

## NEMORALISATION OF CONIFEROUS STANDS IN LATVIA

Establishment of native and alien deciduous broadleaved species (*Acer platanoides*, *Tilia cordata*, *Quercus robur* and *Ulmus laevis*, *Acer pseudoplatanus* and *Tilia platyphyllos*) has been stated in extensively managed mature and over-mature conifer - *Pinus sylvestris* and *Picea abies* - stands in Latvia during the last decades. The process which involves establishment of deciduous broad-leaved species in coniferous stands is called as nemoralisation of coniferous stands. It is characterised by a large number of seedlings of broad-leaved species, young trees and the formation of a subcanopy layer in stands. The research objective was to identify changes in deciduous broad-leaved forest stands, which are formed by the transformation of coniferous stands in Latvia, based on investigation on the age of individuals and the peculiarities of stand structure and the composition of the shrub and tree layer of pine and spruce stands. Thus eight forest stands were selected to characterize the transformation process of coniferous forest stands with various broad-leaved species located in different ecological regions of Latvia. Our research revealed that the establishment of some deciduous broadleaved individuals into the studied coniferous stands occurred 40–50 years ago or during the seventies and eighties of the 20th century. The results showed that the predominant age of alien broad-leaved tree species in the research stands was 15–25 years, which indicates that the introduction of large numbers of seedlings of alien broad-leaved species in the coniferous stands occurred at the end of the 20th century. As a result, stable and mainly shade tolerant and mixed stands consisting of three to four tree species have formed in the final phase of the conifer replacement process or nemoralization, often together with *Picea abies*.

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