Excavations in burial and ceremonial sites of the Bronze Age in Tayside

the late Margaret E C Stewart, and Gordon J Barclay

with contributions by J Close-Brooks, M Davis, R Grove, D Lunt, T Murphy, R D Scourfield, M Seddon, I A G Shepherd, A Sheridan, I Stuart, P Wilthow and A Young, and drawings by D Gallagher, H Jackson, M O’Neil and S Stevenson

Introduction (GJ Barclay)

On her death in 1986 the well known and respected Perthshire archaeologist Dr Margaret Stewart (obituary, Taylor 1988) had not completed a number of excavation reports; some of the projects had been undertaken for Historic Scotland’s predecessor departments. In the 1960s and early 1970s rescue archaeology in Scotland was still undeveloped (Barclay 1997); locally based archaeologists frequently stepped into the breach, sometimes with limited funding from government for the fieldwork, but usually with no financial support whatsoever for post-excavation work (Barclay and Owen 1995). As part of the continuing attempt to deal with the backlog of unpublished excavations sponsored by central government in the 1960s and 1970s, it was decided to gather together Dr Stewart’s unpublished sites and to prepare them for publication. Because of the format chosen for publication it was decided that the projects where there was no central government funding could be included.

Elements of the excavation archive for some of the earlier sites could not be located, and to deal with the variability of material available, it was decided, rather than to publish many small reports, to put all the excavations into two papers. The first deals with the excavations of burial and ceremonial sites of the Bronze Age; the second will deal with excavations in medieval or later rural settlements. Both are built around a substantial site where Dr Stewart had carried post-excavation work to an advanced stage, and where there was a draft report. For this paper the site at Almondbank acts as the foundation site, for the second, the excavated settlement at Altt na Moine Buidhe will be used. Where a draft report had been prepared by Dr Stewart the text is presented here, changed only to reflect additional information now available, or to undertake those revisions that she would almost certainly have undertaken in later drafts. Where drawings but no report have survived, a brief descriptive text has been prepared from the site archive or the Discovery and Excavation in Scotland entry to accompany the original illustrations. Where text or site notebooks have survived, but there are no drawings, photographs have been used instead. A single artefact numbering system (SF 1 to SF 17) has been introduced. As far as possible throughout the sites have been reported in Dr Stewart’s own words, using original illustrations or redrawings of them. Little new commentary or discussion has been added.

The finds reports by Joanna Close-Brooks and Ian Shepherd were completed shortly after the excavations took place; Ian Shepherd revised and expanded his work in 1996; the work by Alison Sheridan of the National Museums of Scotland (NMS) was commissioned by Historic Scotland in 1995. The finds illustrations for Almondbank were prepared by Ms Helen Jackson of NMS in the 1970s, and the other drawings for the site were prepared by Dennis Gallagher in the 1980s. The other finds drawings were undertaken by Marion O’Neil of NMS; the new site drawings by Ms Sylvia Stevenson in 1995 and 1996. The analysis of the ‘jet’ necklaces was undertaken on behalf of NMS by Paul Wilthow and Mary Davis in 1995. Reports on the skeletal material from the various sites were prepared by Dr D Lunt, Dr T Murphy, Dr I Stuart and Dr A Young at the time of the excavations; the manuscript reports are in the archive. Richard Grove prepared a report on the
Westhaugh of Tulliemet human bone, and confirmed the identification of the Muirhall Cist pig bone, in 1996. The archive for these projects is lodged in the National Monuments Record for Scotland. The reference numbers are listed below. Museum accession numbers are also given where possible [NMS = National Museums of Scotland; PMAG = Perth Museum and Art Gallery].

The sites published here are (Illus 1 and 7):

3 Farleyer: one cist. Excavated 1966. NMRS no
MS 617.
7 Carse Farm 1: stone circle. Excavated 1964. Collared Urn in PMAG; flint flake presumed lost. NMRS no MS 615 / MS 594.

Unpublished material relating to an excavation at Balnaguard in 1971 has been prepared for publication by Mr Roger Mercer in conjunction with his report on the excavation of the adjacent cairn site at Sketewan (Mercer forthcoming). The archives of the excavations at Dull, Carse Farm 2 and Pitfour have not survived in a state that could allow publication of these sites beyond contemporary Discovery and Excavation reports.

Radiocarbon calibrations
Calibration of the radiocarbon dates has been carried out using the OxCal calibration program, based on the calibration curve of Stuiver and Kra (1986). The calibrated ranges quoted are the upper and lower limits of the calibrated ranges at 2σ, with over 95% probability.

1 A short-cist cemetery at Almondbank, Perthshire

The excavation (M E C Stewart)
Between 3 and 25 October 1973 ten short cists were found while gravel was being extracted by a mechanical digger from a bank above the northern margin and overlooking the western end of Methven Loch (Illus 1). The ground belonged to the then East Conservancy of the Forestry Commission, who kindly gave permission for the burials to be examined and made a generous financial contribution. Between 1973 and February 1975 there was no further gravel extraction but when work was resumed on 27 February 1975 an eleventh cist was found. Most of the cists were revealed in the vertical section of the gravel pit and had to be excavated quickly so as not to cause undue delay in the gravel extraction. All the cists lay within 2m of the surface but this surface had been artificially created partly by clearing soil prior to the gravel working and partly at an earlier date when a forestry plantation had been made. It was therefore not possible to estimate precisely the original depth to which the cists had been sunk. The ten cists found during 1973 occupied an area of approximately 14m by 12m at NGR NO 0583 2589, at 80m above sea level. There was no trace of any covering cairn or mound.

Cist I (Illus 2). The cist was orientated 80° E of N. The mechanical digger had removed the S side stone and the E end stone and in doing so had exposed the bones of a probable male inhumation, aged between 20 and 25 years at death. When the site of the cist was examined there still remained the N side stone, the W end stone, the cover stone and a small slab which filled the upper part of a gap in the NE corner. Judging by these remaining slabs the cist had measured approximately 0.85m by 0.55m and the burial had been laid directly on the gravel subsoil. The N side stone seems to have been more deeply set in the ground than the W end stone. The cover stone, which was badly cracked was 1.20m in length by a maximum width of 0.75m. It lay 0.97m below the present surface. Two slabs found later at the base of the gravel slope are likely to be the missing side and end stones of this cist.

Cist II (Illus 2). The cist was orientated 60° E of N and measured internally 0.88m by 0.54m by 0.53m. The cover stone had been tipped up by the mechanical digger, revealing the tops of the two side and two end stones. The cist was completely filled with loose gravel, which had probably fallen in when the cover stone was moved. In the NW corner, 0.23m below the top of the N side stone, a Food Vessel lay on its side surrounded by fragments of burnt bone. Against the W end stone and on the same level as the pot, an unburnt skull of an individual aged between 23 and 28 years at death lay on its left side facing due N. All around and under the skull were fragments of burnt bone, among which was part of a bronze awl. Throughout the cist were further fragments of burnt bone with a small concentration in the SE corner: one individual, aged between 20 and 30 at death, is represented. Two pieces of (?)calcined mollusc shell, two long bones and other unburnt bone fragments were also found. The bones were submitted for radiocarbon dating; the assay was 1606±80 BC uncal (2136–1694 BC cal (SRR-590)). The cover stone was a particularly handsome slab of sandstone 1.17m by 0.92m by 0.34m, which contrasted sharply with the brittle, friable cover of Cist I.
As Cist II was to be re-erected at the Forestry Commission Information Centre at Inver near Dunkeld, once the individual slabs had been removed, it was possible to see the original cut made in the gravel subsoil to accommodate the cist. This cut measured 1.70m in length but it was not possible to determine the width as one side had been destroyed. At each end of the cut there had been a close packing of hand-sized boulders up to a level corresponding with the tops of the end slabs.

