

THE CLAVA CAIRNS¹

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THIS paper is divided into three parts: a discussion of the general affinities, such as they are, of the Clava cairns; a discussion of their geographical setting; and some remarks on their possible dating.²

In discussing possible affinities of the cairns, one is immediately struck by the uniqueness of the group as a whole compared with other groups of megalithic tombs. There are five outstanding features: firstly, the dual element of ring-cairn and passage-grave in a group which seems otherwise completely indivisible; secondly, the use of corbelling for roofing the passage-graves (and parallel to this, the equally distinctive open chambered non-passaged construction of the ring-cairn); thirdly, the surrounding circle of free-standing stones; fourthly, the orientation of passage-grave and ring-cairn alike towards the SW. quarter; and fifthly, the presence of cup marks both on stones forming part of the cairn and on boulders in the general area of Clava cairn distribution.

The nearest parallels to the ring-cairns are in the superficially analagous structures in Almeria in southern Spain,³ though Blance⁴ believes that some of these latter were used as ossuaries rather than places for collective burial. Passage-graves in general can be shown to have an Atlantic-Irish Sea distribution, from Iberia northwards,⁵ though the Irish Sea area is certainly equally an area of gallery-grave distribution.

The use of corbelling to roof the structure is a feature which can similarly be traced in the Irish Sea area along the Atlantic seaboard: Rudh' an Dunain in Skye, Barpa Langass in North Uist, Maes Howe in Orkney, and Achnacree at the southern end of the Great Glen, have this feature; so have the Boyne tombs in Ireland and N. Wales, La Sergenté in Jersey, Île Longue and Île Carn in Brittany, and tombs in the Pavia and Alcalá cemeteries in Portugal and the Los Millares cemetery in Almeria.⁶

¹ The burden of this article was originally part of a survey, nominally of the counties of Nairnshire, Moray and Banffshire, in the Neolithic and Bronze Ages made for an M.A. thesis at the Department of Pre-historic Archaeology, University of Edinburgh (*Univ. Edin. Dept. of Arch. 13th Ann. Rep.* (1960-1), 6-9). The Beakers and bronzes from the three counties shown on Maps I and II are taken from my thesis catalogue; the Beakers from the adjacent area of Inverness-shire have been noted from various volumes of these *Proceedings* and the bronzes from the same area have been taken from the same sources, with the addition of several unpublished ones for which information I extend my thanks to Mrs M. E. C. Stewart, M.A., PH.D., F.S.A.SCOT.

² I am most grateful to Miss A. S. Henshall, M.A., F.S.A., F.S.A.SCOT., who had been studying Clava cairns independently as part of her survey of Scottish chambered tombs (Henshall, A. S., *Chambered Tombs of Scotland*, I (1963), 12-39) not only for letting me see her proofs in order to rewrite the section in the form of a comment on her own study, but for much help and discussion during the writing of the original. Where no specific references are given, the relevant sources will be found in her work. I am also most grateful to Dr B. M. Blance, M.A., F.S.A.SCOT., and Dr J. M. Coles, M.A., F.S.A., F.S.A.SCOT., for permission to quote from their unpublished theses.

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³ Leisner, G. and V., *Die Megalithgräber der Iberischen Halbinsel, I: Der Süden* (1943), Taf. 1-7.

⁴ *Antiquity*, xxxv (1961), 193.

⁵ *P.P.S.*, vii (1941), 1-49, cf. figs. 2 and 16.

⁶ Piggott, S., *Neolithic Cultures of the British Isles* (1954), chap. vii *passim*.

The surrounding circle of orthostats is a feature difficult to parallel in other groups of chambered tombs: New Grange, one of the Boyne group, has such a feature, and Bryn Celli Ddu in Anglesey, another tomb of the Boyne group, may have had a similar circle.¹ Kercado, a Breton passage-grave, also has a circle of

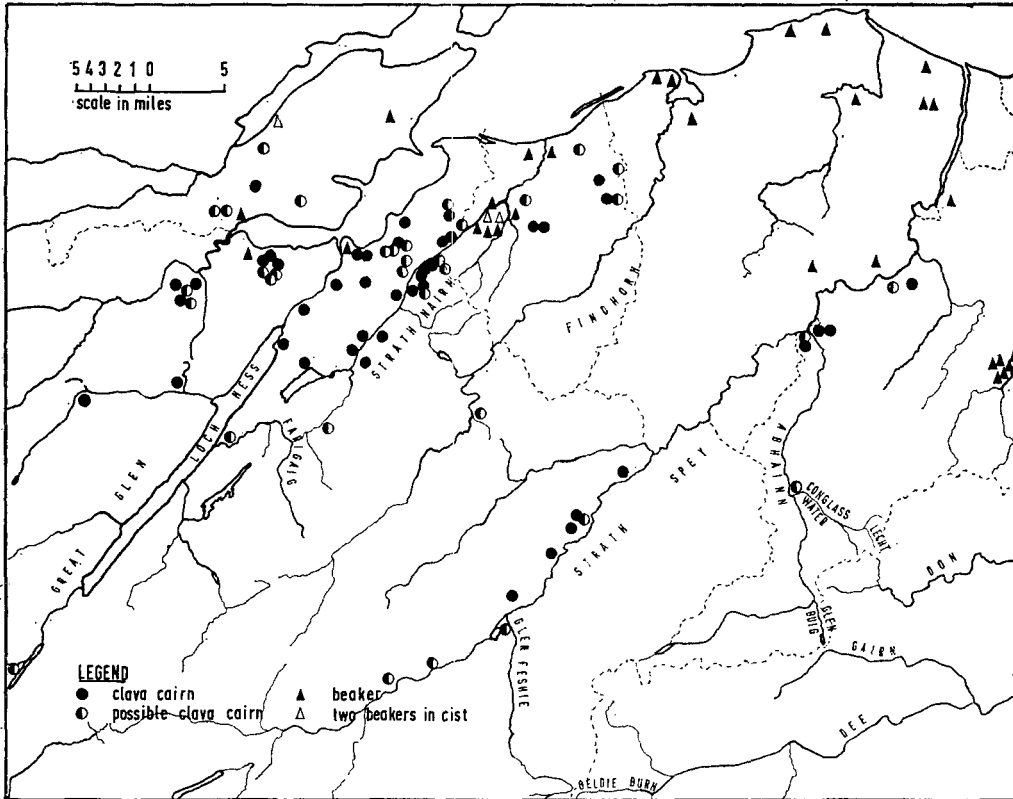


FIG. 1. Map I. All the Clava cairns marked on this map are noted by Henshall either in her catalogue, text or introduction, with the exception of the possible example of Inverfarigaig (see p. 101) and the two possible examples at Windhill, Easter Ross, *P.S.A.S.*, LXXXVIII (1955-6), 85. I am grateful to Dr A. A. Woodham, M.B.E., B.Sc., F.S.A.S.COT., for information on the latter. The two Beakers from the Culbin Sands (immediately to the W. of the Findhorn estuary) are now known to be from Aberdeenshire (see *P.S.A.S.*, xcv (1961-2), 305-6).

orthostats,² as well as a stone set on top of its cairn, as was apparently formerly the case at New Grange.³ A few of the Los Millares tombs – Nos. 7, 9, 16 and 40, for example – have some suggestion of free-standing stones beyond the cairn kerb. The Aberdeenshire Recumbent Stone Circles are the only other primarily burial monuments to have a circle of orthostats, and their connections will be discussed later.

The orientation of the Clava cairns has its closest parallels among the Recumbent Stone Circles of NE. Scotland and those in southern Ireland, and discussion of these

¹ *Archaeologia*, LXXX (1930), 205.

² Piggott, S., *op. cit.*, 200.

³ Coffey, G., *New Grange . . . and other Incised Tumuli in Ireland* (1912), 7-8, 9, 12.

two groups will follow later. However, work by de Valéra and Ó Nualláin¹ has recently shown that all the wedge-shaped gallery graves of Co. Clare face between S. and WNW., the majority between SW. and W. This should be compared with, for example, de Valéra's work on court cairn gallery graves in the N. of Ireland,² where the orientation is much more varied, but the majority face between E. and NE., particularly between E. and ENE. Sufficient information on the orientation of the Breton allées couvertes, a type which must be ancestral to the wedges,³ is lacking but while there can be no connection between gallery-graves and Clava cairns, this may be yet another hint of an Atlantic-Irish Sea tradition. Of the Almerian passage-graves planned by the Leisners only two – Llano de la Atalaya 6 and Los Millares 45 – face SW.: the rest face the eastern half of the compass, the majority of them approximately SE., a fact which Blance⁴ confirms.

