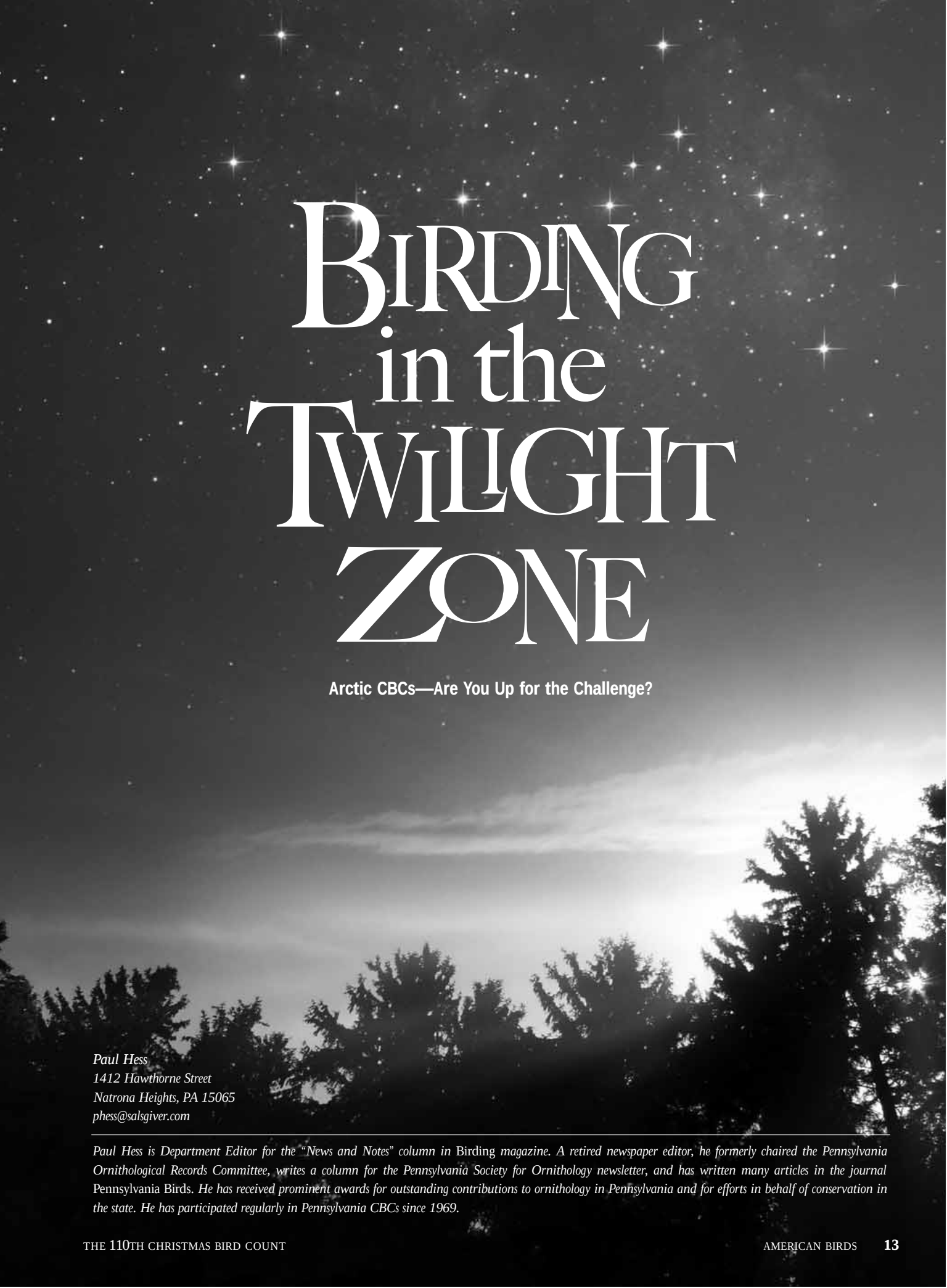

Birding in the Twilight Zone

Arctic CBCs—Are You Up for the Challenge?

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The polar bear?

Mike Olson and I arrived at the dump on count day and were surprised to see a sign posting new hours. We were too late, and "Closed" was just that–a locked gate across the entrance road. From where we had stopped at the gate, we had no view into the dump at all. We could have gone around or over the gate on foot. However, there was a polar bear alert in effect that day, and all personnel had been notified about a bear in the area. For a view of the dump, one would have to walk about 30 yards to make it to the edge. I asked Mike if he wanted to walk in there and count ravens while I kept warm in the truck. He said, "no." ❄ [Ed Burroughs recalling a Christmas Bird Count at Prudhoe Bay, Alaska]

Welcome to the world of Arctic CBCs.

