The 108th Christmas Bird Count
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Above: This stunning male Wood Duck x Hooded Merganser hybrid *(Aix x Lophodytes)*, a new hybrid for the cumulative CBC database, was discovered on the Northampton, Massachusetts, CBC. Photo/Frank Bowrys Left: Sean McElroy, one of the first to participate on Audubon's first Christmas Bird Count for Kids in California's Sonoma Valley. Photo/Christine Hansen

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ON THE COVER: Sprague's Pipits *(Anthus spragueii)* are skulkers of the grasslands, and it is often difficult to appreciate the subtle beauty of such birds given how hard they are to see. Normally found on CBCs in the southwest and Mexico, this beautifully photographed example was one of two found this season at Apalachicola Bay-St. Vincent N.W.R., Florida. Photo/John B. Spohrer, Jr.

The 108th Christmas Bird Count

December 14, 2007 to January 5, 2008

Geoffrey S. LeBaron

A myriad of factors can affect the results of any given Christmas Bird Count season, but first and foremost is often the weather. We all know how the weather can impact us directly both negatively and positively on count day. Sometimes it feels like great weather results in poor findings, and bad weather produces remarkable records. In other seasons the reverse seems true: Great conditions produce great birds, and wretched counting conditions result in dismal lists. But often, and as it appears to be the case in the 108th CBC, the weather months and perhaps even a year before had an even larger effect than count day weather on what birds were tallied where by CBC observers.

As mentioned in various summaries in last season's *American Birds,* during the summer of 2006 there appeared to be a bumper crop of wild food across much of northern North America. Seed types and wild fruits of most descriptions were in good supply; this produced a healthy supply of small mammals. This combination likely resulted in a great reproductive year for many seed-eating birds—and also mammal-eating avian predators. Things were good back then in the North Country, apparently continuing even into the boreal breeding season of 2007. Then the La Niña of 2007 occurred in mid-summer, and conditions changed dramatically. Cool and wet conditions, especially in the western boreal forest, caused seed crops to fail, soft mast was reduced, and vole and mouse populations likely dropped, if not crashed. Fruit- and seed-eating birds that had two seasons of favorable conditions were present in high numbers; avian predators that prey on small mammals were busy feeding their second bumper crop of fledglings. Resources were limited for birds across the board; predators, frugivores, and seed-eating finches were poised to emigrate toward regions where food still abounded.

Even in the north woods where they are fairly common, Spruce Grouse *(Falcipennis canadensis)* can be challenging to find. This pair was among the 10 that were tallied at Beltrami Island, Minnesota. Photo/Carl Greiner

Through the fall of 2007, a series of major storms battered the west coast, pumping a stream of moisture from the tropical Pacific Ocean into the North American weather pattern. Arctic air masses plunged southward early across Canada, and then the cold and snows set in during mid-fall, covering up much of what limited resources were available in the North Country. Thus the stage was set for a major exodus of birds in search of winter fruit, seeds of many types, and small mammalian prey. Things were well primed for an "interesting" 108th CBC to begin in December 2007.

La Niña continued her effects into the 108th Christmas Bird Count period. Especially coinciding with the first full weekend, major ocean storms pummeled the west coast; and severe winter storms plunged southward across many areas of the continent. These snow and ice storms—predicted well in advance—began to wreak havoc on the best-laid plans of Christmas Bird Counters. A "typical" snowy, cold winter that many people in northern climes remember was setting in, unlike so many seasons in recent years. In most instances for safety more than convenience, many counts were postponed or in some instances cancelled. Date conflicts cropped up; compilers and observers with carefully crafted itineraries to attend multiple counts became unavailable on rescheduled dates. Many peoples' well thought out holiday plans became a shambles.

But despite, or perhaps because of, Mother Nature's best wintry efforts in the guise of a small child from the Pacific Ocean (La Niña), by many measures the 108th Christmas Bird Count was a remarkable season. From the frozen lands of the high arctic to the waters off southern South America, and

from Bermuda to the Pacific Islands of the Northern Marianas, CBC birders went out and made the best of every situation they encountered. Records were broken once again; all told, data from 2113 circles are included in the 108th CBC, shattering the former record of 2060 set in the 106th count. Of that lofty total, 371 counts were submitted under the able guidance of Bird Studies Canada in Canada and the islands of St.-Pierre et Miquelon, 1658 counts are included from the United States, as well as 84 counts from Bermuda, the Bahamas, the Caribbean, Latin America, and the Pacific Islands. Some of this dramatic increase in counts is due to the 49 new Christmas Bird Counts listed in Table 1, including a superlative effort in Latin America; 19 of those new counts (including 14 in Colombia alone) are from the neotropical regions. The 108th CBC includes data from 13 countries and seven territorial or protectorate regions spanning a significant percentage of the Earth's surface. Welcome, congratulations, and many thanks for a job well done, and we look forward to future seasons' data from all.

