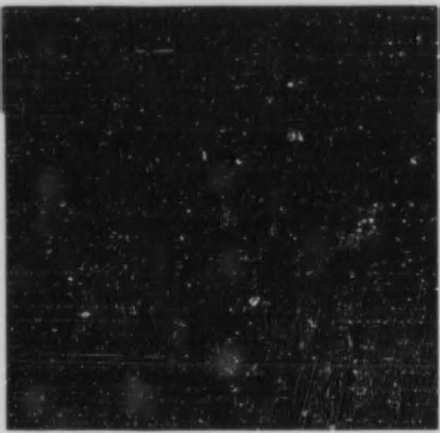
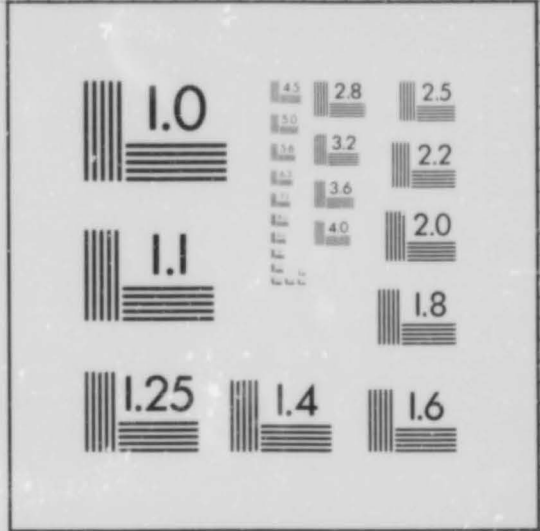


10 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890

8 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

6 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

4 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890



2.5 lp/mm

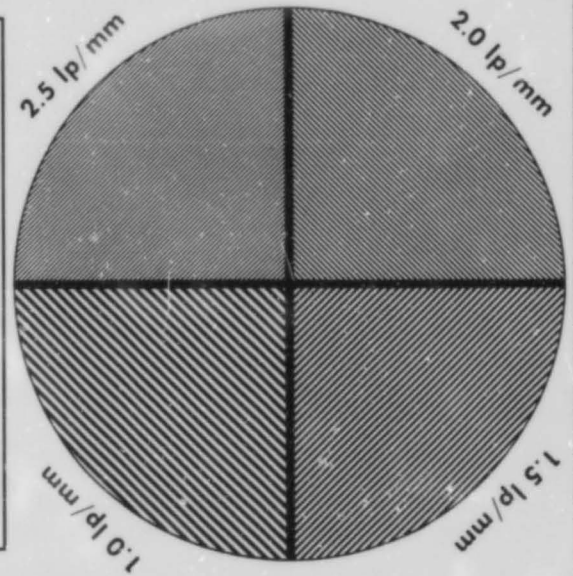
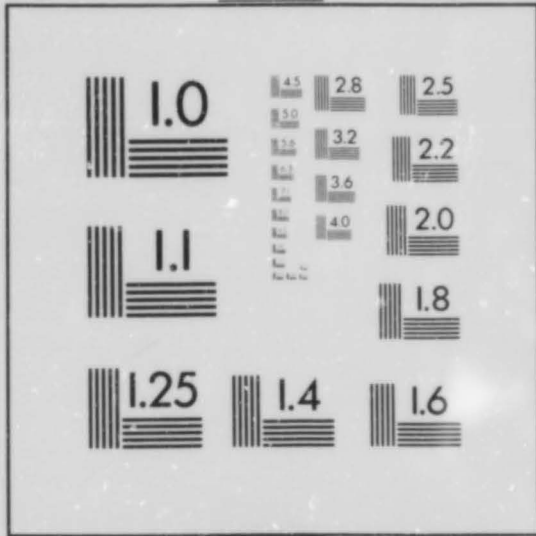
100mm

10 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890

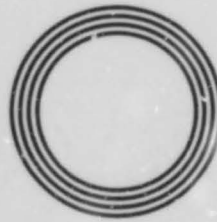
8 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

6 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

4 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890



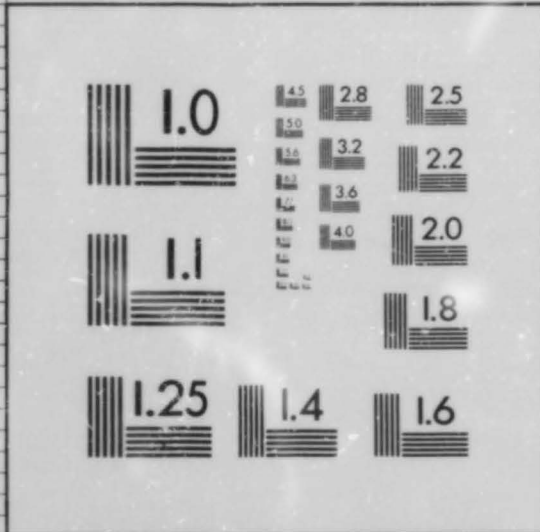
1.0 lp/mm



1.0 lp/mm



IMAGE SYSTEM
 TEST TARGET
 U.S. DEPARTMENT OF COMMERCE
 PATENT AND TRADEMARK OFFICE

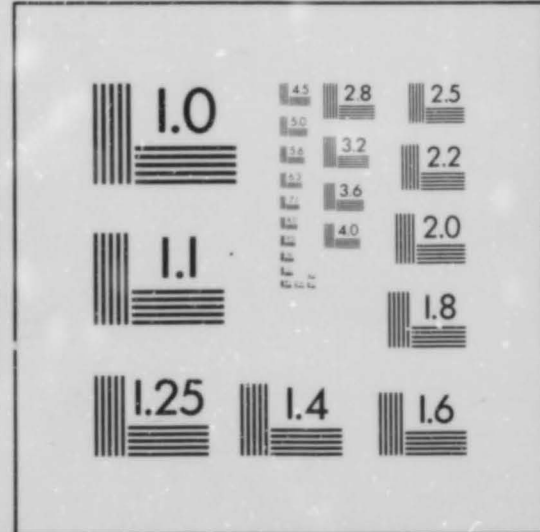


10 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890

8 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

6 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890

4 PT. ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz1234567890



EAST ANGLIAN ARCHAEOLOGY
REPORT NO. 72

Published by
Field Archaeology Division,
Norfolk Museums Service,
Union House,
Grossenhall,
Dereham,
Norfolk NR20 4DR

in conjunction with
The Scole Archaeological Committee

Editor: Peter Wade-Martins
Managing Editor: Jenny Glazebrook

Scole Editorial Sub-committee:
David Buckley, County Archaeologist, Essex Planning Department
Keith Wade, County Archaeological Officer, Suffolk Planning Department
Peter Wade-Martins, County Field Archaeologist, Norfolk Museums Service
Stanley West

Set in Times Roman by Joan Daniells using ® Ventura Publisher
Printed by

©FIELD ARCHAEOLOGY DIVISION, NORFOLK MUSEUMS SERVICE

ISBN 0 905594 15 0

For details of *East Anglian Archaeology*, see last page

This volume is published with the aid of a grant from the Historic Buildings
and Monuments Commission for England

Cover:

Excavation at Redcastle Furze in progress, facing west. Structure 6 adjacent
to the street lies in the foreground, Red Castle is beyond the limit of excava-
tion in the background.

Excavations at Redcastle Furze, Thetford, 1988-9

by Phil Andrews

with contributions from
H.M. Appleyard, Marion Archibald,
Elisabeth Crowfoot, Blanche M.A. Ellis,
Graeme Lawson, Alexandra Little,
Jacqueline I. McKinley, Peter Murphy,
Rebecca Nicholson, Tristan Wilson

and illustrations by
Steven Ashley, David Fox

East Anglian Archaeology
Report No.72, 1995

Field Archaeology Division
Norfolk Museums Service

Contents of Microfiche

1:A.4	Table of Contents	1:D.7	Animal bone: abbreviations used in tables
1:A.5-9	Non-ferrous small finds	1:D.8-14	Animal bone tables
1:A.10-14	Ferrous small finds	1:E.1-13	Animal bone tables
1:B.1-14	Ferrous small finds	1:F.1-9	Animal bone tables
1:C.1-7	Ferrous small finds	1:F.10-11	Worked stone
1:C.8-13	Flint	1:F.12-14	Brick and tile
1:D.1-6	Bone musical instrument		

Non-Ferrous Metal Objects

Period II

- 323: Copper alloy fragment. s.f. 188.
844: Copper alloy pin-head, broken with grooves on the shaft;
?Roman. s.f. 1319.

Period IV2

- 28: Copper alloy thin sheet. s.f. 149.
917: Lead droplet, weight 39gm. s.f. 1126.
1267: Lead weight, 110gm. s.f. 587
1340: Lead droplet, weight 3gm. s.f. 780.

Period IV3

- 382: Lead droplet, weight 17gm. s.f. 338.
382: Lead pot-mender, ?Shelly Ware. s.f. 337.
383: Lead droplet, weight 5gm. s.f. 187.
743: Lead droplet, weight 4gm. s.f. 232.
753: Lead droplet, weight 4gm. s.f. 272.
947: Lead droplet, weight 5gm. s.f. 318.
1215: Lead droplet, weight 1gm. s.f. 753.
1215: Copper alloy fragment of hooked tag with decorative cut-outs;
Late Saxon, s.f. 754.
1215: Copper alloy fragment with three rivets, s.f. 844.
1215: Copper alloy stud with round head and short stem, s.f.
382.
1341: Copper alloy disc, hollowed on one side; broken at top;
?pendant. s.f. 1007.

1341: Seven lead droplets, total weight 86gm. s.f.s 932, 1008 and 1009.

Period VI

40: Copper alloy ?belt stiffener with two rivets. s.f. 139.

Period VII

1102: Copper alloy ornamental stud; sheet pressed into domed-shape; central hole for stud at top; medieval, s.f. 390.

1102: Copper alloy vessel rim; probably medieval, s.f. 395.

1102: Copper alloy ring, s.f. 435.

1102: Copper alloy disc with crude hole punched through the centre, s.f. 391.

1103: Copper alloy rivet, s.f. 350.

1103: Copper alloy fitting; hooked at one end, hole at the other; probably medieval, s.f. 351.

1103: Copper alloy strip, s.f. 380.

1103: Five lead droplets; total weight 75gm, s.f. 372.

1109: Copper alloy patch with six pairs of holes around edge; corner broken, s.f. 529.

1142: Folded lead, s.f. 354.

1142: Copper alloy sheet; folded with holes around the edge, s.f. 359.

1143: Copper alloy nail with round head and square shank, s.f. 345.

1143: Copper alloy fitting, s.f. 332.

1143: Copper alloy fragment, s.f. 333.

1143: Lead weight with central hole; 34gm, s.f. 335

1143: Lead ?token, s.f. 347.

1143: Lead musket ball, s.f. 349.

