

Four short cists from north-east Scotland and Easter Ross

Ian B M Ralston*

with contributions by Margaret F Bruce, Kevin J Edwards, Alastair M D Gemmell, N W Kerr, Kirsty A Sabine, Ian A G Shepherd, Nigel H Trewin & Clive L M Warsop
and illustrations by Moira K Greig

ABSTRACT

The results of rescue excavation of individual short cists containing inhumations are reported. Three male burials produced beakers, one accompanied by a higher status assemblage including a copper alloy knife-dagger fragment and evidence for archery. A female inhumation showed evidence of a healed fracture. Radiocarbon dates and palynological and anatomical data are included. Funding for post-excavation work was provided by Historic Scotland.

INTRODUCTION

Between 1975 and 1983, when a member of staff of the University of Aberdeen, the author was approached to examine four short cists, all of which had been identified as a result of agricultural, quarrying or development activities. The following account makes available the principal information recovered from these excavations, which were undertaken with field assistance from respectively: Kevin Edwards, John Smith, Moira Greig and Jane White, and William Watt and Sandra Ralston.

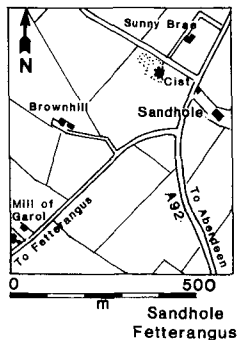
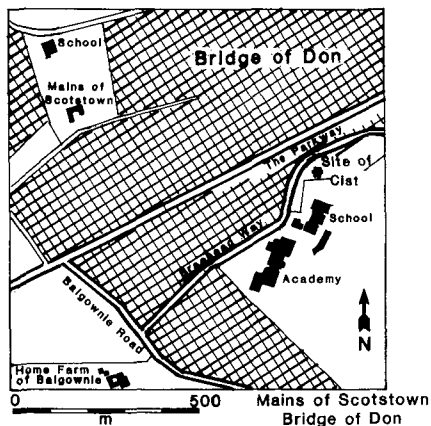
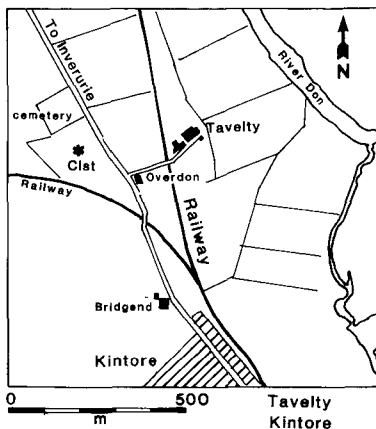
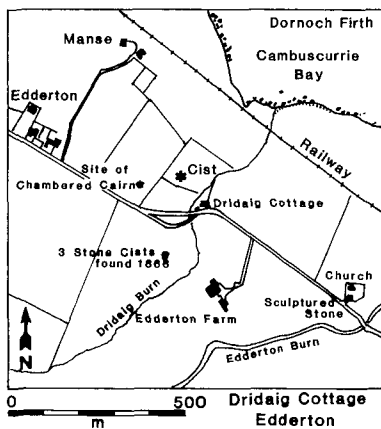
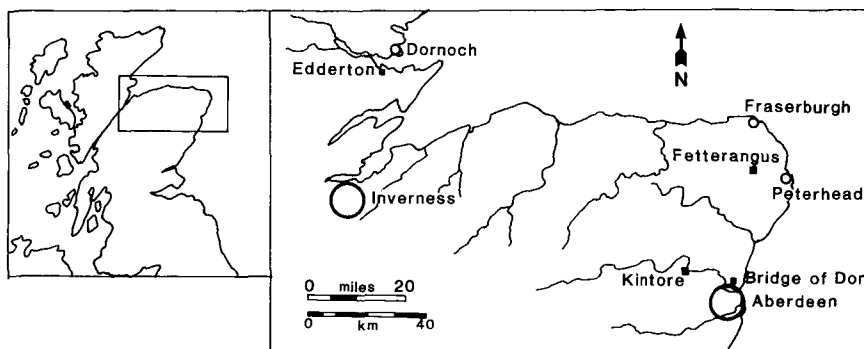
An archive of the project records from each of these excavations has been deposited with the National Monuments Record of Scotland; selected archive reports have been copied to local museums and local authority sites and monuments records.

MAINS OF SCOTSTOWN, BRIDGE OF DON, ABERDEEN (1975)

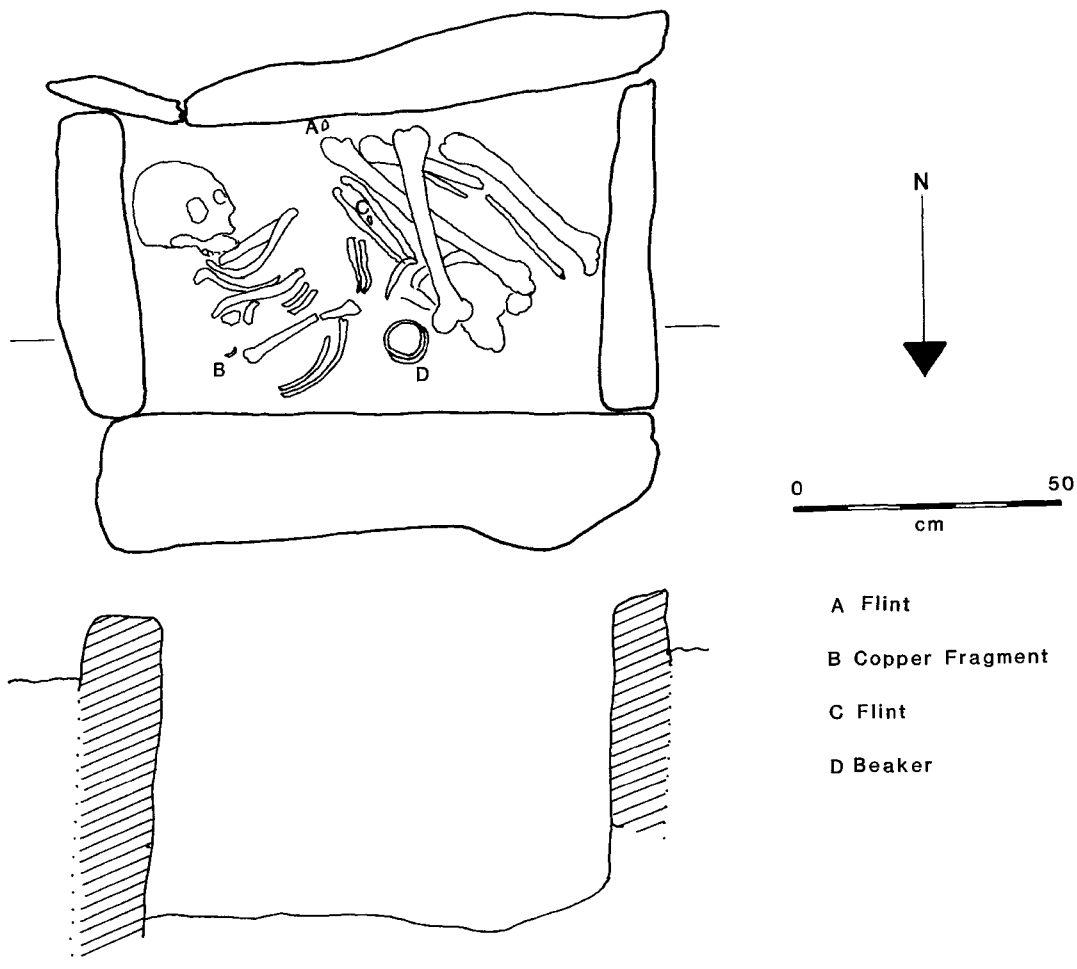
This short cist was discovered by an employee of George Wimpey, the housebuilding company, whilst grading land ESE of Mains of Scotstown, Bridge of Don (NGR: NJ 935 107) prior to the development of the area in May 1975 (illus 1). The discovery of a skeleton in the cist led to the involvement of Inspector Ritchie of Grampian Police; and, through the good offices of the police, the University was contacted.

The cist was located at the summit of a kamiform mound at approximately 70.3 m OD in what

* Department of Archaeology, University of Edinburgh, Old High School, Infirmary Street, Edinburgh EH1 1LT



ILLUS 1 Location maps for short cists at Dridaig Cottage, Edderton, Tavelty, Kintore, Mains of Scotstown, Bridge of Don; and Sandhole, Fetterangus (Based on the Ordnance Survey maps © Crown Copyright)



ILLUS 2 Short cist at Mains of Scotstown, Bridge of Don: plan and profile

had been agricultural land about 650 m ESE of the steading at Mains of Scotstown. Prior to site preparation, this mound, one of a series in land undulating between *c* 66 and 71 m, would have been capped with a thin iron podzol. The mound, consisting of coarse, gravel-rich, sand and gravel, is freely drained, and this factor, despite the slightly acidic character of the environment, will have contributed to the preservation of the skeleton.

THE CIST

The capstone had been removed by the mechanical grader before the excavation took place. According to the grader driver, Mr Tom McHale, it was a very substantial block. The four slabs (illus 2) edging the cist were of the following sizes (all dimensions are maxima):



ILLUS 3 Short cist at Mains of Scotstown, Bridge of Don: the skeleton *in situ*, and the pebble floor, viewed from the west

North slab: length 1.32 m; breadth 0.58 m; thickness 0.25 m

East slab: length 0.72 m; breadth 0.68 m; thickness 0.13 m

South slab: length 1.24 m; breadth 0.56 m; thickness 0.09 m

West slab: length 0.68 m; breadth 0.39 m; thickness 0.09 m

Dr Nigel Trewin contributes the following information on the geological composition of the principal stones. The four principal slabs are mainly of natural shape, being banded by joint surfaces. The tops of two have been carefully worked. The rock is a grey to pale pink granite with a weak foliation picked out by both biotite and muscovite mica. The grain size is 2–4 mm for the quartz and feldspar. All the main blocks are probably from the same source, and judging by the uneven weathering could have been quarried from weathered outcrop. The rock type is not uncommon in the area and it is not possible to suggest a precise source.

The corners of the cist had been sealed with a red clay, which is not available on site. The nearest surface exposure occurs some 800 m away on Cairnfold Farm, but the closest substantial deposit is located at Blackdog Farm, some 4 km distant, towards the coast to the north of Aberdeen (Dr David Chester, pers comm). A floor of water-rolled pebbles had been inserted in the bottom of the grave (illus 3). In all, approximately 80 kg of rounded quartzites, gneiss and granites had been used. The inclusion of white quartz pebbles in conspicuous numbers makes plain that the selection of this material represented a deliberate choice. At the north-east corner of the cist, the pebbles of

the floor were noted as being pressed into the clay luting, indicating that the latter was in position first.

There was no opportunity fully to examine the pit into which the cist had been set, but the indications are that it had been cut economically in the sand and gravel deposits so as to incorporate the cist. Numbers of chocking stones, destined to level up the top of the cist side-slabs, were recovered.

SKELETAL MATERIAL AND CIST CONTENTS

The cist had not infilled with materials either during prehistory or as a result of the passage of the mechanical grader; and so the position of the surviving components of the skeleton was readily discernible. The body lay in a crouched position, seemingly comparatively tightly flexed, with the skull at the east end of the grave facing approximately south. The gravegoods were positioned as follows: the beaker (D on illus 2) stood upright about midway along the north side of the grave, approximately at the small of the individual's back; one flint item lay beside his knee (A); a second flint lay beside his forearm (C). A tiny trace of copper was identified on one pebble of the floor approximately under the individual's spine (B).

