


APPLICATION FOR ECOLOGICAL RESERVE

1. Legal description of the area (or general "Metes and bounds" description)
2. Geographical location (relate to nearest settlement, mountain, river, etc.)  
  
Subalpine vegetation on a mountainous ridge between the valleys of Downing Creek and Furry Creek, 5 1/2 mi. SE of Britannia Beach, Coast Mountains
3. Indicate the biogeoclimatic zone of which the reserve is representative.  
MH, mostly MHb
4. Approximate total acreage.  
240 acres
5. Purpose of the reserve.  
To conserve outstanding ecosystems of the upper subzone of the coastal subalpine zone (MH) in the Coastal Mountains (close to Vancouver)
  - (a) Primary (state acreage)  
240 acres
  - (b) Others if any (state acreage)  
- -
  - (c) Buffer areas (state acreage)  
- -
6. Attach a map and indicate: (a) the perimeters and acreage of the areas detailed in 5 above, and  
(b) indicate the species and total timber volumes in these areas.  
Abies amabilis, Chamaecyparis nootkatensis, Tsuga mertensiana  
(mostly in scrubby growth, commercially not very successful)

  
Signature V.J. Krajina  
I.B.P. Surveyor

INTERNATIONAL BIOLOGICAL PROGRAMME

SECTION CT: CONSERVATION OF TERRESTRIAL BIOLOGICAL COMMUNITIES

CHECK SHEET (Mark VII) FOR SURVEY OF IBP AREAS\*

To be completed with reference to the GUIDE TO THE CHECK SHEET

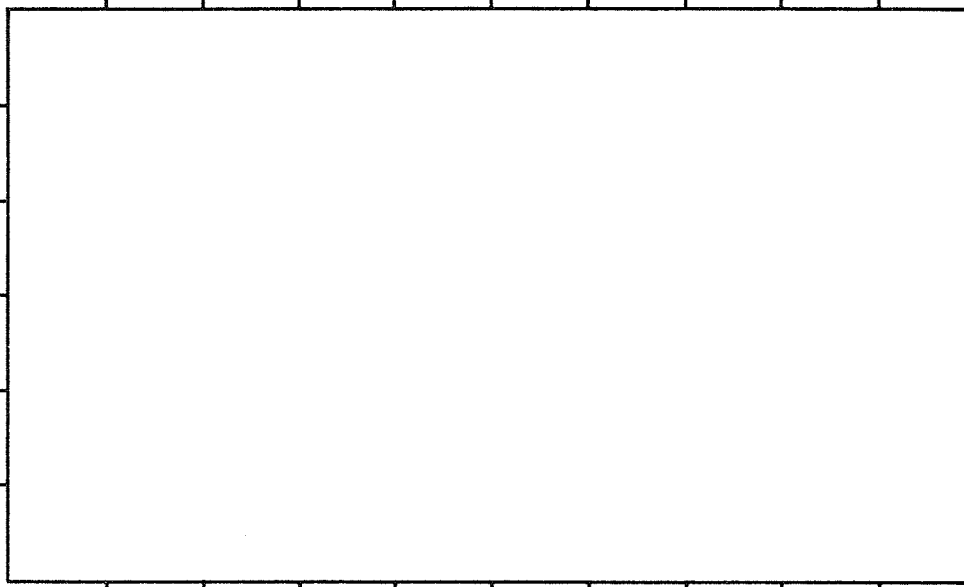
Serial Number

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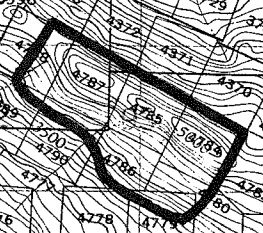
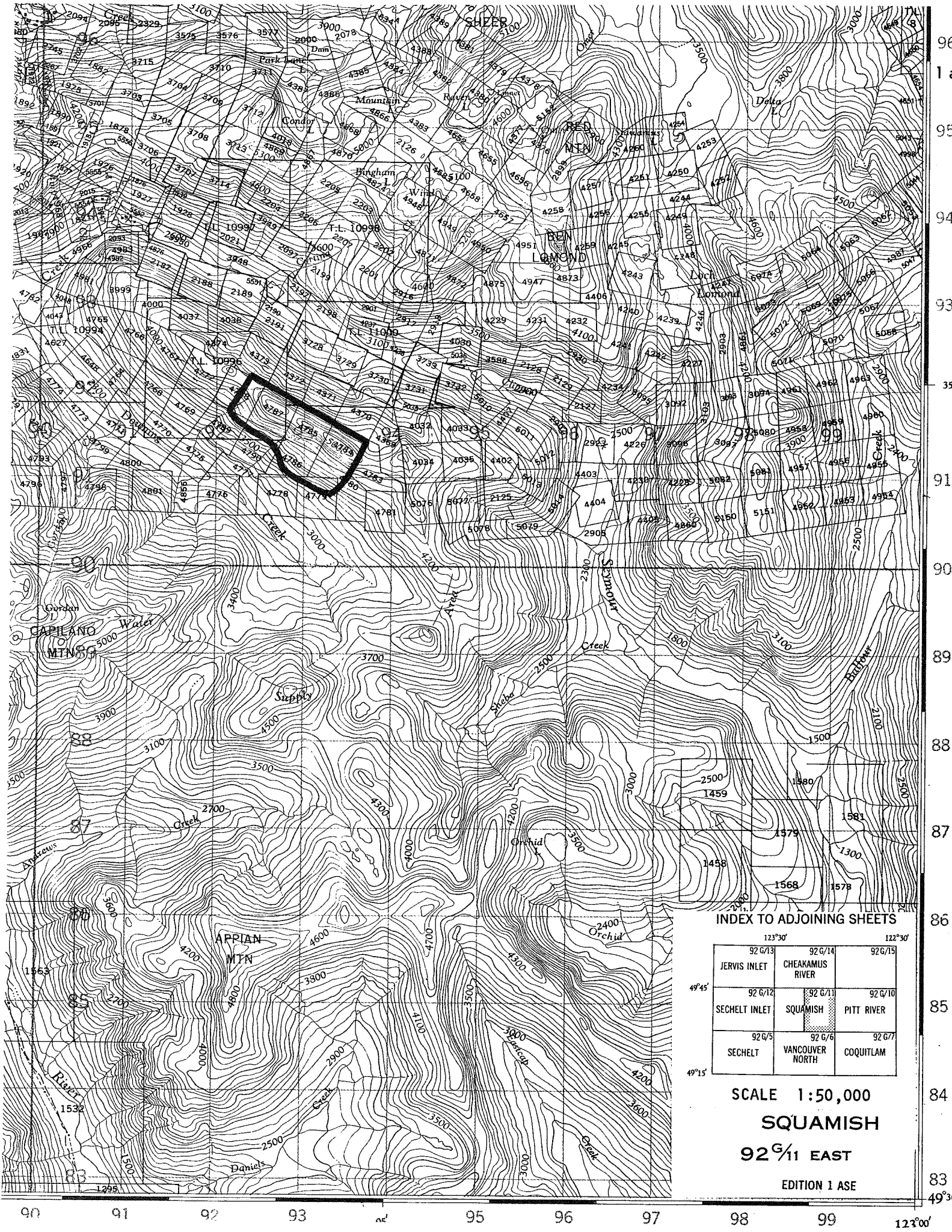
For Data Centre Use only

1. 1. Name of surveyor V.J. Krajina  
 2. Address of surveyor Department of Botany  
University of British Columbia  
Vancouver, B.C.  
 3. Check Sheet completed (a) on site X (b) from records X  
 4. Date Check Sheet completed October 18, 1974

2. 1. Name of IBP Area Subalpine vegetation on a mountainous ridge  
between the valleys of Downing Creek and Furry Creek,  
 2. Name of IBP Subdivision (or serial letter) MH 5 1/2 mi. SE of Britannia  
(mostly MHb) Beach, Coast Mountains  
 3. Map of IBP Area\* showing boundaries attached? Yes X No         
 4. Sketch map of IBP Area\*. Please mark direction of north, the scale and grid numbers where applicable.



