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HERTFORD CASTLE:
MOLLUSCS AND OTHER MACROFOSSILS

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Summary

Samples from a large 15th century feature, either a pit or the butt-end of a ditch, produced land, freshwater and marine molluscs, ostracods, avian eggshell, bones, charophyte remains and carbonised plant remains. The mollusc assemblages indicate that the lower fills included an allochthonous component, probably related to river flooding. The upper fills seem to have been dumped layers. Food refuse generally was exceedingly rare and there is no evidence for large-scale refuse disposal.

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Methods

Samples were collected from a large feature within the outer bailey of the castle, dating from the 15th century. It represented either the butt-end of a ditch or a large pit. Contexts sampled were JC(10), JC(7), JK(6), JK(1) and JS(3). From most of these contexts two samples were processed. A small sub-sample was disaggregated and wet-sieved over a 0.5mm mesh to ensure complete retrieval of mollusca; a larger sub-sample was flotated manually using a 0.5mm collecting mesh and the non-floating residue wet-sieved over a 2mm mesh (apart from JC(10), where a 0.5mm mesh was used). Both flots and residues were sorted under a binocular microscope at low power.

Mollusca

Shells of molluscs and other calcareous macrofossils (ostracods, avian eggshell, calcified charophyte remains) are listed in Table 1. JC(10), the lowest fill, from the bottom of the feature, produced a sparse snail assemblage. Ecological interpretation is difficult, since there are so few shells, but terrestrial species, particularly Carychium sp(p) and Discus rotundatus, predominate, with a few shells of species found in poorly oxygenated stagnant freshwater habitats (Lymnaea truncatula, Anisus leucostoma) and rare remains of freshwater molluscs requiring well-oxygenated flowing water. Such an assemblage would be consistent with the feature having contained some shallow stagnant water, possibly with an input of shells from river flooding. The predominance of Carychium and Discus could indicate that the sides of the feature became overgrown, although cavities between large cobbles, which the sample contained, could have provided suitable shaded habitats.

The assemblage from JC(7) is quite different. There is a diverse range of freshwater species including taxa which would not be found in a small, closed, stagnant water body, but are common in rivers. This evidently does not represent a resident mollusc fauna, but is probably related to river flooding, incorporating sediment and shells into layer JC(7) (cf. O'Connor 1988, 62-3). Terrestrial snails were also present in small numbers but might have been derived from a number of sources.

Mollusc shells were also present in layers JK(1) and JK(6). These are almost entirely of terrestrial species. Valves and fragments of oyster, mussel and cockle indicate some small-scale refuse disposal.

Bone

Mammal bone fragments, small mammal bones and fish bones occurred sporadically, in very small quantities. These were distributed as follows.

	Bone frags	Small mammal	Fish
JC (7) 12	-	+	+
JC(10) 14	+	-	-
JK (1) 33	+	+	+
JK (1) 34	+	+	+
JK (6) 31	+	+	+
JK (6) 32	+	-	+

There is too little material for detailed analysis to be worthwhile.

Carbonised plant remains

Samples 1 and 2 from JS(3) included very large quantities of wood charcoal and most other contexts, with the exception of JC(7), were moderately charcoal-rich. Apart from this, carbonised plant remains were unusually rare. The following specimens were identified:

JC (7) 13 Triticum sp. 1 caryopsis
JK (6) 32 Corylus avellana. Nutshell fragments
JS (3) 1 Leguminosae indet. 1 seed + 1 cotyledon (large).

Conclusions

The samples provide no information on the function of the feature, but do give some indication of the character of its fills. Layers JC(10) and JC(7) seem to have been fills with an allochthonous component of sediment and macrofossils relating to river flooding. JK(1), JK(6) and JS(3) contained rather more charcoal, bone and marine mollusc shells and the sparse land mollusc assemblages which they produced imply deposition in relatively dry conditions, presumably largely by intentional dumping. For an urban medieval site the quantities of food refuse present in the samples were exceedingly small : there is certainly no evidence for any large-scale refuse disposal.