The skeletal material

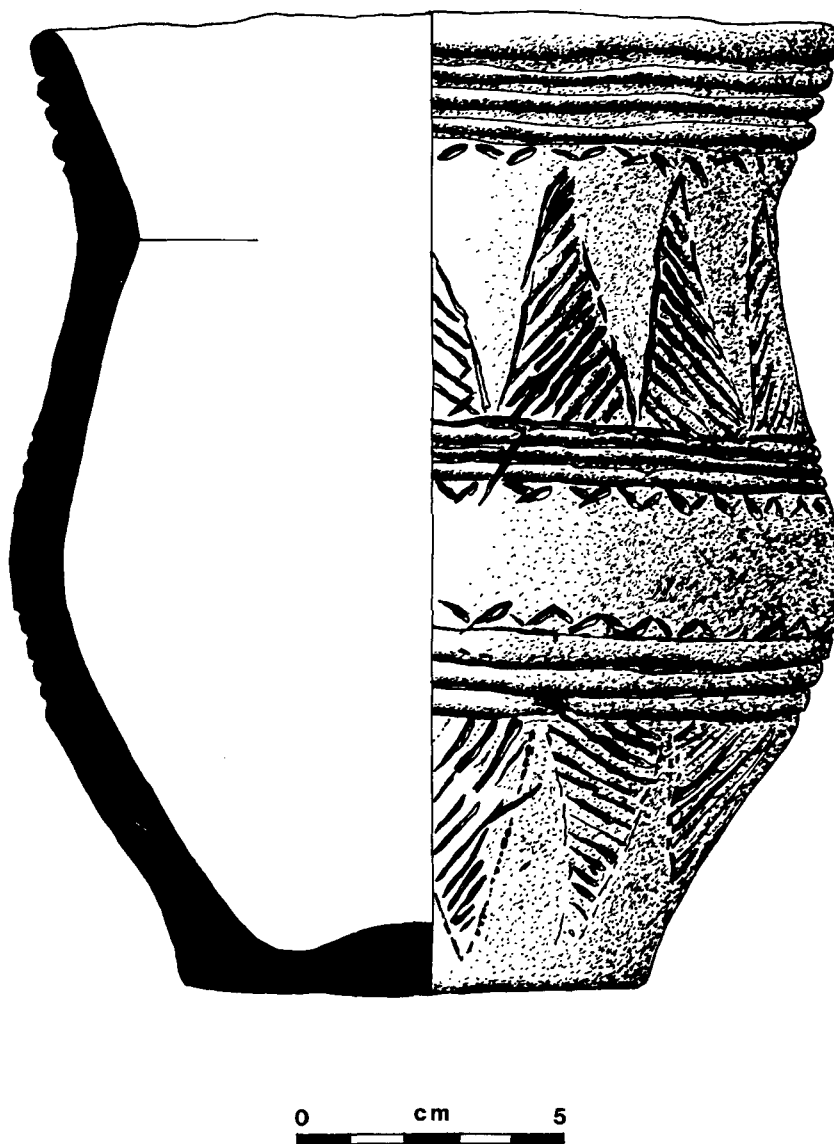
Margaret Bruce

The remains are those of a male, aged about 40–45 years and rather taller than average at about 1.77 m. The femoral shaft diameter falls within the male range identified by MacLaughlin & Bruce (1985). The skull is markedly brachycranic. The skeleton shows some evidence of disease, and dental attrition is marked. There is no evidence as to the immediate cause of death, but evidence of disease is apparent on the innominate bone (possibly a form of tumour), and there is a small lesion, possibly related to an overlying skin condition, on the frontal bone. The skeleton shows the flange frequently remarked on the femur of skeletons from short cists. The pattern of dental wear suggests that the man may habitually have held something in the left side of his mouth. The full skeletal report is in fiche: Sheet 1/A3–A7.

The beaker (ABDMS 00355)

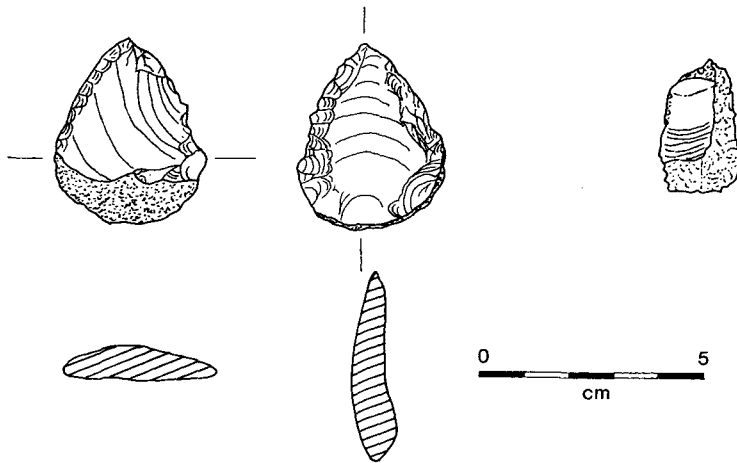
Ian Shepherd

This is a substantial, well-made pot rising from a slight foot into a broadly biconical profile which continues up in a short neck, defined internally by a distinct carination and externally by four deep horizontal channels (illus 4). Its height is 170 mm, belly diameter c 154 mm and rim diameter 148 mm; the base is 81 mm in diameter and the pot is 6 mm thick at the rim. The vessel is complete, with some cracks running from the rim to shoulder. There is a possible grain impression at the top of the blank belly zone. The fabric is hard, evenly fired and biscuity, with crushed quartzitic grits c 2 mm long. Dark brown internally, the exterior varies in colour from pinky red to mid brown, colours produced by the application of a fine slip. The inside of the pot has been hand-smoothed and the outside well burnished. The bottom of the vessel bears the common boss raised during the initial working up of the wall. All the decoration on the pot was produced by use of a toothcomb, apart from the small fringe bands of chevrons which were made by short stabs with a flat, smooth-ended implement, possibly bone. Most of the motifs were impressed when the clay was very plastic. The comb employed was 15 mm long and had rectangular teeth, each at least 1 mm long. The decoration is arranged in five broad zones occupying most of the pot. The principal features



ILLUS 4 Short cist at Mains of Scotstown, Brige of Don: the beaker

are the four deep grooves which to all intents and purposes define the neck and the massive isosceles triangles which cover the upper and lower belly, sitting on or pendant from four prominent horizontal lines. The base is undecorated. There are 17 triangles on the upper belly, six pairs of which are filled with opposing diagonals; three contiguous triangles contain horizontal hatching and there is one triangle with diagonals and another with cross-hatched infill. The lower scheme is made up of seven pairs of triangles all with opposing diagonal infilling. In general the outlines of the triangles appear to have been marked out in the soft clay prior to infilling. However, traces of the breaking down of this scheme can be seen on the lower belly where an extra marker line survives and where some of the infill hatching appears to have been laid down first and new guidelines impressed over them.



ILLUS 5 Short cist at Mains of Scotstown, Bridge of Don: flint items

In Clarke's classification, this would be termed a Final Northern (N4) Beaker, a late group but one with acknowledged links to the disparate Northern/North Rhine group in the 'waist set just below the rim' (1970, 118). The decoration is in his style *e* (*ibid*, 12–13, 191): 'balancing the upper and lower registers about the belly axis'. The dominant motifs of large triangles are part of Clarke's Southern British Motif Group 4 (29, triangles), while the pronounced neck grooving equates with his Late Northern Motif Group 3 (motif no 21). The difficulties of confining such globular beakers as Mains of Scotstown and its close parallels within a single, late grouping (*infra*) were acknowledged by Clarke who noted the potentially early position of their biconical form in his matrix analysis of beakers (1970, 471). This uncertainty was further recognized in Shepherd's sequence of north-east beakers (1986, fig 20) under which the Mains of Scotstown pot would be classed as Step 4, similar to vessels such as Upper Boyndlie, Aberdeen (*ibid*, fig 20; Clarke no 1503, fig 725) which has same internal neck carination (here the bevel thus created is also decorated), although its zoning is different.

The Scotstown beaker bears a remarkable resemblance to that from Chapelden, Aberdour, Aberdeenshire (Greig *et al* 1989, 75–8, fig 4) down to the fringe motifs at the belly. Chapelden lies c 55 km to the north of Mains of Scotstown and is one of a series of similar pots recorded south of the Moray Firth, such as Mill Farm, Rathen (Clarke 1970, no 1476, fig 726) which has the same bold triangles about the belly axis and an internal neck carination (also decorated) as well as neck grooving (although strictly speaking at the waist). These beakers have been recently discussed (Shepherd 1986, 26–8; Greig *et al* 1989, 75–8) and appear to represent a tradition of short globular beakers running in parallel to the trajectory of the more regular, and numerous, north-east beakers.

The flints

Kirsty Sabine

The item recovered adjacent to the individual's knee (A on plan: *illus* 2) is a secondary flake of dark yellowish brown flint (10 YR 4/2) (*illus* 5). Its dimensions are: length 40 mm; maximum width 32 mm; and maximum thickness 8 mm. It does not display a platform. The object has been retouched along both the lateral edge left (on both sides) and the lateral edge right (on one side only), this work having been carried out with a hard hammer. This retouch has produced a triangular flake tool with useful edges 30.5 and 34.5 mm long. The proximal end displays evidence of wear.

The second flint item from this cist, recovered below the forearm (C on *illus* 2), could not be located in

Aberdeen City Museums at the time of writing. The following account has thus been compiled from available photographs (there is none of the dorsal face of the object) (illus 5). A secondary flake of medium yellowish brown (10 YR 5/4), in apparently complete condition. Its dimensions are: length 30 mm; maximum width 18 mm; thickness unknown. It does not appear to possess a platform. The flint has been partly retouched partially along the lateral edge right, the proximal end and the ventral face, this work being carried out using a hammer of unknown hardness. This retouch has produced a flake tool with a useful edge approximately 17 mm long and a point at the proximal end. It is not possible to estimate whether this implement shows signs of wear.

Chemical analysis of a trace of copper

Kevin Edwards

A minute bright green smear, several millimetres across, was noticed on the upper surface of one pebble set in the floor deposit of the cist. The smear was scraped but yielded insufficient material for weighing, thus precluding any reliable determination of quantifiable elemental composition. The deposit was placed in a nitric acid solution and assessed spectrophotometrically for copper. A significant amount of Cu greater than in the blank was found to be present. Assay for tin was also attempted, but there was insufficient material for analysis.

It is possible that this trace represented the remains of a copper awl or similar-sized item that had been placed in the grave; but the vestigial character of the trace means this suggestion can only be conjectural.

Pollen evidence

Kevin Edwards

Samples for pollen analysis were taken from the organic-stained deposit which overlay the pebble floor and which filled the interstices amongst the stones; from a small deposit of mineral soil which lay beneath the pelvis; from a scraping from the beaker; and from the modern soil surface. The soil samples alone proved to be polleniferous. Samples were prepared using standard pretreatments including NaOH, HF and acetolysis techniques (cf Faegri & Iversen 1989). Preparations were mounted unstained in silicone oil of 12,500 cSt viscosity. Pollen 'type' identification largely follows Moore *et al* (1991), but pollen and vascular plant nomenclature follows Stace (1991). Percentage pollen and spore data were calculated on the basis of a total land pollen (TLP) sum. The results are presented in Table 1, opposite.

The stratigraphic position of the soil sample, from beneath the pelvis and above the bed of pebbles, suggests that it represents soil which fell into the cist before the insertion of the body and perhaps, indeed, as a result of grave-side disturbance as interment was about to occur. If the soil was derived from material dug from the pit into which the cist was inserted, then it may not be coeval with the burial. The differences between the pollen spectra from the cist and the modern soil surface (they are significantly different on the basis of a chi-square test), would seem to preclude any possibility that the soil became incorporated into the cist as a result of the grading activities which led to its discovery.

The cist pollen spectrum indicates a light woodland of birch and hazel with some alder in damper areas. The herbaceous pollen component is dominated by grasses (21.5 % TLP). The presence of heather and sedge pollen may suggest that a nearby heath community had developed. Microscopic charcoal fragments (> 10 µm in size) attain a value of almost 25% TLP and may derive from domestic burning, or, conceivably, from a regime of heathland management. The presence of grass, plantain, cf. buttercup and bracken may reflect grazing activities, while the presence of cereal type suggests that arable farming was also occurring. There is no indication from the results of this analysis of any special organic deposits being incorporated in the cist (compare Dickson 1978; Whittington 1993; Tipping 1994; also see Sandhole below). The sample is thus probably furnishing evidence of local rather than regional circumstances at the time of deposition.

TABLE 1
Pollen and spore taxa from the Mains of Scotstown cist

Taxon	cist sample (% TLP)	modern sample (% TLP)
<i>Betula</i> (birch)	25.1	16.2
<i>Pinus sylvestris</i> (Scots pine)	1.4	3.2
<i>Quercus</i> (oak)	0.5	
<i>Alnus glutinosa</i> (alder)	7.2	3.6
Coryloid (cf. hazel)	24.2	12.6
Poaceae (grass family)	21.5	40.5
Cerealia type (cereal type)	0.5	5.4
Cyperaceae (sedge family)	8.1	5.4
<i>Calluna vulgaris</i> (heather)	4.5	5.9
Ericales undiff. (other heaths)	0.9	
<i>Plantago lanceolata</i> (ribwort plantain)	1.8	1.4
<i>Rumex acetosa</i> type (sorrel type)	0.5	0.5
Caryophyllaceae (pink family)	0.5	
Rosaceae (rose family)	0.5	0.9
<i>Ranunculus acris</i> (cf. buttercup)	0.5	
Ranunculaceae (buttercup family)	1.8	
Brassicaceae (cabbage family)		1.8
<i>Aster</i> type (daisy type)		0.9
Asteroideae (daisy sub-family)	1.8	
Lamiaceae (deadnettle family)		0.5
<i>Helianthemum</i> (rock-rose)		0.5
<i>Pteridium aquilinum</i> (bracken)	1.8	0.5
<i>Polypodium vulgare</i> type (polypody type)	0.9	0.5
Filicales (other ferns)	1.4	0.5

Radiocarbon date

A radiocarbon date was obtained from the University of Belfast laboratory for fragments of carbonized material associated with the pebble floor of this cist. This returned a determination of 3140±70 BP (UB-2097). Calibrated according to the University of Washington programme (Stuiver & Reimer 1993), this determination corresponds to a central date of 1410 cal BC, and a range of 1500–1320 cal BC at 1 SD, and 1520–1220 cal BC at 2 SD.

DISCUSSION

The cist is nearer the coast, which lies some 2 km to the east, than any other Beaker examples known from the lower Don Valley. Some 3 km westward, and much closer to the course of the river, lay the cist at Persley Quarry, Old Machar (most recently discussed in Shepherd 1986), found in 1868.

