

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.)

Shannon Creek and Hardscrabble Creek, Nass Ranges of Hazelton Mountains.

3. Indicate the biogeoclimatic zone of which the reserve is representative.

CWHa and MH

4. Approximate total acreage.

22,212 acres

5. Purpose of the reserve.

To preserve virgin ecosystems of the dry subzone of the CWH and its subalpine zone (MH). The only untouched area in the Skeena River Basin, opened to east and with exposures to the north and south.

- (a) Primary (state acreage)

A: 5,106 acres

- (b) Others if any (state acreage)

B: 8,806 acres

- (c) Buffer areas (state acreage)

C: (Shannon Creek valley) : 8,300 acres (some cautious logging operations could be permitted in C)

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. Tsuga heterophylla, T. mertensiana (and their occasional hybrids), Pinus contorta, Picea engelmannii, Picea sitchensis (and their hybrids), Abies lasiocarpa, A. amabilis, Thuja plicata, (very little at the bottom of the valley), Populus tremuloides and Populus trichocarpa (very little at the bottom), Betula papyrifera and Alnus rubra (very little at the bottom of the valley). Their growth is worse than in the coastal area.

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

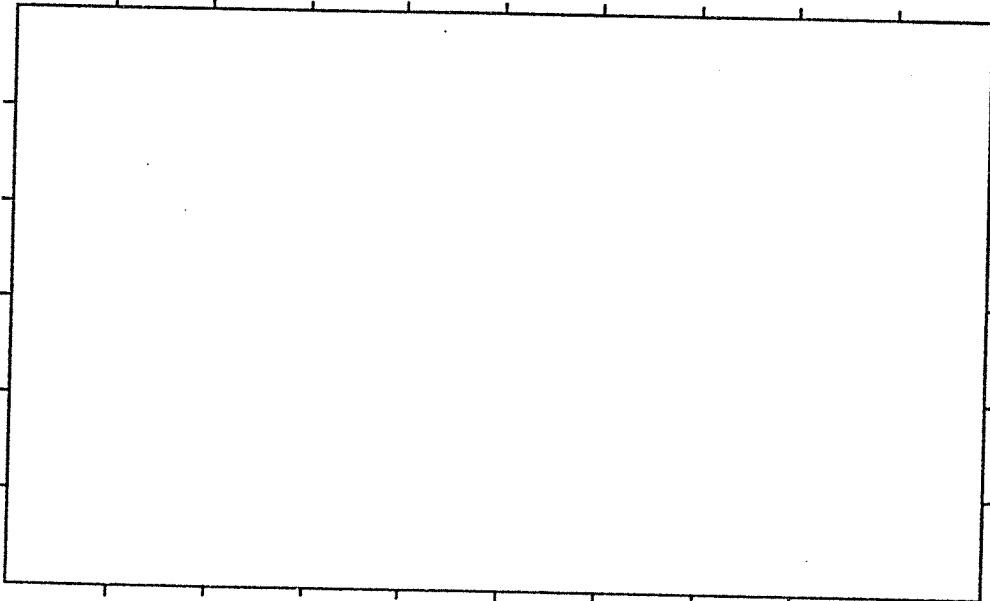
Serial Number

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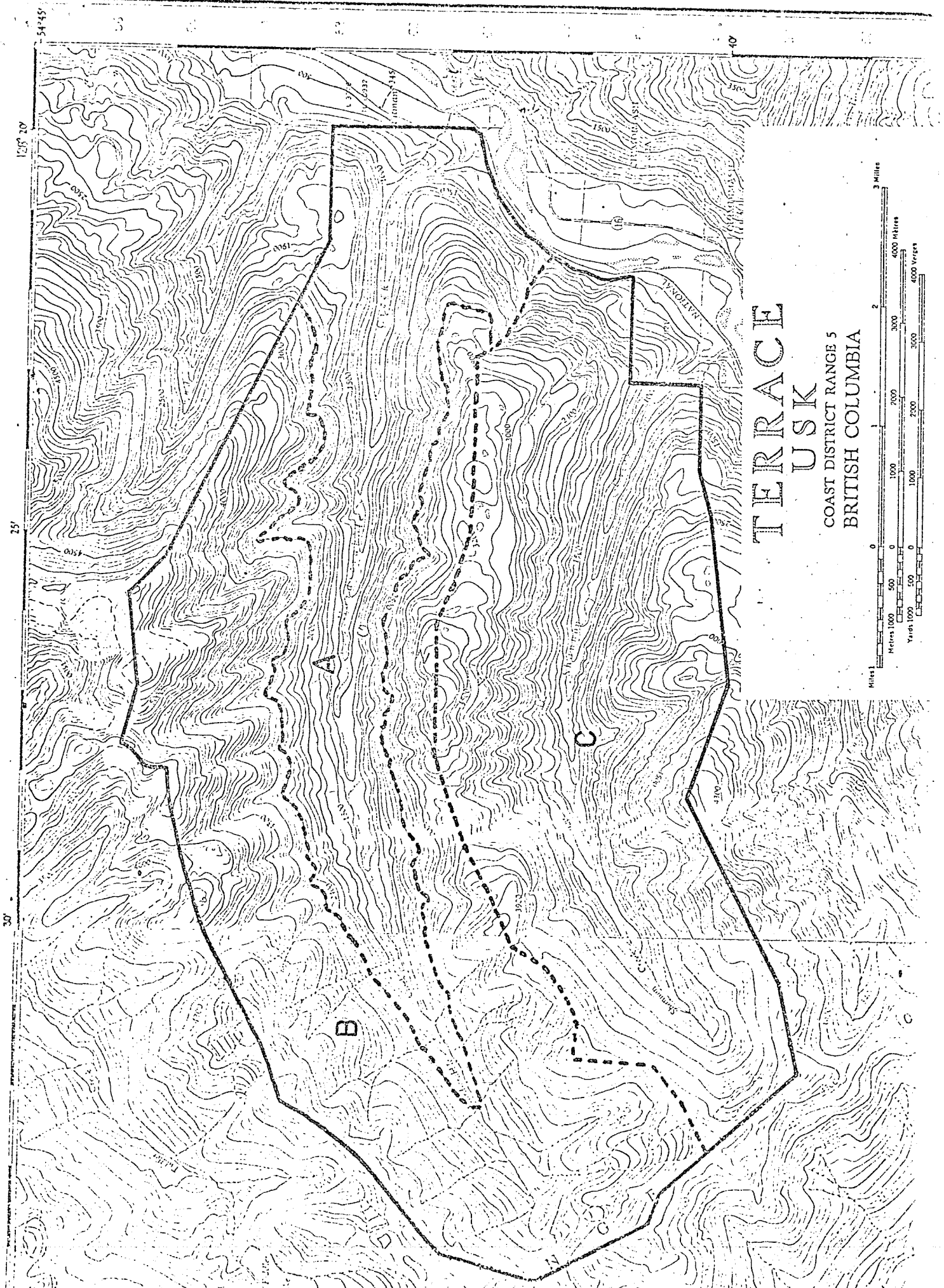
For Data Centre Use only

- 1.
1. Name of surveyor V.J.Krajina
 2. Address of surveyor Department of Botany,
 University of British Columbia,
 Vancouver, B.C. Canada.
 3. Check Sheet completed (a) on site X (b) from records X
 4. Date Check Sheet completed August 6, 1973 and November 27, 1973

- 2.
1. Name of IBP Area Shannon Creek and Hardscrabble Creek, Nass Ranges of Hazelton
 Mountains.
 2. Name of IBP Subdivision (or serial letter) QWHa and MH
 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.



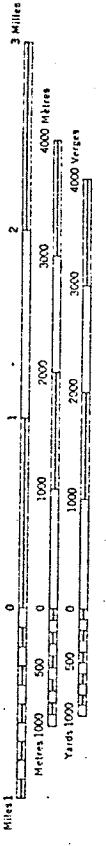
* For "IBP Area", read IBP Area and/or IBP Subdivision.



