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# Environmental evidence from 14 Skeldergate (YAT/Yorkshire Museum sitecode: 1991.14)

by

E. P. Allison, J. B. Carrott, A. R. Hall  
and H. K. Kenward

## Summary

Seventeen samples were analysed for their content of plant and invertebrate animal remains. Many were very rich in well-preserved remains, with evidence of disposal of material including probable stable manure and waste from certain textile manufacturing processes. Most of the samples were deserving of further investigation.

Excavation in this area would undoubtedly necessitate a large scale investigation of environmental evidence, with considerable cost implications.

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## Introduction

This report discusses the results of analyses of invertebrate animal and plant remains from deposits excavated from the 14 Skeldergate (YAT/Yorkshire Museum sitecode: 1991.14) site.

## Methods

Subsamples of raw sediment were described and then examined in the laboratory for plant and invertebrate animal remains.

A 'rapid assessment' was carried out on all seventeen of the samples. A 'test' subsample (Kenward *et al.* 1986) of 1 kg was taken from thirteen of the samples and processed by paraffin flotation (Kenward *et al.* 1980) to extract insect remains. Plant remains were recorded from the residues.

## The samples and results of the analyses

The analyses carried out on each sample, and the remains recovered, are described below, together with a laboratory description of the sediment. A brief archaeological description and/or interpretation of the context is given in brackets where available. The samples are presented in context order.

**Context 321** [Spot find from borehole sample; layer of ?organic material from beneath a thick layer of alluvial deposits. A small amount of contamination by material from the walls of the auger was noted.]

**Sample 8:** Grey sand with lumps of rotten sandstone. The matrix contains tiny fragments of black (sulphide rich) herbaceous detritus, perhaps including some rootlets.

No further analysis of this sample was undertaken.

**Context 505** [Borehole sample with high wood content]

**Sample 3:** Dark grey-brown, moist, crumbly, silt with some fly puparia present. The bulk of this sample consisted of one large, cylindrical piece of wood (approximately 200 mm by 150 mm), evidently part of a large oak timber.

A 1 kg 'test' subsample (taken from the silt component of the sample) was processed by paraffin flotation to recover plant and invertebrate animal remains.

The average-sized flot contained many fly puparia, a human flea and a strong decomposer beetle community indicative of slightly foul, mouldering plant remains. The beetle assemblage also contained some grain pests and the preservation of insect material was good. The residue was full of very fragmentary wood - some apparently 'chips' - with a modest amount of charcoal, fragments of fly puparia and fragmentary cornfield weeds (perhaps part of a spoiled grain component).

**Context 509** [Borehole sample - highly woody and organic]

Sample 4: Mid to dark, grey-brown, moist, crumbly, slightly sandy, silt with large stones (60 mm to 200 mm), twig and wood fragments, large mammal bone fragments (greater than 20 mm), oyster shell and pot fragments present.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The average-sized flot contained abundant insects, dominated by decomposers, but with no one clear decomposer group indicated. This flot resembled that from sample 3 except that no grain pests were present. The residue consisted of some charcoal and abundant wood fragments.

This sample was very similar to sample 3.

**Context 706** [Spot sample of highly organic material - including seeds and insects - from a borehole]

Sample 5: This sample consisted of large amounts of herbaceous stem fragments and the matrix was rich in weld/dyer's rocket seeds. No further analysis was performed.

**Context 917** [Borehole sample with a small amount of contamination by material from the drill tube. Is this a river bank deposit?]

Sample 2: Moist, crumbly, mid yellow-brown sand and mid grey-brown silt with abundant small and medium-sized stones (6 mm to 60 mm).

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The trace flot was mostly sand grains with a few, poorly preserved insect remains including an elminthid, *Helophorus* sp., *Lesteva longoelytrata* and some probable aquatic larvae. The residue consisted of a few scraps of wood and some pieces of orange limestone.

The raw sediment had the appearance of a river bank deposit and the insect assemblage shows every sign of aquatic deposition.

**Context 1003** [Spot find - coprolite]

Sample 1: The coprolite was highly calcareous and almost certainly canine.

A small amount of the material was dissolved in dilute hydrochloric acid and a smear made on a slide; however, microscope examination of this smear failed to find parasite ova.

**Context 1026** [From a deposit full of charcoal and burnt material, above what may have been a floor]

Sample 6: Grey-black, moist, plastic to crumbly, silt with some light brown patches and amorphous organic material present.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The tiny flot was mostly charcoal - including an unidentifiable charred beetle fragment - with some very poor cuticular fragments preserved by 'waterlogging' and one whole, modern, contaminant beetle. The residue was almost all charcoal with some sand and traces of brick/tile.

**Context 1049** [Fill of a medieval stone-built drain - heavily contaminated with diesel oil]

Sample 9: Mid yellow-brown (with veins of black running through), wet, sticky, plastic, silt with amorphous organic material and charcoal present. The sample smelled strongly of oil.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The trace flot was mostly sand grains with one *Sambucus* seed and traces of unidentifiable insect material. The small residue was mostly fine sand with some charcoal, small bone fragments (less than 20 mm) including fish, ?eggshell membrane and small concretions. The latter may be reworked faecal material, though a check on a small fragment of this material failed to reveal any parasite ova.

**Context 1061** [Build-up against 13th century wall above samples 11 and 12. High level of contamination from other contexts as well as some modern contamination by diesel]

Sample 10: Mid grey-brown to dark grey-brown, moist to wet, slightly silty, sand with some yellow patches and charcoal present.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The small flot contained abundant nematoceran flies and a tiny number of poorly preserved beetles. There were hints of unusual fauna, but a much larger subsample

would need to be examined to be definite. The residue was mostly pale sand with moderate amounts of charcoal.

