
On the frontier? Recumbent stone circles in Kincardineshire and Angus

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Introduction

The recumbent stone circles (RSCs) of the north-east of Scotland are an enigma. While they have been widely discussed as a class, no modern excavation has been published, the dating of the sites is not resolved, and in some surveys of their period they receive barely a mention (Parker Pearson 1993). It has been argued that they originate in the later Neolithic (Shepherd 1987). If they are of this period then their restricted distribution, when compared to that for the broadly contemporary henge monuments, may be significant; it has been suggested (Barclay 1997) that this almost exclusive distribution, which is paralleled by that of carved stone balls (Edmonds 1992), reflects at least a different ceremonial practice, if not a different social organisation in the north-east from that developing to the south, in Angus and Perthshire. Further, it has been noted (Cowie and MacSween 1999) that no Grooved Ware has been found in the north-east. If there is indeed a difference, then the 'frontier' between the two distributions may be worthy of detailed examination.

To that end the authors have re-examined the supposed RSCs at the southern edge of the distribution (illus 1), confirming the presence of a local variant (noted first by RCAHMS (1982)), and dismissing some sites that have gained currency as RSCs. We have also made other observations about the relationship between these sites and their landscape, and their potential astronomical significance.

In considering the reality of a boundary between different traditions in the later Neolithic in this area, we also consider monument distributions in the earlier Neolithic.

The sites

The supposed Perthshire sites

Two possible recumbent stone circles are thrown up by a search of the National Monuments Record for Scotland – Moncrieffe (NO11NW 11) and Fortingall Church 'C' (NN74NW 3). Both have

been excavated: Moncrieffe by Stewart (Stewart 1985), Fortingall by Simpson (unpublished, but see Burl 1988, 168–175).

Moncrieffe's only possible RSC connection is the presence of stones graded in height. Burl (1995, 160) views the three stones at Fortingall as reminiscent of a recumbent stone and flankers, and notes that they could have stood on the south-western side of a circle in line with the direction of major southern moonset. However, their dimensions and spacing (see Burl 1988, 173, top photograph) are very unlike those of a recumbent stone and flankers and they seem more likely to be a stone row similar to others in Perthshire (cf Ruggles 1999, 188, 266 n 27). A stone hole discovered to the NW (Burl 1995, 160) may mark the site of another stone in this row rather than necessarily being part of a circle.

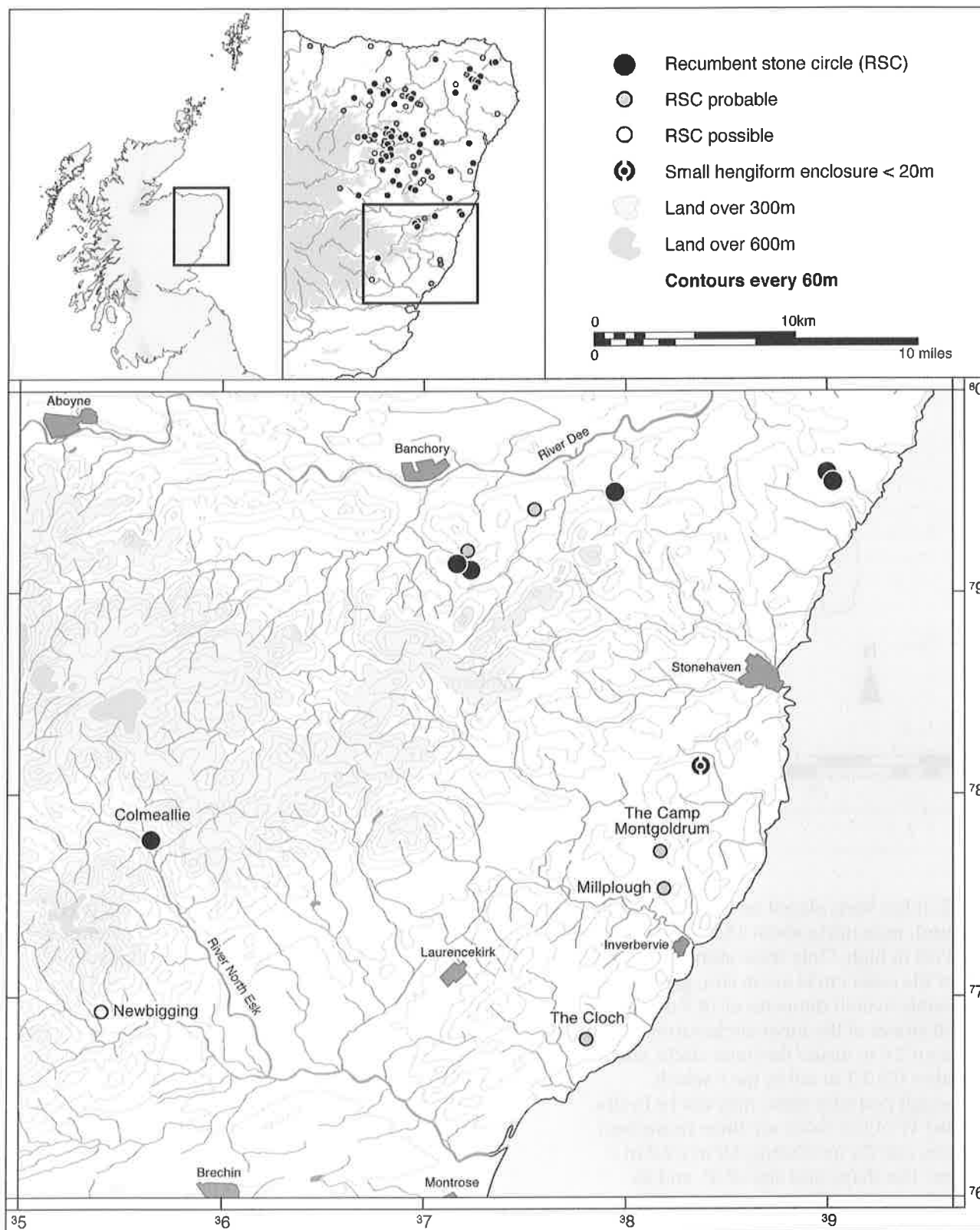
Burl also considers the circle at Croft Moraig (Piggott and Simpson 1971) to have RSC associations in its later phases of construction, largely because of the existence of a cup-marked slab at the SSW (Thom, Thom and Burl 1980, 349) aligning with major southern moonset (Burl 1995, 158). However, the slab in question lies outside the circle, within the kerb of the stone bank (Piggott and Simpson 1971, 9–10; Thom, Thom and Burl 1980, 349), and although there is a height gradation of the circle stones towards the SW, it is only slight (Barnatt 1989, 318). A number of interpretations are certainly possible of this complex monument (ibid).

