**Supplemental Material: Methods and Microscopic Analysis of Sediment Cores**

The sediment analysis for pollen, fungal spores, phytoliths, and microscopic charcoal analysis was based on modified method employed by The method used in this analysis was the modified heavy liquid flotation method (MHL), with the oxidation treatment replaced by treatment with hydroxide to remove humic acids and allow extraction of pollen and spores as well as phytoliths within a single process. The extraction procedure was as follows: Approximately 3 ml of fresh soil sediments was deflocculated in a solution of Calgon (sodium hexametaphosphate) for several hours and or shaken by hand several times to loosen the soil. The samples were wet sieved through a 250-mesh sieve to separate sand from the soil fraction. The samples were placed in large 25ml beakers or conical flasks and water was added. The suspension was stirred vigorously and allowed to settle for about 5 minutes. The supernatant containing fine silt was poured off and the remaining suspension was diluted by adding water, stirred, and allowed to settle for 5 minutes after which the supernatant was pour off. The step was repeated several times until the supernatant is clear. The carbonates were removed by adding 10 ml of 10% HCl, stirred and centrifuged the samples at 100% for 5 minutes and decanted. The suspension was washed twice with distilled water. The content was floated in 3ml portion of heavy liquid, Sodium polytangestate (SPT) at a density of 2.3. The floated samples containing pollen, fungal spores and phytoliths fraction was washed twice with distilled water to remove all the heavy liquid. Small amounts of the extracts were mounted on a slide with silicon oils.

**References**

Lentfer and Boyd (1998).