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Identification of the Woods from the Sockets of Iron Artefacts found at Fiskerton, Lincolnshire in 2000 and 2001

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Summary

Iron tools and weapons were recovered during monitoring and excavation at Fiskerton in 2000 (LWES00) and 2001 (FISK01). This report provides the identifications of wood from the sockets of three axeheads, two spearheads and a currency bar, examined by optical and scanning electron microscopy.

Keywords

Wood
Iron
Conservation
Iron Age

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Introduction

As part of a five-year programme of flood defence enhancements in the Witham Valley, Pre-Construct Archaeology (Lincoln) was funded by the Environment Agency to monitor groundworks along the river Witham. As a consequence, in 2001 it was necessary to excavate an area of land close to the known early Iron Age causeway excavated by Naomi Field in 1981 (Field and Parker Pearson 2003). This excavation was on land between the northern bank of the river Witham and the north delph, in line with the posts of the causeway (Field et al. 2003, Fig. 4).

A currency bar and axehead were recovered during monitoring in 2000 (LWES00) and metal and other artefacts were found during excavation in 2001 (FISK01). Wood survives in the sockets of several of the metal finds, including three axeheads, two spearheads and a currency bar. This report provides the wood identifications for those artefacts.

Method of analysis

The wooden haftings or samples of the wood were initially examined under a low power lens or microscope. The ring porous woods of ash and oak are usually readily identified by this method providing clear transverse sections (TS) are visible. The remaining woods were examined as small samples using scanning electron microscopy (SEM). Samples were mounted on stubs, carbon-coated, and examined for characteristic features at a variety of magnifications. Identifications to species level is generally not possible from physical characteristics of the wood alone.

Results

The results are given in Appendix 1, Figs 1–5 and summarised in Table 1.

Discussion

The two spearheads have haftings of ash, which was a commonly used wood for haftings of early weapons, for example in all of the five identifiable socket woods in the spearheads excavated at Fiskerton in 1981(Field and Parker Pearson 2003, 45).

The handle of shaft-hole axehead 065 was also made of ash whereas the handle of shaft-hole axehead 11 was made of hazel. Hazel was also employed for the handle of an axehead (331) from the 1981 excavations (Field and Parker Pearson 2003, 45). The socketed axehead (131) has a two-part handle made of two different woods. The wood surviving in the socket is *Pomoideae*, sub-family *Rosaceae* (eg apple, hawthorn) whereas the other component of the handle is oak. From the 1981 excavations, *Pomoideae*, sub-family *Rosaceae* was used for the hafting of a socketed axehead (413).

Table 1. Summary of wood identifications

No.	Context	Object	Wood identification
LWES00			
10	-	Currency bar	Possible *Salix* (willow)
11	-	Shaft-hole axehead	Possible *Corylus* (hazel)
FISK01			
43	008	Scale tang knife handle	Very uncertain but possibly *Quercus* (oak)
54	-	Spearhead	*Fraxinus* (ash)
065	-	Shaft-hole axehead (in block)	*Fraxinus* (ash)
75	012	Spear with haft	*Fraxinus* (ash)
131	012	Socketed axehead (2 component handle)	*Pomoideae*, sub-family *Rosaceae* (apple, pear, hawthorn), **and** *Quercus* (oak)

The survival of wood in the sockets of currency bars is rare, probably in part because the vast majority of bars have been found in aerated soils and the wood has not survived. Nevertheless, a few have been recorded with traces of mineralised wood in their sockets, for example at Danebury, Hampshire, although the wood was not identified (Sellwood 1984, 359). Occasionally wood survives in the sockets of bars from waterlogged contexts, for example in seven at Orton Meadows, Northamptonshire, where three were identified as possible willow and a fourth may have been cherry or blackthorn (Stead 1984). The one from Fiskerton is also willow.

Knife handle 43 could not realistically be sampled without damage and this identification is very uncertain.

