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Site 6032 (Boreal Stand 32): Aetna Creek, Keweenaw County, Michigan, Township 58N, Range 28W, Section 6. 1955-08-15

[s.l.]: [s.n.], 1955-08-15

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[Site 6032]

Data Form No. 20

Plant Ecology Research

Univ. of Wisconsin

STAND RECORD

FORESTS

Stand No. 32

Name: Aetna Creek
 County: Keweenaw Co., N. Mich.
 Date: Aug 15, 1955
 Size of Stand: 20 acres
 Forest Type: spruce fir
 Topography: gently rolling

Locality:
 T: 58N R: 28W Sec: SW 1/4 6

Observers: PFM

Size of Area Sampled:

Soil Type:

Slope:

Directions

slight to east

Condition of Stand:

High water table.
 Logged for pine
 A large cedar was 10' 3 1/2" in circumference at breast height
 Stand split by Hwy #1
 Old logs are cleared

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									

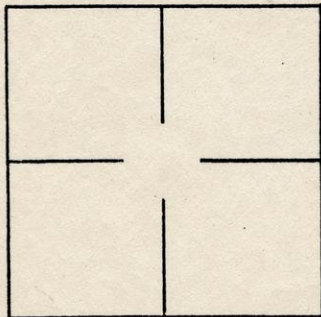
DEPTH

CHARACTERISTICS (Color, Texture, Structure, etc.)

DEPTH	CHARACTERISTICS
Ao #1	1/2" little no ferment
A1	10" rich black crumbly
A2	marshy soils
B	5" 1/2" red-brown clay loam

Parent Material:

Map:



Stand irregular with respect to profiles - some lie much lower than others but same arrangement of species

LICHENS OF GREAT LAKES SPRUCE-FIR COMMUNITIES

NORTHERN MICHIGAN

Keweenaw County



Aetna on Hy. 41 - T58N R28W SEC 6.

White spruce, balsam, aspen & cedar. Gently rolling, slight slope eastward, high water table. Logged for pine, burned, tends to be boggish.

August 15, 1955. Coll. Paul F. Maycock

Plant Ecology Research
TREE DATA SUMMARY SHEET

University of Wisconsin

238.7

~~Northern Pine Hardwoods~~
spruce-fir
20 treesPicea glauca - Abies balsamea - Populus tremuloides
20 sap

Station Number: 32 - 1780

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										
622.8 Abies bals	28	40		25.0		2490	70	43.8		70.0	26.2	25.0	18.0	69.2	484.4
7.8 Acer rubru	2	2		1.3		103				5.0	1.9	1.3	0.7	3.9	23.4
57.2 A. sacchar	5	7		4.4		505	19	11.9		12.5	4.8	4.4	3.6	12.8	128.0
9.0 A. spicatu							5	3.1							1.0
28.2 Betula lut	1	1		0.6		450	1	0.6		2.5	0.9	0.6	3.2	4.7	37.6
18.0 B. papyrif	1	1		0.6		34				2.5	0.9	0.6	0.3	1.8	9.0
Carpinus c															
3.0 Amelanchier Eagles-green							7	4.4							1.0
Ostrya vir															
1249.0 Picea glau	36	70		43.8		6600	16	10.0		90.0	33.6	43.7	47.6	124.9	749.4
Pinus Bank															
P. resinosa															
102.6 P. Strobus	7	7		4.4		861				17.5	6.5	4.4	6.2	17.1	85.5
Populus ba															
P. grandid															
263.2 P. tremulo	13	16		10.0		1486	5	3.1		32.5	12.2	10.0	10.7	32.9	65.8
Prunus pen															
Quercus el															
5.0 Q. rubra															1.0
Tilia amer															
Tsuga cana															
198.4 Thuja occi	10	12		7.5		1107	28	17.5		25.0	9.3	7.5	8.0	24.8	173.6
Ulmus amer															
U. fulva															
31.5 Pyrus amer	2	2		1.3		46	6	3.8		5.0	1.9	1.3	0.3	3.5	14.0
17.0 Alnus rug.	1	1		0.6		17	3	1.9		2.5	0.9	0.6	0.2	1.7	3.4
27.0 Larix lar.	1	1		0.6		162				2.5	0.9	0.6	1.2	2.7	2.7
2634 TOTALS		160				13860	160			267.5	100.0	100.0	100.0	300.0	1780

AVE. DIST. BTW'N TREES:

9.52.

