

HVORDAN BLIVER DET NYE ÅRTUSINDES DANSKE NATURSKOV?

*En undersøgelse af artssammensætning,
bevoksningsstruktur og vegetationsdynamik i
et område med ung, selvgroet skov i Nordsjælland*

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*How will naturally grown and unmanaged
forest develop in Denmark in the new millenium?*

Key words: Secondary succession, military training areas, unmanaged natural forest, scrub, species composition, *Crataegus*, *Quercus*, *Prunus avium*, basal area, competition, light, shadow, seed dispersal.

SUMMARY

The article describes the species composition of woody plants, the forest structure, and the vegetation dynamics in different scrub and young forest stands in part of a military training area in Northern Zealand, Denmark, in which a secondary succession in abandoned farm land started after 1910. The colonization of woody plants has been pronounced after 1945.

33 species of trees and shrubs are found in the stands. The main part of these are native species. The 3 most dominating species with respect to basal area are *Quercus robur* L., *Crataegus monogyna* Jacq., and *Prunus avium* L.

The competition for light is serious in some of the stands more than approximately 25 years old because of a closed canopy layer of species with a more or less pronounced shading effect. Some of the results show a reduced survival of seedlings, suppression and eventual death of younger stems.

Species with seeds dispersed by birds and mammals are very common, whereas wind-dispersed species are not often represented as their seeds germinate poorly in grassland vegetation, which covered most of the surveyed area when the forest succession started. Elderly individuals, as well as saplings of some of the species are mainly concentrated in particular geographical areas as their seeds have not been dispersed very long, whereas seeds of other species have been very effectively spread all over the area but mainly germinate near well-established trees and shrubs. Those woody plants first grown up have thus had the function as recruitment foci for the further colonization of new saplings of different species.

The dynamic development process can be divided into 3 successional phases mainly on the basis of changes in the herb and shrub vegetation from very light-demanding species to species tolerating partly shadow, and the changes in stand structure. But the rather few years from 1910 is yet too short a time to show pronounced changes in tree species composition. The analyzed scrub and young forest stands will (if not disturbed) proceed the succession towards a species-rich, mixed deciduous forest having a natural forest structure. Thus the surveyed area provides an excellent basis for studying the contemporary emergence and development of unmanaged natural forest in Denmark.