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Site 3175: Otter Island, Ashland County. 1956-06-30

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STAND RECORD

FORESTS

Stand No. OTTER

3

Name: OTTER Island

Locality: SOUTH-CENTER

3175

County: Island

T:

R:

Sec:

Date: 6/30/56

Observers: Cottam & Vogl

Size of Stand 40

Size of Area Sampled:

Forest Type: White Cedar - Birch

Soil Type: 40 acres

Topography: Flat

Slope:

Directions

Condition of Stand: Uncut, ungrazed, low deer population
 This island is being cut, and the uncut portions
 will disappear in a year or so

Open Grown Trees:

Stumps:

1. 460" - 201 years 4.
 2. 5.
 3. 6.

7.
 8.
 9.

10.
 11.
 12.

% Canopy: #1 LIGHT 125 ON LOW SCALE
 #16 LIGHT 165 ON LOW SCALE

Soil Data:

	pH	N	P	K	Ca	Mg	Org. Mat.	Colloids	W.H.C.
A ₀									
A ₁									
A ₂									
B									

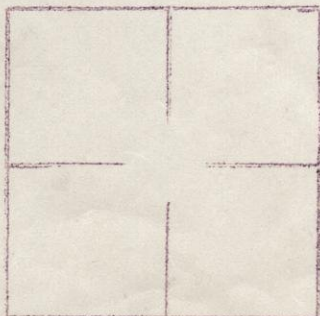
DEPTH

CHARACTERISTICS (Color, Texture, Structure, etc.)

A ₀	3"	
A ₁	SAND & UNDIFFERENTIATED	FIRST 2" SLIGHTLY DARK
A ₂		
B		

Parent Material:

Map:

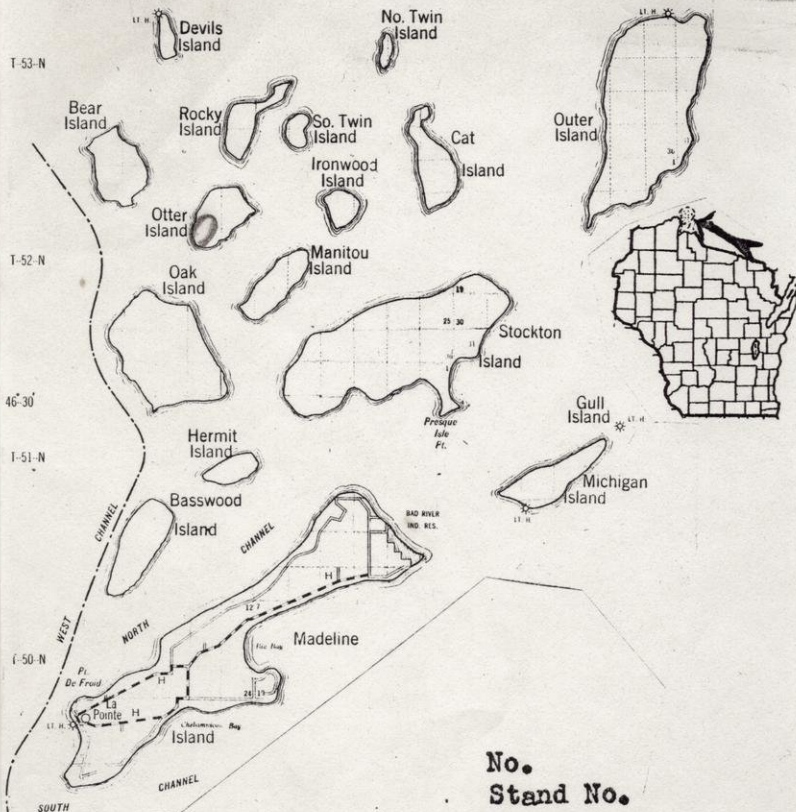
A₀ 2"A₁ MISSING 1" BLACK SLTA₂ 2" CLAY-SAND GRAY BROWN

B 3" " " DARKER

C CLAY - DARK GRAY

Northern WISCONSIN ASHLAND County

APOSTLE ISLANDS in LAKE SUPERIOR



Collected by

Grant Cottam
Richard J. Vogl

No.
Stand No.
Date:

