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**Site 6018 (Boreal Stand 18): Big Falls - 12 mi
W., Koochiching County, Minnesota,
Township 154N, Range 25W, Section 27.
1955-07-21**

[s.l.]: [s.n.], 1955-07-21

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[= Site 6018]

Data Form No. 20

Plant Ecology Research

Univ. of Wisconsin

STAND RECORD

FORESTS

Stand No. 18

Name: *Big Falls - 12 Mi W.*
 County: *Koochiching Minn.*
 Date: *July 21/55*
 Size of Stand: *25-30 acres*
 Forest Type:
 Topography: *Gently rolling*

Locality:
 T: *154* R: *25* Sec: *N 1/2 27*

Observers:
PFM

Size of Area Sampled:

Soil Type:

Slope:

Directions

Slight slope to East

Condition of Stand:

Logged for pine
Some popple cut out - large stumps
Logged for pine
Very young stand - with few old balsam, spruce, aspen + wb. scattered throughout
Stand reported by Francis Moore - Grand Rapids + Ed Richards - Big Falls, Minn.

Open Grown Trees:

% Canopy:

Stumps:

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

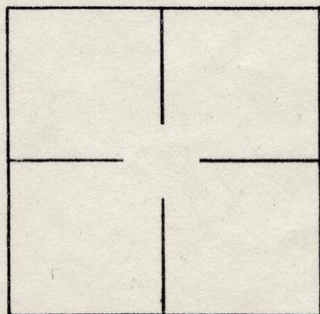
Soil Data:

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

#	DEPTH	CHARACTERISTICS (Color, Texture, Structure, etc.)
Ao	<i>3 1/2" 2" litter</i>	<i>#2 4" 2" litter</i>
A1	<i>1 1/2" ferment</i>	<i>2" ferment</i>
A2	<i>1/2" black</i>	<i>1/2" black</i>
B	<i>2" brown grey</i>	<i>2" brown grey</i>
	<i>then hard compacted</i>	<i>then hard compacted</i>
	<i>white-grey clay</i>	<i>white-grey clay</i>

Parent Material:

Map:



LICHENS OF GREAT LAKES SPRUCE-FIR COMMUNITIES

MINNESOTA

Koochiching County



13 miles W. of Big Falls T154N R25W SEC 27
Balsam, aspen, & w. spruce. Gently rolling,
slight slope eastward, young stand with older
scattered trees. Dense canopy, sparse
undercover.

July 21, 1955. Coll. Paul F. Maycock

Plant Ecology Research
TREE DATA SUMMARY SHEET

University of Wisconsin

162.5

~~Spruce-fir~~
~~Northern Pine-Hardwoods~~

Station Number: 18 - 1509

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											
1224.0 4.4 Abies bals	39	89				3754	109	68.1		97.5	41.9	57.9	42.2	136.0	952.0	1088.0
Acer rubru	1	1				45	1	0.6		2.5	1.1	0.6	0.5	2.2	13.2	11.0
A. sacchar																
17.1 A. spicatu	1	1				14	19	11.9		2.5	1.1	0.6	0.2	1.9	11.4	15.2
Betula lut																
65.0 B. papyrif	2	2				276	3	1.9		5.0	2.1	1.3	3.1	6.5	32.5	58.5
Carpinus c																
Fagus gran																
Ostrya vir																
242.0 Picea glau	8	9				891				20.0	8.6	5.6	10.0	24.2	145.2	242.0
Pinus Bank																
P. resinosa																
P. Strobus																
108.0 Populus ba	4	6				346	2	1.3		10.0	4.3	3.8	3.9	12.0	24.0	108.0
P. grandid																
775.2 P. tremulo	29	49				3121	15	9.4		72.5	31.2	30.6	35.1	96.9	193.8	872.1
6.0 Prunus virg							1	0.6							1.0	1.0
11.0 Quercus maro	1	1				44				2.5	1.1	0.6	0.5	2.2	4.4	8.8
Q. rubra																
18.4 Tilia amer	2	2				103	1	0.6		5.0	2.1	1.3	1.2	4.6	36.8	23.0
Tsuga cana																
18.4 Thuja occi	1	1				58				2.5	1.1	0.6	0.6	2.3	16.1	16.1
18.8 Ulmus amer	1	1				62	1	0.6		2.5	1.1	0.6	0.7	2.4	19.2	32.9
U. fulva	1	1				55				2.5	1.1	0.6	0.6	2.3	18.4	
39.0 Frax. nig	3	3				129	6	3.8		7.5	3.2	1.9	1.4	6.5	39.0	45.5
1.0 Acer negundo							2	1.3							1.0	1.0
3.0 Amelanchier															1.0	1.0
2551 TOTALS		160				8898	160	100.0		232.5	100.0	100	100.0	300.0	1508	2524.1

