

Excavations at Threave Castle, Galloway, 1974–78

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'Adieu, my Castle o' the Threave,
And a' my buildings there.'

Good Night (Lord Maxwell)

EXCAVATIONS AT THREAVE CASTLE between 1974 and 1978 have revealed the full extent of the artillery-work that was wrapped around the late 14th-century tower-house of the 'Black Douglas' family and have proposed a date of c. 1450 for its construction. The foundations of two stone buildings, dismantled to make way for this artillery-work, have been re-excavated. Excavation elsewhere in the outer enclosure has recovered plans of other outbuildings and evidence of industrial activity.

Many artefacts came from the water-logged deposits within the harbour. They include an important collection of wooden tableware made for the 'Black Douglas', a sizeable amount of leather and animal bone but little ceramic material.

The report includes a summary of the island's recorded history and a brief architectural description of the standing remains.

INTRODUCTION

Threave Castle (N.G.R.: NX 739622; O.D. 40 m) stands upon a low-lying grassy island of the same name in the R. Dee in the parish of Balmaghie 14 km inland from the seaport of Kirkcudbright and is approached from the SE. from Kelton Mains farm 800 m away (Fig. 1). The island measures 10 hectares and is composed of greywacke, of Silurian age, lightly covered by freshwater alluvium. The water-level of the Dee is now artificially regulated for hydro-electric purposes but excavation has shown that the level was higher in the medieval period, thereby increasing the natural impregnability of the island and restricting the area suitable for occupation to the southern third (Pl. viii).

The castle ruins became the responsibility of the then H.M. Office of Works in 1913 and extensive repairs were undertaken between then and 1930.¹ This included

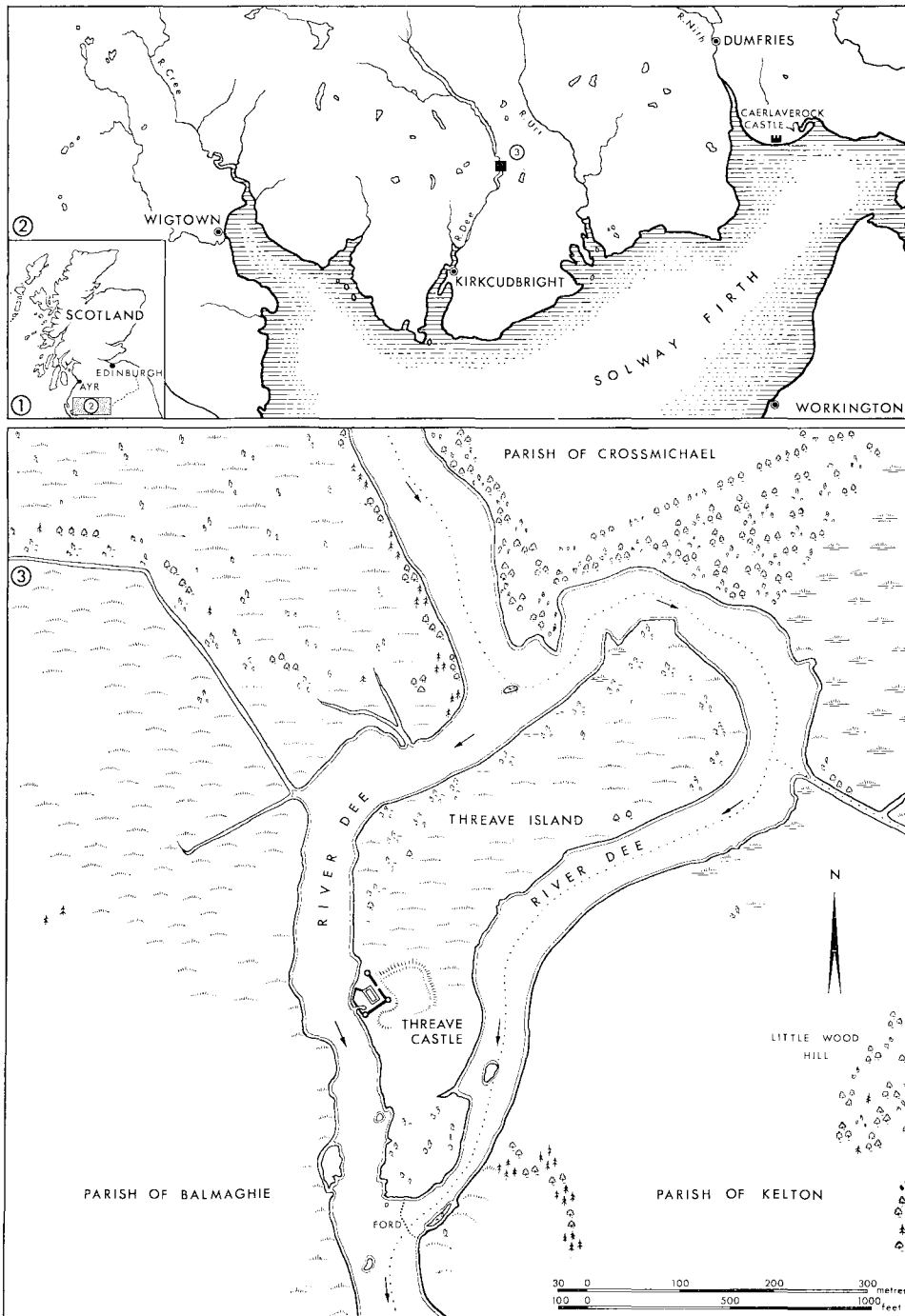


FIG. 1
THREAVE CASTLE, GALLOWAY
Location plan

archaeological excavation in the 1920s (unpublished) within the ditch and outer enclosure; a pencilled plan² and a number of artefacts³ are the only surviving records. A further programme of excavation and masonry consolidation was necessitated by the continuing erosion of the artillery-work foundations along the river bank to the W. and N. of the tower-house. Between 1974 and 1976 Trenches A–J within the inner enclosure were excavated, revealing the remaining portions of the artillery-work and its encircling ditch as well as the small harbour (Fig. 2). In addition Trench M in the outer enclosure was partly excavated revealing traces of out-buildings. Between 1976 and 1978 a re-examination of the buildings in the outer enclosure (Trenches K and L) was carried out and a further trench (Trench N) was excavated across the outer bank to the E. of the tower-house. All the work was financed by the then Department of the Environment and carried out under the direction of the writers using staff and a ‘volunteer’ workforce.

The artefacts are in the National Museum of Antiquities of Scotland; the notebooks, field-drawings and other material have been deposited with the National Monuments Record of Scotland; the photographic and architectural-survey material is housed with the Scottish Development Department (Ancient Monuments).

HISTORICAL SUMMARY

The name of Threave (‘Le Treffe’ (1426), ‘Treyff’ (1426), ‘Le Treife’ (1447), ‘Tref’ (1526)) is derived from the Old Welsh *tref*, meaning ‘a homestead’,⁴ and suggests that the island was inhabited at least as early as the 6th century A.D. by Britons prior to the influx of a Gaelic-speaking people during the 7th century.⁵ It is an understandable choice for, in addition to its natural defensive qualities, the island is situated beside a readily-fordable stretch of the R. Dee. Tradition associates the island with Fergus, Lord of Galloway, and his descendants from the 12th century onwards though there is no evidence to substantiate this. There is, however, an intriguing reference to the burning of an island in the R. Dee (possibly Threave) in 1308 following the defeat of Donald of the Isles and his Gallovidian supporters by Edward Bruce, brother of Robert I, during the Scottish Wars of Independence.⁶ Threave does not make its appearance in the written record until the year 1400 when Archibald ‘The Grim’, third Earl of Douglas died within the castle walls.⁷ It was probably he who ordered the construction of the tower-house upon the island following his elevation to the lordship of Galloway in September 1369.⁸ Threave remained in the possession of the ‘Black Douglas’ family throughout the first half of the 15th century. Archibald ‘The Tineman’, fourth Earl and son of ‘The Grim’, resided there with his wife, the Lady Margaret Stewart, eldest daughter of Robert III, and, following her husband’s untimely death at the battle of Verneuil in 1424, she continued to live there in her capacity as Lord of Galloway. Between 1426 and 1447 several charters relating to grants of land within the lordship were sealed and dated at the castle.⁹ She died there *c.* 1450 and her granddaughter Margaret, ‘The Fair Maid of Galloway’, inherited the lordship.

The growing threat to the Scottish Crown presented by such a powerful baronial family as ‘Black Douglas’ led the war-like James II to take extreme measures.

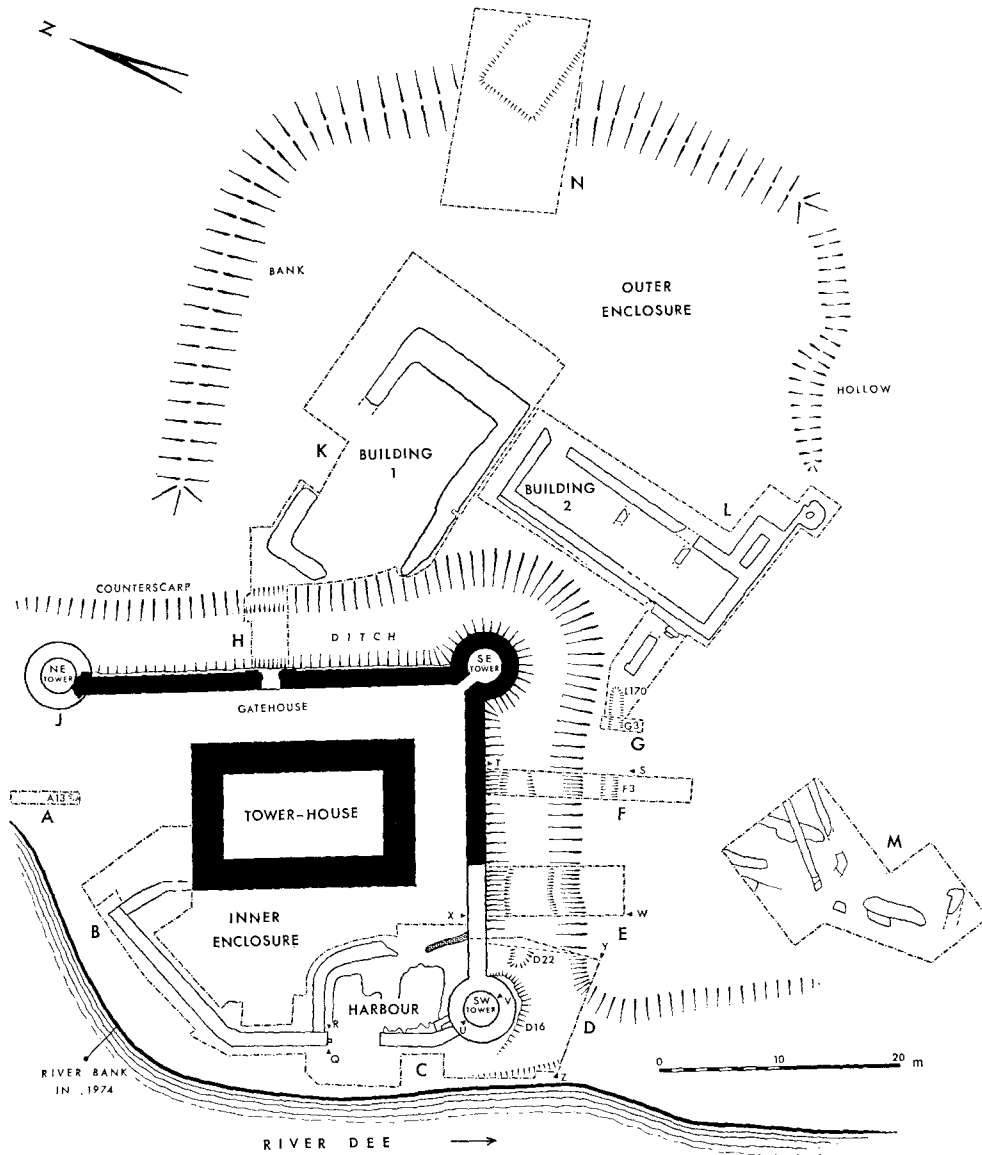


FIG. 2
THREAVE CASTLE, GALLOWAY
Site plan showing location of trenches and sections

In 1450, the Earldom of Wigton, the territory adjoining the lordship of Galloway on its W. which had been acquired by Archibald 'The Grim' in 1372,¹⁰ was annexed to the Crown. Then, in 1452, William, the eighth Earl, was murdered whilst dining with the king at Stirling Castle. By the summer of 1455 James II was sitting in a tent on a hill overlooking the island watching his 'great bombard' fail to make any

impact on the Douglas's stronghold — the last remaining in the ninth Earl's possession. After a lengthy siege the garrison was bribed into surrender and the castle and lordship became the Crown's responsibility. The family of 'Black Douglas' was destroyed.¹¹

Threave was immediately placed in the custody of a keeper, Sir Alexander Boyd of Drumcoll, and a garrison, for the fortress was still a strategic element in the defence of the West March of Scotland. There are several references to the castle in those early years of Crown occupation. In 1458 the keeper, William Edmondstone, was reimbursed the sum of £40 13s. 4d. for repairs to the *domus artilerie*;¹² in 1460 £5 6s. 8d. was paid to a carpenter, John McLellan, for fixing the roof *et diversis aliis negociis*.¹³ Ordnance movements are recorded between the castle and the royal arsenal in Edinburgh Castle for the years 1458, 1460, 1473, 1474 and 1512.¹⁴ Interesting accounts have survived for the visit of James IV in 1502 at the invitation of the keeper, Sir John Dunbar of Mochrum. For the king's comfort Sir John had ordered four rolls of 'sey' (woollen cloth) coloured red, blue, green and yellow, twenty ells of white cloth for curtains, twenty-four ells of black cloth and a small rope.¹⁵ A cask of red wine and one of claret, totalling £10, and five bolls of wheat costing £4 were also brought from Edinburgh,¹⁶ together with Alexander Law, the falconer.¹⁷ Entertainment was provided by an 'ald lutair'.¹⁸

Following the death of the next keeper, Sir James Dunbar of Blackcrag, beside his king on Flodden Field in 1513, the keepership passed to Robert Maxwell,¹⁹ who was ordered to attend to the castle's 'uphald, bigging and reparatioun' following a report that the structure was 'falty, ruinois and fallin doun in divers partis'. There is no record of what, if anything, was done. In 1523 the post of keeper, hitherto a temporary honour, was made heritable in the Maxwell family²⁰ and the castle continued to play a role, albeit a diminishing one, in the defence of the western border. For a short while in 1545 it was even held by the English²¹ but, after a short siege, was returned to Robert Maxwell. The Maxwell family was frequently suspected of treachery and both Queen Mary in 1565 and James VI in 1568²² demanded that the property be surrendered to them together with its artillery. James VI was forced to repeat his action against the Catholic John Maxwell prior to the advent of the Armada in 1588.²³ By the 17th century, Threave's military significance had become relatively slight and the arrest of John Maxwell in 1606 was for nothing more sinister than the non-payment of taxes on Threave and elsewhere.²⁴ The keepership was temporarily given to Sir James Ker before reverting to John Maxwell.²⁵

In 1638 Robert Maxwell, Earl of Nithsdale and keeper of Threave, garrisoned the castle with seventy men and enough arms, ammunition and provisions to withstand a lengthy siege. His concern was for his king, Charles I, in the monarch's dispute with the Scottish Covenanters. By 1640 the garrison had been increased to a hundred men when the Covenanters' army, under Lieutenant-Colonel John Hume's leadership, laid siege to the castle. Like James II before, Hume discovered, after thirteen weeks of siege and despite the use of heavy pieces of ordnance, that Threave was not to be taken by force. The garrison surrendered only after Robert Maxwell had received the necessary authority from the king.²⁶

It was the original intention of the War Committee of the Covenanters to continue Threave's role as a fortress but the decision was soon overturned in favour of its systematic dismantling. Orders issued to the acting keeper, the laird of Balmaghie, specified that '... the sklait roofe of the house and battlement thairof to be taken downe with the lofting thairof, dores and windowes of the same, and to stop the vault of the said hows'. The laird was empowered to '... dispose upon the tymber, stanes, iron worke, to the use of the publict; his necessar charges and expenses being deducted'. During this operation he was further ordered '... to put sex musqueteires and ane sergeand thairin, to be enterteanit upon the publict'. That same year William McLellan was authorized to take what freestone he desired from the castle²⁷ for use in the construction of his own tower-house at Barscobe in the N. of the Stewartry. Thereafter Threave was allowed to decay although certain works were carried out at the beginning of the 19th century to render the tower-house suitable for French prisoners-of-war.

ARCHITECTURAL SUMMARY

The substantial standing remains at Threave have been described elsewhere²⁸ and only the briefest outline is required here in order to explain the very close relationship between the surviving architecture and the archaeological record.

The principal feature is the tower-house itself which measures overall 18.6 m from N. to S. by 12.2 m transversely with walls in excess of 2 m thick. It stands 22.5 m high and contains five storeys excluding the wall-walk at the top (Pl. IX, A). The only entrance is in the E. wall, 3.6 m above the ground, which gives access into the second of these, the kitchen. At ground level is the cellar containing the well in the SW. corner and a prison pit within the northern half. Both the cellar and prison were entered separately from the kitchen.

Above the kitchen is the hall, entered from below by way of a newel-stair in the NW. corner and, above this, two bedrooms within the fourth storey. The fifth storey is positioned immediately below the roof and has no fireplace or garderobe, but it is liberally furnished with nine windows and one doorway, this sited in the S. half of the E. wall and presumably used for hauling war-machines and provisions up to the roof. This storey may well have served as temporary quarters for the garrison during times of siege.

As originally envisaged the tower-house stood alone as a defensive unit. To the W., alongside the river, was a small harbour and, to the E. and S., excavations have revealed the foundations of outbuildings necessary to the life of the island's residents. Towards the end of the 'Black Douglas' stay on the island, a stone-built artillery-work was constructed around the E., S. and W. walls of the tower-house to strengthen the castle's resistance to an artillery bombardment. A detailed analysis of this construction is being published elsewhere;²⁹ only a brief description is given here.

The work consists of two straight walls built parallel with the E. and S. walls of the tower-house, set at 90° to each other and meeting at the SE. angle. The western portion of the S. wall has collapsed. Both walls were 6 m high and have a continuous external batter giving them a thickness at their base of 1.5 m. They are liberally

supplied with vertical slits for use with either hand-guns, cross- or long-bows. The walls are complemented by three circular towers, one at the SE. angle and the others (now collapsed) at the SW. and NE. An engraving by Capt. Grose in 1789 shows them immediately prior to their collapse (Pl. IX, B). These towers have three storeys, the lower two roofed and each provided with three gun-ports of the dumb-bell and inverted key-hole variety, the top storey open to the elements and crenellated. A strongly defended gatehouse is centrally situated in the E. wall and both walls are protected by an encircling rock-cut ditch.

Prior to the excavations the foundations of a thinner wall running along the W. side of the tower-house and enclosing the harbour were visible. A full description is given in the excavation account below.

THE EXCAVATIONS

Since features and layers were not numbered sequentially from season to season the numbers mentioned in the text are preceded by an alphabetical letter to indicate the trench in which they were located (Fig. 2). For economy of space the features and layers are not indexed in this report; sufficient description, where this is relevant, is provided in the text.

The Inner Enclosure (Figs. 2-4)

Excavation within the inner enclosure was mainly confined to the harbour area (Trench C) and the section of ditch around the SW. tower (Trenches D and E), which had remained untouched during the 1920s excavations. The remainder of the ditch had been emptied at this earlier date; consequently only two trenches were excavated across it (Trenches F and H) to provide profiles at selected points. The interiors of the towers at the SW. and NE. corners were also examined (Trenches D and J) and a few additional exploratory trenches inserted elsewhere.

Landward Defences, Trenches D-7

Originally the tower-house appears to have stood alone with no additional defences other than the R. Dee itself, unless the shallow ditch F/G3 formed part of an earlier defensive enclosure. It took the form of a linear, U-shaped gully, 1.3 m wide and 500 mm deep, immediately S. of the large ditch of the later defences (Fig. 4, section S-T). Its eastern termination was found to the W. of Building 2 in Trench L (L170) but it did not appear in Trench E to the W. It is more likely, because of its size and the lack of any sign of it continuing to the E. or N. in Trenches K and L, that, rather than being defensive, it simply formed part of a boundary separating a courtyard area around the tower-house from the outbuildings. Alternatively it could have belonged to an earlier period; the absence of datable artefacts from within its fill precludes a positive conclusion.