\* For "IBP Area", read IBP Area and/or IBP Subdivision.



**INDEX TO ADJOINING SHEETS**

	123°30'	122°30'	
	92 G/13	92 G/14	92 G/15
	JERVIS INLET	CHEAKAMUS RIVER	
49°45'	92 G/12	92 G/11	92 G/10
	SECHLT INLET	SQUAMISH	PITT RIVER
	92 G/5	92 G/6	92 G/7
49°15'	SECHLT	VANCOUVER NORTH	COQUITLAM

**SCALE 1:50,000**

**SQUAMISH**

**92 G/11 EAST**

**EDITION 1 ASE**

3. **Location of IBP Area\***

- 1. Latitude 49 ° 34.3-35.1' N Longitude 123 ° 05.2-06.4' W
- 2. Country Canada  
 State or Province British Columbia County Squamish  
 (State or Province ..... County .....

4. **Administration**

- National** 1. Official category Crown Land, southeast corner of T.L. 10996, Lots 4788; 4787; 4785; 4784; 4786; 4779; 4780
- 2. Address of administration British Columbia Department of Lands, Forests, and Water Resources  
Parliament Buildings  
Victoria, B.C.

**International Class**

3.	Included in U.N. List	Rejected from U.N. List	Area with formal conservation status	No formal cons. status
	(A)	(B)	(C)	(D) x

5. **Characteristics of IBP Area\***

- 1. Surface area (state units of measurement) 240 acres
- 2. Altitude (state units of measurement) Maximum 5100' (1845m)  
 Minimum 3500' (1070m)

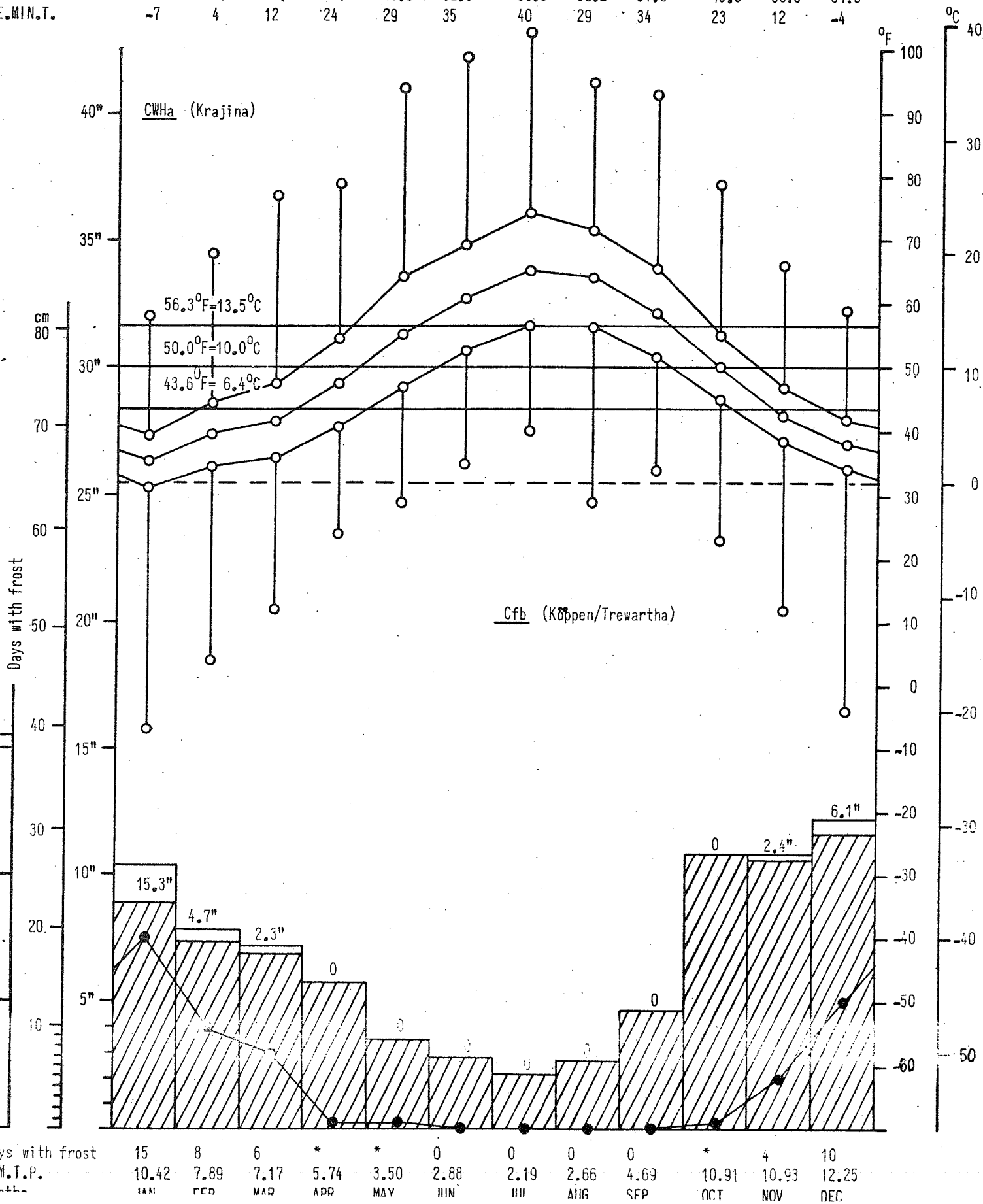
6. **Climate** most likely: Dfc (after Köppen/Trewartha) (colder than on Hollyburn Ridge!)  
 Nearest climatological station:

