

Technical Report: Plant and invertebrate remains from Anglo-Scandinavian deposits at 118-26 Walmgate, York (site code 78-9.8)

by Harry Kenward and Allan Hall

Summary

Plant and invertebrate remains have been investigated from a variety of occupation deposits of Anglo-Scandinavian date at 118-26 Walmgate. The assemblages of plant remains were notable for a lack of plants used in dyeing, in contrast to all other sites of this period in York. The presence of charred, uncharred and partly-charred remains of oats, often in appreciable quantities, characterised many assemblages and in this respect the material from this site resembles that from other excavations in this part of the town. Some fills of features clearly had a faecal content as evidenced by both plant remains and the eggs of intestinal parasites. Remains in floors differed from those in house floors at contemporaneous sites and waste interpreted as faecal appeared in associations not often seen at other sites, and it may be speculated that the structures were primarily animal pens or sheds, the faeces those of pigs. Further research in this part of York should focus on testing the hypothesis that this was an area of relatively low-density occupation, perhaps in a pre-urban stage; it may be that environmental evidence will make an important contribution to the study of land use zonation in Anglo-Scandinavian York.

Keywords: YORK; 118-26 WALMGATE; ANGLO-SCANDINAVIAN; OCCUPATION DEPOSITS; PLANT REMAINS; INVERTEBRATE REMAINS; PARASITE EGGS; INSECTS; PIT FILLS; FOODPLANTS; LAND USE

Environmental Archaeology Unit
Department of Biology
University of York
PO Box 373
York YO10 5YW

Prepared for: York Archaeological Trust
Cromwell House
13 Ogleforth
York YO1 7FG

8 May 2000

List of Tables and Figures

Table 1. List of samples from 118-26 Walmgate, York, examined for plant and invertebrate remains.

Table 2. Complete list of plant and invertebrate remains recorded from samples from 118-26 Walmgate, York, in taxonomic order.

Table 3. Lists of plants remains and other components of the samples from 118-26 Walmgate, York, in context, sample and subsample order.

Table 4. Values for the 'abundance-indicator value' (AIV) for assemblages of plant remains from 118-26 Walmgate, York, in context, sample and subsample order.

Table 5. Explanation of the codes used for AIV groups in Table 4.

Table 6. Main statistics for the assemblages of adult Coleoptera and Hemiptera (excluding Aphidoidea and Coccoidea) from 118-26 Walmgate, York.

Table 7. Insects and other macro-invertebrates from 118-26 Walmgate, York: species lists by context and sample.

Table 8. Abbreviations for ecological codes and statistics used for interpretation of insect remains in text and tables.

Table 9. Measurements (in μm) of trichurid eggs from four samples of Anglo-Scandinavian date from 118-26 Walmgate, York.

Technical Report: Plant and invertebrate remains from Anglo-Scandinavian deposits at 118-26 Walmgate, York (site code 78-9.8)

Introduction

Excavations by York Archaeological Trust in advance of building work took place at 118-26 Walmgate under the direction of David Brinklow in 1978-9. Apart from an account of some selected bone assemblages of post-medieval date (O'Connor 1984), no report on bioarchaeological studies has been published, though a group of samples from the site was included by Tomlinson (1989) in her survey of plant remains from various York excavations and some insect assemblages were described in a report by Laura Chapman (LC), an undergraduate at Bradford University, in 1984.

The subsequent undertaking of a synthesis of Anglo-Scandinavian sites in the city afforded an opportunity to revisit the material. Surviving samples dated to this period were inspected by the authors who considered only one—on grounds of survival of organic content and sample size—to be worth investigating. This report draws together all information concerning plant and invertebrate remains from samples of Anglo-Scandinavian deposits at 118-26 Walmgate, however. Amongst sites manifesting anoxic waterlogged preservation, the site at 118-26 Walmgate is of particular interest in being much the furthest from the presumed Anglo-Scandinavian town centre.

Practical methods

Practical work on material from this site has taken place in a somewhat piecemeal fashion, over a period of nearly 20 years, with samples being processed in three main phases. In the first, a series of 10 pit fill samples was examined in 1984 by LC (subsamples of 1 kg and 0.5 kg being labelled, respectively, '/1', '/2', the plant data from the /2 series having been archived with the subsample designation '/M'—this change is retained in the present report). Later, in the late 1980s, Dr P. R. Tomlinson (PRT) examined a series of 1 kg 'test' (*sensu* Dobney *et al.* 1992) subsamples (primarily for plant remains, and labelled '/T') and further 0.5 kg '/M' subsamples. At this time, Alan Robertson (AR) recorded insect remains from the /T series. All of the insects recorded by LC were checked by HK, as were critical identifications made by AR.

In 1999 a single sample was identified as worthy of further examination by the present authors.

For some samples, bulk-sieving was used to reduce the amount of material in store, but no remains from the bulk-sieved residues or washovers have been investigated.

This report also incorporates the results of some tests for eggs of intestinal parasites carried out by Barrie McKenna and Jef Maytom under the supervision of Dr A. K. G. Jones, and by LC as part of her project.

The general procedure for analysis of the samples from Walmgate was as follows. A laboratory description of lithology of the samples selected for investigation was made using a *pro forma*, and subsamples of 0.5-2 kg were processed according to the methods of Kenward *et al.* (1980; 1986), the residues being stored wet prior to examination. For the single sample examined as part of the present synthesis project, plant remains (and other components of the residues and flots) were recorded using direct input to a PC (using an input form and *Paradox* software). Data from earlier analyses were added to a *Paradox* database some years after the samples were examined.

Abundance of all constituents (in relation to the original size of the subsample) was recorded using a four-point scale from 1 (one or a few individuals or fragments or a small component of the matrix) to 4

(abundant remains or a major component of the matrix). For investigation of the composition of the plant assemblages, ‘abundance-indicator values’ (AIVs) were calculated; these combine the measure of abundance with a score for the degree to which a taxon may represent one or more of a series of ecological and ‘use’ groups (Tables 4-5). These values are not directly comparable between the single sample examined in 1999 and those investigated previously.

Records pertaining to parasitic worm eggs were made on standard forms.

Insects were identified by comparison with modern reference material and using the standard works. Adult beetles and bugs, other than aphids and scale insects, were usually recorded fully quantitatively and a minimum number of individuals estimated on the basis of the fragments present. In one case recording was semi-quantitative. Other invertebrate macrofossils were recorded semi-quantitatively using the scale described by Kenward *et al.* (1986) and Kenward (1992), estimates being made for extremely abundant taxa.

Data pertaining to macrofossil invertebrate remains were transferred from a paper record to computer databases (using *Paradox* software) in 1999 for analysis and long-term storage.

Interpretative methods

The interpretative methods employed in this study were essentially the same as those used in work on a variety of sites by AH, HK and co-workers.

For the plant remains, interpretation is facilitated by the use of ‘abundance-indicator values’ (AIVs), calculated from the abundance scores and a score for the indicator value of each taxon within a series of ecological, use, and other groups (for details, see Hall and Kenward 1990).

For the insect remains, interpretation rests primarily on a number of ‘main statistics’ of whole assemblages of adult beetles and bugs, and on the recognition of ecologically-related groups of species (see Kenward 1978, with modifications outlined by, for example, Kenward 1982; 1988; Hall and Kenward 1990; and Kenward and Hall 1995). The main statistics used include: (a) a measure of species-richness (or diversity), of Fisher *et al.* (1943), for the whole assemblage and for components of it; and (b) proportions of ‘outdoor’ species (OB, calculated from taxa coded oa and ob), aquatics (W, w), waterside species (D, d), phytophages (plant-feeders) (P, p), species associated with dead wood (L, l), moorland/heathland taxa (M, m), and decomposers (species associated with decomposing matter of some kind). Decomposers are subdivided into (a) species primarily associated with somewhat dry habitats (RD, rd), (b) those found mostly in rather, to very, foul habitats (RF, rf), and (c) a residuum not easily assignable to one of these (rt). The category ‘RT’ includes all three of these groups of decomposers (rt + rd + rf). (In each case, the lower-case codes (e.g. ‘rd’) are those applied to species and the upper-case codes (‘RD’) are for the ecological group.)

A further ecological component quantified for the present site was the synanthropes, i.e. those species favoured by human activity (Kenward 1997). Taxa have been assigned codes for degree of synanthropy as follows: ‘sf’—facultative synanthrope, common in natural as well as artificial habitats; ‘st’—typically synanthropic, but able to live in nature; ‘ss’—strong synanthrope, absent from or very rare in natural habitats in the relevant geographical area. These codes give rise to ecological groups SF, ST, and SS, which are summed to give SA (all synanthropes). A group of synanthropes regarded as particularly typical of buildings of various kinds has been termed ‘house fauna’ (Kenward and Hall 1995).

The quantification of an ‘outdoor’ component in what are sometimes clearly natural or semi-natural assemblages may not appear entirely logical, but in fact is useful when working with any deposits associated, even if rather indirectly, with human occupation.

The abundance of these ‘ecological’ groups is discussed against the background of values for many other assemblages from a large number of sites. Thus, % N OB = 30 is a high value, but % N RT = 30 is low; while % N W and % N RF are both high at 10.

The index of diversity offers a guide to the presence or absence of remains of insects which bred in or on the developing deposit (autochthones), low values indicating breeding communities, high ones faunas of mixed origins. Note that ‘significantly’ low values differ for the various components of assemblages; the more inherently rich a component is, the higher the value of the index of diversity for a living community will be. Thus, ‘outdoor’ communities associated with natural vegetation tend to give a high value of , while very specialised communities, such as those of decaying matter deposited by humans, or stored grain, have low or very low ones.

Results

The samples are considered in order of context, since full details of archaeological phasing and stratigraphic position are not available. Table 1 gives a list of the GBA samples from this site selected for study. A full list of plant and invertebrate taxa recorded from these deposits appears in Table 2, with lists of plant remains by context in Table 3. AIVs for plant remains are given in Table 4. Main statistics for the assemblages of adult beetles and bugs are presented in Table 6 and species lists by context and sample for macro-invertebrates in Table 7. Some data concerning measurements of eggs of parasitic worms are presented in Table 9.

In the following accounts the words ‘several’ and ‘many’ are used for macro-invertebrate remains in the semi-quantitative sense of Kenward *et al.* (1986), i.e. estimates of more than three and less than ten individuals are recorded as ‘several’ and translated to ‘6’ for statistical purposes, and estimates of ten or more are recorded as ‘many’ and translated as ‘15’, unless the numbers are very large, in which case a rough approximation is used. Numbers of individuals are ‘MNI’s, calculated from the numbers of parts (heads, pronota, elytra, etc.) recorded.

The listing sheets for invertebrate macrofossils for the subsamples examined by LC and AR give few records for groups other than adult beetles and bugs. This is certainly the result of the early date at which the material was examined, the range of invertebrates which were routinely recorded being expanded subsequently during work on Anglo-Scandinavian 16-22 Coppergate (Kenward and Hall 1995). The exception is the identification of some fly puparia by the late John Phipps.

Context 3416 (?occupation floor)

Sample 132/T (1 kg /T; parasite subsample): no record of sample description or processing.

The residue from this subsample contained a little occupation-derived material amongst which were traces of charred cereal grains and uncharred elderberry seeds which are of no further interpretative value. A subsample examined for parasite remains was barren. The subsample was not examined for insects.

Context 3421/3423 (floor)

Sample 143 (1 kg /T, parasite subsample): moist, dark grey-brown, crumbly, somewhat layered, humic, slightly sandy silt with traces of charcoal, wood, eggshell and tile (and noted at description stage as resembling many floor layers at 16-22 Coppergate).

The modest-sized assemblage of plant remains from the /T subsample included a variety of taxa which might have arrived in cut vegetation such as hay and straw, together with some charred oat grains and chaff fragments (and one or more whole spikelets identified as cultivated oats).

A subsample examined for parasite remains was barren.

The group of adult beetles was quite large (125 individuals of 47 taxa), but few other invertebrates were recorded. Much the most abundant beetle was *Carpelimus pusillus* group, with 34 individuals. This was followed by a *Corticaria* species (7), *Anobium punctatum*, a second *Corticaria*, and *Cryptophagus* sp. (all five). The less abundant species followed the same ecologically rather mixed pattern, suggesting either mixed waste or perhaps house litter subsequently colonised by species preferring rather fouler conditions. A further possibility is that this was stable manure (which would accord with the botanical evidence), insect communities in which appear often to have included *Carpelimus pusillus* in the past. Other, characteristic, stable manure taxa were not prominent, however (cf. *Sample 137* from Context 3432, where such taxa were well represented), so if this *was* the nature of the floor, it was probably cleared frequently.

It may be speculated that the house fauna in this deposit derived from the structure rather than litter, and that the floor was foul but trampled, as in a pig sty, perhaps cleared out at intervals but leaving compressed layers containing some fossils—assuming the floor would not be entirely disturbed by the rooting behaviour of pigs (if these were the animals being kept, for which there is no positive evidence from, for example, ecto- and endoparasites).

Context 3426 (post-robber backfill to bedding trench): no record of sample description or processing.

Sample 140 (1 kg /T; 2 parasite subsamples): no record of sample description or processing.

Of two subsamples examined for parasite remains, one yielded traces of *Trichuris* and ?*Hymenolepis*, the other being barren.

This sample does not appear to have been examined for plant remains. A rather small assemblage of adult beetles (and one unidentified bug) was recorded (71 individuals, 49 taxa), and there were few other invertebrates. Not surprisingly if this was a backfill, the beetles were an ecologically mixed group, and they cannot reasonably be used to reconstruct conditions nearby; they did, however, have a character typical of other assemblages of Anglo-Scandinavian date in York.

Context 3432 (backfill of robbed bedding trench)

Sample 137 (0.5 kg /M, 1 kg /T; parasite subsamples): no record of sample description or processing.

Wood fragments formed the bulk of the plant remains in the residue and there were modest amounts of charcoal; the more abundant remains of fruits and seeds were mostly weeds or plants likely to have arrived with litter (especially from grassland, e.g. in hay). Oat grains were again quite frequent and there was some oat chaff.

Two subsamples examined for parasite eggs gave traces of *Ascaris* and *?Hymenolepis*.

Although the group of beetles (and one bug) recovered was of limited size (S = 42, N = 85), it was of fairly clear ecological character, dominated by species most likely to have occurred together in exposed moist, probably at least locally rather open-textured, decaying matter. The most abundant beetle was *Carpelimus pusillus* group (14 individuals, probably *C. pusillus* itself), followed by *Platystethus cornutus* group (7, probably *P. degener*), *Cercyon atricapillus* (6), and four each of *Cercyon terminatus* and *Platystethus arenarius*. This ecological pattern was continued into the less abundant taxa, which included three *Oxytelus sculptus* and *Carpelimus fuliginosus*, and two *Anthicus ?formicarius*. House fauna species were present, but only in small numbers, so this deposit cannot certainly be said to have contained stable manure. Presumably the backfilling of the bedding trench included a quantity of manure-like material—dung or quickly-ejected stable manure, which was perhaps invaded by insects both before and after dumping.

Context 3433 (pit fill)

Sample 144 (1 kg /T, 0.5 kg /A (from a subsample rich in fly puparia included within *Sample 144*)): black laminated and fibrous humic silt.

Abundant remains of uncharred oat grains and charred cereal culm (flower stem) fragments together with much bark and many fly puparia were recorded from the /T subsample. There was clearly food waste (probably largely from faeces) in this pit, for as well as the oat bran there were rather frequent remains of linseed and wheat/rye 'bran', and traces of ?leek (leaf fragments), celery seed, hazel nutshell, apple (seeds and 'core'), pea, sloes, dewberry, blackberry, elderberry, 'bilberry' and field bean, and of faecal concretions.

The faecal nature of the deposit was evident from the counts for worm eggs in a subsample examined for these remains: there were modest numbers of eggs of both *Trichuris* and *Ascaris* with traces of *?Hymenolepis*.

Overall there was also quite a strong component of litter of various kinds, especially remains likely to have arrived in peat and turf (notably modest amounts of heather flowers and cross-leaved heath leaves as well as traces of various other parts of heather and of *Sphagnum* and some other mosses (*Hylocomium splendens*, *Hypnum cupressiforme*, *Leucobryum glaucum*, and *Polytrichum formosum*) which form a rather close-knit group ecologically. The remainder of the assemblage was largely made up by seeds and fruits of a variety of weeds. Perennial and biennial nitrophiles are here rather well represented amongst the AIVs for the Walmgate samples as a whole, though inspection of the list of taxa concerned shows that it is not a very distinctive one, being formed of plants equally likely to represent one or more other habitats.

A small group of beetles was present in the /T subsample (N = 55, S = 43). Fly puparia and adults were rather common. None of the beetles were particularly abundant, but the upper ranks included *Cercyon analis* and *C. terminatus* (3 each), and *C. atricapillus*, *C. haemorrhoidalis*, *Acritus nigricornis*, *Anotylus complanatus* and *Oxytelus sculptus* (all 2), and most of the remaining taxa could have co-habited with these, so that there is little doubt that conditions were foul (PNRF = 18, a rather high value). Perhaps the fill was buried before large populations of insects other than flies could develop. Two peatland taxa were tentatively identified: the bug *Ulopa ?reticulata* and the weevil *Strophosomus ?sus*, and these presumably arrived with the plants mentioned above.

The most likely circumstances for this range of taxa to co-occur would be in litter in an animal house. There may have been human faeces, but the 'food' plants may have been waste fed to livestock.

Context 3436 (clay floor)

Sample 136 (parasite subsample): no record of sediment description.

A subsample examined for parasite remains was barren.

Context 3443 (floor)

Sample 145 (0.5 kg /M, 1 kg /T, parasite subsample): moist, dark grey-brown, plastic humic silt.

Numbers of identifiable plant remains were rather low in both the subsamples, with no groups other than weeds of much importance. Traces of ?leek leaf fragments were noted in the /M and of linseed in the /T but the food content of the assemblages was low and taxa likely to have arrived in litter few and in low concentrations.

A subsample examined for parasite eggs yielded a single ?*Hymenolepis*.

Insect remains were rare in the /T subsample (35 adult individuals of 21 beetle taxa, and a few others). This was by no means the fauna of the use phase of a house floor (typical house fauna taxa were absent), and much of the fauna may have been brought in mud used for levelling: the only taxon which was at all abundant was *Platystethus cornutus* group (16 individuals), very typical of waterside mud and, in the past probably moist ground on occupation sites.

This may have been sediment introduced to level up the floor, rather than material which accumulated during use.

Context 3446 (floor or dereliction spread)

Sample 149 (0.5 kg /M, 1 kg /T, parasite subsample): black, laminated to fibrous, slightly crumbly, amorphous organic sediment.

The /M subsample was rich in wood fragments, the more abundant fruits and seeds being from weeds of various kinds or wetland plants which are perhaps most likely to have arrived on feet or cut low-growing vegetation. The presence of two other plants typical of tracks, slender parsley-piert and thyme-leaved sandwort (though these are more typical of drier rather than wetter places) perhaps favours the former as the most likely source.

Overall, it is annual weeds from cultivated and waste places that are best represented in the assemblage, the foodplant component being limited to traces of charred and uncharred oat grains, uncharred oat 'bran', linseed, elderberry and wheat/rye 'bran'.

A subsample examined for parasite eggs was found to contain a single *Trichuris* and traces of ?*Hymenolepis*.

A small group of beetles and bugs was recorded from the /T (N = 52, S = 34), together with numerous fly puparia and a few other invertebrates. There were only traces of house fauna, and the only species represented by more than three individuals was *Platystethus arenarius* (nine), typical of very foul decaying matter. 'Outdoor' insects were proportionally moderately abundant (PNOB = 17, although only nine individuals), but there was no reason to suppose that the fauna formed through gradual accumulation in abandonment. This may have been a stable or pen which was cleaned out fairly frequently.

Sample 150 (1 kg /1, 0.5 kg /2 (=/M)): moist to wet, dark brown, crumbly to brittle, silty amorphous organic sediment with traces of concretions.

The assemblage from the /M subsample yielded abundant toad rush seeds (this was also quite common in 149/T) and a rather long list of taxa scored at '2' on a four-point scale. Weeds predominated, but the assemblage had no outstanding characteristics. The small wetland group, which may indicate poor to intermediate fen, included a rush (*Juncus acutiflorus*) in moderately large numbers and traces of bog-rush (*Schoenus nigricans*) nutlets. Remains of this last plant have been recorded in small numbers at several sites in York, mostly from Anglo-Scandinavian deposits; records include material from two other sites in Walmgate (41-9 Walmgate, Johnstone *et al.* 2000 and 104-112 Walmgate (St Margaret's Churchyard), Carrott *et al.* 1992) but these data are probably insufficient to suggest a pattern.

Possible foodplants were limited to modest amounts of charred cereal and oat grains and traces of linseed and elderberry.

Insect remains from the /1 subsample were not very abundant, 63 individuals of 37 beetle and bug taxa being recorded. The three most abundant species together suggest foul matter: ten *Platystethus arenarius* and four each of *Cercyon analis* and *C. haemorrhoidalis* (with hindsight there is no reason to doubt the last of these identifications). Some of the rarer taxa would have co-existed with these, and almost a third of the beetle fauna suggested foul conditions (PNRF = 29). There were also puparia of *Haematobosca stimulans*, and the house fly *Musca domestica*, both primarily associated with fermenting dung. House fauna was rare.

The fauna of this deposit thus clearly signals foul conditions, perhaps even dung; again, one possibility is that the surface had dung on it but was cleaned fairly frequently or trampled. Plant remains may have been introduced in 'trample', in low-grade litter or via animal faeces.

Context 3447 (silty spread, dump or build-up)

Sample 158 (0.5 kg /M, 1 kg /T, parasite subsample): black, somewhat fibrous amorphous organic sediment with some small lumps of natural.

The modest-sized assemblage of plant remains consisted mostly of annual weeds with moderate numbers of flax seeds and charred oat grains. There were a few plant which might have arrived in heathland vegetation or turves, or in various other kinds of litter, but this group was not especially prominent. Together with the oats and linseed, other plants likely to have been used as food included hazel nut, sloe and elderberry, and there were also traces of uncharred oat caryopses.

A subsample examined for parasite eggs was barren.

Insect remains were rather rare in the /1 subsample, a few flies and mites being accompanied by 69 individuals of 52 beetle and bug taxa. Only *Lathridius minutus* group was at all common (seven individuals), but other typical house fauna taxa were not well represented, and the large proportion of 'outdoor' taxa (PNOB = 25) and high diversity (alpha = 95, though SE = 25) suggest long exposure to background fauna. Gradual accumulation in the open thus appears quite likely, an interpretation with which the plant remains are entirely compatible.

A record of the shieldbug *Eurydema oleracea* from this sample is discussed below.

Context 3450 (fill of pit or ?cistern)

Sample 167 (1 kg /1, 0.5 kg /2 (=M), /SPT and a parasite subsample, all examined): moist to wet, dark brown, plastic amorphous organic sediment and herbaceous detritus with much hypnoid moss and apple 'core' visible.

Considered together, the plant remains recorded from the three subsamples examined included a moderate components of foodplants and plants likely to have arrived in fen litter of various kinds. The food remains seem likely to have come at least partly with faeces (there were faecal concretions in two subsamples) and this may also explain the presence of the mosses, with the *Calliergon giganteum*, a large branching species of intermediate fen habitats, which made up a large part of the /SPT, probably having been brought for sanitary purposes (the suite of mosses from these samples was entirely typical of a fen, marsh or wet grassland environment and lacked the woodland and heathland types regularly recorded in Anglo-Scandinavian occupation deposits in York). Another possibility, however, is that these remains arrived with peat, for other plants likely to have been introduced from wetland in such a material included saw-sedge and bog-bean.

It was the foodplants which were most prominent in the assemblages from this deposit, however, mineralised and waterlogged oat caryopses, fig seeds, flax seed, apple pips and 'core', elderberry seeds and wheat/rye 'bran' all being scored at an abundance of '2' in one or more subsamples, and leek (leaf fragments), celery seed, hazel nut, hawthorn, sloe and rose all being recorded at '1'. The fig is an unusual record for the Anglo-Scandinavian period (there were three deposits from Anglo-Scandinavian levels at 16-22 Coppergate where fig seeds were present, always a one or a few specimens) but is widely recorded from later medieval deposits.

A subsample examined by LC for parasite eggs gave large numbers of *Trichuris* and modest numbers of *Ascaris*; the former were measured (Table 9).

Beetles and bugs were rare (S = 21, N = 25), but there were very large numbers of puparia of the fly *Leptocera*, probably indicative of foul moist conditions. In relation to this, the fact that the most abundant beetle, *Omalium ?rivulare* (three individuals) was regarded as a typical denizen of cesspits at 16-22 Coppergate is probably significant.

The fill of this cut thus seems to have been very foul, according with the evidence from plant and parasite remains for faecal material. The rarity of beetles typical of foul matter suggests rapid burial so there may have been some awareness of the need for hygiene.

Context 3452 (occupation spread or dereliction of daub building)

Sample 154 (0.5 kg /M, 1 kg /T, parasite subsample): mid grey, plastic to brittle sandy silt with traces of stones 6-20 mm.

The small group of plant remains from these two subsamples was of little interpretative value; most could have arrived in litter of various kinds or from plants growing as weeds in the vicinity.

A subsample examined for parasite eggs yielded traces of *Trichuris* and modest numbers of *?Hymenolepis*.

Insect remains (in the /T subsample) were rare (N = 16, S = 15), and there were a few mites. Other than being typical of Anglo-Scandinavian York, and suggesting that there were probably not large breeding populations of insects in the deposit as it formed, this group is of no direct interpretative value; however,

like the plant remains, these fossils would not be out of place on a surface where accumulation was rather random.

Context 3453 (floor)

Sample 152 (0.5 kg /M, 1 kg /T, parasite subsample): black humic silt.

The /M subsample gave a rather large assemblage of plant remains (59 identifiable taxa, well above the mean for the Walmgate samples), with several taxa rather abundant, though with no one group especially predominant. Remains of foodplants included moderate numbers of flax seeds, with traces of charred and uncharred oats, hazel nut, apple 'core' and elderberry seeds, but there was no evidence for human faeces, for example, and the remains are not inconsistent with the archaeological interpretation of this layer as a floor—not least in the content of plants likely to have arrived in litter such as straw and perhaps also turf or heathland material.

A subsample examined for parasite eggs gave small numbers of *Hymenolepis*.

The /T subsample gave an insect assemblage which, though fairly small (N = 109, S = 48), was ecologically distinctive. Recording was semi-quantitative. The most abundant taxa were *Anthicus formicarius* ('many'), *Cercyon atricapillus*, *Acrotrichis* sp., *Platystethus arenarius*, *Leptacinus ?pusillus* and *Cordalia obscura* (all 'several'). These beetles strongly suggest an accumulation of organic waste resembling stable manure (cf. Kenward and Hall 1997). There were single individuals of two *Apion* species, commonly found in stable manure deposits, where they are considered to have been imported with hay. However, house fauna (typical of stable manure groups) was indicated only by three *Lathridius minutus* group (likely to have exploited a wide range of decaying matter), and one or two individuals of a few species including the human flea (*Pulex irritans*).

The presence of a single *Tipnus unicolor*, a spider beetle very rare in the Anglo-Scandinavian record but typical of later deposits, is notable.

Insect remains strongly suggest that this deposit included stable manure, an interpretation given some support by the plant remains. The food remains may indicate that animals were fed food waste. Alternatively, this may have been a particularly foul house floor, or humans and livestock may have co-occupied.

Sample 151 (SPT)

This sample consisted of charcoal identified as ash and oak.

Context 3455A (?occupation floor)

Sample 147 (1 kg /T; parasite subsamples): dark brown, layered, compressed herbaceous detritus.

The short list of plant taxa recorded included a mixture of the kinds repeatedly observed in these deposits at Walmgate; there was, however, a preponderance of bark fragments with traces of a wide range of materials representing occupation debris.

Two subsamples examined for parasite eggs were found to be barren.

Only nine beetle taxa were recorded, giving 24 individuals, and there were few other invertebrates. *Carpelimus pusillus* group was represented by 13 individuals; these may have been of background origin (unlikely in view of the lack of other species likely to have arrived in the same way), or indicate moist decaying matter.

If this was a floor, it may have been rather moist, perhaps a further example of deposit forming in a building housing animals, whose floor was cleaned frequently, or which was so heavily trampled as to restrict development of an insect community.

Context 3459 (gully fill)

Sample 157 (0.5 kg /M, 1 kg /1, /SPT, parasite subsample): moist to wet, dark grey-brown, crumbly to plastic silty herbaceous detritus and traces of wood and concretions, abundant fly puparia and frequent seeds.

The /M subsample yielded the second largest plant assemblage from the Walmgate samples in terms of numbers of taxa (there were 82). Of these, a large proportion were foodplants or flavourings, and there is little doubt that this gully fill contained faeces since faecal concretions were moderately frequent. Both oat and wheat/rye 'bran' were very abundant, with moderate amounts of celery, dill and summer savory seed, linseed, apple pips, and 'bilberry' seeds and traces of apple 'core', pea and field bean (in both cases the hila or scars), opium poppy, blackberry, raspberry, and rowan—a very typical Anglo-Scandinavian group. Much the same taxa were recorded from the 'spot' sample which appears to have been faecal material.

