British Columbia Coast



BirdWatch

The Newsletter of the BC Coastal Waterbird and Beached Bird Surveys

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Spotlight on Horned Grebe (*Podiceps auritus*)

By Karen Barry & Pete Davidson, Photos by Ralph Hocken

In April 2009, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommended that Horned Grebe be added to Canada's list of species at risk.

COSEWIC assesses the status of wild species, subspecies and varieties considered to be at risk in Canada. To do so, COSEWIC uses scientific, Aboriginal, traditional and community knowledge provided by experts from governments, academia and other organizations. Summaries of assessments are available on the COSEWIC website (www.cosewic.gc.ca). These reports are submitted to the Federal Minister of the Environment to be considered for listing under the Species at Risk Act (SARA).

More than 90% of Horned Grebe breeding habitat in North America is Canadian wetlands and marshes. A status of Special Concern was recommended for the western population due to declining abundance. Threats include loss and degradation of wetland breeding habitat through conversion to agriculture and drought, increasing populations of nest predators (mostly in the Prairies), and habitat impacts (like pollution) in staging and wintering grounds.



In coastal BC, we usually see this dark gray and white bird during winter months occupying marine estuaries and bays, where it forages for small fish and crustaceans. Usually

by mid-April, Horned Grebes begin to leave their coastal overwintering grounds and migrate to breeding areas further north and inland. For this reason, we don't often have the chance to see Horned Grebes in their beautiful

breeding plumage of warm brown colours and golden "horns". Horned Grebes generally nest in marshy areas or lakesides with abundant reeds and cattails and some

open water. They use sedges and cattails to build a nest among the vegetation to conceal it from predators. The attentive parents rarely leave the nest unguarded and will defend their brood aggressively.



One way we can continue to monitor local abundance of this species is through the Coastal Waterbird Survey (CWBS). Preliminary analysis of CWBS data indicates a stable population trend for Horned Grebes througout the Georgia Basin, but surveyors around south-east Vancouver Island, like Kerry Finley, report long-term declines going back decades. Average winter site counts (Dec-Feb) in this region for the last 10 years have fluctuated in a 4-5 year cycle, with peaks in winter 1999-2000 and 2005-06, and troughs during 2003-04 and 2008-09. Based on the last 10 years of CWBS data, highest numbers of Horned Grebe were counted at Iona Island in spring 2001 when 650 grebes were recorded at a pre-migration staging congregation. Other areas with consistently high numbers include White Rock (W. Promenade), where peak counts were made in winter 2004 (364) and 2009 (335). On Vancouver Island, consistently high counts came from Cordova Bay during March 2005 (201) and October 2005 (208), and Fillongley, Denman Island (198 in October 2006). In addition to CWBS, information from Beached Bird Surveys helps us identify causes and patterns in mortality that could affect grebes. Thanks to all our volunteers!

BIRD STUDIES CANADA

COASTAL WATERBIRD SURVEY 2007-2009 HIGHLIGHTS

BY PETE DAVIDSON & KAREN BARRY

From September 2007 to April 2009, over 145 volunteer observers participated in the Coastal Waterbird Survey. More than 200 sites were surveyed throughout the BC coast - from the Lower Mainland, to the west coast of Vancouver Island and further north to the central coast, Prince Rupert & Queen Charlotte Islands. More than 2,300 surveys were completed in the last 2 seasons – a very impressive citizen-science contribution!

We have run a ten-year trend analysis on the entire Coastal Waterbird Survey dataset this year, for which the results are currently being finalized. Some interesting stories are emerging, both good news and not so good news, including an apparently exploding Pigeon Guillemot population. We will have a full report for you in the next few months.

The overview in this newsletter covers the last two seasons of the survey (2007-08 and 2008-09) and the results are divided by region. The Sumary Table (pp. 4-7) shows the maximum monthly counts for the most common species. This was determined by summing up all counts at all sites for each month. This will give you an idea of how monthly counts at your site compare to combined counts from all sites in your region.

For loons, we saw fairly even distribution for Common (as expected) and also Red-throated, but some very distinct peaks for Pacific Loon, particularly in the 2007-08 season, when counts of over 900 birds were made at three different sites: 913 in October 2007 at Cordova Bay (Mike McGrenere), 1,000 in February 2008 at Blunden Point just north of Nanaimo (Harriet Rueggeberg) and 1,042 in March 2008 at Fillongley, Denman Island (Mike Morrell and Harold Birkeland).

Both Western Grebe and Horned Grebe populations have undergone, or are undergoing, long-term declines that have prompted some serious conservation concerns. Four counts of Western Grebe exceeded 250 birds during 2007-09 Coastal Waterbird Surveys, three of these high counts occurred in the Viner River estuary (Yvonne Maximchuk & Bill Proctor) with a maximum of 900 recorded in February 2009. Another high count of 470 occurred off East Pier, White Rock in March 2008 (Gareth Pugh); probably part of a larger flock of ~800 seen regularly during boat-based surveys by the Pacific Wildlife Foundation in Boundary and Semiahmoo Bays that winter. These counts are an order of magnitude lower than the high counts the survey was logging in the early days, and preliminary results from our trends analysis suggest that the decline documented by Christmas Bird Counts over a four decade period (since the 1950s) has continued over the past decade. Various theories exist as to why Western Grebes are declining here at the



B. Whittington



K. Barry



C. Rennie

north end of their wintering range and perhaps re-distributing further south, including reduced herring which are a key prey base, and increased predation risk from Bald Eagles; however none has been proven. Comparisons of maximum counts between the 2007-09 and 2005-07 seasons (see the 2008 newsletter) show a pattern that suggests annual redistribution of birds among regions, with reductions in the numbers of birds using some regions (e.g. east coast of Vancouver Island) and increases in others (e.g. Boundary Bay and Fraser Delta). The 2008-09 winter witnessed the fifth highest site-count of Horned Grebes since the survey began: 335 along White Rock's West Promenade in January 2009 (Fred Simpson and Ken Summers).

Preliminary results from the trends analysis indicate that Double-crested and Pelagic Cormorant populations are slowly increasing, although eyeball comparisons of regional maxima from 2006-09 don't immediately suggest that.

There did not appear to be anything unusual with dabbling duck numbers, although it's interesting to note that there is an increasing trend of Eurasian Wigeon based on preliminary ten-year trends analysis results, partially borne out by the regional maxima for Boundary Bay-Fraser Delta, the main stronghold for large concentrations of dabblers. The largest count ever tallied on the survey (212) was made from the Roberts Bank Coalport Jetty in March 2009 (by Kevin Bell, George Clulow and Rob Lyske), following a 162 count in February. One to watch is Green-winged Teal, which appears to be showing a declining trend over the past decade, despite November 2007 high counts of 2,500 in Jensen's Bay, part of the Tofino Mudflats Important Bird Area (IBA, Barb Beasley and the Tofino Mudflats Stewardship Group), and 3,200 at Beach Grove in Boundary Bay (Pete Davidson), the latter part of a huge gathering of ~60,000 dabblers including 37,000 American Wigeon (Pete Davidson). Barb and colleagues also recorded a Eurasian x American Wigeon hybrid at Tofino Mudflats in January 2008. The BC Breeding Bird Atlas has recorded a pair of Eurasian Wigeon in the Lower

Mainland in summer 2009. It may not be long before the species makes it onto the list of breeding birds in our province!

It was good to see a return to large numbers of Surf Scoters in Burrard Inlet IBA, with combined site counts totalling over 11,000 in November 2007 (Barry Price, Bill Kinkaid, Janice Wilson and others), and consecutive monthly counts of 6,000 and 7,000 at Tower Beach in January & February 2009 respectively (Peter Candido).

One concerning trend over the past decade, is an apparently steep decline in our regional wintering Surfbird population. The highest survey-count for several years, 350 at Eagle Harbour in Howe Sound (Janice Wilson) in October 2007, was therefore very noteworthy. One good news story appears to be Black Oystercatcher; local breeding success is high, and whilst the survey does not show an increasing trend in the wintering population, the highest ever site-count, 68, was recorded between French Creek and Eaglecrest Beach in October 2008 (John and Lois MacKenzie), which may include birds from further north coming to winter in this area.

