

Insect Remains from the Annetwell Street site, Carlisle*

REPORT 8

Level X Structures

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Date: 29th July 1988

[NB: This report was scanned and reformatted on 13th March 2008. The only changes have been to preserve internal consistency and to correct typographical errors. HK. The original was an archive report deposited at Environmental Archaeology Unit, Carlisle Archaeology Unit and Ancient Monuments Laboratory, and allocated *post hoc* as *Reports from the Environmental Archaeology Unit, York 88/18.*]

* Carlisle Excavation Unit site code: CAR80-84ANN

Summary

The structures discussed in this report generally produced insect assemblages with limited interpretable value, as in the cases of A1896, A1904 and A2512. However, the assemblages from structures A2006 and A2025 proved a little more informative; relatively clean conditions appear to have predominated, at least during the period of deposition. Unfortunately, conclusive statements can not be made about the prevailing character of structure A2366 since the majority of the samples were from latrines and yielded small assemblages of little note.

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1. Introduction

This is the eighth report on material from the Annetwell Street site, Carlisle, presenting species lists, summary statistics and interpretations.

All of the samples discussed here are from Level X. The Structures are organised into context number order and the samples discussed in sample number order. Some of the samples from structure A2006 have already been examined in Report 1 of this series and will not therefore be dealt with again here.

Table 1. Annetwell Street, Carlisle. Descriptions of the sample material in sample number order. Water state was moist unless otherwise indicated.

Sample number	Context number	Description
124	1705	Mid brown plastic-crumby silt. Medium stones and charcoal present.
129	1945	Mid grey/brown plastic, sticky, slightly sandy clay. Some components of orange/pink clay and black silty clay. Very small stones present, charcoal abundant.

133	1946	Dark grey crumbly-brittle, humic clay silt. Bone and sand grains present.
135	1862	Heterogeneous - ranging from bright pink clay to sandy clay silt of brown/black colour. Many medium stones.
139	2079	Light-mid buff, plastic, silty clay with components of olive silty clay and pale buff silt. Very small and small stones present.
141	2030	Mid-dark grey, plastic-crumbly, sandy silt with fine orange sand common. Charcoal common. Wet
146	2105	Black plastic-crumbly sandy silt, with orange patches and greyish brown patches. Charcoal abundant. Wet.
150	1958	Mid orange/pink plastic clay. Components of whitish clay, reddish clay and mid grey/brown sandy clay silt. Small stones and charcoal present.
151	2115	Mid pinkish/grey plastic sandy clay silt. Components of dirty orange silt present. Medium stones abundant.
152	2094	Light-mid brown plastic-crumbly clay silt with patches of dark grey/brown clay silt. Small stones present.
154	2125	Light-mid pinkish/brown plastic, sticky, sandy silty clay. Some darker, possibly charcoal rich, patches.
155	2128	Mid brown plastic sandy silty clay. Components of bright orange silt, yellow/grey clay, pink clay and dark brown clay. Charcoal present. Wet.
156	2130	Black crumbly sandy silt with abundant charcoal. Dry-moist.
163	2173	Dark grey crumbly slightly sandy clay silt. Wood and bone fragments present.
182	2295	Dark grey plastic-crumbly silty fine sand. Components of fine orange sand common. Charcoal abundant. Wet.
191	2382	Mid pinkish brown plastic silty clay. Small stones present, charcoal common.
194	2397	Humic silt containing plant remains and puparia.
195	2351	Mottled light-dark grey sandy clay silt with patches of pure yellow/brown silt. Small and medium stones and bone present.
196	2397.1	Dark brown sticky humic sample with herbaceous detritus greater than 2mm and yellowish patches. Very small stones, charcoal and wood fragments present. Wet.
197	2397.2	Dark brown organic matter with some mineral content. Patches of fine comminuted organic matter and many puparia also present. Moist-wet.
199	2397.4	Mid grey plastic, sticky, sandy silty clay. Some patches of black silt and pink clay. Small and medium stones present.

