Proc Soc Antiq Scot, 118 (1988)

FICHE 2: CONTENTS

Proc Soc Antiq Scot, 118 (1988), fiche 2: A3-D6

EXCAVATIONS AT THE ROMAN CIVIL SETTLEMENT AT INVERESK, 1976-77 *continued*

GORDON D THOMAS

POST-ROMAN POTTERY

Catherine Brooks and George Haggarty

As most of the post-Roman pottery from the site comes from mixed levels, for the purposes of this report is is considered as two main groups, medieval and post-medieval.

Medieval Pottery

This group comprises 298 sherds, of which 70 are glazed, and a further 6 are glazed and decorated. Both cooking-pots and jug forms are represented; the former seem to outnumber the latter by about 2:1 although it is difficult to be certain as many of the sherds are to small. Nearly all the pottery is in a hard pale quartz-tempered fabric which varies in colour from off-white to pinkish-buff, and is thin and well-fired. Glaze varies from honey-coloured through pale yellowish-green to occasional dark copper-green. Most of the material is typical of 13th to 14th century SE Scottish pottery, and was probably locally made; it has certain affinities with the Colstoun kiln material as well as with excavated pottery from the Edinburgh area. Very little late-14th to 15th century pottery seems to be represented in this group.

Rims

There are 32 rim sherds representing as many vessels; 13 typical rims are described.

1. Cooking-pot, very gritty fabric with creamy-white external surface and grey core.

2. Cooking-pot, which gritty fabric, exterior surface fire-blackened in places. Two similar sherds.

3. Cooking-pot, white gritty fabric, exterior surface fire-blackened in places on underside of rim. Small splash of honey-coloured glaze on rim. One similar sherd.

4. Cooking-pot, gritty pale buff fabric. Six similar sherds.

5. Cooking-pot, gritty pale buff fabric. Partially fire-blackened on rim.

6. Cooking-pot, gritty white fabric, exterior surface fire-blackened beneath rim.

7. Cooking-pot, gritty pale buff fabric, exterior surface fire-blackened beneath rim. One similar sherd.

8. Cooking-pot, white gritty fabric. One similar sherd.

9. Cooking-pot, pale buff gritty fabric with grey core. One similar sherd.

10. Cooking-pot, gritty pale buff fabric with grey core, pale grey internal surface. Partially fire-blackened on rim. One similar sherd.

11. Cooking-pot, gritty buff fabric, with small splashes of honey-coloured glaze externally.

12. Jug rim, with simple pinched spout. Gritty creamy-white fabric. Two similar sherds.

13. Small jug rim with part of strap handle. Gritty pale buff fabric. Five similar sherds.

Handles

There are 5 small sherds from jug strap handles.

14. Simple strap handle, gritty white fabric with pale grey core, yellowish-green glaze. Two similar sherds.

15. Strap handle sherd with 6 slight grooves running vertically, buff gritty fabric with grey core, and green glaze. paralleled at Colstoun and Edinburgh High Street.

16. Large strap handle in smooth red fabric, unglazed, with a vertical incision placed centrally on the outside of the handle. later than the bulk of the material, and may be 15th century. The fabric is paralleled at the Stenhouse kilns (unpublished material NMAS and Falkirk Museum).

Bases

There are 28 base sherds, of which 4 have traces of glaze. Most of the base sherds are too small to be certain whether they come from jugs or cooking-pots. The cooking-pot base sherds tend to be slightly sagging and fire-blackened. Two jug base sherds have Hurst type 2 thumbing (Hurst 1962).

Decorated Sherds

There are 6 tiny decorated sherds.

17. Body sherd, thin slightly gritty cream fabric with grey core. Two incised vertical lines beneath patchy yellowish-green glaze.

18. Body sherd, fairly thick gritty whitish fabric, decorated with an impressed applied strip, glazed dull olive-green.

19. Body sherd, slight gritty pale grey fabric with reddish surface on interior. Exterior surface decorated with applied curved strip coloured dark brown on dull green glazed background.

20. Body sherd, thick slightly gritty white fabric, decorated with 2 horizontal grooves and one vertical applied strip of clay c 1.5cm long, flattened onto the body at both ends and coloured dark brown, the whole sherd being glazed yellow.

21. Two small sherds from the same jug, in smooth whitish fabric. Both have groups of incised vertical lines and applied clay 'scales' coloured dark brown, on a rich green glaze. Possibly imported from the north of England.

Post-Medieval Pottery

There are 47 post-medieval sherds, most probably belonging to the 17th and 18th centuries. The main forms represented are open cream-slipped bowls, jugs, storage jars and posset cups. Most of the pottery falls into 2 groups. There is a hard well-fired brick-red fabric, typically represented by the cream-slipped bowls, which dates from the late 17th-18th centuries. There is also the thick hard dark grey reduced fabric with a dull olive-green glaze typical of late medieval and early post-medieval pottery in the south of Scotland. This latter fabric lasts through the 16th and 17th centuries and is difficult to date with any certainty. There are good local parallels for both kinds of pottery amongst unpublished material from excavations in Edinburgh and Cramond.

Rims

There are 6 rim sherds.

22. 'Cream-slipped bowl', hard brick-red fabric with occasional large mineral inclusions, exterior unglazed, interior clear-glazed over a white slip producing a cream colour. Two other identical examples represented.

23. Storage pot, hard reddish-brown fabric, unglazed. One similar sherd.

24. Jug rim with scar of broken-off strap handle. Hard dark grey fabric, dull olive-green glaze completely covers interior and exterior surface.

Handles

There are 3 handle sherds.

25. Part of strap handle of small jug, dark grey fabric, thick shiny glaze all over, varying from pale brown to yellowish-green. Could be 18th or 19th century.

26. Base of rod handle of jug, hard grey fabric with oxidised red surface on interior; dull olive glaze externally, patchy brownish-green glaze internally.

27. Part of skillet handle, dark grey fabric, oxidised red surface, patchy brownish-yellow glaze.

Bases

There are 8 base sherds, 4 belonging to cream-slipped bowls of same form as number 22 above.

28. Base of ?open bowl, hard brick-red fabric, thick brown glaze covering all the interior surface and the upper part of the exterior, with runs of glaze towards the base.

29. Pedestal-based open bowl, hard brick-red fabric, unglazed exterior, interior cream-glazed over a white slip. 18th or 19th century.

30. Very small base sherd, hard red fabric, unglazed exterior, brown glazed interior.

31. Base of delft ware cup, in abraded condition, smooth white fabric, bluish-white glaze internally and externally with traces of 2 blue-painted lines on exterior, too badly worn to be included in the illustration. Probably English import, late 17th or 18th century.

Other Sherds

32. Two small body sherds probably belonging to posset cups; both have very think reddish-brown fabric and are glazed internally and externally with thick shiny glaze, one being brown, the other dark purplish-brown. Later 17th-18th century.