- 1143: Lead droplet; weight 17gm, s.f. 327.
- 1154: Folded lead, s.f. 521.
- 1210: Copper alloy buckle with rectangular frame; modern, s.f. 526.
- 1221: Copper alloy penannular ring with tapering ends, s.f. 537.
- 1295: Lead droplet; weight 2gm. s.f. 594.
- 1305: Folded tin, s.f. 628.
- 1305: Copper alloy circular disc; bent with scar on one side, s.f. 621.
- 1334: Lead droplet; weight 19gm, s.f. 768.
- 1584: Lead pot-mender; ?medieval unglazed coarseware, s.f. 809.
- 1662: Lead fragment, s.f. 368.
- 1662: Lead droplet; weight 6gm, s.f. 362.
- 1662: Copper alloy fragment; decorated with small punched annulets; medieval, s.f. 363.
- 1662: Copper alloy fragment of hook tag; four holes visible; Late Saxon, s.f. 339.
- 1662: Copper alloy strip; folded round so ends are butted; s.f. 1089.
- 1662: Copper alloy object; folded several times, s.f. 361.
- 1673: Three lead droplets; total weight 40gm, s.f.s 975, 1059 and 1240.
- 1719: Copper alloy fitting, s.f. 1336.
- 1737: Copper alloy fitting with central hole punched out and raised, s.f. 375.
- 1741: Copper alloy folded sheet, s.f. 367.
- 1741: Copper alloy stud; modern, s.f. 371.
- 1741: Lead droplet; weight 35gm, s.f. 1066.
- 1912: Lead fragment, s.f. 1283.

Modern

- 845: Copper alloy strip, s.f. 1328.
845: Lead strip, folded and twisted, s.f. 279.
1304: Copper alloy bar; broken, has a hole at each end, s.f. 615.
1304: Copper alloy ring; modern, s.f. 612.
1592: Copper alloy sheet; rounded with one hole, s.f. 1316.

Unstratified

- 1: Copper alloy strip, s.f. 1328.
1: Five lead droplets; total weight 54gm, s.f.s 1001 and 1329.
2: Fifty-five lead droplets; total weight 313gm, s.f.s 2, 4, 5, 6, 8, 13, 19, 22, 23, 26, 27, 28, 30, 31, 32, 33, 36, 37, 38, 42, 43, 44, 45, 47, 49, 50, 51, 53, 54, 55, 56, 57, 58, 60, 70, 72, 73, 74, 75, 76, 77, 78, 79, 81, 82, 83, 103, 104, 106, 109, 111, 117, 118, 119, 134.
2: Copper alloy ring; modern, s.f. 15.
2: Copper alloy disc; thin with pressed decoration; modern, s.f. 115.
2: Copper alloy disc; thin with pressed decoration; modern, s.f. 115.
2: Copper alloy fragment with four stamped holes at one end; ?back plate for draw handle; post-medieval, s.f. 7.
2: Copper alloy buckle plate with stamped dot decoration, s.f. 120.
2: Copper alloy fragment with two holes, s.f. 108.
2: Copper alloy fitting with central hole and two rivets, s.f. 11.
2: Copper alloy crescent-shaped stud, s.f. 85.
2: Copper alloy ring; small and thin, s.f. 65.
2: Copper alloy fragment of sheet, s.f. 69.
2: Copper alloy button top with attachment scar on inner

face, s.f. 68.

852: Copper alloy fitting; folded, s.f. 456.

U/S: Copper alloy nail with round head and square shank,
s.f. 468.

U/S: Copper alloy ring; very small, s.f. 1327.

Iron Objects.

Period 1

- 24: Strip with square section, s.f. 147
169: ?Bolt with round head, s.f. 146
1315: ?Nail shank with square section, s.f. 769

Period II

- 202: Object, tapering at one end, s.f. 151.
202: Hinge with hanging eye, s.f. 150.
560: Nail shank with square section, s.f. 924
677: ?Nail shank with square section, s.f. 216
794: Rectangular bar, s.f. 269.
794: Metal sheet, s.f. 258.
794: Object with broken tip and rectangular section, s.f. 257.
1298: Comb-tooth with round section.
1598: Object which is long and thin; hooked at one end; bent and round in section, s.f. 1317.
1637: Rectangular shaped bar, s.f. 992.
1661: Object with rectangular section, s.f. 970.
1785: Object, s.f. 1087.
2124: Nail with round head and shank, s.f. 1303.

Period III

- 2121: Nail with round head and shank, s.f. 1296.

Period IV1

- 620: Rectangular buckle frame, part broken; no pin, s.f. 207.
715: ?Staple; rectangular-shaped with broken arms, s.f. 1115.
871: Four nails: three with square shank and one with round shank, s.f. 1117.

- 871: Rectangular object, s.f. 1118.
976: Building staple; U-shaped with straight arms, s.f. 1112.
1241: Comb-tooth with rectangular section, s.f. 915.
1726: Comb-tooth with rectangular section, s.f. 1085.
1758: ?Broken pin, s.f. 188.
1776: ?Comb-tooth with rectangular section, s.f. 1133.

Period IV2

- 174: Two objects, one with a square section and one which is flat; s.f. 148.
256: Comb-tooth with rectangular section, s.f. 217.
767: Rectangular-shaped object; s.f. 232.
913: Tapering object with rectangular section; s.f. 458.
917: Nail with round head and shank, s.f. 1127.
1066: Horseshoe nail, s.f. 1116.
1066: Object, s.f. 114.
1145: Nail with square head, s.f. 479.
1146: Horseshoe nail with bent shank, s.f. 493.
1214: ?Nail shank, badly corroded, s.f. 747.
1214: Object; slightly curved with rectangular section, s.f. 731.
1214: Small horseshoe nail, s.f. 730.
1214: Hook, probably modern; round section, s.f. 729.
1214: Twelve nails: six horseshoe and six with round heads, s.f. 726.
1214: Six nails: three with round heads, three are shanks only, s.f. 727.
1214: Fragment of bar with rectangular section, s.f. 746.
1214: Comb-tooth with rectangular section, s.f. 789.
1214: Horseshoe nail, s.f. 605.
1214: Blade, Type 1, s.f. 604.

1214: Horseshoe nail, s.f. 606.

1214: Nail with round head and shank, s.f. 608.

1214: Fragment with rectangular section, s.f. 728.

1214: Object; broken in centre and rectangular in section, s.f.
732.

1214: Thin strip; ?wire with round section, s.f. 788.

1214: Object; slightly tapering and rectangular in section, s.f.
830.

1216: Object; rectangular in section; s.f. 681.

1216: Rove, s.f. 763.

1216: Nail with round head and shank, s.f. 907.

1216: Two small nail shanks, s.f. 906.

1269: Nail with large round head, s.f. 684.

1269: Rove and clench bolt, s.f. 683.

1340: Object with rectangular head, s.f. 682.

1340: Object with rectangular section, s.f. 779.

1347: ?Comb-tooth with round section; possibly broken, s.f. 759.

1410: Flat sheet, s.f. 725.

1538: Horseshoe nail, s.f. 919.

1617: Nail shank, s.f. 917.

1705: Nail with square head and shank, s.f. 954.

1740: Comb-tooth with rectangular section, s.f. 1181.

1821: Comb-tooth with round section, s.f. 1182.

1890: Thickish object; tapering one end and rising the other end,
s.f. 1172.

2017: Object angled down to tip at both ends; s.f. 1286.

2120: Hinge pivot, s.f. 1313.

2120: Bolt with square head and shank, s.f. 1305.

Period IV3

- 268: Object, flattish but widening at one end, s.f. 167.
- 268: Nail with square head and shank, s.f. 164.
- 268: Two comb-teeth with round sections, s.f. 166.
- 268: Horseshoe nail, s.f. 155.
- 336: Blade, Type 3, s.f. 842.
- 382: Rove and clench bolt, s.f. 175.
- 382: Nail shank with square section, s.f. 174.
- 382: Nail with large head and square shank, s.f. 180.
- 382: Nail with square head and shank, s.f. 172.
- 382: Comb-tooth with square section, s.f. 178.
- 382: Nail with round head and shank, s.f. 176.
- 382: Nail with round head and shank, s.f. 179.
- 382: Nail with round head and shank, s.f. 177.
- 382: ?Nail shank with square section, s.f. 173.
- 382: Staple; rectangular shaped arms, slightly inturned at tips,
s.f. 171.
- 383: Comb-tooth with round section, s.f. 182.
- 383: Nail with round head and shank, s.f. 189.
- 383: Nail with square shank and large head, s.f. 183.
- 403: Nail shank with square section, s.f. 169.
- 423: Blade, Type 3, s.f. 1287.
- 483: Rectangular bar with rectangular section; slightly curved,
s.f. 1142.
- 522: Nail with square shank and large head, s.f. 197.
- 557: Staple; U-shaped with straight arms, s.f. 206.
- 696: Nail with round head, s.f. 215.
- 696: Two nails with round heads and shanks, s.f. 1113.
- 720: Rove, s.f. 1120.
- 726 ?Staple, s.f. 1274.

- 726: Rivet and rove, s.f. 1277.
- 742: Comb-tooth; broken with rectangular section, s.f. 1242.
- 742: Nail with square head and shank, 1243.
- 742: ?split pin; s.f. 236.
- 743: Object; tapering to point and with rectangular section; s.f. 228.
- 743: Comb-tooth with rectangular section, s.f. 260.
- 743: Nail with round head, s.f. 235.
- 743: ?Comb-tooth, curved at either end and with rectangular section, s.f. 231.
- 743: Fragment of horseshoe with two keyholes and one nail in-situ, s.f. 273.
- 743: Horseshoe nail, s.f. 263.
- 748: Nail shank with round section, s.f. 238.
- 748: Nail with round head and shank, s.f. 233.
- 748: Nail with round head and shank, s.f. 296.
- 750: Buckle; D-shaped; no pin, s.f. 294.
- 753: Object with round section, s.f. 237.
- 753: Clench bolt and rove, s.f. 1121.
- 753: Nail with square head and shank, s.f. 1122.
- 786: Comb-tooth with rectangular section, s.f. 319.
- 816: Object, semi-circular and thickish, s.f. 1144.
- 843: Nail with round head, s.f. 271.
- 843: Nail with round head, s.f. 270.
- 849: Nail with round head and shank, s.f. 293.
- 894: Nail with round head and shank, s.f. 297.
- 947: Comb-tooth with rectangular section, s.f. 317.
- 947: ?Pin shank, s.f. 316.
- 947: Nail with round head, s.f. 457.
- 949: Twisted wire, s.f. 1132.
1010. Nail with square head and shank, s.f. 1124.

1010: ?Barrel lock, s.f. 1123.

1209: Comb-tooth with rectangular section, s.f. 524.

1215: Object with pointed stem and broken terminal; round section;
s.f. 556.

1215: ?Pin shank or small nail, s.f. 563.

1215: ?Horseshoe nail, s.f. 384.

1215: Nail shank with square section, s.f. 966.

1215: ?Pin, s.f. 564.

1215: Nail shank with rectangular section, s.f. 559.

1215: Nail with square head and shank, s.f. 562.

1215: Nail shank with rectangular section, s.f. 638.

1215: Bent nail shank, s.f. 787.