Plant Ecology Research
TREE DATA SUMMARY SHEET

University of Wisconsin

Northern Pine-Hardwoods

113 160 111 41 8 13,600/160

Station Number: 3175

TREE	# PTS	# TRS	DOM. CLASSES			TOT. DOM.	# SAP	D. % SAP	F. % SDL.	F. % TRS.	% SUM F. TR.	D. % TRS.	DOM% TRS.	DFD INDEX	C. I.
			-80	-320	321										
Abies bals	10	11	10	1	—	445	26	16.3			8.8	6.9	3.3	19.0	
Acer rubru	4	6	5	1	—	278	1	.6			3.5	3.8	2.0	9.3	
A. sacchar	17	22	11	9	2	2818	9	5.6			15.0	13.8	20.7	49.5	
A. spicatu	9														
Betula lut	20	30	21	6	3	2706	6	3.8			17.7	18.8	19.9	56.4	
B. papyrif	14	22	17	5	—	1307	8	5.0			14.2	13.8	9.6	37.6	
Carpinus c															
Fagus gran															
Ostrya vir	1	1	1	—	—	22	1	.6			.9	.6	.2	1.7	
Picea glau															
Pinus Bank															
P. resinosa															
P. Strobus															
Populus ba															
P. grandid															
P. tremulo															
Prunus pen	1	1	1	—	—	12					.9	.6	.1	1.6	
Quercus el															
Q. rubra	2	2	2	—	—	140					1.8	1.2	1.0	4.0	
Tilia amer							1	.6							
Tsuga cana	13	14	2	9	3	3380	4	2.5			11.5	8.8	24.8	45.1	
Thuja occi	29	51	41	16	—	2492	104	65.0			25.7	31.9	18.3	75.9	
Ulmus amer															
U. fulva								100.0			100.0	100.2	99.9	300.1	

AVE. DIST. BTW'N TREES: 12.3
ave sap. Dist. 13.5

AVE B. A.: 85.0

TREES/ACRE: 287.9
239.0DOM./ACRE: 24471.5
169.9

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	1		1			1	3		1	
Acer rubrum	✓								15	
A. sacchar.	27		35	65	30 14	23		120 74	✓ 50	
A. spicatum					✓				✓	
Betula lut.	70	(27) (60)				40 19 160	45 140	45	35	1
B. papyrif		130 75	35 475	30 1	120 1		65	45	85	25
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau										
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem										
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can	190			100	2 110					180
Thuja occ	13	✓	45	15	1	4	20	✓	15	45
Ulmus amer										
U. fulva										
SAMPLING DIS.	19 22 10.5 13 11.5 35 26 6.5 3.5 30 30 7 1.5 15 2 14 6.5 9 1.5 5	20 12 24 7 9 33 8 6.5 8 25 13 23 3 17 5.5 14 9.0 15 3.5 7								
TREE Distance	18 24 4 9.5 8.5 31 7.5 5 1 4 3.5 14.5 8.5 7.5 6 18 6 14.5 12 9.5	13 20 9 8 14 1 7 45 3 14.5 9.5 18 8 5.5 3 14.5 22 4 12.5 14.5								

Y1

9/2

9/5

12/8

4/4

6/6

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 3

18-20

STATION NO.	11	12	13	14	15	16	17	18	19	20
Abies balsam				35	100		2			
Acer rubrum							35	1		
A. sacchar.		110	1	110						720
A. spicatum										
Betula lut.					390		100			
B. papyrif			145						35 40	25 55
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau										
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem										
Prunus pen.								12		
Quercus ell										
Q. rubra			75	65						
Tilia amer										
Tsuga can				330	240	1020				
Thuja occ	15, 12 35, 75	35 45, 21	45 13	✓ 4		30 4	✓ 110, 35 140	20 20	✓ 22 30	55 12
Ulmus amer										
U. fulva										
Supl...	11, 34 4, 60	17, 1 37, 33	8, 8 6, 5	4, 10 8, 8	5, 20 30, 30	7, 12 13, 60	15, 2 3, 3	4, 7 8, 5	2, 5 6, 11	3, 2 10, 22
Distance	12, 9 5, 5	2, 4 7, 12	6, 7, 12 8	5, 20 17, 8	3, 7 30, 22	8, 7 11, 15	1, 7 21, 15	6, 6 8, 9	2, 3 20, 8	9, 8 14, 26

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1/1

3/3

2/2

5/3

1/1

2/2

3/3

2/9

Other

20-30

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 3

STATION NO.	21	22	23	24	25	26	27	28	29	30
Abies balsam	55	35		40				45		
Acer rubrum										
A. sacchar.			55	140	1			1		
A. spicatum			130							
Betula lut.		470			27	40	23	100		45
B. papyrif	35	40				95				
Carpinus car										
Fagus gran										
Ostrya virg	1					22				
Picea glau										
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem										
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can	170		50				220			190
Thuja occ	20	2	2	15	170	130	190	110	130	35
Ulmus amer				20	190	2	230	40	27, 70	30
U. fulva										
Sampling dist	8, 8	12, 20	4, 16	2, 8	10, 11	11, 15	7, 48	5, 5	14, 17	3, 9
	9, 22	30, 31	16, 14	12, 29	26, 13	38, 8	12, 26	23, 25	27, 29	7, 1
Distance	19, 19	4, 14	8, 16	11, 20	10, 13	17, 19	8, 8	9, 11	8, 7	14, 20
	4-19	16, 20	12, 25	9, 8	6, 13	5, 26	5, 14	15, 15	6, 7	25, 15

5/4

3/2

2/5

3/3

Y1

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16/7

Stand No.

