

Biggar Common, 1987–93: an early prehistoric funerary and domestic landscape in Clydesdale, South Lanarkshire

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with contributions by S Boardman, S Carter, A Crone, B Finlayson, R Pelling, R Ritchie, A Sheridan, R Tipping & T Ward
illustrations by M O’Neil, C Unwin & S Stevenson

ABSTRACT

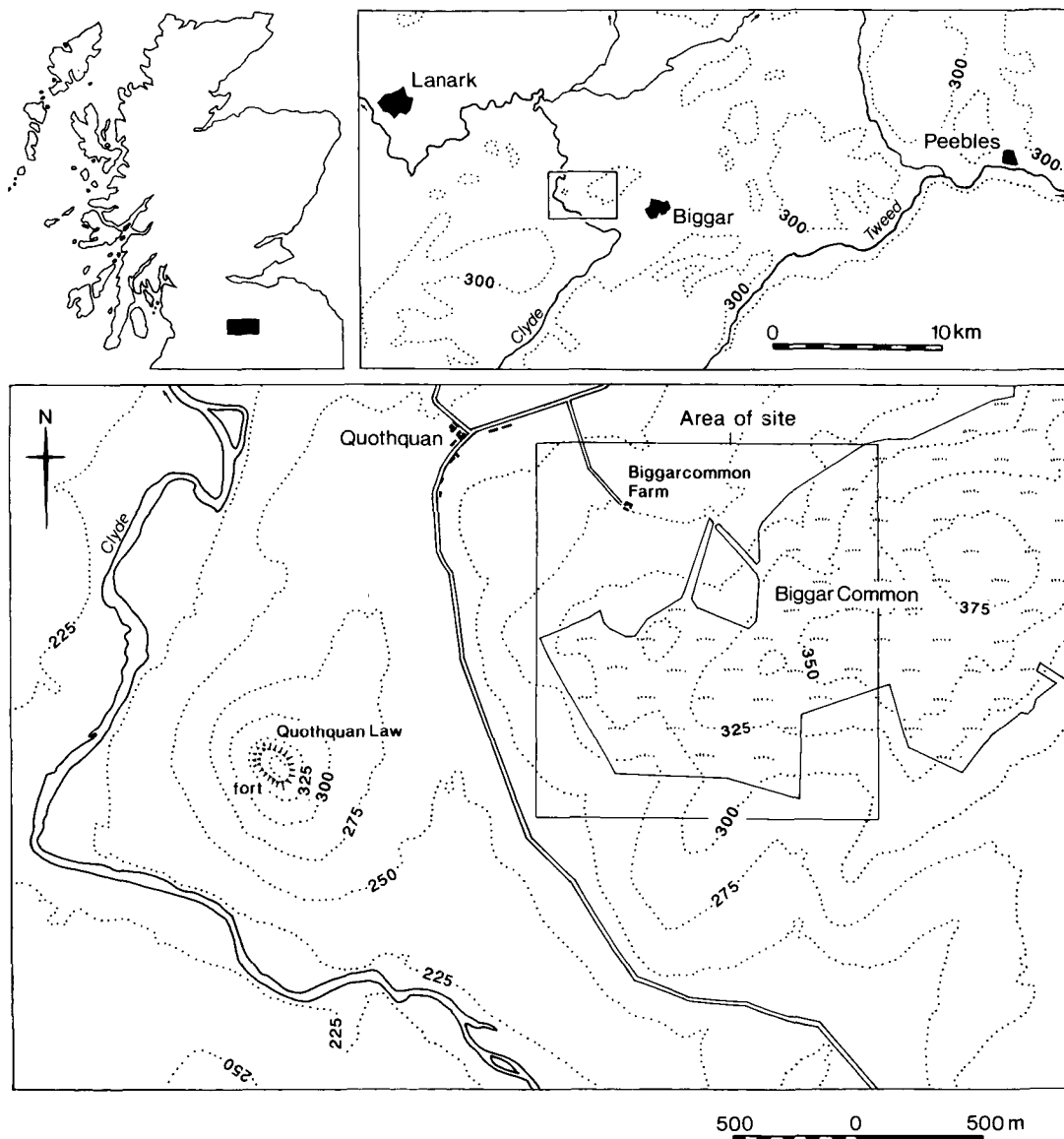
A fieldwalking exercise by Lanark and District Archaeological Society (LADAS) on moorland recently ploughed for forestry revealed the presence of an extensive early Neolithic, late Neolithic and Early Bronze Age artefact scatter, a long mound and five round cairns. Excavation of two of the round cairns revealed them to be simple single-phase monuments of Beaker date, sealing possibly cultivated soils. The long mound was a complex, multi-phase monument of early Neolithic date, which contained two secondary burials of a later date; one contained late Neolithic artefacts (a Seamer Axe and a large leaf-shaped knife), and the other contained three Beakers and a polished stone axehead. The mound overlay three phases of earlier activity: a stake-built structure which produced two late Mesolithic radiocarbon dates; a possibly cultivated soil deposit; and a series of bonfires (containing early Neolithic pottery) which produced two early Neolithic radiocarbon dates. This phase may be contemporary with stone structures whose relative stratigraphic position could not be ascertained.

Excavation in the artefact scatters by Historic Scotland and LADAS revealed evidence for widespread Neolithic domestic activity. Historic Scotland arranged and provided funding for the excavation (except that undertaken by LADAS), post-excavation analysis and publication of this report.

INTRODUCTION

Biggar Common (NGR: NT 005 385) is an expanse of moorland lying on top of a broad, relatively low isolated hill (summit at approximately 385 m) in upper Clydesdale (illus 1). The hill is formed of acid igneous rocks, with a thin covering of glacial till derived from them. The River Clyde flows round the west and south-west sides of the hill. The Common is surrounded by lower ground on all sides, with commanding views up and down Clydesdale, through the Biggar Gap, and to the Pentland Hills and the Southern Uplands.

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ILLUS 1 Location of Biggar Common. (Based on the Ordnance Survey map © Crown Copyright)

Part of the moorland area (c 127.6 ha) was ploughed and planted with conifers by Tilhill Economic Forestry Ltd in 1986. The furrows average 0.8 m wide by 0.7 m deep, and are spaced at intervals of roughly 2 m. A post-ploughing fieldwalking programme was started in 1987 by the Lanark and District Archaeology Society in conjunction with Biggar Museum Trust (referred to, for brevity's sake, as LADAS throughout the report), led by Tam Ward.

The LADAS survey demonstrated the presence of a thin scatter of prehistoric artefacts over the disturbed part of the Common, west of the summit. The assemblage was dominated by chipped stone and early Neolithic Carinated Bowl pottery, and included several polished stone

axeheads and some Beaker sherds. Five round cairns and one long mound (Cairn 2) were also identified (illus 2). Cairns 1 and 2 lay some 40 m apart on a south-facing slope near the west end of the hill. Cairns 4, 5 and 6 lie adjacent to each other some 200 m to the north-east, forming a tight linear group in a 'saddle' on the main ridge line. Cairn 3 lay roughly 750 m east of Cairn 1, on slightly higher ground, again on a slight south-facing slope. Cairns 1-3 had been severely damaged by plough furrows, and planted with conifers; the group formed by Cairns 4, 5 and 6 was recognized by LADAS prior to ploughing, and Tilhill Forestry agreed not to damage them. A seventh pile of stone was excavated by LADAS in 1991.

In total excavation took place in 13 separate trenches, some of which produced considerable amounts of information, others very little. Eleven of these are described below.

Cairns 1-3 were all seriously damaged by ploughing, and were at risk of further damage by erosion and tree roots. Neolithic and/or Beaker pottery had been collected from all these monuments in the LADAS fieldwalking survey. Rescue excavation of all three was therefore considered necessary. In 1988 a team led by Alison Sheridan and John Triscott on behalf of Historic Scotland undertook reconnaissance work on Cairns 1 and 2, excavating 75% of Cairn 1 and 40% of Cairn 2. A new team from Historic Scotland, led by the present author, continued the project in 1990-1, completing the excavation of Cairns 1 and 2, excavating Cairn 3 in total, and investigating parts of the artefact scatter. Further samples of the artefact scatter were excavated by LADAS in 1990-3. This report describes the excavations by the Historic Scotland teams, and the results of the fieldwalking and excavations by LADAS. Purely LADAS work was undertaken in the trenches marked Sample Areas 2, 3, 5, 6 and 7, and Cairn 7 (illus 2).

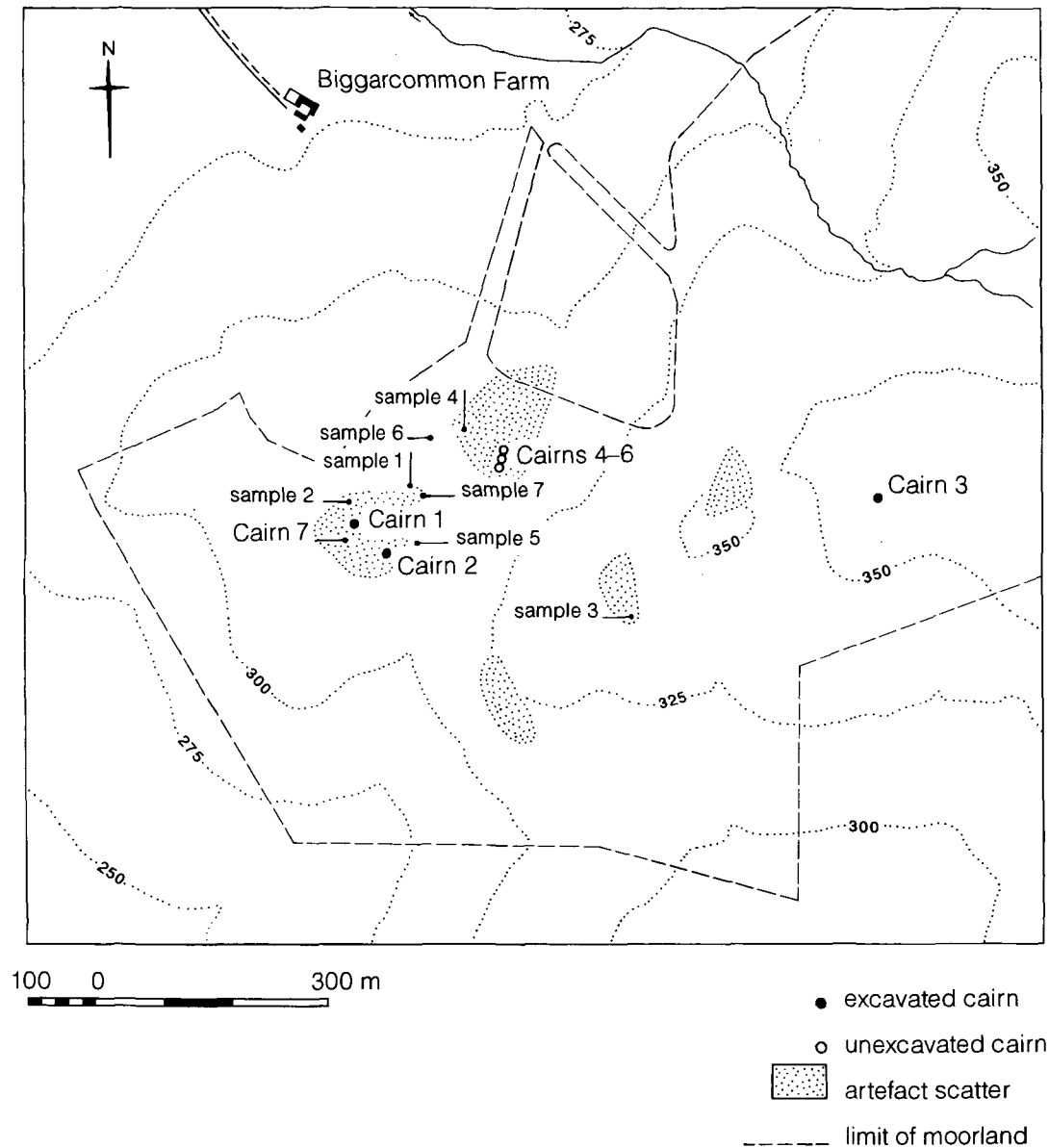
EXCAVATION RESULTS

Daniel A Johnston

CAIRN 1

Cairn 1 lay at NGR: NT 0028 3886 on a summit of the western shoulder of the hill, on a south-facing slope (illus 2). It was intersected by one plough furrow, which had destroyed a third of the mound (illus 3). Before excavation, the cairn was roughly circular, 3.3 m long by 3.8 m wide and 0.4 m high. It was built of small to very large sub-angular to angular rubble, with about 20% peaty soil, most of which probably filtered in after construction. The cairn overlay a shallow oval pit, 1.85 m long by 1.2 m wide and 0.18 m deep, which cut through a buried old ground surface, 0.03-0.10 m deep into the underlying till and bedrock. The old ground surface was best preserved around the edge of the pit, where it was separated from the cairn by a narrow band of subsoil upcast from the pit (illus 4; Carter, below). The main fill of the pit was identical to the mound material. Beneath this fill were two very thin stone-free fills in the base of the cut, the upper of which was very similar to the soil matrix of the cairn material.

The east end of the pit was damaged by the plough furrow, but because the pit had been cut into the bedrock its basal fills were preserved. A handled Beaker, five chert cores and seven fragments of a second Beaker were recovered from the lowest of the pit's three fills. A further 192 fragments of the second Beaker were recovered; 60 from the plough furrow during fieldwalking by LADAS, and the rest from the surface of the cairn and in the interstices between the cairn stones. The distribution of the fragments of this Beaker suggests that it was ritually smashed and mixed with the cairn material either before or during construction. If this was the case, the cairn must therefore have been constructed almost immediately after this event, which is likely to have



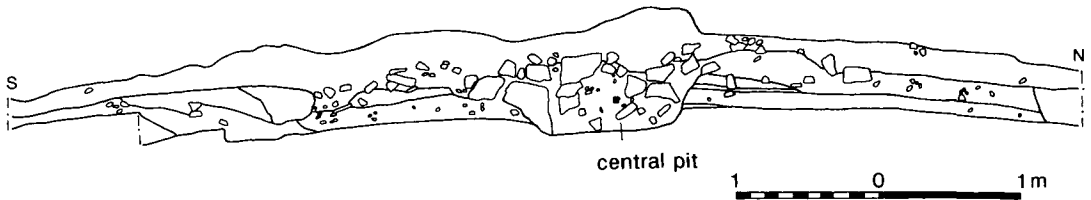
ILLUS 2 Location of cairns and artefact scatters

included inhumation of human remains. The Beakers are discussed in more detail elsewhere (see Sheridan, below).

Chert flakes and a cache of quartz pebbles were found on the surface of the cairn. Several chert flakes, a chert leaf-shaped arrowhead and four sherds of plain early Neolithic Carinated Bowl pottery were found on the old ground surface; these were probably residual inclusions in that layer.



ILLUS 3 Cairn 1: before and after excavation

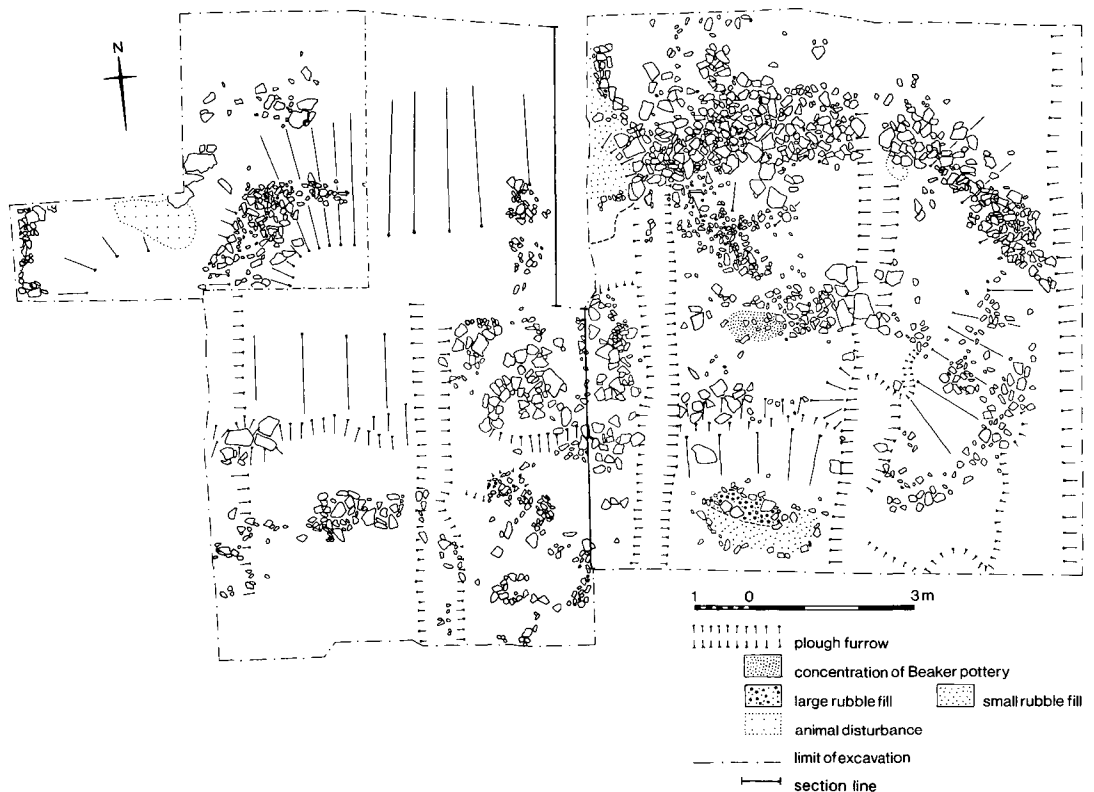


ILLUS 4 Cairn 1: east-facing section

No bone was found in the pit. However, soil conditions on the Common would completely destroy bone very quickly. The pit fills had high phosphate contents (Carter, below) which could indicate the former presence of a burial. High phosphate levels were unusual on Biggar Common; of 43 samples analysed, only seven had high phosphates, of which six were from primary pits under Cairns 1 and 3.

CAIRN 2: LONG MOUND

Cairn 2 lay at NGR: NT 0033 3882, approximately 40 m SSE of Cairn 1 and slightly downslope from it (illus 2). It originally appeared to be an earth and stone cairn, 16 m by 10 m, aligned east/



ILLUS 5 Cairn 2: general plan

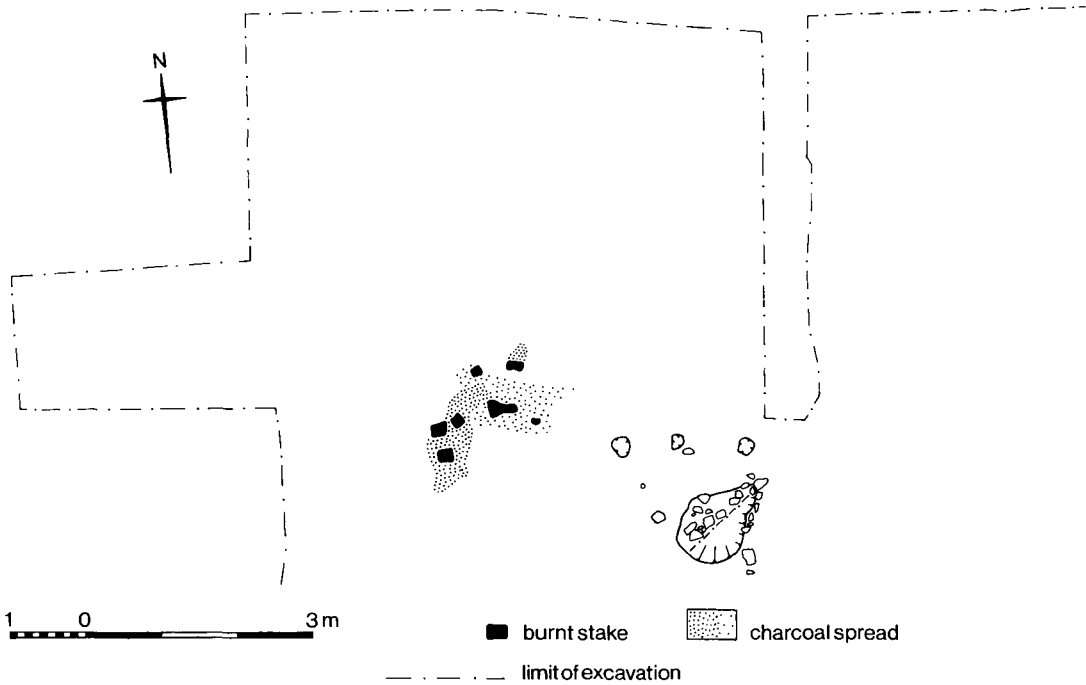
west (along the contour), although from excavation it was shown to have been approximately 20 m long (illus 5). Four plough furrows, running north/south, cut through the mound. Disturbance by rabbits was severe, and some parts of the mound had been completely reworked. Particularly severe damage resulted from rabbits burrowing into the exposed sections between the 1988 and 1990 excavation seasons.

Excavation ultimately showed the cairn to be a complex multi-phase monument and also demonstrated that it was not a cairn proper, but was primarily an earth mound and/or turf stack, to which stone banks and dumps had been added at several later stages. There were two features interpreted as burials, both of which post-date the primary mound. Three phases of activity predated the mound (illus 11).

The order of some phases remains uncertain, due to the destruction of stratigraphy in the centre of the mound, separating the western and eastern halves. In particular, the 'primary' mound material (Phase 4) could represent either one or two phases, with the eastern half possibly being a later addition, which could either pre-date or post-date Phase 5a; Phase 6 could be two episodes, one at each end of the mound and if so, the earlier of these could potentially pre-date Phase 5a. The description (below) has been arranged according to the following interpretations of the sequence (see illus 11 for phasing summary):

Phase 1: Stake-built structure; stakes cut natural till (illus 6).

Phase 2: Soil deposit sealing the Phase 1 structure.



ILLUS 6 Cairn 2: Phase 1 features

Phase 3: Burnt deposits with crude possible 'hearth' structure. A stone wall aligned north/south may belong to this phase, to Phase 4, or may have been built between Phases 4 and 5 (illus 7).

Phase 4a: Primary mound material sealing bonfires at west end (illus 8).

Phase 4b: 'Primary' mound material at east end (illus 8).

Phase 5a: Western burial pit cut through mound material (illus 10).

Phase 5b: Eastern burial pit cut through mound material (illus 9 & 10).

Phase 6: Secondary mound material added.

Phase 7: Stone dumps added on top of mound.

Phase 8: Stone banks added around the periphery of the mound.

Phase 9: Hiatus in which peaty soil developed over the mound.

Phase 10: Further stone dumps added around periphery of mound (illus 5 & 11).

Pre-mound activity: Phases 1-3

Phase 1 Twelve shallow, truncated stake- and post-holes were found under the west end of the mound (illus 6). Seven of them were certainly burnt *in situ*; one of the others had a charcoal-rich fill. Although no clear structural pattern emerged, they could be very tentatively interpreted as forming one corner and part of the north side of a sub-rectangular structure aligned ESE/WNW. This impression was reinforced by the shape of a charcoal spread which surrounded the group of burnt stakes, all at the west end of the possible structure. A shallow hollow, 1.3 m by 0.9 m, with a stony fill, at the east end of the complex, was associated with this phase.

The charcoal from five of the burnt stakes was examined, and proved to consist exclusively of oak (Crone, below). Radiocarbon dates were obtained from two of the stakes, with results of 6300 ± 130 BP (5490–4908 cal BC; GU-2987) and 6080 ± 60 BP (5220–4847 cal BC; GU-2988).

Phase 2 The burnt stakes were sealed by an extensive soil deposit up to 0.2 m thick. This deposit was dark greyish-brown in colour, with frequent charcoal flecks. The charcoal from this context was predominantly oak, but included some hazel and birch. Some of the charcoal could have derived from the underlying features, but most of it was probably introduced during the formation of the deposit, as it contains a greater number of species and is equally abundant in areas not directly overlying the burnt stakes. This soil deposit was certainly the product of human activity, but did not appear to be an occupation deposit or midden.

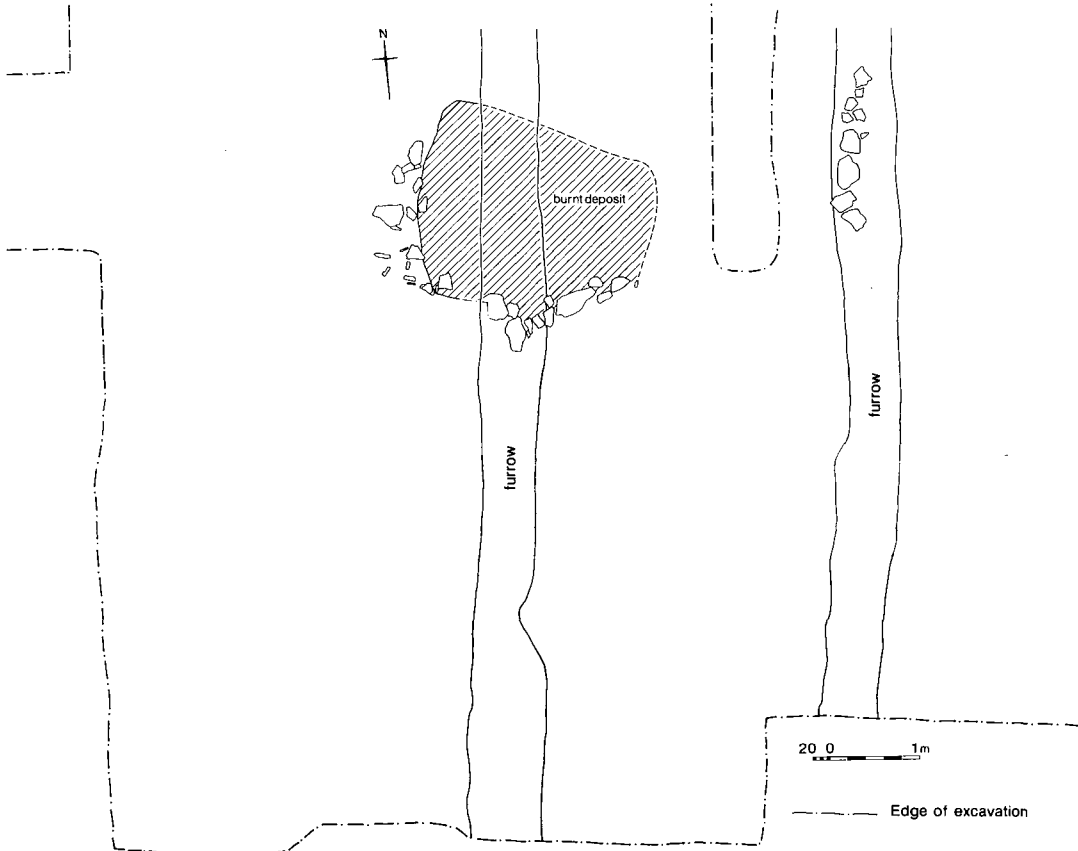
Phase 3 In the north-west corner of the later mound (illus 7), there was a series of heavily burnt deposits, lying on the surface of the dark soil deposit sealing the stakes. The south and west edges of this group of deposits were roughly defined by discontinuous lines of medium to large rubble, and had a near-vertical sharply defined boundary between 0.05 m and 0.25 m high. The east and north edges, where no stone structure survived, were very indistinct and patchy. The base of the mound material immediately overlying these deposits contained larger quantities of rubble than the surrounding areas.