In the last newsletter, we mentioned high numbers of Pigeon Guillemots along Cordova Bay- Sayward Beach in the Victoria-Saanich area. This continued in fall 2007, when 674 were counted at one site in September (Mike McGrenere), while 2008/09 saw a return to normal numbers (200). Nonetheless, the decadal trend of this alcid is one of the strongest increasing trends of any species from the latest analysis (based on the period November-January). The highest count of Ancient Murrelets in the last 5 years occurred this year near Gibsons on the Sunshine Coast with 1,400 counted in January 2009, and 420 in February 2009 (Russ Tkachuk). A high count of 163 Ancient Murrelets occurred between Harling and Gonzales Points in Victoria in November 2008 (Paul de Niverville & Ian Cruikshank), part of a late fall influx around south-eastern Vancouver Island.



Coastal Waterbird Suvey Results: 2007-08 and 2008-09

Season 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2007-08 2008-09 2008-	Region	Boundary Bay	& Fraser Delta	ta Vancouver & Burrard Inlet		Southern Gulf Islands		Southern Vancouver Island	
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Pacific Loon	Number of species recorded	90	94	66	70	73	71	78	73
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Eurasian Wigeon 163 (Mar) 214 (Mar) 3 (Feb) 3 (Dec) - 2 (Feb) 1 (Feb) 1 (Feb, Dec) Gadwall 175 (Sep) 250 (Oct) 2 (Feb, Nov) 2 (May) 10 (Jan) - Green-winged Teal 4206 (Nov) 2149 (Nov) 75 (Feb) 155 (Apr) 13 (Nov) 18 (Mar) Northern Pintail 26319 (Dec) 24746 (Nov) 4 (Sep, Oct) 34 (Feb) 69 (Mar) 104 (Mar) Mallard 4510 (Jan) 5087 (Feb) 775 (Jan) 1055 (Feb) 75 (Dec) 194 (Feb) 334 (Nov) 172 (Dec) Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) 9 (Feb) 9 (Jan) Lesser Scaup 4312 (Nov) 1238 (Nov) 34 (Feb) 47 (Mar) 9 (Feb) 9 (Jan) Lesser Scaup 50 (Dec) 120 (Feb) 43 (Jan) 61 (Mar) 3 (Mar) 5 (Oct) 80 (Nov) 67 (Nov) Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) Mhite-winged Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) 45 (Jan) 3 (Nov) 12 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) 126 (Feb) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Snow Goose	11451 (Oct)	4699 (Oct)	1 (Mar)	45 (Jun)	-	-	-	6 (Sep)
Gadwall 175 (Sep) 250 (Oct) 2 (Feb, Nov) 2 (May) - - 10 (Jan) - Green-winged Teal 4206 (Nov) 2149 (Nov) 75 (Feb) 155 (Apr) - - 13 (Nov) 18 (Mar) Northern Pintail 26319 (Dec) 24746 (Nov) 4 (Sep, Oct) 34 (Feb) - - 69 (Mar) 104 (Mar) Mallard 4510 (Jan) 5087 (Feb) 775 (Jan) 1055 (Feb) 75 (Dec) 194 (Feb) 334 (Nov) 172 (Dec) Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) -	American Wigeon	43633 (Dec)	36854 (Nov)	570 (Feb)	573 (Oct)	210 (Dec)	300 (Mar)	662 (Jan)	773 (Dec)
Green-winged Teal 4206 (Nov) 2149 (Nov) 75 (Feb) 155 (Apr) - - 13 (Nov) 18 (Mar) Northern Pintail 26319 (Dec) 24746 (Nov) 4 (Sep, Oct) 34 (Feb) - - 69 (Mar) 104 (Mar) Mallard 4510 (Jan) 5087 (Feb) 775 (Jan) 1055 (Feb) 75 (Dec) 194 (Feb) 334 (Nov) 172 (Dec) Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) - - - - Greater Scaup 4312 (Nov) 1238 (Nov) 34 (Feb) 47 (Mar) - - 9 (Feb) 9 (Jan) Lesser Scaup 50 (Dec) 120 (Feb) 43 (Jan) 61 (Mar) 3 (Mar) 5 (Oct) 80 (Nov) 67 (Nov) Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) - - Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter<	Eurasian Wigeon	163 (Mar)	214 (Mar)	3 (Feb)	3 (Dec)	-	2 (Feb)	1 (Feb)	1 (Feb, Dec)
Northern Pintail 26319 (Dec) 24746 (Nov) 4 (Sep, Oct) 34 (Feb) - 69 (Mar) 104 (Mar) Mallard 4510 (Jan) 5087 (Feb) 775 (Jan) 1055 (Feb) 75 (Dec) 194 (Feb) 334 (Nov) 172 (Dec) Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) - - - - Greater Scaup 4312 (Nov) 1238 (Nov) 34 (Feb) 47 (Mar) - - 9 (Feb) 9 (Jan) Lesser Scaup 50 (Dec) 120 (Feb) 43 (Jan) 61 (Mar) 3 (Mar) 5 (Oct) 80 (Nov) 67 (Nov) Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) - - Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter	Gadwall	175 (Sep)	250 (Oct)	2 (Feb, Nov)	2 (May)	-	-	10 (Jan)	-
Mallard 4510 (Jan) 5087 (Feb) 775 (Jan) 1055 (Feb) 75 (Dec) 194 (Feb) 334 (Nov) 172 (Dec) Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) -	Green-winged Teal	4206 (Nov)	2149 (Nov)	75 (Feb)	155 (Apr)	-	-	13 (Nov)	18 (Mar)
Canvasback 2 (Feb) - 2 (Jan) 1 (Jan, Mar) -	Northern Pintail	26319 (Dec)	24746 (Nov)	4 (Sep, Oct)	34 (Feb)	-	-	69 (Mar)	104 (Mar)
Greater Scaup 4312 (Nov) 1238 (Nov) 34 (Feb) 47 (Mar) - 9 (Feb) 9 (Jan) Lesser Scaup 50 (Dec) 120 (Feb) 43 (Jan) 61 (Mar) 3 (Mar) 5 (Oct) 80 (Nov) 67 (Nov) Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) - - Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov)	Mallard	4510 (Jan)	5087 (Feb)	775 (Jan)	1055 (Feb)	75 (Dec)	194 (Feb)	334 (Nov)	172 (Dec)
Lesser Scaup 50 (Dec) 120 (Feb) 43 (Jan) 61 (Mar) 3 (Mar) 5 (Oct) 80 (Nov) 67 (Nov) Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) - - Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr)	Canvasback	2 (Feb)	-	2 (Jan)	1 (Jan, Mar)	-	-	-	-
Ring-necked Duck 1 - 3 (Jan) 9 (Jan, Apr) 52 (Dec) 53 (Nov) - - Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar)	Greater Scaup	4312 (Nov)	1238 (Nov)	34 (Feb)	47 (Mar)	-	-	9 (Feb)	9 (Jan)
Surf Scoter 1777 (Oct) 2184 (Apr) 11329 (Nov) 7031 (Feb) 1011 (Jan) 433 (Nov) 654 (Oct) 815 (Nov) White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Lesser Scaup	50 (Dec)	120 (Feb)	43 (Jan)	61 (Mar)	3 (Mar)	5 (Oct)	80 (Nov)	67 (Nov)
White-winged Scoter 2106 (Oct) 1063 (Nov) 1513 (Apr) 189 (Nov) 55 (Jan) 42 (Apr) 64 (Sep) 108 (Nov) Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Ring-necked Duck	1	-	3 (Jan)	9 (Jan, Apr)	52 (Dec)	53 (Nov)	-	-
Black Scoter 52 (Jan) 122 (Mar) 119 (Apr) - 265 (Apr) - 21 (Oct) 3 (Dec) Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Surf Scoter	1777 (Oct)	2184 (Apr)	11329 (Nov)	7031 (Feb)	1011 (Jan)	433 (Nov)	654 (Oct)	815 (Nov)
Harlequin Duck 52 (Apr) 65 (Apr) 45 (Jan) 31 (Nov) 12 (Nov) 84 (Apr) 148 (Nov) 136 (Nov) Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	White-winged Scoter	2106 (Oct)	1063 (Nov)	1513 (Apr)	189 (Nov)	55 (Jan)	42 (Apr)	64 (Sep)	108 (Nov)
Long-tailed Duck 83 (Feb) 48 (Nov) 7 (Dec) 10 (Feb) 2 (Jan) 3 (Dec) 239 (Dec) 467 (Nov) Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Black Scoter	52 (Jan)	122 (Mar)	119 (Apr)	-	265 (Apr)	-	21 (Oct)	3 (Dec)
Barrow's Goldeneye 15 (Apr) 19 (Apr) 1414 (Jan) 872 (Feb) 304 (Jan) 223 (Mar) 48 (Apr) 30 (Apr) Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Harlequin Duck	52 (Apr)	65 (Apr)	45 (Jan)	31 (Nov)	12 (Nov)	84 (Apr)	148 (Nov)	136 (Nov)
Common Goldeneye 121 (Feb) 318 (Mar) 111 (Feb) 69 (Feb) 38 (Feb) 55 (Mar) 120 (Mar) 126 (Feb)	Long-tailed Duck	83 (Feb)	48 (Nov)	7 (Dec)	10 (Feb)	2 (Jan)	3 (Dec)	239 (Dec)	467 (Nov)
	Barrow's Goldeneye	15 (Apr)	19 (Apr)	1414 (Jan)	872 (Feb)	304 (Jan)	223 (Mar)	48 (Apr)	30 (Apr)
Bufflehead 209 (Nov) 154 (Feb) 106 (Jan) 182 (Mar) 260 (Jan) 354 (Mar) 1157 (Nov) 800 (Nov)	Common Goldeneye	121 (Feb)	318 (Mar)	111 (Feb)	69 (Feb)	38 (Feb)	55 (Mar)	120 (Mar)	126 (Feb)
	Bufflehead	209 (Nov)	154 (Feb)	106 (Jan)	182 (Mar)	260 (Jan)	354 (Mar)	1157 (Nov)	800 (Nov)