4/4
4/2
7/5
13/9
2/2

2/2
8/7

128 in all

STAND # 3175

SPECIES	T	H	M	L	O	
TO		1	11	 11	 	55
TAX		1	 	 	 	16
AS			 	11	 	28
BL				1	1	2
AR		1				1
AC					 	5
TC				1	11	3
TA					1	1
AB					 	6
CC					 	11
	3		11	21	93	

STAND # 3175

BROWSE CONDITION BY SPECIES %

SPECIES	T	H	M	L	O	TOTAL
TO		1.8	3.6	21.8	72.7	99.9
TAX		6.3	37.5	31.3	25.0	100.1
AS			10.7	7.1	82.1	99.9
AB					100.0	100.0
AC					100.0	100.0
BL				50.0	50.0	100.0
AR		100.0				100.0
TC				33.3	66.7	100.0
TA					100.0	100.0
CC					100.0	100.0

% EACH SPECIES CONTRIBUTES TO EACH BROWSE CATEGORY

	TO	TAX	AS	AB	AC	BL	AR	TC	TA	CC	TOTAL
T											
H	33.3	33.3					33.3				99.9
M	18.2	54.5	27.3								100.0
L	57.1	23.8	9.5			4.8		4.8			100.0
B	43.0	4.3	24.7	6.5	5.4	1.1		2.2	1.1	11.8	100.1

% EACH SPECIES CONTRIBUTES TO TOTAL BROWSE - CATEGORY/128

T	H	M	L	O	TOTAL
	2.3	8.6	16.4	72.7	100.0

% BROWSE SPECIES

TO	TAX	AS	AB	AC	BL	AR	TC	TA	CC	TOTAL
43.0	12.5	21.9	4.7	3.9	1.6	.8	2.3	.8	8.6	100.1

STAND 3 OTTER

3175

PT #	SP	DIS.	CON.	SP	DIS	CON	SP	CON	DIS	SP	CON	DIS	COMMENTS
1													NONE TAXUS & SMALL WHITE
2													NONE CEDAR PRESENT
3													NONE
4													NONE
5													NONE
6													NONE
7													NONE
8													NONE
9	AS	9	0	TO	6	0	TO	10.5	0	TO	6	L	TAXUS UNDER 2' no under
10	TO	25	L	TO	35	L	TO	6	0	TO	7	L	
11	AS	5	0	AS	9	0	AS	8	0	BL	14	L	" " "
12	TAX	4	L	AC	20	0	TAX	7	0	TO	7	0	
13	TO	5	0	TO	5	0	TO	4	0	TO	6	0	
14	TO	3	0	TAX	3	L	TAX	7	0	TO	4	0	
15	TO	1	0	TO	0	0	TO	3	0	TO	3	0	
16	TAX	4	0	AS	7	M	TAX	1	M	TAX	8	M	Lots of Taxus under 2'
17	TO	1	L	TO	4	0	TO	5	L	TC	10	L	" " "
18	AS	13	M	TO	11	0	AS	12	0	AB	26	0	
19	AS	1	0	AS	2	0	TO	8	L	TAX	6	0	" " "
20	TO	2	0	AS	4	L	TO	1	0	CC	5	0	
21	TAX	5	L	CC	4	0	AS	8	0	TO	8	0	
22	AS	2	0	AS	6	0	AC	5	0	TO	5	0	
23	TO	7	0	TC	8	0	AS	8	0	CC	8	0	" " "
24	TO	2	0	AS	2	0	CC	4	0	CC	4	0	" " "
25	BL	2	0	TAX	2	L	TAX	10	M	AS	4	0	" " "
26	AB	7	0	AS	8	0	AC	2	0	AC	8	0	
27	TO	7	0	AS	11	0	TAX	25	M	TAX	10	H	
28	AS	3	0	AS	5	L	TO	8	0	TO	4	0	
29	AS	4	0	TAX	5	M	CC	5	0	CC	10	0	
30	AS	4	0	TAX	6	L	AS	5	0	AS	6	0	
31	AB	3	0	TO	3	0	TO	7	0	TO	8	L	
32	AS	1	0	AS	5	0	TO	6	0	TO	5	L	
33	TO	3	0	TC	3	0	TO	7	0	TO	7	0	
34	TO	6	0	TO	6.5	0	AR	2.5	H	TO	7	0	
35	AC	4.5	0	TO	8	0	TO	7.5	M	TO	7	0	LOTS OF LOW TAXUS AGAIN
36	AS	5.5	0	TO	5	H	TAX	5.5	M	AB	7	0	
37	AB	24	0	TO	23	0	AS	38	0	AS	23	M	
38	TA	.5	0	TO	3.5	0	AB	6.5	0	TO	6.5	0	
39	TO	3.5	L	TO	7	M	TO	2.5	L	TO	2.5	L	
40	CC	5.5	0	CC	9.5	0	CC	3	0	CC	2.5	0	