A subsample examined for parasite eggs by LC gave rather large numbers of *Trichuris* and a few *Ascaris*; the former were measured (Table 9).

The abundant fly puparia recorded in the residue add to the picture of organic waste rich in faeces, but plants likely to have arrived in litter were also rather well represented, especially those from hay and straw and turves. There were only traces of the mosses usually associated with faecal deposits at, for example, 16-22 Coppergate (Kenward and Hall 1995) and Queen's Hotel (1-9 Micklegate, Kenward and Hall 2000).

Insects were quite abundant in the flot from the /1 subsample, fly puparia especially so, as remarked above with regard to the residue. Beetles were represented by 121 individuals of 67 taxa, among which species suggesting foul conditions were important (PNRF = 16). Such habitats were indicated particularly by *Cercyon terminatus* (8), *C. haemorrhoidalis* (5), and *C. unipunctatus* and *Platystethus arenarius* (both 2). The fly puparia were mostly Sepsidae and Sphaeroceridae, families including numerous taxa associated with rotting matter, with eight *Muscina* sp. (similar habitats), so this appears to have been a foul deposit, possibly dumped waste. The nature of the material is not apparent from the insects (although they agree well with the evidence for faeces from plants and worm eggs), but it was certainly very foul and left exposed for a considerable period (more than a few weeks).

Context 3463 (accumulation over paved surface)

Sample 170 (1 kg /T, 1 kg /1 (by LC), parasite subsample, 9 kg BSXS): moist, mid to dark grey-brown, plastic to crumbly, slightly heterogeneous silty clay with darker (finer) and lighter (sandier) patches, and traces of stones 6-200 mm, bone, and moderate amounts of charcoal.

Both the /M and /T subsamples yielded only a few plant remains of no particular interpretative value.

A subsample examined for parasite eggs but was barren.

No invertebrate macrofossils were recovered from one subsample, and a second gave only two beetles of no interpretative significance.

Presumably conditions during formation of this deposit were unsuitable for preservation of delicate biological remains.

Context 3468 (pit fill)

Sample 168 (0.5 kg /M, 1 kg /T, parasite subsample): moist, black, slightly crumbly, somewhat fibrous, laminated amorphous organic sediment with a little silt.

Both subsamples gave rather large assemblages of plant remains, with wood fragments and orache seeds well represented in both. Weeds formed the predominant groups, though plants likely to have been brought with litter—particularly in straw or cut waterside vegetation—were quite frequent, especially in the /T subsample. Probable food remains included moderate numbers of uncharred oat spikelets, with traces of hazel nut, linseed, leek leaf fragments, elderberry, summer savory and tentatively identified dill seed. The presence of food waste rather than faeces seems to be indicated by these.

A subsample examined for parasite eggs yielded traces of both *Trichuris* and ?*Hymenolepis*.

A small group of beetles and bugs was recorded from the /T subsample (N = 46, S = 36), though fly puparia were fairly abundant. The assemblage was characterised by a rather large proportion of outdoor fauna (PNOB = 26, eleven taxa). There were hints of foul conditions, but this assemblage may mainly have been background fauna, with some colonists of foul matter which failed to produce large populations of offspring. The entire fauna may even have been redeposited in sediment taken from a surface.

Although the evidence from identified plant remains and insects is inconclusive, the lithological description suggests that this deposit was organic waste; perhaps it included a large component of plants cleared from neglected ground.

Sample 169 (1 kg /1, 0.5 kg /2 (=/M), parasite subsample): dark grey-brown humic silt with herbaceous and woody detritus and moderate amounts of wood fragments.

The /M subsample yielded a large number of taxa—the largest assemblage for any subsample from this site (a total of 99). Of these, the most abundant were weeds (orache and stinking mayweed), with the long list of taxa recorded in moderate amounts ('2' on the four-point scale used) including some likely to have come to the site from or in the kinds of vegetation cut for litter, especially from hay meadows, as well as in straw and in herbivore dung or gut contents from grazing land.

Food remains included moderate numbers of charred cereal grains and uncharred linseeds, with traces of celery seed, oats (uncharred), hazel nut, apple, opium poppy, elderberry and wheat/rye 'bran'.

A subsample examined by LC for parasite eggs gave only traces of both *Trichuris* and *Ascaris*.

The implications of the group of 80 individuals of 46 beetle and bug taxa from the /1 subsample were much as for those from Sample 168, although in this case the evidence for foul matter was re-enforced by five *Platystethus arenarius*, believed to be among the more rapid colonisers of such material.

Though no faecal concretions were recorded, it is possible that faeces were present, though another explanation is that food waste had been fed to animals and the deposit was rich in dung or stable manure.

Context 3475 (pit fill)

Sample 162 (2 kg /T1 processed in 1999; description from 1987): moist, mid to dark grey-brown plastic to crumbly humic, slightly sandy silt with traces of bone and moss.

The largest component of this rather large residue of plant-rich material was bark fragments (to 30 mm) and mammal bone (to 100 mm), with moderate amounts of charcoal, grit, gravel and sand. There was also some decayed wood and traces of very decayed leather. Charred cereals were rather frequent, mostly wheat and oats but with a little barley. Other probable foodplants (all in trace amounts) were hazel nut, linseed, apple, elderberry and wheat/rye 'bran', and there was also a trace of hempseed.

Prominent amongst the remains were plants likely to have arrived in litter, especially from cut wetland vegetation, but also from grazing land and in straw.

A small and mixed group of invertebrates was recorded, including 32 individuals of 25 beetle taxa. It had no clear ecological implications and may have been background fauna and scatter, perhaps introduced in backfill. There were hints that this group represented a smaller subset of that seen in Sample 163, from the same context.

Sample 163 (1 kg /1, 0.5 kg /2 (=M), parasite subsamples): moist, dark grey-brown crumbly humic silt with traces of charcoal, wood and herbaceous detritus.

The plant remains in the /M were substantially of similar kinds to those seen in 162/T1, but with larger numbers of linseed and hempseed (both scored '2' on a four-point scale). There were rather a lot of charred cereals, mostly barley, ?oats and ?rye, with traces of bread/club wheat. Litter from various sources, including wet meadows or fen, was probably also present (there were moderate numbers of fruits of saw-sedge, for example); thatch is one likely material which would account for these remains. Floor litter is another.

Of two subsamples examined for parasite remains, one was barren, the other yielding small numbers of *Trichuris* and *Ascaris* eggs.

Beetles and bugs were not abundant in the /1 subsample (N = 82, S = 52), but puparia of Sepsidae were present in large numbers, and other fly puparia fairly common. The flies suggest foul matter, but the evidence from the beetles is not strong; there were six *Platystethus arenarius*, but few other foul-matter species.

This deposit may have included dumped plant litter, colonised by foul-matter insects at its source or in the pit.

Context 3476 (basal well backfill)

Sample 175 (1 kg /1, 0.5 kg /2 (=M), parasite subsample): no record of sediment description.

The abundant taxa in the /M subsample were almost all weeds of some kind, especially annual weeds of heavily disturbed places and cultivated ground, and perhaps indicate that material cleared from a neglected surface was dumped into the well in this early stage of backfill.

A subsample examined for parasite eggs was barren.

A moderately large group of beetles (no bugs) was recorded from the /1 subsample, with 129 individuals of 81 taxa. The lack of records of other groups (other than a single earwig) is certainly an oversight. The most striking feature of this assemblage was the exceptionally large proportion of ‘outdoor’ forms: forty taxa contributing 43% of the assemblage. A few outdoor taxa were present in moderate numbers (six ?*Aphrodes* sp., four *Brachypterus urticae*, three *Pterostichus ?melanarius* and *Ceutorhynchus* sp., and several taxa with two individuals). At first sight this component of the fauna indicates an area of open ground with at least some vegetation, including nettles (*Urtica*—two species were present as achenes, stinging nettle being abundant and annual nettle frequent), probably where the deposit formed. Quite possibly, however, it is largely background fauna, either introduced with surface deposit used to backfill, or from the use-phase deposits of, the well. (The way in which use-phase deposits at the bottom of a well may have become mixed with fills as they were dumped is discussed by Hall *et al.* 1980). Unfortunately, the numbers of ground beetles, which might be expected to have accidentally fallen into a well of this date, were such that it is not possible to argue convincingly for or against the presence of a substantial use-phase component. The very large number of species present in small numbers (alpha = 93, SE = 15) perhaps supports the hypothesis that most of the assemblage was background fauna. A small house fauna component was present, but probably no more than might have arrived accidentally.

It seems likely that this deposit did, indeed, represent backfilling of the well, but that in addition remains deposited during use had become mixed into it during dumping.

Sample 176 (1 kg /T, parasite subsample): moist, dark grey, plastic slightly sandy silty clay with traces of charcoal and stones 2-6 mm.

This larger subsample gave a rather smaller tally of plant remains though they were essentially similar to those recorded from the subsample of 175.

A subsample examined for parasite eggs gave single eggs of *Trichuris* and ?*Hymenolepis*.

A very small group of invertebrates, including 25 individuals of 20 beetle and bug taxa, was recorded. Although it was too small to be interpreted, it was subjectively reminiscent of the group from Sample 175 and probably originated in the same way.

Context 3477 (pit fill)

Sample 172 (1 kg /1, 0.5 kg /2 (=/M), parasite subsample): dark red-brown silty amorphous organic sediment with herbaceous detritus and traces of faecal concretions.

The number of plant taxa recorded from the /M subsample was a little above the mean for the samples discussed here. There were high abundance scores (‘3’ on a four-point scale) for stinking mayweed, summer savory, chickweed and annual nettle—all but the savory indicating annual weed growth on disturbed or cultivated soils. Overall, the assemblage was certainly dominated by such weeds, especially those of wetter kinds of habitats (group BIDE) like ditches and trampled pond margins. Food remains included moderate concentrations of apple pips, sloes and blackberry seeds, with traces of linseed and elderberry. ‘Flavourings’ scored highly, largely because of the unusually high numbers of summer savory seeds, but there were also moderate numbers of celery seeds and a trace of opium poppy. There is no good evidence that these food remains arrived in faeces and seem more likely to be from some other source, perhaps floor sweepings (though the presence of eggs of intestinal parasites—see below—suggest otherwise). The large numbers of weed seeds, though, suggest the pit fill contained material from ground

clearance (plants, but not soil), unless the fill formed gradually and incorporated the seeds of weed growing in a neglected area.

A subsample examined by LC for parasite eggs was found to contain abundant *Trichuris* (of which some were measured (Table 9) and a modest number of *Ascaris*.

Insect remains were abundant in the /1 subsample; several hundred fly puparia were identified, and there were 170 adult individuals of 59 beetle taxa. The latter appeared to have had two principal components, the first consisting of species associated with fairly dry decomposing matter, and the second of those found in very foul organic remains, the latter also being very strongly signalled by the fly puparia.

Diversity was fairly low ($\alpha = 32$, $SE = 4$), and some taxa were rather abundant, so that there is little doubt that one or more breeding communities is represented. Taxa generally favoured by drier conditions included *Lathridius minutus* group (18 individuals), *Atomaria* sp. (17), a second *Cryptophagus* (5), and a few species in smaller numbers. These suggest a house fauna component, but a rather restricted one in terms of the range of species. Indeed, these more abundant species may have colonised drier parts (or periods) of the pitfill.

The more characteristic foul decomposers included *Cercyon haemorrhoidalis* (13), *C. terminatus* (9), *Omalium ?rivulare* (7), *Leptacinus* sp. (6), *Platystethus arenarius* (5), *Aphodius prodromus* (3), and smaller numbers of various others. The coded 'foul decomposers' contributed over a fifth of the assemblage (PNRF = 21), but a much larger proportion of the beetles would have co-existed with these, as would the flies *Leptocera* sp. (around 400), Sepsidae sp. (around 60), *Tephrochlamys ?tarsata* (about 50), *Paregle radicum* (27), *Leptocera claviventris* (many), *Muscina* sp. (4), and *Haematobosca stimulans* and *Musca domestica* (one of each).

The nature of this decaying matter is not clear. The most likely explanation is that most of the fauna exploited a dump of organic waste which in places or at times was fairly dry, but which was principally extremely foul, and left exposed for a considerable time to allow insect populations to develop through at least one generation. One possibility is that both the food remains and the weed seeds arrived via pig faeces.

Sample 174 (1 kg /1, 0.5 kg /2 (=M), parasite subsample): no record of sediment description.

A plant assemblage of similar size to that from 172/M was recorded from 174/M and it was also of essentially similar composition, with annual weeds dominating. A rather large component of food and flavouring plants was also present, however, including (at an abundance of '2') linseed, sloe stones, 'bilberry' and opium poppy seeds and charred field bean seeds, with traces of celery seed, apple 'core', blackberry, raspberry, elderberry and hop achenes. Again, there was no good botanical evidence that this material arrived in faeces. However, two subsamples examined by LC for parasite eggs gave rather large numbers of *Trichuris* and a few *Ascaris*. Some of the former were measured (Table 9).

The /1 subsample produced an insect assemblage which, though not identical, was very similar in implications to that from Sample 172, except that the drier decomposers were less clearly represented. In this case, the most abundant taxa at the fouler end of the decomposer spectrum were *Anotylus nitidulus* (15), *A. complanatus* (13), probably an aleocharine (11), *Cercyon haemorrhoidalis* (9), *Omalium ?rivulare* and *Aphodius prodromus* (5 each), and *Platystethus arenarius* (4). A similar range of fly puparia to those from Sample 172 supplemented these. Rather drier conditions were suggested by *Atomaria* sp. (7) and *Xylodromus concinnus* (3). The recorded species seem most likely to have occurred in a temporal succession or spatial matrix of decomposer habitats dominated by foul matter but locally drier.

The presence of abundant eggs of parasitic worms strongly argues for a faecal component in this deposit, and the abundant foul-matter insects indicate that it was exposed for some considerable time. There may have been floor sweepings, but this is not certain. One possibility, in view of the lack of botanical evidence for human faeces is that the foul matter was pig faeces. Measurement of eggs of *Trichuris* (Table 9) gave no indication that *T. suis*, typical of pigs, was present. The measurements for length of entire eggs (Table 9a) fell in the range for *T. trichiura* (Jones 1982, table 7), and although the mean width was a little wider than given by Jones, most of the eggs lacked one or both polar plugs and had probably broadened in consequence (Andrew Jones pers. comm.). However, there remains the complication that *T. trichiura* may be able to infest pigs, and that pigs may have eaten human faeces containing eggs of *T. trichiura*.

Discussion

Perhaps the most outstanding feature of these samples is the complete lack of any evidence for the suite of plants used in textile dyeing seen at almost every other site in York with Anglo-Scandinavian deposits. It seems rather unlikely that these remains were overlooked since the bulk of the samples were examined immediately after work on the dyeplant-rich samples at 16-22 Coppergate by P. R. Tomlinson, who had been closely involved with AH in the identification of these taxa. Yet traces of some of these dyeplants have recently been recorded from contemporaneous deposits around 500 m away at 41-9 Walmgate (Johnstone *et al.* 2000), albeit in very small amounts. Perhaps this site—the one we have investigated which is furthest from the ‘epicentre’ of dyeplant use and disposal in the city centre—was simply too far for remains to arrive by accident, nor was textile dyeing an aspect of the local economy in the Walmgate area.

The foodplants recorded were much the same as seen at other sites of this date, though none of the assemblages was exceptionally rich in food waste interpreted as coming from faeces, in contrast to those from, for example, 16-22 Coppergate (Kenward and Hall 1995), Queen’s Hotel (Kenward and Hall 2000) or 4-7 Parliament Street (Hall and Kenward 2000a). On the other hand, many groups at 118-26 Walmgate were quite rich in charred remains of oats—they were present in more than trace amounts in seven of the 17 contexts examined—and in this respect they resemble material from 2 Clifford Street (Hall and Kenward 2000b) insofar as one can judge from a group of only five samples. of deposits interpreted as dumps.

Most of the insect assemblages were rather too small to give clear evidence about conditions and activities as the deposits from which they were recovered were formed. This is partly a function of the predominant use of 1 kg ‘test’ samples, but probably reflects the nature of the deposits, many of which may have formed on surfaces even if they were subsequently disposed of into cuts. The floors never yielded seething assemblages of house fauna like those seen at other sites, suggesting that (assuming the context identification to be correct) they were used in different ways.

One possibility is that conditions resembling those in an old-fashioned farmyard existed at 118-26 Walmgate, the buildings being byres or stables, the food remains representing either domestic occupation or the feeding of livestock with scraps (or both); pigs seem the most likely animals to be kept at a site such as this. Pigs might well be fed cereal cleaning waste, accounting for the records of chaff, and might produce ambiguous evidence in the worm egg record (either by recycling human faeces or through their own infections). The Walmgate area of York may represent an early stage of urban settlement, with crowded small-holdings which would later be subdivided into tenements. This is clearly a topic for further research using structural and bioarchaeological evidence. With the results from 16-22 Coppergate, 2 Clifford Street, 41-9 Walmgate, 6-8 Pavement, 4-7 Parliament Street and Layerthorpe Bridge we are perhaps obtaining the beginnings of an understanding of land use zonation in Anglo-Scandinavian York, paralleling results from Roman Carlisle (Kenward 1999).

The shieldbug *Eurydema oleracea* was recorded from Context 3447. *E. oleracea*, the ‘brassica bug’, has a scattered distribution in southern England as far north as Cambridgeshire and Gloucestershire (not in East Anglia). Its main hosts in Britain are jack-by-the-hedge (*Alliaria petiolata* (Bieb.) Cavara & Grande), horse-radish (*A Armoracia rusticana* Gaertn., Mey. & Scherb.), and wild radish (*Raphanus raphanistrum* L.), although it will feed on many other crucifers, including cultivated forms (Southwood and Leston 1959; Wagner 1966). While *E. oleracea* may have been imported to the Queen’s Hotel site, possibly in dyeplants (Kenward and Hall 2000), its records may indicate climatic change, as do those for the nettlebug *Heterogaster urticae* (references given by Kenward, forthcoming); the lack of dyeplants at Walmgate rather argues for the climatic factor.

Acknowledgements

The authors are grateful to Laura Chapman, Cath Fisher, and Anne Sutherland for processing samples in 1984-7, to Philippa Tomlinson for her work in an assessment of plant remains from many samples, to Alan Robertson for preliminary work on insect assemblages, and to Palaeoecology Research Services, and in particular Darren Worthy, for processing the single later subsample. York Archaeological Trust, and in particular David Brinklow, provided archaeological information.

References

- Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* **9** (for 1991), 24-6.
- Dobney, K., Kenward, H. and Roskams, S. (1997). All mixed up but somewhere to go? Confronting residuality in bioarchaeology, pp. 81-88 in De Boe, G. and Verhaeghe, F. (eds.), *Method and theory in historical archaeology*. Papers of the ‘Medieval Europe Brugge 1997’ Conference **10**. I. A. P. Rapporten **10**. Zellik.
- Fisher, R. A., Corbet, A. S. and Williams, C. B. (1943). The relation between the number of species and the number of individuals in a random sample of an animal population. *Journal of Animal Ecology* **12**, 42-58.
- Hall, A. R. and Kenward, H. K. (1990). Environmental evidence from the Colonia: General Accident and Rougier Street. *The Archaeology of York* **14** (6), 289-434 + Plates II-IX + Fiche 2-11. London: Council for British Archaeology.
- Hall, A. and Kenward, H. (2000a). Technical Report: Plant and invertebrate remains from Anglo-Scandinavian deposits at 4-7 Parliament Street (Littlewoods Store), York (site code 99.946). *Reports from the Environmental Archaeology Unit, York* **2000/22**.
- Hall, A. and Kenward, H. (2000b). Technical Report: Plant and invertebrate remains from Anglo-Scandinavian deposits at 2 Clifford Street, York (site code 99.256). *Reports from the Environmental Archaeology Unit, York* **2000/17**, 24 pp.
- Hall, A. R., Kenward, H. K. and Williams, D. (1980). Environmental evidence from Roman deposits in Skeldergate. *The Archaeology of York* **14** (3), 101-56. London: Council for British Archaeology.

- Johnstone, C., Carrott, J., Hall, A., Kenward, H. and Worthy, D. (2000). Assessment of biological remains from 41-49 Walmgate York (site code 1999.941). *Reports from the Environmental Archaeology Unit, York* **2000/04**, 46 pp.
- Kenward, H. K. (1982). *Insect communities and death assemblages, past and present*, pp. 71-8 in Hall, A. R. and Kenward, H. K. (eds). Environmental archaeology in the urban context. *Council for British Archaeology Research Reports* **43**.
- Kenward, H. K. (1988). Insect remains, pp. 115-40 in Schia, E. (ed.), *De arkeologiske utgravninger i Gamlebyen, Oslo. Vol. 5 Mindets Tomt - Sondrefelt*. Øvre Ervik: Alvheim and Eide.
- Kenward, H. K. (1992). Rapid recording of archaeological insect remains - a reconsideration. *Circaea, the Journal of the Association for Environmental Archaeology* **9** (for 1991), 81-8.
- Kenward, H. (1999). Insect remains as indicators of zonation of land use and activity in Roman Carlisle, England. *Reports from the Environmental Archaeology Unit, York* **99/43**, 88 pp.
- Kenward, H. K., Engleman, C., Robertson, A., and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* **3**, 163-72.
- Kenward, H. K. and Hall, A. R. (1995). Biological evidence from Anglo-Scandinavian deposits at 16-22 Coppergate. *The Archaeology of York* **14** (7), 435-797 + xxii + loose figures. York: Council for British Archaeology.
- Kenward, H. and Hall, A. (2000). Technical Report: Plant and invertebrate remains from Anglo-Scandinavian deposits at the Queen's Hotel site, 1-9 Micklegate, York (site code 88-9.17). *Reports from the Environmental Archaeology Unit, York* **2000/14**, 80 pp.
- 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.
- O'Connor, T. P. (1984). Selected groups of bones from Skeldergate and Walmgate. *The Archaeology of York* **15** (1), 1-60, plates. I-II. London: Council for British Archaeology.
- Southwood, T. R. E. and Leston, D. (1959). *Land and water bugs of the British Isles*. London: Warne.
- Smith, A. J. E. (1978). *The moss flora of Britain and Ireland*. Cambridge: University Press.
- Tomlinson, P. R. (1989). *Plant remains from 118-26 Walmgate, York. Ancient Monuments Laboratory Report* **60/89**.
- Tutin, T. G. *et al.* (1964-80). *Flora Europaea* **1-5**. Cambridge: University Press.
- Wagner, E. (1966). Wanzen oder Heteropteren I. Pentatomorpha. *Die Tierwelt Deutschlands* **54**. Jena: Fischer.

Table 1. List of samples from deposits of Anglo-Scandinavian date at 118-26 Walmgate, York, with an indication of those examined for plant and invertebrate remains.

Context	Sample	Context type	Subsamples examined (weight in kg.)
3413	135	dump next to hearth	
3416	132	?occupation floor	1 kg /T; parasite subsample
3421/3423	143	floor [?context 3421/3]	1 kg /T, 4 kg BSXS; parasite subsample
3426	139	post-robbet backfill to bedding trench	
3426	140	post-robbet backfill to bedding trench	1 kg /T, parasite subsamples
3432	137	backfill of robbed bedding trench	0.5 kg /M, 1 kg /T; 2 parasite subsamples
3433	144	pit fill	1 kg /T, 0.5 kg /A; parasite subsample
3433	155	pit fill	
3436	136	clay floor	parasite subsample only
3436	161	clay floor	
3438	141	charcoal: floor/hearth rakeout	
3443	145	floor	0.5 kg /M, 1 kg /T; parasite subsample
3445	146	burnt daub/timberwork	2 kg BSXS
3445	148	destruction/makeup	
3446	149	floor or dereliction spread	0.5 kg /M, 1 kg /T, 12 kg BSXS, parasite subsample
3446	150	floor or dereliction spread	1 kg /1, 0.5 kg /2, 9 kg BSXS
3447	158	silty spread, ?dump or build-up	0.5 kg /M, 1 kg /T, 3 kg BSXS; parasite subsample
3448	160	burnt daub	2.75 kg BSXS
3449	165	hearth rakeout/ash pit	
3450	167	pit or ?cistern	1 kg /1, 0.5 kg /2, 'spot' sample; parasite subsample
3452	154	occupation spread or dereliction of daub building	0.5 kg /M, 1 kg /T; parasite subsample
3453	152	floor	0.5 kg /M, 1 kg /T; parasite subsample
3453	151	floor [charcoal on peat surface]	'spot' sample
3455	153	floor	
3455	147	?occupation floor	1 kg /T; 2 parasite subsamples
3459	156	gully fill	

Context	Sample	Context type	Subsamples examined (weight in kg.)
3459	157	gully fill	1 kg /1, 0.5 kg /2; 'spot' sample; 7 kg BSXS; parasite subsample
3460	166	well-shaft backfill	8 bucketfuls bulk-sieved
3461	159	hearth deposit	
3463	170	accumulation over paved surface	1 kg /T, 1 kg /1, 0.5 kg /2; parasite sub sample, 9 kg BSXS
3468	168	pit fill	0.5 kg /M, 1 kg /T, 7 kg BSXS; parasite subsample
3468	169	pit fill	1 kg /1, 0.5 kg /2, parasite subsample, 4.17 kg BSXS
3475	162	pit fill	2 kg /T1
3475	163	pit fill	1 kg /1, 0.5 kg /2, 5 kg BSXS; parasite subsample
3476	175	basal well backfill	1 kg /1, 0.5 kg /2
3476	176	basal well backfill	1 kg /T; parasite subsample
3477	172	pit fill	1 kg /1, 0.5 kg /2, parasite subsample, 2 kg BSXS
3477	173	pit fill	
3477	174	pit fill	1 kg /1, 0.5 kg /2, 2 parasite subsamples
3486	164	?wall line destruction debris	

Table 2. Complete list of plant and invertebrate remains recorded from samples from 118-26 Walmgate, York, in taxonomic order (for the plants, only material from Anglo-Scandinavian deposits is listed; for invertebrates, those taxa recorded only from deposits other than those dated to the Anglo-Scandinavian period are marked '(PC)'. Order and nomenclature follow Tutin et al. (1964-90) for vascular plants, Smith (1976) for mosses, and Kloet and Hincks (1964-77) for insects. Plant material not specifically noted as being preserved by charring or mineral replacement can be taken to be uncharred and unmineralised (i.e. 'waterlogged', but sometimes denoted simply as 'uncharred'). Where both secure and tentative identifications for a given taxon were recorded, only the former are listed here. For invertebrates, * = not used in calculating assemblage statistics (Table 6); ecode—ecological code used in generating main statistics (Table 6); sp(p).—species not previously listed; sp(p). indet.—may be a species already listed.

BRYOPHYTA (parts were leaves and/or shoot fragments)

Sphagnum sp(p).
Polytrichum formosum Hedw.
Dicranum sp(p).
Leucobryum glaucum (Hedw.) Ångstr.
 cf. *Anomobryum filiforme* (Dicks.) So lms-Lau b.
Ulota sp(p).
Antitrichia curtispindula (Hedw.) Brid.
Neckera complanata (Hedw.) Hüb.
Thuidium tamariscinum (Hedw.) Br. Eur.
Campylium stellatum (Hedw.) Lange & Jens.
Drepanocladus sp(p).
Scorpidium scorpioides (Hedw.) Limpr.
Calliargon giganteum (Schimp.) Kindb.
C. cuspidatum (Hedw.) Kindb.
Calliargon sp(p).
Isoethecium myurum Brid.
I. myosuroides Brid.
Homalothecium sericeum (Hedw.) Br. Eur./*H. lutescens* (Hedw.) Robins.
 cf. *Brachythecium* sp(p).
Hypnum cupressiforme Hedw.
Rhytidiadelphus cf. *triquetrus* (Hedw.) Warnst.
R. squarrosus (Hedw.) Warnst.
Rhytidiadelphus sp(p).
Hylocomium splendens (Hedw.) Br. Eur.