Despite significant areas of inclement weather and the postponement or outright cancellation of some counts, the level of participation in the 108th Christmas Bird Count also reached a new all-time high. The previous record set last season was just under 58,000 field and feederwatchers; this season's superlative total was 59,918 (11,565 in Canada, 46,620 in the United States, and 1733 in Latin America, the Caribbean, and the Pacific Islands)! Of that total, 50,742 observers were in the field (8205 in Canada; 40,845 in the United States; and 1692 in other regions) and 9176 were stationary feederwatchers (3360 in Canada; 5775 in the United States; and 41 elsewhere). Needless to say, to accumulate this total number of observers a goodly number of counts marshaled 100 or more observers each, and Table 2 lists all CBCs in the 108th count with 100 or more field and feederwatchers combined.

Tens of thousands of observers counting birds in more than 2100 15-mile diameter circles are sure to tally lots of birds of an amazing variety of species, and the 108th count was no exception. All told, 57,704,250 birds were tallied (3,234,026 in Canada, 53,631,134 in the United States, and 839,090 elsewhere) during this season. Cumulative species tallies were also always impressive; overall, 2267 species and 246 other subspecies, hybrids, or taxa unidentified to species were tallied in all regions, the great majority of the species in the amazingly diverse areas of Latin America. Included in this vast total (nearly one quarter of the world's 10,000 or so species of birds!) were 281 species reported in Canada and 665 species (plus 37 forms and 25 exotic species) in the United States. The total number of species from Canada is down slightly from last season, while that in the United States is the second-highest overall tally. The aforementioned weather patterns likely caused these results; species were pushed southward from the frozen and snow-covered north to the benefit of areas to the south. The timing of this push was especially interesting and notable—more on this shortly.

Though the species totals were impressive, the only two species new this season to the cumulative North American CBC database were **Island Scrub-Jay** (expected given the new count included this season from that species' range on Santa Cruz Island off the coast of California) and **Purple Swamphen** (an introduced

The new Santa Cruz Island, California, CBC was essentially guaranteed of adding a new species to the cumulative Christmas Bird Count database—Island Scrub-Jay *(Aphelocoma insularis),* endemic to the island. Photo/Chris McCreedy

Table 1. New counts in the 108th (2007–2008) Christmas Bird Count.

Count Code	Count Name
CANADA	
ONAM	Alfred-Montebello, Ontario
ONLI	Linwood, Ontario
QCIM	Iles-de-la-Madeleine, Quebec
QCLA	Lascelles, Quebec
QCSL	St.-Anne-du-Lac, Quebec
QCVM	Val-des-Monts, Quebec
UNITED STATES	
CAAD	Anderson River Park, California
CACZ	Santa Cruz Island, California
CAGR	Groveland, California
CAMW	Merced N.W.R., California
FLJC	Jackson County, Florida
FLSO	STA5-Clewiston, Florida
GABR	Blue Ridge, Georgia
GACL	Carter's Lake, Georgia
ILCD	Coles-Cumberland, Illinois
INMO	Michaela Farm-Oldenburg, Indiana
KYAL	Ashland, Boyd County, Kentucky
MDCV	Chesterville, Maryland
MICD	Cadillac Area, Michigan
MICN	Carney, Michigan
MNMC	Northern Meeker County, Minnesota
MTBE	Big Hole, Montana
NCLJ	Camp Lejeune, North Carolina
NDDB	Denbigh, North Dakota
PANL	Northern Lycoming, Pennsylvania
SCPW	Pinewood, South Carolina
TXSJ	San Jacinto Wilderness, Texas
WAPA	Port Angeles, Washington
WIFS	Friendship, Wisconsin
WVPH	Pocahontas County, West Virginia
CARIBBEAN, LATIN AMERICA	
BANA	North Abaco, Bahamas
CLAN	Antioquia Norte, Colombia
CLAR	Armenti, Atlantico, Colombia
CLAS	Antioquia Sur, Colombia
CLCO	Cordillera Occidental Valle de Cauca, Colombia
CLGR	Granada, Meta, Colombia
CLLE	La Esmeralda, Caldas, Colombia
CLLV	La Vieja, Atlantico, Colombia
CLLY	Lagos de Yahuarcaca and Isla Ronda, Amazonas, Colombia
CLMO	Mocana, Atlantico, Colombia
CLNV	Nevados National Park, Caldas, Colombia
CLPA	Pasto, Narino, Colombia
CLRO	Rogitama, Boyaca, Colombia
CLTL	Tota Lake, Boyaca, Colombia
CLVV	Villavicencio, Meta, Colombia
CRPR	Pacific Rainforest Tram-Carara Reserve, Costa Rica
GMAV	Atitlan Volcano, Guatemala
MXEG	El Yugo, Sinaloa, Mexico
MXMS	Montanas de San Cristobal, Chiapas, Mexico

Table 2. Counts with 100 or more participants in the 108th (2007–2008) CBC.

