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**Site 3221: Sand Island, Bayfield County,
Township 52N, Range 5W, Section 24;
Township 52N, Range 5W, Section 25.
1956-08-21**

[s.l.]: [s.n.], 1956-08-21

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Data Form No. 20

Plant Ecology Research

Univ. of Wisconsin

STAND RECORD

FORESTS

Stand No. 3221

Name: SAND ISLAND

County: BAYFIELD

Date: 8-21-56

Size of Stand 2

Forest Type: ABIES BALM. - ACER RUBRUM

Topography: LEVEL

Locality: SOUTH END ALONG MAIN ROAD

T: SW

R: SW

Sec: 24, 25

Observers: GRANT COTTAM, JACKIE TESSARO, & DICK VOGL

Size of Area Sampled: 20 ACRES

Soil Type:

Slope:

Directions

Condition of Stand: HAD BEEN CUT, PERHAPS SELECTIVELY, NOT EVIDENCE
OF DEER PRESENT.

Open Grown Trees:

Stumps:

% Canopy:

1.	4.	7.	10.
2.	5.	8.	11.
3.	6.	9.	12.

Soil Data:

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

DEPTH

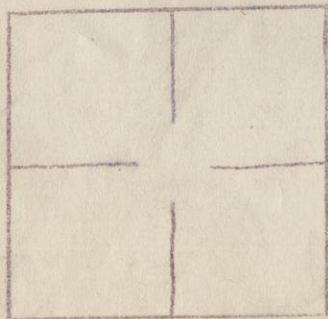
CHARACTERISTICS (Color, Texture, Structure, etc.)

A ₀	1"	Deciduous leaves
A ₁	1-4"	Brown Sands
A ₂	1-4"	white Sand
B		

Total depth of profile 3-6"

Parent Material:

Map:

A₀ = 1"A₁ 1/2"A₂ 4"

B 3"

Sandy brown

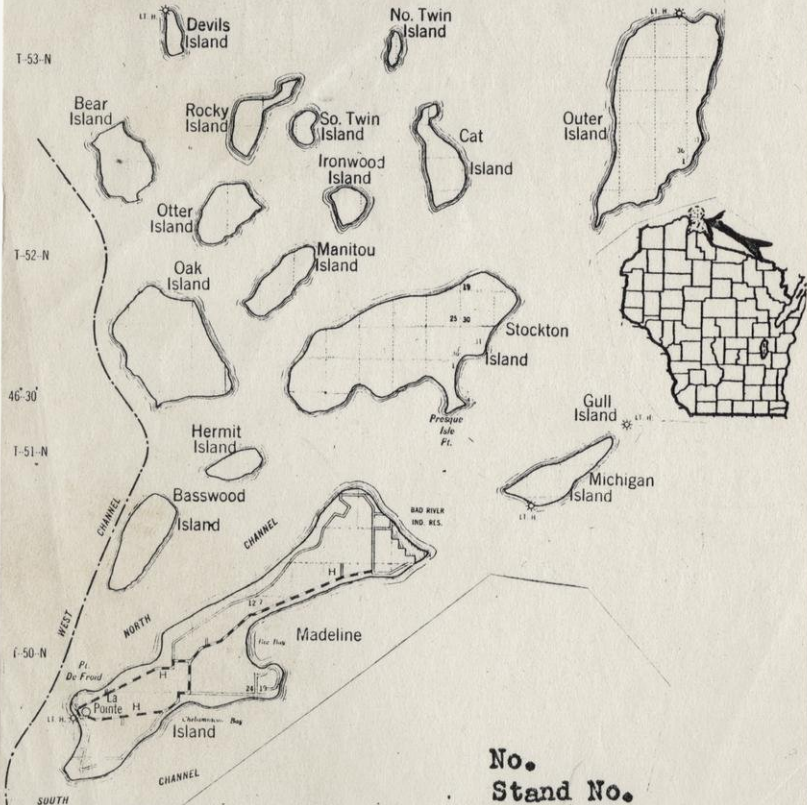
Brown, sandy

lt. brown, sandy

Total depth of profile < 1 ft.

