



British Columbia Coast

# BirdWatch

The Newsletter of the BC Coastal Waterbird and Beached Bird Surveys

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## BEACHED BIRD SURVEYS AND FISHERIES BYCATCH

By Karen Barry and Laurie Wilson, Canadian Wildlife Service

Since 2010, Bird Studies Canada has been collaborating with Environment Canada – Canadian Wildlife Service to determine how, when and where gillnet fishing may impact local marine bird populations, and Beached Bird volunteers are playing a key role in data collection. One project involves frequent beach surveys and informal beach walks to document bird mortalities and collect intact carcasses for lab analysis.



Beached Common Murre, Boundary Bay 2010 (K. Barry)

In 2010, there were very large commercial gill-net fisheries in the Georgia Strait / San Juan Islands during August and September and we saw a record number of salmon returning to British Columbia and Washington Rivers. Over that two-month period, in the Boundary Bay/

Point Roberts area, over 50 beach surveys were completed with the assistance of several volunteers, representing more than 93 km of survey effort! More than 100 dead marine birds were found. The most common species were dive-feeders: Common Murre, Rhinoceros Auklet and Pigeon Guillemot. Forty-five carcasses were collected from Boundary Bay and submitted to the BC Ministry of Agriculture's Animal Health Lab for necropsy. Post mortem examinations done by the avian pathologist, Dr. Vicki Bowes, confirmed that 40 out of 45 birds had drowned as a result of entanglement in fishing nets.

Unlike 2010, the 2011 salmon run was much smaller with correspondingly smaller commercial fisheries in the Georgia Strait / San Juan Islands. Once again, many volunteers helped by conducting Beached Bird Surveys. Compared to 2010, fewer dead birds were found in the Boundary Bay / Point Roberts area. As of October 2011, twenty seven beached birds have been documented, primarily from Point Roberts. Most birds were Common Murre, although Pigeon Guillemot, loons and grebes were also found. Carcasses continue to be collected for post-mortem examination to determine cause of death.

During August and late September 2011, BSC helped Canadian Wildlife Service with another project conducting surveys during commercial gillnet fisheries in Johnstone Strait, near Port McNeill on northern Vancouver Island. This study involved boat-based transects in fishing areas before, during, and after commercial gillnet openings. Data was collected on the diversity, abundance, distribution and behavior of birds along transects and near active fishing vessels. In August, the majority of birds were observed off Malcolm Island, and the most common species were Rhinoceros Auklets, followed by Common Murre, Pigeon Guillemot, and occasional Marbled Murrelets. In late September, alcids were still present, but we saw more loons and grebes. We also found 14 dead Common Murre and 6 dead Rhinoceros Auklets floating in the water where gillnet fishing was ongoing. These carcasses were sent to the lab and preliminary results indicate they died from gillnet entrapment. Results from Beached Bird surveys and at-sea observations are continuing to improve our understanding of the interaction between birds and fishing activities. We thank all volunteers who have contributed to this monitoring effort!

# Coastal Waterbird Survey: 2009-2010 and 2010-2011 Season Results

by Karen Barry & Peter Davidson



This summary covers the last two winter seasons for the BC Coastal Waterbird Survey, from September 2009 to April 2011. We are pleased to report that the program continues to expand. Over 190 volunteer observers participated in the last 2 seasons and the number of sites surveyed increased from 184 in 2009-10 to just over 200 active sites in 2010-11. More than 2,500 surveys were completed in the last 2 seasons and since 1999, the entire database has grown to over 16,000 records! This is a fantastic Citizen Science contribution and we thank all the volunteers who have participated!

The following table shows the maximum monthly total count, for the most common species, determined by summing up all counts at all sites within a region for each month. This will give you an idea of how your monthly count at your site compares to combined counts from all sites in your region. For loons, we saw fairly even distribution for Common Loon with low numbers in some regions. High counts over 80 Common Loon were recorded during surveys in White Rock (Ilya Povalyaev, Fred & Evelyn Dobson, Ken Summers & Fred Simpson) and at Seal Bay-Kitty Coleman in Comox (Dave Robinson). High numbers of Pacific Loon were seen during April of 2010 and 2011 when 406 were counted at Icarus Point in Nanaimo (Harriet Rueggeberg) and 500 off Malcolm Island (John Rosser).



Common Murre (R. Tizard)

Our trends analysis of 1999-2009 data indicate that overwintering Western Grebe and Horned Grebe in the southern Strait of Georgia are continuing to decline. Counts of over 200 Western Grebe were seen on only 6 surveys at 3 sites during the last 2 seasons. The maximum count was outside the Strait of Georgia in the Viner River estuary (Yvonne Maximchuk & Bill Proctor) where 375 Western Grebes were seen in February 2010. This is down from the maximum of 900 recorded at this site in February 2009. Other high counts for Western Grebes occurred in White Rock during September 2009: 353 at the West Promenade (Fred Simpson & Ken Summers) and 249 at Little Campbell River – Peace Arch (Glen Carlson), possibly from the same flock in the area at that time. Boat-based surveys on Boundary Bay that winter tallied a high count of 600+ Western Grebes, typically several km offshore.

The reasons for the decline of Western Grebes are still not completely understood and there may be multiple factors at play, such as reduced prey, fisheries bycatch, pollution, habitat degradation and climate change. Recent evidence indicates that the amount and/or availability of herring and other small forage fish for Western Grebes and other fish-eating birds (like loons) in the Strait of Georgia is declining and/or shifting to other areas. Many wetland and lake breeding sites have been degraded or lost completely. At the same time, Christmas Bird Count trends analyses from California indicates that overwintering Western Grebe are increasing in that region, suggesting a southward shift with possibly fewer Western Grebes overwintering in coastal BC. Further work is ongoing to understand this. For example, scientists with the SeaDoc Society are conducting a tracking study of Western Grebes using small transmitters. On November 4, 2011, one of the Western Grebes they are tracking migrated from a lake in Southern Oregon back to its wintering grounds in San Francisco Bay, reportedly the first time that a complete migration cycle was tracked for a Western Grebe. This is an exciting step which will help us understand Western Grebe habitat requirements and seasonal use patterns (see [www.seadocsociety.org/november2011update](http://www.seadocsociety.org/november2011update)).

Large flocks of over 100 Horned Grebes were seen at only 3 sites: 2 locations in White Rock and one site near Victoria. Fred Simpson & Ken Summers counted 306 Horned Grebes along White Rock's West Promenade in November 2010 and 208 Horned Grebes were recorded at Little Campbell River - East Pier during March 2011 (Gareth Pugh). On Vancouver Island, Mike McGrenere counted 109 Horned Grebes in November 2009 and 108 in April 2010 at Cordova Bay, near Victoria.



Double-crested Cormorant (N. Boyle)

All three species of cormorant were distributed across most regions although Brandt's Cormorant did not occur in some regions. Numbers of Brandt's Cormorant were higher on the Sunshine Coast (maximum count 1254, Allen & Helen Poynter) and southern Vancouver Island (maximum count 576, Ian Cruickshank).

Brant were seen primarily during their spring migration and the maximum count occurred in April when 3640 Brant were seen at Craig Bay-Rath Trevor near Parksville (Rhys & Terry Harrison). Numbers of Trumpeter Swans were highest in the Vancouver Island East region, due to a single count of 352 in January 2011 in Millard Creek/Piercy Estuary near Comox (Frank Hovenden). This area is known as important overwintering habitat for Trumpeter Swans.

Highest numbers of dabbling ducks were consistently seen in Boundary Bay-Fraser Delta region and high numbers also occurred in Vancouver-Burrard Inlet, East Coast of Vancouver Island and North West Vancouver Island. American Wigeon numbers peaked at 15,659 at Roberts Bank in November 2010 (Kevin Bell, George Clulow, Rob Lyske & Larry Dea).

Bufflehead were distributed across all regions with highest numbers in South Vancouver Island and Vancouver Island East (including Denman & Hornby Islands). The maximum count for Bufflehead was 639 at Fillongley, Denman Island (Mike Morrell, October 2010). Our 1999-2009 trends analysis indicates that Harlequin Duck are declining. An impressive count of 700 Harlequin Ducks was made on Hornby Island in March 2011 (Jodi Snijders).

A fantastic flock of 12,000 Surf Scoters was recorded at Icarus Point in Nanaimo (Harriet Rueggeberg, March 2010). Large numbers of Surf Scoters were also seen at the same time in Parksville-Qualicum Beach (4000 at French Creek-Eaglecrest, John & Lois Mackenzie) and off Denman Island (3612 at Fillongley, Mike Morrell), corresponding to herring spawn timing and spring staging. In the English Bay-Burrard Inlet IBA, combined site counts of Surf Scoter totalled over 6,900 in November 2010 (Bob Dyer, Allen Jensen, Janice Wilson, Peter Candido, Marian Coope, June Ryder and others). Black Scoter tend to be less abundant than other scoters and our trends analysis indicates they are declining. In March 2010, an exceptional count of 1,500 Black Scoter was made between French Creek - Eaglecrest Beach near Parksville (John & Lois Mackenzie).

Our regional wintering Surfbird population also seems to be declining. Over the last 2 seasons, the highest count was 250 at Bamfield (Anne Stewart, February 2010), while the next highest count was 61 seen in Neck Point, Nanaimo (Eric Demers & Karen Barry, October 2010).

