

810643



NEVILLE CROSBY INC.

948 HOWE STREET, VANCOUVER, B.C. V6Z 1N9
TELEPHONE 669-7525 TELEEX 04-507762

MINING & FORESTRY SUPPLIES

**Waterproof
Cruiser's Metric Field Book**

NCI 341

PLOT 15 → 30

TULAMEEN

23 JULY → 6 Aug. 78

"P. DEAN"

24 July: PLOT 15: TREES

CBH ob

73 df
87 df
89 df
117 df
62 df
108 df
46 df
112 df

OPEN WOODLAND
ABOVE MULLINS PIT

Heavily grazed
& trampled.

REGENERATION

none

SHRUBS ①

Salix bebbiana 30%
Amelanchier sp

SHRUBS ②

Pachistima myrsinites
Lonicera utahensis

HERBS

Achillea millefolium

Arnica cordifolia

Taraxacum officinale

Cirsium sp.

Ranunculus occidentalis Nutt.

unidentifiable pea

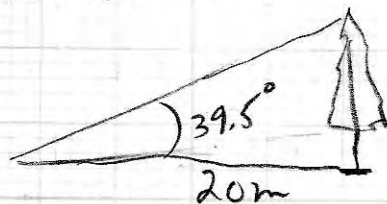
Fragaria vesca

grass 80%

Tragopogon dubius Scop.

- Plot is heavily trampled
and grazed

df 117 cm CBH ob



PLOT 16:

XERIC ROCKY OUTCROPS &
TALUS. AVERAGE SLOPE 33°

TREES: CBH 0.5

172 cm DF bank 3cm x 2
191 cm PP 3cm x 2

REGENERATION - 1 DF

SHRUBS: ①

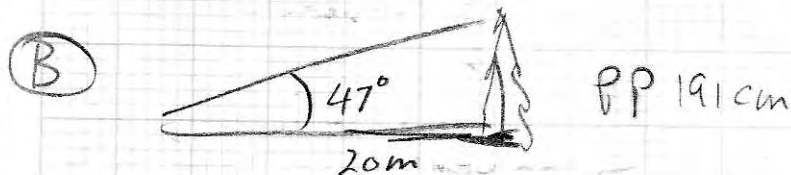
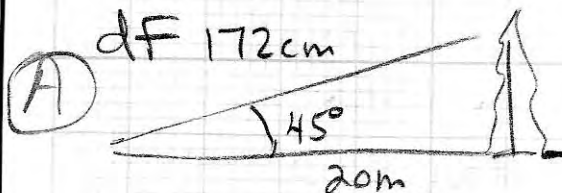
- Populus tremuloides
- Amelanchier
- Sarcocolla
- Juniperus communis
- Ribes cereum (squaw current)
- Rosa 7 leaves single prom spines at nodes.

SHRUBS ②

- Pachistima myrsinites 10%
- Arctostaphylos uva-ursi 10%
- ~~Arctostaphylos uva-ursi~~
- Berberis aquilinum
- unident. shrub 10%

HERBS

grass 50%
fern Woodsia oregona



both trees rotten in core

27 JULY

PLOT 3

HERBS:

Lupinus arcticus

grass ~ 10%

Pedicularis bracteosa

Fragaria vesca

Oznothiza chilensis

Arnica cordifolia

Pyrola secunda

Pyrola asarifolia

Hieracium albiflorum

SHRUBS ①

Soropollallie Shepherdia canadensis

~~Sambucus~~ *Sorbus* sp.

R. parviflorus

Lonicera utahensis

Salix bebbiana

Spirea sp.

SHRUBS ②

V. membranaceum

Pachistima myrsinites

V. scoparium

Tree vegetation is all
alpine fir.



PLOT 17

TREES:

CBH db

83 lp
 85 }
 104 }
 56 }
 102 }
 32 ▽
 48 af
 96 lp
 90 }
 113 }
 74 }
 111 }
 82 }
 67 }
 83 }
 96 }
 86 ▽

REGENERATION:

17 af
 1 es

SHRUBS ①

R. parviflorus 10%

Lonicera utahensis 10%

Sorbus sp.

Shepherdia
Canadensis → Scopellallie

Lonicera involucrata

Flemingia inornata

SHRUBS ②

Pachistima 30%

V. membranaceum 30%

Spiraea sp.

