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**PALYNOLOGICAL ASSESSMENT OF SEDIMENT SAMPLE SLS/02/0011
FROM SHARDLOW, DERBYSHIRE**

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PALYNOLOGICAL ASSESSMENT OF SEDIMENT SAMPLES FROM SHARDLOW, SAMPLE SLS/02/0011

Summary

A preliminary palynological assessment of a sample from the upper level of sample SLS/02/0011 from Shardlow showed potential for further analysis. The sample, consisting of a c. 2 cm spot sample taken at 3-4 cm from the top of the deposit, was assessed primarily for presence/absence of pollen and quality of pollen preservation. Examination of the processed sample from the site indicated a relatively high pollen concentration value and equally good pollen preservation - further analysis is recommended.

Introduction

A pollen sub-sample was retrieved from the block of material provided by Trent and Peak Archaeological Trust, from context no. 0011.

The sample analysed was as follows:

Context No.	Sediment type
SLS/02/0011	Very dark grey / brown peaty clay + fibrous plant remains and large wood pieces.

Method

The samples were prepared for pollen analysis using standard KOH digestion and acetolysis procedures (Faegri and Iversen 1975) with additional treatments of sodium pyrophosphate (Bates *et. al* 1978) to deflocculate clays and micro - sieving to remove coarse and fine residues. *Lycopodium clavatum* spores were added in known quantity to the pollen preparation in order to facilitate the calculation of pollen concentration values (Benninghof 1962). Pollen was scanned using an Olympus BH microscope operating at x400.

Results

An initial scan of the prepared slides indicated that pollen concentrations were high. In order to assess pollen concentration values a count of 500 *Lycopodium clavatum* spores (which had been added in known quantity to the pollen preparation) was made from the sample and the number and type of pollen grains encountered in this process recorded. The spectra from the sample was dominated by arboreal taxa with a low proportion of herbaceous taxa, indicating a wooded landscape. Dominant types noted included *Pinus sylvestris* and *Betula* together with high frequencies of Filicales (fern spores). A total of 20 pollen types were recorded in the scan suggesting a reasonable level of species diversity represented in the pollen spectra. The results of the analysis indicated that the pollen flora contained in the samples was diverse - given that a heavily wooded environment appears to have been the dominant vegetation type. Preservation state was good although some corrosion of *Betula* pollen was noted.

Recommendations

These results were obtained from a very limited sub-sample taken from one level in the deposit, however they suggest that further palynological investigations are merited by the findings of the above investigation. An examination of levels throughout the deposit and possibly from the overlying contexts 0010 and 0009 could yield information about changing environmental conditions which may be related to the sequence noted in the sediment stratigraphy.

Barbara Brayshay 11.3.1994

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