These deposits produced several fragments of early Neolithic Carinated Bowl pottery, some of which were burnt (Sheridan, below), and several flint and chert flakes. They also contained virtually all the macroplant evidence from the project (Boardman, below): one seed of barley, one unidentified cereal seed, two weed seeds, and several hundred fragments of hazelnut shell (totalling 10.65 g).

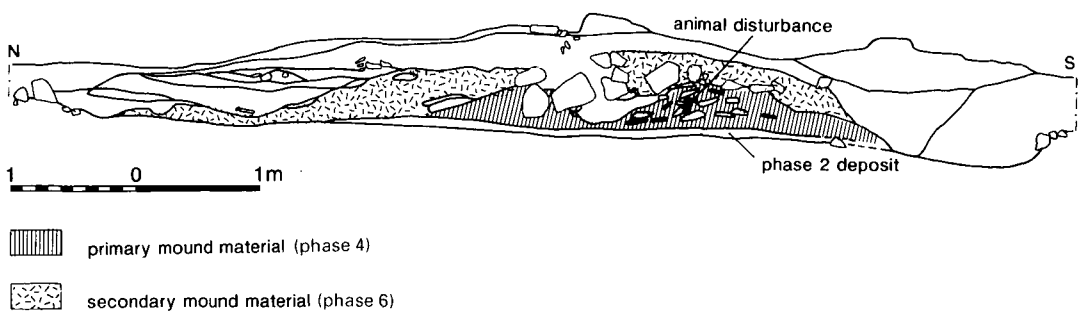
Charcoal from two of the three burnt deposits was radiocarbon dated, with results of 5150 ± 70 BP (4219–3790 cal BC; GU-2986) for the lowest and 5250 ± 50 BP (4234–3980 cal BC; GU-2985) for the uppermost. Oak, hazel and birch were present in all three, and one piece of willow came from the uppermost deposit. Oak, however, remained the dominant species (Crone below).

Phase 4a & 4b: the primary mound An earthen mound, 20 m by 10 m, sealed the burnt deposits (illus 8). It was composed of a dark yellowish-brown, very sandy loam, with many small lenses similar to the dark soil deposit underlying the burnt deposits. The lensing could indicate that the mound was at least partially built of turf, or could derive from dump construction in which soil was brought in small containers (such as baskets), and more than one type of soil was used. Additions of similar material were certainly made to this mound on at least one occasion, although the secondary deposits lacked the distinctive lensing. Subsequent disturbance to the stratigraphy was such that in some areas the boundary between primary and secondary mound material could not be identified. In particular, it was not possible to determine whether the eastern half of the mound was primary or secondary. The primary mound survived to a height of 0.35 m, and was between 3 m and 4 m wide at the midpoint. The eastern half was slightly lower, and between 4.5 m and 6 m wide.

The mound was divided by a line of large set stones resembling a wall-footing, running north/south at a point 11 m from the west end (illus 7 & 8). It extended from the north edge to just past the centre-line of the mound, and may have originally extended further to the south.

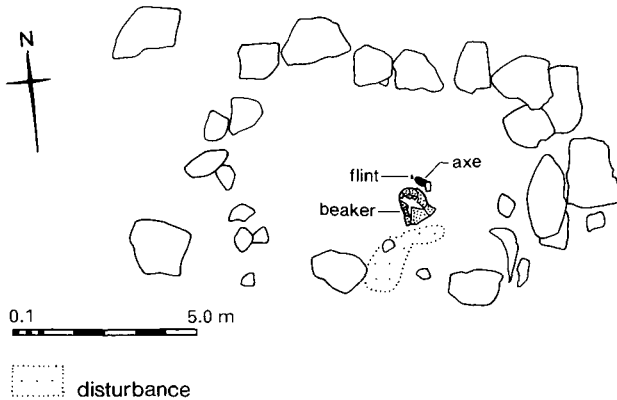


ILLUS 7 Cairn 2: Phase 3 burnt deposits and stone structures



ILLUS 8 Cairn 2: west-facing section through centre of mound

Unfortunately, one of the plough furrows ran on exactly this line, destroying its stratigraphic relationship with the mound and possibly removing any upper courses and the south end of the feature. There were large quantities of rubble in the upcast from this furrow, indicating that a significant part of this feature may have been removed. However, lensing similar to that in the primary mound material in the west half of the mound was not recognized east of the linear stone



ILLUS 9 Cairn 2: eastern burial

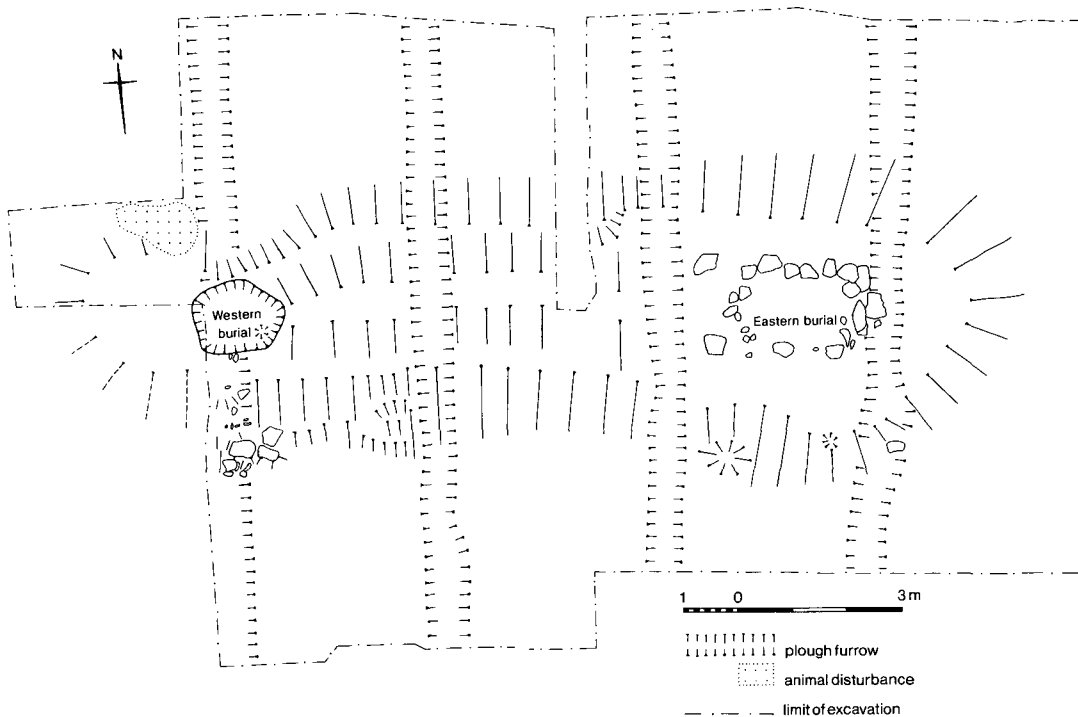
feature, and the dark soil deposit preserved under the west half of the primary mound was very patchy and indistinct in the eastern area, suggesting that it may have been exposed to disturbance for longer than at the west end. Furthermore, the mound was lower and wider east of the stone feature. Nevertheless, the relationship of the mound material with other features (below) indicate that there were at least two episodes of earthen mound construction at this end of the mound, as at the west end. It remains, therefore, very difficult to determine whether the stone linear feature was contemporary with or pre-dated the primary mound.

The primary mound material was generally free of large stones, although there were concentrations of large rubble around and immediately overlying the burnt deposits and in the centre of the mound. Rubble overlying the burnt deposits was mainly found only in the lowest part of the mound material, and appeared to have been dumped during the early stages of mound construction. It could derive from a demolished pre-mound structure. The rubble in the centre of the mound was distributed throughout the depth of the mound material, and could have come from later dumps on top of the mound, which had collapsed into the burrows in the underlying mound material (illus 8). Alternatively, it could also derive from an earlier structure.

The eastern half of the mound was built of a fine sandy loam very similar to that at the west end of the mound, but lacking the frequent dark lenses. This material was also very similar to the natural subsoil, a till derived from the bedrock. The boundary between the till and the mound material in this area was very difficult to recognize, except where it was marked by thin patches of a dark soil similar to that underlying the west end of the mound.

Phase 5a: the western burial pit A simple pit, 1.6 m long by 1.35 m wide and up to 0.48 m deep was located 2.6 m from the west end of the earthen mound (illus 10). A flint knife and a flint edge-polished axehead were found on the base of the pit (Finlayson, below). A plough furrow had passed directly over the pit, making its stratigraphic relationships difficult to determine, particularly as its fill was very similar to the mound material. However, the pit clearly cut the primary mound, although its relationship with the secondary mound material is unclear. The fills of this pit gave a medium response to the spot phosphate test; this result does not rule out the former presence of human remains but does not wholly support it (Carter, below).

Phase 5b: the eastern burial pit A very shallow oval depression, 2 m long by 1 m wide, aligned east/west and cutting the lower mound material, lay 3.8 m from the east end of the mound, and

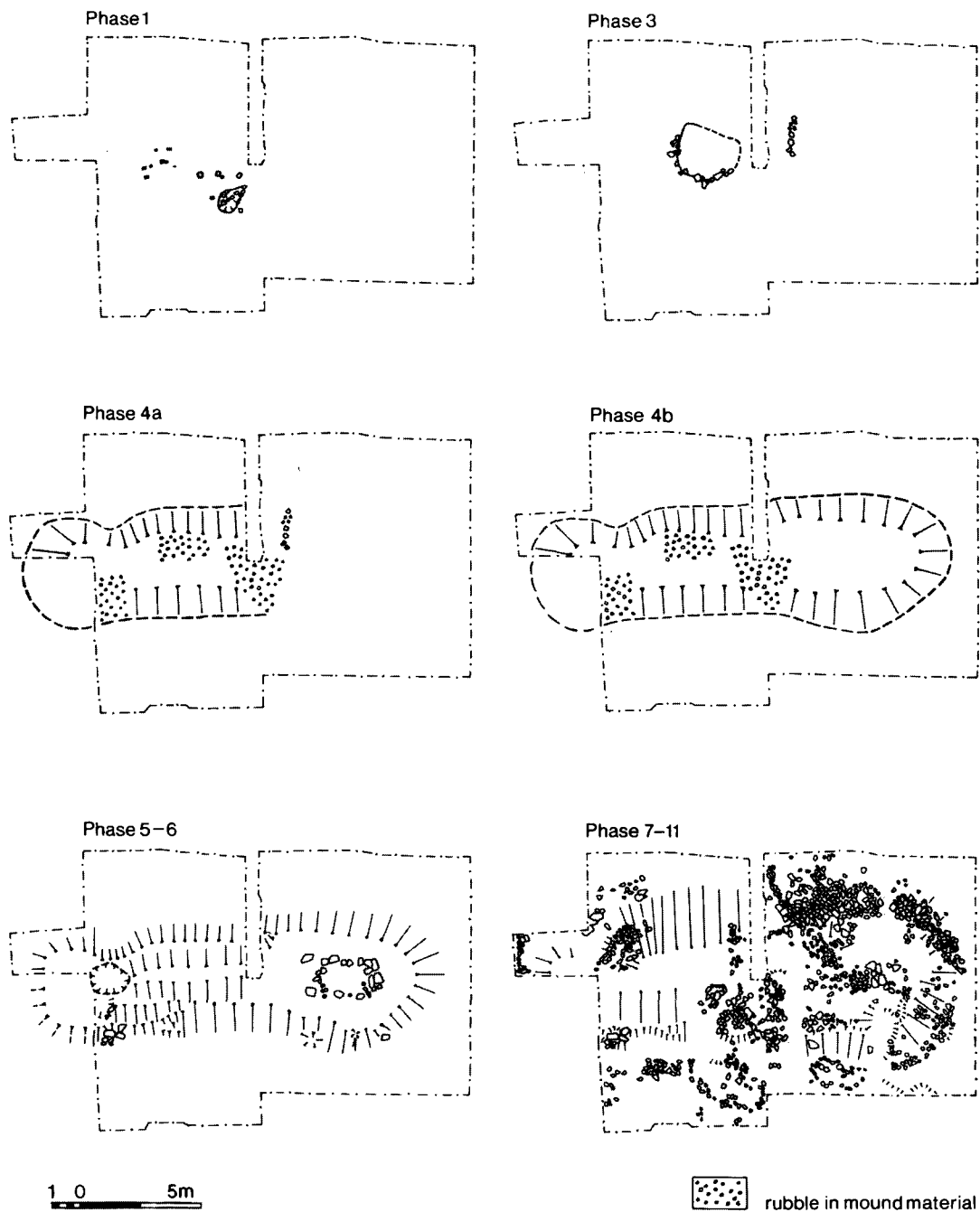


ILLUS 10 Cairn 2: Phases 5a & 5b: the burial pits

on the centre-line (illus 9 & 10). It was surrounded by a discontinuous kerb of medium to very large angular boulders (illus 10). The hollow had two very shallow main fills, both of sandy loam. The lower of the two was slightly darker than the upper. The upper fill contained a Beaker (Sheridan, below), lying on its side and crushed. Immediately adjacent to the Beaker was a polished stone axehead (Ritchie, below), a small flint scraper and a white quartzite pebble. Three flint flakes (one retouched), a chert flake, a possible quartz core, and an agate pebble were found under the Beaker (Finlayson, below). Two chert fragments and one flint fragment were found in the lower fill. All the artefacts were found in the south-east quarter of the hollow. The pit was partly covered by a cairn of small to medium angular stones lying within the stone kerb (illus 5). A small undecorated Beaker was found mixed with this material and in the grave pit, while fragments of a third Beaker were found on the surface of the cairn, scattered over a small area at its west end.

Once again, low to medium phosphate levels were recorded from the pit fills and are tentatively identified as evidence for a burial.

Phase 6: the secondary mound Further soil was added to the whole mound on at least one occasion. This deposit was identical with the earlier mound material in the eastern half of the mound, and the distinction between the two phases of mound building in this area might not have been recognized had the later material not partly overlain the stone kerb and cairn of the Beaker burial pit. This similarity between the secondary mound material over the whole mound and the 'primary' material in the eastern half contributed to the difficulty of determining the stratigraphic/chronological relationship between the two ends of the mound.



ILLUS 11 Cairn 2: phasing summary

Phases 7-10: stone deposits A number of deposits of angular rubble were added to the mound over time (illus 5). The most substantial was a bank of rubble around the north side and east end. This was up to 2.4 m wide on the north side, where it lay partly in a shallow cut in the mound material, but also overlay it. The west end of this bank was poorly defined, but lay near the centre-line of the mound, overlying the linear stone feature described above. To the east the bank became narrower and the stones gradually decreased in size. Patches of similar small to medium rubble occurred around the rest of the mound, forming a discontinuous rubble bank surrounding the mound, and extending its width to between 9 m and 10 m. At the ends of the mound, the rubble directly overlay the mound material; but at the sides it was stratigraphically separated from the mound material by soil eroded from the mound, except within the shallow cut at the north side.

Several small dumps of large rubble were placed on top of the mound at various places. These had generally sunk into the mound material as a result of burrowing underneath. Further dumps of stone at several points around the mound were similar in character to those already described, but separated from the mound and/or the previous stone dumps by a very dark peaty soil deposit, possibly representing the development of a soil over the mound in the intervening period.

CAIRN 3

Cairn 3 lay at NGR: NT 0105 3889, on a nearly level site at the top of a west-facing slope (illus 2). It was intersected by two plough furrows, which had cut through the cairn to the natural subsoil (illus 12a). The cairn was sub-circular, 9.2 m by 8.0 m and 0.62 m high and comprised medium to large, sub-angular stones, with about 20% of loose peaty soil. A ring of very large boulders averaging about 5.2 m in diameter and roughly concentric with the mound underlay it (illus 12). This ring was probably continuous originally, but was partly removed by the plough furrows. It appeared to have been constructed simultaneously with the cairn; most of the stones lay directly on the subsoil, but some were wholly or partly supported on cairn rubble.

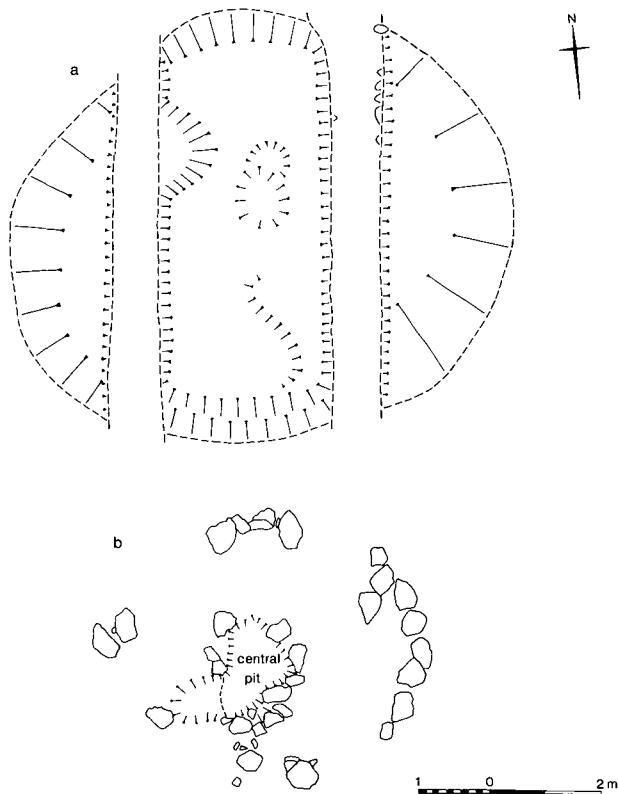
The main part of the cairn overlay a much smaller, irregularly shaped area of more densely packed rubble just south of the centre of the mound. The edge of this area was defined by a discontinuous kerb of large angular stones, which also marked the edge of a very shallow, irregular pit covered by the densely packed rubble. The kerb overlay a narrow band of upcast from the pit, under which a buried soil was preserved. This had been disturbed some time before it was sealed, and suffered further disruption (probably including truncation) immediately before it was sealed (Carter, below; Tipping, below). The rest of the cairn lay directly on the subsoil.

Nothing was found in the pit. Its fills were rich in phosphates, in common with those of the pit under Cairn 1, and it is interpreted therefore as a burial pit.

Three sherds of late Neolithic Impressed Ware, a sherd of a comb-decorated Beaker, a flint flake and a chert flake were found in the plough upcast over the cairn during fieldwalking by LADAS. A sherd of decorated Beaker pottery was found 12.5 m north of the cairn, in a plough furrow. Four sherds of another Beaker (probably all from one pot; Sheridan, below), and a late Neolithic Impressed Ware sherd were recovered from spoil derived from the plough upcast and the initial cleaning of the same furrow at the start of the excavation. One flint flake and three chert flakes were found on the surface of the subsoil underlying the cairn.

'CAIRN' 7

This feature appeared as a group of angular boulders covered by turf, lying undisturbed between two furrows and only 10 m south-west of Cairn 1. An excavation trench measuring 5 m by 5 m



ILLUS 12 Cairn 3: (a) after deturfing; (b) after excavation

was opened over the cairn, which was revealed to be of only a single thickness of stones lying on the subsoil. The feature's nature is obscure.

THE ARTEFACT SCATTERS AND AREAS OF SAMPLE EXCAVATION

Daniel A Johnston & Tam Ward

A brief summary of the LADAS fieldwalking project is presented here to locate the Historic Scotland excavations within the artefact scatters and to provide a background to the pottery report (Sheridan, below), which covers all the pottery recovered by both organizations. The fieldwalking project covered the whole area afforested prior to 1990. In addition to the six monuments, it revealed a scatter of prehistoric artefacts covering the whole western half of the Common, with five extensive concentrations (illus 2).

Seven small areas were excavated within the artefact scatters (illus 2). Sample Areas 1, 2, 3, 5, 6 and 7 were at multiple find-spots; Sample Area 4 was in an area of lower artefact density, excavated as a 'control' sample. The first stage of excavation in each area was to clean the base and sides of the plough furrows by hand, to recover artefacts; this was carried out in all cases by LADAS. The area between the furrows was then excavated down to the subsoil by Historic Scotland's team (Sample Areas 1 & 4), or by LADAS (Sample Areas 2, 3, 5, 6 & 7). Since this work was undertaken, fieldwalking and excavation by LADAS on Carwood Hill, at the east end

of Biggar Common, has also revealed areas of early prehistoric activity; this work will be described by a separate report when the project has been completed (Tam Ward, pers comm).

LADAS recovered a total of 218 potsherds from fieldwalking, most identified as early Neolithic. A further 1972 sherds came from the excavation of the sample areas. The pottery from the sample areas has been identified as an early Neolithic Carinated Bowl assemblage (Sheridan, below). A total of 557 chipped stone artefacts were recovered from the fieldwalking and the sample areas (Finlayson, below).

Sample Area 1

An area of 32 sq m was excavated (about 90 m north-east of Cairn 1). Eighty-one sherds of pottery, six flint flakes and eight chert flakes were found. The B-horizon was carefully removed by trowel and the top of the till cleaned, but no features were recognized.

Sample Area 2

Sample Area 2 was located about 50 m north of Cairn 1. Larger quantities of artefacts were recovered at Areas 2 and 3 than at Areas 1 and 4. Area 2 produced 1323 potsherds. A large number of features, including at least one hearth, could be recognized, possibly representing a settlement area.

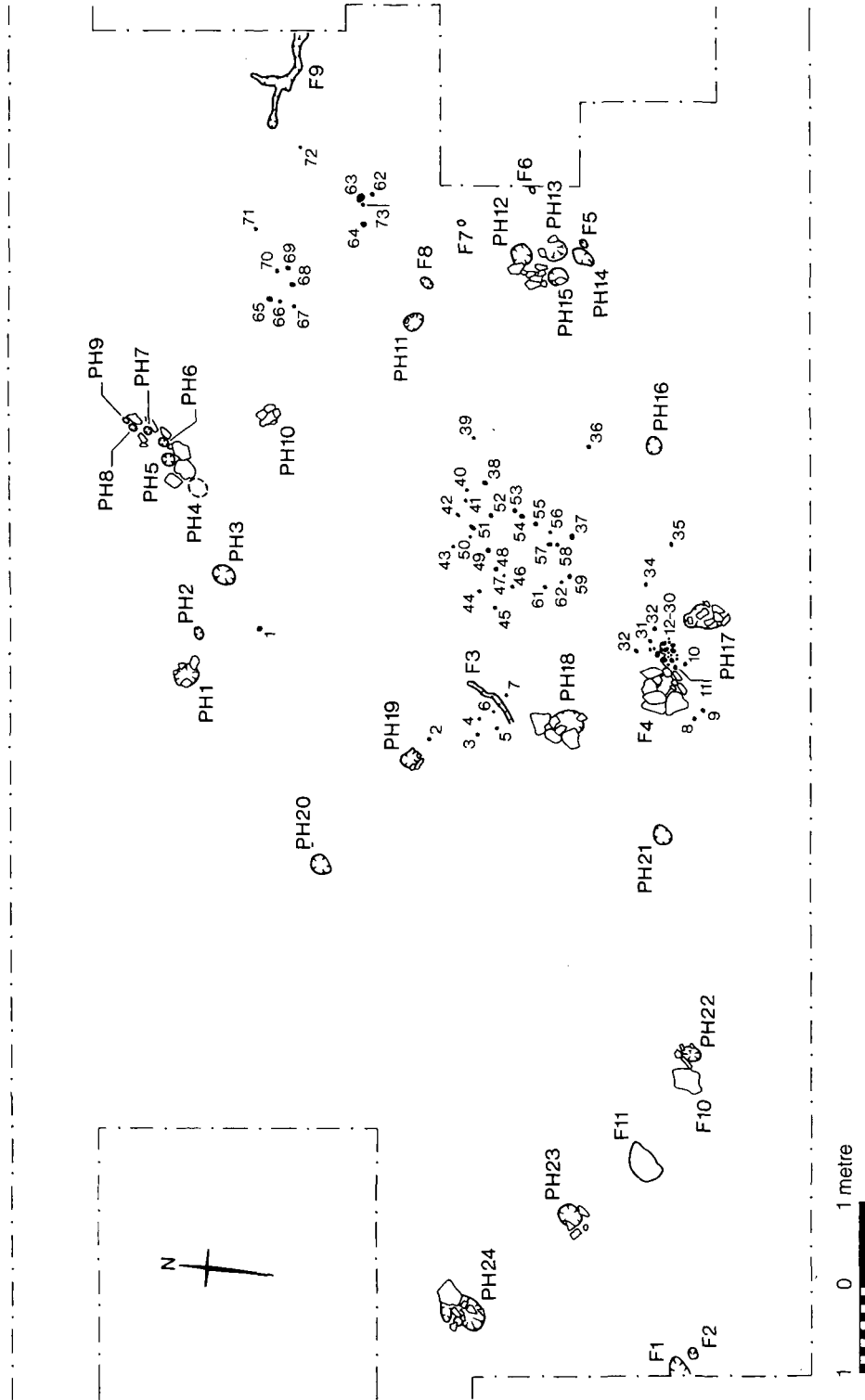
Numerous stake-holes were recorded in Area 2; these varied in width up to 0.08 m and were up to 0.15 m in depth. Several groupings were visible (illus 13). The very tightly packed group in the southern part of the cutting, near post-holes PH4 and PH17, was unusual because nearly all the holes had some remains of burnt bones (of unidentifiable type) within them. The large central group of stake-holes SH37-61 could be interpreted as representing a series of screens, perhaps enclosing a small oblong area on a NE/SW orientation.

