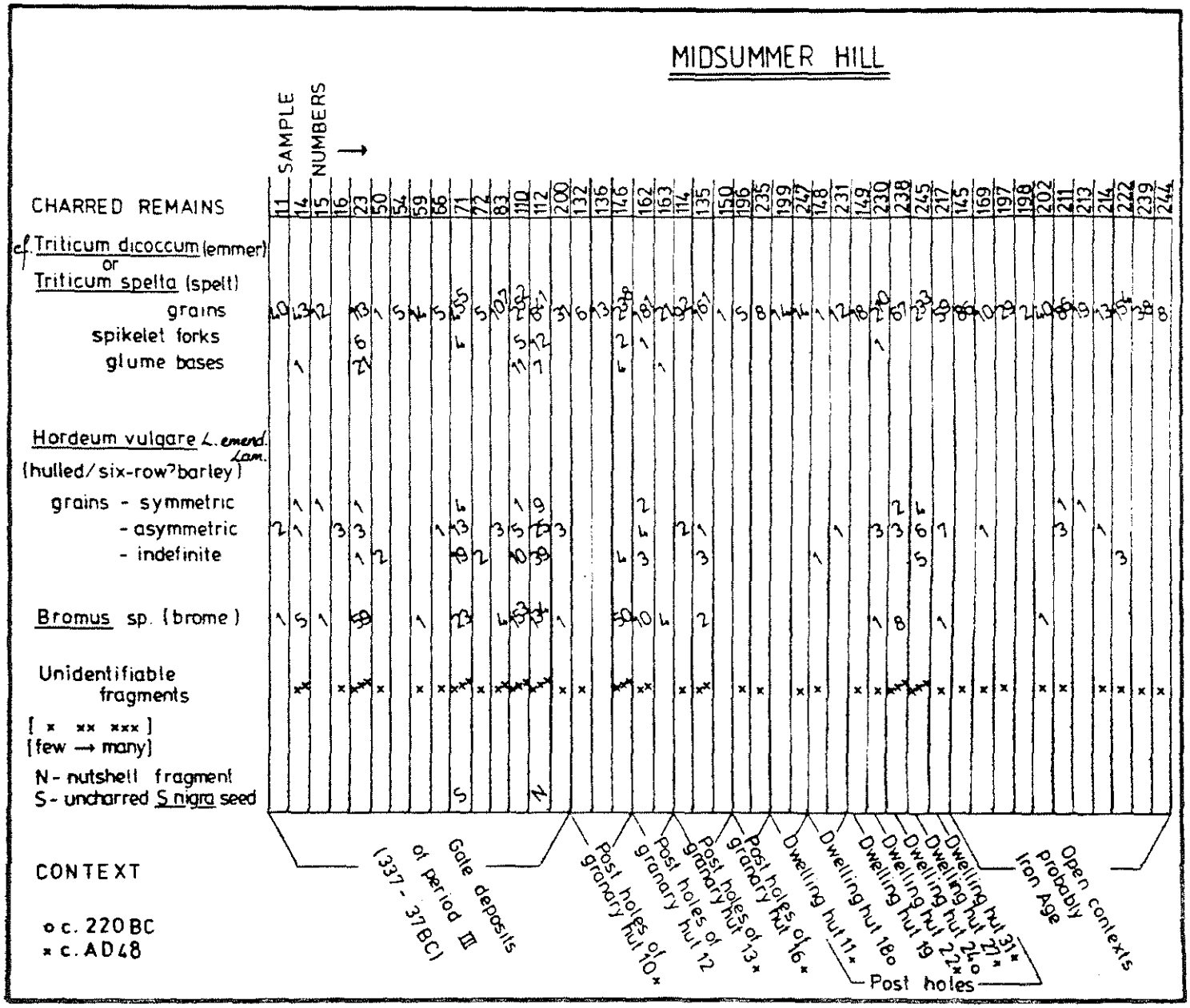
Report 3308 NOT SITE 216 371

MIDSUMMER HILL, Herefordshire

A report on the charred plant remains from the site.

The samples of charred plant remains were collected by the excavator and were initially sorted on site by patiently picking out the seeds from the deposit with tweezers. Because no sieving was carried out, some of the smaller weed seeds which were not easily visible would have been overlooked and the record is bound to have a bias towards the larger remains. Also there are no noted sample sizes from which the seeds were collected and thus the relative abundances of the species within the various features must not be regarded as a guide to the richness of the deposit. The features from which the samples were collected varied from post holes to occupation layers and it is assumed that the sampling was random. Bearing in mind the biases which have entered the study the samples must still be regarded as being important because they are all from Iron Age contexts, a period for which any information on cereal cultivation is valuable.