1215: Three nails with round heads, s.f. 834.

1215: Comb-tooth with rectangular section, s.f. 778.

1215: Comb-tooth with rectangular section, s.f. 782.

1215: ?Nail shank with round section, s.f. 835.

1215: ?Horseshoe fragment, s.f. 777.

1215: Comb-tooth with rectangular section, s.f. 692.

1215: Seven nails with round heads, s.f. 654.

1215: Nail with round head, s.f. 670.

1215: Small nail with round head, s.f. 677.

1215: Five nails: four are ?horseshoe nails, s.f. 653.

1215: ?Nail shank with square section, s.f. 675.

1215: ?Nail shank with rectangular section, s.f. 672.

1215: ?Small nail shank with round section, s.f. 668.

1215: Ring; not fully welded, s.f. 748.

1215: Three nails with round heads, s.f. 770.

1215: Hook type object with wider end and rectangular section,
s.f. 674.

1215: Small comb-tooth with rectangular section, s.f. 665.

1215: Staple; U-shaped with rectangular section and straight arms, s.f. 655.

1215: Comb-tooth with rectangular section, s.f. 656.

1215: Object; ?part of staple; L-shaped with rectangular section, s.f. 660.

1215: ?Nail shank; wide at one end with square section, s.f. 657.

1215: Eight small nails: six with round heads, s.f. 653.

1215: Rove, s.f. 669.

1215: Three nails: two are horseshoe nails and one has a round head, s.f. 749.

1215: Comb-tooth with round section, s.f. 690.

1215: Horseshoe nail, s.f. 671.

1215: Hook (associated with bone), s.f. 689.

1215: ?Blade with tang missing, s.f. 664.

1215: ?Nail shank, s.f. 667.

1215: Nail with round head, s.f. 688.

1215: ?Nail shank; wider at one end, s.f. 673.

1215: Two small objects; ?horseshoe nail shanks, s.f. 752.

1215: Thin wire, s.f. 582.

1215: Thickish object, s.f. 639.

1215: Object with square section shank, s.f. 557.

1215: ?Pin, s.f. 561.

1215: Thin metal strip, s.f. 558.

1215: Object with oval section, s.f. 790.

1215: Object with oval section, s.f. 836.

1215: ?Tweezers, s.f. 750.

1215: Object; fairly flat rectangular section, s.f. 774.

1215: Object with rectangular section, s.f. 776.

1215: Looped object, s.f. 786.

1215: Object; fairly flat with rectangular section, s.f. 781.

1215: Bent strip with round section, s.f. 784.

1215: Object with rectangular section, s.f. 751.

1215: Object with slightly curved ends and square section; s.f. 659.

1215: Object; fairly flat with rectangular section, s.f. 705.

1215: Thin strip with square section, s.f. 662.

1215: Fairly flat bar with rectangular section, s.f. 700.

1215: Fairly flat object, s.f. 706.

1215: Object; rectangular section, s.f. 663.

1219: Object; ?possible head of tool; no stem, s.f. 600.

1302: Curved object with round section, s.f. 601.

1302: Fairly flat object, s.f. 616.

1302: Long pointed object with knob at one end, s.f. 588.

1302: Strip with round section, s.f. 696.

1302: Curved fitting with rectangular section, s.f. 698.

1302: Fairly flat object which widens at one end, s.f. 723.

1302: Flattish bar with rectangular section, s.f. 700.

1302: Nail with round head and shank, s.f. 695.

1302: Nail with round head, s.f. 701.

1302: Bent comb-tooth with round section, s.f. 699.

1302: Horseshoe fragment with one keyhole, s.f.

1302: ?Pin; bent in middle, s.f. 595.

1302: ?Hook; split into two arms at one end, s.f. 619.

1302: Nail shank with round section, s.f. 618.

1302: ?Comb-tooth; bent at tapered end, s.f. 632.

1302: Awl with rectangular section, s.f. 617.

1302: ?Comb tooth; bent with rectangular section, s.f. 636.

1302: Nail with round head, s.f. 620.

1302: Broken blade and tang, s.f. 972.

1302: Comb-tooth with rectangular section, s.f. 971.

1331: Tapering object with rectangular section, s.f. 697.

1335: Staple; rectangular shaped with straight arms, s.f. 709.
1341: Object with squarish section and slightly curved, s.f. 926.
1341: Thinnish strip, s.f. 913.
1341: Fairly flat object, s.f. 929.
1341: Fragment, rectangular and thick, s.f. 914.
1341: Thin small object, s.f. 930.
1341: Blade, Type 3, s.f. 925.
1341: Nail shank with square section, s.f. 927.
1341: Nail with square head and shank, s.f. 928.
1341: Blade, Type 3, s.f. 911.
1341: Two fragments of horseshoe both with four keyholes, s.f.
1094.
1519: Object, bent at one end and rectangular in section, s.f.
854.
1519: Object, flat and tapering, s.f. 849.
1519: Object, badly corroded, s.f. 857.
1519: ?Bar; rectangular in section, s.f. 851.
1519: Object; slightly curved and flat, s.f. 833.
1519: Three nails with round heads, s.f. 847.
1519: ?Blade with broken point, s.f. 369.
1519: Object with split end, s.f. 874.
1519: ?Nail shank with square section, s.f. 855.
1519: Blade, Type 3, s.f. 845.
1519: Knife tang, tapering, s.f. 831.
1519: Comb-tooth with round section, s.f. 853.
1519: Blade, no tang, s.f. 850.
1519: Staple; U-shaped with straight arms, s.f. 852.
1519: ?Nail shank with rectangular section, s.f. 832.
1519: Two chain links, s.f. 846.
1652: Curved object with rectangular section; 979.

1652: Nail with square head and shank, s.f. 977.
1652: ?Broken knife, s.f. 978.
1678: Nail shank, badly corroded, s.f. 1295.
1701: Thinnish sheet with four holes punched in it, 1098.
1701: Sheet, s.f. 990.
1701: Blade, Type 5, s.f. 984.
1701: Awl, s.f. 987.
1701: Comb-tooth with rectangular section; bent, s.f. 988.
1701: Small nail with round head, s.f. 991.
1701: Awl; bent at one end, s.f. 986.
1701: Two nails with round heads and shanks, s.f. 989.
1701: Nail with round head and shank, s.f. 1183.
1701: Bolt with square section and head, s.f. 1099.
1715: Object tapering at one end with square section; 995.
1715: Squarish object, s.f. 955.
1715: Squarish flat sheet, s.f. 957.
1715: Roundish flat sheet, s.f. 958.
1715: Rove and rivet, s.f. 956.
1715: ?Arrowhead, s.f. 959.
1756: Thickish object, s.f. 1097
1757: Object, curved and thinnish, s.f. 1100.
1804: Object, long, thick and square-sectioned; curved at one end,
s.f. 1095.
1804: Nail with rectangular shank and square head, s.f. 1096.
1853: Curved object; thicker at one end, s.f. 1168.
1853: Staple; rectangular shaped with out-turned arms, s.f. 1167.
1897: Object in two pieces; has long point and expanded head,
s.f. 1246.
1902: Nail with square head and shank, s.f. 1166.
1958: Comb-tooth with rectangular section, s.f. 1281.
1985: Two objects, s.f. 1285.

1985: Object; curved and roundish in section, s.f. 1262.
1985: Object, s.f. 1263.
1985: Object; rectangular and flattish, s.f. 1260.
1985: Nail with round head and shank, s.f. 1261.
2093: Nail with round head and shank; bent at end, s.f. 1236.
2094: Horseshoe nail, s.f. 1237.

Period V

296: Horseshoe nail, s.f. 156.
471: Object; flattish with uniform thickness, s.f. 194.
471: Horseshoe nail, s.f. 193.
774: Comb-tooth with rectangular section, s.f. 1125.
883: Object with head; rectangular in section, s.f. 1118.
1104: Two fragments, s.f. 374.
1159: Nail with round head, s.f. 498.
1202: Blade, broken, s.f. 519.
1290: Nail with round head, s.f. 694.
1417: Object; semi-circular in section, s.f. 687.
1417: Nail shank with square section, s.f. 910.
1564: Blade, Type 3, s.f. 909.
2030: Object; thin, flat and curved, s.f. 1255.
2030: Object; long, thin and square-sectioned, s.f. 1256.
2030: Object; flattish but with even thickness, s.f. 1257.
2042: Creaser, s.f. 1308.

Period VI

1155: Nail shank, s.f. 492.
1665: Nail with square head and shank, s.f. 982.

Period VII

- 1093: Horseshoe nail, s.f. 461.
- 1093: Bent nail with round head, s.f. 460.
- 1093: Bent nail with round head, s.f. 429.
- 1102: Flat, square-shaped sheet, s.f. 504.
- 1102: Thick strip with hole at one end, s.f. 469.
- 1102: Long object with rectangular head, s.f. 451.
- 1102: Fairly thick rectangular plate, s.f. 448.
- 1102: Modern door handle, s.f. 470.
- 1102: Object looped at both ends but alternate sides (figure of eight), s.f. 446.
- 1102: Object bent into z-shape with square section, s.f. 437.
- 1102: Object with rectangular section, s.f. 449.
- 1102: Object; slightly curved with rectangular section, s.f. 459.
- 1102: Long thin strips of wire, s.f. 466.
- 1102: Squarish object, s.f. 450.
- 1102: Object with square section; s.f. 438.
- 1102: Fifteen fragments, shapeless and thin; s.f. 473.
- 1102: Small horseshoe with three round keyholes, s.f. 502.
- 1102: Horseshoe with five keyholes, s.f. 505.
- 1102: Nail with round head, s.f. 503.
- 1102: Chain link with square section, s.f. 496.
- 1102: ?Nail shank, s.f. 506.
- 1102: Nail shank, s.f. 507.
- 1102: Small comb-tooth with rectangular section, s.f. 497.
- 1102: Nail with round head, s.f. 440.
- 1102: Small nail with round head, s.f. 447.
- 1102: Nail with round head, s.f. 439.
- 1102: Small hook, s.f. 443.
- 1102: Nail shank only, s.f. 445.
- 1102: Possible blade and tang, s.f. 426.

1102: Blade with point broken, s.f. 394.
1102: ?Binding strip with two holes visible, s.f. 388.
1102: Nail shank, s.f. 441.
1102: Comb-tooth with rectangular section, s.f. 472.
1102: Small nail shank, s.f. 442.
1102: Nail with broken round head; square section, s.f.453.
1102: ?Nail shank, s.f. 467.
1102: Nail with round head, s.f. 451.
1102: Small tack with round head, s.f. 444.
1103: Object with round section, s.f. 464.
1103: Slightly curved object with square section; tapering to point, s.f. 408.
1103: Sheet with four punched holes, s.f. 406.
1103: Curved and flattish object, s.f. 407.
1103: Sheet, s.f. 410.
1103: Comb-tooth with rectangular section, s.f. 462.
1103: Small ring, s.f. 424.
1103: Plough-share with central hole in blade back, s.f. 376.
1103: Blade, s.f. 358.
1103: Nail with large head and square shank, s.f. 357.
1103: Fragment of horseshoe with one keyhole and marked waviness, s.f. 360.
1103: Nail with round head, s.f. 463.
1103: Nail shank with square section, s.f. 409.
1103: Nail with round head and shank, s.f. 405.
1103: Nail with round head and shank, s.f. 404.
1105: Strip, s.f. 499.
1105: Rove, s.f. 385.
1105: Fitting; ?Hinge pivot, s.f. 633.
1108: Small thin strip, s.f. 471.