In the last newsletter, we described the increasing trend of Pigeon Guillemots. High counts continue to be reported from Victoria and Saanich. Maximum counts of Pigeon Guillemot occurred at Cordova Bay in the fall of 2009 and 2010, ranging from 285-395 birds seen during a single survey (Mike McGrenere). Ancient Murrelets were counted on the Sunshine Coast, Southern Vancouver Island and North & Central Coast regions. The maximum count was 70 at Clover Pt – Harling Pt in Victoria (Neil Boyle, November 2010). Our trends analysis indicates Rhinoceros Auklets are undergoing a significant decline. Over the last 2 years, low numbers of Rhinoceros Auklet were counted in several regions while a single count of 230 was made at Gordon Head – Mount Douglas in Victoria (Ian Cruickshank, April 2010).

Below is a summary of some interesting and unusual species counted in the last 2 seasons by Coastal Waterbird surveyors. Yellow-billed Loon made it onto 3 separate counts: 1 in Nanoose (Roger Taylor, Feb. 2010), 1 off Gibsons - Sunshine Coast (Allen & Helen Poynter, Dec. 2010) and 1 was seen further north at Viner River Estuary (Yvonne Maximchuk & Bill Proctor, April 2011).

There were 2 counts of Wandering Tattler: one in Haida Gwaii (Janet Gray, Oct. 2009) and another at Neck Point, Nanaimo (Eric Demers & Karen Barry, Sept. 2010). Several other less common shorebirds were recorded including 10 Red Knot at Boundary Bay- 112th Street (Jeremy McCall), and a Stilt Sandpiper in White Rock (Fred & Evelyn Dobson). A Baird Sandpiper was counted at Roberts Bank in October 2009 (Kevin Bell & others) and again during fall 2010 at Roberts Bank, as well as two at Boundary Bay 88th – 104th Streets (Monica Nugent) and one at Witty's Lagoon (Ian Cruickshank). The Sunshine Coast and Victoria were the places to see Rock Sandpiper with Allen & Helen Poynter counting several in 2009-2010 and Judy Muir finding one near Cattle Point, Victoria in February 2011.

Two counts of single Black Kittiwakes were made on the west coast of Vancouver Island: one by Andy Murray & the Raincoast Education Society at Tofino Mudflats, and another by Anne Stewart in Bamfield. In January 2010, a wintering Northern Goshawk was counted in the Squamish estuary (Dave Lassman & the Squamish Estuary Conservation Society). Gyrfalcon are always a treat to see and Monica Nugent recorded one on 3 counts from November 2009 to January 2010 at Boundary Bay 88th – 104th Streets. Monica also recorded a Pomarine Jaeger at her site in September 2010.

About 5-6 Marbled Godwit and a Long-Billed Curlew continue to be counted regularly at Blackie Spit where they have been overwintering for the last few years (Ilya Povalyaev, Fred & Evelyn Dobson). Once again, a huge thank you to everyone for their contributions to this long-term monitoring program and we look forward to future years!



# Coastal Waterbird Results: 2009-10 and 2010-11

Region	Boundary Bay & Fraser Delta		Vancouver & Burrard Inlet		Southern Gulf Islands		Southern Vancouver Island	
	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
Season	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
Number of sites per region per season	13	16	22	31	26	31	23	29
Number of species recorded	91	85	65	74	55	55	76	82
Common Loon	187 (Oct)	449 (Sep)	9 (Apr)	41 (Oct)	4 (Apr)	32 (Nov)	27 (Oct)	28 (Nov)
Pacific Loon	560 (Feb)	24 (Apr)	1 (Apr)	6 (Oct)	113 (Oct)	338 (Apr)	23 (Nov)	127 (Nov)
Red-throated Loon	56 (Nov)	8 (Apr)	12 (Jan)	33 (Nov)	86 (Nov)	1 (Jan)	14 (Jan)	14 (Mar)
Horned Grebe	298 (Oct)	440 (Nov)	9 (Dec)	23 (Dec)	4 (Dec)	23 (Nov, Dec)	151 (Nov)	179 (Nov)
Red-necked Grebe	858 (Sep)	231 (Sep)	24 (Apr)	26 (Dec)	2 (Oct)	2 (Oct, Apr)	20 (Dec)	26 (Nov)
Western Grebe	628 (Sep)	84 (Oct)	14 (Nov)	95 (Oct)	80 (Feb)	9 (Dec)	18 (Feb)	113 (Mar)
Brandt's Cormorant	8 (Feb)	5 (Jan)	38 (Feb)	18 (Mar)	32 (Dec)	22 (Jan)	616 (Dec)	234 (Feb)
Double-crested Cormorant	192 (Nov)	568 (Oct)	95 (Feb)	201 (Dec)	47 (Dec)	144 (Nov)	214 (Dec)	880 (Nov)
Pelagic Cormorant	26 (Feb)	28 (Oct)	187 (Mar)	180 (Apr)	12 (Dec)	47 (Nov)	226 (Dec)	303 (Nov)
Great Blue Heron	126 (Sep)	309 (Apr)	16 (Apr)	50 (Apr)	9 (Sep, Oct)	13 (Oct)	23 (Sep)	38 (Jan)
Mute Swan	-	-	12 (Nov)	14 (Jan)	3 (Mar)	3 (Nov)	29 (Feb)	33 (Oct)
Trumpeter Swan	17 (Dec)	28 (Oct)	44 (Mar)	3 (Nov)	-	54 (Apr)	42 (Feb)	4 (Jan)
Brant	2700 (Apr)	1321 (Apr)	-	89 (Apr)	-	-	49 (Apr)	71 (Apr)
Canada Goose	369 (Dec)	387 (Sep)	172 (Oct)	363 (Jan)	74 (Dec)	73 (Apr)	497 (Sep)	516 (Nov)
Snow Goose	6751 (Nov)	3481 (Oct)	38 (Oct)	30 (Oct)	-	-	-	-
American Wigeon	18288 (Nov)	25591 (Nov)	498 (Feb)	6989 (Dec)	321 (Dec)	288 (Dec)	467 (Dec)	1384 (Nov)
Eurasian Wigeon	364 (Feb)	186 (Feb)	1 (Oct, Apr)	7 (Nov)	1 (Dec)	2 (Dec, Jan)	302 (Dec)	5 (Nov)
Gadwall	96 (Jan)	111 (Nov)	34 (Feb)	60 (Dec)	-	-	-	6 (Dec)
Green-winged Teal	1218 (Apr)	2051 (Nov)	307 (Dec)	940 (Nov)	4 (Feb)	-	178 (Dec)	167 (Feb)
Northern Pintail	12404 (Jan)	15853 (Dec)	49 (Dec)	4515 (Jan)	-	-	201 (Feb)	91 (Jan)
Mallard	5420 (Feb)	6775 (Feb)	755 (Oct)	804 (Nov)	157 (Dec)	86 (Jan)	387 (Dec)	639 (Jan)
Canvasback	-	2 (Oct)	-	2 (Mar)	-	-	-	-
Greater Scaup	1390 (Feb)	2040 (Feb)	11 (Dec)	832 (Mar)	-	-	130 (Dec)	30 (Dec, Jan)
Lesser Scaup	48 (Jan)	62 (Nov)	333 (Apr)	564 (Mar)	3 (Feb, Mar)	3 (Apr)	150 (Apr)	133 (Apr)
Ring-necked Duck	-	-	5 (Mar)	1 (Oct)	78 (Nov)	114 (Dec)	-	-
Surf Scoter	1313 (Apr)	1516 (Oct)	3736 (Jan)	6962 (Nov)	30 (Nov)	175 (Oct)	820 (Nov)	1719 (Oct)
White-winged Scoter	873 (Feb)	584 (Nov)	1600 (Jan)	411 (Oct)	-	53 (Feb)	78 (Feb)	191 (Nov)
Black Scoter	30 (Dec)	436 (Jan)	6 (Dec)	12 (Nov)	-	2 (Dec)	2 (Nov, Mar)	3 (Nov)
Harlequin Duck	375 (Dec)	93 (Dec)	67 (Jan)	38 (Feb)	23 (Dec)	32 (Oct)	115 (Jan)	127 (Nov)
Long-tailed Duck	295 (Dec)	103 (Dec)	29 (Feb)	79 (Feb)	-	-	677 (Nov)	163 (Nov)
Barrow's Goldeneye	46 (Feb)	59 (Mar)	1558 (Dec)	852 (Dec)	258 (Dec)	223 (Feb)	87 (Jan)	91 (Jan)
Common Goldeneye	225 (Feb)	177 (Dec)	85 (Feb)	129 (Dec)	68 (Dec)	60 (Feb)	375 (Dec)	277 (Jan)
Bufflehead	356 (Feb)	223 (Jan)	386 (Feb)	222 (Apr)	234 (Dec)	438 (Nov)	1924 (Nov)	2055 (Nov)

Note: Each value is the maximum monthly summed count for all sites, by region. The month with the highest count is identified in parenthesis. The Boundary Bay-Fraser Delta region includes sites at Roberts Bank and Boundary Bay including White Rock. The Vancouver-Burrard Inlet region includes sites in English Bay & Burrard Inlet. The Southern Gulf Islands includes Galiano, Mayne, Pender, Saltspring, Gabriola, Texada and Valdez Islands. Southern Vancouver Island includes sites in Victoria, Saanich Peninsula, Sooke, Cowichan Valley and Jordan River. Sunshine Coast includes sites near Gibsons, Sechelt, Pender Harbour & Powell River. Vancouver Island East includes sites in Nanaimo, Nanoose, Parksville-Qualicum, Comox, Campbell River, and Denman, Hornby and Lasqueti Islands. Squamish includes sites in Howe Sound. North West Vancouver Island includes sites near Tofino-Ucluelet, Port McNeill, Port Hardy and Malcolm Island. North - Central Coast includes sites in Kitimat, Prince Rupert and Haida Gwaii.