Northern WISCONSIN ASHLAND County

APOSTLE ISLANDS in LAKE SUPERIOR



No.
Stand No.
Date:

Collected by

Grant Cottam
Richard J. Vogl

Northern Pine-Hardwoods

Station Number: 3221

116 160 98 57 515268 160

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	30	50	44	6		2067	128	80.0			25.9	31.2	13.5	70.6	
Acer rubru	23	35	19	16		3723	4	2.5			19.8	21.9	24.4	66.1	
A. sacchar	1	1			1	350					.9	.6	2.3	3.8	
A. spicatu															
Betula lut	14	17	5	10	2	2845	10	6.3			12.1	10.6	18.6	41.3	
B. papyrif	18	25	13	12		2642	5	3.1			15.5	15.6	17.3	48.4	
Carpinus c															
Fagus gran															
Ostrya vir															
Picea glau	5	5	1	4		695					4.3	3.1	4.6	12.0	
Pinus Bank															
P. resinosa															
P. Strobus															
Populus ba															
P. grandid															
P. tremulo															
Prunus pen	1	1	1			13	1	.6			.9	.6	.1	1.6	
Quercus el															
Q. rubra	4	5	1	2	2	1295					3.4	3.1	8.5	15.0	
Tilia amer															
Tsuga cana	1	1		1		240					.9	.6	1.6	3.1	
Thuja occi	11	12	7	5		980	8	5.0			9.5	7.5	6.4	23.4	
Ulmus amer															
U. fulva															
FRAX AMER.	8	8	7	1		418	3	1.9			6.9	5.0	2.7	14.6	
FRAX T. INUS NIGRA							1	.6			100.1	99.8	100.0	299.9	
								100.0							

AVE. DIST. BTW'N TREES: 14.1

ave sap Dist. 20.6

AVE B. A.: 95.4

TREES/ACRE: 219.1

102.6

DOM./ACRE:

20902.1
145.2

POINT RECORD TREES APOSTLE ISLANDS

Point Number	1	2	3	4	5	6	7	8	9	0
Abies balsamea	25 35 20	60	20 59	25	60				15	22 21
Acer rubrum		65 170			65	45	60 40 95	19 35		95
Acer saccharum						350				
Betula lutea				190	100					
Betula papyrifera	30		90 170			110			40 27 45	260
Quercus rubra				360				320		
Tsuga canadensis										
Thuja occidentalis		20				20	35			
Pyrus amer.					27			19		
Picea canad.				40						
Pop. Trem.										
Tree distance	68 88 188 6	6 7 15 15	8 21 8 9-	4- 6 14 21	5- 30 22 22	5- 9 14- 38	6 12 10 11	9 15 9 40	3- 8- 7 8-	6 7 3- 17
Sapling distance	12 16 11- 15	14 15 12- 31	8- 28 31 42	18 23 44 29	5 5 30 21-	29 28- 40 38	22- 9 20 30	12- 30 37 20	4 12 9 16	14 15 10- 27

7/11

6/10

1/1

2/2

5/8

2/2

3/3

2/2

1/1

POINT RECORD TREES APOSTLE ISLANDS

Point Number	1	2	3	4	5	6	7	8	9	0
<i>Abies balsamea</i>	12	30			22	100 120	60	12 35 55	35 100	22 35
<i>Acer rubrum</i>	15 230	40	16	180		4	2	3	3	15
<i>Acer saccharum</i>										
<i>Betula lutea</i>							140	240	460 210	130
<i>Betula papyrifera</i>	40	60 85	190 35	55 85	65 75	80	230			
<i>Quercus rubra</i>										
<i>Tsuga canadensis</i>										
<i>Thuja occidentalis</i>					110	150	260			
<i>Pop. Trem.</i>										
<i>Populus balsam.</i>			75	22						
Tree distance	6 16 17 14-	4- 20- 15 19	8 19 6 10	9- 17 7 10-	12 6 25 19	15 16- 10- 21	35- 17 7 15-	23 10 14 14	6 30 25 22	14- 8 7 9-
Sapling distance	28 23 5 5	6- 27- 36 7	17- 25 23 52	12- 21 18 25	20 11- 30 20	16 27 15 17	10 24 27- 34	9 7 30 56	13- 11- 22 24	9 33 13 30

 $\frac{8}{13}$ $\frac{5}{6}$ $\frac{4}{5}$ $\frac{7}{11}$ $\frac{3}{3}$ $\frac{2}{2}$