1108: Nail with square head and shank, s.f. 417.
1108: Comb-tooth with rectangular section, s.f. 523.
1108: Blade but no tang, Type 3, s.f. 520.
1108: Nail with square head and shank, s.f. 418.
1109: Object; fairly thick and flat; concave on one side and convex on other, s.f. 488.
1109: Sheet with two punched holes and one broken hole at edge, s.f. 412.
1109: Sheet, s.f. 414.
1109: ?Wire bent into D-shape, s.f. 528.
1109: Awl with rectangular section, s.f. 491.
1109: Hook, s.f. 501.
1109: Fragment of horseshoe with one keyhole, s.f. 490.
1109: ?Strap fragment or hinge; no eye visible, s.f. 500.
1109: ?Hinge, s.f. 489.
1109: Curved object with one hole, s.f. 610.
1109: Three nails: two with round heads and shanks and one with square head and shank, s.f. 415.
1109: Nail with round head and shank, s.f. 416.
1109: Nail shank, curved and round, s.f. 413.
1109: Comb-tooth with rectangular section, s.f. 527.
1122: Metal band, edged, s.f. 908.
1129: Blade, Type 3, s.f. 839.
1133: Nail with square head and shank, s.f. 902.
1136: Nail shank with round head, s.f. 428.
1142: Strip with holes along centre, 432.
1142: ?Hinge with one hanging eye, s.f. 356.
1142: Nail with round head; shank is bent, s.f. 434.
1142: Nail with round head, s.f. 433.
1143: Wedge, probably for splitting logs; modern, s.f. 539.

1143: Door latch or gate hook; has hanging eye at one end, s.f.
348.

1143: ?Latch fitting; modern; has loop on one side, s.f. 330.

1143: Hinge with two hanging eyes, s.f. 324.

1154: Nail with round head, s.f. 487.

1170: Fragment of horseshoe with marked wavy edge and two
keyholes, s.f. 585.

1170: Hinge with two hanging eyes, s.f. 635.

1184: Nail with square head and shank, s.f. 538.

1190: Nail with square head and shank, s.f. 611.

1191: Nail with square head and shank, s.f. 912.

1213: Solid bar, probably smith's bar; s.f. 583.

1213: Rectangular bar quite thin; s.f. 584.

1213: Blade with point broken, s.f. 532.

1213: Blade, s.f. 533.

1221: Object, curved with roundish section, s.f. 536.

1221: Buckle; D-shaped with pin, s.f. 734.

1221: Nail with square head and shank, s.f. 534.

1221: Nail; bent round and badly corroded; rectangular shank, s.f.
535.

1221: Nail with square head and shank, s.f. 602.

1221: ?Bolt with round section, s.f. 603.

1273: Comb-tooth with rectangular section, s.f. 631.

1273: Horseshoe nail, s.f. 581.

1305: Flat sheet, s.f. 756.

1305: Nail with square head and shank, s.f. 627.

1305: Nail shank with square section, s.f. 623.

1305: Nail with round head and shank, s.f. 622.

1305: Nail with round head and shank, s.f. 626.

1305: Part of hinge; broken with one hanging eye, s.f. 624.

1305: Nail shank with square section, s.f. 625.
1305: Nail shank, s.f. 630.
1305: Nail with square head and shank, s.f. 624.
1305: ?Nail shank with rectangular section, s.f. 755.
1306: Strip with two rectangular holes and rivets, s.f. 599.
1306: Nail with square head and shank, s.f. 634.
1306: Fitting; ?hinge pivot, s.f. 596.
1306: Nail shank with square section, s.f. 598.
1306: Nail with round head and curved, s.f. 597.
1334: Large nail/bolt with round head, s.f. 788.
1334: Horseshoe nail, s.f. 757.
1334: Nail with round head, s.f. 693.
1334: Comb-tooth with rectangular section, s.f. 766.
1334: Horseshoe nail, s.f. 767.
1338: Nail with square head and shank, s.f. 916.
1339: Nail with square head, s.f. 707.
1339: Nail with round head, s.f. 708.
1415: Object; cleanly stamped, s.f. 742.
1415: Fitting with hooked end and rectangular head, s.f. 686.
1415: Ten nails of which four are horseshoe nails and five have round heads, s.f. 737.
1415: Building fitting with rectangular section; ?hinge pivot, s.f. 740.
1415: Staple; rectangular shape with straight arms, s.f. 741.
1415: Seven nails. Five have round heads and two are shanks only, s.f. 738.
1415: ?Nail shank with round section, s.f. 739.
1415: Staple; rectangular shaped with straight arms, s.f. 744.
1415: Strap fragment; curved at one end, s.f. 743.
1415: ?Nail shank with square section, s.f. 745.
1415: Comb-tooth with round section, s.f. 736.

1415: Nail with square section, s.f. 904.
1415: Nail with round head and shank, s.f. 903.
1415: Four nails. Three have round heads and one is a shank only
and bent, s.f. 791.
1467: ?Creaser, s.f. 195.
1543: Nail shank with square section, s.f. 868.
1543: Nail with round head and shank, s.f. 867.
1543: Blade, Type 3, s.f. 1288.
1548: Object, s.f. 826.
1548: Clench bolt and part of rove, s.f. 829.
1548: Horseshoe nail, s.f. 828.
1584: Object with rectangular section, s.f. 818.
1584: Object; triangular and fairly flat, s.f. 813.
1584: Object split like tweezers, s.f. 805.
1584: Object with semi-circular section, s.f. 817.
1584: Long, flat metal strip, s.f. 821.
1584: Object with triangular section, s.f. 823.
1584: Thin piece of metal bent in middle with round section, s.f.
931.
1584: Object, s.f. 880.
1584: Rectangular object, s.f. 882.
1584: Curved object, s.f. 865.
1584: Rectangular-shaped bar, s.f. 879.
1584: Thin strip, s.f. 875.
1584: Object, s.f. 873.
1584: Object, s.f. 901.
1584: Decorative fitting, s.f. 866.
1584: Bar curved and square sectioned, s.f. 864.
1584: Rectangular bar, s.f. 878.
1584: Hook, s.f. 808.

1584: Nail with round head, s.f. 812.
1584: Hook, s.f. 802.
1584: Blade with tang missing, s.f. 825.
1584: Blade with tang missing, s.f. 824.
1584: Rove, s.f. 815.
1584: Horseshoe nail, s.f. 807.
1584: ?Hook, s.f. 806.
1584: ?Hinge pivot; L-shaped, s.f. 814.
1584: Horseshoe nail, s.f. 820.
1584: ?Comb-tooth with rectangular section, s.f. 822.
1584: Comb-tooth with round section, s.f. 803.
1584: ?Hinge, s.f. 804.
1584: Comb-tooth with round section, s.f. 863.
1584: Comb-tooth with rectangular section, s.f. 862.
1584: Horseshoe fragment with one keyhole, s.f. 877.
1584: Nail head and shank; head is bent and broken, s.f. 872.
1584: ?Hinge with one hanging eye, s.f. 881.
1584: Fragment of horseshoe; one keyhole, s.f. 981.
1584: Comb-tooth with rectangular section, s.f. 869.
1584: Nail with square shank, s.f. 875.
1584: Horseshoe nail, s.f. 870.
1584: Ring and hook, s.f. 811.
1584: Ferrule, s.f. 810.
1584: Blade with point missing and short tang, s.f. 819.
1635: Nail with square head and shank, s.f. 1086.
1648: Comb-tooth with round section, s.f. 1013.
1662: Fitting; flat one side and raised the other; rivet at one
end, s.f. 1185.
1662: Objects, s.f. 1186.
1662: Nail with round head and shank, s.f. 980.
1662: Thin-band/wire, s.f. 1187.

1673: Rectangular bar, s.f. 973.

1673: Object; thick and tapering with rectangular section, s.f. 1238.

1673: Sheet, s.f. 1294.

1673: Object, s.f. 1188.

1673: Object in two pieces with central hole, s.f. 1082.

1673: Curved wire, s.f. 1078.

1673: Object with rectangular section and pointed at one end, s.f. 1079.

1673: Object; tapering with rectangular section, s.f. 1053.

1673: Object; tapering to blunt edge at one end and point at other (expanded) s.f. 1051.

1673: Flattish object wider at one end, 1056.

1673: Object; curved; flat on one side, s.f. 1057.

1673: ?Nail shank with rectangular section, s.f. 1058.

1673: Blade, Type 3, s.f. 1049.

1673: Three nails with square shanks and heads, s.f. 1052.

1673: ?Comb-tooth with rectangular section, s.f. 1054.

1673: Large bolt type fitting with square shank and head, s.f. 1050.

1673: Comb-tooth with round section, s.f. 1055.

1673: Eleven nails: Three are horseshoe nails; six have square heads and shanks; one has a square shank and one has a round head and shank, s.f. 1189.

1673: ?Comb-tooth; broken and thin, s.f. 1081.

1673: Comb-tooth with round section and curved at one end, s.f. 1089.

1673: Blade, broken, s.f. 1076.

1673: Five nails: Three are square; one is round; and one is a horseshoe nail, s.f. 1077.

1673: Clench bolt and rove, s.f. 1190.

1673: Staple; U-shaped with straight arms, s.f. 1191.

1673: Bolt with round head and shank, s.f. 1293.

1673: Rivet and rove, s.f. 1291.

1673: Awl, s.f. 1292.

1673: Nail with square head and shank, s.f. 1239.

1673: Nail shank with round section, s.f. 1241.

1673: Comb-tooth with round section, s.f. 1290.

1673: Nail with round head and shank, s.f. 968.

1673: Horseshoe nail, s.f. 974.

1687: Nail with round shank and head s.f. 1289.

1698: Comb-tooth with rectangular section, s.f. 1083.

1723: ?Nail, badly corroded, s.f. 1244.

1737: Object, s.f. 969.

1737: Nail shank with square section, s.f. 1093.

1737: Horseshoe fragment with two keyholes; marked wavy edge,
s.f. 377.

1741: Rectangular sheet, s.f. 1024.

1741: Object; flattish with hole at one end, s.f. 1250.

1741: Object; curved and round in section, s.f. 1251.

1741: Small, tongs-like object; bent-over, expanding to terminal,
s.f. 1253.

1741: Object; parallel sides tapering to point and with
rectangular section, s.f. 1249.

1741: Object; flattish, 1140.

1741: Object; flattish but with rectangular section; s.f. 1141.

1741: Object, s.f. 1106.

1741: Object, s.f. 1129.

1741: Thick object, s.f. 1109.

1741: Rectangular bar tapering at one end, s.f. 1136.

