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Site 6012 (Boreal Stand 12): Itasca P.O., Clearwater County, Minnesota, Township 144N, Range 38W, Section 28. 1955-07-16

[s.l.]: [s.n.], 1955-07-16

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[= site 6012]

Data Form No. 20

Plant Ecology Research

Univ. of Wisconsin

STAND RECORD

FORESTS

Stand No. 12

Name: Itaska P.O.
County: Clearwater, Minn.
Date: July 16, 1955
Size of Stand: 15 acres
Forest Type:
Topography: Rolling

Locality:
T: 144 N R: 38 W. Sec: SE 28
Observers: JFM

Size of Area Sampled:
Soil Type:
Slope: gradual slope
Directions: south facing

Condition of Stand: Fair. - Some blow down in certain sections
Stand over 65 years old - young in spruce - 50 yrs, one balsam 61 yrs
Ground cover fairly rich + thick in herbs because rather open
Rich in mosses + lichens but fairly well confined to large boulders scattered
throughout + fallen decomposed logs.
Stand reported by Dr. Murray Buell, - Rutgers N.J.

Open Grown Trees:

% Canopy:

Stumps:

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

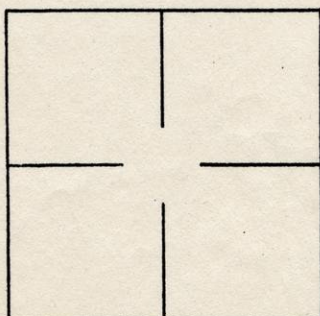
Soil Data:

	pH	N	P	K	Ca	Mg	Org. Mat.	Colloids	W.H.C.
Ao									
A1									
A2									
B									

DEPTH	CHARACTERISTICS (Color, Texture, Structure, etc.)		
#1 1" litter	#2 1 1/2" 1/2" litter	#3 1" litter	
A ₀ 2" - 1" ferment	1 1/2" 1/2" ferment - black	2" 1" ferment	
A ₁ 1/2" - black humus	1" deep black	1/2" black	
A ₂ 1/2" - brownish-light grey	3" - blackish grey-leached	2" brown leached sand	
B 3" - light brown sand	7" grey brown sandy clay	1" black humus between	
about 10" to bedrock		6" greyish brown sand	

Parent Material:

Map:



LICHENS OF GREAT LAKES SPRUCE-FIR COMMUNITIES

MINNESOTA

Clearwater County



3 miles N. of Itasca State Park

r T144N R38W SEC 28

White spruce, balsam & aspen. Approx. 65 yrs.
Rolling, gradual south-facing slope, some
blowdown, fairly open. Rich understory.

July 16, 1955. Coll. Paul F. Maycock

Plant Ecology Research
TREE DATA SUMMARY SHEET

University of Wisconsin

181.4

Spruce - fir
Northern Pine-Hardwoods

Station Number: 12 - 1368

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	26	40				3426	35	21.9		65.0	23.2	25.0	29.6	77.8	544.6
Acer rubru															
A. sacchar															
A. spicatu															
Betula lut															
B. papyrif	8	8				290	14	8.8		20.0	7.1	5.0	2.5	14.6	73.0
Carpinus c															
Fagus gran															
Ostrya vir															
Picea glau	29	46				3310	27	16.9		72.5	25.9	28.8	28.6	83.3	499.8
Pinus Bank	7	10				685				17.5	6.2	6.2	5.9	18.3	18.3
P. resinosa															1.0
P. Strobus															
Populus ba	5	6				550	7	4.4		12.5	4.5	3.8	4.7	13.0	26.0
P. grandid															
P. tremulo	30	43				3091	52	32.5		75.0	26.8	26.9	26.7	80.4	160.8
Prunus ^{virg.} per							9	5.6							
Quercus ^{macro} st	4	4				92	3	1.9		10.0	3.6	2.5	0.8	6.9	13.8
Q. rubra	1	1				17				2.5	0.9	0.6	0.2	1.7	10.2
Tilia amer															
Tsuga cana															
Thuja occi															
Ulmus amer	1	1				60	4	2.5		2.5	0.9	0.6	0.5	2.0	16.0
U. fulva	1	1													
Picea mar.	1	1				62				2.5	0.9	0.6	0.5	2.0	4.0
Amelanchier							6	3.8							1.0
Prunus nigra							2	1.3							
Crataegus							1	0.6							
TOTALS		160				11,583	160	100.0		280.0	100.0	100.0	100.0	300.0	1368

AVE. DIST. BTW'N TREES:

11.3

AVE B. A.:

72.4

TREES/ACRE:

341

DOM./ACRE:

24,688

N limit index

622.4

131.4

833.0

146.4

1.0

117.0

723.6

27.6

6.8

14.0

20.0

1.0

2644.2

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 12(1)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam		17' 152 11' 72	11' 77 2' 23		11' 174			12' 56 8' 65	7' 54	
Acer rubrum										
A. sacchar.										
A. spicatum										
Betula lut.										
B. papyrif	13' 30		2' 27							
Carpinus car										
Fagus gran										
Ostrya virg				14' 67		129' 54				
Picea glau	10' 95 14' 43	33' 195	6' 32	3' 100 10' 73	6' 95	14' 168 13' 110	17' 86 15' 135	17' 115		20' 65
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem	27' 110	9' 16		14' 82	7' 19	20' 24	14' 20	19' 80	10' 88 14' 95 15' 57	3' 42 11' 13 19' 29
Prunus pen.										
Quercus ell										
Q. macrocarpa Q. fubra					21' 7		9' 31			
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer										
U. fulva										
LITTER	1"	1"	1 1/2"	3"	1 1/2"	1"	1/2"	1"	1/2"	1/2"
CANOPY	1%	4%	65%	55%	4%	1%	1%	50%	0%	2%
Distance	64 1/2'	70'	21'	32'	45'	76 1/2'	55 1/2'	57'	46 1/2'	53'

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 12(2)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	3' 125	8' 105	7' 77 16' 112		14' 109 18' 100	9' 90 21' 61	6' 38 17' 78	14' 97	9½' 90 9' 78	10' 72
Acer rubrum			16' 130		12' 55		25' 115			
A. sacchar.										
A. spicatum										
Betula lut.										
B. papyrif	14' 35	14½' 29								
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau	11' 93					5' 45	7' 15		13½' 85 6' 52	7' 79
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals		8½' 30		5' 41 17' 15				4' 245	8' 145	
P. grand										
P. trem	13½' 100	21' 115	15' 120	16' 42 7' 22	11' 75	8' 209				4' 115
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer								3' 60		
U. fulva										
Aspen manana								13' 12		
LITTER	2½"	¾"	2"	2½"	2"	1"	2"	2"	1"	1½"
CANOPY	55%	68%	70%	10%	10%	75%	20%	55%	45%	55%
Distance	41½'	52'	34'	45'	55'	43'	45'	34'	40'	27'

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 12(3)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	10' 25	12 1/2 49	8' 42 14' 110 14' 85	6' 62	18' 55	8' 32	10 35 9' 101	14' 165	9' 205	10 1/2 125
Acer rubrum										
A. sacchar.										
A. spicatum										
Betula lut.										
B. papyrif									17' 62	6' 41
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau	9 1/2 165	9 1/2 109 12 1/2 28	16' 64	10' 34 9' 65					18' 30	10 1/2 94
Pinus Bank	15' 119									
P. resinosa										
P. Strobus										
Populus bals									10 1/2 24	
P. grand						7' 38				
P. trem	4 1/2 75	3' 215		27' 72	5' 58 14' 47	4' 71 5' 52	8 1/2 44 17' 38	10' 59 14 1/2 120		5' 98
Prunus pen.										
Quercus ell										
Q. macrocarpa Q. rubra					4' 22			12' 22		
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer										
U. fulva										
LITTER	2"	2"	1 1/2"	2"	2"	1"	1"	1"	1"	1 1/2"
CANOPY	45%	40%	15%	20%	30%	45%	60%	15%	8%	5%
Distance	39'	37 1/2'	52'	52'	41'	24'	44 1/2'	50 1/2'	54 1/2'	32'

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 12 (4)