The finds from Cist II (J Close-Brooks)
All the finds are shown on Illus 3.
SF 1 [NMS EQ 816]. An intact Food Vessel of simple bipartite form, 125mm high, 150mm rim diameter, 75mm base diameter, in a buff fabric incorporating black crushed stone grits of varying sizes, which show through the smoothed surface. It is decorated on the exterior in a rather haphazard manner with nine lines of stamps and an irregular row on the internal rim bevel. The
Illus 3. Almondbank: all finds drawings.

Cist II. The cist was oriented 45° E of N. The S side slab had been dragged through 90° by the mechanical digger exposing the bones of an inhumation. The cist measured 1.04m by 0.42–0.64m in width. The cover stone of very weathered dolerite was extremely friable and was cracked and shattered along the southern edge. No conclusions as to sex or age at death could be drawn from the surviving bone.

Cist IV. This cist was inadvertently destroyed during the gravel extraction and any contents were lost.

Cist V (Illus 2). The cist was oriented 55° E of N. The first indication of this burial was a number of large boulders appearing through the topsoil on the lip of the working face of the gravel pit. Approximately at the centre of the pile was an oblong boulder 0.78m in length by 0.36m in width whose long axis was later found to coincide with the long axis of the cist. When the stones were removed an oval patch of disturbed gravel 2.23m by 1.55m was exposed. Protruding through the gravel was the top edge of the S side slab of a cist, which measured 1.05m by 0.56m. The cist was well built, the corners fitting closely and gaps at the NW and SW due to shortness of the side slabs having been carefully filled in with smaller stones.

The cist was entirely filled with gravel, which
became increasingly free of stone towards the bottom at a depth of 0.52m. Several hand-sized cobbles had been tightly rammed into the gravel, especially at the E end of the cist where, in the NE corner, there was a water-worn boulder firmly wedged with two packing stones behind it. The placing of the boulders in the gravel infill had the appearance of being quite deliberate and may have some bearing on the absence of a cover stone. A scatter of very soft comminuted charcoal, extending 0.66m from the E end, was found between the stone-free layer and the undisturbed gravel at the bottom of the cist. A compact piece of carbonised wood, 0.18m square, was found a little to the N of, and at the same level as, the top of the E end stone.

With the exception of the N side stone, which had a pointed base, the stones of the cist had not been footed into the gravel but simply laid on the surface. Behind the N slab stood a flat reinforcing stone and packing stones had been inserted outside the NE corner.

*Illus 4. Almondbank: Food Vessel from cist II.*

while on top of the N side stone the cover had rested on a packing of earth clods, amongst which was a large fragment of oak charcoal.

The cist was partly filled with loose soil and gravel, which had infiltrated as a result of the smashing of the cover stone. On the gravel subsoil 0.08m from the W end slab a skull lay on its right side facing S. At the back of the skull and on the same level, there was a lump of yellow clay of a size which could conveniently held in the hand. At the E end of the cist there were the remains of an inhumation, probably aged between 40 and 45 years at death, with evidence of tooth decay. Two bones from a young pig were also recovered.

*Cist VII (Illus 6).* The cist was oriented 80° E of N. The cover stone, 1.04m by 1.0m, which was friable and badly cracked, and lay only 0.30m below the present surface, was supported directly on the side slabs of the cist, but at either end it had been underpinned by additional small slabs. The cist, which measured 1.22m by 0.55m and 0.38m deep, was filled with gravel. At a depth of 0.18m the coarse gravel mixed with larger stones was replaced by a darker more friable soil, and, at a depth of 0.22m and situated 0.1m from the W end slab, a skull was found lying on its right side and facing S. At 0.60m from the W end slab and at a depth of 0.25m, there were parts of an unburnt pelvis and long bone lying in such a way as to suggest that the knees of the inhumed body had
been drawn up towards the face. Other parts of the inhumation were found scattered throughout the gravel infill: the individual was aged between 20 and 25 years at death. Collagen from the bone was radiocarbon dated; the assay was 1567 ± 50 BC uncal (2023–1704 BC cal (SRR-591)). Thirty-seven disc and 15 fusiform beads of jet and cannel coal were scattered through the cist, but the majority were recovered from the W end of the cist. A decorated toggle fastener was found under the jawbone of the skull. Two unworked flint flakes and a flat half-moon flint scraper were also found.

Structurally the cist was interesting. The length of the side slabs, 0.85m and 1.0m respectively, had been augmented at the NW and SW corners by additional blocks of stone skillfully inserted to make the cist sufficiently long to accommodate a complete crouched inhumation. The W end stone had been taken from a split slab. The concave surface had appropriately been used behind the skull.

The finds from Cist VII (J Close-Brooks and I A G Shepherd)

All the finds are shown on Illus 3.

SF 3 [NMS EQ 819]. Approximately half of a thin secondary flake of brown flint, apparently broken in antiquity, with steep retouch all round its convex edge. 37mm long, 18mm wide, 3mm thick.

SF 4 [NMS EQ 821]. A small primary flake of grey flint which retains its cortex: 13mm long.

SF 5 [NMS EQ 820]. A tiny secondary yellow flint flake 11mm long.

SF 6 [NMS EQ 818]. Fifteen fusiform and 37 disc beads and a square fragment of a spacer plate reused as a toggle or fastener. The mean length of the fusiform beads is 17.52mm (range 11.75mm to 22.50mm). The mean diameter of the disc beads is 6.36mm (range 5 to 7mm) and the mean thickness is 2.02mm (range 1.25 to 3mm). Nineteen (52%) of the disc beads have been drilled from one direction; only three showed definite evidence of having been drilled from both sides (an hourglass perforation). The proportions of worm, unworn and indeterminate beads are: 8%; 5.4% and 86.5%.

The spacer plate fragment is 11.75mm long, 13mm broad and 7.5mm thick and bears traces of two parallel lines of punctulated decoration, forming a V and part of another (Illus 5, left).

Analysis of the composition of the necklace from Cist VII (P Willhew and M Davis)

X-ray fluorescence spectrometry revealed that the composition of the fastener and of four fusiform beads was consistent with jet from Whitby, York-
shire, and these pieces also showed a pattern of cracking characteristic of jet. The disc beads and the remaining eleven fusiform beads were identified as cannel coal, but there were significant compositional differences between the disc and fusiform beads, suggesting a different source for each bead type. These results suggest that the necklace had been made up using parts of at least two, possibly three necklaces – the jet beads and reused spacer plate coming from an old spacer plate necklace, and the disc beads coming from a disc-bead necklace. Whether the cannel coal fusiform beads came from a third pre-existing necklace, or had been made specifically to bulk out this necklace, is unclear.

Cist VIII (Illus 6). The cist was oriented 70° E of N. In place of a cover stone there was a partial layer of clay 0.06m thick extending for 0.77m from the W end stone and stopping short 0.15m from the E end.
slab. The clay covering lay up against the N side stone but was fully 0.20m short of the total width of the cist. Below the clay the cist was filled with gravel. Throughout the gravel were many pieces of a very decayed inhumation, aged between 17 and 20 at death. Long bones occurred only 0.05m below the top of the E end slab whereas teeth were found laying on the undisturbed gravel 0.50m below the top of the W end slab. Compared to Cist VII, which lay adjacent, Cist VIII had been carelessly built except the N stone, which had a pointed base and had been carefully underpinned at the E end. The S side stone fell short of the required length by as much as 0.39m and yet had been allowed to overlap with E end stone by 0.10m. Possibly it was felt that the N stone of Cist VII was sufficiently near to make closure to the gap unnecessary; this would be a cogent argument for the contemporaneity of the two graves. The E end stone was out of alignment.

