INTRODUCTION

Presentation of the postglacial history of the Western Carpathian flora on isopollen maps continues the idea of Professor Władysław Szafer (1935), who introduced this method into reconstructions of palaeoenvironmental changes. When in 2004 Ralska-Jasiewiczowa used this method to present the Late Glacial and Holocene history of vegetation in Poland, the number of palynological sites in this part of the Carpathians was still small (Ralska-Jasiewiczowa et al., eds 2004). For this reason, conclusions on the formation and shifts in altitudinal climatic-vegetation belts could not be fully justified and the direction of migration of particular taxa could not be identified with any great precision.

The number of profiles presently available already exceeds 70. They include sites investigated in the interwar period of the last century. However, such pollen diagrams, may be characterized by only a short list of taxa that were then recognized, overlook particular tree species and completely miss out herbaceous plants. For obvious reasons such diagrams were not dated using absolute methods and, therefore, have not been considered in the present synthesis. Furthermore, several new sites were also not considered, as they have only been subjected to superficial analysis, and their stratigraphic position is uncertain. In total, 46 profiles (two from the Bieszczady Mountains), including nine formerly unpublished studies, were used in the construction of the maps (Fig. 25, Tab. 4, Appendix, this volume). The Bieszczady Mountains, a fragment of the Eastern Carpathians lying within borders of Poland, have been mentioned in interpretations mainly for taxa that migrated to the Western Carpathians from that specific direction.

Maps, prepared by D. Nalepka and A. Walanus with the use of POLPAL software (Walanus & Nalepka 1999, Nalepka & Walanus 2003a), present the history of the last 10 000 years for the most important tree species growing in the Western Carpathians. The maps show time-slots at 500-year intervals and are of a dot type indicating the time of local appearance of a given taxon. Dot maps were also used for time-slot "0", as several sites were studied 50 years ago. Moreover, particular authors collected the top samples from different depths (usually between 0 and 10 cm), therefore such data do not always correspond to the present-day range of occurrence of the taxa under discussion.

Isopollen maps provide a basis for the reconstruction of the Holocene history of the taxa presented. However, in a number of cases, reference to specific pollen profiles was necessary to emphasise some events having a local range.

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