

## GENERAL INFORMATION

<b>author(s)</b>	Maddelein D
<b>year</b>	1986
<b>English title</b>	Periodicity of leaf fall in the Aelmoeseneie forest (Gontrode)
<b>original title</b>	Bladvalperiodiciteit in het Aelmoeseneiebos te Gontrode
<b>reference</b>	Msc thesis, Ghent University, Ghent
<b>pages</b>	109
<b>type</b>	dissertation (d2)
<b>ecosystem service</b>	supporting – soil formation and fertility
<b>keywords</b>	litter, species effect
<b>taxa</b>	<i>Prunus</i> – <i>Betula</i> – <i>Corylus avellana</i> – <i>Quercus robur</i> – <i>Quercus rubra</i> – <i>Acer pseudoplatanus</i> – <i>Fraxinus excelsior</i> – <i>Fagus sylvatica</i> – <i>Tilia cordata</i>
<b>project</b>	Msc thesis
<b>supervisor</b>	Van Miegroet M
<b>institution</b>	Laboratory of Forestry
<b>document</b>	hardcopy
<b>data</b>	per sample point: total biomass and leaf area (% per species), monthly leaf fall (% of each tree species)

## MATERIALS & METHODS

<b>study area</b>	5b, 5c, 5d, 5e, 5f, 5h, 5l, 5n
<b>time period</b>	May-December 1985
<b>goal</b>	Study of the periodicity of leaf fall + determination of the relationship between leaf area and leaf dry mass, the production of leaf area per stand/tree/species
<b>set-up</b>	litter fall <ul style="list-style-type: none"> <li>- 37 sample points, on the present 25 m x 25 m grid and in a lime stand</li> <li>- perforated plastic traps with <math>\varnothing</math> 37.5 cm</li> </ul> species-specific relationship leaf biomass – leaf area <ul style="list-style-type: none"> <li>- random on-tree leaf sampling</li> </ul> stand inventory <ul style="list-style-type: none"> <li>- inventory of 1984 + inventory of neighbouring trees around litter traps</li> </ul>
<b>data collection</b>	litter fall <ul style="list-style-type: none"> <li>- monthly or weekly sampling</li> <li>- dried samples: leaves sorted per species, number of leaves, leaf biomass (without petiole), biomass of all other litter and the petioles</li> </ul> species-specific relationship leaf biomass – leaf area <ul style="list-style-type: none"> <li>- monthly (end of May–October, 4 and 20 November)</li> <li>- 25 leaves/tree species: dry mass of leaf sections</li> </ul> stand inventory <ul style="list-style-type: none"> <li>- circular plot with radius 10 m</li> <li>- all living trees with <math>\varnothing</math> &gt; 8 cm: dbh</li> </ul>
<b>remarks</b>	map with sample points (p 16)

## RESULTS

The leaf production was 3500 kg/ha, with a leaf area of 10 m<sup>2</sup> per m<sup>2</sup> soil surface. The main tree species were also the main litter producers, but the leaf biomass production was not really affected by the stand basal area or stem density. Leaf abscission mainly occurred in November although lime, poplar, rowan, and birch leaf fall started earlier. The changes in the ratio biomass/leaf area over time differ between the tree species, but a maximum value was mainly found in June. The number of leaves is smaller for species with

large leaves. The leaf litter of trees with heavy leaves (e.g., red oak and poplar) did not show a strong spatial spread.