STATION NO.	1	2	3	4	5	6	7	8	9	10
<i>Abies balsam</i>		10' 18	6' 60							
<i>Acer rubrum</i>										
<i>A. sacchar.</i>										
<i>A. spicatum</i>										
<i>Betula lut.</i>										
<i>B. papyrif</i>						19' 28				26' 38
<i>Carpinus car</i>										
<i>Fagus gran</i>										
<i>Ostrya virg</i>			10' 54							
<i>Picea glau</i>	6' 111 5' 74	12' 59	5' 79 3' 55	13' 70 8' 32	12' 58 7' 62	7' 75 14' 72	6' 75 4' 46		14' 84 17' 30	18' 29 21' 30
<i>Pinus Bank</i>				5' 54 7' 43	19' 88	8' 64		3' 58 13 1/2 91	11 1/2 42 16 3/4 58	21' 63
<i>P. resinosa</i>										
<i>P. Strobus</i>										
<i>Populus bals</i>										
<i>P. grand</i>										
<i>P. trem</i>	14' 25 15' 56	6' 66 9 1/2 47			16' 45		4' 45 15' 90	10' 39	17' 74	
<i>Prunus pen.</i>										
<i>Quercus ell</i>										
<i>Q. rubra</i>								4' 17		
<i>Tilia amer</i>										
<i>Tsuga can</i>										
<i>Thuja occ</i>										
<i>Ulmus amer</i>										
<i>U. fulva</i>										
LITTER	1 1/2"	1/2"	2"	1 1/2"	2"	1 1/2"	1 1/2"	2"	1 1/2"	1/2"
CANOPY	80%	15%	48%	50%	45%	35%	70%	50%	10%	12%
Distance	40'	37 1/2'	24'	33'	54'	48'	29'	30 1/2'	58 1/2'	82'

Av. canopy. - 35%

Av. litter 1.5"

POINT RECORD TREES ^{SAPLINGS}

NORTHERN PINE-HARDWOODS

Stand No. 12(1)

STATION NO.	1	2	3	4	5	6	7	8	9	10
<i>Abies balsam</i>	4' 2'	5'	22'	32'				5'	19'	
<i>Acer rubrum</i>										
<i>A. sacchar.</i>										
<i>A. spicatum</i>										
<i>Betula lut.</i>										
<i>B. papyrif</i>			3'	16'			17'			
<i>Carpinus car</i>										
<i>Fagus gran</i>										
<i>Ostrya virg</i>										
<i>Picea glau</i>			6' 23'			22'		7'		
<i>Pinus Bank</i>										
<i>P. resinosa</i>										
<i>P. Strobus</i>										
<i>Populus bals</i>										15'
<i>P. grand</i>										
<i>P. trem</i>		5' 10'	9'	19' 24'	4' 7' 5' 6'	18' 26'	19' 21'	17'	18'	4'
<i>Prunus pen.</i> ^{virginiana}							10 1/2'	3'		8'
<i>Quercus ell</i>										
<i>Q. rubra</i>										
<i>Tilia amer</i>										
<i>Tsuga can</i>										
<i>Thuja occ</i>										
<i>Ulmus amer</i>									15'	
<i>U. fulva</i>										
<i>Crataegus</i>						15'				
<i>Amelanchier</i>									6'	8'
Distance	37'	29'	54'	91'	22'	81'	67 1/2'	32'	58'	35'

POINT RECORD TREES

SAPLINGS

NORTHERN PINE-HARDWOODS

Stand No. 12(2)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam				4'	12'	11'	17'	13'	7'	12'
Acer rubrum					17'	4'	7'		10'	18'
A. sacchar.										22'
A. spicatum										
Betula lut.										
B. papyrif							12 1/2'	14'		
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau							8'		12 1/2'	25'
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals	17'			3'						6'
P. grand	16'									
P. trem	24'	5'	18'	7'	4'		17'	2'		
	16'	7'	10'	18 1/2'	19'					
Prunus pen.		9'		9 1/2'				6'		
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer			17'							
U. fulva										
Distance	73'	31'	60 1/2'	23 1/2'	52'	39'	44 1/2'	35'	47 1/2'	65'

POINT RECORD TREES

SAPLINGS

NORTHERN PINE-HARDWOODS

Stand No. 12(3)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	11½'	14'	13½' 21'	22'	5'	17'	7'			13'
Acer rubrum										
A. sacchar.										
A. spicatum										
Betula lut.										
B. papyrif	4' 7'	5½' 14'								
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau		6½'	14'	9' 12'						
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										5' 12½'
P. grand										
P. trem	22'		24'		10½' 14'	16'	9' 13'	14'	13' 12'	13'
Prunus pen. <i>virginiana</i>								6' 8'	4'	
Quercus ell										
Q. rubra <i>macrocarpa</i>						20'				
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer				21'				13'		
U. fulva										
Amelanchier					18'	5'	13'			
Distance	44½'	39½'	72½'	64'	47½'	58'	42'	41'	32'	43½'