Code	Count Name	# Observers	(Field + Feeder)
ABED	Edmonton, AB	694	(416 + 278)
MACO	Concord, MA	310	(192 + 118)
BCVI	Victoria, BC	236	(196 + 40)
WASE	Seattle, WA	210	(203 + 7)
CAPR	Point Reyes Peninsula, CA	208	(208 + 0)
ABCA	Calgary, AB	205	(92 + 113)
CAOA	Oakland, CA	187	(171 + 16)
OREU	Eugene, OR	177	(118 + 59)
NSHD	Halifax-Dartmouth, NS	176	(85 + 91)
CASB	Santa Barbara, CA	173	(169 + 4)
NYIT	Ithaca, NY	165	(145 + 20)
VAFB	Fort Belvoir, VA	162	(155 + 7)
ECNM	Mindo-Tandayapa, Ecuador	160	(160 + 0)
ORPD	Portland, OR	158	(114 + 44)
OHCI	Cincinnati, OH	148	(128 + 20)
DCDC	Washington, DC	147	(146 + 1)
OHMI	Millersburg, OH	147	(129 + 18)
NSWO	Wolfville, NS	144	(47 + 97)
CRMO	Monteverde, Costa Rica	140	(140 + 0)
CAWS	Western Sonoma County, CA	136	(136 + 0)
SCHH	Hilton Head Island, SC	136	(136 + 0)
CASZ	Sonoma Valley, CA	135	(131 + 4)
AKAN	Anchorage, AK	130	(86 + 44)
CAMC	Marin County (southern), CA	127	(117 + 10)
OHCF	Cuyahoga Falls, OH	126	(79 + 47)
PAPI	Pittsburgh, PA	125	(103 + 22)
BCVA	Vancouver, BC	124	(111 + 13)
ABSA	St. Albert, AB	122	(49 + 73)
ABSR	Strathcona, AB	120	(46 + 74)
WABG	Bellingham, WA	119	(66 + 53)
CAPA	Palo Alto, CA	119	(119 + 0)
SKSA	Saskatoon, SK	119	(63 + 56)
CAOC	Orange County (coastal), CA	118	(118 + 0)
CTHA	Hartford, CT	118	(105 + 13)
CASF	San Francisco, CA	117	(113 + 4)
SCSC	Sun City-Okatie, SC	114	(103 + 11)
TXMM	Matagorda County-Mad Island Marsh, TX	113	(113 + 0)
COBO	Boulder, CO	112	(98 + 14)
MBWI	Winnipeg, MB	111	(71 + 40)
WASD	Sequim-Dungeness, WA	111	(87 + 24)
FLSC	Sanibel-Captiva, FL	110	(110 + 0)
FLSR	Sarasota, FL	110	(81 + 29)
ILWA	Waukegan, IL	110	(32 + 78)
NSKI	Kingston, NS	106	(20 + 86)
ILLA	Lisle Arboretum, IL	105	(87 + 18)
CASJ	San Jose, CA	104	(104 + 0)
MANO	Northampton, MA	103	(86 + 17)
ONOH	Ottawa-Gatineau, ON	102	(75 + 27)
MAMV	Martha's Vineyard, MA	102	(67 + 35)
PACH	Chambersburg, PA	101	(67 + 34)

exotic large gallinule now breeding in the Florida Everglades and tallied for the first time on the new STA5-Clewiston, Florida CBC). Though not new to the overall tally, Canada gained one species to its cumulative list: **Arctic Loon** at Duncan, British Columbia. With each new area covered in the New World tropics, the cumulative species list can grow by leaps and bounds. This year's overall species total is up by 373 species over last year, in large part due to the 14 new areas covered in Colombia, the five other new circles in other parts of Latin America, and the resurgence of previously existing counts in Colombia.

Individual species totals were impressive on some counts as always; many record species totals were tallied even in areas with long-standing counts. In North America north of Mexico, Matagorda Island-Mad Island Marsh, Texas, regained its crown at the top of the species total list at 235; last year's champ Corpus Christi found some wonderful birds, but lost the top spot. In Latin America, the species total honors stay in Ecuador, but go back to Mindo-Tandayapa in the Andes, with 425 species. Several counts in Belize, Costa Rica, Panama, and Ecuador exceeded 250 species once again this season. The species diversity in the neotropical areas is astounding, and these results are only a taste of the wonderful array of birds that are found in those regions. Table 3 lists all counts that were blessed with birds, weather, geography, observers, and the luck to tally 150 or more species in the 108th Christmas Bird Count season.

Pacific coast CBCs are blessed with the possibility of locating all the world's loon species, though that has seldom, if ever, happened all on one count. Perhaps the most challenging identification question is separating the recently split and very rare Asian and far western Alaskan breeding Arctic Loon *(Gavia arctica)* from the abundant North American breeding Pacific Loons *(Gavia pacifica)*. This Arctic Loon spent much of the winter at Wahkiakum, Washington, and was enjoyed by many birders. Photo/Mike Patterson

Refining the focus to regional results in the 108th CBC, it's fascinating to see how the combination of long lead-time weather and immediate conditions during the count period combined to shape the 108th count. Species totals in the northern and southern regions in the United States and Canada were negatively affected, while mid-continent counts, especially coastal counts during the second weekend of the count period, had remarkable tallies. Species total records were shattered in some areas: Table 4 lists the circles fortunate enough to have the highest species tallies in their region during the 108th CBC. Apparently, waves of birds were moving southward, escaping both challenging weather and lack of food resources to the north and were concentrated along the coastal areas, especially in regions such as New England.

One early indication of this movement was that of Barred Owls. Not normally considered to be a migratory species, apparently many Barred Owls vacated the northern portions of that species' range in late fall, being seen—and unfortunately killed—in large numbers along roadsides through the CBC period. Tallies of Barred Owls actually dipped on CBC results during the 108th count; this may be a reflection of the event that was occurring with this species, or just an anomaly illustrating the difficulty of counting nocturnal birds. Some diurnal predators moved as well. Although there was no major movement of other owls or diurnal raptors detected, there was a fair southward movement of Northern Shrikes, especially in the mid-continent and west.

