

Insect remains from the Annetwell Street site, Carlisle*

REPORT 2

Samples from Level VI

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Summary

Twenty samples were examined and all were barren of archaeologically significant insect remains: this report is presented as a record of material examined and of sediment types.

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1. Introduction

This is the second report on material from the Annetwell Street site, Carlisle, but the first to deal with samples treated by the scanning technique of Kenward *et al.* (1986).

The material discussed here has all been taken from Level VI; the main features being two third century stone buildings which are thought to have been of military use. One building has certainly been identified as a barrack.

Although every sample in this group was devoid of beetle remains, a soil description is given and the nature of the residues and floats are discussed. They are considered in

sample number order within three groups; Building [999], Building [1000] and Miscellaneous Samples.

2. Practical Methods

Recording and processing of insect samples is undertaken in the following manner. Before processing, the sample is examined by H K to provide a record of sediment type and inclusions and also to note any peculiarities or irregularities of the sample. A 1 kg 'scan' sample (/T) is weighed out for immediate use and the remaining soil is stored for possible future use as a detailed sample (procedure essentially as in Kenward *et al.* 1980).

The 1 kg 'scan' sample is processed using a modification of the paraffin flotation method described by Kenward *et al.* (1980). Rapid but efficient working is aimed for, and the washing process is carried out more carefully than that previously described for the 'test' process (Kenward *et al.* 1986). After an initial sieving stage, the relent is boiled for about 10-15 minutes in a solution of washing soda (sodium carbonate). The quantity of washing soda varies from about 20-50g in approximately 2-3 litres of water, being adjusted according to the nature of the material. It is then re-sieved and riddled in water until clean. The remaining material is drained to remove free water (but not allowed to dry), and mixed with paraffin (kerosene) in a plastic bucket. Excess paraffin is poured off, and the bucket topped up with cold water. Insect remains float to the paraffin/water interface and can be poured off onto a sieve after the bucket has been let to stand for about 15 minutes. The surface is blown on to release trapped plant fragments before the flots are poured off. The bucket is then topped up, and the procedure repeated three to six times, until negligible numbers of insect fragments float. The residue is poured off and insects adhering to the inner surface of the bucket are washed out with detergent and poured onto the sieve. The material on the sieve (the flots) is then thoroughly cleaned with detergent and very hot water, rinsed with industrial methylated spirits (IMS), then stored in IMS in 120 ml vials. The residue is drained, dried in an oven at about 60C, then sorted for finds, small bones, shells and any fly puparia which have failed to float.

Occasionally samples of less than 1kg are provided; these are designated '/1' and are fully processed using the methods described by Kenward *et al.* (1980), in order to ensure recovery of all insects in the sample. (This is necessary as the total sample size is insufficient to allow further subsampling.)

The resultant flots are then examined and recorded. Precise methodology varies between individual workers (see Kenward *et al.* 1986), but in general the following procedure is adopted. The approximate volume of flots is recorded, in terms of proportion of a 120 ml jar filled, or for small quantities the number of Petri-dishfuls into which the material must be divided for examination. Many flots from test samples are very small and can be examined in a single dishful.

The overall nature of the flots is recorded: for example, 'mainly wood fragments', 'abundant bran', 'many insects', 'mainly puparia fragments'. A note is made of the state of preservation and quantified on a scale of 1-5 for fragmentation and chemical erosion.

The flots are systematically scanned, Petri-dishful by Petri-dishful, so that they are examined in their entirety. Numbers of each kind of sclerite for each beetle species present are recorded

and minimum numbers of individuals (MNI) calculated for 1, 2, or 3 individuals. For 4 to 10 individuals, 'several' is recorded, for more than 10, 'many' is recorded, and in some cases more accurate counts for estimates are used.

When thought necessary, fossils are placed on damp filter paper, or even mounted on card slides, for identification or storage, but generally little attempt is made to make close identification of certain difficult groups unless there is a special reason, for example if a taxon is particularly abundant. Usually, such groups are identified to 'type' rather than to species; typical taxa used for recording are: '*Atomaria* sp.', with a note 'punctate type'; '*Cryptophagus* sp. R' (for 'round' prothoracic callus).

When each sample has been fully examined, the lists of beetle species and MNIs recorded are entered on the University of York VAX cluster computer system for construction of the data-base and for calculation of summary statistics for each sample. These operations are carried out by a package of programs written by HKK, together with systems packages, in particular the data inspection system *Datatrieve*.

4. Results of the Analyses

No data are presented since none of the samples contained remains which could not be listed in the text. This report is accordingly presented as an account of methods applicable to this series in general (above), and as a record of material examined and sediment types. Each description consists of (a) a summary of the archaeological information, (b) a sediment description and (c) Notes on the residue from test processing.

4.1 Samples from Building [999]

4.1.1 Sample 39, Context 968

This sample, taken from occupation silt, consisted of a mid-dark brown sandy clay silt with a crumbly texture. The residue contained sand, pebbles, some tile fragments and a few bone scraps. Only a few grains of sand were found in the float.

