

APPLICATION FOR ECOLOGICAL RESERVE

1. Legal description of the area (or general "Metes and bounds" description)

Unnamed islets off southwest and northwest coasts of Anthony Island, Queen Charlotte Islands, and the surrounding sea floor to a depth of 10 fathoms.

2. Geographical location (relate to nearest settlement, mountain, river, etc.)

6 islets off SW coast of Anthony Island;  
14 islets off NW coast of Anthony Island;  
located SW of Moresby Island, Queen Charlotte Islands, B.C.

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

CWHb subzone

4. Approximate total acreage.

Islands approx. 44 ha; marine approx. 204 ha:  
total = approx. 248 ha (613 acres)

5. Purpose of the reserve.

To protect breeding colonies of marine sea-birds nesting on islands with varied habitats.

(a) Primary (state acreage)

44 ha.

(b) Others if any (state acreage)

inter- and sub-tidal ecosystem, approx. 204 ha

(c) Buffer areas (state acreage)

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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.

Picea sitchensis - negligible commercial value

Signature Judy Carson

I.B.P. Surveyor

J.B. Foster, T. Carson, A. Stewart,

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

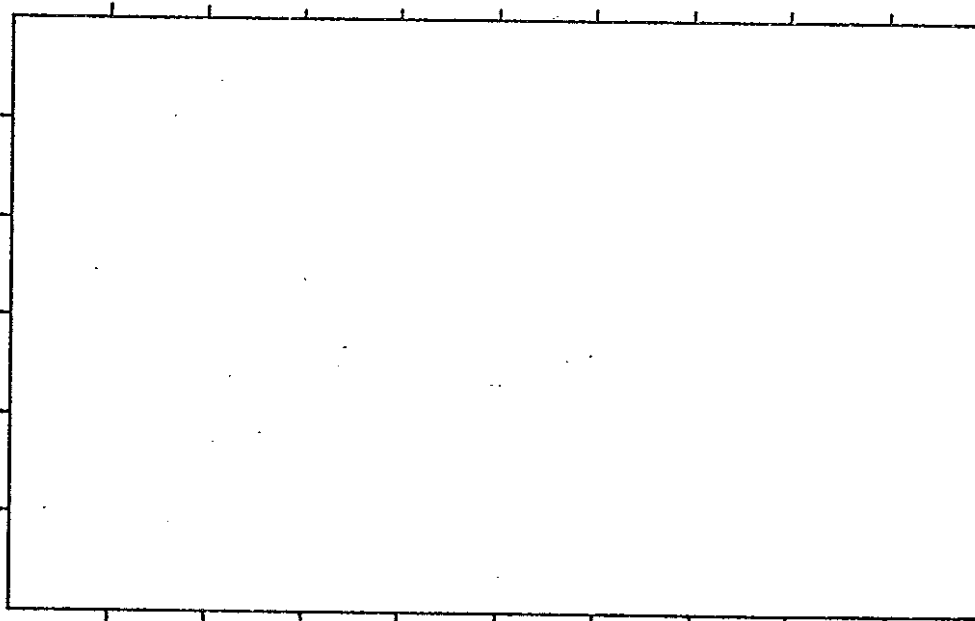
Serial Number

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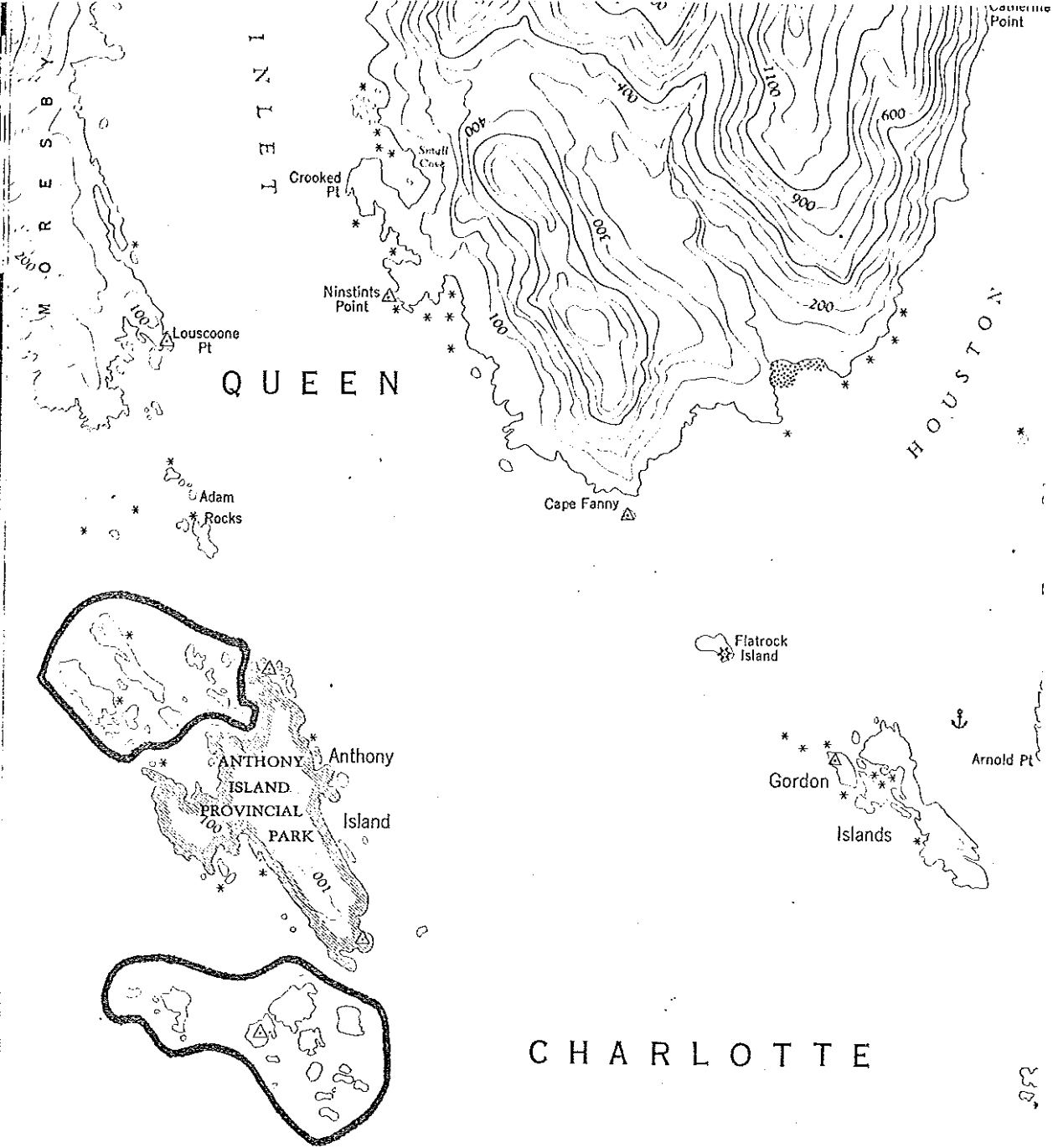
For Data Centre Use only

1. 1. Name of surveyor J.B. Foster, T. Carson, A. Stewart, \*H. Carter, \*R.W. Campbell
2. Address of surveyor Ecological Reserves Unit, Land Management Branch  
Ministry of the Environment, Victoria, B.C. V8V 1X5  
\*B.C. Provincial Museum,  
Victoria, B.C., V8V 1X4
3. Check Sheet completed (a) on site ..... (b) from records ..... X
4. Date Check Sheet completed September 27, 1977

2. 1. Name of IBP Area ..... Islets off north- and southwest coasts of Anthony Island ("Anthony Islets")
2. Name of IBP Subdivision (or serial letter) ..... CWHb
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.



52°  
05'

131°15'

# KUNGHIT ISLAND

QUEEN CHARLOTTE DISTRICT

BRITISH COLUMBIA

SCALE 1:50,000 ÉCHELLE

KUNGHIT ISLAND  
103 B/3 E  
EDITION 2

ISLETS OFF ANTHONY ISLAND - No. 290

52° 07' 30"