Sapsuckers that were lingering to the north, especially Yellow-bellied in the east, were also weather-concentrated in some regions, with many record high counts set for these long-distance migrant woodpeckers from New England to South Carolina, and along the Gulf Coast to Texas.

Other species of the north, most notably Bohemian Waxwings, Pine Grosbeaks, and Common and especially

Table 3. Counts with 150 or more species recorded in the 108th (2007–2008) CBC.

Table 3a. Counts north of the United States-Mexican border.

Count Code	Rank	Count Name	Species Recorded
TXMM	1	Matagorda County-Mad Island Marsh, TX	235
TXGF	2	Guadalupe River Delta-McFadden Ranch, TX	225
CASD	3	San Diego, CA	214
CAOC	4	Orange County (coastal), CA	209
CASB	5	Santa Barbara, CA	206
TXFR	6	Freeport, TX	203
CAMR	7	Morro Bay, CA	202
CAPR	8	Point Reyes Peninsula, CA	197
CAMD	9	Moss Landing, CA	194
CACS	9	Crystal Springs, CA	194
CAOV	11	Oceanside-Vista-Carlsbad, CA	192
CAAR	12	Arcata, CA	188
CALB	13	Long Beach-El Dorado, CA	186
CAMP	14	Monterey Peninsula, CA	185
CATO	14	Thousand Oaks, CA	185
TXSB	14	San Bernard N.W.R., TX	185
CACB	17	Centerville Beach to King Salmon, CA	184
CAVE	18	Ventura, CA	181
CAOA	19	Oakland, CA	180
TXBP	20	Bolivar Peninsula, TX	179
CARS	21	Rancho Santa Fe, CA	178
CAWS	22	Western Sonoma County, CA	177
CAHF	23	Hayward-Fremont, CA	176
CASZ	23	Sonoma Valley, CA	176
CAMC	25	Marin County (southern), CA	175
TXCC	26	Corpus Christi, TX	174
CASJ	27	San Jose, CA	172
GASV	28	Savannah, GA-SC	170
TXWS	28	Weslaco, TX	170
CASF	30	San Francisco, CA	169
NCSB	31	Southport-Bald Head-Oak Islands, NC	168
TXGA	31	Galveston, TX	168
CALA	33	Los Angeles, CA	167
CABE	34	Benicia, CA	166
CAPS	34	Pasadena-San Gabriel Valley, CA	166
CADN	36	Del Norte County, CA	165
CASC	36	Santa Cruz County, CA	165
CASM	38	Sacramento, CA	164
FLCO	38	Cocoa, FL	164
FLNR	38	West Pasco (New Port Richey), FL	164
CARC	41	Rio Cosumnes, CA	163
MDOC	41	Ocean City, MD	163
CAPA	43	Palo Alto, CA	162
CAPP	43	Palos Verdes Peninsula, CA	162
CASS	43	Salton Sea (south), CA	162
NCWI	43	Wilmington, NC	162
NJCM	43	Cape May, NJ	162
TXAR	43	Aransas N.W.R., TX	162
TXKI	43	Kingsville, TX	162
CACM	50	Claremont, CA	161
DECH	50	Cape Henlopen-Prime Hook, DE	161
FLMI	50	Merritt Island N.W.R., FL	161
FLSR	50	Sarasota, FL	161
CAAN	54	Año Nuevo, CA	160
CAON	54	Orange County (northeastern), CA	160
FLJA	54	Jacksonville, FL	160
FLZE	54	Zellwood-Mt. Dora, FL	160
NCBP	54	Bodie-Pea Island, NC	160
TXAP	54	Attwater Prairie Chicken N.W.R., TX	160
TXCF	54	Corpus Christi (Flour Bluff), TX	160
AZRC	61	Ramsey Canyon, AZ	159
TXPA	61	Port Aransas, TX	159
AZPA	63	Patagonia, AZ	158
TXLA	63	Laguna Atascosa N.W.R., TX	158
TXRO	63	Rockport, TX	158
AZGV	66	Green Valley-Madera Canyon, AZ	157
SCWB	66	Winyah Bay, SC	157
TXAZ	66	Anzalduas-Bentsen S.P., TX	157
CACC	69	Contra Costa County, CA	156
CAMU	69	Malibu, CA	156
CASU	69	San Juan Capistrano, CA	156
FLSP	69	St. Petersburg, FL	156
TXHG	69	Harlingen, TX	156
NCMA	74	Mattamuskeet N.W.R., NC	155
AZNO	75	Nogales, AZ	154
LASA	75	Sabine N.W.R., LA	154
ORCB	75	Coos Bay, OR	154
TXLS	75	La Sal Vieja, TX	154
CACL	79	Clear Lake, CA	153
CAST	79	Stockton, CA	153
FLSB	81	South Brevard County, FL	152
TXSR	81	Sea Rim S.P., TX	152
FLAB	83	Aripeka-Bayport, FL	151
SCHH	83	Hilton Head, SC	151
SCLP	83	Litchfield-Pawleys Island, SC	151
VACC	83	Cape Charles, VA	151
AZTV	87	Tucson Valley, AZ	150
CAES	87	Escondido, CA	150
WASD	87	Sequim-Dungeness, WA	150

Table 3b. Counts south of the United States-Mexican border.

