

Ancient Monuments Laboratory
Report 61/92

BRAMPTON, CAMBRIDGESHIRE;
CARBONISED PLANT REMAINS FROM A
NEOLITHIC MORTUARY ENCLOSURE AND
ASSOCIATED FEATURES

Peter Murphy BSc MPhil

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Summary

Bulk samples from shallow features dug into gravels and sealed by c 0.5m of alluvium were processed. Modern root contamination was very bad, and severely hampered analysis. However some sparse assemblages of poorly preserved *Triticum* and *Hordeum* grains, a glume base of *T. cf. dicoccum*, large weed seeds, root and rhizome fragments, *Corylus* nutshell and *Prunus spinosa* fruitstone were retrieved. Charcoal was mainly of oak.

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Introduction

Excavations were undertaken in 1991 by Tim Malim of Cambridgeshire Archaeology at a crop mark complex (scheduled monument Cambs 121) on the line of the new A1/M1 Link Road. A Neolithic mortuary enclosure defined by ditches cut 0.3m into gravel and associated pits and a ring-ditch were sealed by c 0.5m of alluvium. Soil samples were collected for micromorphology from an apparent buried land surface and traces of a mound by C. French. There was no preservation of bone or molluscs and in view of circumneutral pH and extensive root contamination pollen analysis was not thought appropriate. Bulk samples for flotation were taken from all categories of dug features at the site, and floated by E. Guttman in a tank, using 0.5 and 0.25mm collecting meshes. Sub-samples from the flots were scanned to assess their contents: usually flots from samples of the lowest (least contaminated) fills of features have been inspected.

This assessment indicated those samples which included materials suitable for radiocarbon dating, and three of them were selected by the excavator as being significant contexts for dating. Charred seeds etc. and charcoal fragments > 5mm from these C14 samples were then fully analysed prior to submission. A few other contexts appeared, during assessment, to include concentrations of cereal remains and these, too, have been analysed. In addition there were several charcoal-rich samples which were not submitted for dating. Charcoal fragments > 5mm from these were inspected but not fully identified.

Results (Tables 1 and 2)

The contents of the flots, noted during scanning, are listed in Table 1. All samples included intrusive fibrous roots with modern weed seeds (Fumaria officinalis, Veronica hederifolia, Aethusa cynapium, Polygonum spp, Chenopodiaceae etc.), associated frequently with cereal straw fragments. Contamination has been assessed subjectively from 'severe' (i.e. over 90% of flot composed of roots etc), to 'slight' (i.e. under 10% of flot composed of roots). Some flots included scraps of coal.

In most samples there was a low density of small charcoal fragments, sometimes associated with charred cereal grains and, in one sample, charred chaff. Features F24, F25, F28 and F36 included much higher densities of charcoal, in large fragments, with a few scraps of charred Corylus nutshell and a fruitstone of Prunus spinosa.

Charcoal from F28 (Soil block C) and F36.3 was submitted for dating. That from F28 was all of Quercus sp., oak, (including some root charcoal) and that from F36.3 almost entirely Quercus with a small fragment of indeterminate diffuse porous charcoal (Table 2). Other charcoal-rich samples included predominantly oak charcoal. The finer fractions of flots from charcoal-rich deposits F24, F25, F28 and F36 were partly sorted and produced a few poorly-preserved cereal grains (Triticum, Hordeum), fruits of Galium aparine and a charred bud, besides the hazel and sloe remains already noted during assessment. Two other contexts with

less charcoal but apparent 'concentrations' of cereal remains were fully analysed : ditch 12 AA1 and F26.3. Ditch 12 included an emmer-type grain and glume base with a rhizome fragment; F26.3 wheat and barley gains with large weed seeds/fruits (Avena, Vicia/Lathyrus). Triticum grains from F26.3 were submitted for radiocarbon accelerator dating. A charred 'tuber' of Arrhenatherum elatius was noted during assessment in the ring-ditch F13 but further analysis was precluded by the very high proportion of modern roots in the sample.