Sunshine Coast		Vancouver Island: East Coast		Squamish		Vancouver Island: North & West		North and Central Coast	
2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
10	9	54	53	20	19	11	10	5	3
60	51	80	81	47	40	77	72	46	51
54 (Jan)	51 (Nov)	493 (Feb)	304 (Nov)	-	1 (Apr)	71 (Feb)	34 (Apr)	34 (Oct)	5 (Sep)
16 (Jan)	47 (Dec)	1082 (Feb)	528 (Nov)	2 (Mar)	1 (Jan)	67 (Apr)	501 (Apr)	-	-
2 (Oct)	-	13 (Dec)	3 (Oct)	-	5 (Feb)	2 (Dec, Apr)	2 (Oct, Apr)	4 (Oct)	1 (Nov, Feb)
92 (Mar)	73 (Dec)	393 (Feb)	263 (Nov)	-	3 (Feb)	71 (Nov)	55 (Nov)	8 (Oct)	-
92 (Apr)	25 (Mar)	430 (Feb)	153 (Nov)	1 (Mar)	-	125 (Sep)	86 (Nov)	38 (Oct)	17 (Apr)
62 (Apr)	10 (Oct)	380 (Feb)	118 (Dec)	37 (Nov)	-	752 (Feb)	336 (Dec)	-	4 (Nov)
1256 (Nov)	110 (Oct)	405 (Feb)	55 (Jan)	4 (Jan)	-	10 (Oct)	16 (Mar)	-	1 (Nov)
83 (Jan)	112 (Nov)	270 (Dec)	393 (Mar)	110 (Jan)	39 (Feb)	158 (Nov)	50 (Apr)	1 (Oct)	4 (Dec)
45 (Jan)	46 (Oct)	363 (Nov)	226 (Nov)	14 (Jan)	14 (Feb)	140 (Feb)	117 (Nov)	4 (Mar)	7 (Mar)
7 (Sep)	10 (Nov)	48 (Feb)	54 (Sep)	32 (Feb)	10 (Feb)	38 (Feb)	21 (Nov)	15 (Nov)	14 (Dec)
-	-	8 (Feb)	2 (Sep, Nov, Dec)	-	-	-	-	-	-
9 (Mar)	5 (Jan)	64 (Dec)	454 (Jan)	9 (Mar)	-	42 (Feb)	18 (Feb)	40 (Jan)	15 (Apr)
1 (Oct)	-	2366 (Apr)	4271 (Apr)	-	-	-	1 (Nov)	-	-
55 (Mar)	80 (Nov)	820 (Sep)	879 (Oct)	698 (Jan)	198 (Jan, Mar)	265 (Dec)	278 (Dec)	615 (Feb)	554 (Feb)
-	-	6 (Nov)	90 (Oct)	-	-	24 (Nov)	91 (Oct)	31 (Apr)	11 (Oct)
179 (Nov)	148 (Nov)	4134 (Feb)	3883 (Jan)	44 (Feb)	28 (Jan)	3075 (Nov)	412 (Dec)	8 (Mar)	30 (Sep)
1 (Apr)	9 (Dec)	42 (Mar)	40 (Oct)	-	1 (Jan)	13 (Dec)	2 (Feb)	-	-
96 (Oct)	1 (Sep)	62 (Jan)	2 (Jan)	-	1 (Apr)	24 (Apr)	38 (Nov)	-	2 (Oct)
4 (Dec)	-	267 (Dec)	138 (Jan)	43 (Oct)	-	2590 (Nov)	221 (Oct)	10 (Feb, Apr)	32 (Apr)
-	-	622 (Dec)	261 (Jan)	102 (Feb)	24 (Jan)	360 (Dec)	223 (Oct)	88 (Apr)	75 (Oct)
196 (Feb)	84 (Sep)	6036 (Feb)	5263 (Jan)	660 (Jan)	400 (Apr)	525 (Nov)	283 (Mar)	557 (Apr)	520 (Mar)
-	-	-	3 (Nov)	-	-	-	-	-	-
16 (Jan)	12 (Nov, Jan)	2152 (Jan)	1038 (Jan)	-	9 (Apr)	12 (Jan)	23 (Oct)	31 (Dec)	95 (Nov)
-	-	211 (Jan)	121 (Nov)	2 (Mar)	8 (Apr)	-	-	-	-
-	-	52 (Jan)	60 (Feb)	-	9 (Apr)	-	-	-	-
1479 (Apr)	873 (Dec)	19764 (Mar)	4633 (Apr)	-	12 (Mar)	1831 (Sep)	200 (Sep)	12 (Mar)	700 (Apr)
24 (Nov)	41 (Oct)	3947 (Jan)	1999 (Feb)	-	-	146 (Oct)	84 (Oct)	40 (Oct)	5 (Dec, Jan)
241 (Jan, Feb)	188 (Jan)	1558 (Mar)	433 (Jan)	-	-	253 (Mar)	56 (Apr)	-	-
153 (Jan)	82 (Dec)	871 (Feb)	860 (Mar)	-	-	100 (Nov)	93 (Oct)	1 (Sep)	6 (Apr)
-	-	155 (Feb)	118 (Apr)	-	-	13 (Jan)	21 (Jan)	-	-
746 (Jan)	238 (Feb)	245 (Jan)	234 (Mar)	100 (Feb)	46 (Mar)	591 (Dec)	320 (Nov)	30 (Mar)	72 (Apr)
178 (Jan)	67 (Dec)	1204 (Jan)	469 (Jan)	132 (Feb)	82 (Mar)	115 (Feb)	65 (Feb)	11 (Mar)	106 (Mar)
181 (Apr)	149 (Nov)	1999 (Mar)	1206 (Nov)	154 (Jan)	91 (Mar)	664 (Feb)	377 (Nov)	195 (Apr)	78 (Apr)



# Coastal Waterbird Results: 2009-10 and 2010-11 (continued)

Region	Boundary Bay & Fraser Delta		Vancouver & Burrard Inlet		Southern Gulf Islands		South Vancouver Island	
Year	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
# Sites	13	16	22	31	26	31	23	29
Common Merganser	22 (Jan)	20 (Dec)	94 (Feb)	163 (Dec)	99 (Jan)	169 (Dec)	225 (Feb)	207 (Dec)
Hooded Merganser	-	4 (Feb)	15 (Nov)	22 (Dec)	15 (Feb)	20 (Dec)	134 (Dec)	156 (Nov)
Red-breasted Merganser	95 (Mar)	93 (Dec)	121 (Nov)	69 (Dec)	37 (Dec)	153 (Feb)	570 (Nov)	484 (Nov)
Peregrine Falcon	4 (Nov, Dec)	4 (Mar)	-	1 (Sep)	-	-	1 (Dec)	3 (Oct)
Bald Eagle	163 (Feb)	198 (Feb)	16 (Jan)	41 (Feb)	23 (Jan)	27 (Feb)	26 (Apr)	27 (Mar)
Northern Harrier	21 (Nov, Dec)	14 (Oct)	1 (Sep)	-	-	2 (Nov)	2 (Mar)	1 (Sep, Nov)
Red-tailed Hawk	8 (Jan, Feb)	16 (Dec, Apr)	1 (Oct)	1 (Mar)	1 (Dec)	1 (Jan)	2 (Oct)	3 (Oct)
Black-bellied Plover	1864 (Apr)	1952 (Feb)	-	1 (Oct)	-	-	69 (Jan)	21 (Feb)
Black Oystercatcher	14 (Jan)	23 (Jan)	88 (Oct)	26 (Jan)	45 (Dec)	53 (Dec)	55 (Oct)	94 (Oct)
Killdeer	79 (Nov)	13 (Nov)	18 (Oct)	4 (Oct)	2 (Oct)	-	39 (Dec)	29 (Nov)
Black Turnstone	79 (Nov)	20 (Dec)	17 (Dec)	47 (Mar)	26 (Sep)	72 (Oct)	134 (Jan)	120 (Dec)
Greater Yellowlegs	70 (Nov)	89 (Oct)	-	-	-	-	11 (Oct)	10 (Oct)
Dunlin	22670 (Feb)	22040 (Apr)	-	124 (Jan)	-	-	57 (Dec)	29 (Feb)
Sanderling	70 (Mar)	3000 (Apr)	201 (Dec)	30 (Jan)	-	-	18 (Mar)	35 (Mar)
Surfbird	-	-	30 (Dec)	35 (Dec)	17 (Dec)	25 (Dec)	29 (Dec)	21 (Nov)
California Gull	28 (Sep)	49 (Sep)	21 (Sep)	6 (Sep)	79 (Oct)	506 (Oct)	1278 (Sep)	2809 (Oct)
Glaucous-winged Gull	1393 (Jan)	1337 (Jan)	659 (Feb)	626 (Nov)	159 (Apr)	284 (Nov)	874 (Dec)	1083 (Jan)
Herring Gull	8 (Sep)	1 (Nov, Jan, Apr)	36 (Jan)	22 (Apr)	6 (Nov)	12 (Jan)	1 (Dec)	3 (Nov)
Mew Gull	1056 (Oct)	478 (Apr)	387 (Jan)	1008 (Feb)	346 (Oct)	568 (Oct)	359 (Oct)	1226 (Oct)
Ring-billed Gull	531 (Sep)	415 (Sep)	171 (Oct)	87 (Oct)	1 (Oct)	1 (Oct)	-	15 (Dec)
Thayer's Gull	5 (Jan)	22 (Dec)	4 (Apr)	41 (Nov)	93 (Dec)	369 (Oct)	14 (Dec)	297 (Nov)
Unidentified Gull	1016 (Feb)	582 (Oct)	227 (Apr)	174 (Jan)	926 (Nov)	595 (Oct)	2890 (Dec)	2767 (Oct)
Common Murre	-	-	-	2 (Jan)	2 (Nov, Jan)	7 (Feb, Apr)	303 (Dec)	85 (Dec)
Marbled Murrelet	-	-	-	2 (Mar)	2 (Jan)	4 (Dec)	53 (Sep)	67 (Dec)
Pigeon Guillemot	1 (Oct, Mar)	-	3 (Mar)	4 (Mar, Apr)	19 (Mar)	38 (Apr)	450 (Sep)	668 (Oct)
Ancient Murrelet	-	-	-	-	-	-	35 (Nov)	121 (Nov)
Rhinoceros Auklet	-	-	-	1 (Dec)	-	18 (Apr)	363 (Apr)	244 (Sep)

