

HASLAR, GOSPORT, HAMPSHIRE

WATERLOGGED WOOD REMAINS FROM ROYAL HOSPITAL CEMETERY

Zoë Hazell



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SUMMARY

Five water-logged wood samples from three coffins excavated from the Royal Hospital cemetery at Haslar, Gosport, were identified. All were the softwood *Pinus* (pine) and date from sometime within the period of the cemetery's use, between c.1753 and 1826 AD.

Key word: Wood

ACKNOWLEDGEMENTS

Many thanks to Gill Campbell (Head of Environmental Studies Team, English Heritage) for her help with the identifications. Front cover image, showing the trench, is the property of Cranfield University.

ARCHIVE LOCATION

Samples are currently with English Heritage (Fort Cumberland) at the time of this report's compilation.

DATE OF RESEARCH

December 2007 to March 2008

CONTACT DETAILS

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INTRODUCTION

A trench excavation in the paddock at the Royal Hospital Haslar, Gosport was carried out in June 2007 by staff from The Centre of Archaeological and Forensic Analysis, Cranfield Forensic Institute, Cranfield University, where previous work by Oxford Archaeology had suggested the presence of somewhere between 30-60,000 burials on site. During the 2007 works in the burial grounds, seven complete burials were excavated. Although all had nails associated with them, thus suggesting the use of coffins, waterlogged wood samples from the coffins themselves were retrieved from only some of those graves. Five of these wood samples, four associated with two of the burials and one from subsoil sediment, were sent to English Heritage for identification. The burials are thought to date from somewhere between 1753 AD (when the hospital opened) and 1826 AD, over which time the cemetery was in use.

METHODOLOGY

The waterlogged wood pieces were kept in sealed bags in cold storage at 4°C. To examine the wood under a microscope, thin sections along the three main planes of identification (transverse (TS), tangential longitudinal (TLS) and radial (RS) sections) were sliced by hand using a double-edged, flexible razor blade. These sections were then mounted in glycerol between a microscope slide and cover slip. Sections were examined under a high power, light transmitting microscope (Leica DM2500) at magnifications of x100 and x400. Identifications were made based on a combination of Phillips (1948), IAWA Committee (2004), Schweingruber (1982) and Minnis (1987).

Samples

The five analysed wood samples are listed in Table 1.

Table 1. Sample and context details of the five wood samples.

Sample number	Context number	Burial number	Sample label/description
<163>	(002)	n/a	Wood from west facing section
<0077>	(0021)	B010	Wood
<0116>	(0026)	B007	Wood
<0117>	(0026)	B007	Wood
<154>	(0030)	B007	Timber from over abdomen

See Shortland (2007) for a plan of the excavation trench showing the location of the numbered burials.

RESULTS AND DISCUSSION

Using the wood identification key by Schweingruber (1982) together with the specific softwood keys by Richter *et al.* (2004), Minnis (1987) and Phillips (1948) it was possible to identify the wood samples to genus level; all were *Pinus* (pine). This is based on the

combination of the presence of axial resin canals (TS), large 'window pits' (RS) and the dentate structure of ray tracheids (TLS). It is, however, notoriously difficult to narrow down this genus down to species-level, unless the source region is known (Phillips, 1948). If the wood was sourced from Europe, it is most probable that they are *Pinus sylvestris* (Scot's pine) given that "[t]he presence of both dentate walls in the ray tracheids and the fenestriform [window] ray pits should prevent confusion with any other woods" (Hather, 2000: 34)¹.

In addition to the resin canals, exceptionally large 'holes' in the wood were visible in the TS and/or RS sections of some of the samples, most notably in <I54>. In the TS, at first glance, these could easily be misidentified as large axial resin canals (although some had a maximum diameter of 500 µm). However, the presence of similarly large holes (around 300 µm) in the RS sections (the plane where resin canals would not normally be seen), together with the apparent lack of epithelial cells at closer inspection, suggest that they are not such a feature. In a study by Marguerie and Hunot (2007), they publish an image of a softwood with holes bored by insects/woodworms; it is likely that the holes found in the Haslar samples are of a similar origin.

Notably, sample <I54> had narrow ring widths, with at least 15 growth rings; this characteristic differed noticeably from the other wood fragments, including those associated with the same burial (B007).

Little work has been published concerning wood types used as coffins for military burials. Comparisons with other research, if available, would be of great interest. If further excavations at this site occur, it would also be interesting to compare the wood types (if any types other than pine are present) with any associated metal artefacts, to see if there might be any relationship between woods used and the inferred importance of a burial as ascertained by the type and/or quality of coffin decorations e.g. handles (as intimated by Shortland (2007)).

CONCLUSION

Wood samples associated with the remains of three coffin burials from the Royal Hospital cemetery, Gosport, have all been positively identified as from the *Pinus* (pine) Genus, and most likely of the species *sylvestris* (if the woods originated from Europe).

¹ The combination of these two diagnostic features can also be found in the European *Pinus mugo* (Mountain pine), and therefore Hather (2000) maintains that *P. sylvestris* and *P. mugo* cannot be differentiated from each other anatomically. He refers to them as *P. sylvestris/mugo*, although the latter has a more central European distribution than the former, which is more boreal and northern European.

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