Count Code	Rank	Count Name	Species Recorded
ECNM	1	Mindo-Tandayapa, Ecuador	425
ECNA	2	Napo Amazon, Ecuador	418
CRRF	3	Rain Forest Aerial Tram, Costa Rica	391
CRLM	4	Fila Costera (la Merced), Costa Rica	373
CRLS	5	La Selva, Lower Braulio Carillo N.P., Costa Rica	369
CRPR	6	Pacific Rainforest Aerial Tram-Carara Reserve, Costa Rica	350
ECYY	7	Yanayacu, Ecuador	310
CRMO	8	Monteverde, Costa Rica	306
RPPC	9	Pacific Canal Area, Panama	290
RPAC	10	Atlantic Canal Area, Panama	271
BLPG	11	Punta Gorda, Belize	254
RPCC	12	Central Canal Area, Panama	248
GMAV	13	Atitlan Volcano, Guatemala	216
RPVC	14	Volcan, Chiriqui, Panama	201
ECLA	15	Loma Alta, Ecuador	199
MXES	16	Ensenada, Baja California, Mexico	194
MXSC	17	San Carlos, Sonora, Mexico	175
TRTR	17	Trinidad, W.I.	175
BLGJ	19	Gallon Jug, Belize	171
GMTK	19	Tikal, Guatemala	171
CLBB	21	Rio Barbas-Bremen Natural Reserve, Quindio, Colombia	166
MXEL	22	El Naranjo, San Luis Potosi, Mexico	157
MXGF	23	Gomez Farias, Tamaulipas, Mexico	154
CLRB	24	Rio Blanco, Caldas, Colombia	150

Hoary redpolls, were southbound as well. Many CBCs across the span of the continent both north and south of the U.S.-Canadian border had exceptional numbers of these "winter finches." The effect was especially notable in coastal New England during the second weekend of the count period, when Bohemian Waxwings were found by the hundreds directly on the coast—apparently having just arrived from the Atlantic Provinces, where they were also present in record numbers. The frugivore flight remained strong for much of the winter after the CBC period, with remarkable numbers of Bohemian Waxwings and Pine Grosbeaks staying south until early spring.

Interestingly, some other species undertook quite a different movement. Purple Finches made a large incursion down the Great Plains, reaching Texas and the Gulf Coast, while Red-breasted Nuthatches were present in record numbers across many southern counts, especially in the Southeast, the Midwest, and along the Gulf Coast. Pine Siskin numbers were notably up in the west, but surprisingly low in the east, given the relatively large number of redpolls in the east.

Many gallinaceous birds continue their continental decline. Ruffed Grouse is apparently in a down cycle; this species was noted as low across much of its range this season. Quail in many regions are not doing well, especially Northern Bobwhite in its traditional range in the east. And with the exception of Wild Turkey (which is doing well over much of its range), the larger grouse and prairie-chickens are also in decline. In fact, two members of this group usually included in a given season's tally, Attwater's Greater Prairie-Chicken and Gunnison Sage-Grouse, were only tallied as count week species during the 108th count—each with an extremely limited sample of counts (one for the prairie-chicken and two for the sage-grouse).

Other species continue to consolidate their populations northward and/or westward, most notably the introduced Eurasian Collared-Dove. This Old World columbid apparently arrived in Florida on its own less than 30 years ago from the Bahamas, where an introduced population was well established. Following a worldwide pattern of population expansion, Eurasian Collared-Doves have spread westward and northward in North America since that time and are now well established and increasing over much of southeastern, mid-western, and western North America. Though birders are familiar with several examples of anecdotal evidence for the northward range extensions of some formerly southeastern bird species since the mid-1900s, the CBC provides a valuable tool for quantifying range changes. On the CBC website three features have been devoted to such range expansions—the aforementioned Eurasian Collared-Dove, Tufted Titmouse, and Great-tailed and Boat-tailed grackles. Other northward colonizers are famous, easily tracked by CBC data, and ongoing—Red-bellied Woodpecker, Carolina Wren, Northern Mockingbird, and Northern Cardinal.

However, these are all primarily resident birds. Of equal interest are both short- and long-distant migrant species. Anecdotal stories abound, such as the northward shifting wintering range of American Robins, but little has been documented. Now that 40-year population trends for most species of birds included in the CBC database have been calculated (see "The 2007 WatchList for United States Birds" in Volume 61 of *American Birds*), Audubon has focused on determining what species of birds have shifted their range over time as documented in the last 40 years of Christmas Bird Count data. Dan Niven, CBC compiler and Audubon's Senior Scientist for Bird Conservation, is currently in the midst of initial analyses to learn just that—what birds have been doing and where they've been going over the years as tracked by the results that all of us have gathered for the past several decades. Preliminary results already show that more birds are doing better in the north than in other regions and that waterbirds are wintering more and more in interior states. It will be wonderful to quantify what we all know as observers of birds and equally exciting to learn new aspects of what birds are doing around us. And all of this will become critically important reference material as we begin to think about what the consequences of global climate change will have in store for all of us. Theories abound regarding climate change, but the evidence is becoming insurmountable that it is happening at an increasing pace. This issue is of tremendous importance to all of us on planet Earth, and how birds have historically reacted to changes in their environment can help us learn patterns from the past and model scenarios for the future.