Discussion

Compared to Neolithic settlement sites, 'ritual' monuments generally produce low densities of carbonised plant remains (cf. Murphy 1989, 1991): at The Stumble (Blackwater Site 28, Essex) cereal remains, nutshells etc., were present in virtually every sample, sometimes in abundance, whereas at the Springfield, Essex cursus and the Slough House Farm, Essex, Neolithic enclosure only thin scatters of material were retrieved. The Brampton enclosure clearly conforms with this pattern. Despite the large soil volumes processed very little material was retrieved.

A further problem at sites under arable is the extensive contamination of Neolithic deposits with recent plant material as a result of deep ploughing and 'pan busting' Roots etc., are an inconvenience, making flot sorting difficult, but far more serious is the potential contamination of deposits with recent charred cereal remains, produced during stubble-burning. At some sites (e.g. Maxey : Green 1985) such contamination has been suspected and at Slough House Farm it was demonstrated, since radiocarbon accelerator dates on grains from the enclosure ditch were 'recent'. Bearing this in mind, the charred material from Brampton has to be considered with caution.

Having said this, the material retrieved is quite consistent with that from other Neolithic sites in lowland Britain (Moffett et al 1989). There is a low-density scatter of cereal remains (including emmer and barley), a few large weed seeds, hazel and sloe remains, and some remains of rhizomes and tubers. Largely due to preservational factors, oak is the main charcoal. This adds little to results already obtained from other, more productive, sites (Murphy 1989) and it is not considered that these badly root-contaminated samples merit further analysis. All flots will, however, be retained.

References

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Area A

Ditch 11 AA.6. (Enclosure ditch)

Root contamination severe. Rare small charcoal frags under 5mm.
Triticum grain. (charred)

Ditch 11 AC.4.

Root contamination severe. Rare small charcoal fragments under 5mm. Ferrimanganiferous and soil concretions.

Ditch 11 AE (Enclosure ditch)

Root contamination severe. Rare small charcoal frags under 5mm.

Ditch 12 AA.1. (Enclosure ditch)

Root contamination severe. Very rare small charcoal frags under 5mm, silt encrusted. Triticum cf dicoccum glume base (charred)

F 13F 13F2. (Ring-ditch)

Root contamination severe. Rare small charcoal frags up to 10mm; some silt-encrusted.

F13H (Ring-ditch)

Root contamination severe. Charcoal moderately common, frags up to 10mm. Tuber fragment of Arrhenatherum elatius. (charred)

Area B

Ditch 12 AD.3. (Enclosure ditch)

Root contamination severe, some straw fragments. Rare charcoal frags up to 10mm. Cereal grain frags including Hordeum. (charred)

Area C

Ditch 11. AH. (Enclosure ditch)

Root contamination severe. Rare charcoal frags, mostly under 5mm.

Area M

F29 (Ditch)

Root contamination severe. Rare charcoal frags, mostly under 5mm. Cereal grain fragments (charred).

Area N

F24 24.1. (=AG12) (Pit)

Root contamination intermediate. Charcoal abundant, frags up to 20mm.

F34 34.3 (Pit)

Root contamination intermediate, some straw fragments. Charcoal common, frags up to 10mm. Cereal grain frags.

F36. 36.3 (Pit)

Root contamination slight but some straw fragments. Charcoal abundant, frags up to 25mm, some sediment encrustation. Charred bud.

Area O (ditch)

F31

Root contamination severe. Rare charcoal frags up to 10mm. Cereal grain frags.

F40 40.3. (Feature)

Root contamination intermediate. Rare charcoal frags up to 10mm. Charred cereal grain frags, Vicia/Lathyrus seed, Polygonaceae nutlet.

Area Q

F25A 25A3. (Pit)

Root contamination intermediate. Charcoal moderately common, frags up to 10mm.

F25B 25B2 (Pit)

Root contamination slight. Charcoal common, frags up to 15mm, heavy silt encrustation.