Acknowledgements

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Sellwood, L 1984 ‘Objects of iron’ in Cunliffe, B, *Danebury: an Iron Age hillfort in Hampshire Vol 2 The Excavations, 1969–1978: the finds*, 346–371. London: CBA Research Report 52

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Appendix 1. Catalogue of wood identifications

No. (context)	Fig	Object	Wood characteristics	Wood identity
75 (012)	-	Spear with complete haft	Ring-porous	Fraxinus (ash)
54	-	Spearhead (socket and part of blade). Wood in the socket	Ring-porous	Fraxinus (ash)
10	1	Currency bar. Wood from the open 'socket'	Diffuse porous with some slight banding of pores (semi-ring porous). Pores are mostly solitary but there are some doubles. Uniserate. Could not examine LS or TLS	? Salix (willow)
11	2&3	Shaft-hole axehead. Wood from the socket, in poor & shrunken condition	Semi-ring porous. Distinct radial pore files of around 10 pores. Uniserate rays or possibly aggregate rays (wood is very deformed by shrinkage). Heterogenous Type II, c. 8 cells high. Scalariform perforation plates, c. 8 plates.	? Corylus (hazel)
131 (012)		Socketed axehead. The handle is made of 2 components:		
	4	The wood in the socket which projects outwards and is perforated with an eye	Diffuse porous, solitary pores, uniformly distributed. Uniserate rays and biserate rays, c. 12 cells high Spiral thickenings in vessels	Pomoideae, sub-family Rosaceae (apple, pear, hawthorn)
	-	The bar of the handle (incomplete) which projects through the eye. Identification was made from detached fragments packed with the handle.	Ring porous	Quercus (oak)
4 (008)	-	Scale tang knife handle	Could not see a clear TS from the object itself and did not want to sample it. However, the overall visual appearance is oak, but this is provisional.	Possibly Quercus (oak)
065	5&6	Shaft-hole axehead	Ring porous	Fraxinus (ash)

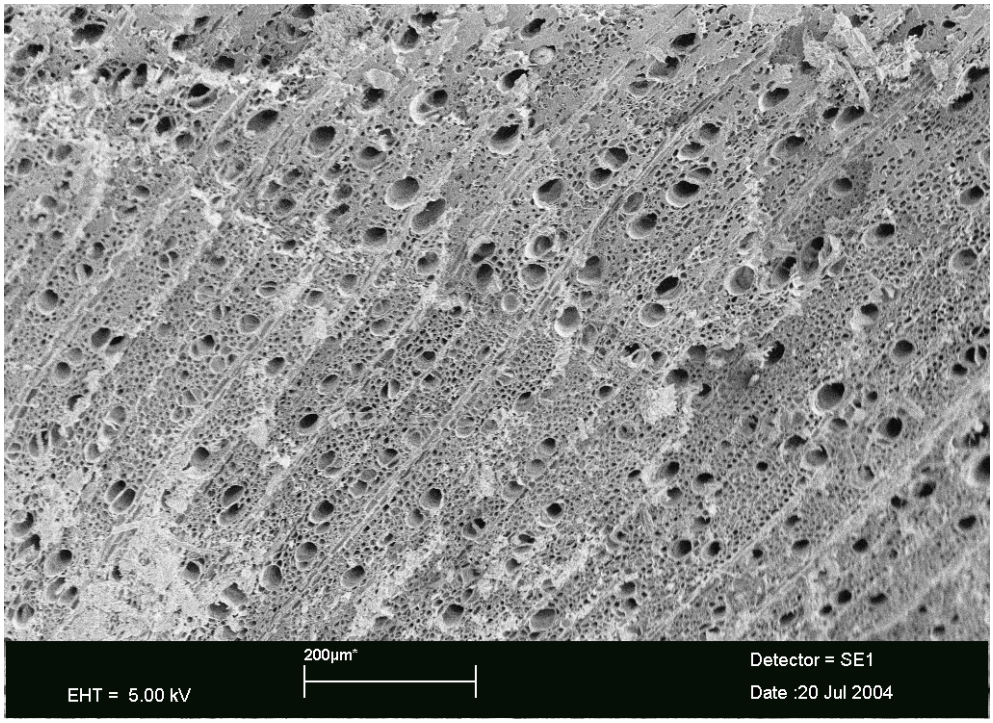

Fig. 1. Wood from the socket of currency bar 10. (TS)