Each of us has our favorite memories of Christmas Bird Counts, whether from the most recent season or from decades ago. As all of you may remember, many of mine in recent seasons have involved owls; it's hard to escape their mystique. As luck would have it, again this past season one highlight was provided at the end of the day by a special, silent predator. I usually try to end my day at a wonderful spot at sunset, at a location that overlooks a pond, the ocean, and an expanse of beach grass. This particular place often provides Short-eared Owls beginning their crepuscular hunting as Northern Harriers retire to their roosts in the fading light. This year I was at my post, and indeed a wonderful mothlike creature floated toward me in the sunset—my anticipated second Short-ear of the day. But wait; this bird was snowy white below, and as we exchanged surprised stares at point-blank range I realized that the white heart-shaped facial disk was that of a Barn Owl, not a Short-ear. It was magical to watch this primarily nocturnal hunter course over the fields in the sunset, occasionally looking over its shoulder at me, just as Short-eared Owls also do.

Ancient human lore has it that owls have great wisdom; as birders we know they have remarkable sight. Let's hope that as humans we can learn from our nocturnal avian neighbors and have the wisdom and foresight to preserve the only planet on which we all can exist.

Though Black Guillemots *(Cepphus grylle)* are tallied fairly frequently on CBCs along the northeastern coasts, this bird was astoundingly far south at Litchfield-Pawleys Island, South Carolina. Photo/Edgar A. Russell

Table 4. Regional high counts for the 108th (2007–2008) Christmas Bird Count.

Region	# of CBCs	Highest Count (species total)
St. Pierre et Miquelon	2	Ile St.-Pierre (54)
Newfoundland	10	St. John's (84)
Nova Scotia	20	Halifax-Dartmouth (116)
Prince Edward Island	2	Prince Edward Island N.P. (56)
New Brunswick	12	Grand Manan Island (70)
Québec	33	Montréal (61)
Ontario	111	Long Point (109)
Manitoba	17	Cypress River-Spruce Woods (44)
Saskatchewan	24	Saskatoon (44)
Alberta	41	Calgary (67)
British Columbia	85	Ladner (138)
Northwest Territories	5	Fort Smith (20)
		Hay River (20)
Nunavut	2	Arctic Bay (2)
		Rankin Inlet (2)
Yukon Territory	7	Whitehorse (26)
Alaska	34	Kodiak (76)
Maine	29	Greater Portland (93)
New Hampshire	17	Coastal New Hampshire (113)
Vermont	17	Ferrisburg (82)
Massachusetts	33	Mid-Cape Cod (142)
Rhode Island	4	South Kingstown (145)
Connecticut	16	New Haven (132)
		Old Lyme-Saybrook (132)
New York	68	L.I.: Southern Nassau County (143)
New Jersey	29	Cape May (162)
Pennsylvania	70	Harrisburg (119)
Delaware	7	Cape Henlopen-Prime Hook (161)
Maryland	24	Ocean City (163)
District of Columbia	1	Washington (99)
Virginia	41	Cape Charles (151)
North Carolina	45	Southport, Bald Head, & Oak Islands (168)
South Carolina	20	Winyah Bay (157)
Georgia	26	Savannah, GA-SC (170)
Florida	66	Cocoa (164)
		West Pasco (New Port Richey) (164)
Ohio	62	Toledo (96)
West Virginia	18	Charles Town (87)
Kentucky	13	Calloway County (83)
Tennessee	30	Reelfoot Lake (109)
Alabama	11	Gulf Shores (149)
Mississippi	17	Southern Hancock County (147)
Michigan	60	Rockwood (99)
Indiana	39	Goose Pond (103)
Wisconsin	40	Madison (85)
Illinois	58	Carlyle Lake (113)
Minnesota	49	Bloomington (62)
		Excelsior (62)
Iowa	32	Keokuk (91)
Missouri	26	Columbia (103)
Arkansas	21	Holla Bend N.W.R. (127)
Louisiana	20	Sabine N.W.R. (154)
North Dakota	18	Garrison Dam (65)
South Dakota	16	Pierre (79)
Nebraska	10	Lake McConaughy (93)
Kansas	21	Udall-Winfield (98)
Oklahoma	20	Tishomingo N.W.R. (126)
Texas	102	Matagorda County-Mad Island Marsh (235)
Montana	30	Stevensville (85)
Idaho	26	Boise (98)
		Nampa (98)
Wyoming	22	Casper (67)
Colorado	42	Pueblo Reservoir (125)
New Mexico	32	Caballo (122)
Utah	21	Salt Lake City (106)
Nevada	12	Truckee Meadows (108)
Arizona	34	Ramsey Canyon (159)
Washington	44	Sequim-Dungeness (150)
Oregon	38	Coos Bay (154)
California	116	San Diego (214)
Hawaii	12	Waimea, Kaua'i (51)
Northern Mariana Islands	4	Saipan (51)
Mexico	24	Ensenada, Baja California (194)
Belize	2	Punta Gorda (254)
Guatemala	2	Atitlan Volcano (216)
Nicaragua	1	Sierritas de Managua, Conteo Navideño (99)
Costa Rica	5	Rain Forest Aerial Tram (391)
Panama	4	Pacific Canal Area (290)
Colombia	19	Rio Barbas-Bremen Natural Reserve, Quindio (166)
Ecuador	5	Mindo-Tandayapa (425)
Chile	1	Drake Passage, South Atlantic Ocean (18)
Trinidad	1	Trinidad (175)
Bahamas	4	New Providence Island (114)
Dominican Republic	2	Puerto Escondido (80)
Puerto Rico	3	Cabo Rojo (124)
British Virgin Islands	2	Tortola (2)
U.S. Virgin Islands	3	St. John (52)
Bermuda	1	Bermuda (94)