Among the more unusual species recorded was a Brown Pelican off Jordan River in June 2008 (Paul de Niverville) illustrating how continuing surveys through the summer months can bring some nice surprises. Gyrfalcons are always a treat to find, and that pleasure was bestowed upon both Monica Nugent and Betty Brooks in Boundary Bay and Black Creek (east coast Vancouver Island) in January 2008 and February 2009 respectively.

Sunshine Coast		Vancouver Island: East Coast		Squamish		Vancouver Island: North & West		North and Central Coast	
2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
9	8	35	32	20	20	14	11	6	4
58	56	85	81	53	41	73	64	54	48
64 (Dec)	55 (Nov)	356 (Oct)	331 (Nov)	20 (Feb)	1 (Jan, Apr)	81 (Mar)	59 (Mar)	29 (Sep)	4 (Jul)
38 (Dec)	27 (Feb)	1187 (Feb)	1229 (Mar)	62 (Jan)	1 (Jan, Dec)	145 (Mar)	25 (Jan)	65 (Sep)	-
2 (Feb, Apr)	1 (Mar)	3 (Oct)	49 (Feb)	8 (Feb)	-	13 (Nov)	3 (Feb, Nov)	3 (Nov)	-
105 (Dec)	81 (Nov)	316 (Oct)	282 (Nov)	3 (Nov)	2 (Feb)	61 (Nov)	101 (Jan)	12 (Sep)	-
449 (Dec)	63 (Apr)	865 (Sep)	224 (Sep)	1 (Mar, Apr)	1 (Sep)	120 (Nov)	100 (Jan)	643 (Sep)	17 (Apr)
65 (Dec)	3 (Oct)	221 (Feb)	238 (Jan)	28 (Nov)	-	395 (Apr)	900 (Feb)	6 (Dec)	12 (Feb)
7 (Nov)	13 (Jan)	471 (Mar)	132 (Feb)	1 (Mar)	1 (Mar, Apr)	18 (Nov)	2 (Nov)	-	1 (Mar)
450 (Nov)	184 (Nov)	196 (Mar)	348 (Nov)	61 (Oct)	37 (Dec)	97 (Oct)	128 (Nov)	-	3 (Jan)
40 (Nov)	60 (Nov)	308 (Mar)	260 (Nov)	20 (Dec)	9 (Feb)	55 (Mar)	56 (Nov)	12 (Nov)	5 (Apr)
15 (Sep)	7 (Sep)	79 (Sep)	60 (Sep)	26 (Nov)	20 (Feb, Apr)	21 (Feb)	20 (Feb)	12 (Oct)	14 (Feb)
-	-	1	4 (Mar, Nov)	-	-	-	-	-	-
2 (Jan)	14 (Nov)	120 (Jan)	516 (Dec)	140 (Mar)	5 (Jan)	29 (Feb, Dec)	33 (Jan)	18 (Mar)	44 (Feb)
-	-	4931 (Apr)	3369 (Apr)	=	-	1 (Jan, Feb)	-	32 (Dec)	-
449 (Apr)	137 (Sep)	1082 (Oct)	1214 (Jul)	362 (Jan)	296 (Feb)	440 (Nov)	480 (Nov)	200 (Feb)	385 (Feb)
29 (Apr)	2 (Nov)	64 (Oct)	9 (Oct)	1 (Nov)	-	-	-	400 (Apr)	5 (May)
63 (Mar)	66 (Mar)	2288 (Jan)	3382 (Feb)	48 (Dec)	40 (Mar)	4537 (Dec)	4024 (Jan)	20 (Oct)	30 (May)
-	1 (Mar)	16 (Dec)	17 (Feb)	1 (Nov)	-	11 (Dec)	19 (Jan)	-	-
-	-	-	3 (Jan)	6 (Apr)	-	28 (Feb)	22 (Oct)	-	-
5 (Apr)	1 (Sep)	167 (Dec)	216 (Mar)	83 (Apr)	60 (Apr)	2610 (Nov)	382 (Jan)	40 (May)	20 (Feb, Apr)
120 (Apr)	8 (Jan)	475 (Jan)	466 (Feb)	70 (Apr)	28 (Apr)	197 (Jan)	150 (Feb)	36 (May)	74 (Apr)
90 (Feb)	148 (Nov)	3313 (Dec)	5449 (Feb)	813 (Apr)	457 (Apr)	471 (Nov)	455 (Jan)	185 (Dec)	715 (Apr)
-	-	-	2 (Apr)	-	-	1 (Oct)	-	-	-
17 (Jan)	10 (Feb)	595 (Dec)	1499 (Apr)	14 (Apr)	2 (Apr)	8 (Oct)	8 (Jan)	6 (Dec)	16 (Feb)
-	-	200 (Feb)	35 (Feb)	2 (Apr)	9 (Apr)	1 (Nov)	-	-	-
-	-	75 (Dec)	68 (Nov)	59 (Apr)	21 (Apr)	-	-	5 (Oct)	2 (Nov)
4000 (May)	2650 (Apr)	2790 (Jan)	10278 (Apr)	-	-	183 (Sep, Oct)	1073 (Nov)	1	300 (Apr)
2103 (Apr)	65 (Nov)	2218 (Jan)	2141 (Feb)	-	-	75 (Oct)	429 (Oct)	42 (Sep)	-
167 (Dec)	91 (Mar)	535 (Dec)	437 (Feb)	-	-	117 (Mar)	39 (Nov)	12 (Jan)	-
118 (Nov)	90 (Nov)	703 (Mar)	1056 (Apr	-	-	85 (Nov)	117 (Oct)	33 (Jan)	2 (Apr)
11 (Dec)	14 (Nov)	317 (Dec)	174 (Nov)	-	-	28 (Feb)	26 (Nov)	2 (Oct)	4 (Apr)
103 (Apr)	518 (Mar)	205 (Feb)	233 (Feb)	50 (Nov)	20 (Mar)	398 (Nov)	698 (Nov)	3 (Feb)	5 (Apr)
68 (Mar)	39 (Dec)	1072 (Mar)	882 (Feb)	60 (Mar)	37 (Mar)	97 (Mar)	70 (Feb)	12 (Apr)	74 (Apr)
171 (Dec)	174 (Nov)	1611 (Mar)	1751 (Apr)	147 (Nov)	88 (Mar)	446 (Apr)	505 (Mar)	56 (Dec)	42 (Apr)

Wintering Northern Goshawks at Jericho Beach made it onto the count in both February 2008 and January 2009 (June Ryder and Michael Church). Winter 2007-08 was a good one for Marbled Godwits: six were recorded at Blackie Spit in both November 2007 and January 2008 (Ilya Povalyaev).

