

A cist at Ruchlaw Mains, East Lothian (NT 616742)

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ABSTRACT

A cist was discovered during ploughing on 10 December 1979. It was a simple floored and capped stone box; it contained an adult male skeleton with a Developed to Late Northern beaker placed to the left of the skull. A radiocarbon date suggests it belongs in the last half of the third millennium BC.

INTRODUCTION

During ploughing a massive capstone was dislodged; the farm tenants, Mr and Mrs J Wyllie, reported the finding of a cist to the Inspectorate of Ancient Monuments who arranged for the authors to excavate between 9 and 12 January 1981. Permission was granted by the tenants and by the owners, Mr and Mrs R M Urquhart of Ruchlaw House.

The site lies on the low rolling hills between the E Lothian plain and the north eastern end of the Lammermuirs, some 5 km from the Firth of Forth, at an altitude of 90 m on a slight south facing slope (fig 1).

The soil is of the Biel series of the Biel Association. It is typically an imperfectly drained Brown Forest Soil on drifts derived from Lower Carboniferous sediments and Upper Old Red

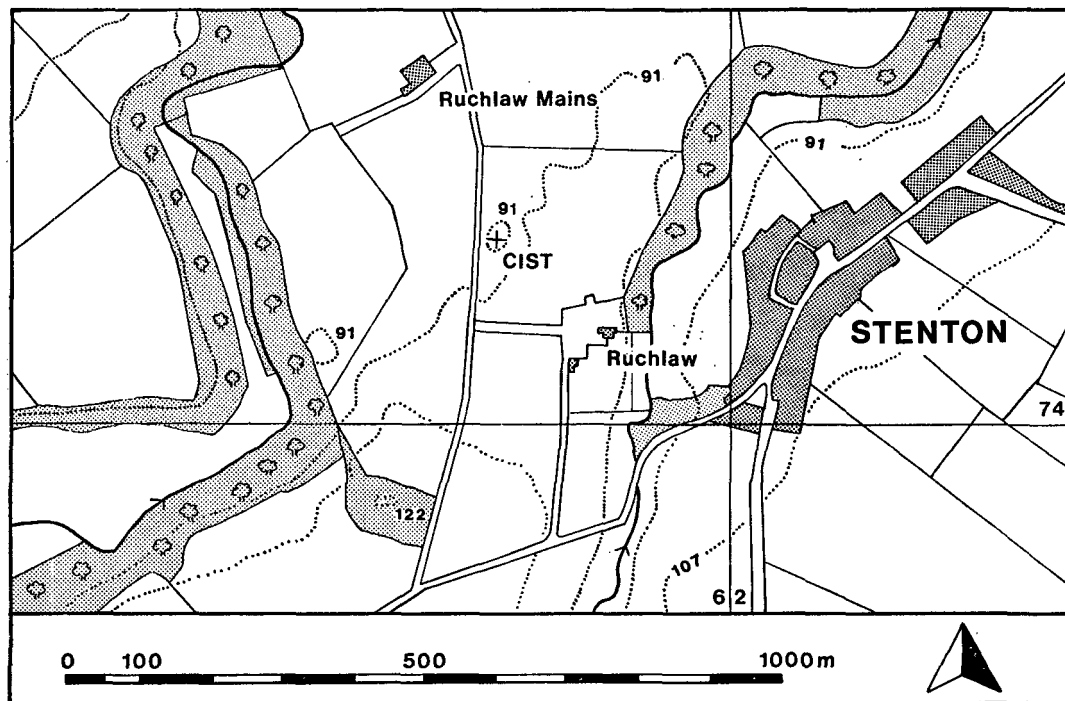


FIG 1 Location map, with National Grid lines. D. Gallagher

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Sandstone conglomerates and sandstones (Ragg & Fuddy 1967, 52-3). The cist, being near the top of a slight knoll, is in ground better drained than the norm for this area. Ploughing has at this point brought the soil down towards the subsoil which is a predominantly round gravel with a small clay fraction; larger stones up to 0.2 m in maximum dimension are fairly abundant on the plough soil, and the field is surrounded by a dyke containing yet larger stones of similar character, while in the strip of woodland adjacent to the site are other large rounded stones, cleared annually after ploughing.

