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The Excavation of Cairns at Blawearie, Old Bewick, Northumberland

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Blawearie Cairn was first excavated by Canon William Greenwell in 1865. His findings indicated that the cairn was a cist cemetery of the Early Bronze Age. Recent excavation has demonstrated that the cairn was originally a kerb circle and that funerary rites were not necessarily its prime function.

The excavations at the Blawearie cairnfield (1984–1988) were initiated and directed by Stan Beckensall on behalf of the Northumberland County Council Education Committee and with the consent of the Historic Buildings and Monuments Commission for England (HBMCE). The project was devised to suit senior students from Northumberland high schools with potential career aspirations in archaeology. This paper was prepared with reference to the corpus of site records by Ian Hewitt, who was co-director during 1987 and 1988.

The following archaeological aims were formulated:

i) to determine the structure and development of Blawearie Cairn,
ii) to investigate the relationship between Blawearie Cairn and two satellite cairns,
iii) to test the supposed association of prehistoric rock carvings with Bronze Age funerary monuments.

TOPOGRAPHY AND ENVIRONMENT

Bewick Moor lies on the Fell Sandstone scarp that rises from the west at Old Bewick village, Northumberland, and runs roughly north–south (Fig. 1). To the east, the scarp slopes downwards to the coastal plain of the North Sea. The nearest towns are Wooler (11 km north-west) and Alnwick (15 km south-east). The moor is drained principally by the Harehope Burn, but patches of land are waterlogged. The soil profile is a typical podsol: thin and acidic, with scatters of glacial detritus. It is colonised by heather, bracken and grasses. Trees are represented by occasional rowan, hawthorn, silver birch, and Scots pine.

Pollen analysis has indicated that there was a greater diversity of trees on Bewick Moor during the later Neolithic/earlier Bronze Age. Birch, alder, and hazel were the most prevalent but pine, oak, lime, and willow were also present. In other respects the vegetation was much the same at it is today: heather, grasses, bracken, and plantain being amongst the most common species.

ARCHAEOLOGY OF BEWICK MOOR

As the best arable land lies to the west, in the Breamish valley, and to the east, on the coastal plain, it is unlikely that the high moorland was cultivated during prehistory; the soil would always have been easily degraded. Instead, food was available from the natural vegetation and from animals, both wild and herded. Flints found locally on the moorland point to a hunting economy (Newbigin 1941, 104–16; Jobey 1981, 39–42).

Cairns proliferate on Bewick Moor but no comprehensive survey has been published (Hardie, pers. comm.). The West Blawearie cairnfield lies 350 m

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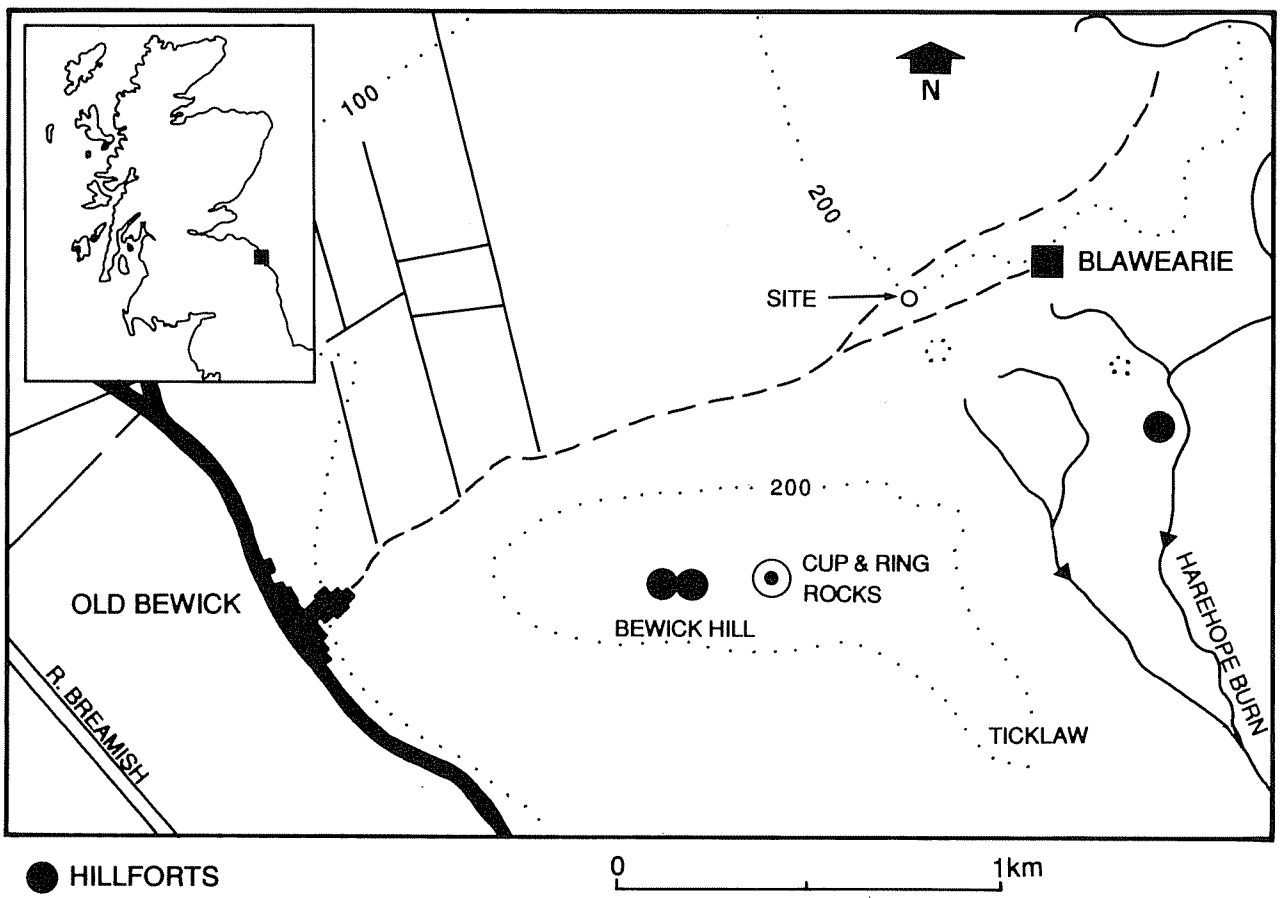


Fig. 1
Location Maps

west-north-west of the shepherd's house from which it gets its name. Blawearie Cairn (SMR NU 02 SE8) is the largest within this group (NU 0817 2229; 198 m). Surrounded by high sandstone outcrops, the cairnfield extends south towards Tick Law and is bounded on the east by the Harehope valley and a hillfort overlooking Corbie Crags. To the west is walled pasture.

On Bewick Hill, *c.* 1 km south-west from Blawearie, there is a spread of rocks bearing prehistoric motifs (Beckensall 1986, 40–1), and a double hillfort which was the subject of a small-scale excavation in 1934 (Charlton 1938, 252–6). At 'Old Bewick' a small Neolithic bowl was 'found 300 yards north-west of (the camp) under a stone projecting from the face of the hill' (Piggott 1931, 143). If this is a reference to Bewick Hill, then the find spot is close to the sites of a 'Cairn' and a 'Circle' (Charlton 1938, 253).

RECENT HISTORY OF BLAWEARIE CAIRN

Quarrying

The moorland landscape has been altered by the establishment of small-scale quarries and their attendant hollow-ways. Demand for stone was created by the construction of boundaries, shielings and, in the mid 19th century, Blawearie shepherd's house. Cairns provided a potential source of building stone (Greenwell 1877, 418) but there is no evidence to suggest that they were exploited in this way.

Early antiquarian disturbance

Archaeological sites on Bewick Moor have been plundered for artefacts. The Rogerson family, shepherd tenants of Blawearie, amassed a significant collection of prehistoric material, including flint, jet, and shale, which came either from their garden or

from cairns (Newbigin 1941, 104–16). Blawearie Cairn, a prominent site on Bewick Moor, was certain to have attracted the attention of passing collectors or opportunists. A plundered central cist was reported by Greenwell 'in which was found an urn, since lost,' of which he was unable to 'recover any account sufficiently exact to determine the type' (Greenwell 1868, 203). Excavation revealed no trace of this cist, but it had probably been built into a pit that was visible at the centre of the cairn in 1984 (Figs 2 & 3).

Canon William Greenwell

The prolific 19th century barrow antiquarian identified Blawearie Cairn as site CC, Eglingham parish (Greenwell 1877, 418–21). He excavated the cairn on 2–3 August 1865 (Greenwell 1868, 203). There is no surviving plan of Greenwell's work at Blawearie, but his excavation pits were visible to the south-south-east and west, and around the site of the previously disturbed central cist (Fig. 3). Greenwell identified three more cists (Fig. 4):

