

Ken Ludwig President, Nature Saskatchewan

As an organization dedicated to the preservation and enjoyment of our natural environment, Nature Saskatchewan is concerned about all those forces that threaten the integrity, stability and beauty of that world. By far the biggest threat that looms over our entire planet is human-generated climate change.

We should all be generally aware of the outlines of the issue. We are releasing more gases, such as carbon dioxide and methane, than ever into the atmosphere while at the same time undermining the earth's ability to mitigate and absorb that production. The result is a "greenhouse" effect that is raising the earth's surface temperature while at the same time destabilizing our weather systems. This is no longer an issue for the future; it is increasingly making its presence felt through severe droughts and heat waves, loss of polar and glacial ice (and the consequential loss in fresh water and the life that depends on it), adverse changes in biotic populations, behaviours and relationships, and more erratic and extreme weather events. Something must be done.

activities — as many small efforts generation, industrial production,

after conference to talk, plan, set



The results of the 81st annual Saskatchewan Christmas Bird Count are in! The 2022 count resulted in two new species being added to the all-time list.



Ron Jensen and Randy Schmidt document the first record of a Costa's Hummingbird in Saskatchewan.



Originally published in Blue Jay 80.4, a corrected version of Another Black Witch Moth for Saskatchewan is provided, in which Muriel Carlson shares the story behind a record of this moth from more than 10 years ago.



In this book review of A Conspiracy of Chickens by David Waltner-Toews, learn how Walter-Toews weaves his experience raising hens at his home in Kitchener. ON together with the history and biology of chickens to tell a personal story that is equal parts

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Of the 83 Christmas Bird Counts conducted last winter, 79 were accompanied by a Mammal Count. One new species was added during the 2022 mammal count, bringing the all-time provincial total to 52 species seen or heard

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ON THE FRONT COVER

Photo credit: Annie McLeod.

Estuary, SK in southwest Saskatchewan.

A Lark Sparrow photographed at the ghost town of

ON THE BACK COVER

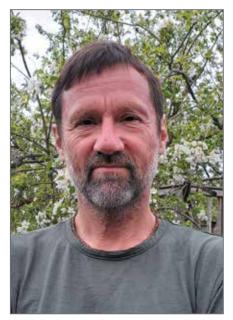
At the Chapel Marsh Conservation Area, a male Yellow-headed Blackbird launches for the sky in a volcanic golden hour scene of reds and oranges

Photo credit: Abbie Reilander

FROM THE PRESIDENT

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While it is certainly important that each of us contribute to the solution through the choices we make in our lifestyles, consumption patterns and do add up — this is not enough. Our whole structure of resource use, energy distribution, consumption and waste disposal is overwhelming the planet. We need individual action, but we also desperately need large scale changes. It seems that our public leaders around the world meet at conference targets, and make public statements of concern. Meanwhile, no significant action is taken to make the changes we need to make. (Indeed, there can seem to be more energy devoted to finding nominal and token examples of action taken for reporting to constituencies, or trading targets and commitments like



Ken Ludwig

commodities, than taking substantive action.) Meanwhile, scientists issue increasingly grave warnings for the next conference to consider.

There are, of course, some areas of exception around the world that are managing to make change and meet targets in meaningful ways. But these tend to be relatively small players in this game, and are not fundamentally changing the direction in which the world as a whole is moving.

It is a sad (and terrifying) situation when governments begin to issue climate change strategies that are, in essence, adaptation strategies rather than prevention strategies.

We are not merely facing inconvenient or annoying adjustments. We are facing devastating impacts that ultimately may include extinction. We can not continue to go blindly into that night.

We must pursue our individual efforts to lighten our own impact. We must prompt larger change through our consumer choices. We must demand, and hold accountable, government and industry leaders to create plans with more substantive actions and adjustments, shorter time frames, and actual execution. We must have the conversation now of what is entailed in ensuring sustainable human society upon the earth. 🖊



Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history and conservation for Saskatchewan and adjacent regions. It is published quarterly by Nature Saskatchewan.

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ANOTHER BLACK WITCH MOTH RECORD FOR SASKATCHEWAN (CORRECTION) NOTE FROM THE EDITOR: This article was initially published in Blue Jay 80.4, regrettably with a number of errors. Below is the revised copy.

Muriel Carlson

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The article by Cedric Gillott in Blue Jay 79.2 has encouraged me to report another sighting of a Black Witch Moth, although it was more than 10 years ago near Stranraer, a tiny village in the Herschel Hills about 20 miles west of Rosetown. There is quite a tale behind this sighting.

Dorothy (Stratillo) Seibold grew up in the small village of Herschel, Saskatchewan. At a young age, she began collecting flowers and things of interest to her. Later, she became a piano teacher, photographer, local history buff, and writer. In 1958, she married Lloyd Seibold and raised four children on the family farm near Stranraer. One of Dorothy's passions was taking pictures and displaying her photographs at Ancient Echoes Interpretive Centre (AEIC), located in the former Herschel School. The centre focuses on the ecology of the local area, including the native petroglyphs and the discovery of marine fossils in the Coal Mine Ravine.

On 24 June 2013, I was volunteering at AEIC, doing some studies of rock alignments around Herschel. Michael Williams, geologist and keen birder, was helping me while we also kept our eyes peeled for butterflies up in the high country. As we prepared to go there, a black butterfly, obviously a swallowtail, flashed by on the breeze. We went to the petroglyphs, on a very high hill, and encountered another swallowtail (possibly the same one). Michael had thoughtfully brought his net. We captured it and hustled back to our house to get some photos of it and to call Dorothy Seibold in Stranraer, because we thought it might be a new species for the area and knew she was preparing a display of her collection of butterfly photographs the next morning (we sent the photos to Anna Leighton, who had the butterfly identified and let us know that it was a black form of an Anise Swallowtail).

The next morning, Dorothy hung her display in the AEIC gallery. The first photo was a Tiger Swallowtail, and the second





Dorothy Seibold (holding camera) and Dave and Sue Neufeld. Photo credit: Muriel Carlson.

was the butterfly we captured the day before. Talk about speed! Then I looked at a third picture. It was a giant among moths. My first Black Witch Moth (Ascalapha odorata). We were ecstatic! And from little ol' Herschel (and Stranraer). But just how she captured it made an even better yarn. In July of 2012 there was a family wedding at her son's farm, and a large tent was erected to house the guests. At some point, after dark, something large and brown flew into the tent. It created quite a stir. Some thought it might be a bat. But not Dorothy. She ran for her camera and photographed the creature, which turned out to be a Black Witch Moth.

But that was not to be the end of this tale. Since then, over three different years, I have personally sighted the black species of swallow tails at five locations in the hills and further north in the high hills above and north of Plenty, fluttering along the steep pinnacles of those hills, all on windy days. I was always with friends and, on one occasion in the Toft Hill Pasture near Stranraer, a group of four butterflies were newly hatched on a Missouri Currant plant less than 20 feet away. These specimens

Board of Directors

Dorothy Seibold's framed picture of the Black Witch moth displayed at Ancient Echoes Interpretive Centre in 2013.

were deeply coloured, with deep yellow bands on the outer wing. We observed them for several minutes but had no camera with us. I believe this indicates that there is a viable population there.

So schedule a trip out there in late June. Book a couple of rooms at the Herschel Retreat House and make a weekend of it. Great birds, butterflies and the Coal Mine Ravine deserves a second look, too. We developed a checklist of birds there as well, and there may be more surprises.

Dorothy Seibold is no longer among us, but her pictures still echo. I wonder how many other records she may have found.

Dedicated to Dorothy Seibold with edits provided by her husband, Llovd Seibold, and children, Linda Klassen, Richard Seibold, Grant Seibold and Mark Seibold. 🔎



A photo, by Dorothy Seibold, of a Blue Jay — her favourite bird. Image courtesy of the Seibold family.

THE FIRST COSTA'S HUMMINGBIRD **RECORD FOR SASKATCHEWAN**

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On 27 October 2022, a hummingbird appeared in the yard of Angela and Randy Schmidt in the Lawson Heights area of Saskatoon, Saskatchewan. Hummingbirds, which in Saskatchewan are almost always the Ruby-throated Hummingbird (Archilochus colubris), had departed the province by the first week of September. To have a hummingbird this late in the year was extraordinary! The fall in Saskatoon was unseasonably warm and sunny.

The day the hummingbird arrived the daytime high temperature was 11.8° C with a low of -0.3° C. It is unsurprising that this rash hummingbird appeared at the Schmidts' yard as they have a goal to keep flowers and hanging fuchsia baskets going as long as possible each fall and still had petunias in bloom on 27 October.

After consulting with Randy's niece, Carly Schmidt, and being concerned for the bird's welfare, the Schmidts contacted Living Sky Wildlife Rehabilitation (LSWR) for advice. The Schmidts borrowed one small hummingbird feeder from their neighbours. The bird fed heavily on sugar water and flowers for the next two days, then was not seen 30-31 October. It reappeared 1 November and then left again until late in the day on 2 November.

On 2 November, with deteriorating weather conditions and a winter storm in the forecast, Randy decided to lure the hummingbird into their heated garage. A second larger hummingbird feeder was borrowed and hung from a step ladder. The bird preferred the larger feeder with roosting perches as it could rest while feeding. To get the bird inside,

Randy steadily shifted the larger feeder from in front of the garage to inside the garage through the open car door. By 3 November, the bird had learned to use the smaller, more secure back door of the garage. During this process, the smaller feeder was kept outside in a large semiheated box that had to be somewhat enclosed to keep it from freezing.

On 4-5 November, the snow storm and colder temperatures arrived. The bird would not roost inside the garage overnight, despite many spruce boughs and flower baskets in the rafters, but continued to come and go from several nearby large spruce trees in the Schmidts' and their neighbour's backyards. On the morning of 6 November, with the snow storm continuing, Randy closed the back garage door. While Randy shovelled snow in front of the garage, the hummingbird appeared, flew to the closed back door, and immediately returned to buzz him at the front door of the garage. Randy raised the front door a few feet and the hummingbird flew in right past him. He pushed the door down quickly and didn't see a small blur fly out.

Checking an hour later, the hummingbird was indeed inside the garage.

Ron Jensen, a permitted hummingbird bander in Saskatoon, was contacted by Jan Shadick, Executive Director of LSWR, on 7 November inquiring if he would try to catch the hummingbird so it could be taken to the LSWR facilities.

On 8 November 2022, Ron contacted Randy to make arrangements to come that afternoon to attempt to capture the hummingbird using his hummingbird trap. Upon quietly entering the Schmidts' garage, the hummingbird was observed sitting on a peg above the workbench (Figure 1). The banding trap was set up with the larger feeder placed inside of it. Randy and Ron moved toward the resting hummingbird, which immediately flew toward, into and out of the trap, then right back into the trap where it rested on the feeder and began to feed. Ron closed the trap, catching the bird. An easy catch! The bird resumed feeding after the trap closed (Figure 2).

