ANCIENT MONUMENTS LABORATORY

REPORT

2949

SERIES/No	CONTRACTOR
AUTHOR	P Murphy Oct 1979
TITLE	A Roman cereal deposit; Somerton, Suffolk

Somerton, Suffolk: A Roman cereal deposit.

A single large sample from layer 10 was taken by the excavator. This consisted almost entirely of carbonised cereal chaff, mixed with finely divided charcoal and silica ash, forming a compacted mass. The silica had been produced by the combustion of cereals, and small fragments of 'silica-skeletons' (Renfrew 1973, 16) preserving cell patterns were common. A few, probably intrusive, land molluscs (principally Cecilioides acicula) and larger charcoal fragments were also present. A 1 kg. sub-sample was disaggregated and washed through a 250 micron mesh sieve prior to examination. Of this sub-sample only a very small portion (c. 14cc.) was examined in detail; its contents are listed in Table 1. Portions of the remainder of the main sample were scanned under the microscope, and appeared to be essentially similar in composition; it therefore seems unlikely that further work would produce significantly more information, though the sample is available for further study should this be thought worthwhile.

Triticum spp.	internodes	144
	spikelet forks	81
	glume bases	722
	caryopses	24
	'sprouts'	86
	awn fragments	abundant
Avena sp.	caryopsis	1
Avena fatua L.	floret	1
Unidentified cereal	caryopses	2

Table 1: Plant remains identified in the 14 cc. sub-sample.

Triticum spp. (wheats)

Internodes. (Fig. 1 d-i). The rachis internodes in the deposit are mostly fragmentary; their relative fragility has resulted in their being under-represented compared with the more durable glume bases. At least two forms may be distinguished. Most are from brittle rachis wheats, and, where intact, are cleanly fractured at base and apex. They vary greatly in size and robustness, and a similar variation is seen in internodes still attached to spikelet forks. This may reflect the presence of internodes from different parts of the ear, though some degree of genetic diversity in the crop is to be expected. A few specimens show traces of pubescence at their margins. The remaining rachis material consists of short lengths of rachis, and smaller fragments, from a tough rachis wheat.

These specimens are not particularly well preserved, but appear to be relatively short and broad and are thus tentatively identified as club wheat, Triticum compactum.

An intact first rachis internode and fragments of others were also recovered. This specimen, still attached to upper part of the culm, is angular in cross-section. Part of a sterile basal spikelet survives.

Spikelet forks. These are rarely completely intact, but in all cases the surviving internodes are ascending, showing a spelt-type fracture.

Glume bases and glumes (Fig. 1, a). Most specimens are robust, with a main prominent vein and subsidiary strong venation, typical of spelt. The widths of 100 glume bases were measured. The modal width is between 1.2 - 1.3 mm, the mean 1.22 mm and the range 0.9 - 1.58 mm corresponding to spelt wheat (Helbaek 1952). A few intact glumes are present. These are slightly worn at their tips, but the veins apparently are not extended to form beaks, again a spelt-type character.

Lemmas, paleas, awns. Even in such well-preserved material as this only small fragments of lemmas and paleas survive, attached to the interior surfaces of the glumes. Awn fragments are common; the barbs are irregularly distributed. In addition to the carbonised awns, specimens preserved as 'silica skeletons' are present.

Caryopses (Fig. 1, b-c). The grains almost without exception had germinated before carbonisation. Most are badly distorted, consisting of collapsed pericarps with little internal tissue. These specimens are very fragile, and prone to fragmentation. The loose 'sprouts', however, are more solid and give a better idea of the overall grain : chaff ratio in the deposit.

In summary the wheat species represented are Triticum spelta L. (spelt) and a tough rachis wheat tentatively identified as club wheat, Triticum compactum Host.

Discussion.

This sample consists largely of waste material from the threshing and winnowing of spelt and other wheats. Debris of this sort always contains a proportion of grain, in this case quite a high proportion judging from the number of loose 'sprouts' in the sample. It appears that this waste material was stored in conditions sufficiently damp to ensure the germination of these

grains.

Similar large deposits consisting principally of spelt chaff have occasionally been found in association with other Roman kilns and ovens. (Murphy 1977, 1979). It seems possible that in these cases the chaff may have been used as fuel, though just how effective such material would in fact be for this purpose could only be settled by experiment. However it is likely that the depletion of wood supplies in the vicinity of kiln sites would have encouraged the use of alternative materials, for kindling at least. A historical parallel would be the widespread use of oat husks as a fuel for drying the oat crop in 19th century Scotland (Findlay 1956, 174).

