

Oak Bay Islands

Ref. No.:

260

ECOLOGICAL RESERVES COLLECTION  
GOVERNMENT OF BRITISH COLUMBIA  
VICTORIA, B. C.  
V8V 1X4

Census of Double-crested and Pelagic  
Cormorants Breeding on Chain Islets  
Ecological Reserve - August, 1983

August, 1983

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On August 3, 1983, four staff from the Provincial Museum visited Chain Island Ecological Reserve to census Double-crested Cormorants (Phalacrocorax auritus) and Pelagic Cormorants (P. pelagicus). Personnel includes R. Wayne Campbell, James W. Curry, Dennis G. Horwood and Ron J. E. Parsons. The weather was hot and sunny, with light winds. Great Chain Island, and associated smaller islets were censused from 1100 - 1330 hours. All nesting cormorants were approached from the land-side before censoring. This assured that birds had time to leave their nests slowly, thus minimizing disturbance.

There are now five definite sub-colonies established on Great Chain Island (Figure 2). Nest contents for each of these, as well as species composition, are shown in Table 1 and Figure 2. Nearly 20% of the nests were empty, most likely due to gull predation, rather than late nesting. Eggs were found in about 20% of the nests, young only in about 40% and the remaining 20% of the nests held a combination of young and eggs. Most young were small with the exception of sub-colony 5 (see Figure 2) where most young were large and scrambling about near their nests. Expressed as an average, Double-crested Cormorant nests held 0.48 eggs and 1.48 young per nest while Pelagic Cormorant nests averaged 1.21 eggs and 1.19 young per nest (Table 2).

In total, two Double-crested Cormorant eggs, seven live young and six dead young were found out of the nests during the census, all on Greater Chain Island. Live eggs and young were returned to nests. Only one egg and young of Pelagic Cormorants were seen beside nests. Five broken eggs of Pelagic Cormorants and three of Double-crested Cormorants were found in the nests. Predation by gulls was minimal. We noticed five Double-crested and one Pelagic Cormorant young snatched from their nests and only two eggs, both of Double-crested Cormorants taken. So mortality, and predation was surprisingly low.

During the 60 years Pelagic Cormorants have been known to breed on Great Chain Island (Table 3) the colony has increased from 15 pairs (in 1924) to 381 pairs today. Double-crested Cormorants first nested in 1977 when five pairs occupied Islet N (see Figure 1). Seven years later, the colony had increased to 190 pairs, most of which now breed on Great Chain Island.

Because of its accessibility, and trend in populations of nesting cormorants, the islets should be censused each summer. Copies of results should be filed with both the Ecological Reserves Unit and the B. C. Nest Records Scheme at the Provincial Museum.

No counts or estimates were made of other seabirds. Gloucous-winged Gulls were unusually abundant this year with large young, some flying, seatbred over the entire island (Great Chain Island) except where a recent fire had been. Only 13 Pigeon Guillemots were counted for the entire area and only one "salt and pepper" shaded young was located under logs on Great Chain. No other efforts were made to locate young. Finally, 7 Black Oystercatchers were counted in the reserve area.

TABLE 1

CONTENTS OF DOUBLE-CRESTED CORMORANT (DC)  
AND PELAGIC CORMORANT (PC) NESTS ON  
CHAIN ISLETS ECOLOGICAL RESERVE  
August 3, 1983