AS - Acer spicatum
 AC - Acer saccharum
 TC - Tsuga canadensis
 CC - Corylus cornuta
 BL - Betula lula
 TR - Tilia americana

TOTAL 894.0

Ave. dist 6.98
 Browse per acre 894.1

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No. 3
 Quadrat No. 1-16

<i>Actaea pachypoda</i>	<i>Fragaria virginiana</i>	<i>Potentilla simplex</i>
<i>Actaea rubra</i>	<i>Galium lanceolatum</i>	<i>Prenanthes alba</i>
<i>Adiantum pedatum</i>	<i>Galium triflorum</i>	<i>Pteridium aquilinum</i>
<i>Allium tricoccum</i>	<i>Gaultheria procumbens</i>	<i>Pyrola elliptica</i>
<i>Anemone quinquefolia</i>	<i>Gaylussacia baccata</i>	<i>Pyrola rotundifolia</i>
<i>Aquilegia canadensis</i>	<i>Geranium maculatum</i>	<i>Pyrola secunda</i>
<i>Aralia nudicaulis</i>	<i>Geum canadense</i>	<i>Ranunculus recurvatus</i>
<i>Aralia racemosa</i>	<i>Gnaphalium obtusifolium</i>	<i>Rhus radicans</i>
<i>Arisaema atrorubens</i>	<i>Helianthemum sp.</i>	<i>Ribes americanum</i>
<i>Aster macrophyllus</i>	<i>Helianthus strumosus</i>	<i>Rosa sp.</i>
<i>Aster sagittifolius</i>	<i>Hepatica acutiloba</i>	<i>Rubus parviflorus</i>
<i>Athyrium angustum</i>	<i>Hepatica americana</i>	<i>Rubus (blackberry)</i>
<i>Botrychium virginianum</i>	<i>Impatiens biflora</i>	<i>Rubus (dewberry)</i>
<i>Brachyelytrum erectum</i>	<i>Linnaea borealis</i>	<i>Sambucus pubens</i>
<i>Carex albursina</i>	<i>Lonicera oblongifolia</i>	<i>Sanguinaria canadensis</i>
<i>Caulophyllum thalictroides</i>	<i>Lupinus perennis</i>	<i>Sanicula gregaria</i>
<i>Chimaphila umbellata</i>	3, <i>Lycopodium annotinum</i>	<i>Smilacina racemosa</i>
<i>Circaea alpina</i>	<i>Lycopodium complanatum</i>	<i>Smilacina stellata</i>
<i>Circaea latifolia</i>	5, 1 <i>Lycopodium lucidulum</i>	<i>Smilax ecirrhata</i>
<i>Clintonia borealis</i>	<i>Lycopodium obscurum</i>	<i>Solidago ulmifolia</i>
<i>Coptis trifolia</i>	<i>Lysimachia quadrifolia</i>	<i>Streptopus roseus</i>
<i>Corallorrhiza maculata</i>	7, <i>Maianthemum canadense</i>	1, 1, 5, 3, 1 <i>Taxus canadensis</i>
<i>Cornus alternifolia</i>	<i>Mitchella repens</i>	<i>Thalictrum dioicum</i>
<i>Cornus canadensis</i>	<i>Mitella diphylla</i>	7 <i>Trientalis borealis</i>
<i>Cornus rugosa</i>	<i>Mitella nuda</i>	<i>Trillium grandiflorum</i>
<i>Corylus americana</i>	<i>Monotropa uniflora</i>	<i>Uvularia grandiflora</i>
<i>Corylus cornuta</i>	<i>Myrica asplenifolia</i>	<i>Uvularia sessilifolia</i>
<i>Cypripedium acaule</i>	<i>Onoclea sensibilis</i>	<i>Vaccinium angustifolium</i>
<i>Diervilla lonicera</i>	<i>Oryzopsis asperifolia</i>	<i>Vaccinium pennsylvanicum</i>
<i>Dirca palustris</i>	<i>Osmorhiza claytoni</i>	<i>Viburnum acerifolium</i>
<i>Dryopteris linnaeana</i>	<i>Oxalis montana</i>	<i>Viola canadensis</i>
<i>Dryopteris phegopteris</i>	<i>Phryma leptostachya</i>	<i>Viola cucullata</i>
5, 3 <i>Dryopteris spinulosa</i>	<i>Polygala pauciflora</i>	<i>Viola pallens</i>
<i>Epifagus virginiana</i>	<i>Polygonatum commutatum</i>	<i>Viola pubescens</i>
<i>Epigaea repens</i>	<i>Polygonatum pubescens</i>	<i>Waldsteinia fragarioides</i>