Cist IX (Illus 6). A narrow slab 0.33m by 0.17m appeared in the face of the gravel pit to the N of Cist VIII. The top of this stone was 0.50m below the present surface, being 0.30m below the level of the surrounding undisturbed gravel, above which there was only 0.20m of disturbed soil. The stone proved to be one of two forming the western end of a cist of which the rest had been destroyed. The approximate orientation of the cist would have been 120° E of N. 0.18m SE of the two stones and 0.25m below their upper edge fibrous ‘turfy’ material extended for 0.25m with a uniform width of 0.20m. Between this and the end stones were numerous flecks of carbon. Under the ‘turfy’ layer was a soft brown stone-free soil 40mm deep, which extended SE for 0.43m. Below the soft brown stone-free soil there was a thin layer of carbonised material, under which, 0.33m from the centre of the W end of the grave, 0.28m below the top of the end stones and extending for 0.18m, was an interrupted string of 218 disc beads and 12 fusiform beads of jet and cannel coal. The original arrangement of the beads had been disturbed by the destruction of the cist, but the disc beads were graded to resemble fusiform beads (below). A delicate knife of grey flint made on a long blade was found nearby. Despite lying below charcoal, there was no evidence that the necklace had been burnt.

The finds from Cist IX (J Close-Brooks and I A G Shepherd

All the finds are shown on Illus 3.

SF 7 [NMS EQ 823]. A small blade of grey, white-speckled flint with fine retouch along both edges of the ventral surface towards the proximal end. It has been broken below the bulb of percussion. 31mm long, 9mm wide, 3mm thick.

SF 8 [NMS EQ 822]. Twelve fusiform beads and 218 disc beads, all of dense shiny cannel coal, barring three of the fusiforms which have been identified as jet by the National Museums of Scotland (below).

The mean length of the fusiform beads is 17.32mm (range 13.75mm to 25.50mm). The disc beads have a mean diameter of 7.06mm (range = 4.75mm to 7.75mm) and a mean thickness of 1.55mm (range = 1mm to 3mm). Fifty per cent of the disc beads have been drilled from one direction; only one showed definite signs of having been drilled from two sides. The proportions of worn, unworn and indeterminate beads are: 27.5%; 18.8% and 53.2% (Illus 5, right).

An important observation by the excavators established that the disc beads lay clustered in graded groups mimicking fusiform beads. It is difficult to reconstruct precisely how the beads were strung on the necklace, but at least one ‘fusiform’ cluster of disc beads lay end to end between two fusiform beads, while several pairs of such groups of disc beads lay touching each other. These observations suggest that the intention in the stringing was to replicate, or at least provide an interesting variant on, the effect of strands of fusiform beads.

Analysis of the composition of the necklace from Cist IX (P Withhow and M Davis)

X-ray fluorescence spectrometry of the fusiform beads and of a random selection of 24 disc beads showed that three of the fusiform beads have a composition consistent with Whitby jet; these also display the characteristic surface cracking. The remaining fusiform beads and the disc beads are of cannel coal; there are no significant compositional differences between the two bead types. It is possible that some of the disc beads which had not been analysed are of a different composition, but the results suggest that a single source is likely. The composition of the cannel coal beads from this necklace differs significantly from that of the cannel coal beads in the Cist VII necklace. Once more, the analytical results show that parts of an old jet necklace had been incorporated; what is harder to fathom, however, is why apparently similar cannel coal had been used to make both fusiform beads and disc beads, the latter arranged as pseudo-fusiform shapes. No conclusions about the source(s) of the cannel coal can be reached; it is a material which can vary in composition within a single deposit.

Cist X (Illus 6). A stone set vertically in the working face of the gravel pit indicated another
The long axis of the cist lay 90° E of N. Again there had been no cover and the cist was filled with gravel. Structurally the cist was unusual. Oval on plan, measuring 0.87 by 0.67m, it comprised six slabs with an average depth to floor level of 0.47m but shortening to 0.31m at the W end. There were two marked concentrations of charcoal staining at floor level. The first started 0.16m from the S end of stone 4 and extended eastwards across the cist for 0.40m. A second concentration began 0.10m from stone 1 and extended for 0.20m where it coincided with the fragments of a broken Food Vessel located 0.32m from stone 4. The cist had been placed at the bottom of a pit cut into the gravel subsoil to a depth of 0.70m. Behind stones 2, 3 and 4, material, probably derived from the original Bronze Age soil surface, had been packed into the space between the exterior of the cist and the wall of the pit. The packing varied in breadth from 0.10m to 0.20m.

The finds from Cist X (J Close-Brooks)
All the finds are shown on Illus 3.

SF 9 [NMS EQ 824]. A fragmentary bipartite vase Food Vessel, very similar in shape to that from Cist II, with an almost vertical neck above the carination and an internally bevelled rim. The pot as reconstructed stands 120mm high and has rim and base diameters of 140mm and 70mm respectively. The fabric is orange to buff in colour and has small, white, crushed stone inclusions. The decoration consists of impressions possibly made by a narrow wooden spatula. The internal rim bevel, rim top and the basal angle are decorated with short oblique or vertical strokes, while the neck and shoulder bear a debased chevron pattern. The belly bears two lines of deeply incised broad chevrons, possibly executed with a different tool.

Cist XI (Illus 6). The cover stones of this cist, which was oriented 15° E of N, were exposed only a few inches below the surface. The cist measured 0.64m by 0.7m and had been placed in a pit measuring 1.25m by 1.50m cut into the gravel subsoil. The cist was filled with gravel and the cover stones only partly masked the surface leaving the top of the N side slab entirely exposed. The cist was almost square in shape with a small end stone of poor quality. In order to achieve the necessary height, the southern half of the W end had two small slabs set precariously edge on edge. Even so, the tops of the W end stones were not level, the northern stone being short by 0.10m and supported by the vertical soil cut, not by a horizontal gravel surface. The S side stone had fallen down the working face of the gravel pit exposing a Food Vessel bedded in the gravel infill in the SE corner of the cist. A flint knife was found on the undisturbed gravel floor in the NW corner.

The finds from Cist XI (J Close-Brooks)
All the finds are shown on Illus 3.

SF 10 [NMS EQ 856]. A bipartite vase Food Vessel, very similar in fabric, decoration and dimensions to those from Cists II and X, but with a lightly lower shoulder and a more concave neck. It stands 120mm tall, and its rim and base diameters are 150mm and 77mm respectively. The pot is decorated on the exterior and on the internally bevelled rim with rows of irregular punctuation, possibly made by the end of a twig. Those on the belly are somewhat more elliptical than those on the neck. Traces of wet smoothing remain on the surface of the bottom half of the pot (the upper surface is eroded at the rim).

SF 11 [NMS EQ 857]. A triangular secondary flake of light orange-brown flint with fine retouch along one edge. 24mm long, 25mm wide, 7.5mm thick.

The finds: comparanda and discussion
(I A G Shepherd)

The pottery
The three Food Vessels from Cists II, X and XI form a remarkably coherent group, particularly in terms of shape. Those from Cists II and XI are strikingly close in their fabric, simple bipartite vase shape and impressed decoration. The Food Vessel from Cist X, although bearing different motifs, maintains a close resemblance to the other two in its rim bevel and the irregular zoning of its decoration.