Coastal Waterbird Suvey Results, continued

Region	Boundary Bay & Fraser Delta		Vancouver & Burrard Inlet		Southern Gulf Islands		South Vancouver Island	
Year	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
# Sites	14	13	27	23	42	43	23	19
Common Merganser	13 (Apr)	5 (Dec)	40 (Jan)	56 (Nov)	178 (Jan)	133 (Mar)	171 (Oct)	62 (Dec)
Hooded Merganser	11 (Nov)	3 (Feb, Dec)	21 (Jan)	6 (Oct)	12 (Jan)	13 (Mar)	39 (Nov)	60 (Jan)
Red-breasted Merganser	79 (Nov)	94 (Oct)	88 (Nov)	518 (Sep)	76 (Jan)	73 (Feb)	490 (Jan)	205 (Feb)
Peregrine Falcon	5 (Jan)	3 (Jan)	1 (Feb)	1 (Sep)	-	2 (Oct)	-	-
Bald Eagle	166 (Feb)	130 (Feb)	36 (Jan)	16 (Feb)	23 (Feb)	40 (Mar)	24 (Mar)	24 (Apr)
Northern Harrier	20 (Jan)	22 (Feb)	-	4 (Sep)	-	-	-	-
Red-tailed Hawk	9 (Oct)	9 (Nov)	1 (Oct, Nov)	1 (Jan)	-	-	1 (Nov)	1 (Dec)
Black-bellied Plover	3355 (Apr)	1205 (Apr)	-	8 (Sep)	-	-	33 (Nov)	28 (Jan)
Black Oystercatcher	5 (Mar)	8 (Mar)	31 (Jan)	17 (Oct)	30 (Oct)	54 (Jan)	57 (Oct)	50 (Nov)
Killdeer	51 (Oct)	30 (Oct)	13 (Feb)	3 (Dec)	-	11 (Mar)	34 (Sep)	18 (Dec)
Black Turnstone	48 (Nov)	70 (Nov)	50 (Dec)	6 (Dec)	54 (Oct)	36 (Oct)	156 (Nov)	105 (Jan)
Greater Yellowlegs	95 (Oct)	104 (Oct)	-	1 (Apr)	-	-	14 (Sep)	6 (Sep, Oct)
Dunlin	71465 (Feb)	47490 (Jan)	20 (Feb)	250 (Nov)	-	-	70 (Apr)	150 (Nov)
Sanderling	159 (Dec)	370 (Dec)	60 (Dec)	-	-	-	11 (Sep)	6 (Dec)
Surfbird	2 (Jan, Apr)	-	350 (Oct)	-	109 (Jan)	80 (Nov)	16 (Oct)	13 (Jan)
California Gull	62 (Sep)	91 (Sep)	13 (Oct)	5 (Dec)	66 (Oct)	448 (Sep)	706 (Sep)	785 (Sep)
Glaucous-winged Gull	1156 (Sep)	187 (Apr)	272 (Sep)	418 (Mar)	966 (Mar)	1205 (Feb)	1051 (Nov)	5999 (Mar)
Herring Gull	107 (Nov)	9 (Dec)	14 (Jan)	9 (Oct)	5 (Nov)	3 (Dec)	1 (Feb)	-
Mew Gull	2173 (Oct)	537 (Apr)	583 (Feb)	870 (Nov)	484 (Sep)	1216 (Feb)	633 (Nov)	741 (Nov)
Ring-billed Gull	1168 (Sep, Oct)	801 (Sep)	155 (Oct)	145 (Oct)	-	-	1 (Oct)	-
Thayer's Gull	320 (Dec)	69 (Jan)	3 (Feb)	1 (Oct, Dec)	31 (Oct,Dec)	676 (Feb)	8 (Dec)	23 (Feb)
Unidentified Gull	1750 (Oct)	2142 (Jan)	320 (Jan)	695 (Jan)	226 (Oct	3208 (Apr)	809 (Oct)	1760 (Feb)
Common Murre	3 (Sep)	-	19 (Jan)	2 (Jan)	206 (Mar)	65 (Dec)	379 (Oct)	253 (Jan)
Marbled Murrelet		3 (Sep)	14 (Feb)	13 (Nov)	11 (Dec)	6 (Jan)	26 (Feb)	65 (Nov)
Pigeon Guillemot		1 (Apr)	8 (Feb)	4 (Apr)	19 (Feb)	29 (May)	757 (Sep)	320 (Oct)
Ancient Murrelet	-	-	-	-	2 (Nov)	-	14 (Feb)	166 (Nov)

Welcome New Volunteers:

A hearty thank you to all volunteers who have contributed to the BC Coastal Waterbird Survey, and a warm welcome to new participants: Ashleigh Ballevona, Norm Cameron, Ryan Cathers, Elaine Couling, Ian Cruickshank, Eric Demers, Krista Englund, Rhys & Terry Harrison, Ryan Johnson, Paula Maddison, Eileen Miranda, Jacquelynn Papineau, Jennifer Provencher, Doug & Ellie Race, Jean Raymond, Reto Riesen, Mary Robichaud, Monica Schroeder, Julia Shewan, Michael Simmons, Keith & Bea Valentine, Charley Vaughan, Leona Wall, Woody & Arianna Wentworth and Robyn Worcester.

Thank you all for your contributions to this program!

Sunshine (Coast	Vancouve East	er Island: Coast	Squa	mish	Vancouve North		North and C	entral Coast
2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09	2007-08	2008-09
9	8	35	32	20	20	14	11	6	4
31 (Mar)	49 (Sep)	260 (Sep)	196 (Oct)	25 (Apr)	65 (Mar)	76 (Nov)	69 (Oct, Dec)	34 (Aug)	28 (Apr)
9 (Dec)	24 (Nov)	39 (Nov)	36 (Nov)	15 (Nov)	8 (Mar)	111 (Oct)	83 (Dec)	6 (Apr)	2 (Feb, Dec)
113 (Dec)	86 (Nov)	869 (Mar)	524 (Nov)	5 (Oct)	1 (Mar)	184 (Mar)	267 (Jan)	3 (Mar)	-
-	-	1 (Mar)	1 (Nov)	1	3 (Sep)	2 (Feb)	2 (Nov)	1 (Nov)	-
35 (Apr)	26 (Feb)	220 (Mar)	138 (Feb)	52 (Nov)	48 (Dec)	120 (Mar)	208 (Oct)	18 (Apr)	34 (Apr)
-	-	-	-	4 (Oct)	2 (Jan)	-	-	1 (Apr, May)	1 (Oct)
1 (Feb)	1 (Feb)	1 (Nov,Dec)	2 (Feb,Nov)	3	3 (Feb)	-	-	-	1 (Feb)
-	-	213 (Mar)	316 (Feb)	-	-	27 (Apr)	17 (Nov)	46 (Sep)	-
36 (Oct)	12 (Sep)	81 (Nov)	136 (Oct)	-	-	24 (Jan)	-	-	-
7 (Sep)	6 (Feb)	40 (Dec)	55 (Sep)	2 (Apr)	3 (Mar, Apr)	30 (Dec)	38 (Mar)	4 (Jan)	18 (Oct)
142 (Dec)	65 (Feb)	449 (Nov)	532 (Dec)	-	-	208 (Jan)	228 (Nov)	76 (Jan)	9 (Feb)
-	-	34 (Apr)	37 (Apr)	-	-	7 (Apr)	2 (Apr)	-	-
-	-	3021 (Mar)	2012 (Dec)	-	-	1710 (Jan)	2325 (Apr)	120 (May)	-
-	-	45 (Nov)	25 (Oct)	-	-	150 (Mar, Apr)	290 (Oct)	-	-
241 (Dec)	302 (Feb)	16 (Nov)	160 (Dec)	-	-	9 (Oct)	5 (Nov)	7 (Jan)	-
115 (Oct)	327 (Sep)	2693 (Mar)	492 (Sep)	1 (Oct)	-	1042 (Sep)	137 (Oct)	-	1 (Oct)
3275 (Mar)	1023 (Jan)	678 (Feb)	301 (Mar)	269 (Oct)	200 (Apr)	(225 (Jan)			
-	3	78 (Oct)	153 (Mar)	2 (Mar)	2 (Dec)	67 (Sep)	45 (Sep)	40 (Mar)	15 (Apr)
525 (Nov)	804 (Jan)	6098 (Mar)	1506 (Apr)	68 (Feb)	73 (Feb)	288 (Sep)	298 (Sep)	143 (Dec)	32 (May)
4 (Oct)	2 (Oct)	750 (Sep)	422 (Sep)	-	-	3 (Oct)	3 (Oct)	-	1 (Oct)
10 (Dec)	497 (Jan)	2471 (Mar)	1668 (Nov)	-	1 (Feb)	59 (Mar)	13 (Feb)	-	15 (Dec)
101 (Feb)	408 (Nov)	36339 (Mar)	3895 (Feb)	11 (Nov)	4 (Feb)	258 (Mar)	183 (Oct)	625 (Feb)	1400 (Nov)
10 (Mar)	40 (Jan)	504 (Feb)	336 (Apr)	48 (Mar)	-	135 (Sep)	362 (Jan)	45 (Mar)	1 (Feb, Oct)
71 (Jan)	37 (Nov)	82 (Apr)	78 (Nov)	-	-	55 (Nov)	201 (Jan)	5 (Feb)	14 (May)
2 (Feb, Apr)	4 (Feb)	29 (Apr)	24 (Apr)	-	-	21 (Apr)	21 (Jan)	-	-
2 (Dec)	1400 (Jan)	14 (Nov)	-	-	-	-	-	-	-



