Ancient Monuments Laboratory
Report 1/87

EXAMINATION AND IDENTIFICATION OF THE UNWORKED WOOD FROM THE WILSFORD SHAFT EXCAVATION, 1962.

Jane P Squirrel BSc

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Summary

The unworked wood from the Wilsford Shaft excavation in 1962, previously unstudied, was examined. Representative samples were identified and species lists compiled. Oak and alder were the dominant species, and it is suggested that they represent the debris from the working of wood.

Comments are also made on the lack of dendrochronological dating potential, the treatment of the material since the excavation and its future storage requirements.

Author's address:

34 Rathmore Road
CHARLTON
London SE7 7QW

01 853 4243

EXAMINATION AND IDENTIFICATION OF THE UNWORKED WOOD FROM THE WILSFORD SHAFT EXCAVATIONS, 1962

Introduction

The 1962 excavation of Wilsford Shaft produced very large quantities of waterlogged wood. The nature of the recovery, when buckets were used to remove the material from the shaft, and its subsequent retrieval by wet sieving, helped to fragment and arbitrarily group together much of this collection, complicating future analysis. The recovered wood consisted of both worked (eg bucket staves and bases) and unworked, broken fragments as well as roundwood and twig material. This examination was concerned with the unworked wooden material only. Except for some worked wood identified by H Greaves (Imperial College) and G C Morgan (Ancient Monuments Laboratory) very little of this material has received any study.

Most of the wood was conserved successfully by the Ancient Monuments Laboratory in the 1960's, using the polyethylene glycol (PEG) impregnation technique. This stabilised the wood by replacing the water with a wax-like substance. A small proportion of worked wood was conserved by freeze-drying, but this wood is now very light and fragile. Since treatment the collection has been stored in polythene bags within cardboard boxes in the basement store of the Ancient Monuments Laboratory, in Fortress House.

The method of, and the length of time since, the excavation, together with the fragmented nature of the wood, most of which was PEG impregnated , made it impossible during the present examination to identify all the material, and, therefore, it was necessary to be selective.

Methodology

A visual examination of each bag in the collection was undertaken, and a general assessment made on its state and condition. The contents varied from

a few to several hundred pieces, and ranged in size from about 1 cm to about 10 cm in length. Representative samples from both the fragmented wood and the roundwood were removed for identification, labelled and rebagged. Samples which required elution to remove surface PEG before identification , were split into two, and one half labelled and rebagged, as the type specimen.

Results and Conclusions

During the examination and identification it was noted that the unworked wood collection consisted of two distinct groups of material:

(i) broken fragments (Table 1)

(ii) roundwood and twigs (Table 2)

Although mostly amorphous and described as unworked by the excavators, the broken fragments did contain some pieces of wood with worked edges. However, the fragmented nature of most of these pieces made it impossible to assign them to any object type. Table 1 shows that oak and alder were the most common identified species, the same species that Greaves and Morgan identified for the worked objects. Much of the recovered worked wood appears to have been from buckets constructed from oak and alder, and it is likely, therefore, that the presence of oak and alder in the unworked wood assemblage is in some way connected with the manufacture of these wooden objects. Table 1, therefore, includes the identifications of all the unworked wood fragments examined, together with those pieces of worked wood previously identified by Greaves and Morgan. These identifications have been checked and confirmed wherever possible.

Table 2 gives the identifications of the roundwood and twig material, and shows that oak, hazel and birch were the most common identified species. The recovery of wicker and basketry items (identifications not known to the author) from the

shaft may suggest that the roundwood and twigs were associated with their construction. Whilst it is usual for hazel, birch and even alder to be used in the making of these types of objects, oak is not commonly used , which suggests that the oak fragments may have been associated with some other activity.

The single identification of common dogwood is fortuitous and interesting because common dogwood is a vigorously growing shrub plant, which, when cutback, sends up good coppice shoots and suckers, and is commonly associated with oak woodland.

The nature of the recovery , as described above, makes it difficult to comment on the relative abundance of individual tree genera, or on the relationship between the mature wood and the roundwood and twig material. However, it is possible for all the identified species to occur together as a mixed deciduous woodland, which suggests that all the woods may have come from within the same area.

Dendrochronology

The Wilsford wood is unsuitable for dendrochronological dating because the number of rings present in any one piece,including the larger worked wood, is insufficient for the analysis.