Similarly high-shouldered vase Food Vessels have been found at Balclutha, Tealing, Angus (NMS EQ 218: Sturrock 1880); Murrayfield, Edinburgh (NMS EE 84); and Hatton Cairn, Inverarity, Angus (NMS EE 63: SAS 1892). The deeply punctuated, extensive decoration on the pots from Cists II and XI can also be seen on the Food Vessel from Greenhills, Balmerino, Fife (NMS EQ 545: Hutcheson 1902).

Bronze
The double-pointed bronze awl from Cist II can be compared with the example from the cist at Culdheth, Inverness, which was associated with a string or collection of disc beads, interpreted variously as a necklace, a belt or the decoration of a fringed garment (Low 1929; see also Simpson 1968; material identified by Davis and Wilthew (pers comm) as jet (fastener) and lignite coal (disc beads)).
Table 1. Dimensions of disc beads from various sites. All from disc-bead or disc-and-fusiform-bead necklaces unless specified.

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<th>Mean thickness</th>
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The 'jet'

The combination of disc and fusiform beads found in both Cists VII and IX is not uncommon in such elaborate Early Bronze Age burials.

The group of objects in Cist VII recalls the disc-and-fusiform-bead necklace with a triangular flint flake found at Balmerino, Fife (NMS EQ 552-554: Hutcheson 1902). It is also very similar to Knockenny, Glamis, Angus, a cist with 17 disc beads, 3 fusiform beads and fragments of a tripartite bowl Food Vessel (NMS EQ 427–8: Edwards 1931, 419–20).

The disc-bead necklace in Cist IX belongs to a series of well-made, remarkably uniform necklaces or other collections of beads such as Culduthel, Inverness (Low 1929), Cist 4, Dalgety, Fife (Watkins 1982) and Stoneykirk, Wigtownshire (Mann 1902).

The beads in Cist VII are comparatively small and fat (with the smallest mean diameter of those studied in detail: see Table 1), although those from Cist IX are rather thinner, having a mean diameter very close to the fine set from Cloburn, Lanarkshire (Pollard et al, in prep), these last were considerably larger in diameter. The main conclusion to be drawn from Table 1 is that the two sets from Almondbank compare best with each other, thus reflecting the position with the Food Vessels.

Conclusions

In contrast to the 'lack of uniformity in both ritual and construction' evident from the structural evidence of the Almondbank cist cemetery, the whole finds assemblage hangs together remarkably tightly. It displays a homogeneity of evidence of deposition which appears to reflect the working-out of very similar, and particular, ideas of object interment. However, unusually, it seems that the dead at Almondbank were afforded either a Food Vessel or a jet necklace. This was not the custom elsewhere in Perthshire, eg Easter Essendy (Thoms 1980), or in Angus, eg Knockenny above, or Fife eg Balfarg (Barclay and Russell-White 1993) and Dalgety (Watkins 1982).

Taken as a whole, the Almondbank finds assemblage, dominated as it is by Food Vessels and disc-and-fusiform-bead necklaces, is rather similar to that from Dalgety, which has been discussed at some length (Shepherd, in Watkins 1982). The role of such disc-and-fusiform-bead necklaces in Early Bronze Age burial rituals has been further examined in the context of the Balfarg, Fife discoveries: see Shepherd in Barclay and Russell-White 1993. These sites, and the other comparanda and useful table of radiocarbon dates for Food Vessels in central and eastern Scotland produced by Cowie and Ritchie (1991; cf Table 2 below) in discussing the high-status cist cemetery at Gaineybank, Kinross, provide an adequate context for the classic Early Bronze Age cemetery at Almondbank.

Comment on the site (M E C Stewart)

It is possible that the total number of cist graves in the cemetery was twelve. According to the driver of the mechanical digger, one might have been destroyed before he realised what it was. On the Ordnance Survey second edition 6-inch map (Perthshire, sheet LXXXV.SE, 1901) the discovery of a 'Stone coffin and urn' is marked just over a quarter of a mile to the E on the western margin of Almondbank village. In the current edition of the map the information has been altered to 'Cinerary urn in cist 1830'. This may indicate an even greater extension of the burial area or possibly a neighbouring cemetery. In five out of six cists the occupants had died before the age of 30. Some of the cists lay so close together that, if they were not contemporary, there must have been some surface indication of their presence.

Cists VII and VIII lay at the same depth with only 10° of difference in their orientation. Though they do not share a common side stone there is a gap at the W end of the S side of Cist VIII, which could have been compensated for by the N slab of
Cist VII. These two cists give the impression of having been built at the same time.

There is a variation in both ritual and construction. Some cists were empty apart from their burial contents. Other had been deliberately filled with gravel and in two instances hand-sized stones had been added in the upper levels. There was obviously a shortage of cover stones. Several were already badly weathered before use and were found disintegrating. Cist XI had several small cover stones over the grave. Some cists had no cover at all. The elongated boulder at the centre of the small surface cairn over Cist V could well have been regarded as a token cover stone. Cists II, V and VI were more carefully constructed than the others, Cist II having a particularly fine cover stone. Both II and V contained evidence of cremation or at least burning and Cist II contained the bronze awl and a Food Vessel. Cist VII was another well-made grave though not in the same part of the cemetery as the others. It contained a disc-and-fusiform-bead necklace while Cist X again associated carbonised material with a Food Vessel. By way of contrast Cists I, III and IV were built of relatively small stones and had poorly chosen thin slabs by way of covers. There had been no grave goods and no attempt to infill the cists with gravel packing.

All the cists except IX lay along a NE/SW alignment.

The piece of carbonised wood lying on the upper edge of the stones in the NE corner of Cist V was reminiscent of a somewhat similar discovery in association with a short cist containing a Beaker burial in the long barrow of Dalladies near Edzell (Piggott 1972). It is interesting to note that the necklace in Cist IX, also under charcoal, showed no sign of having been burnt.

Recent discoveries (G J Barclay)

The Almondbank cists are unexceptional in the corpus of eastern Scottish burials. The radiocarbon dates, particularly at the time of the excavation, were (and still are) valuable additions to the limited number of dated Food Vessels (see Table 2 below).

Dr Stewart’s comments on the possibility of there being more burial activity in the area has been shown to be perceptive. In 1988 further gravel quarrying in the area revealed another burial site, at Loanleven, just over 400m to the WSW (Lowe 1992). An apparently circular enclosure, probably originally 20m in diameter, contained four cists. Two contained inhumations; one, accompanied by a ring-marked stone, was radiocarbon dated to 1670±50 BC uncal (2139–1881 BC cal (GU-2543)). The other two cists contain cremations, one accompanied by a Food Vessel, the other by a plano-convex knife.

Dr Stewart’s Almondbank acknowledgements

I owe a great debt of gratitude to the Forestry Commission and especially to the staff of the East Conservancy (as it was in 1973–75) for their help and encouragement. In addition to the authors of the specialist reports, I would like to thank many friends and colleagues, particularly Miss Jean Comrie who shared the responsibility of the excavation and was always ready to dig, to draw, to photograph, to discuss and advise, and to provide essential transport.

Finally my appreciation to Mr Danny Wards, the JCB driver, who extracted gravel with such ease and finesse that we were able to excavate 11 short cists with the minimum of damage.
2 Westhaugh of Tulliemet

Unfortunately no plans of this site could be located, although Dr Stewart had prepared a draft report. Three cists, found during the construction of farm buildings, were excavated in 1970 (Illus 8). In 1891 a Food Vessel had been recovered from a cist on the same farm; the pot, now in Blair Castle museum, is also reported upon below.