Many thanks to volunteers and their assistants who contributed to the 2009/10 - 2010/11 seasons: Jim & Fran Askey, Harold Birkeland, Louise Blight, Neil Bourne, Sandy Bowie, Mike Boyd, Neil & Pat Boyle, Leona Breckenridge, Betty Brooks, Janice Brown, Jay Cathers, John Chandler, Trudy Chatwin, Vi Chungranes, George Clulow, Paul Colton, Colin Conroy, Thomas & Evelyn Constable, Marian Coope, Fred & Evelyn Dobson, John Dove, Warren Drinnan, Michael Dunn, Phillinda Dunne, Bob Dyer, Krista Englund, Patrick Fawkes, Kerry Finley, Heather Harbord, Lee Harding, Rhys & Terry Harrison, David & Pam Helem, Rick Hilton, Roy & Shirley Hill, Michael Hoebel, Fred Hornby, Fran Hammond-Kaarremaa, Ruth Keogh, Bill Kinkaid, Anne Knowles, Annemarie Koch, Edward Kooi, Dave Lassman, Pat Levitt, Susan & Jim Linden, Michelle Masselink, Monica Mather, Yvonne Maximchuk, Jeremy McCall, Tiiu McCormick, Mike McGrenere, Gerry McKeating, Anne McNeill, Newson, John Newell, Sharon Niscak, Paul deNiverville, Rosemary Nixon, Jason Northcott, Monica Nugent, Stan Olson, Andrea Paetow, Jacqu Jennifer Provencher, Gareth Pugh, Tony Quin, Doug & Ellie Race, Ilze Raudzins, John Rawsthorne, Sheila Ray, Carol Rennie, Reto Riesen, Karin Ross, John Rosser, Rand Rudland, Harriet Rueggeberg, Janet Russwurm, June Ryder, Bob Sarti, Stuart Scholefield, Barbara Sedgwick, Julia She Sullivan, Ken Summers, Mark & Ingrid Taylor, Roger Taylor, Walter & Susan Thorne, Marti Tilley, Russ Tkachuk, Tauno Tuominen, Keith & Bea Warren, Gillian Watson, Diane Webster, Sandra Webster, Woody & Arianna Wentworth, Marja deJong Westman, Bruce Whittington, Janice

Sunshine Coast		Vancouver Island: East Coast		Squamish		Vancouver Island: North & West		North and Central Coast	
2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11	2009-10	2010-11
10	9	54	53	20	19	11	10	5	3
39 (Mar)	13 (Sep, Apr)	231 (Dec, Mar)	234 (Jan)	52 (Feb)	67 (Mar)	478 (Oct)	311 (Oct)	41 (Jan)	25 (Mar)
24 (Jan)	15 (Nov)	52 (Jan)	29 (Nov)	4 (Nov)	12 (Apr)	59 (Dec)	56 (Dec)	3 (Feb)	1 (Dec, Mar)
50 (Apr)	69 (Dec)	1009 (Mar)	228 (Feb)	-	1 (Feb)	327 (Jan)	146 (Feb)	250 (Oct)	1 (Jan, Mar)
1 (Nov)	-	-	2 (Sep)	1 (Sep)	1 (Feb, Apr)	1 (Nov, Dec, Jan)	-	-	-
25 (Mar)	27 (Jan)	140 (Feb)	137 (Feb, Mar)	28 (Jan)	6 (Feb)	55 (Sep)	51 (Feb)	79 (Apr)	21 (Feb)
1 (Jan)	2 (Oct)	1 (Mar)	1 (Dec, Apr)	4 (Oct)	-	1 (Oct)	2 (Apr)	1 (Sep)	2 (Oct)
2 (Nov)	-	1 (Sep)	4 (Nov)	10 (Feb)	2 (Jan)	-	-	2 (Apr)	1 (Sep)
60 (Feb)	-	620 (Jan)	280 (Nov)	-	-	29 (Feb)	44 (Nov)	-	-
43 (Jan)	27 (Oct)	150 (Jan)	127 (Dec)	-	1 (Mar)	22 (Nov)	32 (Mar)	-	-
11 (Nov)	8 (Jan)	64 (Sep)	38 (Jan)	2 (Mar)	2 (Apr)	34 (Oct)	12 (Oct)	8 (Jan)	3 (Nov)
119 (Jan)	36 (Jan)	527 (Nov)	442 (Dec)	-	-	842 (Jan)	300 (Mar)	24 (Jan)	34 (Sep)
3 (Jan)	-	59 (Oct)	16 (Sep)	-	-	16 (Apr)	44 (Apr)	-	-
7 (Oct)	5 (Sep)	3064 (Mar)	2840 (Jan)	-	-	550 (Mar)	2000 (Nov)	-	-
-	-	68 (Jan)	41 (Nov)	-	-	30 (Mar)	8 (Jan)	-	-
35 (Mar)	6 (Jan)	11 (Jan)	61 (Oct)	-	-	500 (Feb)	20 (Jan)	-	2 (Sep)
79 (Sep)	109 (Sep)	2622 (Mar)	677 (Sep)	1 (Mar)	-	51 (Oct)	511 (Sep)	1 (Oct, Nov)	1 (Sep, Oct)
2375 (Jan)	737 (Sep)	59768 (Mar)	8107 (Mar)	1454 (Jan)	532 (Feb)	230 (Sep)	715 (Mar)	609 (Apr)	508 (Mar)
2 (Nov - Feb)	3 (Oct)	357 (Mar)	518 (Mar)	1 (Nov)	-	26 (Oct)	59 (Dec)	200 (Apr)	60 (Nov)
457 (Jan)	129 (Dec)	12750 (Mar)	2370 (Mar)	20 (Dec)	66 (Jan)	298 (Oct)	563 (Sep)	162 (Apr)	63 (Sep)
24 (Feb)	4 (Dec)	339 (Nov)	107 (Nov)	-	-	2 (Oct)	160 (Jan)	-	1 (Sep, Nov, Feb)
969 (Dec)	6 (Sep)	2309 (Oct)	1111 (Feb)	-	-	7 (Apr)	67 (Oct)	-	-
3207 (Feb)	375 (Jan)	38144 (Mar)	12581 (Mar)	35 (Oct)	2 (Mar)	717 (Oct)	293 (Dec)	660 (Nov)	1815 (Mar)
16 (Dec)	4 (Feb)	59 (Jan)	83 (Feb)	-	-	34 (Feb)	167 (Nov)	4 (Dec)	12 (Jan)
22 (Apr)	10 (Nov)	16 (Feb)	13 (Nov)	-	-	456 (Dec)	507 (Feb)	2 (Oct, Apr)	6 (Jan)
9 (Apr)	3 (Mar)	25 (Apr)	14 (Apr)	-	-	35 (Sep)	19 (Mar)	-	-
14 (Jan)	-	-	-	-	-	-	-	-	7 (Apr)
-	-	6 (Feb)	9 (Sep)	-	-	44 (Apr)	95 (Apr)	2 (Apr)	-