Treatment since excavation

Most of the wood was conserved successfully by the Ancient Monuments Laboratory in the 1960's, using polyethelene glycol (PEG) impregnation technique. This stabilised the wood by replacing the water with a wax-like substance. A small proportion of the wood was conserved by freeze-drying, but this wood is now light and fragile. Since conservation the wood has been stored in polythene

bags within cardboard boxes in the basement of the Ancient Monuments Laboratory, Fortress House (temperature and humidity unknown to the author).

Recommendations for future storage

Under the present storage methods and conditions (see above) the material appears to be stable, showing no signs of shrinking, splitting or the PEG leaching to the surface. Therefore I recommend that the future storage of this material should aim to maintain these conditions. However, I suggest that more protective packaging of the larger wooden items should be undertaken, especially if the collection is to be moved. Regular checks should be instigated, so that any deterioration can be detected and corrected immediately.

Jane P Squirrell

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TABLE 1 - Species identification of all the sampled unworked wooden fragments, together with the worked wood pieces previously identified by Greaves and Morgan.

Species	Context no.	AM Lab no.	Type of object
Oak	4 +	620369	bucket base
	5 +	620365	post
	6	620365	post
Quercus sp.	10	620369	
	10A	620369	
	11A *	620369	
	11B *	620369	?bucket
	11C +*	620369	
	13	620371	?bucket
	15	--	
	18 +	620366	bucket base
	22	620370	
	25 *	620370	bucket
	27	620370	staves and fragments
	29	620371	?bucket staves
	31B +	620	
	33	620371	?bucket
	33A	620371	?bucket staves
	35	620372	
	42 *	620372	
	42	620372	
	45	620372	?bucket
	46 +*	620371	?scoop
	50 +	620371	?bucket/scoop
	54	620371	
	59 *	620373	
	60 *	620373	
	62	620373	
	68(1)	620372	
	76	620367	?scoop
	77A *	620374	
	77B	620374	?scoop
	85	620367	?bucket
	87	620374	
	90 *	620374	
	91	620367	
	94	620369	
	95 *	620374	?bucket
	102	620374	
	124A	620376	

Key: + identified by Morgan
* identified by Greaves

Table 1 (continued)

	139 *	620367	?bucket
	139A	620373	?bucket
	139B	620373	?bucket
	139C	620367	?bucket
	139(2)	620367	?bucket
	144	620368	post & fragments
	146 +	620374	
	147	620377	
	150	620375	
	151 +	620375	?bucket
	152	620375	?bucket
	161	620375	
	167	620375	?bucket
	177	620376	
	179	620377	
	204	620366	
	211	620366	
	249	620368	?bucket
	251	620377	
	256	620377	
	276 +	620368	?bucket
	277	620366	
	294 *	620368	
	295	620368	
	303	620377	
	306	620368	?bucket
	310	620377	
	316 +	620373	?bucket
	318	620376	
	320	620373	
	329 +	620364	
	1390	620367	
Alder	1 +	620369	bucket stave
	1B	620370	bucket staves
Alnus sp.	11A +	620369	bucket stave & handle
	11B +*	620369	bucket staves
	11C +*	620369	bucket staves
	13 +	620366	bucket base
	15	----	
	17 +	620366	scoop
	17A +	620371	scoop
	18	620366	?bucket
	22	620370	
	25 +*	620370	bucket stave
	25	620370	
	27 *	620370	
	29	620371	

Key: + identified by Morgan
* identified by Greaves

Table 1 (continued)

Ash *Fraxinus excelsior*	11B + 11C * 27 * 42 * 76 + 77B + 321 + 329 + 1395 *	620369 620369 620370 620372 620367 620374 620373 620364 620367	sewn wood sewn wood scoop scoop tool handle
Lime *Tilia* sp.	50 *	620371	
Scots pine *Pinus sylvestris*	210 *	620368	
Others: ?Evergreen oak *?Rosaceae*	 294 * 1390 *	 620368 620367	

Key: + identified by Morgan
* identified by Greaves

TABLE 2 - Species identification of the sampled roundwood and twig material.

Species	Context no.	AM Lab no.
Oak *Quercus* sp.	22 27 46 50 85 95 102 144 178 318	620370 620370 620371 620371 620367 620374 620374 620368 620376 620376
Hazel *Corylus avellana*	59 76 77B 90 102 179 212 250 258	620373 620367 620374 620374 620374 620377 620366 620377 620376
Birch *Betula* sp.	12 27 72 87 90 152 179 301	620376 620370 620367 620374 620374 620375 620377 620366
Alder *Alnus* sp.	102 178	620367 620367
Common Dogwood *Cornus sanginea*	60	620373