AVE. DIST. BTW'N TREES:

7.6

AVE. B. A.:

55.6

TREES/ACRE:

754

DOM. /ACRE:

41,922

STATION NO. SUBJECT	TREE S										DATE STAND NO 18(2)	
	1	2	3	4	5	6	7	8	9	10		
ABIES BAL	3' 55 10 1/2 79 6 85	6 1/2 32 11 1/2 27		9 1/2 24 9 1/2 96	1 1/2 32 2 21	1' 28 7 1/2 41 6 54	6 30 2 25	12' 55 6 1/2 38 9 1/2 68	8' 25	6 1/2 19 6 25		
ACER RUB												
A. SACC												
A. SPIC	10' 14											
BETULA LUT												
B. PAP												
CARPINUS												
FAGUS												
FRAX NIG												
OSTRYA												
PICEA G L							3 1/2 94					
P. MAR												
PINUS BANK												
P. RES												
P. STROB												
POP BALS		7' 82			2 1/2 24 14 1/2 108							
P. GRAND			9 1/2 31									
P. TREM			12' 54 7 29 10 1/2 41	11' 8 8 39		1 1/2 55	7 1/2 65	10 1/2 105	6' 44 7 1/2 78 11 1/2 37	13' 76 14 1/2 47		
PRUN US PEN												
P. SEROT												
P. VIRG												
QUERCUS ELL												
Q. MACRO												
Q. RUB												
TILIA												
TSUGA												
THUJA		8' 58										
ULMUS AME R												
U. RUBRA												
LITTER	4"	4"	5"	4 1/2"	2 1/2"	2"	2 1/2"	3 1/2"	2 1/2"	2 1/2"		
CANOPY	95	65	25	55	65	15	13	10	2	40		
DISTANCE	29 1/2	33	39	37 1/2	20 1/2	16	19	38 1/2	32 1/2	39 1/2		

STATION NO. SUBJECT	TREE S										DATE : STAND NO 18-21	
	1	2	3	4	5	6	7	8	9	10		
ABIES BAL	9' 5 1/2	19 3/4	10 1/2 52 3 1/2 31 29	5 1/2 95	4 1/2 25 2 1/2 3	5 1/2 55	8 1/2 30 5 1/2 46	6' 29 4' 6 1/2 41	9' 32	8 1/2 41 10 1/2 37	10' 38	
ACER RUB												
A. SACC												
A. SPIC												
BETULA LUT												
B. PAP												
CARPINUS												
FAGUS												
FRAX NIG								7' 67		7 1/2 31		
OSTRYA												
PICEA G L	4 1/2 32		6' 165		11 1/2 176			7' 65				
P. MAR												
PINUS BANK												
P. RES												
P. STROB												
POP BALS								6 1/2 20	3' 6 1/2 72 40			
P. GRAND					6 1/2 39							
P. TREM	1' 56	13' 4 74 65		6 1/2 39 7 1/2 38 7 31		18' 232 4' 53				10 1/2 42 8 1/2 50		
PRUN US PEN												
P. SEROT												
P. VIRG												
QUERCUS ELL												
Q. MACRO			7' 44									
Q. RUB												
TILIA												
TSUGA												
THUJA												
ULMUS AME R												
U. RUBRA						9' 55						
LITTER	3"	3 1/2	3"	4"	4"	3 1/2	3 1/2	2"	4"	3 1/2		
CANOPY	45	15	40	55	45	50	60	50	15	60		
DISTANCE	20	37	20 1/2	26 1/2	21 1/2	41	20 1/2	29 1/2	28	46 1/2		