With the hummingbird in hand, it was now possible to determine the



FIGURE 1. The young male hummingbird sitting above the workbench in Randy Schmidt's garage Photo credit: Ron Jensen



FIGURE 2. Hummingbird sitting on feeder after being captured in a banding trap. Photo credit: Ron Jensen.

species of the bird. Ron confirmed the hummingbird was young (buffy edges to head feathers with scattered violet gorget feathers) male hatched in 2022. Based on previous other hummingbirds reported in Saskatchewan, Anna's (Calypte anna) or Rufous Hummingbird (Selasphorus rufus) were the expected species. Upon consulting A Field Guide to Hummingbirds of North America, Ron saw that photographs of young males of both species have rectrices (tail feathers) with white tips.¹ This bird's tail feathers did not have white tips (Figure 3). It was not either of the expected species!

After concluding that he had no idea what species of hummingbird was in his hand, Ron collected standard banding measurements: wing cord (43.3 mm), tail length (23.4 mm) and culmen (17.7 mm). In addition, the bird's bill was checked for striations (which indicates a younger bird) and its weight was measured (3.7 g). There were no striations in the bill, suggesting an older hatch year bird. During these in-hand observations and measurements, the bird was amazingly calm, not struggling at all compared to Ruby-throated Hummingbirds caught during summer banding months.

LSWR had provided a transport box into which the hummingbird was placed. Randy and Ron carefully wrapped the container in a sheet, keeping the box dark and warm for transport to LSWR.

Once home, Ron consulted a number of resources but none of the

measurements matched a species. In an effort to determine the species, he sent pictures and measurements to Jared Clarke, a fellow hummingbird bander, and to HUMBAND, a private website for North American hummingbird banders. Jared replied that measurements in Pyle² matched perfectly for a Costa's Hummingbird. A member of HUMBAND, with 20 years of experience, replied "Holy Smokes!! Congratulations!! A Costa's." Sheri Williamson, author of A Field Guide to Hummingbirds of North America was also contacted through Guy Wapple. Her response was: "... the photos alone confirm that it's a juvenile male COHU, no measurements required."

These three sources affirmed, without The home range of Costa's At the time of writing this account,

a doubt, that the hummingbird caught in the Schmidts' garage was Saskatchewan's first record of Costa's Hummingbird! Hummingbirds is the Sonoran Desert of Arizona and southern California.³ A review of eBird records from 2012 to 2022 reveals that males — immature and adult — wander from their desert habitat March through December. In Canada, British Columbia has 13 records, while Alberta has two records. In the USA, records exist in Utah, Nebraska, Colorado and Michigan. Some states have multiple year records and Utah reported an immature male in September 2022.

the hummingbird was doing well at LSWR on a specialized sugar water and



FIGURE 3. The bird's rectrices (tail feathers) are all black. Photo taken 11 November 2022 at Living Skies Wildlife Rehabilitation. Photo credit: Phil Taylor.

fruit fly diet (Jan Shadick pers. comm.). LSWR has been in contact with wildlife rehabilitation organizations and zoos that house hummingbirds to learn about the best possible methods and products to keep this little rash hummingbird alive over the winter. The hope is that it can be released in the spring of 2023.

Acknowledgements

There are many people involved in the capture, identification, and care of the Costa's Hummingbird. Thank you very much to you all.

1. Williamson SL (2001) A field guide to Hummingbirds of North America. Houghton Mifflin Company Boston.

2. Pyle P (1997) Identification Guide to North American Birds Part 1 Columbidae to Ploceidae. Slate Creek Press, Bolinas, California

3. Birds of the World (2022). Digital edition. Edited by S. M. Billerman, B. K. Keeney, P. G. Rodewald, and T. S. Schulenberg. Cornell Laboratory of Ornithology, Ithaca, NY, USA 🔎

FOR THE LOVE OF A RIVER

Lorne Fitch, P. Biol. lafitch@shaw.ca

We say oftentimes that we "love" our homes, cars, et cetera ... and sometimes, our jobs. We make this declaration because these things provide us with pleasure, comfort, pride or accomplishment. Can something incapable of being owned, something detached from our lives, that is inanimate, unresponsive and obviously uncaring be a focus for love? Can love be applied to a river?

What is a river? At first glance a river is water, but that requires the sum of many parts. The beginnings include snowmelt and rain falling on absorbent surfaces created by intact forests and grasslands. Those drops of water channeled into hundreds of small drainages, rivulets, runs, ravines and larger streams, collectively delivering the accumulated flow to a channel big enough to accommodate all of it. It needs saying that water doesn't come from a river, it first must come to a river and then, the river delivers water to us.

By the way, rivers are ill-defined. What is termed a river in one place might only be a stream or a creek in others. In Newfoundland, every bit of running water is a "brook" despite differences in size and flows. Definitions are fluid, as are the waters to which the names are attached.

A river is a network where the pieces are not divisible, surplus or of lesser priority, importance or significance. It is all together — or not at all. Always from the smaller to the greater. It is, in many ways, like the veins and arteries that form our circulatory system. You cannot exist on just part of your bloodstream.

The skeleton of a river is defined by its physical geography — bedrock, substrate and gradient. It is also a function of its geologic history, especially the action of past glaciers, which influence present day channels. A river conforms to simple laws of gravity, friction and volume of water.

A river is water — the amount of flow that fills its channel and the variation over a season. That water moves over a channel

bed that has been pushed, shoved and molded by larger flows into undulations and irregularities giving rivers a variety of configurations and water depths. Riffles, the humps, are the shallow, fast flowing and noisy sections, while pools, the hollows, are the deep, slow and quiet portions.

In defiance of the straight geometry of our roads, fields and fences, a river is curvaceous, not adhering to straight lines and edges. It runs along, tugging endlessly at its banks, causing them to crumble in real and over geologic time. Even on the insides of the curves, changing water levels can revise the riverbanks. Sometimes we build too near the edge and what we build crumbles, too. We have yet to learn that when we live on a bend in the river, we must bend with the river.

A river stirs the edge of a surveyed, manufactured world with a wildness of swirling eddies, soft backwaters and a green confusion of banks. It is like a symphony playing across the land — small streams, small instruments, each that can barely be heard but gathered together make one voice. A voice that sings. A voice of music. Within the natural harmony, a beauty of form.

Listening to a river, it gurgles and chortles to itself in notes our ears can hear but we can barely interpret. A river sings to us and sometimes, about us. It can roar with a ferocity that we can feel viscerally and we are fearful of the message. It is equally frightening when a river goes quiet as it does when flows drop to a low ebb. Deep down we know the water that runs in the river also runs in us. When a river is silent, it's a signal we need to worry.

A musical score is a series of symbols arranged on lines that must be read to understand the composer's message. River music requires the same discipline, to be able to read, interpret and comprehend the symphony of time, energy and diversity. Once acquired, it is a wonder to be able to read what the river tells us.

When we can read the notes, hear the music, comprehend a river's architecture, and appreciate its moods, a river becomes

tangible, important, and we become bonded to it. Understanding a river, seeing its beauty, intricacy, and diversity is the pathway to loving it.

Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and a former Adjunct Professor with the University of Calgary. He is the author of Streams of Consequence - Dispatches from the Conservation World. 🗶

POETRY

Dog Days of Summer

The hills have turned to brown, the breeze blows hot.

The prairie roses wilt and fade during the dog days of summer.

The birds fall silent, crickets cease to chirp under the noon sun of those doa days of summer.

The dog only raises his head and gives a sigh when a cat walks by. Another time he would give a chase but not during these dog days of summer.

Grown men sweat and swear and tempers flare as they toil in the heat of the dog days of summer.

But when the winds of winter blow cold and the snow piles up. Oh, what I'd give for a dog day of summer.

> Dorothy I. Rhead Regina, SK

THE NATURE NOTEBOOK: TO MARK OR NOT TO MARK?!

Jared Clarke clarkejared@hotmail.com

I love the idea of nature journaling but I just can't make it happen regularly. I sometimes think to myself that I should sit down for a while and do a bit of journaling, draw a picture or two, and record this moment in time. But that idea only comes once a summer. I complete a page and then that is it for the year. It disappoints me.

Last summer, at an event I was attending, I met a guy named Adrian who nature journals almost every day! He let me look at his notebook and his nature journal was everything one could hope for. He had wonderful details about what he had come across each day and absolutely stunning coloured sketches of the things he noticed along the way birds, bugs, plants, and even people (he worked on his sketches after he returned home each day). I was so impressed.

What I love about nature journaling is the ability to look back and spark memories. While I haven't been able to journal consistently, I may have found a less intense alternative this past winter.

I came across a post on Facebook that asked the question "Do you make notes in your field guide?" My immediate answer was "ABSOLUTELY NOT!" I like my field guide pristinely clean (granted, since my 11-year-old twins have been using it during the last couple of years, it has gotten quite beat up). However, I read through some of the comments to hear from the people that do make notes in their field guides. Huh?! Their arguments were compelling. In short, the field guide essentially became an abbreviated nature journal!

I pondered this idea for a while and was reminded of my very first field guide, which my mom bought me — the Audubon Society Pocket Guides Familiar Birds of North America Western Region. Mom had written a few notes in pencil on some of the pages. I'm looking at it



right now, as I write this. On the Rufoussided Towhee page, it says "April /92 – backyard". This was the bird that caused us to buy this book and started me down this bird-dominated path. On the Yellowrumped Warbler page: "April /93 – in neighbour's yard" and below, in my messy handwriting, "May /95 – in our yard". On the House Wren page: "May 29/97 – nesting in nest box in backyard". It makes me smile to read these little inscriptions. And so just like that, I was sold on the idea to write in my field guide or at least, a field guide. As a bit of compromise, I bought a brand new Sibley's guide, as I don't know how long my current field guide will survive, and decided to narrow the scope of what gets written in the book to just birds from our farm and the Ducks Unlimited guarter across the road. I want to create a keepsake that I can pass on, or just cherish for years to be reminded of all the birds we saw here on this little patch of

land we call home.

I have been going back through my eBird checklists, photos, and notes that I've taken since we moved here in 2009 and have started populating observations of rare and common birds on the pages of this new book. For example, the Sora page now has the note "16 June 2013 – Nest in the 'Big Slough' with 11 eggs!" while the Whooping Crane page includes "31 October 2015 – 4 adults on Goose Lake! Seen again on 1 Nov" and "13 & 14 April 2016 – A pair back at Goose Lake!"

Moving forward, I will continue to add sightings into the book as they occur. Going back in time to mark up this field guide with memories has been a lovely experience and I look forward to seeing what the book looks like in 20 years. I know I can keep this project going! How about you? Do you mark up your field guide? Are you an avid nature journaller? Or is eBird or iNaturalist your go to? However you document the natural world around you, I hope you have a wonderful summer exploring nature!