y, Donna Baker, Liz & Roland Bamford, Karen Barry, Ron Barre, Lonny Bate, Barb Beasley, Kevin Bell, Margaret Beswetherick, Jan Bevan, Brogan, Meg Brown, Bev Bullen, Mikell Callahan, Norm Cameron, Peter Candido, Douglas & Sheila Carrick, Glen Carlson, Jon Carter, Ryan, Elaine Couling, Nonie Coulthard, Sue Couch, Ian Cruickshank, Peter Davidson, Larry Dea, Eric Demers, Christopher Di Corrado, Rian Dickson, Kate Forster, Julie Foster, Margaret Fowler, Pierre Geoffray, Pam Gordon, Barbara Graves, Janet Gray, Margaret Hampshire, Vicki Hansen, k Hovenden, Sheila Howlett, Julian Hudson, Jean Hudson, Neil Hughes, Allan Jensen, Dale Jensen, Bert & Daphne Jervis, Ron Johnson, Liz Berger, Kitty Lloyd, Joan Lopez, Bev Lownie, Rob Lyske, Alan MacLeod, April Macleod, Greg Mackenzie, John & Lois MacKenzie, Art Martell, John Mills, Eileen Miranda, Beth Mitchell, Karen Morrison, Mike Morrell, Norma Morton, Judy Muir, Andy Murray, Heather Neville, Franelynn Papineau, Bonnie Parks, Joan Plysiuk, Ilya Povalyaev, G. Allen & Helen Poynter, Alison & Andrew Prentice, Barry Price, Bill Proctor, Ristau, Dave Robinson, Geoff Robins, Mary Robichaud, Neil & Marilynne Robins, Bernard & Herbie Rochet, Sheila & Doug Rogers, Donald Swan, Muggs Sigurgeirson, Ed & Thelma Silkens, Fred Simpson, Michael Simmons, Jodi Snijders, Anne Stewart, Bill & Michelle Stewart, Michael Valentine, Jason VanRooyen, Charley Vaughan, Sheena Vennesland, Bob Vergette, Sally Wait, Fern Walker, Leona Wall, Carol Wardle, Ted Wilson, Mac Willing, Megan Willie, Neil Wilson, Charlene Wood, Jean Woodley, Robyn Worcester, Ken Wright, Ann Zielinski



# The BC Beached Bird Survey: 1986 - 2010

The year 2011 marks the 10th year that the BC Beached Bird survey program has been coordinated by Bird Studies Canada. Before that, from 1986 to 1997, the Beached Bird (BB) survey program was coordinated by Dr. Alan Burger from the University of Victoria. These 2 periods combined make up over 20 years of Beached Bird survey data for coastal BC!

Like many other regions in the world, the BC Beached Bird program was initiated to monitor oil spill impacts on marine birds and shellfish beaches. In December 1988, funding for BC's BB program increased after a major oil spill occurred near Gray's Harbor Washington when the tanker barge Nestucca sank. Approximately 87,400 litres (5500 barrels) of Bunker C oil were released. Oil then washed ashore in Washington and Vancouver Island, mainly around southern Vancouver Island but small amounts were also seen as far north as Cape Scott. As many as 56,000 seabirds were killed and many crab and shellfish populations were oiled in addition to herring spawning areas. Following the Nestucca spill, another major spill occurred in July 1991, when the vessel Tenyo Maru sunk in the mouth of Strait of Juan de Fuca. Again, many marine birds died although most of the oil moved into Washington and little was seen on Vancouver Island. For both of these incidents, the BC Beached Bird program was key to assessing and understanding the magnitude of these impacts.

During the early years of BC's program under Dr. Burger's direction, Beached Bird surveys were conducted at 49 beaches covering the south coast, the west coast of Vancouver Island, central and north coast, and Haida Gwaii. A total of 1431 surveys were conducted and 1260 carcasses were found. Of these, 39 had oiled plumage. Species identification is not always possible for every carcass depending on the level of decomposition, yet 73 different species of waterbirds, raptors or corvids were recorded during these first 11 years. The most common species was Common Murre followed by Glaucous - winged Gull and Unknown gull species.

During the last 9 years of the program from 2002 to 2010, over 2200 surveys have been conducted at more than 100 beaches although not all beaches have been surveyed continually. During this period, a total of 1063 carcasses were found during regular BB surveys and 59 species have been recorded. Of these, only 10 carcasses had oiled plumage. However in 18 separate surveys, oil was recorded on the beach or as sheen in the water. From 2002 to 2010, the most common beached bird reported was Northern Fulmar as a result of several wreck events when large numbers of these birds washed ashore on the west coast of Vancouver Island.



Dunlin found at Blackie Spit, Surrey in 2010 (A. Prentice)



White-winged Scoter found at Willows Beach, Victoria in 2010 (H. Reid)



Western Grebe found in White Rock in 2010 (G. Pugh)



For instance, 74 beached Northern Fulmar were recorded in 2002, 38 in 2003 and 169 in 2009, all in Tofino-Ucluelet region. The next most common beached birds found were Glaucous-winged Gull followed by Common Murre.

The total number of beached birds during 1986-1997, and annually from 2002-2010, is presented in the Table on page 10-13 (terrestrial birds have not been included). Over the entire duration of the program from 1986-2010, a grand total of 2318 carcasses of waterbirds, raptors and corvids have been found, with Common Murre being the most common species overall (15.8%), followed by Glaucous-winged Gull (13.8%) and Northern Fulmar (13.6%). Generally, most species reported during the early years of the BB program continue to be found, although some may occur in lower numbers now. The most common group that is regularly found are gulls. Even in life gulls can be challenging to identify, therefore it's not surprising that dead and decomposing gulls are often reported as Unknown gull.

Reports of oiled birds seem to be declining. Other than the 10 oiled carcasses found during beach bird surveys since 2002, an additional two oiled birds have been reported from opportunistic surveys. In 2010, a dead Rhinoceros Auklet was found in Boundary Bay with a small amount of oil on the belly and it was sent to the lab for oil analysis.

In 2011, a dead and decomposing Common Murre was found in Victoria with oiled feathers. It is difficult to know where or how these birds may have become oiled but it is important to record this information in order to document the frequency of occurrence of oiled birds. Over the last decade, we have been fortunate in BC that no major oil spills have occurred, however smaller spills and low level chronic oiling, especially from recreational craft and in the vicinity of busy harbours, remain potential problems and the risk of a large oil spill still exists.

Cause of death can be very difficult to assess based on external appearance of carcasses so we continue to collaborate with Canadian Wildlife Service to submit fresh and intact carcasses to the lab for post mortem exam. If you find any oiled dead birds, please record information, on species, age (if possible), date, location, and other details, and take photos if you can. Please take care when touching oiled birds as petroleum products can be toxic. Any BB volunteer who finds an intact carcass and is interested to submit it for lab analysis can contact us for more information. Please check with us first since only volunteers named on our Collection Permit are allowed to collect carcasses.

Although this summary focuses on carcass data, the majority of volunteers do not find any dead birds on their surveys. Yet this, too, is very important information that serves as a baseline data so we can detect when a mortality event occurs.

### Many thanks to contributing volunteers and their assistants in the 2010 survey year:

Jessica Alford, Karen Barry, Lynn Bieber-Weir, Scott Black, Jamie Boyd, Bev Bullen, Jania Chilima, Darlene Choquette, Andrew Clarke, Peter Clarkson, Eric Demers, Joanne Dickeson, Eckhardt Ferdinandi, Michel Froment, Marilynn Futer & Bill Campbell, Jeff George, John Hagen, Barry Hall, Amy Hendel, Carlie Holland, Wayne Jacob and others from the Hakai Beach Institute, Malcolm Jolly, Heather Kay, Daniel Lien, Maggie Little, Robert & Mara Love, Art & Sue Martell, Jeanne Martin, Sylvain Martel, Carie McAlister, Janice Melvin, Sam Michner, Beth Mitchell, Karen Morgan, Norma Morton, Anne & Len Murray, Stan Olson, Margaret Pearson, Christina Perkin, Jeff Pisio, Andrew & Alison Prentice, Gareth Pugh, Anu Rao, Ilze Raudzins, Heather Reid, Dave Robinson, Janet Russwurm, June Ryder, Janet Schindler, Brian Self, Bill & Michelle Stewart, Andrea Tanaka, Margaret Taylor, Roger Taylor & Margaret Pim, Laurie Ulm, Charley & Amanda Vaughan, Jan & Bob Walker, Ling Weston, Laurie Wilson, Robyn Worcester and the Stanley Park Ecology Society

# Total Carcasses Found by Species: 1986-2010



This Table shows the total number of carcasses of each species, for all sites combined. Waterbirds, raptors, corvids and unknown species are included. Terrestrial landbirds have not been included in this analysis.