POINT RECORD TREES APOSTLE ISLANDS

Point Number	1	2	3	4	5	6	7	8	9	0
<i>Abies balsamea</i>	25 70	18 26	35	22	25 45	110		23	40 27	
<i>Acer rubrum</i>	4 620 120	70	3 240 45 35 1	2 230	4	4 120	4 85 35	4	4 100	3 110
<i>Acer saccharum</i>										
<i>Betula lutea</i>				170 320			170 100		25	
<i>Betula papyrifera</i>		70		110	170	220				170
<i>Quercus rubra</i>								330 75		
<i>Tsuga canadensis</i>										
<i>Thuja occidentalis</i>										120
<i>Pinus strobus</i>						45		40		1
<i>Fraxinus nigra</i>		2								
<i>Picea canadensis</i>										110
Tree distance	29 7 25 26	11 10- 16 18	24 25 19 22	13 9- 20 31	4 9 11 26	17 21 17- 16	5 8 21 34	4 8- 18 5	13- 3 6 9	5 8 9 18
Sapling distance	19 32 18 32	25 7- 13- 10-	32 27 50 42	7 23 21 9-	15- 14- 24 50	18 24 8 28	7 19 19 6-	6 8 17 11-	19 32 12 15-	7- 6 21 8

 $\frac{8}{12}$ $\frac{8}{12}$ $\frac{4}{5}$ $\frac{5}{5}$ $\frac{1}{2}$ $\frac{1}{1}$ $\frac{2}{2}$ $\frac{1}{1}$

POINT RECORD TREES APOSTLE ISLANDS

Point Number	31	2	3	4	5	6	7	8	9	0	
<i>Abies balsamea</i>		55	25 20 90	80		30 15 27.4		30	35 50	85 14 75	$\frac{7}{14}$
<i>Acer rubrum</i>		40 50 23			160 220		55	190			$\frac{4}{11}$
<i>Acer saccharum</i>											
<i>Betula lutea</i>	15 45				30	440	60				$\frac{4}{5}$
<i>Betula papyrifera</i>			40				1				$\frac{1}{1}$
<i>Quercus rubra</i>				210							$\frac{1}{1}$
<i>Tsuga canadensis</i>								240			$\frac{1}{1}$
<i>Thuja occidentalis</i>	45			30			30		60 100		$\frac{4}{5}$
<i>Picea glauca</i>	210				1		170	65			$\frac{3}{3}$
<i>Pinus Amer.</i>			60		130						$\frac{2}{2}$
<i>Prunus pennsylvanica</i>				1						13	$\frac{1}{1}$
Tree distance	12- 7 4 8	9 17 12 14	3 4 21 10	8- 14 11- 13	32 10- 34 23	13 8 23- 23	7- 12- 8- 34	13 16- 9- 18-	15 26 7- 13	9- 11- 13 18-	
Sapling distance	5- 11- 24 29	12 15 11 16	21 18- 30 28	7- 6 26 16	11 14- 14 9	42 40 11- 9-	10 8 11 23	23 23 25 36	21- 65 40 50	14- 21 23- 32	

DEER DAMAGE REPORT FORM

180. Stand No. 3221

Pt. No.	Sp	Dis	Con	Sp	Dis	Con	Sp	Dis	Con	Sp	Dis	Con
1	AB	10-		AB	3-		TAX	7		BP	6	
2	TAX	2		TO	4		TAX	5-		AS	3	
3	AS	2-		AS	9		AS	6		CC	8	
4	AS	3-		AS	6		AS	8		AS	13	
5	AS	1		AS	5-		AS	3		TAX	2-	
6	AS	3-		CC	5		AS	6-		AS	4-	
7	AS	5		TAX	6-		TAX	6-		TAX	5	
8	AS	1-		AS	2-		CC	3-		CC	6	
9	AS	2-		AS	8		AB	3		AS	4-	
10	AB	2		TAX	5		AS	4-		AS	4	
11	AS	3-		AB	5		AS	5		AB	5	
12	AS	2		TAX	3		TAX	7		TAX	2-	
13	AS	3-		TAX	5		TAX	2		TAX	3	
14	AS	3		AS	4		AB	5		AS	2	
15	AS	5		TAX	3		AS	3-		AB	6-	
16	AS	2		TAX	2		AS	3		AS	5	
17	AS	2		CC	2-		TAX	4		TAX	8	
18	TAX	1		TAX	2		TAX	4		TAX	3	
19	AS	2		TAX	1		TAX	1		TAX	2	
20	TAX	4		TAX	4-		AR	3-		TAX	6	
21	AB	4		TAX	1		TAX	3		TAX	5	
22	AS	7		AS	5		AS	2		TAX	8	
23	TAX	1		TAX	2		AS	3		AS	1-	
24	TAX	1		TAX	1-		TAX	2		TAX	3	
25	TAX	3		AS	3		TAX	2-		AS	2-	
26	AS	4		CC	5-		AS	7		AS	8	
27	CC	2		CC	4		TAX	4		CC	5-	
28	TAX	1		TAX	1/2		CC	3		TAX	3	
29	TAX	3		TAX	5		TAX	2-		TAX	2-	
30	AS	3		TAX	8-		TAX	7		TAX	6	
31	TAX	1		TAX	1-		TAX	3		AB	2-	
32	TAX	1		TAX	3		TAX	2		TAX	11	
33	CC	9		AS	4		AS	7-		CC	9-	
34	AS	6		TAX	6		AS	3		AB	6	
35	AS	2-		TAX	1		TAX	2		TAX	1	
36	AS	8		AS	3		AS	2-		AS	3	
37	TAX	1		TAX	1		TAX	2		TAX	1-	
38	TAX	1		TAX	2-		TAX	2		TAX	2	
39	TAX	1		TAX	2-		TAX	4		AS	2	
40	TAX	2		TAX	3		TAX	1-		TAX	2	