The cist lies in what was between the middle 17th century and 1934 part of the unploughed parkland of Ruchlaw House. There are no signs of rig and furrow in the field, adjacent fields, or the strip of woodland by the cist. The area is now used for growing soft fruits, root crops and barley.

EXCAVATION

When visited on 13 December the main southern capstone had been dragged by the plough some 5 m S of its original position, leaving a subsidiary northern capstone in position. Ploughsoil had fallen into the cist, filling it to the brim at the southern end and sloping down to the base of the northern end (fig 2).

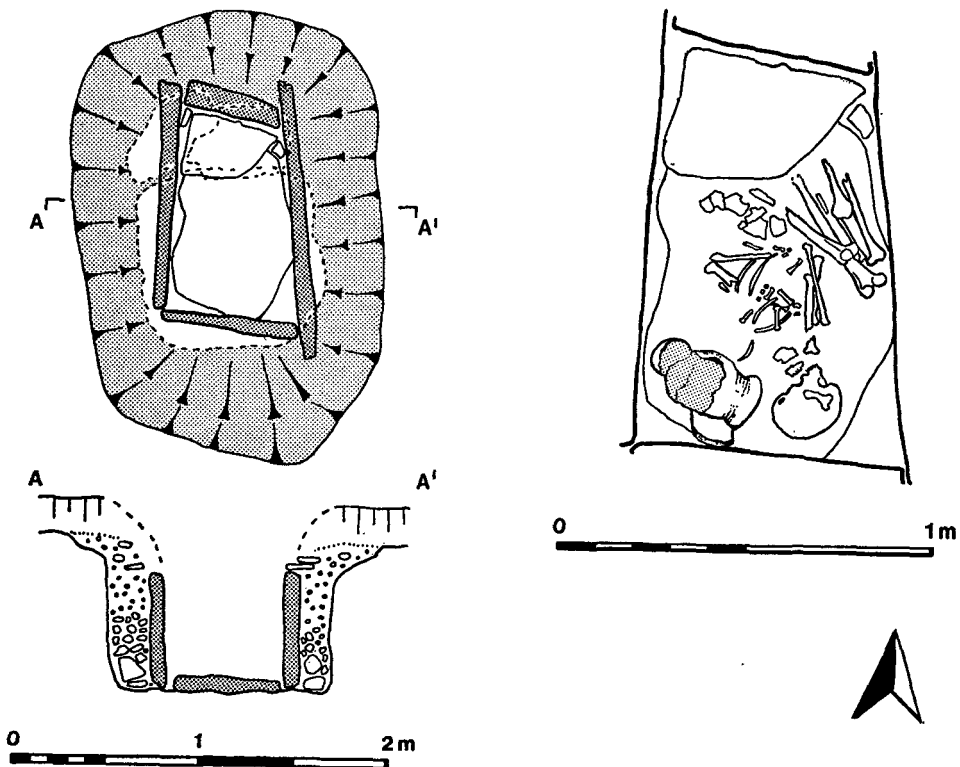


FIG 2 Plans and reconstructed section of the cist and pit; details of disposition of skeleton and beaker at double scale. D Gallagher

On 9 January, 1981 a trench measuring 3 m N-S and 2.5 m E-W oriented at $2\frac{1}{2}^{\circ}$ W of N was laid about the cist and cleaned manually to the top of the B/C subsoil horizon. An area of the same dimensions was laid out from 0.5 m S of the first area, cleared by a mechanical digger operated by Mr J Wyllie, and cleaned manually.

