

## ENVIRONMENTAL EVIDENCE FROM THE MOAT by M. Robinson

The preservation of organic remains in the moat was poor, and organic material only survived in the very bottom of the moat. A sample of F279/2 (Phase 2) from the bottom of the moat was examined for biological remains.

### Sample 279/2

The sample consisted of grey somewhat organic sandy silt with some gravel, charcoal fragments, Mytelus shell fragments and pieces of very rotten wood. 1.13 kg. of the sample was water-sieved down to 0.2 mm. and sorted for all plant and animal remains. A further 3.6 kg. was sieved and subjected to paraffin flotation to extract insects.

The identifications of species present in this sample have been listed in Tables 1 to 4 showing, respectively, seeds, other plant remains, carbonised seeds, and land and freshwater mollusca. Preservation of insect remains was very poor and it was not thought worthwhile identifying them. However, a fragment of an elytron from a *Xestobium rufovillosum* (Deg.), the deathwatch beetle, is of particular interest.

### Interpretation

The non-marine mollusca in Table 4 are mostly aquatic species which presumably lived in the waters of the moat, along with a few terrestrial species which probably fell into the deposit. The aquatic species include *Bithynia* spp. and *Valvata piscinalis*, which are species of streams, rivers and lakes. They require relatively clean, well oxygenated water.<sup>1</sup> Their presence suggests that the moats, which were not very wide or deep, were fed from a diverted stream. Table 1 includes seeds of aquatic species but none of them are from substantial plants, *Lemna* spp. (duckweed) being the most abundant. It is possible that the moats were kept weeded of the large emergent species which would otherwise have rapidly choked them.

The other seeds are from plants of a range of terrestrial habitats. Some scrub or trees seem to have been present in the vicinity of the manor. The agricultural weeds identified included *Agrostemma githago* (corn cockle) and *Anthemis cotula* (stinking mayweed). The evidence for the arable crops of wheat and field/broad bean, each represented by a single carbonized seed, was only to be expected, but there were also some more interesting cultivated species. Walnuts, plums and grapes were either grown on the estate, or imported by the manor.

The poor preservation of organic remains in the moat system may have resulted from the moat having been drained after the abandonment of site. Subsequently, the water table of the site was raised, probably above the medieval level. A possible cause of the high modern water table was the construction (probably in the 18 century) of the overshot watermill at Mill Lane.

### Table 1. Seeds

|                                 |             |   |
|---------------------------------|-------------|---|
| Brassicaceae gen. et sp. indet. |             | 3 |
| <i>Agrostemma githago</i> L.    | Corn Cockle | 1 |

|  |                  |     |
|--|------------------|-----|
| <i>Stellaria media</i> gp.               | Chickweed        | 2   |
| <i>Chenopodiaceae</i> gen. et sp. indet. |                  | 1   |
| <i>Vitis vinifera</i> L.                 | Grape Vine       | 1   |
| <i>Filipendula ulmaria</i> (L.) Maxim.   | Meadow-sweet     | 1   |
| <i>Rubus fruticosus</i> agg.             | Blackberry       | 4   |
| <i>Prunus domestica</i> L.               | Plum             | 1   |
| <i>Anthriscus sylvestris</i> (L.) Hoffm. | Cow Parsley      | 2   |
| <i>Polygonum aviculare</i> agg.          | Knotgrass        | 1   |
| <i>Rumex</i> sp.                         | Dock             | 3   |
| <i>Urtica urens</i> L.                   | Small Nettle     | 1   |
| <i>U. dioica</i> L.                      | Stinging Nettle  | 132 |
| <i>Juglans regia</i> L.                  | Walnut           | 1   |
| <i>Corylus avellana</i> L.               | Hazel            | 1   |
| <i>Fraxinus excelsior</i> L.             | Ash              | 2   |
| <i>Solanum</i> cf. <i>dulcamara</i> L.   | Woody Nightshade | 1   |
| <i>Lycopus europaeus</i> L.              | Gypsy-Wort       | 9   |
| <i>Stachys</i> sp.                       | Woundwort        | 1   |
| <i>Labiatae</i> gen. et sp. indet.       |                  | 1   |
| <i>Sambucus nigra</i> L.                 | Elder            | 10  |
| <i>Anthemis cotula</i> L.                | Stinking Mayweed | 7   |
| <i>Arctium</i> sp.                       | Burdock          | 2   |
| <i>Carduus</i> or <i>Cirsium</i> sp.     | Thistle          | 2   |
| <i>Sonchus oleraceus</i> L.              | Sow-Thistle      | 6   |
| <i>S. asper</i> (L.) Hill                | Sow-Thistle      | 1   |
| <i>Alisma</i> sp.                        | Water-Plantain   | 1   |
| <i>Zannichellia palustris</i> L.         |                  | 1   |
| <i>Juncus</i> sp.                        | Rush             | 10  |
| <i>Lemna</i> sp.                         | Duckweed         | 23  |
| <i>Carex</i> sp.                         | Sedge            | 1   |
| Total                                    |                  | 235 |