POINT RECORD TREES

SAPLINGS

NORTHERN PINE-HARDWOODS

Stand No. 12(4)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam		10 1/2'	22'			24'				
Acer rubrum										
A. sacchar.										
A. spicatum										
Betula lut.										
B. papyrif		24'	23'			18'			24'	10'
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau	11 1/2' 12'	11' 16'	4' 6'	17' 16' 18'	7' 22' 10'		11 1/2' 12'		15 1/2'	18'
Pinus Bank				16'						21'
P. resinosa										
P. Strobus										
Populus bals								13'		
P. grand								19' 13' 18' 8'		
P. trem	16'					20'	12'		3'	9' 3'
Prunus pen. ^{virginiana}	7'									
Quercus ell										
Q. ^{macrocarpa} rubra					20'					22'
Tilia amer										
Tsuga can										
Thuja occ										
Ulmus amer										
U. fulva										
^{Prunus nigra}						14'	13'			
^{Amelanchier}									7'	
Distance	46 1/2'	61 1/2'	55'	57'	59'	76'	48 1/2'	38 1/2'	49 1/2'	44 1/2'

[illegible]

[illegible]

University of Wisconsin
STAND NO. 12

										10								20		
Desmodium glutinosum																				
Dicentra canadensis																				
Dicentra cucullaria																				
Diervilla lonicera	✓			✓		✓				✓	✓	✓		✓		✓		✓	8	40
Dirca palustris	✓	✓	✓	✓				✓	✓				✓		✓			✓	7	35
Dryopteris bootii																				
Dryopteris cristata																				
Dryopteris disjuncta																				
Dryopteris goldiana																				
Dryopteris marginalis																				
Dryopteris noveboracensis																				
Dryopteris phegopteris																				
Dryopteris spinulosa	✓																			1
Empetrum nigrum																				
Epifagus virginiana																				
Epigaea repens																				
Epilobium angustifolium																				
Epilobium glandulosum																				
Epilobium strictum																				
Equisetum arvense																				
Equisetum pratense																				
Equisetum scirpoides																				
Equisetum sylvaticum	✓																			1
Erigeron annuus																				
Erigeron philadelphicus																				
Erigeron strigosus	✓																			1
Erythronium albidum																				
Erythronium americanum																				
Eupatorium maculatum																				
Eupatorium perfoliatum																				
Eupatorium purpureum																				
Fagopyrum sagittatum																				
Festuca obtusa																				
Fragaria vesca	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓		✓		✓	11	55
Fragaria virginiana	✓																			
Galium aparine	✓								✓			✓			✓				3	15
Galium asprellum																				
Galium boreale	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓		✓	✓	16	80
Galium concinnum																				
Galium lanceolatum																				
Galium triflorum	✓		✓						✓						✓				3	15
Gaultheria hispidula																				
Gaultheria procumbens																				
Gaylussacia baccata																				
Gentiana andrewsii																				
Gentiana crinata																				
Gentiana linearis																				
Gentiana quinquefolia																				
Geocaulon lividum																				
Geranium bicknelli	✓																			1
Geranium maculatum																				
Geranium robertianum																				

										10								20	
<i>Geum aleppicum</i>	✓	✓																	1
<i>Geum canadense</i>	✓																		
<i>Geum rivale</i>																			
<i>Glyceria striata</i>																			
<i>Goodyera obtusifolia</i>																			
<i>Goodyera pubescens</i>																			
<i>Goodyera repens</i>																			
<i>Goodyera tessellata</i>																			
<i>Habenaria clavellata</i>																			
<i>Habenaria hyperborea</i>																			
<i>Habenaria obtusata</i>																			
<i>Habenaria orbiculata</i>																			
<i>Habenaria psycodes</i>																			
<i>Habenaria viridis</i>																			
<i>Hackelia virginiana</i>																			
<i>Halenia deflexa</i>	✓																		1
<i>Hamamelis virginiana</i>																			
<i>Helianthus strumosus</i>																			
<i>Hepatica acutiloba</i>																			
<i>Hepatica americanum</i>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	55
<i>Heracleum maximum</i>	✓																		1
<i>Heuchera richardsonii</i>																			
<i>Hieracium aurantiacum</i>																			
<i>Hieracium canadense</i>																			
<i>Hieracium pratense</i>																			
<i>Hieracium scabrum</i>	✓																		1
<i>Ilex verticillata</i>																			
<i>Impatiens capensis</i>																			
<i>Iris lacustris</i>																			
<i>Isopyrum bitermum</i>																			
<i>Juniperus communis</i>																			
<i>Juniperus horizontalis</i>																			
<i>Lactuca canadensis</i>	✓			✓															1 5
<i>Laportea canadensis</i>	✓			✓	✓					✓	✓								4 20
<i>Lathyrus ochroleucus</i>	✓			✓	✓					✓	✓								
<i>Ledum groenlandicum</i>	✓	✓		✓			✓					✓		✓			✓	6	30
<i>Lichens spp.</i>	✓																		
<i>Lilium michiganense</i>	✓																		
<i>Linnaea borealis</i>	✓								✓										1 5
<i>Listera auriculata</i>																			
<i>Listera borealis</i>																			
<i>Listera convallarioides</i>																			
<i>Listera cordata</i>																			
<i>Lobelia inflata</i>																			
<i>Lonicera canadensis</i>																			
<i>Lonicera dioica</i>																			
<i>Lonicera hirsuta</i>	✓												✓	✓					2 10
<i>Lonicera involucrata</i>																			
<i>Lonicera oblongifolia</i>																			
<i>Lonicera prolifera</i>																			
<i>Lonicera villosa</i>																			
<i>Luzula acuminata</i>																			