PTERIDOPHYTA

Equisetum sp(p). (horsetail): nodal sheath fragments
 Filicales (fern): pinnule fragments
Pteridium aquilinum (L.) Kuhn (bracken): pinnule and rachis fragments

ANGIOSPERMAE

Salix sp(p). (willow): buds, leaf and twig fragments
Populus sp(p). (poplar/aspens): buds and/or bud-scales
Betula sp(p). (birch): buds and/or bud-scales, fruits
Corylus avellana L. (hazel): nuts and/or nutshell fragments
Quercus sp(p). (oak): acorns, buds and/or bud-scales, charcoal fragments, leaf fragments
Ficus carica L. (fig): seeds

Humulus lupulus L. (hop): achenes
Cannabis sativa L. (hemp): achenes
Urtica dioica L. (stinging nettle): achenes
U. urens L. (annual nettle): achenes
Polygonum aviculare agg. (knotgrass): fruits
P. hydropiper L. (water-pepper): fruits
P. persicaria L. (persicaria/red shank): fruits
P. lapathifolium L. (pale persicaria): fruits
Bilderdykia convolvulus (L.) Dumort. (black bindweed): fruits, fruit fragments
Rumex acetosella agg. (sheep's sorrel): fruits
R. cf. conglomeratus Murray (?sharp dock): fruits
Rumex sp(p). (docks): fruits
Chenopodium Section *Pseudoblitum* (red goosefoot etc.): seeds
C. murale L. (nettle-leaved goosefoot): seeds
C. ficifolium Sm. (fig-leaved goosefoot): seeds
C. album L. (fat hen): seeds
Atriplex sp(p). (oraches): seeds
Arenaria serpyllifolia L. (thyme-leaved sandwort): seeds
Stellaria media (L.) Vill. (chickweed): seeds
S. palustris Retz./*S. graminea* L. (lesser stitchwort): seeds
Stellaria sp(p). (stitchworts/chickweeds): seeds
Stellaria/Cerastium sp(p). (stitchwort/mouse-ear chickweed): seeds
Cerastium sp(p). (mouse-ear chickweeds): seeds
Scleranthus annuus L. (annual knawel): fruits
Spergula arvensis L. (com spurrey): seeds
Agrostemma githago L. (corncockle): seeds, seed fragments
Silene alba (Miller) Krause in Sturm (white campion): seeds
Caltha palustris L. (marsh marigold): seeds
Ranunculus Section *Ranunculus* (meadow/creeping/bulbous buttercup): achenes
R. sardous Crantz (hairy buttercup): achenes
R. sceleratus L. (celery-leaved crowfoot): achenes
R. flammula L. (lesser spearwort): achenes
R. Subgenus *Batrachium* (water crowfoots): achenes
Thalictrum flavum L. (common meadow rue): achenes
Papaver somniferum L. (opium poppy): seeds
P. argemone L. (long prickly-headed poppy): seeds
Descurainia sophia (L.) Webb ex Prantl (flixweed): seeds

Capsella bursa-pastoris (L.) Medicus (shepherd's purse): seeds
Thlaspi arvense L. (field penny-cress): seeds
Brassica rapa L. ('turnip'): seeds
Brassica cf. *nigra* (L.) Koch in Röhling (?black mustard): seeds
Brassica sp(p). (cabbages, etc.): seeds
Brassica sp./*Sinapis arvensis* L. (brassica/charlock): seeds, mineralised seeds
Raphanus raphanistrum L. (wild radish): pod segments and/or fragments, seeds
Filipendula ulmaria (L.) Maxim. (meadowsweet): achenes
Rubus idaeus L. (raspberry): seeds
R. fruticosus agg. (blackberry/bramble): seeds
R. caesius L. (dewberry): seeds
Rosa sp(p). (roses): achenes
Agrimonia eupatoria L. (agrimony): fruits
Potentilla palustris (L.) Scop. (marsh cinquefoil): achenes
P. anserina L. (silverweed): achenes
P. cf. erecta (L.) Rauschel (?tormentil): achenes
P. cf. reptans L. (?creeping cinquefoil): achenes
Potentilla sp(p). (cinquefoils, etc.): achenes
Aphanes arvensis L. (parsley-piert): achenes
A. microcarpa (Boiss. & Reuter) Rothm. (slender parsley-piert): achenes
Malus sylvestris Miller (crab apple): endocarp, seeds
Sorbus aucuparia L. (rowan, mountain ash): seeds
Crataegus cf. *monogyna* Jacq. (?hawthorn): pyrenes
Prunus spinosa L. (sloe): fruitstones (some with mesocarp attached), thoms
Leguminosae (pea family): calyx/calyces and/or flowers and/or petals
cf. Leguminosae (?pea family): waterlogged seeds
Vicia faba L. (field bean): charred seeds, mineralised and waterlogged hila
Pisum sativum L. (garden/field pea): waterlogged hila
Pisum sp(p). (peas): mineralised seeds
Linum usitatissimum L. (cultivated flax): seeds
L. catharticum L. (purging flax): seeds
Euphorbia helioscopia L. (sun spurge): seeds
Ilex aquifolium L. (holly): leaf epidermis fragments
Viola sp(p). (violets/pansies, etc.): seeds
Bryonia cretica ssp. *dioica* (Jacq.) Tutin (white bryony): seeds
Lythrum salicaria L. (purple loosestrife): seeds
Epilobium sp(p). (willow-herbs, etc.): seeds
Umbelliferae (carrot family): mericarps
Anthriscus sylvestris (L.) Hoffm. (cow parsley): mericarps
Scandix pecten-veneris L. (shepherd's needle): mericarps
cf. *Berula erecta* (Hudson) Coville (?narrow-leaved water-parsnip): mericarps
Oenanthe cf. *fistulosa* L. (?tubular water-dropwort): mericarps
Oe. lachenalii C. G. Gmelin (parsley water-dropwort): mericarps
Oe. aquatica (L.) Poiret in Lam. (fine-leaved water-dropwort): mericarps
Oenanthe sp(p). (water-dropworts): mericarps
Aethusa cynapium L. (fool's parsley): mericarps
Anethum graveolens L. (dill): mericarps
Conium maculatum L. (hemlock): mericarps
Apium graveolens L. (wild celery): mericarps
Heracleum sphondylium L. (hogweed): mericarps
Torilis japonica (Houtt.) DC. (upright hed ge-parsley): mericarps
Daucus carota L. (wild carrot): mericarps
Erica tetralix L. (cross-leaved heath): leaves
Erica sp(p). (heaths): leaves
Calluna vulgaris (L.) Hull (heather, ling): flowers, leaves, seeds, shoot fragments
cf. *Calluna vulgaris* (L.) Hull (?heather, ling): charred root and/or basal twig fragments
Vaccinium sp(p). (bilberries): seeds
Primula cf. *veris* L. (?cowslip): seeds
Anagallis arvensis L. (scarlet pimpernel): seeds
Fraxinus sp(p). (ash): charcoal fragments
Menyanthes trifoliata L. (bogbean): seeds
Galium sp(p). (bedstraws, etc.): fruits
Myosotis sp(p). (forget-me-nots): nutlets
Marrubium vulgare L. (white horehound): nutlets
Galeopsis Subgenus *Ladanum* (hemp-nettles): nutlets
Galeopsis Subgenus *Galeopsis* (hemp-nettles): nutlets
Lamium Section *Lamiopsis* (annual dead-nettles): nutlets
Stachys sp(p). (woundworts): nutlets
Prunella vulgaris L. (selfheal): nutlets
Satureja hortensis L. (summer savory): nutlets
Lycopus europaeus L. (gipsywort): nutlets
Mentha sp(p). (mints): nutlets
Atropa bella-donna L. (deadly nightshade): seeds
Hyoscyamus niger L. (henbane): seeds
Solanum nigrum L. (black nightshade): seeds
Pedicularis palustris L. (marsh lousewort): seeds
Rhinanthus sp(p). (yellow rattles): seeds
Plantago major L. (greater plantain): seeds
Sambucus nigra L. (elder): seeds
Valerianella dentata (L.) Pollich (narrow-fruited cornsalad): fruits
Valerianella sp(p). (cornsalads): sterile cells from fruits
Campanula rotundifolia L. (harebell, bluebell): seeds
Bellis perennis L. (daisy): achenes
Anthemis cotula L. (stinking mayweed): charred and uncharred achenes
Achillea sp(p). (sneezewort/yarrow): achenes
Matricaria perforata Mérat (scentless mayweed): achenes
Senecio sp(p). (groundsels/ragworts, etc.): achenes
Arctium sp(p). (burdocks): achenes
Carduus/Cirsium sp(p). (thistles): achenes
Centaurea sp(p). (knapweeds, etc.): achenes, involucre/fragments
Hypochoeris sp(p). (cat's ears): achenes
Leontodon sp(p). (hawkbits): achenes
Picris hieracioides L. (hawkweed ox-tongue): achenes
Sonchus asper (L.) Hill (prickly sow-thistle): achenes
S. oleraceus L. (sow-thistle): achenes

S. arvensis L. (corn sow-thistle): achenes
Sonchus sp(p). (sow-thistles): achenes
Lapsana communis L. (nipplewort): achenes
Crepis sp(p). (hawk's-beards): achenes
Alisma sp(p). (water-plantains): carpels and/or seeds
Allium porrum L. (leek): leaf epidermis fragments
Allium sp(p). (onions, etc.): leaf epidermis fragments
Iris pseudacorus L. (yellow flag): seeds
Juncus inflexus L./*J. effusus* L./*J. conglomeratus* L.
 (hard/soft/compact rush): seeds
J. bufonius L. (toad rush): seeds
J. acutiflorus Ehrh. ex Hoffm. (sharp-flowered rush): seeds
J. articulatus L. (jointed rush): seeds
Juncus sp(p). (rushes): epidermis fragments, seeds
Luzula sp(p). (woodrushes): seeds
 Gramineae (grasses): charred and uncharred caryopses,
 uncharred leaf epidermis fragments
 Gramineae/'Cerealia' (grasses/cereals): waterlogged culm
 fragments
 'Cerealia' indet. (cereals): charred caryopses, waterlogged
 culm fragments
 cf. *Poa annua* L. (?annual meadow-grass): caryopses
 cf. *Glyceria* sp(p). (?sweet-grasses): caryopses
Bromus sp(p). (bromes, etc.): charred and waterlogged
 caryopses
Triticum 'aestivo-compactum' (bread/club wheat): charred
 caryopses
Triticum/Secale (wheat/rye): waterlogged periderm fragments
 ('bran')
 cf. *Secale cereale* L. (?rye): charred caryopses
Hordeum vulgare L. (six-row barley): charred caryopses
Hordeum sp(p). (barley): charred caryopses
Avena sativa L. (cultivated oat): charred spikelets/spikelet
 fragments
Avena sp(p). (oats): charred awn/glume fragments, caryopses,
 chaff, spikelets/spikelet fragments, mineralised caryopses,
 waterlogged caryopses, periderm fragments ('bran'),
 spikelets/spikelet fragments
Danthonia decumbens (L.) DC. in Lam. & DC. (heath grass):
 caryopses
 Cyperaceae (sedge family): nutlets, papillose leaf epidermis
 fragments
Scirpus lacustris s.l. (bulrush): nutlets
S. setaceus L. (bristle club-rush): nutlets
Eleocharis palustris s.l. (common spike-rush): charred and
 uncharred nutlets
E. cf. multicaulis (Sm.) Desv. (?many-stalked spike-rush):
 nutlets
Cladium mariscus (L.) Pohl (great sedge/saw-sedge): nutlets
 cf. *C. mariscus*: epidermis fragments
Schoenus nigricans L. (bog-rush): nutlets
Carex sp(p). (sedges): nutlets

*Cladocera sp. (ephippium) oa-w
 INSECTA
 DERMAPTERA
 *Dermaptera sp. u
 HEMIPTERA
Aneurus sp. l
Eurydema oleracea (Linnaeus) oa-p
 ?*Coreus marginatus* (Linnaeus) oa-p
Heterogaster urticae (Fabricius) oa-p
Anthocoris sp. oa-p
Lyctocoris campestris (Fabricius) rd-st
Saldula sp. oa-d
Gerris sp. oa-w
 ?*Philaenus spumarius* (Linnaeus) oa-p
Ulopa ?reticulata (Fabricius) oa-p-m
 ?*Aphrodes* sp. oa-p
 Auchenorhyncha spp. oa-p
 *Coccoidea sp. u
 Hemiptera sp. u
 *Hemiptera sp. indet. (nymph) u
 DIPTERA
 *Bibionidae sp. u
 *Syrphidae sp. (larva) u
 **Paregle radicum* (Linnaeus) (puparium) u
 **Leptocera claviventris* (puparium) u
 **Leptocera* sp. (puparium) u
 **Haematobosca stimulans* (Meigen) (puparium) u
 **Tephrochlamys ?tarsata* (Zetterstedt) (puparium) u
 **Spilogona ?surda* (Zetterstedt) (puparium) u
 *Sphaeroceridae sp. (puparium) rt
 *Sepsidae sp. (puparium) u
 **Copromyza* sp. (puparium) u
 **Muscina* sp. (puparium) u
 **Musca domestica* Linnaeus (puparium) u
 **Melophagus ovinus* (Linnaeus) (adult) u
 *Diptera sp. (adult) u
 *Diptera sp. (larva) u
 *Diptera sp. (puparium) u
 SIPHONAPTERA
 **Pulex irritans* Linnaeus ss
 *Siphonaptera sp. u
 COLEOPTERA
Carabus ?nemoralis Muller oa
Nebria brevicollis (Fabricius) oa
Loricera pilicornis (Fabricius) oa
Dyschirius globosus (Herbst) oa
 (PC) *Clivina fossor* (Linnaeus) oa
Trechus obtusus Erichson oa
Trechus obtusus or *quadristriatus* oa
Trechus secalis (Paykull) oa-d
Trechus micros (Herbst) u
Bembidion ?lampros (Herbst) oa

CRUSTACEA

ecode

<i>Bembidion obtusum</i> Serville	oa	<i>Carpelimus</i> sp. indet.	u
<i>Bembidion ?guttula</i> (Fabricius)	oa	<i>Platystethus arenarius</i> (Fourcroy)	rf
<i>Bembidion (Philochthus)</i> sp. indet.	oa	<i>Platystethus degener</i> Mulsant & Rey	oa-d
<i>Bembidion</i> sp. and sp. indet.	oa	<i>Platystethus cornutus</i> group indet.	oa-d
<i>Pterostichus melanarius</i> (Illiger)	ob	<i>Platystethus nitens</i> (Sahlberg)	oa-d
<i>Pterostichus</i> sp. and sp. indet.	ob	<i>Anotylus complanatus</i> (Erichson)	rt-sf
<i>Calathus fuscipes</i> (Goeze)	oa	<i>Anotylus nitidulus</i> (Gravenhorst)	rt
<i>Agonum dorsale</i> (Pontoppidan)	oa	<i>Anotylus rugosus</i> (Fabricius)	rt
<i>Agonum</i> sp.	oa	<i>Anotylus sculpturatus</i> group	rt
<i>Amara</i> spp.	oa	(PC) <i>Anotylus tetracarينات</i> (Block)	rt
<i>Harpalus rufipes</i> (Degeer)	oa	<i>Oxytelus sculptus</i> Gravenhorst	rt-st
<i>Harpalus</i> sp.	oa	<i>Stenus</i> spp.	u
<i>Dromius</i> sp.	oa	<i>Lathrobium longulum</i> Gravenhorst	u
<i>Lebiini</i> sp.	u	<i>Lathrobium</i> sp.	u
Carabidae sp.	ob	? <i>Sunius</i> sp.	u
Hydrophorinae sp.	oa-w	<i>Lithocharis</i> sp.	rt
<i>Helophorus ?grandis</i> Illiger	oa-w	<i>Rugilus ?rufipes</i> Germar	rt-st
<i>Helophorus aquaticus</i> or <i>grandis</i>	oa-w	<i>Othius</i> sp.	rt
<i>Helophorus</i> spp.	oa-w	<i>Leptacinus ?pusillus</i> (Stephens)	rt-st
<i>Sphaeridium bipustulatum</i> Fabricius	rf	<i>Leptacinus</i> sp. indet.	rt-st
<i>Cercyon analis</i> (Paykull)	rt-sf	<i>Gyrophypnus angustatus</i> Stephens	rt-st
<i>Cercyon atricapillus</i> (Marsham)	rf-st	<i>Gyrophypnus fracticornis</i> (Muller)	rt-st
<i>Cercyon haemorrhoidalis</i> (Fabricius)	rf-sf	<i>Xantholinus linearis</i> (Olivier)	rt-sf
<i>Cercyon lugubris</i> (Olivier)	rt	<i>Xantholinus longiventris</i> Heer	rt-sf
<i>Cercyon terminatus</i> (Marsham)	rf-st	Xantholininae sp. indet.	u
<i>Cercyon unipunctatus</i> (Linnaeus)	rf-st	<i>Neobisnius ?villosulus</i> (Stephens)	u
<i>Cercyon</i> sp. indet.	u	<i>Philonthus ?politus</i> (Linnaeus)	rt-st
<i>Megasternum obscurum</i> (Marsham)	rt	<i>Philonthus</i> spp.	u
<i>Cryptopleurum minutum</i> (Fabricius)	rf-st	<i>Staphylinus olens</i> Muller	u
Hydrophilinae sp.	oa-w	<i>Quedius</i> sp.	u
<i>Acritus nigricornis</i> (Hoffmann)	rt-st	Staphylininae spp. indet.	u
<i>Gnathoncus</i> sp.	rt-sf	<i>Tachyporus hypnorum</i> (Fabricius)	u
Histerinae sp.	rt	<i>Tachyporus</i> spp. and spp. indet.	u
<i>Ochthebius</i> sp.	oa-w	<i>Tachinus laticollis</i> or <i>marginellus</i>	u
<i>Ptenidium</i> sp.	rt	<i>Tachinus signatus</i> Gravenhorst	u
<i>Acrotichis</i> spp.	rt	<i>Tachinus subterraneus</i> (Linnaeus)	u
(PC) Ptiliidae sp.	u	<i>Tachinus</i> sp. indet.	u
<i>Catops</i> sp.	u	<i>Cypha</i> sp.	rt
<i>Eutheia</i> sp.	u	<i>Autalia</i> sp.	rt
Scydmaenidae sp.	u	<i>Cordalia obscura</i> (Gravenhorst)	rt-sf
<i>Micropeplus</i> sp.	rt	<i>Falagria caesa</i> or <i>sulcatula</i>	rt-sf
<i>Megarthus</i> sp.	rt	<i>Falagria</i> or <i>Cordalia</i> sp. indet.	rt-sf
<i>Olophrum</i> sp.	oa	<i>Aleochara</i> sp.	u
<i>Lesteva</i> sp.	oa-d	Aleocharinae spp.	u
<i>Phyllodrepa floralis</i> (Paykull)	rt-sf	Euplectini sp.	u
<i>Dropephylla</i> sp.	u	Pselaphidae sp.	u
<i>Omalius excavatum</i> Stephens	rt-sf	<i>Trox scaber</i> (Linnaeus)	rt-sf
<i>Omalius caesum</i> or <i>italicum</i>	rt-sf	<i>Aphodius ?granarius</i> (Linnaeus)	ob-rf
<i>Omalius rivulare</i> (Paykull)	rt-sf	<i>Aphodius prodromus</i> (Brahm)	ob-rf
<i>Omalius</i> spp. indet.	rt	<i>Aphodius</i> spp. and spp. indet..	ob-rf
<i>Xylodromus concinnus</i> (Marsham)	rt-st	<i>Oxyomus sylvestris</i> (Scopoli)	rt-sf
Omaliinae spp.	rt	<i>Phyllopertha horticola</i> (Linnaeus)	oa-p
<i>Coprophilus striatulus</i> (Fabricius)	rt-st	<i>Clambus pubescens</i> Redtenbacher	rt-sf
<i>Carpelimus bilineatus</i> Stephens	rt-sf	<i>Clambus</i> sp. and sp. indet.	rt-sf
<i>Carpelimus elongatulus</i> (Erichson)	oa-d	Byrrhidae sp.	oa-p
<i>Carpelimus fuliginosus</i> (Gravenhorst)	st	<i>Dryops</i> sp.	oa-d
<i>Carpelimus pusillus</i> group	u	<i>Melanotus erythropus</i> (Gmelin)	l

Elateridae sp.	ob	Bruchinae sp.	u
<i>Anobium punctatum</i> (Degeer)	l-sf	<i>Lema</i> or <i>Oulema</i> sp.	oa-p
<i>Tipnus unicolor</i> (Piller & Mitterpacher)	rd-st	<i>Lamprosoma concolor</i> (Sturm)	oa-p
<i>Ptinus fur</i> (Linnaeus)	rd-sf	? <i>Gastrophysa polygoni</i> (Linnaeus)	oa-p
<i>Ptinus</i> sp. indet.	rd-sf	Chrysomelinae sp.	oa-p
<i>Lyctus linearis</i> (Goeze)	l-sf	<i>Phyllotreta nemorum</i> group	oa-p
<i>Brachypterus urticae</i> (Fabricius)	oa-p	<i>Phyllotreta</i> sp.	oa-p
<i>Brachypterus</i> sp. indet.	oa-p	<i>Longitarsus</i> sp.	oa-p
<i>Meligethes</i> spp.	oa-p	<i>Chaetocnema arida</i> group	oa-p
<i>Omosita discoidea</i> (Fabricius)	rt-sf	<i>Chaetocnema concinna</i> (Marsham)	oa-p
<i>Rhizophagus parallelocollis</i> Gyllenhal	rt-sf	Halticinae spp. and spp. indet.	oa-p
<i>Rhizophagus</i> sp. indet.	u	<i>Apion</i> spp.	oa-p
<i>Monotoma ?bicolor</i> Villa	rt-st	<i>Strophosomus ?sus</i> Stephens	oa-p-m
<i>Monotoma longicollis</i> (Gyllenhal)	rt-st	<i>Sitona lineatus</i> (Linnaeus)	oa-p
<i>Monotoma picipes</i> Herbst	rt-st	<i>Micrelus ericae</i> (Gyllenhal)	oa-p-m
<i>Monotoma</i> sp. indet.	rt-sf	<i>Cidnorhinus quadrimaculatus</i> (Linnaeus)	oa-p
(PC) <i>Oryzaephilus surinamensis</i> (Linnaeus)	g-ss	<i>Ceutorhynchus</i> spp.	oa-p
<i>Cryptophagus scutellatus</i> Newman	rd-st	<i>Rhinoncus pericarpus</i> (Linnaeus)	oa-p
<i>Cryptophagus</i> spp.	rd-sf	Ceuthorhynchinae spp. indet.	oa-p
<i>Atomaria nigripennis</i> (Kugelann)	rd-ss	Curculionidae spp.	oa
<i>Atomaria</i> spp.	rd	Coleoptera sp.	u
<i>Ephistemus globulus</i> (Paykull)	rd-sf	*Coleoptera sp. indet. (larva)	u
Phalacridae sp.	oa-p		
<i>Orthoperus</i> sp.	rt	HYMENOPTERA	
<i>Stephostethus angusticollis</i> (Gyllenhal)	rt-st	*? <i>Spalangia</i> sp.	u
<i>Lathridius minutus</i> group	rd-st	*Hymenoptera Parasitica spp.	u
<i>Enicmus</i> sp.	rt-sf	*Formicidae sp.	u
<i>Corticaria</i> spp.	rt-sf	*Hymenoptera Aculeata sp.	u
<i>Corticaria gibbosa</i> (Herbst)	rt		
Corticariinae sp. indet.	rt	ARACHNIDA	
<i>Typhaea stercorea</i> (Linnaeus)	rd-ss	*Aranae spp.	u
<i>Aglenus brunneus</i> (Gyllenhal)	rt-ss	*Acarina spp.	u
<i>Tenebrio obscurus</i> Fabricius	rt-ss		
<i>Anthicus formicarius</i> (Goeze)	rt-st		
<i>Anthicus</i> sp. indet.	rt		

Table 3. Lists of plants remains and other components of the samples from Anglo-Scandinavian deposits at 118-26 Walmgate, York, in context, sample and subsample order. For each list records are presented in descending order by abundance score (on a 3- or 4-point scale as appropriate for the kind of sample) and for each score in alphabetical order.

Abbreviations: *b*—bud(s); *bs*—bud-scale(s); *cal*—calyx/calycies; *ch*—charred; *c/n*—culm-nodes; *dec*—decayed; *endo*—endocarp; *epid*—epidermis; *ff*—fruit fragment(s); *fgt/s*—fragment/s; *fls*—flower; *gl*—glume; *inc*—including; *inv*—involucre; *lef*—leaf epidermis fragment(s); *lf*—leaf; *lfless*—leafless; *lvs*—leaves; *max*—maximum; *meso*—mesocarp ('flesh'); *min*—mineral-replaced ('mineralised'); *pap*—papillose; *pet*—petals; *pinn*—pinnule; *rt-tw*—root or basal twig; *s*—seeds; *segs*—segment(s); *sf*—seed fragment(s); *sh/t/s*—shoot/s; *spk/ls*—spikelet(s); *tw*—twig; *v*—very; *w/l*—waterlogged.

Context 3416, Sample 132/T			
		Quercus sp(p). (b/bs)	1
		Ranunculus flammula	1
		Ranunculus Section Ranunculus	1
burnt mammal bone	1	Raphanus raphanistrum (pod segs/fgts)	1
Cerealia indet.	1	Rhytidadelphus sp(p).	1
charcoal	1	Rumex acetosella agg.	1
fish bone	1	Sambucus nigra	1
iron pan fgts	1	Sonchus asper	1
mammal bone	1	Sonchus sp(p).	1
Sambucus nigra	1	Sphagnum sp(p).	1
sand	1	Stellaria graminea	1
		Stellaria media	1
		Triticum/Secale ('bran' fgts)	1
		twig fgts	1
		Umbelliferae	1
		Urtica dioica	1
		Viola sp(p).	1
		wood fgts	1
Context 3421/3, Sample 143/T			
Avena sp(p).	2		
charcoal	2		
Eleocharis palustris sl	2		
Juncus bufonius	2		
Linum usitatissimum	2		
Prunella vulgaris	2		
Valerianella dentata	2		
Aethusa cynapium	1		
Anthemis cotula	1		
Atriplex sp(p).	1		
Avena sativa (spk/ls/fgts)	1		
Avena sp(p). (awn/gl fgts)	1		
bark fgts	1		
Bilderdykia convolvulus	1		
Brassica sp./Sinapis arvensis (min)	1		
Calliergon cuspidatum	1		
Carex sp(p).	1		
cf. Brachythecium sp(p).	1		
Chenopodium album	1		
Corylus avellana	1		
eggshell fgts	1		
eggshell membrane fgts	1		
fish bone	1		
fly puparia	1		
Galeopsis Subgenus Galeopsis	1		
Hyoscyamus niger	1		
Linum catharticum	1		
mammal bone	1		
Oenanthe aquatica	1		
Polygonum aviculare agg.	1		
Potentilla anserina	1		
Potentilla cf. reptans	1		
Pteridium aquilinum (pinn fgts)	1		
		Context 3432, Sample 137/M	
		wood fgts	3
		Atriplex sp(p).	2
		Avena sp(p).	2
		Carex sp(p).	2
		charcoal	2
		Eleocharis palustris sl	2
		fly puparia	2
		Ranunculus Section Ranunculus	2
		Aethusa cynapium	1
		Agrostemma githago	1
		Anagallis arvensis	1
		Anthemis cotula	1
		Anthriscus sylvestris	1
		Apium graveolens	1
		Avena sp(p). (awn/gl fgts)	1
		Avena sp(p). (spk/ls/fgts)	1
		Avena sp(p). (w/l)	1
		bark fgts	1
		Bilderdykia convolvulus	1
		Brassica rapa	1
		Brassica sp(p).	1
		Brassica sp./Sinapis arvensis	1
		Centaurea sp(p).	1
		Chenopodium album	1
		Corylus avellana	1

Danthonia decumbens	1	Brassica sp(p).	1
Daucus carota	1	Brassica sp./Sinapis arvensis	1
earthworm egg caps	1	Bryonia cretica ssp. dioica	1
Filipendula ulmaria	1	Calliergon cf. giganteum	1
fish bone	1	Calliergon cuspidatum	1
Galeopsis Subgenus Galeopsis	1	Calluna vulgaris (lvs)	1
Gramineae	1	Calluna vulgaris (sht fgts)	1
Homalothecium sericeum/lutescens	1	Carex sp(p).	1
Hylocomium splendens	1	cf. Bromus sp(p). (w/l)	1
Juncus bufonius	1	cf. Cladium mariscus (epid fgts)	1
Juncus sp(p).	1	cf. Poa annua	1
limestone	1	charcoal	1
Linum usitatissimum	1	Chenopodium album	1
Myosotis sp(p).	1	Corylus avellana	1
Papaver argemone	1	Cyperaceae (pap leaf)	1
Polygonum aviculare agg.	1	earthworm egg caps	1
Polygonum persicaria	1	eggshell membrane fgts	1
Potentilla cf. erecta	1	Equisetum sp(p). (nodal sheath fgts)	1
Prunella vulgaris	1	faecal concretions	1
Ranunculus flammula	1	fish bone	1
Raphanus raphanistrum (pod segs/fgts)	1	fruit epidermis	1
Rhytiadelphus squarrosus	1	Galeopsis Subgenus Galeopsis	1
Rumex acetosella agg.	1	Galeopsis Subgenus Ladanum	1
Rumex sp(p).	1	Galium sp(p).	1
Sambucus nigra	1	Gramineae	1
Scandix pecten-veneris	1	Gramineae (ch)	1
Scirpus setaceus	1	Heracleum sphondylium	1
Sonchus asper	1	Hylocomium splendens	1
Sphagnum sp(p). (shts)	1	Hypnum cupressiforme	1
stem fgts	1	Hypochoeris sp(p).	1
Thlaspi arvense	1	Isoetecium myurum	1
twig fgts	1	Juncus sp(p).	1
Urtica dioica	1	Juncus sp(p). (epid fgts)	1
Viola sp(p).	1	Lamium Section Lamiopsis	1
		Lapsana communis	1
		Leontodon sp(p).	1
		Leucobryum glaucum	1
		Malus sylvestris	1
		Malus sylvestris (endo)	1
		mammal bone	1
		moss	1
		Neckera complanata	1
		Papaver somniferum	1
		Pisum sp(p). (min)	1
		Polygonum aviculare agg.	1
		Polygonum persicaria	1
		Polytrichum formosum	1
		Potentilla cf. erecta	1
		Potentilla palustris	1
		Prunella vulgaris	1
		Prunus spinosa	1
		Prunus spinosa (inc meso)	1
		Ranunculus sceleratus	1
		Rubus caesius	1
		Rubus fruticosus agg.	1
		Rumex acetosella agg.	1
		Rumex sp(p).	1
		Salix sp(p). (b)	1
		Salix sp(p). (lf fgts)	1
		Salix sp(p). (tw fgts)	1
		Sambucus nigra	1
		Scorpidium scorpioides	1
<hr/>			
Context 3433, Sample 144/T			
<hr/>			
Avena sp(p). (w/l)	3		
bark fgts	3		
Cerealia indet (culm fgts)	3		
fly puparia	3		
Anthemis cotula	2		
Atriplex sp(p).	2		
Calluna vulgaris (fls)	2		
Erica tetralix (lvs)	2		
Linum usitatissimum	2		
Ranunculus Section Ranunculus	2		
Stellaria media	2		
Triticum/Secale (bran' fgts)	2		
Urtica urens	2		
Aethusa cynapium	1		
Agrostemma githago	1		
Agrostemma githago (sf)	1		
Allium sp(p). (lef)	1		
Anthemis cotula (ch)	1		
Anthriscus sylvestris	1		
Apium graveolens	1		
Avena sp(p). (bran' fgts)	1		
Avena sp(p). (awn/gl fgts)	1		
Betula sp(p). (b/bs)	1		
Brassica rapa	1		