MORESBY ISLAND

(29)  
R.62

T.F.L. 24

Cape Fonny

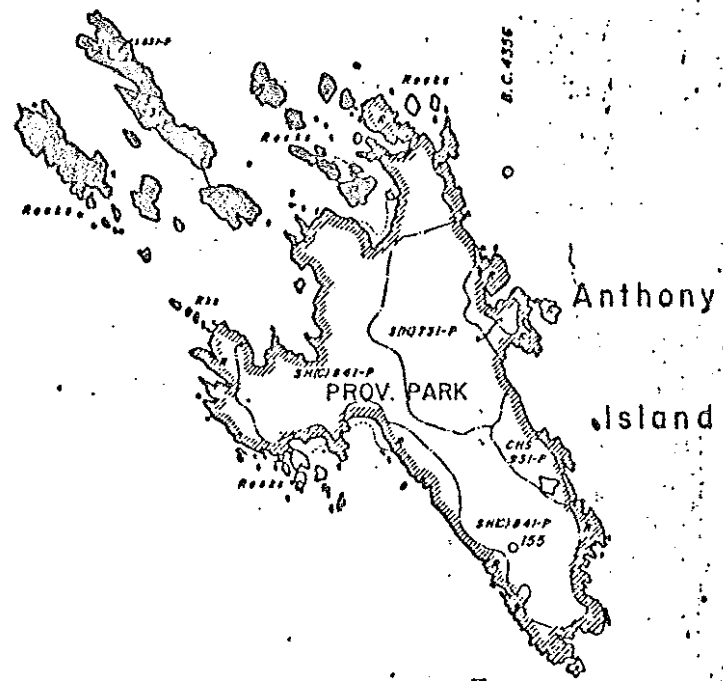
Adam Rks.

(31)  
R.62

MacLeod Shodi

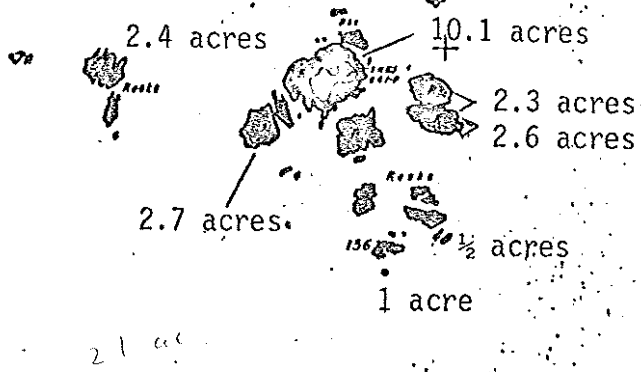
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Floirrock I.

