

Excavation of a beaker cist at Dornoch Nursery, Sutherland

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SUMMARY

Excavation by the author, K Antonio and R Gourlay in Dornoch Forestry Commission tree nursery, in January 1980, revealed a cist with massive capstone, an all-over-corded beaker, five arrowheads, a bracer, a strike-a-light and iron ore nodule, a fragment of Grooved ware and remains of an inhumation and a cremation. The contents of the cist were heavily disturbed by animal burrows. No radiocarbon date was obtained because of the high likelihood that there would be insufficient carbon in the bones for assay.

THE SITING AND DISCOVERY OF THE CIST

The cist lay at NGR NH 7981 9082, near the bottom of the slope forming the north side of a shallow flat-bottomed valley which to the west gives way to an undulating plain and to the east leads down to the sea (illus 1). The area had been agriculturally ploughed for many years, most recently for planting of tree seedlings. The natural subsoil is a mixture of yellow medium-grain sand and coarse gravel, with a fine sand fraction.

Discovery of the cist during ploughing to prepare a bed for tree seedlings was reported by Mr E Michie, the then Forestry Commission District Officer at Hilton, Dornoch. Between the time of discovery in September, and excavation in January, the cist slab had been removed and replaced, a wide hole had been dug through topsoil to below the level of the top of the side slabs, and a small sondage had been made by forestry workers in the west corner of the cist (illus 2, 3).

THE EXCAVATION

INTRODUCTION

Excavation started on 30 January 1980 and lasted for two snowy days. A 3 m by 2.5 m trench was laid out round the cist and it and the pit into which it had been set were completely excavated.

RECENT SOIL DEPOSITION

Recently disturbed material had washed down the sides of the hole dug by the Forestry Commission to form a sequence of six 3 mm-thick bands of fine dark material alternating with five 7 mm-thick bands of lighter, slightly coarser material. These were presumably the result of periods of

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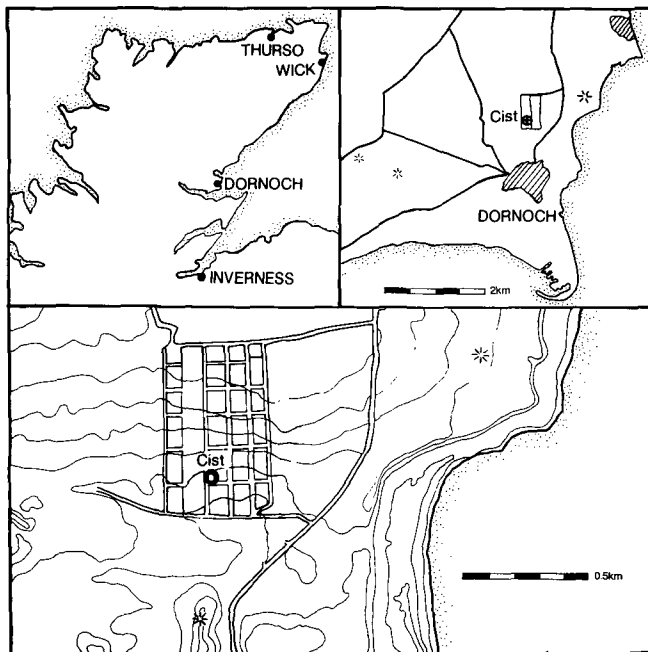
rainfall alternating with drier periods, and provided a useful contrast with the prehistoric fill of the pit (illus 4). A rim fragment of Grooved ware was found in this recent fill (illus 6).

