

APPLICATION FOR ECOLOGICAL RESERVE

1. **Legal description of the area (or general "Metes and bounds" description)**
Land area as shown on the map plus the shoreline, several islets and rocks, the seabed and the overlying water column within that portion of Queen Charlotte Sound whose S boundary is the shoreline, N boundary is the 10 fathom line, and E & W boundaries are lines running 30° NNW from the E & W shoreline corners of the land area, respectively.
2. **Geographical location (relate to nearest settlement, mountain, river, etc.)**

Shuttleworth Bight + Stranby River estuary, northern Vancouver Island
3. **Indicate the biogeoclimatic zone of which the reserve is representative.**

CWha + West Coast Littoral biotic area (Vancouver Island)
4. **Approximate total acreage.**

1,800 acres
5. **Purpose of the reserve.**
Conservation of an excellent combination of coastal terrestrial, estuarine, and marine ecosystems.
 - (a) **Primary (state acreage)**
600 acres (land)
1200 acres (water)
 - (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.

Tsuga heterophylla
Thuja plicata
Picea sitchensis
Alnus rubra

Chamaecyparis nootkatensis
Pinus contorta

J.C. Lyons, Kathryn Kennedy,
Signature Jim Pojar
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

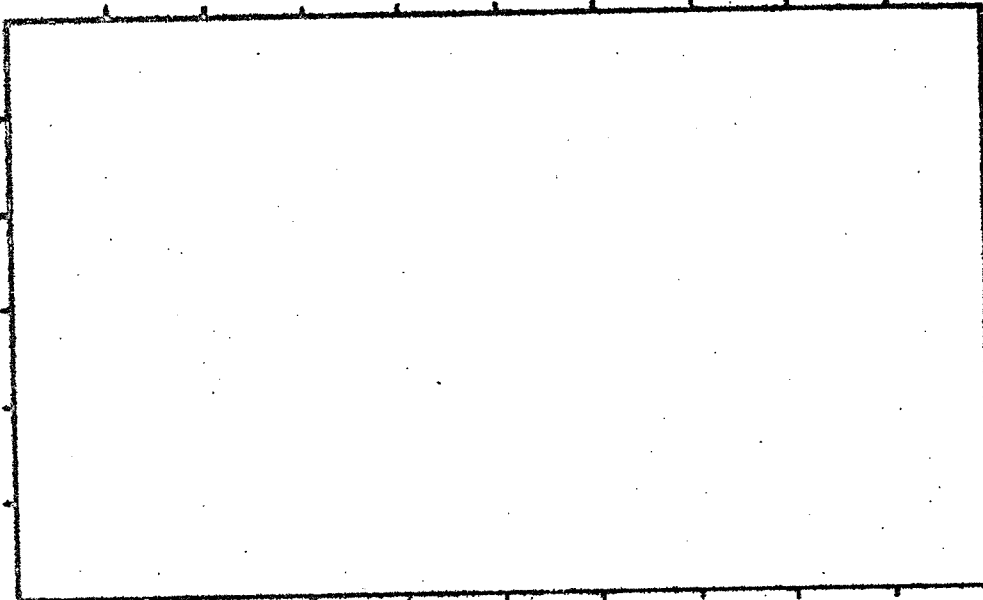
Serial Number

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For Data
Centre Use
only

1. **Name of surveyor** *J.C. Lyons, Regional Director, and Kathryn Kennedy
 **Jim Pojar
2. **Address of surveyor** *B.C. Fish & Wildlife Branch
 324 Terminal Avenue, Nanaimo, B.C.
 V9R 5C8
 **Ecological Reserves Programme,
 Victoria, B.C.
3. **Check Sheet completed (a) on site** ...X..... (b) from records
4. **Date Check Sheet completed** Oct. 7, 1975

2. 1. **Name of IBP Area** Shuttleworth Bight + Stranby River estuary
2. **Name of IBP Subdivision (or serial letter)** CWHa
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.



WHEN REPLYING PLEASE STATE

OUR FILE NO. 79-07

YOUR FILE NO.