No study has been made of the orientation of Boyne tombs: at the New Grange cemetery,⁵ New Grange itself faces approximately SE., while the primary chamber at Dowth faces a little S. of W., the secondary chamber being parallel. It is uncertain where the chamber is at Knowth⁶ – it does not however face N. as Coffey⁷ suggested. A newly discovered passage-grave close by, Knowth Townland,⁸ faces SSE. In the Loughcrew cemetery⁹ 13 of the 24 tombs remain in a state where the orientation can be noted, and of these only one, Loughcrew S, faces the W. half of the compass – W. 10° N. Of the remainder five face E. 20° S., three E. 10° S., one each E. and S. and only two the NE. quarter. At Carrowkeel¹⁰ on the other hand, though in some cases the orientations are not certain from the descriptions, the prevailing orientation seems to be N. – one faces S., another SE. At Carrowmore¹¹ the orientation of very few of the 63 cairns is certain: of those which are, most face the E. half of the compass but one faces S. and two, Nos. 56 and 59, SSW. Fourknocks I¹² is orientated approximately NNE. Neither Fourknocks II or III is a chambered tomb¹³ but the former is a ritual site with Loughcrew ware, the typical Boyne culture pottery.

A recently surveyed possible passage-grave cemetery at Bremore¹⁴ comprises a large mound and four smaller ones: no signs of a passage can be seen in the latter but that in the former may face approximately NNW. (rather than NE. as Hartnett suggested).¹⁵

Of isolated examples approximate orientations are Slieve Gullion¹⁶ SSE., Bryn Celli Ddu¹⁷ NE. and Barclodiad y Gawres¹⁸ NNE. The passage at the Mound of the

¹ Valéra, R. de, and Ó Nualláin, S., *Survey of the Megalithic Tombs of Ireland, I: Co. Clare* (1961), 106 and diagram at end of volume. Hartnett's remark (*Antiquity*, xxxvi (1962), 74) that this shows a 'tendency . . . towards the summer rather than the winter position of the setting sun' seems erroneous.

² *P.R.I.A.* (C) 60 (1959–60), 9–140, figs. 2 and 3, Pl. XXXV.

³ Valéra, R. de, and Ó Nualláin, S., *op. cit.*, 115.

⁴ Blance, B. M., *The Origin and Development of the Early Bronze Age in the Iberian Peninsula* (1960) (unpublished Ph.D. thesis, University of Edinburgh), I, 113.

⁵ Coffey, G., *op. cit.*, 3, fig. 2, and 46, fig. 26.

⁷ Coffey, G., *op. cit.*, 61.

⁹ *P.R.I.A.*, ix (1864–6), 355–79.

¹¹ Wood-Martin, W. G., *The Rude Stone Monuments of Ireland (Co. Sligo and the Island of Achill)* (1888), *passim*.

¹² *P.R.I.A.* (C) 58 (1956–7), Pl. LXIV.

¹⁴ *J.R.S.A.I.*, xc (1960), 79–81 and refs.

¹⁶ *P.P.S.*, iv (1938), 241, fig. 2, No. 31.

¹⁸ Powell, T. G. E., and Daniel, G. E., *Barclodiad y Gawres* (1956), fig. 18 (at end).

⁶ *P.R.I.A.* (C) XLIV (1943–4), 131–3, 139.

⁸ *Antiquity*, xxxvii (1963), 226–8.

¹⁰ *op. cit.* (C) xxix (1911–12), 311–47.

¹³ *ibid.*, 266 and *Antiquity*, xxiv (1960), 115.

¹⁵ *P.R.I.A.* (C) 58 (1956–7), 264.

¹⁷ *Archaeologia*, LXXX (1930), 185, fig. 1.

Hostages, Tara, is on the E. side.¹ Tibbradden, it has recently been suggested,² is probably a nineteenth century folly.

Of other tombs mentioned in giving comparisons with Clava cairns approximate orientations are Maes Howe³ SW., Achnacree⁴ SSE., Rudh' an Dunain⁵ ESE. and Barpa Langass⁶ E. Of the tombs belonging to the Maes Howe group in Orkney (other

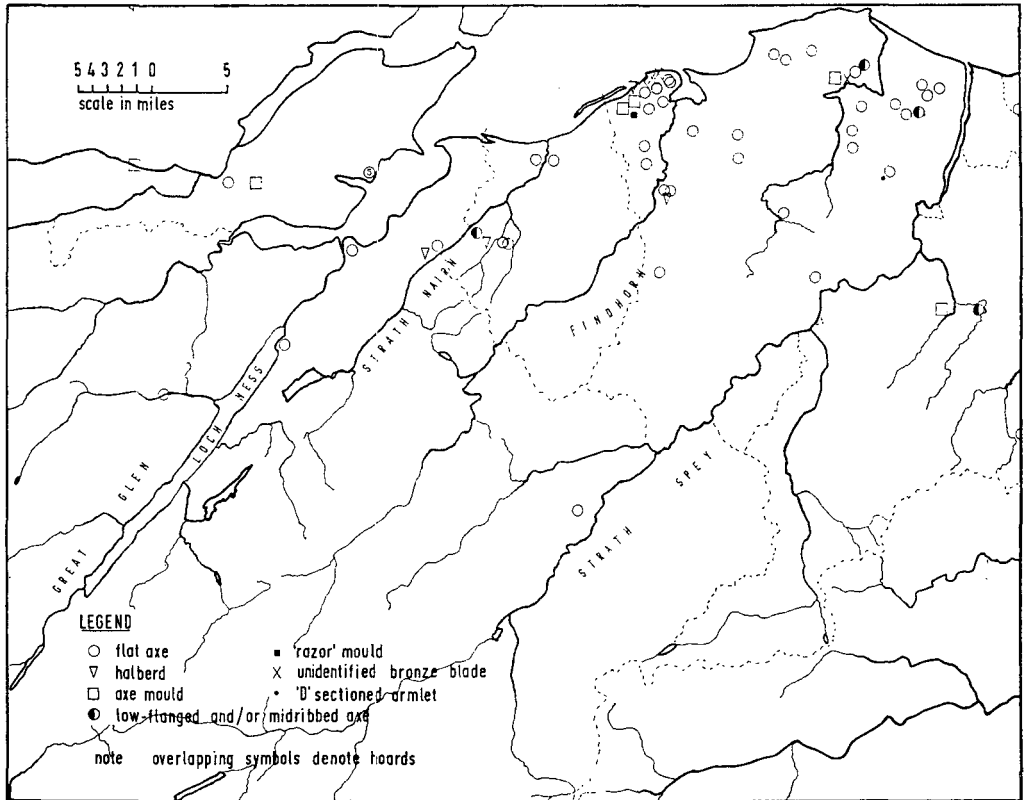


FIG. 2. Map II

than Maes Howe itself) where the orientation can be ascertained, they are approximately Wideford Hill⁷ W., Vinquoy⁸ S., Holm of Papa Westray⁹ SE. and Cuween¹⁰ and Quanterness¹¹ both E. The occurrence of Boyne-like art motifs at Holm of Papa Westray and Eday Church,¹² a ruined site which was almost certainly another Maes

¹ *P.P.S.*, xxi (1955), 164 and Ó Riordáin, S. P., *Tara: The Monuments on the Hill* (3rd ed. 1960), first page of supplementary note.

² *P.P.S.*, xxxiii (1957), 221 and *Antiquity*, xxxiii (1959), 141 and 283.

³ *R.C.A.M.* (Orkney & c.), II, No. 886, pp. 306-13, fig. 381, and refs.

⁴ *P.S.A.S.*, ix (1870-2), 409-16, Pl. XXIII.

⁵ *op. cit.*, LXVI (1931-2), 183-213, Pl. VI.

⁶ *R.C.A.M.* (The Outer Hebrides & c.), No. 224, pp. 73-75, fig. 137.

⁷ *op. cit.* (Orkney & c.), No. 410, pp. 156-9, fig. 223, and refs.

⁸ *ibid.*, No. 216, pp. 54-55, fig. 104, and refs.

⁹ *ibid.*, No. 544, pp. 186-9, fig. 269, and refs.

¹¹ *ibid.*, No. 411, pp. 159-66, fig. 245, and refs.

¹⁰ *ibid.*, No. 340, pp. 97-98, fig. 150.

¹² *ibid.*, No. 225, p. 65, fig. 119.

Howe-type tomb confirms the suggestion plausible on both architectural and cultural¹ grounds that the Maes Howe group must have a connection with the Boyne group. The scrap of pottery from Skara Brae with the face motif² must fit into this tradition though as it stands it is unique in Britain.