THE PIT

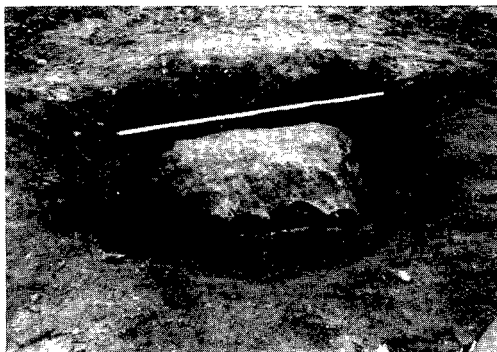
The pit into which the cist had been set measured 1.8 m north-west/south-east by up to 1.4 m wide, with its bottom about 0.9 m below the present surface. The upper levels of the pit, between the cist slabs and natural, were filled mostly with brownish yellow sand, iron-stained in places; but in the west half of the south-west side and at the north corner there were accumulations of darker soil (illus 3). All these materials were heavily disturbed by animal burrows which crossed higgledy-piggledy from fill to soil and subsoil, visible in places and apparently invisible elsewhere; it was not thought worthwhile to take samples for pollen or other analysis. The lower levels of the pit were difficult to distinguish from natural, except at the bottom of the south corner, where it contained many small fragments of shattered sandstone. There was no banding similar to that in the pit dug by the Forestry Commission, which had lain open for between 3 and 4 months. It thus seems likely (although not certain) that the pit was largely filled in a short time after the cist was put in it.

THE CIST AND ITS FILL

The cist was oriented north-west/south-east (illus 4). The capstone measured 1.31 m long by 0.99 m wide. The cist was trapezoidal, with parallel long sides; its internal measurements were 0.72 m wide and between 1.04 and 0.94 m long. It varies between 0.49 and 0.54 m deep, and there was no base slab. The side slabs were roughly D-shaped, flat side uppermost, leaving gaps at the bottom corners which were not covered by subsidiary slabs. The top of each side slab had a natural step in its upper edge at its south-east end; the indent in the south-west slab was neatly filled by a small slab measuring 150 mm by 30 mm, and a similar slab was found in a position suggesting it had recently



ILLUS 1 Location maps. Drawing: F M Ashmore, copyright The Crown



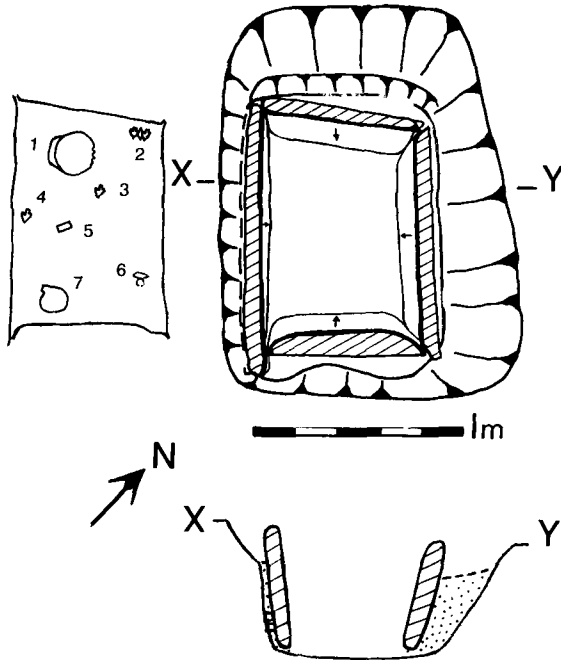
ILLUS 2 The cist before excavation from the south-west, with replaced capstone. Note the small slab at the right-hand end of the side slab. Photo: R Gourlay, copyright Highland Regional Council



ILLUS 3 The top fill of the cist, with Forestry Commission sondage emptied out. Photo: R Gourlay, copyright Highland Regional Council

been dislodged from the corresponding indentation in the north-east slab. There was no sign of clay luting.

