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Site 6021 (Boreal Stand 21): Fraser Bay, St. Louis County, Minnesota, Township 62N, Range 19W, Section 11. 1955-07-24

[s.l.]: [s.n.], 1955-07-24

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[Site 6021]

Data Form No. 20

Plant Ecology Research

Univ. of Wisconsin

STAND RECORD

FORESTS

Stand No. 21

Name: *Fraser Bay*
County: *St. Louis, Minn.*

Locality:

T: *62 N* R: *19 W* Sec: *SW 11*Date: *July 24, 1955*

Observers:

PFM

Size of Area Sampled:

Size of Stand: *40 acres*Forest Type: *pine-fir-birch*

Soil Type:

Topography:

rolling, rather low

Slope:

Directions

Slight slope to E toward B_s bog.

Condition of Stand:

*pine - never been logged**Understory rich in herbs & shrubs**Stand is decadent & some trees are gradually falling or being windblown**Few large old pine were removed many years ago**Some parts of stand are younger than others**One W. of 6" circumference BH**Stand reported by Pete Nygg E of Cook on Hwy 1*

Open Grown Trees:

% Canopy:

Stumps:

1. <i>pinus strobus</i>	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									

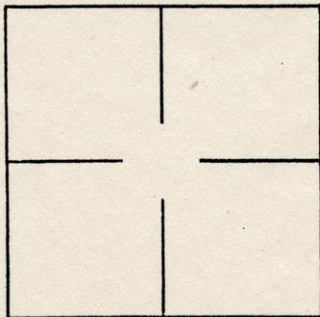
DEPTH

CHARACTERISTICS (Color, Texture, Structure, etc.)

A ₀	<i>#1 2" litter</i> <i>3" - 1" ferment</i>	<i>#2 1" litter</i> <i>2" - 1" ferment</i>	<i>#3 1" litter</i> <i>2" - 1" ferment</i>
A ₁	<i>3/4" - black crumbly</i>	<i>1" - crumbly black</i>	<i>1/2" - black crumbly</i>
A ₂	<i>2" - brown-grey</i>	<i>2" - brown grey - slight red leach</i>	<i>2 1/2" - brown-grey some leaching evident</i>
B	<i>6" light brown sand.</i>	<i>6" - sandy - with small stones</i>	<i>6" - brown sand</i>

Parent Material:

Map:



Plant Ecology Research
TREE DATA SUMMARY SHEET

University of Wisconsin

1954

Spruce - fir
Northern Pine-Hardwoods

Station Number: 21 - 1694

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											
1193.4 Abies bals	38	88				5458	63	39.4		95.0	39.2	55.0	38.4	132.6	928.2	1060.8
15.2 Acer rubru	4	4				138	1	0.6		10.0	4.1	2.5	1.0	7.6	45.6	38.0
A. sacchar																
10.0 A. spicatu							79	49.4							1.0	1.0
Betula lut																
544.0 B. papyrif	20	27				2395	5	3.1		50.0	20.6	16.9	16.9	54.4	272.0	489.6
Carpinus c																
Fagus gran																
Ostrya vir																
512.0 Picea glau	16	17				3421	1	0.6		40.0	16.5	10.6	24.1	51.2	307.2	512.0
68.0 Picea mar Pinus-Bank	3	3				256				7.5	3.1	1.9	1.8	6.8	13.6	68.0
P. resinosa																
P. Strobus															1.0	1.0
Populus ba																
P. grandid																
327.2 P. tremulo	13	18				2316	8	5.0		32.5	13.4	11.2	16.3	40.9	81.8	368.1
Prunus virg							2	1.3								
Quercus el																
Q. rubra																
Tilia amer																
Tsuga cana																
38.4 Thuja occi	2	2				211				5.0	2.1	1.2	1.5	4.8	33.6	28.8
Ulmus amer																
U. fulva																
10.2 Frax. nig.	1	1				18	1	0.6		2.5	1.0	0.6	0.1	1.7	10.2	11.9
2718 TOTALS		160				14,213	160	100.0		242.5	100.0	100.0	100.0	300.0	1694	2579.2
AVE. DIST. BTW'N TREES: 10.9																
AVE. B. A.: 88.8																
# TREES/ACRE: 367																
DOM. /ACRE: 32,590																