590.0

Ave. dist. 3.69
Browse per acre 3199.2

41 HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No.
Quadrat No.

36 33 31 39 <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> 5	<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>
35 <i>Aralia nudicaulis</i> 35	<i>Geum canadense</i>	<i>Ranunculus recurvatus</i>
<i>Aralia racemosa</i> 5	<i>Gnaphalium obtusifolium</i>	<i>Rhus radicans</i>
<i>Arisaema atrorubens</i>	<i>Helianthemum</i> sp.	<i>Ribes americanum</i>
<i>Aster macrophyllus</i> 25	<i>Helianthus strumosus</i>	<i>Rosa</i> sp.
<i>Aster sagittifolius</i>	<i>Hepatica acutiloba</i>	<i>Rubus parviflorus</i>
<i>Athyrium angustum</i>	<i>Hepatica americana</i>	<i>Rubus</i> (blackberry)
<i>Botrychium virginianum</i>	<i>Impatiens biflora</i>	<i>Rubus</i> (dewberry)
<i>Brachyelytrum erectum</i>	IMPATIENS <i>COPENSIS</i> 5	<i>Sambucus pubens</i>
<i>Carex albursina</i>	<i>Linnaea borealis</i>	<i>Sanguinaria canadensis</i>
<i>Caulophyllum thalictroides</i>	<i>Lonicera oblongifolia</i>	<i>Sanicula gregaria</i>
<i>Chimaphila umbellata</i>	LONICERA <i>CANADENSIS</i> 5	<i>Smilacina racemosa</i>
<i>Circaea alpina</i>	<i>Lupinus perennis</i>	<i>Smilacina stellata</i>
<i>Circaea latifolia</i>	33 <i>Lycopodium annotinum</i> 15	<i>Smilax ecirrhata</i>
37 35 33 31 <i>Clintonia borealis</i> 85	<i>Lycopodium complanatum</i>	<i>Solidago ulmifolia</i>
<i>Coptis trifolia</i>	<i>Lycopodium lucidulum</i> 10	<i>Streptopus roseus</i> 25
<i>Corallorrhiza maculata</i>	<i>Lycopodium obscurum</i>	39 31 <i>Taxus canadensis</i> 70
<i>Cornus alternifolia</i>	39 31 <i>Lysimachia quadrifolia</i>	<i>Thalictrum dioicum</i>
<i>Cornus canadensis</i> 5	<i>Maianthemum canadense</i> 5	39 31 <i>Trientalis borealis</i> 35
<i>Cornus rugosa</i>	<i>Mitchella repens</i>	<i>Trillium grandiflorum</i>
<i>Corylus americana</i>	<i>Mitella diphylla</i>	<i>Uvularia grandiflora</i>
<i>Corylus cornuta</i> 10	<i>Mitella nuda</i>	<i>Uvularia sessilifolia</i>
<i>Cypripedium acaule</i>	<i>Monotropa uniflora</i>	<i>Vaccinium angustifolium</i>
<i>Diervilla lonicera</i>	<i>Myrica asplenifolia</i>	<i>Vaccinium pennsylvanicum</i>
<i>Dirca palustris</i>	<i>Onoclea sensibilis</i>	<i>Viburnum acerifolium</i>
<i>Dryopteris linnaeana</i>	<i>Oryzopsis asperifolia</i>	<i>Viola canadensis</i>
<i>Dryopteris CHRUSTATA</i> 5	<i>Osmorhiza claytoni</i>	<i>Viola cucullata</i>
<i>Dryopteris phegopteris</i>	<i>Oxalis montana</i>	<i>Viola pallens</i>
<i>Dryopteris spinulosa</i> 10	<i>Phryma leptostachya</i>	<i>Viola pubescens</i>
<i>Dryopteris DISTUNTA</i> 5	<i>Polygala pauciflora</i>	<i>Waldsteinia fragarioides</i>
<i>Epifagus virginiana</i>	<i>Polygonatum commutatum</i>	
<i>Epigaea repens</i>	<i>Polygonatum pubescens</i>	