4.1.2 Sample 44, Context 1053.1

Back-fill of pit. Mid grey-brown sandy silty clay with small and very small stones. Traces of charcoal. Residue contained small bits of brick/tile, charcoal, fragments of fish bone and several fragments of mammal bone which included pig and hen. Float barren.

4.1.3 Sample 45, Context 1053.2

Hearth debris in pit. Heterogeneous, matrix mid brown. Sandy clay silt with patches of greenish sandy clay and reddish clay. Some small stones, bones, charcoal and eggshell. Residue comprised brick/tile, charcoal, mammal and fish bone.

4.1.4 Sample 46, Context 1053.1

Pit and possibly wooden lining. Mid grey brown, strong clay component, silty clay, some patches more silty. Charcoal present and many very small stones. The residue contained a fragment of glass, some mortar/plaster, tiny pieces of charcoal and several fragments of mammal bone.

4.1.5 Sample 47, Context 1053.1

Contents of pot. Mid brown plastic clay, moist. Residue consisted of sand and concretions positively identified as faecal by the presence of abundant parasites, namely *Trichuris* sp. and *Ascaris* sp.

4.1.6 Sample 56, Context 1213

Occupation/floor level. Dark brown sandy clay silt, some pink clay lenses and a trace of charcoal. Abundant small and very small stones. Many brick/tile fragments. The residue also contained considerable amounts of brick/tile, plus a piece of glass and some mammal bone.

4.1.7 Sample 62, Context 1261

Earth from floor. Dark grey brown sandy clay silt with pale flecks, crumbly texture. Some small stones. A piece of pottery was found in the residue and scraps of mammal bone, some of which were burnt. Some plant fragments found in float.

4.1.8 Sample 63, Context 1265

Occupation silt (?). Mid brown sandy silt with many small and very small stones. The residue contained some brick/tile, wood charcoal and mammal bone.

4.1.9 Sample 64, Context 1252

Occupation silt. Creamy light - mid brown slightly sandy silt. A small amount of mammal bone was found in the mostly sandy residue.

4.1.10 Sample 67, Context 1272

Charcoal/soil filled depression. Mid-dark grey brown sandy clay silt with a light grey brown component. A mostly sandy residue, also containing some brick/tile, charcoal and mammal bone.

4.1.11 Sample 70, Context 1238

Occupation - floor (?). Mid brown sandy silt with many very small stones and a block of reddish clay. A few fragments of mammal bone and a pig tooth turned up in the residue with a piece of pottery and some brick/tile.

4.2 Samples from Building [1000]

4.2.1 Sample 37, Context 961

Occupation layer. Dark brown sandy clay silt with some patches of orange silty clay. Abundant very small stones. The residue, which was mostly sand and stones also yielded fragments of mammal bone, some charcoal, brick/tile and a fragment of pottery.

4.2.2 Sample 38, Context 974

Taken from an area of green/grey silt. The sample was a mid-dark brown sandy clay silt with a low organic content and containing many tile fragments, some small .gritty stones

and some medium stones. The residue was sandy with small stones, tile fragments and scraps of bone.

4.2.3 Sample 41, Context 980

This sample was taken from a clay floor. Mid red brown sandy clay with many small and very small stones, traces of charcoal. Residue sand, stones and mammal bone fragments.

4.2.4 Sample 54, Context 1184

Drain fill. A very stiff, dark grey sandy clay silt, rather mottled, with many stones and patches of orange clay silt. A sandy stony residue with small amounts of coal and charcoal, fragments of mammal bone and a mandible of *Mus musculus*.

4.2.5 Sample 55, Context 1185

Drain packing. Mid-dark grey brown sandy clay silt with small and medium stones, brick/tile and traces of charcoal. Lots of charcoal, some lumps of coal and fragments of glass and mammal bone were found in the residue.

4.3 Miscellaneous Samples

4.3.1 Sample 51, Context 1159.2

This sample came from an external drain and formed part of the fill. A mid brown crumbly sandy silt with small and very small stones. A sandy residue with a few fragments of mammal bone.

4.3.2 Sample 52, Context 1167.2

Silt from an external drain. Reddish brown sweet-smelling silty sand with a few patches of silt and some small stones. Organic content almost non-existent. Residue sandy with two scraps of mammal bone and a tooth.

4.3.3 Sample 58, Context 1242

Sample taken from a sump fill contaminated with petrol. Mid brown externally whilst glistening black internally, this sandy silt contained small and very small stones. Residue contained mammal bone, charcoal and brick/tile.

4.3.4 Sample 59, Context 1243

This sample was taken from the same sump fill and beneath the previous sample. Cobbles in a sandy silt. Apart from sand and stones a few mammal bone remains were found in the residue.

5. Discussion

This group of twenty samples is exceptional for its lack of insect remains (other than modern contaminants, not listed here). Experience with comparable material from other sites has suggested that, even where preservation is generally poor, some deeper features will yield a fauna. Clearly preservational conditions were exceptionally vigorous when

these level VI deposits were formed. Such poor preservation is not general in Carlisle and is not a reason for failing to examine comparable material in future.

6. Acknowledgements

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7. References

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