Report 1993.

EXAMINATION AND CONSERVATION REPORT

SITE : Wicken Bonhunt

LAB. N° : 731780

X-RAY N° : 21

PHOTO NOS : WB 74/75
WB 77
66m27 1,2
66m28 2
BW66m 1 1,2

OBJECT Pair of iron wool combs

EXAMINATION

When received in the laboratory the objects were sitting one on top of the other in a block of soil.

First they were examined for fibres and one was found on the surface of the soil on the upper comb. This was a wool fibre but as it was so near the surface and was not attached to the object itself, only soil, it was probably contamination. No other fibres were found during cleaning which was carried out under a microscope. It has been suggested that the short fibres which gathered at the base of the teeth , and would most likely be able to be preserved by replacement by iron corrosion products, could be removed and spun separately (Wild 1970).

The combs consist of two rows of teeth set into a wooden handle which is bound round on four and a half sides by sheet iron. It is this sheet iron which has held the teeth in position as the wooden handle has almost completely decayed leaving only some traces on the ends of some teeth and on the surrounding iron. These combs are often found as a number of loose teeth with points at one end and being slightly bent at the other where they had been set into the handle (Hoffmann 1964; Brodribb et al 1973).
The iron was attached to the wooden handle by three nails, no heads of which remain, But the shafts of two and a small section of the third are still present. They resemble the description of Scandinavian examples although no trace could be found of a handle which was fixed at the centre of the row of teeth and at right angles to it. (Hoffmann 1964; illustration in Brodribb et al 1973).

The teeth are set at an angle into the handle and some spring still remains in them. The complete comb has twelve teeth in the top row and thirteen in the bottom row. The incomplete comb which is missing one end has eleven teeth in the top row and twelve in the bottom row. The teeth are roughly diamond-shaped (unlike the Shakenoak examples which are round sectioned), with one end pointed and the other flat being set right through the handle to the sheet iron at the back.

In cleaning some od the teeth to reveal their shape it was found that the iron did not react to mechanical cleaning as most archaeological iron. A surface coating of soil and a little rust flaked off cleanly to reveal a smooth shiny black surface underneath. This was not so along the whole length of the teeth. When a metal section was taken it was found that a considerable metal core remained.

In combing wool one comb was fixed to a post and the other held in the hand. Both combs were heated and the wool was kept moist to make combing easier and to keep the fibres together. The wool was placed on the fixed comb in one direction and during combing it was transferred to the free comb and then by a change in direction of the strokes transferred to the fixed comb. The combed wool was drawn off and combed out a second time in the same way. (Wild 1970).

A sample of the remaining wood was taken and this was examined by Mrs. C. Keepax of the Laboratory. She reported that it was wood replaced by iron corrosion products, probably oak (Quercus sp.) (Report no. 8/75).

The metal section was examined by Dr. R.F. Tylecote of the Department of Metallurgy, University of Newcastle. He repoted that it consisted mainly of deformed, fine-grained ferrite with some slight carburization on a small part of the surface. The hardness was in the range 190-200 HV and from this and the etching characteristics he would suspect that it contained appreciable phosphorus. It was not possible to say whether it was drawn or hammered.

References

Brodribb, A.C., Hands, A.R., and Walker, D.R.,(1973)
Excavations at Shakenoak IV. Privately printed.

Hoffmann, Marta (1964)
The Warp Weighted Loom. Oslo.

Wild, J.P. (1970)
Textile Manufacture in the Northern Roman Provinces. Cambridge

TREATMENT

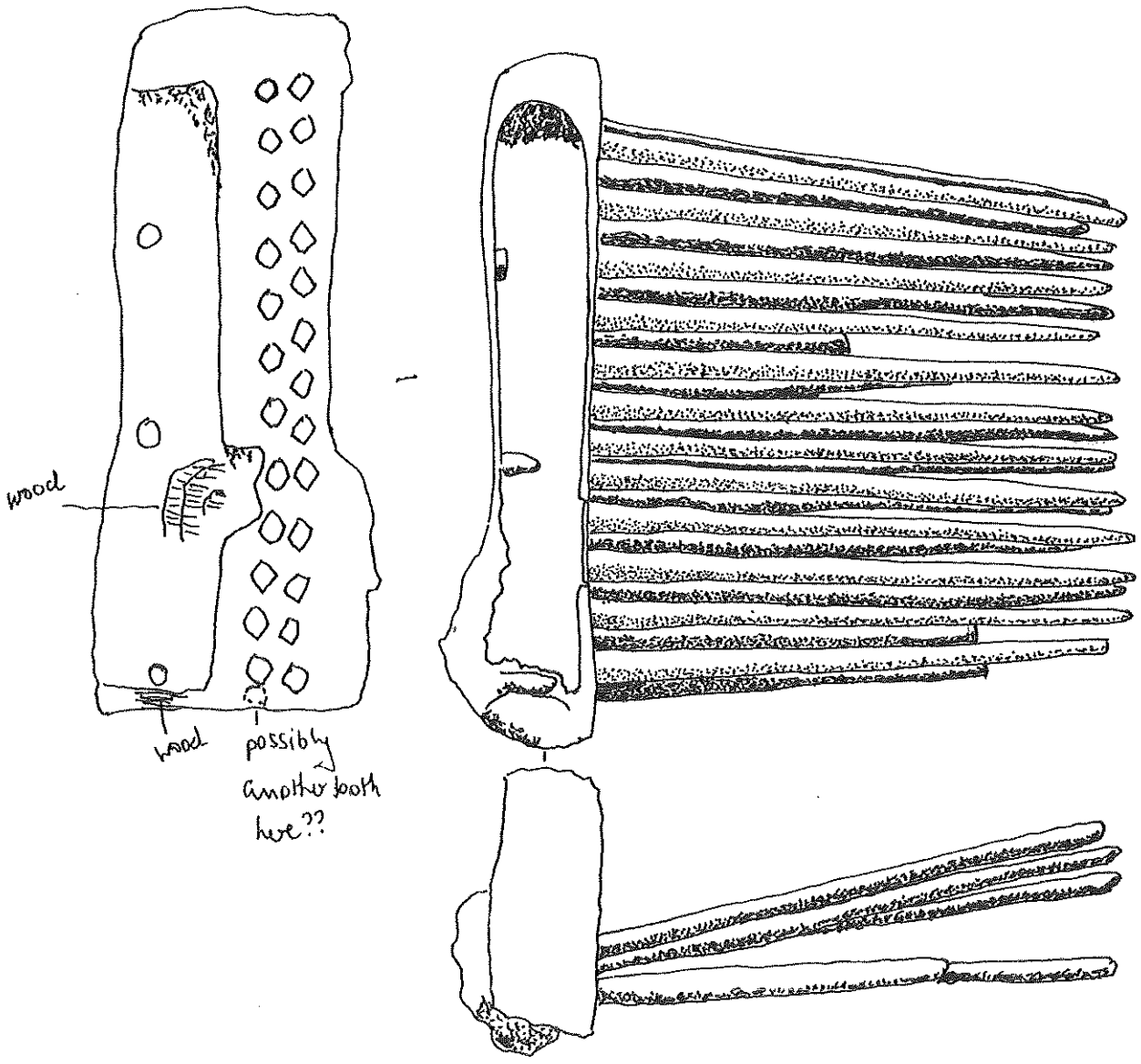
1. Mechanical removal of the soil.
2. Mechanical cleaning of some of the pins.
3. Stuck with HMG (cellulose nitrate).
4. Filled in some gaps with Araldite for strength.

N.B. these objects have not been stabalised.

M.G. Edwards 3.11.75

WICKEN BONHUNT

731780



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