An Arctic CBC can be very cold. Ponder count day windchills of minus 65 degrees Fahrenheit at Sanningaruq, Alaska, in December 1989 and minus 70 degrees Fahrenheit at Prudhoe Bay in January 1990 (*American Birds* 44:529).

An Arctic CBC can be very dark. Pete Islieb, a former Alaska CBC regional editor, remarked that many counts are made in a "twilight zone" where the sun last sets in November and does not rise above the horizon until February (*American Birds* 43:568). Buzz Scher, current Alaska CBC editor, could not resist a wry comment about two observers who tried using a camera flash to count ravens: "Does anyone have night-vision goggles they can use next year?" (*American Birds* 58:57)

An Arctic CBC can be utterly birdless. Observers can spend hours in trucks, on snowshoes, on cross-country skis, on snowmobiles—and find nothing remotely avian. Participants on three counts have experienced such a day. Each of the following zero-bird CBCs lasted only one year:

• Resolute, Nunavut, at 74˚ 43' was the northernmost count ever conducted. The CBC circle was centered at an airstrip 4.5 miles from this ultra-isolated Inuit hamlet of about 200 souls on Cornwallis Island, amid 76 percent tundra habitat. On 18 December 1977, three observers spent 5.5 party hours in temperatures from minus 33 degrees Fahrenheit to minus 17 degrees Fahrenheit without sighting a bird (*American Birds* 32:475). Undeterred, they tried again for five party hours in the next December. The result was the same, and this time they didn't submit a report (*American Birds* 33:335).

• Point Barrow, Alaska, at 71˚ 20' was a circle with 85 percent tundra habitat centered at the Naval Arctic Research Laboratory. On 28 December 1975, three observers in a truck and six in snowmobiles covered 40 party miles in minus 10 degrees weather. They had only two hours of "good" light and one hour of "adequate" light—with no luck. Well, at least they saw 17 caribou and an active den of Arctic foxes (*American Birds* 30:219).

• North Star Island, Alaska, at 70˚ 14' had a circle of 60 percent frozen ocean, 30 percent beach, and 10 percent coastal tundra. On 21 December 1981, in what they called "dusk-like light; sun never above horizon," two observers spent three hours on an all-terrain vehicle in temperatures from minus 11 degrees to minus 2 degrees. The result? No birds, although they did note five Common Ravens during the count period (*American Birds* 36:443).

Such birdless days are not necessarily discouraging. Jim Mosher, the compiler of that Point Barrow CBC, was enthusiastic: "Our consensus is that the count was a success" (*American Birds* 30:156–157). Buzz Scher, one of the North Star Island participants, was elated as well: "I don't know how interesting the count will be, but I had a great time doing it" (*American Birds* 36:369).

And there is scientific value. Geoffrey S. LeBaron, Audubon's CBC Director, emphasized in 2007 that the zero-bird counts "were by no means a failure—recording the absence of birds is as important as recording their presence" (*American Birds* 60:6).

Nothing but Ravens

Next, there are the CBCs with a grand total of one species: Common Raven. If it weren't for town dumps, even the ravens would not likely be around.

Clare Kines had that kind of day three times during his four years counting at Arctic Bay in Nunavut, a bayside Inuit hamlet of 600 people on the north coast of Baffin Island. At 73˚ 03', it is the highest-latitude CBC currently active. Clare retired there after a career in the Royal Canadian Mounted Police, and he considers its tundra, fjords, and frozen ocean to be "one of the magical places in the world." Birdwise, it was truly magical in one of those four years when in January 2008 he added Rock Ptarmigan and suddenly doubled the size of Arctic Bay's CBC species list. Until that day, no CBC anywhere north of 70˚ latitude had ever produced anything but ravens.

Two very high latitude counts on the north coast of Baffin Island, these conducted just once (coincidentally, in December 1978), produced only ravens. One of them, Nanisivik, was a temporary company town for zinc and lead mining about 12 miles from Arctic Bay that operated from 1976 to 2002. Perhaps it was the only CBC held in a community that has now been abandoned and all its houses torn down because of mineral contamination. Its raven total was 33. The other raven-only count, Pond Inlet, is a predominantly Inuit hamlet where the ocean is ice-free for only three months or so. Its tally was 65 ravens.

