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A Report on two pollen spectra obtainedfrom peaty material collected from a sectiom in the bank of the river Alne, near Alcester, Warks.

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Report on om Alcester

Three samples, E and F (upper and lower half) were prepared, and two of these, E and F (lower half) were counted. The pollen preservation in E was quite good and 314 grains were counted, but in the F (lower half) sample the preservation was poor and some pollen grains such as those of pine were very fragmentary. The sediment was very similar in both cases, a black organic mud.

Trees and shrubs	Sample E		Sample F (lower half)	
Alnus	1	(+)	-	-
Betula	12	(4%)	4	(2%)
Corylus	31	(10%)	22	(11%)
Pinus	41	(13%)	21	(11%)
Salix	3	(1%)	-	-
Tilia	-	-	3	2
Herbs				
Alisma	-	-	1	(+)
Artemisia	1	(+)	-	-
cf. Calystegia	-	-	1	(+)
Caryophyllaceae	-	-	2	(1%)
Compositae (Liguliflorae)	5	(2%)	7	(4%)
Compositae (Tubuliflorae)	7	(2%)	2	(2%)
Cyperaceae	45	(14%)	4	(2%)
Filipendula	17	(6%)	3	(2%)
Gramineae	151	(48%)	120	(61%)
Rubiaceae	-	-	2	(1%)
Rumex	-	-	1	(+)
Typha	-	-	1	(+)
total pollen count:	314		196	
Spores				
Filicales	5		1	

Both pollen spectra are very similar, and the important features are moderate amounts of pollen from Pinus (pine) and Corylus (hazel), and a small amount of Betula (birch). The herb pollen consists mainly of Gramineae (grasses), Cyperaceae (sedges), Filipendula (meadowsweet) and Compositae, with a range of other taxa present in sporadic quantities. The differences, such as in the amount of Cyperaceae pollen, are not very significant since this is likely to be of rather local origin.

The presence of pine and birch, together with a moderate amount of hazel pollen suggest that these spectra correspond with Pollen Zone V (Boreal). In other pollen diagrams the hazel curve rises sharply to reach very high values in Zone V, as for example the classic diagram from Hockham Mere (Godwin & Tallantire, 1951), and pollen of oak, elm and lime appear in the record. The absence of these features suggest that the Alcester pollen spectra may represent the early part of the Boreal.

The presence of Tilia (lime) pollen in sample F is somewhat enigmatic, for it would not be expected this early ---- it appears very much later in the pollen diagram from Rodbaston, Staffs (Shotton & Strachan, 1959). However the pollen grains are very robust and are apt to survive where others do not, and might be relicts from interglacial sediments or intrusive from more modern ones. However the Hockham Mere pollen diagram has some traces of Tilia pollen quite early on, so there is a chance that this pollen record is authentic.

The pollen spectra are dominated by evidence of herbaceous plants such as grasses and sedges, which grow in open habitats . Many of these grow in damp places and by their very nature tend to become preserved in some form in waterlogged sediments such as the organic mud from which these pollen spectra were prepared. At least part of the large herbaceous pollen record can therefore be accounted for by rather local wet land with grasses, sedges, meadowsweet, bedstraw etc.

During this period the factors that governed the growth of vegetation cover mu have been rather different from those obtaining today, and this makes it difficult to make a precise vegetational interpretation from the pollen results. The soils are believed to have still been immature at this stage, and the flora restrict by slow migration of taxa from the south as well as by possible climatic limitations, so it is perhaps only by the Atlantic period that present day ecological factors may have governed woodland development.

However it is evident that there was some kind of woodland existed, with pine, hazel and birch, and that this was not thick enough to shade out en extensive herbaceous flora. The record of cf. Calystegia is somewhat unusual.

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References

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