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Ancient Monuments Laboratory
Report 158/87

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Summary

The Corbridge hoard contains a large group of metalwork, including a suit of Roman armour and weapons, together with various organic objects packed in a wooden chest. As the metalwork was heavily corroded, many of the organic objects were preserved by iron oxides, and could be identified. Originally, the chest had been bound with iron corner brackets, so that there was sufficient evidence to suggest its original construction with dove-tail joints.

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Mineral Preserved Organic Material from the Corbridge Hoard.

A. Box Construction.

The box was made from planks of alder (Alnus sp.) with the sides dovetailed together. The pins of these dovetails are triangular , with a depth of 17-18mm which probably corresponds to the thickness of the plank. The pin widths vary in size between 13-21mm. The angle of the dovetails is approximately 1 in 4, and this is very similar to those on the Bradwell Villa Chest which were 1 in 3.5 (Keepax & Robson, 1978). However, the dovetail angles on these two chests are more acute than the modern reccomendation of 1 in 8 (Brazier & Harris, 1969). The height of the tails are between 32-42mm, so that if the chest was 410mm high there would have been 10 dovetails per corner.

There is no evidence to say whether the sides were made from single boards or smaller planks secured with tenons. The surfaces preserved, suggest that the sides were made of flat sawn timber. If single boards were used, the original tree that provided the timber would have to be at least 50cm in diameter. Alder trees can grow to this size but are not common.

There is no evidence to suggest how the base was fixed to the sides. It is therefore assumed that the base was inserted into the sides using tongue and groove joints.

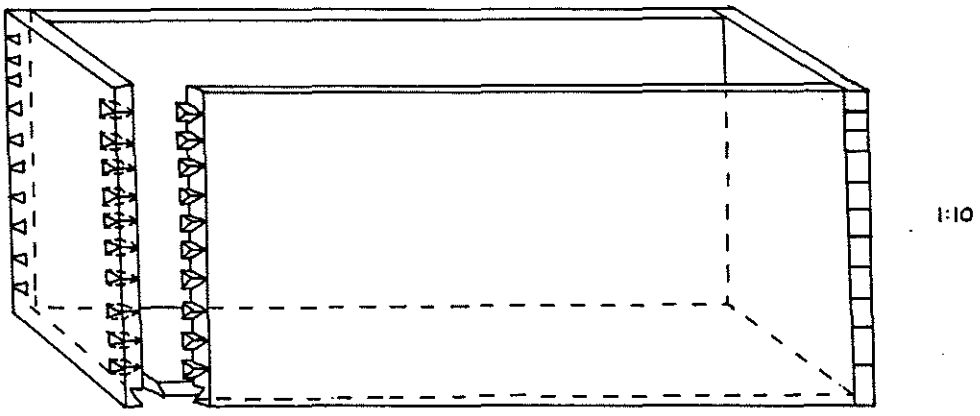


Fig.1 Reconstruction of side and base joints.

B. Spearshafts.

868130 85
Socket with mineral preserved wood, but not well enough preserved to identify the species. The open end of the socket appears to be covered with other organic material, suggesting that the hafting was broken at this point before being placed in the box.

868153 066
Wood from spearhead socket: Fraxinus sp. (ash).

868158 283
Mineral preserved wood from spearhead socket: Salix sp. (willow) or Populus sp. (poplar). SEM Stub No.B57

868159 280
Sample taken from spearhead socket which turned out to be just a fragment of corrosion.

868160 277
Mineral preserved wood from spearhead socket: a wood with uniseriate rays, so will probably be one of the coppicing woods - Alnus sp. (alder), Corylus sp. (hazel), Populus sp. (poplar), or Salix sp. (willow).

C. Tools.

868154 022
Mineral preserved wood from saw tang: Buxus sp. (box).

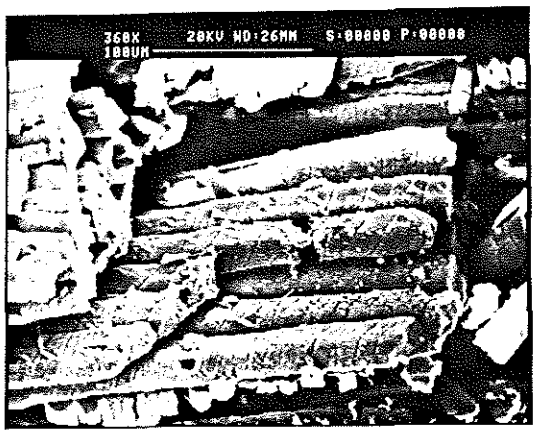
868155 003
Mineral preserved wood from chisel tang: Fraxinus sp. (ash).