- 1. Name \*Britannia Beach (only 160' ASL), \*\*Squamish, \*\*\*Hollyburn Ridge (3120' ASL)
- 2. Climatological station on IBP Area\*? Yes ..... No X
- 3. If (2) not, distance from edge of IBP Area\* (state units) \*5.2 mi.; \*\*8.4 mi.; \*\*\*14 mi.
- 4. Direction from IBP Area\* \*NW; \*\*NNW; \*\*\*SSW
- 5. Additional data sheet attached? Yes X No .....

Britannia Beach (2a), Squamish (2b), Hollyburn Ridge (2c)

Months above 50°F: 5, below 32°F: 0, A.M.T.P. 81.23", A.M.S.F. 30.8", snow % A.M.T.P.: 3.79. days with frost, yearly: 43.

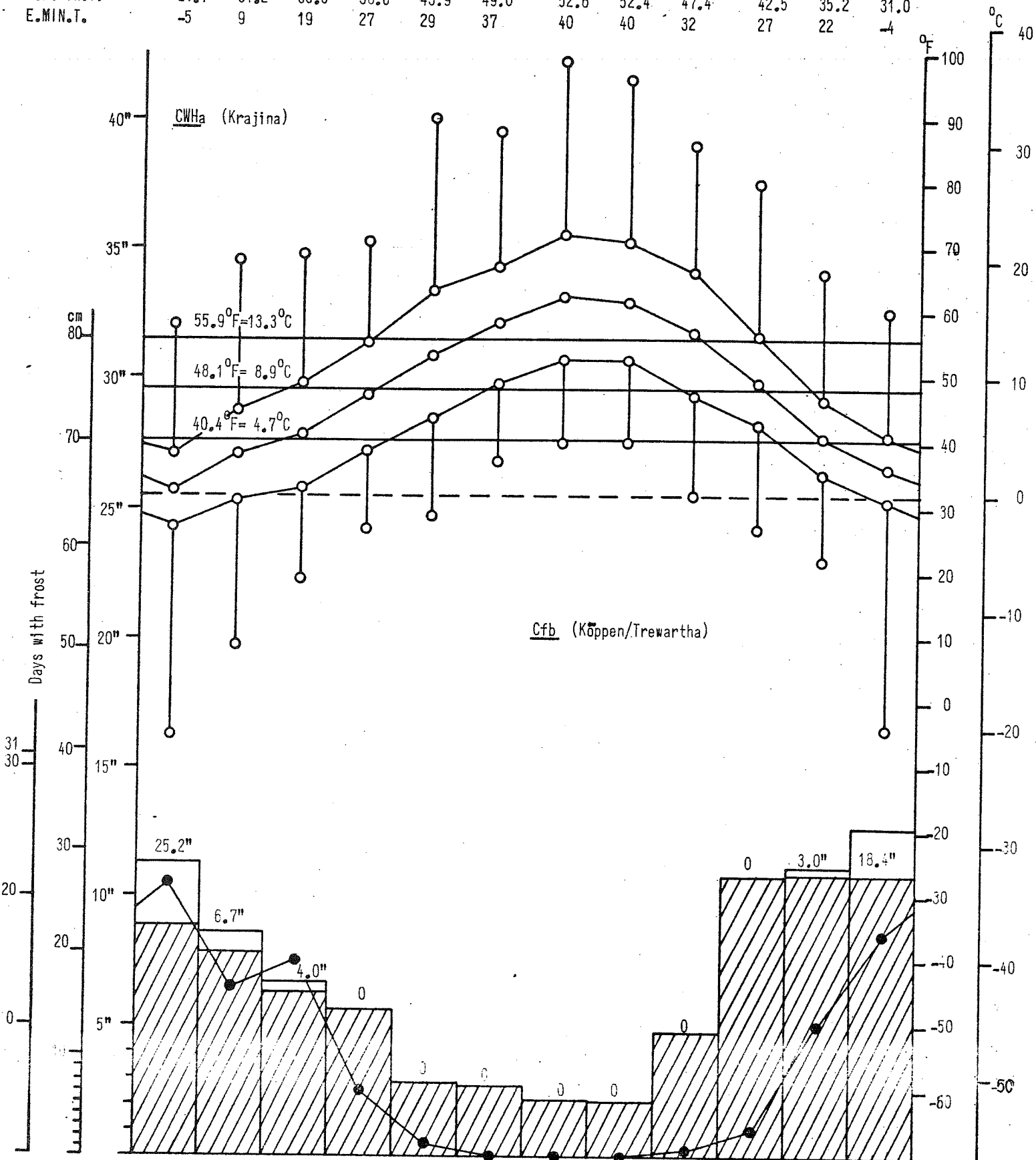
E. MAX. T.	58	68	77	79	94	99	103	95	93	79	66	59
M. D. MAX. T.	39.5	44.3	47.7	54.8	64.1	69.3	74.4	71.8	65.7	55.0	46.7	42.0
M. D. T.	35.4	39.5	41.9	47.8	55.5	60.8	65.3	64.0	58.8	50.0	42.5	38.0
M. D. MIN. T.	31.2	34.6	36.0	40.7	46.9	52.3	56.3	56.2	51.8	45.0	38.3	34.0
E. MIN. T.	-7	4	12	24	29	35	40	29	34	23	12	-4



SQUAMISH 49°42'N, 123°09'W, 5' ASL. Record: 9-10 years. (adjusted).

Months above 50°F: 5, below 32°F: 0, A.M.T.P.: 81.16", A.M.S.F.: 57.3", snow % A.M.T.P.: 7.06, days with frost, yearly: 84.