33. One small body sherd of stoneware jar with internal rilling; probably local, 18th-19th century.

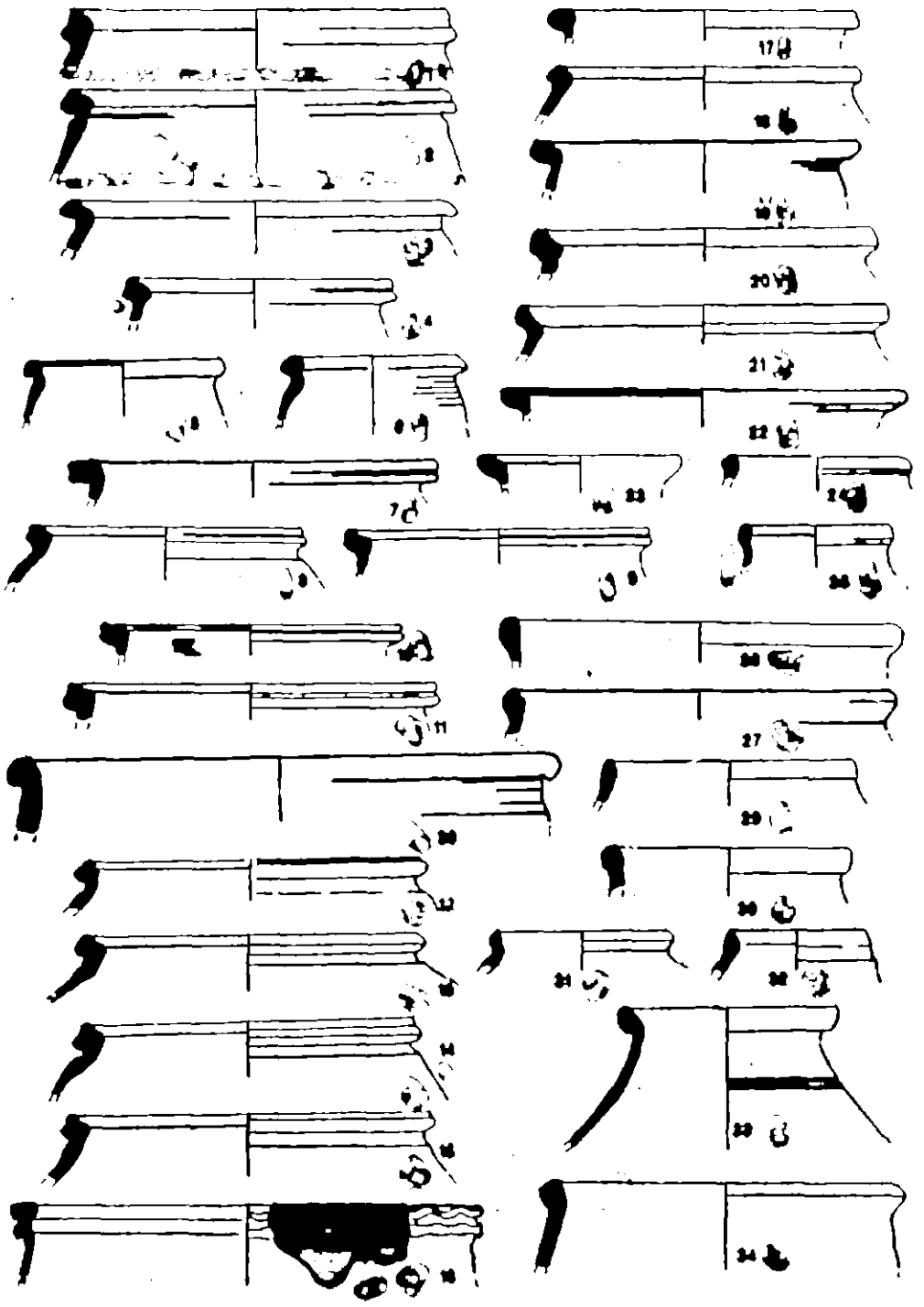
Clay Pipe Fragments

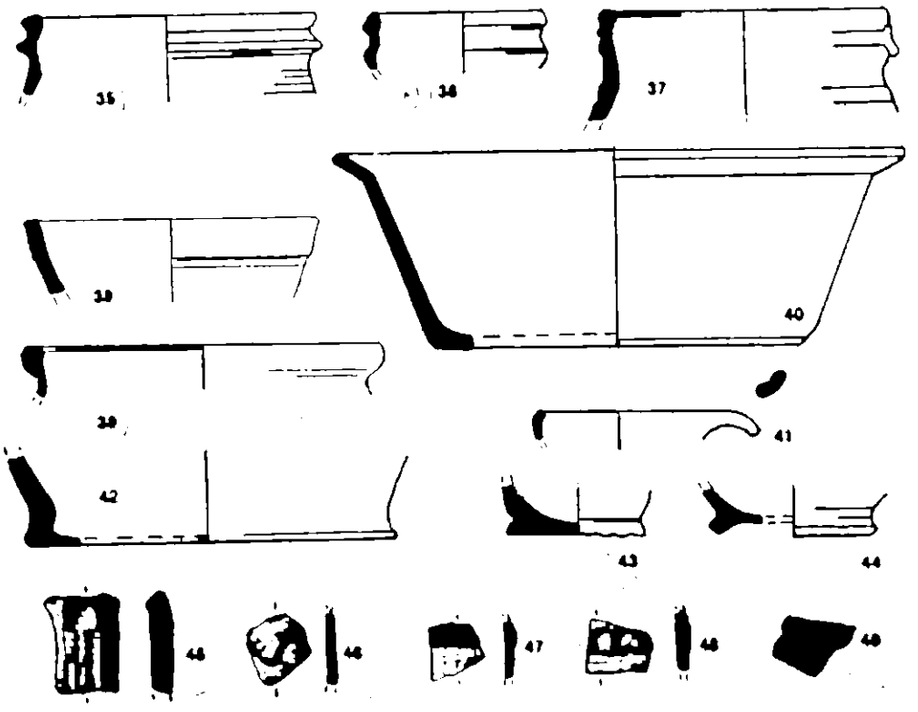
There are 16 clay pipe fragments amongst the medieval and post-medieval pottery; 14 small pieces of pipe stem (maximum length 4cm) and 3 pieces of bowl. They are all of cream/white hard fabric. Little can be said from this small amount of material, although the stem bore size (between 2 and

3mm) together with the reconstructed size of the pipe bowls, which cannot be very early, suggests a date no earlier than the later 17th-18th century. Stem bore size starts to decrease from c 3mm after about 1680, and continues to decrease until the early 19th century, although this cannot be used as an accurate dating method (Lawson 1975).

Acknowledgements

We are grateful to Mr D Evans and Ms L Thoms for their help and advice.

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COINS

Nicholas McQ Holmes

Inveresk 1976: Coins

3.72 Charles I or II AE turner (1642-50 or 1663) S239 or 243

3.73 Bishop Kennedy of St Andrews
AE penny (c1452-80): 19mm
obv: orb tilted downwards and to r (type Ib)
rev: cross in quatrefoils
S96 (extremely rare)

3.74 Bishop Kennedy of St Andrews
AE penny (c1452-80): 19mm
obv: orb tilted upwards with rosette in centre (type III)
rev: cross in quatrefoils, pellets (? or stars)
on cups, ?armlets in spandrels
S99 (rare)

3.75 - illegible
- AE by its size and appearance, probably a billion penny of 15th to 16 centuries
- dia c 15 x 17mm.

3.76 William and Mary
AE bodle (2d) (1691-94)
S257

Inveresk 1977: Coins

3.77 ANTONINUS PIUS (AD 138-161): AE dupondius (28 x 24.5mm, 11.45g): AD 154-55
obv: ANTONINUS AVG.PIVS P.P.TR.P.XVIII: Head radiate r
rev: LIBERTAS COS.IIII; SC in field: Libertas stg. 1, holding pileus and sceptre

Rome: RIC 933
generally only slightly worn, but corroded in places

3.78 AR denarius (18.5 x 17mm, 2.61g)
extremely corroded; no legend or design survives

3.79 TRAJAN (AD 98-117): AR denarius (19 x 18mm, 2.44g,): AD 114-17
obv: IMP. TRAIANO AVG.GER.DAC.PM.TR.P.COS.VI: head laureate r
rev: P.M.TR.P.C.[OS.VI.P.P.] S.P.Q.R.: figure (Mars or Virtus) stg.r, holding spear and parazonium
Rome: hybrid type (not in RIC)-obv of AD 112-14 (without OPTIMUS in legend), but also without PP; rev of AD 114-17 (as RIC 337/353/354) fairly worn, surface corroded

3.80 TRAJAN (AD 98-117): AE sestertius (31 x 32mm, 21.37g): AD 103-11
obv: IMP CAES [NERVAE] TRAIANO AVG.GER.DAC.P.M [TR.P.COS.V P.P]: bus laur r
rev: (S.P.Q.R.OPTIMO PRINCIPI]; SC in exergue: Dacia std.l, in attitude of mourning, on shield and arms; before her a trophy

Rome: RIC 564
worn and partially corroded

3.81 AE sestertius (34 X 33mm, 19.82g): late 1st/early 2nd century, possibly Trajan or Hadrian
obv: head laur l
rev: figure stg.l, holding cornucopiae? altar to l.
Rome
Much corroded, amount of wear uncertain.

3.82 M.ANTONIUS: AR denarius (17 x 17.5mm, 2.48): 32-31 BC
obv: galley to r; above [ANT.AVG], below IIIVIR R.P.C.
rev: 3 military standards; between them LEG.X....
Eastern mit
extremely worn

3.83 ANTONINUS PIUS (AD 138-61): AR denarius (18 x 18.5mm, 1.77g): AD 139
obv: [ANTONINUS AVG.PIVS P.P]: head bare r
rev: [TR.P.COS.II]: figure, probably Fortuna, draped, stg.l, holding rudder on globe and cornucopiae
Rome: cf BMC 82
much corroded; amount of wear uncertain

3.84 TRAJAN (AD 98-117): AE sestertius (34mm, 23.84): AD 103-11
obv: IMP.CAES.NERVAE TRAIANO AVG.GER.DAC.P.M.TR. [P.C]OS.V P.P: bust laur r
rev: figure (? Annona) stg.l, r hand outstretched holding ?, l holding spear/sceptre/cornucopiae
Rome
obv fairly worn, rev much corroded

3.85 HADRIAN (AD 117-38): AE II (dupondius or as) (26.5 x 25.5mm, 10.63d): AD 117-38
obv: bust laur r
rev: totally indistinguishable
Rome
portrait shows average ware; coin highly corroded

3.86 HADRIAN (AD 117-38): AR denarius (18 x 17.5mm, 2.16g): AD 134-38
obv: HA [DRIANVS] AVG.COS.III P.P: head laur r
rev: SALVS AVG: Salus stg r, feeding snake coiled round altar
Rome: RIC 267
coin much corroded, especially obv: rev probably fairly worn

3.87 TRAJAN (AD 98-117): AE dupondius (28.5 x 28mm, 11.95g): AD 114-17
obv: IMP.CAES.NER.TRA IANO OPTIMO AVG.GER [DAC.PARTHICO P.M.TR.P.COS.VI P.P]: bust rad dr r
rev: [SENATVES POPVLVSQVE ROMANVS; SC in exergue]: Trajan stg. facing, between 2 trophies
Rome: RIC 676
high corroded, especially rev; obv fairly worn.

3.80 DIVUS VESPASIANUS: AR denarius (19 x 18mm, 2.35,): AD 80-81
obv: DIVVS AV GVSTVS VESPASIANVS: head laur r
ref: [SC on] shield, supported by 2 capricorns; below, a globe
Rome: RIC (Titus) 83
much corroded and apparently well worn

This group of 12 Roman coins is really too small for any reliable statistical analysis to be applied, but its components are much as would be expected from an early Antonine military site. The only pre-Flavian coin is the Mark Antony legionary denarius, an example of a type which was very popular among soldiers, and which is found fairly often on sites of this period. It is in very worn condition, as the denarius of Divus Vespasian also appears to be. It is significant that half the coins are definitely of Trajan or Hadrian, the two emperors immediately preceding Antoninus Pius. It is normally the case that coins of the emperor during whose reign a particular phase of occupation occurred are outnumbered on a site by those of his two predecessors. In this case only the denarius and the dupondius of Antoninus, the latter found in redeposited topsoil, were minted later than AD 138.

The ratio of 5 silver denarii to 7 bronze coins may seem a little high for this period, but the condition of most of the coins provides clear evidence that the soil in this area is very acid, and it is therefore quite possible that the ratio may have been distorted by the complete corrosion and disappearance of some bronze pieces.

I am grateful to Professor Anne Robertson and to Mr R A G Carson for their assistance in the identification of nos 3.81 and 3.83.

SMALL FINDS

Gordon D Thomas

* 3.1 Large roughly shaped clay object in a buff brown fabric (125mm x 90mm). Two prominent ridges on upper half while lower half tapers to a point. From beside phase 2 furnace.

* 3.2-3.4 Clay objects roughly made in a fine buff coloured clay, generally diamond shaped, some slightly dished. From disturbed deposits beside the furnace and from beside the cobbled lane in 77/1.

* 3.5 Iron, chisel like object. (84mm x 20mm). From disturbed deposits.

* 3.6 Iron object possibly a knife blade (74mm x 30mm) with 2 possible rivet holes along to edge. From disturbed deposits.

