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**An evaluation of biological remains from
excavations at 41 Piccadilly, York
(YAT/Yorkshire Museum site code 1992.18)**

by

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Summary

Eleven samples of sediment and a small amount of bone were submitted for assessment of their potential for bioarchaeological interpretation or for confirmation that they were natural drift. Of four samples examined in more detail, none gave any evidence for plants or invertebrates other than a little charcoal and marine mollusc shell, but there were modest or large quantities of bone in three of them.

The bone assemblage indicated a limited potential for future analysis, being small, of rather poor preservation and for the most part only broadly dated.

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**An evaluation of biological remains from
excavations at 41 Piccadilly, York
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Eleven samples of sediment from excavations at 41 Piccadilly were submitted for examination; all were 'general biological analysis' samples although seven were taken as putative 'natural drift', requiring only confirmation of this. The samples were described in the laboratory, their lithology being recorded on a standard *pro forma*. Four were selected for further analysis, and, for three of these, 1 kg subsamples were disaggregated following methods of Kenward *et al.* (1980). The resultant residues (and, where appropriate washovers) were checked for plant remains and other components. After taking voucher subsamples for longer-term storage, the remaining sediment from these three samples was bulk-sieved to 1 mm to recover larger fossil remains. In the case of the fourth sample selected for further analysis, bulk-sieving alone was employed.

The samples are considered here in context number order; archaeological interpretation and dating supplied by the excavator for each context are given in brackets.

Context 1061 [clay dump, C10/11]

Sample 3: very dark grey, moist, plastic to slightly crumbly clay with traces of stones 2-6 mm and of pot, and frequent fragments of bone >20 mm.

The small residue resulting from sieving of a 1 kg subsample consisted of sand with quite a large proportion of fragmentary bone, some of it showing evidence of superficial charring; there was also a little charcoal to 10 mm in maximum dimension.

The 5.2 kg subsample bulk-sieved to 1 mm also gave a rather large assemblage of bone with similar evidence for burning, with a little charcoal to 10 mm and brick/tile fragments to 5 mm.

Context 1084 [dump/build-up, Roman]

Sample 10: mid brown (locally with an orange cast), moist, plastic to sticky clay with a granular texture of small peds to a few mm in size, traces of stones 2-6 mm and very small fragments of charcoal.

The residue from the 1 kg subsample examined comprised sand and gravel to 35 mm, with a trace of brick/tile to 40 mm, and of charcoal to 10 mm.

Context 2114 [natural drift?]

Sample 11: mid/dark orange-brown, moist, unconsolidated sand with lumps of very soft red-brown and blue-grey clay in the sandy matrix; undoubtedly natural sediment from the local

drift.

Context 3015 [ash dump, lower fit of pit 3017, medieval]

Sample 1: an intimate mixture yellow-grey and dark grey, moist, crumbly ash with concreted ash to about 15 mm and perhaps a little clay.

Bulk-sieving to 1 mm of a 3.8 kg subsample yielded a residue consisting largely of gingery brown granular concretions to about 15 mm maximum dimension. These broke up readily on handling into smaller particle with a whitish, buff or gingery colour, and a somewhat resinous or crystalline appearance. On testing with dilute hydrochloric acid, there was only a little effervescence, but disaggregated material was found to contain minute fragments of organic matter including plant tissues. No intestinal parasite eggs were observed, but it seems possible that this material was poorly preserved faecal concretion. This contradicts the interpretation made during the lithological description of the sample that much of the sediment was ash. Together with this granular material there was a modest amount of fragmentary large mammal bone (largest fragment, rib to 160 mm) and traces of fish bone, a little brick/tile to 30 mm, and charcoal to 15 mm.

Context 3016 [pit fill in 3016, rich in antler/bone waste, medieval]

Sample 2: dark grey-brown, moist, crumbly to unconsolidated, slightly sandy clay silt with traces of stones 2-6 and 60-200 mm, charcoal, bone >20 mm, and frequent small brick/tile fragments, with fine brick/tile dust giving a slight orange cast to the sediment.