The circumstances prevailing at the time of discovery preclude discussion of the possibility of above-ground features associated with the Scotstown cist. The grading carried out by Wimpey left clean gravel in the cist's immediate vicinity, but no other features of potential archaeological interest were identified. The cist may thus be assumed to have been an isolated example.

The indications that the pebble floor in the Scotstown cist comprised a deliberate selection of stones is matched by other discoveries from the north-east, for example the red/white/green quartzites from the inhumation cist at Westbank of Roseisle, Duffus, Moray (Shepherd 1987) and the Beaker burial from Mains of Balnagowan, Ardersier, Highland (Shepherd *et al* 1984, 563–4). More recently, the short cist excavated in 1993 at Allanshaw in close proximity to one of the avenue stones leading to Broomend of Crichtie produced evidence of a pebble floor overlying a charcoal deposit; this

example however produced neither skeleton nor artefacts (Greig & Shepherd, 1993; Ian Shepherd, pers comm). Further afield, Watkins, for example, noted the use of pebbles of a standard module and consistent material at Barns Farm, Dalgety Bay, Fife (1982, 60).

LOCATION OF THE FINDS, CISTS AND SKELETAL REMAINS

The skeleton and finds are in the collection of the City of Aberdeen Council Museums and Galleries. One flint was unavailable for study when this report was revised for publication. The cist has been reconstructed in the basement of James Dun's House, Aberdeen.

DRIDAIG COTTAGE, EDDERTON, HIGHLAND (1977)

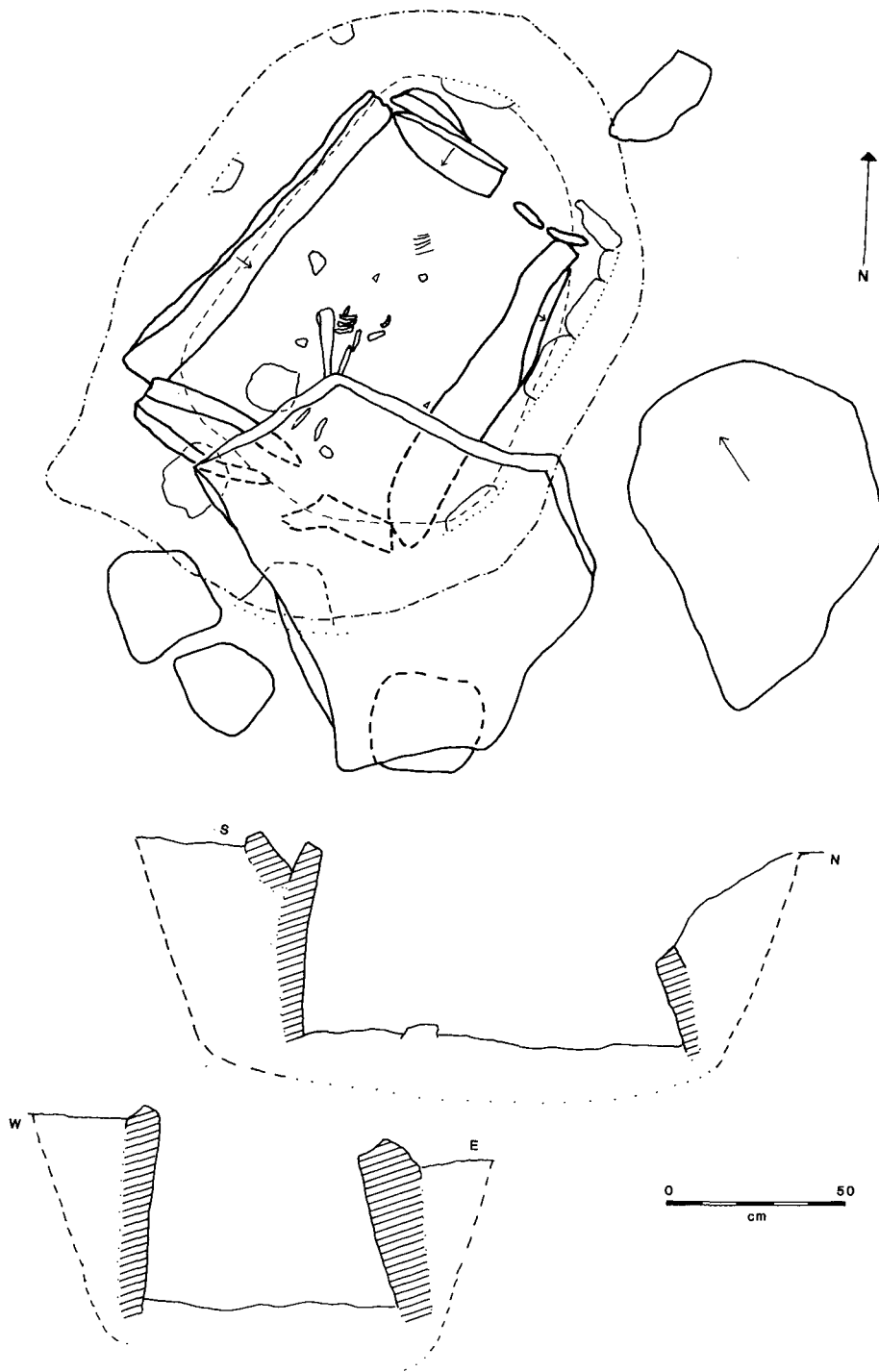
This cist was disturbed during ploughing by Mr David G Mackay and was notified by the farmer, Mr Reay Clarke, to Dr John Smith, of the Department of Geography at Aberdeen University, who assisted in its excavation.

The cist was located (at NGR: NH 714 845) in agricultural land on a slightly raised lobe projecting north-east towards Cambuscarrie Bay above the north-west bank of the Dridaig Burn at approximately 13 m OD (illus 1). High water mark is approximately 300 m away, and the site enjoys wide views to the north towards Sutherland over the inner Dornoch Firth. The cist lay approximately 100 m WNW of Dridaig Cottage.

The site lies some 200 m north of Torran Dubh, where the OS 1:10,560 sheet (1959) notes the discovery of three stone cists in 1866, and where, during the final removal of the cairn in 1964, a further, central cist was located (RCAHMS 1979, 12 no 65). The 1866 cists contained, in two instances, 'urns' and, in the third, located at the summit of the mound, a fragment of bronze interpreted as an awl $1\frac{5}{8}$ in (approx 40 mm) long (Joass 1866: NMA DO 18) associated with cremated bone. In the vicinity of the new find, approximately 100 m to the north-west, there was also formerly a cairn at Edderton Glebe (RCAHMS 1979, 11, no 49). This tumulus or cairn, wrongly described as chambered on the OS 1:10,560 sheet, originally measured c 7.5 m in diameter and 1.5 m in height and was completely excavated in 1866. Five cists, three containing cremations and one an inhumation accompanied by an N3 beaker (Clarke 1970, ii, 520, no 1748), were identified during this work (Joass 1868: fig 1): a further cist, from which a single flint flake was recovered, had been examined during the previous decade. McAdam follows Joass in suggesting that this mound could have been produced through successive acts of accretion (1974, 13).

THE CIST

The cist had been substantially damaged by agricultural activity prior to excavation (illus 6). There were two capstones: that at the south end of the cist had slewed out of position but still overlay the south-east corner of the cist prior to excavation; that which had overlain the north end had been displaced and lay overturned to the east of the cist. The sandstone slab at the north-east end of the cist had partly collapsed inwards, whilst that at the south-west end had split longitudinally, and part of it had been shattered when the capstones were dislodged. The larger capstone was a ripple-marked pebbly sandstone, measuring approximately 1.10 m by 0.99 m; its maximum thickness was 0.19 m. Its displaced northern counterpart, lying east of the cist at the time of the investigation, measured approximately 0.94 m by 0.69 m and was some 0.17 m thick. The sandstone slabs which defined the cist itself were of the following (maximum) sizes:



ILLUS 6 Short cist at Dridaig Cottage, Edderton: plan and profiles

South-west: (broken) estimated at 0.76 m long by 0.56 m high by 0.13 m thick

North-west: 1.12 m long by 0.60 m high by c. 0.08 m thick

North-east: 0.75 m long by 0.42 m high by 0.07 m thick

South-east: 1.05 m long by 0.53 m high by 0.14 m thick.

These sandstones could have been obtained relatively locally from one of a number of incised, stream-cut valleys within c 2 km of the site (J S Smith, pers comm).

The pit had been cut into fluvio-glacial sands and gravels. It was relatively steep-sided and flat-bottomed. It measured approximately 1.8 m along the long axis of the cist by 1.3 m at right angles to this, at the level of the base of the ploughsoil. The fill was essentially redeposited sand and gravel and was sterile: the initial report (Ralston & Smith 1977), which indicated the discovery of cremated bone behind the cist slabs, was founded on an incorrect identification of rotting stone.

THE SKELETAL MATERIAL AND CIST CONTENTS

Some, at least, of the skeletal material had been disturbed prior to the excavation, and certain bones were noted certainly to lie, not *in situ*, but on modern fill that had partly infilled the cist. The skull, from which the mandible had become detached, lay at the south-west end of the cist. In general, the skeleton was in an extremely fragmentary state, such that reconstruction of its original posture in the grave is not feasible.

A solitary flint was found close to the south-east side slab, approximately at the height of the individual's shoulder. A copper alloy fragment was recovered almost centrally within the cist, and was apparently placed below the body. No pottery was recovered from this cist.

The skeletal material

Margaret F Bruce with a dental report by N W Kerr

The remains are those of an adult, about 35 years of age on the evidence of both skeletal and dental condition, and most likely to be female. The fragmentary condition of the long bones precludes the estimation of height. The teeth are caries free, but show considerable evidence of wear, consistent with an abrasive diet. The clavicle displays a healed fracture; and the pubis may show changes attributable to childbirth. The skeleton shows no evidence of the cause of death. The full anatomical report is in fiche: Sheet 1 A8–A10.

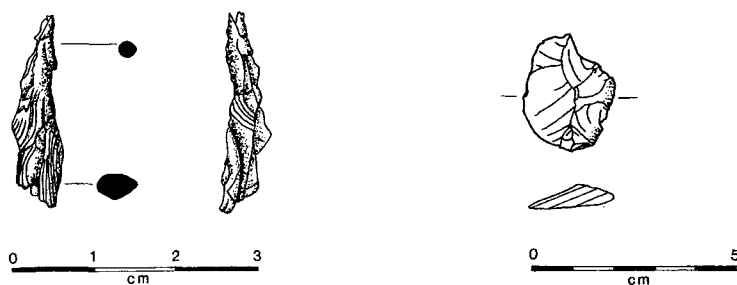
The flint (illus 7)

Kirsty Sabine

A secondary flake of medium yellowish brown (10 YR 5/4), was recovered in apparently complete condition. Its dimensions are: length 27 mm; maximum width 22 mm; and maximum thickness 5 mm. It does not possess a platform. The flint has been partially retouched on the dorsal face and was probably struck with a soft hammer, made of antler, wood or similar material. The piece has a useful edge of 20 mm and may best be described as a flake tool. It displays cortication.

Copper object

In addition a small fragment of copper, corroded but possibly from an awl, was found (illus 7). This item had a surviving length of 22 mm, and a variable, but never rectilinear, cross-section, with a diameter of between 2



ILLUS 7 Short cist at Dridaig Cottage, Edderton: flint items

mm and 4.5 mm, and is assumed to be incomplete. Although occurring in a number of graves, awls – the most prominently represented tool type in the Early Bronze Age repertoire after the axe – are not common finds (Clarke *et al* 1985, 86). Awls have a range of associations, including graves (as at Culduthel, Highland: Low 1929) which lack ceramic gravegoods. Despite the fragmentary state of the item reported here, a tool of this type seems the most likely attribution.

Pollen evidence

Kevin Edwards

A small quantity of organic material was identified beneath the skeletal remains at the base of the cist. A sample was prepared for pollen analysis, but pollen was not preserved.

Radiocarbon date

A radiocarbon date was obtained from bone collagen at the Department of Chemistry, University of Glasgow. This returned a determination of 3280 ± 50 BP ($\delta^{13}\text{C} = -24.2\text{‰}$) (GU-2099). Calibration (according to Stuiver & Reimer 1993) produces a central date of 1520 cal BC, and a range of 1610–1510 cal BC at 1 SD and 1680–1430 cal BC at 2 SD.

DISCUSSION

The discovery of this cist forms an addition to a series, dominantly of cremations it would seem, discovered last century on this lowland strip to the south-east of Edderton and reported by the Revd Joass. The other cists at Torran Dubh (Joass 1866) and Edderton Glebe (Joass 1868) are all from cairn sites, but there was no indication at the time of investigation (when the findspot was in course of being cultivated) of the survival of any mound. The cist seems to have been constructed essentially of local materials. The significant evidence from this find includes the healed fracture from its female occupant (unique in the skeletal material held in the Aberdeen University Anatomy Department), and the radiocarbon date for an aceramic cist, although, as has been discussed by others, the former presence of organic containers can not be excluded.