Black Turnstones at Clover Point, Victoria (B. Whittington)

RESEARCH NOTES

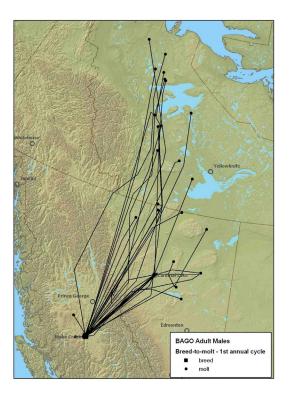
Tracking the Barrow's Goldeneye of BC By Karen Barry and Sean Boyd

Dr. Sean Boyd, Research Scientist with Environment Canada, and Dr. Dan Esler, Professor with Simon Fraser University's Centre for Wildlife Ecology, are conducting ground-breaking research using satellite transmitters to identify migration routes and habitat affiliations of Barrows Goldeneye.

The study started in May 2006 when 20 male Barrows Goldeneye were implanted with satellite transmitters at Riske Creek, an important breeding area located in south-central British Columbia, west of Williams Lake. More males were tagged in May 2007 and May 2008, as well as females and their young in July 2008. To complement the above, females and males were marked at wintering sites near Vancouver (Indian Arm) in February 2007 and in Prince William Sound, Alaska, in March 2009.

The tags were programmed to signal location and body temperature roughly every 5-6 days. The scientists were able to track some individuals over a complete annual cycle, a few individuals over two years, and one amazing male over three years!

Initial results indicate that male Barrow's Goldeneye are highly site-faithful which means they breed, molt and winter at the same sites every year. Males depart Riske Creek while the females are incubating eggs and almost all individuals migrate north to molt in boreal wetlands east of the Rockies. The entire molting area for Riske Creek males spans a large area from Little Slave Lake in Alberta to as far north as Great Bear Lake in the Northwest Territories. Following the molt period (June – October), males migrate directly to their wintering grounds on the Pacific Coast, which extends from Juneau, Alaska to Puget Sound, Washington.





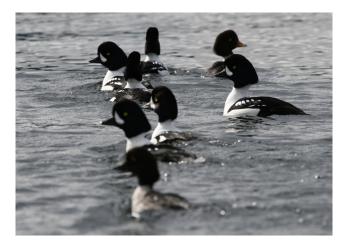
The upper map shows male movements from breeding sites at Riske Creek to moult sites in NWT.

The lower map shows movements from northern moult sites to winter coastal sites.

Most Barrow's Goldeneye winter in the Strait of Georgia and southern Hecate Strait BC, from November to April, where the Coastal Waterbird Survey is the main monitoring program keeping tabs on their status. Preliminary results from our recent 10-year Trends Analysis indicate that the wintering population of Barrow's Goldeneye is stable.

Dr. Boyd's and Dr. Esler's study also determined a definite connection between Riske Creek and a molting/staging lake in northern Alberta. From June to November each year, roughly 30-40% of all males tagged at Riske Creek used Cardinal Lake, a shallow wetland near Grimshaw in northwestern Alberta. The lake supports 4,000-5,000 males in late summer making it the second most important molt site in North America, after Old Crow Flats in the Yukon. Cardinal Lake has unique characteristics that allow it to support a high abundance of amphipods, a small crustacean which is the main food for Barrow's Goldeneye.

Findings from this study have greatly improved our understanding of the population ecology of Barrow's Goldeneye on the Pacific coast. Connections between important breeding sites in BC and molting, staging and wintering areas demonstrate that the species relies on different habitats to carry out their life stages. Additional tagging planned for Cardinal Lake, in Alberta, in August 2009 will help to further understand molt ecology and delineate sub-populations for management purposes.





Barrow's Goldeneye in Indian Arm (S. Boyd)

An Interview with Moira Lemon, Wildlife Technician with Canadian Wildlife Service By Karen Barry

As someone who has always been interested in wildlife and the outdoors, working with birds came naturally to Moira Lemon, who has been with the Canadian Wildlife Service (CWS) since 1979. Moira's first job with CWS was conducting waterfowl surveys in the Yukon and Fraser River Delta. Moira became involved with shorebird work in 1992 when she worked at the CWS field camp on Sidney Island where she assisted with a project led by Rob Butler to study migrating shorebirds. According to Moira "it was an idyllic setting staying in a small cabin and surveying the lovely lagoon for the months of July-August every year".



Moira Lemon at Brunswisk Point (T. Kuwae)

Another project that Moira has long-term involvement with is population monitoring of colonial nesting seabirds including Cassins Auklet, Rhinoceros Auklet and Tufted Puffin on Triangle Island and on Haida Gwaii (Queen Charlotte Islands). The CWS Field camp on Triangle Island (one of the Scott Islands off northern Vancouver Island) first started in the 1970's. Since 1994, scientists from CWS and Simon Fraser University (SFU) have been visiting the island every summer, staying for 3-5 months to study population ecology of these burrow-nesting seabirds.

Moira has been observing shorebird migration in the Fraser Delta since the early 1990's. Her daily spring migration counts are part of a regular monitoring program that feeds into studies on shorebird ecology being conducted by researchers at SFU who recently discovered that biofilm, the "slime" on the surface of mudflats, is the key food source for Western Sandpipers during spring.

This year, the peak shorebird migration occurred on April 24, 2009 which was slightly earlier than previous years. "Generally we see one main peak followed by a few smaller pulses which eventually tapers off in mid-May", Moira says. This year, numbers appeared to drop off rapidly and birds were almost completely gone by May 7, 2009. In other words, the stop-over occurred in a shorter time window than in previous years. The highest number of shorebirds on one day was estimated at 160,000, down from the 5-year high of about 250,000. This shows how important this area is for migrating shorebirds to rest and feed.



Dunlin at Roberts Bank (M. Lemon)

For anyone interested in observing this natural migration phenomenon, the best places to go are the Boundary Bay dyke (between 96th & 88th Streets), or the dyke at Brunswick Point between the Coalport jetty and the end of River Road, west of Ladner. The last week in April is the best time to see huge numbers of shorebirds, often with a Peregrine Falcon or two working the flocks. It's best to go out on a rising tide, nearing high tide, which pushes the birds towards shore for good viewing.

The most abundant species are Dunlin and Western Sandpiper. Scan the flocks for other species including Least Sandpiper,

Semipalmated Sandpiper, Black-bellied Plover, Semi-palmated Plover, Greater Yellowlegs, dowitchers and the rarer Red Knot. As Moira can

attest to, watching the incredible shorebird activity as hundreds of thousands of birds get ready for their long-distance migration is an inspiring sight and we are lucky to witness this each spring!

The Lasting Legacy of the Exxon Valdez Oil Spill By Karen Barry & Pete Davidson (photo from www.evostc.state.ak.us)

This year marks the 20th anniversary of the Exxon Valdez disaster. Just after midnight on March 24, 1989, in the calm waters of Prince William Sound, an oil tanker plowed over charted rocks known as Bligh Reef. The impact ripped open the cargo tanks of the 300-metre single-hulled vessel resulting in the release of approximately 40 million litres of crude oil into the sea. Photos showed the terrible effects to marine mammals, birds, fish and shellfish. An estimated 250,000 seabirds were killed by oil in the weeks and months after the spill.