Much Neolithic pottery and lithic material was found in the fills of the larger cut features, in many instances seeming to be 'on end', particularly in the fills of post-holes PH5-9, where the largest concentration of charcoal was noted and where the largest sherds were found. The vertical arrangement probably suggests that they were included in the packing of the posts, accidentally or deliberately.

Feature F11 was a place where fires had been set (with charcoal and ash), but where there was no sign of scorching of the subsoil. Pottery was found around, below and, in one case, within the ashy fill. Radiocarbon dating now shows that this was a modern intrusive pit. F10 was a flat sub-rectangular andesitic stone, the top of which seems to have been used for rubbing or grinding. It was set on clean subsoil. Feature F4 was a setting of stones adjacent to one of the stake-hole groups. The stones were a mixture of Andesite and rounded Greywacke, set into clean subsoil. Charcoal in the area appeared to have gathered after the stones were placed. A distinctive piece of Greywacke, rounded on one side and flat on the other, was found flat side up on this feature. It is possible that the feature represents a working area.

Features F3, F9 and F12 appeared to be animal burrows into which charcoal and pottery had fallen on their collapse. The other cut features (F1, F2, F5, F6, F7 & F8) were rather amorphous but did contain charcoal and may represent the bases of post-holes.

The pattern of post-holes can be interpreted in a number of ways, but perhaps the most convincing (illus 13) is a sub-rectangular, bow-sided arrangement involving PH10, 11 and one of the group PH12/13/14/15 as the east side, PH17, 18 and 19 as the west, with PH16 filling in the south end. In this arrangement the role of the possibly related outliers PH1, PH20 and PH21, as



ILLUS 13 Plan of features excavated by LADAS in Sample Area 2

well as PH 2, PH3 and the group PH4-PH9 is unclear. To the west, the group PH10, PH22, PH23 and PH24 might be interpreted as part of a similar structure.

Charcoal from PH17 (*Alnus*: alder) was radiocarbon dated to 4565 ± 70 BP (3510–3040 cal BC; AA-18151), and from PH14 (*Corylus*: hazel) to 4300 ± 70 BP (3094–2701 cal BC; AA-18153).

Sample Area 3

Area 3 was about 400 m ESE of Cairn 2. This was the location of the first discovery on Biggar Common, when Martain Brown, a member of LADAS, found some worked stone objects and sherds of early Neolithic pottery in a furrow. An area of 86 sq m was eventually excavated. A pit measuring 0.2 m wide and 0.1 m deep (possibly a post-hole) was discovered. The majority of the 300 or so potsherds from this area were found within 3 m of the pit. The only other features were a stake-hole and a patch of scorched subsoil, indicating burning. Two stone axeheads and a hammerstone were recovered (illus 29, 2–4).

Sample Area 4

An area of 56 sq m was excavated, about 110 m north-east of Area 1, in which 59 potsherds, 22 chert fragments and two quartz fragments were found. Again, no archaeological features were recognized. Parts of this area were disturbed by burrowing.

Sample Area 5

This area was 40 m west of Cairn 2, lying on a moderate slope but at the same level as the cairn. It was detected by the presence of early Neolithic sherds lying in a furrow. A small excavation cutting was opened over the area of the furrow. A scatter of about 100 sherds was found lying in a patch of dense charcoal measuring 0.5 m in diameter and 75 mm deep, which overlay and filled a shallow depression 0.5 m long and 0.2 m wide (F105). The charcoal was almost entirely *Corylus* (hazel) which included much roundwood; a conventional radiocarbon date of 4880 ± 50 BP (3780–3531 cal BC; GU-4276) was obtained.

Sample Area 6

This cutting lay on a flat hilltop 50 m west of Sample Area 4, within a 19th-century plantation boundary. The site was chosen when querns were noticed protruding from the side of the plough furrow. A single pit was found, measuring 0.8 m by 0.6 m by 0.2 m with sloping sides. A secondary cut had been made into its base. Within and over the pit was an assortment of 10 stones of mixed geological type, the largest being a saddle quern of andesite. The stones appeared to be dumped in no particular order. Forming a distinct arc on the south-west side of the pit were 12 stake-holes, with charcoal-rich fills. They ranged in size from 0.3 m to 0.08 m across and the deepest was 0.1 m. On the east side of the pit was a single stake-hole, 0.08 m across and 0.16 m deep, which contained no charcoal. Five Neolithic sherds were recovered from the trench, with seven flakes of chert and one of pitchstone.

Some 20 m to the north of Sample Area 6 a fine quartzite hammer stone was found.

Sample Area 7

Several pieces of struck chert were found in this location, which was 20 m south-east of Sample Area 1.

ARTEFACTS

The finds from Biggar Common have been allocated to Biggar Museums by the Queen's & Lord Treasurer's Remembrancer.

POTTERY

A Sheridan

The fieldwork carried out on Biggar Common between 1987–92 produced a sizeable assemblage of prehistoric pottery, almost all of it of undecorated early Neolithic type (see Discussion for terminology). A small amount of later Neolithic Impressed Ware was also recovered, as was one sherd of possible Grooved Ware, and Cairns 1–3 produced the remains of seven Beakers. Because this assemblage is a significant addition to the corpus of Scottish Neolithic and Early Bronze Age pottery, the finds from all the fieldwork episodes — not just those funded by Historic Scotland — will be covered here. Further information on the assemblage has been deposited with the archive of the project records at the National Monuments Record of Scotland (RCAHMS, Edinburgh).

Early Neolithic (illus 14–20)

Over 2300 sherds, weighing over 13 kg, were recovered from various find-spots and contexts, with the majority (just over 1300 sherds, c 8.1 kg) coming from Sample Area 2. When considered alongside the limited structural evidence from these contexts, the pottery is assumed to relate to episodes of storage, cooking and consumption of foodstuffs, and discard of broken vessels — part of the normal domestic activities of a settlement on the south-facing slopes of the Common. Its involvement in possible ceremonial activities associated with the Cairn 2 pre-construction rites is suggested by the presence of some burnt pieces in the Phase 3 contexts; other early Neolithic pottery from Cairn 2 is interpreted as having been accidentally incorporated in the mound material. Since minimal variation in form and fabric was noted between material from different find-spots, the pottery will be described as if it were a single group.

The assemblage consists of a large number of undecorated, round-based vessels, which fall into the following shape categories: carinated bowls; uncarinated bowls; and cups. Precise quantification of vessel numbers is impossible, owing to the striking homogeneity of the assemblage. However, on the basis of incompatible rim sherds (ie sherds which could not have come from the same pot, despite considerable possible intra-vessel variation), one can tentatively suggest that at least 180 carinated vessels, and around 20 uncarinated bowls and cups, are represented. A single lump of kneaded but unshaped clay from Sample Area 1 constitutes evidence — albeit slight — suggestive of local manufacture.

Carinated bowls (illus 14–18) These are open or neutral in shape (ie the rim diameter slightly exceeds or equals the carination diameter) and bellies range from shallow (illus 14) to deep (eg illus 16). Necks are straight (illus 15, no 1) or, more commonly, slightly curved; a few bowls have

flaring necks (illus 14, no 3). One vessel (illus 17, no 3) stands out as different from the rest, with a collar-like rim above a sinuous body.

The range of rim and carination shapes is narrow (illus 18). Rims are simple, rounded, and either upright or — more commonly — everted (illus 18, nos 1-23). Hooked, beaded and slightly flattened forms occur, but none is markedly angular or heavy. Carinations (illus 18, nos 24-31) are distinctly gentle, sometimes to the point of near-imperceptibility; well-defined shoulders are absent. One small sherd (illus 17, no 4) may have a faceted carination.

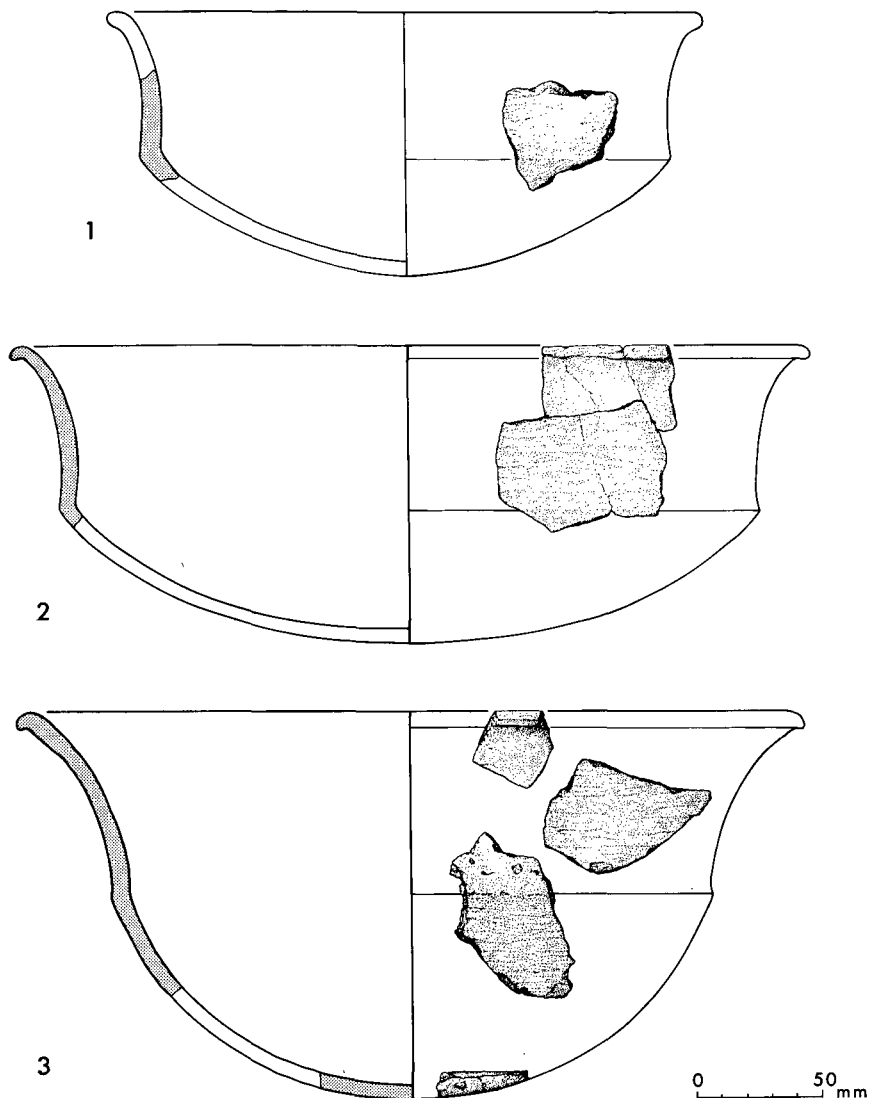
These bowls range in size from 100 mm in external rim diameter to over 380 mm; out of 85 specimens where rim diameter could be estimated, 74 (87%) fell within the range 150-300 mm. Wall thickness varies from 4 mm to 15.5 mm, with most sherds falling between 6-10 mm.

As with vessel shape, other characteristics such as colour, texture and surface finish show a narrow range of variability, and attest to a high degree of skill and consistency in the manufacture of this pottery. Most sherds have a rich dark brown, reddish-brown or blackish-brown surface colour, with other variants including medium brown and dark grey. Many of the sherds from burnished vessels (see below) have black surfaces, which may have been achieved by smudging — coating the vessels with carbonaceous material during or after firing (Gibson & Woods 1990, 243; Rice 1987, 158). Where external and internal surface colours differ, the former is generally lighter than the latter, suggesting that the pots were fired in an inverted position. Core colour often differs slightly from surface colour, but only a small minority of sherds display the distinctive blackish banding of incompletely oxidized pottery; the general impression is of fairly thorough and even firing. A few sherds have the distinctive pale coloration (ie pinkish, buff, pale orange), surface cracks and soft, friable texture of pottery which has been burnt: these include some from the early levels under Cairn 2, associated with the burning episode(s) of Phase 3.

Excluding these latter examples, the assemblage is markedly hard (ie unscratchable or only slightly scratchable by fingernail), dense-textured and robust, again indicating that it has been well fired. The only weaknesses are an occasional fracture along a ring construction joint (giving rise, in several cases, to 'false rims'), and an occasional tendency to spall.

In fineness of fabric (ie size, density and obtrusiveness of inclusions), the assemblage ranges from exceptionally fine to slightly coarse, but in no case does the texture approach the coarseness of the later Neolithic Impressed Ware, described below. Inclusions consist of mineral grains and rock fragments, of various types, shapes and sizes up to c 10 mm by 5.5 mm; typical densities are 5% or less in medium to fine vessels, and up to 7% in less fine, thicker-walled vessels. Often several types, shapes and sizes are present within a single sherd. In only a minority of cases do these grits represent material which has been deliberately crushed and added to the clay; here the inclusions consist of white quartz/ite. The finest ware gives the appearance of having been made from levigated (refined) clay — a common feature of pottery of this type (Sheridan 1989).

Surface finish is uniformly good, with great care having been taken to achieve a smooth finish, irrespective of the size or thickness of the vessel. Three broad categories of surface finish are distinguishable: simple smoothing (eg with finger or plant material); light burnishing; and burnishing to a lustrous, leathery finish. The tool involved for both the latter processes must have been a smooth-ended pebble or spatula; the surface was rubbed in horizontal lines, leaving burnishing facets. Fluting — a decorative effect seen on some other early Neolithic pottery of this type (eg at Fochabers: Henshall 1984) — is absent. Burnishing extended over the whole of the outer surface of the pot, and over the rim and neck interior. The smoothness of these surfaces makes it hard to determine whether slipping — as a preliminary surface treatment — took place. Several definitely unslipped vessels are, however, present.

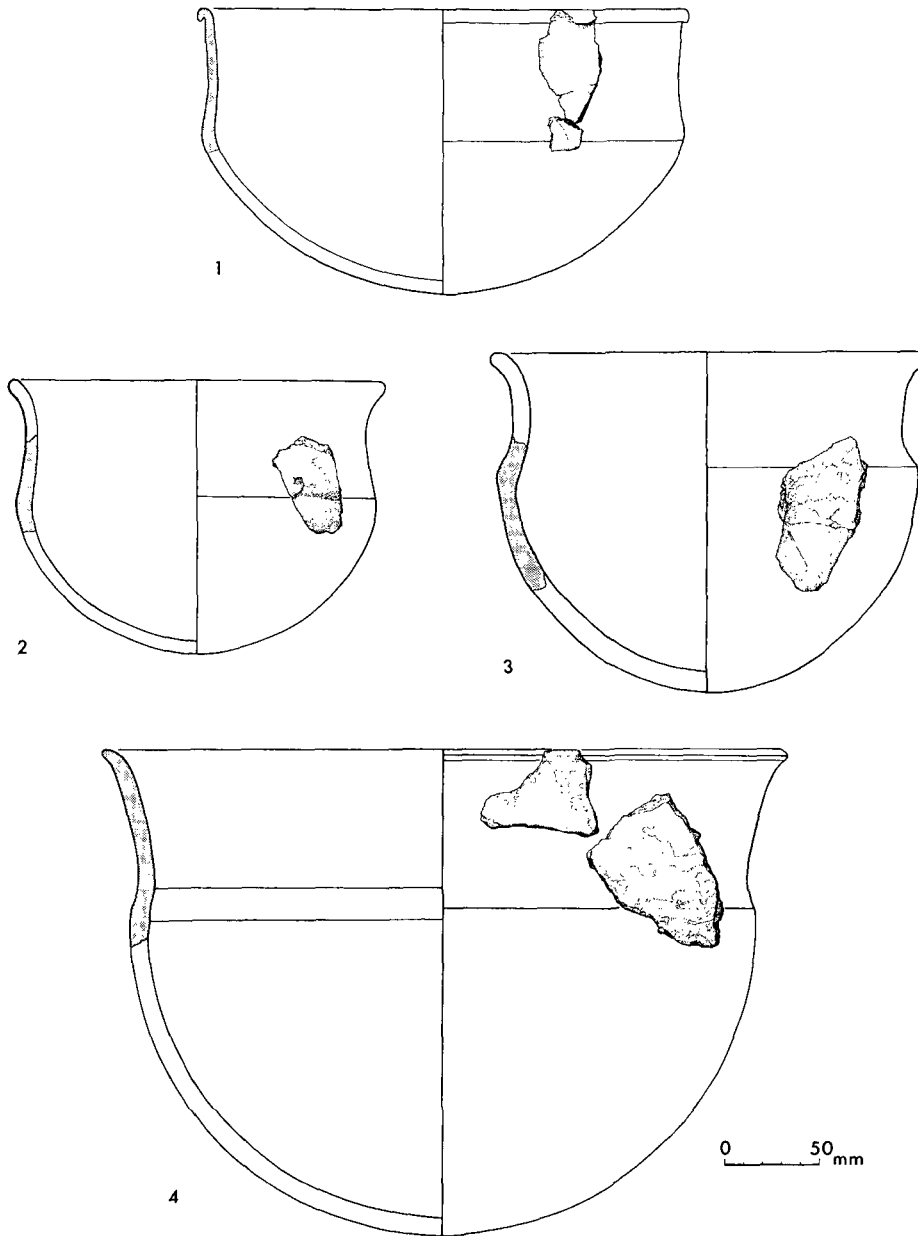


ILLUS 14 Carinated bowls (scale 1:3)

A number of sherds, of all degrees of fineness, have a black sooty encrustation on their interior or exterior surface, which may indicate their use as cooking vessels. As for the other carinated vessels, it is assumed (from their shape, size and texture) that these were used for the serving and consumption of foodstuffs.

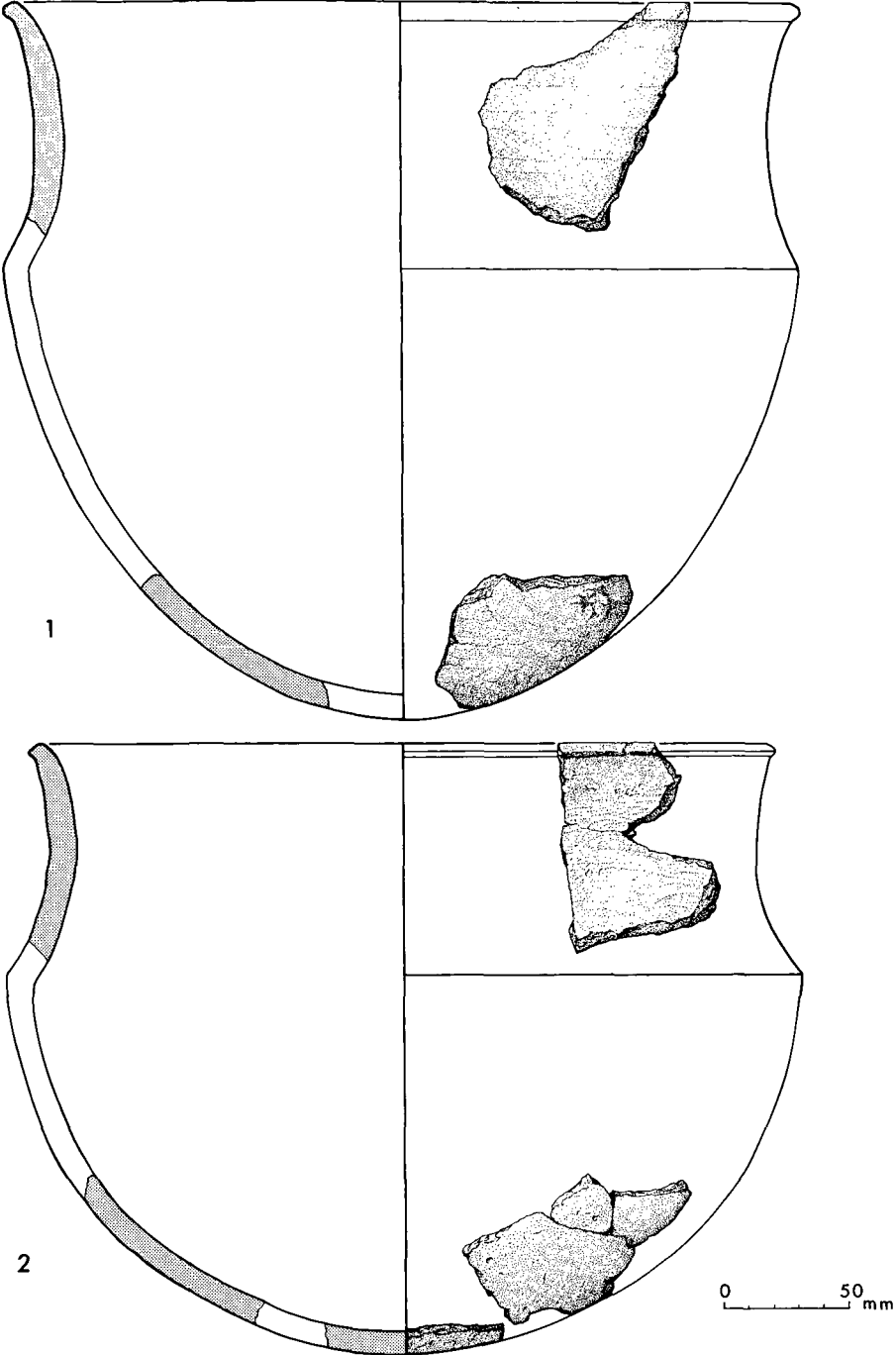
Cereal impressions are notable by their absence.

Uncarinated bowls (illus 19) These are hemispherical or slightly deeper vessels with simple upright or slightly everted rims. Rim diameter ranges from 110 mm to c 190 mm, and wall thickness is around 5–9 mm. None of these vessels is as fine as the finest carinated bowls; surfaces tend to be less smooth, and burnishing is absent.

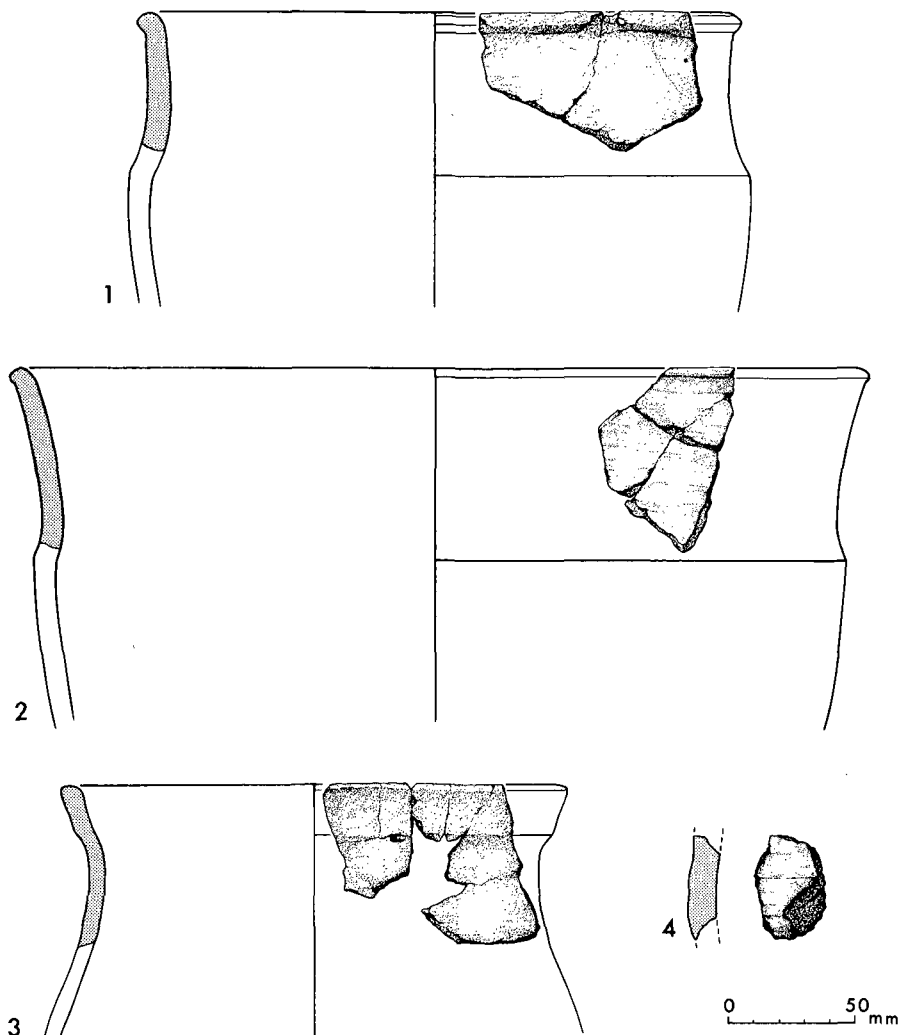


ILLUS 15 Carinated bowls (scale 1:4)

Cups (illus 20) These are even simpler, smaller vessels, with rim diameters of 60–100 mm. Their irregular, lumpy surfaces indicate that they were manufactured as pinch pots, using a single piece of clay, rather than using the ring method of construction as seen with the carinated and uncarinated bowls. Grits tend to protrude through the surfaces, and none of these vessels is burnished.



ILLUS 16 Carinated bowls (scale 1:3)



ILLUS 17 Carinated and unusual-shaped bowls (scale 1:3)

The terminology, affinities, dating and significance of this early Neolithic pottery are discussed below (see Discussion).

Later Neolithic: Impressed Ware (illus 21)

Sixteen pieces, representing some 12 vessels, can be attributed to this pottery type; all decorated and feature sherds are shown in illus 21. The sherds were found at widely scattered find-spots, and although pieces from three vessels were found close to Cairn 3, and four sherds were found within Sample Areas 2 and 3, none of this pottery is directly associated with other finds or features.