The cist appears to have filled up in two or three episodes. The sandy fill of the bottom of the cist formed a double saddle. Later, a slightly dirtier fill came in between the capstone and the tops of the cist slabs. Lastly, soft sandy soil came in to fill the cist to near its top. There was no clear demarcation between the two upper fills. When emptied in the laboratory the beaker was found to contain a similar distinction between its upper and lower fills; because the beaker had been canted over before the lower of the two fills had ceased accumulating, the boundary between its two fills was not at right angles to the vertical axis of the beaker. Natural filling as a result of percolation of the light sandy soil between the cist cover and the vertical slabs aided by transport of soil by animal burrowing does not account adequately for the completeness of the cist fill, nor for the correspondence between the dual



ILLUS 4 The cist and disposition of the finds: 1, beaker; 2, three arrowheads *in situ*; 3 and 4, displaced arrowheads; 5, bracer; 6, strike-a-light and flint nodule; 7, skull. Drawing: F M Ashmore, copyright The Crown

fill of the beaker and the distinction between the upper and middle fills of the cist. The preferred explanation is that the cist was, for some time after deposition of the primary burial, void of sand and soil and (after sand had entered through the bottom corners, canting the beaker) it was purposefully filled up in a later episode of activity.

BONES AND ARTEFACTS

Disturbance

The cist was eventually found to contain an AOC beaker, five arrowheads, a bracer, a strike-a-light, an iron ore nodule, and the remains of an inhumation and at least one cremation. All had been disturbed by the influx of soil into the cist and by animal burrowing.

The first cremated bone fragments were encountered in the top 50 mm of the fill of the cist and were disseminated through all of the fill. There was some correlation between their occurrence and visible animal burrows; but many of the latter will not have been distinguishable from general fill. The first arrowhead was encountered 65 mm from the south-west side of the cist, 475 mm from the north-west end, and 0.29 m below the top of the cist side slab, that is to say 0.2 to 0.25 m above and 0.5 m horizontally from the main group of arrowheads on the cist floor. It was in a detectable animal burrow. A sherd of the beaker had been dislodged and moved sideways by a similar amount, and another arrowhead had also been brought up over 0.11 m above the base of the cist and moved sideways by c 0.2 m. Animal burrows were clearly detectable at all levels including the base. The most economical explanation is that all these bone fragments and non-basal finds were moved by animals.

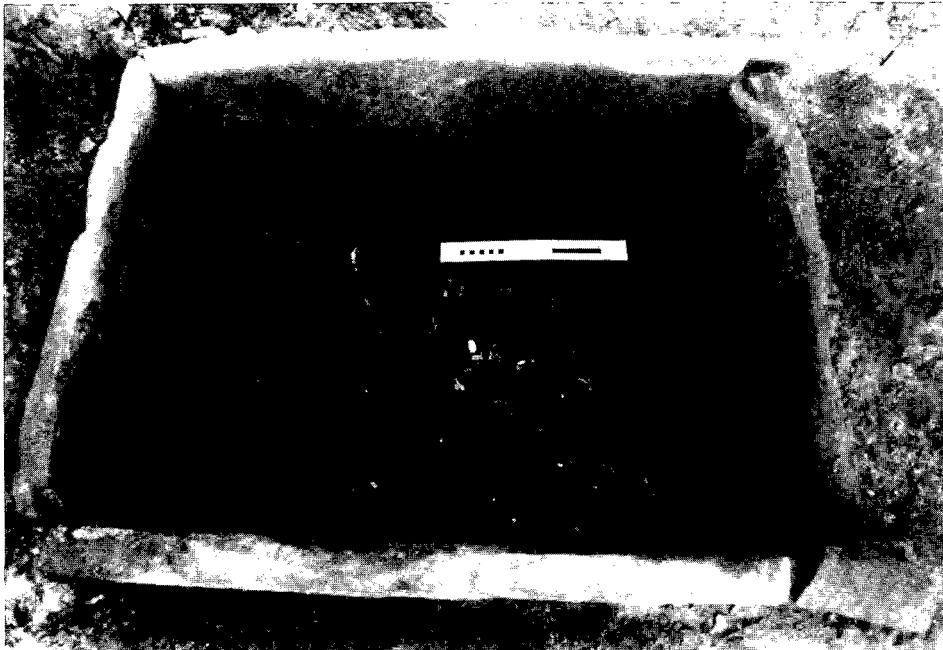
The basal bones

The bones of the inhumation had largely disappeared; only the skull was in a reasonable state of preservation (illus 5). Some burrows ran alongside decayed bones; the latter were lifted in blocks of soil. The impression of a crouched skeleton in illus 5 is misleading, judging by the specialist's identification of the bones; the long bones which survived in decayed and fragmentary condition cannot be shown to have been discovered in their original positions. It seems certain that the inhumation was put in the cist before any soil-fill had entered.