The excavation (M E C Stewart)

The cists lie in a gravel flood plain 620m NE of the E bank of the River Tay at approximately 60m OD (NGR NN 9865 5120). The first intimation of the graves was when two workmen, employed in building cattle courts at the farm of Westhaugh, brought a broken Food Vessel (SF13, Illus 11) to Perth Museum on Friday, 15 May 1970. They reported that during the building operations two cists had been discovered in the eastern court of the northern range. They had lifted the pot from the larger of the two cists but had left the skeleton untouched. When Mr Davidson, then Curator of Perth Museum, visited the site on Sunday, 17 May he found the larger cist had been back-filled.

Cist I. On 25 August the larger Cist I was relocated (Illus 9). Originally it had had a cover stone but this had been smashed when the cist was found and the pieces later used in the back-filling. The cist was aligned ENE-WSW. The E slab measured 0.66m by 0.60m. The top tapered in thickness from 0.07m at the N end to a knife edge at the S end. The N side was formed by two slabs. The eastern slab measured 0.56m by 0.32m and was 0.07m thick. It had been set well within the E end slab, which overshot it by as much as 65mm but had left a gap of 0.20m, which had been filled in by a thin slab 0.49m by 0.22m by 0.02m. This slab had been pushed forward out of position by the pressure of gravel behind it. The S side was also formed by two slabs, the larger of which measured 0.61m by 0.60m by 0.08m and had been set to correspond with the larger of the two slabs on the N side. It lay outwith the S end of the E slab and 0.30m from it leaving a gap which had been filled by a slab measuring 0.56m by 0.32m by 0.07m. It was set forward of the line of the S side but made an exact joint with the S end of the E slab. The W end slab measured 0.64m by 0.52m and the upper edge
tapered in thickness from 60mm to 5mm at the S end. Partly as a result of extreme thinness and partly because of pressure from the gravel behind it, the southern 0.18m of the stone had broken on the line of a vertical fracture. The remainder of the stone was pressed towards the interior of the cist. At either end of the W slab there were gaps. At the N end the slab overshot the N side slab by 0.10m and the respective upper edges were the same distance apart. At the S end the fracture had caused a gap between the upper edges of the W end and S side slabs, and this gap had been filled in by a small slab inserted on edge. This would imply that the fracture had occurred when the cist was built. The fact that the W end slab, unlike the other wall slabs of the cist, was backed by loose gravel rather than hard subsoil, might indicate that this slab was the last to be inserted and that gravel had to be shovelled in behind it. Several small flat slabs laid in packed earth, not gravel, had been placed over the top of the W end slab possibly to even up the seat of the cover stone.

The cist was excavated to a depth of 0.55m below the top of the end slabs, at which point the bottom of the N side slab had been reached. From the infill a number of bone fragments belonging to an inhumation burial were recovered.

Cist II (Illus 10). The smaller cist II had no cover, was filled with gravel, and was apparently undisturbed. When excavated, it produced a quantity of cremated bone and several sherds of a Food Vessel. Only the southern half of the E end slab of Cist II was visible at the point where it emerged from under the concrete footing of the N wall of the cattle court. The N side slab was missing. The S side slab was disproportionately long. At 0.84m by 0.34m it overshot the E end slab by 0.28m. The top of the W slab had been pushed outwards thus forcing the foot of the slab out of the ground. The slab was triangular 0.42m in width at the top but only 0.13m at the foot and 0.43m in height. The top edge was 0.07m in thickness. The cist was aligned NE and SSW.

A radiocarbon date of 1465±55 BC uncal (1884–1537 BC cal (AA-22181)) has been obtained from human bone fragments.

Cist III. One of the workmen reported that when laying the concrete foundations for the N wall the top of a large slab on edge had been exposed 0.82m E of the W wall of the court. Excavation revealed this slab, which measured 0.95m by 0.61m by 0.15m and formed the S side of Cist III, which was aligned ENE and WSW. There was no cover stone, but on the edge of the roadway, immediately outside this particular section of the N wall, lay a large flat slab 1.55m by 0.68m by 0.19m, which may have been a
capstone. Excavation was difficult because of the cramped conditions close to the concrete wall footing and the interior of the cist could not be lowered beyond 0.60m, at which level the foot of none of the wall slabs was visible. In the fill was finely comminuted cremated bone. The E slab measured 0.37m by 0.51m and was 0.07m thick at the exposed southern end. As far as could be seen the N slab, which measured 0.52m by 0.45m, was closely set against it. The S slab overshot the E end slab by nearly 0.26m, but at the other end there was a gap between its top edge and the top edge of the W slab. This gap had been rather clumsily filled by two stones laid against the outside of the SW corner. The W slab, which measured 0.49m by 0.57m by 0.10m, was out of alignment and so there was a corresponding gap at the NW corner between the W end slab and the N side slab, but the extent of this could not be determined.

The human bone (Richard Grove)

The human remains from Tulliemet survive in five bags; one containing uncremated bone fragments, three with a quantity of cremated bone and the fifth with a small number of cremated bone fragments mixed with soil and small fragments of pottery. Some confusion exists in the labelling of these bags: the uncremated bone is labelled ‘Haugh of Tulliemet NN Bone Fragments Cist II’ yet the report states that the remains of an inhumation were discovered only in Cist I. One bag is assigned to Cist III and the bag with soil and pottery to Cist II. The remaining two bags, which contain by far the greatest number of cremated fragments, are not assigned to a cist but one has a circled ‘2’ and the other a ‘3’ on their labels (following the ‘1’ on the bag containing the uncremated bone). The section headings below are transcriptions of the labelling on the bags.

HAUGH OF TULLIEMET NN BONE FRAGMENTS
CIST II, ‘1’.

This context contained 13 human bone fragments which could be identified usually to the left or right side. There are a further 13 small longbone fragments and 6 very small unidentified fragments. No bone is complete and all the remains are fragile and eroded. There is no evidence of burning. There is no reason to believe on anatomical grounds or in their general condition that the bones come from more than one individual.

The majority of bones are longbone fragments (principally from the femur but one of the left tibia and one from the left humerus). The two largest fragments are the distal half of the shaft of the left
femur and the posterior strip – the linea aspera – of the right femur. There are three small fragments of the distal articular surface which prove to be fused; this occurs approximately from 16–23 years (Brothwell 1981).

Finally there are three skull fragments: one small unidentified part of the cranium, a small area of the occiput and a fragment of the left side of the frontal bone, c 46mm wide stretching some 86mm from the left orbit towards the coronal suture. The surface of the bone is eroded but shows at least two blows with a sharp instrument, both struck obliquely, one from above left so that a sliver of bone 25 x 9.5mm has been removed with a further two smaller slices at the same angle and, therefore, possibly in the same action. The other blow has taken a slice of bone 25.9 x 16mm just anterior to the first and above the left orbit. This has come from below and the left. One cut at least remains ‘clean’ compared to the surrounding decayed bone surface and given the circumstances of the cists’ discovery the damage quite possibly occurred at this time.

**HAUGH OF TULLIEMET NN CIST II BONE, POTTERY SHERDS AND SOIL.**

Approximately 20 very small cremated fragments. The largest and only identifiable bone – 17.9 x 10.9mm – is a fragment of cranium.

**HAUGH OF TULLIEMET NN CREMATED BONE FRAGMENTS CIST III.**

This bag contained over 253 fragments weighing 130gm. The largest fragment – of longbone – was 36.3mm. One large piece was the articular surface of either a proximal femur or humerus. Identified fragments were the distal end of either a proximal or middle phalanx of the hand and 7 skull pieces.

If it is assumed that the bags labelled Cist II and III are correct it is possible that those labelled ‘2’ and ‘3’ may belong to either burial. In appearance – the degree of fragmentation and burning – all bags are similar; the majority of bones are white, occasionally buff coloured but very few are grey, indicative of thorough cremation.