It is interesting to note that Newall³ believes the sarsen structure at Stonehenge to be connected not with the midsummer sunrise as popularly assumed but with the midwinter sunset in the SW. Cunnington⁴ suggested that there might have been a recumbent stone facing just W. of S. in one of the timber circles at Woodhenge. The outer enclosure of the Bleasdale Circle⁵ with its Collared urn burials had its entrance facing SSW.

The orientation of prehistoric monuments is a subject deserving of more serious study than it has hitherto been given, but in many cases it must have reflected nothing more than a tradition – a tradition that may very well have been as little understood as that of the orientation of Christian churches and burials.⁶

The presence of cup marks both on stones forming part of the structure of Clava cairns and on isolated boulders within their general area has been fully covered by Henshall – in particular one should note the convincing argument for regarding them as representing aspects of the builders' religious life unassociated with the actual rites of burial or tomb construction, and similar evidence is found among the Aberdeenshire Recumbent Stone Circles. A recent excavation of a Recumbent Stone Circle in Co. Cork⁷ noted two cups, one surrounded by a sub-wedge-shaped groove, on the recumbent.

Piggott⁸ has already noted the occurrence of cup marks on structural stones of chambered tombs in Wales, the Isle of Man, and possibly Cornwall; they are a component of the Boyne art-style, and occur elsewhere in Ireland, in Brittany, and the Évora region of southern Portugal, as well as in Scandinavia and N. Germany.

Cup-and-ring marks, on the other hand, belong to a tradition outside that of the Boyne tombs and probably originate in NW. Spain and N. Portugal.⁹ There seems only one certain example of cup-and-ring marking on a stone incorporated in a Clava cairn – a kerbstone at Balnuaran of Clava NE., where there is also a wavy channel. The small stone circle at Balnuaran of Clava has one stone which has, among several cup marks, one cup-and-ring mark.

The last survey of cup and cup-and-ring marks in Scotland appeared as long ago as 1882, when Romilly Allen published his corpus.¹⁰ The same volume contained Jolly's survey¹¹ of such stones in the Inverness district, and these two articles still remain the basis of any comments. Jolly noted¹² three stones uncovered in 1881 in opening up new land near the farmhouse on the farm of Miltown of Clava, immediately S. of Balnuaran of Clava, and on the lands of which are the remains of two Clava cairns. The first stone, in an excellent state of preservation, had one cup

¹ Piggott, S., *op. cit.*, 232–56, 324–36.

² *ibid.*, Pl. XII, 4.

³ Atkinson, R. J. C., *Stonehenge* (1st ed. 1956), 89 (2nd ed. 1960), 96.

⁴ Cunnington, M. E., *Woodhenge* (1929), 14.

⁵ *Ant. J.*, xviii (1938), 154–71, 168, Pl. XLVI.

⁶ For an interesting discussion on church orientation, see *op. cit.*, xxxvi (1956), 205–13, and refs.

⁷ *J. Cork Hist. A.S.*, 2 ser. LXIV (1959), 1–27.

⁸ *P.S.A.S.*, LXXXVIII (1954–6), 197–8.

⁹ *J.R.S.A.I.*, LXXVI (1946), 62, 75.

¹⁰ *P.S.A.S.*, xvi (1881–2), 79–143.

¹¹ *ibid.*, 300–96.

¹² *ibid.*, 336–9.

with a surrounding ring, another with two surrounding rings and a groove running from the outer ring, while two unringed cups appeared to have connecting grooves, or in one case, an unconnected groove. It was possible to see that the cups had been excavated with a sharp instrument, and in some cases subsequently smoothed over. The second stone, actually a fragment of a larger block, had in addition to numerous cuplets, two large cups partly surrounded by an irregular shallow groove, while the third stone, again part of a larger block, was cupmarked on both sides and had 'an artificial groove' joining two cups on one side.

Channels joining cups are noted on a few other stones scattered within the Clava cairn region, but in view of the difficulty of telling whether they are natural or artificial, they are not noted here – Jolly himself seems to have been aware of the difference between artificial and natural grooves, though he apparently grouped them both together.

Two cup-and-ring marked stones were found at low water mark on the beach at Cummington, between Burghead and Hopeman,¹ and another three in the Roseisle district S. of Burghead,² while a slab originally³ found at Clackmarras, near Elgin, has S-spirals of typical Boyne type on one face and one cup-and-ring mark and many cup marks on another. In addition, another face has a crescent, and below this was originally a figure seven-like carving. In the most recent publication of this,⁴ parallels were drawn with the crescent among the motifs at the then unpublished Boyne tomb of Fourknocks I, Co. Meath. In fact this latter forms the mouth of a statue-menhir like figure⁵ of a tradition well known in Atlantic passage-graves, and though Hartnett, the excavator of Fourknocks I, described the Clackmarras stone (under the name of Strypes) as 'of statue-menhir type', the remarks by Young in the original publication⁶ of the stone, that the crescent and figure seven below were Pictish, seem to me correct, though Gordon⁷ believes the crescent to be of the same technique and in the same style as the spiral – Pictish and/or early Christian carvings on cup marked slabs are not unknown.⁸

Cup-and-ring marks, therefore, are relatively rare⁹ in the Clava cairn area, but apart from the cup marks which, taken by themselves, are scarcely diagnostic, only the Clackmarras stone shows any connection with Boyne art. The distribution of these 'artistic' manifestations, however, coincides with that of Clava cairns, with a slight peripheral scatter, and a similar coincidence occurs with the distribution of Aberdeenshire Circles, while the well-populated Laich of Moray with its concentration of Beakers and bronzes (Maps I and II)¹⁰ in the first half of the second millen-

¹ op. cit., LXVII (1922-3), 11, noted in Davidson, J. M., *The Enigma of the Cup and Rings* (1939), 17.

² Davidson, J. M., op. cit., 15-18; *ibid.*, 18-22; *Nature*, xxii (May-Oct. 1880), 122 noted in *P.S.A.S.*, xvi (1881-2), 123, and in Davidson, J. M., op. cit., 17. ³ *P.S.A.S.*, xli (1906-7), 172, n.1.

⁴ op. cit., LXXXIX (1955-6), 444-6, Pl. LXIV, 2 and 4.

⁵ *P.R.I.A.* (C) 58 (1956-7), 222-3, Pl. LXXXV.

⁶ *Reliquary and Illustrated Archaeologist*, 3 ser. III (1897), 41-47.

⁷ *P.S.A.S.*, LXXXIX (1955-6), 445-6.

⁸ e.g. op. cit., LII (1917-18), 99-102 and refs. ⁹ The references in *P.S.A.S.*, xvi (1881-2), 123 to boulders at Califer Hill and Carden Moor seem erroneous, and descriptions of them have not been found.

¹⁰ I must join issue with Mrs Stewart, op. cit., xcii (1958-9), 80, where she says that 'axes and moulds on the southern shores of the Moray Firth have a mutually exclusive distribution to short-necked beakers'. As can be seen from maps I and II, this is not the case.

nium B.C. is nearly clear of such markings, except for the area peripheral to the Clava distribution and the isolated Clackmarras stone.¹ While the European distribution of cup marks is fairly widespread, and very probably more so than is obvious at present, the connections with the Boyne tombs and the Atlantic route should once more be noted.

From this survey of the distinctive features of the Clava cairns, therefore, the nearest parallels lie along the traditional passage-grave Atlantic route from Iberia, a deduction which, in fact, adds only in detail to previous observations. More specifically some similarities with the Boyne tombs of Ireland must be admitted, and the Almerian tombs of SE. Spain seem to have rather closer connections, but it must be emphasised that in no area is there known to exist a passage-grave culture with enough parallels from which one can derive the Clava cairn settlement *in toto*, and this must be set beside the remarkable unity of, and lack of parallels for, the group in Scotland, and its markedly complementary distribution *vis-à-vis* the Orkney-Cromarty tombs immediately on its northern border. This problem, however, is further discussed when dealing with dating evidence.