Jared Clarke is a grade 6/7 teacher and biologist who lives with his family on a small farm near Edenwold, SK. He has been bird watching since the age of five after a Spotted Towhee visited his yard. 🧷

81ST ANNUAL SASKATCHEWAN CHRISTMAS BIRD COUNT - 2022

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The Counts

The number of counts rebounded nicely from 78 in 2021-22 to 83 this past winter, while the number of observers rose from 729 to 792. As we shall see, this increase in effort did not translate into an increase in the number of birds and species seen on the counts.

The Weather

Average minimum and maximum temperatures for the count period (with 2021-22 records in brackets) were -17 to -13 C (-22 to -17 C), wind speeds 8 to 17 km/h (11 to 22 km/h), and snow depths 18 to 39 cm (15 to 29 cm).

Weather conditions were thus, on average, warmer and calmer compared to the previous winter, while average snow depths were deeper. The most remarkable difference, however, was the amount of fog. Fog was reported on 10 counts this past count compared to only one count the winter before. Fog probably reduced long-distance visibility and thus the number of birds recorded on those counts.

The Birds

The 98,499 birds counted was the fewest since 2014 and much lower than the century average of around 127,000. Much of the decline was due to the almost complete absence of Common Redpoll, which declined from 20,450 birds in 2021-2022 to only 350 this winter (Table 3).

Eighty-six species were recorded on count day, the fewest since 1992, while the average number of species per count at 17.7 was the lowest since 2014 with 17.2.

Saskatoon and Gardiner Dam tied for the most species on count day with 38.

Population Trends

Waterfowl were generally found in lower-than-average numbers and variety in their few overwintering locations. In contrast was the massive increase in the number of upland game birds: Gray Partridge exploded from 3,028 in the winter of 2021-22 to 6,903 this last winter, Ring-necked Pheasant from 223 to 605, and Sharp-tailed Grouse from 989 to 2,731 (Table 3).

Diurnal raptors (hawks and falcons) were generally found at or near normal numbers. Trends for owls were, however, a different story. Boreal forest owls were almost absent from the forest fringe with only two Northern Hawk Owls on two counts and only one Great Gray Owl. Farther south only two Short-eared Owls were found at two locations compared to 21 at seven locations the previous winter (Table 4). Even Great Horned Owls were down with only 53 birds versus 103 in 2021-22 (Table 3); this is hard to explain given the sedentary nature of the species. Trends in numbers of the two

common open country passerines were somewhat different. Horned Larks were way down from 1,495 on 22 counts in 2021-22 to 230 on 16 counts. Snow Buntings were down from 21,257 to 13,405; however, the number of localities recording the species increased from 61 to 65 (Table 3).

The range expansion of the introduced Eurasian Collared-Dove and House Finch appears to have stalled with no appreciable change in the range or numbers of either species.

Results for finches were mixed. As mentioned, numbers of the Common Redpoll imploded, while no Hoary Redpolls were reported. Pine Grosbeaks dropped from 1,613 to 371 birds over the previous winter, but White-winged Crossbills increased from 55 to 374 birds (Table 3).

New Species

Two new species, both gulls, were added to the all-time list. Normally a year-round resident of the High Arctic, an Ivory Gull was recorded on the Turtle Lake count, while a California Gull was noted during the count period at Regina. The Ivory Gull, an immature bird, spent nearly a month feeding on offal discarded by ice fishermen. These species bring the all-time list of species recorded on the Christmas Bird Count to a remarkable 195.

Other Rarities

Other rarities included two woodpeckers. An immature Lewis's Woodpecker was seen during the count period in Moose Jaw, while a Red-bellied Woodpecker was seen on the Regina count. These were, respectively, our second and eighth CBC records (Table 6).

Dedication

This Christmas Bird and Mammal Count is dedicated to P. Lawrence Beckie who completed his 74th consecutive Christmas Bird Count in the Bladworth-Kenaston area. Thanks again, Lawrence!

Note

For the purposes of Saskatchewan Counts, as published herein, the count period extends from 14 December to 5 January; Audubon counts include only those species recorded three days prior to and after the count day.

Count Areas and Participants

(names of compilers are in italics)

1. ARCHERWILL. Gerald Hiron, Susan Hiron, Audrey Hnetka, Perry Hnetka, Elaine Hughes, Dorothy Klettberg, Willie Klettberg, Annette Kozak, Judy Revoy.

2. AVONLEA. Randi Edmonds, Dave Holland, Joanne Miller (count period), Alan Smith.

3. BALGONIE. Ingrid Alesich, Joel Cherry, Jared Clarke, Teal Clarke, Jan Fallas, Ken

Feltin, Dale Hjertaas, Fran Kerbs, Gayle Kertai, Carmen Leibel, Sarah Ludlow, Annie McLeod, Brett Quiring, Dan Sawatzky, Doreen Yurkoski.

4. BIGGAR. Dale Booth, Mary-Jo Danychuk, Sheila Jezowski, Lorri Sielski, Murray Newton, Mark Pickett, Guy Wapple, Marguerite Wapple, Rob Wapple.

5. BORDEN-RADISSON. Jade Allard, Kyron Giroux, Masoud Javadi, Ron Jensen, Jennipher Karst.

6. BROADVIEW. Doug Boivin, Barb Weidl, Don Weidl.

7. CANDLE LAKE. Doug Braaten, Marie Braaten, Ryan Dudragne, Gwen Klebeck, Merle Klebeck, Vicki St. Germaine, Warren St. Germaine, Nick Saunders.

8. CHATSWORTH. Charles Dyck, Donna Dyck, Roberta Mess, Wyonna Mess, George Murray, Holly Penner, Nathan Penner, Kerri Rooke, Stewart Rooke, Carol Tangedal, Rudy Tangedal.

9. CHRISTOPHER LAKE. Jeannie Walker.

10. CLARK'S CROSSING. Bruce Boldt. Dale Booth, Sarah Bradley, Jake Buhler, Ruth Buhler, Wilf Buhler, Geoffrey Carter, Sylvie Clairefond, Kiel Drake, Lorne Duczek, Alex Dunn, Josh Erickson, Shelly Fisher, Anne Friesen, Dawn Hall, Marilyn Haskins, Thompson Hyggen, Ron Jensen, Heney Klypak, LeeAnn Latremouille, Meghan Mickelson, John Patterson, Andrea Perreault, Loretta Sawatzky, Marten Stoffel, Jenny Sutton, Guy Wapple, Diane Wells, Jim Wells, Dianne Young.

11. CORONACH. Linda Ferrie.

12. CRAVEN. Aoki Hiroyuki, Brian Armstrong, Marie-Lou Bernatchez, Stephane Canevet, Joel Cherry, Jared Clarke, Rowan Clarke, Stephen Davis, Ian Fallas, Ryan Fisher, Lorne Freeman, Tara Freeman, Trevor Herriot, Louise Holloway, Phil Holloway, Joan Karasin, Tracy Karasin Bellisle, Fran Kerbs, Lauretta Lane, Amelia McDonald, Jaret McDonald, Annie McLeod, John Menzies, Maxine Menzies, Barry Mitschke, Janet Ng, Dave Phillips, Brett Quiring, Teed Rand, Susan Rollins, Dan Sawatzky, Erin Swerdfeger, Robb Taylor, Jeannette Taylor, Colleen Wolf.

13. CROOKED LAKE. Don Weidl.

14. CROOKED RIVER. Arnold Harpham, Marie Harpham, *Margaret Mehler*, Morley Mehler.

15. CYPRESS HILLS PROVINCIAL PARK (Centre Block). Dwight Dobson, Nancy Dobson, Joel Cherry, David Larsen, Margaret Larsen, Brynne Martin, Mimi Martin, Annie McLeod, Melody Nagel-Hisey, Brennan, Jeff and Julie: surname unknown.

16. DENHOLM. Beverly Beland, Gerard Beland, Linda Beland, Orval Beland, Janice Mazurek, Anna Symynuk.

17. DUNDURN. Jeff Jensen, Ron Jensen, Guy Wapple.

18. E. B. CAMPBELL DAM. Bert Dalziel, Sara Dalziel, Jared Taman, Kari Taman, Bill Weighill, Clara Weighill.

19. EASTEND. Roxie Binkley, Cynthia Fehr, Mark Fletcher, Robert Gebhardt, Oscar Graven, M. Grinster-Graven, Joan Hodgins, Harvey Johnson, Claire Topham, Heidi Topham, Jane Topham, Tyler Topham, Sean Virgo, Eldon Wig.

20. ESTEVAN. Barry Dies, Marilyn Dies, Kathy Hedegard, Gary Leslie, Craig Palmer, Shauna Palmer, Larry Preddy, Guy Wapple, Sandra Wapple.

21. ESTUARY NORTH. Cathy Cocks, Dean Francis.

22. FENTON. Vicki St. Germaine, Warren St. Germaine.

23. FLORAL. Nick Saunders, Guy Wapple.

24. FORT QU'APPELLE. Jean Ashcroft, Pete Ashcroft, Linda Banman, Penny Byers, Jared Clarke, Mark Geremia, Al Kirkley, Jean McKenna, Alan Mlazgar, Wendy Paquin, Sandra Randall, Audrey Schill, Keith Stephens, Kim Stephens, Ted Stevenson, Colette Stushnoff, Richard Stushnoff, Dave Sutherland.

25. GARDINER DAM. Ryan Dudragne, Greg Fenty, Masoud Javadi, Ron Jensen, Burke Karol, Nick Saunders, Lorrie Sielski, Marten Stoffel, Guy Wapple, Robert Wapple, Kale Worman.

26. GOOD SPIRIT LAKE. Joyce Anaka (non-participating compiler), Dorothy Riesz, Ray Riesz.

27. GREENWATER. Bill Gudjonson, Brian Shuya, Helen Toovey.

28. HARRIS. Ryan Dudragne, Ron Jensen, Nick Saunders, Lorrie Sielski, Bruce Trapp, Guy Wapple, Rob Wapple.

29. HUDSON BAY. Judy Block, John Daisley, Agnes Lewellin, Dennis Reimer.

30. INDIAN HEAD. Jared Clarke, Irvin Escott, David Gehl, Roberta Gehl, Tracey Gostik, Jim Jinks, Linda Jinks, Kyle McClintock, Greg Miller, Bruce Neill, Dora Nichols, Laura Poppy, James Rudack, Conrad Schreiner, Erika Schuurmans, Brian Scott, Lorne Scott, Myrna Scott, Fred Skinner, Christine Skinner, Joan Taylor, Donna Thompson, Elaine Williamson.