WET
DRI AREA

[illegible]

[illegible]

[illegible]

[illegible]

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 12

TREES

- ✓ *Abies balsamea*
- Acer pensylvanicum*
- Acer rubrum*
- Acer saccharum*
- Acer spicatum*
- ✓ *Amelanchier* spp.
- Betula lutea*
- ✓ *Betula papyrifera*
- Carpinus caroliniana*
- ✓ *Crataegus* spp.
- Fagus grandifolia*
- Fraxinus americana*

- Fraxinus nigra*
- Fraxinus pennsylvanicum*
- Larix laricina*
- Ostrya virginiana*
- ✓ *Picea glauca*
- ✓ *Picea mariana*
- ✓ *Pinus banksiana*
- ✓ *Pinus resinosa*
- Pinus strobus*
- ✓ *Populus balsamifera*
- Populus grandidentata*
- ✓ *Populus tremuloides*

SHRUBS

- Alnus crispa*
- Alnus rugosa*
- Arctostaphylos uva-ursi*
- Celastrus scandens*
- Chamaedaphne calyculata*
- Comptonia peregrina*
- Cornus alternifolia*
- ✓ *Cornus racemosa*
- Cornus rugosa*
- Cornus stolonifera*
- Corylus americana*
- ✓ *Corylus cornuta*
- ✓ *Diervilla lonicera*
- ✓ *Dirca palustris*
- Empetrum nigrum*
- Gaylussaccia baccata*
- Hamamelis virginiana*
- Ilex verticillata*
- Juniperus communis*
- Juniperus horizontalis*
- Ledum groenlandicum*
- Lonicera canadensis*
- Lonicera dioica*

- ✓ *Lonicera hirsutum*
- Lonicera involucrata*
- Lonicera oblongifolia*
- Lonicera villosa*
- Parthenocissus quinquefolia*
- Parthenocissus vitacea*
- Prunus pumila*
- Pyrus melanocarpa*
- Rhamnus alnifolia*
- Rhus glabra*
- Rhus typhina*
- Ribes americanum*
- ✓ *Ribes cynosbati*
- ✓ *Ribes glandulosum*
- Ribes hirtellum*
- Ribes lacustre*
- Ribes oxycanthoides*
- ✓ *Ribes triste*
- ✓ *Rosa* sp.
- Rubus allegheniensis*
- Rubus* (blackberry)
- ✓ *Rubus* (dewberry)
- ✓ *Rubus* (raspberry)

HERBS

- ✓ *Achillea millefolium*
- Actaea pachypoda*
- ✓ *Actaea rubra*
- Adiantum pedatum*
- ✓ *Agrimonia gryposepala*
- Agrostis perennans*
- Allium tricoccum*
- ✓ *Amphicarpa bracteata*
- ✓ *Anaphlis margaritacea*
- ✓ *Anemone canadensis*
- ✓ *Anemone cylindrica*
- ✓ *Anemone quinquefolia*
- Anemone virginiana*
- ✓ *Antennaria* sp.
- ✓ *Apocynum androsaemifolium*
- ✓ *Aquilegia canadensis*
- ✓ *Aralia nudicaulis*
- Aralia racemosa*
- Arisaema atrorubens*
- ✓ *Asarum canadense*
- Asclepias exaltata*
- Aster furcatus*
- ✓ *Aster macrophyllus*
- Aster nova-angliae*
- Aster paniculatus*