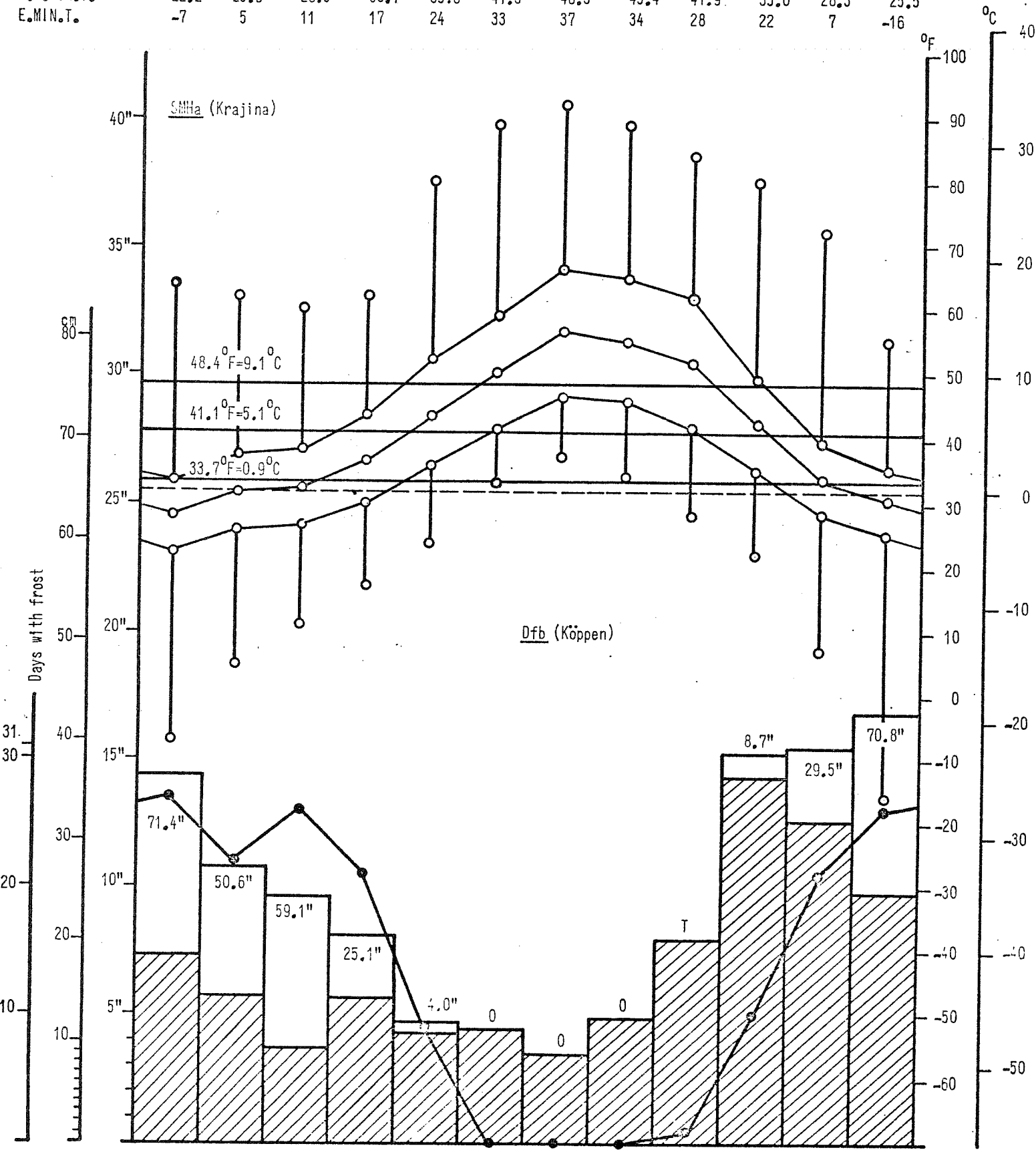
E. MAX. T.	58	68	69	71	90	88	99	96	86	80	66	60
M. D. MAX. T.	38.2	45.0	49.1	55.5	63.4	67.1	72.0	70.8	66.1	56.1	46.3	41.0
M. D. T.	32.7	38.1	41.2	47.1	53.7	58.1	62.3	61.6	56.8	49.3	40.8	36.0
M. D. MIN. T.	27.1	31.2	33.3	38.6	43.9	49.0	52.6	52.4	47.4	42.5	35.2	31.0
E. MIN. T.	-5	9	19	27	29	37	40	40	32	27	22	-4



Days with frost	21	13	15	5	1	0	0	0	*	2	10	17
M.M.T.P.	11.35	8.54	6.65	5.52	2.83	2.71	2.13	2.09	4.73	10.78	11.15	12.68
Months	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Months above 50°F: 4, below 32°F: 3, A.M.T.P. 115.71", A.M.S.F. 319.2", snow % A.M.T.P.: 27.58, days with frost, yearly: 164.