Certain minor features of the religious ceremonies attached to Clava cairn burial may be noted. Firstly, the beliefs seem to have attached no importance to objects of use or material value in the hereafter, though at Corrimony the stain immediately above the 'silhouette' head of the burial may represent a meat offering. The opinion of the soil analyst² on the peripheral stains on the chamber floor at Corrimony was that they were caused by the cutting through of slight irregularities on the old land surface, but Henshall suggests that they might represent vegetable remains. Secondly, no particular attention seems to have been paid to siting the tomb. Thirdly, there may have been little difference in outlook between cremating and inhuming the deceased: both inhumation and cremation were used in the passage-graves, and cremation was used in the ring-cairns. In the one reliable inhumation burial, the body was crouched, with the face, perhaps significantly, directed down the passage, which ran almost due SW. Not only is the crouching of this burial unusual among primary chambered tomb deposits, but it seems to be that of an articulated body as opposed to the common chambered tomb practice of depositing bones previously laid in a mortuary house. Fourthly, the tombs seem to have been very markedly for the elect who, to judge from the amount of labour involved and the sometimes very close placing of the tombs, must have lorded over a sizeable community. While this is a generally admitted fact about chambered tombs, the apparent refusal to bury more than one or two bodies in a chamber the size of that of an average Clava cairn, is unusual. Fifthly, the chamber floors at Corrimony and Culdoich suggested that the turf had been removed before erecting the tomb, and that the floor of the former had been strewn with fresh sand at intervals and consolidated by stamping, which implies that certain rites were carried out for some time after the funeral. This in turn implies that the final blocking of the passage was not immediately connected

¹ I am very grateful to Mr Alastair MacLaren, F.S.A.SCOT., for confirming this and for several references. He also confirms the similar concentration in the Recumbent Stone Circle area.

² P.S.A.S., LXXXVIII (1954-6), 204.

with the burial. The infilling of the chamber and passage, as well as the blocking of the entrance, shows that the lack of secondary burials was quite deliberate. At Corrimony the burial had been covered with flat slabs, among which were fragments of charcoal. This charcoal and that at the other sites must have been brought in separately from the remains – in one case, Culdoich, its distribution was more restricted than that of the cremated bones, and the cremations themselves must have taken place elsewhere. The cremation at Kinchyle of Dores also appeared to be under slabs, and a paving, possibly not primary, was noted at Aviemore.

Lastly, there is the ritual use of white quartz, a rite which has a wide use in time, but which has some noteworthy parallels. Thousands of pieces were found at Corrimony behind, between, and in front of the kerbstones. It was common at Druid-temple and noted at Gownie and Sands of Forvie. It was found in the chamber at Achnacree¹ and in the forecourt and over the mound at Rudh' an Dunain.² At Bryn Celli Ddu it was found all over the site, occasionally, for example in the passage, in deliberate piles.³ Childe⁴ thought the Boyne tombs might have had a quartz capping. Wood-Martin⁵ noted that virtually every tomb at Carrowmore contained quartz associated with the burials, and that rock crystal⁶ was also used, both there and in other Irish tombs. At Kintraw⁷ at the southern end of the Great Glen, a cairn with a false portal flanked by two uprights, like that of a miniature Aberdeenshire Recumbent Stone Circle, showed evidence of having originally been covered with the material. It was also very common in the vicinity of the burial, which was a cremation in the larger compartment of a trapezoid cist. A single large orthostat stands on the W. side of the cairn. Very interestingly the false portal faced SW., and the largest kerbstones were also on the S. and W. sides. At the portal there may have been a ritual blocking, for large quantities of carbonised wood were found between the uprights.

The approximately 12 ft. diameter stone circle near the Clyde-Carlingford cairn at Clach na Tiompan, Perthshire,⁸ contained quartz. A feature of these Perthshire circles is that one of the stones is often disproportionately large, with the rest graduated down to the smallest diametrically opposite – at Clach na Tiompan the W. orthostat was the largest, but the position in other circles is not constant. Carn Ban, Glen Cochill, Perthshire,⁹ a large kerbed cairn with a surrounding circle of standing stones had quantities of white quartz incorporated in the cairn material, suggesting that the name perhaps preserved a long folk memory. The primary burial had been in a short cist with a massive capstone, and fragments of a long-necked beaker were found in the cist.

At the Druids' Circle near Penmaenmawr, N. Wales, Griffiths¹⁰ found a large amount of quartz ranging from tiny chips to boulders up to 18 in. long. The entrance to this circle, which is just over 80 ft. in diameter and has a bank contiguous with,

¹ op. cit., ix (1870-2), 414-15.

² *Archaeologia*, LXXX (1930), 209.

³ Childe, V. G., *Prehistoric Communities of the British Isles* (1940), 67 (1956 reprint).

⁴ Wood-Martin, W. G., op. cit., 86.

⁵ *ibid.*, 87-88, 23.

⁶ Unpublished; for preliminary notes see *Discovery and Excavation, Scotland 1959*, 4-5 and op. cit., 1960, 7.

⁷ *P.S.A.S.*, LXXXVIII (1954-6), 124.

⁸ op. cit., xci (1958-9), 81.

⁹ *P.P.S.*, xxvi (1960), 303-39.

¹⁰ op. cit., LXVI (1931-2), 201, 209.

but on the outside of, the orthostats, faces SW. The primary burial was a cremation in an Enlarged Food Vessel urn, and one of the 'secondaries', also in an Enlarged Food Vessel urn, had a flat ogival riveted knife. A 10 ft. diameter circle nearby contained an even denser concentration of quartz fragments, and so did another stone ring with outside bank. Another circle 40 ft. in average diameter, with a distinct ring-cairn like appearance, also contained quartz, though in much less quantity.

As will be noted below, a Recumbent Stone Circle in southern Ireland also contained quartz, as possibly did an Aberdeenshire example, and into the same tradition must fall the artificially rounded balls of natural chalk found at Fourknocks I.¹ It is interesting that Hartnett mentions their occurrence in megalithic sites, 'usually of passage grave type', in Ireland,² including tombs at Carrowkeel and Loughcrew. The fact that such objects seem to occur in roughly circular structures, whether megalithic tombs, cairns or stone circles, may not be coincidence.

One further point may be noted: at Corrimony there was a non-structural stone embedded in the passage. The main chambers at Bryn Celli Ddu³ and Carrowkeel F⁴ had upright standing stones of no structural function, and a central post-hole with evidence of decayed wood was found at Fourknocks I⁵ though the excavator thought it more likely to have been for supporting the roof than for taking a ritual pole. Centrally placed standing stones are a common feature of Los Millares, Almeria: Blance⁶ thinks they were ritual, and not roof supports as the Leisners thought. It may be worth suggesting that the upright stones noted in the central areas at Balnuaran of Clava Centre and Sands of Forvie could belong to this tradition. At Kintraw there was a post-hole in the top of the cairn suggesting parallels to the orthostats atop New Grange and Kercado already noted.

Boyne tombs often occur in cemeteries as do Clava cairns. The New Grange group and Bryn Celli Ddu are sited in unassuming positions, rather like Clava cairns, but Loughcrew, Carrowmore, Carrowkeel and Fourknocks cemeteries for example have outstanding positions.⁷

There is as yet no definitive survey of the southern Irish Recumbent Stone Circles, but recent excavations at Drombeg⁸ and Bohonagh⁹ may be taken as a basis for discussion. These circles vary in diameter from 8 to 36 ft. and more, and are characterised by a flat-surfaced block-like boulder, usually the lowest stone of the circle and standing almost invariably in the western semicircle of the monument. Diametrically opposite stand a pair of portal stones, the tallest of the circle, usually set in its circumference but sometimes radially with their inner edges touching the circumference. The orthostats are more often slabs or pillars than boulders; sometimes there is a central boulder, and one or more of the stones may be cup-marked. One is enclosed by a ditch; none surrounds cairns or tumuli.

¹ *P.R.I.A.* (C) 58 (1956-7), 231, 235-7.

² *ibid.*, 235.

³ *Archaeologia*, LXXX (1930), 183-4.

⁴ *P.R.I.A.* (C) XXIX (1911-12), 326-7, Pl. XIII, 4.

⁵ *op. cit.* (C) 58 (1956-7), 208, 211-12, 213, fig. 4, 251-2.

⁶ Blance, B. M., *op. cit.*, I, 111.

⁷ *P.R.I.A.* (C) 58 (1956-7), 198 and Piggott, S., *op. cit.*, 193-4.

⁸ *J. Cork Hist. A.S.*, 2 ser. LXIV (1959), 1-27 and *op. cit.*, 2 ser. LXV (1960), 1-17.

⁹ *op. cit.*, 2 ser. LXVI (1961), 93-104.

Parallels between these Circles and the Recumbent Stone Circles of NE. Scotland were noted as early as 1909¹: in the same year² one was noted orientated S. and in 1930³ five all facing between S. and W. were noted. In 1931⁴ one facing just S. of SW. was excavated revealing paving in the circle near the portal and through the portal, and 'a great number' of quartzite stones were also found, chiefly about the portal.

In 1939⁵ one orientated N. was excavated by Ó Ríordáin to reveal two trenches at right angles to each other and originally taking timbers, the excavator thought to take an upright post. Beside this was a ring cairn with two standing stones to the N. and under the cairn material was a circle of radially-set stones with the three biggest, represented by socket holes, on the N. lying in a straight line. Ó Ríordáin suggested that the Aberdeenshire Circles might have been in part ancestral to this group.