7, CAREX SP

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

 Stand No. 3
 Quadrat No. 10-20

<i>Actaea pachypoda</i>	<i>Fragaria virginiana</i>	<i>Potentilla simplex</i>
<i>Actaea rubra</i>	<i>Galium lanceolatum</i>	<i>Prenanthes alba</i>
<i>Adiantum pedatum</i>	<i>Galium triflorum</i>	<i>Pteridium aquilinum</i>
<i>Allium tricoccum</i>	<i>Gaultheria procumbens</i>	<i>Pyrola elliptica</i>
<i>Anemone quinquefolia</i>	<i>Gaylussacia baccata</i>	<i>Pyrola rotundifolia</i>
<i>Aquilegia canadensis</i>	<i>Geranium maculatum</i>	<i>Pyrola secunda</i>
<i>Aralia nudicaulis</i>	<i>Geum canadense</i>	<i>Ranunculus recurvatus</i>
<i>Aralia racemosa</i>	<i>Gnaphalium obtusifolium</i>	<i>Rhus radicans</i>
<i>Arisaema atrorubens</i>	<i>Helianthemum sp.</i>	<i>Ribes americanum</i>
<i>Aster macrophyllus</i>	<i>Helianthus strumosus</i>	<i>Rosa sp.</i>
<i>Aster sagittifolius</i>	<i>Hepatica acutiloba</i>	<i>Rubus parviflorus</i>
<i>Athyrium angustum</i>	<i>Hepatica americana</i>	<i>Rubus (blackberry)</i>
<i>Botrychium virginianum</i>	<i>Impatiens biflora</i>	<i>Rubus (dewberry)</i>
<i>Brachyelytrum erectum</i>	<i>Linnaea borealis</i>	<i>Sambucus pubens</i>
<i>Carex albursina</i>	<i>Lonicera oblongifolia</i>	<i>Sanguinaria canadensis</i>
<i>Caulophyllum thalictroides</i>	<i>Lupinus perennis</i>	<i>Sanicula gregaria</i>
<i>Chimaphila umbellata</i>	<i>Lycopodium annotinum</i>	<i>Smilacina racemosa</i>
<i>Circaea alpina</i>	<i>Lycopodium complanatum</i>	<i>Smilacina stellata</i>
<i>Circaea latifolia</i>	<i>Lycopodium lucidulum</i>	<i>Smilax ecirrhata</i>
<i>Clintonia borealis</i>	<i>Lycopodium obscurum</i>	<i>Solidago ulmifolia</i>
<i>Coptis trifolia</i>	<i>Lysimachia quadrifolia</i>	<i>Streptopus roseus</i>
<i>Corallorrhiza maculata</i>	<i>Maianthemum canadense</i>	<i>Taxus canadensis</i>
<i>Cornus alternifolia</i>	<i>Mitchella repens</i>	<i>Thalictrum dioicum</i>
<i>Cornus canadensis</i>	<i>Mitella diphylla</i>	<i>Trientalis borealis</i>
<i>Cornus rugosa</i>	<i>Mitella nuda</i>	<i>Trillium grandiflorum</i>
<i>Corylus americana</i>	<i>Monotropa uniflora</i>	<i>Uvularia grandiflora</i>
<i>Corylus cornuta</i>	<i>Myrica asplenifolia</i>	<i>Uvularia sessilifolia</i>
<i>Cypripedium acaule</i>	<i>Onoclea sensibilis</i>	<i>Vaccinium angustifolium</i>
<i>Diervilla lonicera</i>	<i>Oryzopsis asperifolia</i>	<i>Vaccinium pennsylvanicum</i>
<i>Dirca palustris</i>	<i>Osmorhiza claytoni</i>	<i>Viburnum acerifolium</i>
<i>Dryopteris linnaeana</i>	<i>Oxalis montana</i>	<i>Viola canadensis</i>
<i>Dryopteris phegopteris</i>	<i>Phryma leptostachya</i>	<i>Viola cucullata</i>
<i>Dryopteris spinulosa</i>	<i>Polygala pauciflora</i>	<i>Viola pallens</i>
<i>Epifagus virginiana</i>	<i>Polygonatum commutatum</i>	<i>Viola pubescens</i>
<i>Epigaea repens</i>	<i>Polygonatum pubescens</i>	<i>Waldsteinia fragarioides</i>