The Exxon Valdez Oil Spill Trustee Council was formed to oversee restoration of the injured ecosystem through the use of the \$900 million civil settlement. Clean-up activities, restoration work and research have helped many affected areas, but full recovery has not been reached yet. What have we learned in the last 20 years?

Perhaps the most dramatic discovery is that Exxon Valdez oil persists in the environment and in many places, it is nearly as toxic as it was during the first weeks after the spill. Even though beaches appear clean on the surface, oil remains below the rocks and sediment. A study in which pits were dug in the intertidal zone found that Exxon Valdez oil is decreasing at a rate of 0-4% per year. At this rate, the remaining oil will take decades and possibly centuries to disappear entirely.



This longterm damage was not expected at the time of the spill and was only just starting to be recognized in 1999, at

the 10th Anniversary. At that time, the majority of species affected were still struggling, but it was expected that the ecosystem would recover naturally with time.

Today, after 20 years, many species and habitats remain in serious trouble. According to the Status Report on Injured Resources and Services, some bird species have recovered, such as Bald Eagles, Common Loons, Common Murres and cormorants. Others are designated as Recovering which means that progress is being made, but full recovery has not occurred yet. These include Barrow's Goldeneye, Black Oystercatcher and Harlequin Duck. Some, such as Pigeon Guillemot, are designated as Not Recovered since little or no clear improvement has been seen since the spill.

The studies of the Exxon Valdez spill over the last 20 years have helped us understand the long-term damage caused by oil spills. As a result, we now know that risk assessment for future spills must consider total damages over a longer period. Previously, it was assumed that the greatest impact from an oil spill was due to acute mortality immediately following the spill. However, the Alaskan situation has demonstrated that chronic exposure to lower levels can continue to harm wildlife for generations and indirect ecosystem level impacts can affect the timing and level of recovery.

Coastal Waterbird & Beached Bird Surveys are a vitally important resource in BC, where shipping activity continues to increase and with it, the risk of an oil spill. An important lesson learned from the Exxon Valdez spill is to plan ahead. "Inventory and monitoring data are worth their weight in gold" says Dr. Dan Esler, Exxon spill specialist and scientist with Simon Fraser University and Canadian Wildlife Service. Good inventory data before a spill greatly strengthens the case for possible court charges and helps in remedial planning. This is precisely what the Coastal Waterbird & Beached Bird Surveys provide in BC!

For further information and reports, visit the Exxon Valdez Oil Spill Trustee Council's website: www.evostc.state.ak.us

Beached Bird Survey

2008 Highlights By Karen Barry & Pete Davidson



Cormorant carcass (B. Beasley)



Gull carcass (E. Ferdinandi)

What's New

In February and March 2009, BSC staff visited several First Nations bands on the north coast to introduce the beached bird program. At the end of March, the Gitga'at people who are based out of Hartley Bay started the program. Several other groups are also interested, including the Metlakatla near Prince Rupert.

Another group who will participate this year for the first time is West Coast Expeditions, an ecotourism company that runs guided kayak trips in Kyuoquot Sound (www.westcoastexpeditions.com). Surveys will be conducted opportunistically as the groups visit beaches off the west coast of Vancouver Island. This is a great way to increase survey coverage in more remote areas. Plus, it's a nice way for tourists to contribute to environmental stewardship activities while on a wonderful west coast vacation.

2008 Summary

During the 2008 survey year, sites were surveyed from southern Straight of Georgia to the West Coast of Vancouver Island to areas as far north as Queen Charlotte Islands. In total, only 37 beached birds were found in 2008. Of the 13 species found, Greater Scaup was the most common species, making up almost 22% of the total carcasses. The highest number of beached birds was found at Boundary Bay where 18 carcasses were recorded in 2008, including 17 carcasses on one survey date in November. Most of these were quite fresh and eaten over, the most likely cause of death was predation by bald eagles - numerous eagles were seen working the flocks in Boundary Bay at the time. The region with the second highest number of Beached Birds was the west coast of Vancouver Island (Tofino-Ucluelet) where ten beached birds were found in 2008.

"Dead Bird CSI"

As most beached bird surveyors know, it can be very difficult to determine what caused a bird to die because there are rarely any external visual clues. This year, a new program has been started in collaboration with Environment Canada and Fisheries and Oceans Canada who are leading a pilot project investigating fisheries by-catch in BC. Carcasses are submitted for lab analysis to identify the cause of death, just like an autopsy. We like to refer to this as Dead Bird CSI!

In 2009, three fresh carcasses found on Centennial Beach were submitted to the Animal Health Centre Lab in Abbotsford for a postmortem examination to try to determine cause of death. One carcass was a female gull species, possibly a glaucous-winged hybrid. Based on the examination, it was found that this gull had been shot sometime in the past, as it had a bullet lodged in the left pectoral muscle. However, it did not die as a result of the gunshot, rather it succumbed to a subsequent fungal infection (Aspergillosus) that occurred later. A second carcass was a female Surf Scoter. Examination revealed that this bird had a puncture wound and fracture of the skull which may have been caused by predation such as an eagle talon, or possibly a gunshot. The third carcass was a female Pigeon Guillemot which had signs of water in the lungs. The cause of death was determined to be drowning, likely caught in a gill net.

The level of information that can be obtained from these laboratory examinations is very detailed and helpful to understand causes of seabird mortality. Any volunteers who find fresh and intact carcasses are encouraged to collect them and submit them to the lab. Carcasses should be tagged with date, time, location and ID number (we supply labels), and placed in a double plastic bag (labeled with permanent marker) and frozen as soon as possible. Contact us or the BC Wild Bird Mortality Toll-free line 1-866-431-2473 for more information and to arrange shipping.

Recent Publications

Two new research papers based on BC and Washington (www.coasst.org) beached bird data will be published in 2009 in the scientific journal Marine Ornithology. One examines how aerial surveillance in Canada appears to be successfully deterring oil spill impacts in some areas, as indicated by reduced beached bird sightings. Another article features a study of fisheries bycatch patterns on the west coast.

O'Hara, P., P. Davidson and A.E. Burger. In press. Aerial surveillance and oil spill impacts based on beached bird survey data collected in Southern BC. Marine Ornithology.

Hamel, N.J., A.E. Burger, K. Charleton, P. Davidson, S. Lee, D.F. Bertram and J.K. Parrish. In press. Bycatch and beached birds: Assessing mortality impacts in coastal net fisheries using marine bird strandings. Marine Ornithology.



Common Loon (A. Murray)



Total Carcasses found by Species and Region in 2008

Region	Southern Vancouver Island	West Coast Vancouver Island	Boundary Bay	Lower Mainland	Sunshine Coast
Common Loon	-	1	-	-	-
Pacific Loon	-	2	-	-	-
Brant's Cormorant	-	1	-	-	-
Pelagic Cormorant	1	-	-	-	-
Canada Goose	1	-	-	-	-
American Wigeon	1	-	-	-	-
Mallard	-	-	-	-	1
Greater Scaup	-	-	8	-	-
Surf Scoter	-	-	4	-	-
White-winged Scoter	-	-	2	-	-
Unidentified Scoter	-	-	1	-	-
Long-tailed Duck	-	-	1	-	-
Glaucous-winged Gull	-	-	1	1	-
Unknown Gull	-	3	-	3	-
Common Murre	-	2	-	-	-
Species Unknown	1	1	1	-	-
TOTAL	4	10	18	4	1

Welcome New Volunteers:

A hearty thank you to all volunteers who have contributed to the BC Beached Bird Survey, and a warm welcome to new participants: Carita Bergman, Scott Black, Bev Bullen, Ryan Cathers, Kevan Chao, Jania Chilima, Courtney Dean, David Evans, Eckhardt Ferdinandi, Andrew Fineberg, Amy Hendel, Mark Mayo, Jennie Milligan, Karen Morgan, Chris Picard and others from the Gitga'at Band, David Pinel, Jeff Pisio, Ilze Raudzins, Janet Schindler, Laurie Ulm, Kristjanne Vosper, Jan & Bob Walker and Robyn Worcester.

Thank you all for your contributions to this program!

