

Impact of Prehistoric and Medieval Man on the Vegetation; Man at the Forest Limit. Assessment of the Situation

Although the contribution presented here (figure 1) are individual case studies which are not intended to give a comprehensive picture of research at the tree line throughout Europe, they do, nevertheless, provide an overview of the present state of investigations in this field. Several points stand out.

It is apparent that more investigations are in progress with respect to man at the altitudinal than the latitudinal forest limit. This is a natural consequence of the fact that, in Europe, the latitudinal forest limit is relatively rarely encountered and is, in many cases, also partly determined by altitude.

It is also evident that fluctuations in the altitudinal forest limit are strongly affected by man and the influence of climatic is more difficult to determine, whereas at the northern forest limit it is climatic changes which play the greater role. This, too, is understandable that in the mountains the use of the area above the timber line is often seasonal and the people concerned can return to the more amenable conditions of the valleys during the climatically unfavourable winter months while the people at the latitudinal forest limit do not have this possibility. Therefore, a long term deterioration in climate may force people to stop using the highest slopes but will not cause them to leave the region altogether, while at the northern forest limit the same deterioration inevitable leads to the abandonment of the area.

Because these forest limit areas are also, by nature, difficult areas to settle and, for this reason form barriers separating more favourable areas, trackways passing through them may be of enormous significance.

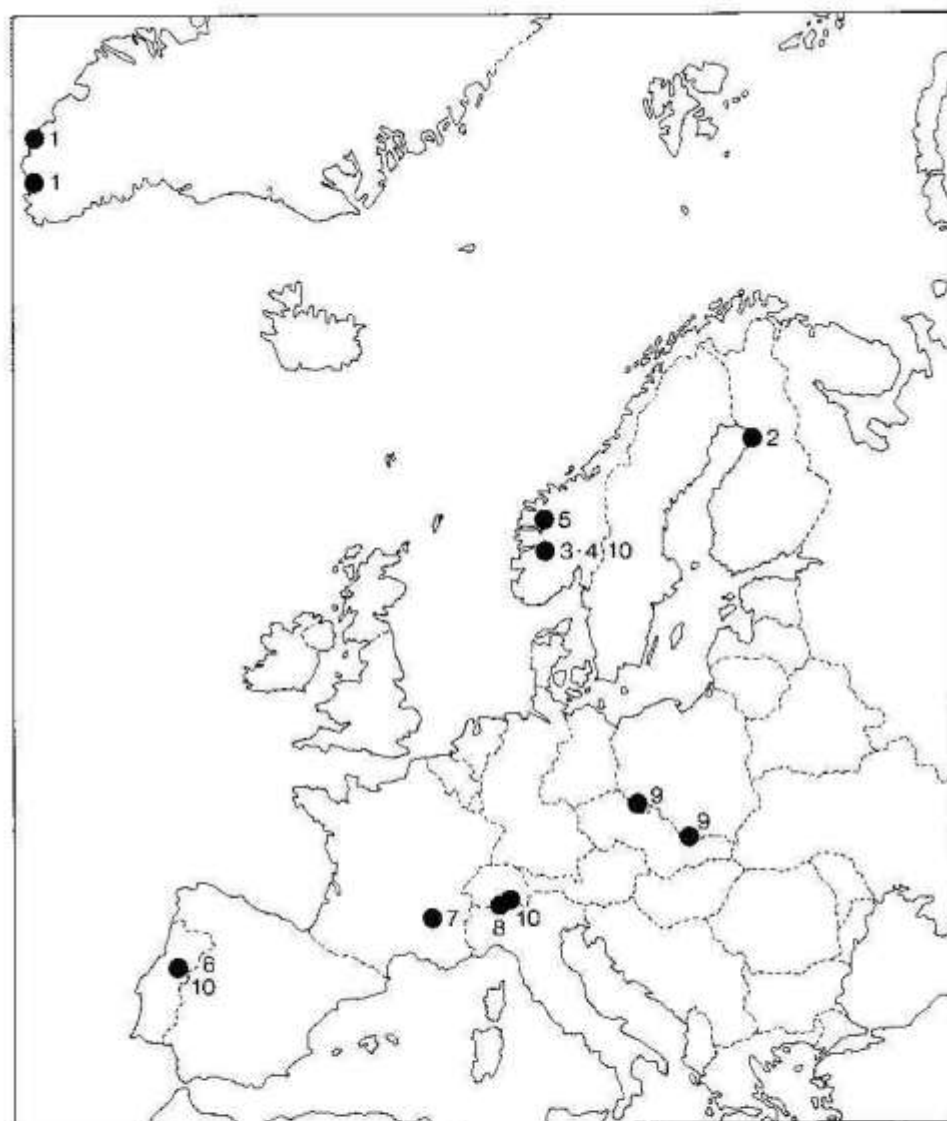


Fig. 1. Map showing location of the individual study sites referred to in this volume.