Mid Range Index

N. Range Index

1.0

489.6

512.0

68.0

1.0

368.1

28.8

11.9

2579.2

STATION NO. SUBJECT	TREES										DATE	STAND NO.	21(1)
	1	2	3	4	5	6	7	8	9	10			
ABIES BAL	3'	33	9 1/2 80	13 105				11 45					
ACER R UB	3'	19	7 1/2 136	16 47	27 76	9 1/2 40	25 20	4 1/2 28	12 187	3 1/2 34	29	7 1/2 64	64 32
A. SACC													
A. SPIC													
BETULA LUT													
B. PAP				4 1/2 135	13 149		3'	204	13 42	7'	64	5 1/2 41	22
CARPINUS													
FAGUS													
FR AX NIG													
OSTR YA													
PICEA GL.		9'	307	6 1/2 179		16'	228						
P. MAR													
PINUS BANK													
P. RES													
P. STROB													
POP BALS													
P. GRAND													
P. TREM	11 45	7 1/2 93			9 1/2 179	17 19		18'	254	3'	108		
PRUNUS PEN													
P. SEROT													
P. VIRG													
QUERCUS E LL													
Q. MACRO													
Q. RUBRA													
T ILIA													
TSUGA													
THUJA													
ULMUS AMER.													
U. RUBRA													
L ITTER	3 1/4"	1 1/2"	3"	2"	2 1/2"	3"	4"	2 1/2"	4"	2 1/2"			
CANOPY	90	40	45	15	40	90	95	5	85	65			
DIS TANCE	24 1/2	34	39 1/2	48	51 1/2	65	24 1/2	52	17	21 1/2			

STATION NO. SUBJECT	TREES										DATE	STAND NO.	24 (2)
	1	2	3	4	5	6	7	8	9	10			
ABIES BAL	6 1/2 15	48 29	13 1/2 21	31 58	15 17	52 64	6 11 1/2	54 149	9 1/2 13 1/2	72 84	3 1/2 6 1/2	39 58	
ACER R UB				13 1/2 42		9 1/2 48					3 5	24 29	24 105 21 76
A. SACC													
A. SPIC													
BETULA LUT													
B. PAP	7 1/2 52	1 1/2 72				6 1/2 210		4 1/2 78	4 56				
CARPINUS													
FAGUS													
FR AX NIG													
OSTR YA													
PICEA GL.	6 1/2 77		7 300		10 1/2 181								
P. MAR													
PINUS BANK													
P. RES													
P. STROB													
POP BALS													
P. GRAND													
P. TREM							16 1/2 10	39 22					
PRUNUS PEN													
P. SEROT													
P. VIRG													
QUERCUS E LL													
Q. MACRO													
Q. RUBRA													
T ILIA													
TSUGA													
THUJA									6 1/2 172				
ULMUS AMER.													
U. RUBRA													
L ITTER	2"	2"	3"	4"	2"	2	2 1/2	2	2"	2 1/2			
CANOPY	40	10	20	55	18	25	2	15	35	5			
DIS TANCE	35 1/2	59	39	37	40	33 1/2	47 1/2	18	43 1/2	47			

