

PLOT 797

LOCATION: 84 m from western edge of Grid Square #: 797  
DATE SAMPLED: 7/20/84

SITE VARIABLES:

SLOPE: 11° ASPECT: 8° POSITION: midslope and local depression  
SURFACE WATER: ephemeral stream  
LITTER DEPTH: 2.50 cm EXPOSED BEDROCK: no  
SOIL SERIES (mapped):  
SOIL pH:

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

AGES OF DOMINANT TREES: 53.5 cm Quercus prinus : years

CANOPY HEIGHT: 25.7 m % SKY VISIBLE: 6.0

COMMENTS:

HYDROLOGY:

The site is well drained, however there is an ephemeral stream created by the runoff from slopes above. The water table is close to the surface in one

SOILS:

There are three sites which have deep, well drained, coarse textured soils with moderately developed organic layers. The fourth site is in a slight depression on top of a knoll. Its soil is fine textured and clayey with a water table 4cm below the surface.

HISTORY:

There are stumps present in the plot. Off the plot to the west is evidence of an old "beehive" kiln for charcoal.

STAND CONDITION:

There is almost 100% mortality of Cornus florida. There is evidence of pits and mounds but no recent windthrow.

ADDITIONAL COMMENTS ON THE SITE:

The plot center was moved 12.62m South due to the main road. There is an extremely dense understory of saplings and shrubs. The canopy is dense in most places except where there is heavy mortality of Cornus florida. There are quite a few stumps in the plot.

## 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
Quercus prinus	20	4.496	0	0.000	0	0.000	20	4.496
Cornus florida	0	0.000	20	0.261	0	0.000	20	0.261
Betula lenta	0	0.000	40	0.364	0	0.000	40	0.364
Carya glabra	20	0.234	0	0.000	0	0.000	20	0.234
Fagus grandifolia	20	2.918	0	0.000	0	0.000	20	2.918
Acer saccharum	40	2.583	0	0.000	0	0.000	40	2.583
Acer rubrum	20	0.795	20	0.353	20	0.160	60	1.309
TOTALS:	DENSITY / HA	120		80		20	220	
	BASAL AREA (M2) / HA	11.0257		0.9785		0.1602	12.1645	

**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	%
Quercus prinus	17	41	0	0	0	0	9	37	23.03
Cornus florida	0	0	25	27	0	0	9	2	5.62
Betula lenta	0	0	50	37	0	0	18	3	10.59
Carya glabra	17	2	0	0	0	0	9	2	5.51
Fagus grandifolia	17	26	0	0	0	0	9	24	16.54
Acer saccharum	33	23	0	0	0	0	18	21	19.71
Acer rubrum	17	7	25	36	100	100	27	11	19.02

**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 prinus	0	0	0	0	0	0	0	0	54	
Cornus florida	1	0	0	0	0	0	0	0		
Betula lenta	2	0	0	0	0	0	0	0		
Carya glabra	1	0	0	0	0	0	0	0		
Fagus grandifolia	0	0	0	0	0	0	1	0		
Acer saccharum	0	0	1	0	1	0	0	0		
Acer rubrum	1	1	1	0	0	0	0	0		
TOTALS	5	1	2	0	1	0	1	0	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
<i>Quercus prinus</i>	0.0	0.00	0.0	0.00
<i>Cornus florida</i>	20.0	100.00	20.0	100.00
<i>Betula lenta</i>	0.0	0.00	0.0	0.00
<i>Carya glabra</i>	0.0	0.00	0.0	0.00
<i>Fagus grandifolia</i>	0.0	0.00	0.0	0.00
<i>Acer saccharum</i>	0.0	0.00	0.0	0.00
<i>Acer rubrum</i>	0.0	0.00	0.0	0.00
TOTALS:	20.0	9.09	20.0	9.09

**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>Ostrya virginiana</i>	920	0	0	0	0	920
<i>Carya glabra</i>	40	0	0	0	0	40
<i>Acer saccharum</i>	360	120	80	0	0	560
<i>Acer rubrum</i>	120	80	0	40	0	240
<i>Sassafras albidum</i>	40	0	0	0	0	40
<i>Amelanchier</i> sp.	0	0	40	0	0	40
<i>Castanea dentata</i>	160	0	40	0	0	200
<i>Tsuga canadensis</i>	0	0	40	0	0	40
<i>Hammamelis virginiana</i>	240	0	0	0	0	240
<i>Cornus florida</i>	0	0	0	40	0	40
<i>Acer pennsylvanicum</i>	80	0	0	0	0	80
<i>Fagus grandifolia</i>	560	80	0	0	0	640
TOTALS:	2520	280	200	80	0	3080

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

SPECIES	DENSITY (#/m <sup>2</sup> )
<i>Ostrya virginiana</i>	0.250
<i>Sassafras albidum</i>	0.500
<i>Quercus prinus</i>	0.250
<i>Acer saccharum</i>	0.250
TOTAL:	1.250

SHRUBS: Percent cover of shrub species within the stand.

SPECIES	% COVER
<i>Viburnum acerifolium</i>	17.004
<i>Corylus cornuta</i>	12.564
TOTAL:	29.568

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

	% COVER
Litter layer	93.500
Exposed soil	+
Exposed rock	+
Bryophytes	2.997
Lichens	+
Dead wood	3.121
Unknown seedlings	+
Tree boles	+
Deadwood over	+
Tree root	2.750
<i>Arailia nudicaulis</i>	1.250
<i>Maianthemum canadense</i>	+
Fungus	+
<i>Aster divaricatus</i>	1.000
<i>Solidago caesia</i>	+
<i>Onoclea sensibilis</i>	+
<i>Actaea alba</i>	+
<i>Athyrium filix-femina</i>	+