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SOIL REPORT ON TOWCESTER, NORTHAMPTONSHIRE (SEWER TRENCH ACROSS NORTH DEFENCES)
R I MACPHAIL, JANUARY 1983

In 1982 a sample of "Dark Earth" from a 1978 excavation of Roman Towcester, Northamptonshire (excavator, Mrs Charmian Woodfield) was received. The sample originated from a "sterile layer" (layer 12) overlying a late Antonine rampart and a pit dated to about 185 AD on Samian pottery evidence (Charmian Woodfield, pers. comm.). As there was a general lack of 3rd Century pottery in the town, the excavator asked the question of what may have been going on at this time, to produce this "sterile layer" or "Dark Earth" deposit.

The sample was examined for organic matter content and scrutinised in thin section (see Results).

Discussion of Results

Layer 12 comprises a relatively organic soil of a mull A horizon type which has been worked by an earthworm population. The soil sample consists of two differing soil microfabrics suggesting the deliberate mixing of two soil types, namely:

(i) a brown silty soil, and

(ii) a darker, more organic and sandier soil.

The former is of a probable anthropogenic context , containing small quantities of fine charcoal and pot fragments, and could possibly relate to Sheldon's (1978) concept of dumped street sweepings. The latter (ii) apparently relates to a more organic topsoil which has been intruded by perhaps "digging in" and earthworm activity.

Two sequences of coatings may be present. An early sequence of fine coatings relating to soil disturbance caused by dumping and exposure to the elements; and a second series of coatings associated with the type (ii) soil material. These latter coatings are characterised by laminae of dusty argillans and silty agricutans of a greater organic matter content than the general soil plasma (i); and probably occur through continued cultivation of an overlying more organic rich topsoil or garden soil. According to the section drawing layer 12 lies a metre beneath later garden levels and is sealed by "battered upper levels", and so it may be assumed that the "Dark Earth" is basically unaffected by this later soil and the fabric is of a mainly late Roman character.

A comparison with other "Dark Earth" sites suggests the "Dark Earth" at Towcester differs from the 4th Century deposit at GPO, Newgate Street, London (Roskams, 1981; Macphail, 1981; Macphail, in press) which are darker, more organic and contain very much more cultural material (eg pottery, oyster shell, charcoal, tile, mortar, bone etc) and suggest more dumping of anthropogenic debris and more mixing by earthworms (ie fewer microfabric differences compared to Towcester). At Tanners Hall, Gloucester (Macphail, in press) deliberate dumping of several soil types produced "Dark Earth" which again contains direct evidence of probably cultivation (ie agricutans) and the possible digging-in of organic matter.

It may therefore be conjectured that at Towcester, during this 3rd Century episode, relatively inorganic silts of the "streetsweepings" (Sheldon, 1978) kind were dumped or possibly in part blown in, and a more organic topsoil added or developed through cultivation of this within-wall deposit. Roskams and Schofield (1978) have already suggested deliberate dumping of such soils for probably within-wall cultivation at the end of the 2nd Century at Milk Street, London, as evidence of the changing character of later Roman England (Reece, 1980). Soil contains evidence of post-depositional gleying (nodules).

Refs

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Results

Analytical Data:

Layer	% Loss on Ignition	% Organic Carbon
12	3.29	1.03

Micromorphological Description:
Towcester, layer 12. up to 50 cm.

Heterogeneous; with 72% brown silasepic (silty) material including areas of darker fine sandy plasma; fine subrounded blocky; 18% macrovoids; compound packing voids, metavughs, fine channels; 20% well sorted, rounded to sub-rounded (fine sandy) mineral grains; mainly quartz, few limonite and rare feldspar grains, few shell and rounded pot fragments; heterogeneous mix of organic matter and fine charcoal - concentrated in some plasma areas where intimately mixed, earthworm channels and void linings (as dusty argillans and agricutans); coarse charcoal fragments present; earthworm channels; 50% of voids lined with "dirty" coatings: dusty argillans - agricutans - perhaps at least two sequences (a) fine lining, (b) more coarse including much organic matter and charcoal; common diffuse ferro-manganiferous nodules; mainly silasepic.

Photomicrograph, Plane Polarised Light; 5.22 mm. across
Two Soil fabrics, 'dirty' channel coatings