In sum, none of these monuments seems to us to have any characteristics providing compelling evidence that they were related to the RSC tradition.

The Angus site

Colmeallie – NMRS number NO57NE 3: NGR NO 5655 7812.

There are two possible sites in Angus, of which only one, at Colmeallie, now survives. This

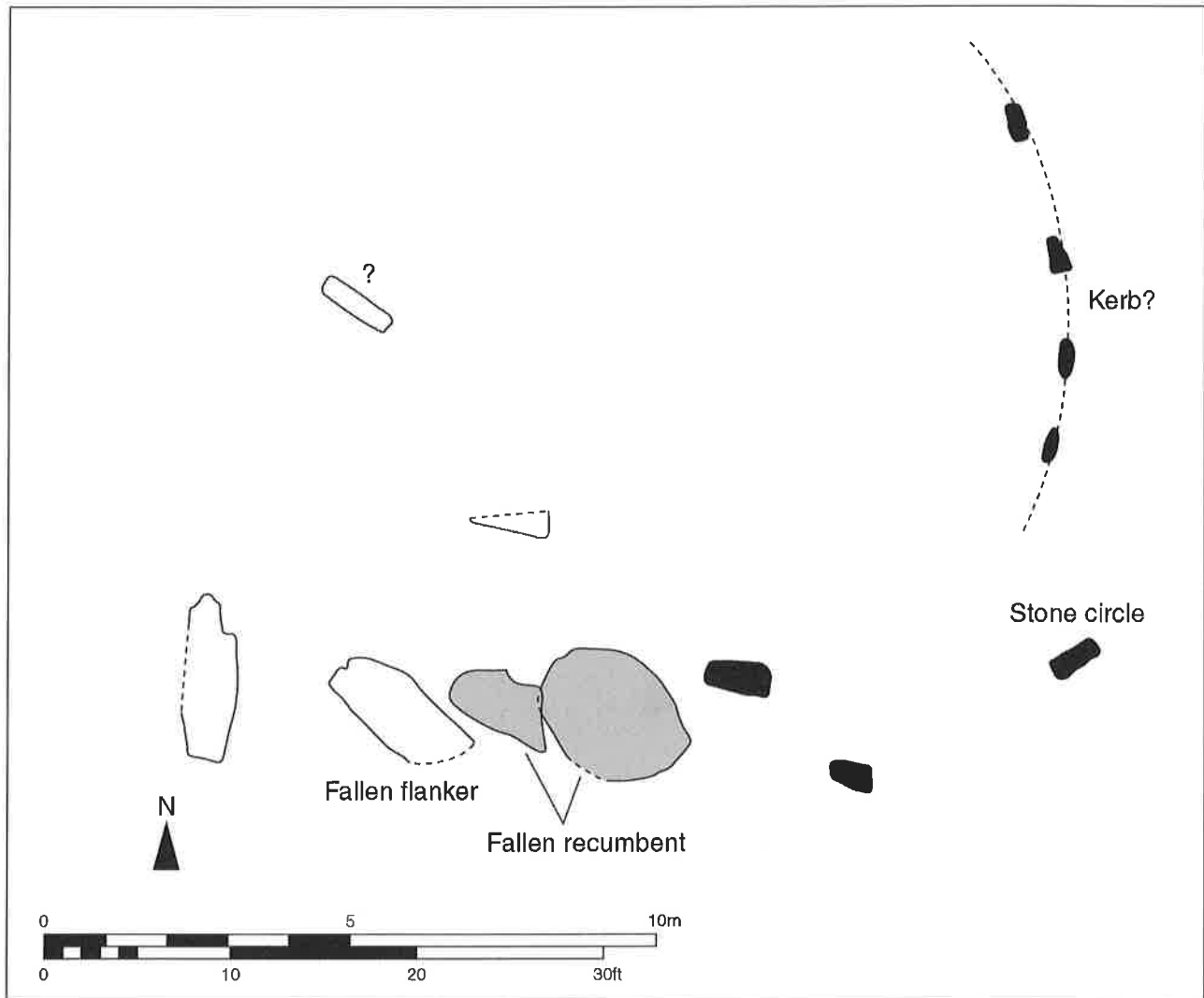


Illus 1. Map showing the location of the study area and the distribution of recumbent stone circles and other monuments.

monument lies several kilometres up Glen Esk, a narrow valley. The site was described by the Ordnance Survey in 1958 as follows (the letters refer to markings on the OS illustration card – we have not marked these on our plan as we are not

certain which stones are referred to):

The remains of a stone circle with most of its stones displaced, truncated in the N by a road, and seems to be little changed since



Illus 2. Site plan of Colmeallie.

1882. It has been placed on a turf-covered mound, measuring about 15.5 m in diameter and 0.6 m high. Only three stones (A, B and C) of the outer circle are in situ, giving a probable overall diameter of 14.5 m. Four small stones of the inner circle survive in the E about 2.0 m inside the outer circle, and another (D) 2.1 m tall in the S which, although perfectly erect, may not be in situ. To the W of this stone are three recumbent stones, one (E) measuring 3.0 m x 2.2 m x 0.5 m. The shape and size of 'E' and its position on the SSW arc of the circle suggests a tentative identification as a recumbent stone circle. However, this classification can only be upheld if 'D' has been erected at a later date and this cannot be positively determined.

On the date of our visit in August 1998 we could see only two stones of the circle, and 'D' which appears to be the eastern flanker, set inside the circumference of the circle (a characteristic of a

