

Magyari, E. (2002): Holocene biogeography of *Fagus sylvatica* L. and *Carpinus betulus* L. in the Carpathian-Alpine Region. *Folia Historico-Naturalia Musei Matraensis* 26: 15-35.

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Short reference: Magyari (2002)

First author: Magyari, Enikő

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Abstract

Holocene biogeography of *Fagus sylvatica* L. and *Carpinus betulus* L. in the Carpathian-Alpine Region

Enikő Magyari

The present distribution of temperate forest types in the Carpathian basin suggests that the direction of forest succession, the order and timing of tree arrival and changes in dominance differed markedly between the eastern and western part of the Carpathian basin and in the adjoining mountain zone. In order to throw light upon the historical aspects of temperate woodland succession in the Carpathian-Alpine Region, we examined in this study the Holocene expansion of two cold temperate tree species, *Carpinus betulus* and *Fagus sylvatica*. Pollen data were extracted from 30 sites, all of which were radiocarbon dated. The dates for the earliest regional appearance and marked *Fagus* and *Carpinus* pollen frequency rises were plotted on maps. Throughout analysis of these maps revealed that *Carpinus betulus* appeared the earliest in the SE Carpathians and in the North Hungarian Middle Mountains, around 8500 cal. BP. We inferred the development of a *Carpinus*-dominated forest belt in this region from ca. 7500 cal. BP. Furthermore, the local expansion of *Carpinus* preceded the spread of *Fagus* in all sites east of the Danube, except above 400 m asl. Local increase of the *Fagus* populations commenced the earliest in Slovenia, around 8000 cal. BP. For *Fagus sylvatica*, a migration route along SW Transdanubia and the Transdanubian Middle Mountains was conceived. Surprisingly early occurrence of *Fagus* and *Carpinus* pollen grains in the joint pollen diagram of Nyíres-tó and Báb-tava suggested that refuges appeared in the nearby piedmont zone of the Eastern

Carpathians.

[geology, geography](#)

Notes

Holocene biogeography of *Fagus sylvatica* L. and *Carpinus betulus* L. in the Carpathian-Alpine Region

Enikő Magyar

Tartalom címszavakban:

Introduction

Data and methods

The timing of the first detection and local/regional expansion of *Carpinus betulus*

The timing of the first detection and local/regional expansion of *Fagus sylvatica*

Discussion

What trees did *Fagus* and *Carpinus* replace?

What do the buried macrocharcoals tell us about the history of *Fagus* and *Carpinus*?

Directions of spread and possible northern refuges

The role of humans in the expansion and population increase of *Fagus* and *Carpinus*

References

Címszavazva - VA

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