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Comments on plant remains from some samples from medieval and post-medieval 'tan pits' at a site in the Bull Ring, Birmingham (site code BRB99)

by Allan Hall

Summary

This report provides some comments on the plant material present in a series of samples thought to come from tan pits in two areas of a site in central Birmingham. The material from two 13th/14th century pit fills included some very decayed bark and leather fragments and it seems likely that the fills do indicate that tanning took place, although they are far from conclusive. Material from a series of later (post-medieval) pits in another area consisted very largely of fine wood fragments interpreted as probable sawdust and this suggests either some other use for the features (as saw-pits, for example) or the backfilling of the pits with material for disposal.

Keywords: BULL RING; BIRMINGHAM; MEDIEVAL; POST-MEDIEVAL; TAN PITS; PLANT MACROFOSSILS

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Introduction

A series of samples from features interpreted as tan pits from two areas at a site in the Bull Ring, Birmingham, was investigated primarily to check for the presence of evidence from plant remains for tanning. In particular, the samples were examined to establish whether assemblages dominated by bark and bark sclereids similar to those from sites in Chartres, France (Hall 1997) and at Layerthorpe Bridge, York (Hall *et al.*, in prep.), were present.

Material and methods

Through the good offices of Marina Ciaraldi of BUFAU some processed and unprocessed samples from the Bull Ring 'tan pits' were made available. The material consisted of seven sets of residues and 'flots' from paraffin flotation (material examined during an assessment by Dr D. N. Smith of the Department of Ancient History and Archaeology, University of Birmingham) and two samples of raw sediment.

For the processed material, part or all of the residue was re-sieved into four fractions (0.3, 1, 2, and 4 mm) for ease of examination, and the flot was also examined in two cases; for the raw sediment, small subsamples were sieved quickly to 0.3 mm and the residue separated into the same series of fractions, using a washover to concentrate the less dense material. In general, only a brief examination of a little of each sieve fraction was possible, in order to make notes on the nature of the sample; in the event, the similarity of composition of all but two samples meant that most could be checked very cursorily.

Results

Comments on the material are presented in area and context order.

Area B (13th/14th century 'tan pits')

Context 2012, Sample 14 (1 kg processed by ARH: mid grey-brown (locally somewhat orange) sand and gravel with a slight clay/silt content)

The residue consisted of rather clean sand with some gravel and lumps of concreted sediment to 30 mm in maximum dimension). There were traces of coal and pottery. The small washover consisted of a few cm^3 of plant material including charcoal, with traces of very decayed leather, wood and bark (all up to 5 mm). There were a few identifiable plant taxa in the form or fruits or seeds or vegetative material, including a small range of probable weeds of no particular interpretive value, and a few achenes of hemp (*Cannabis sativa* L.).

Context 2087, Sample 19 (residue and flot from a 10 kg subsample assessed for insect remains)

A 'handful' of the wet residue was examined quickly, then whole residue was re-sieved and a washover taken. The residue was found to consist mostly of sand and rounded gravel, whilst the washover (which was about 20-25% of the total volume) comprised organic material, mainly plant remains. Of these, the bulk proved to be bark fragments (to 20 mm) with some wood fragments and a variety of fruits and seeds (there were 64 identifiable taxa in all); also present were some fragments of decayed leather (to 25 mm). To judge from its morphology, the bark may represent at least two or three different types; in the <1 mm fraction were a few bark sclereids (small decay-resistant structures found in the bark of some if not all trees, but not currently identifiable).

Amongst the propagules, there were quite a few *Cannabis* seeds and halves and the rest of the assemblage included a variety of taxa from weed communities (both cultivated land and waste places), from grassland, woodland and wetland habitats, as well as foodplants—the

kind of diversity typical of urban archaeological deposits and suggestive of a deposit forming under conditions in which a wide range of materials were incorporated (or located close to a wide range of habitats). The foodplants included hazelnut (*Corylus avellana* L.), fig (*Ficus carica* L.), apple (*Malus sylvestris* Miller), opium poppy (*Papaver somniferum* L.), blackberry (*Rubus fruticosus* agg.) and raspberry (*R. idaeus* L.). Wetland taxa included duckweed (*Lemna*), and wet woodland was perhaps indicated by willow (*Salix*) buds and twig epidermis and a bugle (*Ajuga reptans* L.) nutlet, and drier woodland or a hedgebank by the several nutlets tentatively identified as ground ivy (*Glechoma hederacea* L.). Amongst the more unusual taxa was a single seed of caper spurge (*Euphorbia lathyris* L.), perhaps to be included in a group of biennial and perennial weeds along with vervain (*Verbena officinalis* L.).

Area C (post-medieval 'tan pits')

Context 3004, Sample 34 (residue and flot from a 7.5 kg subsample assessed for insect remains)

A handful of residue was examined quickly: it comprised abundant small wood fragments (mainly <4 mm) which are thought to be sawdust. Also present were traces of larger wood fragments (to 30 mm) including wood chips (these large pieces of wood included oak, *Quercus*), coal, gravel and brick/tile.

Context 3044, Sample 42 (residue and flot from a 7.5 kg subsample assessed for insect remains)

The large residue consisted of small wood fragments interpreted as sawdust with some charcoal, coal, and cinder as well as wood fragments, including wood chips. The only identifiable plant remains were traces of toad-rush (*Juncus bufonius* L.).

Context 3058, Sample 36 (residue and flot from a 5 kg subsample assessed for insect remains)

The very large residue of about 2 litres comprised compressed wood fragments interpreted as sawdust, in the form of olive-buff clumps of tiny wood fragments in a matrix of disaggregated material. Other material included cinders and coal. Amongst the rather sparse identifiable plant macrofossils there were quite a few gorse (*Ulex*) leaves and twig epidermis fragments, as well as cross-leaved heath (*Erica tetralix* L.) leaves, these two taxa perhaps coming from litter or fuel of some kind (there may well have been some cereal straw present, too). The other taxa (33 were recorded in all) represented a wide range of habitats, though the bulk were weeds of various kinds. Two achenes of hop, *Humulus lupulus* L. were also noted.

Context 3065, Sample 39 (residue and flot from a 6.5 kg subsample assessed for insect remains)

A 'handful' of material from the large residue was examined; again, it consisted largely of ?sawdust with coal and cinders rather abundant and traces of other materials including wood and bark; the only identified plant macrofossil was hazel nutshell (a fragment up to 5 mm).

Context 3072, Sample 37

A handful of unprocessed sediment was quickly disaggregated and examined; it consisted of the same ?sawdust-dominated material seen in the other samples from this area.

Context 3097, Sample 46 (residue and flot from a 4.7 kg subsample assessed for insect remains)

The 'handful' of residue examined was found to be the same ?sawdust-rich material seen in the other samples from this series; with it were traces of heathland/peatland plants in the form of a leaf of cross-leaved heath and a twig fragment of heather or some other ericaceous shrub.

Context 3143, Sample 52 (residue and flot from a 6.5 kg subsample assessed for insect remains)

The very large residue consisted of ?sawdust as clumps and disaggregated tiny wood fragments. There was also some coal and traces of cinders, brick/tile and ?slag. Identifiable plant remains were restricted to traces of bracken (*Pteridium aquilinum* (L.) Kuhn) pinnule and stalk

fragments, gorse leaves and one or two seeds likely to have originated from plants growing as weeds or in scrub.

Conclusions

On the basis of this brief survey of the material from the fills of features considered to be 'tan pits' it seems clear that those pits in Area B may, indeed, have been involved in leather-making though assemblages dominated by bark and bark sclereids were not encountered and it may be that the fills included only a small amount of material left over from the use phase (when one might expect tan bark to have formed the bulk of the basal fill deposit).

In the case of the post-medieval pits from Area C, there is no evidence for their use in tanning, though the fills may of course all be secondary and be unrelated to the original use of the pits. The use of wood for tanning, whilst mentioned in the literature (e.g. Howes 1953) seems to be a recent phenomenon and if that was the use to which the 'sawdust' like material at this site had been put one might expect it to be much more strongly decayed, perhaps darkened. Other explanations for the abundance of the 'sawdust' is that the pits were sawpits or that they were simply backfilled with this material as convenient places for disposal after their previous use (for some other purpose) had finished.

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