	1986-1997	2002	2003	2004	2005
Red-throated Loon	2				1
Pacific Loon	6		2	1	1
Common Loon	17			2	2
Yellow-billed Loon			2		
Unknown Loon	2	1			1
Horned Grebe	16		1		1
Eared Grebe	2				
Red-necked Grebe	8				
Western Grebe	22	1	1		1
Unknown Grebe	2			1	
Laysan Albatross					
Northern Fulmar	24	76	40		2
Sooty Shearwater	5	1	1		
Short-tailed Shearwater	1		1		1
Unknown Shearwater	1		1		
Fork-tailed Storm-petrel	1			1	
Leach's Storm-petrel			1		
Unknown tubenose	1				
Double-crested Cormorant	3		1	3	2
Brandt's Cormorant	10	2			1
Pelagic Cormorant	7			2	1
Brown Pelican		1			
Unknown Cormorant	11	1	2	1	2
Great Blue Heron	11	2		2	
Trumpeter Swan	1		1		
Mute Swan	1				
Snow Goose			1		
Brant	2			2	
Canada Goose	10		1	2	2
Greater White-fronted Goose				1	
Unknown Goose					1
Green-winged Teal	43				
Mallard	47	2	6	6	
Northern Pintail	33	1	7	1	
Eurasian Wigeon	1				
American Wigeon	8	1			
Greater Scaup	9	7	3	6	2
Lesser Scaup	2	2			
Unknown Scaup	2			2	
Long-tailed Duck	1			2	
Surf Scoter	12	1	5	3	2
White-winged Scoter	22	1	3	4	1
Unknown Scoter	7				
Unknown Goldeneye	4				
Bufflehead	22	1	4	2	2
Common Merganser	2				

2006	2007	2008	2009	2010	Numerical Total	% Composition
					3	0.1
1	1	1			13	0.6
8	2	1	1	4	37	1.6
					2	0.1
					4	0.2
	2				20	0.9
					2	0.1
4			2	1	15	0.6
1			2	1	29	1.3
			2		5	0.2
			1		1	0.0
1	1		169	3	316	13.6
					7	0.3
					3	0.1
					2	0.1
					2	0.1
					1	0.0
					1	0.0
1	2		1		13	0.6
2		2			17	0.7
1		1	4	1	17	0.7
					1	0.0
1			1	1	20	0.9
1		1	1	1	19	0.8
					2	0.1
					1	0.0
					1	0.0
					4	0.2
1	1	1	2	2	22	0.9
					1	0.0
					1	0.0
	1	2	1	1	48	2.1
	2	1	4	2	70	3.0
	2		6	1	51	2.2
					1	0.0
1	1	1		2	14	0.6
1	1	8			37	1.6
					4	0.2
2	2	2			10	0.4
		1			4	0.2
1		5		2	31	1.3
5	1	3	3	4	47	2.0
					7	0.3
		1			5	0.2
2	5		1		39	1.7
					2	0.1

Total Carcasses Found  
by Species: 1986-  
2010 (continued)



	1986-1997	2002	2003	2004	2005
Red-breasted Merganser	2	1			
Unknown Merganser	1			1	
Ruddy Duck	3				
Unknown Duck	4			4	
Bald Eagle	1		3	5	
Cooper's Hawk	1				
American Kestrel				1	
Unknown Raptor					
American Coot	1				
Black-bellied Plover	3				
Black Turnstone					
Black Oystercatcher	2				
Surfbird	2				
Semipalmated Plover	1				
Western Sandpiper	1				1
Dunlin	4		1		1
Long-billed Dowitcher	1				
Red-necked Phalarope	1	1			
Red Phalarope	1	12	5		10
Unknown Phalarope	6	1			
Unknown shorebird	1		2	1	
Parasitic Jaeger	1				
Bonparte's Gull		1	2	1	
Heerman's Gull	1				
Mew Gull	9	2			1
Ring-billed Gull	12			1	3
California Gull	47			1	1
Herring Gull	11			2	
Thayer's Gull	7				
Western Gull	2		2		
Glaucous Gull				1	
Glaucous-winged Gull	229	7	9	27	11
Glaucous-winged Hybrid Gull	3				
Black-legged Kittiwake	2				
Unknown Gull	82	3	25	12	6
Caspian Tern	2				
Common Murre	279		8	6	19
Pigeon Guillemot	7	3	5	1	6
Marbled Murrelet	7	2			
Ancient Murrelet	3				
Cassin's Auklet	34		1		1
Rhinoceros Auklet	63				1
Tufted Puffin	4				
Unknown alcid	7	3	3	1	
Common Raven	1	1			2
Northwestern Crow	6	1	2	3	
Unknown species	20	1	2	4	4

2006	2007	2008	2009	2010	Numerical Total	% Composition
					3	0.1
					2	0.1
					3	0.1
	1		1	1	11	0.5
			2		11	0.5
					1	0.0
					1	0.0
				1	1	0.0
				1	2	0.1
					3	0.1
1					1	0.0
			1		3	0.1
					2	0.1
					1	0.0
					2	0.1
1				2	9	0.4
					1	0.0
			1		3	0.1
					28	1.2
					7	0.3
	1				5	0.2
					1	0.0
					4	0.2
					1	0.0
1	1		1		15	0.6
2					18	0.8
		3	2		54	2.3
			2		15	0.6
					7	0.3
1	2				7	0.3
					1	0.0
10	7	10	5	6	321	13.8
					3	0.1
					2	0.1
8	9	5	7	11	168	7.2
					2	0.1
3	12	2	1	37	367	15.8
1		2	1	6	32	1.4
			1		10	0.4
2	1				6	0.3
1					37	1.6
2				9	75	3.2
					4	0.2
	1			5	20	0.9
					4	0.2
	1		2	3	18	0.8
7	13	3	18	3	75	3.2

# Notes from the Field

**January 2011:** Joan Lopez, a volunteer doing Coastal Waterbird counts at Kitsilano Point in Vancouver, observed a very unusual looking duck not described in her field guide. It was a diving duck, near some Barrow's Goldeneye, but not associating with them. Luckily Joan was able to take some photos. After asking some others, it seemed to be a hybrid between a Bufflehead and a Common Goldeneye.

Another long-time Coastal Waterbird Surveyor, Kerry Finley, has also observed hybrid male Common Goldeneye x Bufflehead near Victoria. Kerry and co-author S. Huot describe their observations about these hybrids in an article "Interspecific Mate Choice and Hybridism in the Bufflehead, *Bucephala albeola*" in Canadian Field Naturalist Volume 124, published in 2010. Kerry conducted an online search and found at least 12 records for such hybrids. A most interesting duck to see!



Hybrid Bufflehead x Common Goldeneye, January 2011, Vancouver (J. Lopez)

**January 2011:** A Beached Bird Survey volunteer in Ucluelet reported an unusual dead marine mammal washed up onshore. Darlene Choquette who does Beached Bird surveys in Schooner Cove found a dead dolphin and took several photos. We forwarded this report to Lisa Spaven with the DFO BC Marine Mammal Response Network (BCMMRN) who was very pleased to receive this notification.

Lisa identified the marine mammal as a Striped Dolphin which are very uncommon in BC. Darlene's photos helped with identification since wolves and other scavengers had reduced the carcass to a skeleton in about a week. All Beached Bird volunteers are asked to report any dead or injured marine mammals to the BCMMRN at:



[lisa.spaven@dfo-mpo.gc.ca](mailto:lisa.spaven@dfo-mpo.gc.ca)

# A Closer Look at Canada Geese on Vancouver Island

by Karen Barry

Over the last few decades, the numbers of overwintering Canada Geese in coastal areas of Vancouver Island have been on the rise. These geese are a non-native species which was introduced to Vancouver Island from the mainland and never learned to migrate south in winter. A recent article by Neil Dawe and Andy Stewart explains that transplanted Canada Geese came from a variety of sources and did not include the breeding subspecies, *Branta canadensis fulva*, which is native to Vancouver Island (reference: N. K. Dawe and A.C. Stewart. 2010. The Canada Goose (*Branta canadensis*) on Vancouver Island. British Columbia Birds. Vol. 20: 24-40).

These non-native Canada Geese are having numerous negative impacts on farms, parks, shorelines, and other natural areas. For example, the impact of introduced Canada Geese on the Englishman River and Little Qualicum River estuaries has been great enough to reduce estuarine productivity and has even affected the physical structure of the estuaries. Increasing numbers of introduced Canada Geese overgraze estuarine vegetation (eg. Lyngbye's sedge) leading to erosion of the rich organic substrates, channel widening and lowered overall productivity. Because these geese remain in the area year-round, the ongoing impacts can affect critical habitat for salmonids, wintering and migratory waterbirds, and other species that depend on estuaries.

The Guardians of Mid-Island Estuaries Society is conducting field studies to document impacts from introduced Canada Geese on the Englishman River and Little Qualicum estuaries with the ultimate goal of developing a scientifically sound management strategy for non-native geese and restoring degraded estuarine habitats. The project involves installing exclosures to protect remaining sedge vegetation and monitoring revegetation, measuring channel erosion, and assessing habitat use and movement patterns of geese in the region. In 2010, almost 200 Canada Geese from Englishman River and Little Qualicum estuaries were leg-banded or fitted with neck collars to monitor movements and nesting.



Collared Goose at Little Qualicum Estuary, March 2011 (T. Clermont)

The neck collars are white with black letters and numbers, and begin with a letter K or M. If any birders or other local naturalists see collared geese in the mid-island area, please report your sightings. The

website below has more information about the project and how to submit observations: [http://web.me.com/guardiansmie/Guardians\\_of\\_Mid-Island\\_Estuaries/CAGO\\_Monitoring.html](http://web.me.com/guardiansmie/Guardians_of_Mid-Island_Estuaries/CAGO_Monitoring.html)

A similar project is underway in the Victoria area to address increasing health, economic, and environmental issues arising from large populations of non-migratory Canada Geese. The Capital Regional District, in partnership with municipalities, wildlife provincial authorities, Victoria Airport Authority, stakeholders and farmers in the Saanich Peninsula and Metchosin are working to develop a Regional Goose Management Strategy that will identify actions to address the ongoing management of Canada Geese. As an initial step, the working group determined that more information was needed to understand the behavior, distribution and ecology of Canada Geese throughout Greater Victoria.

