ferruginei found in the drained part of lakes in Latvia were considered as limnogenous mire communities in this study. For data analysis 1582 relevées were used; transitional mire, fen, tall sedge and fringe vegetation were distinguished. Cluster analysis was used for classification and 20 associations were distinguished according to the Central European vegetation classification approach. Diagnostic species of four alliances and 20 associations were determined by means of indicator species analysis. *Caricetum rostratae* and *Caricetum lasiocarpae* were the most common limnogenous mire communities in Latvia, while *Myricetum gale, Cladietum marisci, Schoenetum ferruginei*, and *Caricetum buxbaumii* were the rarest ones, found mainly in the Coastal Lowland. The analysis of phytogeographical spectra showed that circumpolar species dominate in all limnogenous mire communities, except *Schoenetum ferruginei* supporting many species found only in Europe. Limnogenous mire communities were also characterized by the lack of temperate-submeridional and submeridional species and the dominance of polizonal species".

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Oak and hornbeam forest communities of Latvia

"Oak and hornbeam forest vegetation in Latvia was studied. Oak dominated forests are found throughout Latvia, while hornbeam forests occupy only small areas in the southwest part of Latvia. For data analysis 161 relevés were used. Six end clusters were obtained using cluster analysis and the following plant communities were distinguished: 1) *Quercus robur - Calamagrostis arundinacea* community; 2) *Quercus robur - Pteridium aquilinum* com-y; 3) *Carpinus betulus - Tilia cordata* com-y; 4) *Quercus robur - Acer platanoides* com-y; 5) *Quercus robur - Silene dioica* com-y; 6) *Quercus robur - Fraxinus excelsior* com-y. Indicator species analysis was used to

describe the plant communities. The syntaxonomical affinity of the plant communities and the impact of site topography to floristical differences of plant communities are discussed".

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Dispersion of plant species in a scattered landscape on a regional scale; a modeling approach

"Due to human activities natural landscapes have become isolated. As a result the dispersal of plant species is hampered. The goal of this research was to develop a model that is able to simulate plant species dispersion in a scattered landscape on a regional to European scale and to apply this model for several species. We developed a spatially explicit dispersion model (DIMO) based on dispersion capacity. Barriers as roads and rivers as well as unsuitable vegetation types are affecting the dispersion speed. Spatially explicit data about current and past occurrence of species is based on inventories. From the inventories, the presence of a viable seed bank is derived. The first model runs show that plant species depending on their dispersal capacity and their presence in a seed bank may become isolated and are not able to reach new suitable habitats due to the lack of connectivity of the landscape. Populations that are not large enough may become locally extinct. This process may be enhanced due to climate change".