1938

Ancient Monuments Laboratory
Report 65/92

WANBOROUGH GREEN LANE: ANALYSIS OF CHARRED PLANT REMAINS FROM DEPOSITS ASSOCIATED WITH ROMAN PRIESTLY REGALIA

Wendy Carruthers

Ancient Monuments Laboratory Report 65/92

WANBOROUGH GREEN LANE: ANALYSIS OF CHARRED PLANT REMAINS FROM DEPOSITS ASSOCIATED WITH ROMAN PRIESTLY REGALIA

Wendy Carruthers

Summary

A soil sample from a black layer associated with Roman priestly regalia, which pre-dated the Romano-Celtic temple, was examined for plant macrofossils. A few cereal remains, including poorly preserved grain, cf.spelt glume bases and weed seeds, were identified. The recovery of plant remains from ritual deposits is discussed.

Author's address :-

Wendy Carruthers

Ancient Monuments Laboratory
Fortress House
23 Savile Row
London
W1

WANBOROUGH GREEN LANE: ANALYSIS OF CHARRED PLANT REMAINS FROM DEPOSITS ASSOCIATED WITH ROMAN PRIESTLY REGALIA

During excavations at Wanborough, Surrey, in 1985/6 a number of soil samples were taken for the recovery of charred plant remains. The most important of these was from a black layer (context 148) which predated the construction of a Romano-Celtic temple and may be dated to the Hadrianic period or a little later. This layer was associated with a unique Roman bronze priestly regalia including sceptres and head-dresses. Other samples immediately preceeded context 148 (contexts 105 and 203) or were associated with the construction of the surviving temple on the site (244,512). A further sample, context 231, was a circular area of burnt material identified within 148 (Dr David Bird, pers.comm.).

Soil samples and flots and residues from one processed sample (context 148) were sent to the author for analysis. The soil samples were processed as described below, and these were the same methods as had been used by Ann Watson for the processed sample.

Processing

The samples consisted of heavy clay which required prolonged soaking in hot water in order to disaggregate them and release the carbonised remains. In some cases hydrogen peroxide was added to the sample, but it was found that repeated mixing with hot water, gentle stirring and pouring off the flot through a 250 micron meshed sieve was eventually effective.

As a check on recovery, the residues were wet-sieved through a 1mm meshed sieve, dried and sorted under a binocular microscope. Flots were slowly air-dried and sorted at X10 magnification.

Results

Very litle flot was obtained from any of the samples and in some cases a few modern rootlets were present. The residues contained virtually no carbonised material, so the recovery was considered to have been effective.

The charred plant remains recovered are listed in table 1. Clapham, Tutin & Moore (1989) was used for the nomenclature.

TABLE 1: THE CHARRED PLANT REMAINS

148 (c.12 litres, sample processed by Ann Watson)

cf. Triticum dicoccum/spelta (emmer/spelt wheat, germinated)	1
Triticum dicoccum/spelta (emmer/spelt wheat)	3
T. dicoccum/spelta (emmer/spelt glume bases)	4
Hordeum sp. (hulled barley grain)	1
Avena sp. (wild/cultivated oat awn frag.)	2
Indeterminate cereals	10
Atriplex patula/prostrata (orache)	1
Corylus avellana L. (hazelnut shell fragment)	1
cf. Ericaceae fruits	2
Galium aparine L. (cleavers)	1
Gramineae (grasses)	1
Rumex sp. (dock)	4
?Bread-type material fragments	27

---

105 (1.5 litres) 'natural clay subsoil'
A few very small fragments of charcoal only

---

224 (1.3 litres) 'redeposited natural clay'
A few very small fragments of chacoal only

---

230 (c.1 litre) 'weathered natural clay'
A few small fragments of charcoal only

---

512 (c.2 litres) 'mottled clay'
A few small fragments of charcoal only

---

231 'C14 sample' burnt ashy clay lumps
Relatively little surviving charcoal. Some burnt bone & burnt pot.

Discussion

The only sample to produce carbonised plant macrofossils was from context 148, and in this deposit the remains were low in concentration. The small assemblage consisted of poorly preserved cereal grains, a few chaff fragments, weed seeds and one fragment of hazelnut shell. Possible ericaceous fruits (heathers etc.) and a few fragments of Prunus sp. (sloe, cherry, plum etc.; identification by Rowena Gale) charcoal were also present.

Because of the poor state of preservation of the cereal grains and chaff fragments it was not possible to identify most of the remains. However, the widths of the glume bases at the point of disarticulation were characteristic of spelt rather than emmer (0.99 to 1.42mm), and the identification of several grains as hulled wheat suggests that spelt is likely to have been the principal cereal present. Spelt is the predominant cereal on most sites in Britain in the Roman period.

The few weeds seeds recovered were probably charred as contaminants of the crop, although these particular taxa have a wide habitat range and can also grow as ruderals. Cleavers is indicative of autumn sowing (Reynolds, 1981), but the other taxa provide little evidence of the nature of the soils cultivated. The oat and barley may have grown as weeds or relicts of previous crops.