		Moist-wet.
203	2446	Dark grey/brown crumbly organic clay silt with some lumps of pinkish clay silt. Small stones, wood chips and plant stems present.
205	2450	Mid-dark grey/brown plastic, crumbly, sandy clay silt. Patches of grey clay present and lumps of compressed organic matter. Small stones also present.
209	2397	Dark brown plastic-crumbly sandy silty clay with some orange sandy clay and darker patches – probably charcoal. Small and very small stones common.
213	2505	Mid pinkish brown plastic silty clay. Very small and small stones and charcoal present. Dry-moist.
216	2396	Mid-dark red/brown crumbly, brittle, silty fine sand. Mottles of darker and paler colours common. Sandstone present. Dry-moist.
218	2566	Mid-dark grey-brown crumbly sandy clay silt. Very small and medium stones and wood fragments present. Dry-moist.
219	2569	Mid brown crumbly sandy silt. Very small stones present. Dry-moist.
220	2578	Mid grey /-brown crumbly slightly sandy silt. Some components of grey/brown clay and orange clay silt. Very small stones present. Dry-moist
235	2788	Dark grey crumbly sandy silt. Small stones present. Dry-moist.
236	2811	Dark grey/brown brittle humic sandy silt Very small stones, wood fragments, sand grains and plant fragments present. Dry-moist.
240	2912.1	Very dark brown crumbly humic silty clay. Wood fragments and plant debris present plus one greenish organic lens.
241	2912.2	Mid grey/brown crumbly sandy clay silt. Very small and medium stones, clay flecks and wood fragments present.
263	3649	Dark brown richly organic clay silt with yellow flecks and much fine compressed plant material. Some wood and a hint of mm scale layering.
269	3701	Mid brown silt, mottled brown and black internally with some patches of pink clay. Pebbles and wood present.
274	3750.4	Dark brown stiff-sticky, humic clay silt. Components of orange silt, dark clay silt and light brown silt.

Table 2. Annetwell Street, Carlisle. Descriptions of dry-sorted sample residues in sample number order.

Sample number	Context number	Description
124	1705	Mostly sand and stones with some charcoal.
129	1945	Stone, charcoal and one fish bone found.
133	1946	Mainly sand and stones with wood, charcoal, quite a few nutshell fragments and some mammal bone fragments including the incisor of a mouse.
135	1862	Largely sand stones and charcoal. One fragment of brick/tile and scraps of mammal bone
139	2079	Mostly large amounts of sandstone.
141	2030	Sand, stones and charcoal with wood scraps, nutshell fragments and pieces of mammal bone.
146	2105	Most of the residue was composed of charcoal.
150	1958	No visible organic matter, all boulder clay and stones with some burnt fragments of mammal bone, including the lower molar of a pig.
151	2115	Mostly stones.
152	2094	Large amounts of sandstone with a small amount of charred wood and a few pieces of shellfish.
154	2125	Majority of residue consisted of sandstone, with a small quantity of charcoal.
155	2128	Mainly stones.
156	2130	Lots of charcoal, some wood, two pieces of pottery, a piece of brick/tile, a nutshell and fragment of mammal bone.
163	2173	Some charred wood, charcoal, mammal bone and three pieces of tile.
182	2295	Very sandy with lots of wood and charcoal and a nutshell fragment.
191	2382	Largely sand.
195	2351	Quite a lot of charcoal, fragments of wood and mammal bone and many puparia.
196	2397.1	Fairly organic with much charcoal, scraps of wood, a fruit, stone and many puparia.
197	2397.2	Fragments of wood and charcoal, lots of mammal bone fragments and puparia, quite a few fruit stones and some moss.
199	2397.4	Much sand and stones with a scrap of mammal bone and one fly puparium embedded in a faecal concretion.

