AML Report 3522.

New Site File

1585

Site	: Chipping Ongar
County	: Essex
Code	: CO 81
Director	: M. Eddy
Type of site	: Section of town ditch
Period	: Medieval
Geology	: Chalky Till
Type of material	: Plant and animal macrofossils

Chipping Ongar (CO81) : The town ditch

Introduction

Major ditches of the type sectioned at this site are not in general a useful source of environmental information since most of the macrofossils and pollen present in the ditch sediments would have come from resident ditch communities, and these would certainly have differed significantly from those of the surrounding area. However, it was thought possible that some plant and animal remains dumped into the ditch would provide information about human activities in the vicinity. Samples were taken primarily in order to investigate this possibility. It was not ancitipated that full quantitative analysis of samples containing only remains of organisms from aquatic, scrub and disturbed-ground communities would be worthwhile.

Site and laboratory methods

A column sample, sub-divided at 10cm intervals, was taken from the lowest 90cm of ditch deposits (Layers 47, 56, 57, 58). 1kg sub-samples from this column were disaggregated by soaking in hot water with manual agitation. The organic fractions of these predominantly mineral deposits were separated by a wash-over technique (Kenward et.al. 1980), collecting these fractions in a 250 micron mesh sieve. The organic fractions were graded into size fractions by washing through a bank of sieves before examination under low power of a binocular microscope. The residues were washed over a 500 micron mesh sieve and dried prior to examination. The organic fractions and residues were initially scanned over to determine whether detailed study would be justified, but it was decided that full quantitative analysis would not be profitable. Instead, the range of macrofossils present was noted, with some assessment of relative abundance where necessary.

Results

47

Seeds etc. Ranunculus acris-type, Ranunculus sceleratus (common), Caryophyllaceae indet, Atriplex patula/hastata, Rubus fruticosus c.f. Fragaria vesca, Aphanes arvensis/microcarpa, Umbelliferae indet. Conium maculatum, Rumex sp. Urtica urens, Urtica dioica, Quercus sp, Lycopus europaeus, Sambucus nigra, Cirsium sp. Carex sp., Gramineae indet.

Wood etc: Section of small ash (Fraxinus) plank (radially split from 12cm diameter branch) showing exit holes of wood-boring beetles; small axed or adzed chips of ash timber; ash twigs (0.6 - 2.0cm. diameter). Oak (Quercus) wood fragments. Charcoal fragments.

Other plant remains: Mosses; leaf abscission scales.

Bone: Mammal bone fragment, avian limb-bone fragment.

Arthropods: Insects, Cladocera, Ostracoda.

Molluscs: Lymnaea truncatula, Discus rotundatus, Zonitidae, Helicidae fragments.

56

Seeds etc: Chenopodium sp., Rubus fruticosus, Conium maculatum, Rumex sp. Urtica urens, Urtica dioica (common), Sambucus nigra.

Wood etc: Ash (Fraxinus) twigs (1.0cm); smaller indeterminate twigs. Charcoal fragments.

Other plant remains: Mosses, leaf abscission scales, buds.

Arthropods: Insects, Cladocera, Ostracoda

Mollusca: Pisidium spp., Bithynia sp., Valvata piscinalis, Succinea/ Oxyloma sp., Vallonia sp., Zonitidae.

57

Seeds etc: Montia fontana subsp. chondrosperma, Atriplex patula/hastata, Chenopodium album, Urtica dioica, Triticum aestivum/compactum (charred wheat grain)

Wood etc: Charcoal fragments

Other plant remains: Rootlets

Bone: Burnt bone fragments

Mollusca: Vertigo pygmaea, Zonitidae

58

Seeds: Atriplex patula/hastata

Other plant remains: Rootlets

Conclusions

This outline study of macrofossils from the ditch sediments clearly does not provide sufficient information for any detailed reconstruction of changing conditions in the ditch. However, the lowest layers (57 and 58) appear to have accumulated rapidly as a result of weathering and collapse of the till exposed in the ditch sides; they contain relatively few macrofossils and these are predominantly of organisms indicating shade-free conditions. In 56, above this primary fill, a more diverse flora and fauna is represented. Seeds of elder and bramble, and ash twigs are present, apparently indicating some scrub development; but seeds of ruderal plants probably derived from vegetation growing on slumped and weathered parts of the ditch sides remain common. Aquatic organisms include Cladocera, Ostracoda and Mollusca. The presence of Valvata piscinalis suggests that there was some flowing water in the ditch. 47 contains a comparable range of macrofossils, although achenes of Ranunculus sceleratus are particularly common, indicating the presence of damp muddy substrates. Obligate aquatic molluscs were not seen in samples from this layer. Some wood-working debris was dumped into the ditch at this level, but there is little evidence at any level in the ditch for the disposal of significant amounts of domestic refuse.

Reference

Kenward, H.K., Hall, A.R. and Jones, A.K., (1980) A Tested Set of Techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. Science and Archaeology 22 (1980), 3-15.