AVE. B. A.:

86.6 sq in.

TREES/ACRE:

481

DOM. /ACRE:

41,655

N. limit
Index

553.6

19.5

64.0

1.0

23.5

16.2

1.0

1249.0

102.6

296.1

1.0

173.6

21.0

17.0

27.0

2566

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 32 (1)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	18 34	9 1/2 68 11 42	21 78		15 140	8 1/2 47	7 1/2 126 7 1/2 49		17 57	11 1/2 21
Acer rubrum		19 1/2 51								
A. sacchar.		7 1/2 110	6 1/2 74 13 52							
A. spicatum										
Betula lut.										
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau	18 138 12 170			14 1/2 71 22 270	27 147	8 152	11 70	23 82 7 85 12 76 14 66	13 1/2 72	12 1/2 30
Pinus Bank										
P. resinosa										
P. Strobus				13 110						
Populus bals										
P. grand										
P. trem			10 87	5 1/2 150	6 136	9 1/2 110	11 1/2 70		11 1/2 48 16 1/2 151	2 100 8 60
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ					11 1/2 47	6 64				
Ulmus amer										
U. fulva										
Alnus rugosa	15 17									
Litter	1/2	1/2	1/4	1/2	1/4	1/4	1"	1/2	1/2	1/2
Canopy	60	55	50	15	40	75	60	2	3	15
Distance	63	47 1/2	50 1/2	55	59 1/2	32	37 1/2	56	58 1/2	34

ave. canopy 46.1

ave litter .7

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 32 (2)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	3	19 3 1/2 20	15 6 5			4 1/2 20		5 15 7 14 46 10 1/2 85	9 58 15 57	
Acer rubrum								11 1/2 125		
A. sacchar.						7 86				
A. spicatum										
Betula lut.										
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg			12 72	8 1/2 42	10 84		7 1/2 28			
Picea glau	11 15	4 1/2 48 3 25	7 1/2 51 14 1/2 106	10 68 7 25	10 102 18 1/2 75	11 15 8 74	13 65	4 122	7 42	
Pinus Bank					19 1/2 36					
P. resinosa										
P. Strobus	5 62					13 1/2 65				
Populus bals										
P. grand										
P. trem		9 1/2 42		14 1/2 28						
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ	9 1/2 35								4 1/2 11 13 96 6 85	
Ulmus amer										
U. fulva										
Larix lar.							8 1/2 162			
Letter	1	3/4	1/4	1/2	1/2	1	1/2	1/4	1/2	1
Canopy	60	40	4	35	45	75	60	55	60	65
Distance	28 1/2	20 1/2	49	40	38	36	31	33 1/2	28	41

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 32(3)