A washover was recovered from the 1 kg subsample examined; it consisted of a little charcoal to 25 mm (the largest fragment being ?hazel, cf. *Corylus*) with traces of burnt marine mollusc shell to 10 mm and a single charred nutlet of hemp-nettle, *Galeopsis* sp. The residue was of sand with rather a lot of brick/tile/?daub to 45 mm, some oyster shell to 25 mm and a little mammal bone to 45 mm.

Mammal bone (to a maximum size of 140 mm) was well represented in the 5.3 kg subsample processed by bulk-sieving, along with a large cobble (to 150 mm), some brick/tile/?daub and glassy slag to 40 mm, pot to 20 mm, and a little charcoal to 15 mm. There was no evidence for bone/antler working.

Context 3070 [natural drift?]

Sample 4: mid orange-brown, moist, unconsolidated sand with traces of stones 2-20 mm and patches of darker brown staining. This seems undoubtedly to be natural drift, perhaps outwash from glacial deposits in the vicinity.

Context 3073 [natural drift?]

Sample 7: mid orange-brown, moist, unconsolidated sand with stones 2-60 mm abundant; appears to be a natural fluvial or fluvio-glacial deposit.

Context 3074 [natural drift?]

Sample 8: mid orange-brown, moist, crumbly to unconsolidated sand with lumps of red-brown to orange-brown stony clay up to about 100 mm, and traces of stones 2-20 mm; this seems to be a natural deposit, apparently with lumps of sandy till in a better-sorted sandy matrix.

Context 3075 [natural drift?]

Sample 9: mid orange-brown, moist, unconsolidated sand with traces of stones 2-20 mm and some lumps of slightly stony sandy clay within the sand matrix which have a stiff to brittle texture but which crumble readily on handling; some dark streaks of chemical staining. This appears to be a natural drift deposit.

Context 4001 [natural drift?]

Sample 5: rather varicoloured (ground colour is mid/dark reddish to purplish brown, but with patches of pale yellow, red brown, and pale grey), moist, crumbly to stiff sandy clay with frequent stones 2-60 mm. Undoubtedly local glacial drift (till).

Context 5003 [natural drift?]

Sample 6: light/mid orange-brown, just moist, crumbly to brittle (working plastic), slightly sandy silty clay with frequent stones 2-60 mm; no doubt this is part of the local drift underlying York.

The animal bone assemblage

A small assemblage of animal bones, amounting to three standard-sized boxes, was recovered from the site and represented material from three excavation trenches. Most of the assemblage from all the trenches derived from medieval deposits, with the remainder representing small amounts of Anglo-Scandinavian and poorly dated Roman remains. Most material represented hand-collected fragments, but limited quantitative assessment was possible on excess bulk-sieved residues taken after GBA analysis was completed (see above). Numbers of fragments were far too small to make any realistic evaluation of species frequency, particularly

since the bulk of the assemblage had been recovered without the use of sieving.

The bones from a total of 23 contexts form the basis of this report and represent a total of 128 identifiable fragments.

Trench 1

A total of seven bone-bearing contexts were recorded from Trench 1. Preservation ranged from poor to fair with little evidence of severe fragmentation or extensive butchery. Some bones, however, showed signs of carnivore gnawing, particularly noticeable on the articular ends of bones.

Of the 37 identifiable fragments, 16 were of broadly medieval date, 18 Anglo-Scandinavian and only three were of broadly Roman date.

Eighteen measurable fragments were present (eight medieval, eight Anglo-Scandinavian and two Roman) and 23 bones were recovered for which ageing information could be obtained (nine medieval, eleven Anglo-Scandinavian and three Roman). Bones of cattle, sheep and pig were the major domestic animals represented in the assemblage from Trench 1. Numbers were obviously too small for any quantitative assessment to be made but caprovid remains were better represented in Anglo-Scandinavian contexts than medieval. Chicken (*Gallus f. domesticus*) and goose (*Anser anser*) were each represented by a single fragment from 10th-11th century contexts. A single duck tibiotarsus, probably mallard (cf. *Anas platyrhynchos*), and a large gadid vertebra, probably saithe (cf. *Pollachius virens*), were present in medieval context 1008 as was a human distal humerus fragment.

Bulk-sieved material

A single bulk-sieved sample from context 1061 showed this deposit to be particularly rich in zooarchaeological remains (78 grams/litre of deposit). Not surprisingly, remains of sheep were better represented here than in the hand-collected material, particularly vertebrae, ribs and shaft fragments. Additional taxa included house mouse (*Mus domesticus*, three mandible fragments) as well as cf. *Apodemus* sp. (some post-cranial elements), bird (19 fragments, three identified as fowl), and fish (24 fragments, including nine salmon vertebrae (*Salmo salar*) and a single herring (*Clupea harengus*) vertebra.

Trench 2

A total of ten-bone bearing contexts were recorded from Trench 2, with medieval deposits being more precisely dated than in Trench 1. Thus material was classified as 14th-15th, 13-14th, residual 12th century or Anglo-Scandinavian. A series of contexts of broadly medieval date was also recorded. Preservation again ranged from poor to fair with little evidence of severe fragmentation or extensive butchery. Some bones exhibited signs of carnivore gnawing. Of the 59 identifiable fragments, 33 were of 14th-15th century date, only one of 13th-14th century,

two residual 12th century and seven Anglo-Scandinavian. A further 16 were of broadly medieval date.

Eighteen measurable fragments were present (eleven 14th-15th, one 12th, two Anglo-Scandinavian and four broadly medieval). Forty-three bones were recovered for which ageing information could be obtained (23 14th-15th, one 13th-14th, two residual 12th, five Anglo-Scandinavian and twelve broadly medieval). Bones of cattle, sheep and pig were the major domestic animals represented in the assemblage from Trench 2, with cattle the most prevalent in the 14th-15th century followed by pig. Goat was represented in a possible Anglo-Scandinavian deposit (2034) by a single large horncore fragment. Three chicken and goose fragments were identified, all from 14th-15th century deposits.

A cattle distal metacarpal fragment from 2034 (Anglo-Scandinavian?) showed evidence of severe joint dysplasia with 'splaying' of condyles, eburnation of the joint surface and infection of the surrounding area.

Trench 3

A total of only six bone-bearing contexts were recorded from Trench 3. As for Trench 1, material could be grouped only into the broad categories of medieval and Roman. Two of the medieval contexts (3015 and 3016) accounted for most of animal bone from the trench. Preservation once again ranged from poor to fair with a single context (3016) containing some fragments classified as good. Of the 32 identifiable fragments, 28 were of broadly medieval date and only four Roman.

Fifteen measurable fragments were present (13 from medieval and two from Roman contexts) and bones were recovered for which ageing information could be obtained (18 medieval and three Roman). Bones of cattle, sheep and pig were again the major domestic animals represented, with cattle the most prevalent in medieval deposits, followed by caprovid and pig. Goat was represented in medieval context 3016 by a single metacarpal fragment. A single goose radius fragment was also recovered from a medieval context. In addition to identified and recorded fragments, numerous cattle-sized rib and shaft fragments were present in these two large medieval contexts.

Bulk-sieved material

Two bulk-sieved samples from the large medieval contexts 3015 and 3016 produced no identifications of further mammal, bird or fish species. In addition, quantification of bone weights showed these to be relatively poor in terms of bone concentration (3015: 8.9 grams/litre of deposit and 3016: 17.9 grams/litre). None of the bone fragments from 3015 showed damage associated with passage through the gut.

Implications of the bone assemblage

Most of the material from this site came from medieval deposits and a potentially modest bone

assemblage may well be recovered from this general period should future excavations take place. However, since preservation was mostly poor to fair and the material generally only broadly dated, the bone is of relatively low priority in terms of zooarchaeological information.

Average preservation, limited range of species, generally broad dating of material from Trenches 1 and 3 and the small numbers of bones of Anglo-Scandinavian and Roman date, renders the need for further excavation of animal bones of this date from the site also of low priority.

Implications

There can be little justification for extensive further analysis of plant and animal remains from deposits of the kind examined here at this site, though the possibility of recovering well-dated deposits rich in the more durable remains, such as bone, should be borne in mind should full excavation take place.

Reference

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.

Please note: Information concerning the archaeological context and dating of the deposits and biota considered in this report have been provided by York Archaeological Trust; the Environmental Archaeology Unit takes no responsibility for changes in archaeological interpretation or re-phrasing which may have occurred since this report was compiled.