	GREATER CHAIN ISLET										Islet F	Islet M		TOTAL
	Area 1		Area 2		Area 3		Area 4		Area 5			PC	DC	
	DC	PC	DC	PC	DC	PC	DC	PC	DC	PC				
Empty	6	0	2	10	15	17	0	9	7	13	3	5	14	101
1 egg	1	0	0	5	8	6	0	4	1	1	1	1	3	31
2 eggs	1	0	0	3	4	9	0	5	3	4	2	2	11	44
3 eggs	2	0	2	2	0	4	0	15	3	1	2	0	5	36
4 eggs	1	0	0	1	1	1	0	4	0	0	0	0	0	8
5 eggs	0	0	0	0	0	0	0	1	0	0	0	0	0	1
1 young	0	0	0	8	19	12	0	6	2	12	0	0	0	59
2 young	2	0	1	12	33	11	0	7	2	16	0	0	0	84
3 young	3	0	0	8	21	12	0	9	2	8	0	0	0	63
4 young	1	0	0	2	10	4	0	5	2	4	0	0	0	28
5 young	0	0	0	0	1	1	0	1	0	1	0	0	0	4
1 egg, 1 young	0	0	0	4	6	8	0	9	1	0	0	0	0	28
1 egg, 2 young	0	0	1	4	5	7	0	15	0	0	0	0	0	32
1 egg, 3 young	0	0	0	0	7	3	0	9	1	1	0	0	0	21
1 egg, 4 young	0	0	0	0	0	0	0	2	0	0	0	0	0	2
2 eggs, 1 young	2	0	0	0	1	3	0	16	0	0	0	0	0	22
2 eggs, 2 young	0	0	0	0	1	1	0	2	0	0	0	0	0	5 <sup>4</sup>
3 eggs, 1 young	0	0	0	0	0	0	0	1	0	1	0	0	0	2
<b>TOTAL</b>	19	0	6	59	133	99	0	120	24	62	8	8 <sup>8</sup>	33	571

TABLE 2

SUMMARY OF NESTS AND CONTENTS OF  
 DOUBLE-CRESTED AND PELAGIC CORMORANTS, BY ISLET,  
 FOR CHAIN ISLETS ECOLOGICAL RESERVE  
 August 3, 1983

	GREATER CHAIN ISLET					Islet F	Islet M	TOTAL
	Area 1	Area 2	Area 3	Area 4	Area 5			
DOUBLE-CRESTED CORMORANT								
Total Nests	19	6	133	0	24	0	8	190
Total Eggs	17	7	44	0	18	0	5	91
Total Young	19	4	235	0	24	0	0	282
PELAGIC CORMORANT								
Total Nests	0	59	99	120	62	8	33	381
Total Eggs	0	29	66	154	16	11	40	316
Total Young	0	76	117	167	93	0	0	453

TABLE 3

HISTORY OF DOUBLE-CRESTED AND  
PELAGIC CORMORANTS NESTING ON  
CHAIN ISLETS COMPLEX

1924 - 1983

Year	Double-Crested Cormorants	Pelagic Cormorants	Source
1924	0	15	A.L. Meugens
1943	0	14	Ted White
1945	0	40	Ted White
1960	0	70	F.A. Gornall
1968	0	129	R.H. Drent
1970	0	194	W.J. Schick
1971	0	212	W.J. Schick
1973	0	274	R.W. Campbell
1974	0	185	M.A. Paul
1976	2	281	R.W. Campbell
1977	5	235	M.G. Shepard
1978	14	215	H.R. Carter
1979	21	371	M.G. Shepard
1980	26	178	E. Perkins
1981	79	367	R.W. Campbell
1983	190	381	R.W. Campbell

Port Angeles

Discovery Island

Oak Bay Golf Course

Double-crested  
Cormorant

Pelagic  
Cormorant

GREATER CHAIN ISLAND

Mixed Colony

Area 1	-	19		19		19
Area 2	-	65		80		80
Area 3	-	232		352		352
Area 4	-	120		167		167
Area 5	-	<u>86</u>		<u>117</u>		<u>117</u>
TOTAL	-	522		735		735

Figure 2. Locations of sub-colonies of Double-crested and Pelagic Cormorants on Greater Chain Island.

Figure 1. Location and names of islets in the Chain Islands complex, Oak Bay, B. C. (from Provincial Museum files).

Complete Survey of the Chain Islets Complex

Victoria, B. C.

June 22/73

Observers: - Jane Algard  
Wayne Campbell  
Richard Gibbs  
Bob Hay  
Phil Nott  
Marilyn Paul  
Phyllida Riseborough

Methods:

All Islets were censused completely; to census nests on Great Chain Island the seven observers walked in a line, about ten feet apart, and called nests to a recorder (RWC) in the middle of the line. Six swaths (70' - 90') were needed for the complete inventory.