Senecio sp(p).	1
Sonchus arvensis	1
Sonchus asper	1
Sonchus oleraceus	1
Spergula arvensis	1
Sphagnum sp(p). (shts)	1
twig fgts	1
Ulota sp(p).	1
Umbelliferae	1
Urtica dioica	1
Vaccinium sp(p).	1
Valerianella dentata	1
Vicia faba (min hila)	1
wood fgts	1

Context 3443, Sample 145/M

Eleocharis palustris sl	2
?daub	1
Allium sp(p). (lef)	1
Anthemis cotula	1
Anthemis cotula (ch)	1
Atropa bella-donna	1
Avena sp(p).	1
Avena sp(p). (awn/gl fgts)	1
Avena sp(p). (w/l)	1
bark fgts	1
Brassica sp./Sinapis arvensis	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
charcoal	1
Chenopodium album	1
Cyperaceae (pap lef)	1
Eleocharis palustris sl (ch)	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Juncus bufonius	1
mammal bone	1
Polygonum aviculare agg.	1
Polygonum persicaria	1
Potentilla cf. erecta	1
Ranunculus flammula	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1
Rumex sp(p).	1
Sambucus nigra	1
Stellaria graminea	1
stones	1
Thlaspi arvense	1
Torilis japonica	1
Valerianella dentata	1
wood fgts	1

Context 3443, Sample 145/T

bark fgts	2
Juncus bufonius	2
Atriplex sp(p).	1
Avena sp(p).	1

Brassica sp./Sinapis arvensis	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
cf. Avena sp(p). (spk/fts/fgts)	1
cf. Berula erecta	1
charcoal	1
Chenopodium album	1
Descurainia sophia	1
Eleocharis palustris sl	1
fish bone	1
fish scale	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
glassy slag	1
Linum usitatissimum	1
mammal bone	1
mammal tooth	1
Oenanthe sp(p).	1
Plantago major	1
Polygonum aviculare agg.	1
Polygonum persicaria	1
Potentilla cf. erecta	1
pottery	1
Ranunculus sardous	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1
Rumex acetosella agg.	1
Sambucus nigra	1
Torilis japonica	1
Urtica dioica	1
Urtica urens	1
Viola sp(p).	1
wood fgts	1

Context 3446, Sample 149/M

wood fgts	3
Atriplex sp(p).	2
bark fgts	2
Chenopodium album	2
Eleocharis palustris sl	2
Juncus bufonius	2
Aethusa cynapium	1
Agrostemma githago (sf)	1
Anagallis arvensis	1
Anthemis cotula	1
Aphanes microcarpa	1
Arenaria serpyllifolia	1
Avena sp(p).	1
Avena sp(p). (bran' fgts)	1
Avena sp(p). (awn/gl fgts)	1
Avena sp(p). (w/l spk/fts/fgts)	1
Avena sp(p). (w/l)	1
Brassica sp(p).	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
Cerealium indet.	1
charcoal	1
earthworm egg caps	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1

Galium sp(p).	1
Gramineae	1
Gramineae (lef)	1
Lapsana communis	1
Linum usitatissimum	1
mammal bone	1
Mentha sp(p).	1
Neckera complanata	1
Papaver argemone	1
Populus sp(p). (b/bs)	1
Potentilla cf. erecta	1
Ranunculus flammula	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1
Sambucus nigra	1
Sonchus asper	1
Stellaria media	1
stones	1
Triticum/Secale ('bran' fgts)	1
Urtica dioica	1
Urtica urens	1
Valerianella dentata	1

Context 3446, Sample 150/M

Juncus bufonius	3
Aethusa cynapium	2
Anagallis arvensis	2
Anthemis cotula	2
Aphanes microcarpa	2
Atriplex sp(p).	2
Brassica rapa	2
Brassica sp(p).	2
Carex sp(p).	2
Cerealia indet.	2
cf. Avena sp(p).	2
Chenopodium album	2
Eleocharis palustris sl	2
Juncus acutiflorus	2
Lapsana communis	2
Polygonum aviculare agg.	2
Polygonum persicaria	2
Ranunculus Section Ranunculus	2
Raphanus raphanistrum (pod segs/fgts)	2
Sonchus asper	2
Urtica dioica	2
Valerianella dentata	2
Agrostemma githago	1
Bilderdykia convolvulus	1
Euphorbia helioscopia	1
Linum catharticum	1
Linum usitatissimum	1
Mentha sp(p).	1
Papaver argemone	1
Polygonum lapathifolium	1
Potentilla sp(p).	1
Prunella vulgaris	1
Ranunculus flammula	1
Rumex acetosella agg.	1
Rumex sp(p).	1
Sambucus nigra	1

Schoenus nigricans	1
Scirpus setaceus	1
Stellaria media	1
Umbelliferae	1

Context 3447, Sample 158/M

Atriplex sp(p).	2
Avena sp(p).	2
Brassica sp(p).	2
Juncus bufonius	2
Linum usitatissimum	2
Polygonum persicaria	2
Ranunculus Section Ranunculus	2
Aethusa cynapium	1
Agrostemma githago	1
Anagallis arvensis	1
Anthemis cotula	1
Antitrichia curtipendula	1
Arctium sp(p).	1
Avena sp(p). (w/1 spkls/fgts)	1
Bilderdykia convolvulus	1
Brassica rapa	1
Bromus sp(p). (w/1)	1
Calliargon cf. giganteum	1
Calliargon cuspidatum	1
Calluna vulgaris (sht fgts)	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
charcoal	1
Chenopodium album	1
Corylus avellana	1
Danthonia decumbens	1
Daucus carota	1
Eleocharis palustris sl	1
fish bone	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
Galium sp(p).	1
Hyoscyamus niger	1
Hypnum cupressiforme	1
Isoetes myosuroides	1
Juncus articulatus	1
Lapsana communis	1
Leontodon sp(p).	1
Neckera complanata	1
Oenanthe lachenalii	1
Polygonum aviculare agg.	1
Polygonum lapathifolium	1
Potentilla anserina	1
Potentilla cf. erecta	1
Potentilla cf. reptans	1
Prunella vulgaris	1
Prunus spinosa	1
Pteridium aquilinum (pinn fgts)	1
Ranunculus flammula	1
Raphanus raphanistrum (pod segs/fgts)	1
Rhytidadelphus sp(p).	1
Rumex acetosella agg.	1
Rumex sp(p).	1

Sambucus nigra	1
Sonchus asper	1
Stellaria media	1
Urtica dioica	1
Urtica urens	1
Valerianella dentata	1
Viola sp(p).	1

Context 3450, Sample 167/1

Anthemis cotula	3
Gramineae	3
Agrostemma githago	2
Anethum graveolens	2
Atriplex sp(p).	2
Brassica sp(p).	2
Carex sp(p).	2
Chenopodium album	2
Cladium mariscus	2
Ficus carica	2
Lapsana communis	2
Linum usitatissimum	2
Malus sylvestris	2
Polygonum persicaria	2
Raphanus raphanistrum (pod segs/fgts)	2
Sambucus nigra	2
Stellaria media	2
Urtica dioica	2
Urtica urens	2
Apium graveolens	1
Carduus/Cirsium sp(p).	1
Crataegus cf. monogyna	1
Filipendula ulmaria	1
Galeopsis Subgenus Galeopsis	1
Malus sylvestris (seed base cups)	1
Mentha sp(p).	1
Picris hieracioides	1
Polygonum aviculare agg.	1
Polygonum lapathifolium	1
Prunus spinosa	1
Ranunculus Section Ranunculus	1
Rosa sp(p).	1
Rumex sp(p).	1
Torilis japonica	1

Context 3450, Sample 167/M

Agrostemma githago (sf)	2
Anthemis cotula	2
Atriplex sp(p).	2
Avena sp(p). (bran' fgts)	2
Avena sp(p). (min)	2
Brassica sp(p).	2
Calliargon cf. giganteum	2
Calliargon cuspidatum	2
Cerealia indet. (culm fgts)	2
faecal concretions	2
fly puparia	2
Gramineae (lef)	2
Malus sylvestris	2
Malus sylvestris (endo)	2

Scorpidium scorpioides	2
Triticum/Secale (bran' fgts)	2
Achillea sp(p).	1
Allium porrum (lef)	1
Anethum graveolens	1
Apium graveolens	1
Avena sp(p). (w/l spkls/fgts)	1
Avena sp(p). (w/l)	1
Bilderdykia convolvulus	1
Brassica rapa	1
Bromus sp(p). (w/l)	1
Calluna vulgaris (fls)	1
Cannabis sativa	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
Centaurea sp(p).	1
cf. Satureja hortensis	1
Chenopodium album	1
Cladium mariscus	1
Corylus avellana	1
fish bone	1
Galeopsis Subgenus Galeopsis	1
Hypochoeris sp(p).	1
Lapsana communis	1
Leontodon sp(p).	1
Linum usitatissimum	1
Malus sylvestris (seed base cups)	1
mammal bone	1
Oenanthe aquatica	1
Pedicularis palustris	1
Polygonum aviculare agg.	1
Potentilla palustris	1
Prunella vulgaris	1
Prunus spinosa	1
Pteridium aquilinum (pinn fgts)	1
Pteridium aquilinum (rachis fgts)	1
Quercus sp(p). (b/bs)	1
Ranunculus flammula	1
Raphanus raphanistrum (pod segs/fgts)	1
Rhytidadelphus squarrosus	1
Rumex sp(p).	1
Sonchus asper	1
Stellaria media	1
Thalictrum flavum	1
Urtica dioica	1
Urtica urens	1
Valerianella dentata	1

Context 3450, Sample 167/SPT

Calliargon giganteum	3
Anthemis cotula	2
Carex sp(p).	2
Cladium mariscus	2
fly puparia	2
Raphanus raphanistrum (pod segs/fgts)	2
Scorpidium scorpioides	2
Agrostemma githago (sf)	1
Atriplex sp(p).	1
beetles	1
Bilderdykia convolvulus	1

Brassica rapa	1
Brassica sp./Sinapis arvensis	1
Calliargon cuspidatum	1
cf. Anomobryum filiforme	1
charcoal	1
Chenopodium album	1
Drepanodadus sp(p).	1
Eleocharis cf. multicaulis	1
Eleocharis palustris sl	1
faecal concretions	1
Linum usitatissimum	1
Malus sylvestris	1
Malus sylvestris (endo)	1
mammal bone	1
Marrubium vulgare	1
Menyanthes trifoliata	1
Polygonum aviculare agg.	1
Potentilla palustris	1
Prunella vulgaris	1
Prunus spinosa (thorns)	1
Quercus sp(p). (b/bs)	1
Ranunculus cf. sardous	1
Rumex acetosella agg.	1
Rumex sp(p).	1
Satureja hortensis	1
Stellaria/Cerastium sp(p).	1
stem fgts	1
Trichuris (ova)	1
Triticum/Secale (bran' fgts)	1
Urtica dioica	1

Context 3452, Sample 154/M

charcoal	2
Juncus bufonius	2
Alisma sp(p).	1
Atriplex sp(p).	1
Carex sp(p).	1
Chenopodium album	1
Corylus avellana	1
Daucus carota	1
Eleocharis palustris sl	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
Linum catharticum	1
Linum usitatissimum	1
mammal bone	1
Oenanthe lachenalii	1
Polygonum aviculare agg.	1
Polygonum lapathifolium	1
Potentilla cf. erecta	1
Prunella vulgaris	1
Ranunculus Section Ranunculus	1
sand	1
Stellaria media	1
stones	1
Umbelliferae	1
wood fgts	1

Context 3452, Sample 154/T

Aethusa cynapium	1
Alisma sp(p).	1
Atriplex sp(p).	1
bark fgts	1
beetles	1
Brassica rapa	1
Brassica sp(p).	1
burnt mammal bone	1
Carex sp(p).	1
cf. Avena sp(p). (spklt/fgts)	1
charcoal	1
Chenopodium album	1
Conium maculatum	1
Eleocharis palustris sl	1
fly puparia	1
Juncus bufonius	1
Juncus inflexus/effusus/conglomeratus	1
Lapsana communis	1
mammal bone	1
Ranunculus Subgenus Batrachium	1
Raphanus raphanistrum (pod segs/fgts)	1
Sambucus nigra	1
Sonchus asper	1
Stellaria media	1
Urtica dioica	1
Urtica urens	1
Viola sp(p).	1
wood fgts	1

Context 3453, Sample 151/SPT

Fraxinus (charcoal)	1
Quercus (charcoal)	1

Context 3453, Sample 152/M

Anthemis cotula	2
Atriplex sp(p).	2
Chenopodium album	2
Eleocharis palustris sl	2
Juncus bufonius	2
Linum usitatissimum	2
Polygonum aviculare agg.	2
Prunella vulgaris	2
wood fgts	2
Aethusa cynapium	1
Agrostemma githago	1
Anthriscus sylvestris	1
Avena sp(p).	1
Avena sp(p). (awn/gl fgts)	1
Avena sp(p). (spklt/fgts)	1
Avena sp(p). (w/ spklt/fgts)	1
Avena sp(p). (w/l)	1
bark fgts	1
Bilderdykia convolvulus	1
Brassica sp(p).	1
Brassica sp./Sinapis arvensis	1
Bromus sp(p). (w/l)	1
Calliargon cf. giganteum	1

Calliargon cuspidatum	1
Calluna vulgaris (fls)	1
Calluna vulgaris (sht fgts)	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
Cerealia indet. (culm fgts)	1
cf. Triticum sp(p).	1
charcoal	1
Chenopodium ficifolium	1
Corylus avellana	1
Dicranum sp(p).	1
earthworm egg caps	1
Erica sp(p). (lvs)	1
Filicales (pinn fgts)	1
fish bone	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Hypnum cupressiforme	1
Lapsana communis	1
Leontodon sp(p).	1
Leucobryum glaucum	1
limestone	1
Malus sylvestris (endo)	1
mammal bone	1
Myosotis sp(p).	1
Oenanthe cf. fistulosa	1
Polygonum lapathifolium	1
Polygonum persicaria	1
Potentilla cf. erecta	1
Potentilla palustris	1
Ranunculus flammula	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1
Raphanus raphanistrum (s)	1
Rhynchospora cf. triquetra	1
Rumex acetosella agg.	1
Rumex sp(p).	1
Sambucus nigra	1
Scirpus lacustris sl	1
Scirpus setaceus	1
Sonchus arvensis	1
Sonchus asper	1
Stellaria graminea	1
Stellaria media	1
Ulotia sp(p).	1
Urtica dioica	1
Urtica urens	1
Valerianella dentata	1
Viola sp(p).	1

Context 3455A, Sample 147/T

bark fgts	3
Chenopodium album	2
Raphanus raphanistrum (s)	2
Sonchus asper	2
Aethusa cynapium	1
Anthemis cotula	1
Atriplex sp(p).	1
Avena sp(p). (awn/gl fgts)	1

Brassica rapa	1
Brassica sp(p).	1
Brassica sp./Sinapis arvensis	1
brick/tile	1
burnt mammal bone	1
Calliargon cuspidatum	1
Campanula cf. rotundifolia	1
Carduus/Cirsium sp(p).	1
Cerealia indet.	1
charcoal	1
Daucus carota	1
Eleocharis palustris sl	1
fish bone	1
flint	1
Galium sp(p).	1
Juncus bufonius	1
Leontodon sp(p).	1
Malus sylvestris (endo)	1
metallic slag	1
Polygonum aviculare agg.	1
Polygonum persicaria	1
Raphanus raphanistrum (pod segs/fgts)	1
Rumex acetosella agg.	1
Sambucus nigra	1
wood fgts	1

Context 3459, Sample 157/M

Anthemis cotula	3
Avena sp(p). (bran' fgts)	3
Chenopodium album	3
fly puparia	3
Triticum/Secale ('bran' fgts)	3
Aethusa cynapium	2
Agrostemma githago	2
Agrostemma githago (sf)	2
Anethum graveolens	2
Apium graveolens	2
Atriplex sp(p).	2
Avena sp(p). (w/1 spkls/fgts)	2
Brassica rapa	2
Bromus sp(p). ('bran' fgts)	2
Carex sp(p).	2
Cerastium sp(p).	2
Satureja hortensis	2
faecal concretions	2
Lapsana communis	2
Linum usitatissimum	2
Malus sylvestris	2
Polygonum aviculare agg.	2
Polygonum lapathifolium	2
Potentilla sp(p).	2
Ranunculus flammula	2
Sonchus arvensis	2
Stellaria media	2
Umbelliferae	2
Urtica dioica	2
Urtica urens	2
Vaccinium sp(p).	2
Anthriscus sylvestris	1
Avena sp(p). (awn/gl fgts)	1
Avena sp(p). (min)	1

bark fgts	1
Bellis perennis	1
Bilderdykia convolvulus	1
Brassica cf. nigra	1
Brassica sp(p).	1
Calliergon cuspidatum	1
Calluna vulgaris (fls)	1
Calluna vulgaris (lvs)	1
Caltha palustris	1
Carduus/Cirsium sp(p).	1
Centaurea sp(p).	1
Centaurea sp(p). (inv fgts)	1
Cerealia indet. (culm fgts)	1
cf. Glyceria sp(p).	1
Danthonia decumbens	1
Daucus carota	1
earthworm egg caps	1
eggshell membrane fgts	1
Eleocharis palustris sl	1
Filipendula ulmaria	1
fish bone	1
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Gramineae (ch)	1
Leontodon sp(p).	1
Leucobryum glaucum	1
Linum catharticum	1
Luzula sp(p).	1
Malus sylvestris	1
Malus sylvestris (endo)	1
mammal bone	1
Matricaria perforata	1
Mentha sp(p).	1
Neckera complanata	1
Oenanthe aquatica	1
Oenanthe sp(p).	1
Papaver argemone	1
Papaver somniferum	1
Picris hieracioides	1
Pisum sativum (hila)	1
Polygonum aviculare agg.	1
Polygonum hydropiper	1
Polygonum persicaria	1
Potentilla anserina	1
Potentilla cf. erecta	1
Potentilla palustris	1
Prunella vulgaris	1
Quercus sp(p).	1
Ranunculus sardous	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1
Rhinanthus sp(p).	1
Rhytidadelphus squarrosus	1
Rubus fruticosus agg.	1
Rubus idaeus	1
Rumex sp(p).	1
Salix sp(p). (b)	1
Scleranthus annuus	1
Sonchus asper	1
Sorbus aucuparia	1
Stachys sp(p).	1
stones	1

Thlaspi arvense	1
twig fgts	1
Valerianella dentata	1
Vicia faba (hila)	1
wood fgts	1

Context 3459, Sample 157/SPT

Agrostemma githago	2
Avena sp(p). (w/l)	2
Bromus sp(p). (w/l)	2
faecal concretions	2
fly puparia	2
Linum usitatissimum	2
wood fgts	2
Anthemis cotula	1
Atriplex sp(p).	1
bark fgts	1
Bilderdykia convolvulus	1
Calliergon cuspidatum	1
Carex sp(p).	1
Chenopodium album	1
eggshell membrane fgts	1
Hypnum cupressiforme	1
Leguminosae (cal/fls)	1
Malus sylvestris	1
Malus sylvestris (endo)	1
mammal bone	1
Neckera complanata	1
Polygonum aviculare agg.	1
Polygonum persicaria	1
Prunella vulgaris	1
Prunus spinosa	1
Quercus sp(p). (lf fgts)	1
Raphanus raphanistrum (pod segs/fgts)	1
Rubus fruticosus agg.	1
Rumex sp(p).	1
Scirpus lacustris sl	1
stones	1
Triticum/Secale ('bran' fgts)	1
Urtica urens	1
Vaccinium sp(p).	1

Context 3463, Sample 170/M

Carex sp(p).	3
Aethusa cynapium	2
Brassica sp(p).	2
Chenopodium album	2
Ranunculus sceleratus	2
Sambucus nigra	2
Scirpus setaceus	2
Urtica dioica	2
Urtica urens	2
Anagallis arvensis	1
Eleocharis palustris sl	1
Silene alba	1
Thalictrum flavum	1

Context 3463, Sample 170/T

Carex sp(p).	2
charcoal	2
mammal bone	2
sand	2
stones	2
Aethusa cynapium	1
earthworm egg caps	1
Hyoscyamus niger	1
limestone	1
Rubus fruticosus agg.	1
Sambucus nigra	1
Urtica urens	1

Context 3468, Sample 168/M

Atriplex sp(p).	3
Avena sp(p). (awn/gl fgts)	2
Avena sp(p). (w/l)	2
Brassica rapa	2
Danthonia decumbens	2
Ranunculus Section Ranunculus	2
wood fgts	2
Aethusa cynapium	1
Agrostemma githago	1
Agrostemma githago (sf)	1
Anagallis arvensis	1
Anthemis cotula	1
Avena sp(p). (w/l spkls/fgts)	1
bark fgts	1
Bilderdykia convolvulus	1
Brassica sp(p).	1
Bromus sp(p). (w/l)	1
Carex sp(p).	1
Cerealia indet (culm fgts)	1
Cerealia indet.	1
cf. Anethum graveolens	1
charcoal	1
Chenopodium album	1
Corylus avellana	1
Daphnia (ephippia)	1
earthworm egg caps	1
Eleocharis palustris sl	1
Epilobium sp(p).	1
fish bone	1
fly puparia	1
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Hylocomium splendens	1
Hyoscyamus niger	1
Hypnum cupressiforme	1
Juncus bufonius	1
Linum catharticum	1
Linum usitatissimum	1
Lycopus europaeus	1
Lythrum salicaria	1
mammal bone	1
Oenanthe aquatica	1
Oenanthe lachenalii	1
Polygonum aviculare agg.	1
Polygonum hydropiper	1
Polygonum lapathifolium	1
Polygonum persicaria	1
Potentilla palustris	1
Prunella vulgaris	1
Ranunculus flammula	1
Rumex acetosella agg.	1
Rumex sp(p).	1
Scandix pecten-veneris	1
Sonchus asper	1
Sonchus oleraceus	1
Stellaria graminea	1
Stellaria media	1
twig fgts	1
Urtica dioica	1
Urtica urens	1

Valerianella dentata 1
Viola sp(p). 1

Context 3468, Sample 168/T

Atriplex sp(p). 3
wood fgts 3
Anthemis cotula 2
Avena sp(p). (w/l spkls/fgts) 2
Chenopodium album 2
Eleocharis palustris sl 2
fly puparia 2
Lythrum salicaria 2
Polygonum aviculare agg. 2
Polygonum lapathifolium 2
Ranunculus flammula 2
Ranunculus Section Ranunculus 2
Urtica urens 2
Aethusa cynapium 1
Agrostemma githago 1
Agrostemma githago (sf) 1
Allium porrum (lef) 1
Anthemis cotula (ch) 1
Antitrichia curtipendula 1
Arctium sp(p). 1
Avena sp(p). (awn/gl fgts) 1
Avena sp(p). (w/l) 1
bark fgts 1
Bilderdykia convolvulus 1
Brassica rapa 1
Brassica sp./Sinapis arvensis 1
Bromus sp(p). (w/l) 1
Calliergon cuspidatum 1
Calluna vulgaris (fls) 1
Cannabis sativa 1
Carduus/Cirsium sp(p). 1
Carex sp(p). 1
Cerealia (culm fgts) 1
cf. Oenanthe sp(p). 1
charcoal 1
Cladium mariscus 1
Corylus avellana 1
Cyperaceae (pap lef) 1
Danthonia decumbens 1
Daphnia (ephippia) 1
earthworm egg caps 1
eggshell fgts 1
Filipendula ulmaria 1
fish bone 1
Galeopsis Subgenus Galeopsis 1
Gramineae 1
Hylocomium splendens 1
Hyoscyamus niger 1
Hypnum cupressiforme 1
Hypochoeris sp(p). 1
Juncus bufonius 1
Juncus sp(p). 1
Lamium Section Lamiopsis 1
Lapsana communis 1
Leontodon sp(p). 1
limestone 1

Linum catharticum 1
Linum usitatissimum 1
mammal bone 1
Pedicularis palustris 1
Picris hieracioides 1
Plantago major 1
Polygonum persicaria 1
Prunella vulgaris 1
Raphanus raphanistrum (pod segs/fgts) 1
Raphanus raphanistrum (s) 1
Rhinanthus sp(p). 1
Rumex sp(p). 1
Sambucus nigra 1
Satureja hortensis 1
Senecio sp(p). 1
Sonchus arvensis 1
Sonchus oleraceus 1
Stellaria media 1
Thuidium tamariscinum 1
twig fgts 1
Valerianella dentata 1
Viola sp(p). 1

Context 3468, Sample 169/M

Anthemis cotula 3
Atriplex sp(p). 3
bark fgts 2
Carex sp(p). 2
Cerealia indet. 2
Cerealia indet. (culm fgts) 2
Chenopodium album 2
Crepis sp(p). 2
Eleocharis palustris sl 2
fly puparia 2
Galium sp(p). 2
Juncus bufonius 2
Juncus inflexus/effusus/conglomeratus 2
Linum usitatissimum 2
Lythrum salicaria 2
Polygonum aviculare agg. 2
Polygonum hydropiper 2
Polygonum persicaria 2
Potentilla sp(p). 2
Prunella vulgaris 2
Sonchus asper 2
Spergula arvensis 2
Stachys sp(p). 2
twig fgts 2
Urtica urens 2
wood fgts 2
Achillea sp(p). 1
Aethusa cynapium 1
Agrimonia eupatoria 1
Agrostemma githago 1
Agrostemma githago (sf) 1
Anagallis arvensis 1
Aphanes arvensis 1
Apium graveolens 1
Arctium sp(p). 1
Avena sp(p). (w/l spkls/fgts) 1

Avena sp(p). (w/l)	1
Bilderdykia convolvulus	1
Brassica rapa	1
Brassica sp(p).	1
Bromus sp(p). (w/l)	1
burnt mammal bone	1
Calliergon cuspidatum	1
Calluna vulgaris (fls)	1
Calluna vulgaris (lvs)	1
Calluna vulgaris (sht fgts)	1
Campanula cf. rotundifolia	1
Campanula rotundifolia	1
Cannabis sat iva	1
Capsella bursa-pastoris	1
Carduus/Cirsium sp(p).	1
Centaurea sp(p).	1
Centaurea sp(p). (inv fgts)	1
Cerastium sp(p).	1
cf. Avena sp(p).	1
charcoal	1
Chenopodium Section Pseudoblitum	1
Conium maculatum	1
Corylus avellana	1
Cyperaceae (pap leaf)	1
Danthonia decumbens	1
Daphnia (ephippia)	1
Daucus carota	1
Dicranum sp(p).	1
Filicales (pinn fgts)	1
Filipendula ulmaria	1
flask-shaped galls	1
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Hylocomium splendens	1
Hypnum cupressiforme	1
Iris pseudacorus	1
Juncus articulatus	1
Lapsana communis	1
Leguminosae (cal/fls)	1
Leontodon sp(p).	1
Leucobryum glaucum	1
Linum catharticum	1
Luzula sp(p).	1
Malus sylvestris	1
Matricaria perforata	1
Mentha sp(p).	1
Myosotis sp(p).	1
Oenanthe lachenalii	1
Papaver argemone	1
Papaver somniferum	1
Picris hieracioides	1
Plantago major	1
Polygonum lapathifolium	1
Potentilla anserina	1
Potentilla cf. erecta	1
Potentilla palustris	1
Primula cf. veris	1
Quercus sp(p). (b/bs)	1
Ranunculus flammula	1
Ranunculus sardous	1
Ranunculus Section Ranunculus	1
Raphanus raphanistrum (pod segs/fgts)	1

Rhinanthus sp(p).	1
Rhytidadelphus squarrosus	1
Rumex cf. conglomeratus	1
Rumex sp(p).	1
Salix sp(p). (b)	1
Salix sp(p). (tw fgts)	1
Sambucus nigra	1
Scirpus setaceus	1
Senecio sp(p).	1
Sonchus arvensis	1
Stellaria media	1
stones	1
Triticum/Secale ('bran' fgts)	1
Urtica dioica	1
Valerianella dentata	1
Viola sp(p).	1