**HAUGH OF TULLIEMET NN BONE FRAGMENTS ‘2’.**

This bag contains over 350 fragments (with a lot of very small pieces approaching dust) and weighs 425gm. The largest piece is a fragment of cranium 44.2 x 45.2mm there are also 41 other skull fragments and the roots of three teeth, one of which is probably a canine. There are 6 vertebral fragments, some of which show that the annular rings are fused – the individual is therefore an adult – one distal end of a phalanx a probable metacarpal and a right lunate.(carpal bone of the hand).

**HAUGH OF TULLIEMET NN BONE FRAGMENTS ‘3’.**

This bag contained over 725 fragments and weighed 420gm. There are 35 recognisable cranial fragments including the right orbit. There is also a fragment of maxilla. Other bones include the distal end of the left humerus, the distal phalanx of the thumb and three other fragments of phalanges; there is also a left lunate and a possible pisiform.

It is not possible to state whether there is more than one individual present in each or indeed in both bags together. The presence of so many skull fragments can be explained by the fact that even very small pieces of the cranium are easily recognised. The presence of so many hand bones in both bags is curious. The two lunates do not match in size but the heat of the cremation may have distorted one bone more than the other.

**Food Vessels from Westhaugh of Tulliemet**

(A Sheridan)

All three vessels are shown on Illus 11.

**SF 12. Pot found 1891 (currently housed in Blair Castle). Label in Blair Castle states: ‘Found in a cist at Haugh of Tulliemet by Robert Kennedy, farmer, 12 August 1891’. Virtually complete ‘Yorkshire Vase’ Food Vessel, with two surviving imperforate lugs (from an original four) on the shoulder groove, and whipped cord impressions on the rim bevel and over the exterior surface. The decorative scheme (see below) is not of the ‘classic’ Yorkshire Vase linear herringbone type, but similarly ‘unorthodox’ schemes are known from pots of this shape in Yorkshire (eg Gilling: Kinnes and Longworth 1985, no 137), and clearly potters were not restricting themselves to a standard design.

Shape and size: height 128mm; external rim diameter 150mm; base diameter 74–82mm; wall thickness c 16mm. Rim bevelled, and with a narrow facet on the outer edge; shoulder groove around 23mm wide, its lower edge lying just above the pot’s mid-height. The overall shape of the lugs and their method of attachment is shown by one example, which had been detached but is now refitted (see illustration). Belly curves in to a pedestal base; base flat on outside and inside.

Colour, surface finish, inclusions and other notable features: core blackish, exterior a variable pinkish-buff/grey-buff/light brown, interior light brown and pink-buff. Surfaces covered by a thick (1–2mm) slip. Inclusions are hard to see, owing to the pot’s near-complete state and the presence of slip; but they appear to be sub-angular and rounded, small to medium-sized grits of a blackish mineral, representing material which has been crushed and deliberately added as temper. The largest visible grit, protruding through the interior surface, is c 8.5 x 4mm. There is a clearly defined cereal impression on the base; the cereal has been...
Illus 11. Westhaugh - Food vessels, (top) SF 12, (middle) SF 13, (bottom) SF14.
identified as barley, probably naked six-row barley (*Hordeum vulgare var. nudum*), by Camilla Dickson of the Glasgow University Institute of Biomedical and Life Sciences. The interior has a patch of blackish encrusted material, extending in an irregular oval shape over part of the base and lower body – perhaps the residue of the pot’s evaporated former contents. There are also traces of a thinner, patchy blackish-brown encrustation on one side of the pot’s exterior; this may be a post-depositional accretion.

Decoration: impressions of loosely whipped
cord, occurring both as 'maggots' and as continuous linear stretches, and executed relatively untidily, in other words, the potter did not attempt to achieve a neat, precise, consistent design. The rim bevel has running chevrons which change direction part way around the circumference, and the facet on its outer edge has a discontinuous horizontal line. Above the shoulder groove is a variable design: in some places, a line of oblique maggot impressions runs above a row of inverted 'V's, while elsewhere there are just arcs of elongated maggots. The shoulder groove has running chevrons, and below it there is a line of diagonal maggots, three meandering continuous lines, a row of roughly vertical maggots and a discontinuous line, the latter running around the pedestal.

**SF 13. Pot from Cist 1 (PMAG, unreg).** Complete (reconstructed) bipartite Vase Food Vessel with shoulder groove and all-over herringbone decoration. But for the absence of lugs, it would be a classic 'Yorkshire Vase'.

Shape and size: height 134mm; external rim diameter 147.5-149mm; base diameter c 64mm; wall thickness 11-13mm. Rim bevelled and faceted on its outer edge; upper neck and shoulder groove concave; shoulder groove 14-17mm wide, and located within upper third of pot. Belly conical in profile, narrowing to a pedestal base, which is flat on the inside but slightly dished on the outside.

Colour, surface finish, inclusions and other notable features: core blackish-grey, exterior variable bluish-grey/grey-buff/light brown, interior bluish-grey/light brown. Slipped, and exterior surface has a low sheen. Inclusions partly obscured, but comprise sub-angular crushed fragments of a dark grey crystalline rock; the largest visible grit is 12 x 10mm. Judging from the pot's interior surface, inclusions appear to be abundant (c 20%). There is a dark stain or discoloration on one side of the interior, stretching from below the bevel to just below the bottom of the shoulder groove. The original position of the pot in Cist 1 is unrecorded, but if this stain represents the residue from its evaporated contents (rather than being a by-product of the firing process), then this implies that the pot had been resting on its side. There is also a small patch of rootlet-like material – a post-depositional accretion – adhering to one part of the rim bevel, and just above the base there are two impressions of straw or grass. When this pot was first published (Ritchie 1970), it was in pieces, and Ritchie remarked, 'The fragmentary condition of the Food Vessel shows very clearly how the pot was built up.' Some of the ring joint lines are still visible as cracks.

Decoration: the rim bevel is decorated with fine twisted cord impressions in a herringbone pattern, and its external facet has oblique whipped cord 'maggots'. Immediately below these are two narrow lines of tightly whipped cord impressions. The rest of the exterior is covered with an incised herringbone design.

**SF 14. Pot from Cist 2 (PMAG, unreg).** Heavily restored open Bowl Food Vessel, coarse in fabric and decoration; sherds and fragments which could not be positioned in the restoration are stored separately. Contra Ritchie 1970, this is not an Irish Bowl Food Vessel; rather, its affinities are to be sought amongst a 'miscellaneous' category of variously shaped, generally coarse bowls (eg Kenny's Hilllock, Moray; NMS EE 6; Reswallie Mains, Angus: Coutts 1971, no 97a).

Shape and size: height 99mm; external rim diameter 173mm; base diameter 95mm; wall thickness 8-15mm (on base, max 19mm). Rim rounded and slightly everted; belly globular, with a very modest mid-height shoulder noted on one of the unattached sherds; low pedestal base. Base has an internal omphalos, and is slightly dished on its exterior.

Colour, surface finish, inclusions: core blackish-grey, exterior red-brown, interior grey-brown; probably slipped. Fabric coarse and flaky, with abundant sub-angular blackish grits of a fine-grained rock (c 30%) up to 8 x 6mm in size, many protruding through the surfaces. Some of these are shown in the illustration.

Decoration: crudely executed linear and stab design, featuring incision, (thumb?)nail impression and impression with a roughly triangular-ended implement. Upper half of body covered with incised, roughly horizontal lines, with a band of vertical incised lines and stab marks around the vessel's mid-height. Below this, further horizontal lines, made by continuous nail impressions and (at the bottom) incision.