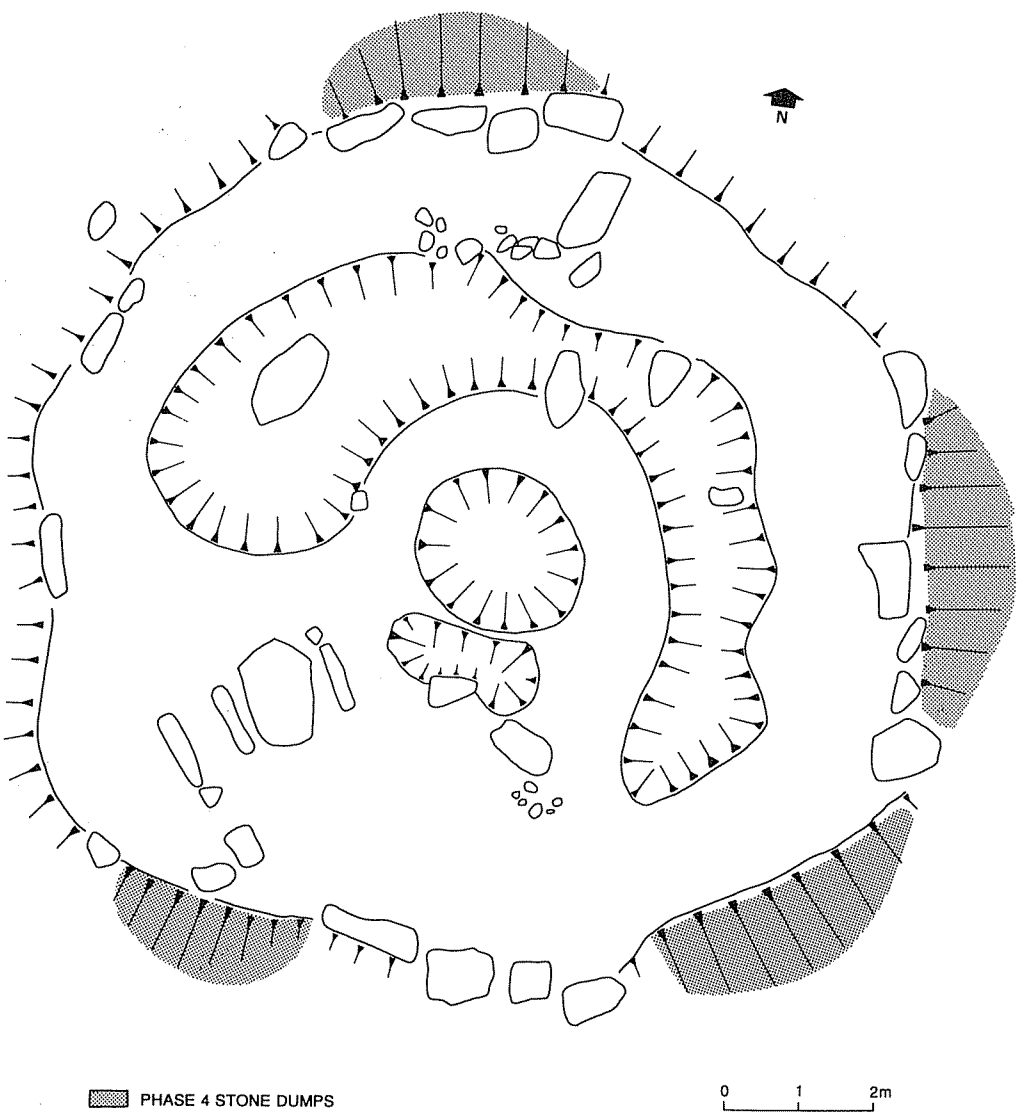


Fig. 2
1984 pre-excavation survey, showing the site of the Central Cist. Greenwell's circular trenching is obscured to the south by his excavation spoil

Fig. 3
the 1984 excavation; early phase

G1 (Cist A): contained a food vessel (Fig. 5) and 'a few pieces of charcoal'.

G2 (Cist B): had no capstone and only three side slabs but contained a *necklace* of 'jet' and 'shale'. There was also a 'flint knife' (Fig. 5).

G3 (Cist C): 'contained nothing beyond a few pieces of charcoal' (Greenwell 1877, 418–9).

All three cists contained a basal layer of 'sand' (up to 'six inches' (0.15 m) of a redeposited mix of E and B horizons). Other than charcoal, none of the cists contained visible organic remains but unburnt bones would have dissolved in the acidic moorland soil.

Military disturbance

During World War II, Bewick Moor was a military range. Spent ammunition was recovered from the pre-Greenwell excavation pit at the centre of Blawearie Cairn, suggesting that it was used by troops as a ready-made foxhole.

BLAWEARIE CAIRN EXCAVATION 1984–1988

The excavation programme initially focused upon the largest cairn in the West Blawearie Group, which stands upon a glacial knoll of clay, sand, and sandstone. For the convenience of excavation records it has become known as Blawearie Cairn (or the 'main cairn'); the name is not traditional. Vegetation and topsoil were removed manually from the site and the cairn was surveyed (Fig. 2). The excavation strategy entailed the removal of all of the material within the cairn down to natural. The cut was extended 2–4 m outwards from the cairn perimeter. No *in situ* kerbstones were removed but some fallen stones were re-erected and a stone of suitable size, but not original, was inserted into an empty kerb socket to the north (Fig. 4). Cists B and C were dismantled for examination but the structure of cists A, D, and E remained undisturbed. Excavation revealed that the cairn was a complex, five-phase monument with a long history of use and reuse. The principal soils and deposits encountered are summarised in Table 1.

TABLE 1: PRINCIPAL SOILS AND DEPOSITS

Soil context	*Description*	*Munsell value*	*Site details*
090 105 107 111 119	medium sandy loam mixed with fine sandy loam: Mixed E and B horizons	10YR 5/6	general upcast eg. from cists and pits
102 103 127	medium sandy loam with sandstone inclusions B horizon	10YR 3/2 10YR 2/2 7.5YR 3/2	undisturbed
121	fine sandy loam with charcoal inclusions E and residual O horizons mixed	7.5YR 2/0	burnt oak and humus from edge of Pits 1 and 2
122	fine sandy loam: E horizon	10YR 8/3	undisturbed
124	humus: O horizon	5YR 2.5/1	prehistoric topsoil

Phase 1: pre-cairn

At least one tree grew upon the knoll. Dark, organic traces within a lateral root burrow were visible to the north-west (Figs 4 and 6). To the south-east of the cairn a stone-filled gouge in the subsoil suggested the position of a second but stronger root (Fig. 4). Both root channels were cut by kerbstones indicating that they were earlier than the cairn. From the location of the root burrows, it is possible to infer that a tree was sited within the circumference of the Phase 2 kerb. Subsequent episodes of disturbance to the cairn interior erased further traces of these roots. Consequently, the precise position of the pre-cairn tree cannot be certain, but a place close to the centre would be feasible.

It could not be proved that the pre-cairn tree was cleared from the site deliberately. The absence of a continuous prehistoric topsoil (O horizon) in the vicinity of the cairn centre did not strengthen the case for planned devegetation of the site. Erosion of the thin moorland soil could have been coincidental with human activity on the knoll (Alexander, pers. comm.). However, a layer of oak charcoal was spread across the centre of the cairn. The amount of charcoal was insufficient to represent a whole tree but perhaps it signified the burning of twigs, minor branches, or the stump — the trunk and boughs having been removed for use elsewhere. Alternatively, hot oak embers could have been introduced to the site from a separate source. Occasional patches of scorched sandstone were insufficient to confirm an *in situ* fire.

The action of removing a tree stump from the site could be associated with the digging of a pit (Pit 1) which measured 2.40 m north–south by 2.90 m east–west, with a projected maximum depth of 0.75 m (Figs 4 & 7). It cut through the layer of oak charcoal which was sealed by pit upcast (reworked mix of E and B horizons). The original shape of Pit 1 could only be determined on the gently sloping west side where a large, earthfast sandstone block restricted digging to 0.50 m depth (Fig. 7). The eastern end of Pit 1 had been cut by a steep-sided shaft (Pit 2) which measured 2.40 m north–south by 1.60 m east–west and was 1.30 m deep at the prehistoric ground surface (Figs 4 & 7). Upcast from both pits was spread over a 6 m radius, sealing the vestigial O horizon, and this may represent an attempt to level the site ahead of Phase 2.

The shape of Pit 2 suggests that it might have been dug as a socket for a stout, flat-bottomed wooden post (*c.* 0.45 m diam.) which was wedged into a vertical position by stones of appropriate shape and size. Corroborative samples were not forthcoming and the presence of a wooden post remains conjectural.

Silt and debris were not apparent in the pits, therefore it is unlikely that they were left open for long. They were backfilled at random with a mixture of angular stones with soil (upcast) and rounded moorland cobbles and boulders. The stones in the core of the Pit 2 backfill were stained dark brown from *c.* 0.50 m depth down to base by the percolation of water discoloured by organic material of unknown origin. To the north-west, the combined upper fill of the two pits contained a penannular copper object which was not necessarily contemporary with this phase (Fig. 10, a).

Phase 2: kerb construction

The filled pits became the centre around which was set an arrangement of kerbstones (Fig. 4). They were erected either in single sockets or in trenches containing two or more stones. Factors such as shape, weight, balance, and texture probably determined the

method used for setting each stone. Upcast from the kerb trenching and sockets mingled with similar material from the Phase 1 pits.

The original number of kerbstones was about 40 and these formed an unbroken ellipse which measured 11 m north–south and 12 m east–west. Excavation revealed that only 18 kerbstones remained more or less intact in their original locations. Others had been either broken-up or displaced. The survivors ranged in size from 1.00 m high by 1.25 m wide to 0.50 by 0.50 m. Of these, 12 had been tooled on one or both sides in order to achieve a tight fit against adjacent kerbstones (Fig. 9).

The kerbstones had been carefully selected. Of those that remained standing, three different forms could be identified: square topped, pointed, and curved (Fig. 9). Some of the stones were naturally formed but others had been artificially shaped. Since less than half of the original kerbstones were *in situ*, it has not been possible to suggest a sequence for the arrangement of shapes.

Phase 3: cobble infill

The space enclosed by the kerb was infilled with sandstone cobbles and boulders which had been gathered from the moorland. The base layer of stones was placed directly upon the soft upcast from Pits 1 and 2 (Phase 1) and from the kerb sockets (Phase 2). No soil horizon had formed upon the upcast, and therefore the process of infilling followed on immediately from kerb construction. A circuit of cobblestones was placed around the outside of the kerb, perhaps to counteract the outward pressure from the mass of stones within. Excavations of undisturbed sections of the cairn perimeter suggested that the tops of the kerbstones were not obscured. Various episodes of disturbance have made it difficult to classify the completed Phase 3 cairn. The finished effect could have resembled a sub-circular dome, perhaps achieving a maximum height of 1.00 m at the centre and sloping gently down towards the retaining kerb. It is also possible that the cobble infill was laid as a flat surface. On the strength of the available evidence, Blawearie Cairn probably best fits into the kerb circle class (Lynch 1972, 61–80).

