

GENERAL INFORMATION

author(s)	Muys B
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project	Msc thesis
supervisor	
institution	Ghent University, Laboratory of Forestry
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data	

MATERIALS & METHODS

study area	5b, 5e, 5f, 5g, 5j, 5n
time period	Aug 1984 – Feb 1986
goal	Find out whether tree species affects the number, biomass and species composition of earthworms. Do these variables show seasonal trends?
set-up	<ul style="list-style-type: none">- Preliminary analysis: handsorting vs. formalin method in 8 paired plots of 0.5*0.5m- 4 stands- 6 random soil samples every month (25 * 25 * 25) cm³- hand sorting
data collection	<ul style="list-style-type: none">- determination earthworms, length, weight after 1 month- 240 worms: length, fresh weight, weight after 1 month formalin fixation, dry weight
remarks	Samples under oak and beech were taken randomly during 6 months. As no earthworms were found during these 6 months, half of the samples was taken at spots where earthworms were more likely to occur (e.g., the bottom of drains) during the next 6 months.

RESULTS

Species composition

Total number of 13 earthworm species: 12 under poplar and ash, 7 under oak, 3 under beech. *Allobophora* is the main species. Under beech, mainly small species are found; under the other species, mainly the larger *Lumbricus* species occur as secondary species. Under oak and beech, earthworms were only found in the drains, and no anecic species were found at all. Two species associations: *Allobophora*–*Lumbricus rubellus*, *Eiseniella tetraedra*–*Dendrobaena mammalis*. Some earthworm species, e.g., *Dendrobaena*, show seasonality in their occurrence.

Quantitative study

Earthworm number and biomass: poplar > ash > oak & beech. Earthworm occurrence increases with pH. Earthworm occurrence is minimal in winter and summer. Non-pigmented worms had a higher dry matter content.