**Discussion of pottery**

The presence of Yorkshire Vase Food Vessels and of a coarse Bowl Food Vessel at Tulliemet is quite in keeping with the broader pattern of east central Scottish Food Vessel pottery. The Blair Castle collection, for example, contains further examples of Yorkshire Vases from near Tom-na-Croiche (Balnaguard) and Kincraigie, whilst the aforementioned bowl from Reswallie Mains, Angus, offers a generalised parallel for the coarse bowl.

As in England (Manby 1994), the dating of Food Vessels in Scotland is severely hampered by the shortage of information (see Table 2), and there is currently no way of determining whether the apparently late dates from Reswallie Mains, Traigh Bhan and the Ardnave middens are anomalous.
The remaining dates (excluding the obvious anomalies) lie between c 1800-1400 BC / c 2300/2100-1700 BC cal.

There is no date yet for a classic ‘Yorkshire Vase’ in Scotland (although some of the Kilellan pots are Yorkshire Vase-like). However, the recent programme of dating Food Vessels in Ireland has indicated that their use there was relatively early (c 1800 BC/ c 2300-2100 BC cal: Brindley 1995). English dates for Yorkshire Vases are restricted to those from Garton Slack Site 7, Yorkshire (1600±70 BC uncal (2131–1700 BC cal (HAR-1236): Manby 1994), Harland Edge, Derbyshire (1490±150 BC uncal (2184–1425 BC cal (BM-178): Riley 1966) and Tallington, Lincolnshire (1460±165 BC uncal (2195–1320 BC cal (UB-450): Simpson 1976). These suggest that their currency may have been slightly later in England than in Ireland, although this small sample of dates may not be representative.

Comment on the site (G J Barclay)
The finds at Westhaugh are entirely typical of Early Bronze Age burials in the area. Other burial finds in the vicinity include those published in this paper and the sites excavated at Grandtully by Simpson and Coles (1990).
3 Farleyer cist

A single large cist was exposed during farming operations in the field below the Aberfeldy to Keltneyburn road (NN 8270 4920; Illus 7B and 12).

The excavation (M E C Stewart)

In April 1966 a cist was exposed during ploughing operations in a field S of the road from Aberfeldy to Coshieville near Farleyer. The cist was oriented NW-SE. Only the E side slab and the S end slab remained. This gave approximate dimensions of 0.9m by 0.6m. A rescue excavation was carried out by the [then] Breadalbane Archaeological Society prior to the removal of the stones to facilitate further ploughing. When the cist had been fully exposed an additional slab was found behind the existing end slab, presumably to fill a gap on the E where the end slab had not reached the required length (Illus 13). A small internal slab had also been placed in position at this point. At the bottom of the cist there was considerable black staining with fragments of cremated bone. This lay directly on top of the sticky yellow sand, which forms the subsoil. On the W side of the cist the yellow sand
formed a margin along what had been the edge of the missing slab. Three years earlier a stone had been removed and was still lying at the side of the field. It measured 1.13m by 0.39m by 0.18m and would have exactly fitted the gap on the W side of the cist. It is probable, therefore, that at some time previously the missing cover stone and end slab were removed, causing the W side slab to fall inwards. This disturbance had caused a small amount of bone and black staining to fall to the outside of the line of the W slab. The remaining stones rested on the hard subsoil and no sockets had been dug.

The cremated bone was very soft and fragmentary and heavily compacted with sticky dark earth, and was therefore unidentifiable.

Dr Stewart expressed herself as indebted to Mr Donald Fraser for the measured drawings.

4 Muirhall Farm cist

Unlike many of the other sites, Dr Stewart had not prepared a draft report for this cist, nor are there any site illustrations.

The excavation (M E C Stewart)

A short cist approximately 1m in length and 0.62m in breadth and oriented E/W was found on the W face of a gently sloping ridge above the S bank of the Langley Burn (NGR NO 142 249).

The N and S sides of the cist measured 1.05m and 1.13m respectively. The S slab, which was thin and had no real footing, was cracked and disintegrated during the excavation. The N slab was much more massive. It was possible to excavate down to the foot of this slab at one end. There was a footing of 0.35m below the level of the burial and the slab rested on hard packed natural gravel.

Hand-sized cobbles had been carefully wedged into the NE and SW corners of the cist. The E end stone, which was also found to be cracked, fell and broke during work in the cist. The W end slab measured 0.7m by 0.75m and like the N slab was found to have a deep footing 0.35m below the level of the burial. At the SE corner, on a level with the top of the side slabs two thin overlapping slabs fitted into the cist. They probably served to support the very heavy corner stone when it was in situ.

The cist contained the very well preserved skeleton of a young adult between 18 and 24 years of age. The head, which lay to the E, was pillowed on a slight mound of pure sand. The body lay on its side with the knees drawn up to the chin and the feet braced against the W end slab.

With the skeleton was a knife of reddish flint, described below. The cover stone, which measured 1.23m by 1.27m, is very much too large for the size of the cist. It was pointed, shouldered and weathered at one end, which gave the impression it was in fact a standing stone deliberately truncated. Mixed in with the human bones were fragments of a pig. Richard Grove has identified them as Ulna, R. shaft; the proximal end above the lower articualar surfaces is missing. Distal end unfused. Radius, R. distal end unfused; ?fragment of hyoid or vertebra; Scaphoid, cuneiform, lunate, pisiform, R.

A radiocarbon date was obtained from the bones of the pig in 1997: 1490±55 BC uncal (1900–1623 BC cal (AA-22180)).

The most surprising find in the cist was a collection of 41 spines of a sea urchin. Only one of these was known from MSS in NMRS. Mr Mark Simmons of Perth Museum and Art Gallery kindly provided an identification of it in 1996. It is of Psammochinus miliaris, a minor pest of oyster beds, common on all British coasts, found in the intertidal zone. Forty further spines from the same species were subsequently located: they are primary spines (10mm by 1mm to 4mm by 0.5mm in size), secondary spines (c 5mm by 0.4mm) and other very small spines (c 3.5mm by 0.1mm). The number of spines recovered would represent less than a quarter of those on an urchin.

The knife from Muirhall Farm (J Close-Brooks)

SF 15. Illus 14. Knife made on a thin flake of pinkish brown flint with cream-coloured spots, some cortex remaining on the striking platform. The knife is carefully retouched on the dorsal surface along both edges, leaving a slightly denticulate edge. The tip of the knife is missing, and a secondary flake has been removed from the ventral surface near the butt. Length 47mm, width 2mm. The knife has been examined microscopically for signs of wear by Miss Rosemary Hope and Miss Caroline Wickham-Jones, who report that it is mint condition with no signs of utilisation.

The plano-convex flint knives found in short cists in Scotland may be divided into two groups; the first consists of flakes retouched on the dorsal surface along one or both edges, and the second of flakes retouched all over the back, the type sometimes called ‘slug knives’. The Muirhall knife belongs to the first category. Such knives have
5 White Cairn, Glen Cochill: cairn, cist

The excavation

Dr Stewart had not prepared a draft report of this excavation. Some information was incorporated in Stewart 1959 but the plans have not before been published (Illus 16, 17):

‘White Cairn stands in Glen Cochill near the summit of the watershed between Dunkeld and Aberfeldy [Illus 15; NGR NN 9072 4116]. It was excavated in advance of almost complete removal. The cairn had originally been 60ft in diameter with a circumference demarcated by a ring of contiguous boulders. Beyond this there had been a circle of free-standing boulders set at irregular intervals. The primary burial had consisted of a short cist covered by a massive capstone. The cist had been completely filled with fine river gravel, from which no relics were recovered. The cover stone had slipped due to the partial collapse of one of the underlying side slabs and from the lowest point of the upper edge of the cover stone fragments of a long-necked Beaker were found. The paste of the Beaker was coarse and poorly made and the inner bevel of the rim was reminiscent of Food Vessel ceramic. The monument had been known locally as Carn Ban or the White Cairn and quantities of white quartz had been incorporated among the cairn material.