This pottery differs in almost every respect from the early Neolithic plainware. The sherds are from large, thick-walled (10.5–22 mm), decorated coarseware vessels, with flanged (illus 21,

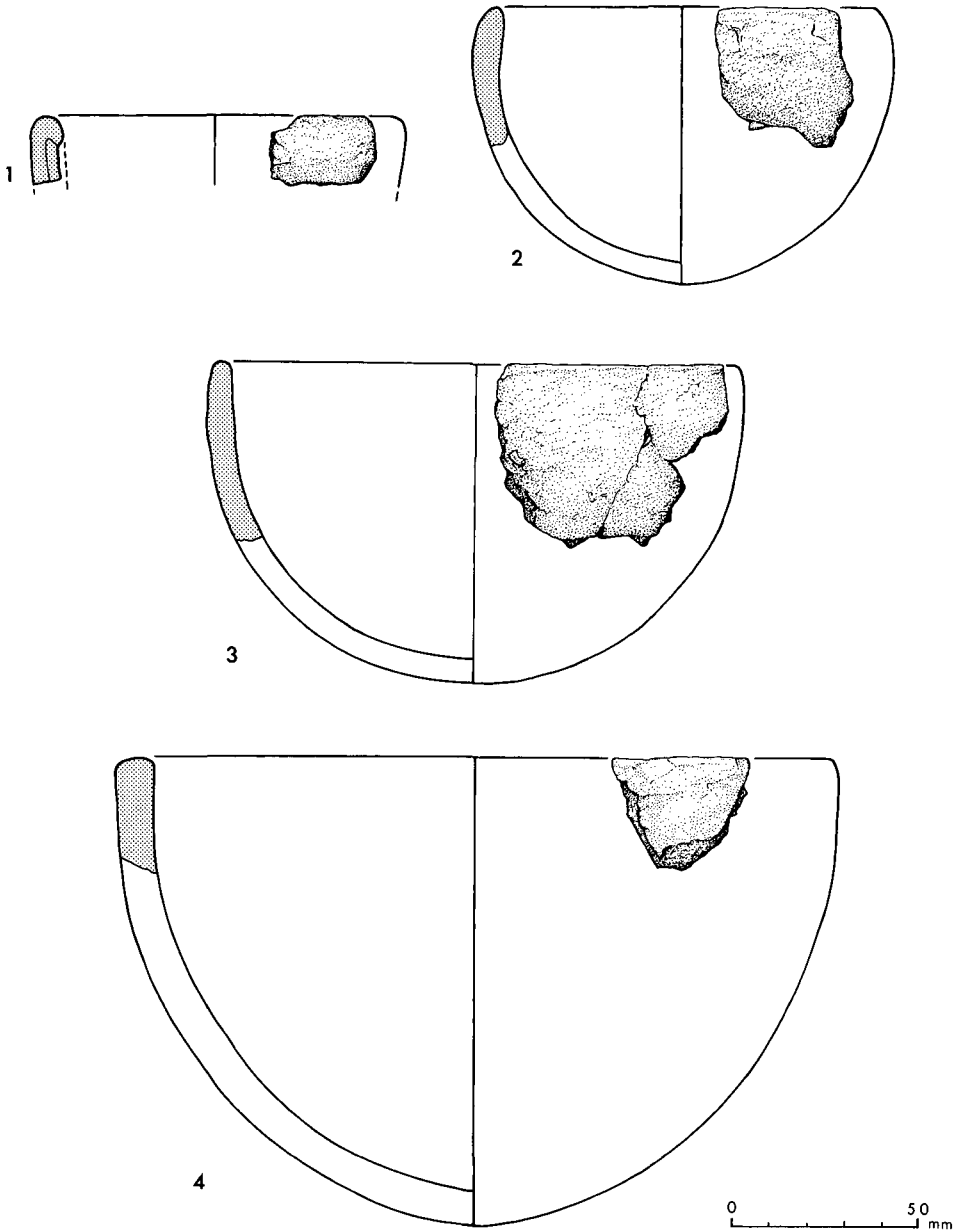


ILLUS 18 Rim (1–23) and carination (24–31) profiles (scale 1:2)

nos 1–5) or flattened rims (illus 21, no 6); the flat-rimmed vessel also has an internal cavetto-like moulding just below the rim. Two of the flange-rimmed vessels (illus 21, nos 1–2) have long, pointed flanges, whilst the others have gently squared-off flanges. There is one sherd (illus 21, no 10) which may come from the wall-base transition area of a saggy-based pot.

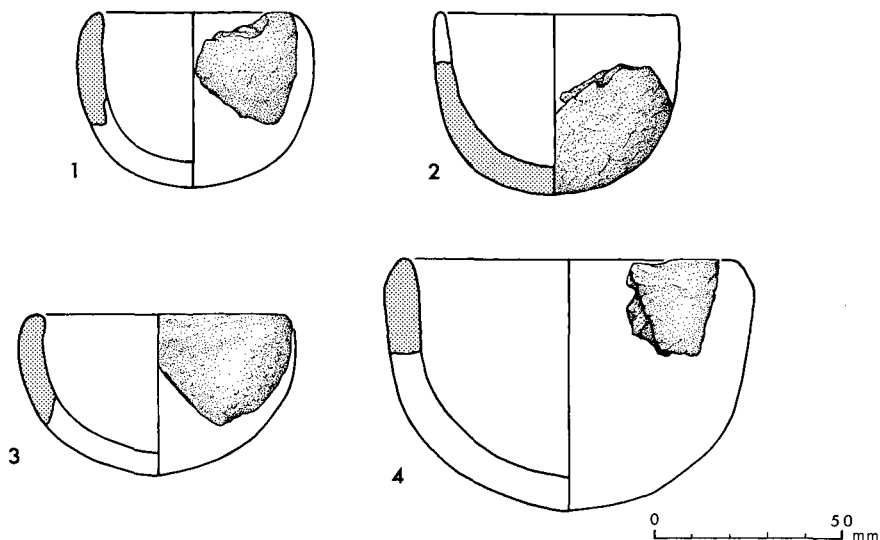
The overall shape of these vessels can be extrapolated from Impressed Ware pottery found elsewhere in southern Scotland and northern England. Such vessels are usually either truncocoenic (eg Meldon Bridge, Peeblesshire: Burgess 1976, figs 9.7–8; Wellbrae, Lanarkshire: Cowie, pers comm; Crookhaven (Crookham), Northumberland: Kinnes & Longworth 1985, nos 4–6) or saggy and bag-like, with flat or flattish bases (eg Crookhaven: *ibid*, no 1; Wellbrae: Cowie, pers comm; Luce Sands, Wigtownshire: McInnes 1964, nos 123, 132, 134; North Carnaby Temple 6: Manby 1975, fig 15.1). Two vessels represented as illus 21: nos 6 & 10 may belong to the latter category; the diameter of the flat-rimmed pot is estimated at 220–240 mm.

Decoration is by impression and incision, using various tools: twisted cord, whipped cord, grass or straw, sticks or twigs for the impressions, and possibly thumbnail for the shallow incised 'V' motif on one sherd (illus 21, no 8). The cord impressions are used to decorate three of the four



ILLUS 19 Uncarinated bowls (scale 1:2)

flanged rims found near Cairn 3. The most complete example (illus 21, no 1) features eight concentric swags, framed on the outside by two plain concentric lines — a design exactly paralleled at Crookhaven (Kinnes & Longworth 1985, nos 4–5). The rim shown in illus 21 (no 3) has five surviving plain concentric lines of twisted cord on the top of the flange, plus short oblique whipped cord impressions on the end facet. The third (illus 21, no 5) has simple concentric lines of loosely whipped cord. This kind of rim decoration, and other aspects of the decorative



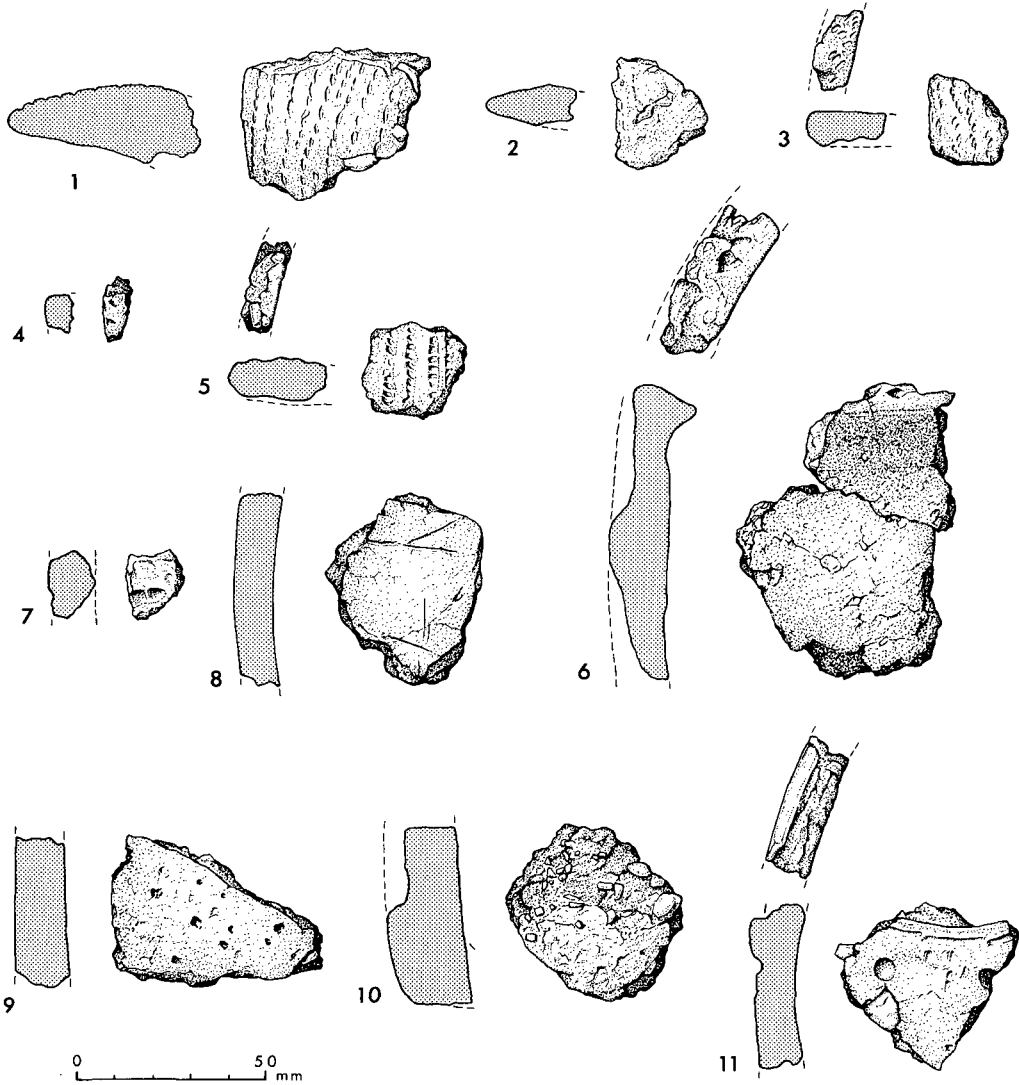
ILLUS 20 Cups (scale 1:2)

repertoire, have parallels at the nearby sites of Wellbrae (Cowie, pers comm) and Meldon Bridge (Burgess 1976).

Although these sherds are fairly hard, in many cases the paste has tended to spall and leave hackly fracture surfaces, and in some instances the external surface has been heavily abraded and/or pitted. Grits are generally large (up to 12.5 mm by 8.5 mm) and/or numerous, and appear to have been added to the clay — in crushed or uncrushed form — to help keep the vessel intact during firing and use. Sherds from four vessels contain crushed fragments of a distinctive black and white crystalline rock, and one other sherd contains abundant crushed quartz/ite. At least one vessel (illus 21, no 6) shows signs of possibly having been slipped, but no vessel has the careful surface smoothing or burnishing as seen on the early Neolithic pottery. Most of the sherds have a pale exterior and dark interior, and some have blackish encrustations on their internal surfaces and/or hairline cracks on their exteriors. All this suggests that some, or most, of these vessels had probably been used for cooking.

Later Neolithic: possible Grooved Ware

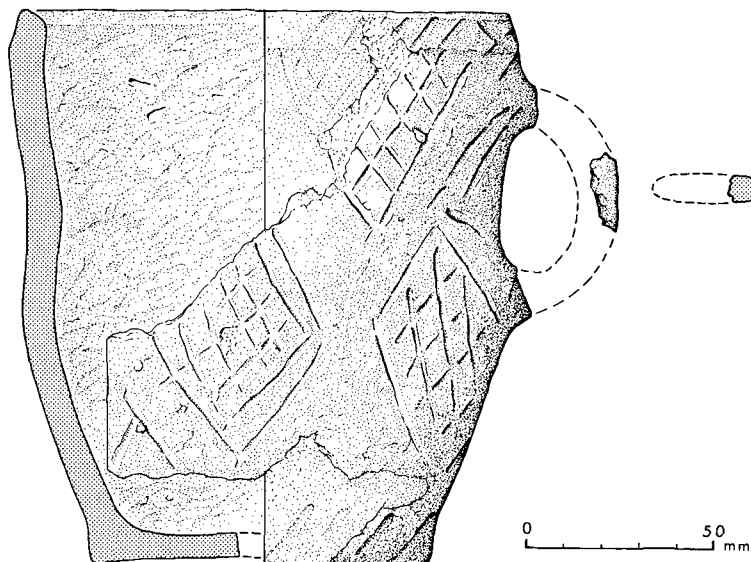
One sherd, found during fieldwalking in 1988 (illus 21, no 11), stands out as being different from this Impressed Ware assemblage in that it is slightly less coarse, and has an unusual decoration and shape. Its internal curvature suggests that it may be from near a rim. Decoration consists of a low, curving, applied shoulder-like ridge, its shape outlined by an incised line, and below this are several shallow ?nail impressions and two deep circular jabs. Juxtaposed dot impressions and curving grooves are known on Grooved Ware (eg Machrie Moor, Arran: Haggarty 1991, figs 6.17a, 20a; Beckton, Dumfriesshire: Cormack 1963, fig 3: paired jabs; Wellbrae, Lanarkshire: Cowie pers comm); and definite examples of Grooved Ware were found on Carwood Hill at the east end of Biggar Common in 1993 and have since been found, in 1996, at Melbourne, about 10 km north-east of the Common (Tam Ward, pers comm). However, no precise parallel for this combination of sherd shape and decorative scheme can be found amongst Grooved Ware, so its attribution can be only tentative.



ILLUS 21 Impressed Ware (1-10) and possible Grooved Ware (11) (scale 1:2)

Beakers (illus 22-25)

Seven Beakers were found, all associated directly or indirectly with funerary activity. Cairn 1 contained a Handled Beaker (Pot 1: illus 22), found lying on its side (handle side down, mouth facing into pit) at the east end of the burial pit, plus numerous sherds of a second Beaker (Pot 2: illus 23). These were found on the floor of the burial pit, in the interstices between the cairn stones and on the surface of the cairn; and unless some agency such as worm action was responsible for this distribution pattern, it strongly suggests that the Beaker had been smashed deliberately and scattered as part of the funerary ritual. (It also suggests that the principal cairn-construction episode took place as part of these rites, shortly after the deposition of the body.)



ILLUS 22 Handled Beaker (Pot 1) from Cairn 1 (scale 1:2)

Cairn 2 contained three Beakers (illus 24), associated with the later of two secondary features (assumed to be interments) within the long mound. Pot 1 is a virtually complete comb-decorated and incised Bell Beaker, found lying on its side, crushed, at the centre of the grave pit. Whether it had been upright when deposited is impossible to tell. Pot 2 is a miniature, cord-decorated Beaker; it appears to have been smashed deliberately and scattered over the small cairn covering the grave pit. Pot 3 is an undecorated, shallow bowl which was found in 22 pieces, scattered through the grave pit, the small cairn and associated sediments. Beside Pot 1 were found a stone axehead, a flint scraper, and a white quartzite pebble; further lithic items were found under it (see Finlayson, below).

Cairn 3 contained sherds of two Beakers (illus 25), both found in disturbed contexts (ie in plough upcast and in the excavation spoil heap).

The proliferation of classification schemes for Beaker pottery makes the application of a simple terminology difficult. Table 1 presents the various ways in which the seven vessels could be described, according to current and recent terminology. The dating and broader significance of the vessels are dealt with below (see Discussion). Details of each pot are as follows (see Table 1 for the key to Clarke's (1970) typological acronyms).

Cairn 1: Pot 1 (illus 22) Around two-thirds of this vessel could be reconstructed; additional loose sherds from the wall and base were recovered, but it appears that the rest of the pot (including all but a tiny fragment of the handle) had decomposed. The Beaker is c 145 mm tall, and has rim and base diameters of c 130 and 90 mm respectively and wall thickness of 8–10 mm. Below a shallow collar the neck curves in very slightly, then out to a sinuous belly just below the vessel's mid-height. The base is flat internally and slightly concave externally. The handle — to judge from the attachment scars and surviving fragment — was strap-like, some 27 mm wide at its top (just below the vessel's collar) and 31 mm wide at its bottom (where it joins the belly).

The exterior of the body is crudely decorated with shallow incised designs, executed with a straw-like implement. Bands of running chevron design encircle the collar and the bottom of the

TABLE 1
Classification of Beaker pottery from Biggar Common, according to recent and current classificatory systems

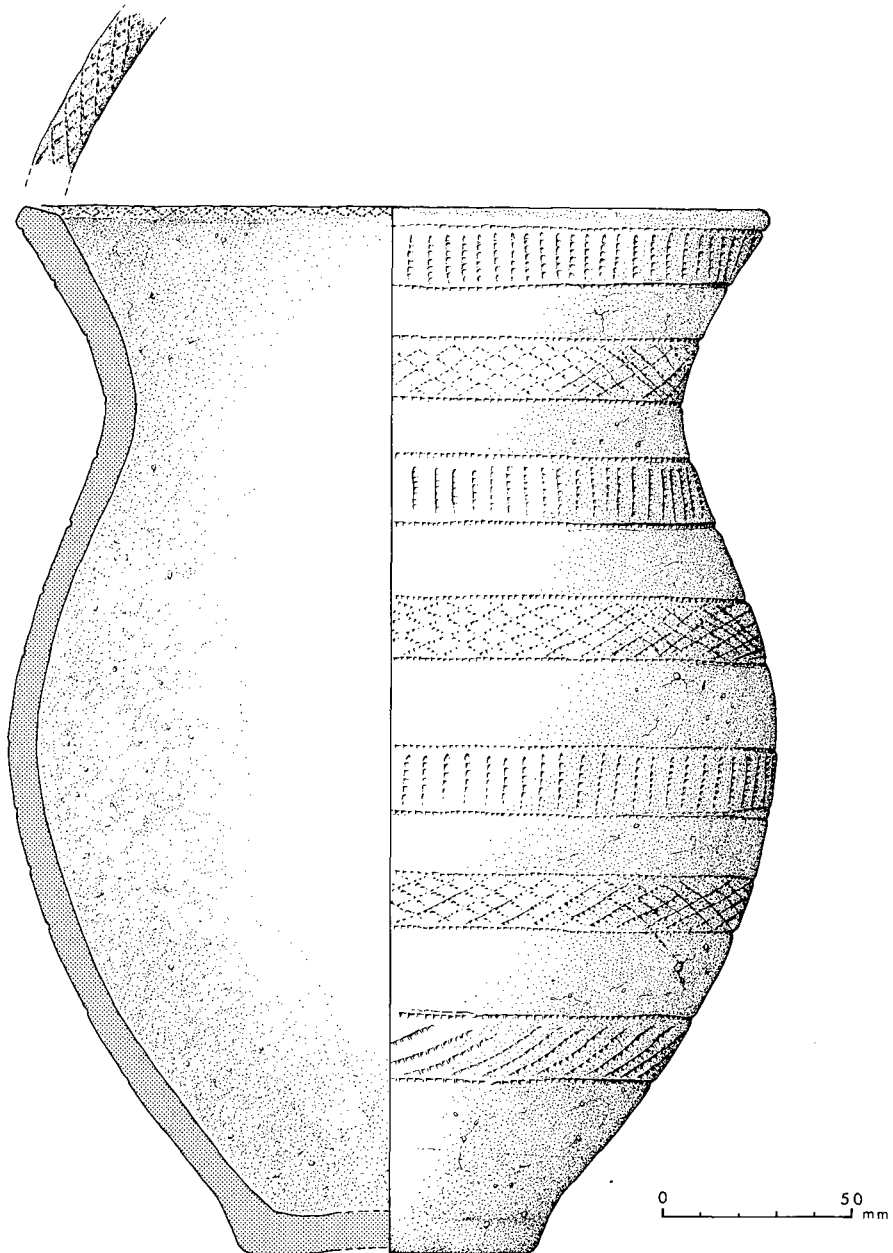
Pot no	D L Clarke 1970	Lanting & van der Waals 1972	Case 1997; 1993
Cairn 1, Pot 1	Southern British, Handled (SH2–4)	Step 7	Late; style 3
Cairn 1, Pot 2	Primary North British/Dutch (N1/D)/ Developed Northern British (N2)/Late Northern British (N3)	Steps 3–5	Middle–Late; styles 2–3
Cairn 2, Pot 1	European Bell Beaker	Step 2	Middle; style 2
Cairn 2, Pot 2	Not in scheme, although closest parallel (Clarke's illus 532: Colchester) described as Late Northern (Long-Necked) — N2(L) — and as showing strong North British/North Rhine influence	Not in scheme	Not in scheme, but would perhaps fall within Case's discussion of Corded Ware-Beaker relationships
Cairn 2, Pot 3	Undecorated bowl — type associated with All-Over-Cord Decorated (AOC), European Bell Beaker (E) and Wessex/ Middle Rhine (W/MR) Beakers	Steps 1–2	Early–Middle; styles 1–2
Cairn 3, Pot 1	European Bell Beaker (E) or Wessex/ Middle Rhine (W/MR)	Step 2	Middle; style 2
Cairn 3, Pot 3	Late Northern British (N3)	Steps 5–6	Late; style 3

wall; in between are two, possibly three bands of cross-hatched lozenges. The vessel appears to have been coated with a self-slip prior to decoration, and this conceals the numerous angular and sub-angular grits in the paste. The exterior is a rich dark brown, and the core blackish. Much of the interior surface is covered with a black stain and encrustation, assumed to be the residue left from the evaporation of the vessel's contents. Its position suggests that the pot had lain tilted from early in its depositional history.

Handled Beakers are extremely rare north of the Tees. While Scotland has produced four handled vessels in addition to the present example (from Mains of Craichie, Angus: Coutts 1971, fig. 83a; Monquhitter, Aberdeenshire: D L Clarke 1970, fig 1074; Balmuick, Perthshire: *ibid*, fig 1081; and Balfarg henge, Fife: Mercer 1981b, 133–6), only the last-mentioned falls comfortably within Clarke's 'Handled Beaker' category. Although more tankard-like in shape than the Biggar Common vessel, the Balfarg Beaker does share decorative characteristics in common (ie use of relatively crude, incised decoration and of the cross-hatched lozenge motif). The use of hatched lozenges, and variants thereof, is a common feature of Clarke's SH2–4 Beakers, and parallels for the shape of the present example can be found from Eynsham, Oxfordshire (D L Clarke 1970, fig 1056), and Gresham, Norfolk (*ibid*, fig 1076).

Cairn 1: Pot 2 (illus 23) This was found in 199 pieces, of which 112 are smaller than 10 mm by 10 mm. Physical reconstruction is impossible because of the vessel's fragmentary and incomplete nature; however, it appears to have been just over 275 mm high, with rim and base diameters of c 200 mm and 80 mm respectively, the wall thickness ranging between 7–11 mm. It has a sinuous profile, with an everted neck and a belly reaching its maximum girth at the pot's mid-height. The rim has a shallow internal bevel, and the base is pedestalled, with a slightly concave outer surface and interior omphalos.

Decoration is by comb impression, made using two or three rectangular-toothed combs (one c 12 mm long, one 40 mm long and possibly one at least 32 mm long). The rim bevel is decorated with a criss-cross design, and the exterior surface has seven bands, interspersed with



ILLUS 23 Beaker (Pot 2) from Cairn 1 (scale 1:2)

plain areas. The top six bands consist of alternating vertical and criss-cross lines, and the seventh has diagonal lines, rising from left to right. Each band is enclosed within two horizontal lines.

The surfaces look slipped, and the paste contains fairly numerous, small to medium-sized angular grits of a distinctive, black and white crystalline stone — the same type as seen in some of the late Neolithic Impressed Ware sherds, and, like those, deliberately crushed and added to the

clay. External colour ranges from buff to grey-buff and reddish; internal colour is grey-buff, and the core is medium to dark grey.

This pot finds its closest parallels amongst Clarke's N1/D, N2 and N3 Beakers — a Dutch-derived Insular tradition, according to Clarke, with examples mainly in the east of Britain, clustering between the Moray Firth and the Humber (*ibid*, maps 5 & 6). Several other Beakers of this general type are known from Upper Clydesdale, and from south-west Scotland in general (Ritchie 1970). If, as seems likely, Pot 2 is contemporary with Pot 1, this represents the first association between these variants of Beaker pottery.

Cairn 2: Pot 1 (illus 24, no 1) Fine Bell Beaker, complete but for part of the rim and two areas on the lower part of the body; two sherds and three fragments loose. Height 178 mm; diameter at rim and base 170 mm and 96–100 mm respectively; wall thickness 6.5–7.5 mm. Rim simple and rounded; neck splaying; belly low and angular, reaching its widest point around two-thirds of the way down the vessel. Base flat internally and slightly concave externally.

Decoration is principally by shallow comb impression, arranged in three irregularly spaced bands of horizontal lines on the exterior of the vessel; just above the base are three shallow horizontal incised lines. The comb impressions suggest the use of two rectangular-toothed combs, one slightly curving and c 46.5 mm long, the other c 33 mm long.