The samples were soaked in warm water in the laboratory to wash off the coating of mud which was present on most of the remains and which would have made identification difficult. On initial examination the samples seemed to consist mainly of charred wheat. The wheat was similar to Triticum spelta, spelt wheat and certain features on the grains were more like Triticum dicoccum, emmer wheat. Amongst other distinguishing features Triticum spelta has a 'low humped' dorsal surface whereas the Triticum dicoccum has a more 'highly humped' back but the state of preservation of the samples was such that definite identification between the species could not be made by just looking for this characteristic on the caryopses. According to Gordon Hillman (pers. comm.) it is necessary to examine the associated spikelet fragments eg. glume bases, spikelet forks and rachis fragments, and these show characteristics which make identification possible. Unfortunately because there was no controlled sampling of the deposits it is possible that most of the spikelet fragments were lost. However some were picked out by the excavators but again preservation was such that it did not allow for definite identification of the wheat species. So on the list of charred remains no attempt has been made to distinguish between the two wheat species and the


MIDSUMMER HILL
SAMPLE NUMBERS →
CHARRED REMAINS
cf. Triticum dicoccum (emmer) or Triticum spelta (spelt)
grains
spikelet forks
glume bases
Hordeum vulgare L. emend. Lam. (hulled/six-row?barley)
grains - symmetric
- asymmetric
- indefinite
Bromus sp. (brome)
Unidentifiable fragments
[× ×× ×××]
[few → many]
N - nutshell fragment
S - uncharred S nigra seed
CONTEXT
o c. 220 BC
× c. AD 48
11 14 15 16 23 50 54 59 66 71 72 83 110 112 200 132 136 146 162 163 114 135 150 196 235 199 247 178 231 149 230 238 245 217 145 169 197 198 202 211 213 214 222 239 244
Gate deposits of period III (337 - 37 BC)
Post holes of granary hut 10×
Post holes of granary hut 12
Post holes of granary hut 13×
Post holes of granary hut 16×
Dwelling hut 11×
Dwelling hut 180
Dwelling hut 19
Dwelling hut 22×
Dwelling hut 24o
Dwelling hut 31×
Post holes
Open contexts probably Iron Age

grains and spikelet fragments are recorded as being either Triticum spelta or Triticum dicoccum. There was some barley present in the samples although it was much less abundant than the wheat. It was obvious that the barley grains were in a much worse state of preservation than the wheat. The charring had resulted in the caryopses becoming very vesicular and therefore more susceptible to damage through crumbling. In the grains which were better preserved it was possible to see the ridges on the dorsal surfaces where the lemmas (part of the husk) had pressed. This was not obvious for all the barley but it has been assumed that the samples were of the 'hulled' rather than the 'naked' variety. Also there were barley grains which were 'skew' or asymmetric and from this observation it was deduced that the barley was 'six-row' rather than 'two-row', because in 'two-row' barley all the grains grow symmetrically. On the list the grains were recorded as being either symmetric or asymmetric or indefinite if the preservation was poor. As well as the cereals in the samples there were also seeds of brome which / was a common weed of cornfields. Further identification is not possible and the brome is classed under the Bromus mollis aggregate which includes Bromus mollis, B. secalinus and B. arvensis the soft, rye and field brome.

The list of identified remains has been grouped according to the contexts from which the various samples have been taken. The grouping falls into several categories gate deposits, post holes from granary huts and from dwelling huts and also several 'open contexts'. The post holes of granary huts 10, 12 and 13 contained large numbers of wheat grains and are equalled in abundance by the samples from dwelling huts 22 and 27. Samples 23, 71, 83, 110 and 112 from the gate deposits have also been taken from deposits rich in remains. Barley is less abundant in most contexts. Because of the methods of sampling the relative abundances of the cereals in the contexts must be regarded as of limited importance.

At Croft Ambrey (Hereford), and Caynham Camp (Shropshire), wheat is recorded as having been found in certain contexts. Samples from the hill fort on the Wrekin (Shropshire) have produced a similar list of species to those found at Midsummer Hill (Hereford), except for the presence oats (probably wild). The Breiddin (Powys) has produced quantities of emmer wheat but no spelt and a few grains of rye together with 'six-row' hulled barley and brome. (G. Hillman

(Clwyd)

pers. comm.) At Dinorben emmer has been recovered from pre-rampart contexts together with 'six-row' barley and wild oats.(G. Hillman pers. comm.) The Iron Age sites at Beckford (Worcs) and Blackstone have produced similar assemblages of charred remains which include a species of wheat, 'six-row' barley, oats and brome. For all these sites it seems that wheat is the most abundant cereal and that there are fewer grains of barley and oats.

At Midsummer Hill the crops were probably grown in the fields around the fort and were brought to the settlement for preparation and storage. It seems that on prehistoric sites there is quite often a general scattering of charred cereal remains throughout the excavated layers. At Midsummer Hill the remains have accumulated in post holes and this has been noted at other sites. From this information it is impossible to determine exactly what part of the Iron Age economy the crops represented Also it would be dangerous to comment on the relative importance of the various crops. However these results are an important addition to the records of cereal cultivation for the Iron Age.

Bibliography

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(The charred remains from the site at Blackstone were identified by J. Arthur.)