Fahy's findings at Drombeg resulted in a fascinating reconstruction of the ritual and while some of it need not be recounted here as it does not bear on known Clava traditions the compacted floor of a single layer of stones, the levelling of the site, the stripping of its turf from the entire immediate vicinity except for the portal and immediately outside, and the presence of flecks of charcoal in the latter, are all at least partially paralleled among the Clava cairns. Fahy believed the removal of turf to have been purely to level the site, however, and the paving to have been not ritual but the covering for the well-concealed burial.

The burial, which the excavator considered dedicatory, was a cremation in a pot of the Lough Gur Class II ware family, normally dated⁶ to the Early-Middle Bronze Age but C 14 dated here to 13 B.C. \pm 140 (with a proviso that it might have been earlier but not before 500 B.C.). The stratification virtually precluded it being a two period monument, but Fahy was prepared to allow the slight possibility of the circle predating the burial and paving though also suggesting that Lough Gur Class II ware might be long-lived.

The orientation Fahy noted was intimately connected with the midwinter sunset, being to the SW. and the tops of the three stones to the N. of the recumbent form a very accurate upward slope before the lower recumbent is reached. The profiles of two of the orthostats suggested a fertility cult.

In the excavation of a stone hut circle and a cooking place less than 50 yds. from the site a C 14 date of A.D. 229 \pm 120 was obtained from beneath the mound of the cooking place, but no positive evidence to connect these features with the Recumbent Stone Circle was found. At Bohonagh besides the circle there was a hut site, as well as a dolmen and an isolated cup-marked slab. Points in common with Drombeg were the stripping of turf from the site, the charcoal flecks outside the portals, the upward sloping top of the only flanker to the recumbent to survive, and the cremated central burial, though in this case with no urn and under a small mound. The

¹ op. cit., 2 ser. xv (1909), 105-8.

² *ibid.*, 59.

³ op. cit., 2 ser. xxxv (1930), 70-85.

⁴ op. cit., 2 ser. xxxvi (1931), 9-19; plan in *J.R.S.A.I.*, xlv (1915), 316-17.

⁵ op. cit., 2 ser. XLIV (1939), 46-49.

⁶ *P.R.I.A. (C)* 56 (1953-4), 297-459.

orientation was a little W. of S. but there appeared to be no continuous stone floor. The isolated cup-marked slab could have come from the Circle but there could be no certainty about this – the dolmen had a cup-marked capstone. As neither the hut site here nor the house circle at Drombeg had any occupation refuse no connection could be proved, but it is worth noting that the lack of such material could conceivably mean that if neither were habitations they might be ritual.

In the light of present knowledge therefore the most that can be said is that in their orientation in particular and in other parts of their construction and ritual these monuments appear to have affinities with the Clava cairns and their namesakes in NE. Scotland, though the C 14 date presents an impasse.

The Recumbent Stone Circles of NE. Scotland differ from their southern Irish namesakes in several ways, the most important probably being that they are primarily sepulchral. So many of the known examples have been so severely robbed, even virtually completely destroyed, that it is almost impossible to obtain an accurate idea of their structure. Coles' surveys made between 1899 and 1906 are still the only published accounts of these monuments, for only a brief résumé¹ of Keiller's survey was ever published.

The central feature of these Circles appears to have been a ring-cairn with a kerb inside and out. The most obvious features, however, are the orthostats and the eponymous recumbent block: the former, unlike those connected with the Irish Circles, are always highest on either side of the recumbent. Keiller maintained the latter blocked a passage: this seems unlikely, though it may represent a ritual entrance. In some cases it is linked to the cairn by a kerbed construction, and platforms in front of them are also known, one² possibly with quartz fragments on it. Keiller noted how often the orthostats are of quartz, and also noted causeways leading from certain orthostats outwards, including the apparent linking of Druidsfield, Crookmore and Old Keig. Again he noted their unassuming positions.

In view of Henshall's accurate summary of these Circles, it is proposed here only to discuss certain aspects of them: their orientation, their dating and their relationship to the Clava cairns. The orientation is in a state of some confusion. A practical difficulty is that the recumbent is very often not tangential to either the arc of the orthostats or the cairn kerb, and both these latter are often sub-circular. Further, the centre of the 'circle' is very difficult to estimate, and may be quite irrelevant to the original intentions of the builders. On the assumption that such blocks must have been raised for a specific purpose, witness the platforms in front of them, and therefore set reasonably accurately, it is here assumed that the stone directly faced the required direction, which is nearly always confirmed by the position of the flankers. Of those plans published by Coles, c. 70% lie between SSW. and S. (including three which face a fraction E. of S.). The remainder can be divided equally between the approximate directions WSW., SW. and SSE. – only one example, Old Bourtree Bush, lay outside these limits and faced E. Keiller maintained this monument was

¹ Keiller, A., *The Megalithic Monuments of North-East Scotland* (1934), private reprint of a lecture given to the British Association at Aberdeen.

² *ibid.*, 16, Keiller says Castle Frazer but gives no references, and I have so far been unable to trace the exact details.

not a Recumbent Stone Circle, but though part of Coles' interpretation is unlikely, the identification itself seems reasonable.

Keiller maintained, however, that an invariable orientation to the SW. quarter was quite wrong, and noted 16 recumbents facing between 348° and 62°. Of these, nine are completely at variance with Coles' plans: Keiller gives for Yonder Bognie 355°, Coles a fraction E. of S.; for Esslie the Greater, 359° 41 mins. and SW. respectively; for Aquorthies, Manar 0° and SSW.; Loudon Wood, Aikey Brae and Cairnton, Strathbogie, 9° and SSW.; Newcraig, Daviot, 22° and SW., and for Tomnagorn, 22° and SW. In the case of Loanhead of Daviot, Kilbridge-Jones' plans¹ agree with Coles', not Keiller's, and Childe's plan of Old Keig² agrees with that of Coles. Rough plans published by Peter in 1885 of Loudon Wood and Aikey Brae³ also agree with Coles' orientations.

Until, therefore, another complete survey of these monuments be made, some uncertainty remains on this subject.

Apart from early and unfortunate diggings, only three have been excavated. At Garrol Wood, Kincardine, Coles⁴ found a central cremation in a stone-lined hollow, three others in pits, another on a slab, and a deposit of charcoal and some fragments of an 'undecorated urn' all within the central ring. At Old Keig,⁵ all the abundant pottery on the site apart from a few minute Beaker sherds belonged to the class of 'flat-rim ware' which Childe termed Old Keig ware and J. Coles⁶ following Powell⁷ has reclassified as Covesea ware. At Loanhead of Daviot⁸ however quite a number of Beaker sherds and one or two possible Food Vessel sherds were found about the site, including the central area. Further, a Pygmy Cup in the form of a miniature Food Vessel was found in a burial secondary to the circle. This excavation came too late to receive more than a footnote in Childe's first work on Scottish pre-history⁹ which dates these circles to the end of the Late Bronze Age on their association with Old Keig ware.

A fragment of a Beaker bracer associated with sherds 'of a reddish colour' had been found years before at Old Rayne¹⁰: further excavations at Loanhead of Daviot^{11,12} reinforced the evidence that the site dated from Beaker times and that it must have been the centre of an area of prolonged activity into the Late Bronze Age and after. Childe recognised this in 1938¹³ and 1940¹⁴ and though in the manifesto of 1944¹⁵ he seemed less certain, subsequent editions of *Prehistoric Communities of the British Isles* have retained the early dating. Henshall has since noted that four rims from Loan-

¹ P.S.A.S., LXIX (1934-5), Pls. I and II, facing p. 196.

² op. cit., LXVIII (1933-4), 381, fig. 9.

⁴ P.S.A.S., XXXIX (1904-5), 190-203.

⁵ op. cit., LXVIII (1932-3), 37-53 and LXVIII (1933-4), 372-93.

⁶ Coles, J. M., *The Late Bronze Age in Scotland* (1959) (unpublished Ph.D. thesis, University of Edinburgh): see *Univ. Edin., Dept. of Arch. 12th Ann. Rep.* (1959-60), 11-12, see now P.S.A.S., XCIII (1959-60), 44.

⁷ *Arch. N.L.*, 6, 1 (1955), 17, see now T. G. E. Powell 'The Coming of the Celts', pp. 105-24 of *The Prehistoric Peoples of Scotland* (1962) (ed. S. Piggott); 116.

⁸ P.S.A.S., LXIX (1934-5), 372-93.