number of RSCs (Burl 1976, 172) and in no way counting against the identification). The recumbent is in two large pieces and the western flanker and a further stone of the circle lie beyond them. The inner kerb, perhaps of a ring cairn, is indeed represented by four stones. There are further earthfast stones in the area, but no sense could be made of them. The plan (Illus 2) was made by a rapid theodolite survey by the two authors. Our conclusion is that the site is a classic, if rather mauled, recumbent stone circle.

This conclusion is strengthened by the archaeoastronomical evidence. Because of the delapidated state of the monument it is impossible to obtain a reliable estimate of the original orientation, either along a line through the centre of the circle and the centre of the recumbent stone ('centre line') or along a line perpendicular to the alignment of recumbent and flankers ('perpendicular line') (cf Ruggles 1984, S63-72; 1999, 92-94). However, the evidence is clearly compatible with the general trend of orientation between SSE and WSW found consistently at other RSCs (ibid). The



Illus 3. The site at Colmeallie.

axial orientation is probably between about 190° and 205° ,¹ and this range includes the prominent hill summit of Craig of Shanno, 2.3 km away. The hill aligns generally with the setting midsummer full moon.² Both the alignment upon a prominent hill and the lunar alignment are common at other RSCs (Ruggles and Burl 1985; Ruggles 1999, 98).

The south-westernmost circle (Illus 1) at Newbigging (NO56NE 3) does not now survive (cf Burl 1976, 10), and we must rely on the written description (Original Name Book 60 (1861), 61). According to this, this is the site of a cairn, some 12 m in diameter, surrounded by a 'double circle' between about 15 m and 18 m in diameter composed of 20 or 30 large stones of which only one remained in 1843. While this might well have been an RSC there is no direct evidence of a recumbent stone, so this is not certain.

