

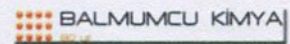
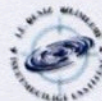
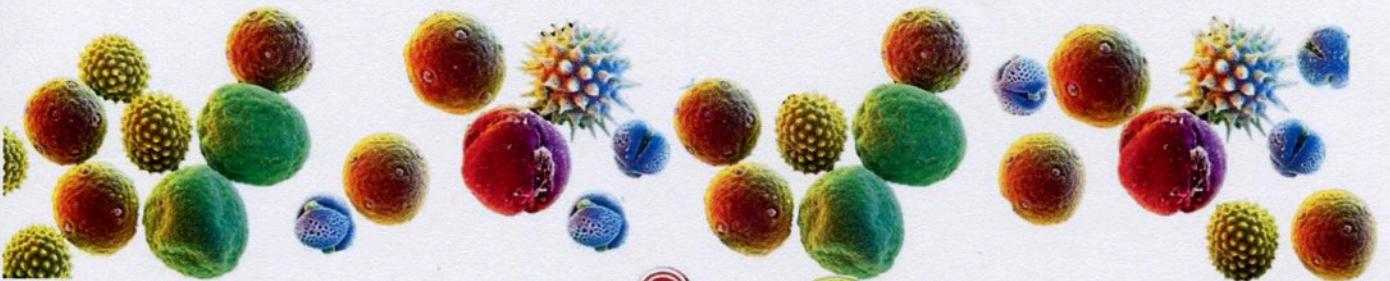
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From forests to the cultural landscape in the Masuria (NE Poland): a case study on the varved sediments from Lake Żabińskie

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Poster Presentation

Abstract

The high resolution studies of pollen grains deposited in annually laminated sediments from Lake Żabińskie were used for the reconstruction of vegetation changes in the last millennium. Recognizing the time of changes based on varve chronology and precise correlation of vegetation disturbances with local historical data allows a better understanding of the origins of the modern cultural landscape and permits to describe a role of human activity and climate in these processes.

A very interesting aspect of these studies was to determine the effect of the crusade against the Prussian tribes followed by economic, demographic and ethnic changes. Also, during this period an introduction of woodland management by the Teutonic Knights occurred in this territory.

Palynological studies conducted on annually laminated sediments from Lake Żabińskie, with c. 6-years resolution, revealed an increase in local agriculture after AD 1450 in the Teutonic Order time. However, agricultural activity was carried out in strongly wooded environment dominated, on one hand, by pine forests with spruce and deciduous forests of *Tilio-Carpinetum* type on dry habitats and, on the other, by birch and alder woods on wet surfaces. Such dominance of forest lasted until AD 1610.

According to the obtained results, the major land cover conversion from almost completely wooded landscape to strongly open with common farmland and secondary woods took place between AD 1590 and AD 1610. The process of environmental change was very fast and lasted ca. 20 yrs.

Other palynological sequences obtained from Masuria revealed significant spatio-temporary differences in the beginning of large scale woodland clearings. Strong and continued deforestation started between the 11th and 16th centuries AD depending on the site, and was substantially intensified in subsequent centuries.

In case of Lake Żabińskie the most intensive anthropogenic impact on environment began from AD 1806 and lasted at least until the World War II. Since the 60s of the 20th century AD the phenomenon of re-forestation was registered and interpreted as a possible result of changes in farming techniques and the recessions of agriculture.

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