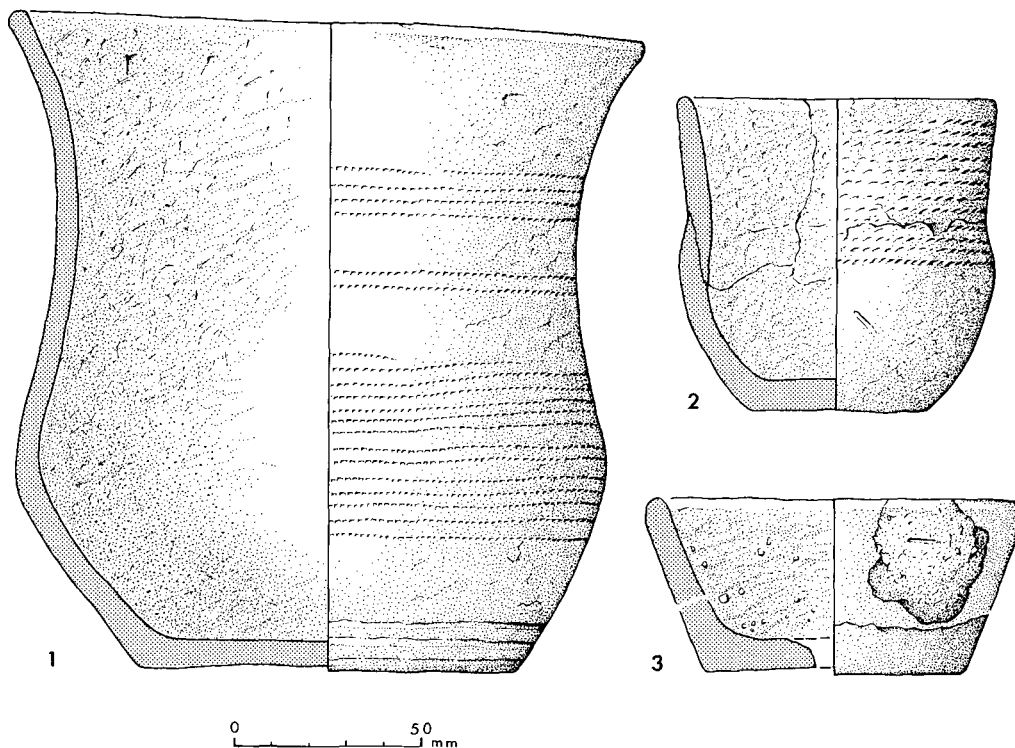
The vessel's surfaces have been carefully smoothed, and the exterior has a low sheen: Clarke (1970, 70) suggests that this finish may have been achieved through wet burnishing, rather than by slipping and 'dry' burnishing. Inclusions are sparse, unobtrusive and mostly tiny (sand-sized); there are occasional rounded grits up to 4.5 mm by 3 mm. The outer and inner surfaces are reddish-buff, with two small blackish sooty patches on the exterior, at the belly. Core colour ranges from light grey (in the upper part of the body) to dark grey, giving the vessel a 'sandwich'-like appearance.

This pot's affinities are with the widespread, heterogeneous continental pottery style known as 'Bell Beaker'. Considering its shape, decoration, colour and surface finish, the closest parallels are to be found amongst Clarke's E group, Lanting & van der Waals' step 2 ('epi-maritime'), and Case's 'Middle' or 'Style 2' Beakers. Other Beakers of this general type (and of the closely related AOC variety) are to be found nearby (eg at Wellbrae: Cowie, pers comm), and further afield in southern, eastern and north-east Scotland as well as south of the Border (D L Clarke 1970; Ritchie 1970).

Cairn 2: Pot 2 (illus 24, no 2) Small, fine, cord decorated Beaker, found in 26 pieces. Around half of the body reconstructed; loose wall and base sherds make up part of the remainder of the body. One of the breaks had been along the neck-belly ring junction. Height 85 mm; rim and base diameter c 89 mm and 46 mm respectively; wall thickness 7.5 mm. Simple rounded rim, slightly splaying neck, globular belly with its maximum width just below the vessel's mid-height, base flat on the inside and very slightly convex on the outside.

Decoration comprises 13 horizontal lines of twisted cord impressions of varying depth, on the outside of the vessel, from just below the rim to the pot's widest point.

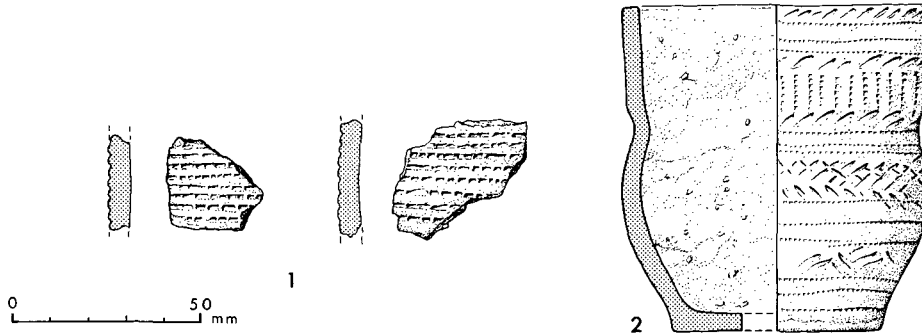
Surfaces are fairly smooth, and the outer surface, and the inner surface as far as the neck-belly boundary, have a low sheen. As with the Bell Beaker, this effect could have been achieved through wet burnishing. Inclusions — grits — are sparse and small. Surface colour is a rich, slightly reddish medium brown; the core is blackish-grey.



ILLUS 24 Beakers (Pots 1-3) from Cairn 2 (scale 1:2)

The placing of this pot within a recognizable Beaker or Beaker-associated tradition is problematic. British parallels for this particular combination of vessel shape and decorative scheme are very rare, the closest one being a small pot from ?Colchester, Essex, described by Clarke as a long-necked N2 Beaker (*ibid*, fig 532; here, however, the lines are incised and there is a belly fringe of running chevrons). In contrast, on the Continent there are numerous pots which are closely comparable in shape and decoration (although not in size): these are to be found within the Corded Ware ceramic tradition of central and northern Europe, and amongst its Trichterbecher predecessors in northern Europe (eg Glob 1945, fig 33; Struve 1955, fig 23.9; Sulimirski 1968, pl 6.2). However, as Jan Lanting has pointed out (*pers comm*), such vessels occur relatively early in the Corded Ware tradition (c 2900–2700 cal BC). By the time that early Bell Beakers comparable to Pot 1 were in use in continental Europe (c 2450 cal BC), cord-decorated Beakers from single-grave contexts had fallen out of use, their place had been taken by herringbone-decorated Beakers of slightly different shape (eg the Protruding Foot Beaker in the Netherlands and adjacent areas: van der Waals 1984). While some influence from the Corded Ware/Single Grave tradition on the British Beaker tradition is undeniable (eg Case 1993; D L Clarke 1970), in this particular case, the stylistic similarity between Pot 2 and Corded Ware would appear to be accidental.

Cairn 2: Pot 3 (illus 24, no 3) Twenty-two pieces of a fragmentary, undecorated, slightly coarse vessel, some of whose sherds are abraded. Much of the base, but very little of the rest of the body survives, making it difficult to estimate original height. The base (estimated diameter 70 mm) is



ILLUS 25 Beakers (Pots 1 & 2) from Cairn 3 (scale 1:2)

concave on the outside and flat on inside; the wall splays at an angle of 70 degrees from base; and the rim (estimated diameter 100–120 mm) is simple, rounded, and slightly uneven. Wall thickness ranges between 7.5–10 mm. To judge from the wall-base angle and the estimated rim and base diameters, this may well have been a fairly shallow bowl; in the absence of evidence to the contrary, a straight-walled form is assumed.

The surfaces are unslipped, and variable in texture: carefully smoothed and slightly burnished at the base, but more uneven higher up the body. Grits are fairly numerous (3–5%), sub-angular and rounded, and are of various sizes ranging from sand-sized to c 8 mm by 8 mm. Various rock types are represented. There are also occasional small grass-like impressions on the outer surface. Exterior colour ranges from reddish-brown to grey-brown; the interior is a rich red-brown, and the core dark grey.

Small, undecorated bowls with straight or slightly curving sides have been found in Britain (where they are rare) and on the Continent, associated with Beakers of Clarke's AOC, E and W/MR types (D L Clarke 1970, 58, 90; Case 1993, figs 4.4 and — slightly different — 5.6 (Newgrange, Ireland)). A few of these bowls seem to have had unusual functions: Clarke (*ibid*, 58) cites an example from Ashberry, Yorkshire, which may have been used as a lamp; and at Brackmont Mill, Fife, one was used as a lid for an AOC Beaker (Longworth 1967, fig 2.3). The present specimen does not, however, have the blackened appearance of the Ashberry pot; nor is it large enough, or positioned appropriately, to have acted as a lid for the aforementioned Bell Beaker.

Cairn 3: Pot 1 (illus 25, no 1) Two small body sherds of a fine, thin-walled (5–6 mm), probably all-over-comb-impressed Beaker. Both appear to be from the upper part of the vessel and the larger of the two (34 mm by 30 mm) allows an estimation of the diameter of the pot at this point at c 160–170 mm.

The decoration consists of neat, closely spaced horizontal lines of rectangular-toothed comb impressions. The vessel appears to have been slipped, and the external surface burnished, prior to decoration. Grits are sparse, angular to rounded, of more than one rock type, and mostly smaller than 2 mm by 1 mm; there are a few larger grits (up to 5 mm by 3 mm), but these do not obtrude. There are two cavities, which may be cereal impressions, visible in the fracture surfaces of the larger sherd. The exterior and interior surfaces are a rich, slightly reddish-brown colour, and the core is brown-grey.

Examples of this Beaker type are distributed widely within Britain and on the Continent, particularly in northern and north-western Europe (van der Waals 1984). Local parallels can be

cited from Wellbrae (Cowie, pers comm) and from several other sites in southern Scotland (eg Luce Sands, Wigtownshire: McInnes 1964; Muirkirk, Ayrshire: Ritchie 1970; and Tusculum, Hedderwick and Archerfield, East Lothian: D L Clarke 1970).

Cairn 3: Pot 2 (illus 25, no 2) Six sherds and one fragment from the rim, body and base of a small, fine, thin-walled, comb-impressed Beaker. The vessel's height cannot be determined precisely, but with estimated rim and base diameters of 80 mm and 50 mm respectively, a miniature vessel is envisaged — comparable to Pot 2 from Cairn 2. Wall thickness ranges from 4 mm to 6 mm. The rim is squared off, the neck is vertical or slightly splaying and has a well-defined constriction at its base, and the belly is globular, narrowing to a flat, pedestalled base.

The comb-impressed decoration has been executed using two rectangular-toothed combs, one at least 19 mm long, and the other around 7 mm long. Not enough of the vessel is present to allow a reconstruction of the overall decorative scheme, but a complex, zoned design seems likely, featuring a combination of horizontal, diagonal, criss-cross, herringbone and angular 'S' lines.

The surfaces are smoothed and probably slipped; the exterior may have been very slightly burnished. Grits are angular and relatively numerous (5–7%) and large (up to 7 mm by 3.5 mm), considering the thinness and fineness of the vessel. However, they tend not to protrude through the outer surface. Surface coloration ranges from reddish-brown to light brown on the outside and reddish-brown to grey-brown on the inside; the core varies from reddish-brown to medium and dark grey.

As with Pot 2 in Cairn 1, this vessel appears to belong to an Insular variant of Beaker pottery (Clarke's N3 type), examples of which are particularly numerous in northern Britain and Scotland. Since the sherds of this pot and of the all-over-comb-decorated pot came from disturbed contexts, it is impossible to say what their stratigraphic relationship had originally been.

Discussion

The early Neolithic pottery from Biggar Common constitutes the largest assemblage yet found in Scotland of a widespread and distinctive ceramic tradition, representatives of which have been found over much of northern and eastern Britain and Ireland. This tradition is characterized by both technological and stylistic attributes: the pottery is well made, thin-walled, usually fine-textured and often burnished; decoration is rare, and normally restricted to the surface finish technique of rim-top fingertip fluting; and the commonest vessel form is the round-based carinated bowl.

Although commentators agree that this tradition seems to represent the earliest pottery to be used in these areas, there has been much inconsistency in the nomenclature and definitions used to describe it. In Scotland, as elsewhere, it has been variously described as 'Grimston' (eg Scott 1978), 'Grimston-Lyles Hill' (eg Haggarty 1991; Henshall 1989), 'Western Neolithic' (eg Longworth 1963; McInnes 1964) and 'Carinated Bowl' pottery (Kinnes 1985; Herne 1988). None of these terms is unproblematic. Andrew Herne's (1988) critique of the concept of 'Grimston' pottery pointed out that the original class of pottery defined as the 'Grimston Bowl' by Piggott (1954), following Newbigin (1937), had subsequently been broadened into 'Grimston Ware' by encompassing later (and slightly different) material such as the Broome Heath assemblage (Wainwright 1972). Similarly, the term 'Grimston-Lyles Hill' conflates the earliest fineware pottery with a regional variant which, thanks to recent excavations at Donegore Hill and Lyles Hill, County Antrim, we know to have been in use from as early as the early fourth millennium

cal BC (Mallory, pers comm). Indeed, some commentators on Scottish pottery have already acknowledged problems with this term, drawing a distinction between the material closest to Yorkshire 'Grimston' pottery and that more akin to 'Lyles Hill' ware (eg McInnes 1969; Scott 1978). 'Western Neolithic', though a convenient short-hand term, needs careful definition if its original, much broader sense (referring to a family of round-based, leathery pots found from the Swiss Lakes to the Atlantic: Schuchhardt 1919) is to be avoided. The use of the term 'Carinated Bowl' is also problematic. The carinated form is not exclusive to this particular tradition; and, as Kinnes (1985) acknowledges in his discussion of Scottish pottery, an over-rigorous differentiation between carinated and 'plain' bowls can obscure the fact that some of the latter were an integral part of the ceramic repertoire of carinated bowl users. Herne (*op cit*) has proposed the term 'Carinated Bowl assemblages' to evoke this broader repertoire, whilst limiting its use to the earliest set of material.

Whatever the terminology, tight definition is still hampered by the paucity of large, closed, well-dated assemblages (cf Henshall 1984). However, the following general model is tentatively proposed as a way of interpreting the information which is currently available (cf Herne 1988): an initial phase is marked by the widespread appearance, over much of northern and eastern Britain and Ireland, of a homogeneous early Neolithic plainware tradition; shortly afterwards, local and regional variants of this tradition begin to appear. These may differ only slightly from the earliest material (eg in some rim, carination and overall vessel forms, or in a more extensive and frequent use of decorative surface finishes). These variants continue to evolve and to be used (often alongside other types of pottery) for much of the fourth and early third millennia BC (cf Sheridan 1985 & 1995).

Perhaps it might be useful to adapt Herne's terminology, using the term 'traditional Carinated Bowl pottery' to refer to the former, and 'modified Carinated Bowl pottery' for the latter (cf Sheridan's 'traditional' and 'modified Western Neolithic' pottery: 1985). The Biggar Common material falls within the former category.

Dating evidence for the Biggar Common assemblage consists of two dates from Cairn 2, Phase 3 (burning phase), of 5250 ± 50 BP (4234-3980 cal BC: GU-2985) and 5150 ± 70 BP (4219-3790 cal BC: GU-2986), and one date from Sample Area 5, an isolated pottery-associated charcoal spread (F105), of 4880 ± 50 BP (3780-3531 cal BC: GU-4276, Ward 1997). Dates from features in Sample Area 2, of 4565 ± 70 BP (3510-3040 cal BC: AA-18151) and 4300 ± 70 BP (3094-2701 cal BC: AA-18153) are from charcoal not associated with pottery (*ibid*). Assuming that the two Cairn 2 dates are representative for the assemblage as a whole (and there is no reason to challenge this on typological grounds), then these would appear to place Biggar Common amongst the earliest dated assemblages of this pottery tradition in Britain and Ireland (see Herne 1988 on dating). It can thus be used alongside other definitely or putatively early material to develop a provisional working definition of this 'traditional Carinated Bowl pottery'. In addition to the characteristics mentioned above, the following can be cited:

- 1 Overall repertoire: a range of forms, sizes and textures (albeit all relatively fine), encompassing a variety of functions, from consumption to storage and cooking.
- 2 Vessel form: mostly variations on the open or neutral carinated bowl, but with some S-profile vessels, uncarinated bowls and cups, and the occasional differently-shaped vessel.
- 3 Rim form: simple, usually rounded, upright or (more commonly) everted, often beaded.
- 4 Carination form: ranging from very gentle to sharp, but distinct from the ledge-like shoulder seen on some 'modified Carinated Bowl' pottery.
- 5 Other features: lugs (as at Pitnacree: Coles & Simpson 1965) a rare feature.

If one accepts the provisional model of earlier Neolithic ceramic development outlined above, then material such as Audrey Henshall's 'north-eastern style' pottery, best illustrated by the Boghead material (1984), could be interpreted as an example of 'modified Carinated Bowl pottery'. This assemblage is dated by five radiocarbon determinations ranging from 5031 ± 100 BP (4010–3630 cal BC: SRR 685) to 4823 ± 60 BP (3715–3500 cal BC: SRR 684). That this material differs from the 'traditional Carinated Bowl pottery' as just described has long been acknowledged (eg Atkinson 1962; Walker 1968; Henshall *op cit*): one feature is the frequent use of fingertip fluting and/or rippled burnishing over the upper part of the body. The similarity between this pottery and that seen at Lyles Hill and elsewhere in north-east Ireland has been remarked upon (eg Henshall *op cit*); given the abundant evidence for Irish-Scottish links around this time, the sharing of ceramic traits should not occasion surprise.

The discovery of this major assemblage of 'traditional Carinated Bowl' pottery in south central Scotland fills an important distributional gap between finds in south-west Scotland and those in central, east and north-east Scotland (cf Kinnes 1985, Cowie 1993). However, it is not the only recent discovery of earlier Neolithic pottery from the south of Scotland. A large assemblage of virtually identical material was found by LADAS in 1993 on Carwood Hill, at the east end of Biggar Common, less than 3 km to the ENE of the other find-spots (Ward forthcoming); and a further, smaller find of similar material was made at Thankerton Quarry (Annieston), c 2 km to the south-west of the Common, in 1987 (Brown 1988). The Carwood Hill (Biggar Common East) pottery was associated with charcoal dating to 4990 ± 110 BP (4035–3525 cal BC: GU-4279) and, surprisingly, 4275 ± 70 BP (3095–2620 cal BC: AA-18156) (Ward 1997). Another nearby find, known since 1923 but omitted from Kinnes' list, is the two sherds from a souterrain at Wester Yards, Lanarkshire (Cowie, pers comm). And around 10 km north-east of the Common, some Carinated Bowl pottery was found in 1995 and 1996 at Melbourne (Ward, pers comm). Elsewhere in Lanarkshire, a Carinated Bowl assemblage (including one unusual, apparently lugged vessel) was found at Stoneyburn, and dated to 4530 ± 70 BP (3497–2935 cal BC: GU-3261; Banks, 1995, 302); and material which is perhaps best described as 'modified Carinated Bowl' pottery was found at Wellbrae (Cowie, pers comm). Farther afield, a pit containing sherds of four vessels of traditional Carinated Bowl pottery at Newton, Islay, produced a radiocarbon date of 4965 ± 60 BP (3910–3690 cal BC: GU-1952; McCullagh 1989); and a pit with two similar vessels from Carzield, Dumfriesshire, has been dated to 5010 ± 70 BP (3965–3650 cal BC: Beta 68480) and 4920 ± 110 BP (3960–3505 and 3420–3385 cal BC: Beta 68481, Sheridan 1995). Finally, Alison Haggarty's excavations on Machrie Moor, Arran, produced Carinated Bowl pottery arguably of 'modified' type, associated with dates of 4820 ± 50 BP (3704–3506 cal BC: GU 2321), and 4770 ± 90 BP (3708–3355 cal BC: GU 2315, *terminus ante quem*: see Haggarty 1991 for a discussion of dating evidence).

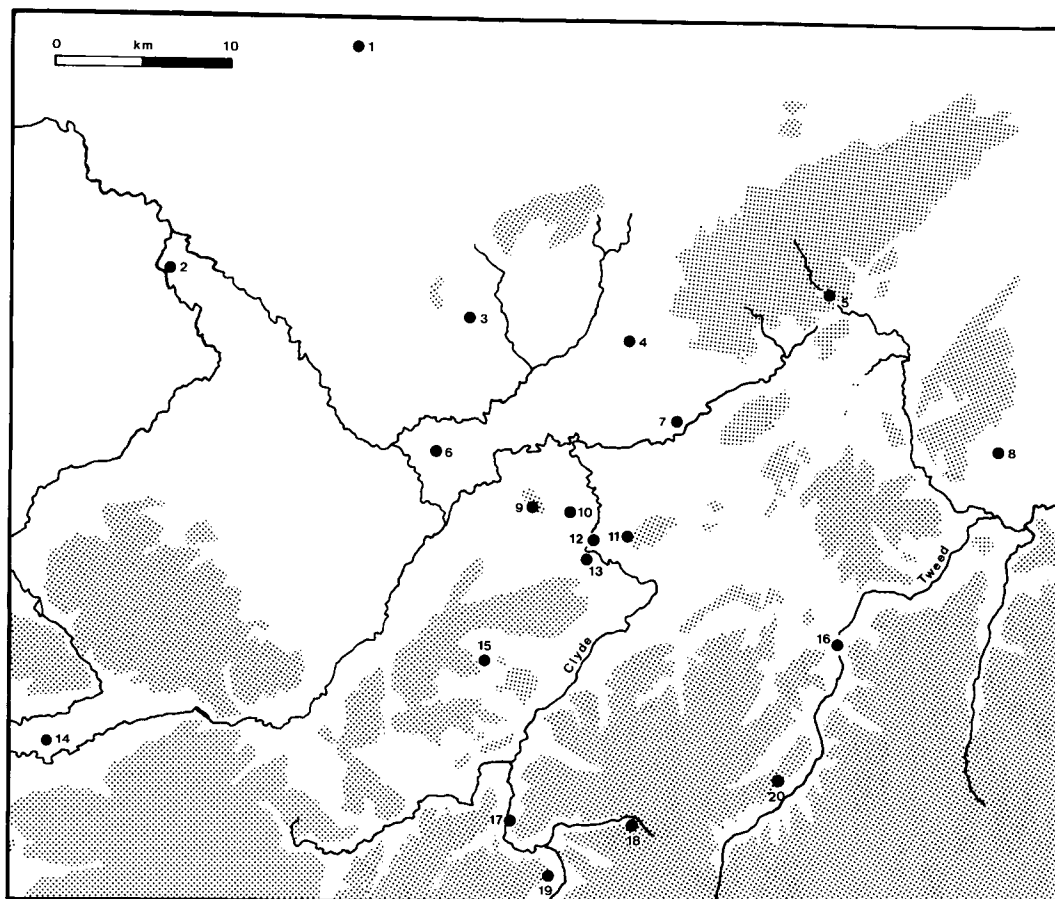
The Impressed Ware from Biggar Common joins the small but growing number of finds of this pottery type from the Upper Clydesdale/Upper Tweeddale area. The other examples are from Meldon Bridge and Drumelzier, Peeblesshire; Wellbrae, Thankerton Quarry (a possible example), and Melbourne, Lanarkshire (Burgess 1976; Craw 1931; Cowie, pers comm; Ward, pers comm). The Biggar Common material is sufficiently similar to these, and to examples from Northumberland (eg Thirlings and Crookhaven: Miket 1976, Kinnes & Longworth 1985), to be placed within Burgess' 'Meldon Bridge style' (Burgess 1976). This is dated, at the eponymous site, by three radiocarbon determinations ranging from 4285 ± 50 BP (3040–2868 cal BC: SRR 646) to 4082 ± 80 BP (2784–2469 cal BC: SRR 645). Two earlier dates for similar pottery from Meldon Bridge — 4676 ± 180 BP (3909–2920 cal BC: SRR 643) and 4686 ± 90 BP (3692–3306 cal BC: SRR 644) — were dismissed by Burgess as the outcome of using a small mixed sample (SRR

643) and old charcoal (SRR 644) for dating. However, a recent find of similar pottery from Blairhall Burn, Dumfriesshire, is associated with a date of 4560 ± 60 BP (3500–3440 and 3380–3070 cal BC: Beta-73951). If reliable, this suggests that this type of pottery may have been in use during the fourth millennium BC (Strachan & Cowie, pers comm).

Burgess (1976) presented the Meldon Bridge style as one of several regional variants of a broader later Neolithic ceramic tradition, usually known as ‘Peterborough Ware’. Other regional variants include Manby’s ‘Rudston style’ pottery in northern England and the east Midlands (Manby 1975) and the ‘Mortlake style’ of southern England and Wales (Piggott 1932; see Gibson 1995 for a discussion of ‘Peterborough Ware’ in Wales, and Gibson & Kinnes 1997 for a discussion of dating southern British ‘Peterborough Ware’). Within Scotland, the existence of other regional or local pottery styles has long been recognized, although the paucity of finds has prevented attempts at close definition (eg Piggott 1954; Longworth 1967; 1970; McInnes 1964). The material from Glenluce, for example, has some affinities with later Neolithic pottery from the north of Ireland (McInnes 1964; Sheridan 1985); whilst the pottery from Grandtully, Perthshire (Simpson & Coles 1990), dated to 4080 ± 190 BP (3254–2047 cal BC: Gak-1398) and 3920 ± 100 BP (2577–2280 cal BC: Gak-1396), echoes earlier north-eastern Scottish material from Balbridie and elsewhere (Ralston 1982; Cowie 1993). The finds from Brackmont and Tentsmuir, Fife (Longworth 1967), and from East Lothian coastal sites such as Hedderwick (Callander 1929) offer further variants. Some shared design features can be identified amongst this diverse and scattered Scottish material, and indeed a few sherds resembling ‘classic Peterborough Ware’ have been found (eg Cairnholy: Piggott & Powell 1949, fig 8.1,3,4). However, several commentators (eg Burgess 1976) have remarked on the many points of dissimilarity between decorated coarsewares in the north of Britain and their counterparts in the south. For this reason, McInnes (1969) proposed to use the more neutral catch-all term ‘Impressed Wares’ to encompass the various Scottish styles.