- ✓ *Aster puniceus*
- Aster sagittifolius*
- Aster umbellatus*
- ✓ *Athyrium filix-femina*
- Athyrium thelypteroides*
- Botrychium lunaria*
- Botrychium matricariaefolium*
- Botrychium multifidum*
- ✓ *Botrychium virginianum*
- Calypso bulbosa*
- Campanula rotundifolia*
- Carex arctata*
- Carex intumescens*
- ✓ *Carex pensylvanica*
- Carex woodii*
- ✓ *Carex* spp.
- Chimaphila umbellata*
- Chrysanthemum leucanthemum*
- Chrysosplenium americanum*
- Cinna latifolia*
- Circaea alpina*
- Claytonia caroliniana*
- Claytonia virginiana*
- Clematis virginiana*
- Clematis verticillaris*

- ✓ *Prunus nigra*
- Prunus pensylvanica*
- ✓ *Prunus serotina*
- ✓ *Prunus virginiana*
- Pyrus americana*
- Pyrus decora*
- ✓ *Quercus rubra* var. *borealis*
- Thuja occidentalis*
- Tilia americana*
- Tsuga canadensis*
- ✓ *Ulmus americana*
- Ulmus rubra*
- ✓ *Viburnum macrocarpa*
- ✓ *Rubus idaeus*
- Rubus parviflorus*
- ✓ *Salix* sp.
- Sambucus canadensis*
- Sambucus pubens*
- Shepherdia canadensis*
- Smilax tamnoides* var. *hispida*
- Spiraea alba*
- Spiraea latifolia*
- ✓ *Symphoricarpos albus*
- Symphoricarpos occidentalis*
- Taxus canadensis*
- ✓ *Vaccinium angustifolium*
- Vaccinium myrtilloides*
- Vaccinium vitis-idaea*
- Viburnum acerifolium*
- Viburnum cassinoides*
- Viburnum edule*
- Viburnum lentago*
- ✓ *Viburnum rafinesquianum*
- ✓ *Viburnum trilobum*
- Vitis vulpina*
- Zanthoxylum americanum*

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

#12

Epigaea repens
 Epilobium angustifolium
 Epilobium glandulosum
 Epilobium strictum
 Equisetum pratense
 ✓Equisetum sylvaticum
 Erigeron annuus
 Erigeron philadelphicus
 ✓Erigeron strigosus
 Erythronium albidum
 Erythronium americanum
 ✓Fragaria vesca
 Fragaria virginiana
 ✓Galium aparine
 ✓Galium boreale
 Galium concinnum
 Galium lanceolatum
 ✓Galium triflorum
 Gaultheria hispidula
 Gaultheria procumbens
 Gentiana andrewsii
 Gentiana crinata
 Gentiana quinquefolia
 Geocaulon lividum
 ✓Geranium bicknelli
 Geranium maculatum
 Geum rivale
 Goodyera repens
 Goodyera tessellata
 Habenaria hyperborea
 Habenaria orbiculata
 Habenaria psycodes
 Habenaria viridis
 ✓Halenia deflexa
 Helianthus strumosus
 Hepatica acutiloba
 ✓Hepatica americanum
 Hieracium aurantiacum
 Hieracium canadense
 ✓Hieracium scabrum
 Impatiens capensis
 Iris lacustris
 Isopyrum biternatum
 ✓Lathyrus ochroleucus
 ✓Linnaea borealis
 Lobelia inflata
 Lycopodium annotinum
 Lycopodium clavatum
 Lycopodium clavatum var. megastachyon
 Lycopodium complanatum
 Lycopodium inundatum

Lycopodium lucidulum
 Lycopodium obscurum
 Lycopodium obscurum var. dendroideum
 Lycopodium selago
 Lycopodium tristachyum
 Lysimachia ciliata
 Lysimachia quadrifolia
 Lysimachia terrestris
 ✓Maianthemum canadense
 Malaxis unifolia
 Medeola virginiana
 ✓Melampyrum lineare
 Mitchella repens
 Mitella diphylla
 ✓Mitella nuda
 ✓Moneses uniflora
 Monotropa hypopithys
 Monotropa uniflorus
 Onoclea sensibilis
 Orchis spectabilis
 ✓Osmorhiza claytoni
 Osmorhiza longistylis
 Osmunda cinnamomea
 Osmunda claytoniana
 Oxalis montana
 Oxalis stricta
 Panax quinquefolius
 Panax trifolius
 ✓Petasites palmatus
 Phlox divaricata
 Poa compressa
 Poa pratensis
 ✓Polygala paucifolia
 Polygonatum biflorum
 Polygonatum pubescens
 Polymnia canadensis
 Polypodium virginianum
 Potentilla norvegica
 Potentilla simplex
 Potentilla tridentata
 ✓Prenanthes alba
 Primula mistassinaca
 Prunella vulgaris
 ✓Pteridium aquilinum
 ✓Pyrola asarifolia
 ✓Pyrola elliptica
 Pyrola minor
 ✓Pyrola rotundifolia
 ✓Pyrola secunda
 Pyrola virens
 Ranunculus abortivus

