

Report on soil associated with a mainly Iron Age site at West Stow,
Bury St Edmunds, Suffolk. (791712)

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During the early months of 1979, excavations were carried out by the Suffolk Archaeological Unit, in conjunction with the environmental archaeology officer for East Anglia (Mr Peter Murphy) of a predominantly Iron Age settlement at West Stow (W S W 030). The site consists of a number of pits and other features in blown sand which rests upon Pleistocene gravels. The soils present are humus podzols, and their upper profiles are influenced by both erosion and burial, which complicates their morphology. In addition, the archaeologists were confused over lines of dark soil material half-way down the soil profile, which had been exposed by "top-soil" removal carried out by the gravel company. These they suggested were plough marks. However, the field study seemed to indicate that the dark lines related to undulations in the Bh horizon of a humus podzol. To check this supposition a soil profile was described and sampled for alkali extractable carbon and ignition analyses, as these would show clearly if the soil is indeed a humus podzol.

Soil Report:

Soil Type: Humic Podzol, Redlodge Series.

Slope: 0.5° S W; interfluvial.

Parent Material: Blown Sand.

Horizons, cm.

3 L,F,H,	
0-3 Ah	Very dark grey (5YR3/1) medium sand; very loose; fine blocky; humose; common medium and fine roots; abrupt, smooth boundary.
3-13 Ea	Reddish brown (5YR4/3) loose, structureless sand; rootless; gradual, wavy boundary.
13-16 Ea2	Dark reddish grey (5YR4/2) to dark brown (7.5YR4/2) loose, structureless sand; rootless, broken, clear boundary.
16-(19)25 Ea3	Strong brown (7.5YR4/2) very weak, structureless sand; few roots; clear, irregular boundary.
(19)25-43 Bh	Dark brown (5YR3/2) weak, structureless sand; humose; few roots; gradual, irregular boundary.
43-47 Bh2	Very dark grey (5YR3/1) weak, structureless sand; humose; few roots; gradual, irregular boundary.
47-(56)60 Bh3	Dark reddish brown (5YR3/2) moderately weak, structureless sand; humose; clear, irregular boundary.
(56)60-70 B(s)	Yellowish red (5YR5/6) moderately weak, structureless sand; gradual, broken boundary.
70-98+ C	Strong brown (7.5YR5/6) sand.

data:

Horizon	Alkali Ext. Carbon	pH
	ppm	
Ah	960	5.0
Ea	310	4.9
Ea2	228	4.9
Ea3	119	5.1
Bh	265	5.0
Bh2	790	5.1
Bh3	178	5.2
B(s)	73	5.1
C	53	5.1

The ignited soil profile which gives a visual indication of the iron distributed through the soil, and the alkali extractable carbon results, clearly show the soil to be a humus podzol. The Ea horizons show only a small loss of iron, but this may be in part due to the influence of additions of blown sand. Lastly, the Bh horizons themselves, which undulate along the eluvial-illuvial interface and give rise to the plough-mark type features, clearly show a distribution of organic carbon typical of such illuvial horizons, thus further establishing the soil as a humus podzol (see Fig 1).

Fig. 1. Humus Podzol at West Stow, Suffolk.