Context 3475, Sample 162/T1

bark fgts	3	max 30 mm
Chenopodium album	3	
mammal bone	3	max 110 mm
Anthemis cotula	2	
Avena sp(p). (chaff)	2	
Brassica sp(p).	2	inc fgts
Carex sp(p).	2	
charcoal	2	max 10 mm
Eleocharis palustris sl	2	
fly puparia	2	
gravel	2	max 20 mm
grit	2	
Juncus bufonius	2	
Luzula sp(p).	2	
Potentilla cf. erecta	2	
Prunella vulgaris	2	
Ranunculus Section Ranunculus	2	
Rumex acetosella agg.	2	
sand	2	
Thalictrum flavum	2	
Urtica dioica	2	
Urtica urens	2	
wood fgts	2	v dec, max 10 mm
?daub	1	max 35 mm
Aethusa cynapium	1	
Agrostemma githago	1	
Agrostemma githago (sf)	1	
Alisma sp(p).	1	'embryos' only
Anagallis arvensis	1	
Antitrichia curtipendula	1	
Atriplex sp(p).	1	
Avena sativa (spk/ls/fgts)	1	
Avena sp(p).	1	
beetles	1	
Bilderdykia convolvulus	1	
Bilderdykia convolvulus (ff)	1	
Brassica rapa	1	
Bromus sp(p).	1	
burnt bone fgts	1	max 10 mm
Calliergon cf. giganteum	1	
Campyllum stellatum	1	
Cannabis sat iva	1	inc fgts

Cerastium sp(p).	1
cf. Calluna vulgaris (ch rt-tw fgts)	1
cf. Cladium mariscus	1
cf. Leguminosae (w/l)	1
Corylus avellana	1
Daucus carota	1 v dec
eggshell membrane fgts	1 max 5 mm
Euphorbia helioscopia	1
Filipendula ulmaria	1
fish bone	1 max 10 mm
Galeopsis Subgenus Galeopsis	1
Gramineae	1
Gramineae/Cerealia (culm fgts)	1
Hordeum sp(p).	1
Hypnum cf. cupressiforme	1
Ilex aquifolium (lef)	1
Juncus inflexus/effusus/conglomeratus	1
Lapsana communis	1
leather fgts	1 v dec, max 20 mm
Leguminosae (fls/pet)	1
Leontodon sp(p).	1
Linum usitatissimum	1 inc fgts
Malus sylvestris	1
moss (lfless stems)	1
Oenanthe sp(p).	1
Polygonum aviculare agg.	1
Polygonum hydropiper	1
Polygonum lapathifolium	1
Polygonum persicaria	1
pottery	1 max 25 mm
Quercus sp(p). (b/bs)	1
Ranunculus flammula	1
Ranunculus sardous	1
Raphanus raphanistrum (pod segs/fgts)	1
Rumex sp(p).	1
Sambucus nigra	1
sandstone	1 max 35 mm
Schoenus nigricans	1
Scorpidium scorpioides	1
Spergula arvensis	1
Stellaria media	1
Thuidium tamariscinum	1
Triticum cf. aestivo-compactum	1
Triticum/Secale (bran' fgts)	1 max 1 mm
twig fgts	1 max 10 mm
Ulota sp(p).	1
Valerianella dentata	1
Valerianella sp(p). (sterile cells)	1
Viola sp(p).	1

Context 3475, Sample 163/M

Anthemis cotula	3
Atriplex sp(p).	3
Carex sp(p).	3
Chenopodium album	3
Juncus bufonius	3
Juncus inflexus/effusus/conglomeratus	3
Urtica urens	3
Anagallis arvensis	2
Aphanes microcarpa	2

Bilderdykia convolvulus	2
Brassica sp(p).	2
Cannabis sativa	2
Cerastium sp(p).	2
cf. Avena sp(p).	2
cf. Secale cereale	2
Cladium mariscus	2
Cyperaceae	2
Filipendula ulmaria	2
Gramineae	2
Hordeum vulgare	2
Hyoscyamus niger	2
Lapsana communis	2
Linum catharticum	2
Linum usitatissimum	2
Polygonum aviculare agg.	2
Polygonum lapathifolium	2
Potentilla palustris	2
Potentilla sp(p).	2
Prunella vulgaris	2
Ranunculus flammula	2
Ranunculus Section Ranunculus	2
Raphanus raphanistrum (pod segs/fgts)	2
Rumex acetosella agg.	2
Rumex sp(p).	2
Spergula arvensis	2
Stellaria media	2
Urtica dioica	2
Aethusa cynapium	1
Agrostemma githago	1
Arctium sp(p).	1
Calliergon sp(p).	1
Calluna vulgaris (lvs)	1
Calluna vulgaris (s)	1
Caltha palustris	1
Carduus/Cirsium sp(p).	1
Cerealia indet.	1
cf. Bromus sp(p).	1
Danthonia decumbens	1
Daucus carota	1
Eleocharis palustris sl	1
Galeopsis Subgenus Galeopsis	1
Leucobryum glaucum	1
Luzula sp(p).	1
Myosotis sp(p).	1
Polygonum hydropiper	1
Polygonum persicaria	1
Salix sp(p). (b)	1
Scirpus setaceus	1
Sonchus arvensis	1
Sonchus asper	1
Sonchus sp(p).	1
Sphagnum sp(p).	1
Thalictrum cf. flavum	1
Torilis japonica	1
Triticum aestivo-compactum	1
Valerianella dentata	1
Viola sp(p).	1

Context 3476, Sample 175/M

Aethusa cynapium	3
Polygonum aviculare agg.	3
Urtica dioica	3
Anthemis cotula	2
Bilderdykia convolvulus	2
Carduus/Cirsium sp(p).	2
Carex sp(p).	2
Chenopodium album	2
Chenopodium Section Pseudoblitum	2
Gramineae	2
Hyoscyamus niger	2
Juncus bufonius	2
Polygonum persicaria	2
Potentilla sp(p).	2
Ranunculus Section Ranunculus	2
Rumex sp(p).	2
Sambucus nigra	2
Scirpus setaceus	2
Sonchus asper	2
Spergula arvensis	2
Stellaria sp(p).	2
Urtica urens	2
Viola sp(p).	2
Anagallis arvensis	1
Apium graveolens	1
Avena sp(p).	1
Betula sp(p).	1
Brassica sp(p).	1
Crepis sp(p).	1
Eleocharis palustris sl	1
Mentha sp(p).	1
Salix sp(p). (b)	1

Context 3476, Sample 176/T

Aethusa cynapium	2
Polygonum aviculare agg.	2
stones	2
Urtica dioica	2
Alisma sp(p).	1
Anagallis arvensis	1
Atriplex sp(p).	1
bark fgts	1
beetles	1
brick/tile	1
burnt mammal bone	1
Carduus/Cirsium sp(p).	1
Carex sp(p).	1
charcoal	1
Chenopodium album	1
Chenopodium murale	1
Chenopodium Section Pseudoblitum	1
earthworm egg caps	1
Hyoscyamus niger	1
limestone	1
mammal bone	1
Menyanthes trifoliata	1
Papaver argemone	1
Polygonum persicaria	1
Potentilla sp(p).	1

Rubus fruticosus agg.	1
Rumex sp(p).	1
Sambucus nigra	1
sandstone	1
Solanum nigrum	1
Sonchus asper	1
Stellaria media	1
Thlaspi arvense	1
Urtica urens	1
Viola sp(p).	1
wood fgts	1

Context 3477, Sample 172/M

Anthemis cotula	3
Satureja hortensis	3
Stellaria media	3
Urtica urens	3
Agrostemma githago (sf)	2
Anagallis arvensis	2
Anthriscus sylvestris	2
Apium graveolens	2
Atriplex sp(p).	2
Brassica sp(p).	2
Carex sp(p).	2
Cerastium sp(p).	2
cf. Daucus carota	2
Chenopodium album	2
Chenopodium Section Pseudoblitum	2
Gramineae	2
Lapsana communis	2
Malus sylvestris	2
Polygonum aviculare agg.	2
Polygonum lapathifolium	2
Polygonum persicaria	2
Prunella vulgaris	2
Prunus spinosa	2
Ranunculus flammula	2
Ranunculus Section Ranunculus	2
Raphanus raphanistrum (pod segs/fgts)	2
Rubus fruticosus agg.	2
Rumex acetosella agg.	2
Urtica dioica	2
Aphanes microcarpa	1
Bilderdykia convolvulus	1
cf. Avena sp(p).	1
Crepis sp(p).	1
Eleocharis palustris sl	1
Lamium Section Lamiopsis	1
Linum usitatissimum	1
Papaver argemone	1
Papaver somniferum	1
Plantago major	1
Polygonum hydropiper	1
Potentilla palustris	1
Sambucus nigra	1
Scirpus setaceus	1
Senecio sp(p).	1
Sonchus asper	1
Sonchus sp(p).	1
Sphagnum sp(p).	1

Viola sp(p).

1

Context 3477, Sample 174/M

Anthemis cotula	3
Atriplex sp(p).	3
Chenopodium album	3
Polygonum aviculare agg.	3
Stellaria media	3
Urtica urens	3
Agrostemma githago (sf)	2
Bilderdykia convolvulus	2
Brassica sp(p).	2
Carex sp(p).	2
Juncus articulatus	2
Linum usitatissimum	2
Papaver argemone	2
Papaver somniferum	2
Prunus spinosa	2
Ranunculus sardous	2
Ranunculus Section Ranunculus	2
Raphanus raphanistrum (pod segs/fgts)	2
Rumex sp(p).	2
Sonchus arvensis	2
Spergula arvensis	2
Urtica dioica	2
Vaccinium sp(p).	2
Vicia faba	2
Aethusa cynapium	1
Anagallis arvensis	1
Apium graveolens	1
Chenopodium ficifolium	1
Crepis sp(p).	1
Eleocharis palustris sl	1
Gramineae	1
Humulus lupulus	1
Juncus bufonius	1
Lamium Section Lamiopsis	1
Lapsana communis	1
Malus sylvestris (endo)	1
Polygonum hydropiper	1
Polygonum persicaria	1
Potentilla palustris	1
Prunella vulgaris	1
Ranunculus flammula	1
Rhinanthus sp(p).	1
Rubus fruticosus agg.	1
Rubus idaeus	1
Rumex acetosella agg.	1
Sambucus nigra	1
Scirpus setaceus	1
Sonchus oleraceus	1
Umbelliferae	1

Table 4. Values for the 'abundance-indicator value (AIV) for assemblages of plant remains from Anglo-Scandinavian deposits at 118-26 Walmgate, York, in context order. For each sample, AIVs are given in descending order; an explanation of the group codes is given in Table 5. Also presented are sums for the 'amount' of the taxa in each group. Note that the AIVs, whilst internally comparable, use a different scale for 'score' from that used by, for example, Hall and Kenward (1990); instead of an indicator score of 1, 2 or 3, the scale 1, 5, 25 is used to 'stretch' the range of the resulting AIVs. The 'unclassified' group UNCL is included here because, although it does not produce AIVs, the sums of taxon amounts are worth recording. Note that some very small assemblages have been excluded from these lists.

Group	Sum	AIV	Group	Sum	AIV	Group	Sum	AIV
Context 3421/3, Sample 143/T			V MOAR	12	76	V ARTE	12	72
U FOOS	8	152	V ISNA	2	50	V OXSP	6	70
V SECA	11	111	V QUFA	6	42	V QUFA	10	62
V CHEN	13	81	V PLAN	3	35	V MOAR	8	52
U FIBR	2	50	V ARTE	8	32	U FIBR	2	50
U FOOO	2	50	U FOOO	2	26	U FOOO	2	50
V ISNA	2	50	M BOGS	1	25	V BIDE	6	50
V MOAR	10	46	U FIBR	1	25	V RHPR	8	40
V PLAN	5	45	U FOOO	1	25	M BOGS	4	36
V QUFA	6	42	V FEBR	4	16	V PLAN	4	36
M BOGS	1	25	V BIDE	3	15	U WOOD	4	28
V ARTE	4	16	V EPIL	3	15	E FUGE	1	25
V PHRA	4	16	V PHRA	4	12	M LIGN	5	25
V EPIL	3	15	V NACA	3	11	M WOOF	5	25
V NACA	3	15	M GRAS	2	10	M HEMO	4	20
V RHPR	3	15	M HEMO	2	10	M SLIT	4	20
V BIDE	2	10	V CAKI	2	10	V EPIL	4	20
V FEBR	2	10	V RHPR	2	10	V CAKI	3	15
U USEF	2	6	E CALC	1	5	M FENS	3	11
V QUER	2	6	M DUNS	1	5	M MARS	3	11
M FENS	1	5	M LIGN	1	5	V FEBR	3	11
M GRAS	1	5	M OLIT	1	5	M GRAS	2	10
M MARS	1	5	M SLIT	1	5	M OLIT	2	10
V ALNE	1	5	M SOIL	1	5	V ALNE	2	10
V CAKI	1	5	M WOOF	1	5	E CALC	1	5
V LITT	1	5	V ALNE	1	5	M SOIL	1	5
V POTA	1	5	V LITT	1	5	V SCCA	1	5
V SCCA	1	5	V SCCA	1	5	V SESC	1	5
V SESC	1	5	V SESC	1	5	V PHRA	3	3
V VAPI	1	5	U USEF	1	1	U USEF	2	2
U WOOD	1	1	V QUER	1	1	U HERB	1	1
V SESL	1	1	V TRGE	1	1	V QUER	1	1
* UNCL	5	0	* UNCL	11	0	* UNCL	19	0
M UNCL	2	0						
Context 3432, Sample 137/M			Context 3433, Sample 144/T			Context 3443, Sample 145/M		
V CHEN	20	132	U FOOS	18	354	V SECA	8	76
V SECA	14	122	V CHEN	28	224	V CHEN	9	61
U FOOS	8	104	V SECA	20	168	V MOAR	8	36
			V NACA	7	111	V EPIL	2	30
			U FOOO	4	76	U FOOS	3	27

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
V ISNA	1	25
V PLAN	1	25
V PHRA	4	16
V ARTE	3	11
V QUFA	3	11
V FEBR	2	6
V NACA	2	6
E CALC	1	5
V BIDE	1	5
V LITT	1	5
V RHPR	1	5
V SCCA	1	5
U HERB	1	1
U USEF	1	1
V QUER	1	1
* UNCL	7	0

Context 3443, Sample 145/T

V CHEN	12	96
V ISNA	3	55
V PLAN	3	55
U FOOS	4	52
V SECA	5	41
U FIBR	1	25
U FOOO	1	25
V ARTE	5	21
V MOAR	5	21
V EPIL	3	15
V QUFA	3	11
V BIDE	2	10
V RHPR	2	10
V PHRA	3	7
V FEBR	2	6
V NACA	2	6
V ALNE	1	5
V CAKI	1	5
V SESC	1	5
V POTA	1	1
V QUER	1	1
* UNCL	5	0

Context 3446, Sample 149/M

V SECA	14	142
V CHEN	16	132
U FOOS	7	79
V ISNA	2	50
V SESC	2	30
U FIBR	1	25
U FOOO	1	25
V MOAR	5	21

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
V ARTE	4	16
V BIDE	3	15
V RHPR	3	15
V FEBR	3	11
V PHRA	3	11
V QUFA	3	11
V CAKI	2	10
V EPIL	2	10
M LIGN	1	5
M SLIT	1	5
M WOOF	1	5
V ALNE	1	5
V LITT	1	5
V SCCA	1	5
U USEF	1	1
U WOOD	1	1
V NACA	1	1
V QUER	1	1
* UNCL	8	0

Context 3446, Sample 150/M

V CHEN	30	242
V SECA	25	237
V ISNA	4	100
V PLAN	4	60
U FOOS	6	54
V MOAR	9	45
V SCCA	4	40
V ARTE	8	32
V BIDE	6	30
U FOOO	3	27
U FIBR	1	25
V RHPR	5	25
V QUFA	5	17
V EPIL	3	15
V FEBR	3	15
V SESC	3	15
V PHRA	4	12
V ALNE	2	10
V CAKI	2	10
E CALC	1	5
V LITT	1	5
V NACA	1	5
V SESL	1	1
* UNCL	8	0

Context 3447, Sample 158/M

V CHEN	22	162
U FOOS	9	129
V SECA	14	122

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
U FOOO	3	51
U FIBR	2	50
V ISNA	2	50
V MOAR	11	47
V QUFA	6	42
V NACA	5	41
V PLAN	4	40
V ARTE	9	37
V BIDE	6	30
V RHPR	5	25
M LIGN	4	20
V EPIL	4	20
V FEBR	4	16
V PHRA	4	12
M OLIT	2	10
M SLIT	2	10
M WOOF	2	10
V CAKI	2	10
M FENS	2	6
M MARS	2	6
V QUER	2	6
E FUGE	1	5
M GRAS	1	5
M HEMO	1	5
M SOIL	1	5
U USEF	1	5
V ALNE	1	5
V BULB	1	5
V LITT	1	5
V OXSP	1	5
V SCCA	1	5
V SESC	1	5
V VAPI	1	5
M BOGS	1	1
V TRGE	1	1
* UNCL	9	0
M UNCL	1	0

Context 3450, Sample 167/I

U FOOS	13	285
V CHEN	21	181
V SECA	14	146
U FOOO	3	75
V PHRA	3	51
U FIBR	2	50
U FOOO	2	50
U USEF	2	50
V RHPR	10	50
V QUFA	10	46
V MOAR	5	45
V ARTE	9	41
V BIDE	7	35

V PLAN 1 25

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
V EPIL	3	15
V ALNE	2	10
V CAKI	2	10
V FEBR	2	10
E CALC	1	5
* UNCL	10	0

Context 3450, Sample 167/M

U FOOS	17	257
V SECA	12	140
V CHEN	15	131
U FOOF	3	51
U FOOO	3	51
U FIBR	2	50
V QUFA	6	46
V MOAR	5	45
U USEF	5	37
V NACA	3	35
V RHPR	7	35
V PHRA	2	30
V PLAN	2	30
M FENS	6	22
M MARS	6	22
V ARTE	4	20
M GRAS	3	15
V BIDE	3	15
V SCCA	3	15
M BOGS	4	12
V QUER	3	11
V ALNE	1	5
V LITT	1	5
OXSP	1	5
V POTA	1	5
U WOOD	1	1
* UNCL	13	0

Context 3450, Sample 167/SPT

V SECA	8	96
V CHEN	11	91
U FOOS	4	76
V PHRA	4	60
U USEF	2	50
V ARTE	3	35
V PLAN	3	35
M FENS	6	30
M MARS	6	30

U FOOO	2	26
M BOGS	5	25
U FIBR	1	25
U FOOF	1	25

Context 3452, Sample 154/M

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
V QUFA	4	16
V RHPR	3	15
V EPIL	2	10
V MOAR	2	10
V SCCA	2	10
M GRAS	1	5
V ALNE	1	5
V BIDE	1	5
V CAKI	1	5
V NACA	1	5
V SESC	1	5
U WOOD	2	2
V OXSP	2	2
M SLIT	1	1
V ISNA	1	1
V QUER	1	1
* UNCL	5	0
M UNCL	1	0

Context 3452, Sample 154/M

U FOOS	3	51
V CHEN	7	51
V ISNA	2	50
V PHRA	4	36
V PLAN	2	30
V MOAR	6	26
V QUFA	2	26
U FIBR	1	25
U FOOO	1	25
V FEBR	4	16
V SECA	4	16
V BIDE	3	15
V ARTE	3	11
V BULB	1	5
V CAKI	1	5
V EPIL	1	5
V NACA	1	1
V QUER	1	1
V SESL	1	1
V TRGE	1	1
* UNCL	2	0

Context 3452, Sample 154/T

V CHEN	9	105
V SECA	5	45
V PHRA	2	30
U FOOS	2	26
V ISNA	1	25
V ARTE	4	20
V MOAR	3	15

Context 3453, Sample 152/M

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
V RHPR	3	15
V BIDE	2	10
V EPIL	2	10
V QUFA	2	10
V ALNE	1	5
V CAKI	1	5
V LITT	1	5
V POTA	1	5
U FOOO	1	1
V MOCA	1	1
* UNCL	3	0

Context 3453, Sample 152/M

V CHEN	24	176
V SECA	16	156
U FOOS	9	129
V ISNA	3	75
V PLAN	5	65
V NACA	5	61
U FIBR	2	50
U FOOO	2	50
V MOAR	10	42
V QUFA	5	41
V PHRA	5	37
V BIDE	6	30
V ARTE	5	21
M LIGN	3	15
V CAKI	3	15
V EPIL	3	15
V RHPR	3	15
M HEMO	3	11
M OLIT	2	10
M SLIT	2	10
M WOOF	2	10
V OXSP	2	10
V SCCA	2	10
M BOGS	2	6
M FENS	2	6

M	GRAS	2	6
M	MARS	2	6
V	FEBR	2	6
M	SOIL	1	5
V	ALNE	1	5
V	LITT	1	5
V	SESC	1	5
U	USEF	2	2
M	DUNS	1	1
V	BULB	1	1
V	QUER	1	1
*	UNCL	13	0
M	UNCL	1	0

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

Context 3455A, Sample 147/T

V	CHEN	14	130
V	SECA	8	100
U	FOOS	4	52
V	PLAN	2	30
V	ISNA	1	25
V	MOAR	3	11
V	ARTE	2	10
V	BIDE	2	10
V	FEBR	2	6
V	NACA	2	6
V	SESC	2	6
M	FENS	1	5
M	GRAS	1	5
M	MARS	1	5
V	CAKI	1	5
V	EPIL	1	5
V	PHRA	1	5
V	QUFA	1	5
V	RHPR	1	5
V	TRGE	2	2
U	FOOO	1	1
U	USEF	1	1
*	UNCL	5	0

Context 3459, Sample 157/M

U	FOOS	25	433
V	CHEN	38	322
V	SECA	29	301
U	FOOF	9	153
V	MOAR	17	121
V	PLAN	5	85
U	FOOO	6	78
V	ARTE	14	62
V	NACA	5	61
V	BIDE	8	60

U	FIBR	2	50
V	RHPR	10	50
V	QUFA	11	47
V	FEBR	5	21
V	CAKI	4	20
V	EPIL	4	20
V	PHRA	4	16
V	ALNE	3	15
V	SCCA	3	15
V	QUER	3	11
M	GRAS	2	10
M	HEMO	2	10
M	LIGN	2	10
M	SLIT	2	10
M	WOOF	2	10

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

V	LITT	2	10
V	OXSP	2	10
E	CALC	1	5
M	BOGS	1	5
M	FENS	1	5
M	MARS	1	5
V	ISNA	1	5
V	POTA	1	5
U	USEF	2	2
U	WOOD	1	1
V	SESL	1	1
V	TRGE	1	1
*	UNCL	23	0

Context 3459, Sample 157/SPT

U	FOOS	8	176
V	SECA	6	90
V	CHEN	8	80
U	FIBR	2	50
U	FOOO	2	50
V	PLAN	2	30
V	PHRA	1	25
V	QUFA	4	16
V	RHPR	3	15
M	LIGN	2	10
M	WOOF	2	10
V	BIDE	2	10
M	FENS	1	5
M	GRAS	1	5
M	HEMO	1	5
M	MARS	1	5
M	OLIT	1	5
M	SLIT	1	5
M	SOIL	1	5
V	ARTE	1	5
V	CAKI	1	5
V	MOAR	1	5

V	NACA	1	5
U	WOOD	1	1
V	BULB	1	1
V	QUER	1	1
*	UNCL	7	0

Context 3463, Sample 170/M

V	CHEN	8	120
U	FOOS	2	50
V	BIDE	2	50
V	ISNA	2	50
V	QUFA	4	20
V	RHPR	4	20

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

V	SECA	4	20
V	ARTE	3	15
V	ALNE	2	10
V	EPIL	2	10
V	MOAR	2	10
V	PHRA	1	5
*	UNCL	5	0
U	FOOS	2	50
V	CHEN	3	35
V	ARTE	2	10
V	QUFA	2	10
V	RHPR	2	10
V	NACA	1	5
V	SECA	1	5
*	UNCL	2	0

Context 3468, Sample 168/M

V	CHEN	23	187
V	SECA	15	127
V	BIDE	7	55
U	FOOS	4	52
V	MOAR	10	50
V	QUFA	5	37
V	PLAN	3	35
U	FOOO	3	27
V	ARTE	7	27
V	PHRA	7	27
U	FIBR	1	25
V	ISNA	1	25
V	CAKI	4	20
V	NACA	4	20
V	EPIL	3	15
V	FEBR	3	15
M	HEMO	2	10
M	WOOF	2	10
V	ALNE	2	10
V	SCCA	2	10

M	GRAS	1	5
M	LIGN	1	5
M	OLIT	1	5
M	SOIL	1	5
V	BULB	1	5
V	LITT	1	5
V	POTA	1	5
V	RHPR	1	5
V	SESC	1	5
U	USEF	2	2
U	FOOF	1	1
V	SESL	1	1
*	UNCL	9	0

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

Context 3468, Sample 168/T

V	CHEN	31	263
V	SECA	19	187
U	FOOS	6	102
V	PLAN	4	80
V	MOAR	15	75
U	FOOO	3	51
U	FIBR	2	50
V	PHRA	7	47
V	ARTE	10	42
V	QUFA	5	37
V	BIDE	7	35
V	NACA	2	30
U	USEF	2	26
U	FOOF	1	25
V	ISNA	1	25
V	CAKI	4	20
V	FEBR	4	20
M	LIGN	3	15
M	WOOF	3	15
V	SCCA	3	15
M	GRAS	2	10
M	HEMO	2	10
M	OLIT	2	10
V	EPIL	2	10
V	LITT	2	10
V	RHPR	2	10
E	CALC	1	5
M	FENS	1	5
M	MARS	1	5
M	SLIT	1	5
M	SOIL	1	5
V	OXSP	1	5
V	SESL	1	1
*	UNCL	15	0

Context 3468, Sample 169/M

V	CHEN	39	283
V	SECA	27	271
U	FOOS	12	156
V	PLAN	9	145
V	MOAR	25	129
V	BIDE	11	111
U	FOOO	5	101
V	NACA	7	87
V	ISNA	4	80
U	FIBR	3	75
E	FUGE	3	55
U	FOOF	2	50
V	QUFA	7	47
V	ARTE	10	46

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

V	FEBR	9	33
V	PHRA	7	31
U	WOOD	3	27
V	EPIL	6	26
V	RHPR	5	25
M	HEMO	4	20
V	CAKI	4	20
M	GRAS	3	15
M	WOOF	3	15
V	OXSP	3	15
V	TRGE	5	13
V	SESC	3	11
M	LIGN	2	10
V	ALNE	2	10
V	SCCA	2	10
E	CALC	2	6
M	BOGS	1	5
M	FENS	1	5
M	MARS	1	5
M	OLIT	1	5
M	SLIT	1	5
M	SOIL	1	5
V	BULB	1	5
V	LITT	1	5
U	USEF	2	2
V	QUER	2	2
U	DYES	1	1
U	HERB	1	1
V	SESL	1	1
*	UNCL	32	0
M	UNCL	1	0

Context 3475, Sample 162/T1

V	CHEN	28	268
U	FOOS	10	202
V	SECA	19	187

V	QUFA	10	78
V	MOAR	14	62
V	ISNA	3	55
U	FOOO	3	51
U	FIBR	2	50
V	BIDE	5	45
V	PLAN	5	45
V	PHRA	6	38
V	ARTE	9	37
V	EPIL	6	30
V	SCCA	2	30
E	FUGE	1	25
V	RHPR	5	25
V	FEBR	5	17
M	LIGN	4	16
V	NACA	5	13

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

M	FENS	3	11
M	MARS	3	11
M	OLIT	3	11
M	SLIT	2	10
V	ALNE	2	10
V	SESC	2	10
M	BOGS	2	6
M	WOOF	2	6
E	CALC	1	5
M	DUNS	1	5
V	CAKI	1	5
V	LITT	1	5
U	USEF	4	4
V	QUER	3	3
U	WOOD	2	2
M	HEMO	1	1
M	SOIL	1	1
V	OXSP	1	1
V	TRGE	1	1
*	UNCL	16	0

Context 3475, Sample 163/M

V	CHEN	41	309
V	SECA	27	247
U	FOOS	11	131
U	FIBR	4	100
U	FOOO	4	100
V	ISNA	4	100
V	MOAR	19	91
V	PLAN	6	70
V	BIDE	9	65
V	NACA	5	65
V	ARTE	14	62
V	PHRA	6	62
E	FUGE	2	50
U	USEF	2	50
V	EPIL	9	45

M	BOGS	2	30
V	FEBR	5	25
V	QUFA	7	23
V	CAKI	4	20
V	RHPR	4	20
V	SCCA	4	20
V	SESC	4	20
V	ALNE	3	15
V	LITT	2	10
V	OXSP	2	10
M	HEMO	1	5
M	LIGN	1	5
M	SLIT	1	5
M	WOOF	1	5
V	SESL	2	2
U	WOOD	1	1
V	TRGE	1	1

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

*	UNCL	21	0
M	UNCL	1	0

Context 3476, Sample 175/M

V	CHEN	27	207
V	SECA	17	117
V	ISNA	4	100
U	FOOS	4	76
V	PLAN	3	75
V	BIDE	4	60
E	FUGE	2	50
V	MOAR	4	40
V	ARTE	7	27
V	QUFA	7	27
U	FOOF	1	25
V	RHPR	5	25
V	ALNE	3	15
V	EPIL	3	15
V	FEBR	2	10
V	PHRA	3	7
U	WOOD	1	1
*	UNCL	18	0

Context 3476, Sample 176/T

V	CHEN	17	145
V	SECA	10	70
U	FOOS	2	50
V	PLAN	2	50
V	BIDE	4	40
V	PHRA	2	30
V	ARTE	4	20
V	QUFA	4	20
V	RHPR	4	20
V	ALNE	2	10

V	EPIL	2	10
V	CAKI	1	5
V	NACA	1	5
V	SCCA	1	5
V	OXSP	1	1
*	UNCL	5	0

Context 3477, Sample 172/M

V	CHEN	39	303
U	FOOS	13	205
V	SECA	22	202
U	FOOF	6	150
V	BIDE	12	120
V	MOAR	14	102
V	PLAN	7	95

<i>Group</i>	<i>Sum</i>	<i>AIV</i>
--------------	------------	------------

V	RHPR	11	55
U	FOOO	2	50
V	QUFA	11	47
V	ARTE	12	44
M	BOGS	1	25
U	FIBR	1	25
V	ISNA	1	25
V	EPIL	4	20
V	NACA	4	20
V	SCCA	3	15
V	SESC	3	15
V	FEBR	4	12
V	ALNE	2	10
V	CAKI	2	10
V	LITT	2	10
V	PHRA	3	7
V	TRGE	2	2
*	UNCL	12	0

Context 3477, Sample 174/M

V	CHEN	42	334
U	FOOS	13	325
V	SECA	29	297
U	FOOF	4	100
U	FOOO	4	100
V	PLAN	5	85
V	BIDE	9	65
E	FUGE	4	60
V	ISNA	4	60
V	MOAR	8	60
U	FIBR	2	50
V	RHPR	9	45
V	QUFA	9	33
V	ARTE	7	27
V	CAKI	5	25
V	EPIL	4	20

V	ALNE	3	15
V	FEBR	2	10
V	NACA	2	10
V	SCCA	2	10
V	PHRA	3	7
V	LITT	1	5
V	SESC	1	5
U	DYES	1	1
U	HERB	1	1
*	UNCL	10	0

Table 5. Explanation of the codes used for AIV groups in Table 4.