But the all-time nothing-but-ravens record goes to Prudhoe Bay: 23 years without another species. Ed Burroughs has compiled the CBC since he began it in 1987 while working there. If you ask him what the motivation is, year after year after year, when he can expect only ravens, he has a memorable answer:

"*Only* ravens? That's a good one! Have you ever seen a Common Raven, its face covered with frost, sitting nonchalantly on the ground six feet from an Arctic fox? Or two of them performing aerobatics and exchanging an empty cigarette pack in mid-flight as if the sub-zero weather was just perfect? One day a year isn't a big sacrifice, and, honestly, the 'event' became somewhat of lark—no pun intended."

Sparrows and Eiders, Too

Even counts south of the Arctic Circle sometimes have produced only ravens. It happened at two hamlets on northwestern Hudson Bay in Nunavut, which eventually added another species to the list:

• Arviat, a recent count spanning from the 102nd to the current 110th CBC, had only ravens in its first two years.

Compensation came in subsequent years with a second species that was notable at the northern edge of its range in Nunavut: House Sparrow. "Thirteen extremely cold House Sparrows managed to hang in for the count," regional editor Rainer Ebel commented (*American Birds* 60:51). The count day temperature fell to minus 4 degrees, and the hardy birds managed to "hang in" on the subsequent counts when temperatures dipped from minus 8 and minus 11 degrees.

• Rankin Inlet, a coastal community of 2400 north of Arviat, has also been active from the 102nd to 110th CBC. Only ravens were listed in its first four years, and then another species, Common Eider, became regular during the next five.

About ravens at Rankin Inlet, compiler Brian Zawadski explains that the species did not begin to appear there until the mid-1980s. He adds, "Too bad CBCs were not done in this area prior to the arrival of the ravens, as this would certainly have documented their appearance in this area."

"This is one reason I do the count," Brian continues. "The records, or lack thereof, speak volumes to changes in bird behavior. I had always been interested in doing a CBC at Rankin Inlet but just never got around to doing it because I figured there was nothing to count. Then I realized that a zero count was still a valuable data point. This is where the raven scenario comes into play, and so I have continued since then. The more data the better for our understanding of the bigger picture of bird biology and the environmental changes we are experiencing."

About eiders, Brian suspects that significant numbers winter in the open water of Hudson Bay but typically are not observed in a CBC because of the distance of the ice floe's edge from most communities. "However," he says, "there are two small tidal races within the CBC circle that typically remain open to the end of December, and it is here that eiders can be found—until it freezes over, of course. How long the water remains open depends entirely upon the temperature."

To Richard Cannings, coordinator of Canada's CBCs, that observation reflects a broad environmental issue: "I imagine that if the de-icing of the Arctic Ocean continues, we'll see an increase in the numbers of eiders, etc., over the decades to come."

Speaking of Common Eiders, the most unusual report came from Chesterfield Inlet, another northwestern Hudson Bay hamlet in Nunavut. The count was active only in the 104th when Rand Rudland, a physician from British Columbia on a professional visit at the small Inuit community's medical center, decided to check for birds on 16 December 2003. During a walk in a frigid white-out, Rand spotted eight low-flying Common Eiders. Visibility was so poor that the tight flock flew directly into a power line, killing seven of the eight. "The local Inuit had a feast that evening," Rand recalls. The only other bird visible that day was a single raven, but the Common Eiders were the first ever reported on a Northwest Territories or Nunavut CBC.

Counts Come and Go

Many high-latitude CBCs are active for only one or a few years. Sometimes the compilers are military, industrial, or government personnel stationed temporarily, scientific researchers making short-term studies, or visitors such as physician Rand Rudland. It is often difficult or impossible to reach some Arctic CBC locations in winter, so the compiler is usually someone who lives there.

Two examples of one-year-only CBCs took place on Baffin Island. Cape Dorset on the big island's southwestern tip and Pangnirtung on the eastern coast are Inuit hamlets with populations of about 1200, where no permanent count can be maintained. A Canadian Forest Service biologist reported 14 Long-tailed Ducks and 24 Common Ravens at Cape Dorset in the 92nd CBC season. A Canadian Parks Service representative reported eight Rock Ptarmigan and 120 Common Ravens at Pangnirtung in the 94th season.