DEPARTMENT OF RECREATION AND CONSERVATION
FISH AND WILDLIFE BRANCH

324 Terminal Avenue
Nanaimo, B. C.
V9R 5C8

July 17, 1975

Director of Land Management
Ecological Reserves
Parliament Buildings
Victoria, B. C.

Dear Sir:

The Nanaimo Fish And Wildlife Branch submits this proposal
for an ecological reserve at Shuttleworth Bight.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. C. Lyons".

J. C. Lyons
Regional Director

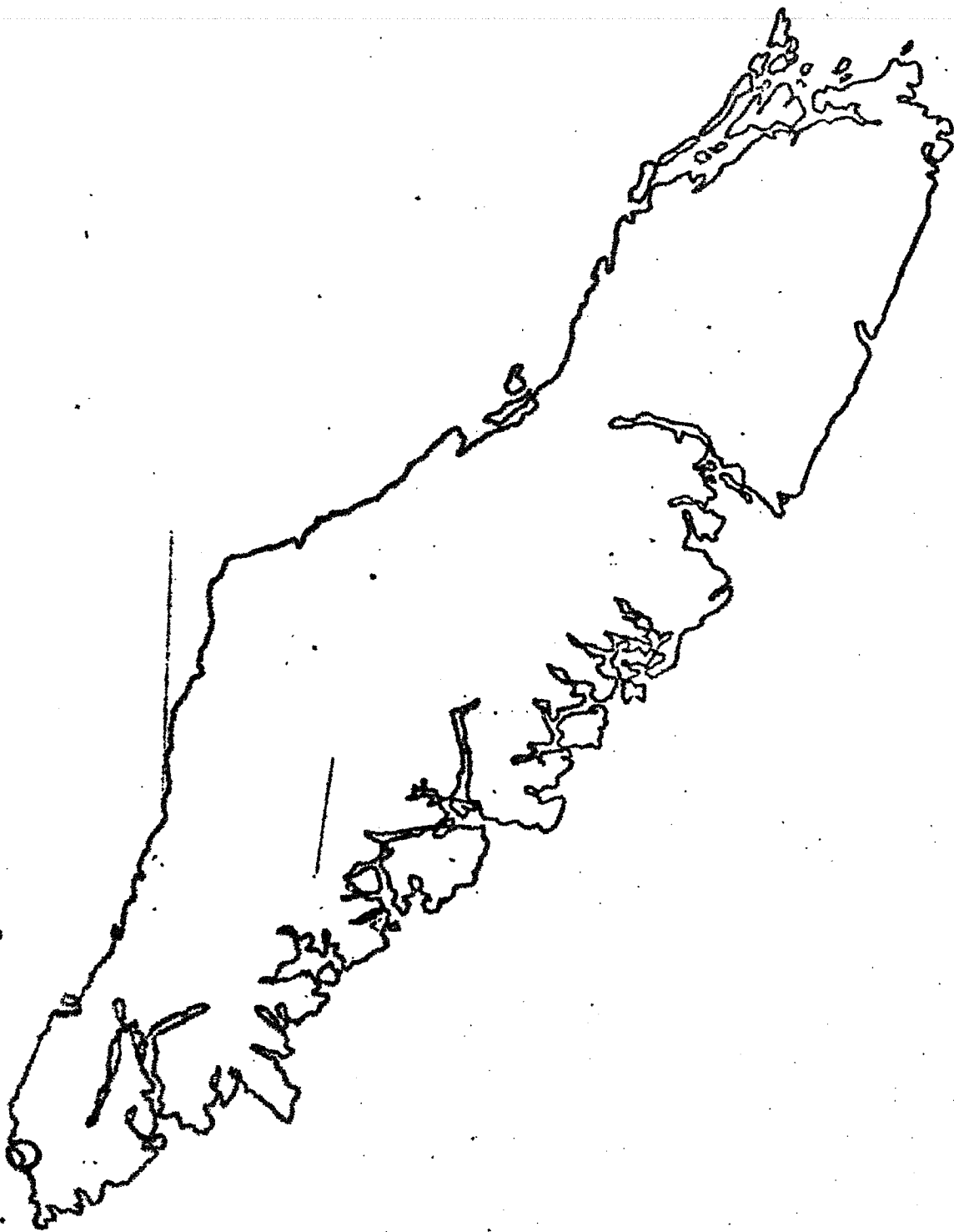
KK:bms
Enclosures

(amended by J. P. P. P. P.)

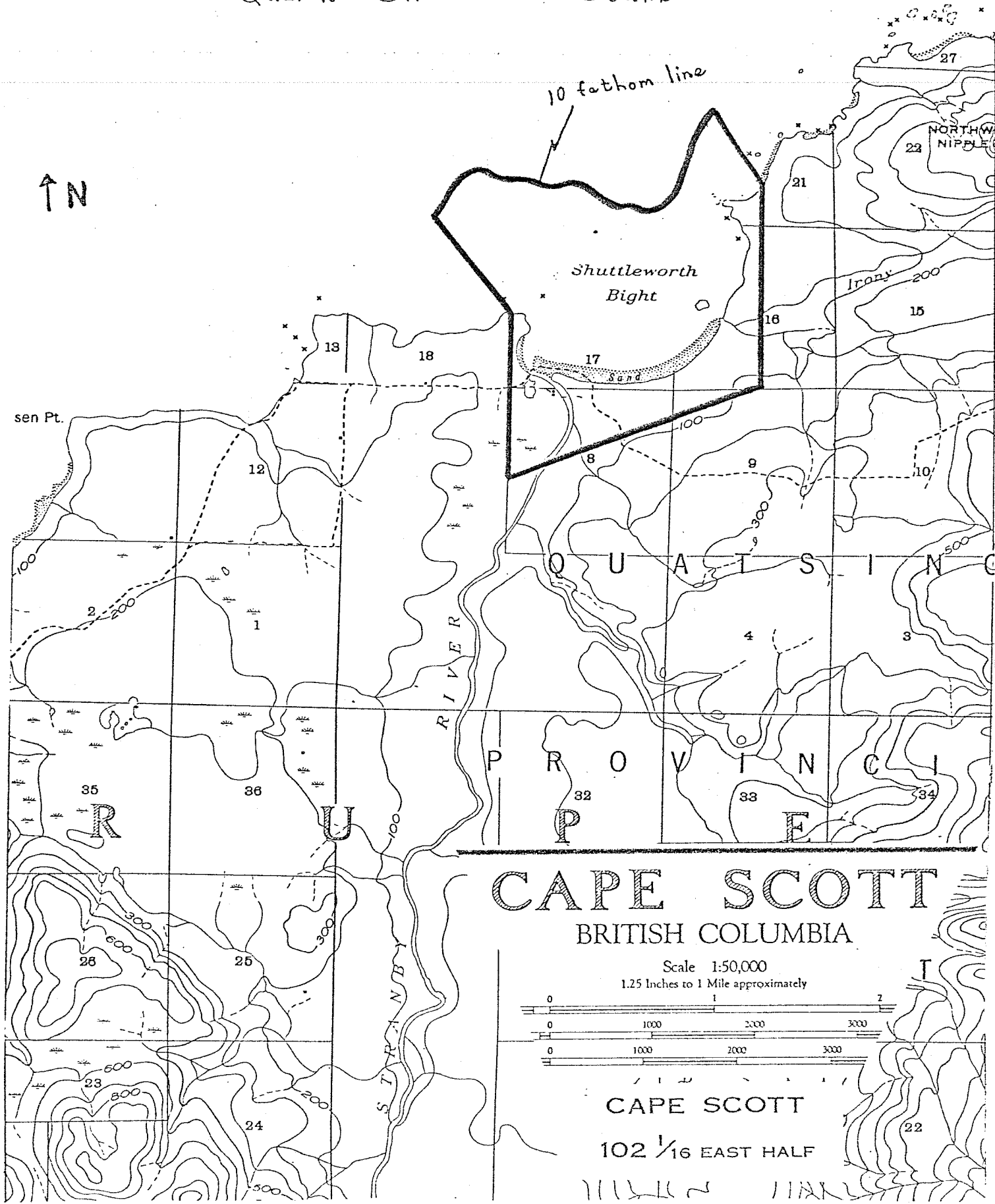


"A LAND FIT FOR WILDLIFE IS A LAND FIT FOR PEOPLE"