31. KENASTON. P. Lawrence Beckie.

32. KENOSEE LAKE. Blain Hjertaas, Dale Hjertaas.

33. KETCHEN NORTH. Dallas Fairburn.

34. KINLOCH. Andy Arnold, Carolyn Arnold, Don Forbes, Darcy Swider, Doreen Wickstrom.

35. KYLE. Greg Nelson, Yvonne Nelson, Barb Pierce, Ken Risi, Marten Stoffel, Ken Waldner, Dan Zazelenchuk.

36. LA RONGE. Sharon Feschuk, Linda Mikolayenko, John Schisler, Brian Ulriksen, Lori Ulriksen.

37. LAST MOUNTAIN NATIONAL WILDLIFE AREA. Wayne Busch, Cayle Cross, Sharlane Toole.

38. LOVE - TORCH RIVER. Bert Dalziel, Joan Dalziel, Sara Dalziel, Scott Edwards, Janice Evans, Neal Evans, Marie Fafard, Susan Kruitzweiser, Adrik Kurbis, Coulter Kurbis, Renee Kurbis, Eileen L'Heureux, Shawn Paschke, Linda Petrinchuk, Reg Petrinchuk, Hannah Rushby, Sara Rushby, Audrey Schrader, Eric Schrader, Jared Taman, Jasper Taman, Kari Taman, Micah Taman, Leonard Turtle.

39. LUSELAND. Estelle Finley, Kim Finley, Liam Finley, Keith Hardcastle, Brent Honeker.

40. MEADOW LAKE. Bob Wilson, Ian Wilson.

41. MELFORT. Bert Dalziel, Gordon Dodds, Kim Eskowich, Wendy Eskowich, Cecil Gooliaf, Scott Green, Darlene Thompson, Sharon Walker.

42. MOOSE JAW. Joel Cherry, Paul James (count period), Jeff Mander, Annie McLeod, Brett Quiring, Ryan St. Louis, Dan Sawatzky.

43. MOOSE MOUNTAIN. Kathy Hedegard, Val Thomas.

44. MORSE. Larry Bonesky, Lorie Dean, John Enns, Noel Enns, Stella Enns, Mike Francis, Dave Gardner, Roxanne Johnson, Randy McCulloch, Joel Priebe, Ken Priebe, Myrna Priebe, Lori Wilson.

45. NEILBURG-MARSDEN. Kale Worman.

46. NICOLLE FLATS. Dale Hjertaas, Paule Hjertaas, Fran Kerbs, Jeff Mander, Karen Mander.

47. NIPAWIN. Cindy Collopy, Mark Collopy, Bert Dalziel, Rick Douslin, Patti Gaertner, Maureen Hagen, Wayne Hagen, Jeannette LeCuyer, Kate McCarriston, Doug Phillips, Shirley Phillips, Ken Turtle.

48. NISBET FOREST, NORTHWEST. Sandra Jewell.

49. NISBET FOREST, WEST. Kim Clark, Shamara Clark, Suzanne Clark,

50. ODESSA. Arden Curts, Denise Curts, Denny Curts.

51. OUTLOOK. Graham Thomson.

52. PANGMAN. Randi Edmonds. Alan Smith.

53. PIKE LAKE. Dalice Abraham, Max Abraham, Carol Blenkin, Donna Bruce, Denice Bezoplenko, Lorne Duczek, Bob Godwin, Raea Gooding, Dawn Hall, Bob Howe, Irene Howe, Greg Hutchings, Masoud Javadi, Ron Jensen, Robert Johanson, Marilyn Leuty, Larry McGuire, Kathy Meeres, Joe Monahan, John Patterson, Marc Sabourin, Gord Sannerud, Joe Stookey, Ljubica Stuglin, Stephan Stuglin, Phil Taylor, Diane Wells, Bert Weichel.

54. PRINCE ALBERT. Doug Braaten, Marie Braaten, Virginia Brown-German, Kim Clark, Shamara Clark, Judy Demong, Lisa Elder, Lisa Fraser, Hamilton Greenwood, Estelle Hjertaas, Sandra Jewell, Gwen Klebek, Merle Klebek, Axel Klenz, John Lundgren, Teddy McDougald, Carl Nahachewsky, Keman Nahachewsky, Shannon Poppy, Christine Rye, John Rye, Gail Sackett, Vicki St. Germaine, Warren St. Germaine, Lois Streeton, Eldon Thorson, Gwen Thorson.

55. PRINCE ALBERT NATIONAL PARK. Kaylene Amundson, Amber Billay, Kaitlin Bird, Brenna Bodnaryk, Karsh Borys, Ffion Cassidy (non-participating compiler), Travis Curran, Judy DeMong, Wade Dupont, Dan Frandsen (count period), Jay Frandsen (count period), Jeannie Gagnon, Erik Gillies, Dustin Guedo, Dave Hales, Petra Hales, Meagan Hamilton, Dave Howard, Charles Hunt, Randall Irving, Lucas James, Tucker James, Gerry Kozowy, Brad Lloyd, Oliver Lloyd, Kyle McDougald, Grace McLeod, Pam Nelson, Nicola Odalsky, Monica Osterhout, Shannon Poppy, Marie Stradeski, Josh Torvi.

56. QU'APPELLE. Jean Ashcroft, Peter Ashcroft, Melnie Beattie, Cory Bennett, Christine Blair, Colette Stushnoff, Richard Stushnoff, Frank Veresh.

57. QU'APPELLE VALLEY DAM. Bob Godwin, Dawn Hall, Robert Johanson, Marten Stoffel.

58. REGINA. Robert Antonowitsch, Brian Armstrong, Lionel Bonneville, Doris Burdon, Janet Canwood, Joel Cherry, Brian Clark, Jared Clarke, Rowan Clarke, Teal Clarke, Kelly Connell, Derek Donald, Suzy Duckett, Elaine Elhman, Jim Elliott, Eric Fallas, Ian Fallas, Rachel Fallas, Mary Field, Shirley Friel, Karen Harasen, Trevor Herriot, Darlene Hince, Peter Hince, Dale Hjertaas, Paule Hjertaas, Marie James, Sarah James, Fran Kerbs, Erin Klassen, Laurie Koepke, Maureen Lee, Sarah Ludlow, Bob Luterbach, Kim Mann, Val Mann, Kristen Martin, Annie McLeod,

Loanne Myrah, Brett Quiring, Chris Ratch, Dan Sawatzky, Margaret Skeel, Cathy Smith, Lisa Simmerton, Jan Stanley, Brian Sterenberg Hanna Walczykowski.

59. ROSCOMMON S.D. Bernice Althouse, Jim Althouse, Kate Althouse, Ruby Finnie, Penny Froh, Brian Irving, Sophie Jankowski, Joan Lillibo, Dianne Sloan, Marguerite Sloan.

60. ROSETOWN. Ryan Dudragne, Bev Gardner, Ryan Sparks, Sophia Sparks.

61. ROSTHERN. Greg Bobbitt, Dennis Helmut, Loretta Helmut, Brenda Kramarchuk, Robert Nelson.

62. ROULEAU. Stuart Anderson, Allen McGratten, Noreen McGratten, Patricia Sterzuk.

63. ROUND LAKE (Qu'Appelle Valley). Kelly Finkas, Boyd Metzler, John Pollock.

64. SALTCOATS. Arden Bradford, Len Cameron, Muriel Cameron, Barbara Croswell, Walter Farquharson, Pam Hall, Terry Hall, Dave Herron, Gloria Herron, Gerri Knudsen, Ron Knudsen, Fern McKay, Les Pearson, Shirley Pearson, Scott Taylor, Randy Torrie, Mardell Trowell, Val Trowell, Verda Upshall, Rob Wilson.

65. SASKATCHEWAN LANDING PROVINCIAL PARK. Greg Nelson, Yvonne Nelson, Glen Pederson, Marten Stoffel, Dan Zazelenchuk.

66. SASKATCHEWAN RIVER FORKS. Bea Kolbialko, John Lundgren, Vicki St. Germaine, Warren St. Germaine.

67. SASKATOON. Alexander Acton, Bruce Acton, Britt Agrey, Jade Allard, Carol Blenkin, Eveline Boudreau, Jennifer Burgess, Geoffrey Carter, Joel Cherry, Louise Cook, Kiel Drake, Melanie Elliott, Joan Feather, Greg Fenty, David Forbes, Stephanie Gauthier, Peter Gerrard, Denise Giroux, Kyron Giroux, Bob Godwin, Mike Gollop, Raea Gooding, Kerry Hjertaas, Amanda Horvath, Angela Kalinowski, Richard Kerbes, Allison Krause Danielle, Shan Landry, Troy Lange, LeeAnn Latremouille, Audrey MacKenzie, Bill MacKenzie, Blair McCann, Annie McLeod, Jane McPhee, Kathy Meeres, Meghan Mickelson, Scott

Mitchell, Carol Monahan, Joe Monahan, John Patterson, Ava Paul, Gerald Paul, Jim Paul, William Robertson, Lisa Rohachuk, Marc Sabourin, Trish Santo, Nick Saunders, Diana Savage, Kathlin Simpkins, Marten Stoffel, Darren Sutcliffe, Jenny Sutton, Margot Taylor, Phil Taylor, Alyssa Vibert, Brandon Wapple, Guy Wapple, Sandra Wapple, Trent Watts, George West, Bernadette Wilson, Heather Wilson, Tony Wilson, Dan Zazelenchuk, Norman Zlotkin.

68. SHELL LAKE. Shelly Balbar, Ryan Dudragne, Laurent Gareau, Carole Martin, Roger Martin, Nick Saunders.

69. SNOWDEN. Sonja Fidyk, Gus Formadus, Shirley Formadus, Ed Hagel, Irene Hagel, George Pickett, Jack Pickett, Annie Pistun, Karen Priestley, Heather Priestley, Valerie Rien, Tim Thompson.

70. SOUTH LADY LAKE. David Weiman, Adam Schmidt.

71. SPINNEY HILL. Ed Driver.

72. SWIFT CURRENT. Jacquie Bolton, Norris Currie, Laurent Dudragne, Mary Ann Dudragne, Arnie Ens, David Gardner, Dave Green, Esther Green, Norma Hain, Hugh Henry, Leonard Howes, Lois Howes,



A Northern Shrike seen on the Saskatoon CBC on 26 December 2022. Photo credit: Nick Saunders.

Dot Letkeman, Randy McCulloch, Janet Payne, Harold Steppuhn, David Tuttle, Allen Twamley, Betty Twamley.

73. THICKWOOD-SPIRITWOOD. Shannon Cafet, Margie Fast, Anna Froese, Ken Froese, Giles Lalonde, Carole Martin, Roger Martin, Kay Willson, Philip Willson,

74. TORCH RIVER VALLEY. Lorna Blaine, Bert Dalziel, Joan Dalziel, Sara Dalziel, Rick Douslin, Don Lidster, Nancy Lidster, Barry MacLeod, Deborah MacLeod, John Minty, Wanda Minty, Shawn Paschke, Maureena Schreiner.

75. TURTLE LAKE. Cliff Nesbitt. Nick Saunders, Phil Taylor.

76. TURTLEFORD. Hank DeGraaf, Marlene DeGraaf, Larry Ingram, Miles Johnson, Rebecca Johnston, Vance Johnston, Brent Keen, Lukas Mckenzie, Bonny Macnab, Richard Roney, Jason Stein, Dorothy Textor, Marg Uhlig.