Cremated bone at the basal level of the cist was concentrated on the south-west side (illus 5). The lowest fill of the cist (which was found at its corners) did not reach to this area, so its relative date cannot be determined. The cremation was, however, put in before the main filling of the cist. The size of the cremated bone fragments is such that it seems unlikely they were put in the cist in a small bag and it may be that they were dumped in the cist without a container; also, the distribution of the basal level cremated bones mimicked to a certain extent that of the inhumation. As has been described above, the cist- and pot-fills probably reflect reuse of the cist for insertion of one of the two burials and subsequent deliberate filling. But the amount of disturbance by animal burrowing, and the suspicion that some burrows followed the line of long bones makes it impossible to know which burial was primary, or indeed, despite Occam's razor, that they were not put in the cist at the same time as each other.

THE AGES OF THOSE BURIED AND THEIR DISPOSITION

The inhumed body was that of a young adult, between 17 and 25, but its sex could not be determined from the surviving bones. Given the possibility of disturbance by man and the certainty of



ILLUS 5 The burial in the cist with long bones and cremation partly cleaned for removal in blocks. The appearance of a crouched burial in original position is misleading. Photo: R Gourlay, copyright Highland Regional Council

disturbance by animal burrowing, it is merely most likely that the skull was originally in the south corner of the cist and that the body faced north-east.

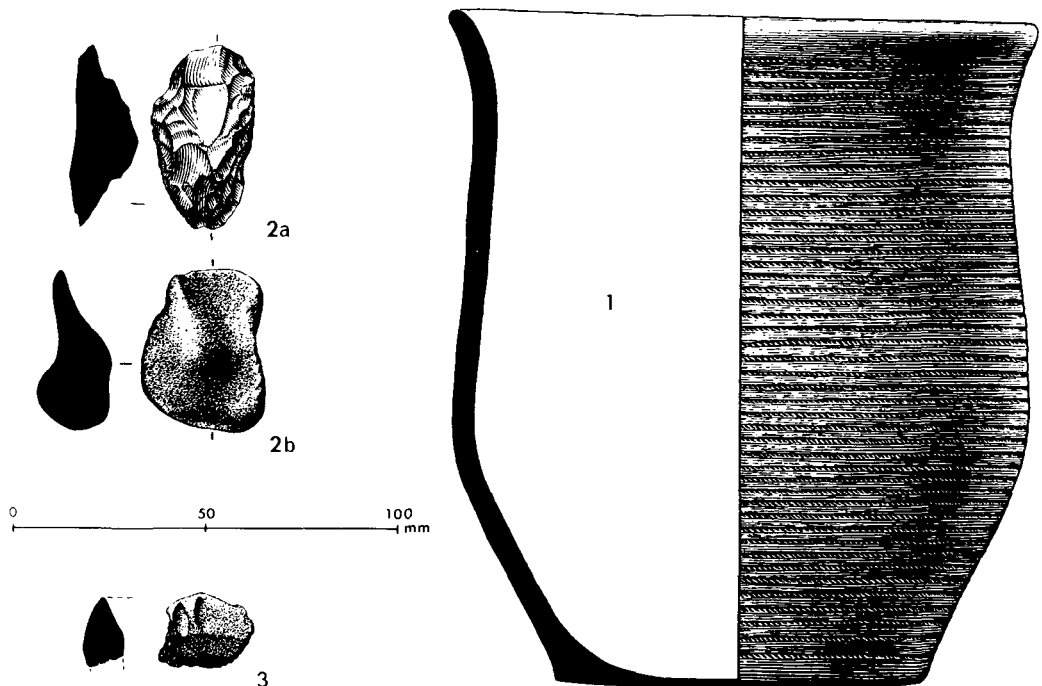
Although cremated bone was widely disseminated, 67% of it by weight was found measuring about 0.3 m by 0.2 m on the south-west side of the cist at the same level as the inhumation (illus 5, white flecks). It had been thoroughly cremated and the rather large pieces had been efficiently collected. Two separate reports on the cremated bones reached different, albeit tentatively expressed, conclusions on the sex of the individual cremated and it seems best to regard it as indeterminate; again the body seems to have been that of a young adult. There is a possibility that some fragments of bone may represent an infant. The detailed reports will form part of the archive.