STATION NO.	1	2	3	4	5	6	7	8	9	10
<i>Abies balsam</i>	3 51	12 52 4 31	13 1/2 48 10 1/2 109	7 68	2 49 2 1/2 28		6 31 7 1/2 40			2 1/2 78
<i>Acer rubrum</i>								9 1/2 52		
<i>A. sacchar.</i>								4 78		
<i>A. spicatum</i>										
<i>Betula lut.</i>										10 450
<i>B. papyrif</i>										
<i>Carpinus car</i>										
<i>Fagus gran</i>										
<i>Ostrya virg</i>										
<i>Picea glau</i>	4 26		10 1/2 116	16 104 13 1/2 65	8 86	14 85 7 1/2 128 16 47 14 1/2 113	13 126		10 1/2 208 11 1/2 170	4 1/2 20 9 85
<i>Pinus Bank</i>										
<i>P. resinosa</i>										
<i>P. Strobus</i>					1' 32			7 1/2 270		
<i>Populus bals</i>										
<i>P. grand</i>										
<i>P. trem</i>			11 75				12 1/2 105		3 142 9 1/2 137	
<i>Prunus pen.</i>										
<i>Quercus ell</i>										
<i>Q. rubra</i>										
<i>Tilia amer</i>										
<i>Tsuga can</i>										
<i>Thuja occ</i>	2' 68 11 1/2 92	12 1/2 65		6 33						
<i>Ulmus amer</i>										
<i>U. fulva</i>										
<i>Pyrus amer.</i>		13 16						10 1/2 30		
Litter	1	1	1/2	1	1 1/2	1	1/2	1	3/4	1
Canopy	65	30	25	60	30	15	35	70	40	65
Distance	20 1/2	41 1/2	45 1/2	42 1/2	13 1/2	42	39	31 1/2	34 1/2	26

POINT RECORD TREES

NORTHERN PINE-HARDWOODS

Stand No. 32 (4)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	8 1/2 120		7 32	7 50			4 22 3 89	12 86 6 1/2 110		6 45 5 35
Acer rubrum										
A. sacchar.		14 1/2 45 11 1/2 60								
A. spicatum										
Betula lut.										
B. papyrif						8 1/2 34				
Carpinus car										
Fagus gran										
Ostrya virg	13 120		4 48		4 58	19 1/2 40				
Picea glau	6 109 8 1/2 52	11 56	1 32 6 1/2 45	15 85	16 142 16 51	12 52 8 1/2 65	16 172 13 1/2 131	14 175 4 160	3 1/2 82 9 110	12 96 11 140
Pinus Bank									4 127	
P. resinosa										
P. Strobus					5 162				10 60	
Populus bals										
P. grand										
P. trem				3 95						
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ		11 1/2 25		9 36						
Ulmus amer										
U. fulva										
Litter	1	1/2	1/2	1 1/2	2	1 1/2	3/4	1/2	1/2	1/2
Canopy	65	70	50	55	70	30	40	45	60	50
Distance	36	48 1/2	18 1/2	34	41	38 1/2	36 1/2	34	26 1/2	34

POINT RECORD TREES ^{SAPLINGS} NORTHERN PINE-HARDWOODS

Stand No. 32 (1)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	16	12 1/2 14 1/2	15 7	6 1/2 9	3 1/2 17 1/2	13	4 1/2 4	18 5	8	3 9 1/2
Acer rubrum										
A. sacchar.					7	8	13 20		2 1/2	
A. spicatum				16						
Betula lut.										
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau								21		4
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem			10					6 1/2	9 1/2 1	
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ	20									
Ulmus amer										
U. fulva										
Alnus incana	4				5					
Pyrus amer	12 1/2									
Amelanchier				3	12 1/2		16	21 9		
Distance	52 1/2	46	32 1/2	40	37 1/2	21 1/2	67	57 1/2	21	32

POINT RECORD TREES SAPLINGS

NORTHERN PINE-HARDWOODS

Stand No. 32(2)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	4 7 1/2	6 9 1/2	5	7 1/2 17	10 1/2 9 1/2	16 23	4 8 1/2	7 4	11	4 17
Acer rubrum										
A. sacchar.	3		13	14 15		9				
A. spicatum									10 1/2	
Betula lut.										
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau		8 7			10					
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem			8 1/2							
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ			7					15 10	8 10 1/2	7 1/2 4
Ulmus amer										16 7
U. fulva										
Amelanchier						13				
Pyrus amer.						6				
Distance	24	27	33 1/2	53 1/2	53	44	23 1/2	46 1/2	39 1/2	34 1/2