No funerary deposits were evident in Phases 1 to 3.

Phase 4: cists and cremation burials

The cairn was modified for the purpose of funerary ritual. Effectively, the monument became a mixed rite cemetery. Apart from the central cist, all the interments were placed within 2.00 m of the kerb. In order to gain access to the interior, sections of the cairn had to be demolished. Excavation revealed extensive gaps in the kerb circle to the north-north-east, east, north-west, and west (Fig. 4). Some kerbstones had been removed intact whilst others were broken off at ground level. The size and shapes of these stones made them ideal as cist building material. Displaced cobbles and boulders were used to cover the sites of interments and to make good the plundered kerb. The standard of reinstatement varied. A robbed section of kerb west of Cist C was replaced by a neat drystone wall. Elsewhere the repairs were haphazard. Surplus stones were heaped against the outer perimeter of the cairn to the north-north-west, east-north-east, east, and west, sealing the Phase 3 outer ring of cobblestones at these points (Fig. 2).

THE CENTRAL CIST

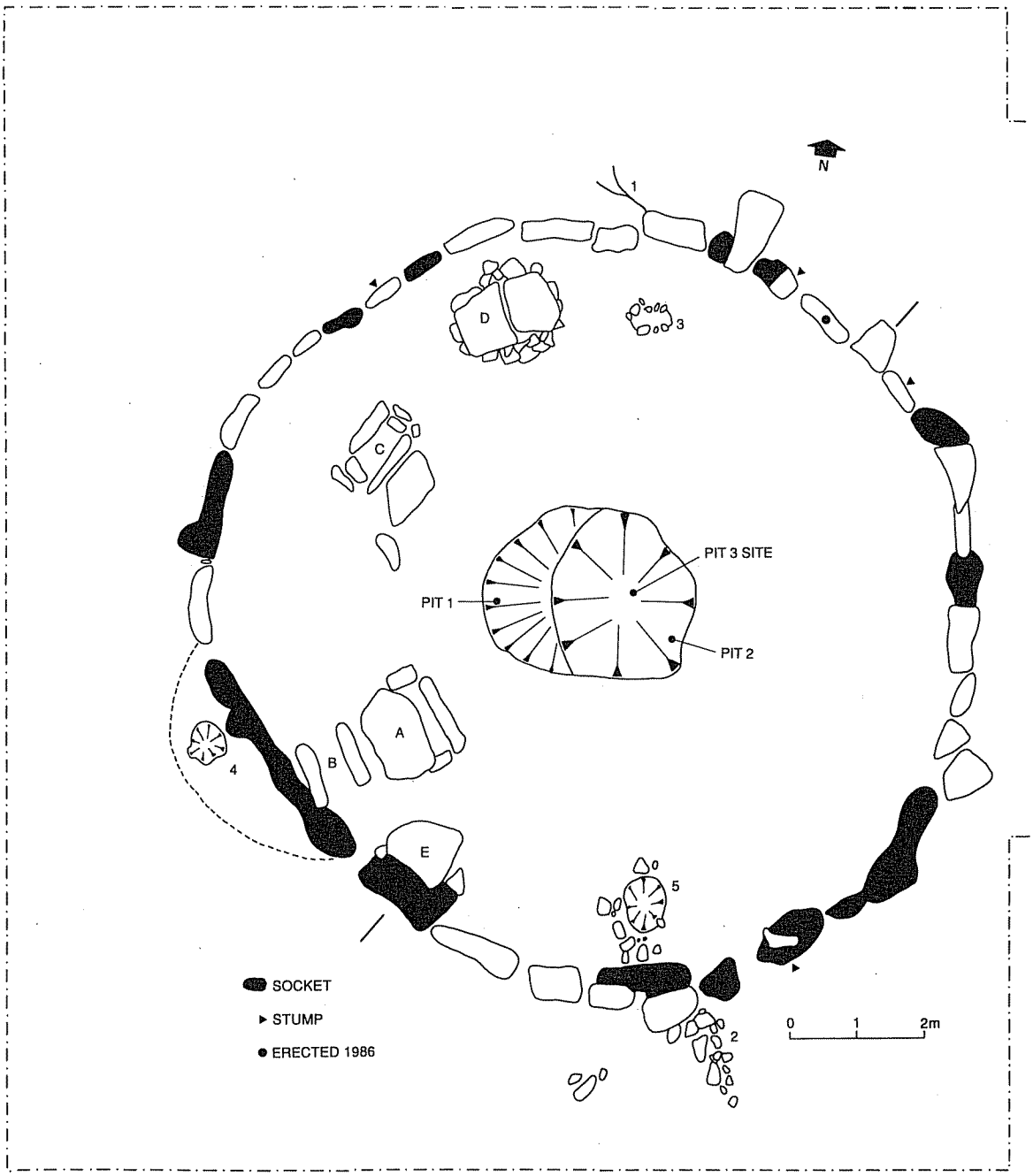
The Central Cist (Kinnes *et al.* 1)was reported by Greenwell (1877, 418) but it had been destroyed by 1984. The cist pit (Pit 3) was sunk into the backfill of Pit 2 (Phase 1) to a depth of *c.* 0.40 m (Fig. 4). Material from the digging of Pit 3 could be seen on the eastern edge of the central pits complex. This suggests that access to the centre was gained by removing a section of kerb and cobbles from the east of the cairn (Fig. 4). The construction of the Central Cist implies the previous removal or degradation of the putative wooden post of Phase 1.

CIST A

Cist A (Greenwell 1; Kinnes *et al.* 2) was a box-like construction of substantial orthostats set deep within the cobbles and soil of the cairn (length 1.16 m, width 0.47 m, depth 0.59 m). The capstone (length 1.50 m, breadth 1.00 m) was pointed at the north-west end, suggesting that it was a reused kerbstone (Fig. 4). Near to the flat south-east end were two notches, suitable for the securing of a drag rope.

CIST B

Cist B (Greenwell 2; Kinnes *et al.* 3) had been cut through upcast from Cist A, which it post-dated. It stood on the ground surface just inside the kerb circle (Fig. 4). The cist was incomplete. Two side slabs remained and only approximate measurements could be recorded (length 1.00 m, width 0.50 m, depth 0.60 m). Both orthostats were shaped suggesting that they were reused kerbstones (Phase 2). The south-west slab was pointed at one end and the north-east stone had been tooled flat on one side. Half of a jet bead was found on the floor of the cist (Figs 5 & 10, c). It was of the same type recovered from this cist in 1865 (Greenwell 1877, 419–20).



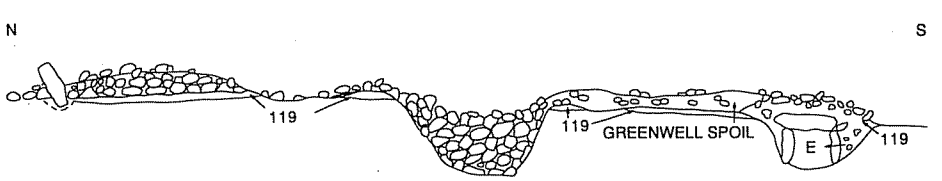


Fig. 4 Blawearie Cairn showing: 1 & 2) tree roots; 3) unurned cremation burial pit; 4) 'fire pit' within Semicircle Cairn; 5) urned cremation burial pit; Cists A–E

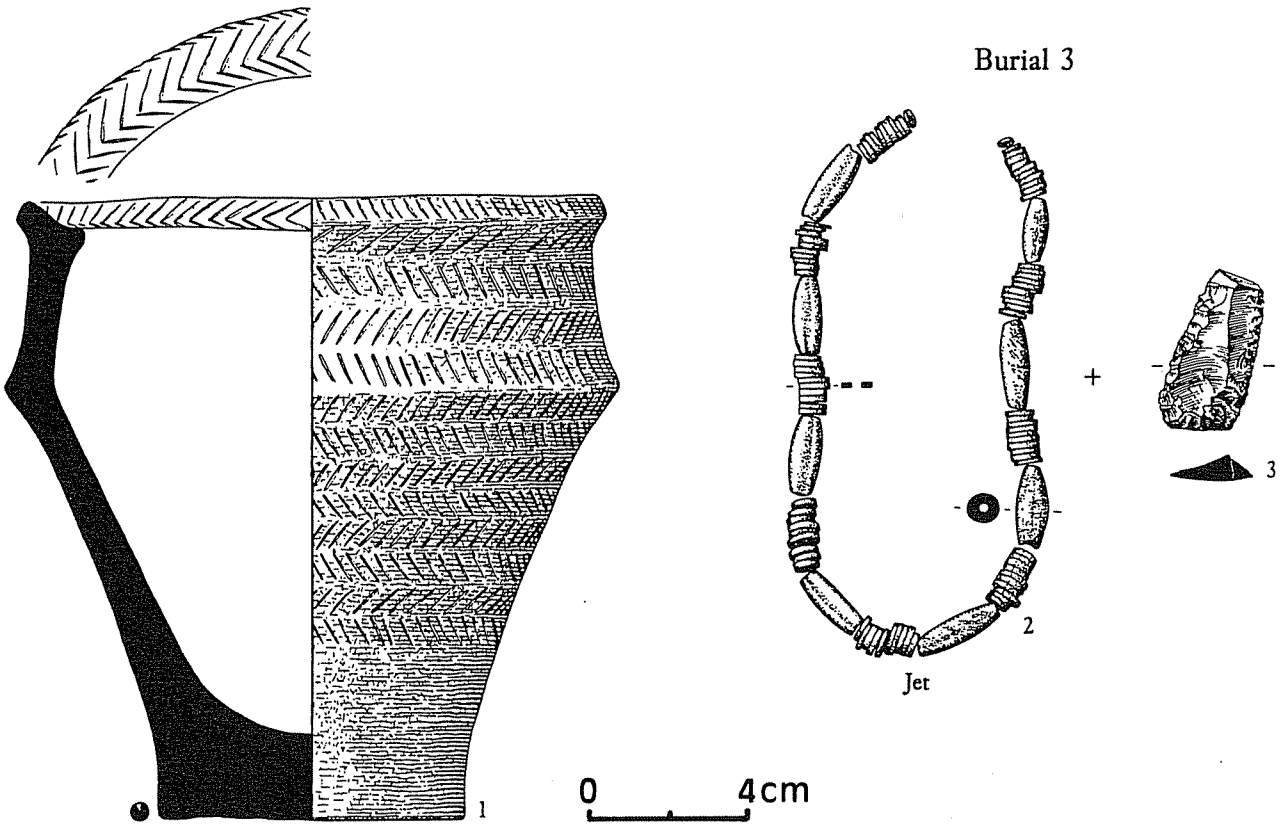


Fig. 5
Greenwell finds. Scale 1:2. *By permission of the Trustees of the British Museum*