E. MAX. T.	64	62	60	62	80	89	92	89	84	80	72	55
M.D. MAX. T.	33.8	37.3	38.7	43.6	52.2	59.0	66.3	64.7	61.5	49.2	39.7	35.2
M.D. T.	28.0	31.6	32.6	36.9	43.9	50.2	56.3	55.1	51.7	42.1	34.0	30.4
M.D. MIN. T.	22.2	25.9	26.5	30.1	35.6	41.3	46.3	45.4	41.9	35.0	28.3	25.5
E. MIN. T.	-7	5	11	17	24	33	37	34	28	22	7	-16



Days with frost	27	22	26	21	9	0	0	0	1	10	22	26
M.M.T.P.	14.40	10.73	9.53	8.06	4.63	4.44	3.49	4.86	7.95	15.24	15.48	16.84
MO. TH.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC





Appl. No. 182

A partial list of plants:

- Vascular plants:
- Abies amabilis*
  - Carex nigricans*
  - Carex pyrenaica*
  - Cassiope mertensiana*
  - Chamaecyparis nootkatensis*
  - Cladothamnus pyrolaeiflorus*
  - Cornus canadensis*
  - Gaultheria humifusa*
  - Juncus drummondii*
  - Juncus parryi*
  - Luetkea pectinata*
  - Lupinus arcticus*
  - Luzula wahlenbergii*
  - Lycopodium sitchense*
  - Phyllodoce empetriformis*
  - Rhododendron albiflorum*
  - Rubus pedatus*
  - Saxifraga ferruginea*
  - Saxifraga tolmiei*
  - Sorbus sitchensis*
  - Spiraea densiflora (!)*
  - Streptopus roseus*
  - Tsuga mertensiana*
  - Vaccinium alaskaense* (rare)
  - Vaccinium deliciosum*
  - Vaccinium membranaceum*
  - Vaccinium ovalifolium* (rare)
  - Valeriana sitchensis*
  - Veratrum viride*
- Bryophytes:
- Dicranum fuscescens*
  - Hylocomium splendens*
  - Rhytidiopsis robusta*
  - Orthocaulis floerkii*
- Lichens:
- Cladonia bellidiflora*
  - Cladonia gracilis*
  - Peltigera canina*

7.  
(cont.)

2

Soil

Community Reference Number	Soil type	Other notes
1	ABC F <sub>5</sub>	Humo-Ferric Podzol
2	A(B)C F <sub>4</sub>	Gleyed Melanic Brunisol
3	ABC F <sub>5</sub>	Humo-Ferric Podzol
4	ABC F <sub>5</sub>	Mini Podzol → Humo-Ferric Podzol
5	ABC /AGC F <sub>5</sub> /P <sub>2</sub>	Gleyed Humo-Ferric Podzol
6	AC I <sub>2</sub>	Snowbed Regosol
7	AC I <sub>2</sub>	Snowbed Regosol
8		
9		
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11		
12		
13		
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16		
17		
18		
19		
20		

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9. Landscape

1. General Landscape (give brief description) A mountainous ridge between two valleys, originally filled with glaciers in the glaciation time.

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				65	65
Gently dissected				25	25
Incised				10	10
Skeletonised					
%				100	100%

3. Special landscape features (list) .....

.....

.....

10. Coastline of IBP Area\* none

1. Protected bays and/or inlets Many  Few  None

2. Substratum. % of coast

Rock	Boulder Beach	Shingle Beach	Sand Beach	Shell Beach	Mud	Coral	Ice
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Physiography. % of coast

Cliffed	Sloping	Flat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Special Coastal Features (list) .....

.....

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5. Tide. Maximum range (state units of measurement) .....

6. Total length of coastline :

Less than 1 km.  1-10 km.  Above 10 km.

11. Freshwater within IBP Area\*

1.