⁹ Childe, V. G., *The Prehistory of Scotland* (1935), 176, n.3.

¹⁰ P.S.A.S., XXXVI (1901-2), 530.

¹² op. cit., LXXVI (1936-7), 401-5.

¹⁴ Childe, V. G., *Prehistoric Communities*, 100-1.

¹⁵ Childe, V. G., *Scotland before the Scots* (1946), 8, 41, 50, 103, 104, fig. 23.

³ op. cit., XIX (1884-5), 375-7.

¹¹ op. cit., LXX (1935-6), 278-310.

¹³ *Univ. Lond., Inst. of Arch. 2nd Ann. Rep.* (1938), 36-39.

head of Daviot classified as Old Keig ware have fluting similar to Lyles Hill ware in Ulster and Grimston ware in Yorkshire, and at least two of the sherds appear to have come from primary positions. In 1951 Piggott¹ suggested that the open carinated bowl tradition originated in the Whitehawk ware of SE. England, spread north to Yorkshire and thence to Ulster, with the similar bowls from Easterton of Roseisle, Moray coming from Yorkshire.

Without going into the matter in detail, though it is hoped to discuss the site at Easterton of Roseisle at some future date, I should prefer to follow Atkinson² and Corcoran³ in suggesting that the movement took place in reverse, or at least that the NE. Scottish material comes from Ulster.

Fluted decoration on Irish Neolithic pottery is common on Lyles Hill style, the third of Case's styles of Western Neolithic ware there,⁴ but rare in the two preceding styles, Dunmurry and Ballymarlagh, and in the succeeding style, Limerick (Lough Gur I/Ia). Case, using the recent C 14 dates for the Irish Neolithic⁵ suggests a floruit of most of the third millennium B.C. for the Lyles Hill style: at East Finnercy in Aberdeenshire⁶ Atkinson found Lyles Hill ware with a scrap of cord-ornamented Bell Beaker which on Dutch evidence cannot be before c. 2200 B.C. One of the sherds in question from Loanhead of Daviot has a lug, a feature very rare on Irish Western Neolithic wares, and it is quite possible that the Loanhead of Daviot material represents a local version, but until much more is known about the Scottish non-Megalithic Neolithic, more Circles are excavated and C 14 dates are available little can be said with certainty. However, the resemblance between the false portal of the Circles and that at the Lyles Hill cairn has been noted, and the preliminary studies of the distribution of Tievebulligh axes⁷ show that the Great Glen route from Ireland to NE. Scotland was used in Neolithic times. Much must remain to be discovered in association with this trade.

That there exists some connection between the Recumbent Stone Circles and Clava cairns must be admitted, but the exact link remains a mystery. 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 Circles to be orientated between SSW. and S. may mean some difference in ritual. As Henshall notes, only the ring-cairn element of the Clava cairns is found on the other side of the Grampians, in Kincardine and Aberdeenshire. Henshall notes the impossibility of separating on distributional grounds the ring-cairns and passage-graves: the only hint of difference is that the former tend to occur over a wider area than the latter, and this suggests that the former may have lasted longer or eventually become more popular, which might explain the lack of passage-graves on the farther side of the Grampians. Henshall has already noted features among the Clava cairns in Strath Spey which suggests they represent a later movement from Strath Nairn, and one

¹ Piggott, S., *Neolithic Cultures*, 116-17, 170, 182, 271-2.

² *Arch. N.L.*, 6, 1 (1955), 14; see now R. J. C. Atkinson, 'Fishermen and Farmers', pp. 1-38 of *The Prehistoric Peoples of Scotland* (1962) (ed. S. Piggott); 14-17.

⁴ *op. cit.*, xxvii (1961), 174-233.

⁵ *Antiquity*, xxxiv (1960), 111-16.

⁶ *Arch. N.L.*, 6, 1 (1955), 14; see now R. J. C. Atkinson *op. cit.* in S. Piggott *op. cit.*, 18-19, 22.

⁷ *Ulster J.A.*, 3 ser. 15 (1952), 31-60 and unpublished map in National Museum of Antiquities of Scotland; see R. J. C. Atkinson *op. cit.*, 19.

could mention here the possible Clava cairn at Lower or East Lagmore at the confluence of the Spey and Abhainn where the cairn material has spread beyond the surviving orthostats, suggesting the latter must be very near the kerb. These late features are very marked among the Kincardine and Aberdeenshire ring-cairns.

This in itself raises a major problem: on the size of the Recumbent Stone Circles alone, it is impossible to suggest they developed out of these late ring-cairns. Henshall suggests that the Circle builders (that is, as opposed to the ring-cairn builders) if they penetrated from the W., were most likely to have come along the inner edge of the coastal plain, and then by Keith to the middle Deveron valley, where they settled, and on by its tributary, the Bogie, to the Urie and Don. From the distribution of the Circles this seems the most likely route for settlers coming from the area of the Clava cairns, but there is indeed a big gap between the nearest Clava cairns on the coastal plain and the Deveron. As will be noted more fully later, Clava cairns very markedly avoid the coastal plain, except in the immediate area of the head of the Great Glen, and there are no examples of any sort farther along the coastal plain, let alone anything that might be regarded as typologically linking Clava cairns and the Circles.¹ It seems safe to say that if any clues exist to show the links between these two types of monument, they will be found in the NE. where new field work and study are urgently needed, and not in the Clava cairns area. A study of large scale distribution maps to find out exactly what areas are occupied by these circle-builders, and how they compare with the distribution of Beakers and also of early metal types must be a first preliminary. The differing opinions of orientation must be resolved, and so must the problem of what exactly was the primary interment, for cremation is totally foreign to the Beaker tradition.

Henshall suggests that the ring-cairn builders reached the NE. by going up Strath Abhainn, over the notorious Lecht, and into the Don valley. The Lecht, however, is the second highest motoring road in Scotland, and generally the first in Britain to be blocked by snow. With the exception of the sites at Sands of Forvie, all these ring-cairns are in or accessible from the lower reaches of the Dee valley: by continuing up Strath Abhainn instead of turning up the Conglass Water to the Lecht, one can traverse the narrow and roadless defile of Glen Buig, only just touching 1600 ft. and reach the Gairn, a tributary of the Dee, but it is tempting to suggest that the route used was that through Glen Feshie, up the river of that name which joins the Spey at Kincaig, and down the Geldie Burn to the Dee. This is the most direct route from the Spey to the Dee and nowhere exceeds 1850 ft. Periodic attempts to have a road constructed have been made ever since General Wade projected such a road to link the barracks at Rathven, Strath Spey, with that at Braemar.²

On the very thorough study of the geographical background to the Clava cairns

¹ F. Coles (*P.S.A.S.*, XL (1905-6), 198-201, 205-6) classified the stone circle at Innesmill, Urquhart, Moray, as a probable Recumbent Stone Circle, and Childe (op. cit. 104, fig. 23) marked it thus on his map showing the distribution of the Clava Cairns and Recumbent Stone Circles. However, this ascription is erroneous - Coles over-enthusiastically misquotes his references.

² *The Scots Magazine*, 75, 6 (Sept. 1961), 537-44 and Salmond, J. B., *Wade in Scotland* (1934), 175-84, esp. map on p. 178.

settlement which Henshall gives, only a few points need be made. Firstly, the almost total lack of settlement by Clava cairn builders on the fertile Laich of Moray must be emphasised, and this will be discussed when offering some dating evidence for the Clava cairns. Secondly, there is a reference to what may have been a Clava passage-grave in that compendium of references, Chalmers' *Caledonia*.¹ Its situation above the Farigaig where it joins Loch Ness, would fit in with a movement coming up the Great Glen and finding its way over to Strath Nairn, for the Farigaig valley leads directly to the upper reaches of the Nairn. Lastly, there is a very interesting reference to the presence of alluvial gold in Strath Nairn²: in 1869 a native of the district returned from the Kildonan gold fields in Sutherland and found gold in the Daltulich Burn near its junction with the Nairn, enough it was said 'to make a finger-ring'. Attempts to locate this burn from various sources have failed, but it must be in the neighbourhood of Mains of Daltulich farm (NH 737418). This is about two miles upstream from the Balnuaran of Clava group of cairns, and near the N. end of that stretch of the Nairn which sees the greatest concentration of these cairns. The discovery was later confirmed, but the quantities were too small to make exploitation practical. Its occurrence has probably nothing to do with the Clava cairns, but if satisfactory ways of identifying various gold lodes are found, it would be worth bearing this area in mind.