1741: Rectangular bar, s.f. 1161.

1741: Object; curved and thinnish, s.f. 1139.

1741: Rectangular bar; curved, s.f. 1104.

1741: Object; curved and flattish, s.f. 1101.

1741: Rectangular bar, s.f. 1070.

1741: Squarish object; flattish and slightly wider at one end,
s.f. 1138.

1741: Object; flattish rounded at one end but widens slightly at
other end, s.f. 1065.

1741: Comb-tooth with rectangular section, s.f. 1064.

1741: Blade, Type 3, s.f. 1134.

1741: Comb-tooth with roundish section, s.f. 1061.

1741: Staple; U-shaped with straight arms, s.f. 1068.

1741: Comb-tooth with round section, s.f. 1072.

1741: Staple; U-shaped with out-turned arms, s.f. 1073.

1741: Comb-tooth with rectangular section; bent, s.f. 1105.

1741: Horseshoe nail, s.f. 1074.

1741: Comb-tooth with rectangular section, s.f. 1062.

1741: ?Ferrule, s.f. 1128.

1741: Three nail shanks, s.f. 1137.

1741: Small ?awl, s.f. 1103.

1741: Staple; U-shaped; curved and with out-turned arms, s.f.
1075.

1741: Comb-tooth with rectangular section, s.f. 1102.

1741: Fragment of horseshoe with two keyholes and marked waviness,
s.f. 1162.

1741: Comb-tooth with rectangular section, s.f. 1135.

1741: Comb-tooth with rectangular section, s.f. 1110.

1741: ?Broken comb-tooth with rectangular section, s.f. 1107.

1741: Staple; U-shaped and straight arms, s.f. 1091.

1741: Two parts of rove and one rivet, s.f. 1160.

1741: Two chain links, s.f. 1111.
1741: Blade; Type 3, s.f. 1248.
1741: Twelve nails including one horseshoe nail, s.f. 1247.
1741: Stud with large head and round shank, s.f. 1252.
1741: Nail shank, s.f. 1254.
1741: Hook, s.f. 1021.
1741: Comb-tooth with rectangular section, s.f. 1023.
1761: Sheet, s.f. 1170.
1761: Object; looks like broken knife, but too thick, s.f. 1177.
1761: Object; ?with head and shaft, s.f. 1178.
1761: Pointed object; rectangular section, s.f. 1180.
1761: Staple; U-shaped and straight arms, s.f. 1179.
1761: One nail shank and one ?rectangular bar, s.f. 1067.
1761: Nail with square head and shank, s.f. 1069.
1761: Nail shank with square section, s.f. 1088.
1805: ?Barrel lock fragment, s.f. 1169.
1842: Thick object; bent, s.f. 1163.
1844: Three fragments with copper alloy rivets in each, s.f. 1172.
1912: Blade, Type 3, s.f. 1282.

Modern

10: Squarish sheet with four holes punched equidistantly, s.f. 135.
10: Squarish; thin fragment, s.f. 136.
14: Layered strip with square section, s.f. 201.
16: Nail with round head, s.f. 129.
18: One screw and one strip, s.f. 124.
18: Object; fairly flat square end tapering off, s.f. 127.
18: Bottle top; round, s.f. 125.
18: Skewer, s.f. 315.

- 18: Fragment of horseshoe with one keyhole, s.f. 123.
- 18: Curved nail with round head, s.f. 128.
- 18: Nail with round head, s.f. 122.
- 18: Nail shank, s.f. 126.
- 50: Sheet, s.f. 141.
- 809: Nail shank with rectangular section, s.f. 234.
- 837: Semi-oval sheet; ?decorated edge, s.f. 259.
- 845: Strip of metal; ?wire, s.f. 276.
- 845: Thin sheet, s.f. 278.
- 845: Nail with square head and shank, s.f. 274.
- 845: Nail with round head, badly corroded, s.f. 277.
- 846: Comb-tooth with rectangular section, s.f. 1272.
- 846: ?Blade, Type 3, s.f. 1271.
- 1116: Object with rectangular section and small head, s.f. 455.
- 1304: ?Hinge with hanging eye, s.f. 679.
- 1304: Nail with round head, s.f. 613.
- 1304: Hinge with two hanging eyes and rivets in-situ, s.f. 614.
- 1592: Nail with rectangular head and shank, s.f. 921.
- 1592: Nail with round head and shank, s.f. 920.
- 1592: Nail with square head and shank, s.f. 922.

Unphased

- 1: Flat bar, s.f. 1014.
- 1: Curved object with two holes, s.f. 1010.
- 1: Flattish object tapering at one end, s.f. 964.
- 1: Thick piece of iron, s.f. 1015.
- 1: Object; tapers at one end, s.f. 1003.
- 1: Fragment from cauldron with handle, s.f. 1318.
- 1: Object with hole at one end, s.f. 996.
- 1: Fragment of handle; terminal is curled, s.f. 1278.

- 1: Seven nails: one horseshoe; two with square head and shank; and four with round head and shank, s.f. 1275.
- 1: Buckle; D-shaped with pin, s.f. 1275.
- 1: Comb-tooth with round section, s.f. 1267.
- 1: Fragment of horseshoe with four keyholes, s.f. 1268.
- 1: Seven nails; all with square shanks, s.f. 1265.
- 1: Four nails, two with heads, s.f. 1164.
- 1: Rove and rivet, s.f. 1020.
- 1: Comb-tooth with rectangular section, s.f. 1002.
- 1: Comb-tooth with rectangular section, s.f. 1266.
- 1: Eleven nails: six have square heads and shanks; four have round heads and shanks; and one is a horseshoe nail, s.f. 993.
- 1: Four horseshoe nails, s.f. 999.
- 1: Awl, s.f. 1276.
- 1: ?Nail shank, s.f. 963.
- 1: Tool; ?awl; tapers both ends, s.f. 1011.
- 1: Six nails: five have square sections and one has a round section, s.f. 994.
- 1: Small nail with square head and shank, s.f. 1019.
- 1: Comb-tooth with rectangular section, s.f. 1004.
- 1: Fragment of horseshoe with three keyholes and marked waviness, s.f. 1012.
- 1: Comb-tooth with rectangular section, s.f. 998.
- 1: ?Hook; twisted at top, s.f. 1018.
- 1: Blade, Type 3, s.f. 995.
- 1: Comb-tooth with rectangular section, s.f. 997.
- 1: Small hook, s.f. 1016.
- 1: Comb-tooth with round section, s.f. 1000.
- 1: One horseshoe nail and one nail with square shank, s.f. 1017.

- 2: Tiny fragment, s.f. 71.
- 2: Small semi-circular sheet with three holes punched in it, s.f. 63.
- 2: Fragment of sheet with two square holes, s.f. 95.
- 2: Sheet, s.f. 67.
- 2: Flattish object wider at one end, s.f. 29.
- 2: Triangular sheet, s.f. 116.
- 2: Stud, s.f. 24.
- 2: Small strip with three holes punched in it equidistantly, s.f. 14.
- 2: Small sheet, s.f. 20.
- 2: Fairly thick strip, s.f. 34.
- 2: ?Button top; corroded to long strip, s.f. 17.
- 2: Sheet, s.f. 40.
- 2: Sheet with hole punched in it, s.f. 25.
- 2: Strip of metal, s.f. 59.
- 2: Object with hammer-type head and rectangular section, s.f. 101.
- 2: Mesh, s.f. 80.
- 2: Object, s.f. 1.
- 2: Button, s.f. 61.
- 2: Rectangular lump, s.f. 113.
- 2: Object tapering to rounded end, s.f. 99.
- 2: Button, s.f. 10.
- 2: Thin piece of folded metal, s.f. 89.
- 2: Button, s.f. 102.
- 2: Scrap of folded metal, s.f. 18.
- 2: Piece of mesh, s.f. 84.
- 2: Half of button, s.f. 105.
- 2: Five strips; two have regular holes punched through them,

- s.f. 202.
- 2: Stud; large roundish head, s.f. 62.
- 2: Ring, s.f. 97.
- 2: Fragment of horseshoe with two keyholes, s.f. 112.
- 2: Fragment of horseshoe with two keyholes, s.f. 3.
- 2: Ring, s.f. 46.
- 2: ?Fragment of horseshoe, s.f. 35.
- 2: Nail with round head, s.f. 41.
- 2: Hinge with two hanging eyes, s.f. 93.
- 2: Six nails: four with square heads and shanks; one with round head and shank; and one is a shank only, s.f. 203.
- 2: Long hook.
- 89: Object, s.f. 144.
- 242: Comb-tooth with rectangular section, s.f. 218.
- 243: Nail with round head, s.f. 219.
- 692: Nail with square head and shank, s.f. 214.
- 1088: Fifteen strip fragments, s.f. 403.
- 1308: ?Fragment of horseshoe one hole visible, s.f. 590.
- 1309: Horseshoe nail, s.f. 591.
- 1309: Part of hinge with one hanging eye, s.f. 592.
- 1368; Flat bar with rectangular section, s.f. 678.
- 1426: Rivet and rove, s.f. 840.
- 1462: Nail with round head, s.f. 765.
- 1462: Nail with square head, s.f. 764.
- 1511: Slightly curved object with square section and pointed at one end, s.f. 1090.

	Single Platform	Blade with retouch	Triangular piece	Proximal end blade	Flake with retouch	Blade with notch	Discoidal Core	Microblade	Crude core	End Scraper	Distal-end Blade	Discoidal Scraper	Rod microlith Scraper
--	--------------------	-----------------------	---------------------	-----------------------	-----------------------	---------------------	-------------------	------------	---------------	----------------	---------------------	----------------------	--------------------------

PERIOD I

24	1												
169	1												
1172	1		1										

1627	17	6	4										1
1827		1											

PERIOD II

509	4												
1264	1												
1298	4	1	1										
1311	1												
1352	2												
1366	1												
1591	1												
1786	2	1					1						
1936		2				1							
1962		1											
1975	2												
1977	1												
2039		1											
2123	1	3											
2124		1											

PERIOD IV1

1248	1								1				
1504	1												

PERIOD IV2

28		1											
31	1	1											
51	1	1	1										
111	2												
119	1												
618	1												
960		1											
1145	2												
1146		1											
1147	2	2	1	1									
1157		1											
1169		1											
1313		1											
1347	1												
1410	1												
1489	5	2											
1538	1												
1750	2												
1821	3												
2092													

C8

C9

53	1	
120		1
306		
314	1	
437	2	
1262		1
1355	1	
1396		
1423		2
1525	1	1

Table 1 Flint: categories by period and context

C12

C13

Musical instrument from Redcastle Furze, Thetford, Norfolk

by Graeme Lawson

Catalogue No.14, s.f.1174

A welcome addition to the musical pipes already known from Saxon and medieval Thetford (Megaw 1968, 149; Lawson 1984, 183; Lawson forthcoming (a)) is a perforated bone tube worked from a metapodial¹ specifically metacarpal, of sheep or goat. It represents a large part of the instrument's total length, bearing its distal end and three finger-holes. The break, which occurs across the proximal perforation, is ancient; of the other bone surfaces enough survives to show how they were shaped, by knife, but a general surface etching, probably due to exposure since deposition, has left overall a coarse, fibrous texture with little or no useful trace of original wear. Dimensions: surviving length 85.5 mm; D-shaped external cross-section tapering from 12.2 x 9.7 mm (at fracture) to 10.9 x 9.2 mm (at third finger hole, 34 mm from distal end); bore 8.0 x 6.5 mm at break, tapering to 6.5 x 4.0mm at distal end.