Pilot Monitoring Project: Assessment of the Occurrence of Plastic Ingestion in Seabirds in British Columbian waters.

As an expansion to the "Dead Bird CSI" work we're doing with carcasses in relation to fisheries by-catch, Stephanie Avery-Gomm at Fisheries and Oceans Canada has very recently approached us about collaborating in a new study to assess another major marine issue, the occurrence of plastic ingestion in seabirds in the North Pacific.

Marine plastic debris is an increasingly significant threat facing seabirds worldwide. Seabirds may mistake floating plastic debris for prey, and ingestion can lead to direct mortality or indirect adverse effects such as reduced appetite, starvation, reduced reproductive success and increased organochloride contamination.

In the past decade, there have been no quantitative studies on how much plastic is ending up in B.C. waters and what the potential consequences are for B.C. seabirds. However, with the help of Beached Bird Program volunteers it will be possible to address this issue. This study will involve analyses of gut contents of all recovered beached birds. The information will be used to establish an understanding of how common plastic ingestion is, and to gauge the severity of the threat to seabirds in British Columbia.

BC surveyors can play an essential role in this study by recovering any seabird (i.e., fulmars, shearwaters, gulls, petrels, alcids, and albatrosses) carcasses, fresh or old, that have intact stomachs. We will be in touch again soon about the logistics of how this will work, which is likely to be along the same lines as that for the fisheries by-catch investigations (see page 13).



Photo credit: Algalita Marine Research Foundation



Other News



BC Marine Mammal Response Network

The BCMMRN is a new collaborative program between government agencies, research, conservation and outreach groups, wildlife rescue organizations and BC citizens. The goal of the progam is to help distressed marine mammals and sea turtles, and to collect information from dead animals that are found. The Network responds to reports of dead, injured, sick and harassed marine mammals. Threats such as disease outbreaks, inappropriate or illegal human activity, contamination, disturbance, vessel strikes and entanglement, will also be tracked.

The BCMMRN is looking for members and primary responders who are willing to assist in response efforts in their local communities. This may take the form of taking and submitting photos of a dead carcass, or helping a live animal in distress. The BCMMRN is holding free information session to train those that are interested.

If you would like to know more about BCMMRN, contact Lisa Spaven, Marine Mammal Response Coordinator at Lisa.Spaven@dfo-mpo.gc.ca.

Pacific Biological Station 3190 Hammond Bay Rd. Nanaimo, BC V9T 6N7 (250) 756-7230

If you encounter a marine mammal or sea turtle in distress, or a dead animal, please contact the 24-hour hotline 1-800-465-4336



Marine Bird and Mammal Surveys in the Southern Gulf Islands

By Pete Davidson and Rob Butler

Since the fall of 2008, BSC in partnership with Parks Canada (who are funding the work) and the Pacific Wildlife Foundation (www.pwlf.org) has been conducting monthly boat-based surveys along an 80 nautical mile transect route traversing the Gulf Islands National Park Reserve. Specifically, we are collecting data on the distribution and seasonal abundance of marine bird and mammal Species at Risk, which the Park requires for the development and implementation of appropriate management and outreach activities.



White-winged Scoters (B. Whittington)

These boat-based surveys build on the body of information generated from the ongoing. shoreline-based Coastal Waterbird Survey, which has already provided ten years of data from many parts of this region, particularly Mayne, Pender Island and Saltspring Islands. Several birds we only occasionally see from shore use the "offshore" waters around the southern Gulf Islands in big numbers. For example, in November of last year there was a major influx of Ancient Murrelets into some of the deeper water channels, particularly Haro Strait and Boundary Pass. This alcid is designated Special Concern (i.e. a species to keep tabs because it has a small population or undergone a decline) under the Species at Risk Act.

The area is well known as a summer haunt for Orcas, but perhaps less well known for other marine mammals, including the Harbour Porpoise, listed as Special Concern under the Species at Risk Act. The waters around the Southern Gulf Islands support high densities of this diminutive cetacean, which occurs throughout the area, but in particularly high concentrations through Boundary Pass. Groups can be regularly seen surfacing laconically in the tidally active waters off Gowlland Point on Pender, and south of East Point, Saturna, where elevated land-based observation points afford excellent viewing opportunities with a telescope, with some breathtaking scenic backdrops.

The survey route takes us through two designated Important Bird Areas (IBAs) – Sidney Channel and Active Pass, which seasonally support large concentrations of seabirds and coastal waterbirds. We are finding other locations that support very large concentrations of birds, which would likely qualify them for IBA status, including East Point and Boiling Reef off the south-east tip of Saturna.

One of our next steps, to build on all this survey data, is to begin using both Coastal Waterbird Survey and the boat-based survey information to develop species-habitat associations. Using GIS and statistical models, this process will identify which habitats (e.g. channels with fast-flowing water, rocky shorelines with significant wave action) are important for which bird species. This information can then be applied to parts of the BC coast where we have little or no survey information to identify potential survey priorities, possible hotspots, and places of key management and protection interest, and linked to other datasets (e.g. fisheries) to investigate trophic interactions and help explain the mechanisms behind the complex patterns of marine ecosystem function.

Notes From the Field

This section features brief anecdotes, stories, reflections and other interesting notes from our surveyors. If you are interested in submitting a written piece or photos for our next newsletter, please contact us. We would love to hear from you!

Eagle Excitement in the Lower Mainland

Story and photo submitted by Carol Rennie, Coastal Waterbird Surveyor

I think that we can all relate to the thrill of seeing a bald eagle, especially one in flight. Such a majestic, impressive spectacle, seeing that great wingspan! Here in Richmond where I live, these birds are now more common than they have ever been. We have been lucky enough to witness successful feldging of pairs of eaglets for three years running in our neighbourhood.

During the April 2009 waterbird count, I rode my bike to my site as usual, and sat on a bench at the beginning of my route to count up the widgeons. For some reason, I glanced up and saw, not one, not two, or even three, but twenty-one bald eagles, soaring on the thermals at the Fraser River mouth. Some of the birds were immatures of various ages-- many were adult baldies. I stood and marvelled, transfixed by the sight. If only I had someone to share my joy with! (This was one of the few times that my husband wasn't accompanying me.) I don't know what had attracted them to that particular spot on that particular day. By the end of the survey, I had encountered fifty-five bald eagles. They seemed to be everywhere—flying across the golf course, in the nature preservation area, on the shore, on the nest, and flying over the marsh.

What a glorious birding day for me!



2009 Coastal Festivals and Events

Brant Wildlife Festival

The 19th Annual Brant Wildlife Festival was held in Parksville, on Vancouver Island, from March 6 to April 26. The festival celebrates the return of Black Brant, a small goose that migrates from Mexico to the arctic to breed. They stop in the Parksville-Qualicum area, in particular Parksville Beach, where they rest and feed in the productive eelgrass beds. As many as 20,000 Brant have been observed in Parksville Bay at one time. Brant geese have been declining over the last several years, but things may be improving because Guy Monty has started observing more juvenile birds in the flocks. Impacts such as nest predation and disturbance during migration stopover are the main issues affecting this species. Rob Butler with BSC gave a presentation during the Opening Night describing how natural areas contribute to heathy evironments and also healthy people. Other events during the festival included guided nature walks, Big Day birding, presentations about Mt Arrowsmith, Kids camps, and many other events.



Tofino Shorebird Festival

At this year's Tofino Shorebird Festival, from May 1-3, many events were held to celebrate springtime shorebird migration and learn about the Tofino Mudflats Wildlife Management Area, a designated Important Bird Area. Shorebirds were abundant and several species were seen on the guided walks such as Whimbrel, Sanderling, Black-bellied Plover, Western Sandpiper, Least Sandpiper, Semipalmated Plover, Dunlin and the rare Red Knot. Karen Barry with BSC attended the evening reception at Tofino Botanical Gardens.

Bird; on the Bay...and Beyond

This event is actually a year-round celebration of Boundary Bay as an Important Bird Area. Activities and programs focus on the natural diversity of plants and animals found in the area. Pete Davidson hosted an information booth about BSC programs on Sunday June 7th, during the World Oceans Day celebration. The event was hosted by Friends of Semiahmoo Bay. Pete is also leading guided walks on counting and identifying birds at Beach Grove, Boundary Bay as part of this program. Visit www.birdsonthebay.ca for a full schedule of what's on!