Y		TREE S										DATE		STAND NO		18(4)	
STATION NO.	SUBJECT	1	2	3	4	5	6	7	8	9	10						
		8' 46	1' 33	8' 52		12' 22				6' 31	5' 20						
		5' 64	1' 45	3' 37	8 1/2 39	7' 19	4 1/2 58	4' 26	2 1/2 27	10' 55	13' 18						
		6' 59	13' 100	10' 88		7 1/2 45		4' 29	2 1/2 35	4' 49	8 1/2 66						
		10 1/2 38	8 1/2 65														
	ABIES BAL																
	ACER RUB																
	A. SACC																
	A. SPIC																
	BETULA LUT																
	B. PAP																
	CARPINUS																
	FAGUS																
	FRAX NIG															8' 31	
	OSTRYA																
	PICEA G L				3' 80	5' 100		3' 95									
	P. MAR																
	PINUS BANK																
	P. RES																
	P. STROB																
	POP BALS																
	P. GRAND																
	P. TREM				12 1/2 75	10' 77	8' 121	3 1/2 47	5' 69	14' 76	3 1/2 56						
								6' 55			3' 84						
	PRUN US PEN																
	P. SEROT																
	P. VIRG																
	QUERCUS ELL																
	Q. MACRO																
	Q. RUB																
	TILIA																
	TSUGA																
	THUJA																
	ULMUS AME R																
	U. RUBRA																
												</					

SAPLINGS						DATE		STAND NO. 718 (1)		
STATION NO. SUBJECT	1	2	3	4	5	6	7	8	9	10
ABIES BAL			17-8 1/2	3 1/2 8 1/2	1 1/2 4 1/2	1 1/2 6	1 1/2 10 1/2	5	9 1/2 10	4
ACER R UB	13									
A. SACC										
A. SPIC	10	2 1/2 3 1/2				3		2 1/2	3	3 1/2 3
BETULA LUT										
B. PAP	12 1/2	8 1/2								
CARPINUS										
FAGUS										
FRAX NIG										
OSTRYA										
PICEA GL										
P. MAR										
PINUS BANK										
P. RES										
P. STROB										
POP BAL										
P. GRAND										
P. TRE M					10 1/2			10 1/2		
PRUNUS PEN										
P. SEROT										
P. VIRG			6							
QUERCUS ELL										
Q. MACRO										
Q. RUBRA										
TILIA	7									
TSUGA										
THUJA										
ULMUS AMER				9 1/2						
U. RUB										
LITTER										
CANOPY										
DISTANCE	42 1/2	18 1/2	43 1/2	31 1/2	17	24	16 1/2	20	31 1/2	12 1/2

SAPLINGS							DATE		STAND NO.		1/8(2)	
STATION NO.	1	2	3	4	5	6	7	8	9	10		
SUBJECT												
ABIES BAL	6'-11"	4'-6"	5' 1/2	1'	4'-5"	7'-8 1/2		4'-10-9"	4'-2 1/2	5'-10"		
ACER R UB												
A. SACC												
A. SPIC	4'	3' 1/2	2' 1/2	5'	6' 1/2	3'	3'					
BETULA LUT												
B. PAP			4'									
CARPINUS												
FAGUS												
FRAX NIG					1'		1'					
OSTRYA												
PICEA GL												
P. MAR												
PINUS BANK												
P. RES												
P. STROB												
POP BAL	10'						3'					
P. GRAND												
P. TRE M		3'		5' 1/2	3'			8'	7'	7' 3/2		
PRUNUS PEN												
P. SEROT												
P. VIRG												
QUERCUS ELL												
Q. MACRO												
Q. RUBRA												
TILIA												
TSUGA												
THUJA												
ULMUS AMER												
U. RUB												
<i>Acer negundo</i>					3'		1'					
LITTER												
CANOPY												
DISTANCE	31'	16 1/2	16 1/2	16	13	23 1/2	8	31	24 1/2	27 1/2		

SAPLINGS						DATE					STAND NO.	18(3)
STATION NO.	1	2	3	4	5	6	7	8	9	10		
SUBJECT												
ABIES BAL	9'-12"	15'-6"	4 1/2' 11'	6'-14"	13 1/2' 14'	7 1/2' 8'	16'-12 1/2'	3' 4'	4 1/2' 9 1/2'	7' 4' 3 1/2' 5 1/2'		
ACER R UB												
A. SACC												
A. SPIC												
BETULA LUT												
B. PAP												
CARPINUS												
FAGUS												
FRAX NIG						17 1/2'		1' 4'	1'			
OSTRYA												
PICEA GL												
P. MAR												
PINUS BANK												
P. RES												
P. STROB												
POP BAL												
P. GRAND												
P. TRE M				13 1/2'	23							
PRUNUS PEN												
P. SEROT												
P. VIRG												
QUERCUS ELL												
Q. MACRO												
Q. RUBRA												
TILIA												
TSUGA												
THUJA												
ULMUS AMER												
U. RUB												
LITTER												
CANOPY												
DISTANCE	37	46	50 1/2'	44	56 1/2'	33	52 1/2'	12	16 1/2'	20		