* 3.7 and 3.95 Several fragments of hobnails and corroded material forming part of the heel and sole of a boot. From phase 1 ditch fill. (NB Similar through more poorly preserved examples were found in abundance in all deposits).

* 3.8 Iron blade with hole near broader end (135mm x 40mm). From disturbed deposits.

* 3.9 T-shaped staple (cf Robertson, Scott and Kepple 1975, 111 nos 53-4; Curle 1911, 298, PL LXVII nos 1-4). (103mm x 57mm). From beside the furnace but other examples were found in all phases.

* 3.10 Thin metal rod 160mm long from disturbed deposits.

* 3.11 Iron mounting (45-55mm x 40-42mm), broken and badly corroded. From the phase 3 cobbled lane in 76/2.

* 3.12 Rectangular iron object (62mm x 21mm) with hole in upper part which is also curved in section. From the phase 3 cobbled lane in 77/2.

- 3.13-3.14 Split-pins (cf Robertson, Scott and Kepple 1975, 96 and Curle 1911, 289. Pl LXVII 10-12). From the area of the furnace but also from elsewhere on site.

- 3.14, 16, 3.20, 3.91 and 3.97 Iron rings of differing sizes, 2 with attachments as for a hook. From the foundation trenches of structural, from beside the furnace and from pit 1 all in phase 2.

- 3.17 Iron punch or spike (119mm x 11mm) from the furnace of phase 2.

- 3.18 Iron mounting or fastening with a rounded end pierced by a hole and with 2 rivets in the body. (85mm x 18mm). From disturbed deposits.

- 3.19 Iron pin with bulb on one end (130mm long) from the phase 2 furnace.

- 3.21 Iron key with hole at top and traces of "teeth" along lower section. For a similar key in bronze see Curle 1911, PL LXXVIII no 13. From deposits associated with structure 1.

- 3.22 Iron object, possibly a bent and broken punch or spike but thicker and heavier than other spikes found on site. (140mm x 15mm). From disturbed deposits.

- 3.23 Iron objects, possibly strip mountings or bindings. From beside the phase 2 furnace.

- 3.24 Bronze perched eagle (19mm high) standing on a pedestal (broken) and with incised decoration on the folded wings and parts of the body. Traces of gilding still survive. From a postholes of structure 8 though in deposits which had been badly disturbed.

- 3.25 Hexagonal bronze brooch with a raised lip around the edge and central boss which would have held decoration. On the back are the spring and catch for a pin (dia 32mm). From the cobbled lane in 77/2. (Phase 3)

* 3.26 Bronze ring or armlet from beside the cobbled lane in 76/3. (Phase 3)

* 3.27-3.28 Bronze rings with a D-shaped section. Examples from the clay filled foundation trenches beside structure 1 in 76/3, from the furnace and from the cobbled surface in 76/9. (Phases 2 and 3).

* 3.29 Hollow backed bronze button (dia 12mm) with a pin and decorated on the face with a dull yellowish paste inlay surrounding a central piece of bronze. (Curle 1911, Pl LXXXIX no 16). From beside the phase 3 cobbled lane in 77/1.

* 3.30 Bronze button (15-16mm dia) with pin at back and set on the front with a pattern of drawn glass decoration. The outer band consists of alternate designs although most have been distorted. The first is a white background with blue bands radiating from a red dot; the second pattern is a light green background divided into 6? squares by darker green bands. A bronze lip separates this from the central design of a white background divided into 9 squares by light blue lines with red dots at the intersections and surrounded by a red band of paste. (Curle 1911 Pl nos 21 and 24). From disturbed deposits.

* 3.31 Fragment of a bronze intaglio ring (11mm x 7mm) from the phase 2 furnace.

* 3.32 Bent bronze pin (100mm) which is threaded at one end. From the phase 2 furnace.

* 3.33 Bronze pin (80mm long) examples of which come from beneath the cobbles in 76/7, from structure 1 and from beside the cobbled lane in 77/2. (Phases 2 and 3).

* 3.34 Bronze disc (dia 31mm) with 3 holes and a fourth on a broken edge. Possibly a decorative fastening for clothing. From the phase 2 furnace.

* 3.25 Leaf-shaped bronze object with elongated point with 2 holes and one rivet. From beside the phase 2 furnace.

* 3.36 Bronze strap pierced by a hole at one end. From beside the Phase 2 furnace.

* 3.37 Semi-circular piece of bronze with 1 or 2 rivets and 2 holes for other rivets. Possibly a protective edging or mounting. From the Phase 1 ditch fill.

* 3.38 Bronze attachment or mounting (71mm x 6mm) bent double, one end being leaf-shaped with a hole in it, the other end expanded, also with a hole in it. From beside the Phase 2 furnace.

* 3.39 Disc of sheet bronze with original edge intact at 2 points to give the complete diameter (62mm). Domed in section but nothing survives to indicate how it was used. From the cobbled lane in 76/2.

* 3.40 Rectangular bronze object (20mm x 45mm) with 2 pins protruding from the back. The edges are curved in towards the back and the object is domed longitudinally. Possibly a decorative mounting on a weapon/tool or article of dress. From beside the Phase 2 furnace.

* 3.41 Tapered flat piece of bronze (25mm) with one rivet from deposits associated with structure 7.

* 3.42 Bronze sheet (50mm x 66mm) with 2 rivets and one hole for a rivet. From structure 1 beneath the cobbled lane in 77/2. (Phase 2).

* 3.43 Iron strip twisted in a spiral as if originally wrapped around another object. From disturbed deposits.

* 3.44 Bone pendant triangular in shape (115mm x 80mm at base) probably carved from a scapula. The apex is pierced by a hole and 5 lines have been incised down the face. (Curle 1911, Pl LXXXIII no 2). From beneath the cobbled lane in 77/2.

* 3.45 Bone object (66mm x 20-24mm) with a dowel at one end. Carving marks on the back and sides indicate that the object is complete. The front face is polished smooth and there are possible carved depressions at either side. Possibly a decorative mounting for a handle. From the Phase 1 ditch fill.

* 3.46 Bone pin 116mm long with rounded end below which are 2 grooves. Finely worked and polished. A 2nd century pin type. (Crummy, 1979, 160). From a posthole of structure 8 in 77/2.

* 3.47 Bone pin 84mm long, roughly worked and unpolished. From the cobbled lane in 77/2.

* 3.48 Bone pin 77mm long with conical end below which are 2 grooves. Finely worked and polished. A 2nd century pin type. (Crummy, 1979, 160). From disturbed deposits.

* 3.49 Bone pin 50mm long with conical end below which are 2 grooves. Finely worked and polished. A 2nd century pin type. (Crummy, 1979, 160). From disturbed deposits.

* 3.50 Bone pin 76mm long with hole drilled at top. Finely worked and polished and upper part stained green from contact with ?bronze. From beside the Phase 2 furnace.

* 3.51 Bone pin 82mm long with hole drilled at top. Finely worked and polished. From disturbed deposited.

* 3.52 Bone pin 91mm with pointed tip. Finely worked and polished. From beside the Phase 2 furnace.

* 3.53 Melon bead (dia 13mm) in blue faience from the cobbled lane in 77/2.

* 3.54 Clay bead (diam 28mm) biconical in shape and th a tubular perforation. In a fine buff brown fabric. From disturbed deposits.

* 3.55 Glass (?) bead (7.5mm dia) with a very glossy black surface. From beneath the cobbled lane in 77/2.

* 3.56 Bead in blue glass paste (dia 3.75mm) from below cobbles in 76/9.

* 3.57 Stone object in shale (?) (21mm along each side). Possible an inlay or decorative piece. From beneath the cobbled lane in 76/3.

* 3.58 Neck and shoulder of a small square bottle in blue green glass from structure 8. Other examples from in and beside the furnace, from beneath the cobbled lane in 77/2, from the cobbled lane in 76/2, and from the cobbled surface in 76/9. (Phases 2 and 3/4).

* 3.59 Open glass bowl with ring base and everted rim in a clear glass. Similar to an example from Cramond (Maxwell 1974, 198 nos 6 and 7). From beside the furnace and beneath the cobbled lane in 77/2. (2 vessels). There are also many other examples of clear glass mostly in a very fragmentary condition but indicating a delicate ?flared vessel with an incised decoration (from beneath the cobbled lane in 76/3), a small bowl with incised lines on the base (from the structure 1 foundation trenches in 76/3), a thick-walled, flared, open vessel with an s-profile, and a vessel with an everted ? rim and ridged decoration. (From the furnace.)

* 3.61-3.62 Several pieces of green glass also occur on site including a group of fragments which had been fused together (from the cobbled lane in 77/1), a fragment with a raised arc decoration (from within the Phase 2 furnace), a ribbed fragment (from the furnace), and the base of a thin vessel. (From beside the cobbled lane in 77/1). Several examples of thick-walled ? bottles in a blue green glass come from beneath the cobbled lane in 76/3, structure 7 and the furnace.

3.63-4 See section on Two Neolithic Sherds.

3.65 Small square of light blue stone (10mm x 10mm x 4mm) possibly a mosaic tessera. From the cobbled lane in 77/2.

3.66 Several fragments of leather and a thong associated with a strip of bronze folded over on itself to clasp the edge of the leather. Possibly a mounting of bronze on a leather garment, purse etc. From deposits associated with the Phase 1 ditch fill. Some leather was also found in the furnace.

* 3.67 Bone object (65mm x 29mm) roughly triangular with a hole at the apex. From Structure 1.

* 3.68 Perforated sheep metacarpal from beneath the cobbled lane in 77/2.

* 3.69 Object in bone or wood with smoothed sides and hole drilled in centre (hole now disintegrated). From beside the Phase 2 furnace.

* 3.70 Four flint flakes, one with evidence of secondary working. From the Phase 1 ditch and from deposits associated with structure 1.

* 3.71 Quernstone in a porous grey volcanic rock which deteriorates badly in the ground. The quern is triangular in section with a flat bottom, straight sides and with the upper surface sloping down to a ? central hole. Many ridges in a V-pattern cut into the upper surface. From beneath the cobbled lane in 76/3. Other examples had been used as packing in the postholes for structures 6 and 8 while yet more, scattered, samples from the Phase 1 ditch fill, the foundation trenches of structure 1, beside the furnace and beneath the cobbled lane in 77/2 and from the cobbled lane in 77/2.