References

Findlay, W.M. (1956) Oats: Their cultivation and use from ancient times to the present day, Aberdeen.

Helbaek, H. (1952) Early crops in Southern England, Proceedings of the Prehistoric Society XVIII, 194-233.

Murphy, P. (1977) Fruits and seeds from Roman Deposits at Ilchester. A.M. Lab. Report Series.

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Fig. 1: Somerton; wheat chaff and grains (scales in mm).

a Triticum spelta glume.

b-c Triticum sp. germinated caryopses.

d-f Triticum c.f. spelta rachis internodes.

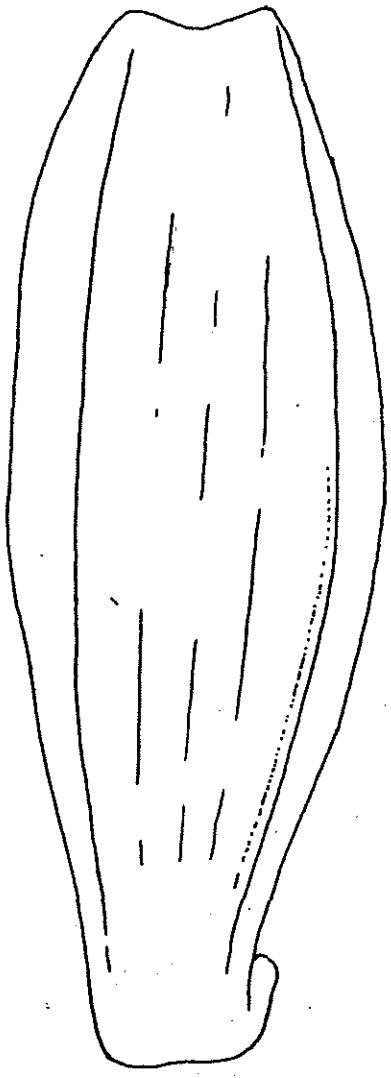
g-h Triticum c.f. compactum rachis internodes.

i Triticum c.f. spelta first rachis internode.

Somerton, Suffolk: Charcoal.

Large charcoal fragments were collected by hand during excavation. These were as follows:

Context No.	2	Fraxinus sp. (ash)	mature wood
	3	Fraxinus sp.	mature wood & bark
		Quercus sp. (oak)	mature wood
	4	Corylus/Alnus sp. (hazel or alder)	2cm. diam. twig
	7	Fraxinus sp.	mature wood
	10	Fraxinus sp.	mature wood
		Quercus sp.	mature wood



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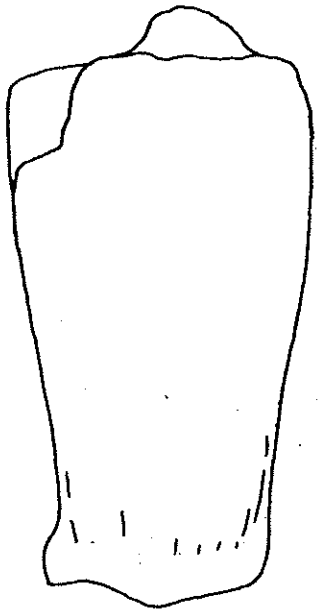

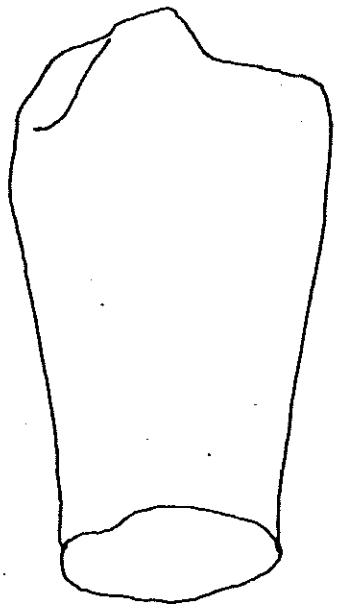

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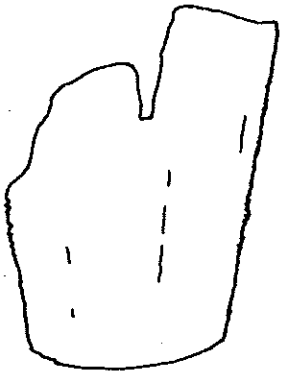