The Beaker sherds were of a type not hitherto found N of the Forth and Clyde isthmus’ (Stewart 1959, 80–1, 83)).

A fragment of Beaker from White Cairn, Glen Cochill (A Sheridan)

SF 16 Illus 18. (PMAG accession no 211) Part of rim and neck of Beaker, previously described as ‘long-necked’ by Margaret Stewart (1959, 81 and fig 7) and ‘possibly Developed Southern: Western variant (S2(W))’ by David Clarke (1970, 520). Clarke’s classification is debatable: on grounds of shape and decoration, it could fall within several of his ‘northern’ and ‘southern’ categories. According to the Lanting and van der Waals scheme (1972), and to Shepherd’s scheme for Buchan (1986), it would fall within steps 5–6.

Shape and size: estimated rim diameter c 150mm; height of neck 64.5mm; wall thickness 7.5–10.7mm. Rim has internal undecorated bevel; neck slightly everted; overall height and shape of
lower body not precisely determinable.

Colour, surface finish, inclusions: core blackish, exterior reddish-brown and interior mid-brown; slipped, and exterior polished to a low sheen. Inclusions: fairly abundant (c 20%), angular and sub-angular grits of a black-brown mineral, up to 6.5 x 4mm in size. This material has been deliberately crushed and added as temper. Its abundance, and the fact that numerous grits protrude through the surfaces of the pot, lend the Beaker a slightly coarse appearance.

Decoration: zone of shallow comb-pressed motifs on the neck, made using at least two rectangular-toothed combs (one possibly c 34mm long, one short). Six horizontal lines frame a panel comprising rectangular metopes separated by four vertical lines. Complete metope consists of a saltire design, with alternate quadrants filled with criss-cross lines; fragmentary metope may have a criss-cross-filled lozenge. Lower edge of zone fringed with a running chevron design, executed in short comb impressions.

Discussion of pottery

The relative rarity and diversity of Beakers in Perthshire has been remarked upon in the past (Reid et al 1986). Nevertheless, the Beaker from Tippermallo (Clarke 1970, fig 609) offers some points of comparison, with its sinuous neck profile and a fringed panel of decoration on its neck. For parallels for the specific metope motif featuring a parti-filled saltire, one has to look further afield: Clarke (ibid) illustrates examples from Yorkshire, Derbyshire, southern England and Wales.

Regarding the likely date of this Beaker, unfortunately, the recent British Museum’s dating programme (Kinnes et al 1991) has thrown the

matter into some confusion. By conventional typo-
chronological standards, it would be regarded as a
relatively late type. Geographically, the closest
dated comparable Beaker is the step 5 example
from Keabog, Kincardine and Deeside (Shepherd
and Bruce 1987), with its fringed zone of complex
panel and metope decoration: the associated
skeleton was dated to 1780±60 BC uncal (2446–
1960 BC cal (GU-1122)).
6 Loch Luig (site also known as Connachan Farm): cairn

Dr Stewart had not prepared a draft report on this site. The site notebook survives, however, together with excavation plans, which allowed the following note to be prepared.

The site lies at NGR NN 8894 2643, 50m SE of the present edge of Loch Luig, on the watershed between the Shaggie Burn to the W and the catchment of the River Almond to the E. In August 1972, with the help of members of the Strathearn Archaeological Society, the first quadrant of a low circular stony area measuring 12m by 12.5m was excavated. This showed that the edge of the stony area had been demarcated by a boulder kerb. The individual stones averaged 0.5m in length and were approximately 0.1m apart. At a distance of between 1.75m-1.8m further towards the centre there was a second concentric setting of boulders of the same size and set the same distance apart.

A second season of excavation in 1973 cleared the SE quadrant. Within this trench the cairn material was contained within a ring of 16 contiguous boulders, beyond which there was virtually no spill of cairn stones. There had been deep disturbance at the centre of this cairn but elsewhere the boulder base had been carefully set in a series of broken concentric rings on the underlying gravel. There were no finds.
7 Carse Farm stone circles

Two stone circles were excavated in 1964 (Illus 19). A manuscript excavation report had been prepared by Dr Stewart for Carse Farm 1 but not for Carse Farm 2. Two plans for Carse Farm 1 were located in the archives of Messrs Finlayson and Campbell, and others, with photographs, formed part of the Margaret Stewart collection in NMRS.

The only find that can now be located is the Collared Urn from Carse Farm 1, in Perth Museum.

Carse Farm 1 excavation (M E C Stewart)

The site lies on the northern margin of the lowest flood plain of the river Tay W of Aberfeldy, 42m S of the main road from Aberfeldy to Fortingall (NGR NN 802 488). The position is singularly inconspicuous being at the base of the steeply rising ground which forms the northern margin of the valley.

Before excavation the site could be identified by three upright stones set on the periphery of an area 5.28m by 4.27m. At the centre of the enclosed space a fourth stone lay prostrate. All four stones are mica schists of local origin (Illus 20, 21, 22).

Stone A. The prostrate stone measured a maximum of 1.78m in length by 0.86m in breadth and 0.64m in thickness. One end of the stone has been deliberately ‘keeled’ and this pointed end is ragged and the outlines sharp. This contrasts with the other end, which shows a considerable degree of weathering. During the excavation of the site the socket of the fourth stone was discovered in the SW quadrant and when the excavation was completed the stone was re-erected in its original position.

Stone B, which has intrusive veins of quartz, measured 1.24m in height from ground level by 0.81m across the southern face and is 0.48m in thickness. This stone had been slewed round so that its broadest face was not towards the centre of the enclosed area but faced S. The stone leans towards the N perhaps due to the pressure of large packing stones, which, before excavation, could be seen rammed in against the southern face.

Stone C measured 1.19m in height from ground level by 1.32m in breadth and is 0.56m in greatest
thickness. The broad top of this stone has been heavily cup-marked on a singularly unsympathetic surface. There are 14 cups; the largest of which measured 100mm in diameter. On the southern margin of the upper surface of the stone there is a natural hole 25mm in diameter and 95mm deep. The top of this natural fissure has been enlarged artificially to form one of the cup marks. In addition to the 14 cup marks there is a ‘dumb-bell’ measuring 100mm by 50mm and 130mm by 50mm, and 13mm in depth.

Against the inner face of this stone there was a pit 0.8m by 0.76m, and 0.36m deep and narrowing to 0.53m square at the bottom. The pit was filled with compacted cremated bone lying in sticky black earth with, towards the bottom, sizeable pieces of charcoal. A Collared Urn was lying on its side, almost upside down in the SE part of the pit. A small quantity of cremated bone was found in the bottom of the urn but the amount of cremated bone recovered from the pit was more than could have been contained in the urn. Dr T Murphy has identified the bone as being from a single adult. A greyish black flint flake 25mm by 12mm without secondary working was found among the bones.

After the area of the circle had been cleared it was seen that three shallow pits had been dug in the gravel. Two of these lay between the NW and NE stones and between the SE and SW stones. The edges of the pits were clean and unweathered and had been filled up with brown loam. Their significance was not clear but their position made it possible that they had been used for stabilising props during the erection of the stones.

Stone D measured 1.55m in height above ground level and was 0.71m broad and 0.61m thick near the top. Like Stone B the broad faces of this stone are to N and S - that is not turned towards the centre of the enclosed area. Like C, the top of D is cup marked, the cups being cut in a very unresponsive schist with intrusive quartz veins. The