19 11, 15, 15, 11

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No.
Quadrat No. 20-30

<i>Actaea pachypoda</i>	<i>Fragaria virginiana</i>	<i>Potentilla simplex</i>
<i>Actaea rubra</i>	<i>Galium lanceolatum</i>	<i>Prenanthes alba</i>
<i>Adiantum pedatum</i>	<i>Galium triflorum</i>	<i>Pteridium aquilinum</i>
<i>Allium tricoccum</i>	<i>Gaultheria procumbens</i>	<i>Pyrola elliptica</i>
<i>Anemone quinquefolia</i>	<i>Gaylussacia baccata</i>	<i>Pyrola rotundifolia</i>
<i>Aquilegia canadensis</i>	<i>Geranium maculatum</i>	<i>Pyrola secunda</i>
<i>Aralia nudicaulis</i>	<i>Geum canadense</i>	<i>Ranunculus recurvatus</i>
<i>Aralia racemosa</i>	<i>Gnaphalium obtusifolium</i>	<i>Rhus radicans</i>
<i>Arisaema atrorubens</i>	<i>Helianthemum sp.</i>	<i>Ribes americanum</i>
<i>Aster macrophyllus</i>	<i>Helianthus strumosus</i>	<i>Rosa sp.</i>
<i>Aster sagittifolius</i>	<i>Hepatica acutiloba</i>	<i>Rubus parviflorus</i>
<i>Athyrium angustum</i>	<i>Hepatica americana</i>	<i>Rubus (blackberry)</i>
<i>Botrychium virginianum</i>	<i>Impatiens biflora</i>	<i>Rubus (dewberry)</i>
<i>Brachyelytrum erectum</i>	<i>Linnaea borealis</i>	<i>Sambucus pubens</i>
<i>Carex albursina</i>	<i>Lonicera oblongifolia</i>	<i>Sanguinaria canadensis</i>
<i>Caulophyllum thalictroides</i>	<i>Lupinus perennis</i>	<i>Sanicula gregaria</i>
<i>Chimaphila umbellata</i>	<i>Lycopodium annotinum</i>	<i>Smilacina racemosa</i>
<i>Circaea alpina</i>	<i>Lycopodium complanatum</i>	<i>Smilacina stellata</i>
<i>Circaea latifolia</i>	27, 25, 21 <i>Lycopodium lucidulum</i>	<i>Smilax ecirrhata</i>
<i>Clintonia borealis</i>	<i>Lycopodium obscurum</i>	<i>Solidago ulmifolia</i>
<i>Coptis trifolia</i>	<i>Lysimachia quadrifolia</i>	<i>Streptopus roseus</i>
<i>Corallorrhiza maculata</i>	<i>Maianthemum canadense</i> 21, 25, 23, 21	<i>Taxus canadensis</i>
<i>Cornus alternifolia</i>	<i>Mitchella repens</i>	<i>Thalictrum dioicum</i>
<i>Cornus canadensis</i>	<i>Mitella diphylla</i>	27 <i>Trientalis borealis</i>
<i>Cornus rugosa</i>	<i>Mitella nuda</i>	<i>Trillium grandiflorum</i>
<i>Corylus americana</i>	<i>Monotropa uniflora</i>	<i>Uvularia grandiflora</i>
<i>Corylus cornuta</i>	<i>Myrica asplenifolia</i>	<i>Uvularia sessilifolia</i>
<i>Cypripedium acaule</i>	<i>Onoclea sensibilis</i>	<i>Vaccinium angustifolium</i>
<i>Diervilla lonicera</i>	<i>Oryzopsis asperifolia</i>	<i>Vaccinium pennsylvanicum</i>
<i>Dirca palustris</i>	<i>Osmorhiza claytoni</i>	<i>Viburnum acerifolium</i>
25, 21 <i>Dryopteris linnaeana</i>	<i>Oxalis montana</i>	<i>Viola canadensis</i>
<i>Dryopteris phegopteris</i>	<i>Phryma leptostachya</i>	<i>Viola cucullata</i>
<i>Dryopteris spinulosa</i>	<i>Polygala pauciflora</i>	<i>Viola pallens</i>
<i>Epifagus virginiana</i>	<i>Polygonatum commutatum</i>	<i>Viola pubescens</i>
<i>Epigaea repens</i>	<i>Polygonatum pubescens</i>	<i>Waldsteinia fragarioides</i>