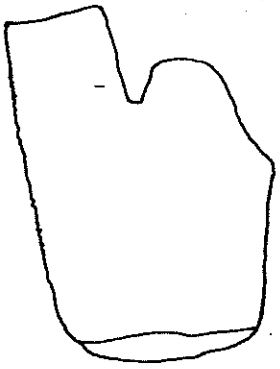

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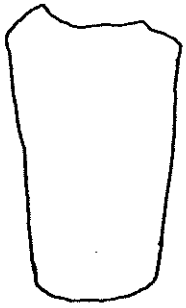

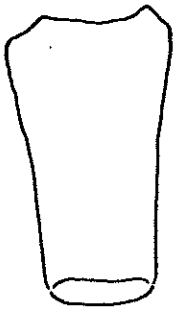

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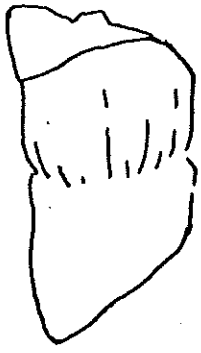

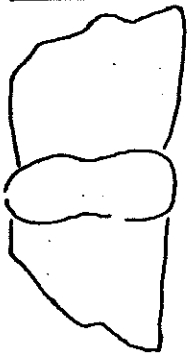

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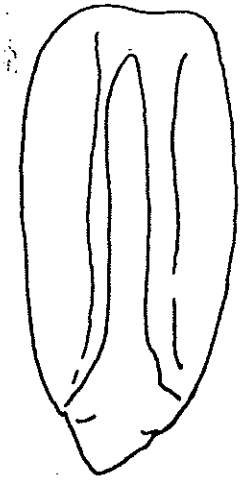

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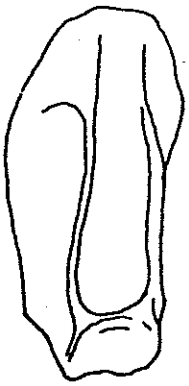

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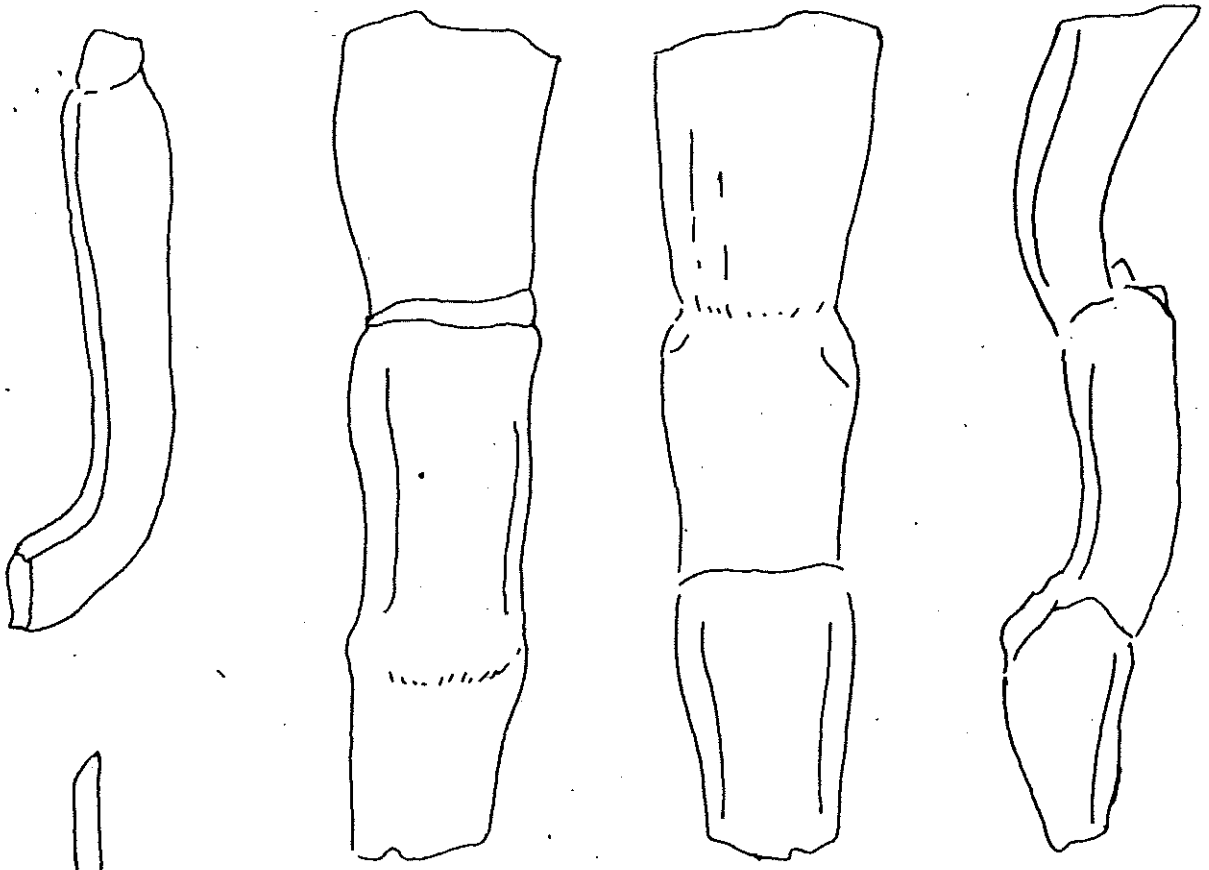