The 108th Christmas Bird Count in Canada

December 14, 2007, to January 5, 2008

Richard J. Cannings

A total of 371 Canadian Christmas Bird Counts reported this year, the same as last year—the first plateau in count numbers since Bird Studies Canada began coordinating the counts in 2000. We might have seen a small increase in count numbers had the weather not been unusually nasty across most of the country. Christmas Bird Counters are hardy souls, but this year the weather truly tested their mettle. Pacific storms battered the British Columbia coast, forcing the cancellation of the Comox count. A serious blizzard made driving essentially impossible in parts of Ontario and Québec on the popular first weekend of the count period, causing postponement of several counts and eliminating the Kingston count altogether. The compiler of the new Repulse Bay count had to cancel, not because of blizzards in Nunavut, but because of deep snow in New Brunswick where he was stuck at the end of the count period. Deep snow also closed all roads accessing the Cape Race, NL, count circle.

Black-throated Blue Warbler *(Dendroica caerulescens),* Nanoose Bay, BC. Photo/Ralph Hocken

The list of active Canadian counts still increased, with four new counts from Québec (Îles-de-la-Madeleine, Lascelles, St.-Anne-du-Lac, Val-des-Monts) and two from Ontario (Alfred-Montebello and Linwood). Two counts were restarted on the Atlantic coast—Machias Seal Island, NB, and St. Pauls-Cow Head, NL. Participant numbers dropped by more than 100 to 11,565, due primarily to the cancelled counts. The bird statistics carried on this theme: the total number of individuals counted was down more than 10 percent to 3.2 million birds, while the species total fell to 281, down 8 from last year.

Ladner, BC, again topped all counts in the country for highest species total with 138. In Alberta, Calgary easily bested Edmonton as usual with 67 to 58 species, respectively. Saskatoon was well ahead in Saskatchewan with 44 species; Estevan tallied 37. In Manitoba, Cypress River-Spruce Woods squeaked by traditional leader Winnipeg with 44 species to Winnipeg's 43. Long Point had 109 species in Ontario, well ahead of Hamilton at 103, while Blenheim dropped to third at 100. The best non-coastal count was again reported from Oliver-Osoyoos, BC, where birders set a new interior British Columbia record for the second year in a row with an astonishing 121 species. On the Atlantic coast, Halifax-Dartmouth edged up to 116 species. Other provincial high counts are shown in Table 1. Counts in Nunavut tallied three species, down from the five reported in the previous two years.

Table 1. Provincial and territorial summaries for the 108th Christmas Bird Count.

Province or Territory	Counts	Field observers	Feeder watchers	Species	Individuals	Highest species total and count
Alberta	41	1238	768	90	222,631	67, Calgary
British Columbia	85	2167	546	227	1,156,732	138, Ladner
Manitoba	17	285	91	76	54,960	44, Cypress River-Spruce Woods
New Brunswick	12	197	67	105	63,923	70, Grand Manan
New Foundland and Labrador	10	187	38	112	73,939	84, St. John's
Northwest Territories	5	54	16	26	4817	20, Hay River, Fort Smith
Nova Scotia	20	426	485	155	237,096	116, Halifax-Dartmouth
Nunavut	2	2	0	3	184	2, Arctic Bay, Rankin Inlet
Ontario	111	2598	1073	176	1,110,880	109, Long Point
Prince Edward Island	2	36	11	66	23,127	56, Prince Edward Island N.P.
Québec	33	633	139	123	195,317	61, Montréal
St.-Pierre et Michelon	2	24	1	68	14,672	54, Île Saint-Pierre
Saskatchewan	24	296	91	86	69,601	44, Saskatoon
Yukon Territories	7	62	34	35	6147	26, Whitehorse
TOTAL	**371**	**8205**	**3360**	**281**	**3,234,026**	

Table 2. Average minimum temperatures reported on Christmas Bird Counts across Canada (°C/°F).

Region	2005–06	2006–07	2007–08
British Columbia	-2.4/27.7	-3.6/25.5	-2.4/27.7
Prairies	-11.8/10.8	-11/12.2	-13.1/8.4
Central	-7.1/19.2	-1.7/28.9	-9.9/14.2
Atlantic	-4.7/23.5	-2.9/26.8	-9.7/14.5
Territories	-14.1/6.6	-20.4/-4.7	-24.3/-11.7

Table 3. Mean maximum snow depth on Christmas Bird Counts (cm).