* UNCL	unclassified	V CHEN	plants of annual nitrophilous weed communities of cultivated and other disturbed land, especially rootcrop fields and gardens
E CALC	plants with distinctly calcicole habit	V EPIL	plants of nitrophilous woodland edge and clearing communities
E FUGE	plants with distinctly calcifuge habit	V FEBR	plants of drier, typically calcareous, grassland
M BOGS	mosses of peat bogs	V ISNA	plants of short-lived dwarf-rush communities of winter-wet (often sandy) habitats, pond edges, wet tracks
M DUNS	mosses of dunes and dune slacks	V LITT	plants of rooted aquatic vegetation at the edge of (usually oligotrophic) waters
M FENS	mosses of fens and carr	V MOAR	plants of grassland, including the wetter meadows and pastures, and adjacent paths
M HEMO	mosses of heathland and moorland	V NACA	plants of grass- and dwarf-shrub (typically <i>Calluna</i> -) dominated dry heaths and moors
M LIGN	mosses growing on tree bark/dead wood	V OXSP	plants of raised bogs and wet heaths
M MARS	mosses of marshes	V PHRA	plants of freshwater reedswamp communities
M OLIT	mosses of unshaded rocks	V PLAN	plants of trampled places
M SLIT	mosses of shaded rocks	V QUER	plants of deciduous woodland on poorer soils
M SOIL	mosses growing on soil	V QUFA	plants of deciduous woodland on better soils
M WOOF	mosses of woodland floors	V RHPR	plants of woodland edge scrub communities
U FIBR	plants certainly or probably used as a source of fibre	V SCCA	plants of poor to intermediate fen communities (acid to mildly basic peat)
U FOOO	plants certainly or probably used for oil	V SECA	plants of annual weed communities in cereal fields
U FOOS	primary food plants	V SESC	plants of established vegetation of sand dunes and other sandy acidic soils
U USEF	plants useful in some way other than for food, fibre, oil, dyeing, medicine or as ornamentals	V TRGE	plants of species-rich communities of grassland/scrub boundaries, often calcicolous
U WOOD	plants likely to have originated with brushwood or timber		
V ALNE	plants of alder carr		
V ARTE	plants of biennial and perennial nitrophilous tall-herb weed communities of waste places, river-banks, waysides and hedgerows		
V BIDE	plants of nitrophilous weed communities of pond edges, ditches and other places subject to periodic inundation		
V CAKI	plants of nitrophilous weedy communities of shingle beaches and sandy strandlines		

Table 6. Main statistics for the assemblages of adult Coleoptera and Hemiptera (excluding Aphidoidea and Coccoidea) from 118-26 Walmgate, York. Data include all samples examined for the site.

Context	1071	1075	1085	1087	1089	1089	1090	2322	3133	3223
Sample	2	8	14	18	21	31	17	90	87	78
Ext	/T	/T	/T	/T	/T	/T	/T	/T	/T	/T
Alphanum. CN		1075A			1089C	1089C	1090B			
S	2	5	11	3	4	3	7	3	42	0
N	3	6	11	3	7	3	12	5	95	0
ALPHA	0	0	0	0	0	0	0	0	29	0
SEALPHA	0	0	0	0	0	0	0	0	5	0
SOB	0	1	0	1	2	0	0	1	6	0
PSOB	0	20	0	33	50	0	0	33	14	0
NOB	0	1	0	1	2	0	0	1	6	0
PNOB	0	17	0	33	29	0	0	20	6	0
ALPHAOB	0	0	0	0	0	0	0	0	0	0
SEALPHAOB	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	1	0	0	0	2	0
PSW	0	0	0	0	25	0	0	0	5	0
NW	0	0	0	0	1	0	0	0	2	0
PNW	0	0	0	0	14	0	0	0	2	0
ALPHAW	0	0	0	0	0	0	0	0	0	0
SEALPHAW	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	1	0
PSD	0	0	0	0	0	0	0	0	2	0
ND	0	0	0	0	0	0	0	0	1	0
PND	0	0	0	0	0	0	0	0	1	0
ALPHAD	0	0	0	0	0	0	0	0	0	0
SEALPHAD	0	0	0	0	0	0	0	0	0	0
SP	0	0	0	1	0	0	0	1	1	0
PSP	0	0	0	33	0	0	0	33	2	0
NP	0	0	0	1	0	0	0	1	1	0
PNP	0	0	0	33	0	0	0	20	1	0
ALPHAP	0	0	0	0	0	0	0	0	0	0
SEALPHAP	0	0	0	0	0	0	0	0	0	0
SM	0	0	0	0	0	0	0	0	0	0
PSM	0	0	0	0	0	0	0	0	0	0
NM	0	0	0	0	0	0	0	0	0	0
PNM	0	0	0	0	0	0	0	0	0	0
ALPHAM	0	0	0	0	0	0	0	0	0	0
SEALPHAM	0	0	0	0	0	0	0	0	0	0
SL	0	1	1	0	0	0	1	0	1	0
PSL	0	20	9	0	0	0	14	0	2	0
NL	0	1	1	0	0	0	1	0	6	0
PNL	0	17	9	0	0	0	8	0	6	0
ALPHAL	0	0	0	0	0	0	0	0	0	0
SEALPHAL	0	0	0	0	0	0	0	0	0	0
SRT	1	2	7	2	1	0	3	0	24	0
PSRT	50	40	64	67	25	0	43	0	57	0
NRT	2	3	7	2	2	0	4	0	67	0
PNRT	67	50	64	67	29	0	33	0	71	0

Context	1071	1075	1085	1087	1089	1089	1090	2322	3133	3223
Sample	2	8	14	18	21	31	17	90	87	78
ALPHART	0	0	0	0	0	0	0	0	14	0
SEALPHART	0	0	0	0	0	0	0	0	3	0
SRD	0	0	3	1	0	0	0	0	5	0
PSRD	0	0	27	33	0	0	0	0	12	0
NRD	0	0	3	1	0	0	0	0	6	0
PNRD	0	0	27	33	0	0	0	0	6	0
ALPHARD	0	0	0	0	0	0	0	0	0	0
SEALPHARD	0	0	0	0	0	0	0	0	0	0
SRF	0	0	0	0	0	0	0	0	1	0
PSRF	0	0	0	0	0	0	0	0	2	0
NRF	0	0	0	0	0	0	0	0	1	0
PNRF	0	0	0	0	0	0	0	0	1	0
ALPHARF	0	0	0	0	0	0	0	0	0	0
SEALPHARF	0	0	0	0	0	0	0	0	0	0
SSA	0	3	5	1	0	0	2	0	16	0
PSSA	0	60	45	33	0	0	29	0	38	0
NSA	0	4	5	1	0	0	2	0	44	0
PNSA	0	67	45	33	0	0	17	0	46	0
ALPHASA	0	0	0	0	0	0	0	0	9	0
SEALPHASA	0	0	0	0	0	0	0	0	2	0
SSF	0	3	3	1	0	0	2	0	11	0
PSSF	0	60	27	33	0	0	29	0	26	0
NSF	0	4	3	1	0	0	2	0	38	0
PNSF	0	67	27	33	0	0	17	0	40	0
ALPHASF	0	0	0	0	0	0	0	0	5	0
SEALPHASF	0	0	0	0	0	0	0	0	1	0
SST	0	0	2	0	0	0	0	0	4	0
PSST	0	0	18	0	0	0	0	0	10	0
NST	0	0	2	0	0	0	0	0	4	0
PNST	0	0	18	0	0	0	0	0	4	0
ALPHAST	0	0	0	0	0	0	0	0	0	0
SEALPHAST	0	0	0	0	0	0	0	0	0	0
SSS	0	0	0	0	0	0	0	0	1	0
PSSS	0	0	0	0	0	0	0	0	2	0
NSS	0	0	0	0	0	0	0	0	2	0
PNSS	0	0	0	0	0	0	0	0	2	0
ALPHASS	0	0	0	0	0	0	0	0	0	0
SEALPHASS	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	1	0
PSG	0	0	0	0	0	0	0	0	2	0
NG	0	0	0	0	0	0	0	0	2	0
PNG	0	0	0	0	0	0	0	0	2	0
ALPHAG	0	0	0	0	0	0	0	0	0	0
SEALPHAG	0	0	0	0	0	0	0	0	0	0

Context	3266	3426	3430	3432	3421/3	3433	3443	3446	3446	3447
Sample	80	140	138	137	143	144	145	149	150	158
Ext	/T	/T	/T	/T	/T	/T	/T	/T	/1	/T
Alphanum. CN						s.144A				
S	24	49	45	42	47	43	21	34	37	52
N	27	71	68	85	125	55	41	52	63	69
ALPHA	100	69	58	33	28	90	17	43	38	95
SEALPHA	58	17	14	6	4	28	5	12	9	25
SOB	2	12	8	5	6	6	6	8	13	16
PSOB	8	24	18	12	13	14	29	24	35	31
NOB	2	14	8	11	6	6	22	9	13	17
PNOB	7	20	12	13	5	11	54	17	21	25
ALPHAOB	0	0	0	0	0	0	3	0	0	0
SEALPHAOB	0	0	0	0	0	0	1	0	0	0
SW	1	2	0	0	2	0	1	2	2	2
PSW	4	4	0	0	4	0	5	6	5	4
NW	1	3	0	0	2	0	1	2	2	2
PNW	4	4	0	0	2	0	2	4	3	3
ALPHAW	0	0	0	0	0	0	0	0	0	0
SEALPHAW	0	0	0	0	0	0	0	0	0	0
SD	0	1	2	1	1	0	2	1	1	1
PSD	0	2	4	2	2	0	10	3	3	2
ND	0	1	2	7	1	0	18	2	1	1
PND	0	1	3	8	1	0	44	4	2	1
ALPHAD	0	0	0	0	0	0	0	0	0	0
SEALPHAD	0	0	0	0	0	0	0	0	0	0
SP	0	4	2	2	2	5	0	3	5	6
PSP	0	8	4	5	4	12	0	9	14	12
NP	0	5	2	2	2	5	0	3	5	7
PNP	0	7	3	2	2	9	0	6	8	10
ALPHAP	0	0	0	0	0	0	0	0	0	0
SEALPHAP	0	0	0	0	0	0	0	0	0	0
SM	0	0	0	0	0	2	0	0	1	0
PSM	0	0	0	0	0	5	0	0	3	0
NM	0	0	0	0	0	2	0	0	1	0
PNM	0	0	0	0	0	4	0	0	2	0
ALPHAM	0	0	0	0	0	0	0	0	0	0
SEALPHAM	0	0	0	0	0	0	0	0	0	0
SL	1	1	1	1	1	1	0	2	1	1
PSL	4	2	2	2	2	2	0	6	3	2
NL	1	2	1	1	5	3	0	2	1	1
PNL	4	3	1	1	4	5	0	4	2	1
ALPHAL	0	0	0	0	0	0	0	0	0	0
SEALPHAL	0	0	0	0	0	0	0	0	0	0
SRT	18	30	26	24	27	27	10	17	18	26
PSRT	75	61	58	57	57	63	48	50	49	50
NRT	19	47	44	43	63	36	14	33	42	38
PNRT	70	66	65	51	50	65	34	63	67	55
ALPHART	0	36	27	23	18	50	0	14	12	37
SEALPHART	0	10	8	6	4	19	0	4	3	12
SRD	3	7	4	5	5	4	1	4	3	5

Context	3266	3426	3430	3432	3421/3	3433	3443	3446	3446	3447
Sample	80	140	138	137	143	144	145	149	150	158
PSRD	13	14	9	12	11	9	5	12	8	10
NRD	3	14	11	8	16	4	1	6	6	13
PNRD	11	20	16	9	13	7	2	12	10	19
ALPHARD	0	0	0	0	0	0	0	0	0	0
SEALPHARD	0	0	0	0	0	0	0	0	0	0
SRF	3	6	3	5	3	6	3	3	5	5
PSRF	13	12	7	12	6	14	14	9	14	10
NRF	3	10	4	16	4	10	4	11	18	5
PNRF	11	14	6	19	3	18	10	21	29	7
ALPHARF	0	0	0	0	0	0	0	0	0	0
SEALPHARF	0	0	0	0	0	0	0	0	0	0
SSA	11	23	19	19	21	22	5	12	13	19
PSSA	46	47	42	45	45	51	24	35	35	37
NSA	12	39	33	35	53	33	5	17	26	30
PNSA	44	55	49	41	42	60	12	33	41	43
ALPHASA	0	24	19	17	13	29	0	0	11	23
SEALPHASA	0	7	6	5	3	10	0	0	4	8
SSF	6	10	14	7	12	11	5	7	9	13
PSSF	25	20	31	17	26	26	24	21	24	25
NSF	7	15	21	7	36	17	5	11	18	18
PNSF	26	21	31	8	29	31	12	21	29	26
ALPHASF	0	0	19	0	6	0	0	0	0	0
SEALPHASF	0	0	8	0	2	0	0	0	0	0
SST	5	9	5	10	6	11	0	4	4	6
PSST	21	18	11	24	13	26	0	12	11	12
NST	5	19	12	26	12	16	0	5	8	12
PNST	19	27	18	31	10	29	0	10	13	17
ALPHAST	0	0	0	6	0	0	0	0	0	0
SEALPHAST	0	0	0	2	0	0	0	0	0	0
SSS	0	4	0	2	3	0	0	1	0	0
PSSS	0	8	0	5	6	0	0	3	0	0
NSS	0	5	0	2	5	0	0	1	0	0
PNSS	0	7	0	2	4	0	0	2	0	0
ALPHASS	0	0	0	0	0	0	0	0	0	0
SEALPHASS	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	0	0
PSG	0	0	0	0	0	0	0	0	0	0
NG	0	0	0	0	0	0	0	0	0	0
PNG	0	0	0	0	0	0	0	0	0	0
ALPHAG	0	0	0	0	0	0	0	0	0	0
SEALPHAG	0	0	0	0	0	0	0	0	0	0

Context	3450	3452	3453	3455	3459	3463	3463	3468	3468	3474
Sample	167	154	152	147	157	170	170	168	169	171
Ext	/1	/T	/T	/T	/1	/1	/T	/T	/1	/1
Alphanum. CN				3455A						
S	21	15	48	9	67	0	2	36	46	3
N	25	16	109	24	121	0	2	46	62	5
ALPHA	60	0	33	5	62	0	0	75	80	0
SEALPHA	31	0	5	2	10	0	0	26	22	0
SOB	6	5	9	2	9	0	0	11	9	0
PSOB	29	33	19	22	13	0	0	31	20	0
NOB	6	6	9	2	10	0	0	12	9	0
PNOB	24	38	8	8	8	0	0	26	15	0
ALPHAOB	0	0	0	0	0	0	0	0	0	0
SEALPHAOB	0	0	0	0	0	0	0	0	0	0
SW	1	1	1	0	1	0	0	0	1	0
PSW	5	7	2	0	1	0	0	0	2	0
NW	1	1	1	0	1	0	0	0	1	0
PNW	4	6	1	0	1	0	0	0	2	0
ALPHAW	0	0	0	0	0	0	0	0	0	0
SEALPHAW	0	0	0	0	0	0	0	0	0	0
SD	0	2	0	0	0	0	0	2	1	0
PSD	0	13	0	0	0	0	0	6	2	0
ND	0	3	0	0	0	0	0	2	1	0
PND	0	19	0	0	0	0	0	4	2	0
ALPHAD	0	0	0	0	0	0	0	0	0	0
SEALPHAD	0	0	0	0	0	0	0	0	0	0
SP	2	1	4	2	6	0	0	6	3	0
PSP	10	7	8	22	9	0	0	17	7	0
NP	2	1	4	2	7	0	0	6	3	0
PNP	8	6	4	8	6	0	0	13	5	0
ALPHAP	0	0	0	0	0	0	0	0	0	0
SEALPHAP	0	0	0	0	0	0	0	0	0	0
SM	0	0	0	0	0	0	0	0	0	0
PSM	0	0	0	0	0	0	0	0	0	0
NM	0	0	0	0	0	0	0	0	0	0
PNM	0	0	0	0	0	0	0	0	0	0
ALPHAM	0	0	0	0	0	0	0	0	0	0
SEALPHAM	0	0	0	0	0	0	0	0	0	0
SL	1	1	1	0	1	0	1	1	1	1
PSL	5	7	2	0	1	0	50	3	2	33
NL	1	1	1	0	1	0	1	1	1	2
PNL	4	6	1	0	1	0	50	2	2	40
ALPHAL	0	0	0	0	0	0	0	0	0	0
SEALPHAL	0	0	0	0	0	0	0	0	0	0
SRT	10	7	28	5	41	0	0	17	29	2
PSRT	48	47	58	56	61	0	0	47	63	67
NRT	14	7	78	8	83	0	0	26	45	3
PNRT	56	44	72	33	69	0	0	57	73	60
ALPHART	0	0	16	0	32	0	0	22	36	0
SEALPHART	0	0	3	0	6	0	0	9	10	0
SRD	2	0	7	3	8	0	0	4	10	0

Context	3450	3452	3453	3455	3459	3463	3463	3468	3468	3474
Sample	167	154	152	147	157	170	170	168	169	171
PSRD	10	0	15	33	12	0	0	11	22	0
NRD	3	0	10	6	22	0	0	8	17	0
PNRD	12	0	9	25	18	0	0	17	27	0
ALPHARD	0	0	0	0	5	0	0	0	0	0
SEALPHARD	0	0	0	0	2	0	0	0	0	0
SRF	2	3	5	1	6	0	0	3	3	0
PSRF	10	20	10	11	9	0	0	8	7	0
NRF	2	3	16	1	19	0	0	5	8	0
PNRF	8	19	15	4	16	0	0	11	13	0
ALPHARF	0	0	0	0	0	0	0	0	0	0
SEALPHARF	0	0	0	0	0	0	0	0	0	0
SSA	5	5	24	4	28	0	1	12	18	2
PSSA	24	33	50	44	42	0	50	33	39	67
NSA	9	5	63	7	55	0	1	18	27	3
PNSA	36	31	58	29	45	0	50	39	44	60
ALPHASA	0	0	14	0	23	0	0	0	24	0
SEALPHASA	0	0	3	0	5	0	0	0	9	0
SSF	4	3	13	3	17	0	1	7	12	1
PSSF	19	20	27	33	25	0	50	19	26	33
NSF	7	3	23	4	29	0	1	12	16	2
PNSF	28	19	21	17	24	0	50	26	26	40
ALPHASF	0	0	13	0	18	0	0	0	0	0
SEALPHASF	0	0	5	0	6	0	0	0	0	0
SST	1	2	11	1	11	0	0	4	6	1
PSST	5	13	23	11	16	0	0	11	13	33
NST	2	2	40	3	26	0	0	5	11	1
PNST	8	13	37	13	21	0	0	11	18	20
ALPHAST	0	0	5	0	7	0	0	0	0	0
SEALPHAST	0	0	1	0	2	0	0	0	0	0
SSS	0	0	0	0	0	0	0	1	0	0
PSSS	0	0	0	0	0	0	0	3	0	0
NSS	0	0	0	0	0	0	0	1	0	0
PNSS	0	0	0	0	0	0	0	2	0	0
ALPHASS	0	0	0	0	0	0	0	0	0	0
SEALPHASS	0	0	0	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	0	0	0	0
PSG	0	0	0	0	0	0	0	0	0	0
NG	0	0	0	0	0	0	0	0	0	0
PNG	0	0	0	0	0	0	0	0	0	0
ALPHAG	0	0	0	0	0	0	0	0	0	0
SEALPHAG	0	0	0	0	0	0	0	0	0	0

Context	3475	3475	3476	3476	3477	3477	Whole site
Sample	162	163	175	176	172	174	
Ext	/T1	/1	/1	/T	/1	/1	
Alphanum. CN							
S	25	52	81	20	59	59	290
N	32	82	129	25	170	140	1783
ALPHA	52	61	93	48	32	39	98
SEALPHA	21	13	15	24	4	5	4
SOB	7	16	40	5	9	16	98
PSOB	28	31	49	25	15	27	34
NOB	6	18	56	5	12	23	287
PNOB	19	22	43	20	7	16	16
ALPHAOB	0	0	62	0	0	24	52
SEALPHAOB	0	0	17	0	0	11	5
SW	0	3	4	1	1	1	9
PSW	0	6	5	5	2	2	3
NW	0	3	4	1	1	2	32
PNW	0	4	3	4	1	1	2
ALPHAW	0	0	0	0	0	0	4
SEALPHAW	0	0	0	0	0	0	1
SD	0	1	5	0	0	2	10
PSD	0	2	6	0	0	3	3
ND	0	1	5	0	0	2	42
PND	0	1	4	0	0	1	2
ALPHAD	0	0	0	0	0	0	4
SEALPHAD	0	0	0	0	0	0	1
SP	3	5	15	1	5	3	41
PSP	12	10	19	5	8	5	14
NP	3	5	26	1	6	4	104
PNP	9	6	20	4	4	3	6
ALPHAP	0	0	15	0	0	0	25
SEALPHAP	0	0	5	0	0	0	4
SM	0	0	0	0	0	0	3
PSM	0	0	0	0	0	0	1
NM	0	0	0	0	0	0	3
PNM	0	0	0	0	0	0	0
ALPHAM	0	0	0	0	0	0	0
SEALPHAM	0	0	0	0	0	0	0
SL	0	1	2	0	0	0	6
PSL	0	2	2	0	0	0	2
NL	0	1	2	0	0	0	38
PNL	0	1	2	0	0	0	2
ALPHAL	0	0	0	0	0	0	2
SEALPHAL	0	0	0	0	0	0	1
SRT	12	29	26	10	38	30	513
PSRT	48	56	32	50	64	51	177
NRT	18	58	52	13	131	92	1094
PNRT	56	71	40	52	77	66	61
ALPHART	0	23	21	0	18	16	376
SEALPHART	0	5	5	0	3	3	19
SRD	4	6	6	4	6	6	116

Context	3475	3475	3476	3476	3477	3477	Whole site
Sample	162	163	175	176	172	174	
PSRD	16	12	7	20	10	10	40
NRD	10	17	21	5	43	13	267
PNRD	31	21	16	20	25	9	15
ALPHARD	0	0	3	0	2	0	78
SEALPHARD	0	0	1	0	1	0	8
SRF	2	7	4	2	8	6	95
PSRF	8	13	5	10	14	10	33
NRF	2	16	4	2	36	22	222
PNRF	6	20	3	8	21	16	12
ALPHARF	0	0	0	0	3	3	63
SEALPHARF	0	0	0	0	1	1	7
SSA	9	18	15	8	20	19	89
PSSA	36	35	19	40	34	32	31
NSA	15	34	35	11	88	50	760
PNSA	47	41	27	44	52	36	43
ALPHASA	0	16	10	0	8	11	26
SEALPHASA	0	5	3	0	1	3	2
SSF	6	9	12	5	8	12	52
PSSF	24	17	15	25	14	20	18
NSF	9	18	27	8	42	40	444
PNSF	28	22	21	32	25	29	25
ALPHASF	0	0	8	0	3	6	15
SEALPHASF	0	0	3	0	1	2	1
SST	3	8	3	3	12	6	32
PSST	12	15	4	15	20	10	11
NST	6	15	8	3	46	9	298
PNST	19	18	6	12	27	6	17
ALPHAST	0	0	0	0	5	0	9
SEALPHAST	0	0	0	0	1	0	1
SSS	0	1	0	0	0	1	5
PSSS	0	2	0	0	0	2	2
NSS	0	1	0	0	0	1	18
PNSS	0	1	0	0	0	1	1
ALPHASS	0	0	0	0	0	0	0
SEALPHASS	0	0	0	0	0	0	0
SG	0	0	0	0	0	0	1
PSG	0	0	0	0	0	0	0
NG	0	0	0	0	0	0	2
PNG	0	0	0	0	0	0	0
ALPHAG	0	0	0	0	0	0	0
SEALPHAG	0	0	0	0	0	0	0

Table 7. Insects and other macro-invertebrates from 118-26 Walmgate, York: species lists by sample. Taxa are listed in descending order of abundance. Key: n - minimum number of individuals; q - quantification (s - semi-quantitative 'several', m - semi-quantitative 'many', both sensu Kenward et al. (1986), e - estimate); ec - ecological codes (see Table 8 for explanation); * - not used in calculation of statistics in Table 6.

Context: 1071 Sample: 2/T ReM: S
Weight: 1.00 E: 5.00 F: 5.00

Notes: One dish flot, some plant debris (?stems), seeds and charcoal.

Taxon	n	q	ec
Megastemum obscurum	2	-	rt
Philonthus sp.	1	-	u

Context: 1075 Sample: 8/T CA: 1075A ReM: R
Weight: 1.00 E: 4.00 F: 4.00

Notes: No flot description and may be an incomplete list, so entered as a rapid scan.

Taxon	n	q	ec
Cercyon analis	2	-	rt-sf
Catops sp.	1	-	u
Omalium ?caesum or italicum	1	-	rt-sf
Elateridae sp.	1	-	ob
Anobium punctatum	1	-	l-sf

Context: 1085 Sample: 14/T ReM: S
Weight: 1.00 E: 4.00 F: 3.00

Notes: One dish flot of plant debris and some seeds.

Taxon	n	q	ec
Megastemum obscurum	1	-	rt
Acrotrichis sp.	1	-	rt
Scydmaenidae sp.	1	-	u
Xylodromus concinnus	1	-	rt-st
Anotylus tetracarinus	1	-	rt
Tachyporus sp. A	1	-	u
Tachyporus sp. B	1	-	u
Anobium punctatum	1	-	l-sf
Tipnus unicolor	1	-	rd-st
Ptinus sp.	1	-	rd-sf
?Cryptophagus sp.	1	-	rd-sf
*Diptera sp. (puparium)	1	-	u
*Mollusca sp.	1	-	u

Context: 1087 Sample: 18/T ReM: R
Weight: 1.00 E: 4.00 F: 4.00

Notes: Two dish flot. Some plant fragments, abundant seeds and traces of charcoal. Possibly an incomplete list, so entered as rapid scan.

Taxon	n	q	ec
Megastemum obscurum	1	-	rt

Ptinus sp.	1	-	rd-sf
Ceutorhynchus sp.	1	-	oa-p

Context: 1089 Sample: 21/T CA: 1089C ReM: S
Weight: 1.00 E: 3.00 F: 2.00

Notes: One dish of flot, with some plant fragments, seeds and charcoal.

Taxon	n	q	ec
Aleocharinae sp.	3	-	u
Anotylus tetracarinus	2	-	rt
Helophorus sp.	1	-	oa-w
Curculionidae sp.	1	-	oa
*Acarina sp.	6	s	u

Context: 1089 Sample: 31/T CA: 1089C ReM: S
Weight: 1.00 E: 2.00 F: 2.00

Notes: One dish of flot, with some plant debris, seeds, and charcoal and wood fragments.

Taxon	n	q	ec
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Staphylinidae sp.	1	-	u
*Acarina sp.	6	s	u

Context: 1090 Sample: 17/T CA: 1090B ReM: S
Weight: 1.00 E: 3.00 F: 2.00

Notes: Five dish flot, abundant plant fragments, charcoal, seeds and a charred grain.