203	2446	Wood, charcoal, nutshells and tiny fragments of mammal bone present.
205	2450	Mostly organic material and sand with some wood, charcoal, seeds and nutshell.
209	2397	Large amounts of stone with a little charcoal.
213	2505	Clay and sand with no visible organic remains.
216	2396	Mostly sand with a few scraps of wood.
218	2566	Sandy with small stones, quite a lot of wood, a fair amount of charcoal and small fragments of mammal bone.
219	2569	Sand and small stones with scraps of wood.
220	2578	Small amounts of sandstone and charcoal.
235	2788	Largely sand, very small stones and charcoal. Many nutshell fragments and two pieces of fish bone.
236	2811	An organic residue including some wood, charcoal and two pieces of mammal bone.
240	2912	Organic with sand and a few small stones. Also present was wood, charcoal, seeds, nutshells and a burnt fragment of mammal bone
241	2912.2	Large proportions of sand, stones and wood. Some charcoal, nutshell and bone fragments
263	3649	The residue included fragments of wood, charcoal and mammal bone and a few fruit stones.
269	3701	This residue, contained wood, charcoal, several fruit stones and a fragment each of nutshell and mammal bone.

2. Practical Methods

For a detailed description of the methodology employed, refer to Report 2 in this series.

3. Interpretative Methods

Interpretation is discussed by Kenward (1978), Kenward (1982) and Hall *et al.* (1983). The methods are based on (a) species composition (b) main statistics such as concentration, 'diversity' and the proportions of certain ecological groups and (c) population structure, as revealed by rank order and cumulative frequency plots.

4. Results of the Analyses

[Revised 2008. Data for this project can now be viewed in:

Kenward, H. (1999). Data archive: Insect assemblages from Annetwell Street, Carlisle (revised edition). *Reports from the Environmental Archaeology Unit, York* **99/32**, 126 pp.

The original edition of these reports included a large paper data archive. This has been omitted from the present version.]

5. Discussion of the Sample Assemblages

Most of the assemblages were small and of little interpretative value beyond being typical of Roman Carlisle, so to avoid repetition they have not been discussed in any detail.

5.1 Samples from Structure A1896

5.1.1 Sample 124, Context 1705

Taken from an area of decay this sample yielded a tiny flot consisting mainly of sand and a few seeds. Two mites and five species of beetle (7 individuals) were also present.

5.1.2 Sample 135, Context 1862

An occupation sample which produced a tiny flot composed of sand, some plant remains, a mite, and six individuals of five beetle species.

5.1.3 Sample 151, Context 2115

This sample of clay/silt contained no insects.

5.2 Sample from Structure A1904

5.2.1 Sample 139, Context 2079

The sample material came from a floor and a very small flot yielding only two beetles was produced.

5.3 Samples from Structure A2006

Some of the samples from this structure were processed as 3kg details and are discussed in Report 1 of this series.

5.3.1 Sample 129, Context 1945

The very small flot from a sample of debris produced only 3 beetles.

5.3.2 Sample 133, Context 1946

This sample came from a silt and charcoal deposit. Apart from beetles the flot contained a few seeds and two *Leptocera* sp.

There was a small group of beetles, 17 taxa and 26 individuals. Only *Aglenus brunneus* was at all numerous ('several') and this species may have invaded buried organic matter. Other taxa may have colonised in small numbers before burial or be true background fauna.

5.3.3 Sample 150, Context 1958

A surface deposit may have been the origin of this sample which was devoid of insect remains.

5.3.4 Sample 152, Context 2094

A very small flot was produced from material thought to have been a floor. There were only 10 individuals of 9 beetle taxa.

5.3.5 Sample 163, Context, 2173

This sample came from a patch in a layer of silt. The small flot contained a few plant fragments some mites and a very small group of beetles, the last being dominated by grain pests.

5.3.6 Sample 235, Context 2788

This and the following sample were taken from an area of burning/silt. The flot was small and yielded only mites and 10 individuals of 8 taxa of Coleoptera; half were grain beetles.

5.3.7 Sample 236, Context. 2811

Many seeds, several mites and lots of charcoal were found in the flot. Two fleas (apparently not human) were also present.