The Ap topsoil was a dark reddish brown (5 YR 4/2), loose to sticky, stony, slightly silty clay ploughsoil with an abrupt irregular boundary at the B/C subsoil horizon. The latter was a reddish brown (2.5 YR 4/4) rounded gravel with clay. The B/C stone content was higher than that of topsoil and contained a greater proportion of grits sized 2-6 mm. Worms were observed in both horizons. Variations in the B/C subsoil were minor: at the S of the S extension at the base of topsoil was a discontinuous layer with abundant patches of pea gravel (2-6 mm) overlying a consistent gravel horizon. In the N of the northern trench stones 20-66 mm in length were more abundant at the ap-B/C junction. The field was limed for the first time in recent years in 1943. PH readings taken before liming, in October 1943, varied between 5.3 and 6.9 (J Wyllie, pers comm). At a point 2 to 3 km away (NT 638766) the pH lies between 5.1 and 6.1 (Ragg & Futtly 1967, 221). These conditions are very marginal for bone preservation.

Artificial features were found only in the N area. They consisted of two plough furrows, one of which corresponded to a plough scar on the displaced capstone, the cast of the capstone, the cist and a stony area round it corresponding to its pit, and a scoop filled with topsoil. The latter had been produced by dragging of the capstone. No ditch like that at Newmill was discovered (Watkins & Shepherd 1981, 34).

The cist and its pit were excavated concurrently. The upper fill of the pit was difficult to distinguish from the surrounding subsoil and it was not until excavation was almost complete that the upper parts of its sides could be identified with reasonable certainty. The pit measured 2.2 m by 1.7 m and was 0.82 m deep below the ap-B/C horizon. Its profile was almost vertical sided except in the top 0.1 m of the subsoil, where it was irregularly 0.1 to 0.2 m wider than the body of the pit. The fill had been sorted before or during original backfilling. The largest stones up to a maximum dimension of 0.3 m had been thrown in first; then rounded stones of medium size; and finally a mixture of gravel and stones up to 0.1 m long (fig 2). In the lower fill pockets of rounded gravel and clay fractions alternated with voids, and at two points irregular patches of red clay occurred. With this one exception no components alien to the immediate locality were noted.

No plough scratches were noted on the stones of the fill. No artefacts were found, nor charcoal nor cremated bone. On the top of this fill had been put sporadically levelling layers of small slabs, which overlapped the sides of the cist (fig 2).

The cist measured 1 m N-S by 0.72 m E-W and was built largely of nine slabs: three overlapping floor slabs, two small irregularly placed end slabs, two side slabs and two capstones. The slabs were all of well bedded sandstone except, perhaps, for the W side slab which was more shaly. The E side slab projected beyond both end slabs; the length of the cist was defined by the W side slab. At each corner a small slab had been placed to limit inflow of loose material, although this precaution had proved unnecessary. Small slabs were also used to fill a vertical gap between the two capstones, and to level up the sides of the cist to take the capstones.

The recent topsoil in the cist was not completely uniform; towards the floor of the unit it became lighter in texture and colour, and fallen small flake slabs were found in the southern two-thirds of the cist. There was a low pile of fine light brown soil beneath the junction of the two main capstones, overlying the abdominal area of the skeleton. Elsewhere, but not particularly at the edges or corners of the cist, there was a skim of the clayey crumbly fraction of the B/C horizon. It seems likely that this latter material had fallen in when the capstones were put on the cist while

the low pile represented percolation between the capstones. Slabs covered the floor of the cist (fig 2).

The beaker lay broken on its side, except for its base. It pointed SE; and a stone underlay it (fig 2). The damage was old, not recent. It is not possible to say whether the beaker lay originally on its side or stood on its base. The upper surface of the beaker, which was abraded and darkened was patchily covered by calcareous concretions. Close by it was a slab which had flaked off the bottom of the capstone. Several small joining sherds were scattered close by. In the base of the beaker and in a small pile close to the base of the beaker was charcoaliferous material.

The skeleton had been more or less complete and gave the overall impression that it had been articulated when deposited but had suffered from falling material, animal disturbance, crushing and partial dissolution in the cist. The pH of the soil before modern liming was between 5.3 and 6.9, sufficiently acid to explain degradation of bones (see p 544).

DISPOSITION OF THE BODY

The bones were in variable condition; some were firm but others had decayed altogether or were represented only by fragile and eroded pieces. The skull and legs were in a position implying the body had lain crouched on its right side, but the upper part of the body lay on its back.