  3.88 Fragment of sheet lead (70mm x 45mm) from beside the Phase 2 furnace.

* 3.89 Amphora sherd which has been bevelled along one edge. From disturbed deposits.

  3.90 A piece of slag which has retained the impression of a mould. From the cobbled lane in 77/2.

* 3.92 Iron object 45mm long with a broad flat end like a spatula. From beneath the cobbled lane in 77/2.

* 3.93 Iron object 100mm long with one end splayed. From beside the cobbled lane in 77/1.

* 3.94 Iron object with a shaft 500mm long and a curved blade projecting at right angles. From the foundation trench of structure 3.

3.96 Rectangular, hollow iron object (40mm x 30mm x 15mm) slightly splayed outwards at the open end and with badly corroded bronze 'panels' on the sides. Contains an organic straw-like material. From beneath the cobbled lane in 76/3.

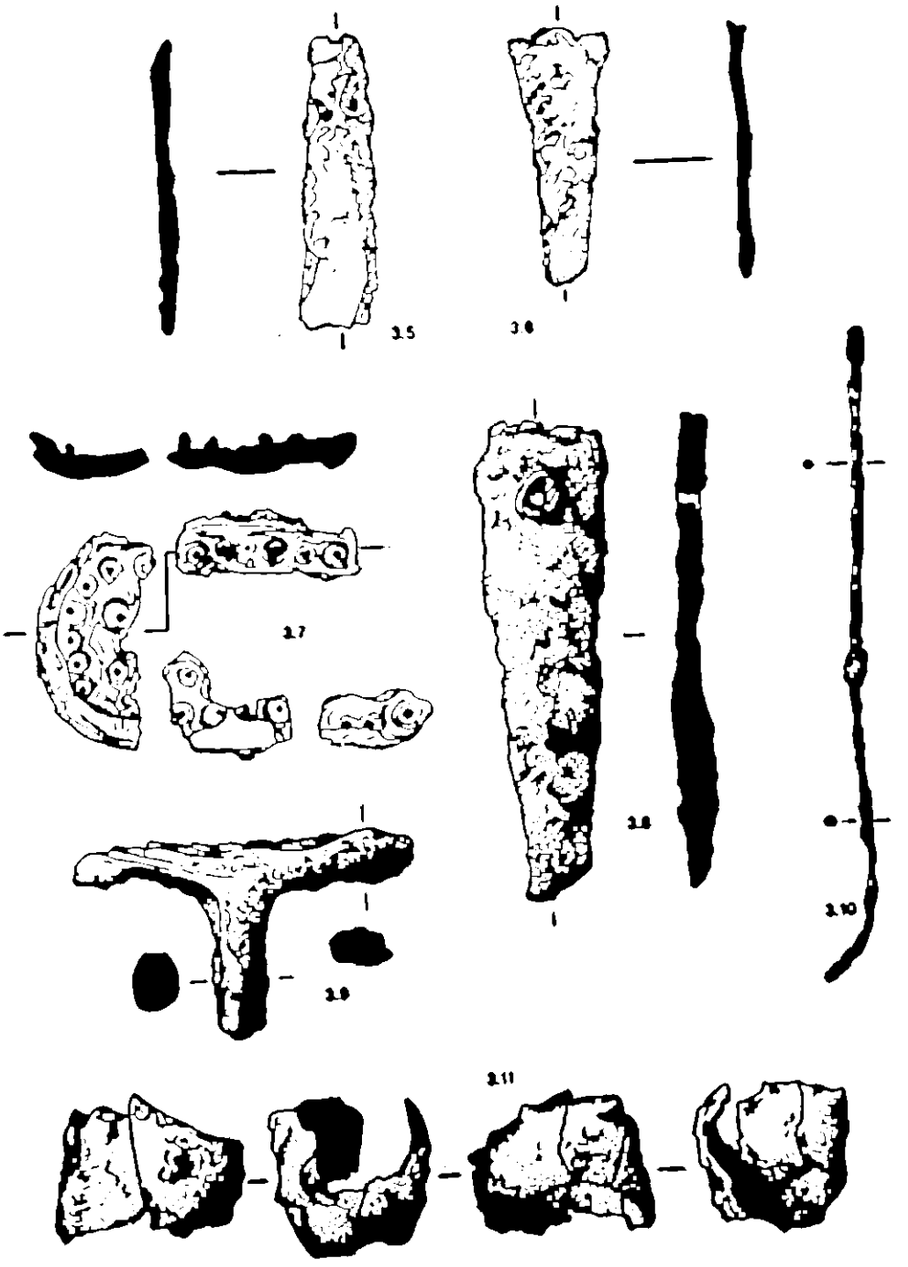
3.98 Iron objects found together on the cobbled surface of 76/9. A rectangular sheet of iron 110mm long folded on itself and several other rectangular pieces of iron 40-60mm long with splayed ends.

3.99 Two rectangular pieces of iron (185mm x 20mm) and (100mm x 45mm) from structure 4.

3.100 Iron sheet (50mm x 105mm) with 3 ? rivets. From beside the Phase 2 furnace.

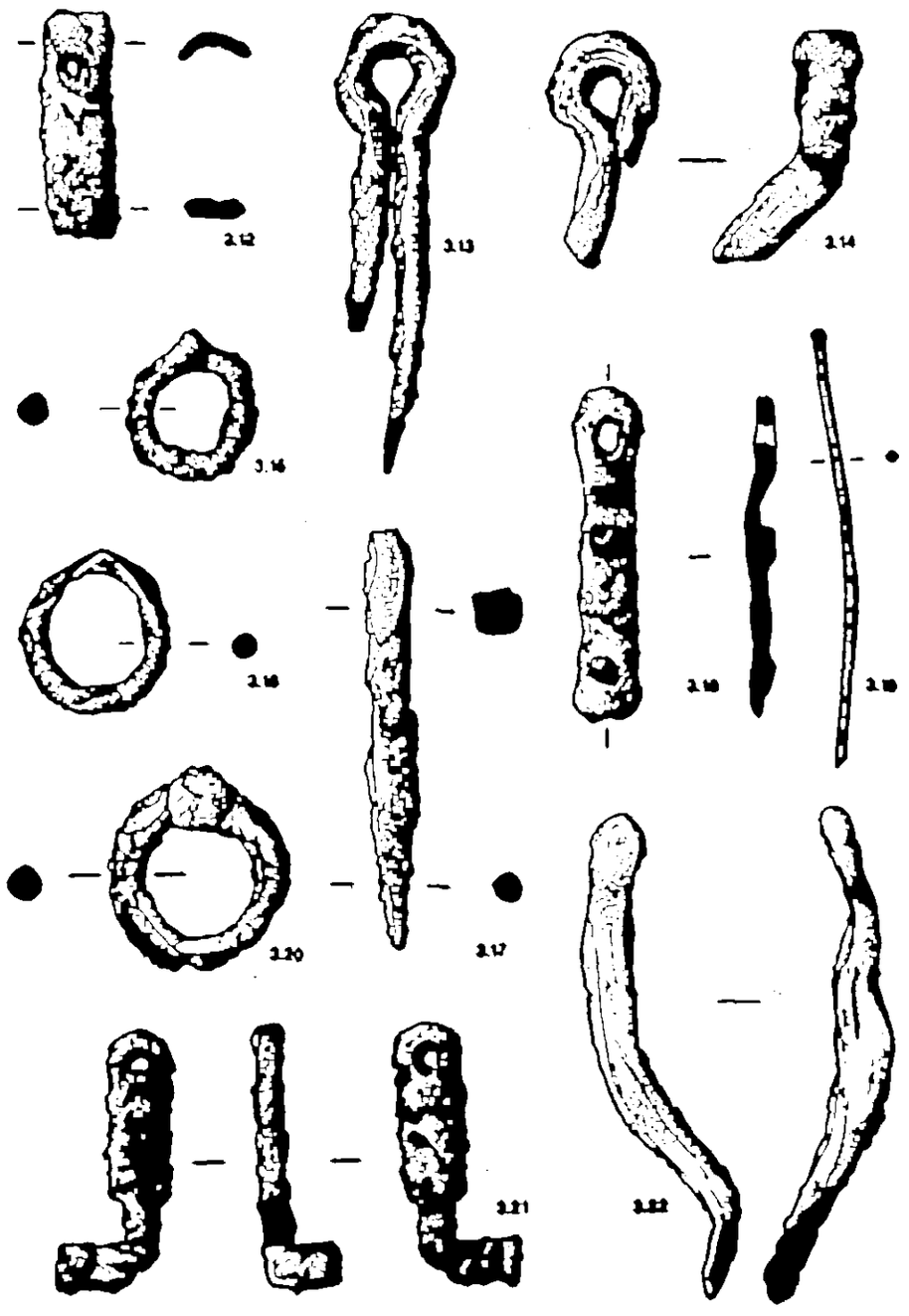
3.101 Iron sheet (65mm x 40mm) bent on itself. From foundation trench of structure 1.

3.102 An iron strap pierced by an iron spike. From disturbed deposits.



2 : 810

Illus 48 Iron objects. Scale 1:2.