The south Kincardineshire sites

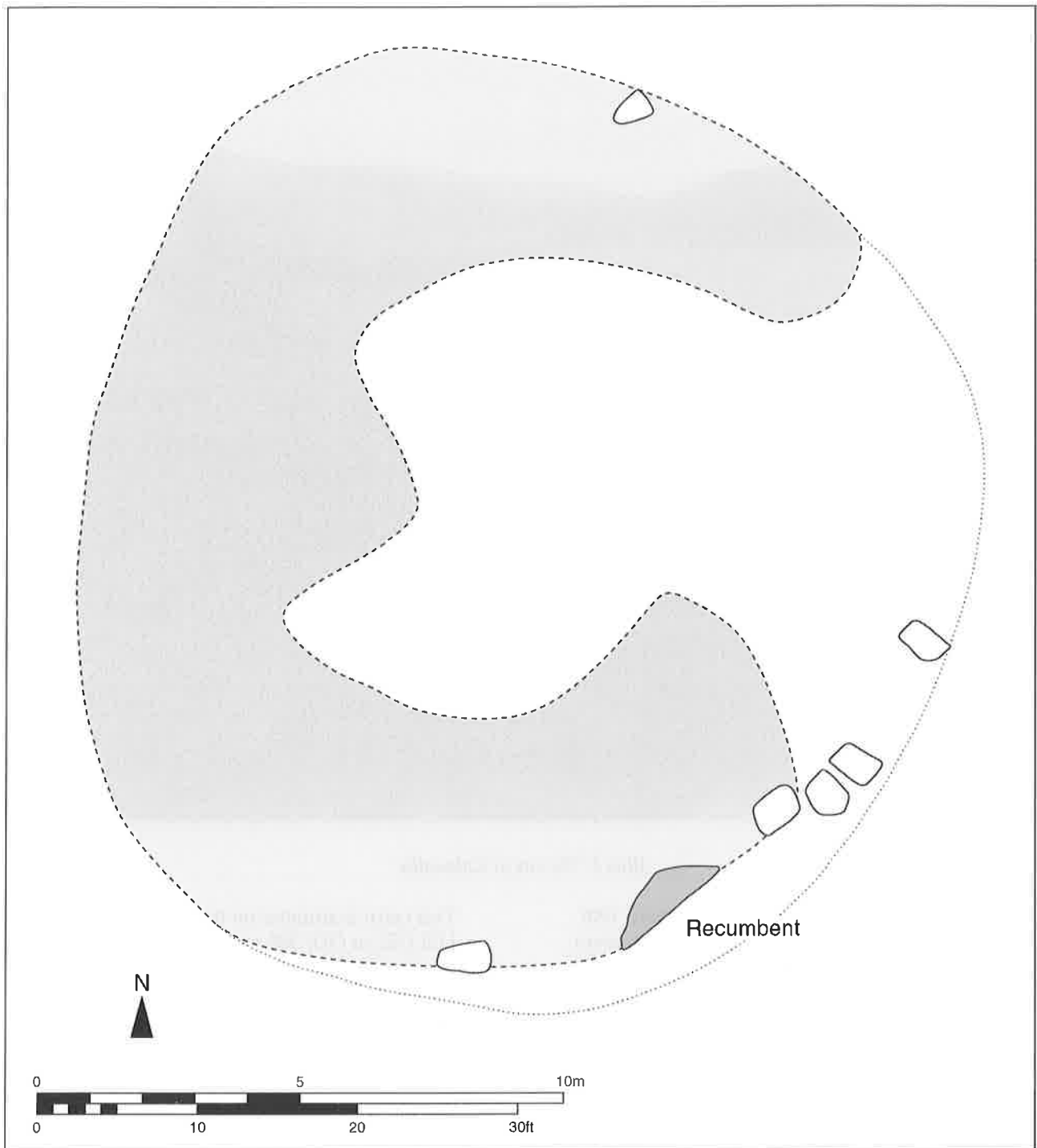
The Cloch – NO76NE 1; NO 7812 6794

The monument. The RCAHMS description of the monument (1982, 9, no 25) is:

This cairn is situated on the summit of Cloch Hill (152 m OD) 380 m WNW of Boghead farmhouse. It measures 18 m in diameter over the remains of a boulder kerb and has been reduced by robbing to a height of 0.5 m. The cairn takes its name from a prominent conglomerate slab (2.3 m by 1.7 m by 0.6 m) set on edge which forms one of the kerbstones on the SSE; it is flanked by two upright kerbstones, leading to the suggestion that the site is a Recumbent Stone Circle. The cairn is, however, one of a group in the area which have well-built kerbs and an associated large stone. (See also NO87NW 1, 6 and 12.)

While the monument certainly seems to have been disturbed, there is no evidence that its height has been to any great extent reduced (Colour Illus 4 and 5). The plan (Illus 4) is redrawn from that made by RCAHMS in 1984.

The site in its landscape. The situation of the Cloch atop a low, rounded hill means that it commands wide views all round. One of us (GJB), when visit-

