Some impressions of plant remains on prehistoric pottery from East Anglia: I

Introduction

The study of impressions on prehistoric pottery has to some extent been superseded by the examination of charred plant remains recovered by flotation. Nevertheless impressions remain a useful source of information where charred material is rare or has not been recovered, and where contamination of prehistoric deposits with modern plant material has occurred.

Soil samples from Iron Age deposits often contain large quantities of charred cereals, but samples from Neolithic-Bronze Age sites in East Anglia have in general produced very few cereal remains. For example, of the 42 soil samples examined from sand-filled features at the Bronze Age site at West Row, Mildenhall only 5 produced cereals, and these contained only small quantities (Murphy, forthcoming). Typically, Neolithic and Bronze Age pit and hearth deposits in the area produce charcoal and hazelnut shells, but cereals are rare. The reason for this marked difference between early and late prehistoric samples is unknown, but may be related to the scale of cereal processing. In these circumstances impressions are worth examining in order to supplement the meagre data from charred cereals. Of course, at most earlier excavations no charred cereals were recovered, and here impressions are the only source of information about early crops.

A further problem associated with soil samples from early prehistoric features is contamination. The sites currently being excavated are on light soils developed on Cover Loam or gravels, where there is often deep penetration of roots and earthworms. The features at these sites are generally shallow. Consequently they often contain large quantities of intrusive modern roots and seeds. Uncarbonised modern plant remains are easily distinguished from ancient charred material. A more serious problem is that some more recent charred plant remains may have been introduced into the features; these might be impossible to separate from charred botanical material contemporary with the prehistoric features. The risk of such contamination is high when there has been subsequent occupation of the site (as at Spong Hill) or where fields have been manured with domestic waste or sewage (as, apparently, at Springfield Barns). This problem of contamination does not, of course, apply to impressions on pottery.

There are, nevertheless, problems with impressions (Dennell 1976). Perhaps

the most serious difficulty in their interpretation is that pottery is portable. Impressions give information about cereals available at the site of manufacture, but pottery might have been exchanged between sites. At these East Anglian sites one can only note that the pottery is flint-gritted, that there is no evidence for long-distance transport and every reason to believe that it was locally manufactured.

Impressions have been reported from two earlier excavations: Broome Heath and Hurst Fen. At Broome Heath, emmer (T. dicoccum), einkorn (T. monococcum) and barley (Hordeum sp.) were identified, though the results were not quantified (Evans and Davies 1972); at Hurst Fen two impressions of emmer, one of barley and one apple-pip were identified (Helbaek 1960). For the present report pottery from the Causewayed Enclosure at Orsett Essex, the Cursus at Springfield Barns, Chelmsford, Essex (1979 season only) and the Neolithic-Bronze Age settlements at Spong Hill, Norfolk (up to 1979 season) has been examined.

This report is intended as the first of a series. The pottery from each individual site is unlikely to produce very large numbers of identifiable impressions; it therefore seems preferable to present the data from the sites together, in a comparable form, rather than producing a number of short lists of identifications. It is intended that subsequent reports will deal with impressions from future excavation seasons at Spong Hill and Springfield and with impressions on pottery from old excavations in the Hockwold area, now being prepared for publication.

Neolithic cursus Springfield Barns, Chelmsford, Essex

All pottery from the 1979 season was examined, but no identifiable impressions were seen.

Neolithic Causewayed Enclosure, Orsett, Essex

The Neolithic pottery from the site is mostly gritted with burnt and crushed flint, with variable sand admixture. Few identifiable plant impressions were seen, but several sherds have shallow surface impressions of miscellaneous indeterminate fragments of grass culm and inflorescence (not listed below). The barley caryopsis (Hordeum sp.) has a rounded profile, comparable to naked barley, though the impression is insufficiently clear for definite identification. The probably grain of einkorn (Triticum c.f. monococcum)

seen in lateral view, has a curved ventral surface, and relatively high thickness: length ratio. Stem fragments with longitudinal grooves are very tentatively identified as Pteridium aquilinum (bracken).

Code No.	Taxon	Type of impression	Dimensions (mm)		
			L	B	T
1731 TQ 68/36 1975 CF 4 II 9	Triticum cf. monococcum	Caryopsis (lateral)	4.9	-	2.3
25 CF 4 III 8	Cereal indet.	Caryopsis (dorsal)	-	-	-
1731 TQ 68/36 1975 CF 4 IV 9	Hordeum sp.	Caryopsis (ventral)	6.2	3.0	-
88 99, CF 121 IV 3	Cereal indet.	Caryopsis (partial lateral)	-	-	-
1731 TQ 68/36 1975. CF 121 IV 3 and II 3.	c.f. Pteridium aquilinum	Stem fragments	-	-	-

Table 1 : Impressions from Orsett

Neolithic Settlement, Spong Hill, Norfolk

As at Orsett, the Neolithic pottery is flint-gritted. Again indeterminate impressions of grass fragments, including some quite large lamina fragments (eg 365) are present. The majority of the identifiable impressions are of emmer (Triticum dicoccum). The spikelet from 24 is excellently preserved, clearly showing the internode, internode scar, glumes with clear keels and faint impressions of lemmas. The remaining spikelet impressions are less sharp, mostly lacking internodes. The terminal spikelet from 804 has the internode at 90° to the normal orientation. Unfortunately the impression of rachis internodes from 115 is not sharp, but is probably of barley (Hordeum sp.). A sherd from 18 has a clear impression of an apple 'pip' (Malus sylvestris). The unusual, but poorly defined, impression on a sherd from 1270 is thought to be either a bulbil or a small succulent fruit.

Context No.	Taxon	Type of impressions	Dimensions (mm)
18	Malus sylvestris	Seed	6.0 x 3.8
22	Cereal indet.	Caryopsis (lateral)	-
24	Triticum dicoccum	Spikelet	Width (Dim.A) 2.9
24	Triticum dicoccum	Spikelet	Width (Dim.A) 2.5
26	Cereal indet.	Caryopsis (lateral)	-
115	c.f. Hordeum sp.	Rachis internodes (2)	-
115	Triticum dicoccum	Spikelet	Width (Dim.A) 2.6
713	c.f. Triticum sp.	Spikelet (shallow partial impression)	-
730	Triticum dicoccum	Glume (interior)	Width (Dim.B) c.1.1
752	Triticum cf. dicoccum	Caryopsis (lateral)	L 7.0 T 2.9
798	Triticum dicoccum	Spikelet	Width (Dim.A) 2.5
804	Triticum cf. dicoccum	Spikelet (terminal)	-
1270 (P258)	Indet.	Bulbil or succulent fruit (indistinct)	L c. 7mm
1285	Triticum sp.	Spikelet (apex showing glume tips only)	-
1457	Triticum cf. dicoccum	Glume (interior)	Width (Dim.B) c.1.5
1534	Triticum dicoccum	Glume (exterior)	Width (Dim.B) 1.2
1584 (P236)	Cereal indet.	Caryopsis (ventral)	-

Table 1 : Impressions from Spong Hill

Dennell, R.W. (1976) Prehistoric Crop Cultivation in Southern England : A reconsideration. Antiquaries Journal 56, 11-23.

Evans A.M. & Davies, J.W.,(1972) Report on examination of pottery sherds from Broome Heath, Ditchingham, Norfolk, in Wainwright, G.J., 'The excavation of a Neolithi settlement on Broome Heath, Ditchingham, Norfol PPS 38, 90

Helbaek, H., (1960) 'Pottery impressions' in Clark, J.G.D. 'The excavations at the Neolithic site at Hurst Fen, Mildenhall, Suffolk' PPS 28, 202.