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No.
Quadrat No.

27 25 21 <i>Am. sp.</i> Actaea pachypoda	Fragaria virginiana	Potentilla simplex
Actaea rubra	Galium lanceolatum	Prenanthes alba
Adiantum pedatum	29 Galium triflorum	Pteridium aquilinum
Allium tricoccum	Gaultheria procumbens	Pyrola elliptica
Anemone quinquefolia	Gaylussacia baccata	Pyrola rotundifolia
Aquilegia canadensis	Geranium maculatum	Pyrola secunda
Aralia nudicaulis	Geum canadense	Ranunculus recurvatus
Aralia racemosa	Gnaphalium obtusifolium	Rhus radicans
Arisaema atrorubens	Helianthemum sp.	Ribes americanum
29 Aster macrophyllus	Helianthus strumosus	Rosa sp.
Aster sagittifolius	Hepatica acutiloba	Rubus parviflorus
Athyrium angustum	Hepatica americana	Rubus (blackberry)
Botrychium virginianum	Impatiens biflora	Rubus (dewberry)
Brachyelytrum erectum	23 " " <i>copense</i> Linnaea borealis	Sambucus pubens
Carex albursina	Lonicera oblongifolia	Sanguinaria canadensis
Caulophyllum thalictroides	27 " " <i>canadense</i> Lupinus perennis	Sanicula gregaria
Chimaphila umbellata	Lycopodium annotinum	Smilacina racemosa
Circaea alpina	Lycopodium complanatum	Smilacina stellata
Circaea latifolia	27 Lycopodium lucidulum	Smilax ecirrhata
27 25 23 Clintonia borealis 29	Lycopodium obscurum	Solidago ulmifolia
Coptis trifolia	Lysimachia quadrifolia	29 27 Streptopus roseus
Corallorrhiza maculata	29 25 Maianthemum canadense	27 27 23 21 Taxus canadensis
Cornus alternifolia	Mitchella repens	Thalictrum dioicum
Cornus canadensis	Mitella diphylla	25 Trientalis borealis
Cornus rugosa	Mitella nuda	Trillium grandiflorum
Corylus americana	Monotropa uniflora	Uvularia grandiflora
27 Corylus cornuta	Myrica asplenifolia	Uvularia sessilifolia
Cypripedium acaule	Onoclea sensibilis	Vaccinium angustifolium
Diervilla lonicera	Oryzopsis asperifolia	Vaccinium pennsylvanicum
Dirca palustris	Osmorhiza claytoni	Viburnum acerifolium
Dryopteris linnaeana	Oxalis montana	Viola canadensis
Dryopteris phegopteris	Phryma leptostachya	Viola cucullata
23 Dryopteris spinulosa	Polygala pauciflora	Viola pallens
21 " " <i>dissecta</i>	Polygonatum commutatum	27 23 " <i>incognita</i> Viola pubescens
Epifagus virginiana	Polygonatum pubescens	Waldsteinia fragarioides
Epigaea repens		

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No.
Quadrat No.