Those reports may not sound like much of a contribution to science, but Dick Cannings commented that the ducks' presence was noteworthy, at the edge of the species' known winter range (*American Birds* 46:522). It is intriguing to ponder what other CBC surprises might be encountered if such far-northern locations could be covered every year. Dick always wishes for more of them.

Sometimes long-term compilers leave, and there is no one who can replace them. It may happen after the 110th count at Arviat, the House Sparrow haven. Lynne Rollin compiled the CBC five times since December 2001, but she and colleague Nadine Lamoureux left Arviat this year after 25 years of service at the Mikilaaq Centre there. The two collaborated on a book published in 2009, *Follow the Trail*, which tells of the people, the community, and the surroundings. They are also acknowledged by authors Jim Richards and Tony White for providing information for *Birds of Nunavut: A Checklist.*

For Lynne, the CBC is only one bit of her quarter-century of Arviat memories, but when asked for an anecdote, an experience came to mind from the first count she conducted with Michael Setterington, a biologist with the Nunavut government who has also moved from Arviat:

"We were each driving a snowmachine trying to cover more area. We weren't seeing much except everything white. I came to the edge of the ridge east of town, close to the dump. I guess I was concentrating too much on finding birds (that we were not finding), and I almost rolled the snowmachine over the edge of the ridge down to the Hudson Bay. I got a real good scare but still saw no birds. Michael's wife had prepared some delicious hot chocolate for our return. I don't think hot chocolate ever tasted so good."

Of course, not all temporary Arctic counts are located along frozen shores. One count almost forgotten was a two-year effort in December 1966 and 1967 at Aklavik in the Northwest Territories. This hamlet on the western side of the Mackenzie Delta was formerly a regional administrative center and is predominantly populated by 600 Inuvialuit and Gwitchin people. There, the count circle was 59 percent muskeg; 40 percent small lakes, ponds, rivers, and streams; and 1 percent tiny village. Besides ravens and Willow Ptarmigan, the CBC in 1966 produced 160 Hoary Redpolls.

In this case, the region's CBC coverage was revived in 2007 at Inuvik, a large town of 3500 on the eastern side of the Delta where the government was relocated from Aklavik. The Inuvik CBC has been conducted regularly since then, and

boasts some species not generally found on counts above the Arctic Circle: Sharp-tailed Grouse, Northern Hawk Owl, and White-winged Crossbill. If maintained it will continue to provide coverage in an important area where increasing knowledge of winter birdlife will be greatly welcomed.

Productive long-term counts fall by the wayside even at latitudes much farther south than Arviat and well below the Arctic Circle. An important example is Churchill, Manitoba, on the western shore of Hudson Bay, a count that was conducted faithfully from the 77th to the 89th count periods, and then ended. When no report was received for the 90th CBC, Dick Cannings lamented that "the loss is especially noteworthy because it was our only Arctic Canada count" that year (*American Birds* 44:527). It was resurrected for the 95th to the 103rd counts, then ended again.

A loss indeed. Churchill almost always had interesting birds such as Gyrfalcons, Snowy Owls, and an almost annual presence of Hoary Redpolls. In fact, the 163 Hoary Redpolls on the 84th count was the highest number recorded on any North American CBC that year.

One facet of the Churchill CBC calls to mind what Dick Cannings said about the future link of increasing Common Eider counts to melting Arctic ice. The final Churchill count, on 4 January 2003, produced the first-ever count day Common Eiders. Without a revival of the CBC, we will never know whether that was the beginning of a climate-related trend bringing open water and wintering eiders into the Churchill circle.

And how about Churchill's astonishing Rusty Blackbird at a feeder on 3 January 1999—certainly not where that bird wanted to be if it had a choice. The temperature was minus 24 degrees on a day when a Rusty should have been basking in warmth somewhere in the southeastern U.S. Future records like that will be lost.

A True CBC Legend

Sometimes a longtime CBC ends but its legend remains. Foremost of these is the Sanningaruq CBC on Alaska's northwest coast—and the man who originated and compiled it for two decades, an extraordinary hunter-trapper-fisher named Bob Uhl. The formal description of his inaugural count on 1 January 1985 was intriguing: "center Uhl's Camp, to include Sisualik Spit, Napaktuqtuq, Akulisak, and Napakturaq" (*American Birds* 39:468–469).

A long-distance phone conversation with Bob fulfills the exotic promise suggested by those place names. The center refers to his remote winter camp nearly 20 miles from the city of Kotzebue—which itself is extremely remote. The CBC's name is an old Iñupiaq language word for a local side stream that flows to a large inlet.