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

 OTTER
 Stand No. 3
 Quadrat No. 31-40

Actaea pachypoda
 Actaea rubra
 Adiantum pedatum
 Allium tricoccum
 Anemone quinquefolia
 Aquilegia canadensis
 Aralia nudicaulis
 Aralia racemosa
 Arisaema atrorubens
 Aster macrophyllus
 Aster sagittifolius
 Athyrium angustum
 Botrychium virginianum
 Brachyelytrum erectum
 Carex albursina
 Caulophyllum thalictroides
 Chimaphila umbellata
 Circaea alpina
 Circaea latifolia
 Clintonia borealis
 Coptis trifolia
 Corallorrhiza maculata
 Cornus alternifolia
 Cornus canadensis
 Cornus rugosa
 Corylus americana
 Corylus cornuta
 Cypripedium acaule
 Diervilla lonicera
 Dirca palustris
 Dryopteris linnaeana
 Dryopteris phegopteris
 Dryopteris spinulosa
 Epifagus virginiana
 Epigaea repens

Fragaria virginiana
 Galium lanceolatum
 Galium triflorum
 Gaultheria procumbens
 Gaylussacia baccata
 Geranium maculatum
 Geum canadense
 Gnaphalium obtusifolium
 Helianthemum sp.
 Helianthus strumosus
 Hepatica acutiloba
 Hepatica americana
 Impatiens biflora
 Linnaea borealis
 Lonicera oblongifolia
 Lupinus perennis
 5 Lycopodium annotinum
 Lycopodium complanatum
 30 33 Lycopodium lucidulum
 Lycopodium obscurum
 Lysimachia quadrifolia
 5 Maianthemum canadense
 Mitchella repens
 Mitella diphylla
 Mitella nuda
 Monotropa uniflora
 Myrica asplenifolia
 Onoclea sensibilis
 Oryzopsis asperifolia
 Osmorhiza claytoni
 Oxalis montana
 Phryma leptostachya
 Polygala pauciflora
 Polygonatum commutatum
 Polygonatum pubescens

Potentilla simplex
 Prenanthes alba
 Pteridium aquilinum
 Pyrola elliptica
 Pyrola rotundifolia
 Pyrola secunda
 Ranunculus recurvatus
 Rhus radicans
 Ribes americanum
 Rosa sp.
 Rubus parviflorus
 Rubus (blackberry)
 Rubus (dewberry)
 Sambucus pubens
 Sanguinaria canadensis
 Sanicula gregaria
 Smilacina racemosa
 Smilacina stellata
 Smilax ecirrhata
 Solidago ulmifolia
 Streptopus roseus
 85 35, 33, 31 Taxus canadensis
 10 Thalictrum dioicum
 Trientalis borealis
 Trillium grandiflorum
 Uvularia grandiflora
 Uvularia sessilifolia
 Vaccinium angustifolium
 Vaccinium pennsylvanicum
 Viburnum acerifolium
 Viola canadensis
 Viola cucullata
 Viola pallens
 Viola pubescens
 Waldsteinia fragarioides

5 CAREX SP

PRESENCE LIST

NORTHERN PINE-HARDWOODS

STAND NO. 3

X *Abies balsamea*
 X *Acer rubrum*
 X *Acer saccharum*
 X *Acer spicatum*
Amelanchier sp.
 X *Betula lutea*
Betula papyrifera
Caprinus caroliniana
Carya cordiformis
Crategeus sp.
Fagus grandiflora
Fraxinus americana
Fraxinus nigra

Fraxinus pennsylvanica
Juglans cinerea
Larix laricina
 X *Ostrya virginiana*
Picea glauca
Pinus banksiana
Pinus resinosa
Pinus strobus
Populus balsamifera
Populus grandidentata
Populus tremuloides
Prunus pennsylvanica
Prunus serotina

Prunus virginiana
Quercus alba
Quercus ellipsoidalis
Quercus macrocarpa
Quercus rubra
Sorbus decora
 X *Thuja occidentalis*
 X *Tilia americana*
 X *Tsuga canadensis*
Ulmus americana
Ulmus fulva
 X *PYRUS AMERICANA*

HERBS AND SHRUBS

Actaea pachypoda
Actaea rubra
Adiantum pedatum
Agrimonia gryposepala
Allium tricoccum
Alnus rugosa
Amphicarpa bracteata
Anemone canadensis
Anemone quinquefolia
Antennaria sp.
Apocynum androsaemifolium
Apocynum cannabinum
Aquilegia canadensis
Aralia nudicaulis
Aralia racemosa
Arctostaphylos uva-ursi
Arisaema atrorubens
Asarum canadense
Asclepias phytolaccoides
Aster cordifolius
Aster lateriflorus
Aster macrophyllus
Aster prenanthoides
Aster sagittifolius
Aster shortii
Aster umbellatus
Athyrium angustum
Aureolaria pedicularia
Boehmeria cylindrica
Botrychium virginianum
Brachyelytrum erectum
Bromus purgans
Campanula americana
Carex albursina
Carex pensylvanica
Caulophyllum thalictroides
Celastrus scandens
Chimaphila umbellata
Chiogenes hispidula

