

Waun Figen Felen

- Title:** Reconstruction of Holocene Vegetation History in Three Dimensions at Waun-Fignen-Felen, an Upland Site in South Wales
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Abstract

Sixteen sites in and around a small upland bog in South Wales were investigated by means of pollen analysis and radiocarbon dating. Most of the sites have ombrogenous (blanket) peat overlying a thin basal mor with abundant charcoal. A Devensian Late-glacial basin filled with muds and reedswamp deposits is shown to underlie the blanket peat in part of the area. It is concluded that the outlet of the basin was probably blocked by the development of ombrogenous peat, perhaps around 6500 years BP (though not closely dated), which spread across the basin and later up its western shore. The pollen diagrams are divided into a series of pollen assemblage zones. The zone boundaries appear synchronous within the limits of the methods. Hazel played an important role in the woodland vegetation of the pre-peat mineral soils. This woodland had generally been replaced by heath and blanket peat by about 6000 years BP. Nevertheless, some woodland apparently persisted locally in areas where peat or mor accumulation had not yet begun. Alder appears to have been established in the basin area by ca. 7000 years BP and to have spread more widely some 500-1000 years later, possibly taking advantage of environmental damage caused by Mesolithic man, evidence of whose occupation is found in the area. It is concluded that Mesolithic man was probably responsible for making a small clearing in the woodland at ca. 8000 years BP when the first mor deposit began to accumulate.

Heath vegetation first came into existence at about this time and there is circumstantial evidence of maintenance by burning. Heath conditions lasted in some areas until ca. 5500 years BP and on the more permeable soils podsolization took place. It is argued that the accumulation of relatively impermeable mor soils under heath was a major factor in the initiation of ombrogenous peat growth. This most generally began in the period ca. 5500-5800 years BP though it was both earlier (ca. 7600 years BP) and later (ca. 4000 years BP) in some areas. A comparison is made of the behaviour of certain pollen curves at the major sites in which it is found that sites with common features fall into spatially coherent groups. It is concluded, therefore, that the pollen diagrams often reflect vegetational changes taking place in relatively small areas. A reconstruction of the vegetational changes in the 4000 years after ca. 8000 years BP is made by means of a series of maps. The classical elm decline of the Atlantic-Sub-boreal transition (ca. 5000-5500 years BP) is variably represented and there follows a series of three other declines or minima dated to ca. 4600 years BP, ca. 4000 years BP and ca. 2850 years BP (though again with some possible variability).

The Bronze Age appears to have been a time of major human impacts on the local

vegetation with some woodland regeneration taking place in the earlier Iron Age before a renewed period of clearance that persisted through Romano-British times.