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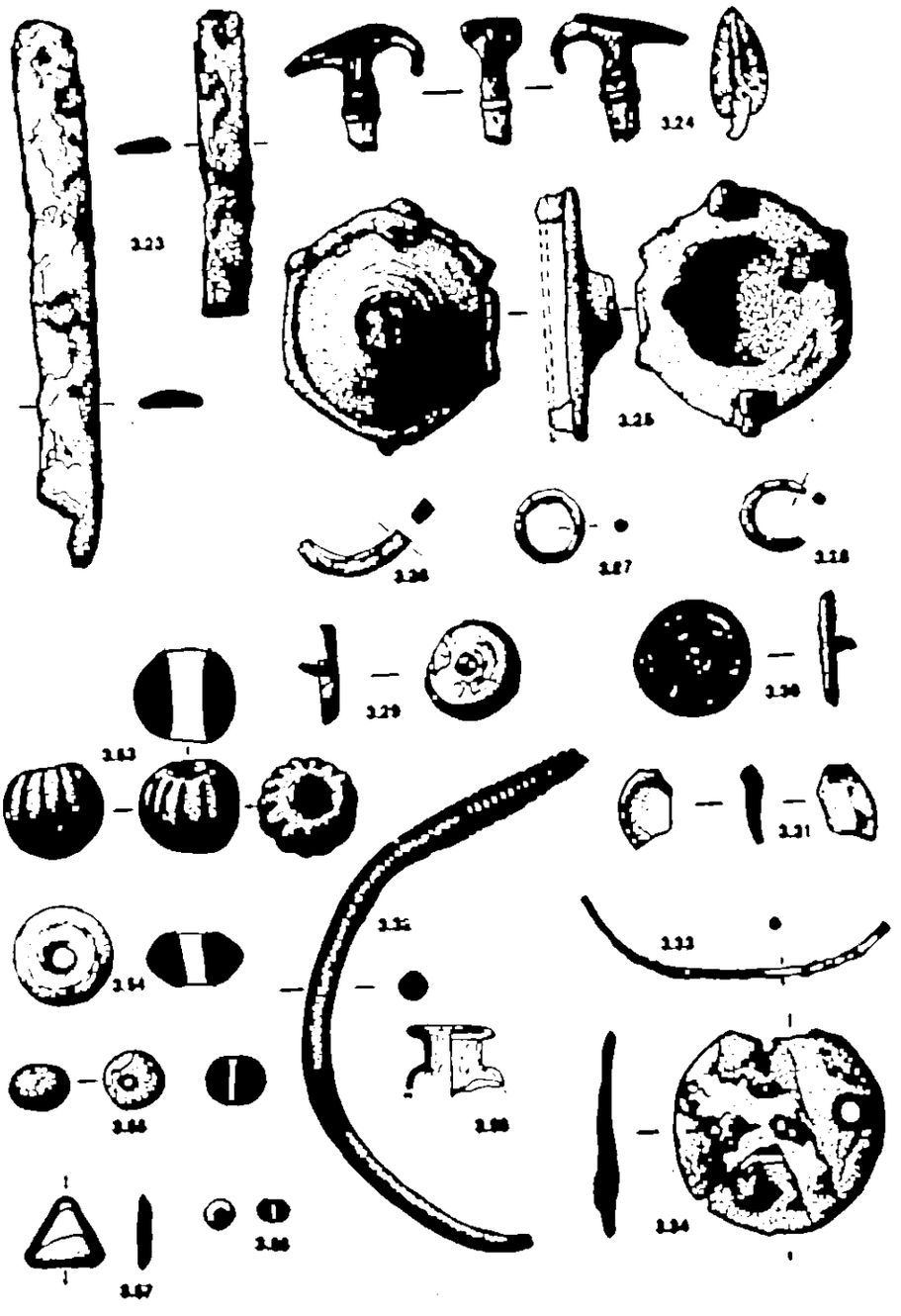
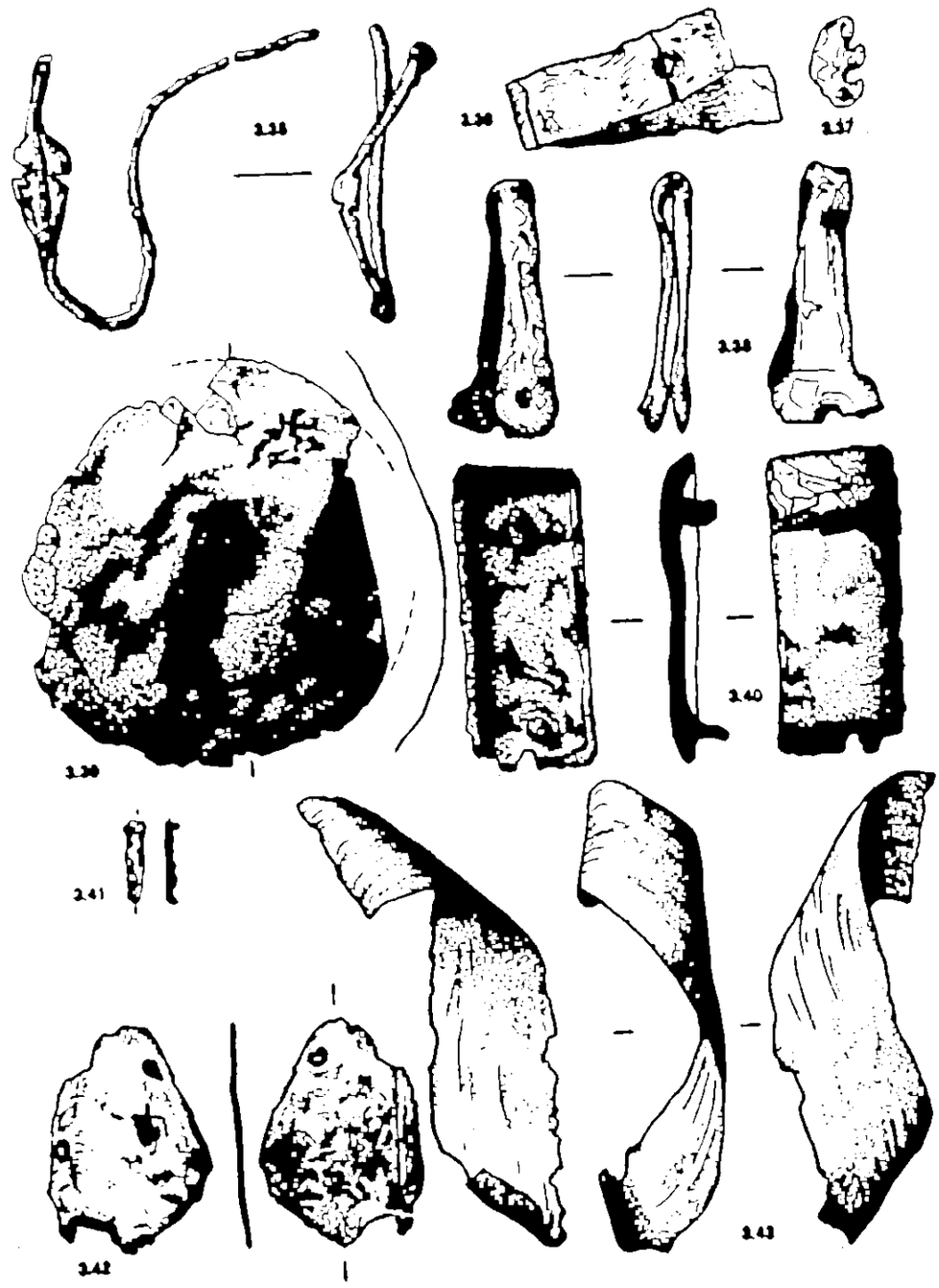
Illus 47 Iron objects. Scale 1:2.



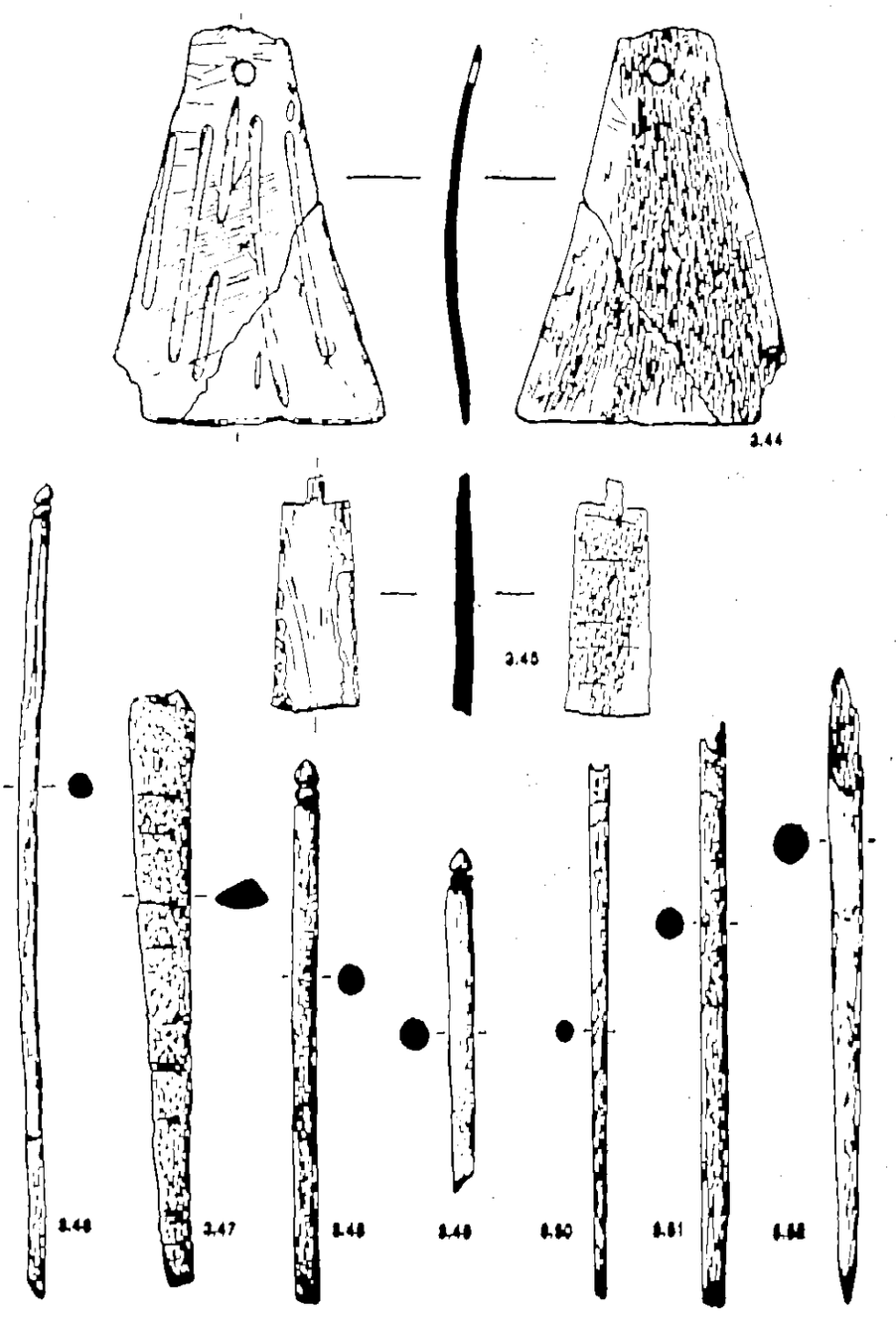
2 : 812

Illus 49 Iron and bronze objects, beads, jewellery and glass.
Scales: 3.23 at 1:4; 3.27, 3.28, 3.54, 3.57 and 3.78 at 1:2;
all others at 1:1.



