

GENERAL INFORMATION

author(s)	Coussement J
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MATERIALS & METHODS

study area	5a–5n
time period	October 1982 (inventory, mapping <i>A. mellea</i>)
goal	Mapping of the distribution of <i>Armillariella mellea</i> , investigation of factors that might affect its distribution and abundance such as soil conditions, tree species, stand characteristics, social position of the tree, tree growth, variation in soil pH
set-up	mapping <i>A. mellea</i> based on a 25 m x 25 m grid distribution of mycelial cords around tree stems for oak, ash and larch vertical distribution of mycelial cords per soil type tree growth with/without <i>A. mellea</i> for oak and ash
data collection	<p><u>mapping <i>A. mellea</i></u></p> <ul style="list-style-type: none"> - 296 points on a 25 m x 25 m grid - trees with <i>A. mellea</i>: numbered, tree species, dbh, position on map - horizontal distribution: density of mycelial cords on the grid points: 13 soil samples (l = 25 cm, ϕ 8 cm) - distribution trees with mycelial cords: 10 nearest trees: species, dbh, position, <i>A. mellea</i> presence <p><u>distribution of mycelial cords around tree stems</u></p> <ul style="list-style-type: none"> - 10 oak, 10 ash, 10 larch - 3 concentric circles (r = 1.5 m, 3.0 m, 4.5 m) with 8 soil samples - crown projection, dbh, height, branch-free bole length <p><u>vertical distribution of mycelial cords</u></p> <ul style="list-style-type: none"> - 2 pits per soil type (w = 50 cm, d = 80 cm) - grid of 50 cm x 50 cm with spaces of 10 cm x 10 cm: number of rhizomorphs - each 10 cm depth: pH <p><u>tree cores</u></p> <ul style="list-style-type: none"> - 10 oaks with mushrooms, 10 oaks with mycelial cords, 10 free oaks with dbh 24–28 cm on (w) Ldc soil - 6 ash with mushrooms, 6 ash with mycelial cords with dbh 28–32 cm, soil Ldc - dbh, h, branch-free bole length, crown projection
remarks	

RESULTS

Mapping

Maps are shown for the distribution of fruiting bodies of *A. mellea* for October-November 1982. In fall 1983, there were less fruiting bodies.

- Occurrence of fruiting bodies on living and dead trees was correlated. In young stands: many fruiting bodies on dead elm trees.
- High densities of fruiting bodies in areas with high densities of small trees.

Distribution of mycelial cords

Maps are shown for the distribution of the mycelial cords in the soil or at the stem base of trees. The occurrence of mycelia in soil and at stem base are correlated.

- Borders of young stands: occurrence of mycelia, but the dead elm trees might be infected by spores.
- Strong mycelial concentrations in the soil around infected trees.
- No correlation between mycelial concentrations in the soil and infected dead stems.
- No correlation with stem diameter and social position of the tree.
- Most frequent on ash and poplar (birch, cherry). Least frequent on larch.

Mycelial cord concentration is not correlated with distance from a tree stem.

Mycelial cord concentration is highest in the top 10 cm of the soil.

Tree growth

No clear relationships with *A. mellea* presence.

Despite the omnipresence of *A. mellea* in the Aelmoeseneie forest, overall, the forest is still healthy.