

ANCIENT MONUMENTS LABORATORY

REPORT

2204

SERIES/No

ENVIRONMENTAL

13/77

AUTHOR

C A Keepax

21.2.77

TITLE

COLCHESTER

REPLACED
ORGANIC MATERIAL

ANCIENT MONUMENTS LABORATORY

MATERIAL Replaced organic

COLCHESTER

SITE:..... (DATE: 21/2/77)

SHEET: 1

AM No	X-Ray No	Photo No	Description and Report	Ref No
			<p><u>Brass 'ingot'.</u>*</p> <p>Remnants of organic material adhering to the corroded surface of this object seemed to consist mainly of long, flat, parallel sided, cream coloured (sometimes stained green) fragments, maximum width about 5mm. This material superficially resembled grass. Two fragments were removed, coated with gold palladium, and examined in the scanning electron microscope.</p> <p>The first sample displayed structures identical in appearance to the bordered pit-nair casts observed in iron-replaced wood. Possible evidence was also obtained for the presence of replaced spiral thickening on the cell walls. Unfortunately, insufficient features were observed for species identification. In this sample, the original wood seems to have been largely replaced by corrosion products.</p> <p>The second sample did not display many clearly recognisable features, partly due to difficulties caused by heavy charging in the S.E.M. However, it seemed to be composed of wood preserved in its original form. Adhering to one part of this sample was the remains of a millipede about 2mm long (probably Polydesmidae²). This may not be contemporary with the ingot, as it is a burrowing organism.</p> <p>The two samples examined indicate that the "grass" on the surface of the object was actually wood. Wood shavings would match these remains in size and shape. Some areas of the wood were preserved due to contact with the metal, but in others it had been replaced by corrosion products and the original wood had decayed away.</p> <p>S.E.M. micrographs, reference nos:- P52-P73, P149, P150.</p> <p>¹ Keepax, C.A. 1975 Scanning electron microscopy of wood replaced by iron corrosion products. <u>J. of Archaeological Science</u> <u>2</u> No.2 145-151</p> <p>² Identified by M. Girling.</p> <p>* Described by J. Musty, Exhibits at Ballots, The Antiquaries Journal, 1976</p> <p align="right">C.A. Keepax</p>	