

# Excavations in the Laird's Hall, Drum Castle, Aberdeenshire

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## ABSTRACT

*In 1976 the National Trust for Scotland was gifted the Castle of Drum and its policies by the Irvine family. Although much was known about the later 17th-century additions to the castle and of the family who had owned it, comparatively little was known about the building of the original earlier tower of Drum. In 1991 the Trust financed an excavation to investigate the possibility of uncovering some evidence of the earlier life of the great tower and to try to date the structure. Excavation was of necessity restricted to the upper Laird's Hall and to part of the cellar. Although few datable artefacts were recovered, organic remains from floor deposits survived. The stone base of a screen was uncovered at the eastern end of the hall, along with post-holes and a post rest in the north-east corner, in the area where the stairs to the upper floor had stood. A small wooden musical instrument was recovered from the cellar.*

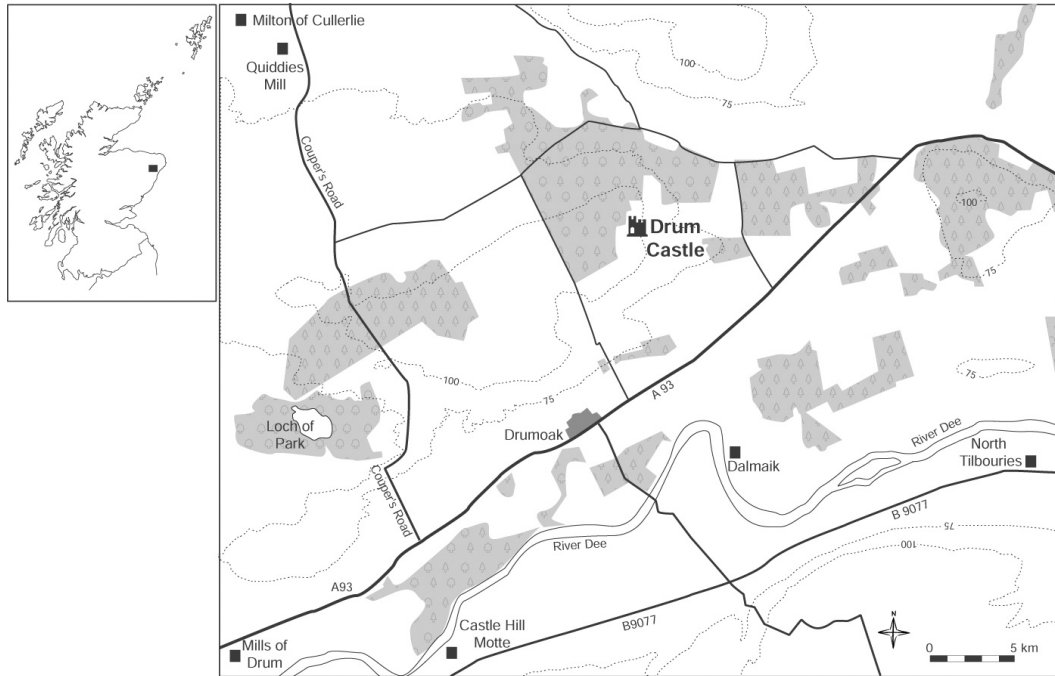
## INTRODUCTION

Drum Castle, Aberdeenshire, sits on a ridge (NJ 7962 0050) on the north side of the River Dee, 95m OD, about 4.8km west of Peterculter (illus 1). It is one of the best-preserved early tower-houses to survive in Scotland. Along with the Castle of Durris, on the south side, it commanded the ford over the river at Mills of Drum. Here the old road from the south, the Cryne Corse Mounth, crossed the river and made its way northward to the west of Drum. It ran past the east end of what was called originally the Loch of Drum, now the Loch of Park. It then headed for Inverurie via Cullerlie, Echt, Skene and Kintore. Part of this road is still in use today and known as the Couper's Road.

To the east of Drum lay a second road from the south, the Elsick Mounth, which forded the river near Tilbouries. After fording the river the road ran towards the Mains of Drum, then directly north towards the castle (Simpson 1929, 133–5). It continued on through the Forest of Drum and eventually joined the Couper's Road just south of Cullerlie.

Although not perhaps so obvious today, Drum Castle held an important strategic position in both medieval times and in the civil wars of the 17th century. The fords and passes it commanded lay at a lower altitude than those further west. They therefore tended to remain open in the winter longer than the westerly passes, and open earlier in the spring. In view of this strategic position it could be argued that

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ILLUS 1 Location map (Based on the Ordnance Survey map © Crown Copyright)

a building of some strength must have stood at Drum from at least the 12th century (Slade 1985, 312–13). These routes were also very useful as drove roads between the north and south.

The great Forest of Drum was used as a royal hunting forest by the 13th century, and possibly even earlier, in the 12th century. Pont's map of c 1583 still shows the tower of Drum, standing within a barmekin wall, surrounded by a 'Perk' enclosed within a possible deer dyke (illus 2). It has therefore been assumed by some historians that Drum may have started life as a royal hunting lodge. What is known is that in 1323 Robert the Bruce gifted the lands of Drum to William de Irwin for services rendered. Other historians consider that this is the period when the great tower of Drum was in fact built, in the first half of the 14th century. There would however, seem to be general agreement that the castle was built in two stages.

Although a number of important dated early documents, charters and accounts still survive in

the Charter Room at Drum, they have not been fully studied. In c 1995 the documents were indexed (James Irvine, pers comm) and confirm that there is no material relevant to payment, or indeed any other aspect, of earlier building work. Some of the documents provide valuable information on general estate and household accounts, and later 17th-century building work. It was to try to elucidate any evidence of dating and use of the hall that the excavation took place.

## THE OLD TOWER

Full descriptions of Drum Castle and its history have already been published by a number of authors including MacGibbon & Ross (1892, 150–5), Cruden (1960, 111–12), Slade (1985, 297–356) and Bogdan (1972, 186–7), and only a brief description is therefore required to set the scene.

The great tower of Drum, which lies in the north-east corner of the present castle (illus 3) built in



ILLUS 2 Pont's map of c 1583 (north to right), showing Drum Castle surrounded by an enclosure/deer park – 'Drum Perk'. Mills of Drum, the ford, is at the top left

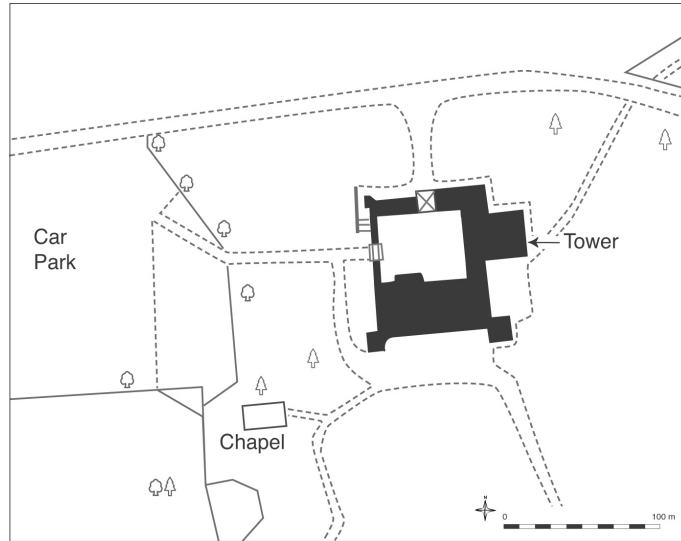
c 1618, is of a simple rectilinear form with rounded corners (illus 4). Nothing survives of any defensive wall that may have surrounded it. Entrance is now gained by a stone forestair to the first floor, on the south side. The present stair most likely replaces an original wooden removable stair or ladder. Inside the tower is a vaulted basement store with a well in the north-east corner. Access is by a straight narrow stair set within the 3.6m thick walls of the lower levels. In the roof of the cellar is a blocked recessed hatch, which allowed food and stores to be lowered from or raised into the common hall above (illus 5).

The large vaulted chamber, which contained the common hall and an upper floor, was converted into a library in the Victorian period. This was accessed by a doorway cut through from the later building into the south-west corner of the common hall.

The window in the east wall was enlarged, with a second window being inserted, or also enlarged, in the south side. These windows are the only evidence of intrusive later work to the exterior of the tower, apart from blocked-up small windows on the north, east and west sides. This work also encompassed the blocking up of a latrine in the north-west corner of the hall.

In medieval times this great chamber would have originally contained the common hall on the first floor, with a timbered floor above it forming the third floor. The original entrance to the hall would appear to have been to the left of the stairs leading to the cellar, and immediately opposite the main entrance.

Entry to the upper floor of the hall, through a now blocked-up doorway, was gained by the newel stair, which spirals up within the wall in the south-east



ILLUS 3 The tower in relation to the rest of the castle

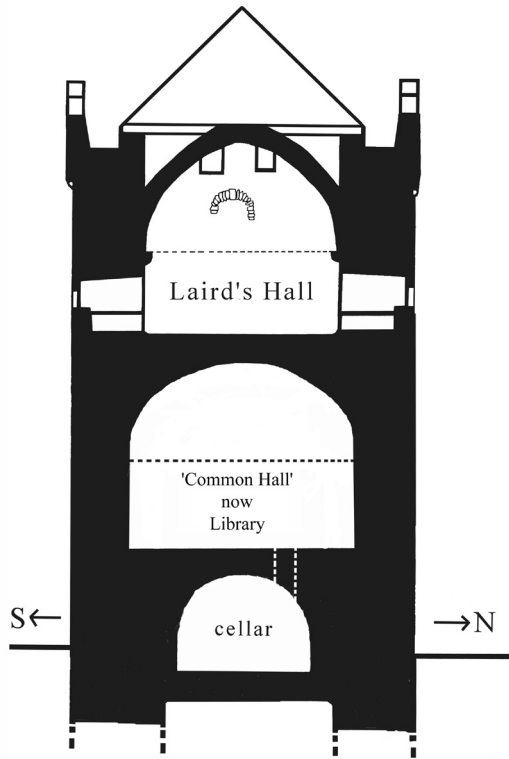
corner of the tower. This stair then continues up to the original fourth floor, which today appears as one large vaulted chamber, similar to the present library. It is evident, however, from the corbels 3.1m above the present floor level, that there was also originally

another wooden-floored storey above. The stairway then continues up past the doorway into this hall for a few more steps before abruptly terminating.

Inside this upper hall, in the north-east corner in the east wall, is a corbel placed at the same height as



ILLUS 4 The castle and tower from the east



ILLUS 5 Cross-section of tower, viewed from east (not to scale)

the main upper floor corbels on the north and south walls. Immediately above it is a blocked-up timber slot. Also in the extreme corner is another corbel, sitting at a slightly higher level. A crossbeam, from the slot to the most easterly main beam, would have formed an area 1.8m by 1.5m where access could have been gained to the upper floor by a wooden ladder or steps. In the late 19th century the antiquarians MacGibbon and Ross noted seeing the remains of 'a solid oak staircase' in this area (1892, 5v, 152). Indeed it is possible that part of these steps, which will be discussed later, still survives in the castle.

From this upper floor another wooden ladder or stairs would have led to the parapet walk, access to which is now gained by a steep, wooden 20th-century stair. This leads up to a small wooden door just below the crown of the vault. It was in this upper hall, the original Laird's Hall, that the main archaeological investigation took place, with a further small excavation in the cellar.

## METHOD OF EXCAVATION

The base of the present wooden stairs in the Laird's Hall, leading to the wall-walk, rests on the upper surface of the library vault, some of the stones of which could be seen protruding through the present floor, which measures 10.7m by 7.4m in plan. The eastern half was covered with loose rubble and some slates (context 02), and the western half with loose grit (context 01). As the crown of the vault made a natural north/south division, each half was sub-divided into three, giving four corner trenches and two central ones, each c 3.56m by 3.7m (illus 6, trench plan). Two areas were left unexcavated – the south-central trench and the eastern part of the north-west (NW) trench used for spoil removal. In the north wall of the north-central trench (NC) stands the great arched Kildrummy freestone fireplace, while in the corner of the north-west trench (NW) lies the latrine, entered through a narrow doorway.

Excavation started in the south-west corner trench (SW). A 1m wide trench was cut down until the upper surface of the lower vault was exposed. No occupation debris survived in this area. The lack of stratigraphy and surviving deposits in Trench SW would indicate that this area had been cleared at a later date, possibly in the late 19th or early 20th century, to repair part of the lower vault. An electric cable had also been inserted along the south wall to provide power for modern lighting fittings.