D. Containers.

868129 Box 1160:104
Wooden "dice" box: probably Buxus sp. (box).

868140 Box 1200:94
Shaped piece of wood which may have belonged to another small box: probably Buxus sp. (box).

Stave built tankard: Taxus sp. (yew). SEM Stub No.B143



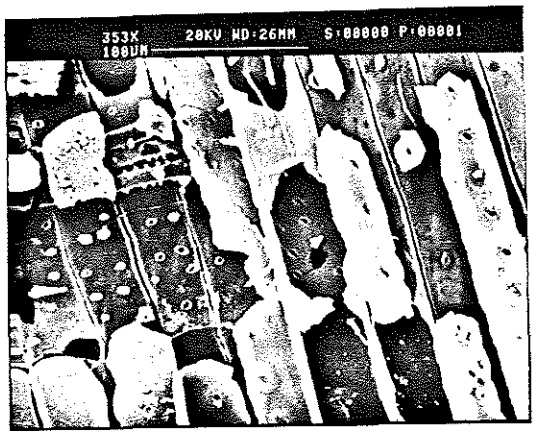
143:1 Iron oxide preserved tracheids in wood from tankard.

E. Writing Tablets.

868134 Box 1188:144
Concertina type writing tablet: Acer sp. (maple).

868135 Box 1189
Fragment of wax writing tablet with remains of inscription: Castanea sp. (sweet chestnut).

Small fragment of wax writing tablet: Abies sp. (silver fir), or Larix sp. (larch). Sem Stub No.B144



143:2 Cross field pitting, from the above writing tablet.

868142 Box 1210
Large piece of wax writing tablet: Acer sp. (maple).

Box 1210:145
Fragment of wax writing tablet with inscription: probably Abies sp. (silver fir).

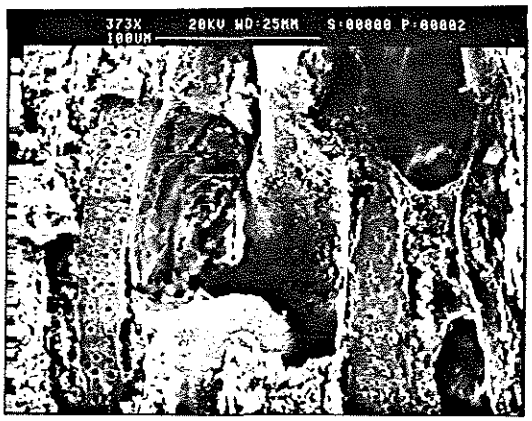
F. Miscellaneous Objects.

868131 Box 1178:138
Fragments of shaped wood, possibly part of a second pulley wheel: Acer sp. (maple).

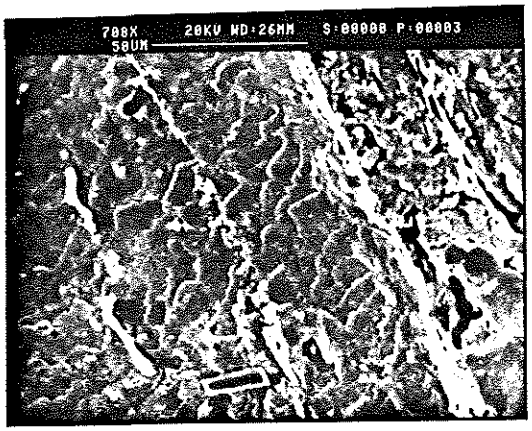
868152 Box 1178:91
Mineral preserved wood from pulley wheel: Quercus sp. (oak).

868163
Mineral preserved wood from copper alloy binding: in too poor a condition to identify.

868146 Box 1251
Mass of organic material which on microscopic examination appears to be made up of long fibres of keratinous tissue, but not animal hair. The most likely interpretation is a large fluffy feather, similar to an ostrich feather. This is further supported by the presence of part of a quill in Box 1189:54, along with more of this organic mass. Presumably a feather of this type could have been used as a quill for use with the concertina type writing tablets, or be a decorative plume associated with the armour. SEM Stub No.B145



143:3



143:4

143:3 Mineral preserved feather, possible cast of barb back.

143:4 Same sample as 143:3. Layered structure similar to horn, possibly remains of feather barbules.

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Wooden block: Quercus sp. (oak).

Summary

All the represented wood species were native to Britain in the Roman period with the exception of sweet chestnut, silver fir, and larch. However, these three woods were readily available in southern Europe.

References

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Keepax, C.; & Robson, M.; 1978
Conservation and Associated Examination of a Roman Chest: Evidence for Woodworking Techniques, The Conservator, Vol.2, 35-40.