Born in California, Bob came to Kotzebue in 1948 when he was drafted into the Army after high school, and he decided to stay there. "I was already recognized as a pretty good hunter," Bob says, but he quickly began receiving an advanced education in the far north's methods from hunters and trappers in his military unit, many of whom were Alaska's native people.

He soon met and married Carrie, an Iñupiat of the Kotzebue Sound group, whose extended family welcomed him and taught him the traditional native ways of life. The couple lived for more than half a century in the ancient Iñupiat manner—not only surviving but thriving on the bounty of wildlife in the wilderness at alternating summer and winter camps.

Seth Kantner, the North Slope's foremost writer, visited Bob and Carrie in 2002 and told their story wonderfully in the Kotzebue Electric Association's newsletter. "Together," Seth said, "they are the rear guard of a retreating subsistence way of life." (Find his article on the Internet via a search for "A Visit to Uhl's Camp." You'll be rewarded.)

Jim Dau, a wildlife biologist with the Alaska Department of Fish and Game, calls Bob "one of the finest naturalists (and kindest souls) I've ever known." No one who has ever talked to Bob would disagree.

Bob is 84 now, and Carrie died unexpectedly last year—a loss Bob still struggles to overcome. He had to leave his remote camps for health reasons and lives in Kotzebue, which is why the Sanningaruq CBC is no longer active.

Birds are just one of countless facets of Bob's knowledge of the outdoors. He and Carrie did not live on the land. They were not merely linked to the land. They were an integral part of the land. He cannot think of a single experience in that half-century that he truly considers unusual. Events that many of us might talk about for the rest of our lives are perfectly ordinary to Bob—encounters with brown bears and black bears, that sort of thing.

Bob describes hunting seals, caribou, ptarmigan, foxes, and hares, as well as feeding Carrie and himself for an entire winter on one moose. "It has all been kind of special, and it came as part and parcel of what our living meant in those years," Bob says. Then he pauses for a moment and adds a softly understated sequel: "For me, it has been a good life and a long one. It has turned out remarkably well."

What led Bob to start the CBC? "I have a feeling of inquisitiveness about birds. I enjoy birds, and I enjoy people who know more about birds than I do, because I can learn from them—or try to."

Bob had to learn the practical side of biology very well, for more than scientific interest. Bob and Carrie needed thorough knowledge of wildlife population cycles, including the peaks and troughs of birds and animals they hunted, to stay alive. When populations of some species were low, they would have to switch to alternatives whose numbers were high.

Nowhere in Bob's CBC records is a population cycle more dramatically evident than in the Sanningaruq counts of Willow Ptarmigan. High counts of 431 and 247 were exactly 10 years apart, compared to an average of just 11 for all the other years. Bob wasn't surprised, and he didn't need Lloyd B. Keith's classic 1963 analysis *Wildlife's Ten-Year Cycle* to call his attention to the phenomenon. Bob had been watching the cycle himself for half a century.

Even for the far north's experts, weather can mean trouble. After two previous tries in the 1988–1989 CBC season had been "stormed out," counters were finally able to get to the Sanningaruq circle on 3 January 1989. They traveled 18 miles out from Kotzebue by snowmachine to reach Bob's camp before twilight at 11 A.M., and they returned that afternoon in a blizzard. The difficult day had its

rewards, foremost among them the all-time North American CBC record of 1023 Willow Ptarmigan. Bob told Alaska regional editor Pete Islieb that without the visible black feathers in their tails when flushed, many of the birds would have been missed in the white-out conditions (*American Birds* 43:568).

New CBCs Arise

Though we've lost some treasured counts, new CBCs are on the rise in Canada—for example, last winter three in the Yukon Territory alone. Dick Cannings credits Cameron Eckert (Northern Canada regional editor for the journal *North American Birds*) and the Yukon Bird Club for making this possible.

Of these new counts, perhaps the most unexpected would be Old Crow at 67˚ 39', the Yukon's northernmost settlement. A tiny, isolated community of just 300 on the banks of the Porcupine River, it is home to the Vuntut Gwitchin, a First Nation people fabled for traditional reliance on caribou for their food, boots, and clothing.

This CBC was organized by Dennis Koch, a Whitehorse birder who visits a relative there at Christmas, and had seven participants out searching in temperatures as low as minus 20 degrees. "That was the count I was happiest to get," Cannings says.