SEMICIRCLE CAIRN

This feature was built against the south-west arc of the main cairn (Fig. 4). It measured 3.50 m north–south by 1.50 m east–west by 0.90 m high. The upper courses of stone may have included some Greenwell excavation spoil from the area of Cists A and B. This cairn was not kerbed and consisted of ordinary sandstone cobbles from amongst which two flints were recovered (Fig. 14, [18], [18b]). During the construction of the Semicircle Cairn, Cist B might have been disturbed or partly dismantled, thus explaining its incomplete state.

The basal stones of the Semicircle Cairn rested upon a secondary topsoil through which a pit had been cut (0.55 m diam. x 0.30 m deep). The pit was filled with charcoal and blackened soil. Just below ground surface (0.10 m), a line of nine pebbles ran north–south, effectively dividing the pit into two parts. Within the fill of the eastern section was a deposit of cremated human bone. The western section contained a flint flake (15 x 10 mm; [22] not illustrated) and some occasional fragments of burnt bone. Oak charcoal and cinder were present in both sections. The pit (hereafter the 'fire-pit') was baked around the edges indicating that burning had taken place *in situ* and it is therefore probable that the Semicircle Cairn sealed a pyre site.

CIST C

Cist C (Greenwell 3; Kinnes *et al.* 4) was a rectangular cist (length 0.70 m, width 0.43 m, depth 0.49 m) which was set within a pit and surrounded by upcast (Fig. 4). At the north and south ends two orthostats had been placed, perhaps to provide additional packing (Fig. 9). Gaps between the orthostats and the cist pit walls had been filled with cobblestones. The capstone was a displaced kerbstone. It was fashioned to a sharp point at each end, and had been tooled to achieve a close fit against adjacent stones in the kerb (Fig. 8).

CIST D

Cist D was concealed beneath cobblestones in the north-west area of the cairn and had not been previously disturbed (Fig. 4). It was elliptical in plan (length 1.12 m, width 1.00 m, depth 0.42 m). The cist wall was built up from a number of angular sandstone blocks, sunk within a pit and surrounded by upcast. There were two capstones which joined above the north-eastern end of the cist. Packing stones sealed the spaces between capstones and the surface soil (reworked E and B horizon). Within the cist, a partial backfill of redeposited upcast sloped gently from maximum height at

Fig. 6
Pre-cairn root burrow (see Fig. 4, no. 1). View from the north-north-west

the north-eastern end to cist base at the south-west. No human remains or grave-goods were found but the centre of the fill was stained brown. A sample was taken in order to test the phosphate content (M. Alexander) but the result was inconclusive.

CIST E

The construction of this undisturbed cist entailed the removal of two kerbstones from the southern arc of the cairn (Fig. 4). The two empty kerb sockets were enlarged and amalgamated to form the cist pit. This process cut deep into the natural, below the bases of Cists A and B. Spoil from the digging of the cist pit was thrown inwards towards the centre of the cairn, sealing upcast from Cist A pit, making Cist E the later of the two. The finished cist was built from eight stone slabs arranged in a sub-rectangular shape (length 1.07 m, width 0.50 m, depth 0.43 m). These slabs were held in the vertical position by a partial backfilling of upcast (*c.* 0.15 m).

A cremation burial had been inserted, tightly packed, suggesting that it was bagged. Five burnt flints were found in association with this deposit (Fig. 14, [20], [35], [37]; [19], [36] not illustrated). Three of them were within a tight matrix of cremated bone ([35], [36], [37]). The cist was filled with a combination of upcast and grey, ash-coloured soil. A single capstone was put in place, probably a reused pointed kerbstone. Small gaps between cap and orthostats were blocked with stones of appropriate size. Finally, the cist was concealed by a covering of upcast and cobbles which formed a low tump.

UNURNED CREMATION BURIAL

At 1.5 m north-east of Cist D, stones were removed from the north-north-west segment of the cairn and a shallow scoop dug into the soil (length 0.70 m, width 0.42 m, depth 0.10 m; Fig. 4). The perimeter of the scoop was then marked out by nine small sandstone cobbles thus forming a cist-like feature. A mix of cremated bone and soil was tipped into the scoop. The deposit was capped by a stone slab and buried beneath cobbles. Although the cremation burial was close to Cist D, it was not possible to determine which was the earlier of the two.

URNED CREMATION BURIAL

South-east of cairn centre a pit was dug through the Phase 1 upcast and the residual pre-cairn soil horizon and into the natural (length 0.88 m, width 0.6.5 m; depth 0.32 m; Fig. 4). An Enlarged Food Vessel Urn was placed inverted into the pit as a container for cremated bones (Fig. 11). The base of the urn had been broken off and replaced either before or

after deposition. There was no evidence to suggest that the mouth of the vessel had been covered. The pit was backfilled around the urn and a broken stone slab (*c.* 0.75 x 0.50 x 0.10 m) provided the final seal. The cairn was then crudely reinstated.

Phase 5: a late deposit

A turquoise–blue glass melon bead was found 0.30 m north of Cist D and at the same level, within a tightly packed matrix of stone and soil (Fig. 10, b). It could not be placed in a secure context but, on stylistic grounds, a post-Roman date has been suggested. For this reason, the bead could not be associated with Cist D. Romano-British pottery was found in Cairn 1 on Camp Hill, Chatton Sandyford, 4.75 km north-north-east, and it was thought probable that it signified a 3rd century AD burial at the site (Jobey 1968, 24–5; 33). At Blawearie there was no evidence to support the presence of either a cremation or inhumation burial of the 1st millennium AD. However, the solid nature of the surrounding matrix argued that the bead was not an accidental deposit but a late votive token which had been buried in the cairn.

OTHER FINDS

A number of artefacts were recovered from within the kerb circle in areas which had been disturbed by Greenwell and earlier antiquarian trenching. Three worked flints were found within the Greenwell excavation trench 3.00 m east of cairn centre (Fig. 14 [21]; [02], [03] not illustrated). One flint pebble fragment was recovered from an area of Greenwell trenching 0.50 m east of Cist C ([01] not illustrated) and nine amber beads were recovered between the cairn centre and Cist A (Fig. 10, d). They were not found in a cluster but were spread within an area of 1.00 x 1.00 m where they had been spilled rather than placed. Possible points of origin were the destroyed Central Cist or Cist A.

SATELLITE CAIRNS

Blawearie Cairn provided a focal point for at least ten satellite cairns which are concentrated close by, to the north-east and south-east of the main cairn. Hollow-