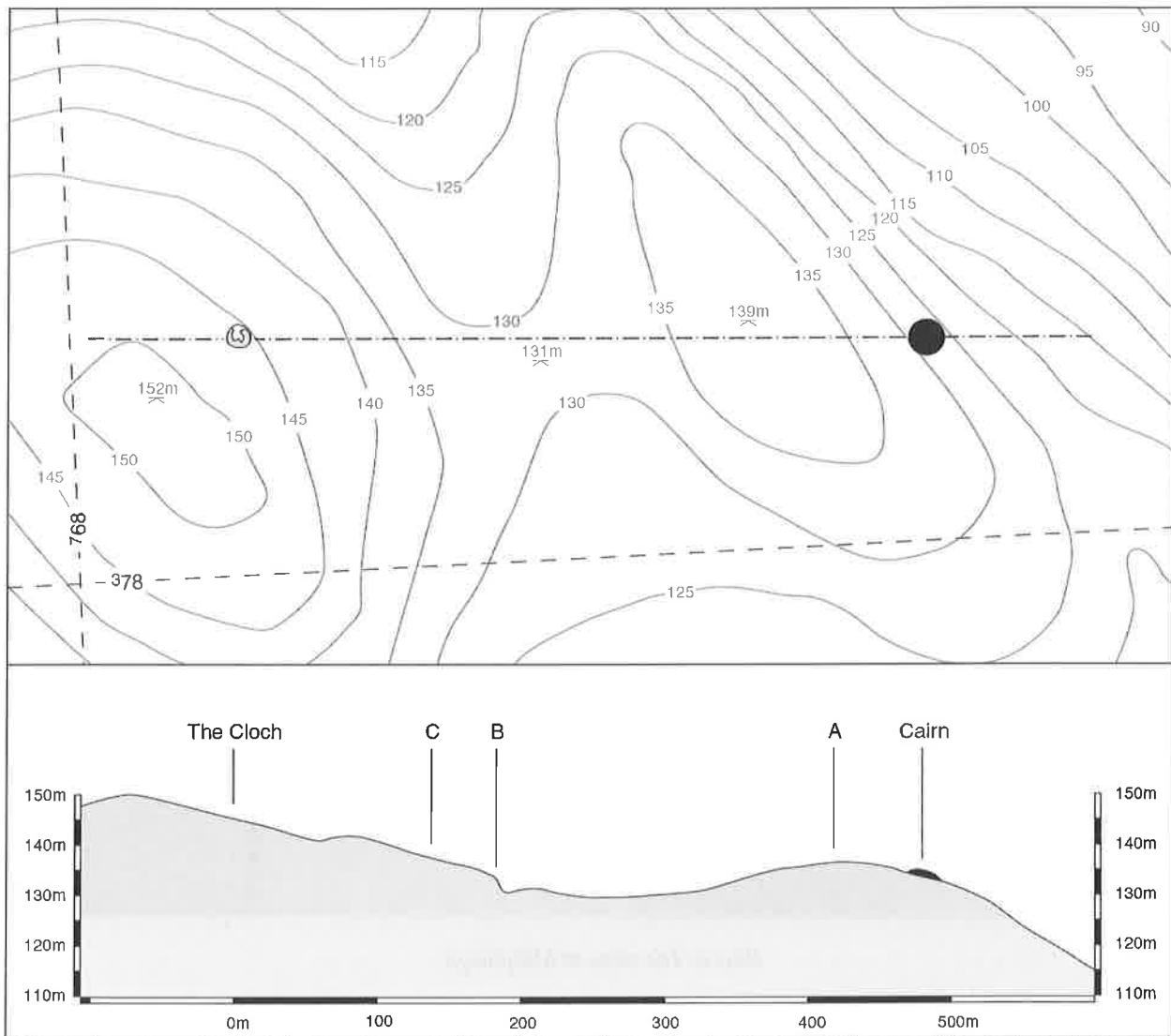


Illus 4. Plan of the Cloch.

ing the Cloch and the nearby Bridgeton Hill cairn (NO76NE 8), noted that the two sites had an unusual relationship. The cairn is set slightly to the east of the summit of Bridgeton Hill and from the Cloch the cairn is invisible. On the cairn one can appreciate that its summit lies only 25cm below the horizon as seen from the Cloch (Illus 5). The relationship seems too neatly calculated to be easily dismissed as a coincidence, and we would suggest that the cairn was constructed deliberately to be kept out of the view of the, presumably earlier,

RSC. The section illustrated on Illus 5 was drawn from a theodolite survey made by GJB and Ann Miles. The contours overlain on the upper part are derived from OS mapping and, as can be seen from the measured section, are rather generalised.

Alignment and astronomy. If this monument does represent a variant form of RSC, then it is of interest to know whether its orientation and any referents to points in the landscape or celestial phenomena are similar in nature to the trends ob-



Illus 5. Profile of Cloch and Bridgeton Hill. The vertical axis is at a different scale from the horizontal.
A = summit, B = lynchet, C = dead ground.

served amongst the RSCs, or whether it seems to be variant in these respects also. It is clear from the plan in Illus 4 that the recumbent stone is placed on the SSE side of the cairn. It is questionable whether the 'centre line' and 'perpendicular line' orientations that have been studied in the context of the core RSCs have any meaning at this type of monument, but for comparative purposes we have attempted to define them using estimates of the position of the centre of the cairn and the orientation of the longer axis of the recumbent stone respectively, judged from the RCAHMS plan. While subject to considerable uncertainty, the azimuth estimates obtained - 157° for the centre line and 140° for the perpendicular line - do not necessarily force us to conclude that the orientation here was inconsistent with the overall pattern at the core RSCs, although they do suggest it was an extreme case: the lowest perpendicular line azimuth obtained elsewhere is 147° at Ardlair (Ruggles 1999, table 5.1) but centre line azimuths

of 165° and below (down to $157^\circ.5$) are found at this and four other sites (ibid). The sea forms the horizon between east and south at the Cloch, so that there is nothing here to contradict what seems to be an absolute rule amongst RSCs, that there should not be a nearby horizon in the direction of the recumbent stone (Ruggles 1984, S76). The horizon altitude over the sea is approximately $-0^\circ.3$, and the declinations in the estimated centre and perpendicular line directions are -31° and -26° respectively. In terms of astronomical potential, the low altitude compensates for azimuths unusually far round towards the south-east, and these declinations - albeit towards one edge of the overall distribution - are not exceptional (see Ruggles 1999, fig 5.5).

Millplough - NO87NW 6; NO 8191 7544.