Skullwort h. Bight

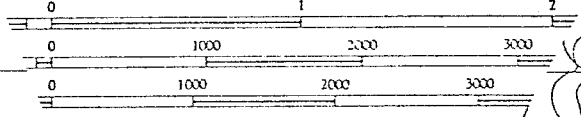


QUEEN CHARLOTTE SOUND



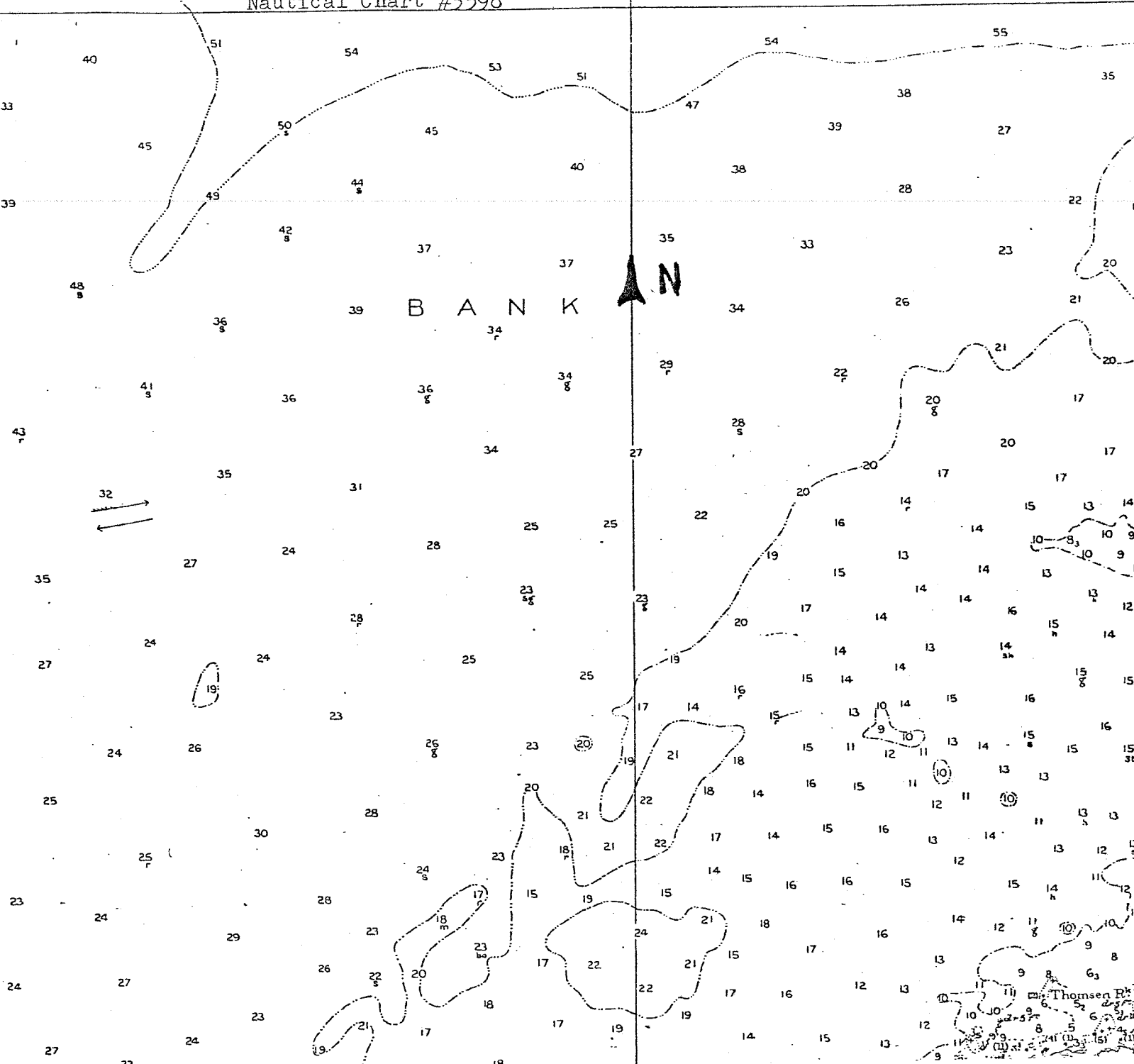
CAPE SCOTT BRITISH COLUMBIA

Scale 1:50,000
1.25 Inches to 1 Mile approximately



CAPE SCOTT
102 1/16 EAST HALF

WILSON HARRISON



3. Location of IBP Area*

1. Latitude 50° 50' N Longitude 128° 10' W
 2. Country Canada
 State or Province British Columbia County
 (State or Province County)

4. Administration

National 1. Official category Crown-Grant-Section 17 and vacant Crown Land
 See attached sheet for Land Use.
 2. Address of administration Lands Branch
 # 215 Court House
 420 Cumberland Road
 Courtenay, 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) 1,800 acres
 2. Altitude (state units of measurement) Maximum ≈ 50 ft.
 Minimum sea level

6. Climate

Nearest climatological station:

1. Name Bull Harbour
 2. Climatological station on IBP Area*? Yes No X
 3. If (2) not, distance from edge of IBP Area* (state units) 10.5 mi. (= 17 km)
 4. Direction from IBP Area* ENE
 5. Additional data sheet attached? Yes X No

LAND USE

There is a cabin on the east bank of the Stranby River. The cabin is on Crown Land (section 17, fraction south) and is built through SUP 6081. The Vancouver District Forester's file MSUP 6081 contains the details of SUP 6081.

The balance of the Stranby River Estuary to the south of the east bank cabin and the west bank is owned by J. and H. Shuttleworth. The Shuttleworth's are related to the original settlers after whom Shuttleworth Bight is named. Remnants of the old homestead are seen in rusted out pots, apple trees, and the old home. J. and H. Shuttleworth have the 315 acres listed with William Sinser Realty (434-8731) for \$300,000 (August 1974). The river is used extensively by salmon, deer, seals, eagles and other wildlife.