STATION NO. SUBJECT	THICKS										DATE	STAND NO. 2113
	1	2	3	4	5	6	7	8	9	10		
ABIES BAL.	29	36	3' 15"	55' 47"	7' 28"							
ACER R UB						13'	35'	13' 40"	19'	112'		
A. SACO												
A. SPIC												
BETULA LUT												
B. PAP	17' 14"	52' 15"	9'	48'	14 1/2'	145'	18'	61'	9 1/2'	75'		
CARPINUS												
FAGUS												
FR AX NIG												
OSTR YA												
PICHA GL.	7'	262'		15' 3"	92' 124"	7'	15V'		14 1/2' 46'	7'	295'	19' 175'
P. MAN								11' 57"				9' 102'
PINUS BANK												
P. RES												
P. STROB												
POP BALB												
P. GRAND												
P. TREM		7'	175'		8 1/2' 18'	204' 72'	15'	160'	2' 3"	138' 160'	13' 242'	17' 61'
PRUNUS PEN												
P. SEROT												
P. VING												
QUERCUS E IL.												
Q. MACRO												
Q. RUBRA												
T ILIA												
TSUGA												
THUJA												
ULMUS AMER.												
U. RUBRA												
LITTER												
CANOPY	2"	2"	2"	2 1/2"	3"	3"	4"	1 1/2"	2"	1 1/2"		
	5	10	60	5	10	50	45	4	45	1		
DIB TARGE	67	34	39 1/2	51 1/2	44 1/2	32 1/2	50	60	44	56		

TREES											DATE		STAND NO.		2/ (4)			
STATION NO.	1	2	3	4	5	6	7	8	9	10								
SUBJECT	10 1/2 16 10	10 1/2 52 40	14 1/2 9 1/2 15	35 26 7 1/2	1 1/2 2 1/2 3	40 18 20	16 23	4 1/2 5 1/2	11 1/2 25	18 7 1/2 16	10 1/2 22 46	10 1/2 15 8 1/2	7 1/2 85 40 48	7 1/2 131 12 1/2	131 160 13 1/2	6 86 72	9 14 6	68 120 96
ABIES BAL																		
ACER R UB																		
A. SACC																		
A. SPIC																		
BETULA LUT																		
B. PAP		7 102		11 1/2 102	7 1/2 3	106 112	13 176											
CARPINUS																		
FAGUS																		
FR AX NIG				7 18														
OSTR YA																		
PICEA GL.	12 178													42 210	10 1/2 325	22 290		
P. MAR						12 97												
PINUS BANK																		
P. RES																		
P. STROB																		
POP BALS																		
P. GRAND																		
P. TREM														19 170				
PRUNUS PEN																		
P. SEROT																		
P. VIRG																		
QUERCUS E LL																		
Q. MACRO																		
Q. RUBRA																		
T ILIA																		
TSUGA																		
THUJA																		
ULMUS AMER.																		
U. RUBRA																		
L ITTER	4"	2"	3 1/2"	4"	4"	3	3"	4"	3"	3"								
CANOPY	35	15	25	20	3	43	25	50	45	35								
DIS TANCE	48 1/2	46	23 1/2	5 1/2	34	54 1/2	42	82	41 1/2	51								

Av. canopy - 35 %

Av. litter - 2.8"

STATION NO. SUBJECT	SAPLINGS						DATE				STAND NO. 21 (1)	
	1	2	3	4	5	6	7	8	9	10		
ABIES BAL	9 ¹⁴ / ₂ 8 ¹ / ₂	11-	8 ¹⁵ / ₂ 8	8 ¹ / ₂ 10 ¹⁰ / ₁₅	3- 4-	1 ¹ / ₂	9- 1-	9-	7- 3 ³ / ₂ 1 ¹ / ₂	5 ¹ / ₂ 1 ¹ / ₂		
ACER RUB						12-						
A. SACC												
A. SPIC	6-	17 ⁷ / ₂ 7-	9-	7-	5- 4	3- 5-	10- 7-	4 ¹ / ₂ 6-				
BETULA LUT												
B. PAP								11 ¹ / ₂		5-		
CARPINUS												
FAGUS												
FRAX NIG												
OSTRYA												
PICEA GL												
PICEA MAR												
PINUS BANK												
P. RES												
P. STROB												
POP BALS												
P. GRAND												
P. TREM												
PRUNUS PEN												
P. SEROT												
P. VIRG												
QUERCUS ELL												
Q. MACRO												
Q. RUB												
TILIA												
TSUGA												
THUJA												
ULMUS AMER												
U. RUB												
LITTER												
CANOPY												
DIS TANCE	38	42	40 ¹ / ₂	40 ¹ / ₂	16	21 ¹ / ₂	27	30 ¹ / ₂	23	16		