77. VAL MARIE. Nick Cairns, 20 Students and Teacher.

78. WATROUS. George Cotts, Cayle Cross, John Lundgren, Iris Talbourdet, Sharlane Toole, Joyce Wilton.





79. WEYBURN. Bailey Burnett, Dallas Burnett, Bob Cameron, Lucille Cameron, Millie Fleming, Dale Huff, Sandi Huff, Charlotte Payak, Don Payak, Goretty Pennington, Jim Pennington, Garnet Schultz, Linda Schultz, Val Thomas.

80. WHITE BEAR. Martin Gerard. Silvia Gerard, Greg Nelson, Yvonne Nelson, Dan Zazelenchuk.

81. WHITEWOOD. Ken Aldous. Carole Armstrong, Cindy Ashfield, Joe Ashfield, Paul Ashfield, Kerri Bachtold, Joyce Kydd, Sarah Mambourg, Boyd Metzler, Margaret Niemenen, Paul Niemenen, Brenda Pollock , John Pollock, Tony Saltasuk, Doug Shepherd, Dawn Vennard, Lyle Vennard, Diane Veresh, Pat Ward.

82. WINGARD. Rebecca Beam.

83. YOUNG. Tena Dempsey, Brad Mason, Sharlane Toole.

TABLE 1. Weather and Snow Cover.

LOCALITY	DATE	MIN TEMP (°C)	MAX TEMP (°C)	MIN WIND (KM/HR)	MAX WIND (KM/HR)	MIN SNOW (CM)	MAX SNOW (CM)	SKY A.M.	SKY P.M.	LOCALITY	DATE
Archerwill	14 Dec 2022	-13	-12	6	15	30	30	cloudy	light snow	Moose Mountain	3 Jan 2023
Avonlea	16 Dec 2022	-14	-12	5	15	0	10	clear	clear	Morse	14 Dec 2022
Balgonie	2 Jan 2023	-17	-11	2	8	20	50	mod. fog	clear	Neilburg-Marsden	18 Dec 2022
Biggar	16 Dec 2022	-17	-14	0	15	15	30	partly cloudy	partly cloudy	Nicolle Flats	15 Dec 2022
Borden-Radisson	30 Dec 2022	-18	-10	2	11					Nipawin	21 Dec 2022
Broadview	28 Dec 2022	-13	-10	10	20	15	25	mod. fog	cloudy	Nisbet Forest NW	26 Dec 2022
Candle Lake	5 Jan 2023	-11	-10	0	10	20	40	light fog	cloudy	Nisbet Forest West	31 Dec 2022
Chatsworth S.D.	4 Jan 2023	-18	-12	2	11	25	40	cloudy	cloudy	Odessa	20 Dec 2022
Christopher Lake	30 Dec 2022	-16	-10	0	0	25		mostly clear	mostly clear	Outlook	2 Jan 2023
Clark's Crossing	18 Dec 2022	-21	-19	25	34	10	25	clear	clear	Pangman	5 Jan 2023
Coronach	2 Jan 2023	-16	-2	2	5	2	30	clear	clear	Pike Lake	2 Jan 2023
Craven	17 Dec 2022	-24	-16	11	18	20	30	clear	clear	Prince Albert	18 Dec 2022
Crooked Lake	27 Dec 2022	-13	-12	10	15	15	20	heavy fog	cloudy	Prince Albert N.P.	21 Dec 2022
Crooked River	3 Jan 2023	-9	-5	2	5	30	40	clear	clear	Qu'Appelle	31 Dec 2022
Cypress Hills P.P.	30 Dec 2022	-9	-4	6	11	8	25	mostly clear	mostly clear	Qu'Appelle Dam	18 Dec 2022
Denholm	5 Jan 2023	-21	-14	0	10	30	50	mod. fog	light fog	Regina	27 Dec 2022
Dundurn	19 Dec 2022	-26	-24	16	25	10	40	light snow	light snow	Roscommon S.D.	4 Jan 2023
E.B.Campbell Dam	3 Jan 2023	-18	-7	5	30	45	60	clear	clear	Rosetown	16 Dec 2022
Eastend	2 Jan 2023	-9	0	6	6	5	20	mostly clear	mostly clear	Rosthern	4 Jan 2023
Estevan	31 Dec 2022	-16	-10	10	15	20	30	cloudy	overcast	Rouleau	18 Dec 2022
Estuary North	30 Dec 2022	-9		0		25			partly cloudy	Round Lake (Q.V.)	30 Dec 2022
Fenton	14 Dec 2022	-12	-11	18	22	10	30	light snow	mostly clear	Saltcoats	18 Dec 2022
Floral	5 Jan 2023	-17	-14	8	10	15	30	mod. fog	heavy fog	Sask. Landing P.P.	20 Dec 2022
Fort Qu'Appelle	18 Dec 2022	-21	-20	20	25	15	25	overcast	overcast	Sask. River Forks	17 Dec 2022
Gardiner Dam	14 Dec 2022	-13	-10	20	30	10	40	overcast	overcast	Saskatoon	26 Dec 2022
Good Spirit Lake	4 Jan 2023	-17	-9	5	10	30	57	clear	clear	Shell Lake	17 Dec 2022
Greenwater	3 Jan 2023	-10	-6	4	11	60	60	clear	clear	Snowden	5 Jan 2023
Harris	15 Dec 2022	-12	-18	15	40	20	30	partly cloudy	partly cloudy	South Lady Lake	20 Dec 2022
Hudson Bay	26 Dec 2022	-17	-15	0	0	50	55	overcast		Spinney Hill	4 Jan 2023
Indian Head	28 Dec 2022	-11	-5	5	5	7		overcast	overcast	Swift Current	15 Dec 2022
Kenaston	31 Dec 2022	-14	-12	0	10	30	40		cloudy	Thickwood-	1 Jan 2023
Kenosee Lake	29 Dec 2022	-16	-12	5	20	25	25	overcast	overcast	Spiritwood	
Ketchen North	26 Dec 2022	-17	-15	0	10	37	50	overcast	overcast	Torch River Valley	23 Dec 2022
Kinloch	2 Jan 2023	-11	-5	2	5	24	36	partly cloudy	overcast	Turtle Lake	16 Dec 2022
Kyle	21 Dec 2022	-35	-32	8	35	10	30	clear	clear	Turtleford	28 Dec 2022
La Ronge	26 Dec 2022	-23	-21	10	20	25	25	mostly clear	mostly clear	Val Marie	19 Dec 2022
LMLNWA	14 Dec 2022	-14	-11	7	17	20	31	light snow	cloudy	Watrous	2 Jan 2023
Love-Torch River	26 Dec 2022	-18	-30	0	15	45	60	overcast	overcast	Weyburn	2 Jan 2023
Luseland	3 Jan 2023	-14	-10	0	5	27	55	mostly clear	mostly clear	White Bear	3 Jan 2023
Meadow Lake	26 Dec 2022	-14	-13	22	33	10	35		cloudy	Whitewood	28 Dec 2022
Melfort	28 Dec 2022	-20		35	40		70	heavy snow	cloudy	Wingard	29 Dec 2022
Moose Jaw	18 Dec 2022	-20	-20	10	18	5	60	overcast	partly cloudy	Young	14 Dec 2022

MIN	МАХ	MIN	МАХ	SKY A.M.	SKY P.M.
WIND (KM/HR)	WIND (KM/HR)	SNOW (CM)	SNOW (CM)		
6	11	15	20	partly cloudy	mostly clear
10	35	22	24	overcast	partly cloudy
10	18	0	0	mostly clear	partly cloudy
30	35	2	20	light snow	overcast
11	25		30	clear	clear
10	21	21	33	overcast	overcast
5	10	20	40	partly cloudy	mostly clear
12	20	20	30	overcast	overcast
10	30	13	100	clear	clear
0	0	5	15	mod. fog	mod. fog
5	18	35	63	clear	clear
17	21	10	40	overcast	overcast
8	12	30	40	partly cloudy	partly cloudy
6	11	15	40	overcast	light snow
20	25	20	35	overcast	partly cloudy
0	24	20	40	overcast	mod. fog
0	2	25	45	clear	clear
0	5	3	15	heavy fog	light fog
0	15	15	25	mostly clear	mostly clear
2	11	15	30	partly cloudy	light fog
10	20	10	60	clear	cloudy
2	5	4	5	partly cloudy	mostly clear
8	20	10	40	clear	overcast
17	32	10	30	cloudy	partly cloudy
12	22	10	70	overcast	cloudy
15	20	8	45	cloudy	partly cloudy
2	25	36	46	clear	cloudy
10		25		partly cloudy	partly cloudy
6	15	10	75	clear	mod. fog
20	40	12	30	overcast	overcast
2	11	10	45	overcast	cloudy
12	28	30	45	mostly clear	mostly clear
10	10	30	40	overcast	overcast
5	10	25	55	overcast	overcast
7	21	0	30	light snow	clear
5	7	20	61	mostly clear	mostly clear
6	11	14	20	partly cloudy	mostly clear
5	5	10	50	clear	clear
2	11	10	80		cloudy
15	19	15	30	partly cloudy	cloudy

MIN TEMP (°C)

-12

-17

-35

-13

-28

-16

-21

-20

-7

-11

-17

-23

-30

-13

-22

-6 -14

-22

-15

-21

-15

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-20

-16

-31

-16

-14

-14

-35

-24

-13

-32

-21

-12

-7

-13

-18

MAX TEMP (°C)

1

-9

-30

-11

-23

-14

-20

-12

-2

-9

-9

-22

-22

-8

-21

-4

-7

-15

-11

-21

-10

-25

-33

-19

-11

-19

-8

-13

-10

-3

-29

-22

-11

-23

-9

-4

-10

-8

-18

 TABLE 2. Effort and Habitat Coverage (%). Wild Fruit: p=poor, f=fair, g=good, e=excellent.