THE ARTEFACTS (illus 6a & 6b)

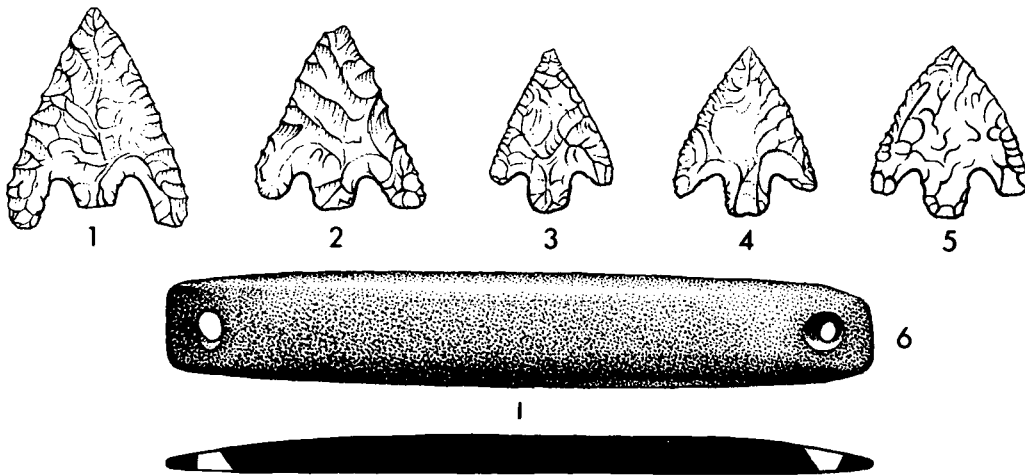
The beaker is all over cord decorated. It has no internal decoration and its exterior profile is smooth. Its fabric is fine and yellowish brown. It is the most northerly complete AOC beaker known, but fragments of AOC beakers have been found in the Western Isles at Callanish, in Caithness and Shetland (Clarke 1970, 557, map 1). Its closest parallels are the beakers from Torphins, Aberdeenshire (Clarke 1970, 512, fig 7) and Alston, Northumberland (*ibid*, 491, fig 3).

The other beakers known from the mainland north of Inverness and catalogued by Clarke are six Northern/Northern Rhine, four Late Northern, and three Developed Northern; and there is one Late Southern beaker. All are slack-profiled and thick-walled.

The bracer has two perforations, is very slightly convex-sided, and has rounded corners. It is thus of Atkinson's type A1 (Clarke 1970, 570). The type is found predominantly in Scotland although

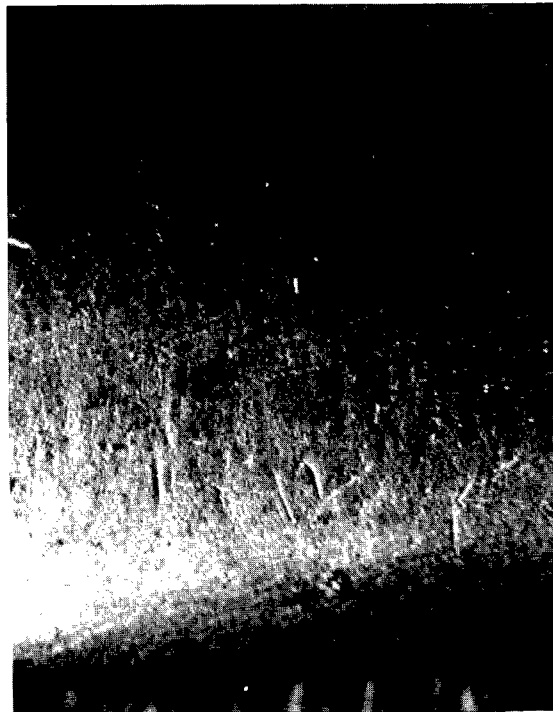


ILLUS 6a The finds: 1, beaker; 2a, strike-a-light; 2b, iron ore nodule; 3, fragment of Grooved ware. Drawing: T Borthwick, *Crown Copyright*