SAPLINGS							DATE		STAND NO. 18(4)	
STATION NO.	1	2	3	4	5	6	7	8	9	10
SUBJECT										
ABIES BAL	6' 6 1/2 11' 10 1/2	18' 19 13 1/2	4' 11 1/2 12' 3'	4' 11'	15' 10 1/2 7'	9' 3' 3"	19' 12 1/2 15'	8' 7'	15' 20' 9 1/2	4' 10' 7 1/2
ACER R UB										
A. SACO										
A. SPIC					6'					
BETULA LUT										
B. PAP										
CARPINUS										
FAGUS										
FRAX NIG										
OSTRYA										
PICEA GL										
P. MAR										
PINUS BANK										
P. RES										
P. STROB										
POP BAL										
P. GRAND										
P. TRE M				14 1/2		10'	4'	6 1/2		
PRUNUS PEN										
P. SEROT										
P. VING										
QUERCUS ELL										
Q. MACRO										
Q. RUBRA										
TILIA										
TSUGA										
THUJA										
ULMUS AMER										
U. RUB										
LITTER										
CANOPY										
DISTANCE	34	60 1/2	30 1/2	35 1/2	38 1/2	25	50 1/2	36 1/2	57 1/2	28

[illegible]

[illegible]

University of Wisconsin
STAND NO. 18

[illegible]

Plant Ecology Research
SPRUCE - FIR, SPRUCE - FIR MIXED HARDWOODS

										10									20		
Geum aleppicum																					
Geum canadense																					
Geum rivale																					
Glyceria striata																					
Goodyera obtusifolia																					
Goodyera pubescens																					
Goodyera repens																					
Goodyera tessellata																					
Habenaria clavellata																					
Habenaria hyperborea																					
Habenaria obtusata																					
Habenaria orbiculata	✓																			1	
Habenaria psycodes																					
Habenaria viridis																					
Hackelia virginiana																					
Halenia deflexa	✓																			1	
Hamamelis virginiana																					
Helianthus strumosus																					
Hepatica acutiloba																					
Hepatica americanum	✓																✓			1 5	
Heracleum maximum																					
Heuchera richardsonii																					
Hieracium aurantiacum																					
Hieracium canadense																					
Hieracium pratense																					
Hieracium scabrum																					
Ilex verticillata																					
Impatiens capensis																					
Iris lacustris																					
Isopyrum bitermatum																					
Juniperus communis																					
Juniperus horizontalis																					
Lactuca canadensis																					
Laportea canadensis																					
Lathyrus ochroleucus	✓																			1	
Ledum groenlandicum																					
Lichens spp.	✓	✓	✓		✓			✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	13 65
Lilium michiganense																					
Linnaea borealis	✓																			1	
Listera auriculata																					
Listera borealis																					
Listera convallarioides																					

										10								20		
Luzula multiflora																				
Lycopodium annotinum																				
Lycopodium clavatum																				
Lycopodium complanatum																				
Lycopodium inundatum																				
Lycopodium lucidulum																				
Lycopodium obscurum	✓																			1
Lycopodium sabinaefolium																				
Lycopodium selago																				
Lycopodium tristachyum																				
Lycopus americanus																				
Lycopus uniflorus																				
Lysimachia ciliata																				
Lysimachia quadrifolia																				
Lysimachia terrestris																				
Maianthemum canadense	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	17 85
Malaxis unifolia																				
Medeola virginiana																				
Melampyrum lineare																				
Menispermum canadense																				
Mertensia paniculata																				
Milium effusum																				
Mitchella repens																				
Mitella diphylla																				
Mitella nuda	✓				✓				✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	12 60
Moneses uniflora	✓																			1
Monotropa hypopithys																				
Montropa uniflora	✓																			1
Mosses spp.	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	18 90
Nemopanthus mucronata																				
Onoclea sensibilis																				
Orchis spectabilis																				
Oryzopsis asperifolia	✓					✓				✓	✓	✓					✓			5 25
Oryzopsis racemosa																				
Osmorhiza claytoni	✓																			1
Osmorhiza longistylis																				
Osmunda claytoniana																				
Osmunda cinnamomea																				
Osmunda regalis																				
Oxalis montana																				
Oxalis stricta																				
Panax quinquefolius																				
Panax trifolius																				
Parthenocissus inserta																				
Parthenocissus quinquefolia																				
Petasites palmatus	✓						✓	✓	✓	✓										4 20
Phleum pratense																				
Phlox divaricata																				
Phryma leptostachya																				
Plantago major																				
Poa compressa																				
Poa pratensis	✓							✓												1 5