19 15 <i>acer sp.</i> Actaea pachypoda	Fragaria virginiana	Potentilla simplex
Actaea rubra	Galium lanceolatum	Prenanthes alba
Adiantum pedatum	Galium triflorum	Pteridium aquilinum
Allium tricoccum	Gaultheria procumbens	Pyrola elliptica
Anemone quinquefolia	Gaylussacia baccata	Pyrola rotundifolia
Aquilegia canadensis	Geranium maculatum	Pyrola secunda
19 17 15 Aralia nudicaulis	Geum canadense	Ranunculus recurvatus
13 Aralia racemosa	Gnaphalium obtusifolium	Rhus radicans
Arisaema atrorubens	Helianthemum sp.	Ribes americanum
15 11 Aster macrophyllus	Helianthus strumosus	Rosa sp.
Aster sagittifolius	Hepatica acutiloba	Rubus parviflorus
Athyrium angustum	Hepatica americana	Rubus (blackberry)
Botrychium virginianum	Impatiens biflora	Rubus (dewberry)
Brachyelytrum erectum	Linnaea borealis	Sambucus pubens
Carex albursina	Lonicera oblongifolia	Sanguinaria canadensis
Caulophyllum thalictroides	Lupinus perennis	Sanicula gregaria
Chimaphila umbellata	17 Lycopodium annotinum	Smilacina racemosa
Circaea alpina	Lycopodium complanatum	Smilacina stellata
Circaea latifolia	17 11 Lycopodium lucidulum	Smilax ecirrhata
17 15 13 11 Clintonia borealis 19	Lycopodium obscurum	Solidago ulmifolia
Coptis trifolia X	Lysimachia quadrifolia	Streptopus roseus
Corallorrhiza maculata	17 15 11 Maianthemum canadense	19 17 B Taxus canadensis
Cornus alternifolia	Mitchella repens	Thalictrum dioicum
Cornus canadensis	Mitella diphylla	19 Trientalis borealis
Cornus rugosa	Mitella nuda	Trillium grandiflorum
Corylus americana	Monotropa uniflora	Uvularia grandiflora
Corylus cornuta	Myrica asplenifolia	Uvularia sessilifolia
Cypripedium acaule	Onoclea sensibilis	Vaccinium angustifolium
Diervilla lonicera	Oryzopsis asperifolia	Vaccinium pennsylvanicum
Dirca palustris	Osmorhiza claytoni	Viburnum acerifolium
Dryopteris linnaeana	Oxalis montana	Viola canadensis
Dryopteris phegopteris	Phryma leptostachya	Viola cucullata
17 17 Dryopteris spinulosa	Polygala pauciflora	Viola pallens
Epifagus virginiana	Polygonatum commutatum	17 11 " <i>incognita</i> Viola pubescens
Epigaea repens	Polygonatum pubescens	Waldsteinia fragarioides

HERB FREQUENCY

NORTHERN PINE-HARDWOODS

Stand No.
Quadrat No.

Actaea pachypoda	Fragaria virginiana	Potentilla simplex
9 75 <i>Act. sp.</i> X	Galium lanceolatum	Prenanthes alba
Actaea rubra	Galium triflorum	Pteridium aquilinum
Adiantum pedatum	Gaultheria procumbens	Pyrola elliptica
Allium tricoccum	Gaylussacia baccata	Pyrola rotundifolia
<i>Alnus rugosa</i> X	Geranium maculatum	Pyrola secunda
Anemone quinquefolia	Geum canadense	Ranunculus recurvatus
Aquilegia canadensis	Gnaphalium obtusifolium	Rhus radicans
9 36 Aralia nudicaulis X	Helianthemum sp.	Ribes americanum
Aralia racemosa	Helianthus strumosus	Rosa sp.
Arisaema atrorubens	Hepatica acutiloba	Rubus parviflorus
9 3 Aster macrophyllus X	Hepatica americana	Rubus (blackberry)
Aster sagittifolius X	Impatiens biflora	Rubus (dewberry)
Athyrium angustum	Linnaea borealis X	Sambucus pubens
Botrychium virginianum	Lonicera oblongifolia	Sanguinaria canadensis
Brachyelytrum erectum	" " <i>Canadensis</i> X	Sanicula gregaria
Carex albursina	Lupinus perennis	Smilacina racemosa
Caulophyllum thalictroides	3 Lycopodium annotinum X	Smilacina stellata
Chimaphila umbellata	Lycopodium <i>complanatum</i> X	Smilax ecirrhata
Circaea alpina	Lycopodium lucidulum X	Solidago ulmifolia
Circaea latifolia	Lycopodium obscurum X	9 7 3 Streptopus roseus
7 5 31 Clintonia borealis X	<i>Lycopodium angulosum</i> X	9 7 5 Taxus canadensis X
Coptis trifolia	Lysimachia quadrifolia	Thalictrum dioicum
Corallorrhiza maculata	5 31 Maianthemum canadense X	7 5 3 Trientalis borealis X
Cornus alternifolia	Mitchella repens	Trillium grandiflorum
" " <i>stolonifera</i> X	Mitella diphylla	Uvularia grandiflora
1 Cornus canadensis X	Mitella nuda	Uvularia sessilifolia
Cornus rugosa	Monotropa uniflora	Vaccinium angustifolium
Corylus americana	Myrica asplenifolia	Vaccinium pennsylvanicum
5 Corylus cornuta X	Onoclea sensibilis	Viburnum acerifolium
Cypripedium acaule	Oryzopsis asperifolia	Viola canadensis
Diervilla lonicera X	Osmorhiza claytoni	Viola cucullata
Dirca palustris	<i>Osmorhiza</i> X	Viola pallens
Dryopteris linnaeana	Oxalis montana	" " <i>incognita</i> X
Dryopteris phegopteris	Phryma leptostachya	Viola pubescens
Dryopteris spinulosa X	Polygala pauciflora	Waldsteinia fragarioides
Epifagus virginiana	Polygonatum commutatum	
Epigaea repens	Polygonatum pubescens	
	<i>Pet. Silis.</i> X	