LOCATION OF THE FINDS AND SKELETAL REMAINS

The skeleton is in the collection of the Department of Anatomy, University of Aberdeen (Bruce 1986b, 38). The final disposal of the finds has not been determined at the time of writing.

SANDHOLE QUARRY, DENHEAD, FETTERANGUS, ABERDEENSHIRE (1981)

The damaged remains of a short cist were spotted protruding from the top of the 4 m high working section of a sand-and-gravel quarry in July 1981 by Dr Rodger Connell, then a postgraduate student in geomorphology at the University of Aberdeen. The cist overlay laminated fine sands and silts. Dr Connell notified us immediately at the Balbridie excavation on Deeside, and the site was visited on the same evening. Preliminary examination showed the cist to have lost its east end slab, but to retain part of its stone capping, despite the fact that the upper surface of the glacial hummock into which it had been set had just been scraped mechanically to remove the topsoil. Exposed and disturbed portions of the skeleton, in particular the skull, were removed at this stage: at this time, the skull, by no means certainly *in situ*, faced north. The fact that the major slabs of this east/west oriented cist overhung the quarry face, as well as the mobile nature of the face itself, meant that the cist had to be excavated most prudently, and I am grateful to Mrs M K Greig and Ms J E C White for their extremely careful work on site.

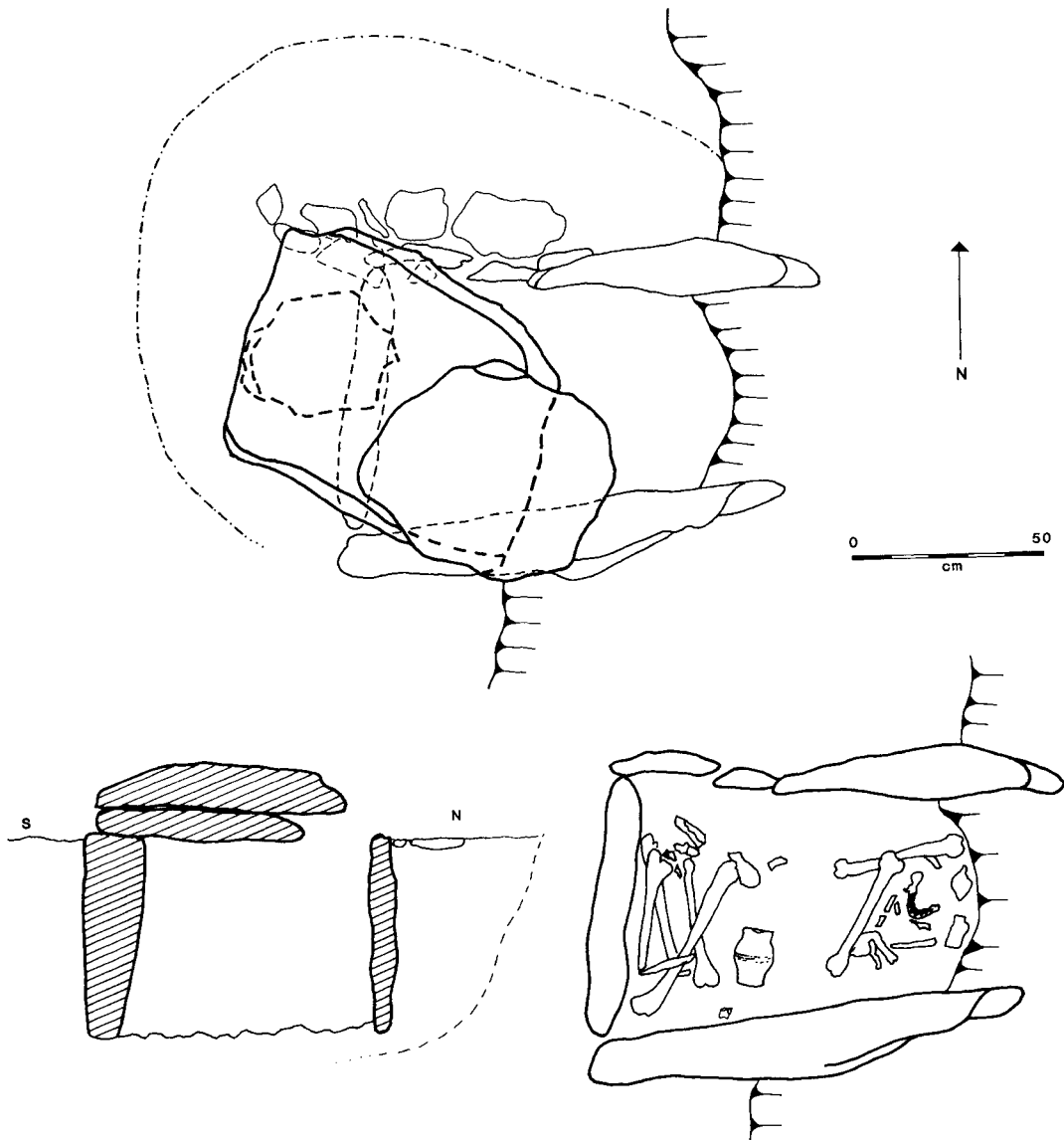
The site (NGR: NJ 998 521) lies a little above 50 m OD in an area of hummocky fluvio-glacial terrain approximately 0.5 km north-east of the course of the North Ugie Water (illus 1) and approximately 13 km from the east coast. Overall, the landscape is gently undulating and local high points, for example around Denhead less than 1 km to the north-east, attain altitudes little in excess of 60 m. The detailed topographic setting of the cist in its immediate landscape can not be assessed, as the circumstances of discovery make plain. None the less, on a visit to the site, an elderly local farmer reported that there had previously been a conspicuous mound of earth and stone some 30 m long running approximately north/south along the top of the ridge in which this cist was located. No confirmation of this observation can be offered. There were no indications of associated features in the adjacent quarry face. The cist must therefore be considered as an isolated example of its type.

THE CIST

The remaining portion of the cist (illus 8) and its immediate environs were reached by excavating by hand through the disturbed and redeposited overburden as far as the level of the capstones. The surviving capstones overlapped the edges of the upright slabs to a considerable degree and suggested that a rudimentary form of corbelling had been adopted to overcome the lack of a suitably-sized slab to function as a capstone. Removal of the capping stones showed the grave to be edged by one large slab on its south side, by a smaller one at the narrower, west end, but by two slabs on the north side. Of these two, the westernmost example, being considerably thinner, had fractured vertically. All the major slabs of the cist were of granite.

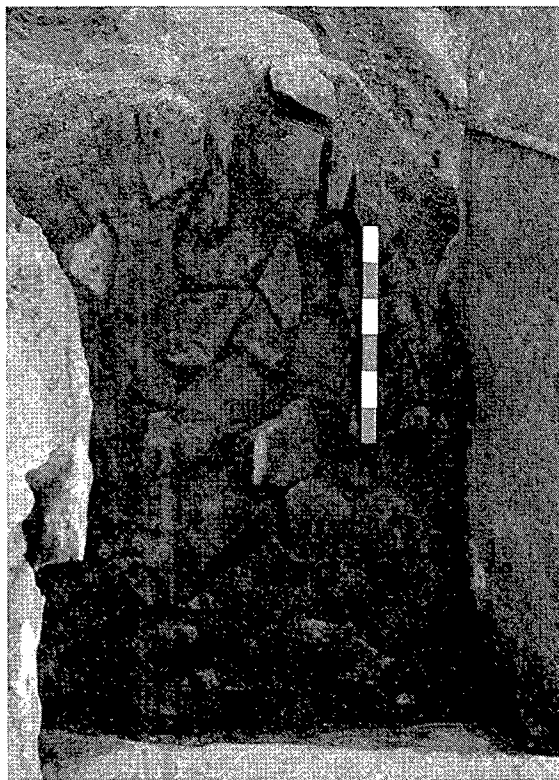
Intermittent traces of clay on the upper surfaces of the end- and side-slabs suggested that some attempt at luting had been made. The uneven upper surface of these slabs indicated very clearly that such luting could never have afforded a continuous seal to the cist, and it may be that the luting was simply intended to assist with the stabilization of the small roof materials, rather than to act as a seal.

The bulk of the fill of the cist consisted of coarse sand and gravel, but the presence of one unworked quartzite stone on edge within this material (and, as subsequently became clear, directly above a Beaker) suggests that deposition of this material was deliberate, and occurred before the capstones were in place. This may have been a precaution to stop these latter, oversmall, slabs capsizing into the cist. This fill material proved to be very largely sterile; small quantities of associated humic material were seen in the exposed section prior to the excavation. Removal of this material revealed the skeleton, and an underlying organic-stained layer, which appeared to contain a little particulate charcoal.



ILLUS 8 Short cist at Sandhole, Fetterangus: pre-excitation plan and profile and excavation plan

Within the cist, traces of a floor of thin slabs, overlain by a thin organically stained deposit, were visible in the quarry-face section prior to excavation. The irregular fragments that were recovered (illus 9) lacked the more substantial slabs represented for example at Springwood, Roxburgh (Henshall & Macinnes 1968, 81 fig 4), but are paralleled more locally in the paving from Cist 3 at the Borrowstone cemetery, Newhills, Aberdeenshire (Shepherd 1986, 12; and pers comm). Dr Nigel Trewin supplied the following information on the Sandhole paving stones. All the material comprises pink felsite, an acid intrusive rock type found in the general area of Fetterangus. The rock usually



ILLUS 9 Short cist at Sandhole, Fetterangus: the stone floor seen from the north Scale: 0.30 m by 0.05 m divisions

occurs in small intrusions, thus this distinctive pink stone may have been specially selected for the purpose.

Examination of the pit was restricted owing to the circumstances of the excavation and especially the likelihood of imminent collapse. After the deposits within the cist had been examined, the cist slabs, which had become increasingly unstable, were deliberately collapsed inwards and examined for signs of decoration: none was detected. The small flat slabs lining the upper surface of the gravel-pit were removed, and, in so far as this was practicable in unstable sand deposits, the remaining contents of the pit were examined: no further discoveries were made.

SKELETAL REMAINS AND CIST CONTENTS

As noted above, the unstable nature of the remains meant that disturbed portions of the skeleton were removed from the east end of the cist prior to the start of the excavation. The remainder of the skeletal material was recovered, unevenly preserved, beneath the sand and gravel which had infilled the cist.

This consisted of an adult skeleton, lying on its left side and facing south. The leg bones were well preserved, and tightly flexed. The pelvis was less well preserved, and most of the vertebral column and rib cage did not survive. Undisturbed, however, were a number of carpal bones, which

were recovered in the vicinity of the lower jaw; their positions suggested that the arms had been tightly folded against the face.

Gravegoods were limited to a very fine beaker, including portions of white infill in its elaborate triple-zone decoration, lying in front of the body's lower abdominal area, and a single piece of flint located against the south side slab.

SKELETAL MATERIAL

Margaret F Bruce with a dental report by N W Kerr

The skeletal remains were generally not well preserved. They indicate a young adult male in his early twenties and of relatively short stature (1.60–1.66 m). The degree of dental wear suggests an abrasive diet. There were no skeletal indications of the cause of death, but the presence of bog moss – possibly used to staunch a wound – indicated by palynology is discussed below. The complete anatomical report on this skeleton is in fiche: Sheet 1 A11–A14.

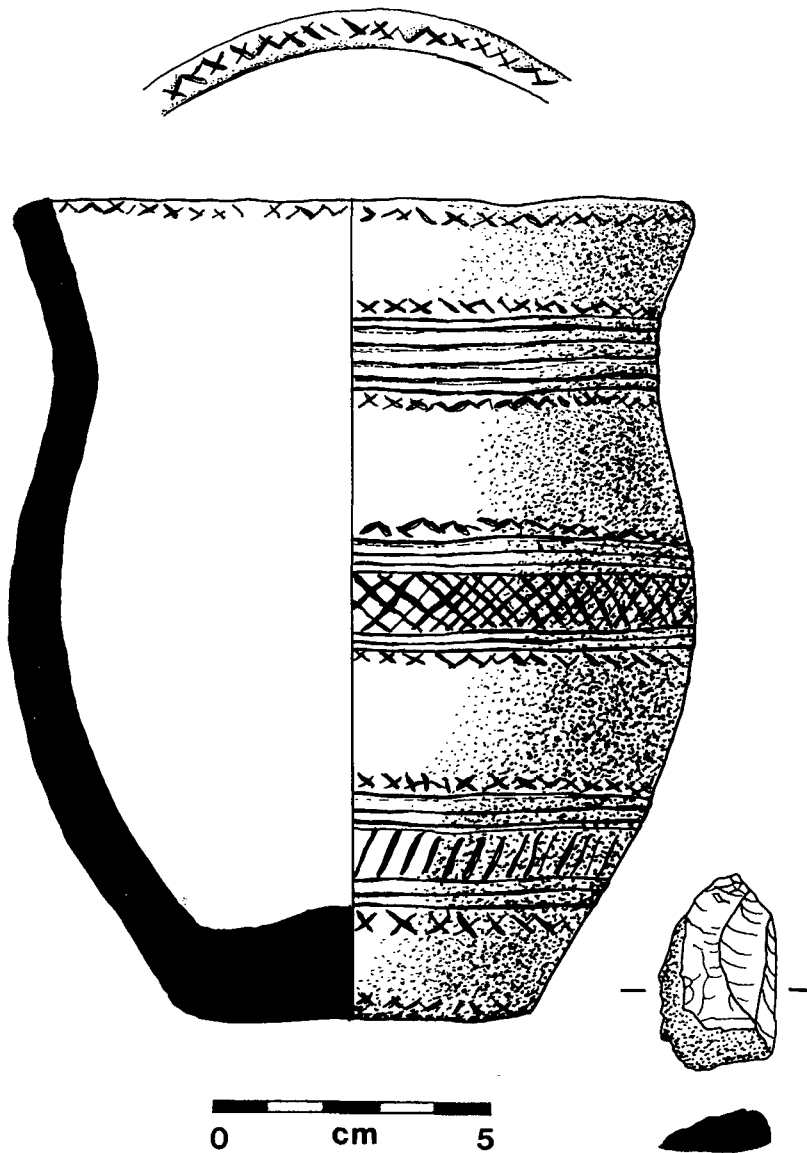
The beaker (ABDUA 14300)

Ian Shepherd

This is a slightly squat beaker, well made but with a minor irregularity in overall height, produced in the firing process (illus 10). The neck and belly merge in a gentle S-profile; the greatest diameter is rather more than half way up the pot. Attempts have been made to create a slight foot; internally the base has a central swelling produced during the initial building up of the pot. It is complete, but for a triangular area of damage on the rim. It stands 142 mm tall, and is 125 mm in diameter at the belly and 124 mm in diameter at the squared and bevelled rim, which is 7 mm thick. The fabric is hard and well fired with crushed stone grits, up to 3.5 mm long, in its black core. Inside it has been wet-hand finished to a light brown-to-buff colour, but the exterior bears a light, pinky-red slip which, in the undecorated areas, has been well burnished. The decoration has been incised rather freely with a sharp instrument, c 6 mm wide at its end, when the clay was in a very plastic state. The tool may have been of flint [contra Shepherd (1986, 25) where toothcomb decoration was suggested].