Bone identification

Despite its poor condition the piece does bear some interesting, rather unusual features. The selection of sheep/goat metacarpal, for example, contrasts with the bones used in other Late Saxon and medieval English pipes, which are almost always made either from goose, swan or crane ulna or from sheep/goat tibia. Among the now significant body of related material from the East Anglian region only one other example of the use of metapodial is recorded, a so far unpublished section of sheep/goat metatarsal from the Castle Mall, Norwich (Site 777N context 11268 s.f. 5474 Lawson forthcoming (b)).

A preference elsewhere for bird ulna is readily understandable. In both their length and their internal regularity such bones are acoustically well suited to practical musical exploitation. Similarly, sheep/goat tibia, though quite differently proportioned, offers smooth lines and reasonable length in an easily accessible bone. The question that this new find brings into sharp focus is why other, equally readily available and (apparently) compatible bones, particularly those of sheep/goat but also of pig, should appear to have been so little used for this purpose. Examination of a similar phenomenon, the almost exclusive use of pig metapodials in the making of buzz-bones (formerly interpreted as 'toggles') shows that pressures of tradition could have played an important part in this (Lawson and Brown 1990, 589-591); nevertheless in both cases the original, practical significance of such selectivity still remains obscure. Certainly acoustical considerations alone seem hardly sufficient to explain such rejection, for experiments using this and other rarely selected bones have so far failed to discern any tonal disadvantages they may have had.

Finishing

Another irregularity can be seen in the pipe's external shaping. The crude chamfering of its distal end, achieved by means of a series of sawing strokes from a sharp knife-blade, contrasts with the flat, perpendicular terminals of most of our other known examples. At first glance this looks inferior, possibly unskilled workmanship. But it could also represent an unfinished condition, not chamfering at all but simply the remains of a V-shaped annular groove cut in order to remove the epiphyses and their adjacent solid tissue. Although in other finds elsewhere this precise method of tube formation still remains conjectural, the evidence having been erased by subsequent trimming, it makes good practical sense in relation to the simple

knife blades that seem to have been the only tools used in shaping these instruments. Indeed this example proves, on closer inspection, to have had at least one fully perpendicular re-touching stroke, removing at least its sharpest edges. Now, such a sequence has interesting musical implications, for any such shortening would have had a significant impact upon tuning, especially if carried out after the cutting of the finger-holes. Reducing the separation between the lowest finger-hole and the tube's distal end would narrow the interval between the first and second notes of its scale. It could therefore be that the initial pitching of such pipes was, if anything, more complicated than has previously been thought.

Equally intriguing is the way in which the surfaces surrounding the finger-holes have been treated. Elsewhere these are almost always rebated flat, probably in order to facilitate efficient sealing by the pads of the player's fingers. Here however, of the three present, only the two that survive complete have been so treated. The one bisected by the fracture has not. The loss, through erosion, of any use-wear that there may have been makes this difficult to assess more fully, but in the light of the evident antiquity of the fracture it seems not impossible that such an omission could be due to the break itself, occurring before the instrument had been fully finished.

Reconstruction

Some understanding of the find's originally intended, overall form may be gleaned from examination of instruments from others sites in Thetford and elsewhere around East Anglia. Among all such pipes, whether bird ulna or sheep/goat tibia, two features constantly recur: in addition to circular or near-circular finger-holes, varying in number between three and five, they all bear a single, more-or-less D-shaped sound-hole close to the proximal end. It is this that is

missing from this latest Thetford piece, and here lies perhaps its most curious feature of all; in trying to estimate its original dimensions we find a significant discrepancy between the overall length suggested by the finger-hole layout and that predicted from its material identification as sheep/goat metapodial.

In order to produce a sequence of musical pitches roughly equivalent to either a modern diatonic or traditional pentatonic (i.e. partially gapped) scale, which seems to have been the general rule among such pipes, there is usually an extended space separating the sound-hole from the nearest (i.e. first) finger-hole. This is because the relationship between pitch gradation and finger-hole placement is measured, like radioactive decay, in terms of fractions, not equal units, and the distances between pitches (i.e. finger-holes) become increasingly and inconveniently congested as the sound-hole is approached.² This proximal area is therefore generally left unperforated. Were this to apply here then a substantial portion of the instrument's original length, not just the mouth-piece and sound-hole but also a long, unperforated region, would have to be missing. Indeed, both the spacing of the finger-holes and their relationship to the surviving, distal and closely resemble the layouts to be seen in the larger extant bird-bone pipes, where the unperforated regions can measure anything up to 135 mm in length. Among these perhaps the most striking correspondence is with the complete swan ulna pipe found recently at Bishopgate, Norwich (Lawson forthcoming (a)). This is, however, at variance with what is known of the type of bone actually employed here. Sheep/goat metapodials, even sheep metatarsals, average at most around 140 mms in total length including epiphyses. What we see must therefore form the bulk of the original instrument, with a total length of little over 120 mm.

How this should be interpreted remains for the present a mystery.

With what must have been a very widely gapped scale it may represent

quite a new type, perhaps related in function to some of our smaller pipes of goose ulna; or it may join a number of isolated and so far apparently irregular cases, perhaps a test-piece, an idle experiment or a child's imitation. Certainly it differs in important details even from its nearest material parallel, the Norwich (Castle Mall) metatarsal. There, in an arrangement clearly more consistent with melodic scaling, the problem is overcome by a much tighter finger-hole grouping, set as little as 9.8 mm apart, making it possible to maintain as much as 48 mm of unperforated tube between the group and the sounding-hole.

Notes

1. The writer is indebted to Dr. Rosemary Luff, Faunal Remains Unit, Cambridge for her identification and detailed assessment of the bone. The absence of any evidence of the vestigial internal division characteristic of such metapodials remains a problem. It could, however, have been obliterated by simple internal working.
2. The pitch that a pipe will play is dependent upon its length, from its mouth-terminal to its nearest exit, whether the distal end or some intervening perforation, intended or accidental. In a generalised cylindrical pipe measuring 20 cms in length and producing a note 'x' when voiced, a hole drilled at its mid-point will effectively halve its vibrating length, producing the same note, one octave higher. Moreover, a further hole drilled half-way between that hole and the proximal end will sound the same note, one octave higher still. Thus, halving the length of the vibrating air-column at any stage doubles the frequency of vibration, so raising the pitch by one octave, irrespective of the original length. The same is true of a vibrating string. As a result, attempting to achieve upper frequencies may require finger-holes (or in stringed instruments, frets) to be placed

so close together as to make individual fingering impossible, while more realistic spacing would result in scales that had jumps in pitch too large to allow the playing of traditional melodic musics.

Bibliography

- Lawson, G., 1984 'Flutes' in Rogerson, A., and Dallas, C., Excavations in Thetford 1948-59 and 1973-80, E. Anglian Archaeol. **22**, 182-3.
- Lawson, G., 'Bone flutes' in Dallas, C., Excavations in Thetford forthcoming (a) 1964-70, E. Anglian Archaeol.
- Lawson, G., 'Bone flutes' in Reeve, J., Excavations at Castle Mall, forthcoming (b) Norwich, E. Anglian Archaeol.
- Lawson, G., 'Bone flutes' in Margeson, S., Norwich Small Finds, forthcoming (c) E. Anglian Archaeol.
- Lawson, G., and 'Toggles' in Biddle, M., (ed.), Object and Economy in
Brown, D., 1990 Medieval Winchester (Winchester Studies 7, ii. Artefacts from Medieval Winchester), 589-591.
- Megaw, J.V.S., 'An end-blown flute from medieval Canterbury',
1968 Medieval Archaeol. 12, 149-50.

Conventions Used in the Tables.

d = distal
p = proximal
wh = whole
sh = shaft
mtc = metacarpal
mtt = metatarsal
sfr = skull fragment(s)
lfr = long bone fragment(s)
l/t = loose tooth/teeth
nav.cub = navicular cuboid
costal cart. = costal cartilage
vert. = vertebra(e). numbers in brackets represent
(miscellaneous vertebra + atlas + axis)
carp. = carpal
tarsomtt = tarsometatarsus
oxo = cow, horse, red deer
lar = cow, red deer
sma = sheep/goat, pig, roe deer, fallow deer
rum = sheep/goat, roe deer,
s/m = small mammal (cat/dog size)
tim = tiny mammal (rat/mouse size)
f = fused
nf = not fused

Table 2. Period I Indicators, Non-Indicators and Avian Indicators.

Species	cow	s/g	pig
MTC (pr)		1	
Tibia (pr)			1
Tibia (d)	1		
MTT (pr)		1	
MTT (d)	2		

Non-Indicators.

Species	cow	s/g	pig	oxo	sma	rum	ind
SFR	23	5					4
Jaw	1					1	
L/T			1				
Radius		2					
Vert				3			
Rib				2			
LFR				5	5		

Avian.

Species	Chicken
Scapula	1
Humerus (pr+sh)	1
Humerus (d+sh)	1
Radius	1
Ulna	1
Femur	1

Table 3. Period I Indicators.