ILLUS 6b The finds: 1-5 arrowheads, 6 bracer (Scale 1:1)

it is also known from Cambridgeshire and Lincolnshire. The only previously known association of an A1 bracer with a beaker is at Callachally, Glenforsa, on the Isle of Mull. The associations known to Clarke suggested to him that bracers in general occurred with Rhenish rather than AOC beakers (1970, 448).



ILLUS 7 Fluting on the bracer, overlying scratchmarks. The fluting runs up and down the illustration and occupies the middle third of the picture. Photo P J Ashmore, *Crown Copyright*

The Dornoch bracer is made of fine-grained reddish stone and shows wear on its upper surface, scratches perhaps attributable to the manufacturing process, and some six transverse light flutings which overlie the scratches (illus 7). The origin of the latter is unknown; other bracers have not been studied for comparanda.

The five flint barbed and tanged arrowheads are of Sutton type, which occurs throughout Britain (Green 1980).

The flint strike-a-light has a well defined striking platform and shows signs of use. The iron ore nodule has a deep rounded groove in it which matches the striking platform of the flint. The two were found adjacent to each other and we need not doubt their association; they thus add to the small number of such associations known from Scotland. Strike-a-lights or iron ore nodules appear to occur with both inhumations and cremations; they occur most commonly with beakers but also with enlarged food vessels and food vessels (Close-Brooks *et al* 1972, 126–7).

The small rim fragment of Grooved ware (pers comm, J Kenworthy) has a smooth brown fabric. Its rim seems to have vertical plastic piecrust decoration, probably produced by finger-pinching. It was found in modern disturbed material outside the cist.

DISCUSSION

It is tempting to regard the finds as all associated with one another and the inhumation, but since there were remains of two young adults in the cist which could not be separated stratigraphically from each other or from the artefacts, the finds cannot be shown to be a closed group. That the beaker, for instance, could have belonged with the cremation rather than the inhumation is implied by the association at Knockdoon (Clarke 1970, 62). The temptation must be resisted.

There are too few beakers known from northern Scotland to construct a local typological sequence as recommended by Lanting and van der Waals (1972, 20–46). Without scientific dates for the inhumation and cremation (which may be obtainable with refinement of small sample counting, but which are unlikely ever to discriminate between the dates of the two burials and can never show them to be contemporary with one another) all that can be said is that the burial is likely to be earlier than most beakers of the insular series and that there is no evidence that AOC beakers like the Dornoch Nursery cist beaker influenced the development of the insular styles of beakers so far known in Scotland north of Inverness.

The orientation of the cist, north-west/south-east, is similar to that preferred for burials with Dutch All-Over Ornamented beakers (Van der Waals 1984, 3–35). Northerly orientations are predominant with AOC beakers (Clarke 1970, 62). Such orientations suggest an early place in the British sequence (Watkins & Shepherd 1980, 41). The excavation trench dug in 1980 was not large enough to reveal whether the cist was surrounded by a ring ditch.

The grave and its contents thus provide us with little more than dots on the distribution maps of the various types of artefact. Paradoxically, the most important find from the site may be the small sherd of Grooved ware which may indicate a settlement or ritual site of the late Neolithic period in the vicinity; and one of the most interesting avenues for further study of the artefacts is the shallow fluting on the bracer.

LOCATION OF ARTEFACTS AND ARCHIVE

The finds are in Inverness Museum and the original excavation records will be archived in the National Monuments Record.

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