

## PLOT 93

LOCATION: 32 m from western edge of Grid Square #: 93

DATE SAMPLED: 7/25/84

## SITE VARIABLES:

SLOPE: 0° ASPECT: 8° POSITION: local depression

SURFACE WATER: ephemeral stream

LITTER DEPTH: 1.75 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: 47.2 cm Quercus bicolor : years

CANOPY HEIGHT: 22.7 m % SKY VISIBLE: 8.0

## COMMENTS:

HYDROLOGY:

There is a stream created by overflow from swamp to the south. Site is very wet and swamp-like.

Slopes are more well drained.

SOILS:

Soils are deep and fairly fine textured. Moderately stony, especially on the upland bodies. Runoff bed seems to have greater accumulation of litter due to moisture.

HISTORY:

Major windthrow event occurred recently ( 1 large tree down). Some windthrow present, but most openings are due to death of standing trees probably caused by high water event.

STAND CONDITION:

The canopy is dense except where windthrown tree is downed. Some major trees

ADDITIONAL COMMENTS ON THE SITE:

Site is wet, an overflow ephemeral stream runs through the plot. Dense understory of shrubs and saplings. There was a recent windthrow of large canopy tree (about 5 years ago). This plot is situated in an ephemeral runoff channel and on the slopes of the upland bodies to the east and west. To the east, an old road grade is quite evident. To the west, upland bodies and ridges alternate with perennial and ephemeral wetlands and streams.

## 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	0	0.000	180	6.757	20	0.312	200	7.070
Acer saccharum	0	0.000	40	1.814	0	0.000	40	1.814
Quercus bicolor	40	8.425	20	1.510	0	0.000	60	9.935
Fraxinus pennsylvanica	20	2.931	0	0.000	0	0.000	20	2.931
Fraxinus americana	60	5.047	60	0.926	0	0.000	120	5.973
Carya glabra	0	0.000	0	0.000	20	0.344	20	0.344
Betula lenta	20	2.162	0	0.000	0	0.000	20	2.162
TOTALS:	DENSITY / HA	140	300	40	480			
	BASAL AREA (M2) / HA	18.5656	11.0073	0.6564	30.2293			

**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	0	0	60	61	50	48	42	23	32.53
Acer saccharum	0	0	13	16	0	0	8	6	7.17
Quercus bicolor	29	45	7	14	0	0	13	33	22.68
Fraxinus pennsylvanica	14	16	0	0	0	0	4	10	6.93
Fraxinus americana	43	27	20	8	0	0	25	20	22.38
Carya glabra	0	0	0	0	50	52	4	1	2.65
Betula lenta	14	12	0	0	0	0	4	7	5.66

**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	1	3	5	1	0	0	0	0	
Acer saccharum	1	0	0	0	1	0	0	0	
Quercus bicolor	0	0	0	0	1	0	0	1	56
Fraxinus pennsylvanica	0	0	0	0	0	0	1	0	
Fraxinus americana	2	1	1	0	1	0	1	0	
Carya glabra	1	0	0	0	0	0	0	0	
Betula lenta	0	0	0	0	0	1	0	0	
TOTALS	5	4	6	1	3	1	2	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	10.00	20.0	10.00
Acer saccharum	0.0	0.00	0.0	0.00
Quercus bicolor	20.0	33.33	20.0	33.33
Fraxinus pennsylvanica	0.0	0.00	0.0	0.00
Fraxinus americana	0.0	0.00	0.0	0.00
Carya glabra	0.0	0.00	0.0	0.00
Betula lenta	0.0	0.00	0.0	0.00
TOTALS:	40.0	8.33	40.0	8.33

**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	
Ulmus americana	0	0	40	0	0	40
Fraxinus americana	120	0	40	0	0	160
Carya glabra	40	40	40	0	0	120
Betula lenta	0	0	0	80	0	80
Acer saccharum	760	80	120	40	0	1000
Carpinus caroliniana	1080	120	0	0	0	1200
Hammamelis virginiana	280	40	0	0	0	320
Fraxinus pennsylvanica	80	40	40	0	0	160
Cornus florida	0	200	40	0	0	240
TOTALS:	2360	520	320	120	0	3320

**SEEDLINGS:** Densities (per m<sup>2</sup>) of stems < 1 m tall.

SPECIES	DENSITY (#/m <sup>2</sup> )
Quercus velutina	0.500
Acer rubrum	1.750
Carpinus caroliniana	2.750
Carya glabra	0.250
TOTAL:	5.250

**SHRUBS:** Percent cover of shrub species within the stand.

SPECIES	% COVER
Cornus racemosa	4.082
Lindera benzoin	0.951
Parthenocissus quinquefolia	0.277
Viburnum acerifolium	1.268
Vitis sp.	2.893
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TOTAL:	9.473

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

	% COVER
Litter layer	90.250
Exposed soil	7.745
Exposed rock	1.367
Bryophytes	1.875
Lichens	+
Dead wood	2.249
Unknown seedlings	+
Tree boles	+
Fungus	+
Lycopodium complanatum	+
Arisaema triphyllum	3.247
Dead wood over	+
Vitis sp.	+
Galium triflorum	1.125
Tree root	+
Onoclea sensibilis	3.750
Boehmeria cylandrica	+
Circaea quadrisalcata	+
Athyrium filix-femina	+
Oxalis stricta	+
Geranium maculatum	+