PRESENCE LIST

NORTHERN PINE-HARDWOODS

STAND NO.

XAbies balsamea
 XAcer rubrum
 Acer saccharum
 XAcer spicatum
 XAmelanchier sp.
 XBetula lutea
 XBetula papyrifera
 Caprinus caroliniana
 Carya cordiformis
 Crataegus sp.
 Fagus grandiflora
 Fraxinus americana
 XFraxinus nigra

Fraxinus pennsylvanica
 Juglans cinerea
 Larix laricina
 Ostrya virginiana
 XPicea glauca
 Pinus banksiana
 Pinus resinosa
 Pinus strobus
 Populus balsamifera
 Populus grandidentata
 XPopulus tremuloides
 XPrunus pennsylvanica
 Prunus serotina

Prunus virginiana
 Quercus alba
 Quercus ellipsoidalis
 Quercus macrocarpa
 XQuercus rubra
 Sorbus decora
 YThuja occidentalis
 Tilia americana
 XTsuga canadensis
 Ulmus americana
 Ulmus fulva

PYRUS AMER.

HERBS AND SHRUBS

Actaea pachypoda
 Actaea rubra
 Adiantum pedatum
 Agrimonia gryposepala
 Allium tricoccum
 XAlnus rugosa
 Amphicarpa bracteata
 Anemone canadensis
 Anemone quinquefolia
 Antennaria sp.
 Apocynum androsaemifolium
 Apocynum cannabinum
 Aquilegia canadensis
 XAralia nudicaulis
 Aralia racemosa
 Arctostaphylos uva-ursi
 Arisaema atrorubens
 Asarum canadense
 Asclepias phytolaccoides
 Aster cordifolius
 Aster lateriflorus
 XAster macrophyllus
 Aster prenanthoides
 XAster 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
 XClintonia borealis
 Convolvulus spithameus
 Coptis trifolia
 Corallorrhiza maculata
 Corallorrhiza striata
 Cornus alternifolia
 XCornus canadensis
 XCornus ~~femina~~ STOLONIFERA
 Cornus rugosa
 Corylus americana
 XCorylus cornuta
 Cryptotaenia canadensis
 Cyripedium acaule
 Cyripedium pubescens
 Cystopteris fragilis
 Danthonia spicata
 Dentaria diphylla
 Desmodium glutinosum
 Desmodium nudiflorum
 Dicentra canadensis
 Dicentra cucullaria
 XDiervilla lonicera
 Dirca palustris
 XDryopteris ~~linneana~~ DISJUNCTIA
 Dryopteris phegopteris
 XDryopteris spinulosa
 Epifagus virginiana
 Epigaea repens
 Equisetum arvense
 Erythronium americanum
 Fragaria virginiana
 Galium aparine
 Galium boreale
 Galium circaeans
 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
 XLinnaea borealis
 XLonicera canadensis
 Lonicera hirsuta
 Lonicera oblongifolia
 Lonicera prolifera
 Luzula multiflora
 XLycopodium annotinum
 XLycopodium clavatum
 Lycopodium complanatum
 XLycopodium lucidulum
 XLycopodium obscurum
 Lycopodium tristachyum
 Lycopus americanus
 XLycopus uniflora
 Lysimachia quadrifolia
 XMaianthemum canadense
 XLYCOPodium CLAVATUM