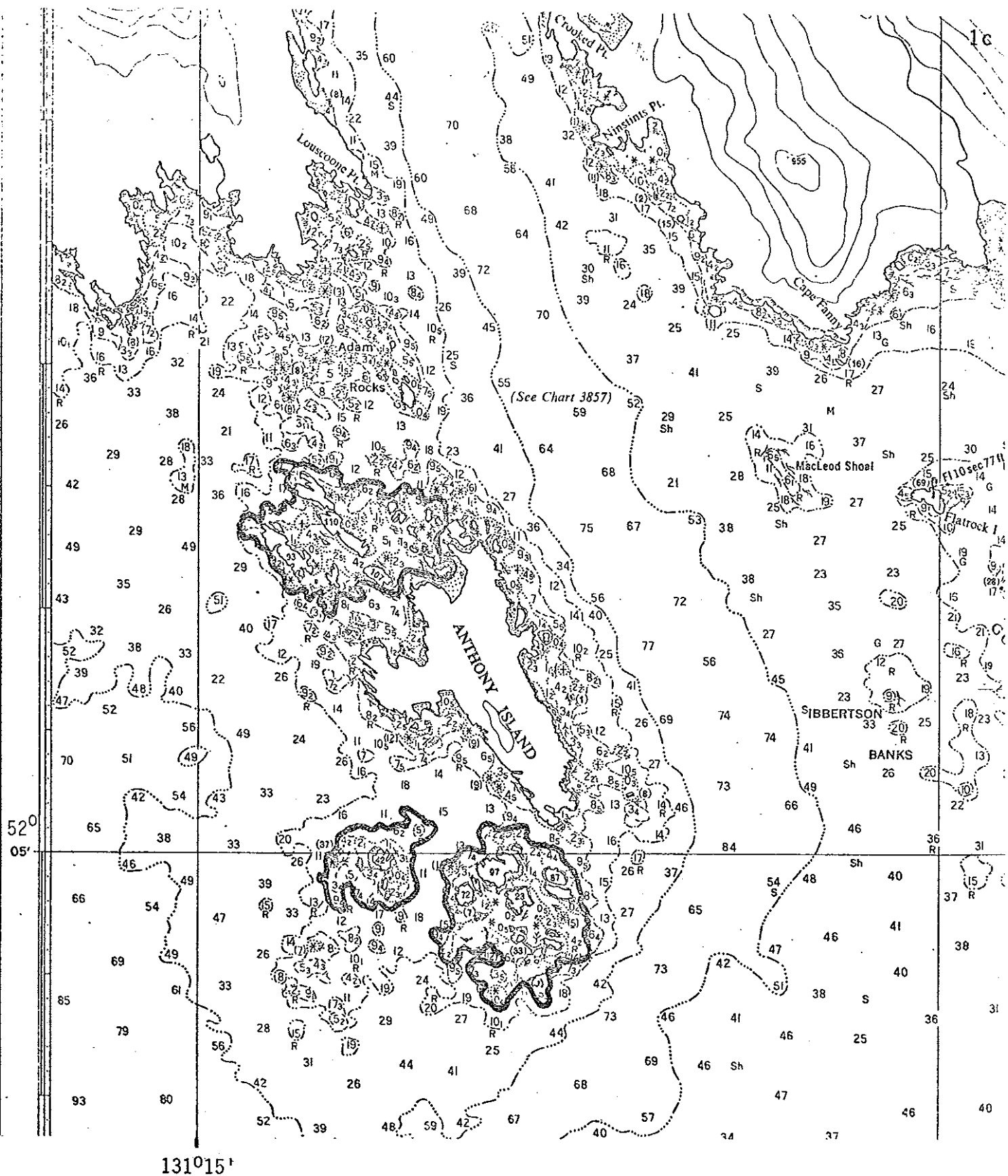


Ibbertson

Bonks



40 chain Forest Cover Map  
E.R.P. No. 290 - "Anthony Islets"



Hydrographic Chart No. 3825 - Cape St. James to Houston Stewart Channel

E.R.P. No. 290 - "Anthony Islets"  
 Boundary approximately following 10 Fathom Contour

3. Location of IBP Area\*

1. Latitude ..... 52° 04-06'30" N Longitude ..... 131° 13-14'30" W

2. Country ..... Canada

State or Province ..... British Columbia County ..... Moresby Island

(State or Province ..... County .....)

4. Administration

National 1. Official category ..... Crown Land; Moresby Provincial Forest

2. Address of administration ..... Land Management Branch, Ministry of the Environment  
Parliament Buildings, Victoria, B.C. V8V 1X5

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) ..... ca. 248 ha

2. Altitude (state units of measurement) Maximum 33.5 m (110')

Minimum -10 fathoms

6. Climate

Nearest climatological station :

