

PLOT 107

LOCATION: 70 m from western edge of Grid Square #: 107

DATE SAMPLED: 8/3/84

SITE VARIABLES:

SLOPE: 7° ASPECT: 32° POSITION: midslope and local depression

SURFACE WATER: none

LITTER DEPTH: 1.38 cm EXPOSED BEDROCK: no

SOIL SERIES (mapped):

SOIL pH:

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

AGES OF DOMINANT TREES: 45.7 cm Quercus velutina : years

CANOPY HEIGHT: 27.7 m % SKY VISIBLE: 5.0

COMMENTS:

HYDROLOGY:

Site is well drained.

SOILS:

Soils are deep, well drained and only slightly stony with a poorly developed humus layer and a well developed litter layer.

HISTORY:

Some windthrown trees in plot.

STAND CONDITION:

High Cornus florida mortality and dieback.

ADDITIONAL COMMENTS ON THE SITE:

Site has a low, dense shrub layer.

## 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	60	3.573	20	0.299	40	0.941	120	4.813
Quercus alba	20	1.957	40	2.517	0	0.000	60	4.474
Quercus velutina	40	8.420	20	0.443	0	0.000	60	8.863
Betula lenta	0	0.000	20	0.654	60	0.577	80	1.231
Fraxinus americana	0	0.000	0	0.000	0	0.000	0	0.000
Carya ovata	0	0.000	20	0.487	20	0.197	40	0.684
Quercus prinus	0	0.000	40	1.406	0	0.000	40	1.406
TOTALS:	DENSITY / HA	120		160		120		400
	BASAL AREA (M2) / HA		13.9501		5.8059		1.7159	21.4719

**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
	%D	%BA	%D	%BA	%D	%BA	%D	%BA	VALUE
Acer rubrum	50	26	13	5	33	55	30	22	26.21
Quercus alba	17	14	25	43	0	0	15	21	17.92
Quercus velutina	33	60	13	8	0	0	15	41	28.14
Betula lenta	0	0	13	11	50	34	20	6	12.87
Fraxinus americana	0	0	0	0	0	0	0	0	0.00
Carya ovata	0	0	13	8	17	11	10	3	6.59
Quercus prinus	0	0	25	24	0	0	10	7	8.27

**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
	15	20	25	30	35	40	45	50	
Acer rubrum	1	2	1	1	1	0	0	0	
Quercus alba	0	0	1	0	1	1	0	0	
Quercus velutina	0	1	0	0	0	0	0	1	57
Betula lenta	3	0	1	0	0	0	0	0	
Fraxinus americana	0	0	0	0	0	0	0	0	
Carya ovata	1	1	0	0	0	0	0	0	
Quercus prinus	0	1	1	0	0	0	0	0	
TOTALS	5	5	4	1	2	1	0	1	1



**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	20.0	16.67	40.0	33.33
Quercus alba	0.0	0.00	0.0	0.00
Quercus velutina	0.0	0.00	20.0	33.33
Betula lenta	0.0	0.00	0.0	0.00
Fraxinus americana	20.0	999.00	0.0	0.00
Carya ovata	0.0	0.00	0.0	0.00
Quercus prinus	60.0	150.00	0.0	0.00
TOTALS:	100.0	25.00	60.0	15.00

**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	
Quercus velutina	0	0	0	0	40	40
Acer rubrum	0	40	40	0	40	120
Pinus strobus	0	0	0	0	40	40
Fagus grandifolia	320	80	40	0	40	480
Fraxinus americana	40	0	40	0	0	80
Betula lenta	0	80	40	120	80	320
Carya ovata	40	40	40	0	0	120
Carpinus caroliniana	40	0	0	0	0	40
Quercus rubra	0	0	0	40	0	40
Amelanchier sp.	40	0	0	0	0	40
Ostrya virginiana	40	0	0	0	0	40
Cornus florida	1400	400	40	0	0	1840
TOTALS:	1920	640	240	160	240	3200

**SEEDLINGS:** Densities (per  $m^2$ ) of stems < 1 m tall.

SPECIES	DENSITY ( $\#/m^2$ )
Hammamelis virginiana	1.000
Acer rubrum	1.250
Fraxinus americana	0.250
Acer saccharum	0.250
Cornus florida	0.250
Rhamnus cathartica	0.250
TOTAL:	3.250

SHRUBS: Percent cover of shrub species within the stand.

SPECIES	% COVER
Parthenocissus quinquefolia	0.436
Rubus sp.	0.674
Vitis sp.	0.436
Viburnum acerifolium	5.192
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TOTAL:	6.738

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

	% COVER
Litter layer	92.750
Exposed soil	+
Exposed rock	+
Bryophytes	+
Lichens	+
Dead wood	5.000
Unknown seedlings	+
Tree boles	+
Maianthemum canadense	+
Lycopodium complanatum	5.125
Uvularia perfoliata	+
Polygala paucifolia	+
Solidago sp.	+
Dead wood over	+
Arisaema triphyllum	+