BULL HARBOUR	LATITUDE 50° 55' N	LONGITUDE 127° 57' W	ELEVATION 45 FT	ASL	Year											
					January	February	March	April	May	June	July	August	September	October	November	December
MEAN DAILY TEMPERATURE (DEG F)	36.3	40.5	41.2	44.7	49.0	53.0	55.9	56.4	54.0	49.2	43.4	39.9	47.1			
MEAN DAILY MAXIMUM TEMPERATURE	42.1	45.1	46.6	50.4	54.8	58.1	60.9	61.5	59.1	54.4	47.7	43.8	52.0			
MEAN DAILY MINIMUM TEMPERATURE	34.4	35.8	35.8	38.9	43.2	47.9	51.0	51.3	48.8	44.0	39.1	36.0	42.2			
EXTREME MAXIMUM TEMPERATURE	62	68	72	72	85	100	78	86	84	77	75	60	100			
NO. OF YEARS OF RECORD	49	49	48	48	49	49	49	48	49	49	50	50	50			
EXTREME MINIMUM TEMPERATURE	9	14	13	26	28	37	40	40	32	21	18	10	9			
NO. OF YEARS OF RECORD	49	49	49	49	49	49	50	49	49	49	50	50	50			
NO. OF DAYS WITH FROST	10	8	7	2	*a	0	0	0	0	*	3	7	37			
MEAN RAINFALL (INCHES)	8.34	6.40	5.53	4.73	2.97	2.42	2.41	3.06	5.37	10.65	9.67	10.21	71.76			
MEAN SNOWFALL	7.9	3.1	2.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	17.6			
MEAN TOTAL PRECIPITATION	9.17	6.72	5.75	4.76	2.97	2.42	2.41	3.06	5.37	10.65	9.78	10.50	73.56			
GREATEST RAINFALL IN 24 HRS	6.25	6.19	2.41	2.08	2.02	2.21	2.60	1.89	4.61	3.19	3.97	5.29	6.25			
NO. OF YEARS OF RECORD	48	49	49	49	49	49	50	49	49	49	50	50	50			
GREATEST SNOWFALL IN 24 HRS	12.0	9.0	9.3	4.5	T ^b	0.0	0.0	0.0	0.0	T	6.8	12.0	12.0			
NO. OF YEARS OF RECORD	48	49	49	49	49	49	50	49	49	49	50	50	50			
GREATEST PRECIPITATION IN 24 HRS	6.25	6.19	2.41	2.08	2.02	2.21	2.60	1.89	4.61	3.19	3.97	5.29	6.25			
NO. OF YEARS OF RECORD	49	49	49	49	49	49	50	49	49	49	50	50	50			
NO. OF DAYS WITH MEASURABLE RAIN	20	18	19	18	14	13	12	13	16	22	23	23	211			
NO. OF DAYS WITH MEASURABLE SNOW	4	2	2	*	0	0	0	0	0	0	1	2	11			
NO. OF DAYS WITH M. PRECIPITATION	22	18	20	18	14	13	12	13	15	22	23	24	215			

a Not measured

b The period of record used to compute the means is the 30 years between 1941 and 1970.

7. Vegetation and Soil

1 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		
1	1	M	2	2		<i>Salicornia virginica</i> - <i>Fucus gardneri</i>	
2	1	M	2	2		<i>Carex lyngbyei</i> - <i>Deschampsia caespitosa</i> salt marsh	
3	2	G	2	1		<i>Elymus mollis</i> - <i>Lathyrus japonicus</i> marine halophytic community	
4	1	M	2	2		<i>Deschampsia caespitosa</i> - <i>Triglochin maritimum</i> - <i>Potentilla pacifica</i> <i>Trifolium wormskjoldii</i> brackish grass/forb meadow	
5	1	A	1	7	a	<i>Tsuga heterophylla</i> - <i>Picea sitchensis</i> - <i>Rubus spectabilis</i> - <i>Polystichum munitum</i> alluvial floodplain forest	
6	1	A	1	7	a	<i>Picea sitchensis</i> - <i>Gaultheria shallon</i> - moss strand/sea spray forest	
7	1	A	1	7	a	<i>Tsuga heterophylla</i> - <i>Thuja plicata</i> - <i>Vaccinium</i> spp. - <i>Rhytidiadelphus loreus</i> - <i>Plagiothecium undulatum</i>	
8							
9						+ other unurveyed lowland forest and bog communities	
10							
11						+ several uninvestigated intertidal and marine communities, including	
12						<i>Nereocystis luetkeana</i> beds	
13							
14							
15							
16							
17							
18							
19							
20							

Please give information about further communities on a separate sheet.

The areas represent plant associations. The percent coverage of each area by vegetation is given with the name of the area. The presence of a plant species in an area is indicated by a check mark (✓) in the area's column opposite the species. A percentage indicates the plant is dominant and indicates its percent coverage of the vegetated area.