The interpretation of small assemblages of this nature is difficult. The relatively high proportion of weed seeds to cereal grains suggests that the remains may represent burnt crop processing waste. Although few chaff fragments were preserved, this could be due to differential preservation (Boardman & Jones, 1991). Crop processing waste may have been used as tinder to light ritual fires, and the charred hazelnut shell and possible Ericaceae fruits could have been burnt amongst locally gathered fuel.

Alternatively, the charred remains could have come from burnt ears or spikelets that had not been cleaned of weeds, with differential preservation having caused the loss of many of the glume bases and rachis fragments. Had grain or spikelets been burned as ritual offerings, however, a greater quantity of charred plant material is likely to have been recovered.

The presence of a germinated grain of emmer/spelt (probably spelt in this context - the germinated embryo was missing, but had formed a deep groove along the entire dorsal surface of the grain) is of interest since this could indicate malting. The use of spelt for producing malt has been observed on other Roman sites, e.g. Catsgore (Hillman, 1981). However, the evidence from Wanborough is very slight and further data would be needed before germination under poor storage conditions could be ruled out.

As might be expected from redeposited natural clays, virtually no carbonised material was present except small fragments of charcoal which could have been incorporated into the deposits by worm and root action.

Ritual deposits

There is, as yet, little archaeobotanical evidence for the use of plants in rituals. A sample from Romano-British temple deposits at West Hill, Uley, Gloucestershire (Girling & Straker, 1989) produced charcoal from a variety of taxa, but these were all native British trees and shrubs, and so probably simply represent locally gathered fuel wood rather than anything of specific ritual significance. Evidence from bones of the ritual use of animals is much greater. One example of this was the high occurrence of sheep/goat and domestic fowl bones from Uley (Levitan, 1978). Since the temple was dedicated to Mercury, and Mercury is often associated with the goat, ram and cockerel, it seems likely that the bones represented sacrificial activities.

It was hoped that these deposits would provide evidence of plant foods that were either being burnt or consumed in ritual activities, but the small quantity of remains recovered are not easy to interpret. If they represent crop processing waste they could have been used as tinder to light a fire or fodder for sacrificial animals. If they were whole spelt spikelets they may have been used as an offering, but it is perhaps surprising that so few remains were preserved if this had been the case. Therefore, the plant remains provide no evidence for the ritual burning of offerings.

If cereals were being brought to the temple in order to be consumed by the priest, it seems likely that they would have been brought onto the site already prepared. In this case few remains might be preserved in the archaeological

record. It has been suggested that the domestic pottery at Wanborough may have been present as containers for offerings being consumed on site (Joanna Bird, pers.comm.). The bread-like fragments recovered could represent offerings of prepared foods or the discarding of food being consumed during ceremonies, but the absence of cereal bran inclusions makes the identification of these charred fragments uncertain.

It has been suggested for some other sites, such as the Thames Vally Business Park site, Reading, Berkshire, (Carruthers, in preparation), that the most valued crops may have been used for ritual purposes. In the quoted case bread-type wheat was present in a Roman cremation pyre but was virtually absent from the rest of the site. The ritual site at Le Pinacle, Jersey (Godfrey & Burdo, 1950, and Carruthers, in preparation) produced a large number of Middle/Late Bronze Age horse beans, and beans were a recently introduced, and so presumably valued, crop at this time. The results from Wanborough, if they do represent a ritual offering, do not support this theory, as spelt seems to have been the most commonly consumed cereal during the Roman period. Further research into ritual deposits using carefully planned sampling programmes for the recovery of both plant and animal remains would be of great interest.

ACKNOWLEDGEMENTS

I am very grateful to Ann Watson for carrying out the flotation so efficiently, and also to Rowena Gale for doing the charcoal identification. I would also like to thank Sebastian Payne for giving me references to ritual bone deposits.

REFERENCES

Boardman, S. & Jones, G. (1990) Experiments on the effects of charring on cereal plant components. *Journal of Archaeological Science* 17,1-11.

Clapham,A.R., Tutin,T.G. & Moore,D.M. (1989) *Flora of the British Isles*. Cambridge University Press.

Girling, M. & Straker, S. (unpublished) Plant Macrofossils, Arthropods and Charcoal from West Hill, Uley, Gloucestershire, 1977-1979. Ancient Monuments Laboratory Report 45/89.

Godfray,A.D.B. & Burdo,C. (1950) Excavations at the Pinnacle, Jersey (1930-1936). Part II. *Bulletin Annuel* XV:174, Société Jersiaise.

Hillman,G. (1981) Evidence for spelting malt. *In* R.Leech, *Excavations at Calsgore 1970-73: A Romano-British Village*. CRAAGS Excavation Monograph Series Report 2, 137-140.

Levitan, Bruce (1978) The animal bones, p.41. *In* Ann Ellison, *Excavations at West Hill Uley: 1977. The Romano-British Temple, Interim Report*. Committee for Rescue Arch. in Avon, Glos. & Som. Occasional Papers No.3, pp.33-43.

Reynolds,P.J. (1981) Deadstock and Livestock. *In* R.Mercer, *Farming Practice in British Prehistory*. 97-122.