Species	cow	sheep	goat	s/g	pig	horse
Horn core	12	6	6			
Jaw	1	11		18	2	
Scapula (d)	19			11	12	3
Humerus (wh)					1	
Humerus (pr)				2	3	
Humerus (d)	6			9	2	
Radius (wh)	3			2	2	
Radius (pr)	11			10	6	
Radius (d)	5			4		2
MTC (wh)	2			4	14	1
MTC (pr)	19			8	2	
MTC (d)	2			1	1	1
Radialcarpal	1					
Pelvis	19			14	2	1
Femur (pr)	7			6		
Femur (d)	6			6	2	2
Tibia (wh)	1				1	
Tibia (pr)	2			3		
Tibia (d)	19			20	4	3
MTT (wh)	5			4	8	1
MTT (pr)	7			5	2	1
MTT (d)	6			2		1
Astragalus	18			1		4
1st phalange	32			6	1	2
MTP	2				2	

Table 4. Period II Non-Indicators (1).

species	cow	sheep	goat	s/g	pig	horse
Horn core	4	2		4		
SFR	53			3	27	
Maxilla	60			25	5	1
Jaw	90	9	1	97	15	
L/T	77			77	13	9
Premaxilla	4			1		
Hyoid	1					
Scapula	8			4	11	2
Humerus	4			1	1	1
Radius	2			3	1	
Ulna	7			4	11	1
MTC	7			3		
Carpal	6					1
Pelvis	9			3	1	1
Femur	3			3	2	1
Patella	3					
Tibia	1			2	8	
Fibula					3	
MTT	3					
Tarsal						1
Calcaneum	10			3	4	1
Nav.cuboid	5					
1st phalange	7			2		
2nd phalange	10			1	1	4
3rd phalange	5			1		1
Splint bone						3
Vertebra	8(4+4)			3(1+2)		1
Ribs					2	
MTP	1			1		

Table 5. Period II Non-Indicators (2).

species	oxo	lar	sma	rum	ind
Horn core					5
SFR	121		82	1	36
Maxilla	23				
Jaw	3	2	3	13	
L/T					5
Hyoid		4			
Scapula	37	10	21	16	
Humerus	28	3	10	7	
Radius	8	2		22	
Ulna	8	1	3	2	
MTC	2	1		14	
Carpal	1				
Pelvis	37	2	12	5	
Femur	13	2	8	5	
Tibia	12	4	4	6	
MTT	6	4	1	11	
Calcaneum	1	2		1	
Vertebra	74 (72+1+1)		69		1
Ribs	495		300		
MTP	2			1	
LFR	365		472	3	
Carp/Tarsal	1				
Ind.					443

Table 6. Period II Miscellaneous Species.

species	dog	badger	cat
Jaw			1
Humerus (d)		1	
Radius (wh)			1
Tibia (d)	1		
Maxilla	2		

Table 7. Period II Avian.

species	goose	chicken	avian
Scapula		1	
Coracoid	1	1	
Humerus	2		
Radius		3	
Ulna	1	2	
Pelvis		3	
Sacrum		2	
Femur		3	
Tibiotarsus	1	4	
LFR			4

Table 8. Period III Indicators.

Species	cow	she	s/g	pig	horse
Jaw		2	1		
Radius (wh)			2		
MTC (pr)				1	
MTC (d)	1				
Tibia (d)			1		
MTT (wh)			1		
MTT (pr)					1
1 Phalange	1				

Table 9. Period III Non-Indicators.

Species	cow	s/g	pig	oxo	lar	sma	rum	ind
SFR	1			4		7		
Jaw	1	4					1	
Premaxilla		1						
L/T	1	1						
Scapula			1	2		1		
Humerus					1		1	
Radius							1	
Ulna					1			
MTC (pr)		1						
Pelvis				2				
Calcaneum	1							
3 Phalange	1							
Vertebra				2				
Rib				16		7		
Costal cart.				1				
LFR				15		15		
Ind.								12

Table 10. Period III Avian.

Species	Chicken
Tibiotarsus	1
Humerus (wh)	1

Table 11. Period IV2 Indicators.

Species	cow	sheep	goat	s/g	pig	horse
Horn core	2	6	2	1		
Jaw	6	1		11	3	1
Scapula (d)	10			6	1	1
Humerus (wh)					1	
Humerus (pr)				1		
Humerus (d)	6			8	1	1
Radius (wh)				1	1	
Radius (pr)	7			4	1	
Radius (d)	3					1
MTC (wh)	4			5	5	
MTC (pr)	1			9	2	1
MTC (d)	2			3		
Pelvis	3			5	3	1
Femur (wh)					1	
Femur (pr)	1					1
Femur (d)	1			2	2	1
Tibia (wh)					1	
Tibia (pr)	2			2		1
Tibia (d)	5			12	3	2
MTT (wh)	3			1	1	
MTT (pr)	8			8	3	1
MTT (d)	3			4		
Astragalus	11			1		
1st phalange	13			3		1
MTP	1			1		

Table 12. Period IV2. Non-Indicators (1).

species	cow	goat	s/g	pig	horse
SFR	9	1	2	8	
Maxilla			3	6	
Jaw	34		8	15	1
L/T	23		39	2	8
Premaxilla	1		2		
Scapula				6	
Humerus			1	1	
Radius	1		2	2	1
Ulna	7		1	5	
MTC	1		2		
Carpal	2				
Pelvis	7		3	2	
Femur	1				
Tibia	1			2	
MTT	1		6		
Tarsal					1
Calcaneum	8		2	2	2
Nav.cuboid	5				
1st phalange	2				
2nd phalange	8				
3rd phalange	3				2
Splint bone					4
Vertebra	3(1+2)		3(atlas)	7(4+3)	2(axis)
MTP	1				

Table 13. Period IV2 Non-Indicators (2).

species	oxo	lar	sma	rum	ind	tm	vsm
Horn core					3		
SFR	9		44	1			
Jaw		6	8	10			
L/T					1		
Scapula	16	4	20	7			1
Humerus	12		5	2			
Radius	1	1		5			
Ulna	3						
MTC		1		1			
Pelvis	24		11	4			
Femur	1		2				
Tibia	5		3	8			
MTT		4		5			
Nav.cuboid	1						
Vertebra	68 (1ax)		70(68 +1+1)	2(ax)			
Ribs	200		116				1
MTP	1	4		1			
LFR	242		151			1	
Ind					219		

Table 14. Period IV2 Miscellaneous Species.

Species	dog	cat	rabbit	hare
SFR	3	1 (wh)		
Jaw	1	1		
Scapula (d)	6			
Humerus (wh)	1			
Humerus (d)		2		
Radius (wh)	2			
Ulna	4			
Pelvis	1			
Femur (wh)	4	1		
Femur (d)	1			
Tibia (d)	1		1	1
MTP	8			
Rib	1			

Table 15. Period IV2 Avian.

	chicken	goose	avian
Clavicle		1	
Humerus		4	
Radius	1	1	
Ulna	1		
Sternum	1		
Femur	2		
Tibiotarsus	4		
Tarsomtt.	2		
LFR			2

Table 16. Period IV3 Indicators.

Species	cow	sheep	goat	s/g	pig	horse
Horn core	8	21	5			
Jaw	4	15		54	16	2
Scapula (d)	15			15	4	
Humerus (wh)				2		
Humerus (pr)	1			3	2	
Humerus (d)	13			25	3	2
Radius (wh)	1			5	1	1
Radius (pr)	13			23	1	1
Radius (d)	11			2		2
MTC (wh)	11			7	16	1
MTC (pr)	5			16		4
MTC (d)	7			11		
Radialcarpal	1					
Pelvis	6			21	3	5
Femur (pr)	6			2		1
Femur (d)	2			5		6
Tibia (wh)				2	2	
Tibia (pr)	9			6	3	
Tibia (d)	13			26	8	1
MTT (wh)	12			10	10	
MTT (pr)	13			19	4	1
MTT (d)	8			7		
MTP	20			7	1	
Astragalus	14			7	3	2
1st phalange	47			22		1

Table 17. Period IV3 Non-Indicators (1).

species	cow	sheep	goat	s/g	pig	horse
Horn core	2			1		
SFR	10	5	3	7	23	1
Maxilla	10			24	26	
Jaw	46			49	33	3
L/T	64			45	35	10
Premaxilla	3			3		
Hyoid	2					
Scapula	4			1	5	3
Humerus	4			4	3	1
Radius	2			5		3
Ulna	10			9	15	2
MTC	5			4		
Carpal	4					3
Pelvis	16			8	3	
Femur	6			1		1
Patella	3					
Tibia	2				8	
Fibula					3	
MTT	5			6		
Tarsal	1					3
Calcaneum	17			6	7	2
Nav.cuboid	10			2	1	
2nd phalange	11			2		2
3rd phalange	12			1		2
Splint bone						3
Astragalus	1					
Sacrum	2					
Vertebra	12(9+3)			18(10+8)	16(8+5 +3)	1(atlas)
MTP	2				2	

Table 18. Period IV3 Non-Indicators (2).

species	oxo	lar	sma	rum	ind	vsm
Horn core					5	
SFR	58		159	5	2	
Jaw	15	14	9	29		
L/T					12	
Scapula	47	3	26	19		
Humerus	19	1	3	10		
Radius	9			30		
Ulna	2					
MTC	2			2		
Pelvis	43	1	23	25		1
Femur	8	2	1	4		
Tibia	8		8	8		
MTT		4	1	8		
Calcaneum	2	1	2			
Vertebra	188(7+3 +178)	1(atlas)	160(2+3 +155)	1(atlas)		4
Sacrum	1					
Ribs	417		307			2
Sternum	1					
Costal cart.			4			
MTP	1	1		1		
LER	313		369			
Ind					384	

Table 19. Period IV3. Miscellaneous Species.

Species	rab	cat	dog	roe
SFR		1 (wh)	6	
Max		1		
Jaw	1	1	4	
L/T			6	
Scapula		1	7	
Humerus (wh)			2	
Humerus (d)		2		
Humerus (sh)		1		
Radius (wh)		2		
Radius (pr)			1	
Ulna (wh)		1		
Ulna (p+sh)			1	
MTC			1	
Pelvis	1	3	3	
Femur (wh)		3	2	
Tibia (wh)		2	1	
Tibia (pr)			1	
Fibula (wh)		1		
Fibula(p+sh)		1		
Fibula(d+sh)			1	
MTT (wh)			1	
MTP		2	5	1
Calcaneum			1	
lphal			2	
Ribs		3	18	
Vertebra		4	22 (18 +2+2)	

Table 20. Period IV3 Avian.

	goose	duck	chicken	avian
SFR		1		
Scapula	1		1	
Corcoid	4		1	
Clavicle	1		1	
Humerus	3	1	8	
Radius	5			
Ulna	2		8	
MTC	5	1	3	
Pelvis			3	
Sinsacrum			2	5
Sternum			4	
Femur	2		10	
Tibiotarsus	4		7	1
Tarsomtt	1		8	
1phal	1		1	
Ribs				2
LFR				12
Ind				2

Table 21. Period VII Indicators.

