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AUTHOR P Murphy April 1979

TITLE Silt loam (Cover Loam) deposits associated with the barrow group; Levington, Suffolk

Levington, Suffolk : Silt loam (Cover Loam) deposits associated with the barrow group.

Description and local distribution

The modern soil profile inside the ring-ditch of the barrow LVT 024 was developed on non-calcareous silt loam.

0-30 cm. Brown (10YR 3.5/3) friable silt loam; rare small flints; chalk flecks; many roots; irregular boundary with plough-grooves.

30-65 cm. Dark yellowish brown (10YR 4.5/4) friable silt loam; rare small flints; some small yellowish-brown and brown mottles; roots, modern seeds, charcoal, scraps of marine bivalves; many earthworm burrows, merging boundary.

65-80 cm. Yellowish-brown (10YR 5/4) friable silt loam; stony, with small and rare medium flints; rare fine roots; sharp boundary.

80-90 cm. + Yellowish-brown (10YR 5/8) coarse sand; very stony, with small flints; loose and structureless.

The Munsell notations refer to artifically moistened soil.

The chalk flecks and fragments of marine molluscs are thought to relate to recent marling of the fields. Along with the charcoal these have been introduced into lower horizons by worm action.

The barrow ditch cut through the silt loam horizons into the gravel but outside the ditch these horizons were absent. The soil here was developed on coarse sand and gravel, though it seems possible that laboratory analysis might indicate some silt-enrichment of its surface horizons.

A similar, but thicker, profile on silt loam was seen in the centre of LVT 026: an Ap horizon from 0-30 cm; silt loam with rare small flints and some charcoal from 30-110 cm; a paler silt loam with common small flints from 110-130 cm; and gravel beneath this. 026, however, proved to be an entirely natural feature, rising to approximately 1m. above the surrounding field surface, and some 30 m. in diameter.

Thinner silt loam deposits were also observed during the excavation of the barrow LVT 025, where they filled irregularities (35-40 cm. deep) in the surface of the underlying gravel.

The aerial photograph of the site shows dark, roughly circular patches on the sites of 024 and 026. These represent areas of more vigorous crop growth resulting from the superior water-retaining properties of the silty soils, compared with the gravel. Darker tones are also seen in the small dry valley which separates LVT023 from LVT 024. Corbett (1977) has shown that patterns of darker tones on aerial photographs can define very closely the extent and depth of surface silts in these conditions, so it may be assumed that thicker layers of silty drifts in the two fields examined are confined to the dry valley (though this has not been tested by augering) and to sites 024 and 026. Thinner silt loam is present elsewhere in the local area filling undulations in the gravel surface.

Interpretation

Soil samples from these deposits were shown to Mr W.M. Corbett (Soils Survey) who confirmed that the soil profiles in the centres of LVT 024 and LVT 026 are developed on Cover Loam, a deposit including loess derived by wind erosion of glacial outwash sediments during the late Devensian. Cover Loam has been described in North Norfolk (Corbett and Tatler, 1974) and similar sediments have been identified in North East Essex (Sturdy and Allen, in press). Discrete patches of Cover Loam are visible in aerial photographs of this latter area, where they often partly obscure patterns of fossil periglacial features. (R. Sturdy, pers.comm.) However, these differ from the isolated patches of Cover Loam at Levington in that they are larger and apparently have no surface expression in terms of relief. Polygonal patterns of periglacial features (ice-wedge casts) are not visible in the air photograph of the Levington sites, and were not detected during excavation.

Discussion

The present distribution of Cover Loam is the result of the erosion of an original uniform sheet of loess. The key question from an archaeological point of view is when this erosion took place; whether it is attributable to soil degradation and erosion caused by early agriculture or to erosion during the Later Devensian and Early Flandrian (Catt, 1978).

Although the preservation of thick Cover Loam inside the ring ditch of LVT 024 may be partly due to the former presence of the barrow mound, protecting the sediment from erosion, LVT 026 does appear to be an entirely natural feature, not related to human activities. It may therefore be suggested that these small discrete patches of Cover Loam were in existence before the Bronze Age barrows were constructed: 024 was built on one such patch, whilst a similar patch, 026 was not utilised. It is unfortunate that recent agricultural activities have destroyed all the barrow mounds in the group, along with the fossil Bronze Age soil profiles which these mounds would have sealed. Such profiles would have given one an idea of the extent and depth of Cover Loam during the Bronze Age in this area. However there are well-preserved barrows in the area which may be expected to produce more information during future excavations.

References

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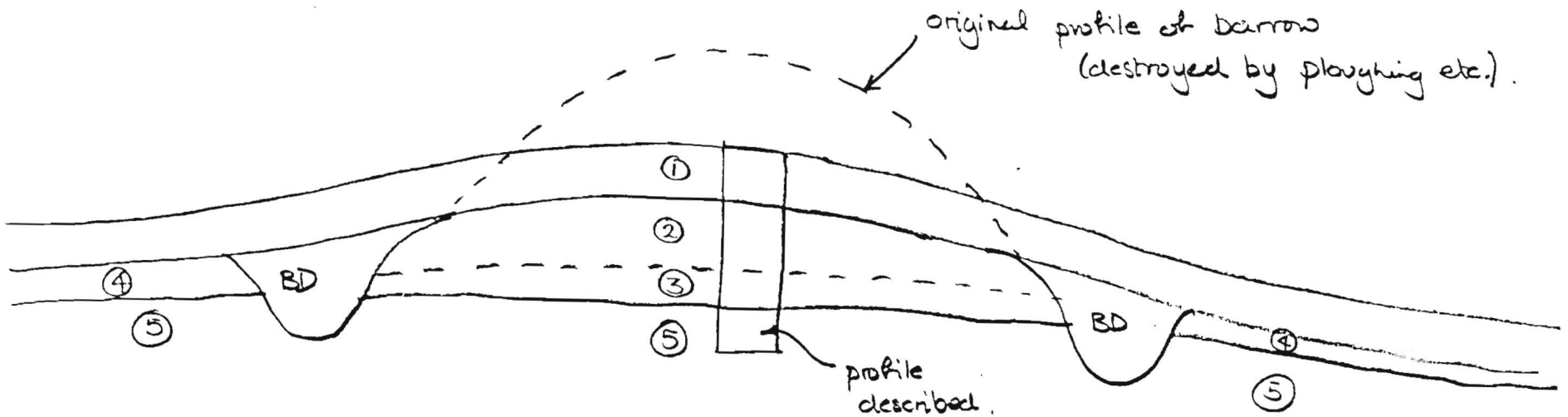
LVT 024 : Diagrammatic section (exaggerated vertical scale).



① A_p horizon

② Silt loam.

③ Paler stony siltloam.

④ Sandy loam with flints

⑤ Coarse sand and gravel.

BD – Barrow ditch.

LEVINGTON, SUFFOLK

LEVINGTON, SUFFOLK.

INTERPRETATION OF AERIAL PHOTOGRAPH.