F26 26.3. (Enclosure ditch)

Root contamination severe. Rare small charcoal frags mostly under 5mm. Some charred cereal grains, including Triticum, Hordeum and Avena, with Vicia/Lathyrus cotyledons.

F27. 27.2 (Ditch)

Root contamination severe. Very rare small charcoal frags under 5mm. Hordeum grain frag.

F28 28.1. 1st spit (Pit)*

Root contamination, slight. Charcoal abundant, frags up to 15mm, heavily silt-encrusted. Occasional small fragments of coal.

F30. 30.3. (Enclosure ditch)

Root contamination severe, some straw frags. Charcoal rare, frags up to 10mm. Cereal grain fragments.

Area W

F32

Root contamination severe, some straw fragments. Rare small charcoal frags, mostly under 5mm.

Table 1 : Assessment of the flots

* Other samples from F28 were soil blocks with charcoal, as follows:

- | | |
|------|--|
| F28A | Block with discontinuous charcoal layer, c 30 x 14cm x 3mm thick. Consistent direction of grain. Rests on soil with more diffuse charcoal scatter. 2kg. sample flotated. |
| 28B | 20 x 20cm soil block with more diffuse charcoal scatter. 1.1kg sample flotated. |
| 28C | Block with charcoal layer 8 x 20cm, up to 25mm thick. Also other charcoal fragments. Consistent direction of grain 3.2kg sample flotated. |

'A' and 'C', at least, seem to represent individual large pieces of wood. The rather thin charcoal layer in 'A' might reflect superficial charring of a wooden object, the uncharred part of which subsequently rotted.

Ditch 12 AA1 (Area A) Fully sorted. 95 litres
 Cereal frags (grains) +
 Cereal indet (grain) 1
Triticum sp. 1 (drop-shaped, emmer-type)
Triticum cf. dicoccum 1 (glume base)
 Rhizome frag 1

F24 (Area N) 25% sorted 234 litres
 Cereal frags (grains) +
Triticum sp. (grain) 1
 cf. Hordeum sp (grain) 1
 Cereal-type (culm frag) 1
Galium aparine 2
 Charcoal > 5mm

F25 B.1. (Area Q) Fraction > 5mm examined. (50%) 40 litres
Corylus avellana (frag) +
 Charcoal > 5mm

F25 (Area Q) Fraction > 5mm examined. 10 litres
 Charcoal > 5mm

F25B.3. (Area Q) Fully sorted. 5 litres
 No seeds etc.
 Charcoal > 5mm

F26.3 (Area Q) Fully sorted. C14 sample. 90 litres
 Cereal frags (grains) +
 Cereal indet (grains) 4
Triticum sp (grains) 4 (drop-shaped and short forms)
Hordeum sp (grains) 2
Avena sp 2
Vicia/Lathyrus sp 1 seed + 3 cotyledons
 Leguminosae indet 2 cotyledons (large)

F28.1. (Area Q) Fraction > 5mm examined (50%) 57 litres.
 Charcoal > 5mm

F282 (Area Q) Fraction > 5mm examined. 50 litres
Prunus spinosa (fruitstone) 1
 Charcoal > 5mm

F28.3 (Area Q) Fraction > 5mm examined. 46 litres
 Charcoal > 5mm

F28.4 (Area Q) Fully sorted. 27 litres
 Cereal indet (grain) 1
 Charcoal > 5mm

F28C (Area Q). Fully sorted. C14 sample
 No seeds etc.
 Charcoal > 5mm Quercus sp (some root charcoal)

F36.1 (Area N) Fraction > 5mm examined (50%) 77 litres
 Charcoal > 5mm

F36.2 (Area N) Fraction > 5mm examined (50%) 64 litres
Charcoal > 5mm

F36.3 (Area N) Fully sorted. C14 sample. 20 litres
No seeds etc.

Charred bud 1

Charcoal > 5mm Quercus sp (mainly)

Indet diffuse porous (1 small frag)

Table 2 : Charred plant remains from selected samples analysed.