[illegible]

[illegible]

									10									20		
Trifolium pratense																				
Trifolium repens																				
Trillium cernuum	✓																		1	
Trillium erectum																				
Trillium grandiflorum																				
Trillium undulatum																				
Uvularia grandiflora	✓				✓		✓		✓									2	10	
Uvularia sessilifolia	✓		✓		✓		✓		✓									4	20	
Vaccinium angustifolium																				
Vaccinium cespitosum																				
Vaccinium corymbosum																				
Vaccinium myrtilloides																				
Vaccinium ovalifolium																				
Vaccinium uliginosum																				
Vaccinium vitis-idaea																				
Veronica officinalis																				
Veronica scutellata																				
Veronica serpyllifolia																				
Viburnum acerifolium																				
Viburnum alnifolium																				
Viburnum cassinoides																				
Viburnum edule																				
Viburnum lentago																				
Viburnum rafinesquianum	✓		✓						✓					✓				3	15	
Viburnum trilobum	✓								✓									1	5	
Vicia americana	✓																		1	
Viola adunca																				
Viola blanda																				
Viola canadensis																				
Viola conspersa	✓		✓			✓				✓		✓		✓				5	25	
Viola cucullata																				
Viola incognita	✓					✓			✓			✓						3	15	
Viola nephrophylla																				
Viola pallens																				
Viola papilionacea																				
Viola pubescens	✓																		1	
Viola renifolia	✓																		1	
Viola selkirkii	✓																		1	
Viola sororia																				
Vitis riparia																				
Waldsteinia fragarioides																				
Woodsia ilvensis																				
Xanthoxylum americanum																				
Tree Seedlings																				
Abies balsamea	✓		✓	✓	✓					✓			✓				✓	6	30	
Acer pensylvanicum																	✓	1	5	
Acer rubrum	✓																			
Acer saccharum																				
Acer spicatum	✓				✓	✓	✓	✓		✓					✓			6	30	

[illegible]

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 18

TREES

- ✓ *Abies balsamea*
- Acer pensylvanicum*
- ✓ *Acer rubrum* *Acer negundo*
- 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*
- Rubus 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*

- ✓ *Clintonia borealis*
- Comandra richardsiana*
- Comandra umbellata*
- ✓ *Coptis groenlandicum*
- Corallorhiza maculata*
- Corallorhiza striata*
- Corallorhiza trifida*
- ✓ *Cornus canadensis*
- Corydalis sempervirens*
- Cynoglossum officinale*
- Cypripedium acaule*
- Cypripedium calceolus* var. *pubescens*
- Cystopteris fragilis*
- Dalibarda repens*
- Desmodium glutinosum*
- Dicentra canadensis*
- Dicentra cucullaria*
- ✓ *Dryopteris cristata*
- Dryopteris disjuncta*
- Dryopteris goldiana*
- Dryopteris marginalis*
- Dryopteris phegopteris*
- ✓ *Dryopteris spinulosa*

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

stand 18

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 bicknellii
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

Moss
Lichens
Oryzopsis asper
 Small tree like apricot in Stand 17 - *Prunus americana*
Viola sp. - same - selkirkii
Juncus macro
Cirsium sp.
Carex pedunculata

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 18 (1)

TREE SEEDLINGS

- 432 Abies balsamea
Acer pensylvanicum
Acer rubrum
Acer saccharum
07654 Acer spicatum
Betula lutea
72 Betula papyrifera

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

87541 *Pinus nigra*

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

62 *Prunus virg*
9 *Alnus arbor*

SHRUBS

- Alnus rugosa
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
0 Corylus cornuta
Diervilla lonicera
Dirca palustris
Ilex verticillata
Ledum groenlandicum
Lonicera canadensis
1 *Cornus racemosa*
5 *Cornus altern*

- Prunus pumila
Pyrus melanocarpa
Ribes cynosbati
Ribes glandulosum
Ribes lacustre
098 Rosa sp.
Rubus (blackberry)
Rubus (dewberry)
Rubus (raspberry)