Region	2006–07	2007–08
British Columbia	35	26
Prairies	41	27
Central	3	41
Atlantic	6	35
Territories	63	46

Temperatures were much colder across the country this year compared to last year, except for along the Pacific coast (Table 2). Similarly, snow was dramatically deeper in central and Atlantic Canada this year (Table 3), while declining in depth to a lesser degree in the rest of the country.

In terms of abundance (Table 4), European Starlings stayed on top of the heap but were down significantly in numbers. The commonest waterbirds—Canada Geese and Mallards—also maintained their positions near the top of the list but were also well down in numbers. The biggest drop for a common waterbird was the Ring-billed Gull, which dropped from 10th to 19th place this year, going from 81,888 to 25,913 individuals. American Crows bounced back to second place, perhaps allaying some fears of serious losses due to West Nile virus in the northern part of their range. Crow numbers are difficult to monitor, however, since a majority of the count totals are from a few circles with large roosts that are difficult to count accurately. Sixty percent of the 253,898 American Crows reported in Canada this year were seen on only seven counts. Two counts in Québec—Granby and St.-Jean-sur-le-Richelieu—had more than 30,000 crows each.

There was one new species added to the official Canadian Christmas Bird Count list this year—an Arctic Loon spotted on the Duncan, BC, count. A Magnificent Frigatebird got on the count week list at Halifax-Dartmouth, the first time that species has made it into a Canadian CBC report. As usual, a few summer birds braved the blizzards; some of those highlights included a Bullock's Oriole in St. John's, NL, a Black-throated Gray Warbler and a Yellow-throated Warbler on the almost-new Port Burwell-Vienna, ON, count, and a count week Black-throated Blue Warbler at Nanoose Bay, BC. A Swainson's Thrush was carefully identified at Kelowna, BC, and a Rufous Hummingbird was photographed at Nanaimo, BC. The all-time Canada species list for Christmas Bird Counts now stands at 409.

Ups and Downs of Bird Populations

One of the main uses of Christmas Bird Count data is to monitor the populations of wintering birds in Canada. For instance, count data were recently used to assess the status of Rusty Blackbirds, Red Crossbills, and Short-eared Owls by the Committee on the Status of Endangered Wildlife in Canada.

Some populations are going up. Wild Turkeys seem to be increasing everywhere—9888 were counted on 104 counts across the country. Fifteen years ago, only 146 were seen on 18 counts. A similar explosion seems to be unfolding for the Eurasian Collared-Dove, but the movement is still in its early stages. This year, 336 Eurasian Collared-Doves were seen on 16 counts in all four western provinces, including the first CBC records for Manitoba. Northern Cardinals, recently established in parts of the Maritimes, continued to increase there, with 144 seen on 13 counts in New Brunswick and Nova Scotia.

Finch populations are notorious for their ups and downs, at least on a local scale, as they roam the continent looking for abundant seed crops. All the usual "northern forest" finches—Pine Grosbeak, Red and White-winged crossbills, Pine Siskin, Common Redpoll, and Evening Grosbeak—were up in numbers this year, some of them to heights not seen since the banner year of 2001–2002. The number of Pine Grosbeaks reported—21,246—was about double what it has been over the past five years. White-winged Crossbills, perhaps one of the most nomadic of this wandering family, invaded Newfoundland in a big way, where almost half of the 14,127 birds found Canada-wide were located. Most of these were on the east coast of the island at St. John's and Ferryland. Red Crossbills, on the other hand, were commonest on the southwest coast of Canada on Vancouver Island and the Gulf Islands.

The Pacific coast is the traditional heartland of wintering Pine Siskins in Canada, and after a near-absence on the west coast two years ago they were finally back in big numbers—69,124 were reported across the country, 95 percent of them in the moist coniferous forests of British Columbia. Wintering Common Redpolls often show a biannual pattern of abundance in southern Canada, but this year they bucked the trend and appeared in twice the numbers they did last year, which had been one of the "high" years. More than 80,000 were seen, more or less all across the country, with concentrations in Nova Scotia, Ontario, and Alberta. And finally, Evening Grosbeaks rallied again after a poor showing last year, with 11,735 seen across the country, perhaps responding to increasing spruce budworm populations.

Lastly, I would like to mention the loss of two compilers who passed away last year—David Nadeau (Wabamun Lake, AB) and Frank Reynolds (Whistler, BC). We will miss them.

Table 4. The 15 most abundant birds reported on the 108th Christmas Bird Count in Canada, with totals from the past two counts for comparison.

Species	108th Count	107th Count	106th Count
European Starling	317,615	457,478	371,437
American Crow	253,898	191,328	250,642
Canada Goose	207,993	297,987	204,373
Mallard	184,012	224,279	227,869
House Sparrow	124,430	138,627	137,371
Black-capped Chickadee	121,875	132,821	140,971
Rock Pigeon	117,384	124,107	127,302
Glaucous-winged Gull	93,513	112,596	119,326
Bohemian Waxwing	86,595	76,004	146,750
Dark-eyed Junco	85,397	66,514	147,384
Common Redpoll	82,316	34,383	16,886
Snow Bunting	80,289	41,469	73,447
Herring Gull	77,615	97,568	81,281
American Wigeon	74,547	72,972	92,111
Dunlin	72,663	52,872	56,576