1. Name ..... Cape St. James

2. Climatological station on IBP Area\*? Yes ..... No ..... X

3. If (2) not, distance from edge of IBP Area\* (state units) ..... 20 km

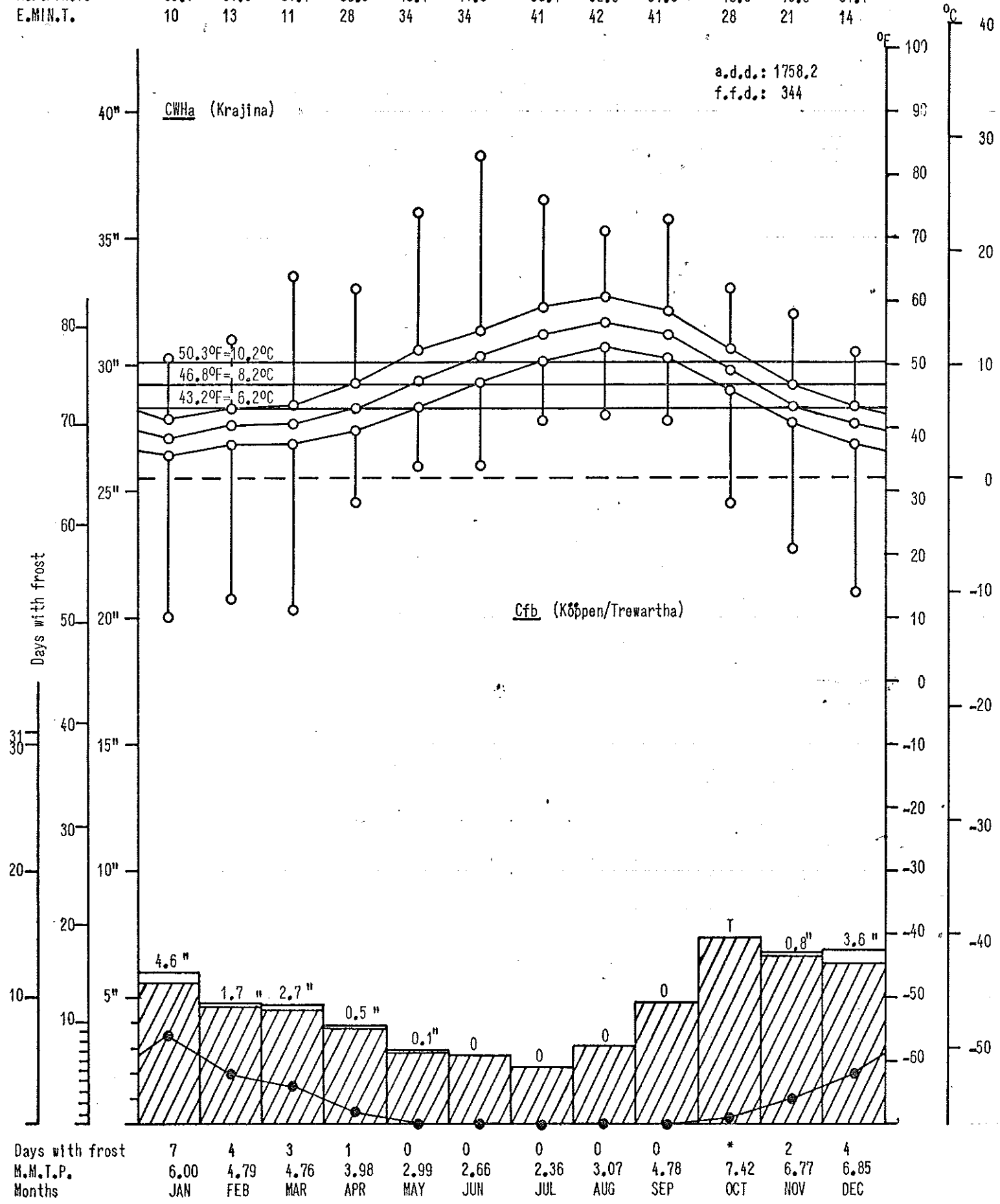
4. Direction from IBP Area\* ..... SE

5. Additional data sheet attached? Yes ..... No ..... X

CAPE ST. JAMES 51°56'N, 131°01'W, 292' ASL. Record: 23-27 years.

Months above 50°F: 4, below 32°F: 0; A.M.T.P. 56.43", A.M.S.F. 14.0", snow % A.M.T.P.: 2.48. days with frost, yearly: 21.

E.MAX.T.	51	54	64	62	74	83	76	71	73	62	58	52
M.D.MAX.T.	41.3	43.0	43.9	47.0	52.1	55.4	58.9	60.6	58.2	52.2	46.9	43.7
M.D.T.	38.4	40.2	40.5	43.3	47.8	51.3	54.7	56.6	54.7	49.1	43.9	40.8
M.D.MIN.T.	35.7	37.3	37.1	39.5	43.4	47.0	50.4	52.6	51.0	46.0	40.9	37.7
E.MIN.T.	10	13	11	28	34	34	41	42	41	28	21	14



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	A	1	7	a	<i>Picea sitchensis</i> - <i>Calamagrostis nutkaensis</i> association	} 97'- islet
2	1	L	1	1		<i>Elymus mollis</i> - driftwood association	
3	1	L	1	1		<i>Elymus mollis</i> - <i>Conioselinum pacificum</i> association	} 72'- islet
4	1	L	2	1		<i>Calamagrostis nutkaensis</i> association	
5	1	L	2	1		<i>Calamagrostis nutkaensis</i> association	} 87'- islet
6	1	A	1	7	aa	<i>Picea sitchensis</i> - moss sp.? association	
7	1	G	1	3		<i>Picea sitchensis</i> krummholz association	} 32'- islet
8	1	N	2	1		<i>Conioselinum pacificum</i> - <i>Mimulus guttatus</i> forb meadow association	
9	1	G	1	3		<i>Picea sitchensis</i> krummholz association	Seal Island
10						<i>Potentilla villosa</i> - <i>Elymus mollis</i> rock crevice association	93'- islet
11						Other islets have either:	
12	1	A	1	7	a	<i>Picea sitchensis</i> - <i>Calamagrostis nutkaensis</i> association or	
13						rock crevice associations	
14							
15						- additional vegetation communities	
16						were present but were not identified	
17						on this initial survey	
18							
19							
20							

S.W. islets

N.W. islets

no shrubs



7.  
(cont.)