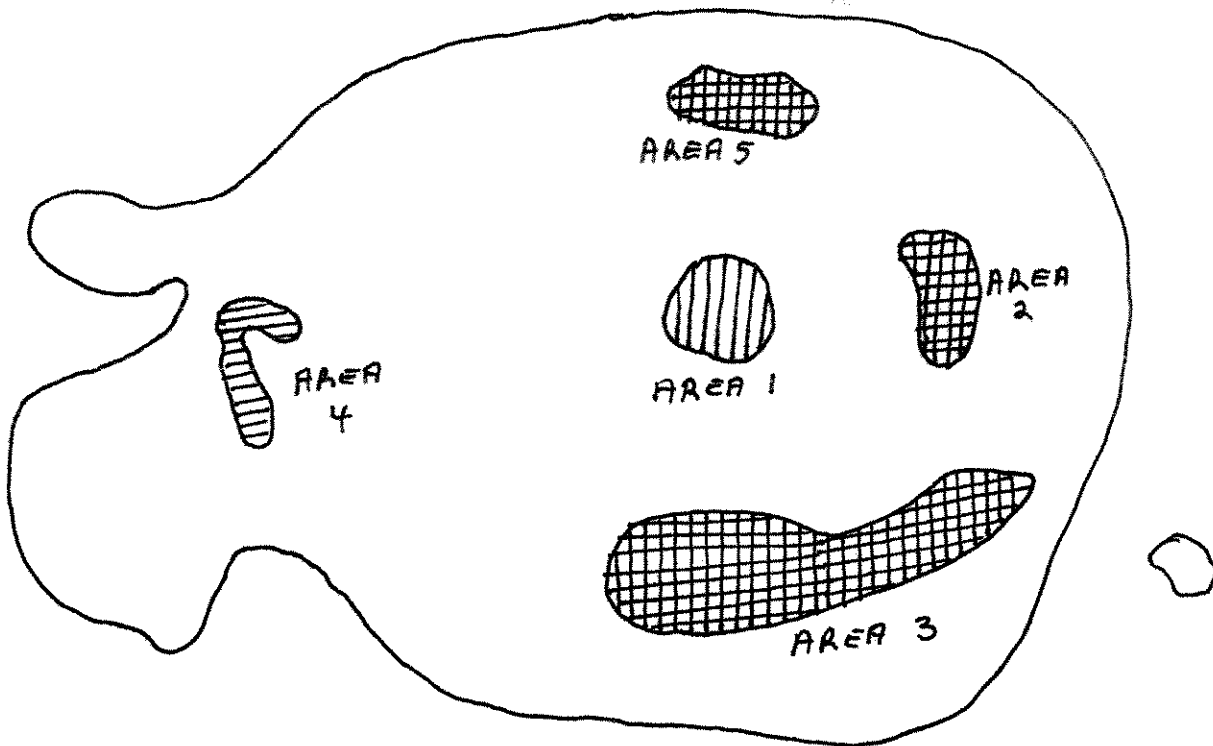





DISCOVERY ISLAND

PUMI MOUNTAIN

↓ N?

OAK BAY GOLF COURSE



-  - DOUBLE-CRESTED CORMORANT
-  - PELAGIC CORMORANT
-  - MIXED COLONY

GREATER CHAIN ISLAND

AREA 1	-	19 NESTS	(17 EGGS, 19 YOUNG)
AREA 2	-	65 NESTS	(36 EGGS, 80 YOUNG)
AREA 3	-	232 NESTS	(110 EGGS, 352 YOUNG)
AREA 4	-	120 NESTS	(154 EGGS, 167 YOUNG)
AREA 5	-	86 NESTS	(34 EGGS, 117 YOUNG)
TOTAL		<u>522</u> NESTS	( <u>351</u> EGGS, <u>735</u> YOUNG)

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