POINT RECORD TREES ~~SAPLINGS~~ NORTHERN PINE-HARDWOODS

Stand No. 32 (3)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	12 9	8	15	15 14	8	2	19	8 1/2 11	12 1/2 13	
Acer rubrum										
A. sacchar.								9 1/2		8 4 6 4 17
A. spicatum		2 1/2 1 1/2 6								
Betula lut.										
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau			8 10 1/2	6		9 3	21			
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem										
Prunus pen.										
Quercus el)										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ	11	8	11 1/2 11	16	3 16	8	21 10	12	16	
Ulmus amer										
U. fulva										
<i>Populus amer</i>				4	12					
<i>Amelanchier</i>									13	
Distance	40	17 1/2	41	39	39	22	71	41	54 1/2	35

POINT RECORD TREES ^{SAPLINGS} NORTHERN PINE-HARDWOODS

Stand No. 32 (4)

STATION NO.	1	2	3	4	5	6	7	8	9	10
Abies balsam	13 1/2 22		7	9 10	3 9		9 12	7 12	9 20	12 10
Acer rubrum										
A. sacchar.		8 10	14 13 1/2							
A. spicatum										
Betula lut.				5						
B. papyrif										
Carpinus car										
Fagus gran										
Ostrya virg										
Picea glau	19		10 14		3	11				
Pinus Bank										
P. resinosa										
P. Strobus										
Populus bals										
P. grand										
P. trem										
Prunus pen.										
Quercus ell										
Q. rubra										
Tilia amer										
Tsuga can										
Thuja occ			12 1/2	4		12 10	6 11		10	
Ulmus amer										
U. fulva										
Alnus rug.	8									
Pyrus amer.				13				4		
Distance	62 1/2	45 1/2	43 1/2	36	20	44	39	22	60	36

University of Wisconsin
STAND NO. 32

[illegible]

[illegible]

[illegible]

										10									20		
Geum aleppicum																					
Geum canadense	✓	✓																		1	5
Geum rivale																					
Glyceria striata																					
Goodyera obtusifolia	✓																				1
Goodyera pubescens																					
Goodyera repens																					
Goodyera tessellata																					
Habenaria clavellata																					
Habenaria hyperborea	✓																				1
Habenaria obtusata																					
Habenaria orbiculata																					
Habenaria psycodes																					
Habenaria viridis																					
Hackelia virginiana																					
Halenia deflexa																					
Hamamelis virginiana																					
Helianthus strumosus																					
Hepatica acutiloba																					
Hepatica americanum	✓	✓												✓						2	10
Heracleum maximum																					
Heuchera richardsonii	✓																				1
Hieracium aurantiacum	✓																				1
Hieracium canadense																					
Hieracium pratense																					
Hieracium scabrum	✓																				1
Ilex verticillata																					
Impatiens capensis																					
Iris lacustris																					
Isopyrum bitermum																					
Juniperus communis																					
Juniperus horizontalis																					
Lactuca canadensis																					
Laportea canadensis																					
Lathyrus ochroleucus																					
Ledum groenlandicum																					
Lichens spp.	✓	✓				✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14 70
Lilium michiganense																					
Linnaea borealis	✓								✓	✓		✓					✓				4 20
Listera auriculata																					
Listera borealis																					
Listera convallarioides																					
Listera cordata																					
Lobelia inflata																					
Lonicera canadensis	✓																				1
Lonicera dioica	✓																				1
Lonicera hirsuta																					
Lonicera involucrata																					
Lonicera oblongifolia																					
Lonicera prolifera																					
Lonicera villosa																					
Luzula acuminata																					

[illegible]

[illegible]

