AML Rpt 2469

ICKLINGHAM--------A ROMAN FOOTSLOPE SITE.

REPORT SENT TO MR. P. MURPHY, U. OF E. ANGLIA.

BURY ST. EDMONDS (ICKLINGHAM).

A vertical section, adjacent to the Roman occupation on the footslope of a small hill, was investigated. It showed a thick (1 metre) deposit of poorly sorted material (layer 5) overlying a slightly darker, finer layer (layer 6). Beneath this was a brown material (layers 7 and 8) of the same texture as layer 6, overlying natural gravels. (see fig). The problem was concerned with the interpretation of the section. Layer 5 shows all the features of a slope deposit caused by plough wash (i.e. poorly sorted, organic rich material). Layer 6 could be a buried soil or a natural slope deposit of finer grained material overlying the original groundsurface (layer 7). Layer 9 represents the natural gravels which underlies the site.

In order to ascertain the nature of layer 6, alkali-soluble humus teste were carried out on the samples.

ALKALI-SOLUBLE HUMUS.

Layer	Humus (mgs/100grs)
5	68
6	71
7	41
8	38
9	9

The above table shows a slight increase in humus in layer 6. However, such a result is inconclusive since high levels of humus may be expected in a buried topsoil and also in a slope deposit of transported topsoil. Layers 7 and 8 show a decrease in humus with depth and layer 9 is very low in humus. There is no evidence of a groundsurface below layer 6.

SOIL DESCRIPTIONS

Layer 5------Dark brown (10YR 3/3) sandy loam. Structureless. Moderate consistency. Stones 30%, up to 6cms.

6------Very dark greyish brown (10YR 3/2) sandy loam. Structureless. Moderate consistency. Stones rare, 5%.

7------Dark yellowish brown (10YR 4/6) sandy loam. Very poor fine, blocky structure. Moderate consistency. Stones 10%.

8------Yellowish brown (10YR 5/4) sandy loam. Very poor fine, blocky structure. Moderate consistency. Stones 25%.

9------Natural gravels.

Field evidence of particle size characteristics indicates a lithological discontinuity between layers 5 and 6 (i.e. layer 5 is a poorly sorted deposit containing large pebbles, whereas layer 6 is finer). However, in order to investigate the relationship between layers 6 and 7, thin sections were prepared using Carbowax 6000 as the impregnating medium.

Sections were made of layers 5,6 and 7. The lithological discontinuity of layers 5 and 6 was confirmed by the size of the individual mineral grains, which consisted mainly of quartz. Also, the percentage of voids (holes in the basic soil groundmass) greatly increased in layer 6. Structure in the form of small individual grains was also observed in layer 6. Layer 5 showed a more massive structure. The distribution of organic matter was denser in layer 6 and individual grains were stained with humus.

Layers 7 and 8 showed a similar distribution of voids to layer 6. Also structure, in the form of subangular peds was observed in these layers. Again, as in layer 6 individual grains were stained with humus. Concretions of iron were common in layers 6,7 and 8.

Therefore, the basic soil fabric (organization of soil material) was identical in layers 6,7 and 8. Structural development was also confined to these layers. Also, the presence of pedological features such as glaebules (microscopic concretions) would indicate that layers 6,7 and 8 represent the Ah,B and B/C horizons respectively, of an in situ soil profile. The soil properties and morphology indicate a brown earth type of soil, probably developed below grassland. Layer 5 represents the overburden (i.e. ploughwash) presumably formed when a change in land use occurred which entailed ploughing and accompanied by soil erosion.

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Section