Since the seasonal pattern and the longer term variations are superimposed, the dating of individual events which have taken place over the past 15,000 years or so (Fedele), is essential if these two scales of fluctuations are to be separated. A well dated chronology is also needed if events are to be compared from one region to the next.

Despite the differences in these two types of forest limit area the same investigation techniques can be applied in both. Moreover, because, in both cases, the situation is one in which the evidence of human presence is often

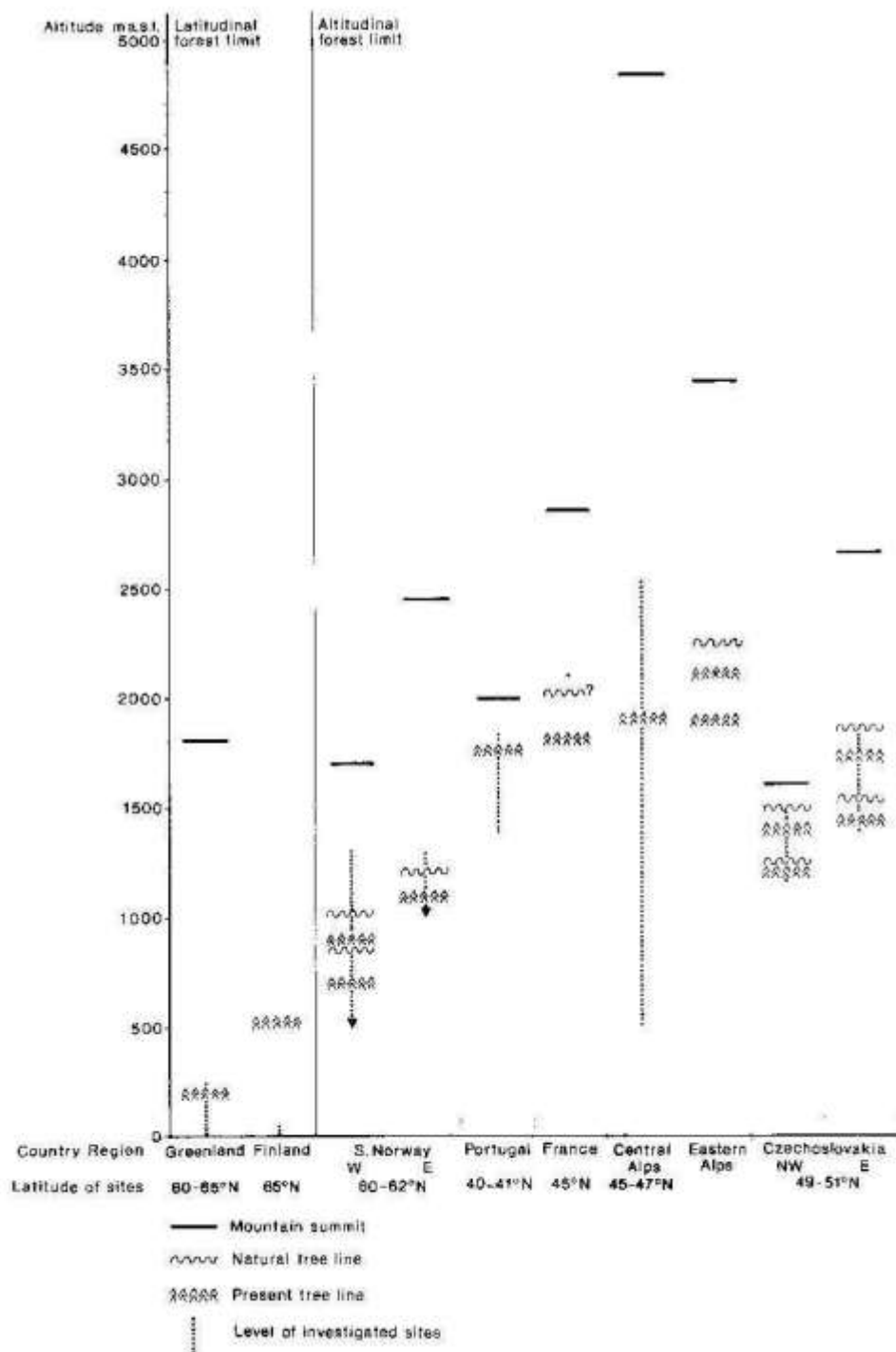


Fig. 2. Summary table of the study sites referred to in this volume and their location with respect to the present day tree line.

obscure and minimal the development of new and varied lines of approach is necessary. A pooling of resources in this respect is highly beneficial so that aspects such as using satellite pictures to calculate biomass (Fredskild) and employing pedoanthracology (Beaulieu *et al.*) to reconstruct former forest composition, to mention just two examples, open up new possibilities to be used in addition to the more established methods. The forest limit presents a real challenge for comparative work between natural scientists, archaeologists and anthropologists.