Taxon	n	q	ec
Aleocharinae sp. A	5	-	u
Anotylus rugosus	2	-	rt
Ptiliidae sp.	1	-	u
Omalium rivulare	1	-	rt-sf
Aleocharinae sp. B	1	-	u
Anobium punctatum	1	-	l-sf
Anthicus sp.	1	-	rt

Context: 2322 Sample: 90/T ReM: S
Weight: 1.00 E: 3.00 F: 2.00

Notes: Recorded AR, one dish flot with abundant seeds, some plant debris and charcoal.

Taxon	n	q	ec
Aleocharinae sp. B	3	-	u
Aleocharinae sp. A	1	-	u

Apion sp. 1 - oa-p

*Acarina sp. 6 s u

Context: 3133 Sample: 87/T ReM: S
Weight: 0.00 E: 0.00 F: 3.00

Notes: Recorded by AR - marked 'to fin' but a second sheet probably represents completion. 12 dish flot, lots of plant debris and seeds, three charred grains.

Taxon	n	q	ec
Anotylus complanatus	13	-	rt-sf
Anotylus nitidulus	8	-	rt
Anotylus rugosus	7	-	rt
Anotylus tetracarinatus	6	-	rt
Anobium punctatum	6	-	l-sf
Cercyon analis	5	-	rt-sf
Omalium rivulare	5	-	rt-sf
Anotylus rugosus	3	-	rt
Catops sp.	2	-	u
Carpelimus bilineatus	2	-	rt-sf
Anotylus sculpturatus group	2	-	rt
Aleocharinae sp. A	2	-	u
Aleocharinae sp. E	2	-	u
Aleocharinae sp. F	2	-	u
Ptinus fur	2	-	rd-sf
Oryzaephilus surinamensis	2	-	g-ss
Helophorus aquaticus or grandis	1	-	oa-w
Helophorus sp.	1	-	oa-w
Acritus nigricornis	1	-	rt-st
Ptenidium sp.	1	-	rt
Acrotrich is sp. A	1	-	rt
Acrotrich is sp. B	1	-	rt
Omalium caesum or italicum	1	-	rt-sf
Xylodromus concinnus	1	-	rt-st
Coprophilus striatulus	1	-	rt-st
Platystethus nitens	1	-	oa-d
Neobisnius sp.	1	-	u
Cordalia obscura	1	-	rt-sf
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Aleocharinae sp. G	1	-	u
Staphylinidae sp.	1	-	u
Aphodius sp.	1	-	ob-rf
Elateridae sp.	1	-	ob
Rhizophagus sp.	1	-	u
Cryptop hagus sp. A	1	-	rd-sf
Cryptop hagus sp. B	1	-	rd-sf
Atomaria sp.	1	-	rd
Lathridius minutus group	1	-	rd-st
Corticaria sp.	1	-	rt-sf
Phyllotreta nemorum group	1	-	oa-p

*Acarina sp. 4 - u

*Diptera sp. (puparium) 3 - u

Context: 3223 Sample: 78/T ReM: S
Weight: 10.00 E: 2.00 F: 1.00

Notes: Bulk sieved using 300 micron mesh (producing 1.4 kg of residue) then paraffined. Three dish flot, much charcoal. Three contaminant insects recorded.

null 0 - u

Context: 3266 Sample: 80/T ReM: R
Weight: 1.00 E: 3.00 F: 3.00

Notes: List may be incomplete so entered as a rapid scan. Twelve dishes of flot, mainly plant debris with some seeds, charcoal and charred grain.

Taxon	n	q	ec
Neobisnius sp.	3	-	u
Cercyon analis	2	-	rt-sf
Helophorus aquaticus or grandis	1	-	oa-w
Cercyon terminatus	1	-	rf-st
Cercyon ?unipunctatus	1	-	rf-st
?Ptenidium sp.	1	-	rt
Acrotrichis sp.	1	-	rt
Omalium rivulare	1	-	rt-sf
Xylodromus concinnus	1	-	rt-st
Carpelimus bilineatus	1	-	rt-sf
Anotylus nitidulus	1	-	rt
Anotylus rugosus	1	-	rt
Anotylus sculpturatus group	1	-	rt
Oxytelus sculptus	1	-	rt-st
Philonthus sp.	1	-	u
Aleocharinae sp.	1	-	u
Aphodius sp.	1	-	ob-rf
Anobium punctatum	1	-	l-sf
Rhizophagus sp.	1	-	u
Monotoma sp.	1	-	rt-sf
Cryptophagus sp.	1	-	rd-sf
Atomaria sp.	1	-	rd
Lathridius minutus group	1	-	rd-st
Anthicus sp.	1	-	rt

Context: 3426 Sample: 140/T ReM: S
Weight: 1.00 E: 2.00 F: 2.00

Notes: One dish flot, rich in insects including puparia, and seeds.

Taxon	n	q	ec
Lathridius minutus group	6	s	rd-st
Cercyon terminatus	3	-	rf-st
Platystethus arenarius	3	-	rf
Corticaria sp. A	3	-	rt-sf
Helophorus sp. A	2	-	oa-w
Xylodromus concinnus	2	-	rt-st
Carpelimus bilineatus	2	-	rt-sf
Leptacinus sp.	2	-	rt-st
Aleocharinae sp. C	2	-	u
Aleocharinae sp. D	2	-	u
Anobium punctatum	2	-	l-sf
Cryptop hagus sp. A	2	-	rd-sf

Typhaea stercorea	2	-	rd-ss	Aleocharinae sp. A	2	-	u
Anthicus formicarius	2	-	rt-st	Aleocharinae sp. D	2	-	u
Halticinae sp. A	2	-	oa-p	Cryptophagus scutellatus	2	-	rd-st
Hemiptera sp.	1	-	u	Cryptophagus sp.	2	-	rd-sf
Carabidae sp.	1	-	ob	Clivina fossor	1	-	oa
Helophorus sp. B	1	-	oa-w	Micropeplus sp.	1	-	rt
Acritus nigricornis	1	-	rt-st	Phyllodrepa floralis	1	-	rt-sf
Histerinae sp.	1	-	rt	Omalius caesum or italicum	1	-	rt-sf
Lesteva sp.	1	-	oa-d	Omalius rivulare	1	-	rt-sf
Dropephylla sp.	1	-	u	Coprophilus striatulus	1	-	rt-st
Omalius sp.	1	-	rt	Carpelimus fuliginosus	1	-	st
Carpelimus fuliginosus	1	-	st	Carpelimus pusillus group	1	-	u
Oxytelus sculptus	1	-	rt-st	Platystethus cornutus group	1	-	oa-d
Stenus sp.	1	-	u	Platystethus nitens	1	-	oa-d
Gyrophynus sp.	1	-	rt	Anotylus sculpturatus group	1	-	rt
Cordalia obscura	1	-	rt-sf	Stenus sp.	1	-	u
Aleocharinae sp. A	1	-	u	Xantholinus longiventris	1	-	rt-sf
Aleocharinae sp. B	1	-	u	Neobisnius sp.	1	-	u
Aleocharinae sp. E	1	-	u	Cordalia obscura	1	-	rt-sf
Euplectini sp.	1	-	u	?Falagria sp.	1	-	rt-sf
Aphodius sp. A	1	-	ob-rf	Aleocharinae sp. B	1	-	u
Aphodius sp. B	1	-	ob-rf	Aleocharinae sp. C	1	-	u
Aphodius sp. C	1	-	ob-rf	Aleocharinae sp. E	1	-	u
Aphodius sp. D	1	-	ob-rf	Aleocharinae sp. G	1	-	u
Byrrhidae sp.	1	-	oa-p	Euplectini sp.	1	-	u
Ptinus fur	1	-	rd-sf	Aphodius sp. A	1	-	ob-rf
Meligethes sp.	1	-	oa-p	Aphodius sp. B	1	-	ob-rf
Rhizophagus parallelocollis	1	-	rt-sf	Elateridae sp.	1	-	ob
Monotoma longicollis	1	-	rt-st	Anobium punctatum	1	-	l-sf
Cryptophagus sp. B	1	-	rd-sf	Monotoma sp.	1	-	rt-sf
Atomaria nigripennis	1	-	rd-ss	Cryptophagus sp. B	1	-	rd-sf
Atomaria sp.	1	-	rd	Anthicus sp.	1	-	rt
Enicmus sp.	1	-	rt-sf	Phyllotreta sp.	1	-	oa-p
Corticaria sp. B	1	-	rt-sf	Apion sp.	1	-	oa-p
Aglenus brunneus	1	-	rt-ss				
Tenebrio obscurus	1	-	rt-ss	*Acarina sp.	15	m	u
Halticinae sp. B	1	-	oa-p	*Diptera sp. (puparium)	6	s	u
				*Pulex irritans	3	-	ss
*Diptera sp. (puparium)	6	s	u	*Hymenoptera Parasitica sp.	1	-	u
*Acarina sp.	6	s	u				
*Bibionidae sp.	1	-	u				

Context: 3430 Sample: 138/T ReM: S
Weight: 1.00 E: 3.00 F: 3.00

Notes: Very large flot (25 dishes!), mostly plant fragments and some seeds. Not in original database; probably a completed list, however. Apion newly emerged.

Taxon	n	q	ec
Lathridius minutus group	6	-	rd-st
Aleocharinae sp. E	4	-	u
Cercyon analis	3	-	rt-sf
Enicmus sp.	3	-	rt-sf
Ptenidium sp.	2	-	rt
Xylodromus concinnus	2	-	rt-st
Carpelimus bilineatus	2	-	rt-sf
Platystethus arenarius	2	-	rf
Anotylus complanatus	2	-	rt-sf
Anotylus nitidulus	2	-	rt
Anotylus rugosus	2	-	rt

Context: 3432 Sample: 137/T ReM: S
Weight: 1.00 E: 0.00 F: 0.00

Notes: One dish flot, several seeds, fine plant debris.

Taxon	n	q	ec
Carpelimus pusillus group	14	-	u
Platystethus cornutus group	7	-	oa-d
Cercyon atricapillus	6	-	rf-st
Cercyon terminatus	4	-	rf-st
Platystethus arenarius	4	-	rf
Carpelimus fuliginosus	3	-	st
Oxytelus sculptus	3	-	rt-st
Lathridius minutus group	3	-	rd-st
Acrotrichis sp.	2	-	rt
Xylodromus concinnus	2	-	rt-st
Aleocharinae sp. A	2	-	u
Aleocharinae sp. B	2	-	u
Aleocharinae sp. C	2	-	u
Atomaria sp. A	2	-	rd
Anthicus ?formicarius	2	-	rt-st

Auchenorhyncha sp.	1	-	oa-p
Carabidae sp.	1	-	ob
Cercyon analis	1	-	rt-sf
Cercyon ?unipunctatus	1	-	rf-st
Ptenidium sp.	1	-	rt
Leptacinus sp.	1	-	rt-st
Gyrohypnus sp.	1	-	rt
Neobisnius ?villosulus	1	-	u
Staphylininae sp. A	1	-	u
Staphylininae sp. B	1	-	u
Cordalia obscura	1	-	rt-sf
Aleocharinae sp. D	1	-	u
Aleocharinae sp. E	1	-	u
Aleocharinae sp. F	1	-	u
Aleocharinae sp. G	1	-	u
Euplectini sp.	1	-	u
Aphodius sp.	1	-	ob-rf
Anobium punctatum	1	-	l-sf
Ptinus fur	1	-	rd-sf
Monotoma sp.	1	-	rt-sf
Cryptophagus scutellatus	1	-	rd-st
Atomaria sp. B	1	-	rd
Enicmus sp.	1	-	rt-sf
Corticaria sp.	1	-	rt-sf
Aglenus brunneus	1	-	rt-ss
Tenebrio obscurus	1	-	rt-ss
Halticinae sp.	1	-	oa-p
*Diptera sp. (puparium)	15	m	u
*Acarina sp.	15	m	u
*Coccoidea sp.	6	s	u
*Coleoptera sp. (larva)	6	s	u
*Syrphidae sp. (larva)	1	-	u
*Formicidae sp.	1	-	u

Context: 3421/3 Sample: 143/T ReM: R
Weight: 1.00 E: 3.00 F: 3.00

Notes: Context may be 3423; it was originally processed and listed as 5422. Six dishes of flot, abundant plant fragments and a few seeds. Not in original database. May be incomplete list so entered as a rapid scan.

Taxon	n	q	ec
Carpelimus pusillus group	34	-	u
Corticaria sp. B	7	-	rt-sf
Anobium punctatum	5	-	l-sf
Cryptophagus sp. L	5	-	rd-sf
Corticaria sp. A	5	-	rt-sf
Cercyon analis	4	-	rt-sf
Acrotichis sp.	4	-	rt
Xylodromus concinnus	4	-	rt-st
Ptinus fur	4	-	rd-sf
Atomaria sp.	4	-	rd
Aleocharinae sp. D	3	-	u
Aglenus brunneus	3	-	rt-ss
Platystethus arenarius	2	-	rf
Anotylus rugosus	2	-	rt
Oxytelus sculptus	2	-	rt-st
Stenus sp.	2	-	u
Philonthus ?politus	2	-	rt-st

Philonthus sp.	2	-	u
Aleocharinae sp. A	2	-	u
Lathridius minutus group	2	-	rd-st
Helophorus aquaticus or grandis	1	-	oa-w
Cercyon haemorrhoidalis	1	-	rf-sf
Acritus nigricornis	1	-	rt-st
Ochthebius sp.	1	-	oa-w
Scydmaenidae sp.	1	-	u
Micropheplus sp.	1	-	rt
Dropephylla sp.	1	-	u
Omalium caesum or italicum	1	-	rt-sf
Carpelimus bilineatus	1	-	rt-sf
Platystethus cornutus group	1	-	oa-d
Gyrohypnus angustatus	1	-	rt-st
Tachinus sp.	1	-	u
Falagria sp.	1	-	rt-sf
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aleocharinae sp. E	1	-	u
Aleocharinae sp. F	1	-	u
Aleocharinae sp. G	1	-	u
Pselaphidae sp.	1	-	u
Aphodius sp.	1	-	ob-rf
Enicmus sp.	1	-	rt-sf
Corticaria sp. C	1	-	rt-sf
Typhaea stereorea	1	-	rd-ss
Tenebrio obscurus	1	-	rt-ss
Anthicus sp.	1	-	rt
Apion sp.	1	-	oa-p
Apion sp. B	1	-	oa-p
*Acarina sp.	15	m	u
*Diptera sp. (puparium)	6	s	u

Context: 3433 Sample: 144/T CA: s.144A ReM: R
Weight: 1.00 E: 3.00 F: 2.00

Notes: Four dish flot, with fine plant debris and some seeds. Not in original database, perhaps unfinished so entered as rapid scan.

Taxon	n	q	ec
Cercyon analis	3	-	rt-sf
Cercyon terminatus	3	-	rf-st
Anobium punctatum	3	-	l-sf
Cercyon atricapillus	2	-	rf-st
Cercyon haemorrhoidalis	2	-	rf-sf
Acritus nigricornis	2	-	rt-st
Anotylus complanatus	2	-	rt-sf
Oxytelus sculptus	2	-	rt-st
Aleocharinae sp. A	2	-	u
Ulopa ?reticulata	1	-	oa-p-m
Cercyon haemorrhoidalis	1	-	rf-sf
Cryptopleurum minutum	1	-	rf-st
Acrotichis sp.	1	-	rt
Olophrum sp.	1	-	oa
Omalium rivulare	1	-	rt-sf
Xylodromus concinnus	1	-	rt-st
Carpelimus fuliginosus	1	-	st
Carpelimus pusillus group	1	-	u
Platystethus arenarius	1	-	rf

Anotylus rugosus	1	-	rt
Stenus sp.	1	-	u
?Lithocharis sp.	1	-	rt
Leptacinus sp.	1	-	rt-st
Gyrophypnus sp.	1	-	rt
Philonthus sp.	1	-	u
Staphylininae sp. A	1	-	u
Staphylininae sp. B	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Clambus sp.	1	-	rt-sf
Meligethes sp.	1	-	oa-p
Omosita discoidea	1	-	rt-sf
Cryptophagus scutellatus	1	-	rd-st
Cryptophagus sp.	1	-	rd-sf
Atomaria sp.	1	-	rd
Lathridius minutus group	1	-	rd-st
Enicmus sp.	1	-	rt-sf
Corticaria sp.	1	-	rt-sf
Corticaria gibbosa	1	-	rt
Anthicus formicarius	1	-	rt-st
Phyllotreta nemorum group	1	-	oa-p
Strophosomus ?sus	1	-	oa-p-m
Ceutorhynchus sp.	1	-	oa-p
*Diptera sp. (adult)	15	m	u
*Diptera sp. (puparium)	15	m	u
*Acarina sp.	6	s	u
*Coccoidea sp.	2	-	u
*Hymenoptera Aculeata sp.	2	-	u
*Syrphidae sp. (larva)	1	-	u
*Siphonaptera sp.	1	-	u
*Formicidae sp.	1	-	u

Context: 3443 Sample: 145/T ReM: S
Weight: 1.00 E: 4.00 F: 3.00

Notes: One dish flot, with pale spongy plant fragments, lumps of wood and a few seeds.

Taxon	n	q	ec
Platystethus cornutus group	16	-	oa-d
Anotylus nitidulus	4	-	rt
Platystethus arenarius	2	-	rf
Platystethus nitens	2	-	oa-d
Carabidae sp.	1	-	ob
Helophorus sp.	1	-	oa-w
Cercyon analis	1	-	rt-sf
Cercyon ?haemorrhoidalis	1	-	rf-sf
Omalium excavatum	1	-	rt-sf
Omalium ?rivulare	1	-	rt-sf
Carpelimus pusillus group	1	-	u
Stenus sp.	1	-	u
Gyrophypnus sp.	1	-	rt
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Aphodius sp.	1	-	ob-rf
Elatерidae sp.	1	-	ob
Atomaria sp.	1	-	rd

Enicmus sp.	1	-	rt-sf
*Diptera sp. (adult)	6	s	u
*Diptera sp. (puparium)	6	s	u
*Coccoidea sp.	2	-	u

Context: 3446 Sample: 149/T ReM: S
Weight: 1.00 E: 3.00 F: 3.00

Notes: One dish flot, with spongy plant fragments and some seeds.

Taxon	n	q	ec
Platystethus arenarius	9	-	rf
Anotylus nitidulus	3	-	rt
Cryptophagus sp.	3	-	rd-sf
Cercyon analis	2	-	rt-sf
Xylodromus concinnus	2	-	rt-st
Platystethus cornutus group	2	-	oa-d
Anotylus rugosus	2	-	rt
Falagria sp.	2	-	rt-sf
Staphylinidae sp.	2	-	u
Auchenorhyncha sp.	1	-	oa-p
Helophorus aquaticus or grandis	1	-	oa-w
Cercyon atricapillus	1	-	rf-st
Ochthebius sp.	1	-	oa-w
Carpelimus bilineatus	1	-	rt-sf
Carpelimus pusillus group	1	-	u
Stenus sp.	1	-	u
Philonthus sp. A	1	-	u
Philonthus sp. B	1	-	u
Autalia sp.	1	-	rt
Cordalia obscura	1	-	rt-sf
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aphodius sp.	1	-	ob-rf
Elatерidae sp.	1	-	ob
Anobium punctatum	1	-	l-sf
Lyctus linearis	1	-	l-sf
Meligethes sp.	1	-	oa-p
Atomaria sp. A	1	-	rd
Atomaria sp. B	1	-	rd
Lathridius minutus group	1	-	rd-st
Aglenus brunneus	1	-	rt-ss
Anthicus floralis or formicarius	1	-	rt-st
Apion sp.	1	-	oa-p

*Diptera sp. (puparium)	15	m	u
*Coccoidea sp.	6	s	u
*Diptera sp. (adult)	6	s	u
*Acarina sp.	6	s	u
*Siphonaptera sp.	1	-	u
*Hymenoptera Parasitica sp.	1	-	u

Context: 3446 Sample: 150/1 ReM: D
Weight: 1.00 E: 0.00 F: 0.00

Notes: No information about flot. JP data added.

Taxon	n	q	ec
-------	---	---	----

Platystethus arenarius	10	-	rf
Cercyon analis	4	-	rt-sf
Cercyon ?haemorrhoidalis	4	-	rf-sf
Anotylus nitidulus	3	-	rt
Cryptophagus sp.	3	-	rd-sf
Anthicus floralis or formicarius	3	-	rt-st
Cercyon atricapillus	2	-	rf-st
Stenus sp.	2	-	u
Falagria caesa or sulcatula	2	-	rt-sf
Aleocharinae sp. A	2	-	u
Lathridius minutus group	2	-	rd-st
Aneurus sp.	1	-	l
Carabus ?nemoralis	1	-	oa
Dromius sp.	1	-	oa
Helophorus sp.	1	-	oa-w
Ochthebius sp.	1	-	oa-w
Xylodromus ?concinnus	1	-	rt-st
Platystethus degener	1	-	oa-d
Anotylus complanatus	1	-	rt-sf
Anotylus rugosus	1	-	rt
Staphylininae sp. A	1	-	u
Staphylininae sp. B	1	-	u
Staphylininae sp. C	1	-	u
Cordalia obscura	1	-	rt-sf
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aphodius ?granarius	1	-	ob-rf
Aphodius sp.	1	-	ob-rf
Elateridae sp.	1	-	ob
Ptinus ?fur	1	-	rd-sf
Enicmus sp.	1	-	rt-sf
Corticaria sp.	1	-	rt-sf
Lema or Oulema sp.	1	-	oa-p
Chrysomelinae sp.	1	-	oa-p
Phyllotreta nemorum group	1	-	oa-p
Micrelus ericae	1	-	oa-p-m
Ceuthorhynchinae sp.	1	-	oa-p
*Haematobosca stimulans (puparium)	5	-	u
*Sphaeroceridae sp. (puparium)	4	-	rt
*Paregle radicum (puparium)	2	-	u
*Musca domestica (puparium)	1	-	u

Context: 3447 Sample: 158/T ReM: S

Weight: 1.00 E: 2.00 F: 3.00

Notes: Two dish flot, with twigs and fine plant remains, wood fragments, charcoal and seeds.

Taxon	n	q	ec
Lathridius minutus group	7	-	rd-st
Aleocharinae sp. A	3	-	u
Cryptophagus sp. B	3	-	rd-sf
Omalium rivulare	2	-	rt-sf
Anotylus complanatus	2	-	rt-sf
Anotylus nitidulus	2	-	rt
Stenus sp.	2	-	u
Aleocharinae sp. B	2	-	u
Corticaria sp. B	2	-	rt-sf
Chaetocnema arida group	2	-	oa-p

Eurydema oleracea	1	-	oa-p
Bembidion sp.	1	-	oa
Pterostichus melanarius	1	-	ob
Harpalus rufipes	1	-	oa
Carabidae sp.	1	-	ob
Helophorus sp.	1	-	oa-w
Cercyon analis	1	-	rt-sf
Cercyon atricapillus	1	-	rf-st
Cercyon haemorrhoidalis	1	-	rf-sf
Cercyon terminatus	1	-	rf-st
Acritus nigricornis	1	-	rt-st
Ochthebius sp.	1	-	oa-w
Ptenidium sp.	1	-	rt
Carpelimus bilineatus	1	-	rt-sf
Platystethus arenarius	1	-	rf
Platystethus nitens	1	-	oa-d
Gyrophypnus sp.	1	-	rt
Neobisnius ?villosulus	1	-	u
Philonthus sp.	1	-	u
Staphylininae sp. A	1	-	u
Staphylininae sp. B	1	-	u
Falagria caesa or sulcatula	1	-	rt-sf
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Aleocharinae sp. E	1	-	u
Aphodius sp.	1	-	ob-rf
Elateridae sp.	1	-	ob
Anobium punctatum	1	-	l-sf
Monotoma ?bicolor	1	-	rt-st
Cryptophagus sp. A	1	-	rd-sf
Atomaria sp.	1	-	rd
Ephistemus globulus	1	-	rd-sf
Orthoperus sp.	1	-	rt
Enicmus sp.	1	-	rt-sf
Corticaria sp. A	1	-	rt-sf
Corticaria gibbosa	1	-	rt
Anthicus floralis or formicarius	1	-	rt-st
Phyllotreta nemorum group	1	-	oa-p
Longitarsus sp.	1	-	oa-p
Chaetocnema concinna	1	-	oa-p
Apion sp.	1	-	oa-p
Curculionidae sp.	1	-	oa

*Diptera sp. (adult) 6 s u

*Diptera sp. (puparium) 6 s u

*Acarina sp. 6 s u

*Coleoptera sp. (larva) 1 - u

*Formicidae sp. 1 - u

*Hymenoptera Parasitica sp. 1 - u

Context: 3450 Sample: 167/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: No details of flot. JP data added.

Taxon	n	q	ec
Omalium ?rivulare	3	-	rt-sf
Lathridius minutus group	2	-	rd-st
Enicmus sp.	2	-	rt-sf
Trechus obtusus or quadristriatus	1	-	oa
?Amara sp.	1	-	oa

Helophorus sp.	1	-	oa-w
Cercyon analis	1	-	rt-sf
?Cercyon sp.	1	-	u
Platystethus arenarius	1	-	rf
Anotylus nitidulus	1	-	rt
Anotylus rugosus	1	-	rt
Lathrobium longulum	1	-	u
Philonthus sp.	1	-	u
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aphodius sp.	1	-	ob-rf
Anobiidae sp.	1	-	l
Cryptophagus sp.	1	-	rd-sf
?Corticaria gibbosa	1	-	rt
Chrysomelinae sp.	1	-	oa-p
Phyllotreta nemorum group	1	-	oa-p
*Leptocera sp. (puparium)	420	e	u
*Formicidae sp.	1	-	u
*Hymenoptera Parasitica sp.	1	-	u

Context: 3452 Sample: 154/T ReM: S
Weight: 1.00 E: 4.00 F: 3.00

Notes: One dish flot with a few pale plant fragments, some seeds and charcoal.

Taxon	n	q	ec
Platystethus cornutus group	2	-	oa-d
Helophorus sp.	1	-	oa-w
Cercyon haemorrhoidalis	1	-	rf-sf
Acritus nigricornis	1	-	rt-st
Carpelimus ?elongatulus	1	-	oa-d
Carpelimus sp.	1	-	u
Platystethus arenarius	1	-	rf
Anotylus nitidulus	1	-	rt
Stenus sp.	1	-	u
Lathrobium sp.	1	-	u
Aphodius sp.	1	-	ob-rf
Oxyomus sylvestris	1	-	rt-sf
Anobium punctatum	1	-	l-sf
Anthicus floralis or formicarius	1	-	rt-st
Apion sp.	1	-	oa-p
*Acarina sp.	6	s	u

Context: 3453 Sample: 152/T ReM: SS
Weight: 1.00 E: 2.00 F: 2.00

Notes: Two dish flot, rich in insects including puparia, and with many seeds.

Taxon	n	q	ec
Anthicus formicarius	15	m	rt-st
Cercyon atricapillus	6	s	rf-st
Acrotichis sp.	6	s	rt
Platystethus arenarius	6	s	rf
Leptacinus ?pusillus	6	s	rt-st
Cordalia obscura	6	s	rt-sf
Cercyon analis	3	-	rt-sf
Oxytelus sculptus	3	-	rt-st

Aleocharinae sp. B	3	-	u
Aleocharinae sp. C	3	-	u
Lathridius minutus group	3	-	rd-st
Cercyon ?haemorrhoidalis	2	-	rf-sf
Carpelimus fuliginosus	2	-	st
Carpelimus pusillus group	2	-	u
Anotylus nitidulus	2	-	rt
Anotylus rugosus	2	-	rt
Philonthus sp. A	2	-	u
Philonthus sp. B	2	-	u
Staphylininae sp. A	2	-	u
Staphylininae sp. B	2	-	u
Falagria sp.	2	-	rt-sf
Aleocharinae sp. D	2	-	u
Cryptophagus sp. A	2	-	rd-sf
Dyschirius globosus	1	-	oa
Bembidion sp.	1	-	oa
Carabidae sp.	1	-	ob
Helophorus sp.	1	-	oa-w
Cercyon terminatus	1	-	rf-st
Acritus nigricornis	1	-	rt-st
Omalius caesum or italicum	1	-	rt-sf
Xylodromus concinnus	1	-	rt-st
Anotylus complanatus	1	-	rt-sf
Stenus sp.	1	-	u
Aleocharinae sp. A	1	-	u
Aphodius sp.	1	-	ob-rf
Anobium punctatum	1	-	l-sf
Tipnus unicolor	1	-	rd-st
Monotoma sp.	1	-	rt-sf
Cryptophagus scutellatus	1	-	rd-st
Cryptophagus sp. B	1	-	rd-sf
Atomaria sp.	1	-	rd
Ephistemus globulus	1	-	rd-sf
Enicmus sp.	1	-	rt-sf
Corticaria sp.	1	-	rt-sf
Lamprosoma concolor	1	-	oa-p
Halticinae sp.	1	-	oa-p
Apion sp. A	1	-	oa-p
Apion sp. B	1	-	oa-p
*Diptera sp. (puparium)	15	m	u
*Coccoidea sp.	6	s	u
*Acarina sp.	6	s	u
*Hymenoptera Parasitica sp.	4	-	u
*Diptera sp. (adult)	1	-	u
*Pulex irritans	1	-	ss

Context: 3455 Sample: 147/T CA: 3455A ReM: S
Weight: 1.00 E: 3.00 F: 3.00

Notes: Two dish flot, mainly plant debris, with a few seeds.

