

Ancient Monuments Laboratory  
Report 63/92

POLLEN AND CHARRED SEEDS FROM SAXON  
AND MEDIEVAL MATERIAL CONNECTED  
WITH THE RAMPART AT NEWARK ON TRENT  
SLAUGHTERHOUSE LANE

J R A Greig

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Summary

The material contained some pollen and seeds, which showed that there was probably a buried land surface under the Saxon rampart and scatters of plant material throughout the deposit as a whole, but the remains were not abundant enough for a very detailed analysis.

Author's address :-

J R A Greig

School of Biological Sciences  
University of Birmingham  
P.O. Box 363  
Birmingham  
B15 2TT

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# Pollen and charred seeds from Saxon and medieval material connected with the rampart at Newark on Trent, Slaughterhouse Lane.

*James Greig* (contractor to English Heritage)

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## Introduction

The 1988 excavation by Gavin Kinsley (Trent & Peak Archaeological Trust) of an area in Newark including the Saxon defences provided an important chance for finding well-dated remains from this period. The rampart would seal the old ground surface, and any environmental material preserved there could well be important. The first possibility was for information from pollen preserved in the old soil layers, if the sands and gravels had not become too neutral from urban deposits containing mortar. The second possibility was shown by the initial samples which showed that some charred remains were present as well.

## Fieldwork

Two soil profiles were collected for pollen analysis, with the following stratigraphy:

Section 1 sample 009

14cm to top of section

collected section starts at 0, 14cm from top:

0-10 more or less sand

10-28cm Keuper Marl and sand rampart material (context 0190)

28-50 sand (context 0222)

50-63 ditto

63- Keuper Marl ? natural

this column is called sample 009, and is equivalent to Matthew Canti's sample 006 (see soil report)

## Section 2

40 cm from top of section, upper 40 cm house bricks and general disturbance, then 20 cm rampart.

0-36 rampart (ctxt 0227). This had many vertical holes with small stones and charcoal in them ? worm burrows.

Buried soil surface indistinct (ctxt 0228)

36-75 cm subsoil (0229)

75-77 ditto

77- Keuper Marl (Mercian mudstone)

Sample 0247

from rampart material to test for plant remains.

Additional samples were collected by the excavator as work on the site progressed

Sample context

009 0190, 0222

010 0227, 0228, 0229

011 0247

012 0150 +

013 0240

014 0211

015 0212

016 0227 +

017 0229 +

018 0153c

019 0153d +

020 0204

021 0190

022 0222

0247 +

(+ = material analysed)



The site during excavation showing baulks with soil profiles

### Methods (macrofossils)

The samples consisted of rather silty and sandy material which broke down easily in water. 1 litre was measured out by water displacement in a 2 litre beaker, and the organic material including charred remains washed over into a sieve. The mainly inorganic residue was dried and washed over again to check whether anything more would separate, but it appeared that the original washover was adequate. Almost all the remains were charred (\*);

3 pollen samples were prepared from profile 010, and were counted. They were from depths of 25, 50 and 75 cm. Pollen analysis was not particularly successful.

### Results (macrofossils)

These are given in the species list at the end of this report. There were rather few plant remains in the samples examined, less than 10 per litre of sediment, mostly charred seeds with quantities of charcoal besides. Context 0247 from the Saxon rampart had the richest flora consisting rather badly preserved charred grain and cornfield weeds, and a sloc stone

fragment. There were also some uncharred seeds. The floras of the other samples were essentially similar, with grain, weeds and a few other things. Such material seems to have been charred by rapid heating judging by the puffed appearance, so the remains seem to have come from fire ash, whether domestic or otherwise. The plant remains are probably 'background' relating to the rampart material, or perhaps earlier remains dug up when it was built, and also relating to the medieval occupation. The most-frequently identified cereal, *Hordeum* (barley) may represent fodder rather than food for humans. The uncharred seeds of violet and elder might be contemporary with the charred remains, or they could have fallen down from above through cracks and wormholes in the soil.

### Pollen analysis

The 25 and 75 cm samples contained scarcely any pollen apart from a few battered Liguliflorae (a group including dandelions and other yellow-flowered composites), which usually persist because they are the thickest-walled pollen grains. The 50 cm sample had a more varied flora (although dominated

by Liguliflorae, as above). There were also some cereal pollen grains, a *Centaurea cyanus* (cornflower), Cruciferae, Umbelliferae, Ranunculus, and Gramineae. The only trees present were *Betula* (birch) and *Alnus* (alder). This spectrum corresponds somewhat to the picture obtained from the charred remains, which also contained mainly cereals and cornfield weed remains. The larger amount of pollen at this level may be because the material was part of the old soil surface, or associated pollen-rich layers.

#### Discussion

Ramparts can be very useful agents for preserving ancient land surfaces complete with features, as shown for example by the results from Rhuddlan, where the whole remains of camp fires complete with a range of charred crop plants were discovered (Williams, in Manley et al. 1985). The Newark material however, despite the early promise of the finds from context 0247, contained very few plant remains. This is not really surprising, because even on a buried land surface one would be lucky to be able to find concentrations of preserved plant remains such as camp fireplaces, and nothing of the kind could be seen during the excavations at Newark. What we have, then, is a small glimpse of some Anglo-Saxon crops and environment, which certainly advances knowledge, if not as much as might have been hoped.

Pollen from ramparts and associated land surfaces has usefully been studied at Chester (Roman rampart) and Worcester (Saxon rampart)(Greig, in preparation). At these sites the pollen has been abundant and fairly well-preserved, in contrast to that found at Newark. The relative lack of pollen at Newark may be partly due to less suitable preservation conditions, and maybe the old soil surface was either removed, or it contained less pollen than at the other two sites mentioned. The bulk of the rampart material would not be expected to contain a lot of pollen, if it was made up from subsoil, and there was no sign that it had been made up with turves.

#### Plant species from Newark

sample	0150	0153d	0227	0229	0247
<i>Viola</i> sp.	-	-	-	1	-
<i>Chenopodium</i> sp	?	-	?	-	-
Leguminosae half	1	-	-	-	1*
<i>Prunus</i> fruitstone	-	-	-	-	1*
<i>Rumex acetosella</i> L.	-	-	-	-	1*
<i>Urtica dioica</i> L.	-	-	-	-	1
<i>Corylus avellana</i> L.	1	-	-	-	-
<i>Sambucus nigra</i> L.	-	-	1	-	13
<i>Anthemis cotula</i> L.	-	-	?	-	3*
<i>Bromus</i> sp.	-	-	-	-	2*
<i>Poa/Agrostis</i>	-	-	-	-	1*
lg grass/sm cereal	2	-	-	-	-
<i>Triticum</i> sp.	-	-	-	-	6*
<i>Avena</i> sp.	-	-	-	-	2*
<i>Hordeum</i> sp.	2*	-	+	-	-
Cerealia n.f.i.	1*	-	3*	-	13*
charcoal	++	++	-	-	++

#### References

- Manley, J., Otlett, R.L., Walker, A.J. & Williams, D. (1985) Early medieval radiocarbon dates and plant remains from Rhuddlan, Clwyd. *Archaeologia Cambrensis* 134: 106-119.