GENERAL INFORMATION

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taxa	*Anemone nemorosa, Hyacinthoides non-scripta, Primula elatior, Pteridium aquilinum*, *Oxalis acetosella*, *Mercurialis perennis*
project	
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MATERIALS & METHODS

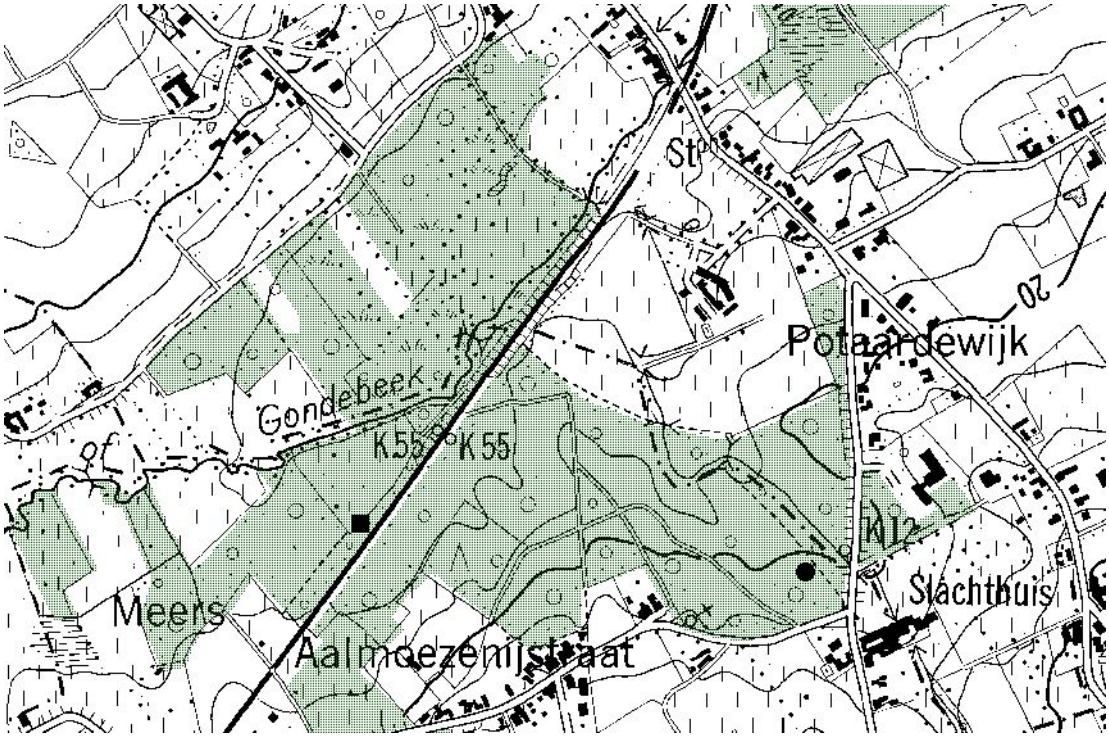
study area	3b, 3e, 5l
time period	2004-2006
goal	Investigate the impact of tree species on the development of forest understorey species typical of ancient forest sites.
set-up	introduction experiment in the Mortagne forest - 6 herb species (*Anemone*, *Hyacinthoides*, *Primula*, *Pteridium*, *Oxalis, Mercurialis*) - rhizomes of *Mercurialis* and *Oxalis* collected in the Aelmoeseneie forest, other plants bought at Ecoflora - 10 stands with 9 tree species planted in 1972: *Fraxinus Americana*, *Populus*, *Castanea sativa*, *Acer pseudoplatanus*, *Quercus rubra*, *Alnus glutinosa*, *Fagus sylvatica*, *Tilia cordata*, *Robinia pseudo-acacia* - 10 m x 10 m grid, 20 introduction points per stand, plants introduced around these points (30 cm distance) between 12-17/03/2004
data collection	introduced species - before planting: plant biomass, number of bulbs/rhizomes/rosettes, presence/absence of flowers/spores - measurements: mid May & mid July 2004; end March, mid May, mid July in 2005 & 2006 - variables: number of rosettes/leaves/stems, number of flowering stems, number of flowers, height, cover, number of seedlings - other observations: damage, deformations, sex of *Mercurialis* vegetation inventory - circular plots, radius = 1 m - at each grid point - mid May and mid July 2004 - scale of Londo soil analysis

	- mixed sample of 4 samples per grid point, 0-10 cm - mid July 2005 - N, P, ph-KCl, pH-H_2O litter - litter type (Jabiol) - litter collection in circular plot with d = 19 cm, dry biomass - January/February 2005 light availability - LAI: at 20 cm above ground level, mid July 2004, end March 2005, mid May 2005, mid July 2005 - densitometer: at breast height, July 2005
remarks	collection rhizomes *Mercurialis perennis* (3b, 3e), collection *Oxalis acetosella* (5l close to the brook) in February-March 2004, see map below

RESULTS

Overall, the establishment and growth of the understorey species was hampered by a low soil pH. *Oxalis* was positively affected by a high pH. *Hyacinthoides* was not affected by the studied pH range. *Anemone, Primula*, *Mercurialis*, *Oxalis* show a pH treshold between 3.5 and 4. Shading was most important for *Pteridium*, *Oxalis*, and *Mercurialis*. The soil P and N concentrations were not limiting. Litter mass was closely related to the establishment success. Thin litter layers resulted in better establishment.

The different species and forest stands are discussed separately in the report.



black square = *Mercurialis perennis*

black circle = *Oxalis acetosella*