Ranunculus acris
 Ranunculus pensylvanicus
 Ranunculus recurvatus
 Ranunculus repens
 Ranunculus septentrionalis
 ✓Rhus radicans
 Rubus pubescens
 ✓Sanguinaria canadensis
 ✓Sanicula marilandica
 Satureja vulgaris
 Schizachne purpurascens
 Scutellaria epilobiifolia
 Scutellaria lateriflora
 Smilacina racemosa
 ✓Smilacina stellata
 Smilacina trifolia
 ✓Smilax herbacea
 Solidago canadensis
 Solidago flexicaulis
 Solidago graminifolia
 Solidago ulmifolia
 Stellaria calycantha
 Streptopus amplexifolius
 ✓Streptopus roseus
 ✓Taraxacum officinale
 ✓Thalictrum dioicum
 Thalictrum polygamum
 Tiarella cordifolia
 Trientalis borealis
 ✓Trillium cernuum
 Trillium erectum
 Trillium grandiflorum
 Trillium undulatum
 ✓Uvularia grandiflora
 ✓Uvularia sessilifolia
 ✓Vicia americana
 Viola adunca
 ✓Viola blanda
 Viola canadensis
 ✓Viola conspersa
 Viola cucullata
 Viola incognita
 Viola nephrophylla
 Viola pallens
 Viola papilionacea
 ✓Viola pubescens
 Viola renifolia
 Viola selkirkii
 Viola sororia
 Waldsteinia fragarioides

Additional species

Zizia aurea
 Zizia aurea
 Zizia aurea

Zizia aurea

Brachyotum erectum

Caulophyllum thalictroides

Hieracium maximum

Aster ciliolatus

Lysimachia ciliata

Quercus macrocarpa var. densaformis

Triostema perfoliatum

Castilleja solanacea

Lactula sp. (canadensis)

Carex pedunculata

Helianthus sp.

Agastache folniculum

Solidago sp. - juncea

Aster lateriflorus

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 12 (1)

3 *Andelanchier*

- 7654321 *Abies balsamea* 89
Acer pensylvanicum
Acer rubrum
Acer saccharum
Acer spicatum
Betula lutea
 92 *Betula papyrifera*

TREE SEEDLINGS

- Fagus grandifolia*
Larix laricina
Ostrya virginiana
 54 *Picea glauca*
Picea mariana
Pinus banksiana
Pinus resinosa

- Pinus strobus*
Populus tremuloides
Prunus pensylvanica
Prunus serotina
Thuja occidentalis
Tilia americana
Tsuga canadensis

SHRUBS

- Alnus rugosa*
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
 54 *Corylus cornuta*
 53 *Diervilla lonicera*
 87321 *Dirca palustris*
Ilex verticillata
Ledum groenlandicum
Lonicera canadensis

- Prunus pumila*
Pyrus melanocarpa
Ribes cynosbati
Ribes glandulosum
Ribes lacustre
 7543 *Rosa* sp.
Rubus (blackberry)
 8 *Rubus* (dewberry)
Rubus (raspberry)
 091 *Rubus idaeus*

- Rubus parviflorus*
Sambucus pubens
Shepherdia canadensis
Spiraea alba
Symphoricarpos occidentalis
Taxus canadensis
Vaccinium angustifolium
Vaccinium myrtilloides
Viburnum acerifolium
Viburnum trilobum

HERBS

- Actaea pachypoda*
Actaea rubra
Adiantum pedatum
Anaphlis margaritacea
Anemone cylindrica
 981621 *Anemone quinquefolia*
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
 3 *Aquilegia canadensis*
 7431 *Aralia nudicaulis*
Arisaema atrorubens
 976531 *Aster macrophyllus*
Athyrium filix-femina
 5 *Botrychium virginianum*
Carex pensylvanica
Chimaphila umbellata
Chrysanthemum leucanthemum
Circaea alpina
Claytonia caroliniana
Claytonia virginiana
Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
 8631 *Cornus canadensis*
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
Dryopteris phegopteris

- Dryopteris spinulosa*
Epigaea repens
Epilobium angustifolium
Equisetum sylvaticum
Erythronium americanum
 985431 *Fragaria vesca*
Fragaria virginiana
 8 *Galium aparine*
 82 *Galium triflorum*
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
 97541 *Hepatica americana*
Hieracium aurantiacum
 9 *Linnaea borealis*
Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
Lycopodium obscurum
 07621 *Maianthemum canadense*
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

