

PLOT 707

LOCATION: 28 m from western edge of Grid Square #: 707
DATE SAMPLED: 7/9/84

SITE VARIABLES:

SLOPE: 2° ASPECT: 5° POSITION: local depression
SURFACE WATER: perennial pond
LITTER DEPTH: 4.50 cm EXPOSED BEDROCK: no
SOIL SERIES (mapped):
SOIL pH:

VISUAL EVIDENCE OF: LOGGING: no
GRAZING: no
STONE WALLS: no
FIRE: no
RECENT WINDTHROW: yes
MOUNDS & PITS: yes

AGES OF DOMINANT TREES: 25.5 cm Acer rubrum : years

CANOPY HEIGHT: 18.8 m % SKY VISIBLE: 11.0

COMMENTS:

HYDROLOGY:

This site is wet throughout the entire year and has been for many years. It is surrounded by slopes which drain into it and the water table is currently about .5m above the surface.

SOILS:

The soils are very fine and heavy with clay sediments and no stones. There is a well developed organic layer in inundated spots, otherwise it is shallow. There are tussocks of Carex rhizomes and peat.

HISTORY:

There is old windthrow on the plot. No human disturbance is evident. More recent windthrow is probably due to the flooding and subsequent shallow rooting of trees.

STAND CONDITION:

The crown is thin on this plot and is probably due to the flooded condition. There is an Acer rubrum overstory with mainly Betula lenta reproduction.

ADDITIONAL COMMENTS ON THE SITE:

The center of the plot was offset 12.62m west due to a road and old buildings. There is standing water and many sedge tussocks. A stone wall is just off plot. The trees on this plot are restricted to the tussocks. Tussocks are formed of Carex rhizomes, sphagnum and partially decomposed peat. They are well developed indicating that the inundating condition has existed for many years. There are no signs of an older forest and the present trees are 30-40 years old. Possibly this site is drying out.

VEGETATION STRUCTURE AND COMPOSITION:

TREES: Absolute density and basal area of stems > 10 cm DBH, by canopy position.

| SPECIES | CANOPY | | SUB-CANOPY | | UNDER-STORY | | ALL STEMS | |
|-----------------|----------------------|--------|------------|-------|-------------|-------|-----------|--------|
| | DENS | BA | DENS | BA | DENS | BA | DENS | BA |
| Acer rubrum | 380 | 11.266 | 440 | 7.346 | 140 | 1.470 | 960 | 20.081 |
| Prunus avium | 0 | 0.000 | 20 | 0.353 | 0 | 0.000 | 20 | 0.353 |
| Acer saccharum | 40 | 1.597 | 0 | 0.000 | 0 | 0.000 | 40 | 1.597 |
| Ulmus americana | 0 | 0.000 | 0 | 0.000 | 0 | 0.000 | 0 | 0.000 |
| TOTALS: | DENSITY / HA | | 420 | | 460 | | 140 | |
| | BASAL AREA (M2) / HA | | 12.8631 | | 7.6990 | | 1.4696 | |
| | | | | | | | 1020 | |
| | | | | | | | 22.0318 | |

TREES: Relative density and basal area of stems > 10 cm DBH, by canopy position; and overall species importance values (mean of overall %D and %BA).

| SPECIES | CANOPY | | SUB-CANOPY | | UNDER-STORY | | ALL STEMS | | IMPORTANCE VALUE |
|-----------------|--------|-----|------------|-----|-------------|-----|-----------|-----|------------------|
| | %D | %BA | %D | %BA | %D | %BA | %D | %BA | |
| Acer rubrum | 90 | 88 | 96 | 95 | 100 | 100 | 94 | 91 | 92.63 |
| Prunus avium | 0 | 0 | 4 | 5 | 0 | 0 | 2 | 2 | 1.78 |
| Acer saccharum | 10 | 12 | 0 | 0 | 0 | 0 | 4 | 7 | 5.59 |
| Ulmus americana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |

TREES: Size class distribution of trees tallied in the 1/20 ha plot.

| SPECIES | SIZE CLASS (cm) | | | | | | | | |
|-----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|------|
| | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 | 35-40 | 40-45 | 45-50 | > 50 |
| Acer rubrum | 22 | 17 | 6 | 3 | 0 | 0 | 0 | 0 | |
| Prunus avium | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Acer saccharum | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | |
| Ulmus americana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | 22 | 18 | 8 | 3 | 0 | 0 | 0 | 0 | 0 |

TREES: Absolute density (per ha) and relative density (as % of density of live trees) of standing dead trees and trees with upper branch dieback

(NOTE: "% OF LIVE" = 999 indicates no live trees of that species in the plot).

| SPECIES | STANDING DEAD | | BRANCH DIEBACK | |
|-----------------|---------------|-----------|----------------|-----------|
| | DENSITY | % OF LIVE | DENSITY | % OF LIVE |
| Acer rubrum | 40.0 | 4.17 | 200.0 | 20.83 |
| Prunus avium | 0.0 | 0.00 | 20.0 | 100.00 |
| Acer saccharum | 0.0 | 0.00 | 40.0 | 100.00 |
| Ulmus americana | 20.0 | 999.00 | 0.0 | 0.00 |
| TOTALS: | 60.0 | 5.88 | 260.0 | 25.49 |

SAPLINGS: Densities per hectare of all stems > 1 m height and < 10 cm DBH.

| SPECIES | SIZE CLASSES (cm) | | | | | TOTAL |
|----------------------|-------------------|-------|-------|-------|--------|-------|
| | 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 8 - 10 | |
| Betula lenta | 1000 | 160 | 40 | 0 | 0 | 1200 |
| Acer rubrum | 360 | 40 | 120 | 160 | 160 | 840 |
| Carpinus caroliniana | 0 | 40 | 40 | 40 | 0 | 120 |
| Quercus rubra | 0 | 0 | 0 | 40 | 0 | 40 |
| Fraxinus americana | 80 | 0 | 0 | 0 | 0 | 80 |
| TOTALS: | 1440 | 240 | 200 | 240 | 160 | 2280 |

SEEDLINGS: Densities (per m²) of stems < 1 m tall.

| SPECIES | DENSITY (#/m ²) |
|--------------------|-----------------------------|
| Acer rubrum | 9.000 |
| Ulmus americana | 0.250 |
| Betula lenta | 0.250 |
| Fraxinus americana | 0.500 |
| TOTAL: | 10.000 |

SHRUBS: Percent cover of shrub species within the stand.

| SPECIES | % COVER |
|-----------------------------|---------|
| Parthenocissus quinquefolia | 5.787 |
| Smilax rotundifolia | 0.436 |
| Toxicodendron radicans | 0.753 |
| Rubus sp. | 0.793 |
| Lonicera tatarica | 0.713 |
| Rhododendron sp. | 8.601 |
| Vaccinium sp. | 3.726 |
| TOTAL: | 20.809 |

HERBACEOUS SPECIES AND THE FOREST FLOOR: Percent cover (note: + means < 1 %).

| | % COVER |
|-----------------------|---------|
| Litter layer | 80.000 |
| Exposed soil | + |
| Exposed rock | + |
| Bryophytes | 17.374 |
| Lichens | + |
| Dead wood | 2.375 |
| Unknown seedlings | + |
| Tree boles | + |
| Equisetum sylvestris | + |
| Carex stricta | 2.874 |
| Carex sp. | + |
| Osmunda cinnamomea | 10.625 |
| Viola sp. | + |
| Galium sp. | + |
| Dryopteris cristata | + |
| Thelypteris palustris | 1.750 |
| tree root | 1.750 |
| Fragaria virginiana | + |
| Symplocarpus foetidus | 3.375 |
| Arisaema triphyllum | + |
| Geranium maculatum | + |
| Onoclea sensibilis | + |
| Potentilla simplex | + |
| Polygonum sagittatum | + |