

The Mancetter Grain

This sample consisted of a small amount of material recovered from the flues of a grain drying kiln in the Roman settlement at Mancetter in Warwickshire. A preliminary sieving separated the larger pieces of blackened matrix from the loose carbonized grains which were later sorted and individually examined under X20 magnification. As it was realised that the matrix itself contained grains, it was broken down, as described earlier, by a stream of warm water under slight pressure. From the floating material in the bath all the carbonized plant remains were collected and air dried. In the account which follows, grains and other plant parts from both sources are considered together.

The Cereal constituents

It should be stated at the outset that the bulk of the Mancetter cereal material was in a very poor state of preservation. Not only had extreme distortion been caused by carbonization, but many of the grains were so friable that they disintegrated at the slightest touch. Several were encrusted with a tarry exudation which completely masked their shape and size and obliterated all diagnostic characters. Others were either blown-up and pumice-like or consisted only of a hollow shell. Fortunately, however, when the most deformed were discarded, there remained about twenty whole grains in reasonably good condition, an equal number of identifiable part grains, and, the most valuable find of all, three relatively well-preserved wheat spikelets. The presence of these, together with the fact that remnants of the husk (lemma and palea) still surrounded most of the recognisable wheat grains, indicated that one was dealing with an unthreshed crop. From this selected sample the following cereal species were identified.

(a) Hulled six-rowed barley (Hordeum vulgare) (Italian barley)

This species was represented by three whole grains and four identifiable fragments. Of the former, one was intact, another was externally perfect but completely hollow inside, while the third, though entire, was grossly mis-shapen. They were, however, unmistakably barley. The truncate bases of the grains and the strongly marked dorsal veins of the lemmae allowed no doubt of this. The same criteria identified the fragments as barley also. One of these, an almost whole grain, had additional features of interest. The rachilla was intact and the base of the terminal awn was discernible. The somewhat elongated coleoptile could perhaps be interpreted as evidence of the commencement of germination.

(b) Wheat species (Triticum spp.)

Of those wheat grains which were recognisable as such, four were either bread wheat (Triticum aestivum) or its near relative, club wheat (T. compactum) and the rest were either emmer wheat (T. dicoccum) or spelt wheat (T. spelta).

The most perfect grain of the bread wheat type was measured and the appropriate indices calculated. Although of little statistical value the results are given below.

	<u>Length</u>	<u>Thickness</u>	<u>Breadth</u>
	5.50 mm	2.95 mm	3.20 mm
	L/B	L/T	B/T
Indices	1.57	1.87	1.19

Unfortunately, these figures are no help in determining which of the aestivum wheats is represented in the sample, but they do tempt one to rule out emmer and spelt, the indices for which reflect the relative dimensions of the longer, flatter grains.

All of the remaining wheat grains were of the same type and one was faced, once again, with the problem of determining whether they were emmer or spelt. Their shape (slightly tapering towards both ends and rounded on the dorsal side) suggested emmer. The dimensions and indices, calculated from the most perfect specimen and given below, support this suggestion (although otherwise of little value)

	<u>Length</u>	<u>Thickness</u>	<u>Breadth</u>
	6.82 mm	2.72 mm	3.37 mm
	L/B	L/T	B/T
Indices	2.02	2.51	1.25

Even so, it is unsafe to make a definite identification on such meagre evidence. One can only do so when corroboration is obtained from the presence of inflorescence parts.

By a most fortunate chance, three almost complete spikelets were found amongst the carbonized material released from the matrix. These were unmistakably emmer, the lower internodes were still in position; the glumes, lemmas and palea were almost intact and the typical emmer venation of the lemma could clearly be seen. As a very thorough search amongst all of the organic debris was made and not one single inflorescence part which could be attributed to spelt was found, the inference is that the glume wheat in the Mancetter sample is also emmer (Triticum dicoccum).

#### Other carbonized material

Much of the residual organic material, some 25 ccs in all, consisted of very small pieces of wood charcoal and fragments of cereal leaves and straw. Amongst the former, oak (Quercus sp.) was the only tree species recognised although tiny slivers of some diffuse porous wood were present.

Three weed seeds, too distorted in shape to be identifiable were picked out, together with the upper portion, 3 mm in length, of some flat, spatulate grass caryopsis. A rather bizarre find was a segmented portion of an insect's body bearing one pair of legs!

## Summary

As will be seen from the above, the composition of the Mancetter grain sample was essentially the same as that of the Bainbridge samples. Hulled six-rowed barley (Hordeum vulgare), emmer wheat (Triticum dicoccum), and either one or the other or both of the bread wheats (T. aestivum and T. compactum) were present. Again, spelt wheat (T. spelta) was not in evidence, suggesting that the Mancetter settlement lay outside of the spelt-growing area.

Unlike the Bainbridge grain, the Mancetter sample contained neither rye (Secale cereale) nor the weed oats (Avena strigosa and A. fatua), the major difference between the two, however, was the overwhelming evidence for the premature germination of the Bainbridge grain. The huge number of detached embryos of both wheat and barley at various stages in development in sample G IV 9, for example, was remarkable. One would not expect, of course, to find germinating grain in the flue of a drying oven (although one Mancetter barley grain looked as if germination had started), but neither does one expect to find evidence of the germination of the best part of a grain crop!