PLANT	AREA				
	1 FOREST 90%	2 BEACHLOG 45%	3 GRAVEL BAR 15%	4 FARM MEADOW 85%	5 MARSH MEADOW 65%
<u>Trees and Shrubs</u>					
<i>Pyrus malus</i>				✓	
<i>Picea sitchensis</i>	40%			✓	
<i>Crataegus douglasii</i>				✓	
<i>Alnus rubra</i>	✓				
<i>Thuja plicata</i>	✓				
<i>Tsuga heterophylla</i>	✓				
<i>Rosa</i> sp.				✓	
<i>Gaultheria shallon</i>	20%				
<i>Rubus parviflorus</i>	✓			✓	
<i>Vaccinium parvifolium</i>	✓				
Cultivated tree				✓	
<u>Forbs</u>					
<i>Taraxacum</i> sp.		✓		✓	
<i>Stachys cooleyae</i>				✓	
Cultivated vine				✓	
<i>Achillea millefolium</i>				✓	
<i>Trifolium wormskjoldii</i>			5%	✓	5%
<i>Plantago lanceolata</i>				✓	
<i>Spergularia</i> sp.		✓			
<i>Plantago maritima</i>		✓	10%		✓
<i>Fragaria chiloensis</i>		5%			
<i>Lathyrus japonicus</i>		10%			
<i>Trifolium repens</i>		✓		✓	
<i>Maianthemum dilatatum</i>	✓				
<i>Galium</i> sp.	✓			✓	
<i>Potentilla pacifica</i>			10%	✓	5%
<i>Glaux maritima</i>			10%		
<i>Lomatium</i> sp.				✓	
<i>Triglochin maritimum</i>					10%
<i>Atriplex</i> sp.					✓

7.
(cont.)

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Soil

Community Reference Number	Soil type	Other notes
1	I ₂	regosol (influenced by brackish water)
2	I ₂	regosol (influenced by brackish water)
3	I ₂	regosol
4	I ₂	gleyed regosol
5	I ₂	gleyed regosols (alluvial)
6	I ₂	regosols
7	F ₅	humo-ferric podzols
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

9. Landscape

1. General Landscape (give brief description)
 Level to gently sloping topography + ocean.

2. Relief Type

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

3. Special landscape features (list)
 To the east of Stranby River is a sand beach and to the west
 is a bedrock outcrop. The mouth of the Stranby River has
 10 foot high gravel deposits - attesting to the wave and wind energy.

10. Coastline of IEP 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
10			90				

3. Physiography. % of coast

Cliffed	Sloping	Flat
	10	90

4. Special Coastal Features (list)
 1.2 miles of sand beach; 1.1 miles of bedrock outcrops and
 sand beach; Stranby River estuary

5. Tides. Maximum range (state units of measurement) 16.5 feet by the Alert Bay
 tide table

6. Total length of coastline :
 Less than 1 km. 1-10 km. 1.4 Above 10 km.

11. Freshwater within IBP Area*

1.

	Permanent	Intermittent
General		
Standing		
Running	X	

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 pool inside river mouth
 seasonally inundated land

12. Salt and Brackish Water within IBP Area*

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

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

1. Fresh Lake River Stream

2. Salt and Brackish

Estuary	Salt lake	Salt pool	Lagoon	Ocean		
				X		

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	X		X			X	X	X	X		
Aves	X	X		X				X	X	X		
Reptilia												
Amphibia												
Pisces	X	X	X						X			
Insecta	X											

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

Aves - Haliaeetus leucoccephalus - bald eagle

Mammalia - Cervus canadensis roosevelti - Roosevelt elk

Felis concolor - cougar

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

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

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.....

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15. Exceptional Interest of ISP Area?

The aquatic and marine production associated with Shuttleworth Bight. An estuary, coastal sand beach, gravel beach, salt marsh, and alluvial forest. Excellent combination of coastal ecosystems.

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16. Significant Human Impact

1. **General** : None in entire IBP Area*
 None in part of IBP Area* the abandoned Shuttleworth homestead
 Impact on entire IBP Area*

2. **Particular**

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

3. **Additional details on each type of impact attached?**

Yes No

17. Conservation Status (required)

	Protection			Utilization			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

- List major biological/geographical references for the IBP Area.
 Sheet attached? Yes No None available
- List main maps available for the IBP Area.
 List attached? Yes No National Topographic Series
 102 I/16 E (1:50,000)
- Aerial photographs for the IBP Area available?
 For whole area For part of area None

19. Other Relevant Information

Signed J.C. Lyons, Kathryn Kennedy
 Jim Pojar
 (Surveyor)