It is unfortunate that the Biggar Common specimens, occurring as ‘stray’ finds, offer so few clues regarding the local context of this pottery’s use. All that can be said is that they attest to some kind of activities here — probably including cooking — during the early third (or late fourth?) millennium cal BC. This contrasts with the well-contexted assemblages from Meldon Bridge and Wellbrae, where sherds of Impressed Ware pots were found in — and in some cases, apparently lining — the sides of pits (Burgess 1976; Cowie, pers comm).

The Beaker assemblage is important in several respects. Firstly, along with the other definite Beaker finds of the past decade from Upper Clydesdale (namely those from Blackhouse Burn, Stoneburn, Wellbrae and Camps Reservoir), the Biggar Common vessels significantly increase the number, density and variety of examples of this ceramic tradition in this part of Lanarkshire. While Clarke could list only six Beakers from Upper Clydesdale in 1970 (D L Clarke 1970, 519), and the Royal Commission a further eight plus one possible example in 1978 (RCAHMS 1978, 16–17), the total of definite and possible examples now stands at between 67 and 72 — thanks largely to the assemblage of 35–40 vessels from Wellbrae. The distribution of these finds, and of other Beakers from adjacent parts of Ayrshire and Peeblesshire, is shown in illus 26. The relatively high density of finds around the bend of the Clyde between Lanark and Thankerton may well be a function of the amount of earthmoving activity in this area since 1900 — resulting from road widening, quarrying, the laying of a gas pipeline, and afforestation. A similarly high (or higher) original density in other parts of Upper Clydesdale and Tweeddale may be expected; indeed, it is likely that some of the indeterminate ‘urns’ listed by the Royal Commission (RCAHMS 1967, 18; 1978, 19–21) are also Beakers.



ILLUS 26 Distribution of Beaker pottery in Upper Clydesdale, Upper Tweeddale and adjacent areas. Land over 300 m shaded. Key (L=Lanarkshire, P=Peeblesshire, A=Ayrshire): 1 Cairny, L; 2 Ferniegair, L; 3 Mossplatt, L; 4 Wester Yardhouses, L; 5 West Water Reservoir, P; 6 Lanark Moor, L; 7 Newbiggingmill Quarry, L; 8 Harehope, P; 9 Blackhouse Burn, L; 10 Wellbrae, L; 11 Biggar Common, L; 12 Drowsy Brae, L; 13 Boatbridge Quarry, L; 14 Muirkirk, A; 15 Limefield, L; 16 Drumelzier, P; 17 Crawford, L; 18 Camps Water, L; 19 Stoneyburn, L; 20 Oliver, P. Note: the recent Beaker find at Melbourne, c 10 km north-east of Biggar Common, is not marked on this map

Secondly, as noted before, the Biggar Common assemblage includes several Beakers which are of rare or unusual type: the Handled Beaker from Cairn 1, and the cord-decorated Beaker (Pot 2) and plain bowl (Pot 3) from Cairn 2. The presence of two miniature Beakers (namely Pot 2, Cairn 2 and Pot 2, Cairn 3) is also unusual. It has been suggested elsewhere (eg Welfare 1977, on Vessel 1 from Newbiggingmill Quarry, Lanarkshire) that such vessels may be indicative of the presence of a child interment. While this is indeed a possibility, the evidence from known child Beaker burials and from burials with miniatures (reviewed in Hanley & Sheridan 1994) indicates that no exclusive patterning linking Beaker size and age of grave occupant can be demonstrated. Some children are buried with full-sized Beakers, some with small ones; unfortunately, the former presence of child remains is hard to prove, and in most cases where miniature Beakers have been found, no positive evidence for the presence of a child has been determined. With the Biggar Common miniatures, Pot 2 from Cairn 3 offers no clues as to its funerary associations, as it was

found in a disturbed context; whilst Pot 2 from Cairn 2 seems to have been used for the ritual sealing of the grave, having been smashed (after a funerary libation?) and scattered over the covering cairn.

Thirdly, the assemblage is important for having preserved details such as this, illuminating the funerary practices of the Beaker users: too often stratigraphic data have not survived or not been recorded. The practice of smashing a pot and scattering it over a Beaker burial cairn finds echoes in similar acts, such as the placing of fresh sherds on the capstone of a Beaker cist at Chapelden, Banff & Buchan (Greig *et al* 1989), or of an entire Beaker on the capstone of a cist at Dryburn Bridge, East Lothian (Pollock & Triscott 1980).

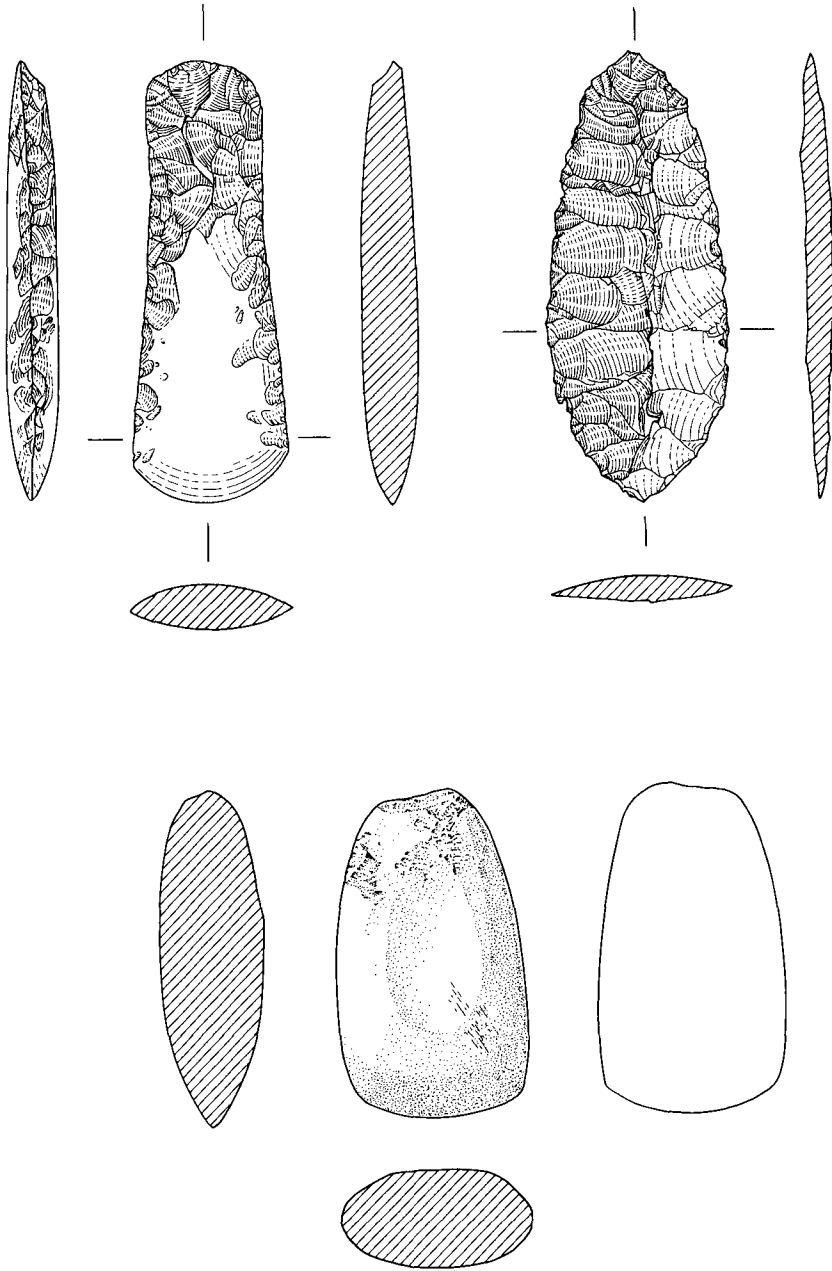
Finally, the set of Beakers from Cairn 2 is also noteworthy because of its associations and context. Stone axeheads and small lithic artefacts other than arrowheads are rare as Beaker grave goods: Clarke (1970, 448) could cite only six assemblages featuring stone or flint axeheads, for example. The use of a grave rather than a cist is also unusual in Early Bronze Age Scotland (Watkins 1982, 126–9). The shallow sub-oval pit, covered by a low kerbed cairn c 2.5 m long and 1.6 m wide, finds its closest parallel in the putatively early grave at Newmill, Perthshire (Watkins & Shepherd 1980). The latter differs from Biggar Common in having produced traces of a thin (?bark) coffin and an encircling penannular ditch, but both features could easily have been missed in Cairn 2. Watkins & Shepherd emphasized the similarities of the Newmill grave to mainland European (and particularly Dutch) Beaker graves; the Cairn 2 grave, with its mainland European ceramic analogues (at least for Pots 1 and 3), suggests similar links.

Thus, the affinities, associations and context of the Biggar Common Beakers suggest that their makers were participants in extensive networks of contacts, linking Upper Clydesdale with other parts of Scotland, with England, and with mainland Europe — particularly to the north of the Rhine. Unfortunately, their date must remain a matter for speculation, since no datable material was found with them and since the results of the British Museum's recent radiocarbon dating project for British Beakers (Kinnes *et al* 1991) have thrown the existing typochronological schemes into turmoil. The chronological problems associated with suggesting Corded Ware affinities for Pot 2, Cairn 2 have already been discussed. Until an extensive series of absolute dates for Beakers from southern Scotland becomes available, all that can be stated with some confidence is that the seven vessels were made between c 2500–1500 cal BC. As for the handled Beaker from Cairn 1, however, it should be added that the British Museum project results did not produce any proof to contradict Clarke's (1970) and Mercer's (1981b) assertions that the emergence of handled vessels relates to continental influence at the time of Reinecke's 'Bronze A2' — ie during the development of the so-called 'Wessex Culture' (cf the date of 3520 ± 150 BP (2300–1510 cal BC: BM-77) for charcoal associated with Handled Beakers at Wattisford, Suffolk).

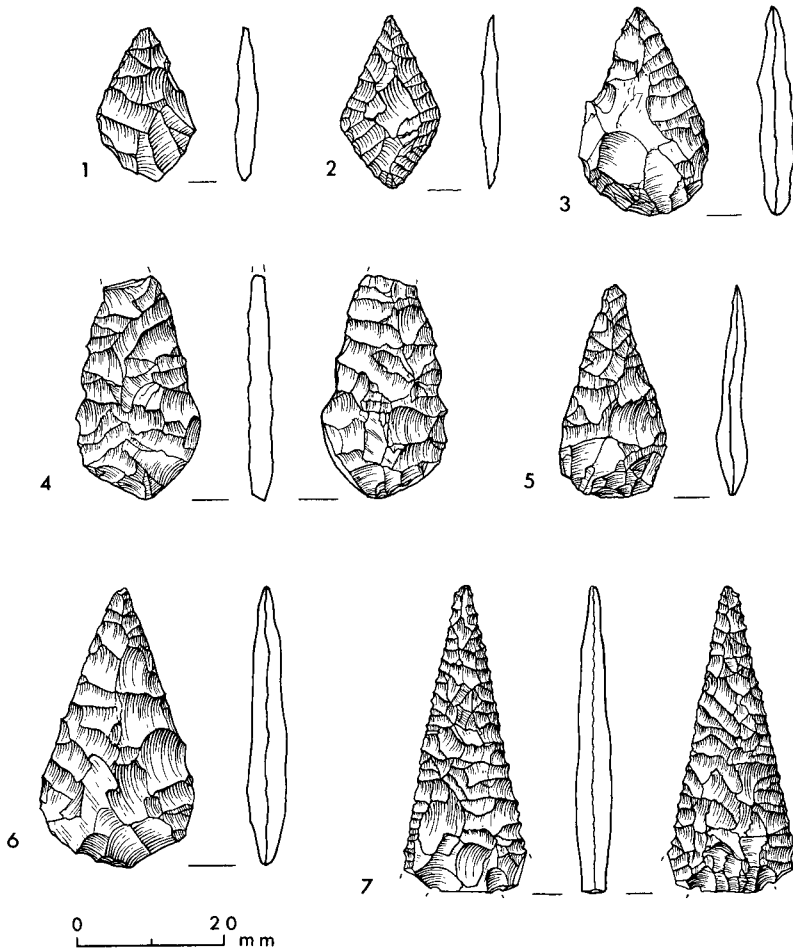
CHIPPED STONE; HAMMERSTONE & AXEHEADS (illus 27–29)

Bill Finlayson

Lithic studies in the Neolithic and Bronze Ages in Scotland are still in their infancy and rely heavily on parallels with English material. This situation is currently in the process of changing with the publication of material from several sites (including Biggar Common; Wellbrae (Alexander, in prep); Pool (Hunter *et al*, forthcoming); and Tofts Ness (*ibid*)) where sizeable assemblages have been recorded. Unfortunately, at present the situation is still so poor that Kinnes's 1985 review of the Neolithic in Scotland only discussed lithics in terms of raw material availability.



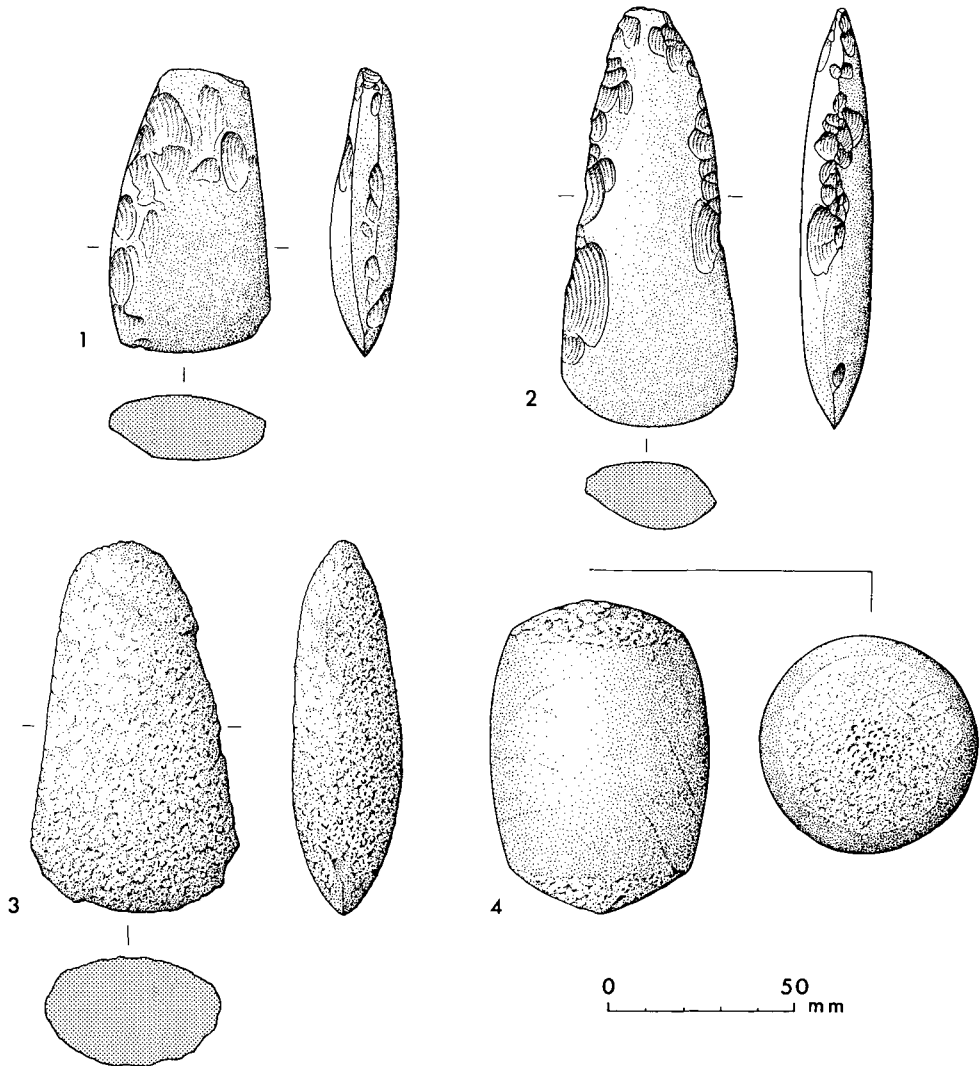
ILLUS 27 Flint knife, flint axe and stone axe from Cairn 2. (Drawn by Sylvia Stevenson)



ILLUS 28 Arrowheads recovered by LADAS fieldwalkers

The chipped stone from Biggar Common was examined in two separate sample assemblages. One sample is from the excavations conducted for Historic Scotland. The second, larger sample, comprises the material recovered in fieldwalking by LADAS. Material from the LADAS excavations could not be described in detail, as the remit of this study was to examine only the Historic Scotland sample. However, in order to allow a more complete report to be produced the study has included a rapid assessment of the LADAS sample. Full catalogues of all pieces examined are given in the archive of the project records at the National Monuments Record of Scotland. (For most of the material this information is restricted to tabular data; only artefacts of specific note — ie retouched pieces, cores and axehead flakes — are given individual textual descriptions.)

Historic Scotland excavations A sample of 242 pieces of chipped stone was recovered during these excavations. The bulk of the assemblage is of chert (172 pieces), but also includes elements of flint (35), various chalcedonies and agate (11) and small quantities of quartz (8), pitchstone



ILLUS 29 Stone axes and hammerstone recovered by LADAS fieldwalkers

(10) and various other unidentifiable fragments, including one probable axehead flake. Forty-nine pieces were smaller than 10 mm in any dimension. Only 15 pieces were retouched.

LADAS sample A sample of 519 pieces of chipped stone was recovered by LADAS both by excavation and fieldwalking. As above, most of the assemblage is of chert (408 pieces). Unlike the above sample pitchstone is the next most common material (46 pieces or 8.9% of the sample). The remaining materials comprise a similar set to the first sample, flint (39), various chalcedonies including jasper (8), and quartz (3). Unidentified materials were more common (14), but include 12 axehead flakes. No measurements were made on this sample. Only 12 retouched pieces were recovered.

The overall breakdown of the assemblage from both samples is as follows:

	All materials
Blades	25
Flakes, Inner	377
Flakes, Secondary	176
Flakes, Primary	31
Chunks	89
Cores	12
Pebbles	34

Chronology

No conclusive evidence for Mesolithic knapping was recovered at this site. The small numbers of blades present are normal in any assemblage. Only one piece, a blade core platform rejuvenation flake, suggests any sign of early occupation, and as an isolated item has to be treated with considerable caution as anything other than the accidental replication of a Mesolithic technique. Taken in combination with the Mesolithic dates from the site, this piece may be interpreted as a residual trace of Mesolithic occupation. Most of the working is the result of fairly crude amorphous flake reduction. Elements indicating some bipolar reduction are present. Most recent work suggests that with the exception of the specific technical needs of quartz working (as on Jura) and in the so-called Obanian, most such work is probably Neolithic/Bronze Age in date (Wickham-Jones 1990; Finlayson 1989).

There are two very fine modified pieces from the Historic Scotland excavations, a partly polished Seamer Axe and a large leaf point (illus 27). These have parallels in Yorkshire, one of which is radiocarbon-dated to c 3380–3040 cal BC (Sheridan 1992). These are both from F050, within the western burial in Cairn 2, which suggests that this burial pre-dates the eastern (Beaker) burial. One fragment of a slug knife was also recorded. These are generally associated with graves, particularly with food vessels (Clark 1932; Simpson 1968). Several early Neolithic (leaf and lozenge shape) arrowheads and one barbed and tanged arrowhead were also recovered (illus 28). Unfortunately, neither the slug knife fragment nor any of the arrowheads were recovered from the excavated monuments. The catalogue (below) also includes descriptions of three axeheads and a hammerstone recovered by LADAS fieldwalkers (illus 29).

The assemblage has several interesting features which reflect the nature of activity on the site. With the exception of a small number of finely crafted pieces, there are very few retouched pieces in the assemblage, making up only 3.5% of the collection. Several of these pieces are very lightly retouched. Assemblages from burial sites usually include high proportions of retouched artefacts.

Most of the assemblage is made from the cherts found locally within the Southern Uplands. Only 9.7% is made of flint, an unusually low percentage in the area, while 7.3% is made of pitchstone, a remarkably high proportion. The well-made artefacts are all of good-quality flint. There is no indication that any substantial flint working was undertaken on site; what flint debitage there is appears to derive from beach pebbles, an unsuitable material, both in size and quality, for such artefacts. Several characteristics indicate wide-ranging contacts; these include the imported pitchstone, probably from Arran (Thorpe & Thorpe 1984), the leaf-shaped point and axehead, probably from Yorkshire (Pierpoint 1980), and the pebble flint, probably from

somewhere on the west coast. The ground stone axes and axe flakes also indicate long-distance contacts.

There are 16 flakes from ground stone tools within the assemblage. Whether these have been produced as a result of damage through use, or as tool maintenance is unimportant here. It is clear that these tools were serving a utilitarian function.

There is a comprehensive collection of material from all stages of the reduction sequence, including unworked pebbles; split pebbles; cores; primary, secondary and tertiary flakes; and retouched and utilized flakes. In addition, the presence of 49 pieces (ie 20.24%) less than 10 mm in maximum dimension from the Historic Scotland sample, makes it quite clear that knapping was undertaken on site.

Interpretation

It appears from the nature of the assemblage that there are two, quite distinct elements. One is a utilitarian component, comprising debitage, axehead flakes, all the local material and probably the beach pebble flint. The other is a ceremonial component, comprising fine flint artefacts and possibly the pitchstone.

The chronological information derived from the technology and from the retouched artefacts is complimentary. There appears to be a continuum of material from early Neolithic arrowheads, through later Neolithic artefacts to artefacts with Beaker affinities. The nature of the assemblage, incorporating material from contexts with differing degrees of security, makes it difficult to be absolutely certain.

Functional analysis, including microwear analysis, has been conducted on several pieces. This analysis has confirmed the suggestion that the fine artefacts do not represent tools that functioned in a practical domestic sense. Rather, they appear so fresh that, as well as appearing to be unused, they also seem to have been handled very carefully so that the usual damage and polishing associated with tool curation is not present. A similar study of plano-convex knives has been conducted following the recovery of an example at Sketewan (Mercer & Midgley, this vol). In an analysis of several such pieces from the National Museums of Scotland it appeared that none of these artefacts had been used, indeed, that the design of several made use almost impossible (Finlayson nd). Combined with the almost 100% association of such artefacts with burial contexts (where they are not stray finds) as at Biggar Common, the conclusion must be that their designed function is ceremonial. One very large pitchstone flake, although unmodified, may fulfil a similar role.

The distribution of later Neolithic artefacts of Yorkshire origin within Scotland, which has most recently been discussed by Sheridan (1992), includes six Duggleby Adzes and at least two Seamer Axes. From a concentration in East Yorkshire these pieces are found from Wessex to Aberdeenshire. The Scottish examples appear to be concentrated in eastern Scotland (Aberdeenshire, Dunbartonshire, Midlothian and Fife), with only one example from Ayrshire. The two Seamer Axes are both from Biggar (Kenworthy 1981; Sheridan 1992). Sheridan observes that the uniformity of material used reinforces the hypothesis that they are produced by specialists in Yorkshire. The leaf point has similarities with leaf points in hoards in Yorkshire (Manby 1988). A similar artefact has recently been found at Easter Carsehill, Perthshire (Sheridan, pers comm). The artefact falls within the general class of 'laurel leaf and other thin bifacial forms' discussed by Clark (1960). A second, poorer bifacial piece, possibly a roughout, has also been recovered at Biggar Common, near Cairn 1.

Pitchstone has been recovered from numerous sites over much of Scotland. Since the last review of this distribution (Ritchie 1968; Thorpe & Thorpe 1984) many more pieces have been recorded. Most of these represent insignificant numbers, unlike the 7.3% recorded here. Interestingly, the site of Corse Law, Carnwath, has 3% pitchstone, but all pieces are small, with maximum lengths of 25 mm (Clarke 1990). Much of the Biggar Common material is larger than that, with one very large flake measuring 64 mm by 42 mm.

Numbers of retouched artefacts are notably low at Biggar Common; 3.5% of the Corse Law material is retouched, the same proportion as at Biggar Common. The presence of a Mesolithic component at Corse Law makes this comparison far from ideal, but at present there are few other sites suitable for comparison.

The late Neolithic/early Bronze Age site at Wellbrae has a chipped stone assemblage which will be suitable for comparison and which is presently being recorded. In a site largely interpreted as domestic in nature, the character of the assemblage is markedly different. The assemblage is almost entirely in local chert, with a little flint and pitchstone. There are no fine artefacts of a presumed non-domestic nature.

The assemblage of lithics from Biggar Common is significant in that it highlights the difference between domestic and ceremonial material. The importing of material from Yorkshire is significant. These pieces must be considered as being highly visible items, demonstrating emblematic style (Weissner 1983). The fact that they are both imported and unused argues for a very conscious use of style. Sackett has argued that style is unconsciously generated through routine actions in the traditional means of production (Sackett 1985), a position that is weakened by this evidence.

The collection of arrowheads recovered is also interesting (illus 28). The one barbed and tanged arrowhead recovered is a very fine piece, again falling into a non-functional category. The leaf- and lozenge-shaped arrowheads are known to have been used as weapons, having been found in bodies, as at Fengate (Pryor 1976) and Hambledon (Mercer 1980), and in apparent battle sites, as at Carn Brea (Mercer 1981) and Crickley Hill (Dixon 1979). However, their general distribution is heavily biased towards burials and not to domestic sites in Scotland. Edmonds & Thomas (1987) have suggested that by the later Neolithic arrowheads were becoming 'as much weapons of exclusion as weapons of war'. Within the context of artefacts made for burial, it seems very likely that many other artefacts may have played an important non-functional role.

Catalogue of individual artefacts

Find 13, U/S, C2 A poorly made denticulated blade of chert. 35 by 15 by 4 mm.

Find 2, U/S, C2 A tiny core fragment of clear chalcedony. It is unlikely that functionally useful artefacts have been removed from this core. 22 by 16 by 15 mm.