2

SoilS.W.  
Islets:

Community Reference Number	Soil type	Other notes
1	ABC - F <sub>5</sub> /0	podzol - lithic humo-ferric podzol/folisol
2	AC - I <sub>2</sub>	regosol - lithic regosol
3	AC - I <sub>2</sub>	regosol - lithic regosol
4	A - 0	organic - folisol
5	A - 0	organic - folisol
6	ABC - F <sub>5</sub> /0	podzol - humo-ferric podzol/folisol
7	AC - I <sub>2</sub> /F <sub>5</sub>	regosol - regosol/humo-ferric podzol
8	AC - I <sub>2</sub>	regosol - lithic regosol
9	AC - I <sub>2</sub> /F <sub>5</sub>	regosol - regosol/humo-ferric podzol
10		rock
11		
12	ABC - F <sub>5</sub> /0	podzol - lithic humo-ferric podzol/folisol
13		
14		
15		- folisol enriched with nitrogen from nesting sea-birds
16		
17		
18		
19		
20		

N.W.  
Islets:



9. Landscape

1. General Landscape (give brief description) .....  
 ..... rocky and vegetated islands; some are deep and rugged, all  
 ..... are dissected .....  
 .....

2. Relief Type

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

3. Special landscape features (list) .....  
 ..... small coves; vertical cliffs .....  
 .....

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
100							

3. Physiography. % of coast

Cliffed	Sloping	Flat
50	50	

4. Special Coastal Features (list) .....  
 ..... rugged cliffs, small coves .....  
 ..... rocky coast ecosystem .....  
 .....

5. Tide. Maximum range (state units of measurement) .....  
 ..... 4.3 m (14.1') .....

6. Total length of coastline :

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

PROPOSAL #290 - Islets off Anthony Island

The two groups of islets of the Southwest and Northwest coast of Anthony islets support various colonies of breeding marine birds. Although the islets form groups, each islet within the group has unique landforms and vegetation patterns. Some islets have rugged rocky chasms and do not support vegetation while other islets have gentler topography and support Picea sitchensis stands. Consequently the colonies of nesting marine birds are distinct and different on the various islets.

Leaches Storm Petrels and Fork-Tailed Storm Petrels were found nesting on only 4 of the more exposed islets with Picea-sitchensis Calamagrostis-nutkaensis vegetation associations predominating. Cassin's auklets were found nesting on 13 out of the 20 islets proposed. Pelagic cormorants, Pigeon Guillemots, and Glaucous-Winged Gulls nested mainly on the rocky sparsely vegetated islets. Rhinoceros auklets were found nesting on only one densely forested islet. Tufted Puffins were found nesting only on one very steep islet. It is of major interest to note that more than 4 Horned Puffins were seen flying with Tufted Puffins near the nesting cliff off the 93' island. Nesting was suspected. Further observations may substantiate these suspicions and yield a positive new nesting record for British Columbia.

Out of the thirteen species of breeding sea-birds in British Columbia, nine species (including the Horned Puffin) breed on the islets off Anthony Island. Population summaries are presented in Table 1. The islets off Anthony Islet would provide an excellent opportunity to study the habitat relationships of nesting sea-birds.

During the observation period (June 29 - July 4) numerous Hair Seals (Phoca vitulina) were seen with pups "hauling out" in small coves and on rocks. Breeding may occur on these islets.

Observations at an extremely low tide and on a dive were made (Anne Stewart). Exceptional variety and richness was noted in the intertidal and sub-tidal ecosystems surrounding the islets.

At present these islets show no signs of man-caused disturbance. Ecological Reserve classification would help maintain the natural integrity of these island eco-systems.

Trudy Carson

11. Freshwater within IBP Area\*

NONE

1.