95 Rubus idaeus

0 *Ribes triste*

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

3 *Viburnum Raf.*

HERBS

- Actaea pachypoda
3 Actaea rubra
Adiantum pedatum
Anaphalis margaritacea
Anemone cylindrica
91 Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
75321 Aralia nudicaulis
Arisaema atrorubens
06542 Aster macrophyllus
Athyrium filix-femina
Botrychium virginianum
8321 Carex pensylvanica - *Carex pedunculata*
Chimaphila umbellata
Chrysanthemum leucanthemum
9 Circaea alpina
Claytonia caroliniana
Claytonia virginiana
02 Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
0941 Cornus canadensis
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
Dryopteris phegopteris

- Dryopteris spinulosa
Epigaea repens
Epilobium angustifolium
Equisetum sylvaticum
Erythronium americanum

- 09861 Fragaria vesca
Fragaria virginiana
Galium aparine

- 76532 Galium triflorum
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
Hepatica americana
Hieracium aurantiacum
Linnaea borealis
Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
Lycopodium obscurum

- 08764321 Maianthemum canadense
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

- 094 Mitella nuda
Monotropa uniflora
Osmorhiza claytoni
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
Pteridium aquilinum
Pyrola elliptica
Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
Rhus radicans
09831 Rubus pubescens
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
09541 Streptopus roseus
Tiarella cordifolia
97 Trientalis borealis
Trillium erectum
Trillium grandiflorum
7653 Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
Viola renifolia
Waldsteinia fragarioides

Additional species

mon 12356789
Fubens 12489
Salix borealis 180
Malachra diocoria 178

Viola - adunca
Uvularia grandis 57
Asarum can. 50
Smilax herbacea 6
Oryzopsis asper 60

Viola sp. - self-stirring in bog
Potentilla 7890
Parnassia vulgaris 8
Solidago sp. 8
Lepida

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 18(2)

TREE SEEDLINGS

- 074 Abies balsamea
Acer pensylvanicum
9 Acer rubrum
Acer saccharum
8 Acer spicatum
Betula lutea
7 Betula papyrifera

- Fagus grandifolia
Larix laricina
Ostrya virginiana
Picea glauca
Picea mariana
Pinus banksiana
Pinus resinosa
0432 *Frax. nig*

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

SHRUBS

- Alnus rugosa
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
Corylus cornuta
Diervilla lonicera
Dirca palustris
Ilex verticillata
Ledum groenlandicum
Lonicera canadensis
3 *Com. canadensis*
3 *Prunella hirsuta*

- Prunus pumila
Pyrus melanocarpa
6 Ribes cynosbati
Ribes glandulosum
Ribes lacustre
7 Rosa sp.
Rubus (blackberry)
Rubus (dewberry)
Rubus (raspberry)
Rubus idaeus
83 *Ribes hirs*

- Rubus parviflorus
Sambucus pubens
Shepherdia canadensis
Spiraea alba
Symphoricarpos occidentalis
Taxus canadensis
Vaccinium angustifolium
Vaccinium myrtilloides
Viburnum acerifolium
2 Viburnum trilobum
92 *Vib. Rafinesq*

HERBS

- Actaea pachypoda
0 Actaea rubra
Adiantum pedatum
Anaphlis margaritacea
Anemone cylindrica
9 Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
9876 Aralia nudicaulis
Arisaema atrorubens
1 Aster macrophyllus
Athyrium filix-femina
Botrychium virginianum
097643 Carex pensylvanica *pedunculata*
Chimaphila umbellata
Chrysanthemum leucanthemum
2 Circaea alpina
Claytonia caroliniana
Claytonia virginiana
987 Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
09821 Cornus canadensis
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
Dryopteris phegopteris

- 5 Dryopteris spinulosa
Epigaea repens
Epilobium angustifolium
Equisetum sylvaticum
Erythronium americanum
Fragaria vesca
Fragaria virginiana
Galium aparine
08653 Galium triflorum
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
8 Hepatica americana
Hieracium aurantiacum
Linnaea borealis
Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
Lycopodium obscurum
08765421 Maianthemum canadense
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

- 098765321 Mitella nuda
Monotropa uniflora
Osmorhiza claytoni
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
Pteridium aquilinum
Pyrola elliptica
Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
Rhus radicans
98321 Rubus pubescens
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
98 Streptopus roseus
Tiarella cordifolia
83 Trientalis borealis
Trillium erectum
Trillium grandiflorum
Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
2 Viola pubescens
874 Viola renifolia
Waldsteinia fragarioides

Additional species

- Oxytropis asper* 127
Mib. 123456789
Lichen 12456780
Asarum 238
Malicium divium 28
Viola incognita 3
Viola conspersa 246 -adumra