Circaea alpina
Circaea latifolia
Claytonia caroliniana
Claytonia virginiana
Clintonia borealis
Convolvulus spithameus
Coptis trifolia
Corallorrhiza maculata
Corallorrhiza striata
Cornus alternifolia
 X *Cornus canadensis*
Cornus femina
Cornus rugosa
Corylus americana
 X *Corylus cornuta*
Cryptotaenia canadensis
Cypripedium acaule
Cypripedium pubescens
Cystopteris fragilis
Danthonia spicata
Dentaria diphylla
Desmodium glutinosum
Desmodium nudiflorum
Dicentra canadensis
Dicentra cucullaria
 X *Diervilla lonicera*
Dirca palustris
Dryopteris linneana
Dryopteris phegopteris
 X *Dryopteris spinulosa*
Epifagus virginiana
Epigaea repens
Equisetum arvense
Erythronium americanum
Fragaria virginiana
Galium aparine
Galium boreale
Galium circaeazans
Galium concinnum

Galium lanceolatum
Galium triflorum
Gaultheria procumbens
Gaylussacia baccata
Geranium maculatum
Geum canadense
Gnaphalium obtusifolium
Goodyera pubescens
Goodyera repens
Habenaria bracteata
Hamamelis virginiana
Helianthus strumosus
Hepatica acutiloba
Hepatica americana
Hieracium canadense
Hydrophyllum virginianum
Hystrix patula
Impatiens biflora
Lactuca canadensis
Laportea canadensis
Lappula virginica
Lathyrus ochroleucus
Ledum groenlandicum
Linnaea borealis
Lonicera canadensis
Lonicera hirsuta
Lonicera oblongifolia
Lonicera prolifera
Luzula multiflora
 X *Lycopodium annotinum*
Lycopodium clavatum
Lycopodium complanatum
 X *Lycopodium lucidulum*
Lycopodium obscurum
Lycopodium tristachyum
Lycopus americanus
Lycopus uniflora
Lysimachia quadrifolia
 X *Maianthemum canadense*

X *CAREX* sp.
DRYOPTERIS DISJUNCTA

Data Form No. 17 (P.2)

Melampyrum lineare	Pyrola elliptica	Smilax herbacea
Mitchella repens	Pyrola rotundifolia	Smilax hispida
Mitella diphylla	Pyrola secunda	Solidago latifolia
Mitella nuda	Ranunculus abortivus	Solidago ulmifolia
Monarda fistulosa	Ranunculus recurvatus	Streptopus amplexifolius
Moneses uniflora	Ranunculus septentrionalis	XStreptopus roseus
Monotropa uniflora	Rhus radicans	XTaxus canadensis
Myrica asplenifolia	Rhus typhina	Thalictrum dioicum
Onoclea sensibilis	Ribes americanum	Tiarella cordifolia
Oryzopsis asperifolia	Ribes cynosbati	XTrientalis borealis
Osmorhiza claytoni	Ribes lacustre	Trillium cernuum
XOsmunda cinnamomea	Ribes triste	Trillium grandiflorum
Osmunda claytoniana	Rubus idaeus	Uvularia grandiflora
Oxalis montana	Rubus parviflorus	Uvularia sessilifolia
Panax quinquefolia	Rubus hispidus	Vaccinium angustifolium
Parietaria pennsylvanica	Rubus - blackberry	Vaccinium pennsylvanicum
Parthenocissus vitacea	Rubus - dewberry	Viburnum acerifolium
Pedicularis lanceolata	Rubus - raspberry	Viburnum affine
Phytolacca leptostachya	Sambucus canadensis	Viburnum lentago
Podophyllum peltatum	Sambucus pubens	Viola canadensis
Polemonium reptans	Sanguinaria canadensis	Viola cucullata
Polygala pauciflora	Sanicula gregaria	Viola incognita
Polygonatum commutatum	Schizachne purpurascens	Viola pallens
Polygonatum pubescens	Scutellaria lateriflora	Viola pubescens
Potentilla simplex	Shepherdia canadensis	Vitis aestivalis
Prenanthes alba	Smilacina racemosa	Vitis riparia
Pteris nodulosa	Smilacina stellata	Waldsteinia fragarioides
Pteridium aquilinum	Smilax ecirrhata	Zanthoxylum americanum

Additional Species: