sands, are the four Lacra stone circles excavated in 1947 (Dixon and Fell, 1948), of which site B had a form of ring-cairn. A circle, measuring 48 ft in diameter, surrounded a cairn 32 ft across and 2 ft high. There was a central setting of large stones measuring 14 ft in diameter. On the old land surface were some fragments of cremated bone resting on a heat-reddened patch which stretched beyond the inner stone setting. Over the bone had been heaped turves intermixed with small stones and charcoal. There were no finds. Site D had a late Collared Urn at the foot of one stone. It is possible that some of the burial sites at Moordivock, Westmorland, particularly nos. 5, 7 and 10, were ring-cairns but these did not have stone circles (Taylor, 1886). Conversely the stone circles nos. 1, 3 and 4 cannot now be demonstrated to have had cairns although a 'flower-pot shaped food vessel' was discovered at the centre of site 4. The Three Kings,

Northumberland was excavated in 1971 (Burl, *Archaeol Aeliana*, forthcoming) and had a very badly damaged ring-cairn. The centre of the cairn was about 1 ft away from the centre of the circle. The site was a four-poster which belongs to the Clava tradition (Burl, 1971) and the presence of a ring-cairn although unique is not disconcerting. The writer knows of no other stone circle (i.e. a setting of spaced standing stones) containing a ring-cairn, and the absence of such sites amongst all the other stone circles of the British Isles ratifies the belief that it is from the Clava passage-graves that one might expect to find the origins of this group.

Conclusions. The tenuous evidence available suggests that the Clava cairns may have developed in the late 3rd millennium BC and that the derivative RSCs may have flourished in the first half of the 2nd millennium BC. It is impossible at present to offer any more than the vaguest of chronological schemes. But, even believing that the Clava ring-cairns had their antecedents in the passage-graves, there is no direct evidence that the surrounding stone circles were contemporary structures. They might have existed before or might have been added to the cairns. It is, however, known that stones graded in height are unusual in stone circles outside this group. This trait was probably designed to emphasise the passage-grave entrance and points to the circle being either contemporary or subsequent to the earliest chambered tombs; a fact of significance is that from published plans (Henshall, 1963; Thom, 1967) it seems that most Clava cairns, whatever their shape, share a common centre with their circles. If further surveys confirm this then there must be a probability that cairns and circles are contemporaneous.

It is certain that the considerable majority of Clava passage-graves and ring-cairns and RSCs held burials but whether they were tombs or ritual centres remains debatable. During the modern excavations (Piggott, 1956) at Druidtemple, Kinchyle of Dores and Corrimony no signs of any passage-grave forecourt ceremony were discovered and only a scatter of charcoal in the chambers and occasional quartz pebbles bore testimony to activities other than those of depositing the remains of the dead. Yet if these were places of ceremony then the transformation from encapsulated chamber to open space where all might observe is understandable. What the rites might have been can only be speculated. Clues may be found in the azimuths, cup-marks and cremations. The azimuths (compass-bearings) of Clava cairns and RSCs are so different from any other form of prehistoric monument and yet so similar to each other (Fig. 3) that they add confirmation, if it is needed, of the close relationship between these megalithic sites.

Among the passage-graves Piggott (1956) has calculated that the cairns might

have been as much as 10 ft high, a height which would effectively preclude astronomical sightings being taken across the stones of the surrounding circle. This is important, for claims have been made that the consistent SW orientation of the entrances show the builders to be much concerned with the mid-winter sunset. 'In view of the consistency of the orientation of Clava cairns between WSW and SSW one is entitled to suppose that the assumed similar consistency of the (recumbent stone) circles to be orientated between SSW and S may mean some difference in ritual' (Walker, 1963, 99). Thom (1967, 143) points to the large stone at the SW of Delfour, 'at the latter site the narrow top of the stone again shows the setting solstitial sun', though, of course, it is not a subtle outlier but the one remaining stone of the ruined circle that he is referring to. Actually the entrances of the passage-graves are not consistently at the SW. Of the ten chambered tombs three had entrances at the SW, four at the SSW and three to the S. The Clava cairns do not demonstrate that precision of alignment sometimes claimed by devotees of prehistoric astronomy, for at no time can the midwinter sunset have been at the S or even SSW point of the horizon. Indeed, even as far north as latitude 57° sunset can rarely have been more than 2° or 3° south of 221° (Fig. 3) so that the builders of a cairn 44 ft diameter, an average size for Clava cairns, had they intended to align their entrance on the midwinter sunset, would have made an enormous error of 8 ft if their tomb faced even SSW. The same is true of recumbent stones, some of which lie even to the SSE. One might conclude that either orientations were taken upon some astronomical event other than the solstitial sunset or that alignments were approximate, much as they appear to be among the east-arranged chambered tombs of southern Britain and Ireland. The writer has speculated that the Clava alignments were taken at right-angles to late summer and autumn sunsets and that the graded heights of stones reflect the sun's daily path through the sky. If this is so then it can be assumed that one important aspect of the ceremonies and the potential power of the site was connected with the going down of the sun. Cup-marks in the Clava passage-grave chambers are often also in significant solar positions though out of sight of a living observer. In RSCs cup-marks are found only in the proximity of the recumbent stone and never on the cairn. This surely indicates a shift in emphasis from the importance of the cairn as burial-place to the circle as an enclosure. Perhaps the deliberate siting of RSCs on hillside-terraces unlike the low and enclosed situation of Clava cairns reflects a developing need for sites with wide views to the horizon.

The sequence of events in some ring-cairns can be tentatively reconstructed: a site was carefully selected for its aspect; the stones were brought to it, some were dressed, sometimes one or two were cup-marked; the stone circle was laid out and erected on a plan related to the sunset; a cremation pyre was

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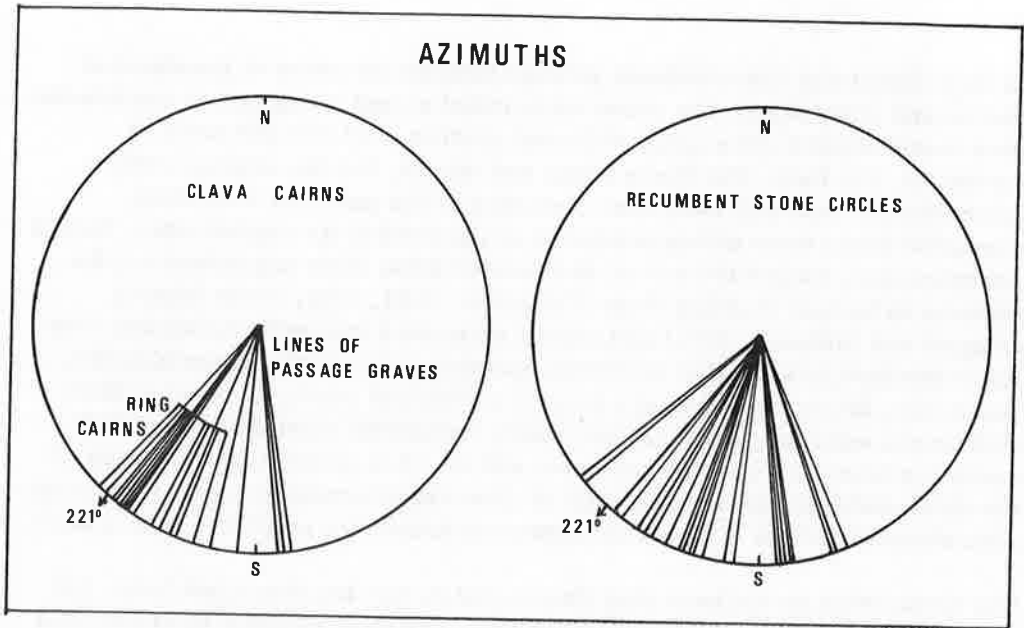


Figure 3.

GORTCORBIES, Co. Londonderry (C 741259)

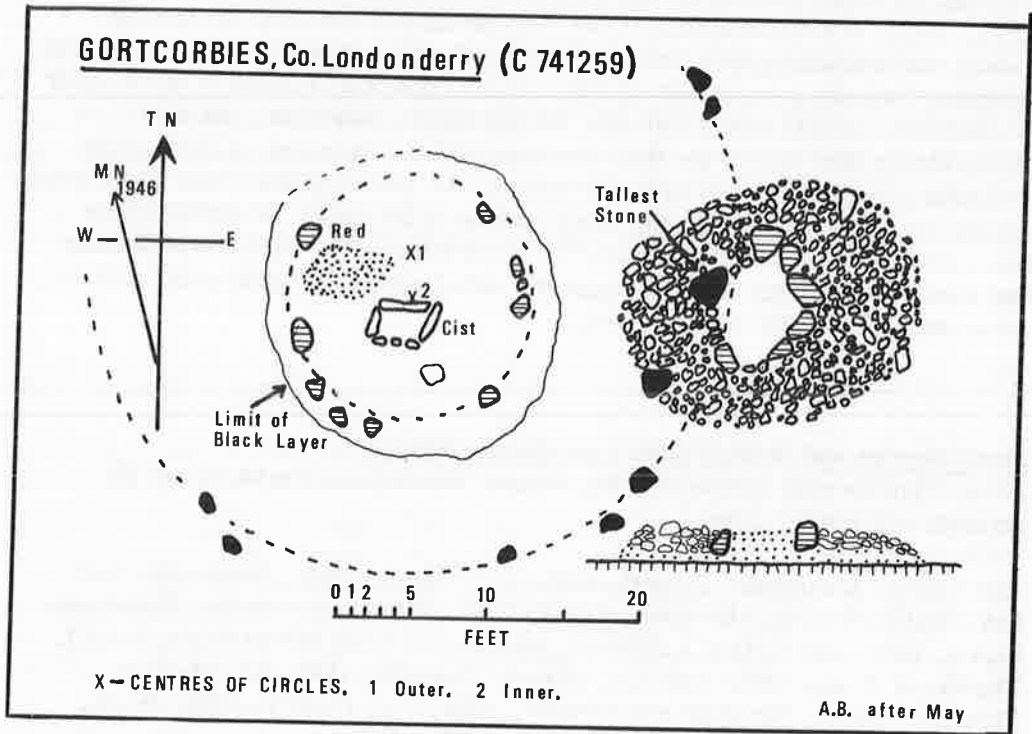


Figure 4.

lit in it (hence the fire-reddened patches beneath the cairn at Loanhead of Daviot and other sites); the ashes were raked up and a ring-cairn constructed (this would explain the slightly different centres of circle and cairn at Loanhead, Old Keig, the Three Kings and others, for the original centre would almost certainly have been obscured by the previous activities); cremated bones were either scattered or interred in the central area. Such a sequence once caused the writer to consider these sites sepulchral but the absence of burials at Aikey Brae (Ferguson, 1881, 105), Croft Moraig (Piggott and Simpson, 1971) and others requires a reconsideration and it is more discreet to state that activities connected with death occurred within the circle. We are discussing a span of a thousand years. It is not unlikely that ceremonies originally predominantly sepulchral should over several centuries have become more esoteric and the once paramount deposition of the dead modified into a minor part of rites transformed by increasingly complex abstract beliefs of which astronomical knowledge may have been a facet.

The Irish RSCs do not have ring-cairns and so are not described here. Yet it should be remembered that Kealkil (Fig. 2) was considered by O'Riordain (1939) to have a ring-cairn alongside it, though the published plan is not convincing. Of more interest in this context is Gortcorbies, Co. Londonderry (May, 1947), a site consisting of two concentric circles (Fig. 4). An off-centre cist containing only soil lay beside a large red-burned area on the old surface. The inner stone setting was largely concealed beneath a black layer of charcoal, animal bones and soil. At one stage, therefore, the site resembled a RSC before the final erection of the ring-cairn. A ring-cairn had been added to the side of the structure, the tallest stone of the outer ring having been incorporated in the inner setting of the cairn. At Gortcorbies there are many architectural features of the Clava-RSC group. The Beaker and Food Vessel from the site suggest a date in the 17th century BC (Clarke, 1970, no. 1926 F; Harbison, 1969).