Table 2. Other Plant Remains

Bud scales  
Deciduous tree leaf fragments  
Leaf abscission pads  
Rosa (rose) prickle  
Salix (Willow) capsule  
Wood and twig fragments

Table 3. Carbonised Seeds

|                      |                  |   |
|----------------------|------------------|---|
| <i>Vicia faba</i> L. | Field/Broad Bean | 1 |
|----------------------|------------------|---|

|              |   |
|--------------|---|
| Triticum sp. | 1 |
|--------------|---|

Table 4. Land and Freshwater Molluscs

|                              |    |   |
|------------------------------|----|---|
| Valvata cristata Mull.       | 1  |   |
| V. macrostoma Morch          |    | 2 |
| V. piscinalis (Mull.)        | 1  |   |
| Bithynia tentaculata (L.)    |    | 3 |
| Bithynia sp.                 | 14 |   |
| Carychium sp.                | 1  |   |
| Planorbis planorbis (L.)     |    | 1 |
| Bathyomphalus contortus (L.) |    | 1 |
| Cochlicopa sp.               | 1  |   |
| Discus rotundatus (Mull.)    |    | 2 |
| Arion sp.                    | +  |   |
| Limax or Deroceras sp.       |    | 2 |
| Clausilia bidentata (Strom)  |    | 1 |
| Trichia hispida (L.)         | 5  |   |
| Pisidium sp.                 | 2  |   |
| Total                        | 37 |   |

#### Note

1. A.E. Boycott, 'The Habitats of Fresh-Water Mollusca in Britain', Jnl. Animal Ecology v (1936), 139-141.

#### THE CHARCOAL by M. Robinson

All the potentially identifiable charcoal found during excavation was examined from a selected series of contexts and the results are tabulated below:

| Context | Phase | Number of Pieces: |         |       |          |
|---------|-------|-------------------|---------|-------|----------|
|         |       | Fagus             | Quercus | Ulmus | Fraxinus |
|         |       | (oak)             | (elm)   | (ash) | (beech)  |
| 1022/2, | 3/1-5 | 13                | 2       | -     | -        |
| 1022/3, |       |                   |         |       |          |
| 1015/1, |       |                   |         |       |          |
| 600/8   |       |                   |         |       |          |

|               |     |   |   |   |   |   |
|---------------|-----|---|---|---|---|---|
| 535/1         | 4/2 | 5 | - | - | 1 | - |
| 508/1         | 3/1 | - | - | - | - | 1 |
| 509/1         | 3/1 | 3 | 1 | - | 1 | 1 |
| 46/2          | 3/1 | - | - | - | - | 1 |
| 279/2         | 2   | 1 | - | 2 | - | 1 |
| 534,<br>534/1 | 2   | 2 | - | - | - | - |
| 518/1         | 5   | 5 | - | - | - | 1 |

Only one of the unidentified fragments (that from F279/2) was definitely not from beech, oak, elm or ash. Almost all the beech charcoal was of slow-grown wood aged between about 12 and 24 years. For example, F600/8 contained a 13 year-old charcoal 1.2 cm. in diameter and a 21 year-old charcoal 5 cm. in diameter. In contrast, F535/1 had a charcoal 12 years old which was 10 cm. in diameter. The oak, elm and ash charcoal included both fragments from substantial timbers and small-diameter slow grown branches.

Most of the charcoal from the moated manor represents wood brought to the site as firewood. Few of the fragments were from timbers substantial enough for structural use and the slow-grown small diameter pieces were probably from branches too crooked for use as stakes, rafters or wattles. It is interesting that the assemblage is dominated by beech rather than oak, and this probably represents a regional variation owing to the proximity of the Chilterns beech woods. The absence of charcoal from understory species, such as hazel, is also noticeable.

It seems probable that the firewood consisted mostly of the trimmings from felled standards in a wood dominated by beech, the timber going elsewhere, or that it was the result of the clearance of badly grown beech scrub. If it had come from a well-managed pollard wood or coppiced trees, there ought to have been more rapidly grown pieces (with the character of the charcoal described from F535/1).