STATION NO. SUBJECT	SAPLINGS										DATE	STAND NO.	21 (2)
	1	2	3	4	5	6	7	8	9	10			
ABIES BAL	9 1/2	10 1/2	13 1/2	9	5 1/2	13 1/2	8	5 10 1/2	6	17	4 1/2		
ACER RUB													
A. SACC													
A. SPIC	6 7 5	12 5	4 1/2 3 1/2	7 4	13 1/2 3	8	5 1/2 8 9	5	1 9	2 6			
BETULA LUT													
B. PAP						13 1/2		4 7					
CARPINUS													
FAGUS													
FRAX NIG													
OSTRYA													
PICEA GL													
PICEA MAR													
PINUS BANK													
P. RES													
P. STROB													
POP BALS													
P. GRAND													
P. TREM							9			11			
PRUNUS PEN													
P. SEROT													
P. VIRG									6 1/2				
QUERCUS ELL													
Q. MACRO													
Q. RUB													
TILIA													
TSUGA													
THUJA													
ULMUS AMER													
U. RUB													
LITTER													
CANOPY													
DIS TANCE	27 1/2	40 1/2	17 1/2	22	38 1/2	37	31 1/2	22	33 1/2	21 1/2			

STATION NO	SAPLING S										DATE	STAND NO	21 (8)
	1	2	3	4	5	6	7	8	9	10			
SUBJECT													
ABIES BAL	3 1/2	8'	2 1/2 3 1/2	12'		1 1/2	8 1/2	9'	20	7 1/2 7 1/2			
ACER RUB													
A. SACC													
A. SPIC	4'	1' 4 7'		3'	7' 5' 4'	8' 10' 12'	8' 1'	4' 10'	4 1/2	9'			
BETULA LUT													
B. PAP					7'								
CARPINUS													
FAGUS													
FRAX NIG													
OSTR YA													
PICEA ALL									27'				
P. MAR													
PINUS BANK													
P. RES													
P. STR O													
POP BALS													
P. GRAND													
P. TREM	4' 7'		6 1/2	8 1/2			7'	8 1/2					
PR UNUS PEN													
P. SEROT													
P. VIRG				3'									
QUERCUS E LL													
Q. MACRO													
Q. R UBRA													
TILIA													
TSUGA													
THUJA													
ULMUS AMER													
U. RUBRA													
LITTER													
CANOPY													
DISTANCE	18 1/2	20	14 1/2	26 1/2	23	43 1/2	24 1/2	31 1/2	60 1/2	30			

SAPLING S											
DATE ' STAND NO 21 (4)											
STATION NO	0	1	2	3	4	5	6	7	8	9	10
SUBJECT											
ABIES S BAL		3' 8'	6'	9'	4' 4'	7' 8'	16' 18'			5' 6'	
ACER RUB											
A. SACC											
A. SPIG		6' 1/2 8' 1/2	12' 1 13'	4' 3 5 1/2	2'	3' 10'	5' 8'	4' 5 7 3	11' 3 7 12	7' 9'	3' 6 10 10'
BETULA LUT											
B. PAP											
CARPINUS											
FAGUS											
FRAX NIG					2'						
OSTR YA											
PICEA SIL											
P. MAR											
PINUS BANK											
P. RES											
P. STR O											
POP BALS											
P. GRAND											
P. TREM											
PR UNUS PEN											
P. SEROT											
P. VING											
QUERCUS E LL											
Q. MACRO											
Q. R UBRA											
TILIA											
TSUGA											
THUJA											
ULMUS AMER											
U. RUBRA											
LITTER											
CANOPY											
DISTANCE		26	32	21 1/2	12	28	49	19	33	27	31