TERRACE

USK

COAST DISTRICT RANGE 5
BRITISH COLUMBIA



3. Location of IBP Area*

1. Latitude ⁵⁴.....° 39.5-44.4° N ~~E~~ Longitude. 128.....° 19.9-34.5° R/W
2. Country Canada
- State or Province British Columbia..... County Terrace (Prince Rupert).....
(State or Province County

4. Administration

- National 1. Official category Crown Land
2. Address of administration B.C. Department of Lands, Forests and Water.....
Resources,.....
Victoria, B.C. Canada......
.....
.....

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) 22,212 acres A(primary) : 5,106 acres
B : 8,806 acres
C : 8,300 acres
2. Altitude (state units of measurement) Maximum 5300' (1650m).....
Minimum 200' (60m).....

6. Climate

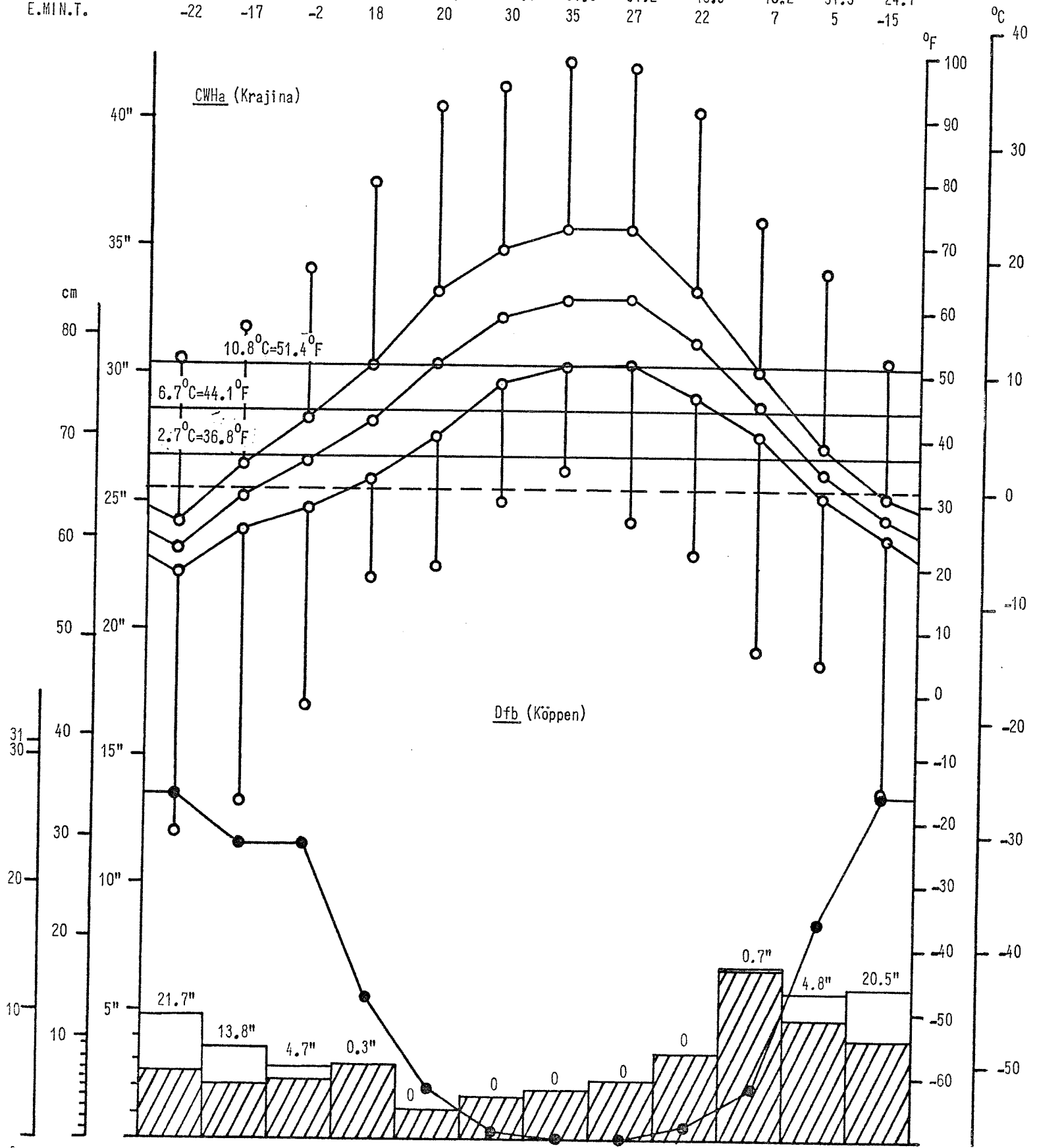
Nearest climatological station :