5.3.8 Sample 240, Context 2912.1

This and sample 241 both came from a pit. The remains in this flot were predominantly beetles, but also included some plant scraps, a flea and some mites.

There were 47 beetles and bugs, including only 16 taxa. Seventy percent were grain pests and the remaining insects had no special character.

5.3.9 Sample 241, Context. 2912.2

Quite a small flot yielding a flea, mites and a large, number of beetles in proportion to its size. The assemblage was much like that from sample 240, predominantly grain beetles.

It is clear that insect remains, including the delicate sclerites of fleas, were preserved in the deposits associated with this structure, so their rarity cannot be ascribed to post-depositional loss. Input of corpses was therefore probably low and the structure thus fairly clean, or at least regularly cleaned out. A few 'dry decomposer' taxa may have inhabited the structure, supported by moulds on small amounts of litter or even on the structure itself.

5.4 Samples from Structure A2025

5.4.1 Sample 141, Context 2030

This occupation deposit yielded a small flot containing mites, a scale insect and 17 beetles of 11 taxa. Only *Lathridius minutus* group ('several') was represented by more than two individuals.

5.4.2 Sample 146, Context 2105

A sample from an occupation layer which produced a flot containing only three beetles.

5.4.3 Sample 154, Context 2125

Taken from a floor/occupation layer. Small pieces of charcoal, plant material, mites and seeds were found in the flot as well as a small and characterless group of beetles.

5.4.4 Sample 155, Context 2128

Possibly from a floor, this sample contained no insects.

5.4.5 Sample 156, Context 2130

The material for this sample was thought to be from an area of occupation. Apart from a few seeds, single individuals of six beetle taxa were all that was recovered from this flot.

5.4.6 Sample 182, Context 2295

There were few insects (16 individuals of 12 taxa) and some mites in this sample of charcoal.

5.4.7 Sample 191, Context 2382

The flot from this floor sample yielded some puparia and three individuals of Coleoptera.

5.4.8 Sample 203, Context 2446.1

This pit sample yielded several mites and seeds, and puparia: one *Musca domestica* and several *Leptocera* sp.

There were 25 beetle and bug taxa, with 35 individuals. Although the assemblage was rather small for reliable interpretation there is a hint of a 'house fauna' community in the form of *Lathridius minutus* group ('several'), *Xylodromus concinnus* and *Cryptophagus* sp. (3 of each). These may have exploited small amounts of litter, mould in damp corners or even birds' nests, but a background origin for the whole assemblage cannot be ruled out.

As in the case of Structure A2006 the insect remains were thinly distributed but there was no evidence of preservational loss. Again, only small insect populations seem to have been present, indicating relative cleanliness and a few taxa which may have lived in the structure on sparse litter.

5.5 Samples from Structure A2366

5.5.1 Sample 194, Context 2397.1

This sample was taken from the fill of a latrine and was processed for puparia, but there is no record of the results.

5.5.2 Sample 195, Context 2.351

The sample was from a deposit of charcoal over a latrine. A medium-sized flot was recovered, yielding a reasonable and well preserved beetle assemblage. Much plant material, many *Leptocera* sp., some mites and charcoal were also present.

Thirty-three species of beetles were recorded; the number of individuals was estimated at 88. There were few grain pests (NG =9), and outdoor forms were not abundant (N OB = 10). Decomposers contributed 66 of the individuals and several uncoded taxa probably belonged with this group. Diversity was low and a fairly generalised decomposer community may have bred in deposits associated with this one, perhaps the underlying layer.

5.5.3 Sample 196, Context 2397.1

This and the following three samples were from the latrine fill. Many mites, seeds, over 20 *Leptocera* sp. puparia and one earwig were present.

There were an estimated 114 beetles, including 34 taxa. Diversity was low ($\alpha = 17$, SE = 2) and the outdoor component very small (3 individuals, %N OB = 3). The percentage of decomposer individuals (%N RT) was estimated at 55 but the addition of uncoded taxa probably belonging to this category would raise the value considerably. A varied decomposer community probably bred in this fill. How foul the surface was is hard to determine. There were few taxa restricted to dung-like substrata, however.