[illegible]

[illegible]

	P								10								20		
Desmodium glutinosum																			
Dicentra canadensis																			
Dicentra cucullaria																			
Diervilla lonicera	✓			✓			✓	✓	✓		✓							5	25
Dirca palustris																			
Dryopteris bootii																			
Dryopteris cristata																			
Dryopteris disjuncta	✓		✓					✓										2	10
Dryopteris goldiana																			
Dryopteris marginalis																			
Dryopteris noveboracensis																			
Dryopteris phegopteris	✓																✓	1	5
Dryopteris spinulosa	✓		✓														✓	3	15
Empetrum nigrum																			
Epifagus virginiana																			
Epigaea repens																			
Epilobium angustifolium																			
Epilobium glandulosum																			
Epilobium strictum																			
Equisetum arvense																			
Equisetum pratense																			
Equisetum scirpoides																			
Equisetum sylvaticum	✓								✓						✓	✓		3	15
Erigeron annuus																			
Erigeron philadelphicus																			
Erigeron strigosus																			
Erythronium albidum																			
Erythronium americanum																			
Eupatorium maculatum																			
Eupatorium perfoliatum																			
Eupatorium purpureum																			
Fagopyrum sagittatum																			
Festuca obtusa																			
Fragaria vesca	✓			✓				✓	✓	✓	✓	✓		✓			✓	8	40
Fragaria virginiana																			
Galium aparine																			
Galium asprellum																			
Galium boreale	✓								✓									1	5
Galium concinnum																			
Galium lanceolatum																			
Galium triflorum	✓		✓	✓	✓			✓	✓	✓	✓			✓	✓	✓		10	50
Gaultheria hispidula																			
Gaultheria procumbens																			
Gaylussacia baccata																			
Gentiana andrewsii																			
Gentiana crinata																			
Gentiana linearis																			
Gentiana quinquefolia																			
Geocaulon lividum																			
Geranium bicknelli																			
Geranium maculatum																			
Geranium robertianum																			

[illegible]

[illegible]

	P.									10										20		
Podophyllum peltatum																						
Polygala paucifolia																						
Polygonatum biflorum																						
Polygonatum pubescens																						
Polygonum cilinode																						
Polymnia canadensis																						
Polypodium virginianum																						
Potentilla canadensis																						
Potentilla norvegica																						
Potentilla simplex																						
Potentilla tridentata																						
Prenanthes alba																						
Primula mistassinaca																						
Prunella vulgaris																						
Prunus pumila																						
Pteretis pensylvanica																						
Pteridium aquilinum	✓											✓							✓		2	10
Pyrola asarifolia	✓						✓	✓													2	10
Pyrola elliptica																						
Pyrola grandiflora																						
Pyrola minor																						
Pyrola rotundifolia																						
Pyrola secunda	✓																					1
Pyrola virens																						
Pyrus floribunda																						
Pyrus melanocarpa																						
Ranunculus abortivus																						
Ranunculus acris																						
Ranunculus pensylvanicus																						
Ranunculus recurvatus																						
Ranunculus repens																						
Ranunculus septentrionalis																						
Rhamnus alnifolia																						
Rhus glabra																						
Rhus radicans																						
Rhus typhina																						
Rhus vernix																						
Ribes americanum																						
Ribes cynosbati	✓											✓									1	5
Ribes glandulosum																						
Ribes hirtellum																						
Ribes lacustre																						
Ribes oxyacanthoides																						
Ribes triste	✓																		✓		1	5
Rosa sp.	✓							✓													1	5
Rubus allegheniensis																						
Rubus idaeus	✓									✓	✓										2	10
Rubus hispidus																						
Rubus odoratus																						
Rubus parviflorus																						
Rubus pubescens	✓					✓		✓	✓	✓			✓	✓	✓		✓			✓	9	45
Rubus (blackberry)																						