1. Name Terrace
2. Climatological station on IBP Area*? Yes No X.....
3. If (2) not, distance from edge of IBP Area* (state units) 11 miles
4. Direction from IBP Area* SW
5. Additional data sheet attached? Yes X No

TERRACE .54°30'N, 128°30'W, 200' ASL. Record: 10-41 years, adjusted.

Months above 50°F: 5, below 32°F: 3, A.M.T.P. 43.25', A.M.S.F. 71.5", snow % A.M.T.P.: 16.53, days with frost, yearly: 137.

E.MAX.T.	52	57	66	80	92	95	99	98	91	74	66	52
M.D.MAX.T.	26.9	35.9	43.3	51.4	62.6	69.1	72.4	72.5	63.0	50.2	38.4	31.0
M.D.T.	23.0	30.9	36.2	42.6	51.7	58.6	61.7	61.9	59.8	45.2	34.9	27.9
M.D.MIN.T.	19.0	25.8	29.1	33.8	40.7	48.1	51.0	51.2	46.5	40.2	31.3	24.7
E.MIN.T.	-22	-17	-2	18	20	30	35	27	22	7	5	-15

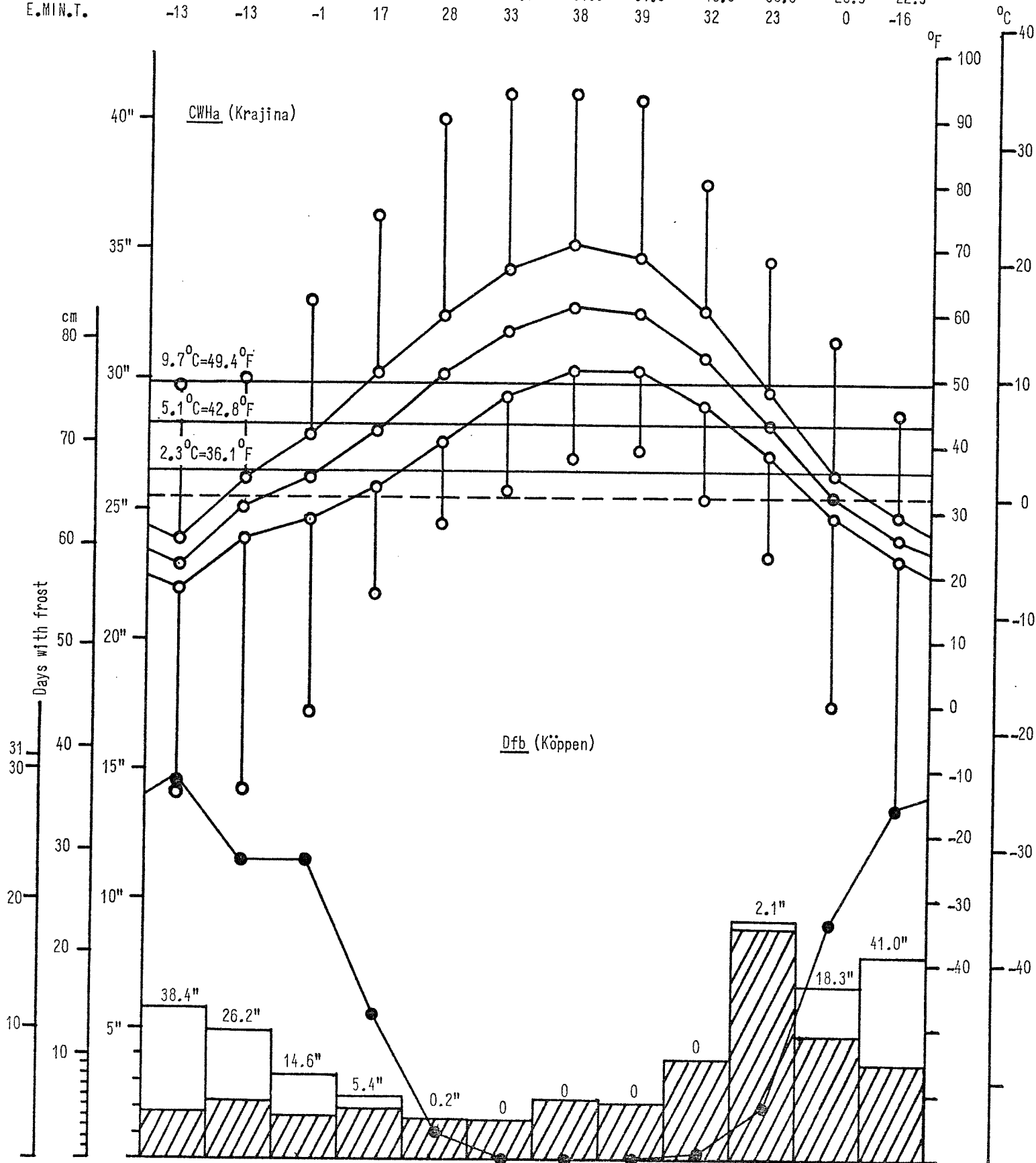


Days with frost	27	23	23	11	4	*	0	0	1	4	17	27
M.M.T.P.	4.38	3.55	2.86	2.96	1.17	1.56	1.99	2.38	3.47	6.77	5.75	5.96
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

TERRACE AIRPORT 54°28'N, 128°35'W, 719' ASL. Record: 15-16 years, adjusted.

Months above 50°F: 5, below 32°F: 3, A.M.T.P.: 51.22", A.M.S.F.: 146.2", snow % A.M.T.P.: 28.54, days with frost, yearly: 137.

E. MAX. T.	49	50	62	75	90	94	94	93	80	68	56	45
M. D. MAX. T.	25.7	34.9	41.5	50.7	59.9	66.8	70.6	68.5	60.6	48.1	35.8	29.3
M. D. T.	21.8	30.3	35.2	42.3	50.3	57.2	61.1	60.0	53.4	43.3	32.4	25.9
M. D. MIN. T.	17.9	25.7	28.8	33.8	40.5	47.5	51.5	51.5	46.0	38.6	28.9	22.5
E. MIN. T.	-13	-13	-1	17	28	33	38	39	32	23	0	-16



Days with frost

M. M. T. P.

MONTH

29	23	23	11	2	0	0	0	*	4	18	27
5.70	4.97	3.11	2.47	1.55	1.54	2.32	2.23	3.89	9.13	6.60	7.71
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