V. scoparium 10%

HERBS

Clintonia

~~Asarum~~
Actaea rubra

Hieracium
albiflorum

Ornithoglossum chilense

Lilium columbianum

Aquilegia formosa

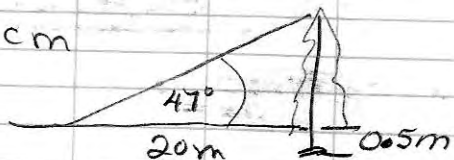
Arnica cordifolia

Pyrola asarifolia

Pyrola secunda

Lupinus arcticus

lp 96cm
CBHob



PLOT 18: TREES:

128 lp
73 es
78 lp
48 lp
28 es
64 lp
104 lp
90 lp
80 lp
81 lp
122 es
152 es
114 lp
115 lp
91 lp
49 lp
~100 lp (tree screwed up)
110 lp

REGENERATION

af ~~12~~ 12
es ~~9~~ 9

SHRUBS ①

Lonicera utahensis 10%
Alnus incana 20%
Ribes lacustre
Ribes viscosissimum
Salix bebbiana

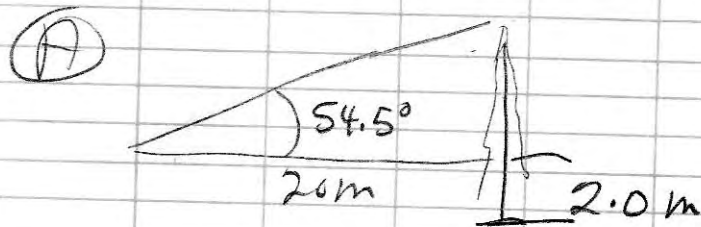
SHRUBS ②

V. membranaceum 20%
P. myrsinites 10%
Spirea sp
Sorbus sp
V. scoparium 10%

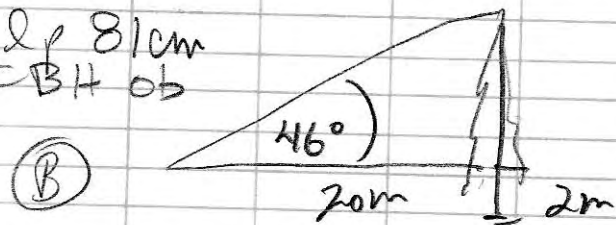
HERBS

Arnica cordifolia 20%
Pyrola secunda
Aquilegia formosa
Smilacina racemosa
Lupinus arcticus
Lilium columbianum
Clintonia uniflora
Osmorhiza chilensis

es 122 cm CBH ob



lp 81cm
CBH ob



PLOT 19

Rock outcrop, rubble & talus
PLOT IS ~ FLAT LYING

TREES

CBH ob

38
82
43
30
35
47
33

REGENERATION

1 es

SHRUBS ①

J. communis 50%

Rubus idaeus

SHRUBS ②

P. myrsinites 10%

V. scoparium

HERBS

grass

Woodsia oregana

2 or 3 unidentified species

new plants POLYGONACEAE

Eriogonum heracleoides Nutt.

open meadows

- check ID in Flora

Arnica fulgens Pursh.

- check

28 JULY

Plot 2 - Hieracium gracile Hook.
slender hawkweed yellow flwr.

PLOT 20:

Claytonia meadows

- open deciduous woodlands
 & meadow with *Salix bebbiana*,
 Aspen, and scattered DF
 Veterans

- SW exposure
 - slope 15°

TREES

71 CBH ob } ASPEN
 38 " }

SHRUBS ①

Salix bebbiana 40%

SHRUBS ②

Rosa 10%

Ribes (inerm?) 10%
 whitestem gooseberry (med flowers)

Symphoricarpos

HERBS

Fragaria vesca

Fragaria virginiana

Achillea millefolium

Taraxacum ~~volgare~~ officinale

pea

grass

40%

stick-titoweed

Aquilegia formosa

stinging nettle *Urtica dioica*

clover

Arenaria macrophylla Hook.
 sandwort

Hackelia deflexa (Wahlenb.) Opiz.
 nodding stickseed

▲ *Cynoglossum officinale* L.
 common handsoot

Potentilla gracilis ← just outside plot

Blakeburn Creek at road -

Geum macrophyllum Willd.

Veronica americana

Potentilla arguta

- in wet ditch

Tower road -

Matricaria matricarioides

WESTERN TANGER

Piranga ludoviciana

Clatonia meadows +
Blakeburn

~~B~~ Prunella vulgaris

~~Prunella~~ Intake Road

29 July: WIER

30 July: $\frac{1}{2}$ WIER
 $\frac{1}{2}$ DRILL

31 July: DRILL

Angelica anguta Nutt.