The monument may be described as follows (adapted from the NMRS record). This recumbent stone (450 m NNE of Millplough farmhouse) meas-



Illus 6. The stone at Millplough.

uring 2.9 m by 0.6 m and 1.7 m high, situated in an arable field, was interpreted as the sole remnant of a circle shown as two stones on the OS maps. As these stones are approximately 200 m apart, and have apparently not been moved since 1868, their association as parts of the same circle is doubtful. The stone is oriented E-W and lies immediately S of a false crest.

Landscape. The stone is extraordinarily impressive (Illus 6) and is visible from a considerable area around (including in the distant view from Montgoldrum). From the stone there are fine views to the south and west but a generally rather more restricted view to the north and east.

Alignment and astronomy. Although nothing but the recumbent stone is visible at this site, its orientation (which is almost exactly east-west) suggests a perpendicular line azimuth of 181° . There is a slight hilltop in this direction, whose summit at an altitude of just over $0^\circ.5$ yields a declination of around -33° . All these things are fully consistent with the patterns found at many RSCs (Ruggles 1999, ch 5). So also is the orientation of visibility (variation of horizon distance with azimuth) relative to the 'perpendicular line' orientation of the

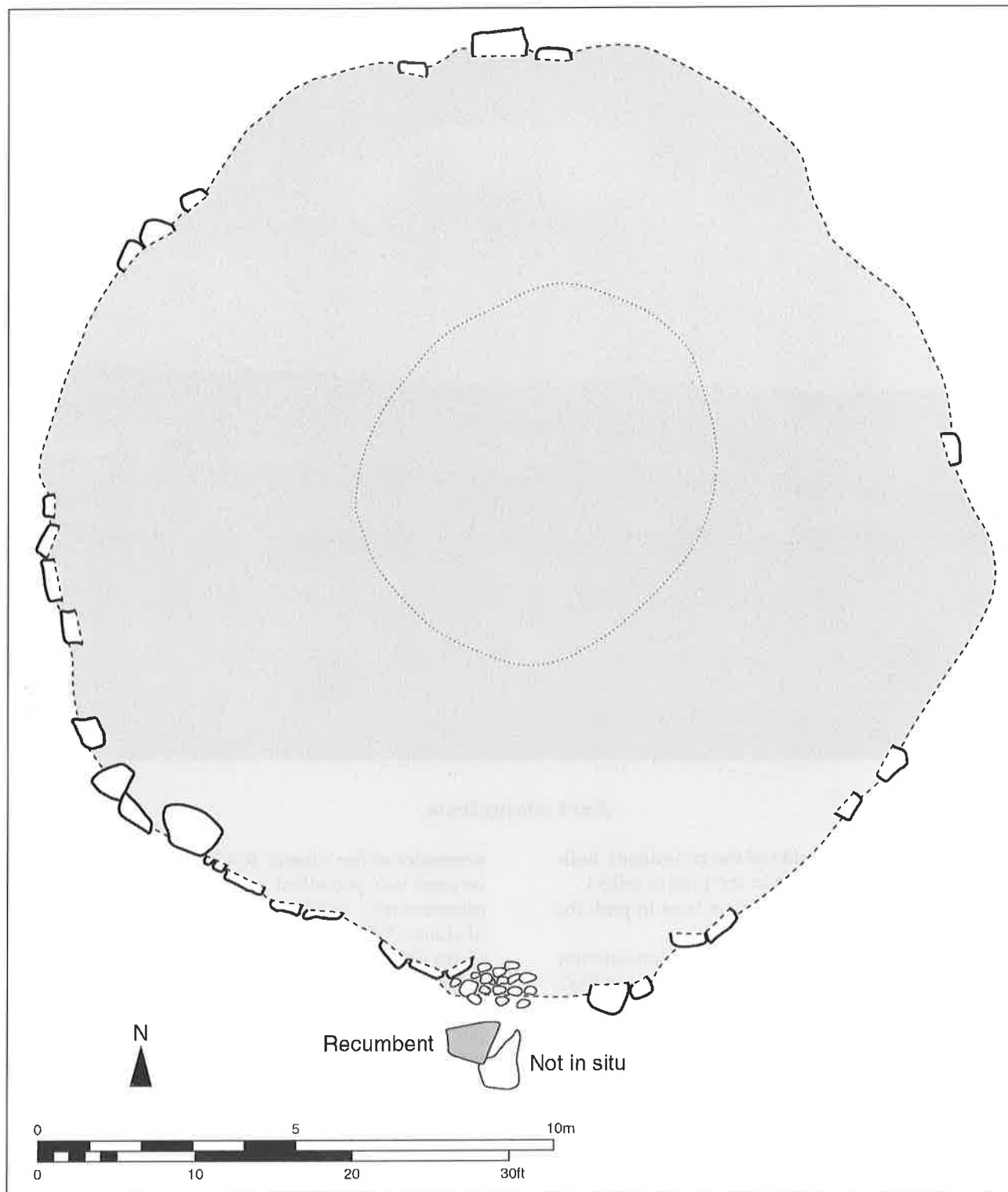
monument (ibid, 94 and fig 5.4).

Montgoldrum, NO87NW5; NO 8166 7719.