Stone Circles and Related Sites with Quartz Pebbles

(Stone Circles with quartz standing stones, common in Cornwall and SW Ireland, are not included.)

Corrimony, Inverness. Piggott, 1956, 174; Druidtemple, Inverness. *ibid*, 185; Castle Frazer, Aberdeen. Coles, 1904, 299; Corrie Cairn, Aberdeen. Stuart, 1867, lix; Culsh, Aberdeen. Beveridge, 1914; Strontoiller, Argyll. Ritchie, J.N.G., 1971; Kintraw, Argyll. Simpson, 1967, 54; Clach na Tiompan, Perth. Henshall and Stewart, 1956, 122; Croft Moraig, Perth.

Piggott and Simpson, 1971; Fowlis Wester East and West, Perth. Young, 1943; Monzie, Perth. Young and Mitchell, 1939; Cuninghar, Tillicoultry, Clackmannan. Robertson, 1895; Circle 275, Penmaenmawr, Caernarvon. Griffiths, 1960; Gortcorbies, Co. Londonderry. May, 1947; Muisire Beag, Co. Cork. Gogan, 1931.

Key to Fig. 2

Stone Circles with Definite Ring-Cairns:

1-12, 25-7 see Henshall, 1963, 360-85, 388, 400-2; 13-24 see Burl, PSAS, forthcoming.

1. Aviemore, INV 6; 2. Balnuaran of Clava, Centre, INV 8; 3. Bruaich, INV 14; 4. Culburnie, INV 19; 5. Culdoich, INV 21; 6. Cullearnie, INV 23; 7. Daviot, INV 28; 8. Delfour, INV 29; 9. Gask, INV 32; 10. Grenish, INV 34; 11. Tordarroch, INV 48; 12. Moyness, NRN 6; 13-20 Aberdeenshire. 13. Candle Hill, Inch, Burl No. 17; 14. Loanhead of Daviot, Burl No. 44; 15. Old Keig, Burl No. 58; 16. Castle Frazer, Burl No. 18; 17. Tomnagorn, Burl No. 70; 18. Whitehill, Burl No. 74; 19. Tomnaverie, Burl No. 71; 20. Binghill, Burl No. 11; 21-27 Kincardineshire. 21. Aquhorthies, Burl No. 6; 22. Raes of Clune, Burl No. 62; 23. Garrol Wood, Burl No. 35; 24. Esslie the Greater, Burl No. 32; 25. Cairnwell, KNC 1; 26. Raedykes NW, KNC 5; 27. Raedykes SE, KNC 6; 28. Three Kings, Northumberland. Burl, Archaeol Aeliana, forthcoming.

Stone Circles with Possible Ring-Cairns:

a-h, j-k see Henshall, 1963, 358-86, 391; l-q see Burl, PSAS, forthcoming.

a. Aldourie, INV 2; b. Altlarie, INV 3; c. Boblainy, INV 13; d. Culchunaig, INV 20; e. Midlairgs, INV 42; f. Miltown of Clava, North, INV 43; g. Little Urchany, NRN 5; h. Marionburgh, BAN 3; i. Doune of Dalmore, Banff. Coles, 1907, no. 6; j. Leanach, INV 39; k. Tullochgorm, INV 49; l-q Aberdeenshire. l. Sunhoney, Burl No. 68; m. Aikey Brae, Burl No. 1; n. Berrybrae, Burl No. 10; o. Dyce, Tyrebagger, Burl No. 30; p. Ardlair, Burl No. 2; q. Hatton of Ardoyne, Burl No. 39; r. Lacra B, Cumberland, Dixon and Fell, 1948; s. Moordivock, Westmorland, Taylor, 1886, 326; t. Goatstones, Northumberland, Honeyman, 1932; u. Brats Hill, Cumberland, Dymond, 1881; v. Loch Roag, Lewis, Stuart, 1860.