Piggott has already³ fully discussed the Iberian relationships of the Boyne tombs, and to this one should add the comments of Hartnett on his excavations at Fourknocks I.⁴ There are numerous related features both in the construction of the tombs and in art motifs along the Atlantic coast of Iberia, but the fullest parallels occur in the Almeria, Badajoz and Algarve regions of southern Iberia, where Blance's recent work⁵ has added greatly to the detail and understanding of this area. On the other hand, the spiral motif, so characteristic of Boyne art, is totally absent from the S. Iberian objects, and is rare both there and elsewhere in Iberia in rock carvings and paintings. The possible origin of the spiral will be noted later, but its rarity in Iberia suggests – unless one argues that it was developed in the Boyne culture itself – that there is more than one tradition present in the Boyne culture.

The poppy-headed pins of the Boyne culture, though markedly bigger, have good parallels at Vila Nova de São Pedro and pestle-hammer beads occur in the SW. of the Peninsula,⁶ but apart from these and parallels to use of stone basins for holding remains in some Iberian tombs, the Iberian affinities of the Boyne tombs so strongly suggested by art and architecture are totally absent from any comparison of material culture. This phenomenon is a feature of virtually the whole tradition of chambered tomb settlement in Europe: apart from tantalising glimpses and odd

¹ Chalmers, G., *Caledonia*, I (1807), 94–95, n.(s): the reference given, *Phil. Trans. of Edin.*, II, II, 14–15, cannot be satisfactorily identified.

² Bain, G., *History of Nairnshire* (1st ed. 1893), 576 (2nd ed. 1928), 460; quoted in Matheson, C., *Moray and Nairn* (1915), 109.

³ Piggott, S., *Neolithic Cultures*, chap. VII.

⁴ *P.R.I.A.* (C) 57 (1955–6), 220–8, 239–40, 249–62.

⁵ Blance, B. M., op. cit.: see *Univ. Edin., Dept. of Arch. 12th Ann. Rep.* (1959–60), 6–10 and *Antiquity*, xxxv (1961), 192–202.

⁶ *J.R.S.A.I.*, LXXVII (1946), 65.

traits there is no material to suggest great folk-movements such as might have been expected. Childe in his last book¹ suggested the concept of 'megalithic missionaries' to explain this spread of chambered tombs in western and northern Europe, an idea which I believe to contain a considerable amount of truth. However, there is little evidence that the newcomers ever came in numbers large enough to settle by force even had they wished to do so. As seafarers, those that settled the W. and N. of Britain may have been content to live by and off the sea.

Blance's examination of the Almeria culture of SE. Spain in particular, throws some interesting light on the problem of chambered tombs. Probably *c.* 2700-2600 B.C., there impinges on the indigenous population of southern Iberia a settlement from the eastern Mediterranean bringing with it among other things the use of ring-cairn like structures, either as communal ossuaries or collective tombs forming the Almeria culture. About this time, copper metallurgy was introduced to Iberia by the first of a number of settlements beginning the 'Colonial' period. The earliest of these settlements, all of them heavily defended, was probably Mesas de Asta on the Gulf of Cadiz; the other sites, from Almizaraque in eastern Almeria to Vila Nova de São Pedro upriver from Lisbon are a little later. The founding of Los Millares, Almizaraque and other sites in Almeria ended the development of the Almeria culture and introduced the passage-grave. It is to this period that the objects carrying Boyne-like art motifs belong. The arrival of these settlers in Almeria possibly caused an expansion W. of the Almeria culture, which seems to have played an important part in the formation of the Portuguese dolmen group in S. Portugal and SW. Spain, where the flat idols of the Almeria culture developed into the decorated schist plaques whose triangular and lozenge motifs are so like those in Boyne art, though here the face motif is exceedingly rare. However, this last motif is common on clay plaques at Vila Nova de São Pedro.

An examination of the Los Millares passage-graves suggested that certain of them, particularly of the earlier phase, were never roofed by corbelling. Llano de la Atalaya 6, already noted as being one of the only two passage-graves planned by the Leisners orientated SW., is such an example, being in fact an Almeria culture grave with the passage adopted from the newcomers.

As has already been noted, the Mesas de Asta colony probably dates from *c.* 2700-2600 B.C., and the other colonial settlements must date to before 2400 B.C. A C 14 date of 2345 ± 85 B.C. was obtained from an upper level at Los Millares, and all the sites are pre-Beaker, there being evidence to suggest that Vila Nova de São Pedro was actually destroyed by the Beaker folk. On the Dutch C 14 evidence,² Bell Beakers were in the Netherlands by 2200 B.C. That Vila Nova de São Pedro was founded before 2400 B.C. is suggested by the fact that while it has several links with the Cyclades the typical Cycladic spiral pattern is absent, and this implies a date before the beginning of the Early Cycladic II period, usually dated to *c.* 2400 B.C.

Recent C 14 dates for the Irish Neolithic have suggested a floruit of *c.* 2200-1600

¹ Childe, V. G., *The Prehistory of European Society* (1958), 124-34.

² *Palaeohistoria*, IV (1955), 3-27 and *Antiquity*, xxxiv (1960), 17, correcting the C 14 dates, *op. cit.*, xxxii (1958), 261.

B.C. for the Boyne culture. Bearing in mind therefore, the dating suggested by the parallels between the poppy-headed Boyne pins and those from Vila Nova de São Pedro, and the occurrence of pestle-hammer beads and cup-marks in the Évora region, it would be tempting to regard the Boyne culture as originating in the area of Portugal settled by the E. Mediterranean colonists. The manner in which the spiral became an integral part of the Boyne art tradition is not clear: Blance suggests that each of the Iberian colonies had a different source in the eastern Mediterranean; this together with the previous eastern Mediterranean settlement which resulted in the Almeria culture, suggests that the first half of the third millennium B.C. witnessed a series of independent voyages from the Aegean to Iberia: it would be quite reasonable to suppose that a later such movement from the Cyclades at the beginning of Early Cycladic II brought with it the spiral pattern. The rarity of this motif in southern Iberia suggests that these voyagers, probably heading in this case directly for the Tagus region, moved on immediately with those who were in the process of moving up the Atlantic seaboard to Brittany, Ireland and ultimately Orkney. Why this migration took place will very probably never be known: if the spiral motif cannot arrive until after 2400 B.C. then it may have arrived at the time the Vila Nova de São Pedro settlement was becoming beset by Beaker folk. This would confirm MacWhite's suggestion¹ that 'the art of the Irish Passage Graves received some fresh stimulus from the Mediterranean which partly by-passes the Iberian peninsula'.

Typically the Boyne culture shows very little connection in its material remains with the area of its assumed origin. The settlement, whether by missionaries or refugees from Vila Nova de São Pedro, must have been numerically very small, and an impoverished material culture is only to be expected. Loughcrew ware, which is the recurrent pottery type in the Boyne tombs, has already been fully covered by Piggott,² and recently Case³ has further commented upon it. It is a poor quality ware, the pots semi-globular in shape, with profuse overall decoration, both of these features being completely foreign to the Western Neolithic pottery tradition in Ireland. Case indeed suggests that it was the work of natives who had no previous knowledge of pottery. A comparison of the distribution of the Western Neolithic pottery and Loughcrew ware⁴ shows them to be almost mutually exclusive, and the idea of a handful of settlers arriving among a people still Mesolithic in economy seems a very probable explanation of the origin of Loughcrew ware.

Certain changes in religious tradition undoubtedly took place; for example, none of the decorated round idols are known from Ireland. On the other hand, we have the transference of the decoration to stones in the tombs themselves, even, as for example at New Grange, to the extent of erecting non-structural stones in front of the dry-stone walling to carry the decoration. These stones may have originated in a feature noted for example at Los Millares – a lining of stone or schist slabs hiding the lower walls of the chamber.

¹ *J.R.S.A.I.*, LXXVII (1946), 65.

² Piggott, S., *op. cit.*, 202-4, Pl. VI.

³ *P.P.S.*, XXVII (1961), 185-6, 206, 210-13, 217 under the name of Carrowkeel ware.

⁴ *ibid.*, cf. 215, fig. 27 and 216, fig. 28.

The one surprising feature of the Boyne culture is its apparent total lack of contribution to the introduction of metallurgy, despite the undoubted fact that copper metallurgy, and that in closed moulds, had been introduced to Iberia by the Colonists. Indeed, Blance believes that the Colonies were in fact founded by metal prospectors. In Ireland, there seems to have been no thought of metal prospecting in the mind of the new settlers, who in this particular instance may have arrived as refugees rather than missionaries *per se*. The most probable explanation for the metalless economy of the Boyne culture is again that so few settlers arrived that prospecting for ore, which would have necessitated journeys into southern Ireland, was impossible.