In the summer of 2011, work was initiated to identify where resident Canada Geese were located in Greater Victoria/ Saanich peninsula, what habitats were being used and when, how much damage was being done to agricultural crops, recreational areas, and if safety of air traffic was an issue. A Consultant (EBB from Vancouver) was hired to assist, led by Kate Hagmeier who has worked on goose management in the Okanagan, the lower mainland and at CFB Esquimalt. Volunteer naturalists, birders, farmers, and others have been assisting in data collection and field observations. For more information, see: [www.crd.bc.ca/parks/gooseman-strategy.htm](http://www.crd.bc.ca/parks/gooseman-strategy.htm).

# News and Announcements

## New Online Data Entry for Beached Bird Survey - [www.naturecounts.ca/beachbird](http://www.naturecounts.ca/beachbird)



This summer, a new online data system was introduced for the Beached Bird program. Previously, volunteers submitted their data by mailing or emailing in their forms which then had to be manually entered, but now volunteers in British Columbia and Québec can enter their survey data online through the NatureCounts website. For those new to NatureCounts, the system is easy to use; you just sign up and register for the Beached Bird survey program. We encourage all volunteers with a computer and internet access to use this system and we are happy to help. For assistance, please contact Karen Barry at [BCprograms@birdscanada.org](mailto:BCprograms@birdscanada.org).



## New Wildlife Management Area Designation at Roberts Bank

On September 8 2011, Steve Thomson, Minister of Forests, Lands and Natural Resource Operations, announced that approximately 8770 hectares of Crown land, foreshore or land covered by water, under the administration of the Minister of Forests, Lands and Natural Resource Operations at Roberts Bank would be designated as a wildlife management area under the BC Wildlife Act. Roberts Bank provides very important habitat for birds and is a globally significant site, part of the Fraser Delta-Boundary Bay Important Bird Area.

## 5th North American Ornithological Conference in Vancouver, August 2012



The University of British Columbia, and the city of Vancouver will host the 5th

North American Ornithological Conference from 14 to 18 August 2012. The 4 day scientific program (15-18 August) will begin each day with an address by a distinguished NAOC Plenary Speaker. The conference is organized jointly by the American Ornithologists' Union, Society of Canadian Ornithologists/ Société des Ornithologistes du Canada, Bird Studies Canada, Association of Field Ornithologists, Cooper Ornithological Society, Raptor Research Foundation, La Sociedad para el Estudio y Conservación de las Aves en México [CIPAMEX], Waterbird Society, and Wilson Ornithological Society. [www.naoc-v2012.com](http://www.naoc-v2012.com)



## New Publication Describes the Importance of the Salish Sea to Birds and Mammals

This fall Joseph Gaydos and Scott Pearson published an article in *Northwestern Naturalist* compiling a comprehensive list of avian and mammal fauna of the Salish Sea (Volume 92: 79-94). The authors identified 172 bird and 37 mammal species that rely on the marine ecosystem in the Salish Sea. This information will be valuable to identify and track the occurrence of new species and the disappearance of others, to identify potential indicator species of ecosystem health, and to help understand the possible mechanisms underlying marine bird and mammal declines. The complete article can be found here: [www.seadocsociety.org/publications-by-year](http://www.seadocsociety.org/publications-by-year)



## **BC Scientist is honored with the SeaDoc Society’s prestigious Salish Sea Science Award.**

Dr. John Elliott, with Environment Canada, was awarded the Salish Sea Science Prize in October 2011 in recognition of his research documenting the presence and effects of dioxins and furans on wildlife and his work with regulators to translate his science into policy that eliminated the release of these chemicals into the ocean.

Dioxins and furans are highly toxic persistent organic pollutants that once were dumped into the Salish Sea in pulp mill effluent. They are counted among the twelve most poisonous “dirty dozen” toxins in the world, and once were concentrated in fish and fish-eating birds in British Columbia. Thanks to mandated changes in bleaching processes and restrictions on usage of the parent compounds at pulp mills, discharge of dioxins and furans into the Salish Sea has been eliminated.

Dr. Elliot began his work in the mid-1980s with research on great blue herons, to better understand the possible effects of persistent organic pollutants. As part of a team that included population biologists, chemists and biochemists, Dr. Elliot documented for the first time the exposure of wild birds to dioxins and furans. As well, he documented high concentrations of these chemicals in bald eagles living near pulp mill sites, and went on to determine the deleterious effects of these toxins on eagles breeding near contaminated areas. His initial studies led to further research demonstrating the effects of these chemicals on embryonic development of both herons and cormorants at colonies near pulp mills and other sites in the Salish Sea. The SeaDoc Society’s 2011 Salish Sea Science Prize is bestowed biennially to recognize a scientist whose work has resulted in the demonstrated improved health of fish and wildlife populations in the Salish Sea. For more details, see [www.seadocsociety.org](http://www.seadocsociety.org)



Great Blue Herons (T. Middleton)

# Decline of Common Loon in Shoal Harbour Migratory Bird Sanctuary, 2000 – 2011

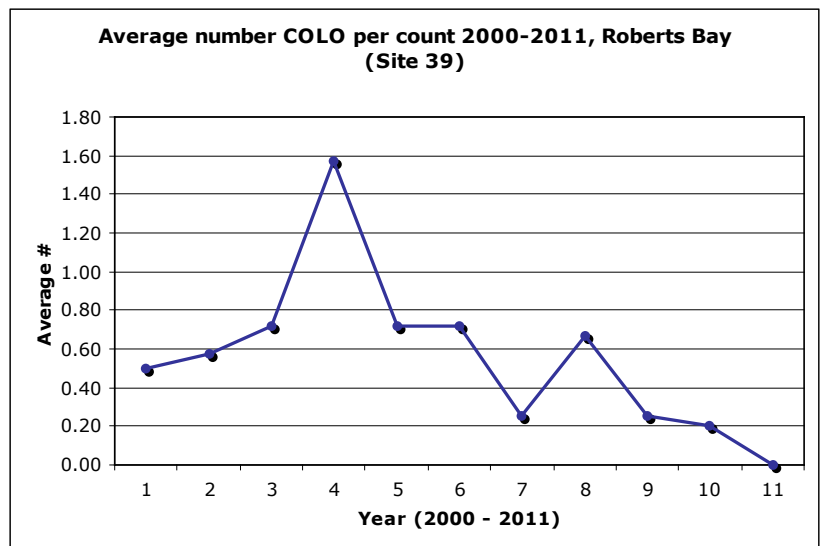
by Kerry Finley, Coastal Waterbird Survey Volunteer and Caretaker for the Sidney Channel Important Bird Area

Coastal areas of British Columbia are recognized for their regional and international importance for numerous migratory waterbirds, including various loon, grebe, cormorant, heron, duck, gull, tern and seabird species. During the winter, waterbirds are attracted to BC's relatively moderate climate, extensive estuaries, tidal flats, and near-shore protected habitats. Shoal Harbour Migratory Bird Sanctuary and the adjacent Sidney Channel Important Bird Area support a diversity of habitats and migratory birds. These species are dependent on the ecological processes that support a diversity of forage fishes and invertebrates.

The Common Loon is a consummate fisher, highly dependent on various small fish species. Its presence and abundance is a good reflection of the health of the marine ecosystem. The results of 79 monthly waterbird counts at Roberts Bay, which is part of Shoal Harbour Sanctuary in the southern Salish Sea, show a long term decline of this species. Last winter, for the first time, not a single loon was detected during the surveys, and except for two observed in September 2010, none were seen during casual daily observations in the sanctuary. At one time Common Loons were observed every day in the sanctuary. These observations suggest that something drastic has happened to the ecosystem affecting their fish prey. The Pacific Loon and the Red-throated Loon have also declined in abundance at this site, as well as the Horned Grebe, the Red-necked Grebe and the Western Grebe which are all piscivores, or fish eating birds.

Data from the B.C. Coastal Waterbird Survey can be used to identify early signs of declining trends in waterbirds and can be a useful indicator of site-specific changes. The graph below shows annual average number of Common Loon from Coastal Waterbird data collected at the Roberts Bay site (79 counts from 2000-2011).

After several years of surveying the same site, Coastal Waterbird Volunteers become very familiar with the seasonal patterns in bird abundance and distribution at their site, noticing yearly differences which can be useful to track over time. Coastal Waterbird data is available to any volunteer to download for their site, or any of the sites, through Nature Counts at [www.naturecounts.ca](http://www.naturecounts.ca).



# Pacific Flyway Shorebird Monitoring

by Peter Davidson

In 2011, BSC's Rob Butler and Pete Davidson started working with a group of shorebird specialists between Alaska and Peru to establish a hemisphere-wide project to assess population changes in Western Sandpipers and Dunlins. The project aims to create a range-wide winter and migration stopover survey and to develop outreach and actions to improve conservation of key shorebird habitats throughout the flyway. The survey will allow researchers to test several potential causes of population change while also assessing trends. The project is linking existing regional initiatives like the BC Coastal Waterbird Survey, the Pacific Shorebird Survey in California, and shorebird monitoring in Colombia and other South and Central American nations. This exciting Pacific Flyway initiative is made possible by the U.S. Forest Service International Program's support to BSC and several of the collaborating partners, which include Point Reyes Bird Observatory Conservation Science, Asociacion Calidris in Colombia, BirdLife International, CICESE in Mexico, Panama Audubon, and the Canadian Wildlife Service.

The Coastal Waterbird Survey design fits the general protocols for the range-wide survey very nicely. Flocks both small and large can often be very mobile, especially when there are predators around. Estimating flock size can be rather daunting if you are surveying the shores of the Fraser Estuary or Boundary Bay where large flock occur, but it is equally

important that we know what is happening with smaller flocks that use estuaries and bays up and down the coast because their distribution and abundance is often a very good indicator of population level effects.

