

PLOT 54

LOCATION: 67 m from western edge of Grid Square #: 54
DATE SAMPLED: 7/31/84

SITE VARIABLES:

SLOPE: 4° ASPECT: 146° POSITION: local depression
SURFACE WATER: perennial pond
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: 47.7 cm Quercus alba : years

CANOPY HEIGHT: 21.9 m % SKY VISIBLE: 13.0

COMMENTS:

HYDROLOGY:

This site is very wet and swampy.

SOILS:

The soils are deep, slightly stony and waterlogged.

HISTORY:

There are stumps and logs from blowdowns. The forested area was probably pastured. There is an old road at the western edge of the plot.

STAND CONDITION:

The canopy is dense and in good condition in the forest and becomes more sparse towards the swamp.

ADDITIONAL COMMENTS ON THE SITE:

Much of the plot is in a swampy area and the rest is in a forest which has a dense understory. A large pile of rocks is in the plot - not a stone wall wall, and not a natural formation.

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
Fraxinus americana	100	2.884	60	1.288	20	0.270	180	4.442
Quercus alba	40	6.741	0	0.000	0	0.000	40	6.741
Quercus velutina	20	2.024	20	0.567	0	0.000	40	2.592
Acer rubrum	20	3.574	60	1.024	0	0.000	80	4.598
Ulmus americana	0	0.000	20	0.215	20	0.160	40	0.375
Carya ovata	0	0.000	20	0.295	0	0.000	20	0.295
TOTALS:	DENSITY / HA	180		180		40		400
	BASAL AREA (M2) / HA	15.2235		3.3890		0.4298		19.0423

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
Fraxinus americana	56	19	33	38	50	63	45	23	34.16
Quercus alba	22	44	0	0	0	0	10	35	22.70
Quercus velutina	11	13	11	17	0	0	10	14	11.80
Acer rubrum	11	23	33	30	0	0	20	24	22.07
Ulmus americana	0	0	11	6	50	37	10	2	5.99
Carya ovata	0	0	11	9	0	0	5	2	3.27

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	
Fraxinus americana	5	0	4	0	0	0	0	0	
Quercus alba	0	0	0	0	0	0	1	1	
Quercus velutina	0	1	0	0	0	1	0	0	
Acer rubrum	2	1	0	0	0	0	0	1	
Ulmus americana	2	0	0	0	0	0	0	0	
Carya ovata	1	0	0	0	0	0	0	0	
TOTALS	10	2	4	0	0	1	1	2	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
Fraxinus americana	120.0	66.67	100.0	55.56
Quercus alba	0.0	0.00	20.0	50.00
Quercus velutina	0.0	0.00	20.0	50.00
Acer rubrum	0.0	0.00	20.0	25.00
Ulmus americana	20.0	50.00	20.0	50.00
Carya ovata	0.0	0.00	0.0	0.00
TOTALS:	140.0	35.00	180.0	45.00

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	
Fraxinus americana	40	0	80	240	0	360
Acer rubrum	40	0	0	40	0	80
Hammamelis virginiana	880	80	0	0	0	960
Carpinus caroliniana	1160	120	80	40	0	1400
Ulmus americana	0	40	80	40	0	160
Rhamnus cathartica	40	0	0	0	0	40
Quercus velutina	40	0	0	0	0	40
Carya ovata	0	40	40	0	0	80
Quercus bicolor	0	40	0	0	0	40
Amelanchier sp.	0	0	0	40	0	40
TOTALS:	2200	320	280	400	0	3200

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

SPECIES	DENSITY ($\#/m^2$)
Acer rubrum	2.250
Ostrya virginiana	0.750
TOTAL:	3.000

SHRUBS: Percent cover of shrub species within the stand.

SPECIES	% COVER
Rubus sp.	4.677
Parthenocissus quinquefolia	8.561
Lindera benzoin	4.400
Viburnum prunifolium	2.576
Toxicodendron radicans	0.238
Smilax rotundifolia	0.476
TOTAL:	20.927

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

	% COVER
Litter layer	78.875
Exposed soil	2.499
Exposed rock	6.624
Bryophytes	5.375
Lichens	4.249
Dead wood	11.749
Unknown seedlings	+
Tree boles	+
Symplocarpus foetidus	2.997
Arisaema triphyllum	1.000
Impatiens capensis	4.000
Boehmeria cylindrica	2.125
Fragaria virginiana	+
Galium aparine	+
Carex sp.	+
Juncus	2.625
Tree root	1.125
Polypodium virginianum	+
Epilobium coloratum	4.125
Onoclea sensibilis	2.125
Solidago sp.	+
Geranium maculatum	+
Potentilla simplex	1.125
Circaea quadrisalcata	+
Dennstaedtia punctilobula	+
Grass sp.	+