However, the fact that these settlers did use some metal is suggested by the fact that the decorated flat axes of the Irish Early Bronze Age included passage-graves motifs.¹ The non-appearance of these axes in Iberia² seems to me a decisive point in rejecting the idea that contacts with the Iberian metal-workers still existed by Early Bronze Age times in Ireland.

All the evidence, therefore, points to a numerically very small settlement in the Co. Meath area of eastern Ireland, where tomb planning and construction and artistic manifestations are at their best. Why the 'megalithic religion' of the particular sect spread so far and became so popular, inspiring such expenditure of effort is something which archaeology perhaps can never explain, but is a feature of the entire megalithic tradition and must represent some important psychological force. In this particular case, it is reasonable to suppose that the introduction of a Neolithic economy, building techniques, the arrival in sea-going craft from an unknown land and no doubt the use of a few copper tools all combined to mightily impress the Mesolithic people among whom they settled – the occurrence of cemeteries of tombs suggests quite a considerable native population.

Because of the total lack of the material culture of the Clava cairn builders tomb types are practically the sole positive feature which can be used in discussing the cairns in the light of Irish and Iberian evidence: if we accept the validity of the parallels drawn between Clava ring-cairns and those of the Almeria culture, and between Clava passage-graves and those of the Colonists, then the origin of the Clava settlement must lie in Almeria, where the two types exist together.

The ring-cairns indicate a time not long after the arrival of the Colonists, when the Almeria culture still existed, though the evidence particularly among the earlier Los Millares passage-graves that roofs were not corbelled suggests a time not at the very beginning of the Colonial phase – on the other hand, the lack of side-chambers among Clava passage-graves means a fairly early date in terms of the Almerian examples. The cup marks on present evidence suggest some contact with S. Portugal. The fact that the Clava cairn builders went directly to the head of the Great Glen seems extraordinary, but presumably they avoided the Irish Sea area because it was already relatively well settled, which suggests the movement took place later than the beginning of the Boyne culture. The total lack of Boyne tomb art among the Clava

¹ *op. cit.*, IV (1938), 294.

² *loc. cit.*

cairns shows there can be no direct connection between Boyne and Clava cairns.¹

The geographical evidence from the Clava cairn area itself seems to conflict with this evidence, however. As previously noted, and as can be seen from the distribution map, the Clava cairns, except in the immediate area of Inverness at the head of the Great Glen, totally avoid the fertile Laigh of Moray. The fertility of the soil and geniality of the climate of the Laigh have been proverbial for centuries, and it seems extraordinary that a Neolithic community should prefer to settle in less favourable areas. It is all the more remarkable when one considers that the structure of the tombs, their occurrence in cemeteries and the social organisation implied by their being used only for a privileged person must reflect a well-organised community. There seems only one possible reason for this: the Laigh was already relatively densely populated by the time the Clava cairn builders arrived.

I am, however, less confident than Henshall when she speaks of the 'considerable Neolithic population' on the coastal plain – I certainly cannot visualise a population dense enough to prevent an organised settlement of the area by newcomers. Wooded conditions would certainly exist in the Laigh, but the climate some 4000 years ago would have been markedly drier and milder than now.² The first evidence for a major occupation of the Laigh comes with the Beaker settlement, and this is followed by a marked concentration of early bronze types and moulds, which is limited rigidly to the coastal plain.

If one assumes a Dutch origin for the Beaker settlement of NE. Scotland³ the Dutch C 14 evidence suggests this must have occurred *c.* 2000 B.C. in which case one must assume Beaker settlement on the Laigh by 1900 B.C. If, therefore, one argues that the Clava cairn builders were kept off the Laigh by the Beaker settlements, a date of 1900–1800 B.C. would be the earliest possible for the former. This, however, seems too low to make an Almerian origin plausible even if, as we have hinted above, a date later than the start of Boyne culture might be inferred. One outstanding problem is that if the Recumbent Stone Circles are indeed Neolithic in origin, then the Clava cairns must be earlier still, for one can hardly derive them from the former. The lack of early bronzes in the Clava cairn area (cf. Maps I and II) is important: the restriction of bronzes to the Laigh continues throughout the entire Bronze Age, and it is quite certain that the Clava cairn builders no longer existed by the beginning of the Early Bronze Age in the Laigh which, I would suggest,

¹ It is not proposed to argue about the disturbing C14 date of 3280 ± 75 (Grn-1962) for Île Carn. Giot emphasises the undisturbed nature of the tomb and the association of the wood from which the dating sample was taken and the pottery (*Bull. Soc. Préh. Française*, lvi (1959), 292–3) and Case (*P.P.S.*, xxvii (1960), 220) derives his Irish Western Neolithic pottery from Brittany. This being so, it seems incredible that corbelled passage-graves should not have appeared in Ireland until so much later. The Île Carn date is far earlier than Blance's dates for the Iberian passage-graves, but the earlier part of her chronology was ultimately based on that of Troy I, and recent work by Mellaart (*Anatolian Studies*, ix (1959), 131–62) has inspired his radical reassessment of Anatolian and Eastern European chronology (*Antiquity*, xxxiv (1960), 270–8) which suggests a far higher chronology than hitherto generally believed (for a criticism of Mellaart's chronology see *Antiquity*, xxxv (1961), 276–80, also *op. cit.*, xxxiv (1960), 293).

² I am grateful to Messrs S. E. Durno and R. Grant of the Macaulay Institute for Soil Research, Aberdeen for information on this point.

³ The most recent argument for this was made by Professor Piggott in his lecture 'Abercromby and After', C.B.A. 'Problems of the Bronze Age' Conference, London, December 1960; see now S. Piggott, 'Traders and Metal-workers', pp. 73–103 of *The Prehistoric Peoples of Scotland* (1962) (ed. S. Piggott).

started *c.* 1650 B.C. This effectively disposes of the suggestions¹ that these cairns are connected with the introduction of metallurgy. Here one would like to know what length of time might be in order for the initial settlement, subsequent expansion and final demise of the Clava cairn builders. It may also be noted that all pottery types are likewise absent from the Clava cairn area. A possible reason for the lack of metal in the Boyne culture has already been suggested, but in the case of the Clava cairn builders, assuming an Iberian origin, the explanation cannot be so simple, for copper deposits exist at Bona on the W. side of Loch Ness.²

Among the cists in the Food Vessel cemetery near Burgie, Moray,³ one contained a cup-marked slab, and another one may have, while an urnless cist had quartz pebbles on the floor. Two other urnless cists were of proportions that might be called megalithic. A Food Vessel cist also of megalithic size, at Loch of Blairs, Altyre, near Forres, Moray⁴ contained pebbles 'partially covered with a white limey deposit' which may be in the same tradition as the quartz. This would suggest that Clava cairns existed prior to the Food Vessel period. A white pebble was found with one of the Beakers from Achindown, Nairnshire.⁵

At Druidtemple, a cist was discovered 14 or 15 yds. NW. of the cairn which contained a 'small vase or urn' reddish on the outside and bluish-black inside, of a 'plain barrel-shaped pattern', 4 or 5 in. in height, with mouth, middle and basal diameters $3\frac{1}{2}$, $3\frac{3}{4}$ and $2\frac{5}{8}$ in. respectively.⁶ If it were a Beaker, it *might* suggest that the cairn was built subsequently to this burial, as one might have expected the latter to have been placed either in the Clava cairn or well away from it. The complementary distribution of Clava and Orkney-Cromarty cairns can hardly be interpreted at present: the suggestion that the Clava cairn builders arrived up the Great Glen first because they chose the southern side of the Moray Firth need not follow, for they kept off the fertile Laigh which the first settlers might have been supposed to have settled. Cup marks, admittedly unusually large, on a stone at the Orkney-Cromarty cairn at Contin Mains and the occurrence of quartz at the entrance and elsewhere at Kilcoy West⁷ suggest that these particular tombs, both on the Black Isle, were constructed after the arrival of the Clava cairn builders.

¹ First suggested by Megaw and Hardy, *P.P.S.*, iv (1938), 292. Piggott, S., *Neolithic Cultures*, 261, among others, has also suggested this.

² *P.P.S.*, xvii (1951), 69, site 43 on p. 70, fig. 1.

³ *P.S.A.S.*, L (1915-16), 201-40.

⁴ *op. cit.*, LXVI (1931-2), 404-5.

⁵ *T. Inverness Scientific Soc. and Field Club*, I (1875-80), 188.

⁶ *P.S.A.S.*, xviii (1883-4), 355-6 and *T. Inverness Scientific Soc. and Field Club*, II (1880-3), 370.

⁷ Unpublished; see *Discovery and Excavation, Scotland 1956*, 23-24.