5.5.4 Sample 197, Context 2397.2

The flot contained much cereal bran, some bugs and many puparia: nine *Muscina stabulans* (including 3 whole unemerged individuals) and numerous *Leptocera* sp.

Twenty-five beetle taxa and a single bug were recorded, and the number of individuals was estimated at 51. Grain pests were abundant (37% of the individuals), and the residual assemblage after their subtraction was small.

5.5.5 Sample 199, Context 2397.3

A large quantity of cereal bran, some mites, a scale insect and six *Leptocera* sp. were recovered.

The small beetle assemblage was rather like those from sample 195 and 196.

5.5.6 Sample 205, Context 2450

This clay/silt sample produced mites, an earwig and rather a small group of beetles including an estimated 72 individuals of 35 taxa. Decomposers were predominant (%N

RT = 67) and rather mixed, although no taxa primarily associated with very foul conditions were recorded. A small 'house fauna' component was present.

5.5.7 Sample 209, Context 2397.6

Also from a latrine fill the, sample yielded a medium-sized flot with much plant material (mostly cereal bran) and quite a few seeds. Invertebrates other than beetles included mites, a spider and four *Leptocera* sp. puparia.

There were only 26 beetle and bug taxa, none of them with more than three individuals (N = 35). The assemblage was rather mixed ecologically and little can be deduced from it.

5.5.8 Sample 216, Context 2.396

This floor sample produced a small flot which contained many seeds, some mites, a scale insect and one *Leptocera* sp. puparium.

There were few beetles and bugs (N = 30, S = 22), only *Lathridius minutus* group being represented by more than two individuals. The assemblage had no special character other than a rather large proportion of outdoor forms (%N OB = 27).

5.5.9 Sample 218, Context 2566

The sample originated from an area of occupation silt. Some mites and an uninterpretable group of 15 beetles and bugs were recovered from the flot.

5.5.10 Sample 219, Context 2569

A silt sample possibly of occupation origin. Mites, seeds, two *Leptocera* sp. and 18 beetles (12 taxa) were recorded from the flot.

5.5.11 Sample 220, Context 2578

This sample, possibly from a floor, produced a small, poorly preserved flot containing seeds, charcoal, mites and a single *Leptocera* sp. Also recovered was a very small group of beetles and a single bug (N = 20, S = 18).

5.5.12 Sample 263, Context 3649

This pit sample produced a medium-sized flot containing much well preserved cereal bran, some mites, seeds and many puparia, these being represented by one Muscidae sp., many *Leptocera* sp. and a single *Tephrochlamis tarsalis*.

A fairly substantial beetle assemblage was recorded, although nearly a third (32%) were grain pests. The residual assemblage was deficient in outdoor forms (%N OB = 6) but quite rich in decomposers (%N RT = 64). In the latter group RT taxa predominated (N RD as %N RT = 58) and an autochthonous decomposer community of modest size and a rather generalised nature appears to have been present.

5.5.13 Sample 269, Context 3701

The flot from this latrine fill sample was almost entirely composed of well preserved cereal remains with some mites and a few *Leptocera*. sp. puparia.

Other insects were not abundant and only 24 individuals of 18 beetle taxa were recorded. The assemblage was undistinguished and quite probably of background origin.

5.5.14 Sample 274, Context 3750.4

Material for this sample was taken from a latrine pit. A fairly small flot with many seeds, two mites and 14 beetles of 12 taxa was recovered.

5.6 Sample from Structure A2512

5.6.1 Sample 213, Context 2505

This floor sample produced no insect remains.

6. Acknowledgements

The authors are grateful to Ian Caruana and Mike McCarthy for providing archaeological information, to Simon Pearsall and John Pickering for assistance with sample processing and sorting of dry residues and to John Phipps for identification of fly remains.

7. References

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