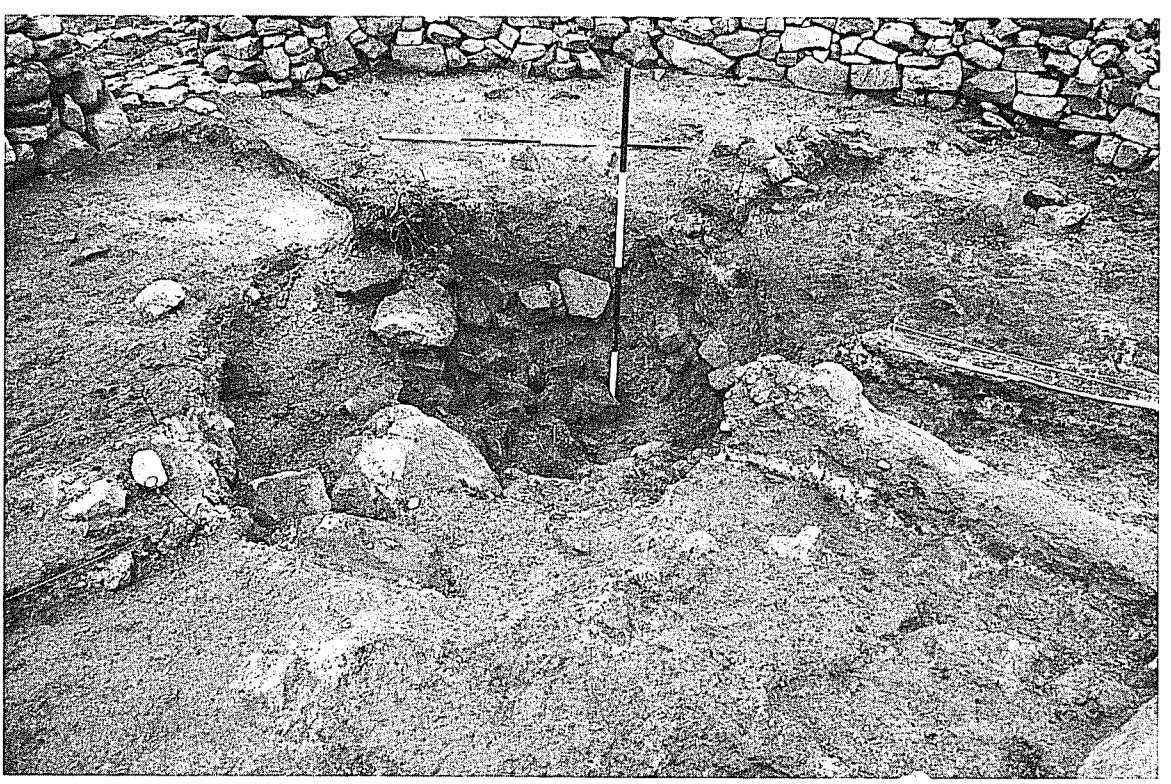


Fig. 7
Pits 1 and 2 from the south-west

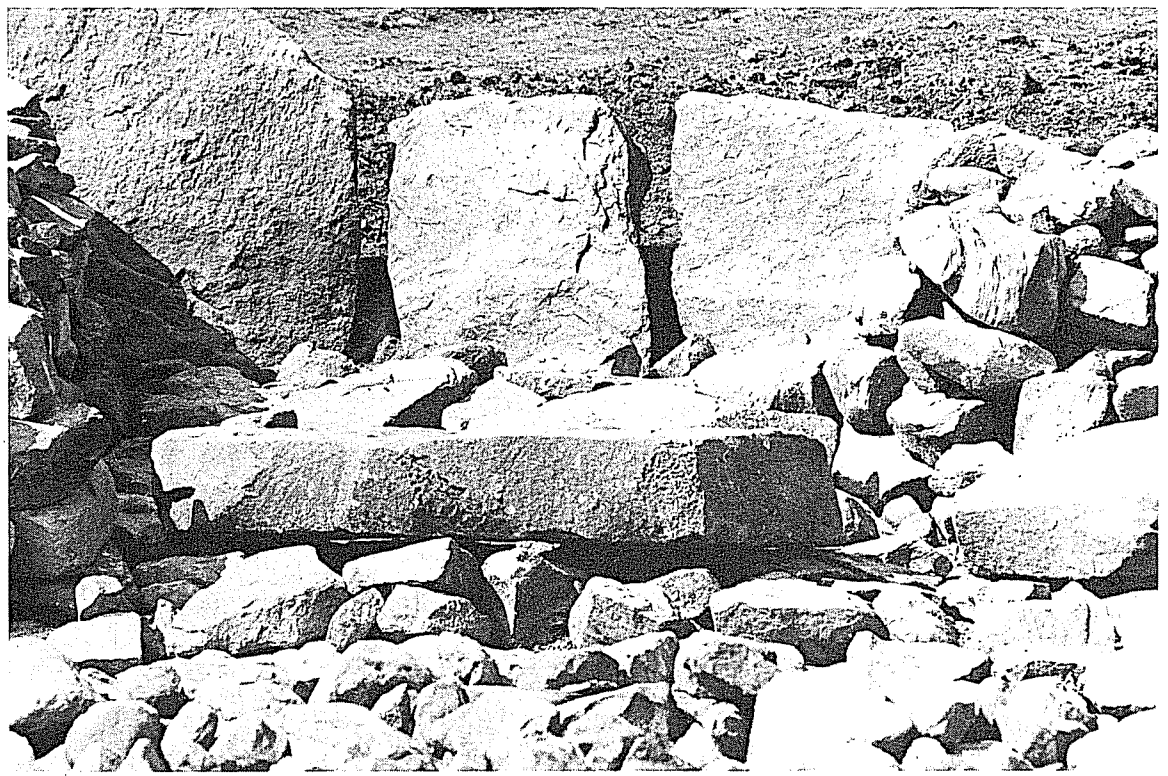


Fig. 8
Cist C capstone showing tooling and pointed shape. Two flat-topped kerbstones in the background. View from the east

ways to the west and north have possibly destroyed other examples. Two of these satellite cairns were selected for excavation.

Satellite Cairn 1 (SC1, Trench 1)

This undisturbed cairn was 3.50 m north-east of Blawearie Cairn (Fig. 12). Excavation revealed five stages in its development.

Stage 1: A shallow pit was dug (1.00 m diam. x 0.15 m deep) which contained cremated human bone and oak charcoal. The base of the pit was scorched and reddened which indicated that burning had taken place *in situ* and it is probable that this was a pyre site. Two flint fragments were found beneath the cairn, within 1.00 m south of the cremated bone ([25], [26] not illustrated).

Stage 2: the 'pyre pit' was backfilled.

Stage 3: ten flat stones were arranged upon the site of the pyre. Eight of these stones formed a shallow cist (0.10–0.15 m deep) which was surmounted by a capstone (length 1.25 m, width 0.75 m, depth 0.20 m). The capstone was curiously shaped. Roughly hewn to a point at one end but square at the other, its size and form suggested that it was a displaced kerbstone from the north-eastern arc of the main cairn. One of the flat component stones of the cist had a series of scratch marks on its underside such as might be made by a sharp metal tool.

Stage 4: an eccentric ellipse of sandstone boulders was laid out as a kerb (2.75 x 2.50 m). Two south-eastern kerbstones were set upon the backfill of the 'pyre pit'. Gaps in the kerb were filled with small stones.

Stage 5: the space within the kerb was filled with cobbles and boulders of random size and form, generally with larger boulders at the base. Adjacent to the south-eastern perimeter edge of Satellite Cairn 1 was an arc of six boulders in close association with a scatter of cobblestones (Fig. 12). It was originally interpreted as the remains of a separate cairn but excavation did not substantiate this hypothesis. However, overspill cremated material from SC1 was recovered from beneath the boulder arc. It is therefore probable that this feature was a component of SC1.

Satellite Cairn 2 (SC2, Trench 1)

SC2 was situated 8.00 m east-north-east of Blawearie Cairn and 3.00 m east-south-east of SC1 (Fig. 13). It

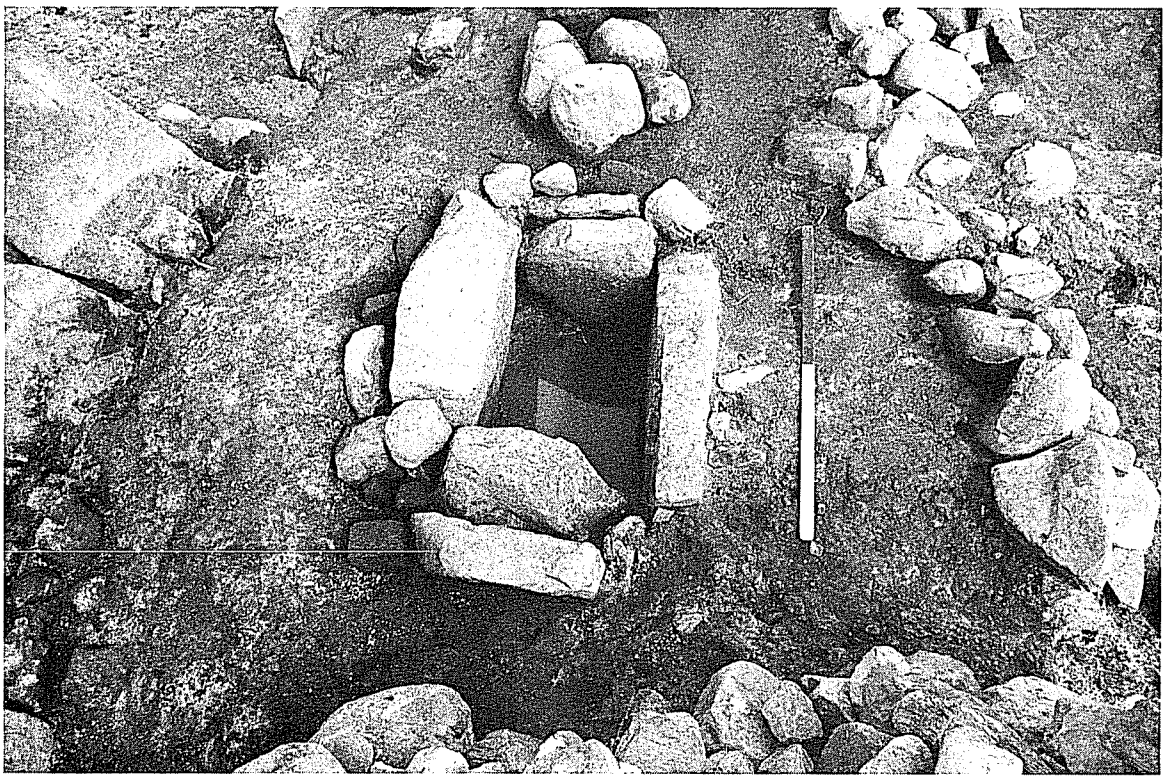


Fig. 9
Cist C showing double end orthostats. To the left are two disturbed kerbstones. Extreme top right is part of Greenwell's circular trench. View from the south

measured 1.25 m diameter with a kerb consisting of 19 flat sandstones (max. length 0.24 m, max. height 0.24 m) enclosing a cobble mass. Eleven kerbstones remained standing, set on edge in a shallow trench. The eastern segment of the cairn had been disturbed. SC2 contained no evidence of funerary or other deposits but its structure and close proximity to SC1 and Blawearie Cairn suggests a ritual purpose rather than field clearance.

Satellite Cairns 1 and 2 were surrounded by piles of stones which were surplus to their construction.

Satellite Cairn 3 (SC3, Trench 2)

The site was situated on low-lying marshy ground 50.00 m south-east of the main cairn. Excavation was prompted by recent disturbance which included the digging out of the centre. The cairn (2.25 m diam.) was kerbed by ten sandstone boulders and the spaces between were packed with small cobbles. No artefacts or useful samples were recovered.

Satellite Cairns 4 and 5 (SC4 and SC5, Trench 3)

These conjoining cairns lay 70.00 m south of Blawearie Cairn. They were not excavated but were planned because their component stones were protruding through the thin soil and vegetation. Some covering turf was removed and within this spoil was found a flint flake ([16]; not illustrated). Nearby (4.00 m north-east), and visible just above ground surface, was a linear arrangement of cobblestones of unknown date and purpose.