The face of the skull lay as if it were looking at the floor by its right shoulder, right cheek bone and lower jaw resting on the stone slab by the right shoulder. The upper arm lay parallel to the body. The right shoulder was in articulation; the elbow of the right arm, by the right thigh, was not in articulation; the hand and finger bones – two articulated – lay across the chest palm downwards and slightly closed. The elbow of the left arm, by the lowest of the left side rib, was still articulated; the wrist and hand bones extended below the left femur. It was as if the body had one hand on its heart and the other between its thighs.

The vertebrae had disappeared. The bones of the thorax survived largely as a spread of rotten bone particles and powder. The ribs were poorly preserved and had for the most part gone, and they were displaced, apart from two of those under the crossing forearm. A pile of earth and flat angular stones which had fallen between the two capstones overlay the abdomen, and the bones of the pelvic area were found crushed flat to powder. The small area between the bones here was almost clean of silty earth, which must mean one of the stones filling the vertical gap between the capstones fell before earth percolated in. The upper ends of the upper leg bones were damaged and had largely rotted away. The knees were together at lower chest level. The lower ends of the lower leg bones and the feet had rested on the northernmost flag of the floor; they had disappeared completely and round where they had been was a pinky red silty clay (fig 2).

REPORTS ON THE BODY

The bones

M Harman

The skull was largely complete, but had a hole on the left side of the cranium affecting the frontal, parietal and temporal bones, and some of the facial bones were missing. The brow ridges, a fairly large mastoid process and a well defined nuchal ridge suggest that the skull is that of a male. All the sutures were open and there were no wormian bones. The cranial index is 81.6. The post-cranial remains include fragments of at least 7 ribs, parts of both scapulae, humeri, radii and ulnae, the right side being better preserved than the left; most of the hands, the first sacral body and parts of both ilia, though not the sciatic

notch, most of the femora, patellae, and the proximal halves of both fibiae and fibulae. No evidence of injury or non-dental disease was noted.

The Teeth

D Lunt

The maxilla is quite well preserved, and although there are some areas of slight post-mortem abrasion, on the whole the bone is quite normal in appearance. The mandible, on the other hand, shows severe post-mortem damage, only a little of the chin and body surviving, and even these parts being badly eroded. There is a curious hard deposit on both teeth and bones, appearing in some areas on microscopic examination as a glassy sheet and in others as small round glassy nodules. It may be related to the calcareous concretions noted in the excavation report.

In the maxilla 14 permanent teeth are in position or were returnable to position; two have been lost post-mortem. Twelve permanent teeth are *in situ* in the fragment of mandible and three mandibular molars are identifiable as belonging to the same jaw. A loose carious root is probably the distal root of the absent first right molar.

The teeth are heavily worn, and though attrition is rather unevenly distributed the amount of wear on the molars would suggest an age of not less than 40-45, using the scales published by Miles (1963) and by Brothwell (1972).

No fewer than nine, and possibly 11, teeth have been affected by dental caries which has affected the left side of the dentition more severely than the right. In five or six teeth there has been gross carious destruction of the whole crown. Abscesses have resulted from gross caries in two teeth. Attrition of the maxillary first molars has been so severe that there appear to be pinhole exposures of the pulp.

Abscesses often result from this state of affairs, but have not done so here. There has been a marked resorption of alveolar bone, which may be partly an age change; but there are obvious traces of infection and early pocket formation indicating periodontal disease. There are heavy deposits of calculus (tartar) on some teeth and smaller deposits on others, indicating poor oral hygiene.

Teeth present 87654321 | 1 45678

 87654321 | 12345678

Teeth lost post-mortem | 23

The beaker

The beaker is 212 mm high. It is of almost equal width at rim and belly, 153 and 152 mm respectively. Its colour is dirty buff; its inner fabric is reduced to a dark grey. Its decoration is zonal, made with a combination of incision and toothcomb and consists largely of a mixture of horizontal comb lines, and incised herring bone and crosses. The uppermost band of decoration, however, consists of tall hexagons run together and filled with vertical lines (fig 3).