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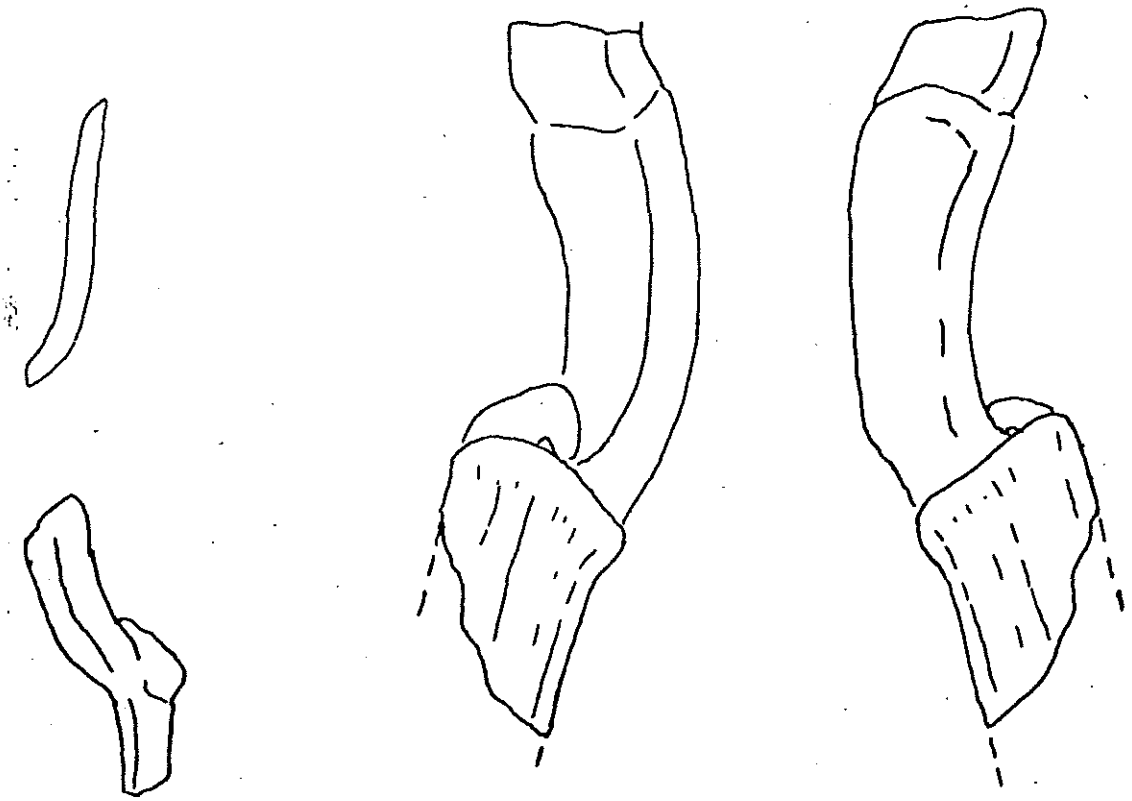

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