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Gallows Hill, Thetford, Norfolk: Charred plant remains from a Bronze Age Barrow

A single deposit of charred plant material (8) was found near the base of the turf stack in this small-scale excavation. This was fortunate, since soil conditions were unsuitable for the preservation of pollen (McPhail, 1979) and the charred plant remains are therefore the only source of information about the Bronze Age vegetation of the area.

Of this deposit 482g. was examined, the remainder being sent for C-14 dating. Charcoal fragments >7mm were extracted by dry sieving and identified. Of the remaining charred material just under 20% was completely scanned under the microscope and the fraction >1mm of the other 80% was also examined in detail.

Plant remains identified are listed in Table 1.

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Ranunculus c.f. acris L.	1
Viola sp.	3
Stellaria graminea L.	6
Chenopodium album L.	7
Acer sp. (charcoal: mature)	+
Leguminosae c.f. Medicago sp. (1)	22
Leguminosae c.f. Lotus sp. (1)	5
Potentilla sp. (2)	16
Rumex acetosella agg.	1
Corylus sp. (charcoal: 5mm. twigs)	+
Quercus sp. (charcoal: mature)	+
Calluna vulgaris (L) Hull (charcoal; leaves; capsules + perianth; seeds)	+++
Fraxinus sp. (charcoal: mature + 4cm. twigs)	++
Plantago lanceolata L.	4
Juncus sp. (capsule + seeds)	1
Carex sp.	1
Cyperaceae indet. (stem fragments)	+
Gramineae indet.	12
Triticum sp.	10
Triticum spelta L. (glume base)	1
Triticum spelta L. (spikelet fork)	1
Triticum c.f. spelta L. (rachis internode)	1
Monocotyledones (rhizomes) (3)	++
? Monocotyledones (seeds) (3)	27
Unidentified (4)	28
Unidentified (charcoal)	+

Table 1: Charred plant remains from context 8 (taxa are represented by fruits or seeds unless otherwise indicated)

\+ - present
++ - common
+++ - abundant

NOTES

1. Most of these seeds have lost their testas and have been deformed during carbonisation.

2. Achenes with surface patterning lost or only partially preserved.

3. The writer was unable to identify these specimens, though they are well preserved. Gordon Hillman kindly examined them subsequently. Due to lack of reference material he was unable to identify the rhizomes. The seeds could not be matched with any British species, though they closely resembled Leucojum autumnale. However, they have become distorted as a result of insect infestation, which probably explains the difficulty experienced in identifying them

4. Very poorly preserved.

The cereals

The sample produced grains, a spikelet fork, glume base and internode of a glume wheat (Fig. 1). The loose glume base has a width at the point of spikelet articulation of 1.08 mm, and though the two bases attached to the spikelet fork could not be measured accurately they are certainly over 1mm wide. These glume bases thus fall within the size range considered to be characteristic of spelt (Helbaek 1952). Their venation is spelt-like; they have one prominent vein with subsidiary strong venation. The better-preserved glume attached to the spikelet fork has an additional fairly strong vein in its upper part, originally associated with the secondary point of the glume tip. There are faint traces of possible hairs or spicules on the prominent veins. The breadth of the spikelet fork, which lacks its internode, at the articulation point is 2.38 mm. The fragmentary internode is relatively broad and stout, more closely comparable with spelt than emmer.

The grains are elongate with roughly parallel sides and flat or slightly concave ventral surfaces where undistorted. One specimen has its maximum width close to its apex. The apices ..

are blunt or slightly rounded with traces of apical hairs. The dorsal surfaces have longitudinal striations, and in cross-section the grains vary from rounded and flattened to rounded triangular.

Largely on the basis of the spikelet parts this material is identified as spelt, Triticum spelta L.

Discussion

1) The local environment

The deposit contains a very mixed assemblage of charred plant remains, some of which are derived from the vegetation of the immediate area just prior to the construction of the barrow, whilst others must have been imported to the site. By far the greater part of the deposit consists of charred remains of heather (Calluna vulgaris) which almost certainly was growing locally on the immature soil formed on blown sand now sealed beneath the barrow (McPhail 1979). In comparable modern situations, for example at Lakenheath Warren, Calluna is the dominant species on areas of thin blown sand and on sandy soils truncated by wind erosion (Watt 1937). It is likely that the charred seeds of Viola sp.and Potentilla sp. are also of heathland plants, though these specimens were not identified to species.

An unusual feature of the buried soil is the presence of an impervious sandy clay loam horizon 1 metre down, leading to the development of a perched water table (McPhail 1979). Nowadays there is periodically standing water on the site. The remains of Stellaria graminea, Juncus sp. and Carex sp. (N.B. not C.arenaria) suggest that damper habitats were also present around the site before the barrow was constructed. It may be conjectured that these plants would have found suitable habitats in small blow-outs comparable in some ways to coastal dune slacks.

Given the apparently unstable and nutrient deficient soil conditions it is unlikely that the charcoal of maple, hazel, oak and ash comes from trees growing in the vicinity. Nor does it seem probable that

cereal cultivation would have been possible at the site. Overall the deposit appears to represent the remains of a hearth, or possibly a pyre, in which heather and incidentally other heathland plants growing locally were used to kindle timber imported to the site.

2) The cereals

These have been described in some detail, and the better preserved specimens illustrated, since Triticum spelta has very rarely been reported from pre-Iron Age contexts in this country. The charred spelt from Hembury which Helbaek (1952) considered to be Iron Age is now accepted as Neolithic (Field et al. 1964, 373); and Jones (1978) reports spelt from a ditch at Abingdon, which was cut by early Iron Age features, and may possibly be Bronze Age. The species is known from the Neolithic of Central Europe and the Late Bronze Age of S. Sweden (Renfrew 1973, 205-7). Consequently its apparent rarity in pre-Iron Age contexts in Britain may simply result from the fact that relatively few cereal remains have yet been recovered from Neolithic and Bronze Age contexts. In East Anglia, for example, the only other charred Bronze Age cereals available at present are the small collection of emmer and barley from the settlement site at West Row, Suffolk (Murphy, 1978) and a few wheat grains (emmer?) from a late Bronze Age urn at Witton, Norfolk (Murphy 1979). The importance of spelt is its suitability for autumn sowing; and some writers (eg. Bradley, 1971, 79-81) have seen its widespread cultivation in the Early Iron Age as part of an agricultural intensification resulting from increased population pressure. However it may be that as more material is recovered spelt will prove to have been more important than appears at present in the Bronze Age and Neolithic.

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