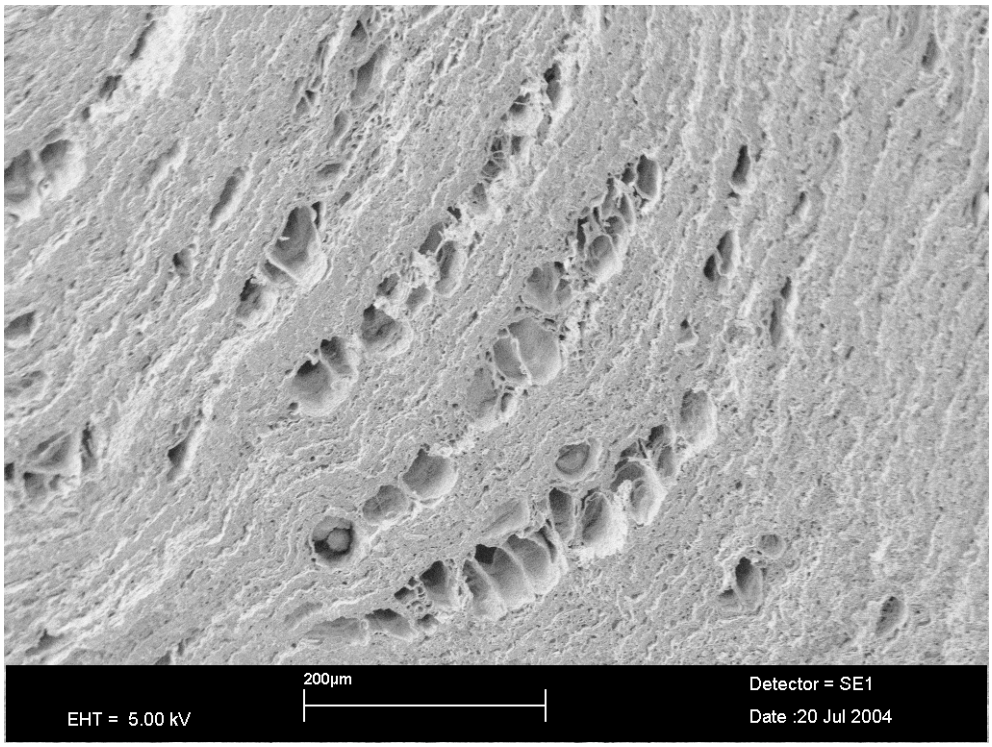

Fig. 2. Wood from the socket of axehead 11. TS showing radial pore files

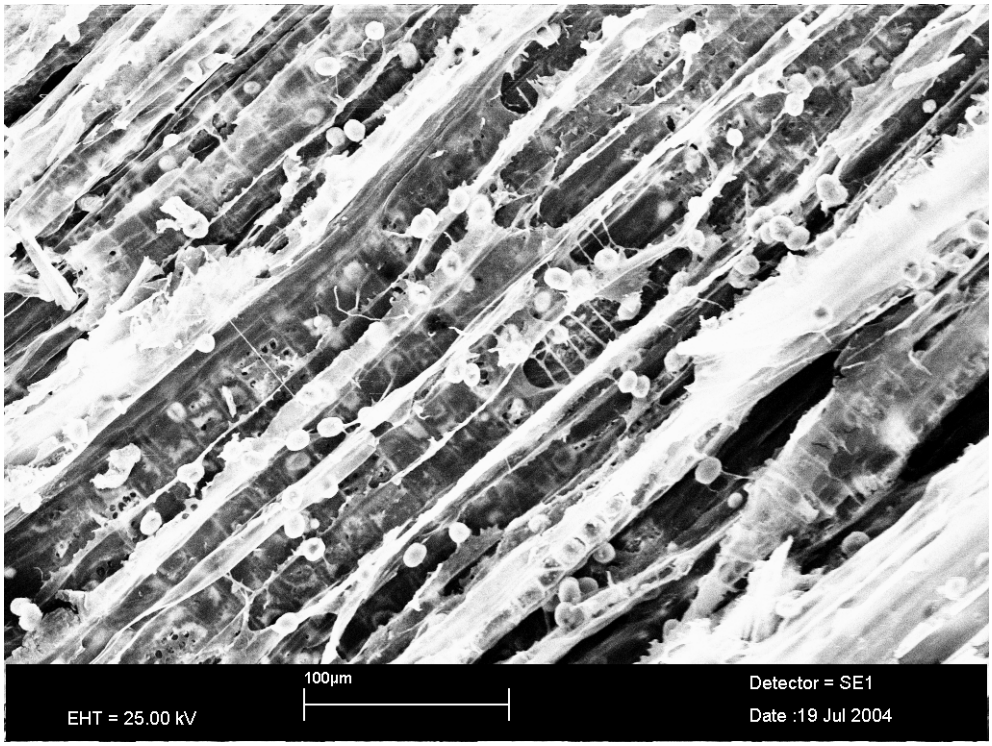

Fig. 3. Wood from axehead 11. LS showing scaliform perforation plates. The small circular features are fungal spores.