As practice, take a look at the image below taken by Moira Lemon of the Canadian Wildlife Service. What approximate number of peeps does each red box encompass? Using the green (transect) line on the left, pan through the flock to estimate the ratio of Dunlin to Western Sandpipers. Taking photos of discrete flocks, and counting them at home is a good way to verify your field estimate. Of course, it is essential to have a telescope for these types of counts. In 2012, we will be providing training at select locations on counting large numbers of shorebirds, and estimating flock composition. Further details will be made available soon.



Each red box has about 100 birds. There are about 2,000 in the whole image and approximately 60 Dunlin to 20 Westerns along the green line on the left

# An Update on Glaucous-Winged Gull Colonies in the Georgia Basin

by Louise Blight, PhD candidate at University of British Columbia's Centre for Applied Conservation Research and Coastal Waterbird Survey Volunteer

In the summer of 2010, I set out with my field assistant Tella Osler on the path set by seabird biologist Kees Vermeer 24 years before, when he and colleague Kevin Devito surveyed all of the Glaucous-winged Gull (*Larus glaucescens*) colonies in the Georgia Basin in an attempt to track their then-burgeoning numbers. Times have changed and these gulls are now undergoing a dramatic decline. The aim of my research is to understand why regional Glaucous-winged Gull populations are declining, and my goal was to re-census as many of those colonies as possible in order to analyse long term population trends for the species. Doing this research is in some ways like stepping back in time. Apart from collecting my own data, I have been searching for survey notes in museum records dating back to the early 1900s, and even the Vermeer and Devito study had its roots in history: their data were preceded by a 1961 Royal BC Museum compilation of seabird surveys going back to the beginning of the 20th century.

On the water, our small rigid hull inflatable was often buffeted by nasty Georgia Strait weather, but the boat is sturdy and allowed us to land anywhere we needed to go. Despite having limited time and a gas budget, it turned out that Tella and I, with the help of colleagues at Parks Canada and the BC Breeding Bird Atlas, were able to record population count data for 43 of the 76 colonies visited by Vermeer and Devito a quarter-century before. Of the 33 colonies that we did not revisit, most (73%) were home to less than 10 pairs of birds in 1986, meaning that the sites we did not reach were likely less important in terms of total population numbers for the region.

The most interesting part of our survey is to see how dramatically the Georgia Basin Glaucous-winged Gull colonies have declined in number over 24 years. No colonies have grown in size, and Mitlenatch Island, one of the biggest colonies in British Columbia and designated as an Important Bird Area (IBA), now sits at only about 50% of its 1986 size.



Glaucous-winged Gull chick, 40 days old (L. Blight)

Population declines near Nanaimo were the most dramatic. In 1986, about 1600 pairs of Glaucous-winged Gulls – 12% of Georgia Basin numbers, and over 2% of the national population – were found nesting on islands in the approaches to Nanaimo Harbour. Yet in 2010, we counted only 32 nests at these sites. Snake Island, near Nanaimo, was designated as an Important Bird Area in 2001 due to its national significance to breeding Glaucous-winged Gulls and Pelagic Cormorants based on counts from 1986-1999. However these cormorants were no longer nesting there in 2010. Similar declines have been observed for other colonial nesting birds like some Great Blue Heron colonies, and other gulls and cormorants in other locations. In addition to declining population numbers, there can be other reasons why birds will cease using a breeding colony such as increased predation, disturbance, introduction of invasive species, habitat degradation and others. Clearly, these changes present a conservation and management challenge.

This example also brings up a bigger question: when an area is identified for the purpose of protecting or conserving a species, as IBAs do, and the species no longer occurs there, does this mean the area is no longer important, or is this a sign that restoration of a site or a species is long overdue? These questions and other complex issues are currently a focus of the Important Bird Area program ([www.ibacanada.ca](http://www.ibacanada.ca)) in BC. Data from research like that described here, monitoring work by volunteer IBA Caretakers, and from Citizen Science programs like the BC Coastal Waterbird Survey, the BC Breeding Bird Atlas ([www.birdatlas.bc.ca](http://www.birdatlas.bc.ca)), and others provide crucial information to help answer these questions.



Louise Blight and Tella Osler searching for gull nests during their survey of Mitlenatch Island, an Important Bird Area (T. Chatwin)

# USEFUL WEB RESOURCES



## **BC Marine Conservation Analysis Project**

**[www.bcmca.ca](http://www.bcmca.ca)**

The British Columbia Marine Conservation Analysis (BCMCA) is a collaborative project designed to provide resource managers, scientists, decision-makers, and others interested in the marine environment with information to help to inform coast-wide integrated marine planning and management. The purpose of the BCMCA project is to identify marine areas of high conservation value and areas important to human use in Canada's Pacific Ocean. In May 2011, the BCMCA released its Marine Atlas of Pacific Canada. All the individual atlas pages illustrating biophysical and human use features are freely available for viewing and download. Data from the BC Coastal Waterbird Survey was an important component to this Marine Atlas.



## **Slater Museum of Natural History - Wing Image Collection**

**<http://www.pugetsound.edu/academics/academic-resources/slater-museum/biodiversity-resources/birds/wing-image-collection/>**

Numerous images of wings and tails are available on this website. Several standard searches are available on the "Featured Searches" page including Order, Family, common group name, and common name. For example, to view all warblers, simply search for "warbler". If you wish to view an image of a warbler from May, click May to see all wings from May. This is an excellent way to practice ID using wings, allowing close-up views of wing plumage of different sexes and ages for many species.



## **Salish Sea Conference, October 2011**

**[www.salishseaconference.org](http://www.salishseaconference.org)**

The theme of the 2011 Salish Sea Ecosystem Conference, was "Many Voices, One Sea". The conference was co-hosted by Environment Canada and the Puget Sound Partnership, and presented the latest scientific research on the state of the ecosystem. Formerly called the Georgia-Basin/Puget Sound research conference, this year it was re-named the Salish Sea Ecosystem Conference, to reflect recent decisions by US and Canada to re-name the area and acknowledging the connectivity of the ecosystem and the traditions of the region's Salish peoples. Over 900 people attended and a wide variety of topics were presented in posters and talks, ranging from population trends in waterbirds, biology of forage fish to water quality monitoring programs and Citizen Science. Complete abstracts are available online.

# Vancouver Island University Students Take Learning Outside with Beached Bird Surveys

by Karen Barry

This winter, three Biology students from Vancouver Island University in Nanaimo had a chance to see what Bird Studies Canada's Citizen Science programs are all about. The students, Annie Ellison, Mandi Baxter and Dinah Duinker, were taking an Upper Year Conservation Biology class and their Instructor, Dr. Liz Demattia, wanted students to gain some real-life experience in the conservation biology field. Students were required to complete a "Conservation Outreach" project which was worth 1/3 of their final grade. Students were tasked to work in groups and find a conservation organization with whom they could volunteer their time conducting a specific activity and research a biodiversity topic related to the volunteer activity. Annie, Mandi and Dinah contacted Karen Barry at BSC and, after receiving some background information about the various programs BSC runs, they decided to participate in the Beached Bird program. They conducted beach surveys at 2 sites: one in Nanaimo and another at Nanoose Bay on Vancouver Island.

Two of the 3 students had heard of BSC previously but none had ever participated in any bird monitoring programs before, so it was quite new to them. Annie said "I had no idea the number of projects that Bird Studies Canada oversaw and the number of volunteers which it must take to make the programs a success!" She goes on to say: "It was nice to be able to take the knowledge we had learned from the classroom and apply it to a real world situation. Oil spills, marine debris, habitat loss, etc. are all major concerns for many species, including shore birds worldwide and having people out there looking for the early signs of trouble was really great to be a part of".

Their enthusiasm was great and in the end they completed more surveys than they originally planned. Mandi came away with a very positive experience and said that "Any conservation work makes me feel like I'm giving back to the planet". And Mandi felt this experience would benefit her as she pursues her goal to become a veterinarian. Annie acknowledged that "Volunteer experience is always appreciated by employers and having the opportunity to try doing something I wasn't very familiar with was a great chance to learn some new skills such as bird ID and taking measurements."

Dinah said she learned a lot including "terminology such as what a wrack-line was". And on top of that, Dinah found the beach walks very pleasant and good exercise too!

One of the advantages with the Beached Bird Survey program is that anyone can participate. It is suitable for any age and no special skills are required. As these students discovered, it can be great fun being out in the fresh air, walking a beautiful beach while contributing to Citizen Science monitoring programs.



Sidney Island (K. Barry)

# Surveyor's Scrapbook



Sunrise at Gonzales Bay, Victoria (Neil Boyle)



The Prentice family doing a Beached Bird survey at Blackie Spit (Marg Cuthbert)



Training session at Stanley Park (David Knight)



California sea lion at Schooner's Cove, Tofino (Mara & Robert Love)

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## Bird Studies Canada BC Program

5421 Robertson Road, RR1  
Delta, BC V4K 3N2  
toll free: 1-877-349-2473  
local: (604) 940-4688  
www.birdscanada.org

Program Manager:  
Peter Davidson  
pdavidson@birdscanada.org

BC Projects Officer:  
Karen Barry  
bcprograms@birdscanada.org

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