The site known as 'The Camp', Montgoldrum measures 17.8 m in diameter over a kerb and now appears as a ring of cairn material up to 0.8 m high, with a pronounced depression in the interior. A rapid tachometric survey by the authors in August 1998 produced the plan shown in Illus 7. The bottom of the slope of the inner 'face' is marked by a dotted line. On the SSW, immediately outside the kerb, lie the fragments of a large boulder, shattered by drilling and explosives, which was probably a recumbent stone (Illus 8). Only one piece now seems to be in situ. Only the largest fragment of the many lying around is illustrated on the plan.

Landscape. As at Millplough, there are fine views to the south and west but a generally rather more restricted view to the north and east.

Alignment and astronomy. Here it is possible to estimate the centre of the kerb ring and to obtain from this an estimate of the centre line orientation. The latter estimate is also dependent upon what one assumes about the original size and position of



Illus 7. Plan of Montgoldrum.

the recumbent stone. Certainly the orientation was close to due south. A survey by one of the authors (CR) in 1981 obtained a centre line azimuth of 179° . The horizon altitude here is close to 0° and the declination a little above -34° . The orientation of the monument and the overall orientation of visibility are once again fully consistent with the patterns found at many RSCs, a conclusion which the uncertainties in the exact original position of

the recumbent stone will not affect in broad terms.

Discussion

The sites at 'The Camp', Montgoldrum, the Cloch and Millplough share the characteristic that there is not now, and never seems to have been, any trace of an accompanying stone circle at any of them. Furthermore, at the two former sites there



Illus 8. Montgoldrum.

are cairns on the north side of the recumbent, both with sunken centres (taken in the past to reflect robbing, but perhaps reflecting, at least in part, the shape of ring cairns).

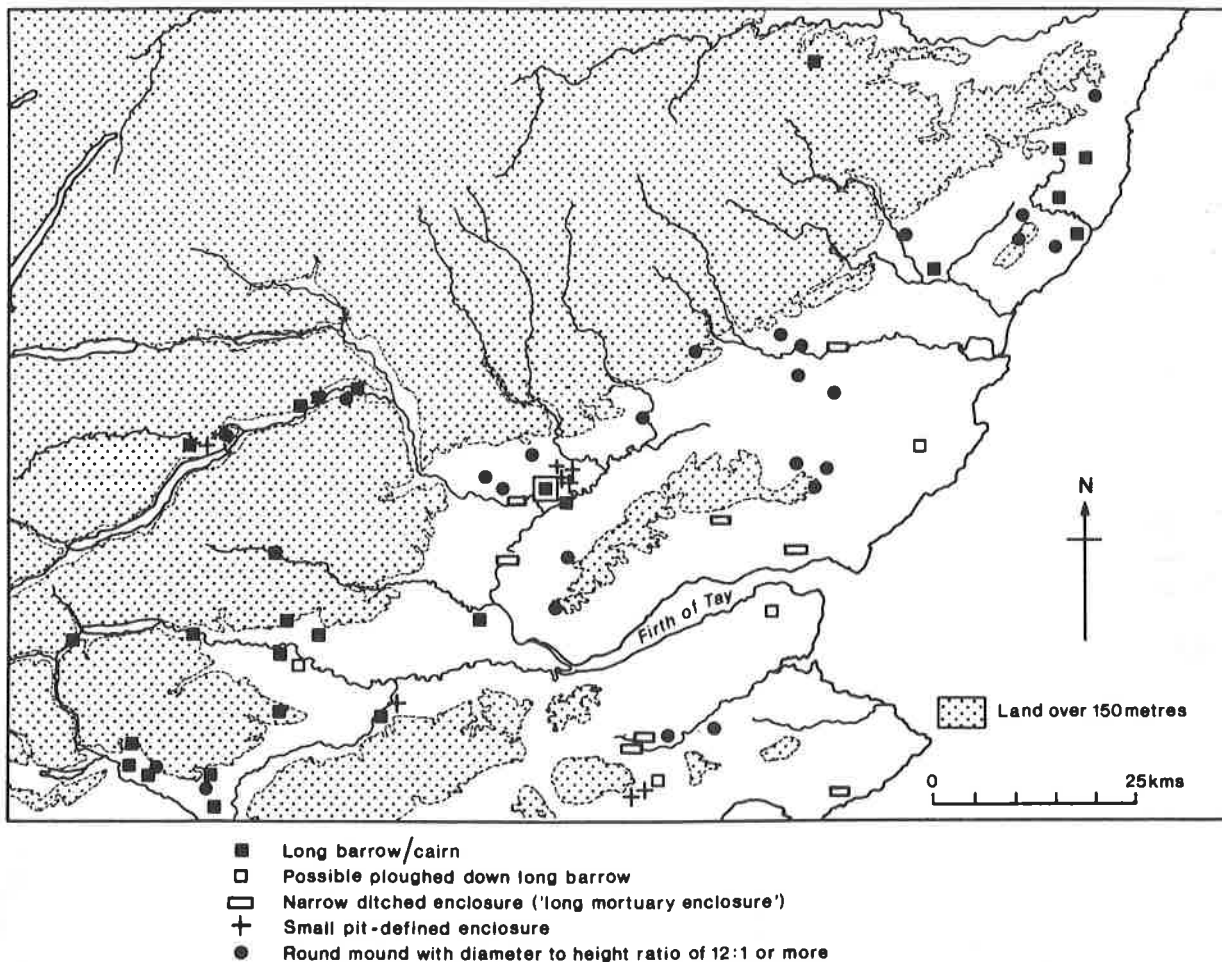
Sites comprising just a recumbent stone are not unknown amongst the main concentration of RSCs to the north. The main examples are Clochforbie, Pitglassie, Arnhill, Dunnideer, and Braehead (RSC3, 19, 24, 42, and 44 in Ruggles 1999). Ruggles and Burl (1985, S29–31) have suggested that these – and a number of further cases comprising just a recumbent stone and one or both flankers – may reflect a practice of erecting the recumbent and flankers first, with the intention (not always fulfilled) of adding the circle stones later. However, none of the examples named above seems convincing as an example of a category of monument consisting of just a recumbent stone with or without an adjacent cairn. At all of them there is at least circumstantial evidence of further stones (flankers, at least) having existed, and at some the evidence seems clear.