	Permanent	Intermittent
General		
Standing		
Running		

2. Standing Water

	Permanent	Intermittent	Unproductive	Productive
Swamps				
Ponds				
Lakes				

3. Running Water

	Permanent	Intermittent
Springs, cold		
Springs, hot		
Streams		
Rivers		

4. Special freshwater features .....

.....

12. Salt and Brackish Water within IBP Area\* During strong gales everywhere.

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

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

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

Leach's Storm Petrel, Horned Puffin, Fork-tailed Storm Petrel,  
 Tufted Puffin;  
 besides the above threatened species:  
 Cassin's Auklet, Bald Eagles, Pigeon Guillemots, Rhinoceros Auklet,  
 Black Oystercatchers, Pelagic Cormorants and Glaucous-winged Gull  
 breed on these islets.

POPULATION SUMMARY OF BREEDING SEA-BIRDS (in pairs)

ISLETS OFF ANTHOY ISLAND

Refer to Marine hydrographic Chart #3825

S.W. Anthony Islet Group, censused June 20th, 30th, July 1, 2, 1977 by Trudy Carson & J. B. Foster  
 N.W. Anthony Islet group, censused June 29-30, July 1, 2 & 4 by Harry Carter, Sussane Guiget,  
 Anne Stewart, Martin Lee & Wayne Campbell

Island # or height as indicated on Chart	Bald Eagle Auklet	Cassins Storm Petrel	Leach's Storm Petrel	Fork-tailed Storm Petrel	Rhinoceros Auklets	Tufted Puffin	Horned Puffin	Pelagic Cormorant	Pigeon Guillemots	Glaucous-winged gull	Black Oyster Catcher
<u>S.W. Group</u>											
97' forested		4500+							3		1
72' island		125							19+	16	1
42' island							11		22	18	1
87' island		4750	5610+						8	3	
32' island									10	22	2
<u>N.W. Group</u>											
unnamed N.E. islets		150+	800+						5		
unnamed S.E. islet		90+									
unnamed middle S.E. islet		270+							5		
unnamed N.E. islet		300+									
unnamed N.E. islet		400									
unnamed N.E. islet		20							5		
unnamed N.E. islet									17		
107' islet		500+									
110' islet	2 prs.	4000+	50	200+					10		
islet N. of 110' islet		1200		250							
islet S.W. most isles		250								17	4
Tiny islet						20	2+		20	146	1
93' islet						25					
S. islet N. of 93' islet										24	
<b>TOTAL (PRS.)</b>	<b>2</b>	<b>16,500</b>	<b>6,460+</b>	<b>200+</b>	<b>250</b>	<b>45</b>	<b>2+</b>	<b>11</b>	<b>124</b>	<b>246</b>	<b>11</b>

4. Flora

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

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

.....

.....

.....

15. Exceptional Interest of IBP Area\*

Small separated islets with different habitat (Landform and vegetation) features supporting distinct colonies of various breeding sea-birds (Leach's Storm Petrel, Pigeon Guillemot, Cassin's Auklet, Pelagic Cormorants, Glaucous-winged Gull and Tufted Puffin).  
 Hair seals "haul out" on these islands and may breed here.  
 Exceptional variety in sub- and intertidal ecosystems.



16. Significant Human Impact

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

2. Particular

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

3. Additional details on each type of impact attached?  
 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	
Fauna			X	X							X	
Non-living			X	X							X	

18. References

- List major biological/geographical references for the IBP Area.  
Sheet attached? Yes ..... No .....
- List main maps available for the IBP Area. 103 B/3E (Kunghit Island)(1:50,000)  
Forest Cover Map (40 chain) X  
List attached? Yes ..... No ..... Hydrographic Chart 3825.
- Aerial photographs for the IBP Area available? B.C. 7839:233  
For whole area .....  For part of area ..... None .....

19. Other Relevant Information

Small, fairly inaccessible islets supporting colonies of nesting sea-birds. Although the islets form a group, each has a varied habitat supporting distinctly different groups of sea-birds. The islands would provide opportunity to study habitat relations and nesting sea-birds. Hair seals and pups were seen hauling out on these islands. These islands also support a noteworthy marine inter- and subtidal ecosystem. They show no sign of human impact.

Signed .....  
(Surveyor)  
J.B. Foster, T. Carson, A. Stewart,  
R.W. Campbell, H. Carter