Find 28, F017, C2 Amorphous flake core made on a rounded quartz pebble. 29 by 23 by 20 mm.

Find 72, F047, C2 Amorphous core of pink chalcedony. The material is not really suitable for knapping yet repeated attempts to remove flakes have been made. 28 by 19 by 15 mm.

F034, C2 Miscellaneous retouched flint flake, possibly a fragment of a larger tool. The dorsal face appears to have two separate events visible, separated by a light weathering period. 29 by 35 by 9 mm.

F043, C2 A small flake from a polished flint tool. It is impossible to determine the nature of the original tool, although the flat polished surface is unlikely to be derived from a polished flint axe. 12 by 7 by 1 mm.

F042, C2 A small retouched piece, snapped in half. 14 by 8 by 2 mm.

Find 64, F050, C2 (illus 27) A partially polished flint axe of classic 'Seamer' shape, slightly 'waisted', with a broad and round butt and a shallow blade. The polish covers the blade area and the central ridges of the body. It is made of mottled light grey flint and has both a shape and material that indicate manufacture in Yorkshire (Sheridan nd). 118 by 41 by 16 mm.

Find 63, F050, C2 (illus 27) Bifacially flaked large leaf-shaped point made of mottled grey flint similar to the axe (Find 64). Although this piece appears both macro- and micro-scopically to be very fresh, it seems to have been made on a previous polished tool. The shallow invasive retouch has left an area of polished surface on the interior of the tool. It is impossible to be certain what the previous polished tool form was, but it is unlikely to have been an axe, as the area of polish is very flat on the central portion of the tool. 119 by 48 by 7 mm.

Find 1, U/S, C2 Flint flake with inverse lateral backing. 22 by 17 by 6 mm.

Find 127 (illus 28, no. 1) Lozenge-shaped flint arrowhead. Bifacially flaked light grey flint. The piece has originally been shaped by large shallow invasive flakes and is finished off with short (3–4 mm) retouch around the edges. On one face a small area of polish survives, suggesting that the arrowhead is made on a reworked polished tool. 23 by 14 by 3 mm.

Find 129 (illus 28, no. 6) Leaf-shaped arrowhead. Bifacially flaked coarse grained material. The material appears to be an old axe flake, with some polished areas surviving. 37 by 21 by 5 mm.

Find 8 (illus 28, no. 5) Leaf-shaped arrowhead (kite-shaped), bifacially flaked, of local chert. The manufacture technique is not perfect. The piece is longitudinally curved, following the original flake morphology, and the bulb of percussion, while slightly reduced, is still visible. 28 by 13 by 4 mm.

Find 83 (illus 28, no. 7) Barbed and tanged arrowhead, bifacially worked, of pale grey flint. This piece is of exceptional manufacturing quality. The lateral margins are finished with fine serrations, and the surfaces have been worked to symmetrical concave faces with fine pressure flaking. The barbs and tang have all broken off immediately at the base of the arrow. The artefact appears unlikely to have been manufactured with a practical function as the main design criterion. 41 by 17 by 4 mm.

Find 94, Area 3 Axe flake, possibly Type VI. A large flake was flaked around its margins to produce steep edges. Part of the original polished surface is visible. 17 by 29 by 6 mm.

Find 132, Area C2 Although very badly burnt and broken, this appears to be the fragment of a bilaterally backed tool. The central portion of the dorsal face seems to have been polished. 23 by 16 by 4 mm.

Find 10, F103, Area C2 Amorphous flake core made on a quarter of a chert block. 35 by 33 by 14 mm.

Find 140 Large pitchstone flake. Unlike most pitchstone found over Scotland which comprises small conical cores, bladelets and small flakes. The edges have been damaged, but the brittle nature of volcanic glasses means that this may be the result of accidental non-use processes. 20 by 20 by 3 mm.

Find 17, Area FC3 A thick denticulated scraper made on a large chert secondary splinter, where the material has fractured along an internal fault to produce a very flat face. 44 by 40 by 17 mm.

Find 71, Area C3 Although burnt and fragmentary this appears to be the central portion of a flint slug knife. The piece is bilaterally flaked, with the retouch invasive over the dorsal face, forming a steep-sided domed tool. 14 by 17 by 7 mm.

Find 6 Possible flake from axe, material unidentified. 15 by 18 by 5 mm.

Find 121, Scatter at cane 7 Probably two fragments of a polished flint knife. The material of each appears identical, as does the nature of the polished surface. They may refit, although the join is a poor one, affected by subsequent retouch. One has been partially bifacially retouched, possibly to produce an oblique arrowhead (cf Clarke 1990, illus 3 & 10). The other had been steeply retouched to produce a shallow convex working edge. 27 by 19 by 5 mm and 24 by 18 by 4 mm.

Find 121, Scatter at cane 7 A chert flake with invasive retouch over the dorsal face except for one area which appears to be the remains of a polished chert surface. It is possible that the polishing is the result of natural weathering and the morphology of the tool is not helpful. Polished chert tools are very rare, despite the great use made of the material for knapping. 37 by 24 by 8 mm.

Find 139 Fragment of steeply retouched tool made of dark grey translucent flint. 12 by 24 by 5 mm.

Find 131 Fragment of a bilaterally backed tool of light grey flint. 23 by 22 by 4 mm.

Find 136 Amorphous chert flake core, extensively worked from a sub-angular chert block. 46 by 35 by 14 mm.

Find 120 Honey brown flint 'pièce esquillée'. A classic pièce esquillée made on a thin flake with shallow flakes removed from both ends to produce two wedge shaped edges. 27 by 24 by 6 mm.

Find 45, Area C2 Chert convex thick end scraper, made on a secondary flake. 35 by 24 by 13 mm.

Find 358, Area C2 Probable axe flake from coarse material. Dorsal surface shows no polished areas, and may have been reworked. 37 by 23 by 10 mm.

Find 137, Area C2 Amorphous flake core made on a small chert pebble. Various knapping methods have been utilized, including direct hard hammer flaking and bipolar flaking. 33 by 28 by 24 mm.

242, Area C2 Axe flake with area of original polished axe surface intact. One edge retains a small area of flaking that may relate to secondary re-working of the piece. 23 by 29 by 9 mm.

Find 251, Area C2 Large presumed axe flake with extensive shallow convex area of polish. 45 by 58 by 9 mm.

Find 293, Area C2 Axe flake, with dorsal retaining some original polished surface. Striations on this surface indicate that the axe had definitely been used. 26 by 23 by 7 mm.

Find 340, Area C2 Possible axe flake in coarse brown material with possible polished surface. 33 by 44 by 12 mm.

Find 355, Area C2 Axe flake with polished surface surviving on the dorsal face. The morphology and location of the butt indicate that this is a deliberately struck flake, not directly detached from the parent axe. 23 by 15 by 4 mm.

Find 368, Area C2 Flake of axe material. No polished surfaces visible. 13 by 14 by 3 mm.

Find 375, Area C2 Flake (blade segment) of axe. Single dorsal ridge, with one dorsal face retaining a very flat polished (striations), surface. 30 by 17 by 4 mm.

Find 383, Area C2 Bifacially retouched flint flake. The retouch is shallow non-invasive. 18 by 27 by 4 mm.

Find 417, Area C2 Badly burnt, but probably a side blow platform rejuvenation flake. This is formed by striking at the side of a worn out platform, to remove all the preparation and platform scars along the top of the core. These are normally found within Mesolithic assemblages in Scotland. 35 by 15 by 14 mm.

Find 96, Area C3 Flake from a Group VI axe. The flake appears to include all the original front of the axe, and shows large use-damage scars. The inner face of the flake has been reworked, to produce a steeply retouched notch. 34 by 69 by 18 mm.

Find 138 Convex end scraper on a chert flake. There is retouch down one of the lateral margins, formed at a sharp angle to the end and apparently snapped off, indicating that the current morphology of the piece is incomplete. 14 by 14 by 6 mm.

U/S Chert platform core. Two prepared platforms survive, one replaced by the other. The core appears to have been used to detach blades. Surviving areas of cortex indicate that it is unlikely that the core has been reduced greatly. There is no obvious reason for abandonment. 33 by 36 by 30 mm.

Find 128 (illus 28, no 2) Small bifacially worked green chert lozenge-shaped arrowhead. A pressure flaking technique appears to have been used successfully (with one or two splinters coming off) despite the presence of several natural flaws in the material. 20 by 13 by 3 mm.

U/S Chert flake with steep retouch on one lateral margin producing a symmetrical tip with basic blank form on other margin. 32 by 28 by 14 mm.

U/S Brown chert bifacially worked piece. The overall form is leaf-shaped, but the piece is still quite thick and may not have been finished. It is possible that this represents a local imitation of imported Yorkshire pieces. The population certainly appears to have had the skills required, as evidence by the chert arrowheads present. 58 by 37 by 12 mm.

Find 1, Cairn 7 Chert flake, which appears to have an artificially polished part of the dorsal surface. Submitted for microscopic examination. 38 by 34 by 10 mm.

Find 214 U/S Chert flake, which appears to have an artificially polished dorsal surface. Submitted for microscopic examination. 24 by 18 by 4 mm.

Find 130 (illus 28, no 3) Bifacially worked grey chert leaf-shaped arrowhead. Numerous parallel flaws run across the material, but a reasonably well-made piece has been produced. Only one lateral margin has fine bifacial pressure flaking. The other side appears to have begun to collapse when worked this way. 28 by 18 by 5 mm.

Find 146 (illus 28, no 4) Bifacially worked black chert leaf (kite)-shaped arrowhead. The chert is of very good, homogenous character, and the knapping is equally good, bifacial pressure flaking. This is further evidence of local knapping skill, able to meet the type of raw material worked. The point of the artefact has been lost. 30 by 17 by 3 mm.

Find 101 Convex end scraper made on a thick flint flake. The flint is from a large core and appears to be flaw free and homogenous, suggesting that it has come from nodular material, not a beach pebble source. 38 by 38 by 14 mm.

BC91/FC3/95 Polished axehead (illus 29, no 2) Full length, with faceted sides. Grinding striations are visible on both surfaces. Highly polished. Group VI axehead. Iron, Aluminium, Silica, Calcium, Potassium, Manganese and Titanium were identified in the rock. The proportions of the last two elements and the typological form of the blue/grey fine-grained material would support a Langdale provenance. Petrographic analysis would be necessary to confirm this. (Length = 107 mm, Breadth = 11 mm, Maximum Width = 43 mm).

BC/FC2/256 Polished axehead (illus 29, no 1) Full length. Faceted sides and upper surface. Grinding striations are visible on both surfaces. Highly polished. Slightly asymmetrical profile. A fine-grained rock but geologically very distinct from the last example. It was identified macroscopically as a Grit which is a commonly occurring sedimentary rock. (Length = 72 mm, Breadth = 19 mm, Maximum Width = 40 mm).

BC88/SF116/FC3 Ground axehead (illus 29, no 3) Full length. Coarse-grained Gabbro. Gabbro can be found in the south-west of Scotland. Despite being extremely coarse textured this has been ground all over its surface. (Length = 94 mm, Breadth = 25 mm, Maximum Width = 52 mm).

BC88/SF88/FC3 Quartzite grinder (illus 29, no 4) Faceted at both ends. Macroscopic examination of the edge damage would suggest that the cobble had been used for grinding hard materials. Possibly used for grinding minerals for pottery temper. (Length = 82 mm, Breadth = 59 mm, Maximum Width = 58 mm).

STONE AXEHEAD FROM CAIRN 2

Roy Ritchie

A well-made small axehead with very good surface polish and traces of use, made from a very fine-grained rock of light olive-grey colour was recovered from Cairn 2. It is 87 mm long, 50 mm wide and 28 mm thick, and weighs 198 g (illus 27).

The cutting edge is arcuate with rounded tips. The broad butt has been damaged by striking, leaving an irregular flake scar. Narrow rounded facets mark each side. One face has an area of surface damage near the butt, as though there had been use as an anvil. Beside it are tiny criss-cross scratches. Such damage to the butt is a feature which this axehead has in common with many others. The other face has a flat facet with a very good surface polish. Its nature suggests that this was a very fine axehead which had been worked down. However, a series of scratches lie at 30 degrees to the long axis between this facet and the cutting edge. The facet truncates these scratches, and must post-date them. This axehead has almost certainly formed part of a working axe.

PALAEOENVIRONMENTAL REMAINS

THE CHARRED PLANT REMAINS FROM CAIRNS 2 & 3

Sheila Boardman

Bulk soil samples representing 46 contexts were processed for the recovery of dating material, charred plant remains and any other environmental or artefactual material. Six samples produced charred plant remains. A complete report on the plant remains can be consulted in the archive of the project records at the National Monuments Record of Scotland; the following is a summary only. Nomenclature follows Clapham *et al* (1989).

The layers of burning in Cairn 2 were dominated by hazelnut (*Corylus avellana* L) shell fragments, but also produced a few seeds and cereal grains, including barley (*Hordeum* sp). The seeds represent very general plants (*Galium aparine* L, *Vicia* sp), which are known today in a variety of habitats. Large quantities of hazelnut shells, with isolated cereals and other seeds are typical of Neolithic deposits throughout Britain (eg Moffett *et al* 1989; Boardman, 1993a). At some sites in southern Britain, it has been suggested that hazelnuts were the main plant staple, even though cereals were frequently present and presumably cultivated. Other wild edible species were not recovered at Biggar Common. The other samples from Cairn 2 produced single seeds, one of which was identified as chickweed (*Stellaria* sp). It is not possible to draw any conclusions from these isolated finds. The buried soil beneath Cairn 3 produced four hazelnut shell fragments. These could indicate middening of the former cultivation soil (cf Carter, below; Tipping, below).

CHARCOAL FROM THE PRE-MOUND DEPOSITS UNDER CAIRN 2

Anne Crone

Samples from 10 contexts belonging to the three phases of pre-mound activity were examined four of which were submitted for radiocarbon dating. The analyses were carried out to test three hypotheses: that the very charcoal-rich contexts representing the earliest phase were burnt *in situ*

posts; that the charcoal in the dark soil deposit overlying the supposed posts was derived from the earlier features; and that the very charcoal-rich deposits overlying the dark soil and underlying the mound derive from bonfires.

Results

A detailed list of identifiable charcoal inclusions from these contexts can be consulted in the archive of the project records at the National Monuments Record of Scotland; the following is a summary only. The charcoal from the five features examined from the earliest phase consisted entirely of one species, oak (*Quercus* sp), supporting the hypothesis that these features contained burnt *in situ* posts. The examined charcoal from the dark soil deposit was predominantly oak, but contained a small proportion of other species, namely hazel (*Corylus avellana*) and birch (*Betula* sp). The charcoal may have derived from disturbance of the earlier features, but as oak is predominant throughout the three early phases, indicating its local availability, it is just as likely that the charcoal from this phase was introduced onto the site contemporaneously with the formation of the soil deposit. The charcoal-rich deposits of the last pre-mound phase contain the greatest admixture of species, supporting the contention that the charcoal was derived from bonfires. Oak, hazel and birch were present in all deposits examined. The uppermost of the three deposits also contained one piece of willow (*Salix* sp).

PALYNOLOGY OF OLD GROUND SURFACES BENEATH CAIRNS 1 & 3

Richard Tipping

The preservation of well-preserved and complete buried soil profiles beneath two of the three excavated cairns allowed the application of fine-resolution pollen analysis (cf Green & Dolman 1988) in analysing the pollen contents of buried O- and A-horizons. Fine resolution sampling, employing sediment slices of 5 mm or less in this instance, allows the identification of possible down-profile biases in pollen content and preservation, and thus the isolation of an *in situ* pollen assemblage in the uppermost layers of the profile. This assemblage can be related to the time immediately prior to burial, the period of most interest to the archaeologist. Sampling and laboratory preparation are detailed in Tipping *et al* (1994).

Both buried profiles are free-draining brown earths. pH is only moderately acid, and at 5.2–5.3 is not sufficiently acid to exclude soil fauna from mixing components, including pollen (Dimbleby 1985). Each pollen sample (Kubiens tin) was sealed from overlying materials, by a large boulder at Cairn 3 and by virtually non-polleniferous upcast at Cairn 1. This is assumed to have effectively prevented contamination from later deposited sediments.

Results

At Cairn 3 there is considerable evidence in the pollen concentration and preservation data, and in the representation of pollen taxa, for quite severe distortion of the pollen assemblage, through decay and removal of susceptible pollen types. Palaeoecological reconstructions are based on the combined results of four samples from the topmost c 15 mm of the profile. This does not appear to be a problem at Cairn 1, and interpretations are based on all the buried soil spectra from the bF/H- and bAh-horizons, and from five samples obtained from the burial pit fill. These spectra are closely comparable, and all are thought to reflect land use immediately prior to and during cairn construction (Tipping *et al* 1994).

The two soil profiles reveal few differences in pollen content, and can be considered together. However, the broad similarities in vegetation types between Cairns 1 and 3 cannot be taken to assume their direct contemporaneity, since there is no local conventional pollen stratigraphy from which to demonstrate the longevity on Biggar Common of the vegetation types depicted from the two cairns.

The pollen spectra depict a mosaic of open ground habitats in the area immediately around the site of each cairn, principally species-rich damp grassland or rough pasture (Gramineae less than or equal to 8 m an1-D), rich in ribwort plantain and buttercups. Wetter areas accommodated meadowsweet, mercury and Sphagnum. Very limited areas of ericaceous heath are suggested, perhaps from below 1 to 5% of ground cover, with 60–70% ground cover for grassland, assuming a closed sward (Tipping, unpublished data from Groenman-van Waateringe 1986). Cairn 3 may have been sited closer to permanent pasture. There is no evidence for cereal cultivation at Cairn 3, although cereals appear to have been grown around Cairn 1 before and during cairn construction. These differences need not imply diachroneity between the cairns, given the limited dispersal of cereal pollen. The persistence of particular tree and shrub taxa (alder, hazel/bog myrtle) even where highly deteriorated make their contemporaneous presence unclear (Tipping *et al* 1994), but there is no indication of mature oak/elm woodland on Biggar Common at this time.

Microscopic charcoal is significant in all spectra, particularly at Cairn 3. The values are difficult to compare with those from conventional polleniferous deposits, but it is clear that the levels recorded are enhanced above a regional 'background'. Only one *Corylus/Myrica* grain was seen to be altered by the effect of heat (cf Andersen 1988), and for this reason the charcoal is not thought to have originated by direct burning of the grassland, as in swidden cultivation (Andersen 1988) or ritual practice (Casparie & Groenman-van Waateringe 1980), but to have been present in smoke derived either from clearance or settlement activities.

MICROMORPHOLOGY OF THE SOILS BURIED BY CAIRNS 1 & 3

Stephen Carter

Excavation of Cairns 1 and 3 at Biggar Common revealed soils buried by the cairns. These were sampled using Kubiena tins (80 mm by 50 mm) and thin sections were produced from the soil blocks by the Department of Environmental Science, University of Stirling. The buried soils were also sampled for pollen analysis and therefore the purpose of the soil micromorphological analysis was twofold: firstly, to investigate the nature and history of the buried soils; and secondly to provide information relevant to the interpretation of the pollen assemblages. The thin sections were divided into areas of similar micromorphology and each area was described separately using the terminology of Bullock *et al* (1985). The descriptions and detailed interpretation of the thin sections are given in more detail in the archive of the project records at the National Monuments Record of Scotland; a summary of the conclusions is presented here.

The two profiles are c 800 m apart on similar bedrock and soil parent material (Devonian acid igneous rocks and till derived from them). Their mineralogy and texture are similar and unremarkable. The Cairn 3 profile shows some evidence of impeded drainage but is not significantly different from the freely draining Cairn 1 soil and both may be classified as brown earths. Both profiles are shallow (less than 0.2 m) and show evidence of major disruption into the B-horizon. This could be the result of profile truncation by erosion as both have evidence of an earlier, shallower episode followed by deeper disruption. The specific causes of this are not known but it serves to illustrate the disturbed nature of both soils.

The differences between the two soil profiles result from different histories shortly before burial. The Cairn 3 soil was buried very soon after the disruption of its surface A-horizon; this led to compaction and the loss of structure in the A-horizon. Again, the cause is not known but the evidence is consistent with turf stripping and trampling. In contrast, the Cairn 1 soil was left undisturbed long enough for a litter layer c 10 mm thick to develop on the surface and a well-structured Ah-horizon to form beneath it. It is not possible to estimate the time required for this degree of profile formation with any precision but a period of at least decades seems reasonable.

SOIL CHEMISTRY FROM THE HISTORIC SCOTLAND SITES

Stephen Carter

Methods

A total of 43 samples were analysed: four from Cairn 1, 33 from Cairn 2 and six from Cairn 3. All samples were subjected to three analyses. The soil was in a field-moist condition; pH was determined in a 1:2.5 soil to distilled water mixture. Loss-on-ignition used c 10 g oven dry soil ignited to 400°C for four hours. The determination of phosphate used a spot test for easily available phosphate (Hamond 1983). Samples were rated on a three-point scale (high, medium, low; Hamond 1983, 57) using the time taken for a blue colour to develop following the addition of two reagents to the sample. Details of methodology are given in a fuller report in the archive of the project records in the National Monuments Record of Scotland.

Discussion

The pH of all the samples is acid in the range 4.4–5.6 with no variation that can be related to archaeological features. Loss-on-ignition values are generally quite high with only four samples less than 5%. The majority are in the range 5–15% with five organic samples greater than 20%. High loss-on-ignition is caused by organic matter content, except perhaps in one of the charcoal-rich deposits immediately pre-dating the mound. This reflects the proximity of most contexts to the modern soil surface and therefore contemporary organic matter accumulation.

The spot phosphate tests were complicated by the development of strong brown colours after the addition of the first reagent, which masked any faint blue colour. Consequently, the division of the low and medium ratings was difficult and may not be correct. In contrast, the seven high-rated samples had a strong and clear development of the blue colour and they form a distinct group. This includes six contexts from Cairns 1 and 3, all associated with the central grave pits. The other high rated sample is from one of the burnt stakes beneath Cairn 2. The results from Cairns 1 and 3 suggest the former presence of a body in those graves. The lack of high phosphate ratings from the grave fills in Cairn 2 does not rule out the former presence of bodies but it does not support it.

CHARCOAL IDENTIFICATIONS FROM SAMPLE AREAS 2 & 5

Sheila Boardman

Sample Area 2: Post-holes F14 & F17

The post-holes, although visibly rich in carbon, contained relatively small amounts of identifiable charcoal (fragments greater than 4 mm in size). Each had a preponderance of a single taxa, *Alnus*

(alder) and *Corylus* (hazel), with smaller amounts of *Betula* (birch), *Quercus* and Pomoideae (incorporates *Crataegus* [hawthorn], *Malus* [crab-apple] & *Sorbus* [rowan/whitebeam/etc]). Small roundwood was absent. *Alnus* (in F17) and *Corylus* (in F14) may therefore represent remnants of degraded *in situ* burnt posts. Neolithic dates were obtained from both samples, but while these overlap at the two sigma range, it is possible that the features and any associated structures are separated by a period of several hundred years. A smaller variation in ages may point to successive buildings at the site, or possibly the re-use of older *Alnus* timber. A range of additional radiocarbon dates would be required to test these hypotheses.

Sample Area 2: Spread of charcoal overlying stake-holes SH62–64, associated with F74

The sample from the charcoal spread (F74) also contained highly degraded material, identified as a mixture of *Quercus* heartwood, *Corylus* and Pomoideae. The *Quercus* charcoal may derive from structural timbers, with *Corylus* and Pomoideae having similar roles, or derived from domestic activity at the site.

Sample Area 5: charcoal spread F105

The charcoal spread in Area 5 (F105) produced almost entirely *Corylus*, including many roundwood fragments, plus very small quantities of *Alnus* and *Quercus* charcoal. Seven roundwood fragments were sufficiently well preserved to enable measurement (diameters 9–35 mm) and the recording of rings of growth (three to seven plus).

Interpretation

The taxa represented by charcoal in these samples, from the pre-mound deposits (Crone *infra*), and elsewhere at Biggar Common (Boardman, in prep), suggest mixed deciduous woodland in the vicinity during the late Mesolithic and Neolithic. This contained oak, hazel, some birch, and hawthorn, crab-apple and/or rowan/whitebeam. The presence of alder may indicate damper areas and/or import of wood from the valley bottoms. During the Neolithic grazing animals may have been excluded from part of the woodland, enabling hazel to regenerate naturally.

CARBONIZED PLANT REMAINS FROM SAMPLE AREAS 2 & 5

Ruth Pelling

Twenty samples were examined for macro plant fossils of which 14 have produced charred plant remains. The cereal assemblage, although small, is dominated by grains of wheat. Two wheat species appear to be present: possible emmer wheat and free-threshing compact wheat. A single barley is present. Edible wild plants are represented by hazel-nut.

Methodology

Bulk samples, 2.5–14 l in size, were processed by the excavators for the recovery of charred plant remains, dating material, and any other retrievable environmental or artefactual remains. The samples were processed using a water-separation machine (Kenward *et al*, 1980), on loan from Environmental Archaeological Services, Edinburgh (EASE). The flots were collected in sieves of

1 mm and 300 µm mesh size, while the heavy residues were collected in a 1 mm mesh. The flots and residues were left to dry slowly, before being sorted. Hazel-nut shell fragments were also hand picked by the excavators from several features prior to sampling. Identification of plant macro fossils was based on morphological characteristics, and by comparison with modern reference material held by the School of Archaeological Studies, University of Leicester. Sorting of the flots, and identification were conducted under a low-power binocular microscope at magnification of x10 to x40.

Results

Cereals are represented by grains only. Grains of wheat, *Triticum sp.*, were most frequent. A total of 17 grains was identified as possible emmer wheat, *Triticum cf dicoccum* Schubl. A further four *Triticum* grains were small, very compacted and round at the top. They are most characteristic of a compact free-threshing wheat. Some of the grains were, however, rather 'humped' on the dorsal surface, and these may represent unusually compact (short) glume wheat grains. A further four grains of indeterminate wheat species were recorded as *Triticum sp.* Only one definite barley grain (*Hordeum sp.*) was identified. This did not show signs of the longitudinal ridges characteristic of hulled barley, but identification as naked barley was not possible since there were no clear transverse wrinkles on the dorsal surface. The grain was not clearly asymmetric, which is characteristic of lateral grains of the six-row variety (*Hordeum vulgare* L).