- Blakeburn Spring
- intake site

1 Aug } DRILL $\frac{1}{3}$
2 Aug } INTAKE SITE WIER
 $\frac{2}{3}$

Saxifraga punctata L.

- intake site
- Collins Gulch

HERBS

Arnica cordifolia
Pyrola secunda
Lupinus arcticus
Osmorhiza chilensis
Actea rubra
Pyrola asarifolia
Chimaphila umbellata
Clintonia uniflora
Aquilegia formosa
Lilium columbianum

Dryopteris austriaca (Jacq.)
Wagner.
Tiarella trifoliata

- in damp hole near
Plot 22.

PLOT 22:

TREES

CBH ob

64	2p	76	2p
100			
75		87	
79		28	
44		35	
63		56	
87		29	
78		63	
46		68	
39		53	
69		38	
52		25	
70		27	
33		47	
25		38	
46		59	
43		65	
68		63	

REGENERATION

lp 0
af 4
es 1

SHRUBS (1)

Alnus tenuifolia 40%

Salix bebbiana

Shepherdia canadensis

SHRUBS (2)

V. membranaceum 20%

Pachistima 46%

Spiraea betulifolia

Lonicera utahensis

HERBS

Chimaphila

vattlenake plantain Goodenia

~~Spiraea betulifolia~~

Grass 20%

Pyrola secunda

Clintonia uniflora

Lilium columbianum

Osmorhiza

Pyrola asarifolia

Pterospora andromeda

Arnica cordifolia

Lupinus arcticus

PLOT 23:

TREES:

CBH ob

75 df
 66 lp
 43 lp
 50
 44
 46
 41
 31
 47
 50
 30
 54
 43
 38
 43
 41
 50
 53
 43
 36
 49
 53
 45
 35
 41
 60

32 lp
 54
 34
 42
 38
 65 df
 37 ~~df~~ df
 48
 52 lp
 36
 60
 51
 40
 47
 46
 39
 50
 48
 46
 62
 62
 43
 40
 49
 45
 43

48 lp
 37
 52
 60
 33
 41
 46
 42
 34
 63
 33
 44
 30
 34
 35
 28
 38
 35
 29
 62
 43
 54
 52
 40
 61

REGENERATION

df 5 (sub-adults)
 df 1
 df 1

SHRUBS ①

S. bebbiana

SHRUBS ②

V. scoparium 70%
P. myrsinites 30%
Spina betulifolia
V. membranaceum

HERBS

Grass 50%

L. orchica

Pedicularis bracteosa (wood betony)

Goodyera 0

L. columbiformis

Pedicularis racemosa? deck

Arnica cordifolia

PLOT 24

TREES:

CBH00

76 sp	66 df
81 lp	79 df
72 lp	
55 df	73 lp
97 df	40 af
39 af	73 af
77 lp	95 df
52 df	77 lp
80 lp	76 df
122 df	121 df
77 lp	
81 lp	

REGENERATION

af 16
es 1
df 1

SHRUB ①

Lonicera utahensis

Salix bebbiana 20%

SHRUB ②

Spirea

V scoparium 20%

P myrsinites 20%

V membranaceum

HERBS

grass 20%

Lupinus arcticus

Pedicularis bracteosa

Goodyera

Hypoxis secunda

Fragaria ~~virginiana~~

Fragaria vesca
Fragaria virginiana

Cornus canadensis

Linnaea

Chimaphila

Aquilegia formosa

Ozmothiza

Aug 4 - PLOT 26

TREES

CBHob.

29 df	51 lp	31 lp
57 lp	46 lp	34 lp
70 lp	38 lp	49 lp
55 lp	50 lp	46 lp
95 df	51 lp	30 lp
43 df	68 lp	49 lp
30 df	39 lp	29 lp
35 lp	57 lp	37 lp
49 lp	45 lp	58 lp
60 lp	44 lp	46 lp
39 lp	47 lp	35 lp
79 df	39 lp	35 df
44 lp	56 lp	35 lp
47 lp	46 lp	38 lp
61 lp	51 lp	69 lp
34 lp	39 lp	53 lp
50 lp	32 lp	27 lp
44 lp	31 lp	38 lp
45 lp	64 lp	50 lp
55 lp	43 lp	56 lp
70 lp	38 lp	53 lp
51 lp	49 lp	31 lp
53 lp	47 lp	47 lp
69 lp	39 lp	52 lp
29 lp	54 lp	33 lp