Though it is above the Arctic Circle, the landscape is sub-Arctic taiga. The count on 26 December 2009 produced a diverse little list: 10 Willow Ptarmigan, two Sharp-tailed Grouse (said to be unusual so far north in the Yukon), three Gray Jays (at the northern edge of their range), and 15 Common Ravens.

The second new Yukon CBC, Dawson, three degrees of latitude southward, not surprisingly produced a more varied species list: Downy Woodpecker, Hairy Woodpecker, Gray Jay, Black-billed Magpie, Common Raven, Black-capped Chickadee, Boreal Chickadee, Pine Grosbeak, and Common Redpoll. Nine participants led by compiler Sebastian Jones spent a total of 24 party hours in temperatures as low as minus 31 degrees.

The third new Yukon count is perhaps unique among all CBCs. It is Tagish, a community with a population of just 200, four degrees of latitude south of Dawson. Why unique? It was organized by Shyloh van Delft, age 15.

An article about Shyloh in the *Yukon Warbler*, the newsletter of the Yukon Bird Club, describes her as "a mover and shaker in the Tagish birding scene." The story goes on to tell about her efforts lining up feederwatchers, even training the observers by marking pages for them to study in a bird book and by leading a birding walk through the community. Read more about Shyloh in the newsletter at www.yukonweb.com/community/ybc/ybc-spring2010.pdf.

Seven participants on 26 December 2009 reported the Tagish CBC's historic first list: Common Merganser, Ruffed Grouse Bald Eagle, Gray Jay, Black-billed Magpie, Common Raven, Black-capped Chickadee, Mountin Chickadee, Boreal Chickadee, and Red-breasted Nuthatch. Shyloh says it was fortunate that someone brought a spotting scope to pin down the 23 far-away Common Mergansers.

The Arctic Challenge

Bears. Extreme windchills. White-outs killing visibility. You have to know the Arctic well to take on the challenge of a high-latitude CBC.

"The Arctic as a biological proving ground is unquestionably stern and insistent," L. L. Snyder wrote in his classic 1957 book *Arctic Birds of Canada.* He was referring to birds' evolutionary adaptations to the far north, but his point applies just as well to CBC observers' adaptations. The evolutionary moral for participants in many of the toughest CBCs is clear: Watch for bears, watch the weather, and watch the terrain if you want to pass your genes along to another generation.

Meanwhile, at the South Pole…

If Arctic CBCs are given so much attention, then a few paragraphs are in order about failures and successes on the opposite side of the Earth.

In his summary of the 89th CBC, Geoff LeBaron told of an experience by Randy Korotev, who usually compiled the count at Orchard Farm, Missouri. During the 89th count period Randy was about 400 miles from the South Pole searching for meteorites on the Antarctic ice cap. Geoff commented, "If you get discouraged on your counts when finding fewer species than in prior years, think of Randy who spent the entire count period outside in his area and found about 790 meteorites, but never saw a bird!" Geoff added, "We doubt we'll ever be able to accept a new count from where Randy was located" (*American Birds* 43:558–559).

Very close was a remarkable pelagic count that began in the 102nd CBC season—and is still active—in the Drake Passage between the southern tip of South America and Antarctica. During the count's nine-year history, Andrew Bernick, Michael Force, Jarrod Santora, and current compiler Richard Veit have listed a total of 33 species, including such area rarities as Fairy Prion and South Georgia Diving-Petrel—plus Rockhopper, Macaroni, and Magellanic penguins, as well as six species of albatrosses. Who'd have thought until a decade ago that penguins would ever be listed on a CBC?

A land-based Antarctic CBC almost happened when a proposed circle was approved a few years ago for Palmer Station at Anvers Island on the Antarctic Peninsula, but it has not been conducted.

Finally, Geoff was able to make an enthusiastic announcement in his report on the 109th CBC last year (*American Birds* 63:2–7): "We also welcome a new continent to the universe of the Christmas Bird Count—Antarctica!" The compiler was Noah Strycker, who was spending the South Polar summer studying an Adélie Penguin colony at Cape Crozier. Noah reported his experience wonderfully in that same issue, heralded by the most unusual cover photo ever to grace that publication. Noah and two research colleagues tallied five species, including more than 270,000 adult Adélies. To sum it up in a word: "Wow!"

Arctic and Antarctic Christmas Bird Counts are high adventures with an important purpose. They not only add a fascinating human dimension to the CBC tradition, they also offer uniquely valuable contributions to science. Here's hoping the prospect of making ornithological history in a polar or sub-polar count circle will entice more birders to give it a try.