The decorative scheme consists of three zones of almost equal size, located at the waist, belly and just above the foot. The flat surface of the rim is decorated with crosses and there is a single line of crosses just below the rim; the base is undecorated. White infill remains in some of the motifs, particularly in those of the middle zone. All three zones are fringed by single bands of crosses. The uppermost zone bears six horizontal lines, the middle a band of lattice set between two sets of three horizontal lines. The lower zone is similar to the middle one but with short vertical lines (in one sector cut by another horizontal line) between the horizontals.

This pot arguably belongs to Clarke's Primary Northern British/Dutch (N1/D) Beaker group. The decorative scheme accords with Clarke's style b (1970, 12–13: 'broad bands of decoration and plain burnishing'), while the motifs used fall within his Primary Northern British/Dutch Motif Group 2 (particularly motif no 14, lattice and simple crosses). The use of fringe motifs is also very characteristic of this group (*ibid*, 154). The proportions and decoration of the Sandhole vessel could be compared with such eastern Scottish N1/D beakers as Pitsligo, Aberdeenshire (*ibid*, no 1487, fig 449) (especially the fringe crosses) or Linlathen, Angus (*ibid*, no 1521, fig 451). However, important elements of the Sandhole beaker are not typical of the N1/D group, most notably the lack of a pronounced neck bend and the use of incised rather than toothcomb decoration. An unusually high proportion of Northern/North Rhine (N/NR) Beakers were decorated with rather careless incision using a flint blade; c 33% of Clarke's N/NR beakers were decorated this way (1970, 120). It is really amongst the Northern/North Rhine beakers that Sandhole is best placed. Good parallels can be seen in the North-East pots from Norry Hill, Glass, Aberdeenshire (Shepherd 1986, illus 19) or Gordonstoun, Moray (Clarke 1970, no 1715, fig 280).



ILLUS 10 Short cist at Sandhole, Fetterangus: the beaker and flint

Both exhibit sinuous S-profiles, rising from footed bases to high bellies and with simple zoned decoration comparable to Sandhole's.

This short discussion highlights one of the fundamental problems of Clarke's typology, the primacy given to country-wide motif groups over the building of individual local sequences (Lanting and van der Waals 1972, 29). Over-abstract distinctions are best avoided, as illustrated by the apparent intimate relationship between N/NR and N1/D seen at Goodmanham 99, Yorkshire, a burial which produced a pair of beakers which Clarke classified as N/NR and N1/D (1970, figs 302-3). An alternative approach, concentrating on developments in appropriate focus areas, has proved to be more rewarding.

In the scheme of Lanting and van der Waals (1972), as extended to the north-east (Shepherd 1986, 25–8, illus 19), the Sandhole beaker would belong to Step 3: ‘tall, rather slender pots with a slightly smoother profile and decoration in zones’ (*ibid*, 25). As such it belongs to the early stage of beaker development in the core area of Buchan, which demonstrates the closest associations in the north-east with the beginnings of metalworking (Shepherd 1986, 8–9; Cowie 1988, 12).

The flint

Kirsty Sabine

The single flint (illus 10) is a secondary flake, light olive brown in colour (Munsell 5Y 5/5), in apparently complete condition. Its dimensions are: 32 mm long; maximum width 21 mm; and maximum thickness 7 mm. It has a platform thickness of 3.5 mm. The flint displays continuous retouch on its dorsal face and was probably struck with a soft hammer. A useful edge of 35 mm has been produced; and this was probably a cutting tool. The lateral edge left has partial wear on both sides.

The pollen evidence

Clive Warsop

The sample for this analysis was recovered from a thin organically stained deposit overlying traces of the stone floor in the base of the cist. Pre-treatment techniques were the same as those employed by Edwards (*supra*). Preparations were stained with safranin and mounted in silicone oil of 12,500 cSt viscosity. Pollen preservation was good within the sample and a pollen sum of 300 total land pollen plus spores (TLP+S) was selected: identification followed Moore *et al* (1991). Percentages of pollen and spore data were calculated on the basis of this sum: Sphagnum spp. has been excluded from the pollen sum, for reasons given below. Nomenclature follows that of Stace (1991).

The analysis was undertaken to reveal the presence of any plant material which may have been deliberately placed in the cist at the time of the interment and/or to use any pollen present to reconstruct the local vegetation at a time after the cist’s construction, but before it was sealed. The results are presented in Table 2.

The pollen record indicated a local environment which was predominantly an open one. The sample also contained extremely high levels of the bog moss, Sphagnum spp.

Coryloid (cf. *Corylus*) is recorded at 25% TLP+S, indicating a reasonable stand of fairly open woodland nearby. A heath community of *Calluna vulgaris* and other Ericaceae, at 4% and 11% respectively, reinforces a picture of a locally open landscape. Although often a woodland epiphyte, Polypody fern in this case may be part of the heathland community as it is commonly found in dwarf scrub heath. *Alnus* at 18% TLP+S would seem to indicate an area of moister soils, possibly corresponding to the neighbouring valley of the Ugie, while weeds

TABLE 2
Pollen analysis of a thin organic deposit within the Sandhole cist

<i>Betula</i>	4%	<i>Ranunculus</i> type	*
<i>Alnus glutinosa</i>	18%	Caryophyllaceae	*
<i>Fraxinus excelsior</i>	*	<i>Filipendula</i>	2%
<i>Quercus</i>	2%	<i>Plantago</i> undiff.	1%
<i>Ulmus</i>	*	<i>Plantago lanceolata</i>	4%
Coryloid	25%	Lactucoideae	
(cf. <i>Corylus</i>)		<i>Taraxacum</i>	*
Ericaceae	11%	Asteroideae	2%
<i>Calluna vulgaris</i>	4%	Polypodiaceae	7%
Poaceae	12%	Lycopodiaceae	*
Cerealia type	3%	Unidentified	2%

* = < 1%.

The sample also contains extremely high levels of the bog moss, Sphagnum spp.

of pasture (including Poaceae at 12% and the presence of *Ranunculus*, *Taraxacum* and especially *Plantago lanceolata* pollen at 4%) indicate the possible availability of some open pasture for grazing. A relatively high level of Cereal type pollen at 3% TLP+S strongly suggests an arable element in local agricultural activity and this is not contradicted by the remaining herb taxa. There is thus good evidence to argue for a mixed farming economy proximate to the cist when it was open to the elements.

Very high counts were recorded for the bog moss *Sphagnum* spp. (twice the pollen sum) and require additional discussion. Values as high as this would not be expected, even if a sample for analysis had been taken from the centre of a raised bog. Abundant *Sphagnum* moss has previously been recovered from a Beaker cist at Ashgrove, Methilhill, Fife (Henshall 1964). There, Miss C A Lambert (now Mrs J H Dickson) noted the use into modern times of bog moss as a surgical dressing, and suggested that its presence at Ashgrove may have been to staunch bleeding from a chest wound. J H Dickson, in a consideration of unusual pollen concentrations from Scottish short cists (1978), repeated this suggestion and offered an alternative: that the Ashgrove moss may have been used to wrap the artefacts in the grave or to furnish a covering for the body.

This latter suggestion seems inappropriate to the Sandhole example, given the absence of suitable gravegoods. Whilst Dr Bruce identified no evidence for injury in the case of the Sandhole skeleton (compare for example those from Keabog, Pitdrichie, Aberdeenshire, discussed by Shepherd & Bruce 1987), the possibility that the young man buried here had died of injuries that had caused profuse bleeding can not be ruled out. If this were to have been the case, it also implies that the body was interred still with wound dressings in place. However, although organic material was not prolific on the floor of the cist, it was not very localized in its distribution. Thus, the use of bog moss to cover the floor slabs prior to the insertion of the corpse is the preferred explanation for the high values of *Sphagnum* spp. pollen encountered, and perhaps represents a variation on the use of *Filipendula* as a floral tribute noted by Whittington (1993) and Tipping (1994) in cists elsewhere. This variant could be attributable either to a difference of season (as Whittington proposed as a possible explanation), or of ritual practice, floral tributes of meadowsweet from Scotland being predominantly associated with Food Vessel burials.

Radiocarbon date

A radiocarbon date was obtained from the collagen. This returned a determination of 3650 ± 50 BP ($d_{13}C = -21.59\text{‰}$) (GU-2100). Calibrated according to Stuiver & Reimer (1993), this produces a central date of 2020–1980 cal BC, and a range of 2120–1930 cal BC at 1 SD, and 2170–1880 cal BC at 2 SD.

DISCUSSION

Circumstances related to the discovery of this cist mean that there was minimal opportunity to investigate its surroundings, but it seems unlikely that its presence was marked by a man-made feature visible at ground level prior to ground preparation in relation to the quarry. The disposition of the skeleton conforms with the normal posture identified for Beaker males in north-east Scotland (Shepherd, A N in Greig *et al* 1991). The possibility that the grave incorporated a layer of moss is assessed as the most likely reason for the concentration of evidence identified in the pollen analysis.

LOCATION OF THE FINDS

The skeleton is in the collection of the Department of Anatomy, University of Aberdeen (Bruce 1986b, 38). The finds are in the Anthropological Museum, Marischal College, University of Aberdeen.

TAVELTY FARM, KINTORE, ABERDEENSHIRE (1983)

During ploughing in January 1983, on Tavelty Farm, Kintore, Mr Raymond Sharp struck what appeared to be a substantial boulder against which his implement jammed. Mr Sharp endeavoured to remove the obstruction using a backhoe loader, and in so doing revealed the presence of a short cist (NGR: NJ 787 162). Although substantial damage was caused to the cist in this operation, Mr Sharp managed to rescue sherds of a beaker from the soil which had infilled the cist as a by-product of the effort to remove the capstone. The latter, a substantial boulder measuring c 1.5 m long by c 1.2 m wide by c 0.3 m deep, was taken to the dump at Tavelty steading. The sherds were also taken to the farmhouse. The cist was backfilled with soil, and ploughing continued. A few days later, the discovery of the pottery was brought to the University's attention by a member of Mr Sharp's family, and the site was immediately visited.

The site occupies a barely discernible summit within the field to the south-east of the cemetery west of Kintore, at an altitude of c 60 m OD and not far from the north outskirts of the burgh of Kintore. It forms the east extremity of a very gently undulating area of fluvioglacial deposits defined by the terrace-edge above the Don Valley on the north-east and a tributary, the Bridgealehouse Burn, to the south (illus 1).

In the 19th century, a number of cists were found in a sand-and-gravel ridge to the south of the henge at Broomend of Crichton and approximately 2 km north of Kintore cemetery (Ritchie 1920; with previous references). The second and third of these cist discoveries, found within a metre of each other but two months apart in 1866, provide a number of points of comparison with the Tavelty find. These cists, and their juxtaposition with the henge at Broomend, have also been significant in assessing the nature of Beaker activity in the Garioch in relation to the earlier ritual monuments primarily found south-east of the Urie/Don confluence (Shepherd 1986).

THE CIST

On excavation, the cist was found to be defined by substantial slabs on its west, north and east sides, but the south side had been severely damaged (illus 11). The fill of the cist at the time of excavation consisted in the main of redeposited ploughsoil: Mr Sharp had, however, previously noted the presence of skeletal material, as well as the beaker, the latter having stood upright in the north-east corner of the grave. The cist was aligned with its long axis approximately east/west. The surviving slabs may be described as follows (all dimensions are maximum):

West slab: coarse-grained granite; length 1.07m; height 0.52m; and thickness 0.18m.