											10								20		
Rubus (dewberry)																					
Rubus (raspberry)																					
Rumex acetosella																					
Salix spp.																					
Sambucus canadensis																					
Sambucus pubens																					
Sanguinaria canadensis																					
Sanicula gregaria																					
Sanicula marilandica	✓			✓												✓				2	10
Satureja vulgaris	✓																				1
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	✓																				1
Solidago gigantea																					
Solidago graminifolia																					
Solidago hispida																					
Solidago juncea																					
Solidago lepida																					
Solidago macrophylla																					
Solidago rugosa																					
Solidago ulmifolia																					
Spiraea alba																					
Spiraea latifolia																					
Stachys palustris																					
Stellaria calycantha																					
Stellaria longifolia																					
Stellaria palustris																					
Streptopus amplexifolius																					
Streptopus roseus	✓			✓																1	5
Symphoricarpos albus																					
Symphoricarpos occidentalis																					
Taraxacum officinale	✓			✓																1	5
Taxus canadensis																					
Thalictrum dasycarpum																					
Thalictrum dioicum																					
Thalictrum polygamum																					
Tiarella cordifolia																					
Trientalis borealis	✓									✓	✓		✓							3	15
Trifolium hybridum																					

[illegible]

[illegible]

PRESENCE LIST

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 32

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 32

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
 Filix
 Cirsium vulgare
 Viola - same - selkirkii + incognita
 Equisetum black arvense borealis
 Geum canadense
 Gracyleptum erectum
 White Aster - lateriflorus
 Oryzopsis asper
 Mithrasia paniculata
 Plantago major

Caulophyllum thalictroides
 Carex pedunculata
 Phlox pratensis
 Trifolium repens
 Smooth - Sol. fl. canalis
 Fern with peculiar roots - Cystopteris bulbifera
 Habenaria hyperborea
 Equisetum scirpoides
 Cynoglossum boreale

Hemlockia Richardsonii
 Carex canescens
 Goodyera obtusifolia

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 32(1)

TREE SEEDLINGS

- 08641 *Abies balsamea*
Acer pensylvanicum
 0 *Acer rubrum*
 43 *Acer saccharum*
 09 *Acer spicatum*
Betula lutea
Betula papyrifera
 042 *Amelanchier*

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

SHRUBS

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

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

HERBS

- 8 *Achillea millefolium*
Actaea pachypoda
Actaea rubra
Adiantum pedatum
Anaphalis margaritacea
Anemone cylindrica
Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
 3 *Aralia nudicaulis*
Arisaema atrorubens
 76432 *Aster macrophyllus*
Athyrium filix-femina
 832 *Botrychium virginianum*
Carex pensylvanica
Chimaphila umbellata
Chrysanthemum leucanthemum
Circaea alpina
Claytonia caroliniana
Claytonia virginiana
Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
 765 *Cornus canadensis*
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
Dryopteris disjuncta
Dryopteris phegopteris

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

- 41 *Pyrus amer*
Pinus strobus
 62 *Populus tremuloides*
Prunus pensylvanica
Prunus serotina
Thuja occidentalis
Tilia americana
Tsuga canadensis
 3 *Prunus nig*
 5 *Sorbus rubra*
 1 *Rubus parviflorus*
Sambucus pubens
Shepherdia canadensis
Spiraea alba
Symphoricarpos occidentalis
Taxus canadensis
 7 *Vaccinium angustifolium*
Vaccinium myrtilloides
Viburnum acerifolium
Viburnum trilobum

- 09831 *Mitella nuda*
Monotropa uniflora
 3 *Osmorhiza claytoni*
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
 541 *Pteridium aquilinum*
Pyrola elliptica
Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
Rhus radicans
 098321 *Rubus pubescens*
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
 2 *Streptopus roseus*
Tiarella cordifolia
 0 *Trientalis borealis*
Trillium erectum
Trillium grandiflorum
Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
 91 *Viola pubescens*
Viola renifolia
Waldsteinia fragarioides

Additional species

Viola conspersa 145
Equisetum - black 1
Scum canadense 1
Aster umbellatus 1
Xanthoxylum off 1