REGENERATION

lp 4 (sawney sub-adults)
df 1
df 2
es ~~2~~ 3

SHRUBS ①

Alnus tenuifolia 10%
Lonicera utahensis

SHRUBS ②

V. membranaceum
P. myrsinites 10%
Linnaea borealis

HERBS

Arnica cordifolia
Clintonia uniflora
Pyrola secunda
Goodyera oblongifolia

PLOT 27TREESOBH ab

37 ep

67 ep

41 ep

27 ↓

28

46

65 ↓

60

54

106 ↓

29

64

44 ep

39

53

102

62

43

78

34

72 ▽

45

34

56 ↓

33

53

72

64

61

74

50

73

37

71

60

57

69

73

51

85

44 ▽

70

41 af

64

63 ep

53

53 ↓

66

68 ↓

52



REGENERATION:

~~more~~ df 1

SHRUBS (1)

Alnus tenuifolia 10%

SHRUBS (2)

Pachystima
Spiraea

HERBS

Grass 40%

Pteris

Chimaphila umbellata

Clintonia uniflora

Pyrola asarifolia

P. secunda

Lilium columbianum

PLOT 28

TREES CBH db:

103 df

32 es

54 af

84 lp

40 af

40 lp

62 df

50 ~~af~~ lp

65 df

40 df

74 lp

47 lp

78 lp

100 lp

37 df

74 lp

46 es

111 df

78 af

100 af

33 af

117 af

106 df

83 af

84 lp

64 af

83 af

35 af

84 lp

85 df

48 df

140 df

REGENERATION

af 4

SHRUBS ①

Rubus parviflorus
Lonicera utahensis
Amelanchier

SHRUBS ②

Liriodendron
Spiraea
Pachistima 10%
Sorbus
Ribes lacustre

HERBS

Cornus canadensis
Smilacina
Clintonia
Osmorhiza
Arnica cordifolia
Pyrola secunda
P. asarifolia
Equisetum sp
Tiarella
Aquilegia Formosa

PLOT 29

TREES: CBH db

0000
02 ep
06
04
33
64
66
77 es
71 es
37 es
74 af
65 ep
93 ep
92 ep
66 es
43 ep
43 ~~ep~~ af
87 ep
53 ep
47 ep
31 ep
165 ep
02 ep
92 es

50 es
80 es
73 es
45 es
136 es
44 es
86 es
33 af
68 es
37 af
70 es
64 es
35 af
72 ep
70 ep
68 ep
58 es
57 ep

REGENERATION

af 12

SHRUBS (1)

Viburnum edule
Alnus tenuifolia
Sorbus
Lonicera utahensis
Cornus stolonifera
Rubus parviflorus

SHRUBS (2)

Pachistima 100%
Lernaea
Spiraea
Ribes lacustre

HERBS

Cornus canadensis
 Chimaphila
 Ozmorhiza
 Arnica cordifolia
 Goodyera
 Tiarella
 Actea rubra
 Pyrola secunda
 Smilacina
 Clintonia
 Grass
 Aquilegia formosa

Aug 6PLOT 25TREES:

CBH 06

129 df

55 df

58 es

149 df

118 df

35 df

84 es

83 es

40 df

134 es

31 es

60 df

72 df

78 df

29 df

56 df

173 df

32 df

REGENERATION

6 es

2 df

SHRUBS ⊙

Ribes lacustre 100%
Rubus parviflorus 40%
Salix bebbiana

SHRUBS ⊙

Pachistima
Lonicera utahensis
V. scoparium

HERBS

Osmorhiza
Fragaria vesca
Smilacina
Actea
Pyrola secunda
— Unident plant with 5 rad. leaves

Arnica cordifolia
Aquilegia
unident pea
Goodyera oblongifolia
grass

WATER DEPTH AT

INTAKE SITE 10 cm

est. speed 0.5 m/sec

$$0.5 \times 0.10 \times 0.37 = 0.0185 \text{ m}^3/\text{sec}$$

$$= 1.11 \text{ m}^3/\text{min} \times 219.9694$$

$$= 244.17 \text{ Imp gal}^{\text{Imp}}/\text{min}$$

PLOT 30

TREES: CBH ob

33 df
31 df
84 df
94 df
53 lp
38 lp
58 df
89 lp
54 df

REGENERATION

1 df
1 lp

SHRUBS

Pachistima 20%
V. scoparium 10%
Spirea betulifolia

HERBS

Fragaria virginiana
Lepinus arcticus
grass 80%
~~pedicularis~~ Achillea
Hieracium albatrum
Taraxacum officinale
unident pea

Plot is heavily trampled and
grazed. At slope 13° to
SW