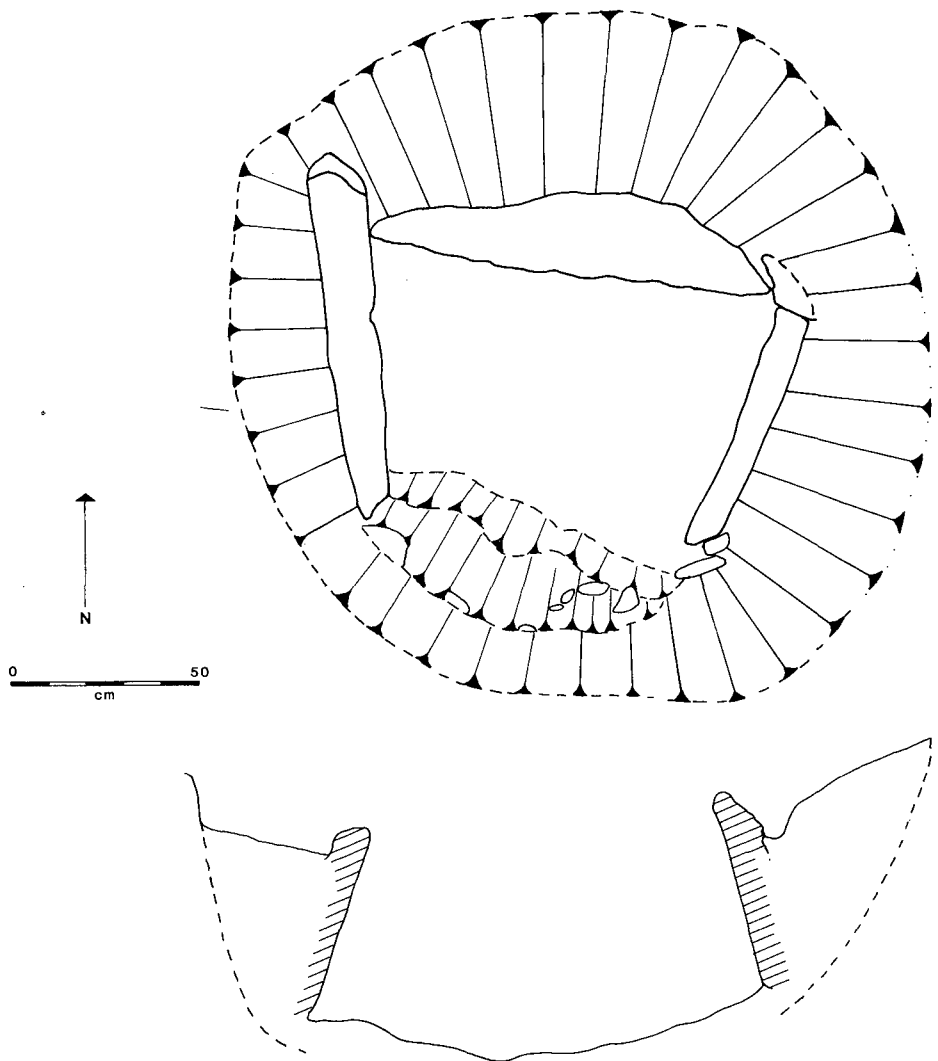
North slab: granite; length 1.19 m; height 0.67 m; and thickness 0.26 m.

East slab: a schist-like slab; length 0.80 m; height 0.56 m; and thickness 0.14 m.

South slab: This black micaschist-like slab had been shattered, but enough survived to suggest original dimensions greater than 0.91 m long; 0.61 m high; and 0.07 m thick (this stone had also split longitudinally).

Also found amongst the soil in the cist, lying at an angle and propped against the east slab, was a further substantial schist slab. This stone measured 0.76 m by 0.58 m by 0.12 m. Since there was no obvious purpose for this slab at the position at which it was recovered, it is surmised to have been a subsidiary capstone.

Traces of clay luting, using an off-white clay, were recovered at the north-east and north-west angles of the cist, and on the cist floor. Two samples were analysed by Dr A M D Gemmell, to test the possibility that this material might be of non-local origin. Dr Gemmell concluded that this material is derived from a sandy till, and is therefore likely to have been obtained locally.



ILLUS 11 Short cist at Tavelty Farm, Kintore: plan and longitudinal section

The fill of the cist consisted for the most part of recently redeposited topsoil including grass and rootlet material, as well as the shattered fragments of the south side slab. This was removed by hand and dry-sieved, but it was only in the lowermost fraction of this material, adjacent to the fragmentary skeletal remains within the cist, that artefacts were recovered. These included two flint items, one of which is a tiny spall, and the other of which is an item of yellow flint which retains substantial areas of cortex. Also recovered on site by sieving from the base of this mixed deposit was a small flat fragment of either copper or bronze, provisionally interpreted as part of a small bronze knife-dagger. An item of red-black flint was also found from the basal deposit, which showed much less sign of recent disturbance, within the cist. Two further sherds of the beaker were recovered

from the north-east corner of the cist, supporting Mr Raymond Sharp's recollection of the location of the pot within the cist.

The basal deposit included remnants of a pebble floor including numbers of rounded, coarse-grained reddish granite pebbles, mixed with an organic-stained sandy loam. Pebbles of this type seemed to be represented more frequently than in the surrounding natural deposits, but this floor was much less substantial than those recorded in Victorian times from both the Beaker cists at Broomend of Crichton. Both pebble floors and luting were features of the second (Chalmers 1868) and third (Davidson 1868) cists found at Broomend; they were also identified in the cist excavated at Allanshaw mentioned above (Greig & Shepherd 1993). Sieving of the basal deposits in the laboratory produced two barbed-and-tanged arrowheads and one further flint. A pebble, initially considered as a possible strike-a-light, was rejected on fuller examination. The finds are discussed in more detail below.

The pit into which the cist had been inserted was oval in plan and measured 2.55 m east/west by 2.10 m north/south by approximately 0.8 m deep, the depth being measured from the top of the surrounding natural fluvioglacial deposit (illus 11). This pit was steep-sided, with edges that were locally difficult to determine in sandy deposits within the fluvioglacial materials. Apart from pockets of turf-like material, recovered from the uppermost fill of the pit behind the north and, less securely, the south slabs, and a few comminuted fragments of charcoal, the fill of the pit consisted of sterile sand and gravel.

THE SKELETAL MATERIAL AND CIST CONTENTS

The skeletal remains within the cist were extremely fragmentary and had been much disturbed by in-falling topsoil. The longbones that were recovered were underlain by recently-deposited topsoil, so that it is not possible to speak with absolute conviction about the orientation of the body. The head may be surmised to have been set at the east end of the cist, as a few teeth in very poor condition were recovered in this sector. The skull itself did not survive.

The skeletal material

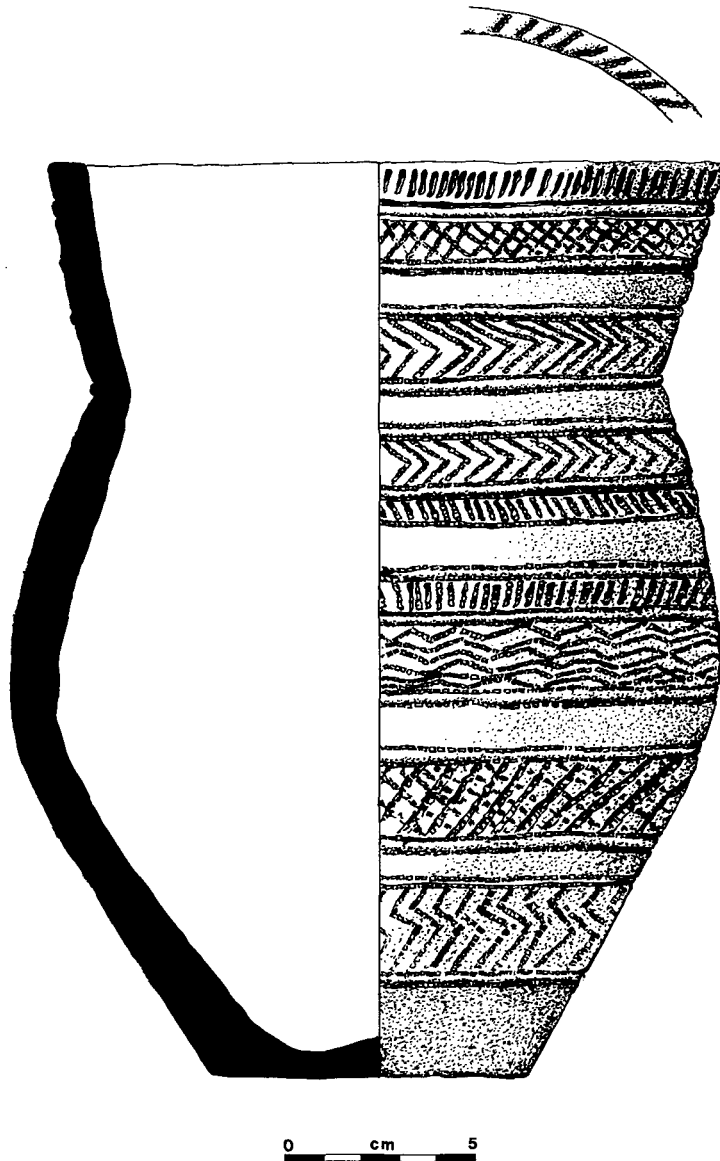
Margaret F Bruce

The skeletal remains from Tavelty are in poor condition. They indicate the interment of a young adult, probably male, in his late teens or early twenties. The longbones are slender and indicate the presence of an individual who was probably quite tall. There is no evidence for the cause of death in the anatomical remains. The full skeletal report is on fiche: Sheet 1/B1-B2.

The beaker (ABDUA 14261)

Ian Shepherd

This is a tall, imposing and exceptionally well-made beaker with a substantial, gently ovoid body, high belly, prominent waist and an everted neck bearing four narrow cordons (illus 12). The rim has been carefully squared to an even, level, surface. The pot has been restored from the fragments recovered by Mr Sharp; at least one third of the pot is missing, but sufficient survived to permit the reconstruction of the whole profile. The vessel is 231 mm tall, 168 mm in diameter at the rim, 79 mm diameter at the foot and c 180 mm in diameter at the belly. It is 6.5 mm thick at the rim. The fabric is thin, very hard and well-fired to a biscuity texture. The grits, of crushed stone, are very fine (maximum length 1 mm) and



ILLUS 12 Short cist at Tavelty Farm, Kintore: the beaker

include mica specks which glint through the surface of the pot. Light brown in colour inside, the exterior is a light reddy buff, and has been carefully burnished.

The pot has been decorated, generally most precisely, in six zones, using two toothcombs. The four upper zones were created using a toothcomb 8 mm in length while the two lower zones required a comb 11 mm in length, often applied less carefully or more freely than the shorter one. The base bears very faint traces of decoration made up of a line of paired shallow chevrons running across the mid-line. On the rim are short diagonal comb impressions, set regularly. Considerable traces of white inclusions survive in the comb impres-

sions. On the neck four low ribs, c 3.5 mm wide, define two zones containing lattices and tall chevrons; above all is a narrow band of short vertical strokes. The upper belly contains two zones of unequal size, chevrons above short diagonals and short verticals above open horizontal chevrons, with single horizontal lines of comb as separators. The two lowest zones are rather more freely filled with lattice work and vertical zigzags.

This vessel belongs to Clarke's Developed Northern British Group (N2) (1970, 162), and to Step 4 in the scheme of Lanting & Van der Waals (1972). The decorative scheme is Clarke's style a (1970, 12–13). The motifs of lattice chevrons on the neck and lower belly, as well as the short verticals just below the rim belong to his Primary Northern British/Dutch Motif Group 2: nos 13, vertical chevrons; 14, lattice and 12, short diagonals. These motifs also draw on Late Northern British Motif Group 3 (horizontal chevrons, no 20; cordons and grooving, no 21: Clarke 1970, figs 507–17; 524–9).