	P.									10								20		
Rubus (dewberry)																				
Rubus (raspberry)																				
Rumex acetosella																				
Salix spp.	✓																			1
Sambucus canadensis																				
Sambucus pubens	✓																			1
Sanguinaria canadensis																				
Sanicula gregaria																				
Sanicula marilandica																				
Satureja vulgaris																				
Saxifraga pensylvanica																				
Schizachne purpurascens																				
Scutellaria epilobiifolia																				
Scutellaria lateriflora																				
Senecio aureus																				
Shepherdia canadensis																				
Sium suave																				
Smilacina racemosa																				
Smilacina stellata																				
Smilacina trifolia																				
Smilax herbacea																				
Smilax tamnoides var hispida																				
Spiranthes gracilis																				
Spiranthes romanzoffiana																				
Solidago canadensis																				
Solidago flexicaulis																				
Solidago gigantea																				
Solidago graminifolia																				
Solidago hispida																				
Solidago juncea																				
Solidago lepida	✓																			1
Solidago macrophylla																				
Solidago rugosa																				
Solidago ulmifolia																				
Spiraea alba																				
Spiraea latifolia																				
Stachys palustris																				
Stellaria calycantha																				
Stellaria longifolia																				
Stellaria palustris																				
Streptopus amplexifolius																				
Streptopus roseus	✓	✓				✓	✓		✓						✓				5	25
Symphoricarpos albus																				
Symphoricarpos occidentalis																				
Taraxacum officinale																				
Taxus canadensis	✓																			1
Thalictrum dasycarpum																				
Thalictrum dioicum																				
Thalictrum polygamum																				
Tiarella cordifolia																				
Trientalis borealis	✓		✓				✓			✓		✓	✓		✓		✓		7	35
Trifolium hybridum																				

[illegible]

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 21

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*

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

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 oxyacanthoides
 ✓ *Ribes triste*
 ✓ *Rosa* sp.
Rubus allegheniensis
Rubus (blackberry)
 ✓ *Rubus* (dewberry)
Rubus (raspberry)

✓ *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

HERBS

Achillea millefolium
Actaea pachypoda
 ✓ *Actaea rubra*
Adiantum pedatum
Agrimonia gryposepala
Agrostis perennans
Allium tricoccum
Amphicarpa bracteata
Anaphalis 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

✓ *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 21

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 americana
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
Lichen
Oryzopsis asper
Brachyglottis erecta
Solidago sp. - lepidota
Viola incognita

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 21 (1)

TREE SEEDLINGS

02 *Abies balsamea*
Acer pensylvanicum
Acer rubrum
Acer saccharum
 8754321 *Acer spicatum* 0
Betula lutea
Betula papyrifera

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

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

SHRUBS

Alnus rugosa
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
 93 *Corylus cornuta*
 9874 *Diervilla lonicera*
Dirca palustris
Ilex verticillata
Ledum groenlandicum
 0 *Lonicera canadensis*

Prunus pumila
Pyrus melanocarpa
Ribes cynosbati
Ribes glandulosum
Ribes lacustre
 7 *Rosa* sp.
Rubus (blackberry)
Rubus (dewberry)
Rubus (raspberry)
 9 *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
 76 *Actaea rubra*
Adiantum pedatum
Anaphalis margaritacea
Anemone cylindrica
Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
 0824 *Aralia nudicaulis*
Arisaema atrorubens
 98754321 *Aster macrophyllus*
Athyrium filix-femina
Botrychium virginianum
 09821 *Carex pensylvanica*
Chimaphila umbellata
Chrysanthemum leucanthemum
 02 *Circaea alpina*
Claytonia caroliniana
Claytonia virginiana
 8765421 *Clintonia borealis* 90
 02 *Coptis groenlandicum*
Corallorhiza maculata
 084321 *Cornus canadensis*
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
 82 *Dryopteris disjuncta*
Dryopteris phegopteris