Wild edible plant foods are represented by *Corylus avellana* L (hazel-nut). Fragments of shell of *Corylus avellana* L were identified in eight of the samples, while an actual nut was recovered from one. Further fragments were hand picked by the excavators from five of the features for which samples were examined. Carbonized seeds and endocarp fragments of *Malus sylvestris* Mill (crab apple) were also identified from one sample, but this feature was subsequently radiocarbon dated and found to be modern.

Weed/wild species are represented by seeds of *Stellaria media* (L) Vill (chickweed), possible *Juncus sp.* (rushes), leaves of *Erica sp.* (heath) and *Calluna vulgaris* (L) Hull (heather). A further seed was too poorly preserved for identification and was recorded as indeterminate.

GENERAL DISCUSSION OF THE PALAEOENVIRONMENTAL REMAINS

The six Neolithic sites listed by Boyd (1988) all produced a few grains of six-row barley (*Hordeum vulgare* L). More recently, grains of naked six-row barley (*Hordeum vulgare var nudum*) have been recovered at Barnhouse, Orkney (Hinton, forthcoming), Howe, Stromness, Orkney (Dickson 1994), Bharpa Carinish, North Uist (Boardman 1993a), and on mainland Scotland from Carzfield in Dumfries & Galloway (Boardman 1993b), and Rhiconich, Sutherland (Boardman, forthcoming). Hulled barley has recently been recovered from possible Neolithic contexts from Wardend of Durris, Banchory, Aberdeenshire (Boardman 1995). On the available evidence, therefore, *Hordeum vulgare var nudum*, is generally regarded as the predominant cereal crop in Neolithic Scotland. The converse appears to be true of England and Wales, where the predominant cereals recovered have been *Triticum dicoccum* Schubl (emmer) and *T aestivo-compactum* Schiem (bread wheat) (Moffett *et al* 1989; Greig 1991). An important exception in the Scottish record is the assemblage recovered from Balbridie, Grampian Region, dated to 5000 BP (Fairweather & Ralston 1993). The plant remains are exceptional in that they appear to have been charred in a single episode of burning, in which the timber structure was destroyed. *Hordeum vulgare var nudum* was present, although the cereal assemblage was dominated by *Triticum*

dicoccum Schubl and *T aestivo-compactum* Schliem. This is far closer to the situation reflected in the English assemblages. A few grains of *Triticum dicoccum* Schubl have now also been recovered from the site of Bharpa Carinish, North Uist (Boardman 1993a), and Carzfield, Dumfries & Galloway (Boardman 1993b). Recent finds of wheat from Neolithic sites, therefore, including those from Biggar Common, suggest that *Triticum dicoccum* Schubl and *Triticum aestivo-compactum* Schliem were of far greater importance in the Neolithic economy than has previously been thought.

A fact highlighted in the study by Moffett *et al* (1989) is that the present evidence available from Neolithic sites in England and Wales suggest that, despite the introduction of cereal cultivation, there was still considerable reliance on collected food resources, notably those available within the deciduous woodland environment. This is reflected by the finds of *Corylus avellana* L from Biggar Common. *Corylus avellana* L is an easily stored and nutritious food source.

The relative importance of collected wild plants and cereals within the economy of the sites is difficult to assess. While the cereals are quantified on the basis of the number of grains, the hazel-nut shell is recorded as number of fragments, thus it is not possible to make a direct quantitative comparison between the two species. Furthermore, the different species would have varied in their likelihood of their being charred. Cereal grains may have been accidentally charred if they came into contact with fire during processing or food preparation. The infrequency of hazel-nut kernels in the deposits would suggest that the shells were discarded onto fires once the kernels had been removed. Other wild fruits may also have been utilized, such as blackberries or raspberries, but would have had little reason to have come into contact with fire.

The palaeoenvironmental evidence can be considered as a whole here: the charcoal evidence suggests mixed deciduous tree cover — oak, hazel and alder — a picture enhanced by pollen analysis, which suggests a mixture of rough pasture and mixed woodland. The macro-plant evidence shows the presence of various cereals, *Triticum* predominating. The soils identified are well-drained brown earths with a history of deep disturbance, perhaps tillage.

DATING

Daniel A Johnston

CALIBRATION OF RADIOCARBON DATES

Four radiocarbon dates were obtained from the early phases pre-dating Cairn 2 and three from features excavated by LADAS. The dating of five samples was undertaken by the Scottish Universities Research and Reactor Centre (SURRC), the others under an arrangement with the University of Arizona AMS facility. The dates were calibrated by SURRC using CALIB, the University of Washington Quaternary Isotope Laboratory Radiocarbon Calibration Program (1987). All samples were of charcoal.

DATING EVIDENCE

Daniel A Johnston & Tam Ward

The only concrete dating evidence from Biggar Common is the radiocarbon dates from the pre-mound phases of Cairn 2 and from the LADAS-excavated post-holes in Sample Area 2 and Sample Area 5. The remaining dating evidence is all in the form of artefactual or monumental typology, or stratigraphic phasing.

TABLE 2
Radiocarbon determinations and calibrated dates from the sites excavated by Historic Scotland

Context	Phase	Lab no	Yrs BP	Calibrated Range 69% probability	Calibrated Range 95% probability
Burnt stake	1	GU-2987	6300 ± 130	5360–5144 BC	5490–4908 BC
Burnt stake	1	GU-2988	6080 ± 60	5198–4906 BC	5220–4847 BC
Burnt deposit	3	GU-2985	5250 ± 50	4221–3998 BC	4234–3980 BC
Burnt deposit	3	GU-2986	5150 ± 70	4035–3820 BC	4219–3790 BC

TABLE 3
Radiocarbon determinations and calibrated dates from LADAS Sample Areas 2 & 5

Context	Lab no.	Yrs BP	Calibrated Range 69% probability	Calibrated Range 95% probability
Sample Area 5: fill of pit	GU-4276	4880 ± 50	3774–3637 BC	3780–3531 BC
Sample Area 2: PH17	AA-18151	4565 ± 70	3372–3108 BC	3510–3040 BC
Sample Area 2: PH14	AA-18153	4300 ± 70	3023–2788 BC	3094–2701 BC

Cairn 2

Activity at Cairn 2 appears to span two of the major cultural/chronological interfaces, the Mesolithic/Neolithic and the Neolithic/Bronze Age. It was necessary, therefore, to examine the dating evidence in association with the evidence for cultural association in the earliest and latest phases with care.

The stake-built structure under Cairn 2

The earliest phase of activity is represented by a group of stakes (illus 7), the radiocarbon dates for which suggest a late Mesolithic date. The charcoal used for these dates was well stratified and had clearly been burnt *in situ*. There is a possibility that the stakes were made from bog-oak, and the structure could, therefore, be much later in date than the age of the wood. However, the charcoal was from structural members, and it seems more likely that contemporary wood would be used for such a purpose. There is no reason to believe that suitable wood was not easily available. The close agreement between the two dates, which came from separate features, also tends to support the conclusion that the stakes were made of contemporary wood.

Inland Mesolithic sites in Britain are usually identified by the presence of artefact scatters; often this is all there is to a site. There are several such sites in the lower ground surrounding Biggar Common, mainly in the Clyde valley. However, the only artefactual evidence for Mesolithic activity on Biggar Common is a single core rejuvenation flake (Finlayson, above). This absence of Mesolithic artefacts could be seen as suggesting that these stakes represent very early Neolithic, rather than Mesolithic, activity. However, Kinnes (1988) listed only four Neolithic sites on the British mainland which have produced fifth-millennium radiocarbon dates, some of which have dubious associations. The only one from Scotland was from a burial cairn at Boghead (Burl 1984), which also overlay stake-built structures and had a number of other similarities with Cairn 2 (below). The dated charcoal, however, came from the body of the cairn, and was stratigraphically 'above' several later dates. There is no evidence therefore that the stake-built structures at Boghead were as early in date as the one at Biggar Common. The balance of the evidence therefore suggests that the stakes at Biggar Common do represent a late Mesolithic structure.

Other pre-mound activity at Cairn 2

The Phase 2 soil deposit (above) contained no diagnostic artefacts. It did contain charcoal, but this was not sampled for radiocarbon dating, as its origin was unclear. Two radiocarbon dates in the late fourth millennium were obtained from charcoal in the Phase 3 'bonfire' deposits. These dates are consistent with the identifications of the pottery, flint and chert artefacts from these features as early Neolithic (Sheridan, above; Finlayson, above).

Cairn 2

Some pottery and chipped stone did come from each phase of the mound at Cairn 2, but much of it appeared to be in residual contexts or was unstratified. The only securely stratified material was in the burials. The Seamer Axe and the large flint point from the western burial pit provide a mid-to late Neolithic date for this burial (Finlayson, above). A similar axe was found at Whitegrounds barrow in the Yorkshire Wolds, with an associated radiocarbon date of 4520 ± 90 BP (Manby 1988). The other burial contained a Beaker and was associated with two other Beakers, placing it in the late third to early second millennium BC. The later phases of addition to Cairn 2 again contained no secure dating evidence, but were probably spread over a significant timespan, as a peaty topsoil had time to develop between the final two phases of addition.

The two burials are separated culturally, and on the face of it chronologically, by the character of the artefacts found in them; specifically, the association of three Beakers with the eastern burial and two mid/late Neolithic artefacts with the western burial. However, it was not possible to demonstrate in excavation that the eastern burial was later than the western one. The Beaker in the eastern burial pit was in close association with a polished stone axehead, an artefact supposedly belonging to an earlier tradition (a very rare association repeated in a cremation burial at Wellbrae, a site in the Clyde valley which is intervisible with Biggar Common; Alexander, in prep). Although the Beaker burial was more elaborate than the western one, both appear to be single graves, a form of burial which became widespread in southern Britain in the late Neolithic but was rarer in the north (Kinnes 1985).

Cairns 1 & 3

The Beaker sherds found in the pit and cairn material of Cairn 1 indicate a date in the early to mid-second millennium BC for its construction. The primary pit under Cairn 3 was empty, but unstratified Beaker sherds were found in association with the cairn; these may have come from a secondary burial inserted in the top of the cairn, or from a Beaker smashed on its surface as occurred at Cairns 1 and 2. They are therefore limited in their usefulness in dating the cairn itself, except in providing a very imprecise *terminus ante quem* in the early to mid-second millennium. No diagnostic stone finds came from Cairn 3.

The pottery and stone artefacts scattered over the hillside indicate activity in the early Neolithic; artefacts from the lower slopes extend this to include the late Neolithic; and the Beaker period. There is nothing to indicate Early Bronze Age activity.

The dating of the LADAS sites

Where do the features excavated by LADAS lie in relation to the sequence of features excavated by Historic Scotland? First, it can be seen that the date from the shallow charcoal-filled feature

(F105) in Sample Area 5 is a little later than those obtained from the bonfire deposit below Cairn 2, but not inconsistent with the associated pottery in that area. The rather later dates from the two post-holes in Sample Area 2 are more difficult to interpret. Their calibrated ranges do not overlap with each other nor with any other radiocarbon-dated activity on the site. While Sheridan (above) notes that some assemblages of Carinated Bowl pottery have been associated with comparable dates, the context of the two dates is *perhaps doubtful* — the material dated in both cases was flecks of charcoal recovered from a post-hole. This charcoal may have been intrusive to the post-holes. It might be suggested, therefore, that the dates relate, not to the structures and pottery found in the vicinity, but to later activity on the site.

GENERAL DISCUSSION

Daniel A Johnston

CAIRN 2/THE LONG MOUND

The stake-built structure and overlying soils

Human activity on the site occupied by Cairn 2 seems to have spanned the whole Neolithic era, taking in parts of the preceding and succeeding periods; a total of at least 2000 years. The nature of the activity varied from time to time, and there was no mound to mark the spot until Phase 4, approximately 1000 years after the first recorded activity began. This implies either that the location of the Phase 3 and later features directly above the Phase 1 stake-built structure was coincidental, or that the site retained sufficient significance throughout the intervening millennium to be remembered, and possibly marked, by some means which has left no archaeological record. On the face of it, both possibilities seem unlikely, but the issue depends on the interpretation of the three early phases, and in particular the Phase 2 soil deposit.

This deposit is a fairly homogenous grey-brown soil with charcoal fragments. The soil has clearly been very heavily disturbed by human activity; it is unclear whether it had originally developed naturally, been transported to the site, or gradually accumulated as a result of human activity on the site. The latter cause seems most unlikely, as there was very little cultural debris in the deposit. Of the other possible causes, natural formation is the simplest, and therefore the best, explanation. If the Phase 2 deposit was originally a natural topsoil, it may well have formed before Phase 1, the stake-holes of which would therefore have cut it. The soil was heavily disturbed in antiquity, and this disturbance would have caused the truncation of the burnt stakes. This interpretation simultaneously supplies a source for at least some of the charcoal in the soil deposit, and a reason why the stakes do not form a complete structural pattern. The remainder of the structure may simply not have penetrated the base of the soil. There is a charcoal spread on the surface of the till, surrounding the burnt stakes, which would tend to contradict the interpretation above. However, this could have been caused by invertebrate sorting in an area originally of high charcoal density in the soil. Such sorting could not occur now, as all Biggar Common soils had become too acid for worms to survive by the Bronze Age (Carter, above), but the state of the soil in the Mesolithic and early Neolithic is unknown.

The most likely cause of the disturbance which transformed the soil into the Phase 2 deposit, and may have truncated the Phase 1 features, is cultivation. This would explain the uniform nature of the deposit over such a relatively large area, and the lack of cultural debris. However, almost no charred plant remains were recovered from Cairn 2, despite the quantities of charcoal present in the three early phases. One barley seed, one unidentified cereal seed, and nine

other seeds (two of which were possibly weeds of cultivation) came from the cairn; mostly from the Phase 3 bonfire deposits. There is palynological evidence from Cairns 1 and 3 for cereal cultivation in the area, but this refers to a much later period. It is common for evidence from early Neolithic sites to suggest a heavy reliance on wild species, in particular hazel-nuts, supplemented by small-scale cultivation of grain (Boardman, above); the evidence from Phase 3 at Biggar Common would fit this pattern.

The bonfires and possible early stone structures

The function of the bonfires is unknown. It could have involved cooking, as food remains were recovered, but these could have derived just as easily from the use of domestic waste as fuel. Given their context and the possibility that they were contemporary with pre-mound stone structures, the fires may have been part of ritual activities.

The wall-like stone structure running north to south near the midpoint of the mound divides the mound into eastern and western sections; the damage caused by the plough furrow on this line made it impossible to prove the stratigraphic position or original extent of this feature. Large quantities of rubble in the upcast of the same furrow on the south side of the mound suggest that the structure may have continued across the full width of the mound, but was truncated by the plough. This structure could represent a 'façade' for a short mound to the west; however, wood or stone façade structures have been shown in some cases to precede the construction of the mound. Free-standing façades were sometimes redundant or deliberately destroyed prior to the construction of the mound (Manby 1970, 13). Pre-mound ritual activities or structures, often not designed with the later construction of the mound in mind, have been recognized at a number of long mounds elsewhere (eg Dalladies: Piggott 1972). Although often interpreted as 'mortuary structures', they frequently contain little or no evidence of having contained burials. Barrows containing no burials or other putatively mortuary features are familiar from other parts of Britain, notably at South Street (Smith & Evans 1968).

THE CAIRN 2 MOUND

The mound at Cairn 2 presents a number of interpretative difficulties. It is very difficult to determine accurately how many phases of construction there were, or what the original plan of the mound looked like. In particular, the eastern extent of the true primary mound material could not be determined, due to the destruction of the stratigraphy at the centre of the mound. The primary mound at Biggar Common could, therefore, have been constructed either abutting the 'façade' to the west or overlying it. The possibility also remains that the 'façade' was a later feature cut through the mound, although this seems most unlikely.

The function of early Neolithic long mounds and cairns is a matter of some debate. It has been argued that they were not primarily intended for burials (Barrett 1988), and that those which do have mortuary structures or deposits in early phases were not necessarily 'burials' as such. Rather, they were sites for 'ritual' activities, which could contain storage places for human bone, possibly for use in ancestor rituals. Cairn 2 contains no chamber or mortuary structure, so even this degree of association with mortuary practices remains only an outside possibility. The pre-mound activity did involve fires, but there is no evidence to suggest that the bonfires were funeral pyres.

If the stone linear feature was a 'façade' pre-dating the primary mound, then its function may have been to separate areas in which different types of activity took place. If the western half

of the mound was primary and the eastern secondary, the construction of the western half would mark an end to the activity in that area, possibly a transition from an active function to a monumental function. The activity in the eastern area (the 'forecourt') could continue, with the 'façade' structure remaining as its focus. The construction of the eastern half of the mound marks the end of the other type of activity, and the transformation of the function of the entire mound to a monumental function.

Changing function: the burials

The earliest mortuary feature in Cairn 2 is probably the western burial, which is in the 'single grave' tradition which began to spread in the mid- to late Neolithic. This tradition, which generally post-dated the construction of long mounds, is very rarely encountered north of the Tees (Kinnes 1979; 1985). The exotic flint grave goods found here are typical further south, but have few proven mortuary associations in Scotland (Kinnes 1985). Purpose-built monuments in this tradition are functionally very different from earlier Neolithic mounds, in that, although they may have complex histories involving more than one form and function, they are primarily burial sites (Barrett 1988). The western burial in Cairn 2 therefore represents a reuse of the earlier monument for a new purpose. It must have retained some significance, but its original purpose may have been forgotten.

It is unlikely that the eastern half of the mound was constructed for the purpose of inserting the Beaker burial, as in this case the order of construction of mound and burial would probably have been reversed. The insertion of the eastern burial simply represents a more elaborate, and probably later continuation of the same sort of activity as the western one, ie, the adaptation of an earlier monument for later funerary purposes.

Later additions to the Cairn 2 mound

The final earthen phase of mound building involved the addition of material after the insertion of the burials at either end. This was probably simply part of the burial process, enlarging the monument in which the burials had taken place.

Subsequently stone banks and dumps appear to have been added over a lengthy period. There is evidence for cereal cultivation on the Common in the Beaker period (Tipping, above; Carter, above), so this could simply be the result of clearance. However, the way in which the stone was laid, in banks around the edge of the mound; and the fact that in places a shallow cut was made for it, suggest that at least some of the stone additions had a greater significance, and were probably intended to aggrandize the monument. This indicates that the mound retained some importance for a considerable period after the insertion of the final grave.

THE BURIAL CAIRNS AND THE LATE NEOLITHIC/BEAKER PERIOD

Mortuary ritual

The three excavated cairns contained between them four features identified as burials (albeit without any human remains), all in the single-grave tradition which replaced more complex mortuary practices in the mid- to late Neolithic. A clear contrast between this era and the earlier Neolithic phases of Cairn 2 is that no burials were identified from those phases, and there is no evidence to suggest that the long mound originally had any mortuary function, whereas in the

later Neolithic and Beaker period the mounds and cairns were clearly seen primarily as burial sites. This is shown both by the design and sequence of construction of the round cairns, and by the reuse of Cairn 2, an apparently non-mortuary monument, as a place of burial.

There are clear indications of differences in mortuary ritual between the Neolithic (western) burial in Cairn 2 and the three Beaker period burials in Cairns 1–3. The most obvious is in the nature of the grave goods. The western burial contained two flint artefacts, both of which were high-prestige purpose-made items which were probably never used or intended to be used (Finlayson, above), but lacked any ceramic artefacts. The Beaker (eastern) burial in Cairn 2 and the burial under Cairn 1 contained both ceramic and flint/stone artefacts, the latter being functional tools or tool-making materials. This suggests a difference both in ideas about the material requirements of the dead and in attitudes to supplying those requirements. The absence of any inorganic grave goods in the burial under Cairn 3 indicates that they were not an absolute requirement (there is no way of knowing whether organic goods were originally present).

A small cairn was built over the eastern burial in Cairn 2, which had been inserted in a pre-existing mound, and did not therefore require a cairn simply as a monument to mark the spot. This suggests that a (specifically) stone cairn was of some significance, an impression enhanced by the fact that more effort would have been required to obtain the stone than to enlarge the earthen mound; and by the association of two deliberately smashed Beakers with the construction of this cairn and a similar rite at Cairn 1, possibly part of the ritual associated with closing the grave or part of a later commemorative ritual. The Beaker sherds found at Cairn 3 could derive from a similar ritual. The Neolithic western grave in Cairn 2 had neither a stone cairn nor evidence for post-burial rituals.

Agriculture, burials and settlement

The absence of significant quantities of late Neolithic/Beaker period material from the artefact assemblages in areas away from the cairns tends to suggest that activity in this period was at a lower level than in the early Neolithic. However, the buried soils sealed by the round cairns contain evidence for activity immediately pre-dating the construction of the cairns. The soils were disturbed, possibly by cultivation of grain, followed by further disturbance and truncation which may relate to the construction of the cairns (Carter, above; Tipping, above; Tipping *et al* 1994). It has been suggested that the microscopic charcoal in the buried soils derives from settlement or other anthropogenic activity on the Common (Tipping, above), although this need not be contemporary with the construction of the cairns. Taken together, the evidence for agricultural activity and the absence of large quantities of artefacts suggest that late Neolithic/Beaker non-burial activity was restricted to agricultural operations, based on settlements outside the area covered by the LADAS fieldwalking programme.

LADAS FIELDWALKING AND SAMPLE EXCAVATIONS

The fieldwalking results and the excavation of Sample Area 2 clearly indicate extensive early Neolithic activity, including settlement, on the western half of Biggar Common. Furthermore, the quality of the evidence is sufficient to locate some settlement areas. The overall artefact assemblages, in particular the pottery, are among the largest of this period from Scotland, and therefore of considerable potential importance. The structural information, even from Sample Area 2, is not easy to interpret but domestic activity has been inferred as the general signature of the pottery assemblages (Sheridan, above).

Sample Areas 1 and 3 were more difficult to interpret. They produced large quantities of artefacts, as anticipated, but there were no features at all at Area 1 and only one possible small post-hole at Area 3. This could indicate simply that there had been more weathering and/or erosion of the ancient surface in these areas than at Area 2, destroying the earlier features. This is certainly likely at Area 1, which is further upslope, more exposed, and on a steeper slope than Area 2; but there is no obvious reason why there should be such a difference at Area 3, which if anything occupies a more favoured location. The artefacts could derive from an activity which did not produce features. This is unlikely to be agricultural manuring, as the density of artefacts is greater than this would be expected to produce, unless it was exceptionally intense and prolonged. Unfortunately, the limited extent of excavation at these areas meant that it was impossible to clearly define the extent of the dense artefact scatters, although fieldwalking results above testify that they were certainly large (illus 2).

THE IMPORTANCE OF THE EARLY NEOLITHIC POTTERY

The most common class of artefact found on Biggar Common was plain early Neolithic Carinated Bowl pottery (Sheridan, above). The assemblage as a whole is one of the largest of its type from Scotland, and has resulted in a reassessment of the classification of early Neolithic pottery. Unfortunately, only a small proportion was recovered from stratified contexts, and the rare stratified material was often residual, as is the case for most of the material from Cairn 2. However, the small group of sherds from the Phase 3 bonfire deposits were probably in their primary context. If so, this puts the pottery in association with a pair of radiocarbon dates.

CONCLUSIONS

The prehistoric remains on Biggar Common indicate human activity in the late Mesolithic, the entire Neolithic and the Early Bronze Age periods.

The Mesolithic activity involved the construction of a small stake-built structure, but left no diagnostic artefacts. The structure was discovered only by chance, in the excavation of a much later monument. This has implications for the recognition of inland Mesolithic sites throughout northern Britain, as most have been recognized by (or consisted solely of) the presence of artefact scatters.

The earliest Neolithic activity may have involved cultivation, probably on a small scale; wild resources such as hazel-nuts may have been as important, or more important, than grain. It is possible that ritual activities involving large bonfires took place on formerly cultivated land; this may have included the separation of ritual areas by means of a low stone wall. The bonfires came to an end with the construction of a low earth and turf mound, which may or may not have extended beyond the wall to the east. The mound may have had a monumental function, but was not a funerary structure. It was not possible to securely determine the number of phases of construction of the mound in this period.

About a millennium after the construction of the mound, a single grave was inserted near its west end, containing two high-prestige, unused flint artefacts. Slightly later, another grave was inserted near the east end of the mound, containing artefacts which, although of high quality, had been used, and representing a mix of cultural traditions. These included a Beaker and a polished stone axehead, an unusual association with local parallels, and with possible implications for the process of culture change. The mortuary ritual appears to have been more complex than that in the first grave, and involved the construction of a small cairn over the burial and the smashing of

a second Beaker over the cairn. A similar ritual sequence appears to have taken place for another, probably slightly later burial, for which a new round cairn was constructed north-west of the long mound; and may have been repeated at a third cairn approximately 1 km to the east. The evidence from the late modifications to the long mound, combined with that from the two excavated round cairns, suggests that the Beaker-using population attached a ritual significance to stone cairns, as opposed to earthen mounds.

Both the early Neolithic long mound and the much later round cairns appear to have been constructed on land which had been recently cultivated. There was certainly settlement, and possibly agricultural activity, on the Common in the early Neolithic, although it is unclear whether the settlement, or settlements, were seasonal or permanent. In the later Neolithic and Beaker period, grain was probably cultivated from settlements located elsewhere. No later prehistoric activity is represented in the archaeological record on Biggar Common. The most likely reason for this is a change in subsistence strategies among the local population, involving less intensive use of higher ground. This could have been caused by such factors as climatic change, or a reduction in the population.

Only the western third of the upper slopes of Biggar Common has been explored by fieldwalking, and a tiny fraction of that has been excavated. It is clear that there is a significant amount of early Neolithic settlement evidence remaining unexcavated within this area, and there could be further Mesolithic or other evidence as well. On the eastern end of the Common, an equally important assemblage of early pottery and lithics has been recovered at Carwood Farm (Ward, forthcoming).

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