Towards the end of the second quarter of the 15th century the artillery-work was added (see below). The walls and round towers on the E. and S. were built of local grey-wacke, bonded together by a soft shelly mortar, and substantially founded directly upon the bedrock. In addition the SW. tower had a revetment (D16) of large water-worn stones and clay packed against its foundations where the bedrock was deeper (Pl. x, A). The NE. and SW. towers, whose internal diameters were 2.6 m, had similar stratification (Fig. 4, section U-V). In both, the earliest deposit was a patchy spread of mortar — debris from their construction — overlain by a deposit of clay (400 mm deep in the SW. tower, 300 mm deep in the NE. tower) to form the floor level. In the SW. tower this was

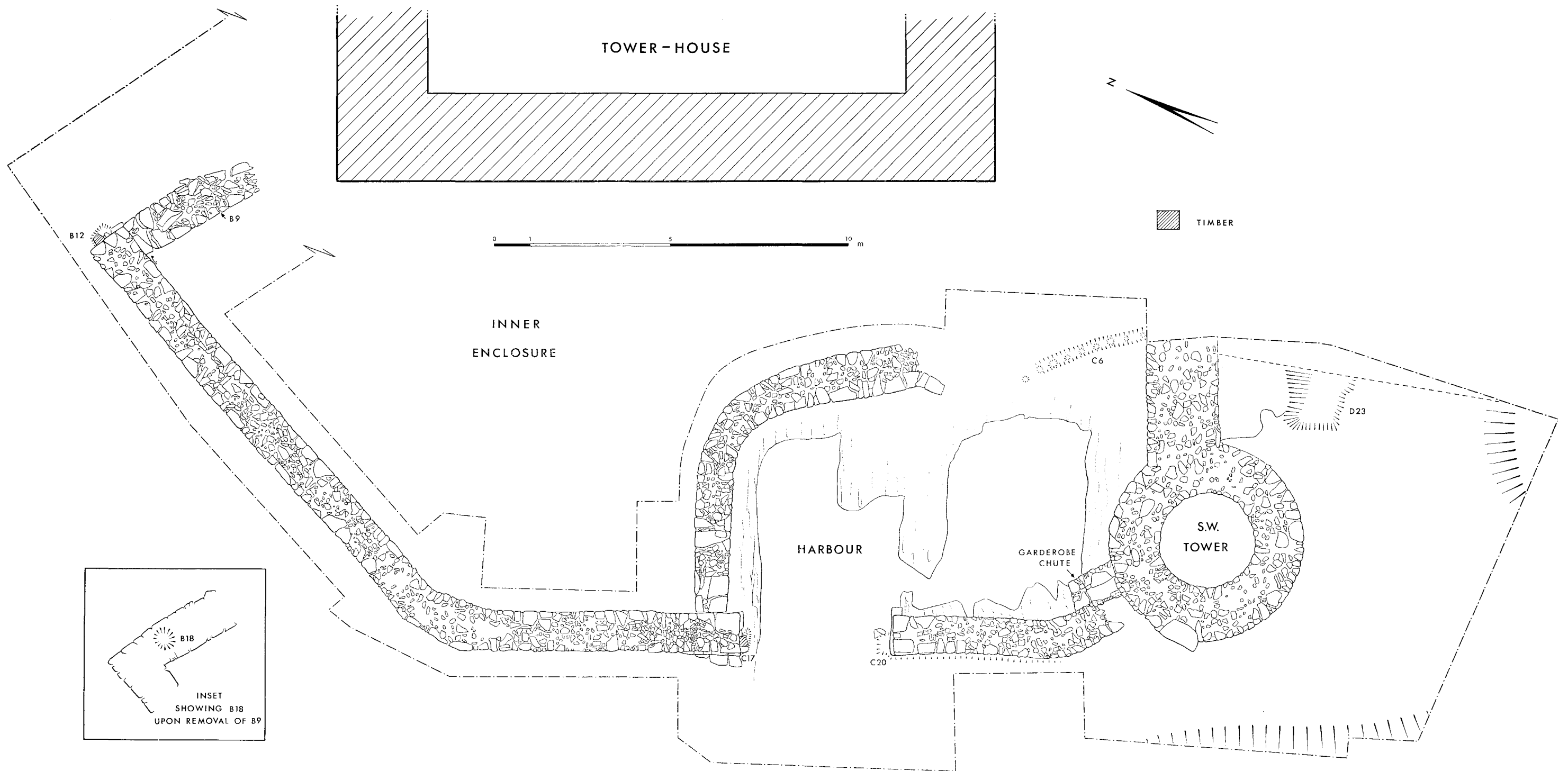
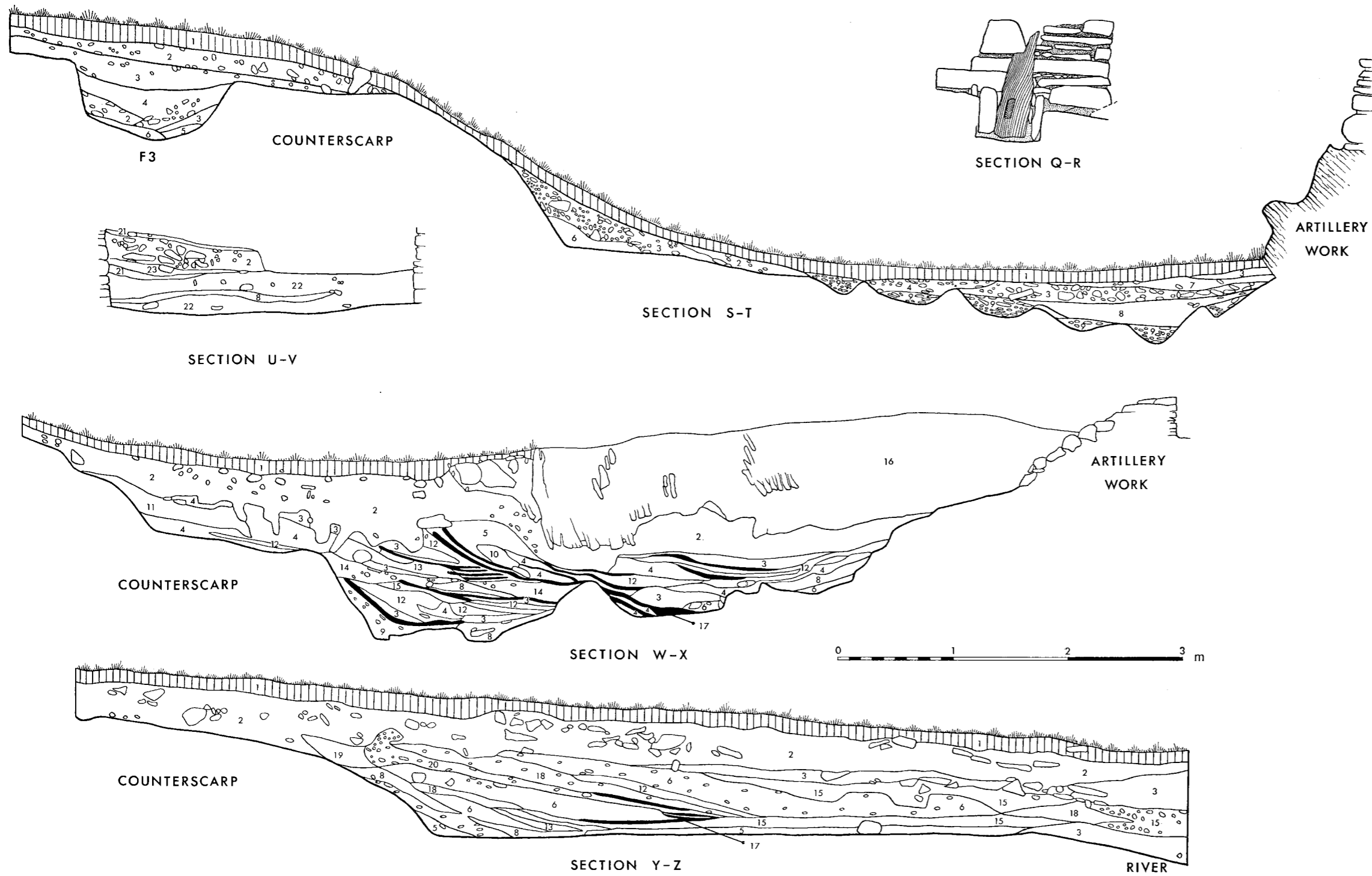


FIG. 3
 THREAVE CASTLE, GALLOWAY
 Plan of Trenches B, C and D



DESCRIPTION OF LAYERS

1. Turf and top-soil
2. Humic soil
3. Yellow/brown silt
4. Yellow/brown sandy silt
5. Grey sand
6. Yellow/brown sand
7. Brown loam
8. Grey clay
9. Pink silty clay
10. Sandy silt and gravel
11. Loam and gravel
12. Alternating layers of black peaty silt and grey clay
13. Grey sand and clay
14. Pink silt
15. Grey sandy silt
16. Collapsed rubble masonry
17. Black peaty silt
18. Grey sandy silt and gravel
19. Brown clay
20. Gravel
21. Loam with mortar and small stones
22. Yellow clay
23. Dark grey clay with small stones

FIG. 4
 THREAVE CASTLE, GALLOWAY
 Sections Q-R, S-T, U-V, W-X, Y-Z (section S-T is reversed for consistency of direction)

covered in the northern half firstly by the vestigial remains of an occupation layer containing the jetton (No. 9), made probably in the last quarter of the 15th century and dropped not long after since it was practically unworn. Above this a thick deposit of stony earth contained a collection of ironmongery, including the rowel spur (No. 114), dated to the 14th/15th century.

The Ditch

Immediately outside the artillery-work a large ditch, 8 m wide and 2 m deep, had been excavated out of the bedrock. The rock-cutting of the ditch (D 22) terminated just to the E. of the corner-tower at a point where the counterscarp curved away to the S. to follow the natural break of slope along the river-bank.

The bottom fill of the rock-cutting (Fig. 4, section W-X) consisted of a peaty material containing thin patches of sand, indicative of the marshy nature of the area. Overlying this was a series of sand and fine gravel layers alternating with thin patchy layers of dark clay and charcoal flecks. These probably represent seasonal deposits — the sandy layers being laid down in the winter months when the river level was high, the clay layers representing the growth of turf during the drier summer months.

A recutting of the ditch at least twice showed in these layers, the fill of the recuts likewise comprising deposits of sand and gravel alternating with thinner bands of dark clay and charcoal flecks. A sherd from a 16th-century Raeren drinking mug (No. 225) came from the silts within the first recut, D23. The marshy ground to the SW. of the corner-tower also appears to have been levelled off at a later date, possibly around 1640, judging by the pottery. Over the ditch silting lay the masonry debris from the corner-tower and artillery-work, which had apparently suffered badly at the hands of the Covenanters' ordnance.

The Riverside Defences, Trenches A-C

There was little archaeological evidence to show that the area to the W. and N. of the tower-house, along the river bank, had been protected defensively prior to the construction of the artillery-work. It is, however, reasonable to assume that such protection was necessary and this may have been provided by a turf bank or wooden fence. Amongst the earliest deposits within the harbour was a large amount of peaty material which may have been debris from the demolition of a bank prior to its replacement in stone. Such peaty deposits, however, also occurred in the bottom of the ditch around the SW. tower and may simply have been a feature of the marshy conditions. Additional support for a defence is provided by a few large post-holes pre-dating the artillery-work. That the pits dug to receive the posts were earlier is certain since in two instances (C17 at the N. side of the harbour entrance and B12 at the N. end of the artillery-work) they were partly sealed by the wall itself. However, both these pits still held timbers *in situ* indicating that they were certainly standing after the construction of the wall. Dendrochronological dating of these timbers has given a felling date for each in the winter of 1446/7,³⁰ which confirms the numismatic evidence for the date of erection of the wall (see below).

At the S. side of the harbour entrance another post-pit (C20) was apparently sealed by the material into which the foundation-trench of the wall had been cut. This material, however, was so soggy that it had been pushed over the foundation-trench in places and consequently may have been pushed over the post-pit also. In Trench A the corner of another pit (A13) was found with a fill similar to B12. The pit lay at the southern edge of a turf bank and its position suggests that the post formed part of a fenced structure against which a turf bank had been built. Another square post-pit (B18) was found sealed beneath the artillery-work where it returned to link with the NW. corner of the tower-house (B9); this too may have been associated with the earlier defensive system.

The artillery-work to the W. of the tower-house was different in its construction from the E. and S. walls. It was narrower, being only 1.10 m in width, without an external

batter, except immediately on the N. side of the harbour entrance (Fig. 4, section Q-R). It was built of blocks of the local greywacke with a core of smaller stones, the whole bonded with a pale-yellow silt, not mortar. Some 8 m N. of the harbour entrance the wall changed alignment to run NE. for 14 m before terminating against the wooden post in pit B12. A very worn penny of Robert III, minted *c.* 1400 and deposited around 1450 (No. 2) was found in the heart of the wall during its dismantling prior to reconsolidation, thus confirming the date obtained from dendrochronology (see above).

Abutting the wall at its N. end was a short stretch of wall (B9) of similar construction linking it with the NW. corner of the tower-house. At this point a number of quoins had been removed from the tower-house to allow the wall to be bonded into it, giving an indication that the artillery-work along the W. had reached a height of about 4 m, some 2 m lower than the artillery-work on the E. and S.

Prior to the excavation it had been supposed that the artillery-work had continued along the N. side of the tower-house. Trench A, however, confirmed that the line of the wall had been continued only in turf. Further excavation was considered beyond the scope of the current series of excavations and the trench was abandoned at a depth of 1.20 m. A 16th-century version of the bank — dated by a Type II Martincamp flask (No. 226) — was excavated; it was composed of layers of turves interspersed with thin patches of silt. The waterlogged conditions within this trench had ensured that organic as well as inorganic material had survived in an excellent state of preservation.

The Harbour

The harbour lay to the W. of the tower-house and, in its original form, was a simple hollow cut into the bedrock by the Douglases to allow boats to moor free from the fast river current (Pl. x, B). The shallow depth of water at the entrance and the projections of rock within the harbour would only have admitted boats of shallow draught. A ledge on the S. side sloping downwards gradually to the W. probably acted as a jetty whilst the timbers that stood within the two post-pits C17 and C20 may have been supporting members for a gate across the harbour mouth. Towards the bottom of the timber in C17 was a mortise (Fig. 4, section Q-R).

Around the inner edge of the harbour a curved wall had been built to the same design and thickness as the main W. wall, against which it had been butted. It stopped 6 m short of the S. artillery wall, the intervening space being filled by a narrow slot (C6) with a series of small post-holes cut into its bottom fill. Below this bottom fill, though still within the slot, was another series of similar post-holes, some in the same position as the ones above. This must represent a small fence, possibly of wattle-and-daub construction, and its replacement. In the SW. corner of the harbour were the foundations of a garderobe chute attached at a later date to the SW. corner tower, the outlet draining through a hole forced through the W. artillery wall.

The earliest deposits within the harbour comprised a number of fine silts with a large quantity of shale from the weathered bedrock. Overlying this the main accumulations were of a very peaty material containing much organic material. Above this were layers generally less peaty and mainly of dark silty mud. In these upper layers were several stakes, *c.* 1 m long and trimmed to a point at one end, which may have come from the fence C6.

Fluctuating water-level hampered excavation in the harbour area. Layers could not always be distinguished; neither could all the finds, including wooden posts, be ascribed with any certainty to a particular layer. Wet sieving was needed to recover the smaller finds. Many of the layers distinguishable within the harbour and immediately outwith its entrance were rich in artefacts and other debris.

The Outer Enclosure (Fig. 2)

A complex of buildings, aligned at 40° to the artillery-work, was found in the 1920s, and this was re-excavated in 1974 (Trench M) and 1976-77 (Trenches K and L). The

1920s work, however, had destroyed the relationship between wall faces and occupation levels.

Apparently forming the boundary of the outer enclosure on the N. and E. sides was a bank surviving to a height of *c.* 1 m above the general ground level within the enclosure. On the E. it faded out toward the S. and was non-existent on the S. side. Towards the N. end of the eastern side was a noticeable swelling where the bank was wider and higher than elsewhere. Since this swelling lay at the end of what appeared to be a causeway across the marsh to the river on the E. it was thought that it might represent the position of an entrance into the enclosure and Trench N was excavated to check this hypothesis.

Pre-Building Features, Trenches K and L (Figs. 5 and 6)

Few features were stratigraphically earlier than the building complex. L170 and L145 may have been boundary ditches; the linear slot, K60, may have pre-dated Building 1 or been associated with its construction; the pit, K77, produced the flint scraper (No. 192) whilst a post-hole, K50, contained sherds of pottery ascribed to the 12th/13th century.

Building 1, Trench K (Fig. 5)

Building 1 measured externally 22.4 m from E. to W. by 12 m transversely. Because of its size and close proximity to the tower-house, and since the SW. corner had been chopped away by the ditch encircling the artillery-work, it was originally thought to have been part of an earlier defended stronghold of the lords of Galloway. A coin from the occupation level and associated pottery, however, suggest that it was occupied contemporaneously with the tower-house.

Only the foundation-raft of the walls survived robbing and this too had disappeared in places. Built of rounded water-worn stones bonded with soft shelly mortar, it was 1.6 m wide on the N., S. and W. sides and 2.4 m wide on the E. The width of the raft suggests a stone building at least two storeys high, the ground-floor serving as an undercroft and the upper storey as a hall or dormitory, whilst the extra width on the E. side perhaps indicates that the wall here held an internal stairway providing access to the upper levels. A layer of roofing slates, made from the local greywacke and representing sizes up to a maximum of 500 × 300 mm, was found to the NE. of the building.

Inside the building a number of post-holes and other features were found. In most cases only the pits dug to take the posts were distinguishable but in a few cases the sizes of the posts themselves could be determined, either from a different fill or because some appeared as voids within the pits. The posts of the major groups were between 150 and 180 mm square, set to a depth of between 300 and 500 mm, and the pits dug to receive them generally between 400 and 500 mm in diameter.

Four principal arrangements of post-holes could be discerned running E.-W. through the building, roughly equidistant from the N. and S. walls of the building. These were:

A. K122, 118, 37 and 68; 600 mm from the N. wall and roughly equally spaced 3 m apart. K121, the same distance from the wall halfway between K118 and K37, may also have belonged to the group.

B. K157, 120, 76 and 33; all between 400 and 500 mm from the S. wall, though the spacing between the posts was not so even. K155, about halfway between K157 and K120, may also have belonged to the group since it was the same distance from the wall.

C. K91, 90, 89, 28, 67 and possibly K69 and 73; all 1 m to 1.20 m from the N. wall, the first five evenly-spaced roughly 2.35 m apart. K69 was 1.6 m closer to K67 though K69 and K73 were again 2.35 m apart.

D. K101, 100, 99, 75, 32 and 30; all *c.* 1 m from the S. wall. Their spacing was not so regular with K101 and K100 1.4 m and K100 and K99 2.8 m apart. The final four, however, were all between 1.8 m and 2 m apart.

Because of their similar distances from the N. and S. walls it is likely that groups *A* and *B* are associated; similarly groups *C* and *D*, but lack of stratification and the 1920s disturbance made it difficult to provide associations. Groups *C* and *D*, however, seem to have been secondary since post-holes K89, 99, 100, 101 and 75 were all sealed by a layer of burning which appears to represent debris from the demolition of the building. In these cases the post-holes showed through the underlying occupation-levels, which in turn sealed the pits dug to receive the posts. They seem too insubstantial to have been supports for the upper storey and it is more likely that the first floor was supported on joists resting on the side walls of the building. An alternative consideration is that the posts supported internal partitioning within the undercroft, dividing the area for either storage or stalls.

At the E. end of the building, halfway between the N. and S. walls and 2 m from the E. wall, was a substantial rectangle of stonework (K59) bonded in the same mortar as the walls and set in a large pit. The lack of an equivalent base at the W. end of the building precludes the interpretation of K59 as a major support for the undercroft ceiling, but it could indicate that additional support for the ceiling was needed at the E. end. This might suggest the presence of a cross-wall in the upper storey, forming a screens passage *c.* 2 m from the E. of the building.

Just E. of the centre of the building and 2.4 m from the N. wall was a crude hearth (K47) of burnt clay with an associated ash-pit containing animal bone. Other features within the building were of less obvious significance. A group of stake-holes (K55, 56, 57, 58 and 49), all about 100 mm in diameter and 150 mm deep, formed a rough line at right angles to the N. wall and may have represented some slight partition. It seems likely that the three post-holes (K10, 20 and 46) were constructed after the demolition of Building 1. Other features within the area were all fairly shallow depressions and of no obvious significance.

The stratification within Building 1 was extremely poor. The pottery from the floor make-up was for the main part no earlier than the late 14th century, which suggests that Building 1 was erected during the Douglas occupation. Overlying this layer, in places, was a thin patchy spread of grey loamy occupation which sealed a number of the post-pits but was cut by the post-holes. This occupation layer produced a badly corroded coin (No. 3) tentatively ascribed to the reign of James I (1406–37). The occupation level was itself sealed by patchy remains of a layer of ash and burnt soil which presumably represented the demolition of the building. Indeed the occupation layer itself was burnt in places, especially near the N. and S. walls, and sometimes the impressions of the timbers themselves, which had burnt after collapsing, could be seen in the varying degrees of intensity of the burning of this layer.

Building 2, Trench L (Fig. 6, Pl. XI, A)

To the S. of Building 1 and set at right angles to it was the other major structure shown on the 1923 plan — Building 2. It was similar in length to but narrower than Building 1, measuring externally 21.6 m from N. to S. by 6.7 m transversely over walls *c.* 1 m thick.

It differed radically in its manner of construction from Building 1. The N., S. and E. walls (L78, 86 and 95) were built of large blocks of the local greywacke with a bonding material of yellow silt which occurred naturally above the bedrock, very similar in its style of construction to the W. wall of the artillery-work. The W. wall (L79) had been bonded with a more orange silt and appeared to have been rebuilt in places. At the N. end the stonework was less tidy and its width varied from 850 to 1050 mm. L79 was founded on an earlier wall (L166) which was much wider than any of the other walls of the building (1.5 m) and bonded with a darker orange silt. In general L79 was built directly on top of L166 except near the middle where the two were separated by a 100–150 mm thick layer of yellow silt.

At the N. end of the building wall L78 abutted L166 but the overlying L79 had been robbed out at their junction. At the S. end, however, L79 appeared to have been bonded

with L86 and, whereas L86 had projecting footings at this junction, L79 did not. It seems probable that the wall L166 was standing before the construction of Building 2 and that it was initially used as the W. wall of the building prior to being replaced by L79.

Within the building were vestiges of two partition walls (L146 and L150), both 670 mm in width and only one course high. They divided the building into three rooms, that at the N. end measuring 8.5 by 5 m with two smaller rooms to the S. measuring *c.* 5 m square. Against the E. side of the building at the S. end was another small chamber, perhaps a passage-way, built at the same time. It was 900 mm wide internally at the footings, and 2.9 m long. Its walls were more substantially founded than the others in the building and were set a few courses deeper into the ground.

It was difficult to determine where any entrances into the building might have existed. The only positive entrance was through wall L79 at its southern end, about 1 m from its junction with wall L86. Here the surviving upper course of stones indicated an inward-opening doorway 1.1 m wide. At the N. end of wall L95 the absence of stonework may also indicate the position of an entrance. The inside face of wall L78 did seem to carry partially across this gap but the stonework was rougher here and there was no equivalent facing across wall L95 to provide the S. side of the doorway.

As in Building 1 traces of occupation and demolition levels existed in patches. In the N. room the soil of the occupation level was burnt in places and was sealed by a layer of burnt soil and charcoal 100 mm in thickness. This appears to have been debris from a fire in the building and may mark the period in which the N. end of wall L79 was rebuilt. This burning level was sealed by a layer of clay which may have been deposited to provide a fresh floor surface above the debris. The clay level also spread into a linear feature (L117) running parallel to this wall and about 1 m from it, providing part of its upper fill. None of the burning or occupation layers existed to the W. of L117, which may have marked the position of a partition providing a narrow corridor alongside the room. The clay level was in turn sealed by another spread of burnt material which was the last of the well-stratified levels and may have represented the final demolition of the building. In the two rooms to the S. the only level possibly associated with the building was a patchy layer of silt and burnt material near the E. wall; this layer sealed the robber-trench of the cross-wall (L150) but there were no traces of occupation layers beneath it.

Outside the building smaller structures had been built against it. To the W. was an isolated stretch of wall (L134), 900 mm wide, which had the beginnings of a northward return at its W. end. The relationship of this wall to the W. wall of Building 2 was lost when a later stone feature (L148) was constructed. It is probable, however, that it represented the S. wall of a small building set against the W. wall, though it may also have been associated with the earlier wall L166. L148 comprised a patch of laid stonework against wall L79 just N. of the entrance and faced at the bottom towards the NW. in a rough circular arc with another face stepped in by 250 mm. Apparently associated with it was a short narrow wall (L133) with a slight northward return at its W. end. L148 may have been the foundation for an oven enclosed in a small structure, of which L133 formed the S. wall.

Below L148 and L133 was a pit (L151), stone-lined on its E. and W. sides and partly built into the earlier wall L166. The pit had evidently been used as a rubbish pit, but its original function and date of construction is unknown.

Beyond the chamber attached to the SE. corner of Building 2 another stretch of narrow wall (L114) extended eastwards to a circular stone-lined pit (L115) with a rectangular central hole, 550 × 400 mm, cut into the bedrock. Although the backfilled material was predominantly humic, its original function is likely to have been a storage-pit for keeping perishable food items fresh — a primitive ice-house.

To the E. and N. of L115 were two large rubbish pits (L116 and L123) containing considerable quantities of animal bone and shell. The occurrence of these rubbish pits and the storage pit L115 near the S. end of the building suggests that the S. portion may have served as a kitchen.

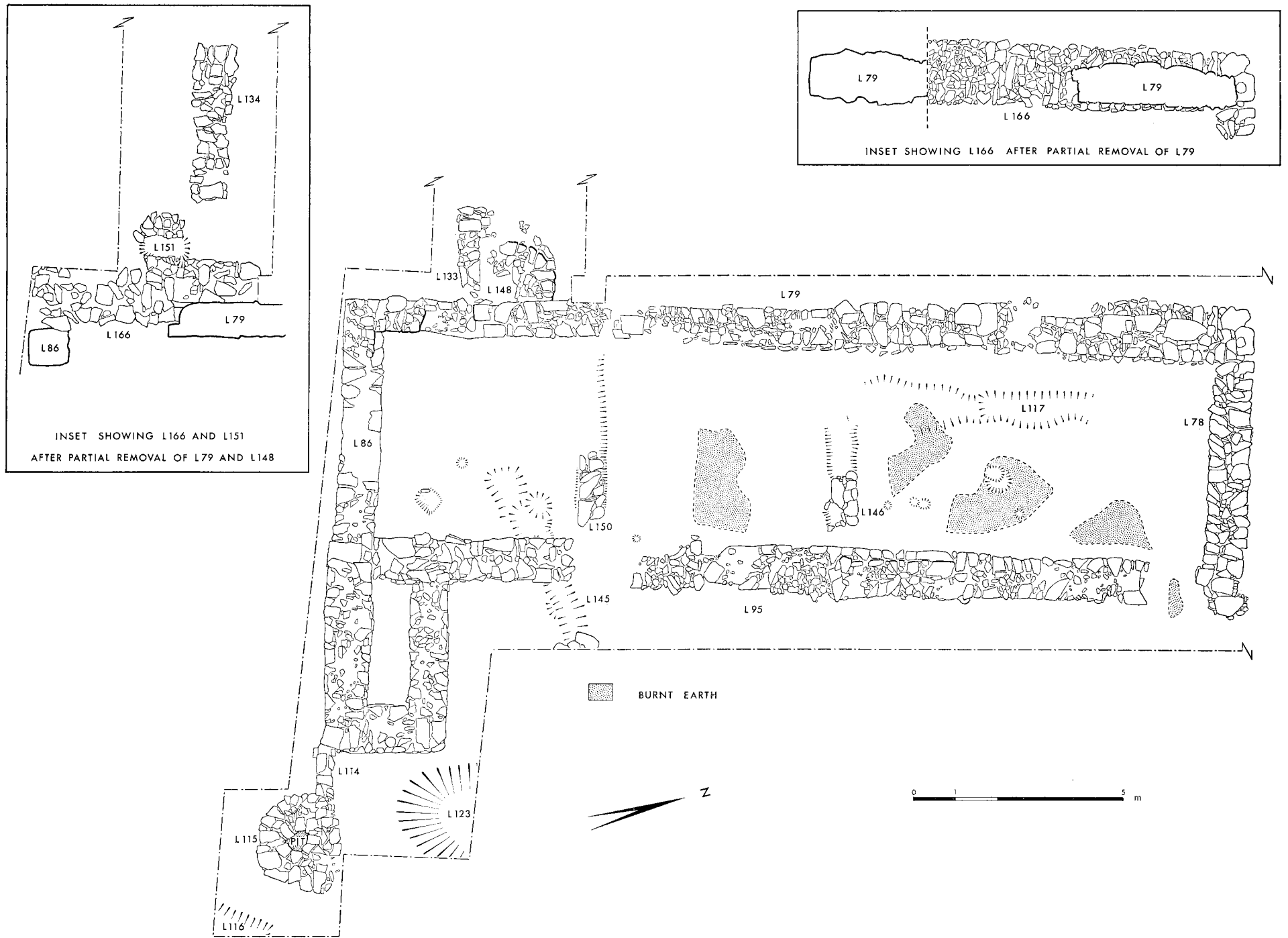


FIG. 6
THREAVE CASTLE, GALLOWAY
Plan of Trench L (Building 2)

Trench M (Fig. 7, Pl. XI, B)

Two main phases of building construction were found in this trench though generally only single courses of walling remained, and these only in patches, so that it was not possible to obtain complete building plans.

The first construction phase was represented by a rough wall on a N. and S. alignment at the S. end of the trench and by a patch of possible cobbling and a short stretch of walling near the N. end. Spreads of burning and large amounts of iron slag throughout the



FIG. 7
THREAVE CASTLE, GALLOWAY
Plan of Trench M

area suggest that they were remains of structures associated with smithing. In the debris around the cobbled area was found a penny of Edward I (No. 7) which could date this phase of activity to the early 14th century.

In the N. part of the trench overlying the cobbled area and the associated wall and burning, and separated from it by a layer of humic soil up to 200 mm deep, was a dry-stone building (Building 3) 3 m wide overall which appears to have been contemporary with another building (Building 4), 4 m in width, immediately overlying, and on the same alignment as, the earlier remains in the southern part of the trench. Possibly also associated with these were two narrow walls in the NW. corner which formed a corridor 1 m wide. In the demolition debris over these buildings was found a number of cannonball fragments which suggests that they had been destroyed during the siege of 1640. A turner (No. 4), minted in 1642 and likewise found amongst the debris, was probably dropped during the robbing of the castle that took place after the siege. There was little evidence to indicate the function of these ancillary structures, though it seems likely that they were half-timbered sheds or outhouses used for storage purposes or as workshops.

Trench N (Fig. 8)

Along the E. and N. sides of the outer enclosure, and apparently forming its limits, was a low bank. Trench N was positioned across this at its highest and widest point and excavation showed that the bank had been constructed in the 17th century, probably as an artillery-bank.

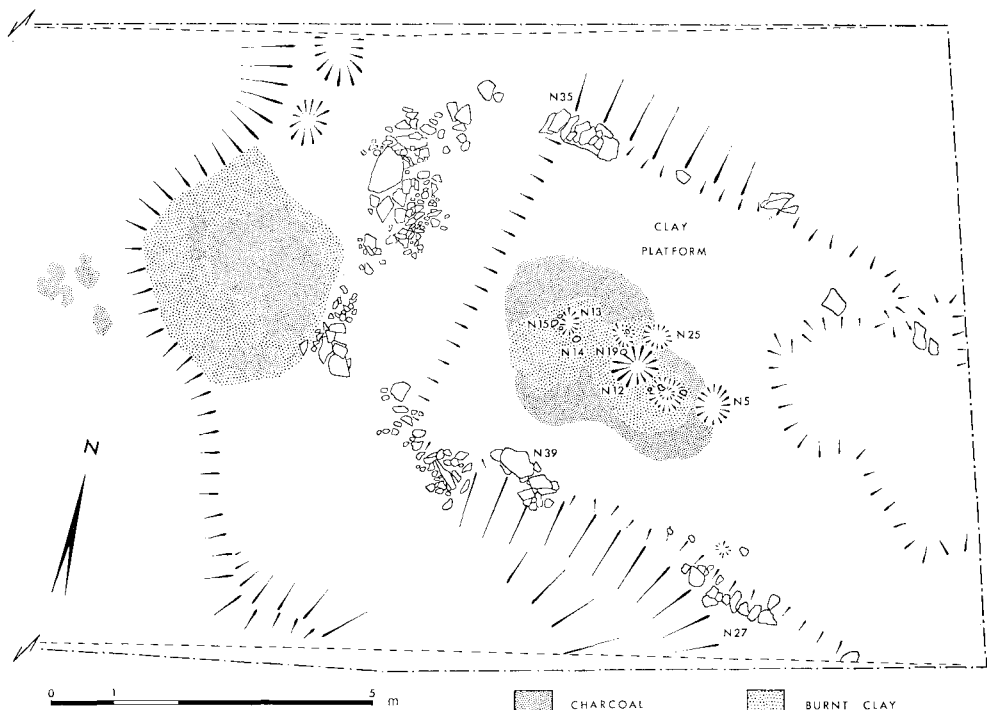


FIG. 8
THREAVE CASTLE, GALLOWAY
Plan of Trench N showing lead-smelting area

The earliest feature was a raised clay platform, 5 m wide, which displayed large areas of burning on its surface. Cut into the platform were a number of shallow oval pits (N5, 12, 13, 19 and 25) no more than 200 mm in depth, which were burnt down the sides and bottom. The amount of lead slag from these features, in particular N5, indicates that they were used for lead smelting.³¹ Several small stake-holes were found within or near the pits. Two which appeared significant (N14 and 15) were for rectangular stakes, measuring 150 by 100 mm, on either side of the small pit N13, and may have represented the bases for a support over the pit. Around the edge of the platform on the N., S. and E. sides were traces of stonework (N27, 39 and 35), probably the foundations of a low wall to shelter the smelting area from the rest of the outer enclosure and from the prevailing wind. It is possible, though perhaps unlikely because of the risk from fire or fumes, that the platform had been roofed since a few slates were found around it. A smaller area of burnt soil, with a depression in the centre, to the W. of the platform may have been caused by the dumping of waste ash material from the pits on the platform. The function of other shallow pits and post-holes, apparently contemporary with the platform, could not be ascertained.

There was insufficient evidence to date the lead-smelting pits but the alignment of the platform parallel to Building 1 suggests that it was contemporary with the Douglas occupation of the island and the pottery from the immediately overlying soils, ascribed to the 15th century and later, is consistent with this.

Covering the platform and the areas of burning to the W. was a number of deposits, mainly consisting of greywacke chippings with some rubble and earth, which comprised the bank. The dating evidence — a few sherds of pottery, fragments of clay-pipe stem and a number of gunstones and a lead musket-ball — indicates that it was built in the 17th century, possibly immediately prior to the Covenanters' siege of 1640.

There were no features on top of the bank to indicate any form of superstructure, and other features in the area were of no apparent significance. A number of linear trenches to the W. of the clay platform, 1 m wide and filled with shale and gravel, are most probably evidence of the 1920s excavations. From these trenches, however, came a penny of Alexander III (No. 1) and a fragment of glass bangle (No. 207), adding support to the tradition that Threave Island had been occupied prior to the arrival of 'Black Douglas'.

THE ARTEFACTS

Note. The artefacts are numbered consecutively and their trench location, phase and excavation accession number identified. Unstratified artefacts came chiefly from the back-filled 1920s excavation and the catalogue includes relevant artefacts from that work now in the collection of the National Museum of Antiquities of Scotland (hereinafter NMAS).

The excavated contexts have been grouped into four phases:

- PHASE 1 Pre-Douglas era (—1370)
- PHASE 2 Douglas era (1370–1455)
- PHASE 3 Post-Douglas era (1455–1640)
- PHASE 4 1640 onwards

COINS AND JETTONS

Scottish Coins. By R. B. K. STEVENSON, *National Museum of Antiquities of Scotland*

1. *Penny* (sterling). William the Lion, early in his third coinage, 1195 onwards. Same die as is known from Roxburgh and Perth mints;³² broken in two and slightly worn. Obv: WILELMVS RX: the short-double-cross reverse is Roxburgh, moneyer Raul — reading RAUL:ON:ROCE. Most

- short-cross pennies were probably re-minted 1250–79 during Alexander III's long-double-cross first issue, and very few will have been current as late as his second issue in the 1280s. *N, unstratified* (77, 5)
2. *Penny*. Robert III without mint name; much worn. Obv: ROBERT (TVS) (.) DEI (.) GRACIA; Rev: REX / SCO / TOR / (VM) X. D. 18 mm. Minted probably late in his second issue c. 1400, it might have been in circulation for fifty years. *B, phase 2* (76, 1)
3. *Coin*. Considerably alloyed and much worn. Possibly a penny of James I. D. 15 mm. *K, phase 2* (77, 9)
4. *Turner*. Charles I, in his third issue, 1642; much worn. D. 18 mm. *M, phase 4* (74, 88)
5. *Copper alloy disc*. Probably a worn coin. D. 24 mm. It is the right size for a late 17th-century bawbee. *E, phase 4* (74, 82)
6. *Forgery of a hardhead* (2d). James VI, his second issue of 1588; in poor condition. *NMAS* (303) — from *E. ditch*

English Coins. By MARION ARCHIBALD, *British Museum* and DAVID H. CALDWELL, *National Museum of Antiquities of Scotland*

7. *Penny*. London, Fox class IXb, c. 1300–02; hardly worn. The wear suggests a deposition date of 1310–30. *M, phase 1* (74, 86)
8. *Penny*. Henry VI, minted at Calais, annulet issue of 1422–27; good (? fine) condition. *NMAS* (267) — from outer enclosure *E. of the tower-house*

Jettons. By the late STUART E. RIGOLD, *Inspectorate of Ancient Monuments, London*

9. *Late 'French Derivative'*. Rather thicker (1 mm) than most. Obv: schematized Burgundian shield, viz. an attempt at 'Burgundy ancient' (but bendy sinister in 1st and dexter in 4th) quartering a single lys in 2nd and 3rd i.m. pierced sixfoil, or six-pointed mullet; extremely bad mixed Lombardic and black letter, aVE Maria (lys) GracIa / Rev: plain three-strand-cross flory in quadrilobe, A M on cusps, annulet between pellets in spandrels. Almost unworn. D. 30 mm.

'French derivatives' are progressively coarser versions of the larger size of late 14th- and early 15th-century official jettons probably equally official, in a single degenerative series. This is one of the latest, the most slovenly in execution and the broadest in diameter (that of the big Nurembergers of c. 1500), and has the mixed lettering and characteristic cusp and spandrel ornaments that often mark the last of the series, which covers most of the second half of the 15th century. Only very worn or damaged examples come usually in assemblages of the 1530s and 40s. *C, phase 3* (75, 153)

Not listed: 2 jettons (lost in transit) similar to No. 9. *L, unstratified* (77, 1); *L, phase 3* (77, 47); Also 3 coins of 19th- and 20th-century dates

METALWORK. By DAVID H. CALDWELL

Gold

10. *Strap-end* (not illustrated). Perforated. L. 10 mm. *L, phase 2* (77, 43)
11. *Earring* (Fig. 10). Consisting of an open wire loop to pass through the ear-lobe, pendant from which is a wire bent through a small ring at the end of the ear-loop and then wound round itself decoratively. The wire ends in a knob and was apparently meant to retain a stone, pearl or bead (cf. No. 203). 16th century. *C, phase 3* (75, 19)
12. *Fragment of sheet gold* (not illustrated). 10.5 × 0.75 mm. *C, phase 3* (74, 81)

Silver

13. *Stamped leaf design* (Fig. 10). Gilt all over. From a piece of jewellery or other decorative metalwork. L. 14 mm. *L, phase 2* (77, 38)
14. *Locket* (Fig. 9, Pl. XII). Traces of gilding, rectangular with suspension loop. On one side *ih̄s* in black letter is reserved against a cross-hatched background, on the other is an engraved quatrefoil leaf design with smaller trefoils between the leaves. This side slides up and out so that a relic or memento of some sort could be put inside. 28 × 17 × 4.5 mm. (*L, unstratified* (77, 3))
15. *Maltese cross* (not illustrated). Gilt all over, decorated on the front with quatrefoils and trefoils reserved against a background of cross-hatching. At the top there is a

suspension loop with a ring through it for attaching it to a chain and on the ends of the other three arms there are short spikes. These have been filed off smoothly but were probably originally longer and meant for securing pearls, other precious stones or silver balls as on the closely-comparable Mylecharaine Cross from the Isle of Man, in the Manx Museum, Douglas.³³

Four holes pierced at the junctions of the arms of the cross may also have been for attaching pearls, as on the 15th-century reliquary cross from the site of Clare Castle, Suffolk, now in the British Museum,³⁴ or the 15th-century cross from the Fishpool, Nottinghamshire, hoard, on which only the spikes for the stones remain.³⁵ The cross is hollow and the back is formed as a separate plate, held in place by a rivet through the lower cross arm. It is probable that the cross was meant to contain a relic — like the piece of the true cross (?) and the piece of stone from Calvary (?) contained in the Clare Cross. In shape it is most closely paralleled by the 15th-century Mylecharaine Cross, which has silver balls both at the extremities of its arms and also at their junctions, and also by a 15th-century reliquary in Norwich Castle Museum, in which the voids in between the arms of the cross have been filled in.³⁶ 42 × 20 × 6 mm. *NMAS* (*KE* 3, donated 1880)

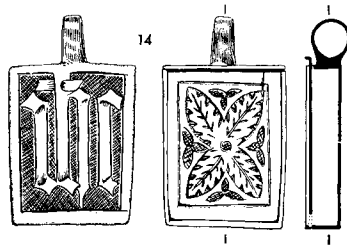


FIG. 9
THREAVE CASTLE, GALLOWAY
Locket (no. 14). Scale 1:1

Nos. 14 and 15 are so similar in style and workmanship that it is not improbable that they were made in the same workshop. The find spot of No. 15 is given only as Threave Castle; No. 14 was found in the backfilled trenches of the 1920s excavation in Building 2 and cannot, therefore, be considered as having a secure stratigraphical context. Both pieces may, however, on stylistic grounds be dated to the 15th century.

Copper Alloy (Fig. 10)

16. *Pin*. With globular head formed from spirally twisted length of wire. L. 52 mm. *L*, phase 1 (77, 74)
17. *Embossed quatrefoil mounting*. Probably for applying to clothing, belts, etc. L. 13.5 mm. *L*, phase 1/2(?) (77, 82)
18. *Brooch pin*. Cast, with part of loop missing. L. 46.5 mm. *K*, phase 2 (76, 177)
19. *Embossed leaf-mounting*. L. 14 mm. *C*, phase 2 (76, 143)
20. *4 links of mail*. Links riveted. Probably part of the fringe of a mail garment. Average D. of links *c.* 18 mm. *N*, phase 2 (78, 22)
21. *50 links of mail* (not illustrated). Links butted, not riveted. Average D. of links *c.* 6 mm. *N*, phase 2 (78, 3)
22. *Thimble*. H. 21 mm. *N*, phase 2 (78, 1)
23. *Twisted loop of wire*. L. 10 mm. *L*, phase 2 (77, 41)
24. *Hasp*. From a book or a chest. L. 37.5 mm. *L*, phase 2 (77, 36)
25. *Barrel padlock*. The barrel ribbed and decorated with a wavy line with dashes, evidently a degenerate rendering of a foliage design. The iron spring is corroded inside the barrel. L. 39 mm.

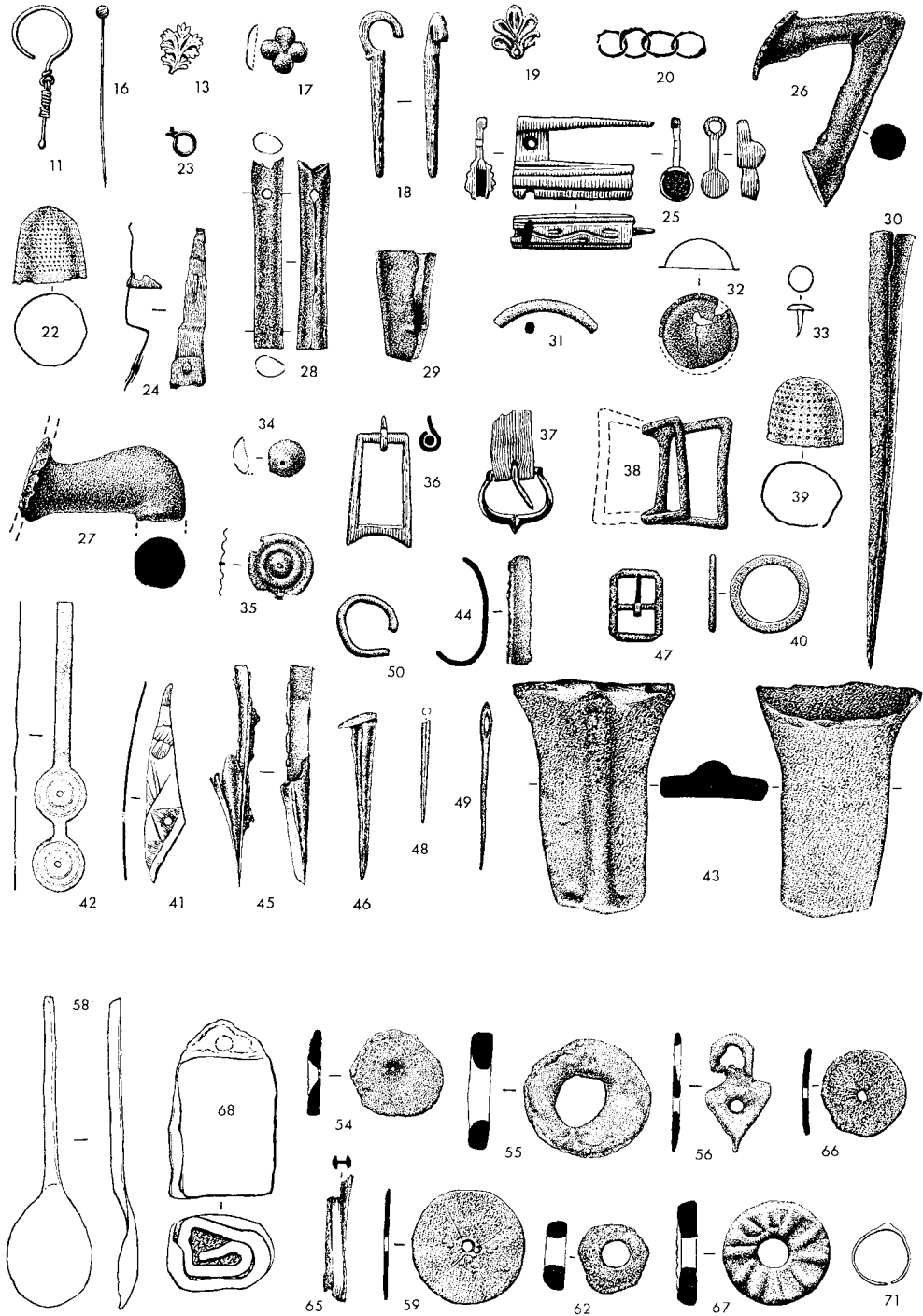


FIG. 10

THREAVE CASTLE, GALLOWAY

Metalwork (gold, silver, copper alloy, lead and base-metal). Scale 1: 2

- Cf. a padlock from excavations in the town of Arhus, Denmark, from a context dating to the late 13th or early 14th century.³⁷ *N*, phase 2 (77, 67)
26. *Handle of a cast bronze cooking-pot*. 60 × 46 mm. *N*, phase 2 (78, 4)
27. *Part of handle of a cast bronze cooking-pot*. L. 45 mm. *K*, phase 2 (76, 244)
28. *Cylindrical mount*. For a stick, rod, etc., with two rivet-holes. L. 53 mm. *K*, phase 2 (76, 233)
29. *Ferrule*. With flattened base, one rivet-hole and part of its top edge scalloped. L. 31 mm. D. 15 mm. *K*, phase 2 (76, 131)
30. *Ferrule*. L. 123 mm. D. 11 mm. *K*, phase 2 (76, 114)
31. *Segment of a ring brooch*. D. 21 mm. *M*, phase 3 (74, 68)
32. *Cup-shaped mount*. D. 22 mm. *D*, phase 3 (74, 106)
33. *Stud*. Complete with pin. L. 10 mm. *C*, phase 3 (74, 43)
34. *Stud*. D. 10 mm. *N*, phase 3 (77, 48)
35. *Mount*. With concentric grooving and rivet at centre. D. 20 mm. Cf. similar mount from Southampton, thought to date to c. 1300–50.³⁸ *N*, phase 3 (77, 70)
36. *Rectangular buckle*. The shank of its pin is missing. 32 × 18 mm. *M*, phase 3 (74, 47)
37. *D-shaped strap end buckle*. 34 × 20 mm. *M*, phase 3 (74, 56)
38. *Rectangular double buckle*. Lacking its pin and bent double. 26 × 31 mm (as bent). *C*, phase 3 (74, 51)
39. *Thimble*. H. 17.5 mm. *B*, phase 3 (75, 147)
40. *Ring*. Possibly for hanging curtains. D. 22 mm. *M*, phase 3 (74, 46)
41. *Fragment of an engraved mounting*. For a book, chest, etc., with remains of gilding. It has a border of hatched triangles and one rivet-hole. It has evidently been sheared off with a pair of clippers and, like many of the other fragments of copper alloy from the site, may have been intended for melting and reworking. L. 57 mm. *D*, phase 3 (75, 158)
42. *Strap of sheet metal*. With two decorative roundels, possibly binding for a book or box. L. 81.5 mm. *C*, phase 3 (75, 28)
43. *Leg of cast bronze cooking-pot or skillet*. With prominent mid-rib. L. 66 mm. This type of leg — short, rectangular and ribbed — is fairly prevalent on three-legged cooking-pots and skillets of the later 15th century onwards. A notable example from Scotland is the great ‘Soulis Pot’ at Drumlanrig Castle, Dumfriesshire, made by a Scottish potter c. 1500. Cf. also a 16th-century cauldron and skillet from the Nant Col hoard, Wales³⁹ and some cauldrons in the Ulster Museum, Belfast.⁴⁰ *M*, phase 3 (74, 126)
44. *Part of a loop handle*. L. 34 mm. *M*, phase 3 (74, 114)
45. *Ferrule(?)*. With strip of iron corrosion adhering down one side. L. 60 mm. *A*, phase 3 (74, 108)
46. *Nail*. Made from folded sheet metal, possibly for use in boat construction. L. 47 mm. *B*, phase 3 (74, 95)
47. *Rectangular double buckle*. 20 × 15.5 mm. *L*, unstratified (77, 2)
48. *Tag*. With rivet-hole near the top for attaching it more securely to a lace or cord. L. 29.5 mm. D. 2 mm. *L*, unstratified (77, 49)
49. *Needle*. L. 47.5 mm. *L*, unstratified (77, 6)
50. *Incomplete ring*. D. 17 mm. *M*, unstratified (74, 138)
51. *Earring* (not illustrated). With blue glass bead, scalloped mounts at top and bottom. L. 34 mm. D. of bead 15 mm. 17th century. *NMAS* (282) — from *E. ditch*
- Not listed*: over 70 fragments and pieces, including about 20 tags and 20 pins

Lead (Fig. 10)

52. *Seal matrix* (Pl. XII). Made for Princess Margaret of Scotland, wife of Archibald, fourth Earl of Douglas and first Duke of Touraine in France. It has a circular face from which rises an octagonal stalk with broad spreading base. It has apparently had a loop arrangement at the top but this has been sheared off. The bottom edge is also damaged, having been flattened and pushed in to distort the seal design. The design (described as impressed) consists of a heater-shaped shield with two coats per pale; dexter, quarterly, first, a man's heart with a mullet in chief; second, a lion rampant; third, a lion rampant, crowned; fourth, a man's heart; surtout, three mullets of four; sinister, a lion rampant within an (incomplete) double tressure counterflory (i.e. the royal arms of Scotland, to which Margaret was entitled as daughter of Robert III). Encircling the shield is an inscription in black letters: *sig. mergareta* [sic] *.dowglas* . and at the top some foliage. On the edge

of the seal at the top is incised a small cross for lining it up correctly when making impressions. D. 43 mm. H. 20 mm.

This seal matrix is an unusual survival as seals belonging to individuals were normally destroyed on their death, except in the relatively rare cases where an heir used his predecessor's seal, suitably altered in some way. A few other Scottish medieval seal matrices have survived but the majority of them belonged to institutions, such as abbeys and burghs, and were meant to remain in use for several generations. They are mostly made of more durable materials — silver and copper alloys.

Most medieval seal matrices for uni-face sealings fall into three main types: firstly those with a ridge or raised spine formed into a lug or loop at one edge; secondly those with a flange raised along the major axis of the back, often hinged to lie flat; and thirdly those with a stalk handle normally terminating in a loop or arrangements of loops for suspension. The first two types are used with round or vesica (pointed oval) shaped seals but the third type is usually restricted to circular-shaped seals and particularly to personal seals of a small size. The seal from Threave has a stalk but is considerably larger than most other surviving matrices with this type of handle.

The design of the seal suffers from inept draughtsmanship, the whole noticeably lacking in that symmetry and regularity of line which one would expect in a heraldic design of the period and especially in a seal belonging to such an important person as the Countess of Douglas. Not only that, the heraldic achievement is botched or unfinished in several details. In the dexter coat both quarters with a man's heart should have three mullets in chief, but only one mullet is shown, to such a scale, that if the others were done likewise the composition would have been hopelessly overcrowded. The chief should also be clearly distinguished from the rest of the shield. Both quarters with a lion rampant should have a crown but in the second only the bottom edge of one could be squeezed in on the top edge of the shield and the three mullets on the inescutcheon should be five-pointed instead of four. The dexter coat, therefore, should be: quarterly, first and fourth, a man's heart with three mullets in chief (for Douglas); second and third, a lion rampant crowned (for Galloway); surtout, three mullets (for Bothwell). The inscription, furthermore, is rather untidy, and one might have expected that it would have given some indication of the status and titles of this particular owner. The letters conform to those used on other contemporary Scottish seals, and also English seals.⁴¹

The matrix has been cast in lead but it is not clear how much of the design has been cast in or engraved afterwards. Probably some of the elements like the hearts and mullets have been added by means of a punch. There are no known contemporary impressions of it. That it is unfinished seems certain but it is not so clear that it was ever intended for proper use. Certain possibilities readily suggest themselves as to its nature or function. It could simply be an unfinished piece of work by a local craftsman or apprentice, or it could even be a trial piece, a mock-up of a proposed design made by a seal-maker and then accidentally lost. This would help to explain the poor quality of the design. Another and more intriguing possibility is that it might have been intended as a forgery, made by someone in the Douglas household to produce sealings on spurious documents. Sealings at this time had much the same importance for authenticating written statements as signatures today. Medieval seal forgeries have been noted by others⁴² and the Threave matrix is paralleled in Scotland by another lead matrix of rather crude design purporting to be a 13th-century seal of the Burgh of Arbroath.⁴³ It is in the collection of the National Museum (*NM 33*) and has also been considered to be a contemporary forgery or the work of an apprentice.⁴⁴

Finally let us give some consideration to the heraldic achievement depicted on the seal. The arrangement of a man and wife's arms on the one shield parted per pale is quite proper. This particular version of Archibald's arms is that cut on his first seal, attached to two documents dated in October and July 1401.⁴⁵ In the Douglas Book it is described as the seal of his father the third Earl⁴⁶ but this is unlikely since, on the seal of his widow attached to a document of 9 February 1400–01, his arms are given as Douglas impaled with Galloway — the only form of his arms as Earl of Douglas which is known.⁴⁷ Two other versions of

Archibald the fourth Earl's seal are known, all the sealings of which are attached to documents of later date. The second seal has a shield, quarterly, the arms of Douglas and Galloway, and dated examples are 1406-10 and 1425. The third seal has a shield, quarterly, the arms of Douglas and Galloway, Bothwell and Annandale, and dated examples occur on documents of 1413-18.⁴⁸ The evidence of Archibald's seals strongly suggests that this matrix of his wife must date to the period from about December 1400, when Archibald succeeded his father Archibald 'The Grim' as the fourth Earl of Douglas, and October 1406, by which time he is known to have assumed a different form of arms. A later sealing of Princess Margaret attached to a document of April 1425 has the arms of the Earl of Douglas, Duke of Touraine (quarterly the arms of Touraine, Douglas, Annandale and Galloway) impaling the royal arms of Scotland.⁴⁹ This version of the Douglas arms (but not impaling the royal arms) is also to be found on a roof boss in the upper chapter-house of Glasgow Cathedral which was largely rebuilt in the 15th century. The chimney-piece in the same room has the arms of Bishop Cameron (1426-46).

The inescutcheon with the arms of Bothwell on Archibald the fourth Earl's first seal and that of his wife is a record of the Douglas acquisition of the Lordship of Bothwell by royal favour rather than a display of the family's connexion with the Morays of Bothwell through the marriage, *c.* 1362, of Archibald the third Earl of Douglas with Joanna Moray, widow of Sir Thomas Moray of Bothwell. After this marriage the earl acquired not only the lands of which Joanna Moray was heir but also the lands of Bothwell which belonged to her husband and of which she was presumably only life-rentrix.⁵⁰ The fourth Earl of Douglas and his wife were no doubt anxious to display their lordship over the Bothwell inheritance in this way as it seems to have been acquired irregularly. There were more than likely good claimants to it of the Moray lineage. The later suppression of the Bothwell arms *en surtout* in favour of a quartering alongside the other great fiefs held by the Earls of Douglas is a process by no means unknown in other Scottish achievements.⁵¹ The shield surtout on this seal and the first seal of the fourth Earl appear to be the earliest examples of such devices in Scottish heraldry.⁵² *L, unstratified (77, 33)*

53. *4 fragments of window-comes* (not illustrated). Longest 56 mm. *L, phase 1/2?* (77, 81)
 54. *Button*. Pierced centrally with two holes. D. 25 mm. *N, phase 2 (78, 9)*
 55. *Spindle-whorl*. D. 36 mm. *N, phase 2 (78, 8)*
 56. *Tag*. For securing sack or bag (?). L. 33.5 mm. *C, phase 2 (76, 151)*
 57. *Strip* (not illustrated). Pierced with rectangular nail hole. L. 47 mm. *K, phase 2 (77, 31)*
 58. *Small spoon*. With shallow fuculate bowl and four-sided stem without a knob. L. 88 mm. 16th century. *D, phase 3 (75, 154)*
 59. *Disc*. Pierced centrally; one side is divided into segments by lightly-scored radii. Possibly the base of a button. D. 32 mm. *D, phase 3 (74, 113)*
 60, 61. *Discs* (not illustrated). D. 18 mm. *N, phase 3 (77, 16)*; D. 26 mm. *N, phase 3 (77, 8)*
 62. *Spindle-whorl*. D. 19 mm. *M, phase 3 (74, 122)*
 63, 64. *Musket balls* (not illustrated). D. 15 mm. Weight 21.5 grms. *E, phase 3 (75, 22)*; D. 15 mm. Weight 22.5 grms. *N, phase 3 (77, 7)*
 65. *Strip of window came*. L. 36 mm. *D, phase 3 (75, 162)*
 66. *Disc*. Pierced centrally; possibly the base for a button. D. 24 mm. *C, unstratified (74, 14)*
 67. *Spindle-whorl*. With cast radial decoration. D. 29 mm. *unstratified (76, 272)*
 68. *Weight*. Formed from a strip of metal folded into a rectangular mass with a projecting loop at the top. 49 × 30 × 21 mm. Weight 170 grms. *C, unstratified (74, 9)*
 69. *Bullet* (not illustrated). For small piece of artillery such as a hagbut or crok. It is rough in finish and apparently hammered into shape. D. 25 mm. Weight 86.7 grms. *NMAS (127)-unprovenanced*
 70. *Musket ball* (not illustrated). D. 12 mm. Weight 11.7 grms. *NMAS (687) — from SE. corner tower*

Not listed: 4 scraps and 1 19th-century bullet

Base Metal (Fig. 10)

71. *Pewter(?) link of mail*. From fringe of mail garment. D. 16 mm. *D, phase 3 (75, 50)*

Iron (Figs. 11-13)

72. *Socketed arrowhead*. Head mostly wasted. L. 81 mm. Cf. *London Museum Medieval Catalogue* (hereinafter *L.M.M.C.*), type 11.⁵³ *K, phase 2* (76, 56)
73. *Socketed arrowhead*. Leaf-shaped blade. L. 61 mm. Cf. *L.M.M.C.*, type 10.⁵⁴ *N, phase 2* (78, 20)
74. *Socketed arrowhead* (not illustrated). Lacking most of its head. L. 46 mm. *K, phase 2* (76, 277)
75. *Piece of mail* (not illustrated). Folded, each link *c.* 10 mm in diameter. 130 × 83 × 41 mm. *N, phase 2* (78, 11)
76. *Bit*. With octagonal stem and spoon-shaped borer. Probably a carpenter's tool. L. 596 mm. *C, phase 2* (76, 122)
77. *Bit*. With spoon-shaped borer. L. 121 mm. *L, phase 2* (77, 62)
78. *Spike*. Probably tooth from a comb for carding flax (rather than wool, because of its size). L. 246 mm. *C, phase 2* (74, 146)
79. *Spike* (not illustrated). Similar to No. 78. L. 257 mm. *N, phase 2* (78, 19)
80. *Knife-blade*. L. 103 mm. *K, phase 2* (76, 130)
81. *Knife-blade*. With part of pointed tang. L. 140 mm. *N, phase 2* (77, 72)
82. *Knife or small dagger*. With pointed tang. L. 115 mm. *N, phase 2* (78, 2)
83. *Part of knife*. With flat tang, copper alloy mounting and remains of wooden grips. L. 72 mm. *N, phase 2* (78, 21)
84. *Knife-handle*. With flat tang, copper alloy mounting, remains of wooden grips and a decorative row of studs on each side (now mostly missing). L. 54 mm. Similar to one from Caerlaverock Castle, Dumfriesshire.⁵⁵ *K, phase 2* (76, 273)
85. *Knife-handle*. With flat tang and wooden grips, pierced at top for suspension. L. 110 mm. *L, phase 2* (77, 32)
86. *Knife-handle*. With flat tang, wooden grips and iron crescent-shaped cap. L. 93 mm. *N, phase 2* (77, 71)
87. *Knife*. With flat tang covered with horn grips. L. 165 mm. *N, phase 2* (78, 5)
88. *Hook for attaching a spur to its strap*. L. 26 mm. Cf. *L.M.M.C.*, fig. 35, 1.⁵⁶ *K, phase 2* (76, 280)
89. *Mouth-piece from horse's snaffle-bit*(?). Two twisted linked rods, one lacking an end. L. 75 mm. Cf. *L.M.M.C.*, type II.⁵⁷ *K, phase 2* (76, 282)
90. *D-shaped buckle*. 50 × 83 mm. *L, phase 2* (77, 86)
91. *D-shaped buckle*. Lacking its pin. 57 × 69 mm. *N, phase 2* (78, 6)
92. *Candle-holder*. With simple open socket and pointed (broken) tang for securing in block of wood, etc. L. 51 mm. In Scotland, similar simple holders have been found at Lochmaben Castle, Dumfriesshire and Urquhart Castle, Invernesshire.⁵⁸ *K, phase 2* (76, 276)
93. *Fragmentary remains of a candle-holder* (not illustrated). L. of socket, 36 mm. *K, phase 2* (76, 279)
94. *Part of a steel or strike-a-light*(?). L. 59 mm. *N, phase 2* (77, 68)
95. *Key*. With kidney-shaped bow, long pointed shank and two symmetrical wards like capital E's. The shank is decorated. L. 167 mm. Cf. *L.M.M.C.*, type VIIb.⁵⁹ *C, phase 2* (75, 195)
96. *Key*. With pointed oval bow and solid squared shank, decorated, similar to No. 95. L. 170 mm. Cf. *L.M.M.C.*, type VIIIb.⁶⁰ *L, phase 2* (77, 14)
97. *Key*. With oval bow, probably for a casket. L. 35 mm. *L, phase 2* (77, 53)
98. *Rectangular cased lock* (not illustrated). Badly corroded. 80 × 65 × 29 mm. *N, phase 2* (78, 16)
99. *Barrel padlock*. Rectangular body. 65 × 70 × 32 mm. *N, phase 2* (78, 7)
100. *Loop handle*. For a chest or piece of furniture. L. 86 mm. *N, phase 2* (78, 18)
101. *Part of a door hinge* (not illustrated). D. 27 mm. *K, phase 2* (76, 277)
102. *Part of a hinge*. Pierced centrally, with two nail stubs in its back. D. 52 mm. *K, phase 2* (76, 275)
103. *Hinge strap* (not illustrated). L. 180 mm. *N, phase 2* (77, 11)
104. *Key*. With small loop handle. L. 60 mm. *K, phase 2* (76, 274)
105. *Disc*. Embossed like a berry with two rivets in its back. Possibly a belt or clothing ornament. D. 41 mm. *N, phase 2* (77, 65)
106. *Broken loop handle* (?). L. 48 mm. *C, phase 2/3?* (75, 171)
107. *Barbed and socketed arrowhead*. L. 54 mm. Cf. *L.M.M.C.*, type 16.⁶¹ *G, phase 3* (74, 145)
108. *Socketed arrowhead*. With leaf-shaped blade. L. 32 mm. Cf. *L.M.M.C.*, type 7.⁶² *D, phase 3* (75, 173)
109. *Socketed arrowhead*. With leaf-shaped blade. L. 48 mm. Cf. *L.M.M.C.*, type 10.⁶³ *G, phase 3* (74, 145)
110. *Awl*. With pierced point and broad flat tang with slight traces of wooden grips. Possibly for leather working. L. 132.5 mm. *D, phase 3* (75, 145)
111. *Piece of knife-blade*. L. 59 mm. *C, phase 3* (74, 149)

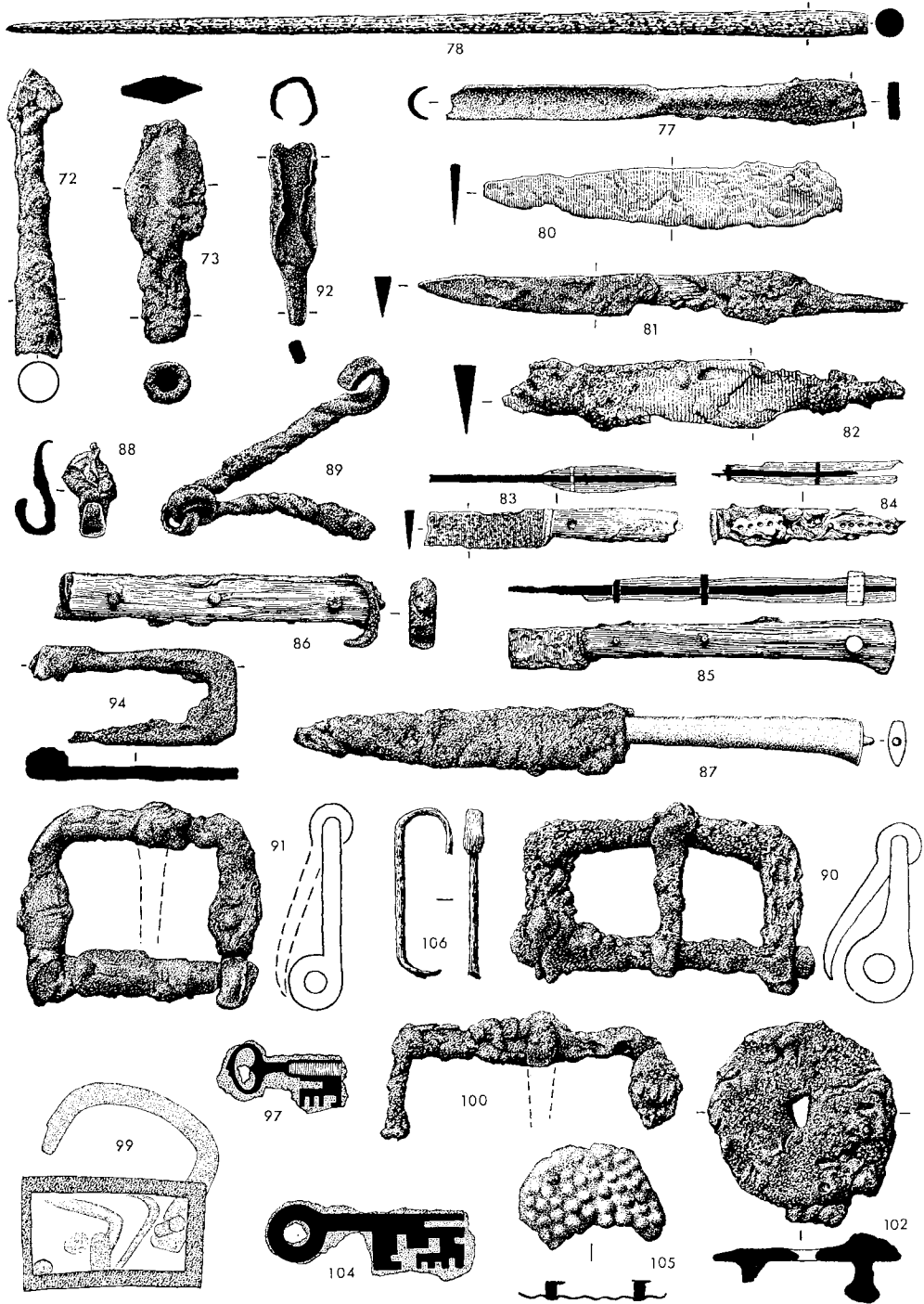


FIG. 11
THREAVE CASTLE, GALLOWAY
Metalwork (iron). Scale 1: 2

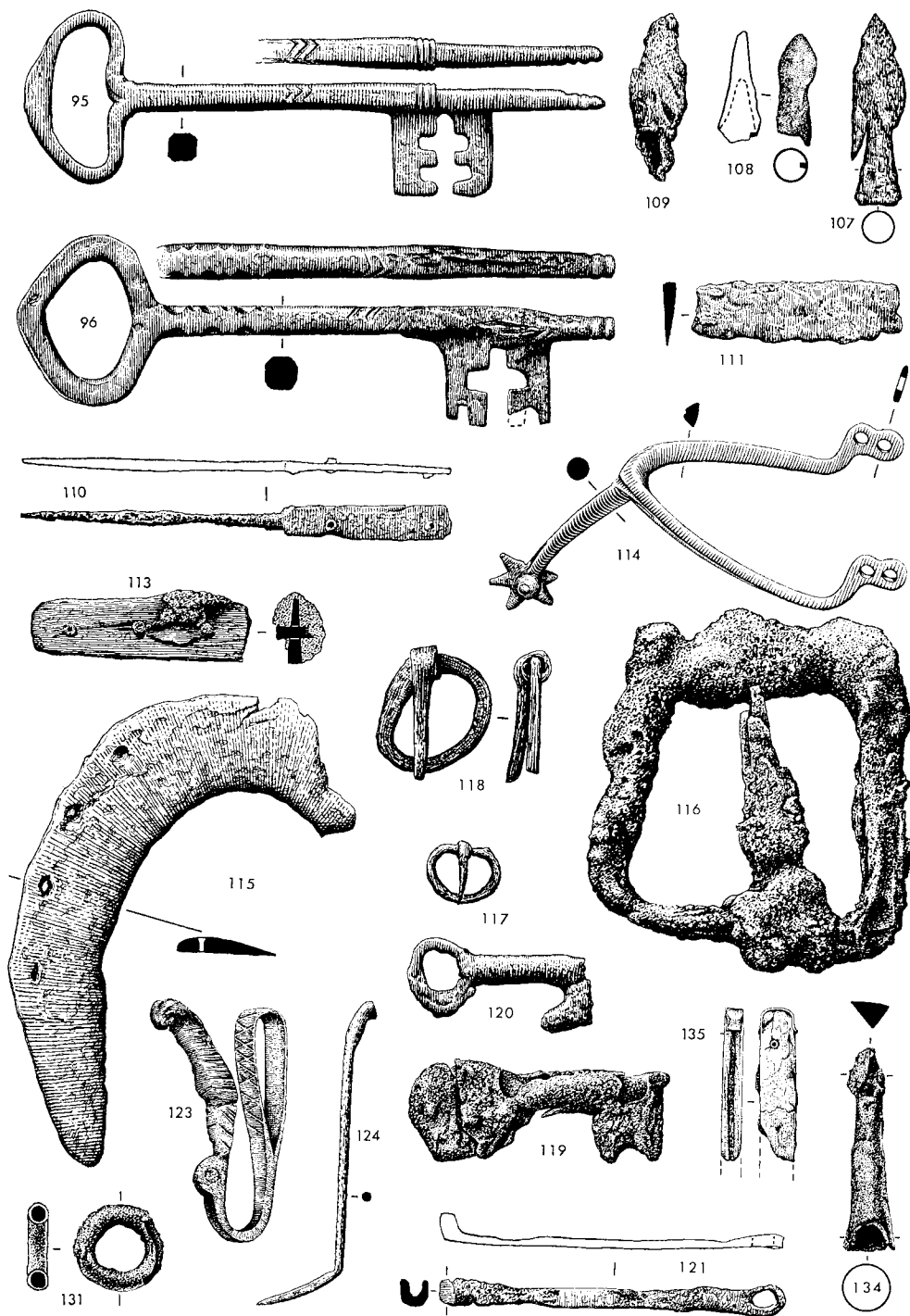


FIG. 12
THREAVE CASTLE, GALLOWAY
Metalwork (iron). Scale 1: 2

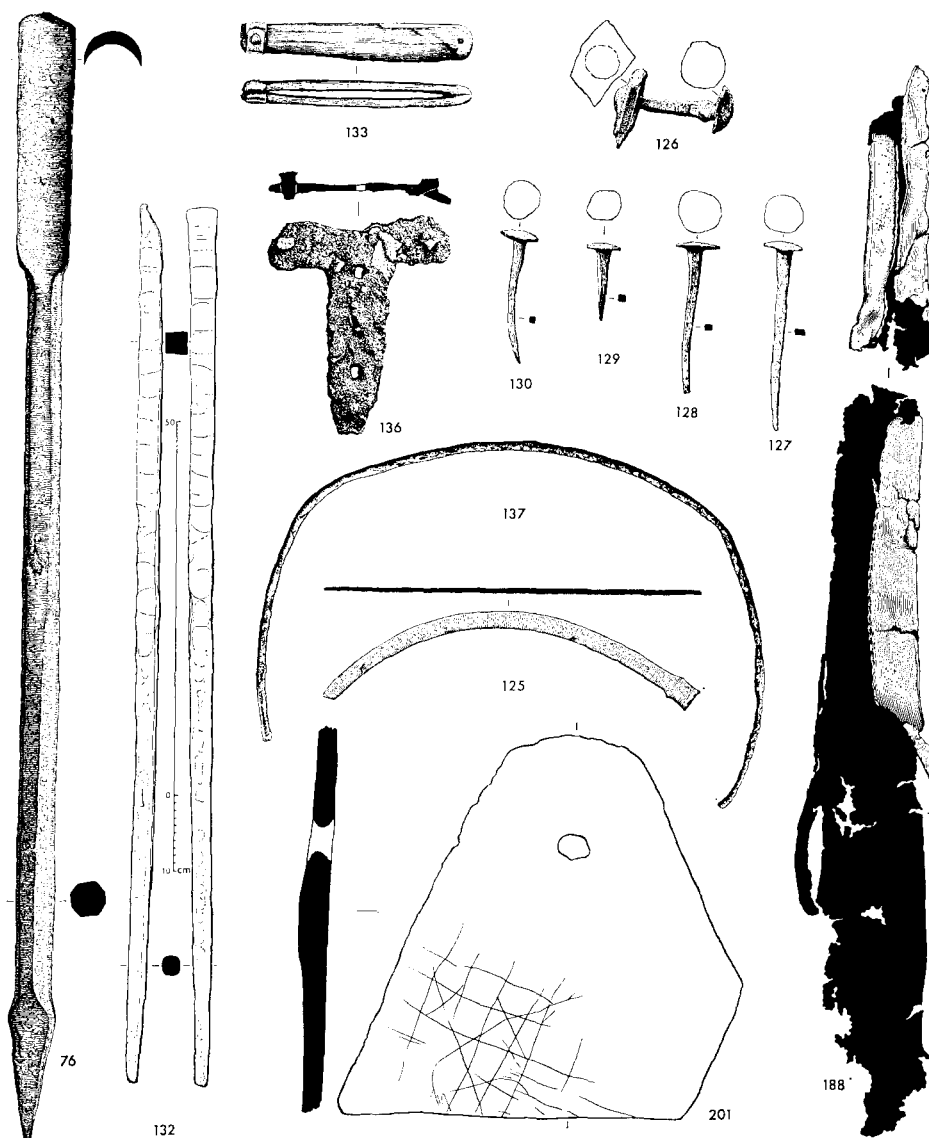


FIG. 13

THREAVE CASTLE, GALLOWAY

Metalwork (iron), sword-sheath (no. 188) and incised roofing-slate (no. 201).

Scale 1: 4 except for no. 132, scale as shown

112. *End of knife-handle* (not illustrated). With copper alloy crescent-shaped cap and part of pointed tang. L. 32 mm. *M*, phase 3 (74, 54)
113. *Knife-handle*. With flat tang and traces of wooden grips. L. 63 mm. *B*, phase 3 (75, 255)
114. *Rowel spur*. With figure of eight terminals and small rowel with six points. The arms are grooved longitudinally. L. 126 mm. 14th/15th century. *D*, phase 3 (75, 139)
115. *Part of a horse-shoe*. With four nail-holes and no calkin. L. 133 mm. *D*, phase 3 (75, 140)

116. *Rectangular harness buckle*. 100 × 90 mm. *M*, phase 3 (74, 45)
 117. *D-shaped buckle*. 22 × 18 mm. *D*, phase 3 (75, 142)
 118. *D-shaped buckle*. 30 × 37 mm. *D*, phase 3 (75, 161)
 119. *Key*. With solid shank and circular bow, probably for a chest. L. 74 mm. *C*, phase 3 (74, 29)
 120. *Key*. With oval bow and hollow shank, probably for a chest. L. 52 mm. Cf. *L.M.M.C.* type III.⁶⁴ *D*, phase 3 (75, 105)
 121. *Barrel-padlock key*. With loop-shaped ward and ring-shaped bow. L. 98 mm. Cf. *L.M.M.C.*, type C.⁶⁵ *D*, phase 3 (75, 151)
 122. *Part of loop handle* (not illustrated). L. 64 mm. *E*, phase 3 (76, 33)
 123. *Latch(?)*. The whole object is U-shaped with a loop at one side and a latch at the other, and could apparently be pivoted on a pin which passed through a loop above the latch. The latch is engraved with parallel lines around its edge and one side of the loop with criss-cross lines. 67 × 49 mm. *D*, phase 3 (75, 152)
 124. *Hook*. For shutting door(?). L. 92 mm. *C*, phase 3 (75, 60)
 125. *Curved band*. Possibly the support for a door or lid. L. 202 mm. *D*, phase 3 (75, 146)
 126. *Bolt*. With circular head and diamond-shaped rove. L. 61.5 mm. *D*, phase 3 (75, 150)
 127-30. *Nails*. L. 40-100 mm. *C*, phase 3 (75, 70, 82, 86, 190)
 131. *Ring*. Possibly link for a chain. D. 25 mm. *C*, phase 3 (75, 17)
 132. *Crowbar*. L. 1.19 m. *C*, phase 3/4? (75, 66)
 133. *Hollow wooden handle*. With copper alloy mount for folding knife-handle or razor. L. 122 mm. *B*, phase 3/4 (75, 64)
 134. *Bolt or arrowhead*. With small three-sided head. L. 59 mm. Cf. *L.M.M.C.*, type 11, dated to 14th/15th century.⁶⁶ *L*, unstratified (77, 34)
 135. *Part of knife-handle*. With flat tang, bone grips, hollow rivet(s) and shouldered copper alloy cap. L. 43 mm. *K*, unstratified (76, 90)
 136. *T-shaped mounting*. With 4 nails, possibly part of a door hinge or decorative strap for a chest. L. 114 mm. *L*, unstratified (77, 83)
 137. *Piece of curved wire*. Possibly part of a loop handle for a small bucket. W. 249 mm. *K*, unstratified (76, 283)

Not listed: many badly corroded fragments, mostly *nails*, *bolts*, *pinles* and *strap-hinges*

WOODEN OBJECTS. By JOHN BARBER, *Central Excavation Unit, S.D.D.(A.M.)*

The wooden material can be divided into three main classes: 1. Vessels (plates and bowls); 2. Other artefacts; 3. Carpentry timbers.

The author has not seen any 'natural' or unworked wood from the site but a range of this material was examined by Messrs R. E. Moore and T. Lawrence of the Royal Botanic Gardens, Kew and identified as including: Oak (*Quercus*), Alder (*Alnus*), Elm (*Ulmus*), Yew (*Taxus*), Ash (*Fraxinus*), Poplar (*Populus*) and *Prunus* together with members of the *Salicaceae* (including poplars and willows) and the *Corylaceae* (including hornbeam and hazel). None of the objects is fashioned from any type of wood other than in the foregoing list and there is no reason to suppose that any of the wood was not obtained locally. Pollen analysis of a profile from Racks Moss, near Dumfries shows a complex series of forest clearances and regenerations in the vicinity of the island throughout the whole post-Atlantic period. However, it also shows the survival into medieval and post-medieval times of mixed deciduous forests dominated by oak and ash, together with alder, birch and hazel. The overall picture is one of a richly-forested landscape interspersed with open farmland.

With the exception of a handful of pieces all the material has been conserved by resin impregnation, a technique generally considered a poor one for wood because, though it provides a stable object, it renders identification of anatomic structures impossible and gives a poor friable surface in which much detail (e.g. tooling marks) becomes lost.⁶⁷ The identifications made here are, therefore, presented with some reservations; indeed many pieces have defied identification.

The following is abbreviated from a fuller report in the archive. The writer has not discussed the methods of production, particularly of the vessels; this is being published elsewhere.⁶⁸

1. *Vessels* (Fig. 14)

138. *Part of plate*. Five sherds, ash. The full profile is present including the greater part of the basal boss into which two motifs have been burnt — the first a 'heart' motif, a distinguishing heraldic device of the Douglas family adopted c. 1350; the second the letter J, perhaps the maker's initial. The curve of the inner shoulder is slightly overcut, leaving a groove 1.4 mm deep and 5 mm wide surrounding the convex bottom (interior) of the plate. The base is slightly dished. Clear turning marks are visible on the underside of the rim and on the side wall. Overall D. 270 mm, H. 30 mm. *C, phase 2* (74, 20)

139. *Almost complete plate* (Pl. xi, c). Sixteen sherds, some charred. The rim has the typical simple under-bevel on which are slight traces of an ornamental groove. On the outside the angle between the rim and body is marked by a raised, square-sectioned rib, c. 1 mm square. A 'heart' motif is burnt into the basal boss. Faint traces of lathe markings are visible over all surfaces, especially in the charred area, perhaps indicating that the vessel had been burnt and discarded almost immediately. Overall D. 240 mm. *C, phase 2* (74, 40)

140. *Parts of plate*. Two portions (one containing nine sherds, the other two) forming the shoulder and rim, ash. They are clearly lathe marked on the underside of the rim and shoulder and also have a single deeply-cut groove 6 mm below the rim/shoulder on the outside. Overall D. 280 mm. *C, phase 2* (74, 15 and 22)

141. *Part of plate*. Single rim sherd, ash. *C, phase 2* (74, 15)

142. *Part of plate*. Single sherd, ash, comprising part of base and body. A 'heart' device is branded into the underside. D. of basal boss, 76 mm. *C, phase 2* (74, 65)

143. *Part of bowl*. One-third of a deep, steep-sided and exceptionally thin bowl, probably ash. It has two 'heart' motifs burnt into the underside of the base. It is otherwise without ornament and the rim is simply rounded off. *C, phase 2* (75, 113)

144. *Half of bowl* (Pl. xi, c). Probably ash. A pronounced thickening of the wall 10 mm below the rim on the inside forms the main ornamentation, with a well-developed rib 24 mm below the rim on the outside. Overall D. 190 mm. H. 70 mm. *C, phase 2* (74, 13)

145. *Part of bowl*. Five sherds from the base and walls, probably ash. The base is slightly dished and a halo of knife-cuts is visible around its margin. The practice of inverting bowls and using them as cutting boards was a common one. D. of base 120 mm. *C, phase 2* (74, 144)

146. *Part of bowl*. Single sherd forming the neck and rim of a large bowl. There are no discernible lathe marks and the bowl may not have been turned. *C, phase 2* (74, 15)

147. *Part of bowl*. Four sherds from the rim and body of a finely-turned vessel. *C, phase 2* (74, 10)

148. *Half of bowl*. The inner profile has been ornamented by cutting into it a series of shallow curves leaving raised areas between. On the outside the line of a change in curvature has been ornamented with a deep groove. The base is covered with knife-cuts. Overall D. 210 mm. *A, phase 3* (74, 110)

149. *Part of bowl*. Two sherds from the rim of a near vertically-sided bowl. *C, unstratified* (74, 5)

Not listed: Eighteen sherds from *plates*, ten sherds from *bowls*, made from ash where identified

2. *Other Artefacts* (Figs. 15–18)

150. *Paddle-blade* (Pl. xi, c). Short length of haft survives. The sides of the blade are square-cut with the edges broadly bevelled above and below. The oval haft, measuring 23 by 35 mm, is disproportionately small and weak in relation to the surface area of the blade. Present L. 430 mm. *C, phase 2* (74, 70)

151. *Disc*. Obverse has a carved sexfoil motif; reverse has three inscribed circles, 9, 17.8 and 19.4 mm in diameter, together with the central point from which they were struck. This central point is also visible on the obverse. D. 44 mm. *C, phase 2* (74, 38)

152. *Disc*. Single inscribed circle on one face. D. 36 mm. *C, phase 2* (76, 94)

153. *Disc*. Similar to No. 152 but without any decoration. D. 43 mm. *C, phase 2* (76, 95)

154. *Heel of small smoothing plane*. Made from a softwood. L. 87 mm. *C, phase 2* (75, 124)

155. *Decorated piece* (broken). Obverse has two five-pointed stars, reverse two simple crosses. L. 50 mm. *C, phase 2* (74, 147)

156. *Handle of stave-built tub (luggie)*. Hole 34 mm in diameter. Stave 75 × 60 mm. *C, phase 2* (76, 134)

157. *Barrel bung*. Made from oak. External D. 56 mm. *C, phase 2* (74, 49)

158. *Stave*. Croze 45 mm from base. Probably from a bucket (or luggie). H. 195 mm. *C, phase 2* (76, 67)

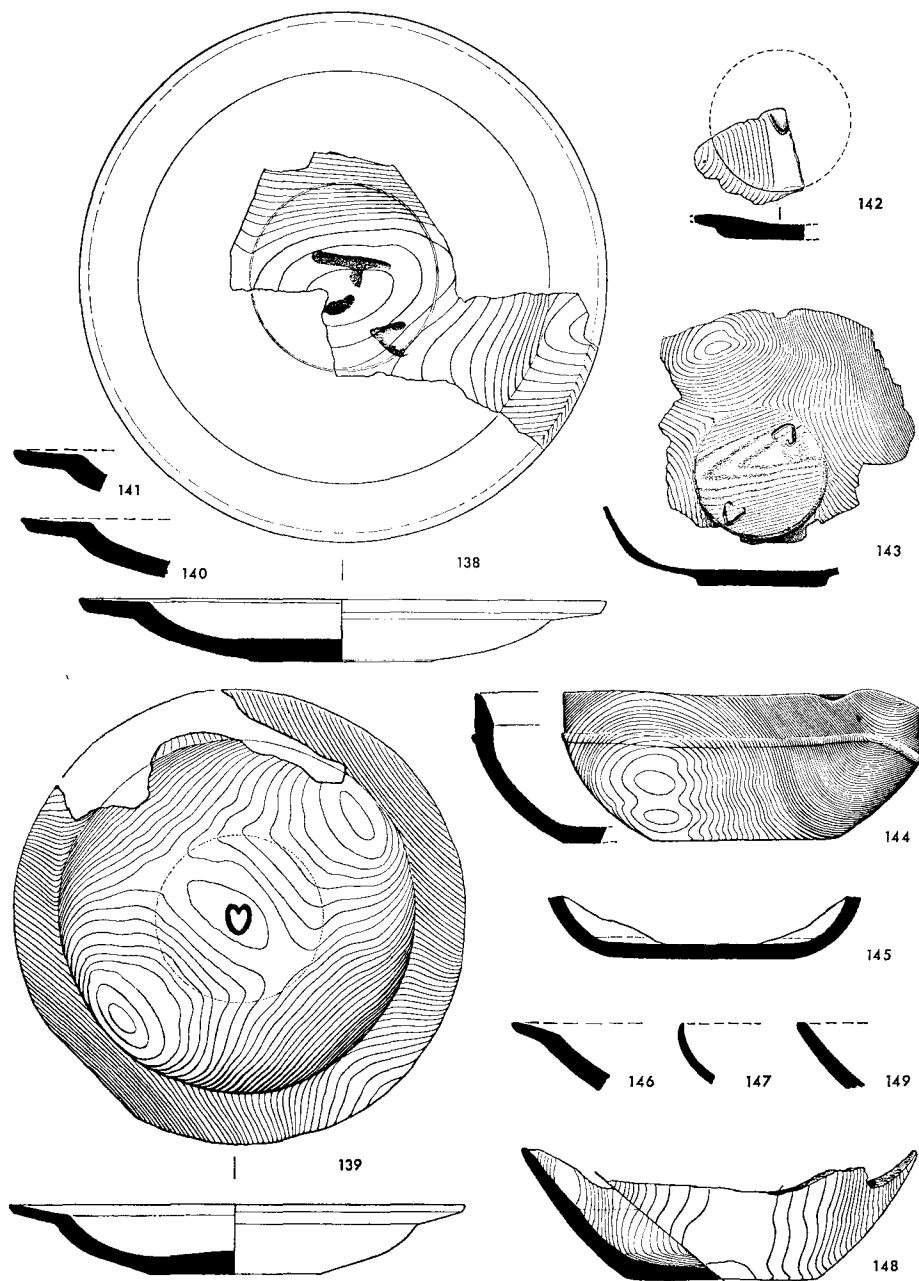


FIG. 14
THREAVE CASTLE, GALLOWAY
Wooden vessels. Scale 1:4

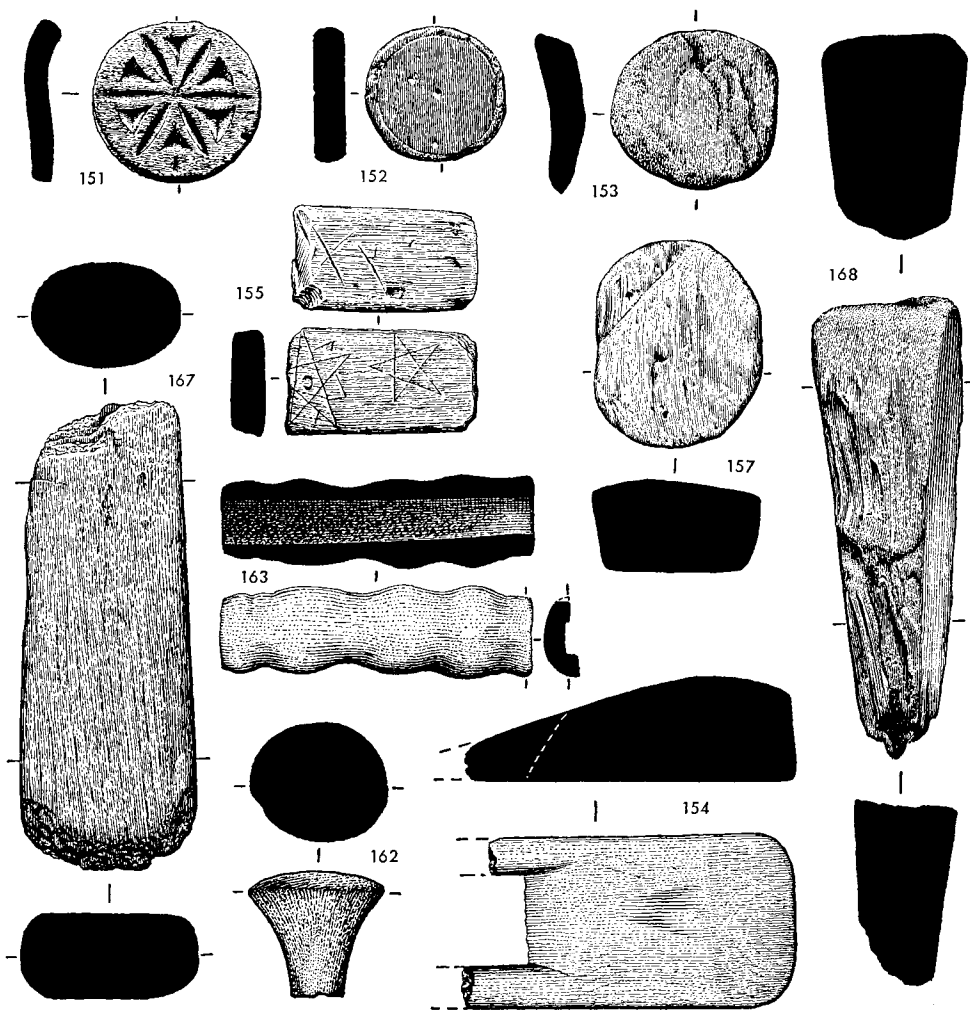


FIG. 15
THREAVE CASTLE, GALLOWAY
Wooden artefacts. Scale 1:2

159, 160. *Two staves*. Croze 45 mm from base of each stave. Probably from a shallow tub. H. 95 mm. *C, phase 2* (75, 118)

161. *Large object*. Three pieces conjoined by four dowels, each 16 mm in diameter. Possibly part of a boat's rudder. Overall dimensions 760 × 530 × 35 mm. *C, phase 2* (74, 57)

162. *Knob or pommel*. Poplar. Lathc-turned and survives as a frustrum of a cone with concave sides, broken off at its narrow end. 35 × 32.7 mm. *C, phase 3* (75, 7)

163. *Part of knife-handle*. Heavy carbonization within internal groove. L. 83 mm. *C, phase 3* (75, 68)

164. *Oar-blade*. One side bevelled, the other flat. A little of the haft survives. Present L. 760 mm. *C, phase 3* (75, 160)

165. *Six staves* (one illustrated). Oak. Croze 30–35 mm from end of each stave. From single barrel. H. 835 mm. *C, phase 3* (74, 16 and 17)

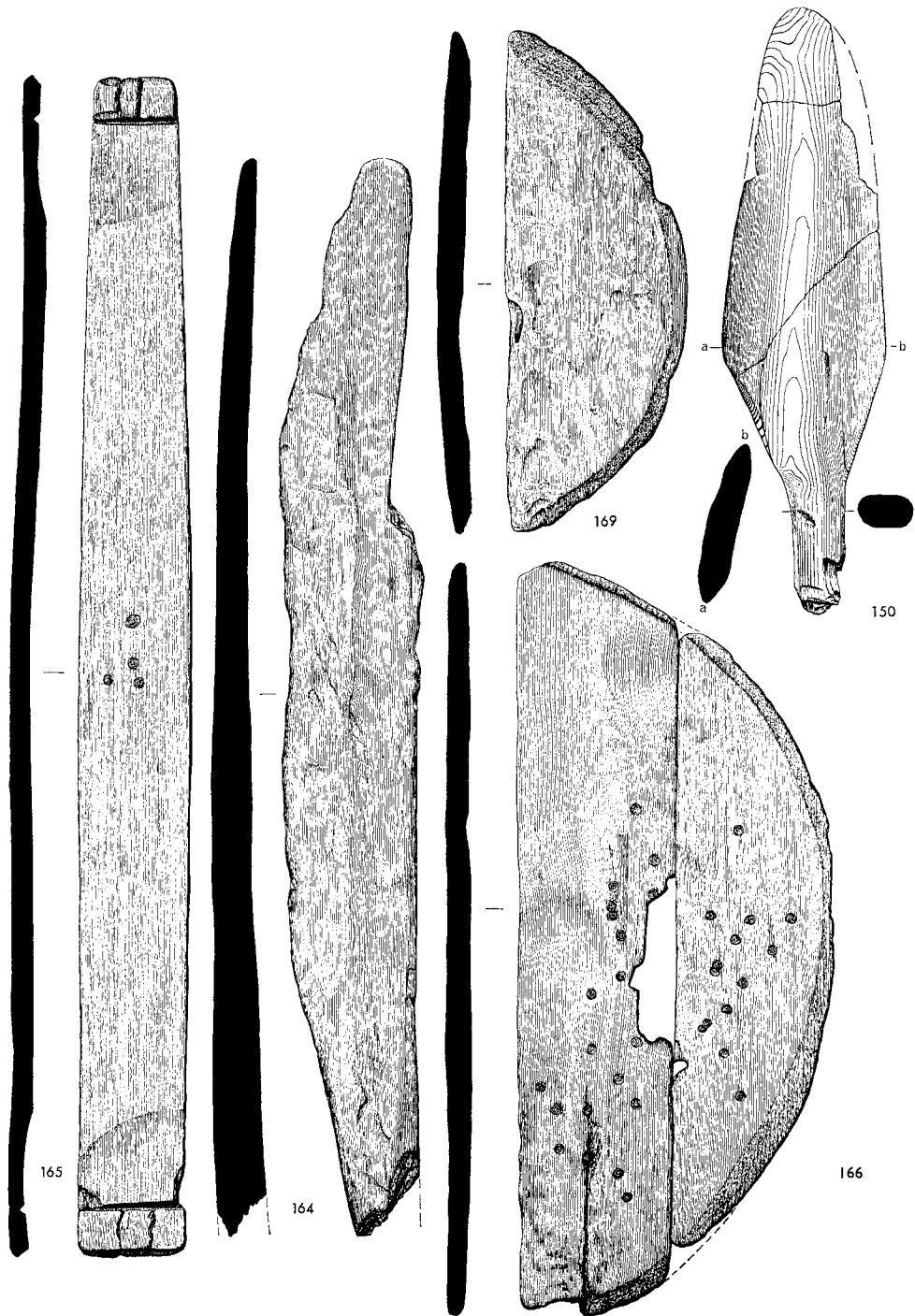


FIG. 16
THREAVE CASTLE, GALLOWAY
Large wooden artefacts. Scale 1:5

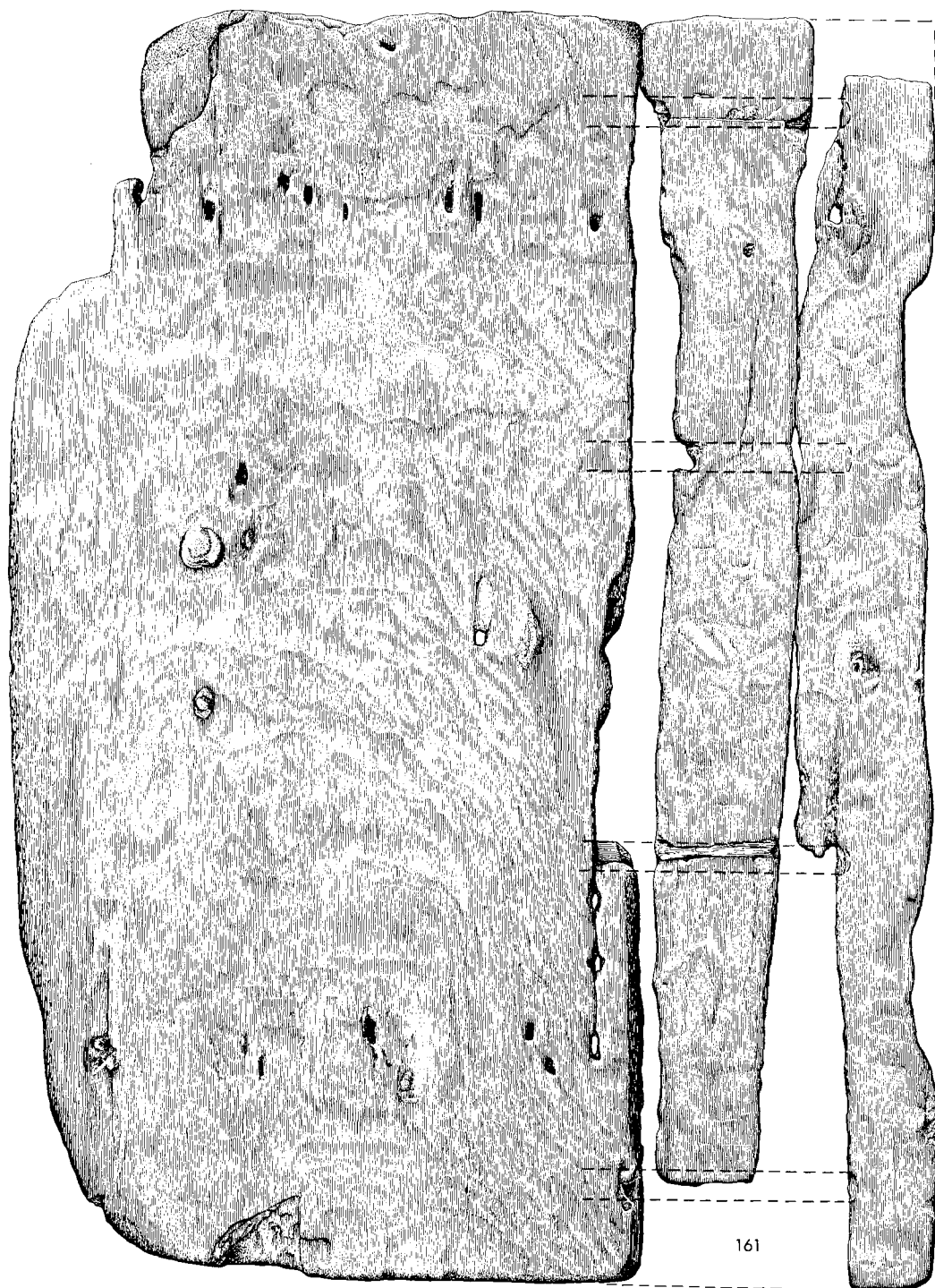


FIG. 17
THREAVE CASTLE, GALLOWAY
Boat's rudder (no. 161). Scale 1:4

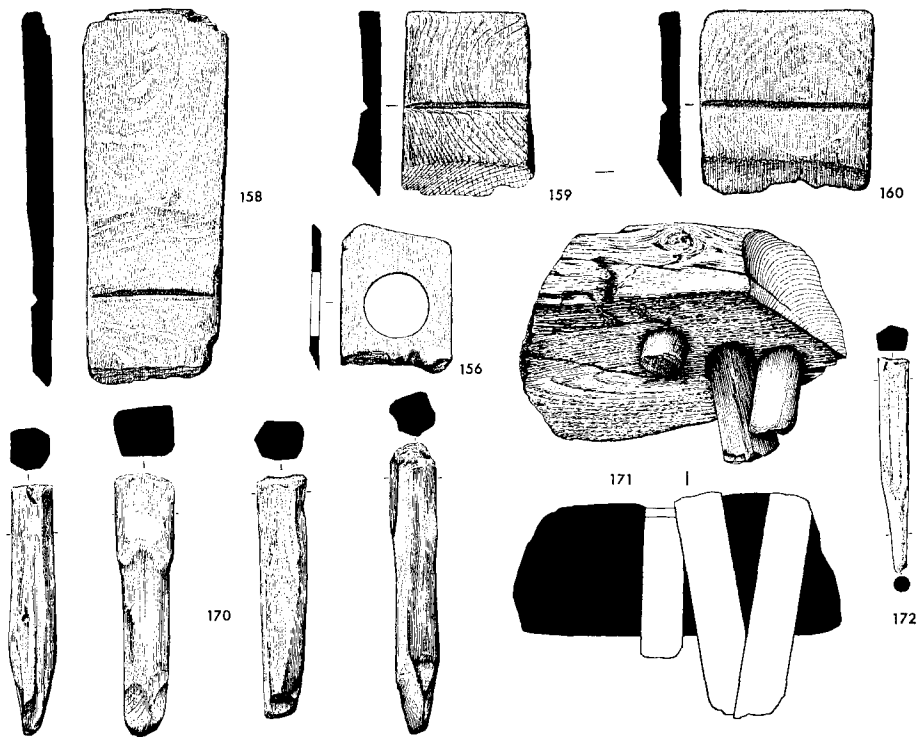


FIG. 18

THREAVE CASTLE, GALLOWAY
Wooden artefacts and carpentry timbers. Scale 1: 4

166. *Five end-staves* (two illustrated). Oak. Each stave has a bevelled edge on its outer face for neatly fitting into the croze; all have a number of small dowels, 5 mm in diameter, scattered haphazardly through them. These staves come from the two cask-heads of the barrel No. 165; originally each cask-head comprised five staves giving a diameter of 540 mm. *C, phase 3* (74, 17)

167. *Piece of axe haft*. Ash. Broken at either end. Identical to its modern counterpart. *C, unstratified* (75, 29)

168. *Carpenter's wedge*. The broad end is much compressed by hammering and the two broad faces are polished and compacted. L. 120 mm. *C, unstratified*

169. *End stave*. Oak. Crudely fashioned with a sharp bevel around its outer edge. One of three end-staves forming the cask-head. D. 400 mm. *C, unstratified*

3. Carpentry Timbers (Fig. 18)

Throughout the waterlogged levels within the harbour were found a number of wooden artefacts associated with the builder's trade. For economy of space, only a brief description is included here.

A variety of pointed or tapered pieces of wood have been categorized under four headings — stakes, pegs, dowels and wallplugs. These categories are not, of course, uniquely definable and other workers might, in all probability, make somewhat different divisions of the material. However, even in the relatively small numbers of these items recovered, sufficient evidence survives to suggest a diversity of function and the categorization below attempts to mirror this.

The term *stake* is reserved for lengths of relatively thick wood (i.e. over 50 mm in diameter) brought to a clearly defined point. It is implicitly assumed that these were driven into the soil to serve as minor structural uprights, for example, in fence lines. Consistent with this assumption, the tips of all the pieces in this category display some degree of damage, ranging from complete destruction to simple compression.

The term *peg* is given to pieces that are simply smaller versions of stakes and it is assumed that their primary function was served by driving them into the soil to fix, anchor or tether. Damage to their tips, as with the stakes, is consistent with this assumption (cf. No. 170. *C, unstratified*).

Dowels are short lengths of wood (between 60 and 150 mm long) which have been fashioned to, or exploited in, a cylindrical shape with only the slightest degree of tapering. They would appear to have been used in the jointing of structural timbers. Droplets of pitch adhere to the end facets of two examples, which may imply either the use of pitch as a glue or the use of the timbers in roofing, where the pitch was used as a waterproofing agent. Three dowels are found *in situ* in a short piece of hazel beam (cf. No. 171 — *C, phase 2/3 (74, 18)*). Two of these have glue adhering to their sides.

In size, *wallplugs* are similar to dowels but they have a quite distinct taper, being, in fact, steep-sided truncated cones. Hammered into holes in stone walls, these served as fixing points to facilitate the erection, for example, of wooden panelling or shelf brackets (cf. No. 172 — *C, phase 2 (74, 148)*).

The use to which oak was put by the carpenters of the period is of interest. It would seem to have been the main species of wood used for the principal structural members (as, for example, the upright stob from C17) but an examination of the relationship between the cross-section of a particular item and the cross-section of the stem from which it was prepared suggests that only splinters and off-cuts of oak were used for the smaller pieces, which implies that no branchwood or coppiced oak was available locally. This apparently is not so for alder, hazel and willow — the other efficient coppice woods — as many examples of the use of 'natural' pieces of these species were found. It is logical to assume, therefore, that the demand for oak either for structural pieces or for planking had exhausted the local supply and that consequently oak came to the castle from a distance, already prepared, or at least stripped of its branches.

LEATHERWORK. By CLARE THOMAS

The leatherwork comprises mainly shoe parts and offcuts, much of it from the waterlogged deposits within the harbour. Other miscellaneous pieces were found, including part of a sword-sheath. The bulk of the material was retrieved from phase 2 and early phase 3 contexts. The following is abbreviated from a fuller report in the archive. A full report by Mrs Helen Bennett, *National Museum of Antiquities of Scotland*, on the four textile fragments is also in the archive.

Shoes (Fig. 19)

The shoes are of turnshoe construction.⁶⁹ The soles are very thin and do not all have the usual edge/flesh stitching channel; instead, the grain surface has been folded to form an edge through which the holes were made. The stitch length is very long, 7–10 mm, which is characteristic of welted shoes, not turnshoes. The possibility of these being insoles for welted shoes has, however, been discounted for the following reasons: the soles have the flesh side up rather than the grain side as with insoles; there is no evidence from the site for welts or welted outer soles; furthermore, both style and context suggest a late 14th-/early 15th-century date for their manufacture, which is, on present evidence, at least a century too early for welted shoes.⁷⁰

The uppers have lasting margins with grain/flesh stitching channels, with stitch lengths 7–10 mm. No complete uppers survive. In some (e.g. No. 184) vamp and quarters were separate pieces, jointed at both sides of the instep with butted edge/flesh seams. Others were

probably made from one fragment, joined on the inside edge (e.g. No. 187). Triangular and semi-circular stiffeners were used to strengthen the quarters (e.g. No. 183). No evidence survives for the use of rands — strips of leather enclosed between upper and sole to make the seams more watertight — though it is possible that these shoes, with their thin soles and loosely-stitched sole-upper seams, were worn with wooden pattens, which came into use in the 14th century.⁷¹

Both soles and uppers display a remarkable uniformity of style which suggests that they are all of one period. The soles are long and narrow, with pointed toes; similar examples from Oakham Castle, Rutland⁷² and Dover Castle, Kent⁷³ are dated to the 14th century. The uppers are of shoes, not boots, and all have an opening down the centre of the vamp, with one or two tie-holes on each side of the top of the opening. The edges of the opening have been oversewn. Tunnel stitching on the flesh side of the openings was probably for the attachment of tongues. Similar uppers, though without tunnel stitching, are known from Oxford⁷⁴ and are also dated to the 14th century.

In addition to the finished pieces there was a considerable amount of waste material present, which suggests that leatherworking was carried out on the island. Two awls (Nos. 110 and 214) may have been tools of the trade.

Note: Most pieces are badly delaminated and the thickness is not given

173. *Flesh fragment of left sole.* Pointed forepart, narrow waist. Stitching channel with vertical holes, probably part of an edge/flesh seam. *C, phase 2* (74, 64)
174. *Flesh layer of right sole.* Probably pointed forepart, short, slender seat and waist. Stitching channel with vertical holes, probably part of an edge/flesh seam. *C, phase 2* (74, 33)
175. *Flesh fragment of right sole.* Gently curved forepart, slender waist. Stitching channel with vertical holes, probably part of an edge/flesh seam. *C, phase 2* (74, 32)
176. *Fragment of left sole.* Probably rounded toe, slender seat and narrow waist. Stitching channel with grain/flesh holes, grain folded to form edge. *C, phase 2* (74, 61)
177. *Fragments of left sole.* Pointed forepart, slender seat and waist. Stitching channel with edge/flesh holes. *C, phase 2* (74, 39)
178. *Flesh fragment of right sole.* Narrow waist, parts of forepart and seat missing. Holes indicate both seat and forepart have been repaired with clump soles. Stitching channel with vertical holes, probably of an edge/flesh seam. *C, phase 2/3* (74, 21)
179. *Fragment of left sole.* Forepart tapered to a point, slender seat and waist. Stitching channel with edge/flesh holes. *C, phase 2/3* (75, 164)
180. *Flesh layer of child's right sole.* Forepart pointed. Stitching channel with vertical holes, probably part of an edge/flesh seam. *A, phase 3* (74, 135)
181. *Flesh fragments of right(?) sole.* Pointed forepart. Stitching channel has vertical holes, probably part of an edge/flesh seam. *A, phase 3* (74, 124)
182. *Fragment of right sole.* Pointed toe, narrow seat and waist. Stitching channel with edge/flesh holes. *C, phase 3/4* (75, 57)
183. *Fragment of upper.* Part of vamp, with opening down centre of instep, and quarters, with tunnel stitch holes on flesh side for triangular stiffener, which survives. Lasting margin with stitching channel of grain/flesh holes, stitch length 7–8 mm. Stitching channel with edge/flesh holes, stitch length 3 mm, on vertical edge of quarters. Top edge of quarters has been cut. Row of tunnel stitching on flesh side of vamp opening for attachment of tongue. One oval tie-hole at the top of opening. *C, phase 2* (74, 32)
184. *Fragment of vamp.* Opening down centre of instep; vamp wings on both sides (front missing). Lasting margin with stitching channel of grain/flesh holes. Holes are oval, formed of two small round holes joined together, stitching channels with edge/flesh holes on vamp wing and throat. Tunnel stitching on flesh side parallel with cut edges of central opening — for attachment of tongue. On one side of vamp, short split sewn up with edge/flesh stitching. *C, phase 2* (74, 34)
185. *Rectangular fragment of upper.* Probably side piece joining vamp and quarters. Lasting margin with stitching channel of grain/flesh holes. Stitching channels with edge/flesh holes on vertical sides, fourth edge cut. On flesh side, tunnel stitch holes indicate position of part of stiffener. *C, phase 2* (74, 35)
186. *Triangular stiffener.* For quarters of shoe. Lasting margin with stitching channel of grain/flesh holes. Hem stitching on other two edges, for attachment to inside of quarters. *C, phase 2/3* (75, 159)

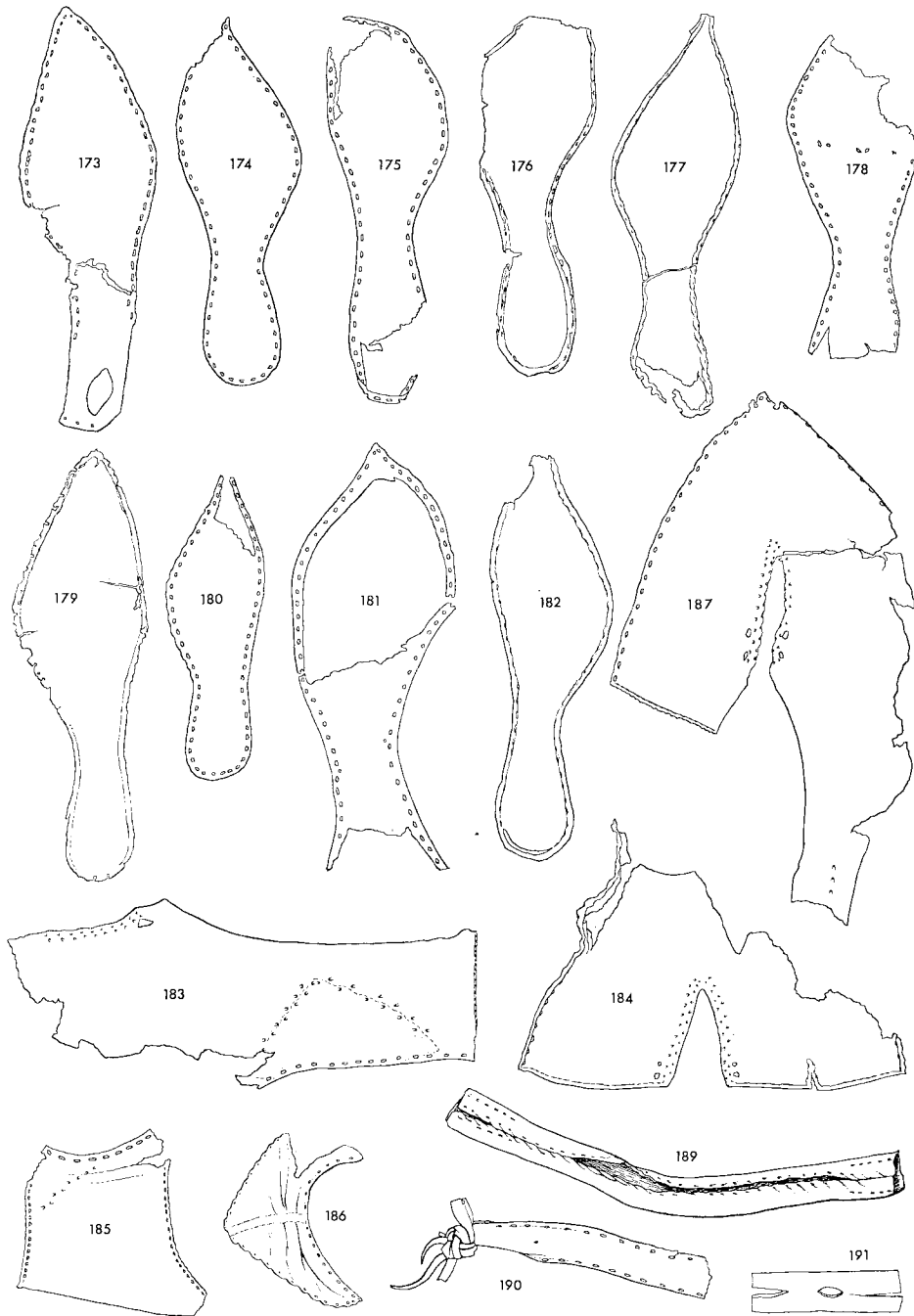


FIG. 19
THREAVE CASTLE, GALLOWAY
Leatherwork. Scale 1:4

187. *Fragments of upper*. Vamp, vamp wing, vamp throat with opening down centre of instep, and part of quarters. Lasting margin with stitching channel of grain/flesh holes. Stitching channel of grain/flesh holes on vamp wing. Tunnel stitching on flesh side parallel to edges of central opening. At top of opening, on either side, two oval tie-holes. Top edges of vamp wing and quarters cut. On flesh side of quarters tunnel stitching indicates position of semi-circular stiffener. *A, phase 3 (74, 111)*

Other objects (Figs. 13, 19)

188. *Two fragments of sword sheath*. Leather folded twice and stitched up centre of reverse, with butted edge/grain seam. No decoration visible. *C, phase 2 (74, 30)*

189. *Fragment of strap*. Leather folded twice and stitched together up centre of reverse with butted grain/edge seam, leaving scalloped edges. At both ends of strap, two parallel rows of grain/flesh holes, perforating both layers. *C, phase 2 (74, 35)*

190. *Fragment of strap*. One end knotted with three thongs braided together. Stitching channels of grain/flesh holes along both edges. *C, phase 3 (75, 80)*

191. *Fragment of strap*. Oval hole in centre, 12.5 × 5.5 mm. *C, phase 3 (75, 169)*

Not listed: Over 200 fragments mainly from shoes but including several large undistinguished pieces, perhaps from clothing. Also three fragments of *woollen cloth* all in 2:1 twill, and one piece of *felt*, possibly a finishing or binding on a piece of clothing

STONE (Figs. 13, 20). Identified by G. H. COLLINS, *Institute of Geological Sciences, Edinburgh*

192. *Flint scraper*. Secondary grey flake. 52 × 22 mm. *K, phase 1 (76, 261)*

193. *Siltstone spindle-whorl*. D. 27 mm. *M, phase 1 (74, 99)*

194. *Fragment of polished shale*. Two edges chamfered, lightly incised on one face with two parallel circular lines, 80 × 55 mm. *M, phase 1 (74, 150)*

195. *Shale counter*. Incised on both faces. D. 50 mm. *L, phase 2 (77, 55)*

196. *Three shale counters*. Crudely rounded. Ds. 35, 47 and 60 mm. *C, phase 2 (74, 85)*

197. *Siltstone counter*. Decorated on one face with septfoil petal design. D. 28 mm. *C, phase 3 (74, 72)*

198. *Sandstone whetstone*. Smoothed on three faces. 110 × 30 × 25 mm. *B, phase 3 (75, 84)*

199. *Shale slate*. Lightly incised on one face. 83 × 78 mm. *C, phase 3 (75, 8)*

200. *Shale roofing-slate*. Deeply incised on one face with parallel lines. 70 × 65 mm. *E, phase 3 (75, 15)*

201. *Shale roofing-slate*. Incised on one face. 230 × 175 mm. *M, phase 3 (74, 92)*

202. *Polished jet bead*. Flattened on top and bottom. D. 12 mm. *A, phase 3 (74, 107)*

203. *Polished jet bead*. Flattened on top and bottom and decorated with interwoven incised line. Perhaps from an earring (cf. No. 11). D. 9 mm. *N, phase 3 (77, 44)*

204. *Fragment of jet bead*. D. 12 mm. *D, phase 3 (75, 4)*

205. *Half of shale spindle-whorl*. Radiating incisions on one face. D. 40 mm. *M, unstratified (74, 37)*

206. *Fragment of shale slate*. Incised on one face. 40 × 32 mm. *K, unstratified (76, 14)*

Not listed: 16 *flint flakes* (from phase 3 levels), probably gunflints; 126 *shale counters* (from phase 2/3 levels), similar to No. 196, with Ds. 26–72 mm; 100 + *pebbles* covered in glazes of various hues (from phase 2/3 levels), possibly associated with glass manufacture; several pieces of *worked stone* (from phase 4 levels in Trench D), from dumb-bell and inverted key-hole gun-loops in SW. corner-tower

Gunstones. By DAVID H. CALDWELL

Thirty-four gunstones were recovered, mainly from the harbour and ditch (Trenches C, D and E). A further twelve pieces of stone, considered to be roughouts for gunstones, were found scattered over the site. A further three gunstones, recovered from the E. ditch in the 1920s excavation, have also been considered. The stones are all, with three exceptions, fashioned from a coarse sandstone or grit, with pink feldspar, probably of Calcliferous Sandstone age. Sandstones of this age crop out on the Stewartry coast at Abbey Head and Southernness. The exceptions have been made from New Red Sandstone rocks of Permian age such as are to be found around Locharbriggs, twenty miles to the E. of the island, and which extend to the Solway coast at Caerlaverock Castle.

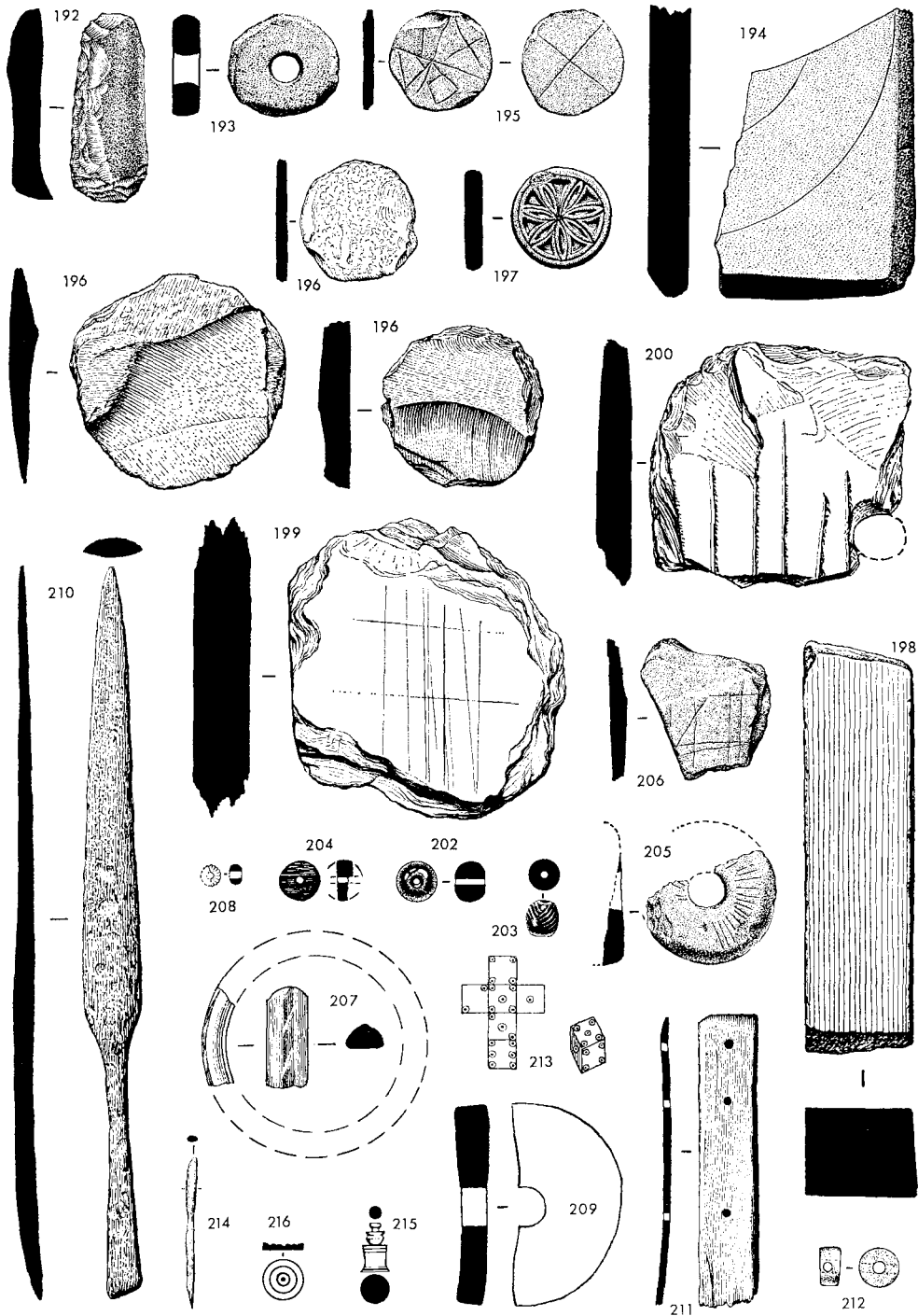


FIG. 20

THREAVE CASTLE, GALLOWAY

Miscellaneous artefacts of stone, glass, fired clay and worked bone. Scale 1:2

The following table summarizes the sizes of the gunstones, given in this case in inches, a more meaningful measurement for artillery sizes:

Shot	Diam.	Shot	Diam.	Shot	Diam.
1	1.7	1	2.35	1	3.1
1	1.75	9	2.4	1	3.25
1	1.8	1	2.5	1	4.5
1	2.1	1	2.8	2	5.0
1	2.2	1	2.95	1	5.3
1	2.25	4	3.0	1	5.8
2	2.3	5	3.05		

Some of the measurements are only approximate since only a small fragment of some balls is represented; however, two major groupings can be recognized, centring on 2.4 and 3.0 inches (61 and 76 mm). Early gunners often allowed for considerable 'windage' — that is the difference in diameter between the shot and the bore of the gun — owing to the difficulty of working guns and shot to consistently precise sizes, and a windage allowance of a quarter of an inch seems to have been quite normal.⁷⁵ It is therefore quite likely that the shot from Threave were mostly for guns with bores of about 2.5 and 3.1 inches (64 and 79 mm).

Stone shot is considerably lighter than metal and also very much cheaper to produce. It was almost exclusively used with wrought-iron guns, normally breech-loaders, which in many cases were not strong enough to withstand the larger charges of powder used with metal shot. The Threave shot of 3 inches weigh between 19 and 20 ounces (0.54 and 0.57 kg.) while comparable cast-iron balls would weigh about 3½ pounds (1.59 kg.). Similarly the Threave shot of 2.4 inches weigh about 9 ounces (0.25 kg.) while iron ones weigh about 2 pounds (0.91 kg.).

Cast bronze guns on the other hand fired metal shot; the larger pieces cast-iron balls, the smaller lead ones. Cast iron was not produced in 16th-century Scotland and iron shot had to be imported,⁷⁶ and, although there is some evidence for iron smelting at the beginning of the 17th century in Wester Ross,⁷⁷ it is doubtful if iron shot was produced in any quantity prior to the 18th century. The Scots sometimes avoided the expense of importing iron shot or casting solidly in lead by coating stones or 'diamonds' of iron in lead⁷⁸ and it is possible that some of the rough-outs to be considered below were intended to be treated in this way or have lost their coatings. There are two small lead-covered stone shot in the site museum at Tantallon Castle, East Lothian. Pieces of wrought iron were apparently also hammered into roughly-formed 'pellokis' or 'dice'.⁷⁹

There was a fair amount of standardization in gun sizes and nomenclature across Europe in the 16th and 17th centuries as far as bronze guns are concerned, there being numerous early gunnery manuals attesting to this. Such evidence is unfortunately largely lacking for wrought-iron pieces and more variety in size and name seems to have been the case. The wrought-iron pieces known to have been used in Scotland in the 16th century include *heidsteikis*, *slangis*, *bersis*, and *cutthroats*, but these names may have been applied rather vaguely, the former two to larger guns, the latter two to smaller ones.

The Threave shot may be compared with pieces from elsewhere in Scotland. The writer has been gathering data on other shot sizes and, although to date this work is not very far advanced, quite a grouping of stone balls has been noted of about 2.4 and 2.5 inches in diameter. It has to be remembered, however, that several other explanations can be advanced for stone balls according to their size and the circumstances of their findings. Some of the larger ones may have been for non-gunpowder pieces of artillery and smaller balls were used in the game of henching or bulleting, in which players took it in turns to throw balls as near as possible to a target or goal. Small stone balls have also

turned up on Iron Age sites and may have been used as gaming pieces. I am grateful to my colleague, Dr D. V. Clarke, for this suggestion.

The majority of the Threave balls could have been for use with small pieces of breech-loading wrought-iron artillery, such as could have been positioned in the embrasures of the towers at the angles of the curtain wall or mounted on the wall-heads. Wrought iron guns of this sort probably remained in use well into the 17th century and could certainly have been still used at the time of the 1640 siege.

Also found in the excavations were twelve pieces of stone considered to be unfinished pieces of shot and these are of great interest in demonstrating how they were made. It seems the stone was cut into rough cubes at the quarry and brought back to the castle to be worked. The cubes were then shaped by picking them into a cylinder and rounding top and bottom or by cutting away at the four corners, picks, presumably of a small size, being used for this.⁸⁰ The polishing of the roughly-hewn balls could readily have been achieved by rubbing them on a stone. Many of the balls from Threave are remarkable for their regularity of shape, though some of the smaller ones are more ovoid or flattened owing to the difficulty of holding and working them.

The only early account about the manufacture of stone shot known to the writer is contained in *Le Livre du Secret de l'Art, de l'Artillerie et Canonnerie* published in Paris in 1561, but apparently composed at a much earlier date.⁸¹ It provides no useful details of working methods other than the essential point that the measurement of the gun's bore had first to be taken with compasses which were then used to describe the size of the shot. In December 1512, John, Quarrier, was paid for providing gun-stones for a gun at Threave Castle.⁸²

GLASS (Fig. 20)

207. *Fragment of bangle*. Made of turquoise-blue glass, D-shaped cross section, with dark-blue strip, separated by angled white glass streaks, applied to outer face. Estimated D. 64 mm. Cf. similar bangle fragment found at Hyndford Crannog, Lanarkshire, dated to the 2nd century A.D.⁸³ *N, phase 2 (77, 20)*

208. *Half of Bead*. Made of blue glass and decorated with vertical ribs. D. 6 mm. *B, phase 3 (74, 77)*

Not listed: Several fragments of *window-* and *bottle-glass* (from phase 3/4 levels)

FIRED CLAY (Fig. 20)

209. *Half of spindle-whorl*. D. 56 mm. *D, phase 3 (75, 157)*

Not listed: Three clay *tobacco pipe bowls* and sixteen *stem* fragments (from phase 4 levels)

WORKED BONE (Fig. 20)

210. *Unsocketed spearhead*. L. 209 mm. *L, phase 1 (77, 80)*

211. *Knife-handle*. With three rivet holes. L. 28 mm. *C, phase 2 (74, 80)*

212. *Bead*. With two holes D. 11 mm. *K, phase 2 (76, 64)*

213. *Die*. Each unit represented by a ring and dot. 8 mm square. *C, phase 2 (76, 133)*

214. *Awl*. L. 44 mm. *L, phase 2 (77, 64)*

215. *Gaming-piece*. L. 14 mm, D. 8 mm. *A, phase 3 (74, 105)*

216. *Gaming-piece*. One face decorated with concentric grooves. D. 12 mm. *D, phase 3 (75, 209)*

POTTERY (Fig. 21)

Coarsewares. By GEORGE R. HAGGARTY

The bulk of the pottery is in the form of small, abraded body-sherds and in no instance, despite thorough working, was it possible to reconstruct profiles. All the material has been examined under a $\times 20$ microscope and sorted into type fabrics; a complete catalogue, together with a reference collection, has been deposited in the National Museum of Antiquities of Scotland, Edinburgh.

In the absence of known pottery kilns from Galloway, coupled with the dearth of published excavation material, it is difficult to fit the pottery into a wider context. The survey by Truckell and Williams⁸⁴ of pottery from Galloway in Dumfries Museum, although useful, is misleading for much of the material is dated too early. For example, the reduced fabrics from Lochrutton Crannog, ascribed to the mid 13th century, are found elsewhere in 15th-century and later contexts, as attested at Threave Castle (Type Fabric 4 below).

When oxidized, Type Fabric 1 from Threave is similar to pottery recently recovered from the site of Caerlaverock Castle — tentatively ascribed to the mid 14th century — although the forms tend to differ. The Caerlaverock material (as yet unpublished) comprises jugs and cooking-pots; the Threave material produced storage vessels, etc., in addition.

Since few features produced little more than scraps of body-sherds and as much of the pottery was recovered from the back-filled 1920s excavations, this short report merely describes the type fabrics, illustrated by diagnostic stratified sherds.

TF1: A soft, smooth, wheel-thrown fabric with hackly fracture. A moderate to abundant quartz filler, well-sorted, sub-angular and 0.5 mm in size, is included in a predominantly red or grey fine-grained clay. The abraded interior and exterior surfaces show signs of turning marks. No evidence of slip but some sherds have a patchy dark-green/brown lustrous glaze on the exterior varying in thickness and finish.

Buildings 1 and 2 (Trenches K and L) produced 285 sherds in this fabric from phase 2 contexts: 217. *Rim sherd from a large storage vessel.* Thick green/brown glaze on exterior and a horizontal thumb-pressed clay strip applied below the rim; red fabric with grey reduced core

218. *Rim sherd from a large storage vessel.* Thick green/brown glaze on exterior; red fabric with grey reduced core

219. *Rim sherd from a large storage vessel.* Badly decomposed glaze on exterior and a horizontal, thumb-impressed clay strip applied below the rim; red oxidized fabric with grey reduced core

220. *Rim sherd possibly from large open bowl.* Internal pale lead glaze; orange fabric

221. *Fragment of small oval dish.* External and internal green glaze, probably knife-trimmed round base; red oxidized fabric

The best published parallels for Nos. 217–19 are storage vessels from sites in NW. England and N. Wales, for example from the Ewloe and Silverdale kilns.⁸⁵ This type of decoration is known in Scotland, albeit rarely. One sherd from Bothwell Castle, Lanarkshire (in the NMAS collection) and another from Glenluce Abbey, Wigtownshire⁸⁶ — are both from large open bowls and not storage jars. Nos. 220 and 221 cannot be easily paralleled. In addition to the forms illustrated jugs are represented.

TF 2: A very hard, rough fabric with irregular hackly fracture. An abundance of quartz and rock fragments are present as poorly-sorted angular grains 1–2 mm in size. The exterior has a pink-coloured wash.

Two conjoining body-sherds (not illustrated) in this fabric came from the base of post-hole K50. They are probably dated to the 12th or 13th century.