Reference

O'Connor, T (1988) Slums, puddles and ditches : are molluscs useful indicators?, in Murphy, P and French, C (eds)
The Exploitation of Wetlands
BAR British Series 186, 61-8
BAR : Oxford

Context	JC(7)	JC(10)	JK(1)	JK(1)	JK(6)	JK(6)
Sample no	12	14	33	34	31	32
Pisidium amnicum (Müller)	+(a)	-	-	-	-	-
Sphaeriacea indet (juv.)	25	+	-	-	-	-
Theodoxus fluviatilis (Linné)	+(a)	-	-	-	-	-
Valvata cristata (Müller)	10	1	-	-	-	-
Valvata piscinalis (Müller)	22	-	-	-	-	1
Valvata sp	35	-	-	-	-	-
Bithynia tentaculata (Linné)	18	-	-	-	-	-
Bithynia opercula	+	+	-	-	-	-
Lymnaea truncatula (Müller)	2	2	-	-	-	-
Lymnaea glabra (Müller)	3	-	-	-	-	-
Lymnaea peregra (Müller)	3	-	-	-	-	-
Lymnaea sp(p)	10	-	-	-	-	-
Planorbis planorbis (Linné)	17	-	-	-	-	-
Planorbis carinatus Müller	7	-	-	-	-	-
Anisus leucostoma (Millet)	1	6	-	-	-	-
Anisus vortex (Linné)	2	-	-	-	-	-
Bathyomphalus contortus (Linné)	4	-	-	-	-	-
Gyraulus albus (Müller)	11	-	-	-	-	-
Hippeutis complanatus (Linné)	1	-	-	-	-	-
Planorbidae indet (b)	30	1	-	-	-	-
Ancylus fluviatilis Müller	2	-	-	-	-	-
Carychium sp(p)	1	11	-	-	-	-
Succineidae indet	2	-	-	-	-	-
Cochlicopa sp(p)	3	3	-	-	-	-
Vertigo sp	1	-	-	-	-	-
Pupilla muscorum (Linné)	-	-	-	-	2	1
Lauria cylindracea (da Costa)	-	-	-	-	-	5
Vallonia costata (Müller)	-	3	-	-	2	3
Vallonia excentrica Sterki	1	1	-	-	-	-
Vallonia sp(p)	3	4	-	1	2	1
cf.Ena sp	-	1	-	-	-	-
Discus rotundatus (Müller)	+(a)	16	-	-	2	6
Vitrea sp	-	1	-	-	-	-
Nesovitrea hammonis (Ström)	1	-	-	-	-	-
Aegopinella sp	-	1	-	-	-	-
Zonitidae indet	-	-	-	-	2	2
Limacidae indet	1	1	-	-	-	-
cf.Euconulus fulvus (Müller)	1	-	-	-	-	-
Cecilioides acicula (Müller)	2	2	-	-	-	-
Clausilia bidentata (Ström)	+(a)	-	-	-	-	2
Trichia hispida gp	2	4	-	-	-	-
Helix aspersa (Müller)	-	-	-	-	-	1
Indet gastropod apices(b)	24	3	-	-	-	-
Ostrea edulis Linné	-	-	3	1	2	1
Mytilus edulis Linné	+(a)	-	+	+	1	+
Cerastoderma sp	-	-	-	+	-	+
Ostracods	+	-	-	-	-	-
Avian eggshell	+	-	+	-	-	-
Charophyte thallus/oogonia	+	-	-	-	-	-
Sample wt(kg)	1	5	1	5	2.7	5

Table 1 : HAT 27 Mollusca and other calcareous macrofossils

Freshwater molluscs are listed at the top, terrestrial below and marine at the base of the table.
Notes: (a) Not noted in this sample but present in a 5kg sample (13) from JC7
(b) Small and/or abraded apical frags.
In the case of 5kg samples only molluscs from the flot were counted; the counts for smaller samples refer to shells from both flots and residues '+' refers to fragmentary material or items which were not counted.