Sambucus racemosa 3
Oryopsis 24
White Aster 3
Mertensia 39
Carex pedunculata 380

Carex acutata 3
Brachyotum 3
Cypripedium 5
Hepatica repens 8
Synanthus Aster 8
Ranunculus acris 8

Prunella 80
Fern species 9
Cystopteris bulbifera

Myrica 123567890
Achens 157890
Viola - same 1890 *incognita*
Anemone canadensis 1
Viola - heart 1990 *incognita*

FREQUENCY DATA
(Common Species)

SPRUCE-FIR - MIXED HARDWOODS

STAND NO. 32 (2)

TREE SEEDLINGS

- 8753 24 Abies balsamea
Acer pensylvanicum
8 Acer rubrum
6 Acer saccharum
Acer spicatum
Betula lutea
Betula papyrifera
81 Amelanchier

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

SHRUBS

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

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

HERBS

- Actaea pachypoda
06 Actaea rubra
Adiantum pedatum
Anaphalis margaritacea
Anemone cylindrica
Anemone quinquefolia
Anemone virginiana
Antennaria spp.
Apocynum androsaemifolium
Aquilegia canadensis
093 Aralia nudicaulis
Arisaema atrorubens
9642 Aster macrophyllus
Athyrium filix-femina
8 Botrychium virginianum
Carex pensylvanica
Chimaphila umbellata
Chrysanthemum leucanthemum
4 Circaea alpina
Claytonia caroliniana
Claytonia virginiana
Clintonia borealis
Coptis groenlandicum
Corallorhiza maculata
984 Cornus canadensis
Cystopteris fragilis
Dicentra canadensis
Dicentra cucullaria
93 Dryopteris disjuncta
Dryopteris phegopteris

- 09843 Dryopteris spinulosa
Epigaea repens
Epilobium angustifolium
Equisetum sylvaticum
Erythronium americanum
Fragaria vesca
Fragaria virginiana
Galium aparine
864 Galium triflorum
3 Gaultheria hispidula
Gaultheria procumbens
Gentiana quinquefolia
Geranium maculatum
Goodyera repens
Habenaria obtusata
Halenia deflexa
Hepatica acutiloba
6 Hepatica americana
Hieracium aurantiacum
83 Linnaea borealis
Lycopodium annotinum
Lycopodium clavatum
Lycopodium complanatum
Lycopodium lucidulum
Lycopodium obscurum
62 Maianthemum canadense
Medeola virginiana
Melampyrum lineare
Mitchella repens
Mitella diphylla

- 86 Pyrus amer
Pinus strobus
7 Populus tremuloides
Prunus pensylvanica
Prunus serotina
Thuja occidentalis
Tilia americana
Tsuga canadensis
5 Prunus nig

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

- 098654321 Mitella nuda
Monotropa uniflora
Osmorhiza claytoni
Oxalis montana
Oxalis stricta
Polygala paucifolia
Polygonatum pubescens
Prenanthes alba
72 Pteridium aquilinum
Pyrola elliptica
Pyrola rotundifolia
Pyrola secunda
Ranunculus acris
Rhus radicans
0986432 Rubus pubescens
Sanguinaria canadensis
Smilacina racemosa
Smilacina stellata
Streptopus roseus
Tiarella cordifolia
31 Trientalis borealis
Trillium erectum
Trillium grandiflorum
Uvularia sessilifolia
Viola canadensis
Viola cucullata
Viola pallens
Viola pubescens
7 Viola renifolia
Waldsteinia fragarioides

Additional species

Mosses 1234567890
Lichens 13457890
Carex pedunc 134567890
Mertensia 1490 pan
Oryzopsis 2 aspen
Viola same 3 self-kind
Potamogeton 40
Brachyelytrum 4
Carex lasiocarpa 56
Viola conspersa 5

Monarda uniflora 5
Viola heart 6 mequetia
Sambucus mar 7
White Astor 90