7. Vegetation and Soil

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Vegetation

Community Reference Number	Vegetation Code					Plant communities (give usual name using full Latin names of a species where applicable)	Area (state units)
	Primary Structural Group	Class	Group	Formation	Sub-Formation		
CWHa: 1	1	A	1	7	a	Pleurozio (schreberi) - Pachystimo (mysinitis) - Pino (contortae) - Tsugetum heterophyllae	
2	1	A	1	7	a	Hylocomio (splendens) - Gymnocarpio (dryopteridis) - Abieto (lasiocarpae) - Piceo (glaucae) - Tsugetum heterophyllae	
3	1	A	1	7	a	Rhizomnio (pseudopunctati) - Oplopanaco (horridi) - Tsugo (heterophyllae) - Thujetum plicatae	
4	1	A	1	7	a	Corno (stoloniferae) - Salico (sitchensis) - Alno (rubrae) - Populo (tremuloidis) - Piceetum sitchensis	
MH: 5	1	A	1	7	a	Rhytidiadelpho (lorei) - Vaccinio (ovalifolii) - Abieto (lasiocarpae) - Tsugetum mertensiana	
6	1	B	1	7		Cassiopo (mertensiana) - Nano-Tsugetum mertensiana	
7	1	C	1	2	b	Cladonio (gracilis) - Cassiopetum mertensiana	
8	1	C	1	2	b	Luetkeo (pectinatae) - Cassiopetum stelleriana	
9	1	M	2	1		Faurio (cristae-galli) - Caricetum nigricantis	
10	1	C	1	2	b	Cassiopo (mertensiana) - Luetkeo (pectinatae) - Nano-Abietetum lasiocarpae	
11	1	O	2	2		Cladonietum bellidiflorae	
12	1	N	2	1		Ranunculo (eschschooltzii) - Luetkeo (pectinatae) - Calthetum leptosepalae	
13	1	B	2	1	a	Valeriano (sitchensis) - Alnetum sinuatae	
14	1	D	1	4	a	Vaccinio (membranacei) - Tsugetum mertensiana	
15						And many other plant communities, which were not surveyed.	
16							
17							
18							
19							
20							