Taxon	n	q	ec
Carpelimus pusillus group	13	-	u
Lathridius minutus group	3	-	rd-st
Cryptophagus sp. R	2	-	rd-sf
Platystethus arenarius	1	-	rf
Aleocharinae sp.	1	-	u
Ptinus fur	1	-	rd-sf
Corticaria sp.	1	-	rt-sf

Halticinae sp.	1	-	oa-p
?Cidnorhinus quadrimaculatus	1	-	oa-p
*Diptera sp. (puparium)	6	s	u
*Acarina sp.	6	s	u
*Coccoidea sp.	1	-	u
*Hemiptera sp. (nymph)	1	-	u

Context: 3459 Sample: 157/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: No information about the flot. JP dets. added.

Taxon	n	q	ec
Atomaria sp. A	9	-	rd
Cercyon terminatus	8	-	rf-st
Cercyon haemorrhoidalis	5	-	rf-sf
Anotylus rugosus	5	-	rt
Aleocharinae sp. A	5	-	u
Lathridius minutus group	5	-	rd-st
Clambus sp. A	4	-	rt-sf
Anotylus complanatus	3	-	rt-sf
Philon thus sp. A	3	-	u
Philon thus sp. B	3	-	u
Enicmus sp.	3	-	rt-sf
Lyctocoris campestris	2	-	rd-st
Cercyon unipunctatus	2	-	rf-st
Ptenidium sp.	2	-	rt
Xylodromus concinnus	2	-	rt-st
Carpelimus sp.	2	-	u
Platystethus arenarius	2	-	rf
Anotylus nitidulus	2	-	rt
Stenus sp. A	2	-	u
Leptacinus sp.	2	-	rt-st
Aleocharinae sp. B	2	-	u
Cryptophagus sp.	2	-	rd-sf
Phyllotreta nemorum group	2	-	oa-p
Trechus obtusus or quadristriatus	1	-	oa
Trechus micros	1	-	u
Helophorus sp.	1	-	oa-w
Sphaeridium bipustulatum	1	-	rf
Cercyon analis	1	-	rt-sf
Acritus nigricornis	1	-	rt-st
Histerinae sp.	1	-	rt
Acrotichis sp.	1	-	rt
Eutheia sp.	1	-	u
Omalium ?rivulare	1	-	rt-sf
Omalium sp.	1	-	rt
Omalinae sp.	1	-	rt
Coprophilus striatulus	1	-	rt-st
Carpelimus bilineatus	1	-	rt-sf
Stenus sp. B	1	-	u
Lathrobium sp.	1	-	u
Gyrophypnus fracticornis	1	-	rt-st
Xantholininae sp.	1	-	u
Neobisnius sp.	1	-	u
Philon thus sp. C	1	-	u
Falagria caesa or sulcatula	1	-	rt-sf
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Euplectini sp.	1	-	u

Aphodius sp.	1	-	ob-rf
Oxyomus sylvestris	1	-	rt-sf
Clambus sp. B	1	-	rt-sf
Anobium punctatum	1	-	l-sf
Ptinus sp.	1	-	rd-sf
Omosita ?discoidea	1	-	rt-sf
Monotoma ?picipes	1	-	rt-st
Atomaria sp. B	1	-	rd
Atomaria sp. C	1	-	rd
Ephistemus globulus	1	-	rd-sf
Orthoperus sp.	1	-	rt
Corticaria sp. A	1	-	rt-sf
Corticaria sp. B	1	-	rt-sf
Anthicus ?formicarius	1	-	rt-st
Bruchinae sp.	1	-	u
Halticinae sp. A	1	-	oa-p
Halticinae sp. B	1	-	oa-p
Apion sp.	1	-	oa-p
Sitona lineatus	1	-	oa-p
Ceutorhynchus sp.	1	-	oa-p

*Sepsidae sp. (puparium) 150 e u

*Sphaeroceridae sp. (puparium) 150 e rt

*Muscina sp. (puparium) 8 - u

*Tephrochlamys ?tarsata (puparium) 4 - u

*Paregle radicum (puparium) 2 - u

Context: 3463 Sample: 170/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: Small flot with a little plant debris and a seed.

null

Context: 3463 Sample: 170/T ReM: S

Weight: 1.00 E: 4.00 F: 0.00

Notes: Two dish flot with abundant spongy plant fragments, a few seeds and a trace of charcoal.

Taxon	n	q	ec
Anobium punctatum	1	-	l-sf
Coleoptera sp.	1	-	u

Context: 3468 Sample: 168/T ReM: S

Weight: 1.00 E: 3.00 F: 2.00

Notes: Two dish flot with plant debris including stems and grassy fragments, and numerous seeds. Some modern contaminant fly larvae.

Taxon	n	q	ec
Cryptophagus sp. A	4	-	rd-sf
Platystethus arenarius	2	-	rf
Anotylus complanatus	2	-	rt-sf
Anotylus nitidulus	2	-	rt
Oxytelus sculptus	2	-	rt-st
Aleocharinae sp. E	2	-	u
Aphodius sp.	2	-	ob-rf
Cryptophagus sp. B	2	-	rd-sf

?Coreus marginatus	1	-	oa-p
?Amara sp.	1	-	oa
Carabidae sp.	1	-	ob
Cercyon analis	1	-	rt-sf
Cercyon atricapillus	1	-	rf-st
Gnathoncus sp.	1	-	rt-sf
Omalium sp. A	1	-	rt
Omalium sp. B	1	-	rt
Xylodromus concinnus	1	-	rt-st
Platystethus cornutus group	1	-	oa-d
Platystethus nitens	1	-	oa-d
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Aleocharinae sp. F	1	-	u
Staphylinidae sp.	1	-	u
Phyllopertha horticola	1	-	oa-p
Anobium punctatum	1	-	l-sf
Atomaria sp.	1	-	rd
Lathridius minutus group	1	-	rd-st
Corticaria sp.	1	-	rt-sf
Tenebrio obscurus	1	-	rt-ss
Chrysomelinae sp.	1	-	oa-p
Phyllotreta nemorum group	1	-	oa-p
Halticinae sp.	1	-	oa-p
Apion sp.	1	-	oa-p
Coleoptera sp.	1	-	u
*Diptera sp. (puparium)	15	m	u
*Coccoidea sp.	6	s	u
*Acarina sp.	6	s	u
*Diptera sp. (adult)	4	-	u
*Siphonaptera sp.	1	-	u

Context: 3468 Sample: 169/1 ReM: S

Weight: 1.00 E: 0.00 F: 0.00

Notes: No information about flot. JP data added.

Taxon	n	q	ec
Platystethus arenarius	5	-	rf
Lathridius minutus group	5	-	rd-st
Atomaria sp. A	3	-	rd
Cercyon analis	2	-	rt-sf
Cercyon ?haemorrhoidalis	2	-	rf-sf
Anotylus rugosus	2	-	rt
Leptacinus sp.	2	-	rt-st
Cryptophagus sp. A	2	-	rd-sf
Enicmus sp.	2	-	rt-sf
?Lyctocoris campestris	1	-	rd-st
Auchenorhyncha sp.	1	-	oa-p
Bembidion ?lampros	1	-	oa
Helophorus aquaticus or grandis	1	-	oa-w
Cercyon ?atricapillus	1	-	rf-st
Acritus nigricornis	1	-	rt-st
Acrotrichis sp.	1	-	rt
?Megarthrus sp.	1	-	rt
Xylodromus concinnus	1	-	rt-st
Platystethus cornutus group	1	-	oa-d
Anotylus complanatus	1	-	rt-sf

Anotylus nitidulus	1	-	rt
Othius sp.	1	-	rt
Gyrophypnus sp.	1	-	rt
Philonthus sp.	1	-	u
Cypha sp.	1	-	rt
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. C	1	-	u
Aleocharinae sp. D	1	-	u
Staphylinidae sp.	1	-	u
Pselaphidae sp.	1	-	u
Oxyomus sylvestris	1	-	rt-sf
Elateridae sp.	1	-	ob
Anobium punctatum	1	-	l-sf
Ptinus ?fur	1	-	rd-sf
?Meligethes sp.	1	-	oa-p
Cryptophagus sp. B	1	-	rd-sf
Cryptophagus sp. C	1	-	rd-sf
Atomaria sp. B	1	-	rd
Atomaria sp. C	1	-	rd
?Ephistemus globulus	1	-	rd-sf
Corticaria sp.	1	-	rt-sf
Corticarinae sp.	1	-	rt
Halticinae sp.	1	-	oa-p
Curculionidae sp. A	1	-	oa
Curculionidae sp. B	1	-	oa
*Sepsidae sp. (puparium)	16	-	u
*Formicidae sp.	1	-	u

Context: 3474 Sample: 171/1 ReM: D
Weight: 1.00 E: 0.00 F: 0.00

Notes: No details of flot.

Taxon	n	q	ec
Megastemum obscurum	2	-	rt
Anobium punctatum	2	-	l-sf
Gyrophypnus fracticornis	1	-	rt-st

Context: 3475 Sample: 162/T1 ReM: S

Weight: 2.00 E: 4.00 F: 3.50

Notes: Entered 14.3.2000. Remains pale.

Taxon	n	q	ec
Lathridius minutus group	4	-	rd-st
Cryptophagus sp. A	3	-	rd-sf
Platystethus arenarius	2	-	rf
Stenus sp.	2	-	u
Cryptophagus sp. B	2	-	rd-sf
Bembidion (Philochthus) sp.	1	-	oa
Pterostichus sp.	1	-	ob
Cercyon sp.	1	-	u
Xylodromus concinnus	1	-	rt-st
Carpelimus ?bilineatus	1	-	rt-sf
Anotylus rugosus	1	-	rt
Oxytelus sculptus	1	-	rt-st
Lathrobium sp.	1	-	u
Neobisnius sp.	1	-	u

Staphylininae sp. A	1	-	u
Staphylininae sp. B	1	-	u
Falagria or Cordalia sp.	1	-	rt-sf
Aleocharinae sp. A	1	-	u
Meligethes sp.	1	-	oa-p
?Ephistemus globulus	1	-	rd-sf
Enicmus sp.	1	-	rt-sf
?Gastrophysa polygoni	1	-	oa-p
Longitarsus sp.	1	-	oa-p
Curculionidae sp.	1	-	oa
Aphodius sp.		-	ob-rf
*Diptera sp. (puparium)	15	m	u
*Acaëna sp.	6	s	u
*Cladocera sp. (ephippium)	1	-	oa-w
*Diptera sp. (larva)	1	-	u
*Melophagus ovinus (adult)	1	-	u
*Coleoptera sp. (larva)	1	-	u
*Hymenoptera Parasitica sp.	1	-	u

Context: 3475 Sample: 163/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: No details of flot. JP data added.

Taxon	n	q	ec
Platystethus arenarius	6	-	rf
Lathridius minutus group	5	-	rd-st
Cercyon analis	4	-	rt-sf
Cryptophagus sp.	4	-	rd-sf
Aphodius sp. A	3	-	ob-rf
Atomaria sp. A	3	-	rd
Cercyon haemorrhoidalis	2	-	rf-sf
Cercyon terminatus	2	-	rf-st
Acrotichis sp.	2	-	rt
Carpelimus ?bilineatus	2	-	rt-sf
Carpelimus sp.	2	-	u
Anotylus nitidulus	2	-	rt
Leptacinus sp.	2	-	rt-st
Gyrophypnus sp.	2	-	rt
Cryptophagus ?scutellatus	2	-	rd-st
Atomaria sp. B	2	-	rd
Corticaria sp.	2	-	rt-sf
Heterogaster urticae	1	-	oa-p
Gerris sp.	1	-	oa-w
?Bembidion sp.	1	-	oa
Pterostichus sp.	1	-	ob
Harpalus sp.	1	-	oa
Lebiini sp.	1	-	u
Helophorus sp.	1	-	oa-w
Acritus nigricornis	1	-	rt-st
Ochthebius sp.	1	-	oa-w
Xylodromus concinnus	1	-	rt-st
Carpelimus fuliginosus	1	-	st
Platystethus ?nitens	1	-	oa-d
Anotylus rugosus	1	-	rt
Oxytelus sculptus	1	-	rt-st
Stenus sp.	1	-	u
?Philonthus sp.	1	-	u
Staphylininae sp.	1	-	u
?Tachyponus sp.	1	-	u

?Cordalia obscura	1	-	rt-sf
?Falagria sp.	1	-	rt-sf
Aleocharinae sp.	1	-	u
Pselaphidae sp.	1	-	u
Aphodius sp. B	1	-	ob-rf
Aphodius sp. C	1	-	ob-rf
Aphodius sp. D	1	-	ob-rf
?Lyctus sp.	1	-	l
Monotoma sp.	1	-	rt-sf
Atomaria sp. C	1	-	rd
Phalacridae sp.	1	-	oa-p
Enicmus sp.	1	-	rt-sf
Aglenus brunneus	1	-	rt-ss
?Gastrophysa polygoni	1	-	oa-p
Phyllotreta nemorum group	1	-	oa-p
Ceutorhynchus sp.	1	-	oa-p
Coleoptera sp.	1	-	u
*Sepsidae sp. (puparium)	72	-	u
*Leptocera sp. (puparium)	15	m	u
*Copromyza sp. (puparium)	15	m	u
*Araneae sp.	1	-	u

Context: 3476 Sample: 175/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: No details of flot.

Taxon	n	q	ec
Cryptophagus sp.	11	-	rd-sf
?Aphrodes sp.	6	-	oa-p
Lathridius minutus group	6	-	rd-st
Anotylus rugosus	4	-	rt
Brachypterus urticae	4	-	oa-p
Pterostichus ?melanarius	3	-	ob
Carpelimus bilineatus	3	-	rt-sf
Xantholinus linearis	3	-	rt-sf
Aleocharinae sp. A	3	-	u
Ceutorhynchus sp.	3	-	oa-p
Anthocoris sp.	2	-	oa-p
Nebria brevicollis	2	-	oa
Bembidion (Philochthus) sp.	2	-	oa
Amara sp. A	2	-	oa
Acrotichis sp.	2	-	rt
Omalium caesum or italicum	2	-	rt-sf
Anotylus nitidulus	2	-	rt
Stenus sp.	2	-	u
Quedius sp.	2	-	u
Tachinus laticollis or marginellus	2	-	u
Aleocharinae sp. B	2	-	u
Corticarinae sp.	2	-	rt
Apion sp. A	2	-	oa-p
Saldula sp.	1	-	oa-d
Auchenorhyncha sp. A	1	-	oa-p
Auchenorhyncha sp. B	1	-	oa-p
Loricera pilicornis	1	-	oa
Trechus obtusus	1	-	oa
Trechus obtusus or quadristriatus	1	-	oa
Trechus secalis	1	-	oa-d
Bembidion obtusum	1	-	oa
Calathus fuscipes	1	-	oa

Amara sp. B	1	-	oa
Harpalus rufipes	1	-	oa
Harpalus sp.	1	-	oa
Carabidae sp.	1	-	ob
Hydroporinae sp.	1	-	oa-w
Helophorus ?grandis	1	-	oa-w
Helophorus sp.	1	-	oa-w
Cercyon ?haemorrhoidalis	1	-	rf-sf
Cercyon sp.	1	-	u
Megastemum obscurum	1	-	rt
Ochthebius sp.	1	-	oa-w
Catops sp.	1	-	u
Omalius ?rivulare	1	-	rt-sf
Carpelimus elongatulus	1	-	oa-d
Platystethus ?nitens	1	-	oa-d
Anotylus ?sculpturatus group	1	-	rt
Lathrobium ?longulum	1	-	u
?Sunius sp.	1	-	u
Rugilus ?rufipes	1	-	rt-st
Gyrophynus sp.	1	-	rt
?Neobisnius sp.	1	-	u
?Philonthus sp.	1	-	u
Staphylinus olens	1	-	u
Tachyporus hypnorum	1	-	u
Tachinus signatus	1	-	u
Aleocharinae sp. C	1	-	u
Staphylinidae sp.	1	-	u
Trox scaber	1	-	rt-sf
Aphodius sp. A	1	-	ob-rf
Aphodius sp. B	1	-	ob-rf
Aphodius sp. C	1	-	ob-rf
Dryops sp.	1	-	oa-d
Melanotus erythropus	1	-	l
Anobium punctatum	1	-	l-sf
Ptinus fur	1	-	rd-sf
Atomaria sp. A	1	-	rd
Atomaria sp. B	1	-	rd
?Ephistemus globulus	1	-	rd-sf
Stephostethus angusticollis	1	-	rt-st
Corticaria sp. A	1	-	rt-sf
Corticaria sp. B	1	-	rt-sf
Lema or Oulema sp.	1	-	oa-p
Phyllotreta nemorum group	1	-	oa-p
Apion sp. B	1	-	oa-p
Apion sp. C	1	-	oa-p
Cidnorhinus quadrimaculatus	1	-	oa-p
Rhinoncus pericarpus	1	-	oa-p
Ceuthorhynchinae sp.	1	-	oa-p
Chaetocnema arida group		-	oa-p
*Dermoptera sp.	1	-	u

Context: 3476 Sample: 176/T ReM: S

Weight: 1.00 E: 2.00 F: 3.00

Notes: One dish flot, with plant debris and a few seeds.

Taxon	n	q	ec
Carpelimus bilineatus	3	-	rt-sf
Stenus sp.	2	-	u
Aleocharinae sp. C	2	-	u

Ptinus fur	2	-	rd-sf
?Philaenus spumarius	1	-	oa-p
Trechus obtusus or quadristriatus	1	-	oa
Bembidion ?guttula	1	-	oa
Ochthebius sp.	1	-	oa-w
Xylodromus concinnus	1	-	rt-st
Carpelimus fuliginosus	1	-	st
Platystethus arenarius	1	-	rf
Anotylus complanatus	1	-	rt-sf
Lithocharis sp.	1	-	rt
Aleocharinae sp. A	1	-	u
Aleocharinae sp. B	1	-	u
Aleocharinae sp. D	1	-	u
Aphodius sp.	1	-	ob-rf
Cryptophagus sp. A	1	-	rd-sf
Cryptophagus sp. B	1	-	rd-sf
Lathridius minutus group	1	-	rd-st
*Diptera sp. (adult)	6	s	u
*Acanina sp.	6	s	u
*Coccoidea sp.	2	-	u

Context: 3477 Sample: 172/1 ReM: D

Weight: 1.00 E: 0.00 F: 0.00

Notes: No details of flot. Three contaminant Euplectini sp. JP dets. added.

Taxon	n	q	ec
Lathridius minutus group	18	-	rd-st
Atomaria sp. A	17	-	rd
Cercyon haemorrhoidalis	13	-	rf-sf
Cercyon terminatus	9	-	rf-st
Omalius ?rivulare	7	-	rt-sf
Leptacinus sp.	6	-	rt-st
Phyllodrepa ?floralis	5	-	rt-sf
Platystethus arenarius	5	-	rf
Cordalia obscura	5	-	rt-sf
Aleocharinae sp. A	5	-	u
Cryptophagus sp.	5	-	rd-sf
Philonthus sp. B	4	-	u
Aleochara sp.	4	-	u
Carpelimus bilineatus	3	-	rt-sf
Carpelimus pusillus group	3	-	u
Aphodius prodromus	3	-	ob-rf
Clambus pubescens	3	-	rt-sf
Cercyon ?atricapillus	2	-	rf-st
Cercyon unipunctatus	2	-	rf-st
Ptenidium sp.	2	-	rt
Xylodromus concinnus	2	-	rt-st
Anotylus rugosus	2	-	rt
Oxytelus sculptus	2	-	rt-st
Neobisnius sp.	2	-	u
Quedius sp.	2	-	u
Aleocharinae sp. B	2	-	u
Aleocharinae sp. C	2	-	u
Aleocharinae sp. D	2	-	u
Orthoperus sp.	2	-	rt
Ceutorhynchus sp.	2	-	oa-p
Trechus obtusus or quadristriatus	1	-	oa
Sphaeridium bipustulatum	1	-	rf

Cercyon lugubris	1	-	rt	Falagria sp.	2	-	rt-sf
Hydrophilinae sp.	1	-	oa-w	Aphodius sp. A	2	-	ob-rf
Acritus nigricornis	1	-	rt-st	Clambus ?pubescens	2	-	rt-sf
Histerinae sp.	1	-	rt	Orthoperus sp.	2	-	rt
Megarthus sp.	1	-	rt	Lathridius minutus group	2	-	rd-st
Dropephylla sp.	1	-	u	Enicmus sp.	2	-	rt-sf
Omalium sp.	1	-	rt	Corticaria sp. A	2	-	rt-sf
Anotylus nitidulus	1	-	rt	Lycocoris campestris	1	-	rd-st
Stenus sp. A	1	-	u	Trechus obtusus or quadristriatus	1	-	oa
Stenus sp. B	1	-	u	Bembidion obtusum	1	-	oa
Gyrophypnus fracticornis	1	-	rt-st	Agonum dorsale	1	-	oa
Philonthus sp. A	1	-	u	Agonum sp.	1	-	oa
Cypha sp.	1	-	rt	Harpalus rufipes	1	-	oa
Aleocharinae sp. E	1	-	u	Cercyon lugubris	1	-	rt
Aphodius sp.	1	-	ob-rf	Cercyon unipunctatus	1	-	rf-st
Ptinus ?fur	1	-	rd-sf	Cercyon sp.	1	-	u
Brachypterus sp.	1	-	oa-p	Acrotichis sp.	1	-	rt
Meligethes sp.	1	-	oa-p	Omaliinae sp. B	1	-	u
Monotoma ?picipes	1	-	rt-st	Platystethus cornutus group	1	-	oa-d
Cryptophagus ?scutellatus	1	-	rd-st	Platystethus nitens	1	-	oa-d
Atomaria sp. B	1	-	rd	Stenus sp.	1	-	u
Corticariinae sp. A	1	-	rt	Lathrobium longulum	1	-	u
Corticariinae sp. B	1	-	rt	Lathrobium sp.	1	-	u
Corticariinae sp. C	1	-	rt	Gyrophypnus angustatus	1	-	rt-st
Anthicus floralis or formicarius	1	-	rt-st	Philonthus sp.	1	-	u
Halticinae sp.	1	-	oa-p	Aleocharinae sp. B	1	-	u
Apion sp.	1	-	oa-p	Aleocharinae sp. C	1	-	u
				Aleocharinae sp. D	1	-	u
*Leptocera sp. (puparium)	400	e	u	Staphylinidae sp.	1	-	u
*Sepsidae sp. (puparium)	60	e	u	Pselaphidae sp.	1	-	u
*Tephrochlamys ?tarsata (puparium)	50	e	u	Aphodius sp. B	1	-	ob-rf
*Paregle radicum (puparium)	27	-	u	Clambus sp.	1	-	rt-sf
*Leptocera claviventris (puparium)	15	m	u	Elateridae sp.	1	-	ob
*?Spalangia sp.	8	-	u	Ptinus ?fur	1	-	rd-sf
*Muscina sp. (puparium)	4	-	u	Monotoma picipes	1	-	rt-st
*Spilogona ?surda (puparium)	2	-	u	Cryptophagus sp.	1	-	rd-sf
*Haematobosca stimulans (puparium)	1	-	u	Atomaria sp. B	1	-	rd
*Musca domestica (puparium)	1	-	u	Corticaria sp. B	1	-	rt-sf
				Corticaria sp. C	1	-	rt-sf
Context: 3477 Sample: 174/1 ReM: D				Aglenus brunneus	1	-	rt-ss
Weight: 1.00 E: 0.00 F: 0.00				Phyllotreta sp.	1	-	oa-p
				Curculionidae sp.	1	-	oa
				?Meligethes sp.		-	oa-p

Notes: No information about flot.

Taxon	n	q	ec				
Anotylus nitidulus	15	-	rt	*Sepsidae sp. (puparium)	150	e	u
Anotylus complanatus	13	-	rt-sf	*Sphaeroceridae sp. (puparium)	110	e	rt
Aleocharinae sp. A	11	-	u	*Paregle radicum (puparium)	28	-	u
Cercyon haemorrhoidalis	9	-	rf-sf	*Tephrochlamys ?tarsata (puparium)	5	-	u
Atomaria sp. A	7	-	rd	*Muscina sp. (puparium)	2	-	u
Omalium ?rivulare	5	-	rt-sf	*Spilogona ?surda (puparium)	1	-	u
Aphodius prodromus	5	-	ob-rf				
Platystethus arenarius	4	-	rf				
Scydmaenidae sp.	3	-	u				
Xylodromus ?concinus	3	-	rt-st				
Anotylus rugosus	3	-	rt				
Tachinus subterraneus	3	-	u				
Aleochara sp.	3	-	u				
Halticinae sp.	3	-	oa-p				
Helophorus sp.	2	-	oa-w				
Omaliinae sp. A	2	-	u				

Table 8. Abbreviations for ecological codes and statistics used for interpretation of insect remains in text and tables. Lower case codes in parentheses are those assigned to taxa and used to calculate the group values (the codes in capitals). See Table 2 for codes assigned to taxa from 118-26 Walmgate, York. Alpha - the index of diversity alpha (Fisher et al. 1943); Indivs - individuals (based on MNI); No - number.

No taxa	S	Percentage of indivs of grain pests	PNG
Estimated number of indivs (MNI)	N	No decomposer taxa (rt + rd + rf)	SRT
Index of diversity ()	alpha	Percentage of RT taxa	PSRT
Standard error of alpha	SE alpha	No RT indivs	NRT
No 'certain' outdoor taxa (oa)	SOA	Percentage of RT indivs	PNRT
Percentage of 'certain' outdoor taxa	PSOA	Index of diversity of RT component	alpha RT
No 'certain' outdoor indivs	NOA	Standard error	SEalphaRT
Percentage of 'certain' outdoor indivs	PNOA	No 'dry' decomposer taxa (rd)	SRD Percentage of RD
No OA and probable outdoor taxa (oa+ob)	SOB	taxa	PSRD
Percentage of OB taxa	PSOB	No RD indivs	NRD
No OB indivs	NOB	Percentage of RD indivs	PNRD
Percentage OB indivs	PNOB	Index of diversity of the RD component	alphaRD
Index of diversity of the OB component	alphaOB	Standard error	SEalphaRD
Standard error	SEalphaOB	No 'foul' decomposer taxa (rf)	SRF
No aquatic taxa (w)	SW	Percentage of RF taxa	PSRF
Percentage of aquatic taxa	PSW	No RF indivs	NRF
No aquatic indivs	NW	Percentage of RF indivs	PNRF
Percentage of W indivs	PNW	Index of diversity of the RF component	alphaRF
Index of diversity of the W component	alphaW	Standard error	SEalphaRF
Standard error	SEalphaW	No synanthropic taxa (sf+st+ss)	SSA
No damp ground/waterside taxa (d)	SD	Percentage of synanthropic taxa	PSSA
Percentage D taxa	PSD	No synanthropic indivs	NSA
No damp D indivs	ND	Percentage of SA indivs	PNSA
Percentage of D indivs	PND	Index of diversity of SA component	ALPHASA
Index of diversity of the D component	alphaD	Standard error	SEALPHASA
Standard error	SEalphaD	No facultatively synanthropic taxa (sf)	SSF
No strongly plant-associated taxa (p)	SP	Percentage of SF taxa	PSSF
Percentage of P taxa	PSP	No SF indivs	NSF
No strongly P indivs	NP	Percentage of SF indivs	PNSF
Percentage of P indivs	PNP	Index of diversity of SF component	ALPHASF
Index of diversity of the P component	alphaP	Standard error	SEALPHASF
Standard error	SEalphaP	No typical synanthropic taxa (st)	SST
No heathland/moorland taxa (m)	SM	Percentage of ST taxa	PSST
Percentage of M taxa	PSM	No ST indivs	NST
No M indivs	NM	Percentage of ST indivs	PNST
Percentage of M indivs	PNM	Index of diversity of ST component	ALPHAST
Index of diversity of the M component	alphaM	Standard error	SEALPHAST
Standard error	SEalphaM	No strongly synanthropic taxa (ss)	SSS
No wood-associated taxa (l)	SL	Percentage of SS taxa	PSSS
Percentage of L taxa	PSL	No SS indivs	NSS
No L indivs	NL	Percentage of SS indivs	PNSS
Percentage of L indivs	PNL	Index of diversity of SS component	ALPHASS
Index of diversity of the L component	alphaL	Standard error	SEALPHASS
Standard error	SEalphaL	No uncoded taxa (u)	SU
No indivs of grain pests (g)	NG	Percentage of uncoded indivs	PNU

Table 9. Measurements (in μm) of trichurid eggs from four samples of Anglo-Scandinavian date from 118-26 Walmgate, York. SE—standard error of mean.

(a) by context

Context	Sample	n	length minus polar plugs			width		
			range	mean	SE	range	mean	SE
3450	167	23	47.5-54.3	51.5	0.3	26.2-29.1	27.3	0.2
3459	157	31	42.6-57.2	51.4	0.5	24.2-31.0	27.5	0.3
3477	172	28	42.6-60.1	51.6	0.6	25.2-31.0	27.9	0.3
3477	174	30	40.7-55.2	50.3	0.6	24.2-31.0	27.4	0.3

(b) aggregated measurement for eggs with polar plugs

n	length including polar plugs		
	range	mean	SE
31	50.4-60.1	55.6	0.5