

Annual Report for Park Use Permit # V10610242: Leach's Storm-petrel survival in British Columbia

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In 2007 I completed the first year of a survival study of Leach's Storm-petrels (*Oceanodroma leucorhoa*) on Cleland Island in the Cleland Island Ecological Reserve. The field work took place in 2.5 days, July 6 – 8, during which time one biologist and one field assistant banded 300 Leach's Storm-petrels. Our study area is along the western side of the storm-petrel colony denoted in the B.C. Seabird Colony Inventory (Rodway and Lemon 1990; British Columbia Seabird Colony Inventory: Report #5 – West Coast Vancouver Island, CWS Tech. Rpt. No. 94; see attached map). All work was conducted according to the methods described in my research permit proposal.

In order to reach our total of 300 banded Leach's Storm-petrels, we excavated approximately 310 burrows; the number is inexact because in a few cases it was not possible to determine whether a tunnel was an actual burrow or an abandoned attempt. Of the 300 birds banded, 293 were incubating eggs and four were brooding newly hatched chicks. In addition, we found two burrows containing a pair of birds without an egg and one burrow containing a single bird without an egg.

My research permit proposal described the use of shingles to cover access holes which are often needed to reach the nest chambers in long burrows. The storm-petrel burrows on Cleland Island are unusually short: only one burrow was sufficiently long to require an access hole.

We marked each excavated Leach's Storm-petrel burrow with a numbered tongue depressor. The locations of all marked burrows were mapped.

The 1988 storm-petrel population estimate for Cleland Island given in the B.C. Seabird Colony Inventory (Rodway and Lemon 1990) was calculated using an occupancy rate of 83%. The burrow occupancy rate found during my work was at least 96%. The 1988 rate was based on a sample size of only 12 burrows throughout the colony, whereas the 2007 rate was based on a sample size of 310 burrows within a small area of the colony.

The B.C. Seabird Colony Inventory (Rodway and Lemon 1990) notes a mixed Leach's Storm-petrel and Fork-tailed Storm-petrel (*O. furcata*) nesting area on Cleland Island. We found no Fork-tailed Storm-petrels during our work.

During our field work, we were dropped off and picked up on the east side of the island each day. We walked to the west side along the rocky edge of the island and approached the study area from the Camp Beach. We returned to the Camp Beach for our lunch breaks. According to a boat charter operator in the area (Steve Lawson, pers. comm.), we were not visible from the water while we were working in the colony.

No collections of any specimens were made during this study.

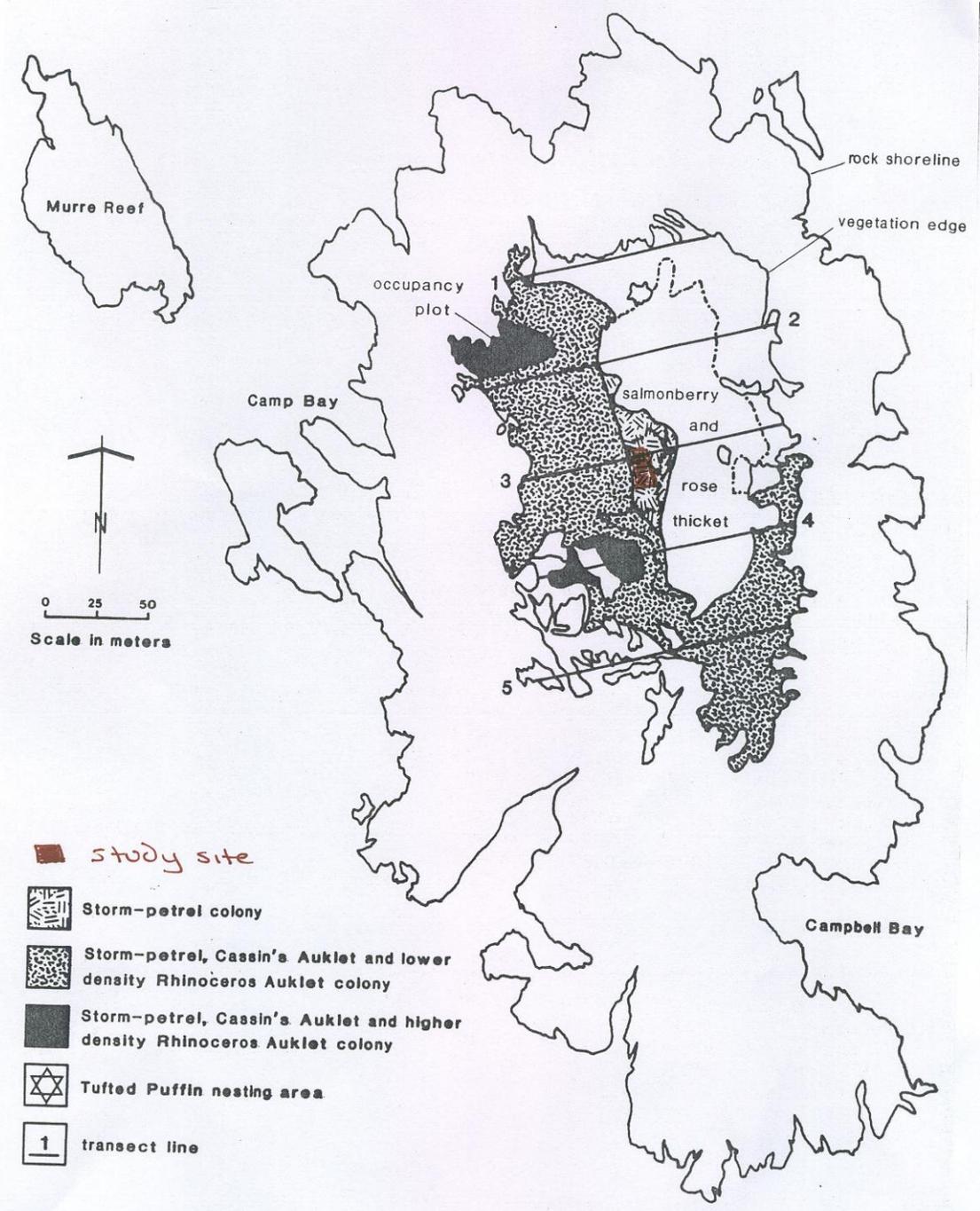


Figure WV410-1. Seabird colony areas on Cleland Island in 1988. Scale is distorted between the main island and "Murre Reef".