BCNature Fall Conference & General Meeting

BCNature represents over 50 local nature clubs throughout BC. The fall meeting is scheduled September 10-13 and is hosted by the Pender Harbour & District Wildlife Society. Many events are planned, including seminars, field trips and socials (www.penderharbourwildlife.com). Karen Barry from BSC is leading a guided walk at Francis Point Provincial Park to demonstrate how to do Beached Bird and Coastal Waterbird Surveys.



The Important Bird Areas program in British Columbia

By Pete Davidson (Bird Studies Canada) and Krista Englund (IBA Coordinator, BC Nature)



British Columbia is leading the way in a renaissance of the Important Bird Area (IBA) program in Canada. Some of you are already

involved in this project, but for those who aren't, here's a quick overview. The IBA program is a flagship initiative of BirdLife International, a global partnership of conservation organisations from over 170 countries and territories, striving to conserve birds, their habitats and global biodiversity, and working towards sustainable use of natural resources. For more on BirdLife, visit their website at www.birdlife.org.

Many bird species, both common and rare, including the majority that occur in British Columbia, travel across many continents and oceans during their annual cycle, and so efforts to conserve birds must be global in scope, even when practicalities dictate that planning and actions are most feasible when implemented on a local scale. The IBA program was devised with precisely this in mind – it is a site-based conservation program that spans the entire globe through the coordinated and cooperative activities of the BirdLife partners, which in Canada are Bird Studies Canada and Nature Canada (represented here by BC Nature).

The ultimate goal the IBA program is to identify, monitor and protect a suite of sites worldwide that collectively will support a minimum viable population of all of the world's bird species. Lofty though this goal may seem, the program has achieved huge successes in the two decades since its inception. Over 10,000 sites in nearly 200 countries have been designated and online

directories of all IBAs have been published and have become vital tools for conservation planning.

In some parts of the world (e.g., Europe), IBAs are used to inform policy through legislation like the EU Birds Directive. Being connected to a worldwide network of respected conservation groups can add weight to local conservation efforts as well. For example, the weight of an international voice can add significant support for a particularly important site in the face of a major threat.

Here in British Columbia, two thirds of our IBAs are marine and coastal sites with a combination of open sea, offshore island, cliff, mudflat and beach habitats that support internationally or nationally important numbers of breeding, migrating or feeding seabirds, shorebirds, and waterbirds (see map next page). So the IBA program has a special relevance to coastal British Columbia. Counts from the early days of the Coastal Waterbird Survey were used to help support IBA site designations, and the Coastal Waterbird and Beached Bird Surveys will be two of the primary means of monitoring bird populations and assessing pressures in our IBAs as we move into the next phase of the program.

Since 2007, BC Nature and Bird Studies Canada have been establishing a Caretaker Network for BC's IBAs. This involves individuals and local groups who live within, or regularly visit a particular site, and take responsibility for monitoring and stewardship at that IBA. Caretakers also assist by providing regular annual updates on site status and ensuring that information posted on the IBA web database (www.ibacanada.ca) is as current and accurate as

possible. Caretakers have now been identified for over 92% of BC's IBAs.

Now that the Caretaker Network is in place, BC Nature and Bird Studies Canada have been conducting an outreach series with agencies and organisations responsible for land and resource management in the province, to raise awareness of the IBA program. To date, we have delivered presentations to over 100 representatives from more than 15 different agencies, including federal agencies (Canadian Wildlife Service, Parks Canada, Department of Fisheries and Oceans), provincial agencies (Ministries of Environment, Agriculture and Lands, and Education), and nongovernment groups (e.g. Canadian Parks and Wilderness Society, Ducks Unlimited, Nature Conservancy of Canada) and we have several more presentations planned for this Fall.



We have been strongly encouraged by the level of interest in the IBA program and are optimistic that the partnerships we are establishing through these meetings will help us in our quest to conserve IBAs over the long term. Approximately 24% of BC's IBAs are currently afforded some form of protection or conservation status, either through the National, Provincial or Regional Parks network, or as conservation lands through fee simple purchase and similar agreements. Our ultimate goal is to significantly increase the protection of IBAs and augment this with local stewardship activities. The IBA program offers great potential to enhance and buffer existing protection measures - an opportunity being recognised by the groups we are approaching with this outreach series.

The IBA website www.ibacanada.ca is receiving a facelift, so look out for a new look in the fall/early winter, and stay abreast of developments through the BC Nature webpages www.bcnature.ca/pages/stewardship_projects/IBA. And to all you Coastal Waterbird and Beached Bird Surveyors who are already involved in the Caretaker Network, many thanks for your valuable efforts, and we look forward to visiting some of you next year!



Chehalis IBA (K. Stewart)



WEB RESOURCES

These webpages provide interesting information and useful tools for people involved in coastal surveys. If you don't have a computer, you can try your public library for access.



E-Bird Canada www.ebird.org/content/canada

This website provides a real-time, online checklist program. Launched in 2002 by the Cornell Lab of Ornithology and National Audubon Society, and coordinated in Canada by BSC's Dick Cannings, eBird aims to maximize the utility and accessibility of the vast numbers of bird observations made each year by recreational and professional bird watchers. A birder simply enters when and where they went birding, then fills out a checklist of all the birds seen and heard during the outing. eBird provides various options for data gathering including point counts, transects, and area searches. Try it out next time you go birding and have fun visualizing your count data with interactive maps, graphs, and charts.



BC Cetecean Sighting Network www.wildwhales.org

Wild Whales is the home of the B.C. Cetacean Sightings Network, a conservation and research program of the Vancouver Aquarium, in partnership with Fisheries and Oceans Canada (DFO). It collects sightings of cetaceans (whales, dolphins and porpoises) and sea turtles from BC and surrounding waters from whale watchers, tour guides, lighthouse keepers, and the public. Information about each sighting is entered into a database, which is available to researchersandscientists. You can help the researchers by reporting your sightings. Another good website to record your sightings is Orca Network (www.orcanetwork.org). This group is dedicated to raising awareness about whales of the Pacific Northwest, and the importance of providing them with healthy and safe habitats.



Canadian Lakes Loon Survey www.bsc-eoc.org/cllsprog.html

The CLLS is a long-term project designed to monitor the numbers and breeding success of loons on lakes across Canada. The goal is to preserve loons by increasing understanding of loons and of human impact on them. Volunteers survey a lake at least three times over the summer to look for pairs in June, chicks in July and record the number of chicks in August. If you visit a lake in summertime, you may be interested in helping to monitor your local loon population.



The Pacific WildLife The Pacific Wildlife Foundation

www. pacificwildlife.ca

This Foundation is a non-profit coastal and marine research and education society that inspires an appreciation for objective scientific research and conservation of the ocean. They conduct original research, develop novel education programs, and inspire an appreciation for conservation of the ocean. The Pacific WildLife Foundation has been educating the public about marine science for nearly three decades. Formed in 1981 as the West Coast Whale Research Foundation, the foundation underwent a renewal and name change in 2003 as the Pacific WildLife Foundation reflecting a wider vision to research and education of the marine environment. The 30-year history of scientific research and education of the foundation reached millions of people around the world through television films with the National Geographic, Discovery, Animal Planet and National Film Board, and popular and scientific books.

Call for Volunteers:

If you know of anyone interested in participating in the Coastal Waterbird Survey or Beached Bird Survey Programs, please pass along our contact information or let us know. We are looking for volunteers for many sites on the Lower Mainland, Vancouver Island, west coast and north coast areas. Thank you!



Common Loon-moulting (B. Whittington)

In Memoriam

Deepest sympathies to the family and friends of John Brighton of Parksville-Qualicum and Brian Slater of Ucluelet. Both passed away in 2009 and were long-time volunteers with the Coastal Waterbird Survey. They will be greatly missed.



Surveyor's Scrapbook



Black Oystercatcher (B. Whittington)



Short -billed Dowitchers at Tofino Mudflats (K. Barry)



Winter Bird counts in Nanaimo (E. Demers)



Partial Gull carcass found at Schooner Cove (R. Love)



Examining foot on a Beached Bird survey (B. Beasley)

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Program Manager: Peter Davidson pdavidson@birdscanada.org

BC Projects Officer: Karen Barry bcprograms@birdscanada.org The BC Coastal Waterbird and Beached Bird Surveys thank the following organizations for their support:

