Species	cow	sheep	goat	s/g	pig	horse
Horn core	1	9	3	2		
Jaw	9	16		108	11	
Scapula (d)	20			17	3	1
Humerus (wh)	1			3		
Humerus (pr)	1			2		
Humerus (d)	4			24	6	1
Radius (wh)	1			7		
Radius (pr)	16			15	3	
Radius (d)	6			12		3
MTC (wh)	13			11	7	2
MTC (pr)	12			21		
MTC (d)	16			13		
Pelvis	2			11	6	1
Femur (wh)				2		
Femur (pr)				2	3	1
Femur (d)	2			4		
Tibia (wh)				1		
Tibia (pr)	3			2	1	1
Tibia (d)	11			30	5	3
MTT (wh)	8			14	2	1
MTT (pr)	14			60	1	
MTT (d)	9			23		
Astragalus	16			2		1
1st phalange	22			4		6
MTP	11			4	2	

Table 22. Period VII Non-Indicators (1).

species	cow	sheep	s/g	pig	horse
Horn core		7	3		
SFR	15	5	18	42(1wh)	
Maxilla	14		14	9	
Jaw	132		195	20	1
L/T	100		140	30	15
Premaxilla	1		2		
Hyoid			1		
Scapula	9		3	6	2
Humerus			1	2	
Radius	10		15	1	
Ulna	12		3	10	
MTC	3		4		
Pelvis	14		13	4	
Femur			1		
Patella	4				
Tibia	2		1	7	
MTT	6		6		
Calcaneum	15		4	4	
Nav.cuboid	8				
2nd phalange	5				3
3rd phalange	11				1
Splint bone					2
Vertebra	13(8+5)		8(3+5)	72(2+2+ 68)	2(atlas)
Ribs				58	
MTP			2		
Astragalus	3				
Sternum				3	

Table 23. Period VII Non-Indicators (2).

species	oxo	lar	sma	rum	ind	t/m	vsm
SFR	46		123	2	13		1
Jaw	10	2	1	9			
L/T					7		
Scapula	58	6	21	13		1	
Humerus	6		1	8			
Radius	2			26			
Ulna	3						
MTC		5		5			
Pelvis	31	1	11	9			
Femur	6						
Tibia	6	1	7	31			
MTT		1		21			
Calcaneum	1						
Vertebra	88 (1+ 2+84)		95				
Sacrum	1						
Ribs	267		176				1
Costal cart.	1						
Sternum	1						
MTP	2	8		1			
LFR	300		301			1	
Ind					171		1

Table 24. Period VII Miscellaneous Species.

species	rabbit	cat	dog	f/m
Skull				1
Max	2		2	
Jaw	2	1	3	1
L/T	5			
Scapula (d)			1	
Humerus (wh)	2	2	2	
Humerus (pr)	1		1	
Humerus (d)	2	1	3	
Radius (wh)	2	1	2	
Radius (pr)	1			
Radius (d)	1			
Ulna	2		2	
Carpal			1	
Pelvis	5	2	4	
Femur (wh)	3	3	2	
Femur (pr)	2		1	
Femur (d)	1			
Femur (sh)	2			
Tibia (wh)			4	1
Tibia (pr)	1		1	
Tibia (d)	1			
MTP			12	
Calcaneum			2	
Astragalus			1	
1phal			1	
Rib	1			
Sternum			2	
Vertebra	5			
Sacrum	2			

Table 25. Period VII Avian.

	goose	duck	chicken	avian
skull			2	1
Mandible			1	
Scapula	2		5	
Corcoid			7	
Clavicle			1	
Humerus	3	1	6	
Radius	2		5	
Ulna	5	1	5	
MTC	2	2	2	
Pelvis			7	
Sternum			1	
Femur			6	
Tibiotarsus	2		6	
Fibula				1
Tarsomtt	2		4	
1phal			5	
Ribs				17
Vertebra			4	
LFR				6
Ind				15

Table 26. Cattle Epiphyseal Fusion.

element	II		IV2		IV3		VII	
	f	nf	f	nf	f	nf	f	nf
distal scapula 7-10 months	17	2	9	1	15	0	16	4
distal humerus 12-18 months	4	2	6	0	10	3	4	1
distal tibia 2-2.5 years	11	8	4	1	7	6	6	5
distal MTC 2-2.5 years	4	0	5	1	15	3	19	10
distal MTT 2.25-3 years	10	1	4	2	18	2	13	4
distal radius 3.5-4 years	2	3	2	1	8	4	2	5
distal femur 3.5-4 years	3	3	1	0	1	1	1	1
proximal tibia 3.5-4 years	0	3	0	2	3	6	2	1

Table 27. Sheep/Goat Epiphyseal Fusion.

element	II		IV2		IV3		VII	
	f	nf	f	nf	f	nf	f	nf
distal scapula 6-8 months	7	4	6	0	13	2	14	3
distal humerus 10 months	8	1	8	0	25	2	23	4
distal tibia 1.5-2 years	14	6	10	2	24	4	28	2
distal MTC 18-24 months	4	1	5	3	14	4	15	9
distal MTT 20-28 months	3	3	4	1	12	5	28	9
distal radius 3 years	4	2	1	0	5	2	9	10
distal femur 3-3.5 years	4	2	0	2	2	3	0	4
proximal tibia 3-3.5 years	1	2	0	2	0	6	1	2

Table 28. Pig Epiphyseal Fusion.

element	II		IV2		IV3		VII	
	f	nf	f	nf	f	nf	f	nf
distal scapula 1 year	7	5	0	1	4	0	2	1
distal humerus 1 year	0	3	0	2	3	0	2	4
distal tibia 2 years	2	2	0	3	2	8	0	5
distal MTP 2-2.25 years	4	23	5	6	7	23	1	9
distal radius 3.5 years	0	2	0	1	0	1	0	0
distal femur 3.5 years	0	2	1	2	0	0	0	0
proximal tibia 3.5 years	0	0	0	1	2	3	0	1

Table 29. Pathological Material.

Very little pathological material was recovered from the site. What was recorded is listed below.

context	phase	species	bone	element	l/r	location of pathology
368	II	cow	mtt	whole	r	lateral side
1298	II	cow	mtc	whole	l	proximal lateral side
700	II	cow	jaw	whole	r	abscess around dp4
794	II	cow	sfr	"ear"	r	
345	II	cow	sfr	"eye"	r	
794	II	horse	carpal	2*whole		fused together
1480	III	s/g	mtt	whole	r	front shaft
1388	IV2	cow	2phal	whole		
1854	IV3	chicken	mtt	whole	l	around spur
503	IV3	s/g	1phal	whole		proximal
1342	IV3	s/g	jaw	whole	r	abscess around M2
947	IV3	dog	rib	.75whole		healed break on shaft
1995	IV3	oxo	vert			fused together
2094	IV3	oxo	sacrum			
1102	VII	cow	1phal	whole		distal
1170	VII	cow	1phal	whole		distal
1102	VII	cow	1phal	whole		proximal and distal
1604	VII	s/g	mtc	p+sh	l	rear shaft
1221	VII	cow	mtt	whole	r	distal
1761	VII	cow	jaw	whole	l	P4/M1 jaw recession
1805	VII	cow	jaw	whole	r	P4/M1 jaw recession
1415	VII	s/g	jaw	whole	l	M1 half pre-mortem loss
1102	VII	s/g	jaw	shaft	r	M1 half pre-mortem loss

Table 29(contd)

context	phase	species	bone	element	l/r	location of pathology
1761	VII	s/g	h/c	whole		odd "twist"
1334	VII	cow	mtt	whole	l	lateral shaft
794	II	oxo	pelvis	whole		acetabulum

Table 30. , Miscellaneous Butchery.

The following unusual cases of butchery were recorded.

context	phase	species	bone	element	l/r	description
898	II	oxo	rib	shaft		"nicks" down both edges
844	II	s/g	tib	shaft		possible flute finger hole but very eroded
564	IV3	horse	mtc	p+sh	r	hole through proximal and indentation in shaft - peg?
1332	IV3	pig	fibula	shaft		hole in proximal shaft
1673	VII	s/g	tib	shaft		large number of incisions at right angles to the shaft

Miscellaneous Worked Stone

1. Shelly Limestone; ?building material; fill of ditch 1234, Period IV1, s.f. 949.
2. Shelly Limestone; worked fragment; hearth 1529, Period IV2, s.f. 859.
3. Shelly Limestone; fragment with two worked surfaces; fill of post-hole 1319, Period IV3, s.f. 646.
4. Shelly Limestone; worked fragment; top fill of pit 1651, Period IV3, s.f. 936.
5. Shelly Limestone; worked fragment; top fill of hut 785, Period IV3,
6. Micaceous Sandstone; worked fragment; fill of ditch 1383, Period V,
7. Micaceous Sandstone; worked fragment; layer 1102, Period VII,
8. Micaceous Sandstone; worked fragment; layer 1306, Period VII, s.f. 1026.
9. Micaceous Sandstone; worked fragment; layer 1543, Period VII, s.f. 801.
10. Micaceous Sandstone; worked fragment; layer 1273, Period VII, s.f. 573.
11. Micaceous Sandstone; worked fragment; layer 1761, Period VII, s.f. 1156.
12. Micaceous Sandstone; worked fragment; layer 1741, Period VII,
13. Limestone; ?brick; layer 1338, Period VII, s.f.796.
14. Limestone; building material; bottom fill of pit 1272, Period I,

15. Limestone; building material; top fill of pit 1873, Period IV3,
16. Quartzite; building material; fill of pit 1986, Period IV3,
17. Chalk; worked fragment; layer 1164, Period VII, s.f. 513.
18. Chalk; worked fragment with knife marks on one surface; wall 1133, Period VII,
19. Chalk spindlewhorl; weight 21gm; fill of 785 (Structure 5), Period IV3, s.f. 249.
20. Chalk spindlewhorl; weight 39gm; fill of ditch 250, Period IV2, s.f. 185.

Hones

1. Blue Phyllite; smoothed overall; broken at both ends; upper fill of pit 1994, Period IV3, s.f. 1231.
2. Blue Phyllite; smoothed on two surfaces; broken at both ends; layer 1102, Period VII, s.f. 478.
3. Blue Phyllite; smoothed on three surfaces, fourth is rough; broken at both ends; one broken suspension hole; layer 1108, Period VII, s.f. 516.
4. Blue Phyllite; smoothed overall; broken at both ends; layer 1102, Period VII, s.f. 522.
5. Micaceous Quartz Sandstone; one smoothed surface; broken both ends; unstratified, s.f. 92.
6. Micaceous Quartz Sandstone; smoothed overall, but ends broken; layer; layer 1154, Period VII, s.f. 477.
7. Micaceous Quartz Sandstone; smoothed overall, ends rough; layer 1673, Period VII, s.f. 1197.
8. Unidentified; smoothed on three surfaces, fourth is rough; broken at both ends; layer 1108, Period VII, s.f. 508.

Tile

Period II

322: ?Roman, with hole, s.f. 163

Period IV1

274: Roman

620: pan.

719: peg, post-med.

1640: hearth tile, modern.

Period IV2

28: peg, post-med.

31: two pan with black glaze.

111: pan.

996: Roman tegula.

1145: pan.

1307: two pan.

1821: two ?Roman, s.f.s. 1040 and 1041.

Period IV3

746: peg, post-med.

894: pan.

1715: Roman imbrex.

Period VII

1093: peg, med.

1102: three peg, med.

1105: peg, ?med.

1107: two peg, post-med.

1109: two peg, med.; two peg, post-med.

1109: ?floor tile with traces of mortar deposits on one side.

1113: peg, med.

1142: three peg, med. or post-med.

1143: pan.

1154: two peg, med. or post-med.

1170: peg, med.

1221: peg, post-med.

1305: peg, med.

1305: two peg, late med. or post-med.

1338: two peg, med.

1415: three peg, med.

1520: peg, med.

1673: pan.

1761: pan.

Modern

16: modern

18: ?peg, med. or post-med.

845: pan.

1116: three peg, med., one modern.

1304: peg, med.

1396: pan.

Unphased

2: Roman tegula; floor-tile, med., six post-med.

1262: pan with black glaze.

1307: two pan.

Brick

Period IV3

1302: one fragment.

Period V

2035: fragment.

Period VII

1105: fragment.

1127: fragment with two fingered grooves and mortar deposits.

1305: fragment.

1546: two fragments.

1737: fragment.

Period Vi

21: fragment.

Modern

6: two fragments.

10: fragment.

18: two fragments.

896: two fragments.