An alternative reading of the evidence is that monuments consisting of a single recumbent stone formed a regionally restricted group to the south of the main concentration of RSCs, in which char-

acteristics of the 'classic' RSCs were utilised, but no need was perceived for features felt to be unnecessary – in this case the accompanying circle of stones. With the possible exception of Blue Cairn (RSC78 in Ruggles 1999), which does appear to be a cairn with a single recumbent stone on the SSW side, giving a centre line orientation of about 207°,³ there are no sites of this character further north. Although the RSCs to the north, such as Aquhorthies, seem more 'normal', as is the example to the west at Colmeallie, they can still be seen to vary from 'classical' forms (Burl 1995, 136), although Burl originally (1972, 172–3) saw the differences as having a chronological origin. The differences between the sites north and south of the Mounth – the high ground that cuts off the north-east from Angus and the Mearns – perhaps suggest that they do indeed represent a distinctive local group, with those considered here, at the southern edge of the distribution, showing the greatest variation.

The earlier Neolithic

Although our main interest was in later Neolithic distributions, the sites we were visiting fell within



Illus 9. Distribution map of long and round mounds and cairns, and other burial structures.

a relatively dense distribution (for eastern Scotland) of long barrows and long cairns. One of the authors (in Barclay and Maxwell 1998) had suggested that the apparent gap noted by RCAHMS (1994) in the distribution of long burial monuments between southern Kincardineshire and western Perthshire might be illusory. It was suggested that this gap was filled by (1) long monuments of similar form (eg ditched 'long mortuary enclosures'), (2) unrecognised long barrows (Herald Hill, and the NW part of the Cleaven Dyke), and, mainly (3), by low, disk-shaped round barrows of the kind investigated at Pitnacree (Coles and Simpson 1965). It can be remarked (Illus 9) that the distribution of long barrows gives over to mainly low disk-shaped round mounds (with a diameter to height ratio of 12:1 or more) at approximately the same point at which the distribution of RSCs finally ends. It may be that further work will determine whether different regional traditions were already becoming established in this part of eastern Scotland in the earlier Neolithic.

Notes

1 On a previous visit in 1981 one of the authors (CR)

obtained an estimate of 202° for the centre line azimuth by assuming that stones A, B and C were indeed in situ outer circle stones, and that the ring was indeed precisely circular, in order to obtain an estimated centre point. Burl (1980) had earlier obtained 190° for the axial orientation.

- 2 This could be claimed of any point on the south-westerly horizon yielding a declination (Ruggles 1999, 18) between about -30° and -20° , and it is the fact that over thirty prominent hilltops in the general direction of the axis at various RSCs cluster strongly in this range that provides the evidence that this was intentional. As viewed from the circle, the summit of Craig of Shanno has an azimuth of $193^\circ.2$ and an altitude of $6^\circ.9$, yielding a declination of $-25^\circ.4$. The foot of the left-hand slope has azimuth $181^\circ.9$, altitude $2^\circ.3$ and declination $-31^\circ.1$. This indicates that the midsummer full moon would have set into the left-hand side of the hill during several years around a 'major standstill' (ibid, 36). During the remainder of the 19-year lunar node cycle the moon (and at all times the midwinter sun) would have passed over the hill before setting.
- 3 Even here there is some suggestion of a stone circle: the NMRS quotes 1831 and 1866 accounts describing the presence of '27 other stones up to 5 or 6ft long ... fallen and displaced' while confirming that the recumbent stone was the only large or upright

stone remaining by 1866. However, twenty-seven stones is an exceptional number for an RSC and the stones described may well have been kerbstones.

Acknowledgements

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Abstract

The paper considers the nature of a group of possible variant recumbent stone circles at the southern edge of the distribution, in Kincardineshire and Angus. The conclusion is that there is a variant group. The identification of some sites as RSCs is challenged. Mention is made of possible regional differences between north-east Scotland on the one hand and Angus and the Mearns on the other in the earlier and the later Neolithic.

Keywords: stone circle, recumbent, archaeoastronomy, Neolithic