FINDS

Lithics (J. Gale)

Twenty-three pieces of flint and one quartz end-scraper [29] were recovered during the 1984–1988 excavation (Fig. 14). Nine of these artefacts (34.5%) can be considered to have primary depositional integrity: those from Cist E [19], [20], [35], [36], [37]; Satellite Cairn 1 [25], [26], [27] and the Semicircle Cairn 'fire-pit' [22]. All but [26] were burnt. None of the retouched pieces within the assemblage is diagnostic, although the scrapers are more akin to Late

Neolithic–Early Bronze Age examples than Mesolithic ones. [35] has an edge angle (40°) more suitable for cutting than scraping. [24] is probably a broken oblique arrowhead.

Copper wire (I. Hewitt)

An incomplete copper wire object of irregular penannular shape (Max. diam. 21 mm; Fig. 10, a) was recovered from an insecure context at the centre of the main cairn.

Beads (I. Hewitt)

Nine amber beads were recovered (Fig. 10). Prehistoric amber is rare in Northumberland (Cowen 1966, 217–9). The Blawearie beads have been assigned an Early–Middle Bronze Age date (Beck & Shennan 1991, 156). The largest specimen has an enlarged use-worn perforation.

The deep turquoise–blue, segmented glass melon bead is circumscribed by a brown band of discoloration (15 mm diam. x 13 mm). The perforation (6 mm diam.) has a thread wear-mark (Fig. 10). Post-Roman examples range between 10 mm and 15 mm in diameter with a large perforation and several segments (Guido 1978, 93). The Blawearie bead resembles 9th/10th century AD specimens from York (Hall 1984, 104 and plate 124).

Cremated human bone

(compiled from notes made by R.I. Macleod and D.S. Brown)

Cremated bone was recovered from five contexts and submitted for examination. The methods employed are not recorded in the archive and the recorded weights of bone were taken inclusive of unquantified packaging and extraneous material such as soil, charcoal, and stones. Consequently the absolute weights taken would not be indicative of the weight of bone recovered and they are not presented in this report. The maximum bone fragments were not routinely recorded and subjective comment has therefore been avoided due to the incomparability of such comment.

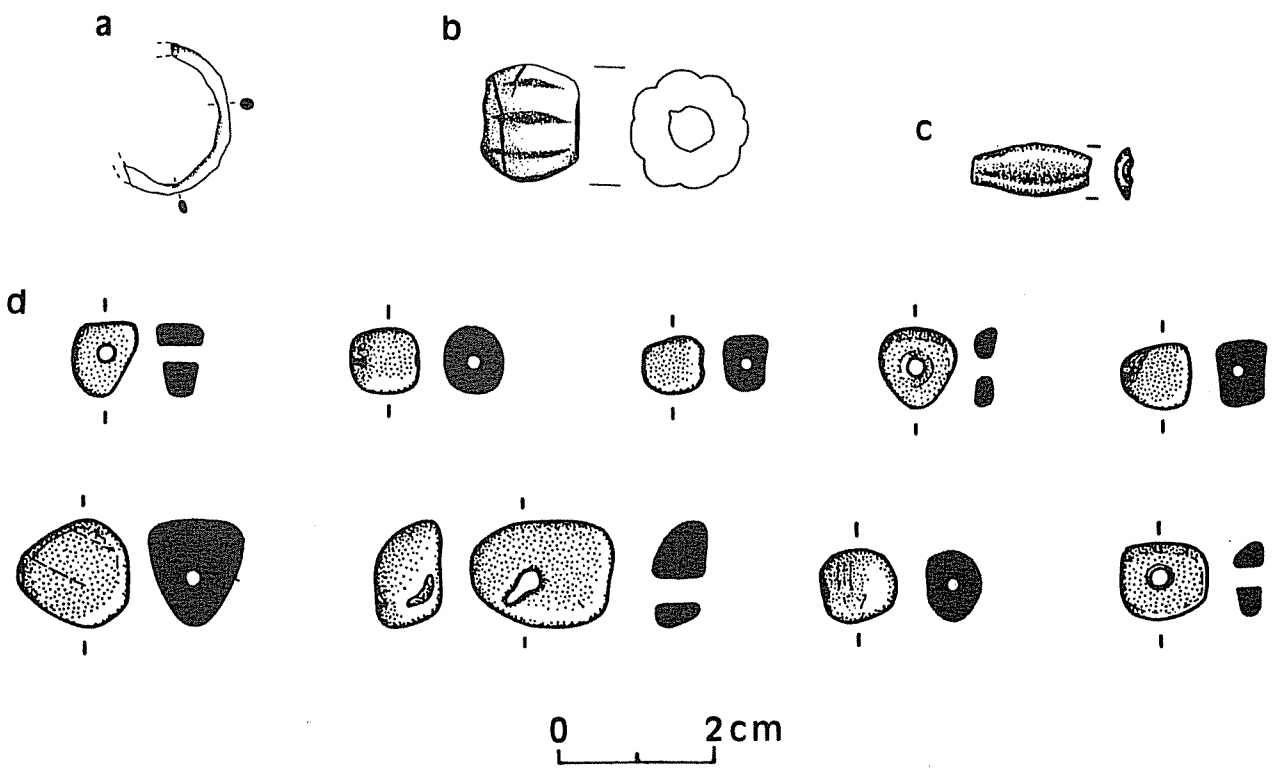


Fig. 10
Small finds: a) copper wire; b) segmented bead; c) half jet bead; d) amber beads. Scale 1:1.
Figs 10, c and d reproduced by permission of the Trustees of the British Museum

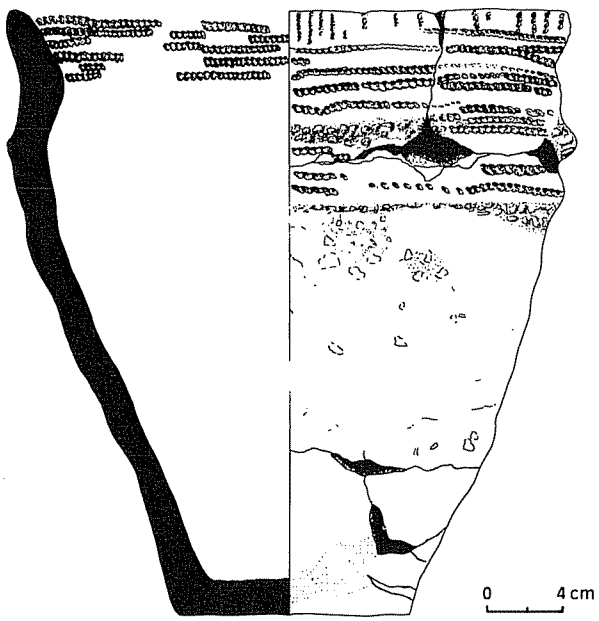


Fig. 11
Enlarged Food Vessel Urn. Scale 1:4

CONTEXT 089: URNED CREMATION BURIAL

The urn contained >1000 g of cremated bone. Maximum fragment size recorded was 140 mm but a substantial quantity was >10 mm. Two individuals were identified from several duplicated bone fragments: one mature adult (>30 years) and a second adult, possibly also male.

CONTEXT 113; UNURNED CREMATION BURIAL, CIST E

This context included a substantial quantity of bone (>1000 g) of an adult individual. A fragment of a second individual (a juvenile of *c.* 5 years) was also identified.

CONTEXT 115; UNURNED CREMATION BURIAL, NORTH-EAST OF CIST D

When examined by Macleod and Brown, the context comprised a mixed deposit of a few bone fragments (<100 g) from which a subadult/adult was identified. However, an earlier palaeo-environmental report on the same context (Nye & Turner, archive) refers to '1300 g of the sample', only the 'largest bone fragments' having been 'picked out of the coarsest fraction' (ie. 1.7 mm sieve).

CONTEXT 253: SEMICIRCLE CAIRN 'FIRE PIT'

This context was also examined for palaeo-environmental data (below). Cremated bone was identified, maximum fragment size 20 mm. Accompanying soils showed characteristics 'consistent with soils from immediately beneath a fire'. From <100 g of remaining bone, Macleod and Brown identified one adult.

CONTEXT 310: SATELLITE CAIRN 1

A substantial amount of pyre debris was recovered from the shallow pit beneath SC1 (contexts 310–3). The whole of context 310 was lost in storage and only <5 g cremated bone remained for examination.

DISCUSSION

Two certain cremation burials were identified; one unurned from Cist E, the other urned. Context 115 might represent a third cremation burial but doubt must be expressed if the total amount of bone recovered was only '<100 g'. The archaeological components of contexts 253 (Semicircle Cairn 'fire pit') and 310 (SC1) suggest that these were pyre sites and it is possible that cremated bone from these contexts was formally deposited within Blawearie Cairn.