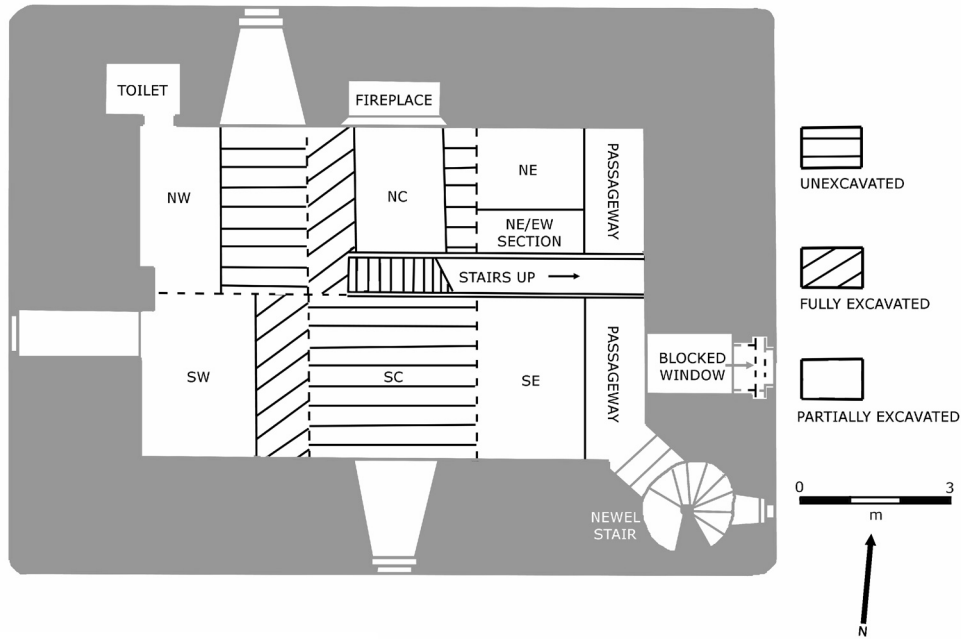
A second, off-set, 1m wide trench was cut on the northern side of the vault in the central area (Trench NC). This gave a complete profile of the lower vault (illus 7, section across vault) and revealed that vestigial remains of occupation debris did survive in the northern half of the hall. In fact it was only in the northern trenches (NW, NC, NE) and part of the south-east trench (SE) that any evidence of earlier occupation of the hall survived. Excavation therefore concentrated in these areas.

## USE OF THE LAIRD'S HALL

### PHASE I

The first domestic use of the hall was as one large room. Each wall was pierced by a window, with those in the south and north walls having lateral window seats built of stone. A fireplace was set in the north wall and latrine in the north-west corner. In the north-east corner stood a wooden ladder giving access to





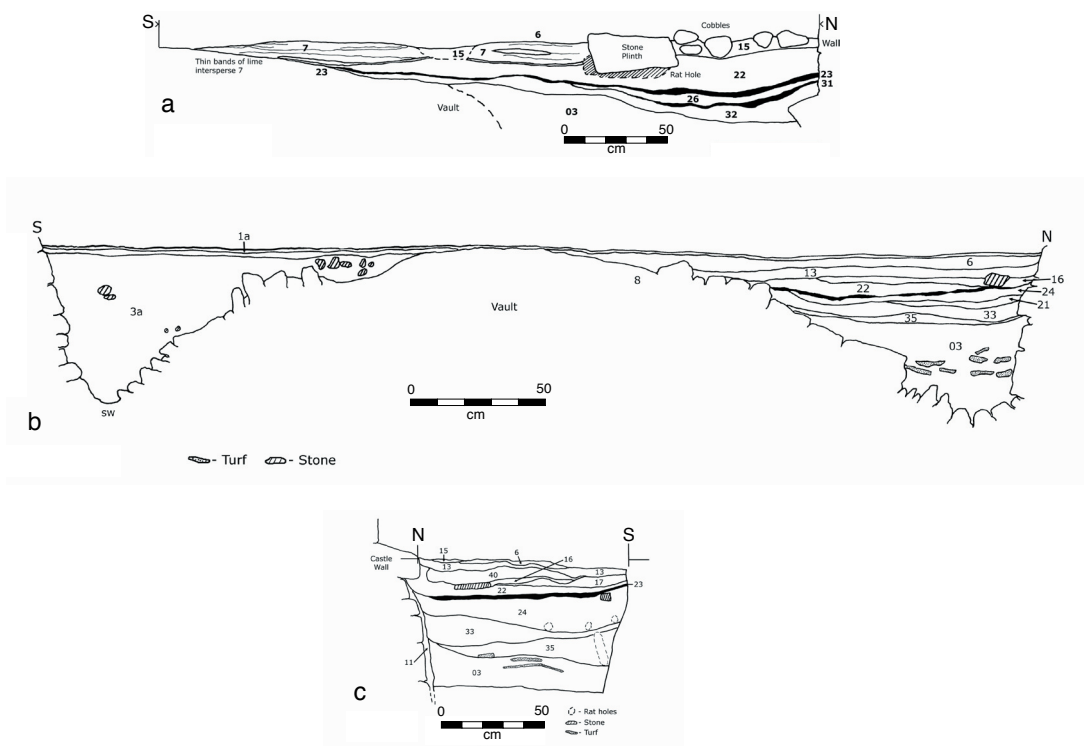
ILLUS 6 Laird's Hall trench plan

the upper floor and battlements. Part of the primary building phase within the hall saw the infill of the sides of the lower vault to form a level surface. This context (03) consisted of dry grey-brown soil with some turf and peat sods mixed within it. Though the soil itself appeared fairly sterile, samples from this context did produce a few beetles and plant remains (see Holden, Kenward, below). The upper surface of this layer was slightly more compacted than the lower area, with the possibility of cut waterside vegetation having been scattered over it. In the corner of Trench NE a 20–30mm thick organic layer (31) directly overlay a compacted area of vault infill, which contained wood chips from the primary building phase (context 32). This in turn lay immediately on top of the vault infill (03) (illus 7).

In Trench NW only a thin layer of grey-coloured soil (context 34) lay directly on top of the infill. A few fragments of fibrous rope (see Gabra-Sanders, below), an iron arrowhead, and two pieces of possible structural timber were recovered from this context. A small fragment of rough textile was also found directly on the top of the vault infill (context 03) in Trench SE. No continuous occupation context could be found associated with Phase I, and where any survived it was very patchy and of differing colours and textures. The preservation was best in the north-east corner, in the area where the stairs had stood. The primary occupation lies c 0.4m below the present floor surface. This would indicate that over a period of time and use the infill of the vault had compacted and contracted. It therefore resulted in the necessity to

TABLE I

<i>Phase</i>	<i>Possible date</i>	<i>Related contexts</i>
I	late 13th to early 14th century	03, 31, 32, 34
II	early to mid-14th century	23, 26
III	late 14th to early 15th century	17, 07?
IV	mid-15th to 16th century	05, 13, 16
V	late 16th to mid-17th century	06, 15



ILLUS 7 Sections through the deposits in the Laird's Hall: a NE trench passageway section; b cross-section of hall; c NE trench east section

top-up the floor level with layers of soil (contexts 35, 33, 24) varying in thickness from 4–18cm.

## PHASE II

Phase II saw the insertion of two post-holes, Features F (32cm by 40cm, 26cm deep) and G (15cm by 21cm, 28cm deep), to the east of the fireplace, in Trench NE (illus 8). These two post-holes cut through infilling layers (contexts 33, 34). They may have been positioned to form a small screened area at the fire, for either some privacy, or for freedom from draughts. A very thin, dark brown, organic layer (context 23) only 2–4 cm thick, and again very irregular, is associated with this phase.

## PHASE III

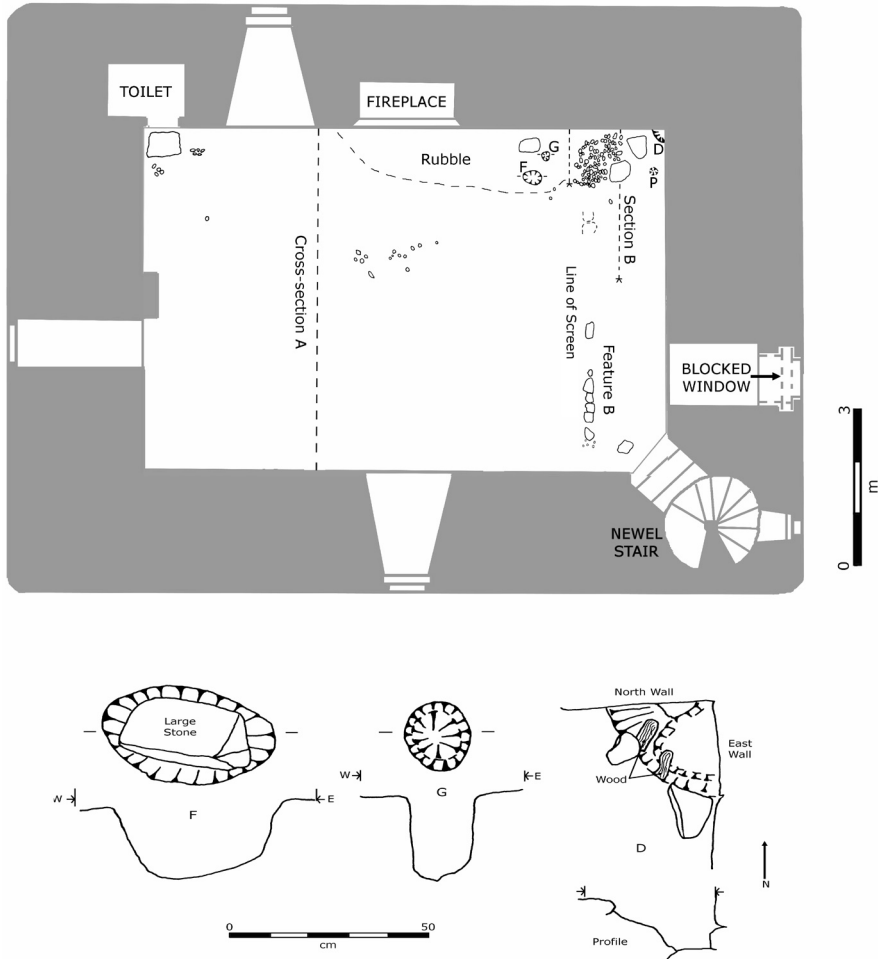
Once again the design of the hall was changed. The posts were removed, a large stone being deliberately placed in Feature F to block it up, and the floor level raised again. The post-holes were sealed under a

topping-up layer, 5–15cm thick of dark orange gritty soil (22), with traces of another thin and patchy occupation layer (17) lying on top.

## PHASE IV

The need or desire for more privacy saw the next structural alteration, with the building of a screen (Feature B) at the eastern end of the hall to form a passageway 1.5m wide, with access to the stair for the upper floor. The foundation of the screen was formed by a line of stones, with a level surface uppermost, which ran from the south wall to 1.8m from the north wall (illus 8). A wooden beam would have been placed along the top of the stones to form a base into which uprights could be inserted. From the scattered fragments of wooden lathes, c 3.5cm wide by c 1.2cm thick, and pieces of clay or daub, it would seem to indicate that this screen was built in a manner similar to wattle and daub.

Although a number of the basal stones had been removed at a later date, it was evident that the screen



ILLUS 8 Plan of features of different phases in the Laird's Hall

had originally two entrances through it. This was indicated by a c 1m gap in the screen line near the stairs to the upper floor, and a c 0.6m gap opposite the main door into the hall. There were remnants of a small patch of small rounded stones or pebbles in this latter area. The context associated with the passageway itself had a very hard, compacted upper surface (07) of light grey earthy mix. Through it were dispersed very thin layers of what looked like lime (see Morgan, Kenward, below). Within the floor matrix were nuts, bones, and a few pins, lace chapes and pottery fragments. A quite extensive associated layer (13) of occupation debris survived, 8–10cm thick, within the hall. This contained much heathy vegetation, which was probably used as flooring (see

Holden, below). An area of builders' rubble sealed context 17 (Phase III). This light grey layer (16), 14–20cm thick, consisting of small stones and mortar, only lay within the vicinity of the fireplace (illus 8), and points to some structural or repair work having taken place in this area.

#### PHASE V

Phase V saw the final slight structural change to the hall. The stair lay-out in the north-east corner was changed. Two large stones, roughly 35cm by 40cm, 25cm thick, were laid as post-plinths, and a post-hole (Feature D), 25cm by 30cm, c7cm deep, was inserted in the extreme corner, with a second possible





ILLUS 9 The crude steps preserved in the castle that may be the original steps from the north-east corner of the hall (© *J Henderson AMPA, ARPS*)

post-hole (Feature P), diameter c25cm, 10cm deep, against the east wall (illus 8). The bases of these post-holes were the stones of the walls themselves, where the wall started to thicken towards the lower vault. Both contained some fragments of wood. This may therefore suggest that a small flight of steps led, perhaps from the hall, up to a small landing built on the plinths, then a further flight of steps, running towards the south, leading up to the floor above. One

stone was removed from the screen line to form a wider area for the stairs.

Still surviving in the castle is a set of wooden steps of obvious antiquity, which are probably the wooden steps that MacGibbon and Ross saw in the north-east corner of the hall on their visit to Drum. These steps were formed by attaching undressed, split quarter timbers to two upright planks with wooden pegs. The uprights themselves are reused structural timbers

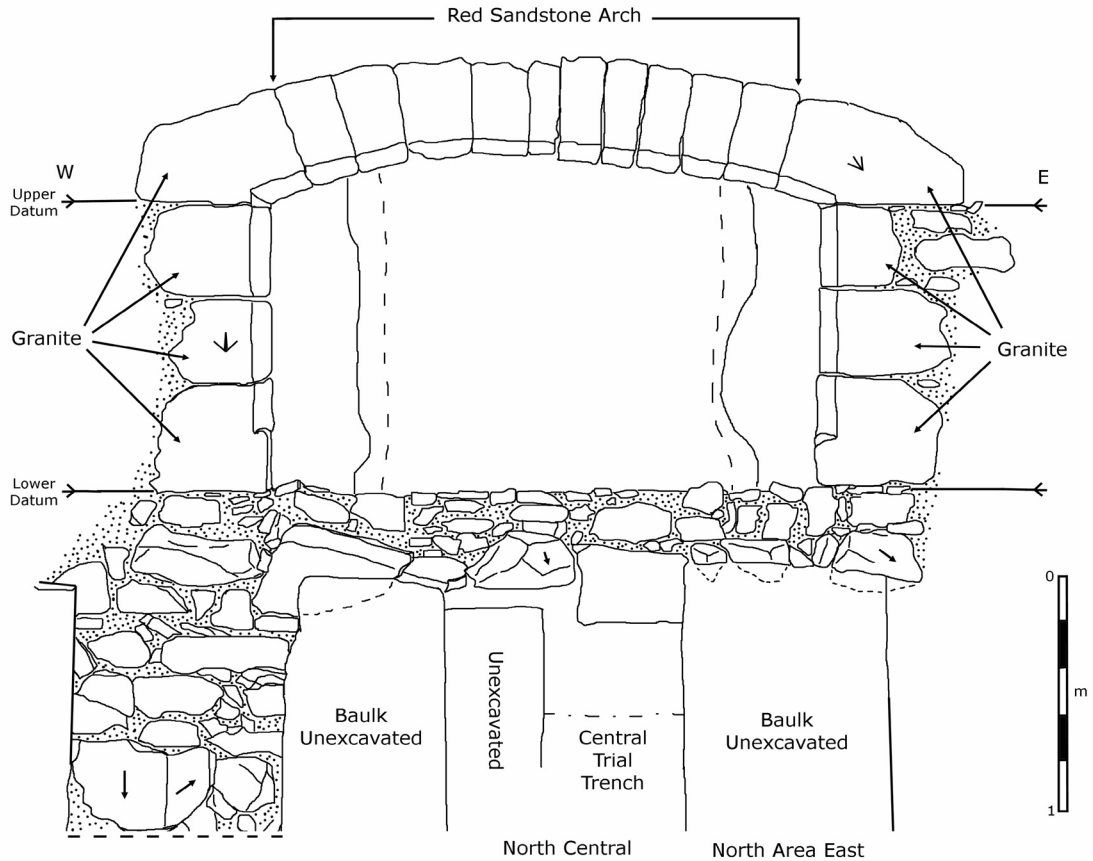


ILLUS 10 The Laird's Hall, looking west (*Crown copyright: RCAHMS*)

showing notches cut out of them. It is unfortunate that it has not yet been possible to date the timber, but these steps may be the lower run of the Phase V stairs.

Two contexts are associated with the occupation debris of this final phase. These are layers 15, and 06, which immediately abutted the stone plinth of the stairs. A small wooden button (see *illus 14*), and a few pottery sherds came from layer 15. A small area of water-rounded stones, or cobbles, lay within the corner of the hall, to the west of the screen line (*illus 8*). These may have been placed at the foot of the stairs, where there would have been considerable activity, but more likely survived because either they were protected by lying under the steps, or because they were in the corner, in an area little used. These cobbles were placed within a dry loose, earthy layer

(context 15), which was not compacted, as might have been expected if they had seen regular use. They were contemporary with the post-plinth as they abutted it, and were not cut by the insertion of it. Another small area of loose cobbles was also found in Trench NW near the latrine entrance, again an area of regular use. One or two scattered cobbles were also noted towards the centre of the hall in Trench NC. However there is not sufficient evidence to state that the whole hall floor may have been cobbled, which would in itself be rare. One other possible post plinth lay within the hall, between the fireplace and the remains of the cobbles. This was a single large stone with a flat upper surface, which was set into the earlier layers. Its exact use was not clear (*illus 8*). There was no evidence of a later occupation after this phase.



ILLUS 11 Fireplace in the Laird's Hall

### SUGGESTED DATING OF PHASES

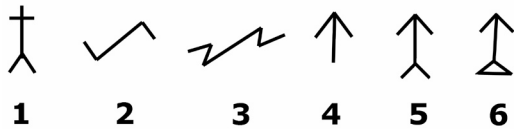
Although few datable artefacts were recovered it is possible to suggest dates for some phases and a more definite date for the later phases of use of the Laird's Hall: the features marked 'F' and 'G' on illus 8, of Phase II; the rubble spread and 'Feature B' Phase IV; the post-holes 'D' and 'P' and the slabs and first plinths to their west, to the west of 'G' and in the north-west corner, Phase V.

### THE UPPER FLOOR

The use of scaffolding during the period of excavation made it possible to examine the upper vault and walls of the upper chamber of the hall. In the centre of the west wall is the arch of a blocked fireplace, and above it, partially hidden behind the crown of the

pointed barrel vault, are two blocked windows. These windows were blocked up with bricks, which are not visible on the exterior of the tower. In fact it is very difficult indeed to trace these windows at all on the exterior. The pointed barrel vault cuts across these window recesses, suggesting that they belong to the earlier building phase of the tower (illus 10). Set into the arched roof are two pairs of rectangular holes. One pair was placed above the line of the screen, and the second pair half way between the screen and the west wall. Impressions of the beams they had held, 13cm by 15cm, can still be seen in the mortar within the holes. These beams would have been approximately 4.48m long and have been used to attach vertical timbers to divide the upper floor into two rooms, separating sleeping areas from the way up to the cap-house and wall-walk. Four small roughly triangular holes, 3cm by 3cm by 4 cm, with a depth of 12cm, were noted in the west wall, c1m apart, on the south





ILLUS 12 Masons' marks recorded within the tower

side of the blocked fireplace. It is therefore possible that some type of wall hanging may have been placed in this area, though no trace of dowelling or pegs survived in the wall.

The vault roof itself bears the impressions of the large timber planks used in its construction. These planks were of an average width of 0.32m by 3.40m long. Also visible, about a third of the way from each end, was a slight raised ridge in the mortar. This suggests that the construction scaffolding was moved in three stages. It was estimated that the shuttering for a single stage of building consisted of about 36 planks.

No structural evidence could be found as to how the stairs from the upper floor to the wall-walk door were attached. There was therefore probably a simple ladder propped against the east wall. As part of the first building phase it would appear that the intention was to take the newel stair past the Laird's Hall and continue up to the next floor, and possibly on to the cap-house. This stair was, for some reason, never completed, as it stops abruptly about five steps further up from the entrance into the Laird's Hall.

#### THE FIREPLACE

The large fireplace in the Laird's Hall is undoubtedly the main feature of the hall. Only the arch itself is of red Kildrummy freestone, the jambs being of granite. Although the chamfered jambs have masons' marks, there is not a single mark visible on the arch (illus 11). Considering that the majority of dressed stones in the hall have masons' marks, one might have expected the arch also to be marked. This therefore could suggest that the arch itself was inserted at a later date (Phase IV), which would account for the builders' rubble (layer 16) found in the area only around the fireplace.

#### MASONS' MARKS

While checking the dressed stones in the hall and on the newel stairs over 46 previously unnoticed masons' marks were recorded, representing the work of six different masons (illus 12). It was noted that the marks

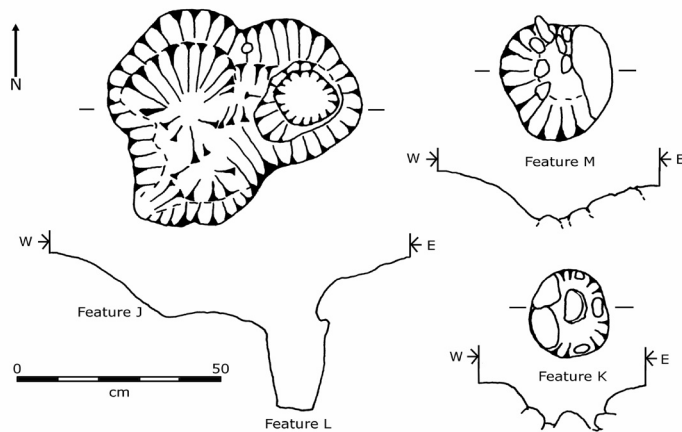
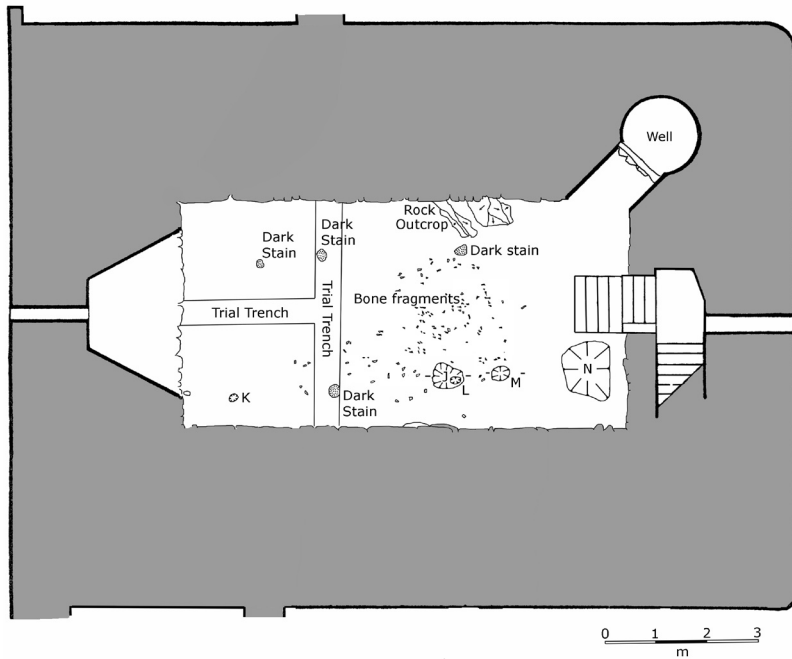
found in the hall (nos 4, 5 & 6) were not evident on the newel stair, or on the blocked doorway into the upper floor of the lower hall, and the masons' marks present on the stairs or blocked doorway (nos 1, 2 & 3) were not evident in the hall. This could perhaps suggest that the tower was built in two stages, with the Laird's Hall being built at a later period. It is a pity that the corbels of the lower hall, now the library, have been painted over so that it is no longer possible to see any masons' marks. The doorway to the latrine and the original fireplace were built over in the Victorian period, and therefore it is not possible to check for marks.

#### THE CELLAR

Examination of the cellar led the excavator to believe that it was the one area where there might be a good depth of surviving stratigraphy. The earthen floor appeared relatively undisturbed, and it was therefore decided that two small trenches would be excavated, to record the depth of stratigraphy, and to uncover any possible dating evidence. Cleaning the surface prior to excavation revealed two areas of bone fragments that appeared to lie below, and around, two iron rings inserted above them in the vault roof. A line of four small, dark, almost circular areas, 20–40cm in diameter, approximately 1m apart, ran parallel to the south wall, 1m from it. Approximately on the same line, to the east side of the cellar, was a larger dark area thought to be a pit. A number of ratholes and runs were also visible. Scatterings of grain were recovered from the initial scrape of the southern area (see Holden, below). A roughly parallel line of four small dark patches, c 15cm in diameter, was also visible running parallel to the north wall.

Two small trenches were cut in the western half of the cellar, one of which ran north/south, to provide a good cross-section. The second trench ran from the centre of the first towards the west wall (illus 13). It was felt that the western half had been less disturbed by visitors' feet than the eastern half, where the stairway entered the cellar. The deposit proved to be extremely shallow, only c 4cm deep on top of natural till and bedrock. Nutshells, bone fragments and grain were recovered from this deposit.

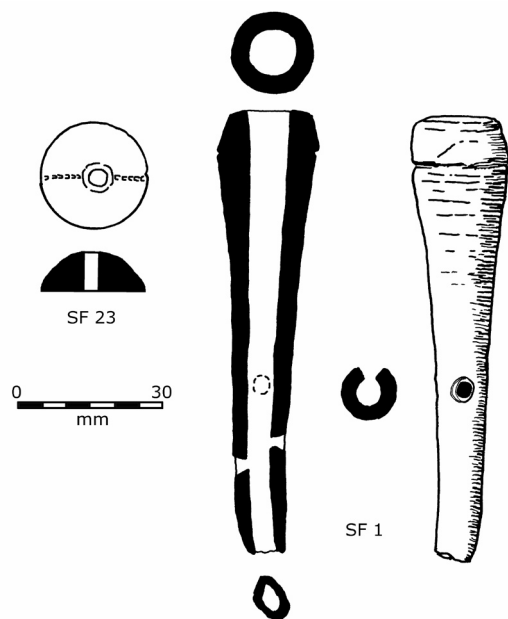
Two of the small dark patches (Features K & M) were excavated and proved to be c 5–10cm deep, and may represent post settings. Cereal grains and seeds were recovered from the deposits within the southern holes. The larger dark area was also excavated. This was an obviously disturbed area where a small pit (Feature J) had been dug through the floor and



ILLUS 13 Plan of cellar, showing position of trial trenches and features, with plans and sections

backfilled with soil. The fill contained pieces of glass and a few pottery fragments of the 19th century. The pit did, however, cut through a small post-hole (Feature L, illus 13), which lay on roughly the same line as the four other post-holes, although it proved to be deeper, at 0.40m. The line formed by the holes probably indicated that a bench of some type had

stood along the south wall. The post-hole itself in turn cut an earlier ratrun. A small wooden perforated object (illus 14 & 15), which would appear to be a musical instrument (see Purser, below), was found within this hole, along with grain, weed seeds, heather and leaf fragments. It is noteworthy that the grain recovered from this hole was common oat, and not the small oat,



ILLUS 14 Wooden artefacts: button and possible musical instrument

which was found elsewhere in the cellar (see Holden, below). This would perhaps suggest a late medieval or post-medieval date for the construction of the storage bench, as well as the rathole. A further feature (N) in the east of the cellar was filled with loose soil and 20th-century debris.

The lack of depth of deposit in the cellar could either indicate that the area had been kept reasonably clean, as had the hall itself, with regular cleaning out, or that it was cleared at a later period. The cellar is well-ventilated by tall, narrow windows in the east and west walls and the temperature remains cool even in the heat of summer. It is possible that it was used as a cold-store well into the 18th century, which might explain the bone scatters – the cellar may have been used for storing and butchering carcasses until a fairly late date. It may, of course, also imply that the cellar was cleared out to just above the basal layer of material.

## ARTEFACTS

The full reports and catalogues are deposited in the National Archive. They are also available on the web site of Aberdeenshire Archaeology Service at: [www.aberdeenshire.gov.uk/archaeology](http://www.aberdeenshire.gov.uk/archaeology).

## THE POTTERY

Charles Murray

The assemblage of pottery from the excavations at Drum Castle is very small, amounting, in total, to some 34 sherds or fragments (not illustrated). As all the pieces are fragmented and amorphous body sherds, it is very difficult to be certain of vessel form: at most the sherds represent five or six vessels. Without exception, the fabric of the vessels is sandy, with occasional grit, ranging from buff to buff-red in colour. An olive-green splash glaze is applied to the external surfaces of the earlier vessels, while the later examples are covered, internally and externally, in a red-brown glaze. The fabric and glaze is common to that used widely in the north-east of Scotland and, therefore, the pots are presumed to be of local manufacture. The assemblage would appear to range in date from the late 14th to the 16th century, although, owing to the fragmented nature of the material, this must remain largely conjectural.

## WOODEN ARTEFACT

John Purser

The object is not straight internally or externally, and the narrow end finishes at an irregular angle (illus 14 & 15). It is made of hardwood – probably boxwood. Externally, it is 91mm long and tapers from 8mm to 20mm for most of its length, tapering back in to 17mm over the last 7mm of its length. An encircling groove has been cut where the taper is reversed. There is a slight taper inward at the narrow end, which, despite the irregular angle of the finish, does not suggest that any significant damage has occurred. Internally, the bore at the narrow end is 5mm and at the broad end 10mm. At 49mm from the broad end the bore is 7mm.

There are three tapered holes, placed in relation to one another and the circumference of the pipe so that it is possible to view each one singly without seeing either of the other two. One can also view the pipe in such a way that no holes are visible. Looking at the pipe with its narrow end uppermost and the hole nearest that end directly in line of vision, an anti-clockwise rotation of the pipe through 90° brings the hole furthest from the narrow end into direct line of vision. A further anti-clockwise rotation of the pipe 90° brings the middle hole directly into the line of vision. The centre of the hole nearest the narrow end





ILLUS 15 Three views of the possible musical instrument

is 18mm from that end, and is 2.5mm wide on its inner edge and 4.5mm wide on the outer edge. The next hole is centred 23mm from the narrow end, and is 3mm wide on its inner edge and 4.8mm wide on its outer edge. The third hole is centred 33mm from the narrow end and is 3mm wide on its inner edge and 5mm wide on its outer edge.

There is no point making a hole through anything unless you intend something to pass through the hole. In this case looking through it is awkward and offers no rewards, and pouring fluids through it would only have resulted in their emergence through the holes in the side as well as the other end. Its conical bore is too complex for stringing it, and the three holes in the side are not placed so that they can be readily threaded. The natural conclusion is therefore that it is intended for the passage of air, and the most obvious way of doing so is to blow into it. Of course the air escapes out the other end and through the holes in the sides. However, the holes have been carefully made and tapered, and can be readily stopped and opened with the fingers. Also the pipe has been conically bored (which is more troublesome to make than a cylindrical bore), which suggests that the object is more than a toy.

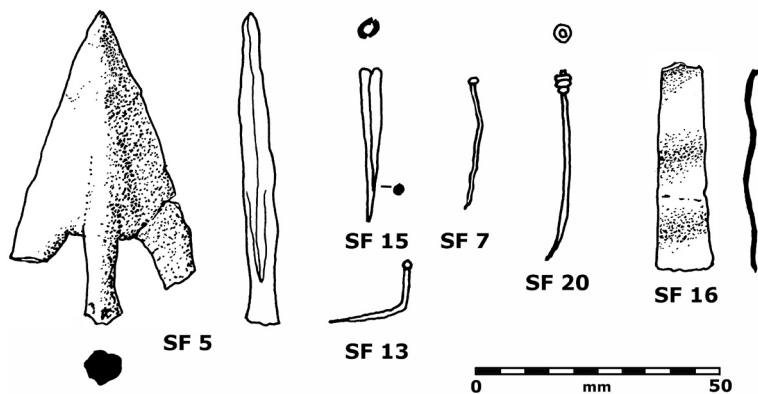
Unfortunately, the object seems unwilling to make any kind of a noise, other than a breathy ill-defined 'pfaff'. First attempts to get a reasonably musical sound from the pipe were all made from the narrow end: they failed. Next a cane reed was gently inserted into the narrow end. In this position the finger holes could be covered using the left hand only, though

using both hands was much more convenient. With a reed in place, the pipe spoke clearly enough, although fingering the holes only produced a range of less than a minor third. Opening the hole nearest the narrow end raised the pitch a semi-tone. Opening it and its neighbour raised it less than a further quarter tone, and opening all three produced an additional pitch rise between a quarter and a semitone. Musically this is neither expected nor promising. However, if intermittent notes are blown using varying fingerings it makes a pretty good imitation of ducks or geese calling, and it is therefore possible that, with a reed, it could have been used as a hunter's lure. The absolute pitch of the instrument cannot be determined by this method as the length of the reed is crucial to the pitch and we do not have an original reed, supposing there ever was one. There is no likelihood of a reed having been inserted in the other end, as it is too wide for the purpose.

Finally, the pipe was blown across the wide end, somewhat like blowing across a bottle top. There are precedents in Africa for instruments of roughly this form being blown across their wide ends. With practice, a tight embouchure aiming the airflow at the opposite inner edge resulted in a clear, penetrating whistle-like tone, and fingering the holes produced a better variation in pitch. In this position the finger holes could be covered using the right hand only, but again both hands were much more convenient. The narrow end could also be stopped when held this way, but seemingly to little purpose for, with all holes and the narrow end covered the pipe refuses to speak, though it does offer alternative, if awkward ways of producing the same notes, so long as at least one finger hole is open.

With all three holes closed, the pitch was A flat above middle C. Opening the hole nearest the narrow end raised the pitch to B flat. Opening the two holes nearest the narrow end raised it to C flat, and all the holes open raised it to D flat. Opening only the middle hole gave a C flat. Opening only the outer holes a C natural. Opening only the hole furthest from the narrow end produced a C natural. What this means is that narrow compass melodies in a major or minor mode can be played. However, so few are the tunes that confine themselves to such a restrictive range (a perfect fourth), that the player would have to improvise a repertoire.

It might be suggested that the pipe was used as a dog whistle, but its natural pitch seems too low. It has not been tried out on ducks and geese. On humans it has the charms of oddity rather than beauty, but I



ILLUS 16 Metal artefacts: arrowhead; pins; lace chape

have not developed any expertise on it, and it would therefore not be fair to rush an aesthetic judgment. Besides, the musical tastes of its maker may have been of a different order from our own: but that it was intended to produce pitched sounds I have no doubt whatever, and in Scotland at the very least, it stands alone – unless it be a descendant of the damaged two or three-hole sheepshank possible wind instrument from Skara Brae (Clarke & Shepherd, forthcoming), over 5000 years ago.

## THE METAL SMALL FINDS

Naomi Crowley

### COPPER ALLOY DRESS ACCESSORIES

#### *Pins*

The excavation produced ten copper alloy pins (illus 16: SF7, 13, 20), seven with wound-wire heads and three with spherical solid heads. Six of the wound-wire heads have been hammered into a spherical shape. The lengths of the pins vary from 17mm to 40mm. Pins such as these would have been used to pin the folds of head-dresses and to secure veils to the hair or round the shoulders to the front of a gown. They have a wide date range from the medieval to post-medieval period and occur on many medieval and post-medieval sites in Britain. Pins of this size are known from 12th-century deposits but the 14th century onwards saw a vast increase in their use. Six of the pins come from layers within the passageway in the north-east and south-east trenches (Layers 5

& 7), particularly Layer 7 that may be the original passage surface. One pin, from Layer 5, has traces of tinning or perhaps silvering. Silvering occurs from the 14th century but tinning was not common before the 16th century. Layer 13 also contained a similar pin. Stratigraphically these layers have suggested dates of the late 15th-16th century. Layer 24 in the north-west trench, which has a suggested date of late 14th to early 15th century, produced a single pin. Two pins are from unstratified layers.

#### *Lace chapes*

The excavations produced five lace chapes made from copper alloy sheeting, bent into tapering tubes with a straight seam along the side (illus 16: SF 15). The wide ends do not appear to have been finished, that is, neatly bent inwards. Chapes or lace tags were put on the end of plaited textile or leather laces to protect the end of the lace and to facilitate threading. The laces were used to fasten clothing rather than to fasten footwear. The earliest examples of lace chapes are from mid-13th-century deposits in London and they continued in use in this standard form into the post-medieval period. In Perth at the Canal Street II excavations they were found in late 15th and 16th-century contexts. At Drum Castle, lace chapes are stratigraphically earlier than the pins. Layer 34 which contained one chape has been dated to the late 13th to early 14th century as it is a well-sealed context and is associated with the construction of the building. It also contained a piece of thin rope, which supports this date, and an iron arrowhead. Layer 27, which contained one chape, has a suggested 14th-century

date. Layer 7 in the passageway also produced a single chape. Two chapes are residual.

### *Strap-end*

The excavation produced one fragment of a copper alloy strap-end (illus 16: SF 16). Strap-ends made from folded strips of metal in a variety of forms were fitted to the ends of girdles, straps or belts. The example from this site was made from a strip of metal folded lengthways. The strap would have been riveted in place between the metal. It came from Layer 7 in the passageway, which has a suggested late 15th-16th-century date.

## IRON OBJECTS

The excavation produced six iron nails, all from the north-east trench passageway area. They all have square shanks and roughly circular heads, probably slightly domed. They range in size from 35mm to 58mm and are probably all woodworking nails. A barbed arrowhead was recovered from Layer 34 (illus 16: SF 5), which has a suggested date of the late 13th to early 14th century and is associated with the construction of the building. This type of arrowhead could have been used for hunting or in battle.

## THE COINS

Nick Holmes

Only one coin and a fragment of a second were recovered from two different contexts. (Not illustrated.)

**SF 2 NW Trench at bottom of layer 4** Fragments of copper coin, unidentifiable, but probably late 16th or 17th century from their dimensions.

**SF6 NW Toilet floor** Charles I copper Turner (2 pence Scots); third issue; 1642–50.

## CLAY PIPES

Dennis Gallagher

Three clay pipe stems were recovered during the excavation. The stem bore diameter of all three is compatible with a 17th-century date. One stem is decorated (not illustrated).

**Decorated stem (DC 55, find no 9)** Stem bore 7/64". Stem decorated with a fleur de lys stamp applied five times, three of which are placed along the top seam of the stem. Burnished. This is a fragment of a high quality Dutch pipe, c 1630–60 (cf Duco 1981, 248, nos 107 and 108; Duco 1987, 86, no 435). Dutch pipes are not uncommon in Scotland, although the scale and nature of the mechanisms of importation are not known (Davey 1987, 190). Stem fragments bearing this type of decoration have been found throughout Scotland, on sites as geographically apart as Shetland (Davey 1987, 316) and Kelso (Gallagher 1987, 288).

## LEATHER

Clare Thomas

The small fragment of quarters of the upper of a leather shoe or boot (not illustrated) was recovered from context 26 in Trench NE in the Laird's Hall. The lasting margin with grain to flesh stitching channel, stitch length 5–6mm, with tunnel stitch holes for attachment of stiffener, are visible on the flesh side. A semi-circular heel-stiffener was in situ secured to the interior of quarters with hem-stitch, with the lasting margin matching that of the quarters.

The stitching length of the lasting margin, 5–6mm, suggests turn-shoe construction, which would agree with the suggested early 14th-century dating of the context. Turn-shoe construction was the normal medieval method of shoe manufacture, until welted techniques were introduced. Welted construction would probably have produced a longer stitch length, c 8–10mm, and only came into use c 1500. Unfortunately nothing can be deduced about the style of this shoe.

## THE TEXTILES

Thea Gabra-Sanders

Various small textile and rope fragments were recovered from the excavation. They were retrieved from: the top of the vault infill (16–20): an area near the great fireplace (17) and from the foundations of the screen (X). A further 11 were retrieved from the hall and the cellar (DC45, 54, 54c, 58,12, 20c, 11 & 7) (not illustrated). The fragments, which are not conserved, are fragmented, degraded and covered in soil. The silk fragment is covered in straw.

## WOOL TEXTILES

Three fabrics are woven in tabby weave, the simplest weave, in which one warp passes alternately over one and under one weft thread. Two (16 and X) are worked from combined Z- and S-spun single yarn and one (17) is worked from S-spun single yarn. They are medium coarse woollens and of no great quality with a low thread-count. Tabby weave fell out of fashion between the 11th and 13th centuries. However, in the 14th century wool tabby regained popularity again but it was usually worked with a Z-spun warp and an S-spun weft (Walton 1989, 385–6). Similar tabbies of Z/S spun are found among 15th-century material from Fast Castle (Ryder & Gabra-Sanders 1992, 6), Pluscarden Priory (McCormick 1994, 421), London (Pritchard 1982, 205) and outside Britain from Haarlem, The Netherlands (Vons-Comis 1980, 66: 1982, 155–6). The tabby weave worked from S/S spun yarn can be compared with 16th-century textiles from Newcastle-upon-Tyne where at this time S/S spinning predominates over Z/S (Walton 1981, 193).

Felting on both sides was noted on fragments 16 & X. Felting could be primary or secondary and it is often not possible to differentiate. Primary felting arises by fulling, that is, pounding while wet to shrink and hence to thicken and condense the fabric. Frequent washing results in secondary felting. Fragment 17 has an uneven appearance as a result of irregularities in the thickness of the yarn. It also displays a weaving fault in the weaving process. Either a weft has passed accidentally twice through a shed or the warps are incorrectly tied.

## SILK TEXTILES

There are two silk fragments (DC11), which are woven, in tabby weave. They were recovered from contexts believed to date from 16th/early 17th century and 17th century. One fragment has a ribbed effect. System (1) is non-twisted and in system (2) two yarns are loosely twisted in S direction. The warp and weft of DC11 are non-twisted. They both have approximately twice as many threads in one system as in the other. None of the silk yarn appears to have been dyed.

## ROPE

Three fragments of rope (29), S-twisted strands, are made of plant fibre. Two of the fragments, a light brown and a dark brown strand, are plied together

in Z-direction. They may have been from a three-strand plait. Another two very fragile fragments are S-twisted.

## OTHER FRAGMENTS

A variety of animal hair, lengths of silk yarn and matted wool fibres was retrieved from various contexts and dates. In a small number of mid-brown fine fibres (DC12) it is not possible to identify the scale pattern, due to degradation, but a ladder medulla is present. The fibres are tentatively identified as rat fur.

Some small light brown wavy silk fibres (DC7) and a length of brown silk yarn with no twist (DC54), in poor condition, could possibly have originated from the two silk fragments. The wool fibres are represented by two tapes of light brown fibres with no crimp (DC11, 45) and a matted mass of brown fibres (DC20c). (DC58) consists of three very small plucks of white and brown fibres, one of which is in the shape of a 'ball' which could be pilling from clothing. A reddish cotton S-plied thread (DC54) is very degraded but shows signs of being used.

## CONCLUSION

The three fragments of wool are in a basic weave, tabby and show similarities to the cloth types found in Scotland, England and the Netherlands. They are all fragmented, degraded and of poor quality and were probably used for an inferior type of clothing. The presence of weaving mistakes suggests that the fabric was woven locally at home.

The two silk fragments from the Laird's Hall and cellar are different. DC11 could have been from clothing. The other fragment with a ribbed effect had three small holes in the folded side, which could indicate that the fragment was perhaps part of the material used as wall covering or had been used for upholstery.

## ANIMAL BONE REPORT

Finbar McCormick

The excavations at Drum Castle produced a small sample of animal bone. They were found in two separate locations: that is, the floor of the Laird's Hall and on the floor of the cellar. Tanya O'Sullivan identified the bird bones, while the fish bones were identified by Ruby Ceron. The two assemblages were

in many ways quite different from each other and will therefore be considered separately.

#### LAIRD'S HALL

The bones from the Laird's Hall came from a series of different contexts. These were difficult to date but ranged from as early, perhaps, as the 13th/14th century to as late as the 17th century. The bones from the individual contexts are listed in the archive. The measurements of the bones are also included. The only complete long bone specimen is a sheep metacarpal from Layer 15, which indicated that the animal was of a small-unimproved type with a shoulder height of 570mm (multiplication factor 4.89). This is marginally larger than the sheep found in medieval contexts at Rattray castle, in north-east Aberdeenshire where they ranged in size between 523mm and 553mm (McCormick 1993). The samples from both sites are, however, very small and the difference cannot be regarded as significant.

The bones found in the floor of the Laird's Hall do not form a homogeneous group. There is no direct evidence of the processing of meat in the area, as there is a clear absence of splinters. The bones present seem to represent a variety of sources. Some of the material can be interpreted simply as food refuse. Some of the sheep bones displayed cut marks. The cattle, hare, fowl and geese bones could also be interpreted as food refuse that was unwittingly trampled into the floor rather than being swept away.

Layer 15 contained the gnawed head of a cattle femur that could easily represent the handiwork of the laird's dog after a meal. Other bones are, however, less easy to explain. It seems unlikely that the crow bone from Layer 15 represents discarded food refuse and the same can be almost certainly said of the dog scapula fragment found in the same context. This eclectic collection is confined to Layer 15 and it is possible that this represents a period of disuse of the room and that birds or other wild animals brought the bones there. The absence of small mammals from owl pellets, however, tends to militate against this hypothesis.

Other bones from the Laird's Hall are also difficult to interpret in terms of food refuse. Layer 6 contained part of a roe deer's maxilla, and a row of deer teeth would seem to be an unlikely part of a laird's diet. It may, however, reflect the use of a broken-up deer's head for the making of soup. The most unusual bones were the chopped axis of a canid, either a fox or dog from Layer 7. This is a bone at the junction

of the skull and the neck, and clearly represents the decapitation of the animal. Perhaps this occurred during the skinning of the animal but it does not explain how the bone came to be found on the floor of the laird's room.

One of the most interesting finds from Layer 15, which has a tentative 14th/15th century date, are the two pike bones. The pike is not a native to Scotland and its date of introduction is presently unknown. In Ireland, where the pike is also not a native species, it was introduced between the Norman settlement and the early 16th century and it seems likely that they were introduced into Scotland during the same period. The examples from Drum, however, are so far the only pike bones to have been found on a Scottish excavation and it is great pity that the context in which they were found cannot be more securely dated. The earliest documentary evidence of the presence of pike in Scotland is in 1525 where they are listed as being amongst the food of the Scottish King's household (Fleming 1836, xiv). The presence of pike, evidenced by either their bones or documentary references, need not, however, provide evidence that the pike had become a naturalized part of the fauna of Scotland because the species were a feature of international trade at this time. Thus, in the late 15th and early 16th century salted pike were being exported from the south coast Irish towns to England (Longfield 1929, 49) and it is quite possible the pike from Drum is an import either from England or Ireland.

#### THE CELLAR

The mammal bones from the cellar formed a very homogeneous group consisting for the most part of small particles of the long bones of large animals. These are splinters from either the primary butchering of the animals or from the breaking of the bones for marrow. The largest concentrations of these splinters were found beneath two iron rings fixed in the roof of the vault. This suggested that the bones might have simply splintered off the carcass when the animal was being butchered while hanging from these hoops. This could certainly have been the case. The saw is only a recent introduction to butchery, and prior to this the chopping necessary for the division of the carcass would have produced many splinters.

It would seem more likely, however, that these splinters were a production of secondary butchery for marrow extraction. Most of the splinters in the cellar



were of large animals, the few that were identifiable being cattle. It would seem most likely that the meat was boned and that most of the breaking of the bone occurred after the meat had been removed. Smith (1877, 112) notes that in some parts of Scotland the bones of slaughtered animals were stored after the meat had been removed from them and kept as insurance until the period of greatest food shortage, that is, in late spring, and then reused in the following fashion:

The larder is now empty, and there only remain the bones that had been carefully collected during the winter. These bones were taken in portions as required, laid on a wooden block, and with a sharp axe split longitudinally; the fragments are then washed in warm water, and boiled in a soup of oatmeal and shreds of potatoes, which soup is very nutritious, and well-flavoured by the fat extracted from the bones (ibid).

Marrow, of course, was not exclusively used only in times of great food shortage, but was an important source of food, which was invariably exploited on an everyday basis until fairly recent times. The bones were broken into small pieces so that the marrow could be boiled out for the making of stock, and on a more practical level so that the pieces of bone could simply fit into the pot. Such a process created a large number of splinters. The deliberate exploitation of marrow at Drum Castle is most clearly seen in a deliberately split cattle toe from the NE trial trench on the floor of the Laird's Hall. Because of the small quantity of marrow involved the extraction of marrow from toe bones is not generally undertaken unless there is shortage of food (Binford 1978, 148). Alternatively, it suggests that the cooks held marrow in an especially high esteem and greatly appreciated the taste of marrow in their stock. On balance it seems that the latter is more likely in the case of Drum Castle and the breaking open of an ox-tail fragment in the cellar also supports the hypothesis of routine marrow extraction. There is very little evidence for the actual dumping of food waste in the cellar.

On the basis of the homogeneous assemblage of mammal bone in the cellar it can be deduced that this was used as an area of food processing, as well as having a primary function as a storage area. The absence of a fireplace meant the food was not cooked in the area. The only other bones from the cellar consisted of a few bones of a domestic chicken and the ulna of a White Fronted goose. Wild fowl were an

important component of the winter diets in Scotland during the medieval period and the White Fronted goose, a winter visitor, reflects this seasonal hunting. They tend to roost on lochs and may have been killed locally at locations such as Loch of Park (formerly Loch of Drum) or Loch Skene. Greylag goose was noted in the Laird's Hall at Drum. Few castle sites have been excavated in the north-east of Scotland but possible Greylag were noted at Rattray Castle while bones of either Brent or Barnacle goose were also present (Hamilton-Dyer 1993). Wild geese were, however, absent from the assemblages of animal bone recovered at Coull and Kildrummy castles in Aberdeenshire (Neill 1924; 1963).

## CONCLUSIONS

The sample of bones from Drum Castle was very small and came from a wide range of dates and contexts. The fact that they were from inside a castle that had never become ruinous, however, made them of special interest and provided useful information about the use of animal resources by the castle's inhabitants.

## ORGANIC REMAINS

### INTRODUCTION

Coralie M Mills

The material investigated is extremely unusual for Scotland, being largely desiccated remains from the interior of a standing building. The preservation conditions have allowed very fragile organic remains to survive, such as plant parts and insects, that do not survive very often on Scottish medieval and post-medieval sites. The environmental reports give valuable information on how the deposits formed, on the living conditions within the building and on diet, economy and environment. The dendrochronology, despite our best efforts, has not yielded dates but future work may resolve this.

### DESICCATED PLANT REMAINS AND COPROLITES

Timothy G Holden

With the exception of two examples of burnt barley grain, oats are the only cereal recorded from the samples at Drum Castle. Two species were present,



the small oat (*A strigosa*) and the common oat (*A sativa*). From what is known of the development of agriculture in Aberdeenshire it is the small oat that would be expected to be more common in the earlier period and the common oat in the later periods. According to Findley (1956) ‘Small aitts’ (*A strigosa*), ‘Gryt aitts’ (*A sativa*) and ‘Blaudit’ or ‘Brocked Aitts’ (a mixture of *A strigosa* and *A sativa*) represent the classifications of oats used in the records of the Friars Courts in Aberdeenshire between 1604 and 1804. After this point the ‘Small’ class was omitted and by 1809 the ‘Brocked’ class had also been removed. This indicates that by the early 19th century, *A strigosa*, as a crop in its own right, was not considered readily saleable in the markets of Aberdeenshire and had probably not been so for many years.

From the cellar deposits in particular the two oat species are mixed in the same samples. This can be interpreted in a number of ways:

- 1 that different sources of grain arrived into the castle stores, the larger common oat coming from the more technologically advanced farms or those on better soil and the small oats from the more primitive farms or from areas of unimproved acid soil;
- 2 that the more demanding common oat derives from the infields and the more tolerant small oat from the outfields of the same farms;
- 3 that the small oat was actually a weed of the common oat. On some Scottish farms of the 1950s the small oat (*A strigosa*) was considered a serious weed of common oat crops having persisted in the soil some 150 years since the time when it was last grown as a crop (Findley 1956).

The weed seeds present would have been common elements in a flora of agricultural fields growing on somewhat acidic soils in the late medieval or early modern periods prior to the regular use of liming and other modern farming techniques. The seeds of various segetal species were recovered from most contexts examined and they appear to represent a background noise that remains more or less constant throughout. They could have been brought into the castle with flooring or bedding material or as part of the original floor construction sediments. With respect to the weed seeds two samples stand out, 34 and 38, because they contain high quantities of highly fragmented seeds and capsule fragments of wild radish (*Raphanus raphanistrum*) and corn spurrey (*Spergula arvensis*) respectively. These are both common weeds

of cultivation on acid soils such as those that could be predicted from the area surrounding Drum Castle. The composition and condition of the plant remains from these matched exactly with that recovered from a number of pigeon pellets recovered from Sample 38 and so must be considered to represent compacted spreads of dung and nesting material. This presumably accumulated while this part of the tower was being infrequently inhabited. Interestingly, the results from the insect analyses (Kenward et al 1995) support this interpretation. They identify large numbers of the spider beetle (*Tipnus unicolor*), a species that is known to inhabit bird’s nests, from both samples and Sample 34 contained dung beetles (*Aphodius* sp) and fly puparia, which, it is suggested, could indicate faecal or decaying animal matter.

Apart from oats it is clear from many samples that heathy plants such as heather, wild grasses, birch twigs, sedges and possibly also peat may have been used as flooring or materials from time to time. During periods of military occupation they may also have been used as bedding. Bog myrtle may have been preferentially selected because of its aromatic properties. The general impression is that the floor was kept clear of food and other domestic waste but some samples do contain the remains of food debris and there is even a suggestion that human faeces may have been present on some of the floor surfaces. Unfortunately the dating framework for the site does not enable us to locate all of the different floor surfaces accurately within the history of the tower but it is probable that at least one sample containing potential faecal material derives from a period during which the castle was plundered and occupied by military garrisons during the wars of the mid-17th century.

## DESICCATED MOSS REMAINS

J Andy McMullen

It is unfortunate that in few of the samples from Drum Castle is there a sufficient number of stems and diversity of moss to yield full and reliable data. No particular use can be ascribed to any of the species, with exception perhaps of *Eurynchium praelongum* in Sample 9. Here, the moss may have been used as ‘toilet paper’, as surmised through its association with strawberry seeds. The remainder of the species seem to have been introduced by accident with the other material found within the samples. This view is further compounded by the distinct lack

of associations between species, growth form and areas, layers and features. However, the opportunity remains to state the probable origin of the species. In this case, the formation of firm conclusions is limited by the low diversity and further, the scarcity of faithful species whose occurrence is indicative of particular habitat types. Despite these limitations it is possible to surmise the presence of heath/rough grassland and woodland of some description. Remains of heather were present in some of the moss samples and Holden (above) has noted the occurrence of this plant. However, it never becomes particularly abundant and it is possible that the main vegetation of the area was rough grassland as opposed to a heather-rich heath. Within these postulated habitats, wetter areas are revealed through the presence of *Amblystegium varium*, *Philonotis* sp and *Sphagnum* spp. These species indicate an acidic to neutral, minerotrophic substratum but their precise origin cannot be stated in any instance. It is most likely that they occurred within wetter areas of heath/rough grassland or woodland but it is not inconceivable that the species were growing by a stream margin and accordingly, may have been collected with drinking water. *Sphagnum* sect *Cuspidata* is a group of mosses, which strongly suggests the existence of, at least locally, open, very wet conditions, probably upon the postulated heath/rough grassland (the sample present is unlikely on taxonomic grounds to be *Sphagnum recurvum*, a notable species of swampy woodland).

#### THE INSECT REMAINS

Harry Kenward, Frances Large & Peter Skidmore

Extracted fossil remains and residues from 25 samples of deposits of medieval date from excavations in the cellar and in the Laird's Hall were examined. The particular aims of this study were: to investigate living conditions, particularly standards of cleanliness, activity and diet of the inhabitants of the Hall; to establish when the building went out of use; and examine depositional processes. Insect remains are especially relevant to the first and last of these topics.

A component of the assemblages discussed in this report is 'house fauna'. This is a group identified on the basis of archaeological records as apparently typical of primitive buildings housing people, stock, or stored organic material such as hay or straw. It is not necessarily suggested that they formed a single

community and insects living variously in timber, wattle, thatch, floors and stored products may be present in any particular case. The species are not likely to be found together today as a rule, since the habitats harbouring them have largely disappeared. This component of archaeological insect assemblages is discussed by Kenward & Hall (1995) and, in a general way, by Kenward & Allison (1994).

#### Results and general discussion

All of the samples contained at least a few invertebrate remains, and some produced quite large numbers. Preservation was about average for material from occupation sites with anoxic waterlogging. There were hints (not proven) that fragments of one individual of some large taxa occurred in more than one sample, suggesting scattering, perhaps through trampling or sweeping, in antiquity.

The assemblages were generally uniform and very restricted, both in the range of taxa recorded and the number of significantly represented ecological groups. The beetle assemblages had a very distinctive general character: a mixture of house fauna and outdoor forms, with a few generalist decomposers (the last never common enough to indicate that they bred in the building). A single species was predominant – the spider beetle *Tipnus unicolor*. The only other species represented by more than a few individuals was the small staphylinid *Xylochromus concinnus*.

*Tipnus unicolor* is a member of the family Ptinidae, a group commonly called spider beetles because of the superficial resemblance of most of them to small spiders. *T unicolor* is often present in insect death assemblages recovered from archaeological sites in Britain, occasionally forming a substantial proportion of the fauna as at the present site (eg in the fills of the Roman well at Skeldergate, York (Kenward et al 1980); in deposits formed in a medieval building at Coffee Yard, York (Robertson et al 1989); and in a medieval barrelwell at Worcester (Osborne 1981)). There are marked inter-period differences in its abundance, however; *T unicolor* is frequent in Roman and later medieval assemblages, but almost unknown from the intervening periods. This time distribution may have considerable importance in relation to changing urban conditions, and conversely the beetle may be a significant indicator species. The species is regarded as a typical component of 'house fauna'.

A modern and well-authenticated record is given by Crowson (1972), who collected *T unicolor* in

hanging oak woods at Gledswood, Berwickshire. Crowson (pers comm) amplifies this record and comments ‘... the species is one I have found in many open-air sites in Scotland, but all of them fairly close to human occupation sites. Its basic requirement seems to be accumulations of dryish organic matter, protected from heavy rain soaking – commonly inside old hollow trees, under rock overhangs, etc’. Ironically, this unpublished record is probably one of the most useful indications as to its synanthropic habitats in the past – in fairly dry litter and rubbish in roof spaces, wall cavities, and the less disturbed corners of floors, of stables as well as domestic and store buildings. At Drum Castle it probably found many suitable slightly damp corners with a little litter throughout the building. The beetle is doubtless primarily an omnivorous scavenger, although there are hints that it can exploit discrete, probably fairly dry, animal droppings (O’Farrell & Butler 1948, 361), and a review of its biology suggests that it is unlikely ever to be more than a minor pest, perhaps best regarded as a commensal.

*Xylodromus concinnus* was rather abundant in two samples (12 and 20, both from the SE trench). Three individuals were recorded from four other samples (6 and 8 from the cellar, 9 and 34 from the SE trench), and single individuals were noted in four others. It is presumably a predator, and the modern records and its archaeological associates place it firmly as a ‘house fauna’ species. It is also found in nature, particularly in birds’ nests.

Some other house fauna taxa were recorded, but only in small numbers: the human flea *Pulex irritans*; the woodworm beetle *Anobium punctatum*; the spider beetle *Ptinus* sp; two rather strong synanthropes, *Cryptophagus scutellatus* and *Mycetaea hirta*; and the rather more eurytopic *Cryptophagus* sp, *Atomaria* sp and *Lathridius minutus* group. All of these are regarded as absolutely typical of the cruder type of building (for example the Anglo-Scandinavian ones at 16–22 Coppergate, York: Kenward & Hall 1995), but would have found localized habitats in nests, litter and rubbish, as well as stored products, in most houses until the middle of the 20th century.

Similarly, more generalized decomposer beetles were very rare at Drum Castle, always represented by single individuals. The species recorded were all migratory and particularly likely to have occurred in the local ‘background fauna’ (*sensu* Kenward 1975; 1976) from semi-natural or synanthropic habitats. The fact that only single specimens of any of these house fauna or generalist decomposer species were found

in the samples (with the exception of two *L. minutus* group from Sample 34) must imply rarity of habitat and thus a generally high standard of cleanliness. Further support for this conclusion comes from the rarity of human (or other) fleas, strongly suggesting clean conditions (assuming there was human occupation). No lice were recovered, but this may have been a consequence of preservational conditions (lice are very delicate) or the use to which the hall was put (lice are likely to have been shed in an area where people undressed and cleaned themselves, rather than in the main hall). The only other parasites found were a rat/mouse flea, *Nosopsyllus* sp, from Sample 12 (SE), and an unidentified flea and a sheep ked, *Melophagus ovinus*, from Sample 34 (also SE). The presence of rodent fleas is hardly surprising. The sheep ked is unlikely to indicate that there were live animals in the hall; it is much more likely to have come from wool or fleece.

‘Outdoor’ species were present in a good proportion of the samples, but always in small numbers. Only *Aphodius* species were found repeatedly, as follows: four *A* sp and a single *A. ater* in Sample 34; two *A* sp in Sample 11; two *A. prodromus* in Sample 12; two *A. prodromus* in Sample 9; and single individuals of *A* sp in seven other samples. The outdoor component seems likely to have had several sources. Much of it may have been background fauna or imported accidentally with floor levelling or trample. *Aphodius* species may migrate in large numbers and their occurrence indoors is not very remarkable if it is assumed (as must be reasonable) that dung of large herbivores was abundant in the environs of the castle.

The fly puparia – especially those of *Calliphora* sp – indicate rather fouler conditions within the building, but these may have been extremely localized foul spots – waste food, including perhaps bones with flesh on, or faeces (which seem more likely to have been from dogs or synanthropic rodents rather than humans). The flies also indicate the presence of grassy material; there were also weak hints of the presence of cut waterside vegetation from beetles (single individuals of *Limnobaris* sp, probably *pilistriata*, from Samples 8, 12 and 26, from various parts of the site). Much of the outdoor fauna may have been brought, together with these flies and beetles, in material used to sweeten the floor. Cut vegetation may even have been used as fodder if livestock was brought indoors in times of danger, but this is unlikely to be the reason why so many dung beetles were recorded.

There were accumulations of bones in some of the cellar deposits, and it is notable that two of the samples from that part of the site (6B and 8) gave indications of decaying animal matter or carrion from the puparia. Whether this represents a cause and its effect is something that cannot be established.

The rarity of the woodworm beetle *Anobium punctatum* is worthy of remark. Fragments of single individuals were recovered from only three samples (12, 20 and 34, all from the SE area of the hall). This beetle readily infests timber (although how old wood must be for it to invade appears not to be adequately established). If it were present at all, it would be expected that large populations would develop and that it would become as ubiquitous in deposits as at other sites. *Anobium punctatum* was present in a very large proportion of deposits at Anglo-Scandinavian 16–22 Coppergate, York, for example (Kenward & Hall 1995; Kenward & Large forthcoming). At Drum Castle it may have been restricted by plastering or painting of exposed timber, or perhaps by smoke deposits, but this is purely speculative.

Overall, then, the insect remains indicate generally clean conditions. The building was reasonably dry, and the floors free of large accumulations of litter or filth. There were occasional patches of foul matter, but these may have been insignificantly small in human terms, and temporary. This is a picture very much in accord with the grand nature of the structure and the social status of its occupants. A note of caution should be sounded, however; it is just possible that at least some of the insect assemblages examined here represent periods of abandonment, when the structure was colonized by wild animals. Birds, in particular, might have produced the range of habitats required by most of the recorded decomposer beetle and fly species, in their nests, corpses and droppings.

The insect assemblages from these samples from Phase IV are perhaps best interpreted as indicating human occupation, but the caveat above must be re-emphasized. Predators may have introduced the rat/mouse flea with their prey. Other birds (eg starlings) might have introduced insect in droppings, the dung beetles being likely candidates in this respect, although the condition of the remains did not suggest this (cf Kenward 1976). Under such conditions a wider range of outdoor forms might be expected to be present, perhaps together with more species characteristic of birds' nests, including parasites. It would be unwise to draw a categorical conclusion from the insect evidence alone; integration with the results of other investigations is essential.

## THE FEATHER REMAINS

### Ruby Ceron-Carrasco

Only four samples from Drum Castle contained feather fragments, Samples 20, 54C, 6B & 38. The condition of these fragments made it impossible to establish whether some of these had been chopped. It was also not possible to determine which type of feathers were present in all samples, although in the two latter samples some species could be identified.

The pheasant feather remains from Sample 6B, recovered from a possible 'rat hole' in the cellar may have been a component of the rodents' bedding material. Other materials (ie uncarbonized oat grains, a grape pip, occasional heather fragments, weed seeds and leaf fragments) have been described as 'material contemporary with the construction of the burrow and recycled debris from older disturbed sediments' (Holden, above). The cellar could have been in use well into the 19th century and so it is not possible to attribute a date to the pheasant feather remains from 6B.

The presence of pigeon feathers in Sample 38, Layer 13 supports the interpretation of the presence of the remains of pigeon droppings and possible nesting materials (Holden 1995). Pheasant feathers were also present in Sample 38. The presence of pheasant feather remains in Scottish contexts assigned to the 15th to 17th centuries is more difficult to explain although extremely interesting. These remains may have been brought to the site in different ways, for example as clothing decoration if not on the pheasant itself. Ornamental feathers have been widely used in costume and in Europe this seems to have been popular since the Crusades (Singer 1980); feathers of pheasant, pigeon and also domestic fowl were used for ornamentation in bonnets and other items of clothing (ibid). Pheasant feather remains were also recovered in an organic deposit dating to 15th-century Scotland at Pluscarden Priory, Moray (Ceron-Carrasco 1994). Although bones from pheasants have not yet been found in Scottish medieval contexts, early historical records and the recovery of feathers from pheasant in two medieval/early post-medieval deposits in Scotland are evidence of the presence of the species in Scotland during medieval times, even though they may have been scarce.

The earliest reference to the presence of pheasant in Scotland is in 1578 when Bishop Lesley stated that pheasants were present, but scarce, in Scotland (Lever 1979, 337–8). In 1594 a Scottish Act of Parliament was passed which stated that no one was allowed to kill 'Pheanis, foullis, partrikis' in or near the King's

hunting parks (ibid). This implies that pheasants must have been introduced a considerable time before to be in sufficient numbers to be included in legislation (Baxter & Rintoul 1960).

Domestic fowl (*Gallus gallus*) bone remains were found at Drum Castle (McCormick above) and therefore the presence of feathers from this species in Sample 38 is not surprising.

## ANALYSIS OF THE MORTARS AND A FLOOR SAMPLE

Graham Morgan

Nine samples of mortar were taken from different parts of the castle to see if they could help establish different building phases. Sample 3 was taken from the blocked-up fireplace in the upper west wall of the hall (?building Phase I). Sample 4 came from the west end of upper vault roof, near its apex (?building Phase II). Sample 6 was taken at the base of the vault wall at the west end (?Phase II). Sample 7 came from the upper surface of the vault forming the roof of the library and floor of the hall (?Phase I). Sample 10 came from the base of the north wall where it meets the lower vault (?Phase I). Sample 11 was taken from the wall of the cellar, in the north-west corner: Sample 12 came from the south side of the west cellar window (? both Phase I). Sample 25 was taken from the inset chimneybreast on the west wall of the hall (?19th century insertion).

Sample 30 was a solid block of material cut from layers 7, 22 and 32 to try to establish if lime had been used as a floor coating.

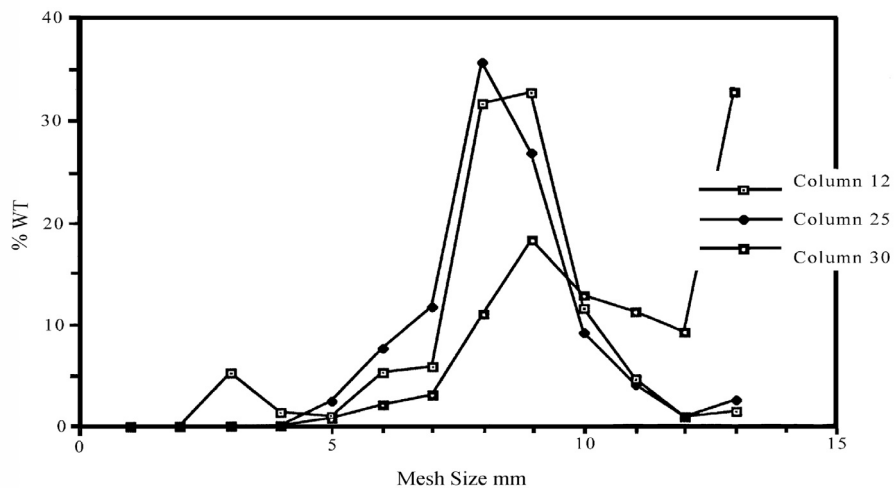
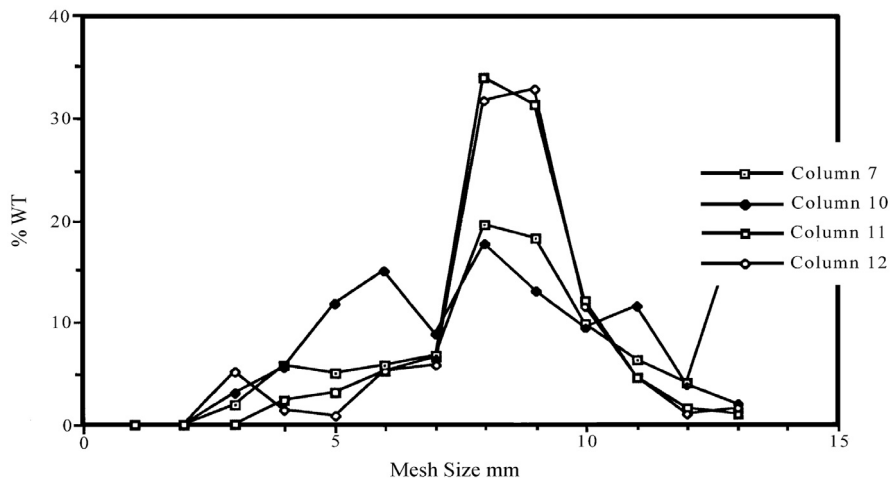
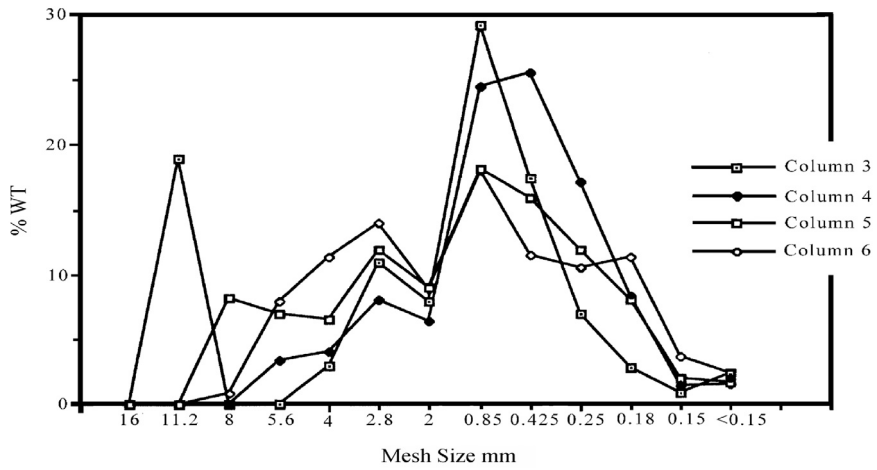
## THE MORTARS

The mortars were analysed using chemical and physical methods to determine the nature of the aggregate and lime content. They were all lime-based with granite particles as the aggregate. The particles were mainly angular to sub-angular quartz, feldspars, pieces of various granites and other igneous rocks. This presumably relates to the local geology. The particle shapes suggest weathering rather than the crushing of rock as a source of the aggregate. The presence of some silica films suggests that the mortar above these samples has been exposed to acid rain or other acidic water, causing solution and subsequent re-deposition of the silica and some of the lime. Long-term weathering may have been sufficient to cause this. Also present in the aggregate were fragments of charcoal, kiln residue and red burnt clay. These probably relate to the kiln used to burn the limestone for the lime production. Table 2 shows the breakdown of the aggregate into gravel (more than 2mm), sand (0.15mm–2mm) silt (less than 0.15mm) and lime (as a percentage of the original weight). The 'lime' is in fact the total acid soluble component that approximates to the lime content.

The particle size distribution graphs (illus 17) show two possible variations in grading. Numbers: – 3, 4, 11, 12, and 25 are all similar and have similar lime content. Number 30 does not really fit into either group. The lime to aggregate ratios should be compared with similar mortar from the area to see if they are typical or not. They would compare in lime content with English medieval mortar although not usually in aggregate composition.

TABLE 2

<i>No</i>	<i>gravel</i>	<i>sand</i>	<i>silt</i>	<i>lime%</i>	<i>comments</i>
3	41	57	2	30	some amorphous silica
4	22	77	1	36	some furnace residue
5	42	56	2	37	some furnace residues
6	43	55	2	13	burnt clay
7	24	57	19	21	
10	44	54	2	11	some furnace residues
11	17	82	1	36	some burnt clay and silica
12	18	81	1	31	some burnt clay
25	22	76	2	32	silica, burnt clay and coal
30	6	61	33	42	(acid soluble) floor sample residue of granite minerals with organic remains



ILLUS 17 Mortar particle size distribution



## THE FLOOR SAMPLE

A sample of a section through an earthen floor (Sample 30) was supplied with a request to identify apparent white 'lime' layers present in the sample. These layers were rather amorphous but about 3mm thick, interspaced with layers of decayed organic material (mainly grass and straw-like material). Initial testing with dilute acid showed that the white material was not lime or carbonate but that it was high in phosphates. Quantitative analysis gave a phosphate level of 2.2% weight, which is very high for most soils. (Without a sample of soil away from the habitation site this level cannot be related to the normal level of phosphates for the area.) The analysis of the floor sample generally shows it to be composed of decayed vegetable matter (straw, grass and similar plants) with possible remains of small insects and some seeds. A possible mechanism for the formation of white phosphate layers follows: particles of lime from the mortar in the walls dropped onto the straw-covered floor, which already contained animal waste or droppings. The acidic decaying material caused the lime to be broken down and react with the phosphates present in the animal waste, leading to the production of the relatively insoluble and stable calcium phosphate. The thinness of the white layers and their particulate structure suggests that there not a deliberate lime level although it is possible that lime may have been scattered as some form of 'sweetener' for the foetid floor. The loss on ignition was 26% weight, presumably all the organic material and water of crystallization of hydrates, etc. The residue was granite components with iron oxide, silica and calcium phosphate. The residue from the acid dissolution was graded in the same way as the mortar samples and is present in the table and graphs. The grading shows the residue to be somewhat finer type of material but with a similar particle profile to the mortar aggregates. It may be soil residue or possibly dust fragments from the mortar in the wall. This latter idea would reinforce the notion that the phosphate deposit had developed on lime fragments from the mortar. I do not know of any similar floor deposits that have been analysed.

## DATING EVIDENCE FOR DRUM CASTLE

Moira Greig

## DISCUSSION

At least eight different floor deposits could be traced from the surviving debris in the hall.

Some of these were very fragmentary (31, 23), while others were fairly substantial (13, 6, 7), and some may actually belong to the same period. Because of the uncertainty over the date of the building of Drum Castle, it was hoped that the artefactual evidence might help towards the dating of these surviving floor deposits, and thus the castle construction itself. Considering the good state of preservation of the later phases of occupational debris, the lack of artefacts was remarkable. This would seem to indicate that on the whole the areas were kept fairly clean, and this is supported by the reports on the plant and insect remains.

In his book *The Province of Mar* the late Douglas Simpson suggested that the castle was built prior to 1286. He quoted from unpublished papers of Dr William Kelly that Richard Cementarius, an Alderman of Aberdeen in 1272, and the King's Master Mason, might have built Drum Castle. Dr Kelly appears to partly base this theory on the likeness between the cross-section of the upper vault and the Auld Brig o'Balgownie over the River Don, which Cementarius is thought to have started for Bishop Chein (1285–1328) but died long before its completion. The bridge is thought to be dated c 1306.

The upper vault of the Laird's Hall belongs to the second major structural building phase, as it cuts across the earlier windows from the primary building phase (see illus 10). If this was indeed built by Cementarius in the late 13th century, this would therefore make the primary building construction to be at the very latest early 13th-century. In spite of extensive searching no similar masons' marks to Drum have so far been found on the bridge. It did, however, undergo extensive repairs in the 17th century, which may have obscured any earlier work.

If masons' marks have any relevance in the building of Drum then it is quite clear that there are two sets of different masons involved in construction work, confirming two definite building phases. Nos 1, 2 and 3 were involved with the building of the earlier structure, or first

major building phase, and 4, 5 and 6 with the Laird's Hall, or second major building phase (see *illus 12*).

It is interesting to note that all but mark no 3 are to be found in St Machar's Cathedral in Aberdeen, nos 1 and 2 being found on freestone from the walls of St John's Aisle, part of the earlier cathedral (?1340), and the others found on granite in the west tower said to have been built about 1430. These latter stones are probably reused. Indeed, a similar mason's mark is to be found in the porch, which was also built at a later date. No 4 is also found in Melrose Abbey (rebuilt c 1385), Jedburgh Abbey (tower date late 12th-15th century) and Norham Castle, in north-east England (late 12th-16th century). Using masons' marks for dating purposes has always proved difficult, unless securely tied down by documentary evidence. If the dating of the building of St Machar's Cathedral were to have any relevance to the building of Drum it would make the primary building phase 14th century, and the secondary phase 15th century. An early- to mid-15th-century date for the second building phase at Drum certainly does not correspond to the artefactual evidence found in the Laird's Hall, scant though it may be.

Although the 14th-16th-century range of dating suggested by the pottery report does tie in with general use of the hall, it cannot be used to help date any of the contexts conclusively. In the screen's passage several sherds of a suggested earlier date were found in a later context, while some later sherds were found in an earlier context. Layer 5, which overlay Layer 7, produced some pottery given a possible 14th-15th century date, while at the bottom of Layer 5, embedded in the top of layer 7 was a sherd of suggested 15th-16th-century date.

The earliest artefact to be found was the iron arrowhead (*illus 16*), which lay within context 24 (Phase I) in Trench NW. There is a slight possibility that it was brought into the castle along with the soil forming the infill. It did however lie immediately on top of the primary vault infill (03), along with a small fragment

of fibrous rope. A possible date of 13th to early 14th century was suggested for the vault infill and layer 24. This date would indeed also appear to tie in with the type of rope found (Gabra-Sanders, above). The arrowhead is slightly more problematic, 'Putting useful dates on pieces like arrowheads and pins is not often practical' (David Caldwell, pers comm). It would, however, appear to be of a type used for hunting or in battle, and belong to the first phase of use of the hall. It may be fortuitous that its position was directly opposite the window, but it could be implied that it was fired into the castle, perhaps during the Wars of Independence.

Sealed beneath occupation layer 23, in the NE trench in the stair area, and immediately overlying the primary occupation context 31 (Phase I), was layer 26. This layer contained a piece of leather shoe. From its type of turnshoe construction it is of definitely pre-16th-century (Thomas, above). Being in one of the few areas with a relatively secure stratigraphy, it is possible to put at least a 14th-century date to it.

A further textile fragment was found in layer 21, which lay in the north trench in front of the fireplace, sealed under layer 17 (Phase III) and 16. Again, the specialist report would agree with a suggested date of late 14th to early 15th century. This was partially a topping up layer, above the primary phase, with the upper surface being more compacted and used as floor. Sample analysis showed it to contain large quantities of grass, sedge and rush stems, as well as bog myrtle, buds of birch and flax seeds.

To try to date the erection of the screen is not easy. Screens were common in the halls of Scottish castles from the 12th century onwards, but little evidence now appears to survive for a comparative study. One of the very rare exceptions is at Craigievar Castle, Aberdeenshire, where a wooden screen still stands. However, this castle was built in 1610, making the screen too late a date for comparison with the Drum Castle screen.

A fragment of textile that was found within the occupation debris associated with the screen



ILLUS 18 Tomb of Sir Alexander Irvie (d 1457) and his wife, Lady Elizabeth Keith, in the Drum Aisle, St Nicholas Church, Aberdeen (© J Henderson AMPA, ARPS)

(Phase IV) could give a possible date of 15th-16th century. Lace chapes and pins were found in layer 7, which may have been the original passageway surface, but unfortunately cannot be used to help date the building phase, as such finds can cover a considerable period of time. Two other pins however, which were found in layer 5 overlying 7, did have traces of possible tinning which was not common before the 16th century (Crowley, above).

The finding of two pike bones within Layer 15, which is later than the screen building date, is of interest (McCormick above). So far, the earliest documentary evidence of pike in Scotland is in 1525, when it was listed as

being amongst the food of the Scottish King's household. Although this is not a definitive date for the Drum pike it perhaps helps help to tie down at least a 15th-16th-century date for the building of the screen. Unfortunately, the wooden button, also found in Layer 15, cannot be used to help date this context, as it is of a type used over a considerable period of time (David Caldwell, pers comm). The fourth Laird of Drum, Sir Alexander Irvine, died in 1457 (see illus 18), and it is therefore possible that the new laird decided to redesign the interior to provide more comfort and privacy. This date would fit in with the other suggested 15th-century dates from the artefacts.

Use of the final phase (V) continued into the mid-17th century with contexts 05 and 06. Part of a clay pipe stem gives a date of early to mid-17th century, and there is also a fragment of a copper alloy coin of probable late 16th or 17th century (Holmes, above).

Samples taken from these layers gave evidence of moss possibly being used as toilet wipes. Given the suggested cleanliness that had been maintained previously, from both insect and plant reports, this change would point to misuse of the hall. This can be supported by documentary evidence of Drum Castle being sacked and used by soldiers in 1639. A few years later in 1644 'Irish soldiers fell to and plundered the place of Drum' (Simpson 1943). It would appear that after the sacking the hall was allowed to decay and no longer used for domestic purposes. This is backed up by the sample reports, which suggest that pigeons or other birds then nested in the area, leaving nesting material and deposits on the floor. With the new building work carried out to the south in the first half of the 17th century the space was probably no longer required.

There is also the possibility that at some earlier stage the hall might have been left vacant for a short period, again allowing birds in to use the area for nesting. This may have happened in the first half of the 15th century, when the fourth laird, Sir Alexander Irvine, was made Captain and Governor of Aberdeen. He was also appointed as an ambassador in 1423. This may have required the laird and his wife, the former Lady Elizabeth Keith, to vacate the castle for extended periods.

## CONCLUSIONS

The excavation confirmed that the Laird's Hall was built at a later date than the primary construction of the tower. At least five internal alterations took place within the hall over a period of three centuries. The largest of these alterations happened in the 15th-16th century,

when a screen was erected at the eastern end of the hall, and a new arch over the fireplace was probably inserted. The stairs to the upper floor were altered to make access easier, by inserting a small 'half-way' landing. These alterations may have happened after the death of the fourth Laird, Sir Alexander Irvine, in 1457.

The upper floor was divided into two rooms by partitions attached to wooden beams inserted into timber slots in the upper vault. The fireplace in the west wall was blocked up, though it is not possible to determine at what phase this happened.

Some floor deposits were recovered from the different phases of use of the hall. From the study made of these it is possible to build up a picture of life in and around Drum. The surrounding countryside had areas of bog and heath, from which vegetation was cut to scatter on the floor. Indeed streams and boggy areas still exist in low-lying ground to the north of the castle, while areas of rig and furrow cultivation, of presumably medieval date, are evident on the better-drained land to the north and east. The oats from such rigs would be sent to the mills. These lay to the south-west of Drum, on the north bank of the River Dee, still known as Mills of Drum, or to the mills at Cullerlie or Quithie, which lie to the north-west of the castle, along Coupers Road. Roy's map of c 1750 shows later rigs in the surrounding area (illus 19), along with the mills. In the later phases of use of the castle the grain was then brought back, after dressing, to be stored in the cellar along with other food. Here in the cellar the kitchen staff also hung the carcasses of larger animals to make butchering easier, and smashed bones to extract the marrow for cooking.

Food was plentiful in the summer and autumn months with a varied diet of domestic animals, such as poultry, sheep or goat, pig and cattle, along with game, fish and fruit. In the winter months White Fronted and Greylag geese were hunted, perhaps using the small wooden pipe as a lure. At Drum, hunger appeared to affect even the upper classes in winter and consequently, when food stocks ran down, bones were crushed





to make nourishing soup or gruel. A number of crow bones were recorded, which could just possibly suggest that crow pie was also eaten.

The residents of the house would appear to have been reasonably house-proud, by ensuring that the servants picked up most of the pieces of any pottery vessels that were dropped and broken. They did not allow too deep a deposit to accumulate on the floors before having them cleaned out. This is supported also by the lack of human fleas found in deposits. Fresh sweet-smelling bog myrtle, an insect repellent, was used as part of the flooring along with rushes, sedge and birch.

Lace-making, carding of wool and spinning were some of the domestic tasks performed by the household, probably during the winter months. Along with the home-made garments, one of the more refined ladies of the house may have had silk clothing, possibly decorated with some feathers, and tied with belts or lacing. On her head she would have worn a headdress or veil secured by pins.

In the mid-17th century, during the wars of that time, the orderliness of the household was shattered by the arrival of troops, who rampaged through the castle, possibly used the hall for sleeping in, as well as defecating in it. The hall went out of use as a living area shortly after the building of the new works to the south.

Although few datable artefacts were recovered, it is possible to suggest a dating of the late 13th to early 14th century for the second phase of building construction, and subsequently for the first phase of use of the Laird's Hall. It is still not possible to give a more definite date for the original construction of the castle some time earlier in the 13th century.

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