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7.
(cont.)

2

Soil

Community Reference Number	Soil type	Other notes
1	ABC F ₅	Humo-Ferric Podzol
2	ABC F ₅	Brunisol/Mini Podzol
3	ABGC F ₅ /P ₂	Gleyed Podzol
4	AGC/AC P ₂ /I ₂	Gleyed Regosol
5	ABC F ₅	Humo-Ferric Podzol
6	ABC F ₅	Mini Podzol
7	AC F ₃	Brown Ranker
8	AC ABC F ₃ /F ₅	Brown Ranker - Mini Podzol
9	AGC P ₂	Gleysol - snow basin anmoor
10	AC/AGC F ₃ /P ₂	Moist Brown Ranker (moisture is from a seepage)
11	AC F ₃	Ranker (dry)
12	AGC P ₂	Gleysol
13	AGC P ₂	Gleysol
14	ABC F ₅	Mini Podzol
15		
16		
17		
18		
19		
20		

CWHa:

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MH:

9. Landscape

1. General Landscape (give brief description) Alpine mountains, a model case of Nass Ranges, Hazelton Mountains

2. Relief Type

	Flat	Undulating (0)-200 m.	Hilly 200-1000 m.	Mountainous > 1000 m.	%
Sharply dissected				50	50
Gently dissected				30	30
Incised				20	20
Skeletonised					
%				100	100%

3. Special landscape features (list) two parallel alpine valleys

10. Coastline of IBP Area*

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)

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	

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps	X			
Ponds	X			
Lakes	X, a small lake			

3. Running Water

	Permanent	Intermittent
Springs, cold		
Springs, hot		
Streams	X	Hardscrabble Creek (major interest)
Rivers		Shannon Creek (of minor interest)

4. Special freshwater features several waterfalls

12. Salt and Brackish Water within IBP Area*

nil

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

Skeena River

2. Salt and Brackish nil

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										
Reptilia		?										
Amphibia		X										
Pisces		?										
Insecta		X										

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

Golden eagles (Aquila chrysaetos canadensis) were observed.

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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		X									
shrubs		X	X		X	X					
herbs		X	X		X	X					
grass		X									
Gymnospermae		X			X	X					
Pteridophyta		X				X					
Bryophyta		X	X			X					
Lichens and Algae		X	X			X					

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

The plant communities, occurring here, are exactly corresponding to the climates of this geographic area.

15. Exceptional Interest of IBP Area*

Very outstanding sample of nature, representative for drier CWH zone and the drier but still snowy. Engelmann spruce representative of yet drier and less snowy climates is still very rare.

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	

in the Shannon
Creek Valley

3. Additional details on each type of impact attached?

Yes No

17. Conservation Status Future

	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	
Fauna	X			X					X		X	
Non-living	X			X					X		X	

18. References

1. List major biological/geographical references for the IBP Area.

Sheet attached? Yes No

2. List main maps available for the IBP Area.

List attached? Yes No

3. Aerial photographs for the IBP Area available?

For whole area For part of area None

19. Other Relevant Information

Most important area for a better understanding of ecosystems evolved under these relatively drier and cooler variations of the coastal climates. However, even in the subalpine zone the impact of the influence of the effect of the Pacific Ocean is still strong.

V.J. Krajina

Signed V.J. Krajina
(Surveyor)