Environmental data (J. Turner with S. Nye)

Pollen analysis was undertaken of a spot sample from the remnant buried soil beneath the upcast from the Cist C pit. The assemblage is summarised in Table 2. If this can be considered to be a snapshot of the local vegetation just prior to the burial of the soil, then the

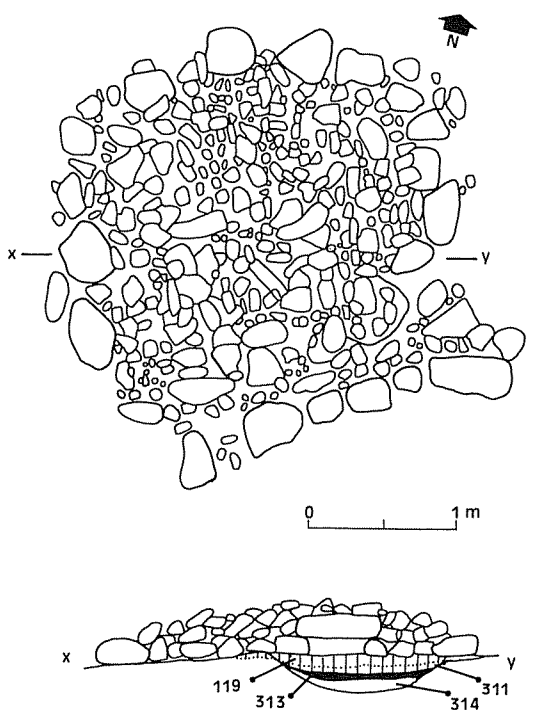


Fig. 12
Satellite Cairn 1

TABLE 2: POLLENS FROM THE REMNANT BURIED SOIL, CIST C PIT

	No. of grains	%
Trees		
Betula (birch)	72	7.1
Pinus (pine)	1	0.1
Quercus (oak)	3	0.3
Tilia (lime)	1	0.1
Alnus (alder)	23	2.3
Corylus (hazel)	126	12.5
Salix (willow)	2	0.2
Calluna (heather)	144	14.3
Caryophllaceae (*Silene* type)	1	0.1
Chenopodiaceae	1	0.1
Compositae		
Tubuliflorae	1	0.1
Liguliflorae	1	0.1
Cruciferae	1	0.1
Cyperaceae (sedge family)	9	0.9
Ericaceae	1	0.1
Gramineae (grasses)	79	7.8
Melampyrum	1	0.1
Mentha type	1	0.1
Plantago lanceolata (ribwort plantain)	34	3.4
Plantago major-media type	1	0.1
Ranunculus type	3	0.3
Rumex	2	0.2
Ulex type	1	0.1
Spores		
Filicales (ferns)	209	20.8
Lycopodium (club moss)	5	0.5
Polypodium (polypody)	183	18.2
Pteridium (bracken)	98	9.7
Sphagnum	3	0.3
Total spores	(498)	(49.5)
Total pollen and spores	(1007)	(100.0)

moorland was partly wooded and partly open. The trees were mainly hazel, birch, and alder and, judging from the virtual absence of oak, formed a secondary woodland that had developed on land previously cleared by man. In the open areas, heath and grassland predominated with weeds associated with disturbed land such as *Plantago lanceolata* perhaps providing further evidence of local human activity. There was no evidence of arable farming.

Samples were taken from a number of contexts and examined for organic remains. Samples 1 and 3 (north-west quadrant) and sample 2 (north-east quadrant) from the periphery of Pit 1, were from a lens of charcoal identified as oak (context 121). No other plant taxa were present indicating that the charcoal was probably not derived from burning vegetation or domestic fires. A sample from the so-called 'fire-pit' beneath the Semicircle Cairn also produced four pieces of oak charcoal and contained 10% burnt bone and 10% indeterminate charcoal and unidentified cinder (context 253). The samples from Satellite Cairn 1 included *c.* 50 fragments of burnt bone and oak charcoal fragments (contexts 311–3). In view of the lack of pollen evidence for oak in the vicinity, it is possible that the oak charcoal repesents the mixing of human cremated bone and pyre debris.

DISCUSSION

Greenwell's excavation

The evidence from Blawearie Cairn indicates that Greenwell was not concerned with the structural aspects of the site, and important details were ignored. In particular, his random trenching method led to a misinterpretation of the cairn's stratigraphy. At Cist A (G1) Greenwell described the surface of the capstone as being 'level with that of the ground'. He was wrong by *c.* 0.40 m. This error probably affected his judge-

Fig. 13
Satellite Cairn 2

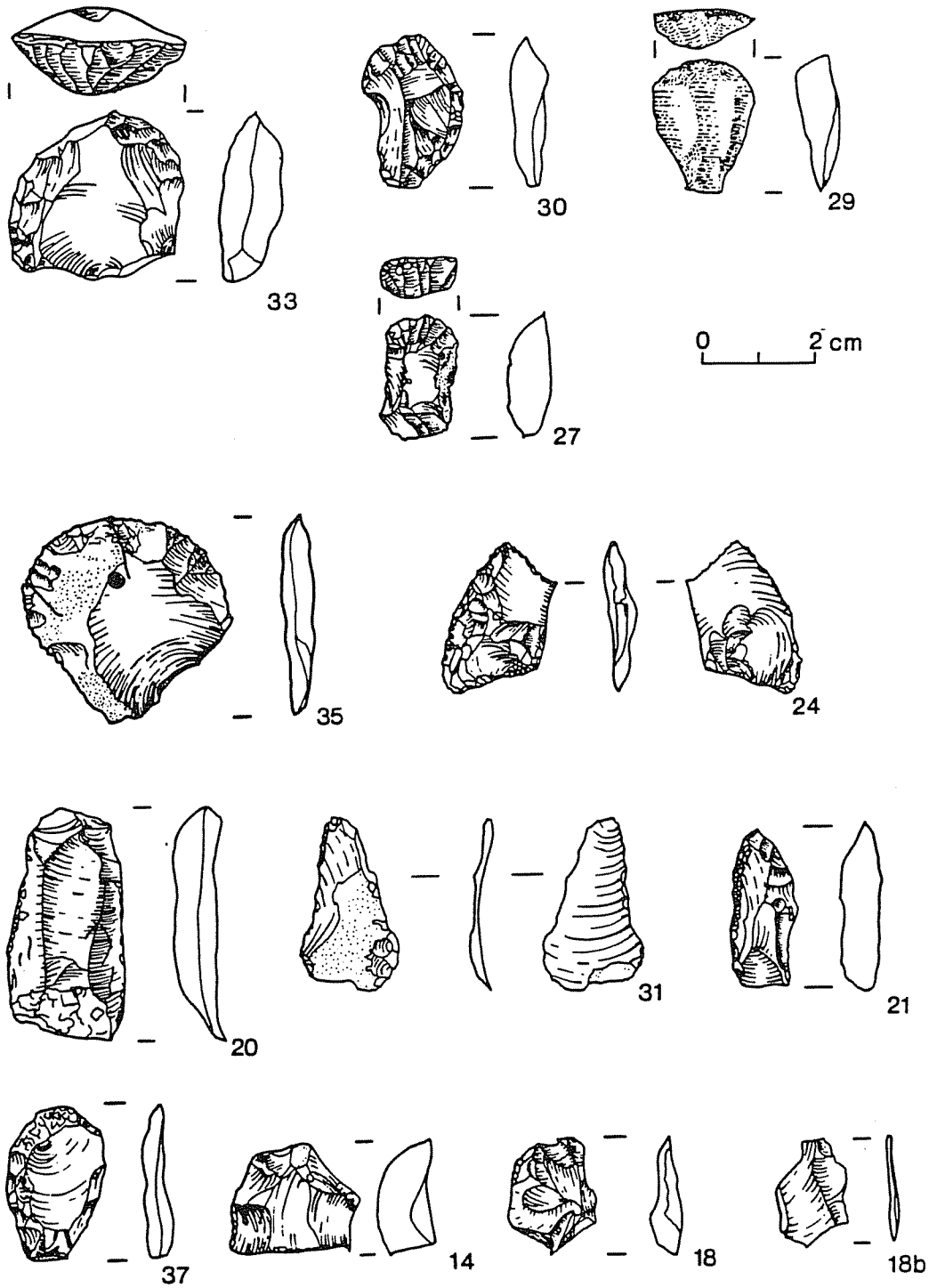


Fig. 14
Flint. Scale 1:1

ment regarding the rest of the site. He therefore did not identify Cists D and E, or either the unurned or urned cremation burials.

Set against the highest standards of the time, Greenwell's excavations were notoriously superficial (Marsden 1974, 100–1), and to some extent this is reflected in his self-declared policy: 'I have not always thought it necessary to remove the whole of the north and west sides, as they are generally found to be destitute of secondary interments ...' (Greenwell 1877, 27 fn).

Blawearie Cairn did not conform to this pattern. Most of the funerary remains had been placed to the west, with the single unurned cremation burial to the north: the 'destitute' areas. Greenwell states that he examined 'the whole of the ... space within the circle' (Greenwell 1877, 418). In fact, the 1984 aerial photographs (Fig. 3) revealed that his work was patchy. Apart from a number of random pits, a continuous trench was dug around the site of the disturbed central cist (Figs 2 & 3). The depth of this trench varied within 0.20 m, but for most of its circuit, it disturbed the stratigraphy around the centre of the cairn.

Morphology of Blawearie Cairn

Blawearie Cairn was shown to be a case 'where robbing has been carried out in such a manner as to leave the impression of a central tump within a ring of stone' (Jobey 1968, 44). Greenwell's digging changed the appearance of the cairn, and complicated the stratigraphy at the centre of the monument, disguising its identity as a kerb circle.

The presence of a pre-cairn tree on the knoll is not in doubt (Fig. 6). How that tree influenced the digging of pits at the centre of the cairn is another matter. It is probable that evidence for a root-pit should have been found within the kerb perimeter and the irregular shape and shallow depth of Pit 1 (Phase 1) make it a good candidate. We are reminded by Carver that an 'unexceptional pit, containing nothing that would suggest it was a burial or structure' may represent rotted (or removed) root mantles (Carver 1992, 354–5). At Blawearie Cairn, there were no suitable samples for testing this hypothesis.

Further questions are raised by the cutting of Pit 2 at the eastern end of Pit 1. The shape of Pit 2 would have been ideal as a socket for a large, flat-bottomed timber post, which could have been inserted from the shallow west side (residual Pit 1) and pulled into a vertical position from the east (Fig. 7). However, the fill of Pit 2 did not include a post-ghost or tell-tale organic residues.