	Permanent	Intermittent
General		
Standing	X	
Running	X	

from snow

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps				
Ponds				
Lakes				

3. Running Water

	Permanent	Intermittent
Springs, cold		
Springs, hot		
Streams	?	X
Rivers		

4. Special freshwater features ..... snow may be in some places until the .....  
 ..... new snow comes .....

12. Salt and Brackish Water within IBP Area\* none

Salt Lakes	<input type="checkbox"/>	Lagoon	<input type="checkbox"/>	.....	<input type="checkbox"/>
Estuaries	<input type="checkbox"/>	Salt pools	<input type="checkbox"/>	.....	<input type="checkbox"/>

13. Adjacent Water Bodies (not within IBP Area\*)

1. Fresh  Lake  River  Stream  Downing Creek  
 Furry Creek

2. Salt and Brackish none

Estuary	Salt lake	Salt pool	Lagoon	Ocean		

14. Outstanding Floral and Faunal Features

1. None .....

2. Fauna

	Species diversity	Abundance of individuals	Superabundance of individuals	Rare species	Threatened/Relict species	Spp. of biogeographical interest	Exceptional Associations	Breeding or Nesting Populations	Migrating Populations	Wintering Populations		
Mammalia		X										
Aves	X	X						X	X			
Reptilia												
Amphibia		?										
Pisces												
Insecta	X	X						X		X		

3. Names of main threatened, endemic, relict and rare species

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4. Flora

	Species diversity	Abundance of particular species	Rare species	Threatened/relict species	Spp. of biogeographical interest	Exceptional associations	Outstanding specimens					
Angiospermae :												
trees												
shrubs	X	X	X		X	X						
herbs	X	X			X	X						
grass		X										
Gymnospermae	X	X										
Pteridophyta		X										
Bryophyta	X	X			X							
Lichens and Algae	X	X			X							

5. Names of main threatened, endemic, relict and rare species

.....  
 .....  
 .....  
 .....

15. Exceptional Interest of IBP Area\*

.....  
 Outstanding subalpine parkland-like area of immense beauties  
 in the fall color - behind the Vancouver Watershed area.  
 .....  
 The presence of Cladothamnus pyrolaeiflorus indicates that  
 it belongs to the most coastal parts of the subalpine zone.  
 .....  
 Because the Britannia Beach mines were closed, it looks that  
 there might be little intention of economic use of mining  
 claims here if they are valid.  
 .....

16. Significant Human Impact

1. General : None in entire IBP Area\* ..... X (?)  
 None in part of IBP Area\* .....  
 Impact on entire IBP Area\* .....

2. Particular

	Past impact	Present impact	Trend			
			Increasing	Decreasing	No change	No information
Cultivation					X	
Drainage					X	
Other soil disturbance					X	
Grazing					X	
Selective flora disturbance					X	
Logging					X	
Plantation					X	
Hunting			X			
Removal of predators					X	
Pesticides					X	
Introductions — plants					X	
Introductions — animals					X	
Fire	X					
Permanent habitation					X	
Recreation and tourism					X	
Research					X	

lightning fire?

3. Additional details on each type of impact attached? This area was partly affected by fire (lightning fire?) which burnt many trees here about +50 years ago.  
 Yes ..... No ...X.....



17. Conservation Status (required)

	Protection			Utilisation			Conservation Management			Permitted Research		
	none	partial	total	none	controlled	uncontrolled	none	to alter status	to maintain status	experimental	observational	prohibited
Flora			X	X				X	X		X	
Fauna			X	X					X		X	
Non-living			X	X					X		X	

18. References

- to develop the climax stages of all communities by no disturbance
- List major biological/geographical references for the IBP Area.  
Sheet attached? Yes ..... No .....
  - List main maps available for the IBP Area.  
List attached? Yes ..... No ..... 92 G/11 East Half (Squamish)
  - Aerial photographs for the IBP Area available?  
For whole area  ..... For part of area ..... None .....

19. Other Relevant Information

This could become the first ecological reserve in the MH zone in the Coastal Mountains. I am convinced that the mining company will cooperate if the case will be presented to them. Britannia Beach mines will hardly be reopened - as I heard.

*V.J. Krajina*  
Signed ..... V.J. Krajina .....  
(Surveyor)