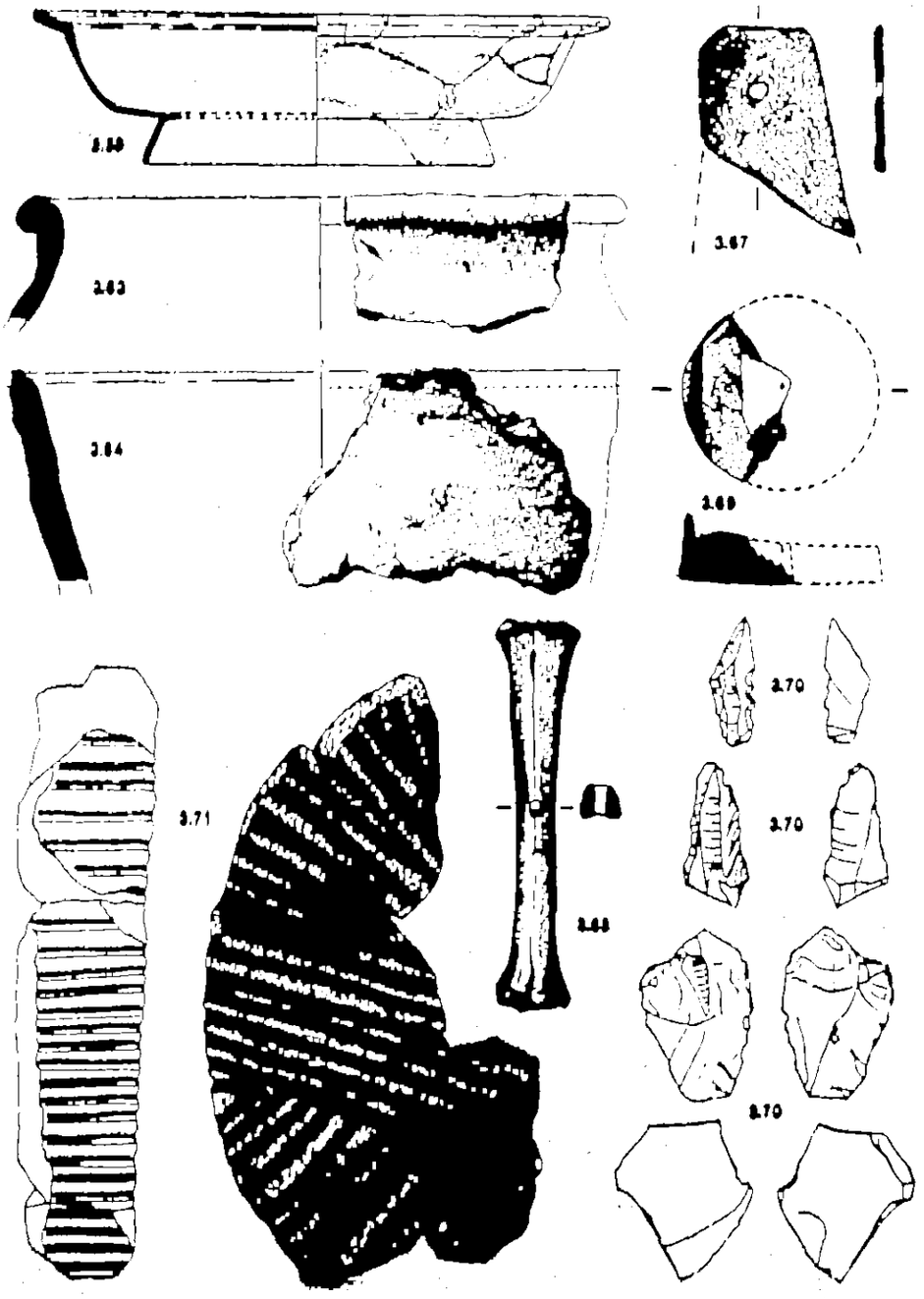
2 : 813

Illus 50 Bronze objects. Scale 1:1 except 3.35, 3.37, 3.39 and 3.46 at 1:2.



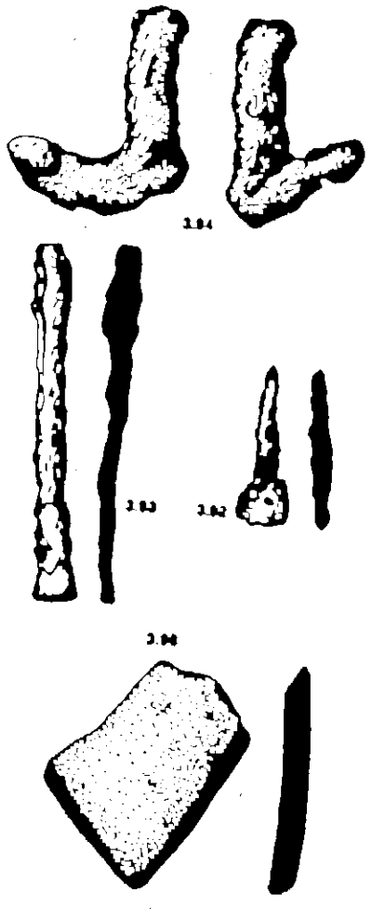
2 : B14

Illus 51 Bone artefacts. Scale 1:1 except 3.44 and 3.45 at 1:2.



2 : 01

Illus 52 Miscellaneous artefacts. Scale: 3.59, 3.63 and 3.64 at 1:3; 3.67-9 at 1:2; 3.70 at 1:1 and 3.71 at 1:4.



2 : C2

Illus 53 Miscellaneous artefacts. Scale 1:2.

ANIMAL BONES

Ian P D Barnetson

Introduction

The animal bones described here were recovered during two seasons of excavation in 1976 and 1977 at the Inveresk Roman vicus. As the principal sites of the Roman occupation of Lowland Scotland are military installations, Inveresk provided an opportunity to investigate the diet and husbandry practices of a domestic settlement albeit one controlled by military interests. Although the vicus was relatively small in area and the bones scattered throughout the deposits it was hoped that this record of faunal remains would at least provide much needed comparative material for this area and perhaps throw some light on vicus-fort relationships.

Material and Methods

All the bones belonged to the Antonine period of occupation of Britain. They were sorted and examined according to deposit but for the purposes of interpretation, as the deposits were laid down in a relatively short space of time, they were regarded as belonging to 4 groups - A, B Bi and C - incorporating the excavator's phases 1-4 as follows: A - Phase 1, a small deposit of ditch material; B - Phase 2, foundation trenches; Bi - material from a furnace probably contemporary with group B; C - Phases 3-4, structures.

It should be noted that the bones from the 1976 season of excavation were sorted and examined in that same year and the results later assimilated into the final report. All the bones of the 1976 season were assigned to groups B and C.

Minimum numbers were calculated using the method given by Chaplin (1971). As the 4 groups were made up of many small deposits which may not all have been mutually exclusive, it was decided to calculate minimum numbers from the bones of each group as if it were a single deposit.

Age estimates were based on the eruption of teeth in situ in mandible fragments using figures by Silver (1969) for eruption of teeth of semi-wild

hill sheep, 19th century cattle and 18th century pigs. As the limb bones were very fragmented age estimates based on the fusion of the epiphyses were not given in tabular form but are taken into account in the discussing using Silver's figures for epiphyseal fusion of bones of modern livestock.

Measurements were taken where possible of the maximum length of the proximal and distal epiphyses of long bones.

As a substantial number of bird bones were recovered these are listed in the results.

Results

The species present and their minimum numbers for all 4 groups are given in Table 5. Age estimates from sheep teeth are given in Table 6, cattle in Table 7 and pigs in Table 8. Measurements are listed at the end of the results.

Table 5

The Species Present and Their Minimum Numbers in Groups A-C

Group	Sheep	Cattle	Pig	Horse	Deer	Bird	Other
A	1	2	2			P	
B	6	21	8			P	Dog, Goat
Bi	1	4	2	1		P	
C	4	16	6	2	P	P	Dog

P = Present

Table 6

Age Estimates from Sheep Teeth in Groups B and C

Group	L/R	Dental Formula	Age Estimate	Wear
B	L	P2P3P4M1M2M3	>3-4 years	Medium
	L	--P3P4M1M2M3	>3-4 years	Heavy
	R	--P3P4M1M2	>40 months	Medium
	R	--P3--M1M2M3	>3-4 years	Heavy
	R	--P3P4M1M2M3	>3-4 years	Medium
	R	--P3P4M1M2M3	c 3 years	Medium
	R	--P3P4M1	>40 months	____
C	L	P4M1M2M3	3-4 years	Medium
	R	--P3P4M1M2M3	>3-4 years	Heavy
	R	--P3P4M1M2M3	>3-4 years	Medium
	L	P3P4M1M2M3	>3-4 years	Light