Archerwii 9 2.0 0.0 0.0 0.0 2.0 1.0		PARTICIPANTS	KM ON FOOT	HOURS ON FOOT	KM BY VEHICLE	HOURS BY VEHICLE	HOURS AT FEEDERS	EVERGREEN FOREST	MIXEDWOOD FOREST	DECIDUOUS FOREST	ASPEN GROVE/FARMLAND	ASPEN GROVE/PRAIRIE	NATIVE PRAIRIE	TAME PASTURE	FARMLAND	FARMSTEADS	AN	OPEN WATER	RIPARIAN	ER	WILD FRUIT CROP
Avonele 3 0.0 0.0 88 5.5 1.5 2.0 2.0 2.0 5.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0 <th>LOCALITY</th> <th>PAR'</th> <th>KM 0</th> <th>пон</th> <th>KM E</th> <th>пон</th> <th>пон</th> <th>EVE</th> <th>MIXE</th> <th>DEC</th> <th>ASPE</th> <th>ASPI</th> <th>NAT</th> <th>TAM</th> <th>FARI</th> <th>FARI</th> <th>URB</th> <th>OPE</th> <th>RIPA</th> <th>отн</th> <th>MILE</th>	LOCALITY	PAR'	KM 0	пон	KM E	пон	пон	EVE	MIXE	DEC	ASPE	ASPI	NAT	TAM	FARI	FARI	URB	OPE	RIPA	отн	MILE
Balgonie 15 32.4 10.3 30.3 15.7 3.0 4 4 5 4 6 5 4 0 5 4 0 5 10 0 0 0 0 0 0 0 0 15 0 15 15 15 15 15 15 16 15 16 15 16	Archerwill	9	2.0	0.0	0	0.0	20.0		25						50	25					р
Biggar 9 6.0 5.8 5.1 7.0 <td>Avonlea</td> <td>3</td> <td>0.0</td> <td>0.0</td> <td>85</td> <td>5.5</td> <td>1.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5</td> <td>10</td> <td>45</td> <td>10</td> <td>25</td> <td></td> <td>5</td> <td></td> <td>g</td>	Avonlea	3	0.0	0.0	85	5.5	1.5						5	10	45	10	25		5		g
Borden-Radisson S 12.0 5.0 21.0 7.0 0.0 1.5 2.0 1.5 2.5 1.5	Balgonie	15	32.4	10.3	303	15.7	3.0														f
Broadview 3 0.8 0.9 1.23 5.3 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.5 1.5 2.	Biggar	9	6.0	5.8	515	17.0	3.0				15				51	4	30				g
Candie Lake 8 0.0 1.0 1.2 9.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0 1.0 1.0 0.0 0.0 2.0 1.0 0	Borden-Radisson	5	12.0	5.0	210	7.0	0.0														
Chatsworth S.D. 11 50 10. 00 7.0 6.0 2.0 <t< td=""><td>Broadview</td><td>3</td><td>0.8</td><td>0.3</td><td>123</td><td>5.3</td><td>2.5</td><td></td><td></td><td>15</td><td>25</td><td></td><td>5</td><td>10</td><td>25</td><td>5</td><td>15</td><td></td><td></td><td></td><td>f</td></t<>	Broadview	3	0.8	0.3	123	5.3	2.5			15	25		5	10	25	5	15				f
Christopher Lake 1 5.0 1.0 0.0 0.0 2.0	Candle Lake	8	0.0	0.0	124	9.0	0.0	15	30	20							25		5	5	р
Clark's Crossing 29 26.4 11.2 57.4 28.7 7.5 6 6 7 6 6 7 7 6 7 <t< td=""><td>Chatsworth S.D.</td><td>11</td><td>5.0</td><td>10.0</td><td>80</td><td>7.0</td><td>6.0</td><td></td><td></td><td></td><td>80</td><td></td><td>10</td><td>5</td><td></td><td>5</td><td></td><td></td><td></td><td></td><td>р</td></t<>	Chatsworth S.D.	11	5.0	10.0	80	7.0	6.0				80		10	5		5					р
Coronach 1 1.0 1.0 1.0 5.0 3.0 0.0 1.0<	Christopher Lake	1	5.0	1.0	0.0	0.0	2.0														
Crave 35 1.3 6.0 2.1 1.3. 7.5 6.0 </td <td>Clark's Crossing</td> <td>29</td> <td>26.4</td> <td>11.2</td> <td>574</td> <td>28.7</td> <td>7.5</td> <td></td> <td></td> <td></td> <td>20</td> <td>5</td> <td></td> <td>5</td> <td>30</td> <td>10</td> <td>20</td> <td>5</td> <td>5</td> <td></td> <td>g</td>	Clark's Crossing	29	26.4	11.2	574	28.7	7.5				20	5		5	30	10	20	5	5		g
Crooked Lake 1 1.5 0.5 77 6.0 0.0 1.2 1.5 1.5 1.4 1.4 0.5 2.5 1.5 0.7 Crooked River 4 0.0 0.0 1.5 0.0 30 2.5 1.0 1.5 0.0 30 2.5 1.0 5 6 7 6 0 <th0< th=""> 0 0</th0<>	Coronach	1	1.0	1.0	50	3.0	0.0								60		20	10	10		f
Crooked River 14 0.0 0.0 60 1.0 12.0 40 20 1.0 40 20 1.	Craven	35	13.0	6.0	271	18.3	7.5														g
Cypress Hills P.P. 11 100 70 20 1.5 0.0 30 25 10 1.0 2.5 1.0 1.0 1.0 5 1.0 1.0 5 1.0 1.0 1.0 5 1.0 1.0 1.0 5 1.0 <td>Crooked Lake</td> <td>1</td> <td>1.5</td> <td>0.5</td> <td>77</td> <td>6.0</td> <td>0.0</td> <td></td> <td></td> <td></td> <td>15</td> <td></td> <td></td> <td></td> <td>40</td> <td>5</td> <td>25</td> <td>15</td> <td></td> <td></td> <td>f</td>	Crooked Lake	1	1.5	0.5	77	6.0	0.0				15				40	5	25	15			f
A Denholm 6 0.0 218 7.8 1.0 0.0 0.0 218 7.8 1.0 0.0 0.0 0.0 0.0 218 7.8 1.0 0.0 <td>Crooked River</td> <td>4</td> <td>0.0</td> <td>0.0</td> <td>60</td> <td>1.0</td> <td>12.0</td> <td></td> <td>40</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>40</td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Crooked River	4	0.0	0.0	60	1.0	12.0		40						40	20					
Landburding335.52.31.144.00.01.05.05.05.55.01.08.05.01.0 <td>Cypress Hills P.P.</td> <td>12</td> <td>10.0</td> <td>7.0</td> <td>20</td> <td>1.5</td> <td>0.0</td> <td>30</td> <td>25</td> <td>10</td> <td></td> <td></td> <td>25</td> <td></td> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>g</td>	Cypress Hills P.P.	12	10.0	7.0	20	1.5	0.0	30	25	10			25		10						g
E.B.Campbell Dam 6 0.5 0.5 94 7.5 2.0 1.0 50 10 10 20 50 10 <td>Denholm</td> <td>6</td> <td>0.0</td> <td>0.0</td> <td>218</td> <td>7.8</td> <td>1.0</td> <td></td> <td></td> <td></td> <td>10</td> <td>5</td> <td></td> <td>5</td> <td>70</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td>е</td>	Denholm	6	0.0	0.0	218	7.8	1.0				10	5		5	70	5	5				е
Lastend1211001.03421000.01510 <td>Dundurn</td> <td>3</td> <td>5.5</td> <td>2.3</td> <td>114</td> <td>4.0</td> <td>0.0</td> <td></td> <td></td> <td></td> <td>5</td> <td>5</td> <td></td> <td></td> <td>80</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td>f</td>	Dundurn	3	5.5	2.3	114	4.0	0.0				5	5			80	5	5				f
Estevan96.07.52449.810.00015000161000Estuary North220.00.00.01715.80.001101101100	E.B.Campbell Dam	6	0.5	0.5	94	7.5	2.0		50		10							10	30		g
Estuary North 12 0.0 0.0 6 1.0 6.0 1.0 1.5 1.0 1.5 1.0 <th1.0< th=""> 1.0 <th1.0< th=""> <th1.< td=""><td>Eastend</td><td>21</td><td>10.0</td><td></td><td>342</td><td></td><td>0.0</td><td></td><td>5</td><td></td><td>10</td><td>20</td><td>50</td><td></td><td></td><td></td><td>14</td><td>1</td><td></td><td></td><td>р</td></th1.<></th1.0<></th1.0<>	Eastend	21	10.0		342		0.0		5		10	20	50				14	1			р
Fenton120.01.715.80.01.0 <th< td=""><td>Estevan</td><td>9</td><td>6.0</td><td>7.5</td><td>244</td><td>9.8</td><td>10.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>26</td><td></td><td>9</td><td>6</td><td>59</td><td></td><td>g</td></th<>	Estevan	9	6.0	7.5	244	9.8	10.0								26		9	6	59		g
Floral122.02.31.876.00.01.51.0 <th< td=""><td>Estuary North</td><td>2</td><td>0.0</td><td>0.0</td><td>6</td><td>1.0</td><td>6.0</td><td></td><td></td><td>15</td><td></td><td></td><td>15</td><td></td><td></td><td>70</td><td></td><td></td><td></td><td></td><td>е</td></th<>	Estuary North	2	0.0	0.0	6	1.0	6.0			15			15			70					е
Fort Qu'Appelle180.00.036517.80.01.02.52.01.01.02.04.2.01.11.01.0pGardine Dam119.08.85712.00.01.00.01.00.01	Fenton	2	0.0	0.0	171	5.8	0.0				20				69		10	1			р
Gardiner Dam119.08.857121.00.01.40.41.41.41.41.31.31.31.41.41.40.0Good Spirit Lake20.00.01316.00.01.41.02.01.0<	Floral			2.3	187		0.0				30				43	12	15				g
Good Spirit Lake20.00.01.316.00.01.01.01.00.01.		18	0.0		365	17.8	0.0				25	20		10	20		20	1			р
Greenwater32.010.010.010.02.09.05.010.10.10.10.10.10.10.10.10.10.10.10.10.10.010.																		34	1		g
Harris174.04.033412.00.01111111201111Hudson Bay740.00.0253.00.050505011320201011Indian Head2350.030.035812.01.0511 <td></td> <td>20</td> <td></td> <td></td> <td>20</td> <td></td> <td>5</td> <td>25</td> <td></td> <td></td> <td></td> <td></td>											20			20		5	25				
Hudson Bay 74 0.0 0.0 25 3.0 0.0 5 5 6								50		20											f
Indian Head2350.030.035812.011.05667555666666Kenaston110.00.01352.03.066<											19				42						_
Kenaston110.010.01352.03.010.010.010.01352.03.010.0 <td></td> <td>_</td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td>50</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td>		_			_				50							_					
Kenosee Lake10.50.3975.80.51.51.0301.51.51.51.5301.5 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td><td></td><td></td><td>10</td><td></td><td></td><td></td><td></td><td>5</td><td></td><td></td><td></td><td></td><td>t</td></t<>								5			10					5					t
Ketchen North 11 1.0 1.0 60 2.5 5.5 1.0 3.0 3.0 2.0 2.0 2.0 1.0 2.0 1.0 2.0		_								~ ~											
Kinloch1.02.09.02.52.0.1.03.02.01.0<										30		15									р
Kyle 7 2.0 1.5 290 9.5 4.0 c				_				10				10		20	20		10				C
La Ronge50.00.05312.018.0202060 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10</td> <td>30</td> <td>20</td> <td>20</td> <td>10</td> <td>10</td> <td></td> <td>45</td> <td></td> <td>25</td> <td></td> <td>-</td> <td></td> <td></td>								10	30	20	20	10	10		45		25		-		
LMLNWA 3 0.5 0.5 200 16.0 0.5 4.0 20 200 20 20 20 5 10 10 9 9 Love-Torch River 24 0.0 0.0 308 15.5 15.0 10 15 50 6 6 5 10 10 9 9 Luseland 5 4.0 2.0 291 17.0 2.0 2.0 45 10 5 55 10 10 6 9 Meadow Lake 2 5.0 4.0 125 2.0 2.0 2.0 50 4.0 10 10 6 9 Melfort 8 0.0 0.0 35 12.0 3.0 5 15 10	-							20	20				10		45	15		10			
Love-Torch River 24 0.0 0.0 308 15.5 15.0 10 15 50								20	20		20	20	20	F	20	F		10	10		
Luseland 5 4.0 2.0 291 17.0 2.0 4 4 10 5 5 25 5 5 5 g g Meadow Lake 2 5.0 4.0 125 2.0 2.0 50 50 10 10 10 g Melfort 8 0.0 0.0 35 12.0 3.0 15 15 10 15 10 15 10					_			10	15			20	20	5							
Meadow Lake 2 5.0 4.0 125 2.0 2.0 50 6 40 10 g g Melfort 8 0.0 0.0 35 12.0 3.0 15 15 15 70 6 f								10	15			10	E	E							
Melfort 8 0.0 0.0 35 12.0 3.0 15 15 70 f									50		45	10	5	5		5					
									50		15										
Moose Jaw 6 21.7 8.3 240 10.1 0.0 10 5 40 5 30 10 g	Moose Jaw	6	21.7	8.3	240	12.0	0.0		10		15			5	40	5	30		10		

