

PLOT 147

LOCATION: 40 m from western edge of Grid Square #: 147

DATE SAMPLED: 8/2/84

SITE VARIABLES:

SLOPE: 7° ASPECT: 350° POSITION: midslope

SURFACE WATER: none

LITTER DEPTH: 2.13 cm EXPOSED BEDROCK: yes

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: 37.2 cm Quercus rubra : years

CANOPY HEIGHT: 23.9 m % SKY VISIBLE: 4.0

COMMENTS:

HYDROLOGY:

Site is well drained.

SOILS:

Soils are deep but stony, moderately well drained, with a well developed litter layer and poorly developed humus layers.

HISTORY:

A field is nearby (about 20m). Site was probably pastured. There is a lot of barbed wire in plot.

STAND CONDITION:

Much dieback of canopy trees is evident, and understory is dense.

ADDITIONAL COMMENTS ON THE SITE:

Site is located on the northwest side of SW-NE trending ridge. Dense shrub layer and sapling layer. Lots of windthrow. Tremendous Fraxinus and Cornus mortality and dieback.

## VEGETATION STRUCTURE AND COMPOSITION:

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

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SPECIES	CANOPY		SUB-CANOPY		UNDER-STORY		ALL STEMS		
	DENS	BA	DENS	BA	DENS	BA	DENS	BA	
Quercus rubra	60	5.938	80	5.435	0	0.000	140	11.373	
Quercus alba	0	0.000	80	3.189	0	0.000	80	3.189	
Acer rubrum	0	0.000	60	1.724	20	0.226	80	1.950	
Quercus prinus	20	0.905	20	0.647	0	0.000	40	1.552	
Acer saccharum	20	1.154	20	0.465	0	0.000	40	1.618	
Fraxinus americana	20	0.928	0	0.000	0	0.000	20	0.928	
Carya tomentosa	0	0.000	20	0.368	40	0.567	60	0.935	
TOTALS:	DENSITY / HA	120		280		60		460	
	BASAL AREA (M2) / HA		8.9238		11.8273		0.7936		21.5447

**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	
Quercus rubra	50	67	29	46	0	0	30	53	41.61
Quercus alba	0	0	29	27	0	0	17	15	16.10
Acer rubrum	0	0	21	15	33	29	17	9	13.22
Quercus prinus	17	10	7	5	0	0	9	7	7.95
Acer saccharum	17	13	7	4	0	0	9	8	8.10
Fraxinus americana	17	10	0	0	0	0	4	4	4.33
Carya tomentosa	0	0	7	3	67	71	13	4	8.69

**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
Quercus rubra	0	2	1	0	1	2	0	1	
Quercus alba	0	2	1	1	0	0	0	0	
Acer rubrum	2	0	2	0	0	0	0	0	
Quercus prinus	0	0	2	0	0	0	0	0	
Acer saccharum	0	1	0	1	0	0	0	0	
Fraxinus americana	0	0	1	0	0	0	0	0	
Carya tomentosa	1	2	0	0	0	0	0	0	
TOTALS	3	7	7	2	1	2	0	1	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
<i>Quercus rubra</i>	0.0	0.00	40.0	28.57
<i>Quercus alba</i>	80.0	100.00	20.0	25.00
<i>Acer rubrum</i>	0.0	0.00	0.0	0.00
<i>Quercus prinus</i>	0.0	0.00	0.0	0.00
<i>Acer saccharum</i>	0.0	0.00	0.0	0.00
<i>Fraxinus americana</i>	80.0	400.00	20.0	100.00
<i>Carya tomentosa</i>	0.0	0.00	0.0	0.00
TOTALS:	160.0	34.78	80.0	17.39

**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	
<i>Acer rubrum</i>	80	120	0	40	0	240
<i>Hammamelis virginiana</i>	1600	0	0	0	0	1600
<i>Ostrya virginiana</i>	400	160	80	0	0	640
<i>Fagus grandifolia</i>	0	80	0	40	0	120
<i>Fraxinus americana</i>	0	0	40	40	0	80
<i>Acer saccharum</i>	600	200	80	0	0	880
<i>Amelanchier</i> sp.	40	40	0	0	0	80
<i>Acer pennsylvanicum</i>	0	0	0	40	0	40
<i>Carya tomentosa</i>	0	0	0	0	80	80
<i>Carya ovata</i>	0	0	0	80	0	80
<i>Cornus florida</i>	960	240	160	0	0	1360
TOTALS:	3680	840	360	240	80	5200

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

SPECIES	DENSITY ( $\#/m^2$ )
<i>Prunus serotina</i>	0.250
<i>Ostrya virginiana</i>	0.500
<i>Amelanchier</i> sp.	0.500
<i>Fraxinus americana</i>	0.250
<i>Acer saccharum</i>	1.500
<i>Hammamelis virginiana</i>	0.750
TOTAL:	3.750

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

SPECIES	% COVER
<i>Viburnum acerifolium</i>	7.015
<i>Viburnum rafinesquianum</i>	0.040
TOTAL:	7.055

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

	% COVER
Litter layer	93.250
Exposed soil	1.249
Exposed rock	+
Bryophytes	+
Lichens	+
Dead wood	4.250
Unknown seedlings	+
Tree boles	+
Dead wood over	2.750
Carex sp.	+
<i>Maianthemum canadense</i>	+
<i>Aster macrophyllus</i>	+
<i>Arailia nudicaulis</i>	+