**Context 1069** [Very organic build-up against 13th century wall. Immediately above sample 12]

Sample 11: Dark grey-brown, moist, plastic to crumbly, slightly sandy, silt with abundant herbaceous detritus and amorphous organic material, and patches of pale green material, small and very small stones (2 mm to 20 mm), twig and wood fragments (some fairly large), seeds, fly puparia and beetles present.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The moderately large flot was approximately 50% insect, mostly decomposers indicative of a 'mucky' town fauna. There were also some heads of an ant (either blind or small-eyed) and an adult *Melophagus ovinus* (sheep ked). The residue contained a lot of fragmentary wood and ?straw with abundant fullers' teasel (receptacular bracts and fruits) and weld/dyer's rocket seeds.

The insect and plant assemblages both suggest dumping of material from within or around a building, the weld and teasel perhaps pointing to waste from textile working.

**Context 1072** [Organic build-up against 13th century wall. Above context 1079]

Sample 17: Dark grey-brown, moist, plastic to crumbly, sandy, silt with small stones (6 mm to 20 mm), twig and wood fragments, large fragments of bird bone (greater than 20 mm), small fragments of mammal bone (less than 20 mm) and fragments of brick/tile.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The average-sized flot was mostly seeds with a modest number of averagely-preserved insects (including ants as in sample 11). There was no strong character to the insect assemblage other than that it was probably formed around a building. The residue consisted of fragmentary wood, with some charcoal, moderate amounts of herbaceous detritus, some food refuse (e.g. hazelnut shell) and hints of a cut vegetation component.

The plant and insect assemblages from this sample again indicate probable dumping of refuse from within or around a building (as with sample 11).

**Context 1075** [Well-preserved, highly organic build-up against 13th century wall. Opposite side of wall to samples 13, 14 and 15.]

Sample 12: Dark grey-brown, moist, crumbly, slightly sandy, silt with small stones (6 mm to 20 mm), wood fragments, hazelnut shell and abundant herbaceous detritus.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The fairly large flot contained abundant, moderately well-preserved insects including an elminthid, a scolytid, *Ptilinus pectinicornis*, a large longhorn beetle and assorted decomposers. Subjectively, there seemed to be a large proportion of woodworm (*Anobium punctatum*). The residue had a similar 'strawy' look to that of sample 11 and contained large numbers of fish bones and fullers' teasel (bracts and fruits) with weld seeds being moderately common.

This sample again represents dumping of rubbish from around or within a building.

**Context 1077** [Organic deposits adjacent to 13th century wall, particularly rich in insect remains. Sample 13 is specific (extremely rich) material from the context - could this have been sweepings from stables? Sample 14 is a more general representative of the whole context]

Sample 13: Very dark brown, wet to moist, stiff and crumbly, slightly sandy, silty, amorphous organic material and herbaceous detritus with abundant fly puparia and wood fragments present.

A 0.25 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The largish flot contained many large fly puparia and a probable foul-environment beetle community, including at least two *Cercyon terminatus*. The residue was very 'strawy' and contained oat caryopses, grass or straw culm nodes, *Heracleum* (hogweed), a fragment of ?*Centaurea* (probably knapweed) involucre and large numbers of spike rush fruits.

The assemblages of plant and insect remains strongly suggest that this deposit was stable manure. A good grassland flora was represented, and corn marigold (*Chrysanthemum segetum*) was present, suggesting the late or post Anglo-Scandinavian period. The lack of grain pests in the insect remains perhaps suggests it was late (rather than post) Anglo-Scandinavian.

Sample 14: Dark grey-brown (internally more brown), wet, crumbly, slightly sandy, silty, amorphous organic material and herbaceous detritus with abundant fly puparia and wood fragments and beetles also present.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The large flot contained modest numbers of insects including an adult histerid (and probable larvae) and a smallish decomposer beetle community. Preservation was, on the whole, good and the sample contained strikingly less fly puparia than sample 13. There was also a fragment of a ?planorbid snail. The residue was rich in 'straw-like' fragments and included modest amounts of wheat/rye bran.

Sample 16: A spot sample containing eggshell compatible in size with domestic hen (*Gallus*) eggs.

**Context 1079** [Organic lenses within river silts. Immediately below context 1077 sample 16]

Sample 15: Externally light, yellow-grey sand, then a layer of dark brown richly organic material, then a layer of light, blue-grey clay, another layer of organic material (as before) and finally a layer of sand (as before). As a whole the sample was moist, strongly layered, slightly plastic and crumbly. There were small fragments of brick/tile present in the sample and the organic layers contained fly puparia and abundant herbaceous detritus.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The moderately large flot was mostly 'woody' plant fragments with modest numbers of beetles (whose preservation ranged from quite good to extremely good) and a few other insects including a ?shield bug. The residue was rich in fragmentary woody and herbaceous detritus and included a fragment of flowering stem of dock (*Rumex* sp.).

Subjectively, both the insect and plant assemblages from this deposit have hints of a 'stable manure' community.

**Context 2012** [Immediately above a 13th century tile hearth]

Sample 2: Varicoloured, primarily rusty-brown with yellow, orange and vermilion, moist, crumbly, clay, silt with fragments of brick/tile and yellow sandstone present and abundant charcoal flecks.

A 1 kg 'test' subsample was processed by paraffin flotation to recover plant and invertebrate animal remains.

The trace flot was mostly mineral grains with one *Daphnia* and traces of arthropod cuticle. The residue was mostly mineral with a trace of charcoal and a modest amount of brick/tile fragments.

### References

Kenward H. K., Hall A. R. and Jones A. K. G. (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.

Kenward H. K., Engleman C., Robertson A. and Large F. (1986). Rapid scanning of urban archaeological deposits for insect remains, *Circaea* **3**, 163-72.