	PARTICIPANTS	KM ON FOOT	HOURS ON FOOT	KM BY VEHICLE	HOURS BY VEHICLE	HOURS AT FEEDERS	EVERGREEN FOREST	MIXEDWOOD FOREST	DECIDUOUS FOREST	ASPEN GROVE/FARMLAND	ASPEN GROVE/PRAIRIE	NATIVE PRAIRIE	TAME PASTURE	FARMLAND	FARMSTEADS	URBAN	OPEN WATER	RIPARIAN	OTHER	WILD FRUIT CROP
LOCALITY	PA	КМ	ОН	КМ	ОН	ОН	EVI	(IM	DE	ASF	ASI	NA ⁻	TAI	FAF	FAF	UR	ОР	RIP	ОТ	MI
Moose Mountain	2	0.0	0.0	95	5.0	0.0				15			10	50	5	15	5			f
Morse	13	3.9	3.2	472	36.0	8.0							3	90	7					g
Neilburg-Marsden	1	7.4	3.2	25	1.1	0.6				4			1	10	3	82				е
Nicolle Flats	5	15.2	4.5	289	13.3	0.0			15	5	10	8	2	43	4	4	1	8	3	р
Nipawin	12	1.0	0.5	150	8.3	8.5	15	5		15				25	10	30				g
Nisbet Forest NW	1	0.8	0.5	0	0.0	3.5		10							90					р
Nisbet Forest West	3	1.0	0.5	130	3.0	2.0	20		10	40				20		10				g
Odessa	3	0.0	0.0	30	4.0	10.0				15	15	15	15	15	25					f
Outlook	1	1p4	1.0	130	4.8	0.0				75			10			10		5		f
Pangman	2	0.0	0.0	85	3.0	0.0						5	10	60	5	20				
Pike Lake	28	25.4	18.8	294	21.9	20.0			10	10	10		5	30	10	15			10	g
Prince Albert	27	18.5	7.8	536	27.0	16.3	15	10		50						23		2		g
Prince Albert N.P.	31	41.7	22.5	69	9.0	0.0	40	5	25							5	20	5		g
Qu'Appelle	9	3.0	2.0	322	11.4	15.0				60	5		5	20	5	5				р
Qu'Appelle Dam	4	1.3	1.6	338	12.0	0.0		5	5		5	5	5	35	5	30	5			р
Regina	48	84.5	33.8	273	14.9	19.5														f
Roscommon S.D.	10		2.0	114	3.5	35.0				20				60	20					р
Rosetown	5	3.0	2.5	153	8.5	6.5						25		45	20	5		5		g
Rosthern	5	10.5	2.5	176	6.0	0.0				32			5	60	1	2				f
Rouleau	4	0.0	0.0	259	10.0	1.0				5				80	5	10				р
Round Lake (Q.V.)	3	0.0	0.0	137	5.0	1.0			30	40						30				f
Saltcoats	15	1.0	1.0	140	7.0	60.0				2		5	10	79	3		1			g
Sask. Landing P.P.	4	3.0	3.0	500	12.0	0.0						10	5	50	25	5		5		р
Sask. River Forks	4	0.0	0.0	162	8.0	0.0		15		10				75						р
Saskatoon	69	104.5	55.1	870	44.1	23.9		5	5	5	10		5	15		50		5		g
Shell Lake	6	7.4	4.75	255	7.25	0.0	10	15	30	10			5	5		20		5		g
Snowden	16		4.0	365	3.0	5.5								40	50	10				f
South Lady Lake	2	3	1.0	114	6.0	1.0				35			10	50	5					f
Spinney Hill	1	1	0.3	132	5.5	0.2	5			60	30	5								g
Swift Current	19	9.5	7.5	408	23.5	11.0								20	10	68		2		g
Thickwood- Spiritwood	9	3.0	2.0	242	8.8	5.5	5	10		20			15	30	5	10		5		g
Torch River Valley	13	1.5	1.0	216	11.5	6.5		40		20				20	20					g
Turtle Lake	3	4.0	2.0	54	2.3	0.0		65	20							5			10	
Turtleford	13	8.0	3.0	341	8.0	7.0				45			50			5				е
Val Marie	21	2.5	2.0	32	3.3	0.0						20	10	40		20	5	5		р
Watrous	6	1.0	1.0	100	18.5	1.0			5	15	5	5	5	25	5	35				g
Weyburn	15	0.0	0.0	195	11.0	6.0	5	20	5	5		5	10	30		15		5		
White Bear	5	1.0	1.0	177	10.0	0.0				-		5	5	60	30	-				р
Whitewood	19	10.0	4.0	333	10.5	23.0			10	25						65				f
Wingard	1									-				5	95	-				
Young	3	0.0	0.0	2008	8.0	4.0				20	5	5	10	30	10	20				g

TABLE 3. Species found on 5 or more counts; () = seen during Count Period (CP).

SPECIES	RCHERWILL 4 DEC 2022	AVONLEA 16 DEC 2022	BALGONIE 2 JAN 2023	BIGGAR 16 DEC 2022	BORDEN - RADISSON 30 DEC 2022	SROADVIEW 28 DEC 2022	CANDLE LAKE 5 JAN 2023	CHATSWORTH 4 JAN 2023	CHRISTOPHER LAKE 30 DEC 2022	CLARK'S CROSSING 17 DEC 2022	CORONACH 2 JAN 2023	CRAVEN 17 DEC 2022	CROOKED LAKE 27 DEC 2022	CROOKED RIVER 3 JAN 2023	CYPRESS HILLS P.P. 30 DEC 2022	DENHOLM 5 JAN 2023	DUNDURN 19 DEC 2022	E. B. CAMPBELL DAM 2 JAN 2023	EASTEND 2 JAN 2023	ESTEVAN 31 DEC 2022	ESTUARY NORTH 30 DEC 2022	FENTON 15 DEC 2022
	14 14	16 1	B/ 2	16 16	ВС	BF 28	ы С	0 4	58	리다	ыС	17 C		บิต	ы С В	دە ت	۲, D	ъ́ш	Е/ 2.		ЗО В	ËĤ
Canada Goose											160		2					2		1042		_
Mallard			3										(1)						3	1376		
Common Goldeneye										38			(1)					39	1	29		3
Ruffed Grouse					2			5					2			1		4				
Sharp-tailed Grouse	_	37	63	147	3	67	24	9		34	40	90	7	(1)		5	16	9	55	29	165	_
Spruce Grouse							1											1				
Gray Partridge	(10)	8	252	110	41	46				194	25	112	35			21	93		24	86	10	_
Ring-necked Pheasant											50				1				30	312	95	
Rock Pigeon	_	70	141	117	254	96		3		131	_	110	34			13	48	9	25	136	10	95
Eurasian Collared-Dove		(1)	3	8	3	4				16	(6)	35					49		20	16	2	
Sharp-shinned Hawk	_																		1		_	
Northern Goshawk												2						1	1	1		
Bald Eagle Snowy Owl	(1)		(1)	3	1					1	1	1	1					7	2	2	3	
Great Horned Owl		(1)						1		2	1					(1)			2		2	2
Black-backed Woodpecker	(1)			2						2							1		3	(1)	2	
Downy Woodpecker							2											2				
Hairy Woodpecker	3	1	12	3	4	1	1	7		14	2	22		1	1	3	3	_	4	6	1	
Pileated Woodpecker	4	(1)	4	2	7	1	5	9		15		8	2		2	3	3	2	2	1	1	4
Northern Flicker					1	(1)	3	1		1		1							-		1	
Merlin			1							-		1			1				7	1	2	
Northern Shrike			2				(1)			2												
Canada Jay			1				(1)			1			1					-		1		1
Blue Jay	10	2		1	2		10 29	0		2			2	2		(2)	1	3 22			5	2
Black-billed Magpie	18 5	2 15	77	1 137	3 59	9		8 28		3 295	7	23 92	3 11	2	19	(3) 23	1 58	18	124	14	28	3 27
American Crow	5	15	11	137	59	9	10	28		295	1	92	11		19	23	58	18	124	14	28	21
Common Raven	3	2	40	98	43	10	27	25		166	1	61	8	2	8	4	41	26	9	29	6	12
Black-capped Chickadee	30	Z	107	36	43 64	6	74	62	12	130	4	148	10	4	25	10	41	20	44	32	12	64
Boreal Chickadee	1		107	30	04	0	3	02	12	130	4	140	10	4	25	10	44	23	44	32	12	04
Horned Lark	1	4		38		7	3											2				
Golden-crowned Kinglet		-		1		'																
Red-breasted Nuthatch	9	1	66	12	12	7	20	1	2	19	3	9			10		6	4	13	5	1	4
White-breasted Nuthatch	1	1	00	2	1	2	20	6	2	3	(2)	11	(1)		10		Ū	1	1	9	1	1
Brown Creeper	-	-	2	-	-	(1)	-	Ū	_	U	(_)	1	(-)		1			-	1		-	-
European Starling			3	17		1				29		_			_	(1)	7		_		50	6
Townsend's Solitaire			1			(1)				-		1			2	,	1					
Varied Thrush	1					. ,																
American Robin				4		(1)						3				(1)						
Bohemian Waxwing			110	84	235	25				77	6	811			12	2	250		12	12		200
Cedar Waxwing				11															6	(4)	60	
House Sparrow	5	156	658	369	690	170		126		1480	100	307	61		2	38	245	12	57	258	80	48
Evening Grosbeak	4						7							1				35				
Pine Grosbeak	11						13											11				
House Finch		3	25	18	3	(1)				64	8	4							13	2	2	
Purple Finch										2						(1)					1	
Common Redpoll				25						3		30						12				
Red Crossbill															17							
White-winged Crossbill	30						64										2	20				
Pine Siskin		(1)	25	(5)						12												
American Goldfinch			5			(2)													(4)		1	
Snow Bunting	20	1	15	1169	220	105		115		503		122	44			186	167	89	6		60	440
Dark-eyed Junco	1		3	3	1	2	1					1		1					9	4	1	2
White-throated Sparrow																						
Common Grackle		(1)									1		1									
TOTAL BIRDS COUNT DAY	146	304	1621	2417	1647	559	296	406	16	3243	409	2006	222	11	101	309	1035	356	479	3416	603	912
TOTAL BIRDS ONLY IN CP	12	5	1	5	0	7	2	0	0	0	8	1	3	1	0	8	0	0	4	5	0	0
TOTAL SPECIES COUNT DAY	16	5 5	26	25	20	17	18	15	3	30	15	25	15	6	13	12	18	26	28	27	27	16
TOTAL SPECIES ONLY IN CP	5	5	1	1	0	6	2	0	0	0	2	1	3	1	0	6	0	0	1	2	0	0