2 *Dryopteris spinulosa*
Epigaea repens
Epilobium angustifolium
 9 *Equisetum sylvaticum*
Erythronium americanum
 095 *Fragaria vesca*
Fragaria virginiana
Galium aparine
 09542 *Galium triflorum*
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
 0 *Goodyera repens*
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
Hepatica americana
Hieracium aurantiacum
 72 *Linnaea borealis*
 82 *Lycopodium annotinum*
 6 *Lycopodium clavatum*
Lycopodium complanatum
Lycopodium lucidulum
 7631 *Lycopodium obscurum*
 7541 *Maianthemum canadense*
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

0847 *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
 9874 *Rubus pubescens*
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
 8651 *Streptopus roseus*
Tiarella cordifolia
 062 *Trientalis borealis*
Trillium erectum
Trillium grandiflorum
Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
Viola renifolia
Waldsteinia fragarioides

Additional species

Moss 1234570
Lichen 2470
Vicia 2346790 incognita
Potamogeton 290
Pyrda asarifolia 56
Wade Carex 9 - arctata
Sabum boreale 9

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 21 (2)

TREE SEEDLINGS

- 8 Abies balsamea
Acer pensylvanicum
9 Acer rubrum
Acer saccharum
765432 Acer spicatum 80
Betula lutea
7 Betula papyrifera
6 Amelanchier

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

- Pinus strobus
3 Populus tremuloides
Prunus pensylvanica
Prunus serotina
Thuja occidentalis
Tilia americana
Tsuga canadensis
32 Pyrus amara

SHRUBS

- Alnus rugosa
Arctostaphylos uva-ursi
Comptonia peregrina
Corylus americana
0963 Corylus cornuta
1 Diervilla lonicera
Dirca palustris
Ilex verticillata
Ledum groenlandicum
1 Lonicera canadensis
7 Lonicera hirsutum

- Prunus pumila
Pyrus melanocarpa
3 Ribes cynosbati
Ribes glandulosum
Ribes lacustre
Rosa sp.
Rubus (blackberry)
Rubus (dewberry)
Rubus (raspberry)
1 Rubus idaeus
7 Ribes strigosum

- 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
Anaphalis margaritacea
Anemone cylindrica
854 Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
698421 Aralia nudicaulis
Arisaema atrorubens
7654321 Aster macrophyllus 90
Athyrium filix-femina
Botrychium virginianum
9571 Carex pensylvanica
Chimaphila umbellata
Chrysanthemum leucanthemum
7 Circaea alpina
Claytonia caroliniana
Claytonia virginiana
8765431 Clintonia borealis 90
08654 Coptis groenlandicum
Corallorhiza maculata
876321 Cornus canadensis 90
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
0 Dryopteris phegopteris

- 07 Dryopteris spinulosa
Epigaea repens
Epilobium angustifolium
76 Equisetum sylvaticum
Erythronium americanum
06321 Fragaria vesca
Fragaria virginiana
Galium aparine
87621 Galium triflorum
Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
Hepatica americana
Hieracium aurantiacum
87642 Linnaea borealis
9865 Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
8 Lycopodium obscurum
9843 Maianthemum canadense
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

- 0974321 Mitella nuda
Monotropa uniflora
Osmorhiza claytoni
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
95 Pteridium aquilinum
Pyrola elliptica
Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
Rhus radicans
06432 Rubus pubescens
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
5 Streptopus roseus
Tiarella cordifolia
8532 Trientalis borealis
Trillium erectum
Trillium grandiflorum
Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
Viola renifolia
Waldsteinia fragarioides

Additional species

7095 123457890 Viola 23567890
Lichens 12345780 Lathyrus albus 3
Asarum 196
Petasites 1370