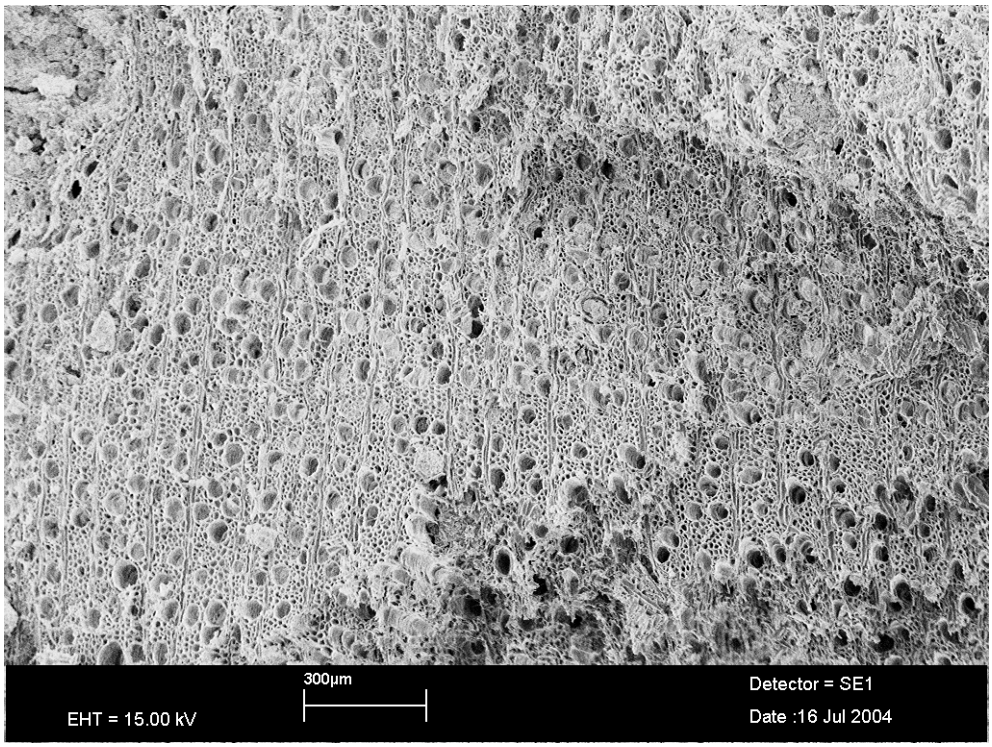

Fig. 4. Wood from the socket of axehead 131. (TS)

Fig. 5. Shaft-hole axehead 065. The wood of the hafting is visible centre right, at an angle to the stone

Fig. 6. Detail of axehead 065 wood