Melampyrum lineare
 Mitchella repens
 Mitella diphylla
 Mitella nuda
 Monarda fistulosa
 Moneses uniflora
 Monotropa uniflora
 Myrica asplenifolia
 Onoclea sensibilis
 Oryzopsis asperifolia
 Osmorhiza claytoni
 X Osmunda cinnamomea
 Osmunda claytoniana
 Oxalis montana
 Panax quinquefolia
 Parietaria pennsylvanica
 Parthenocissus vitacea
 Pedicularis lanceolata
 Phyrma leptostachya
 Podophyllum peltatum
 Polemonium reptans
 Polygala pauciflora
 Polygonatum commutatum
 Polygonatum pubescens
 Potentilla simplex
 Prenanthes alba
 Pteretis nodulosa
 Pteridium aquilinum

Pyrola elliptica
 Pyrola rotundifolia
 Pyrola secunda
 Ranunculus abortivus
 Ranunculus recurvatus
 Ranunculus septentrionalis
 Rhus radicans
 Rhus typhina
 Ribes americanum
 Ribes cynosbati
 Ribes lacustre
 Ribes triste
 Rubus idaeus
 Rubus parviflorus
 Rubus hispidus
 Rubus - blackberry
 Rubus - dewberry
 Rubus - raspberry
 Sambucus canadensis
 Sambucus pubens
 Sanguinaria canadensis
 Sanicula gregaria
 Schizachne purpurascens
 Scutellaria lateriflora
 Shepherdia canadensis
 Smilacina racemosa
 Smilacina stellata
 Smilax ecirrhata

Smilax herbacea
 Smilax hispida
 Solidago latifolia
 Solidago ulmifolia
 Streptopus amplexifolius
 X Streptopus roseus
 X Taxus canadensis
 Thalictrum dioicum
 Tiarella cordifolia
 X Trientalis borealis
 Trillium cernuum
 Trillium grandiflorum
 Uvularia grandiflora
 Uvularia sessilifolia
 Vaccinium angustifolium
 Vaccinium pennsylvanicum
 Viburnum acerifolium
 Viburnum affine
 Viburnum lentago
 Viola canadensis
 Viola cucullata
 X Viola incognita
 Viola pallens
 Viola pubescens
 Vitis aestivalis
 Vitis riparia
 Waldsteinia fragarioides
 Zanthoxylum americanum

Additional Species:

X PETASITES PALM

Stand No. 3221

Species	-	Count	Rel.Dens.	Preference	Value
Abies balsamea		12	7.5	3	22.5
Acer rubrum	1	1	.6	1	.6
AC A. saccharum				3	
AS A. spicatum		55	34.4	2	68.8
Alnus rugosa				4	
Amelanchier sp.				2	
Berberis Thu.					
Betula lutea				2	
B. papyrifera	1	1	.6	3	1.8
Cornus rugosa					
C. atolonifera				2	
Corylus cornuta		12	7.5	3	22.5
Diervilla Lon.				3	
Fraxinus amerl.				3	
F. nigra				2	
Gaylussacchia b.				3	
Larix laricina				4	
Ledum groenlandicum				3	
Lonicera canad.	1	1	.6	2	1.2
L. oblongifolia					
Nemopanthis m.				3	
Ostrya virginiana				4	
Picea glauca				4	
P. mariana				4	
Pinus Strobos				2	

Species	Count	Rel. Dens.	Preference	Value
<i>Populus grandid.</i>			3	
<i>P. tremuloides</i>			3	
<i>Prunus pennsyl.</i>			2	
<i>P. virginiana</i>			3	
<i>Quercus rubra</i>			3	
<i>Ribes americanum</i>			2	
<i>Ribes hudsoni.</i>				
<i>Rubus blackberry</i>			3	
<i>R. dewberry</i>			2	
<i>R. parviflorus</i>			3	
<i>R. raspberry</i>			3	
<i>Sambucus rubes.</i>			2	
<i>Sorbus americana</i>			1	
 <i>Taxus canadensis</i>	77	48.1	1	48.1
<i>Thuja occident.</i> /	1	.6	1	.6
<i>Tsuga canadensis</i>			1	
<i>Vaccinium angust.</i>			2	
<i>V. myrtilloides</i>			2	
TOTAL	168			165.6

Extent of Browse	Count	Rel. D. COUNT	Weight	Value
O			0	
L			1	
M			2	
H			3	
T			4	
TOTAL				

Ave distance 3.69 Mean area Browse per acre 3199.2