TF 3: A very hard, rough fabric with irregular hackly fracture and abundance of angular, well-sorted quartz filler, 0.75 mm in size. No turning marks are visible on either surface, although the exterior is covered in a thick, lustrous dark brown glaze.

Four small, badly abraded sherds from jugs (not illustrated) came from Buildings 1 and 2, dated probably to the 15th century.

TF 4: A hard, smooth, wheel-thrown fabric with irregular fracture. It is void of inclusions, the fabric being made entirely from a dark micaceous clay. A thick, dull green glaze is present on the exterior surface.

Forty-seven sherds from large reduced ware jugs (not illustrated) came from the lowest levels of the ditch in the far W. of Trench D, hard by the river. The dating and origin of this type of material

has been discussed elsewhere⁸⁷ and, although it has seemingly a fairly long life span, it would appear to predominate in the 17th century.

Imported Finewares and Stonewares. By JOHN G. HURST, *Inspectorate of Ancient Monuments, London* and GEORGE R. HAGGARTY

222. *Seven sherds of Spanish(?) micaceous storage jar.* Hard, smooth fabric with laminated hackly fracture and a coarse, unsorted quartz muscovite filler. Throwing marks visible on both surfaces. 17th century. *B, phase 3 (75, CK)*

223. *Piece of handle of lobed cup.* Soft, smooth wheel-thrown fabric with irregular fracture; inclusion-free and fine-grained with a moderate-white mica content. French or English. *E, phase 3 (75, CY)*

224. *Basal sherd from a Raeren drinking mug (not illustrated).* Dark grey stoneware with dark-grey glossy salt glaze and brown wash patches. The frilled base is typical of the Raeren kilns, S. of Aachen, Belgium. The date range is from c. 1480 to 1550 and they were imported into Britain in very large quantities during that period.⁸⁸ *C, phase 3 (75, BF)*

225. *Handle fragment from a Raeren drinking mug (not illustrated).* From a vessel similar to No. 224. *D, phase 3 (75, DM)*

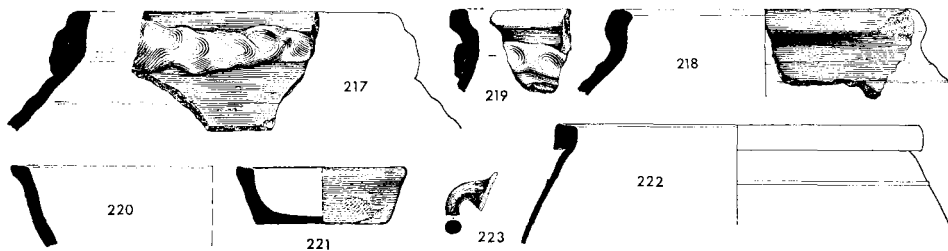


FIG. 21

THREAVE CASTLE, GALLOWAY
Pottery. Scale 1:4

226. *Three body sherds from a type II Martincamp flask (not illustrated).* Buff stoneware with darker grey-brown and purply surface. This type of flattened flask was made at Martincamp, northern France, a pottery centre between Dieppe and Beauvais. They are fairly common in Scotland.⁸⁹ Their date range is through most of the 16th century.⁹⁰ *A, phase 3 (74, FF); C, phase 3 (75, AJ); M, phase 3 (75, BV)*

227. *Shoulder sherd from a Frechen Bellarmine (not illustrated).* Dark grey stoneware with a brown inner surface and mottled brown salt glaze outside. There is the base of a typical rat-tail handle and a scar on the shoulder from kiln stacking. Both the face and medallion are missing, making the piece hard to date; however, judging by the size of the neck it is likely to belong to the first half of the 17th century. Frechen Bellarmines from this kiln site in the Rhineland, W. of Cologne, are ubiquitous throughout the 17th century.⁹¹ *C, phase 3 (75, BX)*

228. *Three basal sherds from a Siegburg Jacoba jug (not illustrated).* Datable to the 15th/early 16th century. *M, unstratified (75, AE)*

ANIMAL BONE

By LIN BARNETSON, *Department of Archaeology, University of Edinburgh*

(For conciseness, a summary of the results together with the principal tables is published here. The full report has been lodged with the archive.)

Animal, fish and bird bones were found throughout the deposits excavated and although the state of preservation of the bones varied, the overall condition was not particularly good in that most of the long bones survived as slivers and shafts only. Even those few relatively intact bones had damaged or worn epiphyses. Those from the harbour were noticeably darker in colour and 'weathered' in appearance.

Minimum numbers were calculated using the method outlined by Chaplin.⁹² Age estimates were based on the state of fusion of the epiphyses of long bones using figures given by Silver⁹³ for modern livestock, and on the eruption and wear of teeth *in situ* in mandibles using Silver's figures for semi-wild sheep, 19th-century cattle and 18th-century pigs. Where possible measurements were taken of the maximum width of epiphyses, the length of intact long bones and the base-circumference of horn-cores. The dressed weights for sheep, cattle and pigs were also calculated.

The range of large mammal species and their minimum numbers in the Inner Enclosure are given in Table 1, and in the Outer Enclosure in Table 2. The range of smaller animal species (including birds and fish) and the number of bones recovered, not minimum numbers, are given in Tables 3 and 4 for the Inner and Outer Enclosures respectively.

The Douglas Deposits

All the bones have the appearance of being domestic refuse. Of the three trenches yielding Douglas material, that is K (Building 1), L (Building 2) and C (Harbour), the latter two produced substantial quantities of bone. Trench K, containing a number of post-holes and one floor deposit, yielded what can only be described as scraps of bone. Some of the bones from Buildings 1 and 2 and from Trench M are from contexts associated with the 1920s excavations and, though identified, have not been included in this report.

As Tables 1 and 3 show, Trenches C, K and L all contained remains of domestic sheep, cattle and pig. Sheep and cattle were apparently kept in similar numbers but, although there are by comparison fewer pigs, the latter's contribution to the diet was not insignificant. Pigs are prolific animals and as virtually the whole carcass is edible they would have provided the inhabitants of the island with a cheap source of meat either as variety in the diet or as a standby in case of stock depletion owing to bad winters, disease or hostilities. Cattle were, however, the major source of meat.

It is obvious from the frequency of the different bones of sheep and cattle that the meatier parts of the carcass were favoured. The waste bones such as heads, lower legs and feet are present but not as numerous as, for example, fore- and hind-limb bones. The pig sample is too small to assess in this way. It is interesting that cattle astragali and calcanei are present in large numbers whereas there are few metatarsal fragments. On butchering these two former bones must have been included along with the cut which severed the tibia from the cannon bone, a cut still used today. By contrast, sheep astragali and calcanei were few in number.

The term 'waste' here does not mean that these bones had no food value. The lower legs provide marrow and fat and heads contain edible matter; both also provide some meat. The need for such by-products was probably not so great as the need for meat (at least in Buildings 1 and 2), hence the greater number of meaty bones in these deposits where food was probably being consumed but not necessarily prepared. On the subject of by-products it was noted that, though there were pieces of sheep skull present (a hornless animal in Building 2 and a horned one in the harbour) there were very few fragments of cattle crania or horn-cores recovered from the Douglas deposits. If the brain was being utilized the cattle skulls would have been split open near the food preparation area and we should not expect to find the fragments inside the buildings. The horns themselves may have been a tradeable commodity in which case they would have been removed at the site of the butchery. There are in fact few signs of butchering cuts on the bones apart from a cattle scapula in Trench K and a cattle calcaneum in Trench L.

If we consider these deposits to be discarded food refuse it is not surprising to find little evidence of young animals among the debris. In all three deposits there is, however, young pig. As pigs were probably kept closer to the habitation than either sheep or cattle, being allowed to scavenge around the dwellings or penned near rubbish disposal areas, their remains would be more likely to end up in our deposits here. However, these piglets (2 years) may indeed have been slaughtered. Sucking pigs (i.e. unweaned) have been considered a delicacy from time immemorial, and as pig litters are generally large, selection for the table is not likely to interfere with the provision of future meat or breeding stock. The presence of these young pig bones strengthens the idea that the Douglases kept pigs rather than purchasing fully-grown individuals when pork was desired.

There is evidence of only one calf (a mandible in Trench L) which died or was killed when less than 18 months old. Principally for economic reasons it is unlikely that calves of this age would be regularly slaughtered for meat. There were, however, a number of immature sheep bones and mandible in Building 2 and one immature femur in the harbour. If we are continuing to regard the remains inside the buildings as food debris we must assume that lamb less than six months old was eaten here. If not eaten by the inhabitants it (the bones may belong to a single individual) may have been fed to the dogs.

In general most of the sheep and cattle in the Douglas deposits were killed in the prime meat age ranges, and despite the smallness of our samples, it would appear that a reasonable number of both sheep and cattle were kept beyond the prime meat age. These older animals were probably breeding stock but we should not discount the idea that some of them were being kept for slaughter.

The other large species are horse and deer: the former represented by loose teeth only, the latter by a metacarpal and mandible with M3 erupted and worn. This latter is a Red deer and its remains, though scanty, do attest to the fact that hunting was a Douglas pursuit.

Of the smaller species birds predominate, as can be seen in Tables 2 and 4, bearing in mind that the figures shown are those of actual numbers of bones and not minimum numbers. Buildings 1 and 2 contain mostly domestic fowl and goose. The presence of bones with unfused epiphyses indicates that the chickens were bred at Threave. The geese were probably domestic too though smaller and slighter than our present-day domestic goose. The curlew in Building 2 may also have been eaten. Curlews favour open, marshy ground and their presence here is only to be expected.

The gull from the harbour, similarly, is no surprise because of the island's proximity to the Solway Firth. The plover in the harbour was not positively identified but may be a lapwing (*Vanellus vanellus*) — another bird which favours marshy, open areas and estuaries. Most interesting, however, is the damaged tarsometatarsus from the harbour which belongs to a large wading bird. It is bigger than the heron and most similar to the Crane (*Grus grus*), a bird which is not indigenous to this country. If this is a crane, and not a large heron, it is possible that cranes were seasonal visitors to this part of Scotland centuries ago. The Solway Firth has always provided an excellent habitat for waders.

Only one rabbit bone was recovered from the harbour and two from Building 1. Cat and dog were numerous in the harbour and a dog scapula and radius were found in Building 2. A complete radius from the harbour belonging to an adult dog measured 217 mm in length giving an approximate shoulder height of 687 mm. We cannot talk of 'breeds' of dog at this period but, for the sake of comparison, our modern Alsatian has an average shoulder height of 630 mm which puts the Threave dog into the 'large' category. The rodent in Building 2 is a rat, probably a black rat (*Rattus rattus*).

The Post-Douglas Deposits (Phase 3)

The bones from this phase of the castle's occupation were found in differing contexts within the Inner Enclosure, that is Trenches A, B, C, D, and J. Material from Trenches E to H has been disregarded for only a few pieces were identifiable.

Trench A yielded remains of domestic sheep, cattle and pig but as most of the bones are weathered and splintered, or in the case of a few, chewed by dogs, it is difficult to obtain a clear picture here. The material appears to be dumped domestic refuse which at one time was exposed to the elements. In such conditions it would not be unusual to find that many of the smaller bones of the skeleton, especially of the smaller species, had perished or become further dispersed. Certainly sheep limb bones predominated over the other bones of the skeleton whereas all the bones of the cow skeleton were present. Only five pig bones were identified. Most of the cattle and sheep had been killed in the prime meat range and there is little evidence here of older animals.

Red deer is again present — a metatarsal shaft and fragment of antler tine bearing a cut mark. The birds are domestic fowl and goose. The only other species present is a dog.

Trench B yielded approximately the same quantity of identifiable fragments as A and the three major domestic species are again present. Several pieces of burnt bone were found in this sample. Both Trenches A and B contain evidence of lamb having been killed or having died about the age of six months but, as with the Douglas deposits, there is no evidence of young calves. Natural losses would not be uncommon at this age, in which case the carcasses were probably thrown to the dogs, although we cannot rule out the possibility that tender young lambs were eaten at the table. A further point to note is that a number of cattle crania fragments were recovered from these trenches.

The deposits from the SW. and NE. corner towers (Trenches D and J) are also fairly small and consistent with the findings already noted, that is that sheep and cattle were kept in similar numbers and that there were few pigs. An ulna and metatarsal fragment of Red deer appears in Trench D and both towers contain scraps of horse bones. A substantial number of rabbit bones was recovered from D but judging by the conditions of these some of them might be intrusive. Among the bird bones are three of jackdaw (*Corvus monedula*) which frequents open country and sea-coasts and nests in castles and ruins. Amongst the latest deposits in the SW. tower was a tarsometatarsus that may belong to a corncrake (*Crex crex*). As crakes are shy birds their presence here may signal the transition of the island from one of prolonged habitation to another of desertion by man.

The deposits in the harbour were by far the largest. Here we have the accumulation of refuse discarded by the inhabitants from their kitchens, dining areas, and, possibly, butchering yards. As might be expected this deposit yields the widest range of species. All the bones of the sheep and cattle skeletons are present, as are most of the principal bones of pig. None of the other deposits at Threave is sufficiently large to enable us to do more than glimpse the pattern of stock selection for slaughter. The harbour deposits, on the other hand, clearly show that a few sheep died or were killed when less than ten months old — a natural loss is represented by the individual *c.* 6 weeks old. The majority of the flock was killed at between 30 and 42 months and a small number was kept beyond the age of 42 months. Cattle were systematically slaughtered between the ages of two and four years and, as noted in the Douglas deposits, a number of animals were kept beyond this age. These older animals are probably breeding stock. It is unfortunate that there are not more intact cattle mandibles which might enable us to assess the age structure of the older stock.

The pig sample, by comparison, is small but it appears that most of the animals were killed in the 24 to 36 months age range and at least one animal was older than three years at death or kill.

Sheep cranial fragments reveal the presence once again of horned and hornless sheep. A piece of cattle cranium has the vestige of a much-hacked horncore *in situ*. Many cattle bones show signs of butchering, ranging from deep chop marks to fine de-fleshing cuts.

The other domestic species present are horse, dog and cat. Virtually all the bones of the fore-limb of a horse are present belonging to an individual less than $3\frac{1}{2}$ years old. Non-domestic species once again include Red deer — one of which was immature — and a fox. There are a few rabbit bones and scraps of fish. Besides domestic fowl and geese there are remains of jackdaw.

TABLE 1
THE RANGE OF THE LARGER ANIMAL SPECIES AND THEIR MINIMUM
NUMBERS IN THE INNER ENCLOSURE (TRENCHES A-J)

Trench	Phase	Sheep	Cattle	Pig	Horse	Deer
A	4 3	P 9	P 6	— 1	— —	— 1
B	4 3	1 11	1 7	1 2	— —	— —
C	4 3 2	16 71 13	18 51 14	2 10 4	1 2 —	1 1 —
D	4 3	2 16	1 13	1 2	— 1	— 1
E	3	P	P	—	P	—
F	3	P	P	—	P	—
G	3	P	P	—	—	—
H	3	P	P	—	—	—
J	3	10	6	1	1	—

P = present

TABLE 2
THE RANGE OF THE LARGER ANIMAL SPECIES AND THEIR MINIMUM
NUMBERS IN THE OUTER ENCLOSURE (TRENCHES K AND L)

Trench	Phase	Sheep	Cattle	Pig	Horse	Deer
K	2	5	4	2	—	—
L	2	17	16	3	1	1

TABLE 3
THE RANGE OF SMALLER SPECIES IN THE INNER ENCLOSURE
(TRENCHES A-J) AND THE NUMBER OF BONES IDENTIFIED

Trench	Phase	Rabbit	Cat	Dog	Fox	Rodent	Bird	Fish
A	3	—	—	3	—	—	7	—
B	4	—	—	5	—	—	1	—
	3	—	—	2	—	—	—	P
C	4	—	1	6	1	—	6	—
	3	8	7	15	1	P	97	P
	2	1	20	5	—	P	61	P
D	4	3	—	—	—	—	6	—
	3	38	—	—	—	—	30	—

P = present

TABLE 4
THE RANGE OF SMALLER SPECIES IN THE OUTER ENCLOSURE
(TRENCHES K AND L) AND THE NUMBER OF BONES IDENTIFIED

Trench	Phase	Rabbit	Dog	Rodent	Bird	Fish
K	2	2	—	—	27	—
L	2	—	2	5	118	2

CONCLUSIONS

Evidence for an occupation of the island prior to the late 14th century is provided by the two coins (Nos. 1 and 7), bangle fragment (No. 207), flint scraper (No. 192) and a few scraps of pottery from K50, though the only structures associated with the period were the sheds (smithy?) in Trench M. It is, however, possible that wall L166 formed part of a large building also associated with this period since it appeared to pre-date Building 2. Both its length and thickness imply a major structure, possibly part of an early castle of the lords of Galloway. The boundary ditches F/G3 and L145, the pit K77 and other features pre-dating Buildings 1 and 2 may also have belonged to this period.

The first phase of the Douglas occupation, *c.* 1370, saw the construction of the tower-house, one of the first to be built in Scotland and essentially a product of the 'economically straitened and politically unstable times of the 14th century'.⁹⁴ To its W. a small harbour was formed to facilitate access by boat, though the ford at the S. end of the island no doubt continued in use.

The restricted accommodation (two bedrooms) within the tower-house was augmented towards the end of that century by the construction of Buildings 1 and 2

to the E. It is reasonable to assume that Building 1 was a two-storeyed stone structure with an undercroft at ground-level, partitioned into stalls along the side walls and used either for stabling or storage, with an upper floor supported on joists and utilized as a hall, if the analysis of the stone base (K59) as part of a support for a screens passage is correct.⁹⁵ Access to both storeys would seem to have been through the E. gable end, in the case of the upper storey, by a mural stair within the E. wall — a feature still visible at Tolquhon Castle, Aberdeenshire.⁹⁶

Building 2 was constructed in a different style but pottery recovered from it supports the idea that the buildings were built contemporaneously. There is a marked similarity between this structure and the now roofless later hall at another Douglas stronghold, Bothwell Castle, Lanarkshire — a building attributed to Archibald, the fourth Earl.⁹⁷ Though built on a grander scale the latter has three vaulted chambers at ground-level with a dining hall over and a private chapel adjoining it at the S. end. The arrangement of Building 2 appears to be similar and the more substantial foundations abutting the SE. corner could well have supported a private chapel, aligned E. and W., at first-floor level.

The excavations produced evidence to suggest that the islanders were largely self-sufficient. Cordwaining, wood-turning, smithing, lead-smelting — perhaps glass manufacture — were carried out on the island itself whilst a sophisticated standard of animal husbandry was practised in the granges of Threave (to the W.) and Kelton (to the E.). Of particular note is the incidence of wooden vessels compared to pottery — the latter being very sparsely represented.

Buildings 1 and 2 were purposely dismantled to make way for the imposing artillery-work, which was previously thought to have been constructed early in the 16th century after the Battle of Flodden.⁹⁸ Only Cruden has argued in favour of it being the product of a desperate earl of Douglas in the mid 15th century in defiance of his bellicose monarch.⁹⁹ Excavation has undoubtedly borne out the latter's hypothesis, for both numismatic and dendrochronological evidence have combined to demonstrate that the entire artillery-work and its encircling ditch were constructed *c.* 1450.

The work comprised three component parts, variously reflecting the degrees of intensity required to protect the tower-house from artillery bombardment. The principal component comprised the walls to the S. and E., together with their three circular towers, which protected that part of the tower-house facing the island itself and the high ground of Little Wood Hill to the SE. (Fig. 1). The ground to the W. was more marshy and hence less capable of being used as a place from which to mount a bombardment. The character of the artillery-work reflects this decreased vulnerability. The ground to the N. was almost entirely water and marsh and the artillery-work was terminated at the NW. corner, the intervening space along the N. side of the tower-house merely being protected against infantry assault by a more conventional turf and timber bank.

The dating of the work to *c.* 1450 supports the notion that this was the *domus artillerie* that had been repaired in 1457/58 at a cost of £40 13s. 4d. Other documentation has suggested the name of the probable designer of the scheme — Sir John Dunbar, master gunsmith to James II between 1455 and 1460, knighted for services

to his king in wartime, but formerly in the employ of the last earls of Douglas and resident in the castle during the siege of 1455.¹⁰⁰ Whether this association is correct or no, it does not detract from the fact that the artillery-work, as a product of the mid 15th century, was a revolutionary piece of fortification design whose basic principles were still being adhered to over three centuries later.

The excavations produced little evidence of construction activity following the overthrow of the Douglases. In the 16th century the turf bank on the N. side of the tower-house was rebuilt and the main ditch recut for the first time. Buildings 3 and 4 in Trench M may also have been erected during that century as outhouses for the garrison. During the 17th century the ditch was recut again and the outer bank to the N. and E. of Buildings 1 and 2 constructed. The garderobe chute within the harbour — serving a latrine within the SW. tower — was also added at this late date.

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NOTES

¹ Scottish Record Office (hereinafter S.R.O.), *MW/1/579*.

² Ancient Monuments Drawing Office, *3/107/6*.

³ S.R.O. *MW/1/1138*. They are now housed in the National Museum of Antiquities of Scotland, Edinburgh.

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- ⁶ John de Fordun, 'Cronica Gentis Scotorum', in W. F. Skene (ed.), *The Historians of Scotland*, I (Edinburgh, 1871), 345 (cxxv).
- ⁷ W. Fraser, *The Douglas Book*, I (Edinburgh, 1885), 347.
- ⁸ *The Register of the Great Seal of Scotland*, I (Edinburgh, 1912), no. 329. The Lordship of Galloway consisted of land lying between the rivers Nith in the E. and Cree in the W. The R. Dee is centrally situated within the lordship (Fig. 1).
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- ¹⁰ *Ibid.*, I, no. 507.
- ¹¹ See R. Nicholson, *Scotland: The Later Middle Ages* (Edinburgh, 1974), 354-66, 369-73 for a recent assessment of this confrontation. Details of the siege are recorded in *The Exchequer Rolls of Scotland*, VI (Edinburgh, 1878), 119, 199-204, 208-09 (hereinafter *E.R.*).
- ¹² *E.R.*, VI, 459.
- ¹³ *Ibid.*, VII, 8.
- ¹⁴ *Ibid.*, VI, 455-56; VII, 7, 163, 216; *Accounts of the Lord High Treasurer of Scotland*, IV (Edinburgh, 1877), 350 (hereinafter *A.L.H.T.S.*).
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- ¹⁰⁰ A detailed analysis by the writers is appearing elsewhere; op. cit. in note 29.

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