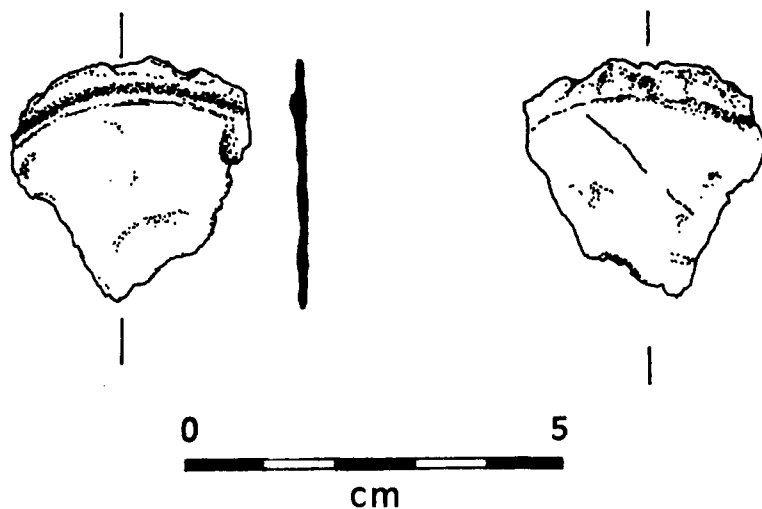
The height of this Tavelty beaker is quite exceptional, exceeding as it does the normal range of between 12 and 22 cm for the Developed Northern Group (Clarke 1970, 162). However, several northern series beakers from the eastern part of this region are closely similar and provide a suitable context: for example, the N3 beaker from Ardoe, Aberdeen (*ibid*, fig 645), which is also a good parallel in motifs and zoning (although the latter is more fused). The tall N2 pot from Upper Boyndlie, Aberdeenshire (*ibid*, fig 493) is also similar, as is the N2 beaker from Leslie (*ibid*, fig 500); however, these three beakers would best fit step 5 of the local sequence (Shepherd 1986, fig 19), whereas the distinctive neck ribbing and sharp neck bend of Tavelty place it firmly in step 4, along with such N2 pots as Leggats Den, Aberdeenshire, (Clarke 1970, fig 503) or the two Beakers from Cruden, Aberdeenshire (*ibid*, no 1423–4, fig 551–2; Shepherd 1986, fig 19), the twin beaker group (especially no 1424 with five narrow zones showing some aggregation). These pots were found with a significant array of archery equipment (seven arrowheads, a bracer and two large flint knives).

The ribbing on the neck of the Tavelty beaker associates it with such high-status graves (also containing archery equipment) as Borrowstone 5 and 6, Aberdeenshire (N2(L)/step 4: Shepherd 1986, 13) which are close parallels, both geographically and stylistically. Farther afield, the tall pot from Wellgrove, Angus (N2(L): Clarke 1970, no 1526, fig 502) which has real zone fusion and a longer neck and the Skateraw, East Lothian, vessel (N3: *ibid*, no 1648, fig 648) are both good illustrations of the use of neck ribbing. Tavelty also has important links further afield, with lavishly furnished graves such as [Kelleythorpe] Driffield, Yorkshire (N2(L): Clarke 1970, no 1265 fig 553) which contained a gold-capped archer's bracer, amber buttons and bronze knife-dagger.

The Kelleythorpe knife-dagger/archer's equipment association is most significant in view of Tavelty's small fragment of bronze. Interpretation of this as a small knife-dagger is greatly strengthened by the microscope observation ($\times 16$) of short striations, indicating the presence of horn, running at right angles from the shallow curved groove to the edge of the piece (Margot Wright, pers comm). Similar traces of a horn hilt have been observed in the corrosion products on the Kelleythorpe knife-dagger itself (Clarke *et al* 1985, 226) while the complex hilt surviving on the much more substantial dagger from Ashgrove, Fife, is well known (Henshall 1964, 169–72, fig 5). A similar knife-dagger to Kelleythorpe's occurs with an archer's bracer in the step 5 double Beaker burial at Callachy, Glenforsa, Mull (Clarke 1970, nos 1531–2, figs 676–7; Ritchie & Shepherd 1973, 28, fig 2).

Given the apparently late arrival of toothcomb decoration on north-east beakers (Lanting & Van der Waals 1972, 41), it is possible that Tavelty represents a local version, adapted for the particular position of the Garioch in Beaker times (Shepherd 1986, 10), of the phenomenon seen much further south, in Wiltshire, of a range of copper/bronze objects associated with archery equipment. Wessex/Middle Rhine Beaker burials of males such as Winterslow, Wiltshire, with its tanged copper dagger, bracer and two barbed and tanged arrowheads (Clarke 1970, no 1204, fig 134), or Roundway (*ibid*, no 1153, fig 132) and Mere, both Wiltshire (*ibid*, no 1125, fig 130), respectively with arrowheads, copper racquet pin and dagger and bracer, copper dagger and gold button caps, emphasize the role of early beakers in the introduction of metalworking (Burgess 1980, 210).

Finally, the occurrence of late Beaker graves with grave goods apparently emulating in other media the high-status dagger/archer's equipment associations of Tavelty and Kelleythorpe should be noted. Male graves containing barbed and tanged arrowheads and flint daggers are recorded from Derbyshire (eg Alsop, Green Low: Clarke 1970, no 115 S1, fig 776) and Somerset (Wick, Stogursey *ibid*, no 821 S3(W), fig 957), this latter an arrowhead roughout.



ILLUS 13 Short cist at Tavelty Farm, Kintore: copper alloy knife-dagger fragment

The fragment of bronze

The small fragment of bronze (max width 32 mm) manifestly comes from a larger piece, but the fact that all its edges are ragged precludes definite measurement of either of its principal axes (illus 13). It may conventionally be described as 'bronze' but it has not in the meantime been analysed to see whether it is indeed an alloy of, as opposed to pure, copper.

A principal indication that this piece of metal may have been part of a knife-dagger or dagger is the presence of what may be a hilt-mark: this seems to be slightly curved, and, in so far as this trait is diagnostic, this seems to be characteristic of knife-daggers (with blades shorter than 100 mm) rather than more sizeable items. There is no definite evidence that this piece was riveted; nor any indication of a midrib nor the former presence of a tang. Accepting that this piece does indeed belong within the dagger or knife-dagger set, unambiguous attribution to a particular type of those classified by Gerloff (1975) is thus not possible.

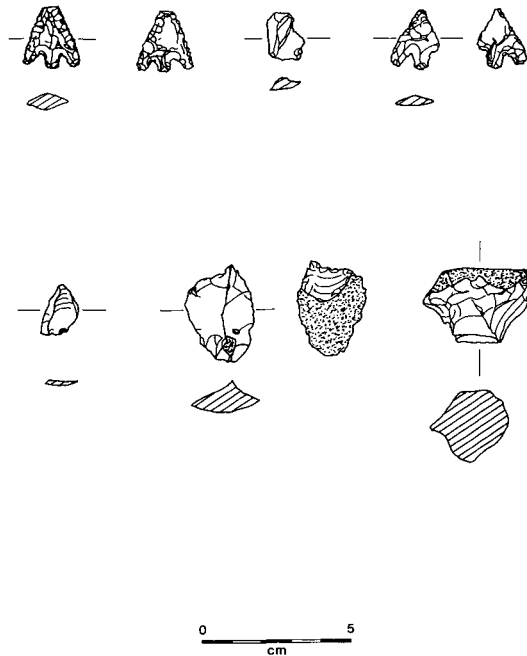
The flints

Kirsty Sabine

In all, six flints were recovered from this grave, but the degree of disturbance that had prevailed prior to excavation precludes discussion of their positions within the cist (illus 14).

A tertiary flake (Marischal Museum no 14782) in translucent yellowish grey (approximately 5Y 8/1) flint, in complete condition apart from the chipped point of the distal edge. Its dimensions are: length 19 mm; maximum width 17 mm; and maximum thickness 4 mm. It does not possess a platform. The flint displays extensive continuous retouch over its entire surface, producing a fine example of a barbed and tanged arrowhead. It was probably struck by a hard hammer. The distal edge point has been broken and the flint displays patination with iron pyrites, probably due to local conditions after deposition.

A tertiary flake (Marischal Museum no 14782) of dusky yellowish-brown (10 YR 2/2) flint, in nearly complete condition apart from a broken barb. Its dimensions are: length 19 mm; maximum width 14 mm; and maximum thickness 2 mm. It has no platform. The flint displays extensive retouch over its entire surface, producing a fine barbed and tanged arrowhead. It was probably struck by a hard hammer. One of the proximal end tangs has broken and the distal end point displays wear on both sides. The flint is patinated with iron pyrites, probably



ILLUS 14 Short cist at Tavelty Farm, Kintore: flint items

due to local conditions after deposition and has possibly been subjected to natural erosion or deliberate polishing, its surface being extremely smooth.

Both these barbed and tanged arrowheads fall into Green's Sutton b/h category (Green 1980, 122), which are found widely distributed in Great Britain. In view of the circumstances of their discovery, there is no evidence as to whether these arrowheads entered the Tavelty grave with, as opposed to in, the body (cf Edmonds & Thomas 1987, 192).

A **tertiary flake** (Marischal Museum no ABDUA 15596) of dark reddish brown (10R 3/4) flint, in probably complete condition. Its dimensions are: length 15 mm; maximum width 11 mm; and maximum thickness 2 mm. It has no platform. The flint displays no retouch but shows partial wear on the lateral edge right. It has been struck with a soft hammer. This flake is probably a waste flake but has a useful edge of 12 mm and may thus have been used as a cutting tool. Like the barbed and tanged arrowheads, it has been stained with iron pyrites, attributable to post-depositional conditions.

A **primary chunk** (Marischal Museum no ABDUA 15596) of medium yellowish-brown (10YR 5/5) flint, in complete condition. Its dimensions are: length 31 mm; maximum width 21 mm; and maximum thickness 10 mm. It has no platform. The flint possesses partial retouch on one side of its distal edge producing a useful edge of 13 mm and a small point, possibly useful as a borer. No wear is apparent in macroscopic examination. Patination by iron pyrites is present, as noted with the previously discussed items.

A **primary flaked pebble core** (Marischal Museum no ABDUA 15596) of brownish-black (5YR 2/1) and dark reddish brown (10R 3/4) flint, in complete condition. Its dimensions are: length 37 mm; maximum width 26 mm; and maximum thickness 22 mm. It displays no retouch or wear. It has been struck by a hard hammer and it is possible that flint no 3 above was struck from this core. As with the rest of this flint assemblage, this piece displays patination with iron pyrites.

A **tiny spall of flint** was unavailable for study, at the time of writing, from Marischal College.

Overall, the flint assemblage indicates a burial of high standing. The arrowheads, though worn, are

fine examples of their kind and are a rare instance within Scotland of evidence of archery in a grave containing a knife-dagger. Case (1977, 81–3), in his consideration of distinctions within Beaker funerary assemblages, notes that although becoming slightly more common in his middle phase (to which Tavelty could be ascribed), that graves containing arrowheads could otherwise be poorly furnished. Graves classed by Case as rich, however, could also contain arrowheads. They appeared from the early phase in southern Britain, as at Radley Barrow 4a in Oxfordshire and Roundway barrow G, Wiltshire (Case 1977, Fig 4:3): associations include wristguards, daggers and gold items. The finds from the cist from Culduthel Mains, Inverness, provide an excellent example of this rich series (Clarke *et al* 1985, 267, no. 74). The addition to the Tavelty grave of other, still useful flints confirms the impression that Tavelty represents an exceptional burial.

Note that the strike-a-light mentioned by Hunt and Inglid (1986) is reclassified above as a core.

The pollen evidence

Clive Warsop

The samples which form the basis of this analysis were recovered as pockets of 'turf-like material' from the uppermost fill of the pit behind the south and north slabs respectively of the damaged cist. These are treated below as samples TAV 1 and TAV 2 respectively. Analytical procedures were the same as those previously outlined.

The vegetational picture obtained from the counts of sample TAV 1 is probably a local one. A relatively open landscape is indicated together with some evidence for agricultural activity. Coryloid (cf. *Corylus*) at 15%, being shade-intolerant, suggests relatively open woodland was present in the vicinity. This general impression is reinforced by the percentages of heathland communities, with Ericaceae and *Calluna vulgaris* at 9% and 4% respectively. Although *Polypodium* spp. is a woodland epiphyte it is commonly found in dwarf scrub heath, and in this case was probably part of the heathland community. Notwithstanding the tendency of *Alnus* to be overrepresented in pollen counts because of its high pollen productivity, it would appear to have been relatively well established in this locality. Fairly moist soil conditions are suggested by its presence; and the neighbouring valley of the Bridgealehouse Burn may well have contained alder. However, Simmons & Tooley (1981) noted that this species can grow on relatively dry soils and it has been identified on old well-drained heathland soils. Certainly, with *Sphagnum* present at a level of 16% TLP+S, areas of wetland were to be found nearby. Despite Poaceae (grasses) only being represented at 4%, such taxa as *Taraxacum* and *Ranunculus* are often indicative

TABLE 3
Pollen analyses of samples from a short cist at Tavelty Farm, Kintore

	TAV1	TAV2		TAV1	TAV2
<i>Pinus</i>	5%		<i>Ranunculus</i> type	*	1%
<i>Betula</i>	1%	–	Caryophyllaceae	3%	5%
<i>Alnus</i>	15%	26%	Filipendula	*	1%
<i>glutinosa</i>			Apiaceae	1%	–
<i>Quercus</i>	2%	4%	<i>Plantago lanceolata</i>	1%	5%
<i>Tilia</i>	–	1%	Lactuicoideae		
Coryloid	15%	26%	<i>Taraxacum</i>	7%	2%
<i>Hedera</i>	*	–	Asteroideae	7%	3%
Ericaceae	9%	2%	<i>Bidens</i> type	*	–
<i>Calluna</i>	4%	3%	<i>Anthemis</i> type	*	–
<i>vulgaris</i>					
Poaceae	4%	9%	<i>Callitriche</i>	1%	–
Cerealia	2%	–	Polypodiaceae	4%	7%
type			Lycopodiaceae	*	–
<i>Sphagnum</i>	16%	2%	Unidentified		3%

* = < 1%

of pasture, probably rough grazing in this case, as the Asteroideae contain several weeds of waste places indicating possible breaks in the sward or disturbed ground. Arable land is strongly evidenced by the presence of Cereal type pollen at 2%: moreover, the families of Caryophyllaceae, Apiaceae, and Asteraceae are known to include some weeds of cultivation. Locally a fairly open landscape of sparse woodland and heath with some wetter areas is suggested. The use of at least some of the immediate environs for mixed farming is also evident in the pollen record.