L = Left
R = Right

Table 7

Age Estimate from Cattle Teeth in Groups A-C

Group	L/R	Dental Formula	Age Estimate	Wear
A	R	----P4M1M2M3	>4-5 years	Medium
	L	--M2M3	>4-5 years	Medium
	R	--P4M1	>42 months	Light
	L	--P3P4M1	>42 months	Medium
B	R	--M1M2M3	>4-5 years	Heavy
	R	M1M2M3	>4-5 years	Heavy
	R	P2P3P4M1M2M3	>4-5 years	Med-Heavy
	L	P3P4M1M2M3	>4-5 years	Med-Heavy
	R	--P4M1M2	>42 months	Medium
	R	P2P3P4--	>42 months	Medium
	L	--P3P4M1M2M3	>4-5 months	Med-Heavy
	R	--P3P4M1M2M3	>4-5 years	Med-Heavy
	R	P4M1M2M3	>4-5 years	Medium
	L	------M1M2	>30 months	Medium
	L	P2P3P4	<18 months	Light
	R	P2P3P4M1M2	>42 months	Light
	L	--P3P4M1M2	>42 months	Light
	L	------M1M2	>30 months	Heavy
	L	M1M2	>30 months	Light
	R	M2M3	>4-5 years	Medium
	R	--P3P4M1M2	>42 months	----
	L	P4M1M2M3	>4-5 years	----
	L	P2P3P4M1M2	>42 months	Medium
C	R	P2P3P4	>42 months	Light
	L	--P3P4M1	>42 months	Medium
	L	P2P3	>30 months	Medium
	R	--P3P4	>42 months	Medium
	L	--P3--	>30 months	----
	R	--P3P4M1	>42 months	Heavy
	L	M1M2	>30 months	Medium

Table 8

Age Estimates from Pig Teeth in Groups A, B and C

Group	L/R	Dental Formula	Age Estimate	Wear
A	L	P2P3P4M1M2	c 1.5-2 years	Light
	R	P4M1M2M3	c 3 years	----
B	R	P4M1M2M3	>3 years	Medium
	R	13----	>6-12 months	----
	R	M1M2	>1.5-2 years	Medium
	R	P3--M1M2	c 1.5-2 years	----
	L	13----	c 6-12 months	----
	L	C P2	1-2 years	----
	?	I112	>2.5-3 years	----
	?	M1M2	>3 years	Medium
C	L	I2I3C P2	>3 years	----
	L	I1I2--CP1P2P3P4M1M2	>2.5-3 years	Medium
	R	C----------M2	>1.5-2 years	----
	R	C P2	>2 years	----
	R	M2M3	c 3 years	----
	R	C P2P3P4M1	>2 years	Medium
	?	C P2P3	>2 years	Light

Measurements

All measurements are in mm. MW = maximum width, ML = maximum length.

Group A - Sheep

MW of proximal epiphysis of radius: 27.5

Group A - Cattle

ML of calcaneum: 138.5
ML of lateral astragalus: 69.0; mesial astragalus: 61.5
MW of distal epiphysis of metacarpal: 58.0
MW of proximal epiphysis of metacarpal: 54.0
ML of 1st phalanges: 58.5, 53.5, 59.0

Group B - Sheep

MW of glenoid cavity of scapula: 28.0, 30.5, 31.0
MW of distal epiphysis of humerus: 25.0, 24.0, 27.5
MW of distal epiphysis of tibia: 24.0, 23.5
ML of lateral astragalus: 22.5; mesial astragalus: 21.5
ML of calcaneum: 51.0
MW of proximal epiphysis of metacarpal: 23.2, 21.0, 20.5
MW of distal epiphysis of metacarpal: 24.8
ML of metacarpal: 138.0
MW of distal epiphysis of metatarsal 21.0, 20.0
ML of 1st phalanges: 34.5, 37.0

Group B - Cattle

MW of distal epiphysis of tibia: 53.0, 53.5
ML of lateral astragalus: 69.0; mesial astragalus: 62.0; lateral: 59.0, mesial: 55.5; lateral: 58.0; mesial: 53.5; lateral: 53.0; mesial: 49.0; lateral 59.0; mesial: 54.0; lateral: 58.0; mesial: 53.0
ML of calcaneum: 119.0
MW of proximal epiphysis of metacarpal: 57.0, 46.0, 59.0, 55.0, 61.5, 65.5, 54.0
MW of distal epiphysis of metacarpal: 60.0, 49.0, 51.5, 53.0, 51.0, 52.5, 50.0, 49.5
ML of metacarpal: 188.0, 171.0
MW of proximal epiphysis of metatarsal: 41.4, 42.2
MW of distal epiphysis of metatarsal: 47.1, 49.1, 52.5, 52.0, 56.5, 45.5
ML of metatarsal: 221.0, 205.0
ML of 1st phalanges: 56.0, 50.0, 52.0, 59.5, 55.0, 54.5, 54.5, 55.5, 64.0, 52.0, 66.5, 57.0, 58.5, 64.5, 55.0, 62.0, 52.5, 53.0, 51.0, 52.0, 58.0, 53.5, 53.5, 52.0, 56.0, 57.5, 54.5, 62.0, 54.0, 65.0, 55.5, 58.5

Base circumference of horn-cores: 131.0, 186.0, 142.0, 121.0, 119.0, 13
134.0, 126.0, 172.0, 190.0, 191.0, 192.0, 107.0, 104.0, 139.0, 137.0, 13

Group B - Pig

MW of distal epiphysis of humerus: 37.5
ML of calcaneum: 71.0
ML of 1st phalanges: 44.0, 43.0

Group Bi - Cattle

MW of distal epiphysis of tibia: 44.5
MW of distal epiphysis of metacarpal: 64.5
MW of distal epiphysis of metatarsal: 48.0
ML of metatarsal: 206.0
ML of 1st phalanges: 56.0, 60.0, 62.5, 54.0

Group Bi - Pig

MW of proximal epiphysis of radius: 26.5, 21.5
MW of distal epiphysis of tibia: 25.0
ML of astragalus lateral: 36.0; mesial: 34.5
ML of 1st phalanges: 37.5, 33.0

Group C - Sheep

MW of proximal epiphysis of radius: 26.5
ML of calcaneum: 51.0
MW of proximal epiphysis of metatarsal: 18.0
MW of distal epiphysis of metatarsal: 21.5
ML of metatarsal: 133.0

Group C - Cattle

MW of glenoid cavity of scapula: 60.0, 73.0
MW of proximal epiphysis of radius: 77.0
MW of distal epiphysis of tibia: 52.5
ML of calcaneum: 127.5, 115.0

MW of proximal epiphysis of metacarpal: 50.0, 61.5, 62.0, 54.5, 49.0, 52.0, 57.0
MW of distal epiphysis of metacarpal: 64.0, 49.0, 67.0, 58.0, 53.0, 49.0, 50.5, 53.0, 55.5
MW of distal epiphysis of metatarsal: 46.5, 47.0, 45.5, 47.5, 49.0, 49.5, 48.5
ML of 1st phalanges: 67,0, 54.0, 60.5, 56.5, 55.5, 55.0, 59.0, 60.0, 60.0, 60.0
Base circumference of horn-cores: 102.0, 157.0, 95.0, 92.0, 113.0

List of Identified Bird Bones

Group A

Coracoid - Goose

Group B

Coracoid x 2 - Goose
Humerus x 2 - Goose
Radius - Domestic Fowl
Ulna x 3 - Domestic Fowl and Goose (2)
Carpometacarpus x 3 - Goose
Femur - Domestic Fowl
Tibiotarsus x 4 - Domestic Fowl and Goose (3)
Tarsometatarsus - Goose

Group Bi

Coracoid x 2 - Domestic Fowl and Teal
Ulna - Goose

Group C

Humerus - Goose

Femur x 2 - Domestic Fowl
Tibiotarsus x 2 - Goose
Tarsometatarsus - Domestic Fowl

Discussion

The bones are discussed here according to group in reverse chronological order, ie starting with C which is slightly later material than B.

In Group C there were 64 identifiable pieces of sheep, 107 pig and 458 of cattle. All the bones of the skeleton of cattle and sheep were present with no one bone predominant. There were more pig mandibles and metapodia than any other bone of the pig skeleton but in such a small sample it is difficult to assess the significance of this. It is possible that pigs were butchered on site and the jointed carcase transported elsewhere for consumption but the evidence for this is very tenuous and it is more likely that the frequency distribution reflects the differential preservation of the pig skeleton as has been noted on other sites.

There was evidence that a number of immature animals died or were killed on site, sheep less than 10 months and less than 20 months old and pigs less than one year old. In the case of sheep these may be natural losses as the carcase would have provided very little meat but pigs under one year may be regarded as suitable for slaughter for tender pork. The youngest cattle killed were less than 2.5 years old and a few had been slaughtered at 2-3.5 years. Signs of butchery and defleshing were noted on a number of bones mostly those of cattle. This must reflect carcase size as suggested by Grant (1975) in that beef would be removed from the carcase by a greater number of cuts than pieces of lamb or pork.

There were signs of disease on only 2 bones, in the form of mild exostosis, on a cattle first phalanx and distal metatarsal. This may be evidence of foot-rot.

Both horned and hornless sheep were present in the sample though the latter was represented by one cranial fragment only. The Romans are accredited with introducing a hornless "breed" of sheep in Britain (Ryder 1976).

Besides sheep, pig and cattle there were also horses present in Group C - at least 2 individuals. Their bones were noticeably more friable and "powdery" than those of the other species and apart from a few fragments of radius they were mainly cranial fragments, teeth and metapodia. In view of

the condition of these bones it would seem probably that the remainder of these two horse skeletons have disintegrated in situ but it is possible that the heads and feet of these animals were utilised, for example, boiling for fat or glue. Even moderately boiled bone loses organic matter in the process and becomes brittle and porous which exactly describes the horse bones in Group C with the exception, of course, of the teeth.

A few fragments of antler and antler tine and a deer first phalanx were also recovered from Group C.

Some dog bones were found in deposit 2.5 and as one femur was intact it was possible using Harcourt's method to derive an approximate shoulder height of 40.4cm for this individual (Harcourt 1974).

Bones of domestic fowl and goose were found in several deposits. The frequency of the goose bones at Inveresk would seem to argue for this being a domestic bird though the bones were much smaller than those of either domestic goose or its wild ancestor the Grey Lag. The were, however, similar to those of smaller wild geese such as the Pink-footed and White-fronted species. These two species are present day winter visitors to Scotland, the Pink-footed in SE Scotland and the White-fronted on the West coast. Virtually all the goose bones at Inveresk compared well with the White-fronted species.

Before leaving Group C it should be noted that one piece of worked bone was recovered. This was a sheep metacarpal, distal epiphysis unfused, which had a hole bored through the shaft to give a toggle effect.