Alternatively, Pits 1 and 2 may have been dug to receive inhumation and/or cremation burials but there was no evidence that they were used in this way. They contained no traces of skeletal material and the only artefact, the penannular copper wire, was retrieved from the combined upper fill of the two pits; an insecure context. In northern England, examples of graves in pits beneath cairns are restricted to Cairn 1 at Chatton Sandyford, but Annable has argued that these pits may not have been graves at all (Annable 1987, 142). At Blawearie, no foundation offerings were apparent, funerary or otherwise, unless the oak charcoal around the perimeter of Pit 1 fulfilled this function. Essentially, no evidence was recovered that suggested anything other than a practical purpose for Pits 1 and 2.

Cists and cremation burials

Blawearie Cairn was remodelled when it became used as a cemetery. The process of deposition could be clearly traced in the areas where the kerb had been demolished. Destruction of the south-south-west section can be attributed to the insertion of cists A, B, and E, and to the construction of the Semicircle Cairn. To the west, missing kerb stones indicated the access point for the builders of of Cist C and possibly Cist D. Disturbance to the north-north-west can probably be assigned to Cist D, the unurned cremation burial and the removal of a kerbstone and cobbles to construct Satellite Cairn 1. To the east of the cairn there was a large arc of missing kerbstones, but the insertion of the nearby urned cremation burial would not have been responsible for disturbance on this scale (Fig. 4). A more likely explanation is that the Central Cist was inserted from here. A heap of cobbles and soil seen at the south-east edge of the central pit complex was probably spoil from the digging of the Central Cist pit (Pit 3).

Cists A to D all contained a basal layer of up to 0.15 m of redeposited upcast: Greenwell describes it as 'sand' (Greenwell 1877, 419). This may have been an aesthetic touch but it could equally have served to bed side slabs and blocks into position. Cist E was an unstable structure and this had been completely filled with the same type of soil.

Sample analysis has indicated that oak was not the most common tree on the prehistoric moorland. However, the presence of oak charcoal around pits 1 and 2, and amongst the cremated bone from the Semicircle Cairn and SC1, suggests that it was the preferred fuel for funeral pyres.

The pyre site beneath the Semicircle Cairn is reminiscent of examples noted by Lynch in Wales (Lynch 1993, 109–11 and 121–5). It illustrates that funerary ritual was not confined to the area within the original perimeter of the cairn. Nevertheless, it must have been important to achieve close contact with the main cairn, and the Semicircle Cairn should be regarded as an enlargement of the original monument rather than as a separate entity.

The empty cists, A, B, C, and D were probably constructed for the deposition of (crouched) inhumation burials, which have totally decayed in the acidic soils.

Satellite cairns

Potential for assessing the relationship between Blawearie Cairn and its satellites was based upon the excavations of SC1 and SC2. SC1 has been placed in the *kerb cairn* category (Lynch 1993, 99–101). It had a funerary function and it is unfortunate that the recovered samples were not available for analysis. Although no conclusive statements could be made, the cist capstone closely resembled the flat-topped kerb stone type from the main cairn, indicating that the component stones of SC1 may also have been plundered from this source. The pyre site beneath SC1 suggests that it was associated with Phase 4 of the main cairn.

SC2 was classified as a *small stone cairn* (Lynch 1993, 94–5). It contained no evidence of organic remains. However, its close proximity to a large ritual monument together with its very small size, argue that it was not a field clearance pile. The stratigraphy of the site indicates that it was broadly contemporary with SC1. This is consistent with a moorland zone, samples from which have not indicated any prehistoric agricultural or horticultural activity. The relationship of SC1 to the main cairn and to SC2 remains undetermined. Enigmatic small cairns without skeletal remains have been excavated at Chatton Sandyford 4.75 km north-east (Jobey 1968, 5–50), and on Millstone Hill 4.75 km north-north-east (Jobey 1981, 23–42). Clearly, the inter-relationship of cairns and their place in the prehistoric landscape in this region is yet to be understood.

Phasing and chronology

The evidence from Blawearie does not make a strong case for pre-cairn activity on the site and questions regarding time spans must be confined to the monument and its satellites. Relative dates for the development of Blawearie Cairn could be determined. Phases 1, 2, and 3 were not separated by the build-up of new soil horizons and therefore these developments occurred in quick succession.

Chronological dates have proved to be difficult to establish. No samples were retrieved which were suitable for radiocarbon assay. Of the artefacts from the site, the copper wire and many of the flints could not be dated. The other finds are more helpful. Elsewhere in this report, Gale suggests a Late Neolithic–Early Bronze Age date for some of the flints, whilst Beck and Shennan offer an Early–Middle Bronze Age date for the amber beads (Beck & Shennan 1991, 156). Annable has assigned the Greenwell finds to the Early Bronze Age on the strength of the Yorkshire Vase Type 3 Food Vessel from Cist A (Annable 1987, 546; 607). For northern Britain, this vessel fits into Burgess's Fargo Phase (Burgess 1986, 350). The Enlarged Food Vessel Urn (Fig. 11) has morphological and decorative features which best fit Longworth's type 1A, Primary Series (Longworth 1984, 79–80). It also conforms to Burgess' criteria for a Primary Series urn (Burgess 1986, 345–6). However, none of these 'phases' has been confirmed by a series of radiocarbon dates and they can only be used to suggest a relative chronology for the material from the cairn.

Using the 'datable' artefacts as evidence, and with reference to Burgess' revised phases for the British Bronze Age (Burgess 1986, 350–51) based on typology and associations, it is possible to propose a relative sequence for the deposit of human remains in Phase 4 at Blawearie.

Fargo Phase: The Yorkshire Food Vessel from Cist A and the jet necklace from Cist B place these features in this phase. Cist C contained no evidence but its structural similarity to Cists A and B suggests that it might be of much the same date. These three cists probably contained inhumation burials.

Fargo-Bush Barrow Phase: Cist E was stratigraphically later than Cist A and of different design. It contained burnt bone and may represent a transition from inhumation to cremation rites. Cist D, which contained no useful evidence, and the destroyed Central Cist which contained an 'urn' (Greenwell 1868, 203), were probably built no later than this overlap phase.

Bush Barrow Phase: Cremation burial in enlarged Food Vessel Urn.

The Semicircle Cairn, Satellite Cairns 1 and 2, and the unurned cremation burial north-east of Cist D, belong to Blawearie Phase 4 but cannot otherwise be fitted into any convincing sequence. However, the Semicircle Cairn certainly post-dates Cists A and B.

The use of the Blaewearie Cairn as a place of burial may have extended over several centuries. The first burial occurred in Phase 4 and this heralded a period of drastic disturbance and alteration. The concept behind the original kerb circle had probably changed or had been forgotten. Several generations may have passed between Phases 3 and 4. Therefore, it might be reasonable to suggest a Late Neolithic–Early Bronze Age date for the construction of the kerb circle (Phases 1–3).

CONCLUSION

The aims of the Blawearie excavation project were fulfilled in part. None of the cairns contained cup-marked stones although some similar natural cups and a fossil groove were noted on one of the kerbstones. The evidence from the satellite cairns has been ambiguous and they have been dated only in relative terms.

Greenwell's 1865 excavation has been assessed and his findings have been extended and updated. Blawearie Cairn can now be regarded as something more than an Early Bronze Age cist cemetery. From the time of its construction, the purpose and significance of the cairn was 'constantly rethought and interpreted' (Bradley 1993, 93).

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BIBLIOGRAPHY

Annable, R. 1987. *The Later Prehistory of Northern England*. Oxford: British Archaeological Report 160.

Beck, C. & Shennan, S.J. 1991. *Amber in Prehistoric Britain*, Oxford: Oxbow Monograph 8.

Beckensall, S.G. 1986. *Rock Carvings of Northern Britain*. Aylesbury: Shire.

Bradley, R. 1993. *Altering the Earth*. Edinburgh: Society of Antiquaries of Scotland Monograph 8.

Burgess, C. 1986. 'Urnes of no small variety': Collared Urns reviewed. *Proceedings of the Prehistoric Society* 52, 339–51.

Carver, M. 1992. *The Age of Sutton Hoo*. Woodbridge: Boydell.

Charlton, J. 1938. Report on a trial excavation at Old Bewick. *Proceedings of the Society of Antiquaries of Newcastle* 4 ser. 8, 252–6

Cowen, J.D. 1966. Two amber beads from Simonside. *Archaeologia Aeliana* 4 ser. 44, 217–9.

Greenwell, W. 1868. Notes of the opening of ancient British tumuli in north Northumberland in 1983 and 1865. *History of the Berwickshire Naturalists' Club* 5, 195–205

Greenwell, W. 1877. *British Barrows*, Oxford: Clarendon.

Guido, M. 1978. *The Glass Beads of the Prehistoric and Roman Periods in Britain and Ireland*, London: Society of Antiquaries & Thames & Hudson.

Hall, R. 1984. *The Viking Dig*. London: Bodley Head.

Jobey, G. 1968. Excavations of cairns at Chatton Sandyford, Northumberland. *Archaeologia Aeliana* 4 ser. 46, 5–50.

Jobey, G. 1981. Groups of small cairns and the excavation of a cairnfield on Millstone Hill, Northumberland. *Archaeologia Aeliana* 5 ser. 9, 23–42.

Kinnes, I. & Longworth, I.H. 1985. *Catalogue of the Excavated Prehistoric and Romano-British Material in the Greenwell Collection*, London: British Museum Publications.

Longworth, I.H. 1984. *Collared Urns of the Bronze Age in Great Britain and Ireland*, Cambridge: University Press.

Lynch, F. 1972. Ring-cairns and related monuments in Wales. *Scottish Archaeological Forum* 4, 61–80

Lynch, F. 1993. *Excavations in the Brenig Valley.* Cardiff: Cambrian Archaeological Association & Cadw, Cambrian Archaeological Monograph 5.

Marsden, B.M. 1974. *The Early Barrow Diggers.* Aylesbury: Shire

Newbigin, N. 1941. A collection of prehistoric material from Hepburn Moor, Northumberland. *Archaeologia Aeliana* 4 ser. 19, 104–16.

Piggott, S. 1931. The Neolithic pottery of the British Isles. *Archaeological Journal* 88, 67–158.