(2093)

Ancient Monuments Laboratory
Report 7/90

THE STUMBLE, BLACKWATER: SITE 28, ESSEX: POLLEN ANALYSIS.

A T Evans

Ancient Monuments Laboratory Report 7/90

THE STUMBLE, BLACKWATER: SITE 28, ESSEX: POLLEN ANALYSIS.

A T Evans

Summary

In an attempt to add to the palynological investigation of the Blackwater and Crouch river estuaries undertaken by Scaife (1988) as part of the Hullbridge project, a sediment column was taken from near a neolithic/mesolithic settlement in the area of the Blackwater estuary known as the Stumble. This sediment column was then analysed but was found not to contain any pollen.

Author's address :-

A T Evans

Ancient Monuments Laboratory
Fortress House
23 Savile Row
London

The Stumble, Blackwater: Site 28, Essex-Pollen Analysis

Introduction

This site was excavated by Tony Wilkinson of the Essex County Council Archaeology Section as part of the Hullbridge Basin Survey (Wilkinson and Murphy 1987). One of the main archaeological features of this area is the neolithic/mesolithic settlement associated with the former land surface. A pollen study was carried out around 100 metres from this settlement by Scaife (1988), that was mainly concerned with the sediments overlying the former land surface. However, the study did include one sample from the top of the land surface which yielded a pollen flora that indicated the presence of *Tilia* rich woodland. The aim of this study was to investigate further material from the buried land surface from as close to the site of the settlement, hopefully supplementing the information provided by Scaife.

Methods

Because of the presence of a water filled depression covering the site of the settlement, it was not possible to take a sample from this actual area. However it was possible to dig a trench about 10m from the settlement, and the material for investigation taken using a monolith tin. In the laboratory the sediment column was sub-sampled, material being taken contiguously every centimetre, and the material chosen for analysis treated using the standard pollen extraction techniques detailed in Moore and Webb (1978). However because of the high levels of silica present in the samples the treatment with hydrofluoric acid was repeated.

Stratigraphy

The stratigraphy of the of the sediment column is outlined below, the top of the former land surface is taken as the datum point:

+7-0cm estuarine muds.
0-6.5cm Light grey clay.
6.5-12cm Darker grey
18-24cm Grey/green clay.
24-42cm Grey clay becoming lighter with depth.

Results

Initially the upper 16 samples (0-16cm) of the buried land surface were extracted and examined, however it was found that pollen did not survive in any of these samples. However, studies by Macphail suggested that as a result of being inundated by sea-water the soils at this site had been slaked, ie. the original soil structure has been altered with the material of small particle size being translocated about 40cm down the profile. This suggested that any pollen in the soil could have also been moved down the profile, so samples from the lower

portion of the column (38-42cm) were also investigated. Unfortunately these too proved to be devoid of pollen.

Discussion

The investigation of this site showed that, at least here, the material making up the former land surface did not contain pollen. However, this may not be totally unexpected as Scaife (1988) noted that pollen preservation was variable, and in some cases non existent, in the sites he investigated in the Hullbridge area. Whether conditions were not suitable for pollen preservation in the soil originally, or whether the changes in the nature of the soil since it was flooded are responsible for the lack in pollen is not clear.

References

Moore, P.D. and Webb, J.A. (1979) An illustrated guide to pollen analysis. Hodder and Stoughton, London.

Scaife, R.G. (1988) The Hullbridge (Essex) survey; results of the palynological investigation. Ancient Monuments Laboratory Report 208/88

Wilkinson, T.J. and Murphy, P. (1987) The Hullbridge Basin Survey 1986. Interim Report No. 7. Unpublished report of the Archaeology Section, Planning Dept., Essex County Council.