Preservation of pollen in sample TAV 2 was poor compared to sample TAV 1; and pollen also appeared to be present at lower concentrations. Thus it was only possible to obtain a pollen sum of 100 total land pollen plus spores, producing a statistically less acceptable analysis. This second sample (TAV 2), obtained from turf found behind the north slab, may not have produced a record which is contemporary with the first, but the vegetational picture is not dissimilar. There is some indication of a less disturbed grassland with *Plantago lanceolata* at 5% TLP+S. The absence of Cereal type pollen does not rule out some arable activity, as weeds of cultivated land are still present in this record.

Radiocarbon date

A radiocarbon date was obtained from bone collagen at the Department of Chemistry, University of Glasgow. This returned a determination of 3710 ± 70 BP ($d13C = -17.88\text{‰}$) (GU-2169). Calibrated according to the University of Washington program (Stuiver & Reimer 1993), this determination produces a central date of 2130–2050 cal BC, and a range of 2190–1980 cal BC at 1 SD and 2290–1890 at 2 SD.

DISCUSSION

Nothing detected at the time of this small rescue intervention indicated that this cist was other than an isolated burial, although the initial report allowed the possibility that a small cemetery might be present (*Press and Journal*, 1 Feb 1983). Despite the continued cultivation of the field, and overflying as part of Aberdeen Archaeological Surveys and latterly Grampian Regional Council's Sites and Monuments aerial archaeology programme, no indication has been noted of any feature enveloping the cist. There are no secure records known to the author of any substantial cairn or tumulus at this location, such as might be expected on the basis of the frequency with which the better-recorded Scottish dagger graves seem to have been associated with sizeable cairns (Henshall 1968). However, it may be noted that Dalrymple (1884), in his account of the excavation of the henge at Crichtie and the monuments of its environs, and following A Watt's *Early History of Kintore* (1864, 240–2) observed: 'Between the hill of Tuack (OS card NJ 71 NE 27: NJ 795 154) and the two stone circles last mentioned [at Fullarton], there was, at Kintore, a remarkable tumulus now removed, surrounded by standing stones, some of them sculpted, so that a line of prehistoric monuments connected the circles of Tuack and Crichtie' (pp 324–5). This is almost certainly a report of the Castle Hill at Kintore, which may have incorporated a recumbent stone circle not considered by Burl (1976). Whilst it is conceivable that the summit of the terrace east of Kintore cemetery and above the break-of-slope to the Bridgealehouse Burn would be amenable to geophysical survey which might produce contrary results, meantime the Tavelty cist must be treated as an isolated grave. Depending on the interpretation that is made of the remains at Castle Hill, Kintore, this may have formed part of the landscape of the Tavelty find. Set some 1100 m away, it does not display the close proximity that the Broomend cists do to the henge and circle there.

Aside from the scale of the cist itself, the assemblage, which, from the circumstances of discovery, may not be complete, includes a number of indications which seem eloquent of the high status of the young male interred here. One is the quality of the beaker; and another is the presence of the

probable knife-dagger blade fragment. The number of flints included in the grave is also supporting testimony of status, although flint items have been recovered in some numbers from certain north-east cists. As far as the author is aware, the tally from Tavelty is only exceeded locally by the eight worked flints which are recorded also from the Beaker cist at Paradise Road, Kemnay, Aberdeenshire (accompanying a Step 5 beaker: Woodham, 1974, 5–6) and by the 11 flints accompanying an inhumation from a Beaker cist at Manar, Inverurie parish (Shepherd & Shepherd 1989). The Tavelty collection is approximately matched numerically by the five flints (including a barbed and tanged arrowhead) accompanying a Step 5 beaker and two slate wristguards found within the cist burial discovered in 1935 at Newlands, Oyne (Low 1936, 330, figs 5–7; Clarke 1970, no 1478; Shepherd 1986, *illus* 13). Slightly more distant, Cists 5 and 6 of the Borrowstone Cemetery, Newhills, Aberdeenshire, contained (as well as the Step 4 beakers mentioned previously), a considerable number of flints including seven unused barbed and tanged arrowheads of very high quality in the case of Cist 5; five flint flakes, as well as archer's gear including a greenstone wristguard with four bronze rivets, were recovered in Cist 6 in the same cemetery (Shepherd 1984; 1986, 12–13). The cist burial of an adult male with a Step 4 beaker from Clinterty, Kinellar, included eight flints (two of which are barbed and tanged arrowheads) as well as a micascist axe, a bone needle and ring, and a crystal of topaz (Reid 1924, 38–41 and fig 27; Hunt & Inglis 1986, 30; Clarke 1970, no. 1443). The archer's grave at Uppermill (formerly Ardiffery), Cruden produced two N2/Step 4 Beakers, seven barbed-and-tanged arrowheads, a bracer and two flint flake knives (Clarke 1970, nos 1423 and 1424; Kenworthy 1977; Shepherd 1986, *illus* 19). More recently, two short cists at Park Quarry, Durris, in the Dee valley, have each produced an inhumation, with a shattered beaker behind the hips. Cist 1 here also contained seven flints and a perforated stone disc (Shepherd & Greig 1989), while Cist 3 was furnished with a barbed-and-tanged arrowhead and three further flint flakes (Shepherd & Greig, 1991). Lastly, amongst north Scottish archers' graves, attention may be drawn to the find of five barbed-and-tanged arrowheads and a bracer, with the remains of two young adults and an AOC beaker at Dornoch Nursery, Sutherland (Ashmore 1989). None of the Tavelty flints approaches the individual size of the most substantial flint items in the Newlands, Oyne or Cruden 'archers' burials', nor the 65 mm by 60 mm flint flake from Cist 2 at Keabog, Pitdrichie, Drumlithie (Shepherd & Bruce 1985, 38 & *illus* 4).

Amongst the Scottish dagger graves discussed and inventoried by Henshall (1968), only Craigs-corry, near Beaully (NH 503542), contains evidence of archery – in this case, a single, damaged barbed-and-tanged arrowhead, lacking its point and one barb (Callander 1925, 205–6: Henshall 1968, 190, no 12). The associated, fragmentary dagger is unusual within Scottish graves (Henshall 1968, 173). A greatly decayed blade seems to have been found with a beaker (or beakers) and, less certainly, a greenstone wristguard at Callachally, Glen Forsa, Mull (Scott 1966, fig 15; Henshall & Wallace 1963, 149), although the association is not incontrovertible (Ritchie & Shepherd 1973, 24). The cemetery sealed beneath the barrow at Barns Farm, Dalgety, produced a small dagger from the heavily plough-damaged grave 3 (Watkins 1982, 77 & 111). The most recently discovered Scottish dagger, also from a cist at Dalgety Bay in south Fife, seems to have been the solitary find accompanying an inhumation found during building work (Proudfoot 1986). In this instance, the grave again seems to have formed part of a more extensive cemetery, perhaps also once marked by a barrow (Proudfoot 1986; Proudfoot & Proudfoot 1987).

The Tavelty grave itself conforms well with Henshall's observations on dagger cists in general: 'The cists tend to be more massive than the average late neolithic or Early Bronze Age cist, and the joints are often luted with clay' (1968, 177). However, none of the other features sometimes recorded with such cists came to light: there was neither trace of hide nor of fragrant floral tributes (cf Tipping 1994).

In comparison with certain other bodies from Scottish dagger graves, the individual at Tavelty may have been distinctly young. Murphy (1964 178), for example, proposed an age of 55 years for the Ashgrove, Methilhill, Fife, dagger inhumation, on the basis of the degree of dental wear. This individual was probably male. The inhumation accompanying the dagger found in 1931 in a cist on the site of Kirkcaldy slaughterhouse also seems to have been aged about 50 (Henshall 1968, 189). This was the age proposed, too, for the male inhumation from the dagger grave from Bught Park, Inverness (Kirk & McKenzie 1956, 9). Contrastingly, Lunt (1963 153) proposed an age of c 20–25 (again on the basis of dental wear) for the teeth from the Masterton, Fife, burial (Henshall & Wallace 1963; Henshall 1968, 189–90, no 10). Equally, the richer archer graves in the north-east seem also in the main to have held mature males: an age of 35–40 was proposed in the case of Newlands, Oyne (Low 1936, 328), over 40 for the skeleton from Clinterty (Bruce 1986b, 36) and 30s and 25–35 respectively for the bodies from Cists 5 and 6 at Borrowstone, Newhills. However, on the basis of dental wear, the individual from the knife-dagger burial at Gairneybank was placed in the early 30s (Cowie & Ritchie 1991).

LOCATION OF THE FINDS

The finds are in the Anthropological Museum, Marischal College, University of Aberdeen. The Beaker has been reconstructed. The skeleton is in the collection of the Anatomy Department, University of Aberdeen (Bruce 1986b, 38).

GENERAL DISCUSSION

McAdam (in Watkins 1982, 129) has remarked that ‘the solitary short cist is not entirely typical of burial sites in Early Bronze Age Scotland. Fewer than 45% of cists occur singly, and that figure is probably an over-estimate, reflecting inadequate recording and the accidental nature of many cist discoveries’. These four finds, grouped together for publication, certainly reflect that latter characteristic, and general discussion will therefore be restricted to a few points, given the haphazard selection of evidence pertaining to the examples discussed here. Others (Kinnes *et al* 1991; Case 1993) have already drawn on the chronological evidence from them in wider considerations of Beaker development. As regards the findspots of these cists, they match the preference for sand-and-gravel deposits noted for single Beaker cists by McAdam (1974, 4). The two examples identified by ploughing provide a testimony, if that were needed, of the continuing erosion of the archaeological record of lowland Scotland, on which Barclay (1992) has commented in another context.

The cists themselves furnish the predominant impression of the use of relatively local resources. This applies, for example, to the clay luting at Tavelty, but whereas it has been noted (Henshall & Wallace 1963, 152; Henshall 1968) that clay luting is a feature associated in the main with cists which appear rather grander than the norm, three of the four examples considered here produced at least some evidence of luting. Of these, only Tavelty otherwise displays signs of unusual wealth and, in its case, the more varied geologies of the slabs of which it was constructed may imply sourcing over a wider area.

The Tavelty burial, aside from its evidence of archery, goes some way to infill a substantial gap between the Spey and the Montrose Basin in the distribution of knife-dagger and dagger graves within Scotland, the latter mapped by Henshall (1968, 174, fig 39) and by Gerloff (1975). There is, however, slight evidence for a further dagger grave having been found in the early 1950s in the north-east: from the farm of Brownhill, at Auchterless in Buchan (Shepherd 1986, 8).

It is noteworthy that three of the cists discussed here include evidence, albeit fragmentary in

each case, for the presence of copper or copper-alloy objects. The most tentative evidence is clearly that from the Scotstown cist, but it suggests that detailed examination of pebble floors and similar features may in future produce corroborating information, and such activity during excavation should sit alongside the fuller examination of organic deposits contained within cists. In the latter regard only the analysis at Sandhole proved rewarding in the identification of the unusual concentration of moss within the grave, but all three successful analyses provide intimations of the setting of the cists within at least partially agricultural landscapes.

The three skeletons associated with beakers are all male; it has been noted that the majority (64%) of the individuals in the Aberdeen University Anatomy Department collections are male, although the overall population (at some 60 individuals) is still small (Bruce 1986a, 17). The man interred at Bridge of Don, probably some 177/178 cm tall, seems to have been amongst the tallest of the local population (Bruce 1986a, 17), although seemingly not much taller than the average for British Bronze Age males (Bruce, 1986a, 18, quoting Manchester, 1983). The body in the Edderton cist is of interest in being the only female skeleton of some 20 in the Aberdeen collection to show evidence of a healed fracture (Bruce 1986a, 19). Burial orientations are discussed by A N Shepherd (1989) in connection with the Chapelden, Tore of Troup, beaker. The two secure Beaker examples published here (Scotstown; Sandhole) conform with the prevailing orientation noted in the north-east. The middle aged man from the Bridge of Don is the only skeleton from the north-east so far examined to display what might be evidence of malignant disease. Study of the condition of his pelvis allowed a number of possible causes to be proposed by Dr Bruce, including chondrosarcoma and malignant spread from a cancer of the prostate. The evidence does not allow specific diagnosis. This individual may have had either a rather unsightly sebaceous cyst or even a low-grade infection on the skin of his forehead, which could have accounted for a circumscribed area of eroded bone on his skull (Bruce 1986a, 20–1).

In sum, the four individual rescue excavations mounted from the University of Aberdeen and reported here have added three beakers to the corpus from the north-east, as well as providing anatomical, palynological, chronological and other information. Only in the case of Scotstown can the possibility of further burials in their immediate vicinities be considered unlikely.

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