- 0987 *Mitella nuda*
Monotropa uniflora
 08 *Osmorhiza claytoni*
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
 41 *Pteridium aquilinum*
 0 *Pyrola elliptica*
Pyrola rotundifolia
 7 *Pyrola secunda*
Ranunculus acris
 76531 *Rhus radicans*
Rubus pubescens
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
 1 *Streptopus roseus*
Tiarella cordifolia
Trientalis borealis
Trillium erectum
Trillium grandiflorum
 751 *Uvularia sessilifolia*
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
Viola renifolia
Waldsteinia fragarioides

Additional species

- 8 *Salix boreale* 1234567 *Pyrola asarifolia* 1679 *Prunus nigra*
Habermium sp. 14 *Mordo* 123456890 *Prunus* 2347890
Carex sp. 123456890 *Sambucus marilandica* 138 *Lathyrus ochro.* 46
Peg. 12345678 *Thalictrum dioicum* 1536489 *Trifolium repens* 47
Salix 1 *Agastache foenic.* 14 *Lactuca* 4
Asarum canad. 5890 *Aster sp.* 90
Viola sp. 6 *Aster sp.* 0-like macro-
Perfoliatum sp. 9 *Tristatum*
Ribes-smooth 9 *Cynosbati*

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 12 (2)

TREE SEEDLINGS

98531 Abies balsamea
Acer pensylvanicum
Acer rubrum
Acer saccharum
Acer spicatum
Betula lutea
Betula papyrifera

Fagus grandifolia
Larix laricina
Ostrya virginiana
9 Picea glauca
Picea mariana
Pinus banksiana
Pinus resinosa

Pinus strobus
Populus tremuloides
Prunus pensylvanica
8 Prunus serotina
Thuja occidentalis
Tilia americana
Tsuga canadensis
Thuja rubra 0

SHRUBS

Cornus racemosa 0
Alnus rugosa
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
43 Corylus cornuta
085321 Diervilla lonicera
64 Dirca palustris
Ilex verticillata
Ledum groenlandicum
Lonicera canadensis
64 *Sorbus hirsutus*

Prunus pumila
Pyrus melanocarpa
Ribes cynosbati
Ribes glandulosum
Ribes lacustre
031 Rosa sp. *blanda*
Rubus (blackberry)
6542 Rubus (dewberry)
Rubus (raspberry)
9 Rubus idaeus

Rubus parviflorus
Sambucus pubens
Shepherdia canadensis
Spiraea alba
8 Symphoricarpos occidentalis
Taxus canadensis
Vaccinium angustifolium
Vaccinium myrtilloides
Viburnum acerifolium
Viburnum trilobum
1 *Salix* sp.

HERBS

Actaea pachypoda
Actaea rubra
Adiantum pedatum
Anaphalis margaritacea
Anemone cylindrica
098621 Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
5 Aquilegia canadensis
Aralia nudicaulis
Arisaema atrorubens
8754321 Aster macrophyllus
Athyrium filix-femina
Botrychium virginianum
Carex pensylvanica
Chimaphila umbellata
Chrysanthemum leucanthemum
Circaea alpina
Claytonia caroliniana
Claytonia virginiana
Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
643 Cornus canadensis
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
Dryopteris phegopteris

? 975321 Fragaria vesca
Fragaria virginiana
51 Galium aparine
5 Galium triflorum
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
964321 Hepatica americana
Hieracium aurantiacum
Linnaea borealis
Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
Lycopodium obscurum
09854321 Maianthemum canadense
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

4 Mitella nuda
Monotropa uniflora
Osmorhiza claytoni
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
097742 Pteridium aquilinum
Pyrola elliptica
2 Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
96543 Rhus radicans
Rubus pubescens
5 Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
3 Streptopus roseus
Tiarella cordifolia
Trientalis borealis
Trillium erectum
Trillium grandiflorum
54 Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
Viola renifolia
Waldsteinia fragarioides

Additional species

Urtica grandiflora 1
Lathyrus ochroleucus 12
Galium boreale 43216790
Carex 1267890
Saxifraga 1267890
Maianthemum 145
Thalictrum 124519
Pyrola asarifolia 23456
Lea 4567
Asarum canadense 56
Moss 57890
Viola sp. 6
Salix 7
Amphicarpia nactata

Urtica grandiflora 90
Saxifraga 9