Group B yielded 88 identifiable fragments of sheep, 122 of pig and 539 of cattle. Once again all the bones of the skeleton were present for all 3 species. A few sheep and cattle had been killed before the age of 3-3.5 years but the majority of bones belonged to older animals. Similarly pigs were killed at less than two years or at full maturity.

Butchering marks were noted on a number of bones, all belonging to cattle apart from one sheep innominate which had 3 holes punched on the ilium close to the acetabulum. A fragment of cattle cranium had a small cut mark on the frontal bone near the right horn-core. It is most unlikely that this blow killed the animal and it was probably an attempt to begin severing the horn from the skull.

Group B produced the only evidence of goat at Inveresk. A piece of cranium and metacarpal were recovered from deposit 1.10 (1977).

There were bones of two dogs in deposits 2.4 and 3.4, the former with an approximate shoulder height of 41.2cm, similar in size to the dog in Group C. Dogs are frequently found in Roman deposits in Britain but neither of the Inveresk dogs can be said to belong to the small variety or "lap dog" noted on Roman sites. The Roman fort at Cramond near Edinburgh also produced evidence of dog - a fragment of cranium of a "terrier-sized" individual (Clarke 1974, 223).

Bird bones were present in 3 deposits in Group B. There were a few bones of domestic fowl but the majority of fragments belonged to goose. As mentioned in the discussion of Group C these all compared favourably with the smaller wild species of goose, the White-fronted, except for one fragment of distal humerus which was similar to the Grey Lag.

Group Bi comprised bones from the furnace area and is probably contemporary with Group B. Sheep, pig, cattle and horse were identified, the former 3 being represented by all the bones of the skeleton and the latter by a first phalanx only. Of the identifiable pieces there were 12 of sheep, 32 of pig and 91 of cattle. Three fragments of cattle bone had been burnt, a proximal humerus, proximal metacarpal and 3rd phalanx. All the cattle bones belonged to mature animals as did those of sheep with the exception of a metatarsal which came from a lamb probably less than one year old. The pig bones showed the presence of both young and old animals. Although this group contained a relatively small number of identifiable fragments it was obvious from the frequency of the kinds of bones that the remains of whole carcases were being dealt with or discarded on site.

Chicken and geese were also present in these deposits but more interesting was the presence of Teal - a small wild duck. Teal would have been available in the vicinity of Inveresk as the nearby River Forth in places provides an ideal habitat for marsh birds and waders and dabbling ducks such as Teal. In this respect it is perhaps surprising that no more wild species of edible birds were found at Inveresk.

Group A, the smallest, comprised bones from 5 deposits all excavated in 1977. Of the identifiable pieces recovered 3 were of sheep, 9 of pig and 72 of cattle. All the bones of the skeleton were present for cattle. With the exception of one cattle radius with distal epiphysis unfused all the cattle limb bones had fused epiphyses. Mandible fragments with teeth erupted and worn in situ indicated that one cow was kept beyond the age of 5 years, one pig was killed at 1.5-2 years and another at about 3 years of age.

One bird coracoid bone was recovered identifiable as goose similar to the small wild species.

In summary the spatial distribution of different species and types of bone is consistent among the 4 groups at Inveresk, with carcases being prepared and eaten on site and the bones being discarded in ditches and around structures. The pattern of animal slaughter, in as much as it can be assessed on a small site, appears to be consistent with a few animals, cattle and sheep, being killed when just fully grown, at an age when they would yield economic carcase weights, and the rest being kept beyond the age of 4 years. Tooth wear has to be used with caution as an indicator of age as different types of grazing take their toll on ungulate tooth enamel. However at Inveresk, occupied for such a short time, one may assume that the grazing was uniform and as several cattle and sheep teeth show signs of heavy wear we can say that a number of animals are kept until quite old. These older animals were probably breeding stock or draught animals.

Cattle were obviously the main source of meat as might be expected from a Roman site, with sheep and pigs kept in smaller relatively similar numbers. Pigs are often kept as a stand-by source of meat because they are extremely fertile, have large litters from which some can be killed when young, some fattened and some kept for breeding, and they do not require much tending. Older animals can usually scavenge a living around settlements and can be slaughtered to supplement the diet during lean seasons such as winter.

The Inveresk cattle would have been kept for by-products such as hides, horn, milk and fat. A number of horn-cores were found on the site especially in Group B. Dairy herds as such were not a feature of the Roman economy (Walker 1978) and cows were not kept "in milk" but were

used as work animals like oxen. The measurements of cattle horn-cores and first phalanges both formed 2 definite clusters and it is likely that these present bulls, a small group, and cows - or castrates.

The horses were either draught or riding animals and although no measurements could be taken the dimensions of the bones would seem to argue for these being native ponies. As noted already their presence on the vicus may have had something to do with carcase utilisation only.

The Inverask vicus, therefore, probably functioned as a small self-sufficient settlement keeping a variety of livestock and there was apparently little need to supplement the diet by hunting. One might have expected to find more evidence of animals, principally cattle and sheep, killed in the prime meat age ranges. It is possible that animals were exported by the vicus for slaughter and consumption elsewhere, the inhabitants killing only those needed to keep themselves in fresh meat. However, it is unwise to attempt to draw conclusions from such a small sample. The inhabitants of Inverask certainly kept a number of "old" animals but as has been suggested these were probably regarded as a valuable source of other products besides meat.

MOLLUSCAN REMAINS

Anne Kimble Howard

This report is based on a small sample of the molluscan remains from the excavation. Table 9 gives an indication of the represented species per sample bag, Table 10 provides an indication of species present in each phase of the site. All species are edible. Ostrea edulis and Mytilus edulis predominate the sample.

Mytilus edulis is very common from high in the intertidal zone to depths of a few fathoms, attached to rocks and piers, within harbours and estuaries, and on rocky shores of the open coast. As the specimens from the site are small in size, on average 3-4cm in length, it is probably that they were collected from a level high in the intertidal zone, possibly from artificial beds.

Cerastoderma edule inhabits clean sand muddy sand or gravel burrowing to a depth of no more than 5cm from mid-tide level to just below the low water mark. It is often found with Mytilus edulis. As only one specimen was included in the sample, it is assumed that the species did not play a large part in the diet of the site.

Ostrea edulis lives offshore from low water to between 27-83m on firm bottoms of mud, sand rocks, silt and man-made collectors. All of the examples in the samples are between 7-10cm long.

The sample included one example each of Patella vulgata, Nucella lapilus, and Buccinum undatum. All are littoral species common to the British Isles. All 3 species were probably accidentally incorporated in the collection of Ostrea edulis and Mytilus edulis.

Based on growth lines of both Ostrea edulis and Mytilus edulis, a collection of both species in winter to early spring is indicated. The relatively slight size differentiation among the specimens involved indicates size specific collection.

Table 9

Identification of species per sample bag

5.1	9	Ostrea edulis
1.7	25	Mytilus edulis Patella vulgata
3.5	32	Mytilus edulis
2.6	33	Mytilus edulis
3.6	35	Mytilus edulis
1.11	49	Patella vulgata
2.8	61	Mytilus edulis
3.7	77	Mytilus edulis
3.7	76	Ostrea edulis Mytilus edulis Buccinum undatum
3.6	75	Mytilus edulis
3.6	76	Mytilus edulis
3.6	68	Cerastoderma edule
3.6	67	Mytilus edulis
3.5a	65	Ostrea edulis Mytilus edulis
7.7	64	Nucella lapillus
4.2	38	Ostrea edulis
3.4	37	Ostrea edulis
2.3	36	Ostrea edulis
5.2	35	Ostrea edulis
3.4	32	Ostrea edulis Mytilus edulis
4.3	20	Mytilus Edulis
3.3	19	Ostrea edulis Mytilus edulis
5.2	17	Ostrea edulis
4.3	8	Ostrea edulis

Table 10

Species represented in each phase

Phase	1	2	3	4	5
Ostrea edulis	X	X	X		X
Mytilus edulis	X	X		X	X
Cerastoderma edule	X				
Buccinum undatum	X				
Nucella lapilus		X			
Patella vulgata					

CHARCOAL

Alan J Hayes

A selection of charcoal samples from the excavations at Inverask was examined but much of it proved to be juvenile wood so that many of the identifications can only be tentative. Taken together, however, the samples would appear to indicate a cool and wet climate - rather like the present prevailing climate. These conditions favour the development of a lowland mixed deciduous forest with a variety of species and usually with an understorey of hazels. The impression gained from looking at the material is that the species present on site probably reflect a lack of other more suitable types of timber for building construction.

Table 11

1.	Phase 2	Structure 2	- hazel - oak - birch - poplar	(corylus sp.) (quercus sp.) (betula sp.) (populus sp.)
2.	Phase 2	Structure 3	- hazel - birch	(corylus sp.) (betula sp.)
3.	Phase 2	Structure 3	- birch - alder	(betula sp.) (alnus sp.)
4.	Phase 2	Structure 3	- alder	(alnus sp.)
5.	Phase 3/4	Posthole of Structure 8	- hazel - alder	(corylus sp.) (albus sp.)
6.	Phase 5	(Disturbed)	- oak - hazel -?cherry	(quercus sp.) (corylus sp.) (prunus sp.)
7.	Phase 2	Building 3	-?ash	(fraxinus sp.)
8.	Phase 2	Structure 1	- birch - hazel	(betula sp.) (corylus sp.)
9.	Phase 2	Beside Structure 1	- hazel - alder	(corylus sp.) (alnus sp.)
10.	Phase 2	Beside Structure 2	- alder	(alnus sp.)
11.	Phase 3	Cobbled Lane in 77/1	- oak	(quercus sp.)
12.	Phase 2	Furnace	- hazel	(corylus sp.)
13.	Phase 2	Beside Structure 1	- cherry or thorn	(prunus or crataegus sp.)
14.	Phase 2	Beside Structure 1	- hazel	(corylus sp.)
15.	Phase 3	Cobbled Lane in 77/1	- oak	(quercus sp.)
16.	Phase 2	Beside Structure 1	- hazel	(corylus sp.)
17.	Phase 2	Beside Structure 1	- hazel	(corylus sp.)