

GENERAL INFORMATION

author(s)	De Couck N
year	2011
English title	Changes in the tree layer of the Aelmoeseneie forest and the impact on litter, soil, and herb layer
original title	Veranderingen in de boomlaag in het Aelmoeseneiebos en de impact op strooisel, bodem en kruidlaag
reference	Msc thesis, Ghent University, Ghent
pages	62
type	dissertation (d2)
ecosystem service	supporting – forest dynamics, biodiversity, soil formation
keywords	resurvey, herb layer, litter decomposition, soil pH
taxa	
project	
supervisor	Verheyen K
institution	Laboratory of Forestry
location	pdf, hardcopy
data	

MATERIALS & METHODS

study area	5n (scientific zone)
time period	2010
goal	Quantify the spontaneous forest dynamics. Analyse the effects of tree layer changes on litter, soil, and herb layer.
set-up	full inventory of the tree layer permanent grid 10 m x 10 m (20 plots ash, 19 plots oak-beech): vegetation and soil
data collection	trees (dbh > 7 cm): tree species, dbh, location (xy coordinates) vegetation: species, presence/absence litter (0.5 m x 0.5 m): mass L, F, and H layer soil 0-5, 5-15: pH-KCl, pH-H ₂ O, moisture content
remarks	re-inventory of the vegetation (Sterken_1993) and soil/litter (Haleplis&Vakalopoulos_1993) re-inventory of the tree layer (VandeWalle_etal_1998, VandeWalle_etal_2006)

RESULTS

The difference between the two forest types (oak-beech vs. ash) was reflected in the litter, soil, and herb layer. Basal area, shade intensity, and species richness had increased. The two zones had become more alike, but the shift in species composition was different in both zones.

The amount of litter was larger in plots with a large basal area and a low litter quality. The pH of the upper soil layer did decrease in the oak-beech zone, and increase in the ash zone.