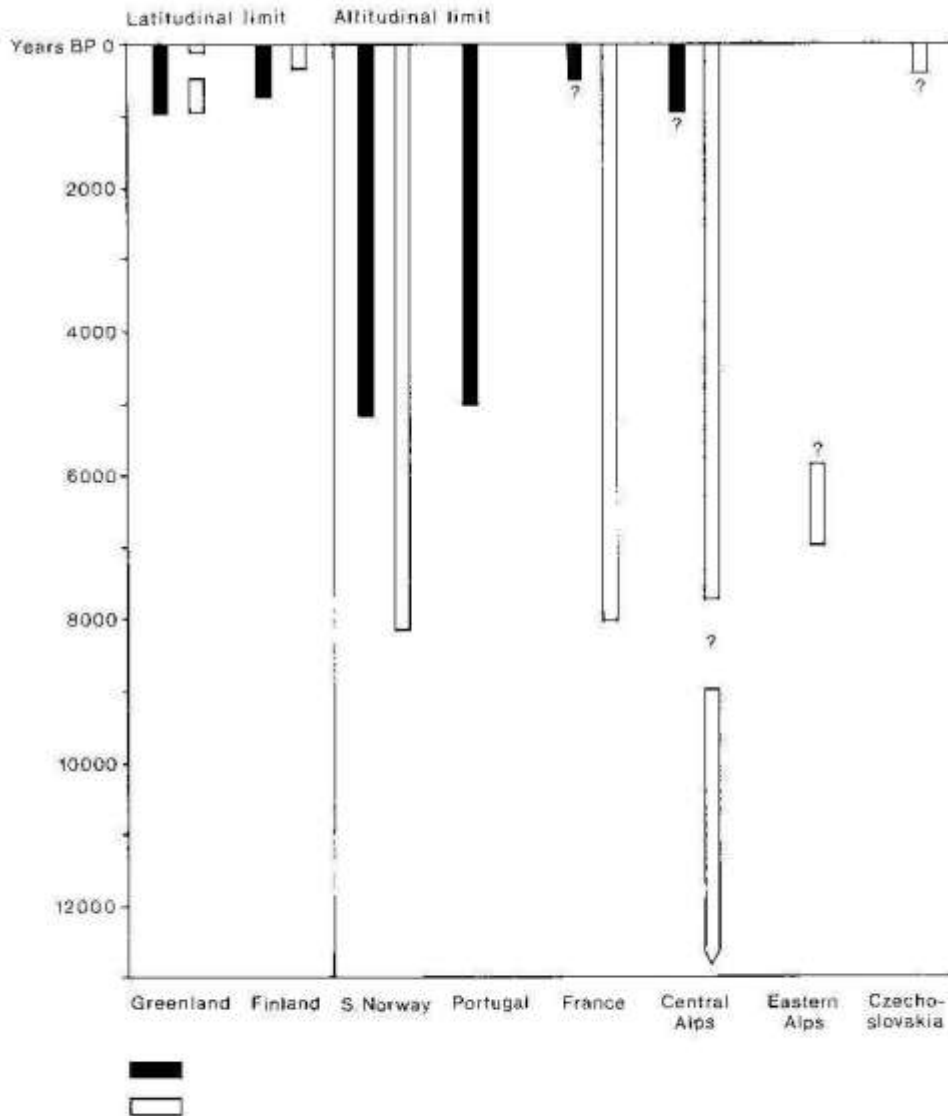


Fig. 3. Time-range represented at the investigation areas in terms of botanical and archaeological/historical evidence.

The investigation areas, although having much in common, are geographically widely separated. An attempt at a correlation or comparison between the individual case studies is presented in figure 2 in which the sites are arranged roughly N to S and W to E and the evidence of human presence is indicated relative to the tree line and the mountain summits. In all the mountainous sites humans have been present well above the tree line and the tree line today is considerably lower than the natural tree line would be under present climatic conditions. In many regions, however, investigations are in the preliminary stages so that this picture shows only the general trend as known at the present time.

When the same case studies are viewed in term of chronology (figure 3) the sketchiness of our knowledge is even more obvious. Although archaeological details from the Central Alps have been widely surveyed the botanical information is very slight. The same is true of the Western Alps (France), while in Portugal it is the botanical evidence which is strong and the archaeological data which is lacking, so far. Again the field is wide open for interdisciplinary collaboration. When detailed botanical and archaeological results, set in a firm chronology (examples from Norway) are available for the majority of the forest limit areas in Europe it will be possible to follow broad regional trends and small local scale variations and obtain a better understanding of the role that climate and humans have played in each.

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