

**Magyari, E., Sümegi, P., Braun, M., Jakab, G. & Molnár, M. (2001): Retarded wetland succession: anthropogenic and climatic signals in a Holocene peat bog profile from north-east Hungary. Journal of Ecology 89: 1019-1032.**

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Short reference: Magyari et al. (2001)

First author: Magyari E.

Year: 2001

Abstract

Retarded wetland succession: anthropogenic and climatic signals in a Holocene  
peat bog profile from north-east Hungary

E. Magyari, P. Sümegi, M. Braun, G. Jakab and M. Molnár

Summary

1. Pollen, plant macrofossil and humification data supplemented by chemical and physical analyses of a Holocene peat sequence from Nagymohos, Kelemér, north-east Hungary, have been used to study local wetland vegetation dynamics and upland vegetation development in the early and mid Holocene. An attempt was made to distinguish between autogenic successional processes and allogenic environmental forces.

2. Holocene sedimentation began c. 7500 cal. BC. The basin was occupied by a shallow open lake with substantial input of inorganic material until c. 6200 cal. BC, when floating reedswamp vegetation encroached on the lake surface. This turned to Carex fen within c. 100 years. Sphagnum transitional bog became established by c. 5300 cal. BC.

3. The local mire water table in the Sphagnum bog phases was elevated between c. 5700-6000 cal. BC, c. 5000-5250 cal. BC and c. 4500-4700 cal. BC. The most distinctive feature of the record is the coincidence of upland vegetation changes with reconstructed wet-shifts in mire hydrology. The upland pollen data imply selective exploitation of Ulmus and Corylus coupled with burning and soil erosion during the second and third wet periods.

4. Succession from shallow open lake to Sphagnum-bog is an autogenic process, although superimposed allogenic perturbation (human induced soil erosion and climate change) modified the expected progression from wetter to drier and from minerotrophic-water dependent to oligotrophic communities.

forest dynamic, gap dynamic, succession

climate: microclimate, climate of stand

meteorology, weather, hydrology

Notes

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Tartalom címszavakban:

Introduction

Site description

Methods

Radiocarbon dating, physical properties, humification and geochemical analysis

Plant macrofossil and pollen analyses

-Surface pollen samples

Results

Chronology

Inorganic content and peat humification

Geochemistry

Wetland vegetation development

-Ordination and numerical comparison of fossil and surface wetland microfossil spectra

-Wetland vegetation dynamics

Upland vegetation development

Discussion

Peat bog palaeohydrology

Phases of human disturbance

Controls on wetland development

Acknowledgements

References

geochemistry, human activity, humification, plant macrofossils, pollen record, wetland community succession

Címszavazva - VA

Publisher: British Ecological Society

Journal: Journal of Ecology

Location: ER Archívum (2001/P-008)

Type: scientific paper

Katalógusba vette: Gulyás Györgyi

Katalógusbavétel időpontja: Wed, 09/30/2009 - 12:00