It has a corrugated neck, the corrugation produced by grooves rather than ridges. Its rim is rounded but not everywhere symmetrically so; in places its inner face is almost flat and its peak markedly towards the outside. Its shape traits according to the system devised by Clarke (1970) are 39, 11, 3, 6 & (8) 9. Its rim trait is 15. It is in style d (trait 20) and its motifs are of groups 2 and 3 (traits 22 & 23). Its neck grooving gives it trait 24. It is thus a member of Clarke's matrix group 3, except that its rim is unusually wide for this group. It is a Developed or Late Northern beaker in his classification. In J N Lanting and J D van der Waals' provisional classification, the beaker is of step 4 (1972, 40).

The Ruchlaw Mains beaker is similar to the Late Northern (N3) beaker from Thurston Mains Innerwick, E Lothian and the Developed Northern (N2) beaker from Hoprig, Cockburnspath (Clarke 1970, figs 581, 309), which was found with an N/NR beaker, an inhumation with flint scraper, strike-a-light and iron ore nodule.

Apart from its shape it is not unlike a Developed Northern beaker found at Skateraw (Close Brooks 1979, fig 3), and a Long Necked Developed Northern beaker from Cairnpapple, W Lothian (Clarke 1970, fig 570), found in a grave with another N2(L) beaker. The Ruchlaw beaker is in the largest of the group.

The various classification systems suggested for beakers (Clarke 1970; Lanting & van der Waals 1972; Case 1977) are not tested by discovery of the Ruchlaw beaker. Nor does it have any relevance to the 'package' theory of Burgess (1976, 1980). The orientation of the inhumation, on its right side facing E, taken with that of a recently discovered inhumation at Skateraw, with an N2 beaker, on its left side facing S

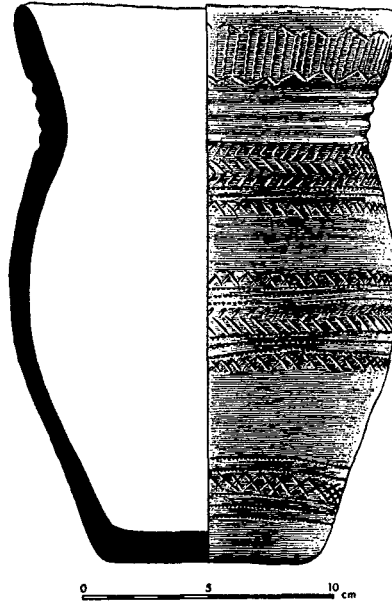


FIG 3 The beaker; scale on drawing. T Borthwick

(Close-Brooks 1979, fig 2), does not support Lanting and van der Waals suggestion of regional trends in burial disposition (1972, 41). Given the small number of beakers (some 40) and their lack of associations known from the Lothians and Berwickshire it is not worth trying to construct a local typology of the kind advocated by Lanting and van der Waals (1972, 29); nor, given again the small number of beakers and associations would it be productive to group the beakers in steps according to those authors' largely Wessex-based scheme (1972, 35), as has been attempted for SW Scotland (Ritchie & Shepherd 1973, 22, 24, 32).

The radiocarbon date

¹⁴C dates have been determined for beakers from Ruchlaw Mains, Skateraw and Dryburn Bridge. That from Skateraw is anomalous; those for the Dryburn Bridge N2 beaker with inhumation and for unaccompanied but similar inhumations are similar to the Ruchlaw Mains date. The dates are too few to test any classification scheme. The Ruchlaw Mains date is GU1356: 3720 ± 80 bp ¹³C = -19.7‰. It has been shown that the error term attached to routine GU dates should be doubled except when comparing dates processed in the same batch as one another. (Stenhouse & Baxter nd) and that for purposes of calibration to calendar dates additional sources of error should be taken into account (Clarke, R 1975). The Ruchlaw Mains radiocarbon date can then be taken to mean that it was probably buried at some time around the second half of the third millennium BC.

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