Canada Gose Canada Gose <thcanada gose<="" th=""> <thcanada gose<="" th=""></thcanada></thcanada>		RT QU'APPELLE DEC 2022	RDINER DAM DEC 2022	00D SPIRIT LAKE JAN 2023	EENWATER AN 2023	RRIS DEC 2022	UDSON BAY 5 DEC 2022	INDIAN HEAD 28 DEC 2022	NASTON DEC 2022	KENOSEE LAKE 29 DEC 2022	ETCHEN NORTH 6 DEC 2022	INLOCH JAN 2023	KYLE 21 DEC 2022	LA RONGE 26 DEC 2022	LMLNWA 14 DEC 2022	VE-TORCH RIVER DEC 2022	SELAND AN 2023	ADOW LAKE DEC 2022	MELFORT 28 DEC 2022	400SE JAW 18 DEC 2022	OSE MOUNTAIN P.P. 4N 2023	MORSE 14 DEC 2022
Mater 20 2000 1		F0 18	GA 14	60 4 J	GR 3 J	HA 15	НU 26	1NI 28	КЕ 31	КЕ 29	KE 26	KIN 2 J	КҮ 21	LA 26	LM 14	L0 26	LU: 2 J	ME 26	ME 28	M0 18	3 J.	M0 14
Common Coldencye 3 0 1 2 1 3 2 1 <th1< th=""> 1 1</th1<>							_					_										
Burdle Grosse G D <thd< th=""> D <thd< th=""> <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<></thd<></thd<>														1								
Subsystalia	,	3	98	1							2	2		1		17				1		
Spree Groups Date		96	112	1		101	1		6		3	2	30	1	17					26		118
Ciry Purling Bits - - - - - 2.52 1.15 Rise pecked Presamt - - - - - - 2.52 1.15 Rise pecked Presamt - <td></td> <td>50</td> <td>115</td> <td></td> <td></td> <td>101</td> <td>1</td> <td>51</td> <td>0</td> <td></td> <td></td> <td></td> <td>35</td> <td>1</td> <td>11</td> <td>5</td> <td></td> <td></td> <td></td> <td>20</td> <td></td> <td>110</td>		50	115			101	1	51	0				35	1	11	5				20		110
Ring neckod Piesana 4 -	-	61	165			60	_	51	66			_	140	-	159	33	379			252		1585
Eurosian Collared. Down A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z A Z Z A Z <thz< th=""> <thz< th=""> <thz< th=""> <thz< th=""></thz<></thz<></thz<></thz<>	Ring-necked Pheasant	4																				
Shorp-shimed Haw a a b a b a	Rock Pigeon		115			79	12	86	46				50		50	64	125		11	233	34	186
Northern Goshway D <thd< th=""> D <thd< th=""></thd<></thd<>	Eurasian Collared-Dove	4	2					3					11		6		3			74		10
Bald sets 2 4 2 4 1	Sharp-shinned Hawk																					
Snowy OM - - - 2 - - - 2 - - 2 - 1 - 5 - 2 4 1 0 5 - 2 4 1 0 1<						1																
Great Homed out S <ths< th=""> S S <</ths<>	-	2	43			2		4			1					(1)						1
Black-backed Woodpocker 10 0 1 0 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 1 1 0 1 1 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 1 1 1 1 <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td>20</td> <td></td> <td>1</td> <td></td> <td>5</td> <td></td> <td>2</td> <td>4</td> <td></td> <td>3</td>	-							2					20		1		5		2	4		3
Downy Woodpecker 15 4 4 2 2 15 1 4 5 5 1 4 1 1 1 0 6 1 4 1 1 1 1 0 7 3 1 1 0 7 3 1 1 0 7 3 1 1 0 7 3 1 1 0 7 3 1 1 0 1 <th1< th=""> 1 1</th1<>			3			3		2					11				(1)		1	(1)		7
Hairy Woodpecker 13 3 6 5 7 13 7 6 6 4 4 2 20 1																4						
Pileated Woodpacks (1) -						2	_		1				1	4								1
Northern Flicker			3	6	5		7	13			6	6		4	2		1	1	9	7		
Mertin Northern Sinke 3 I <thi< th=""> I</thi<>	•	(1)					_			3		_				(1)					2	
Northern Shrike 3 - - - - 1 -																						
Canada Jay O O Q Q O O A A S A O O O O Black-billed Magie O S 11 Q 22 Q P 25 Q S A D Z D D D Z Q S A D <thd< th=""> <thd< th=""> <thd< th=""> <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>(1)</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td></t<></thd<></thd<></thd<>													(1)							1		
Blue Jay 21 1 2 2 1		3								1				_								2
Black-billed Magpie 90 85 11 17 91 25 29 5 8 17 10 18 42 10		21	1	2	22			17		10	7						2	1	10		10	
American Crow Co Co <thco< th=""> Co <thco< th=""> Co Co</thco<></thco<>						01			-				120		42					60		70
Common Raven 115 52 68 17 9 126 30 8 8 17 5 28 131 43 10 112 10 117 44 18 20 53 31 7 202 44 62 28 28 Boreal Chickadee 11 43 22 12 13 14 16 17 16 <th< td=""><td></td><td>90</td><td>85</td><td>13</td><td>17</td><td>91</td><td>25</td><td>29</td><td>5</td><td>8</td><td>12</td><td>1</td><td>130</td><td>18</td><td>42</td><td>105</td><td>25</td><td>8</td><td>10</td><td>60</td><td>31</td><td>79</td></th<>		90	85	13	17	91	25	29	5	8	12	1	130	18	42	105	25	8	10	60	31	79
Black-capped Chickadee Int As Ca Ca <thca< th=""> Ca Ca Ca<!--</td--><td></td><td>115</td><td>52</td><td>68</td><td>17</td><td>٩</td><td>126</td><td>30</td><td>Q</td><td>Q</td><td>17</td><td>5</td><td>28</td><td>121</td><td>13</td><td>101</td><td>14</td><td>22</td><td>12</td><td>10</td><td>57</td><td>22</td></thca<>		115	52	68	17	٩	126	30	Q	Q	17	5	28	121	13	101	14	22	12	10	57	22
Boreal Chickadee i									U									22				22
Horned Lark 13 14 14 14 14 14 16 <t< td=""><td></td><td>111</td><td>15</td><td>25</td><td>23</td><td></td><td>15</td><td></td><td></td><td></td><td>10</td><td>20</td><td>J</td><td></td><td></td><td></td><td></td><td></td><td>.2</td><td>02</td><td>20</td><td></td></t<>		111	15	25	23		15				10	20	J						.2	02	20	
Golden-crowned Kingel ···· ····	Horned Lark	3	14			1		1	(2)				6	-								65
White-breasted Nuthatch 10 2 2 4 1 6 5 0 10 2 10 10 2 10 10 2 10	Golden-crowned Kinglet		2			1									2					1		
Brown Creeper (1)	Red-breasted Nuthatch	7	11		1	6	5	65	(1)	4	(2)			10	10	28	4		9	17	1	6
European Starling (i) (ii) (iii) (iii) (iiii) (iiii	White-breasted Nuthatch	10	2	2	4	1		29		5	2	2	1	1	1	12			4	9	4	
Townsend's Solitaire W		(1)																	2	2		
Varied Thrush i.i.		(1)						4					75			2				15		
American Robin 1 2 2 1 <																						
Bohemian Waxwing 325 18 10																						
Cedar Waxwing Ind																						1
House Sparrow 358 1473 1473 1473 140 505 140 <td></td> <td>325</td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td>295</td> <td>(12)</td> <td></td> <td></td> <td>_</td> <td></td> <td>(4)</td> <td>72</td> <td>2</td> <td>73</td> <td></td> <td>45</td> <td>12</td> <td></td> <td>7</td>		325					_	295	(12)			_		(4)	72	2	73		45	12		7
Evening Grosbeak INS INS <td></td>																						
Pine Grosbeak (1)	•	358	1473		17	505	140	368	43	26		22	430	17	550		136		59	840	37	2936
House Finch 8 M <th< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	-																					
Purple Fine O <tho< th=""> O <tho< th=""> O O O O</tho<></tho<>		Q			21	6	0	/1			15	5	40	10	1	119	7			69		1
Common Redpoll		0				0		41					40		4		1					1
Red Crossbill Image: Second Secon														94		110				1		1
Pine Siskin (1)														51		110						
Pine Siskin (1)	White-winged Crossbill															26						
American Goldfinch 9 1 1 1 1 3 1 1 1 1 1 1 1 3 1	Pine Siskin	(1)						35														
Snow Bunting 76 900 25 25 717 8 111 217 95 33 585 4 173 93 35 45 64 44 Dark-eyed Junco 3 2 4 1 6 2 2 1 6 1	American Goldfinch		1										(1)				(1)					
White-throated Sparrow 1 Image: Common Grackle Image: Common		76	900	25	25	717	8	111		217	95	33			84	173		35	45			403
Common Grackle Image: Common Grackle Im		3	2		1	6		2			1					2	2			5	1	
TOTAL BIRDS COUNT DAY 1978 10782 144 157 1683 382 1391 175 346 210 152 1572 350 1052 1510 896 67 269 1746 215 54 TOTAL BIRDS ONLY IN CP 5 0 0 0 0 155 0 12 0 3 4 0 2 2 0 0 2 0		1				1																
TOTAL BIRDS ONLY IN CP 5 0 0 0 0 15 0 12 0 3 4 0 2 2 0 0 2 0																						
					157			1391						350								5436
																						1
TOTAL SPECIES COUNT DAY 29 38 9 12 19 12 30 7 12 13 12 16 16 18 24 18 5 15 25 12 TOTAL SPECIES COULT DAY 5 0 0 0 0 3 0 2 0 3 1 0 2 2 0 0 2 0	TOTAL SPECIES COUNT DAY	29	38	9	12	19	12	30	7	12	13	12	16	16		24	18	5		25	12	20 1

ROUND LAKE (Q.V.) 30 DEC 2022	SALTCOATS 18 DEC 2022	SASKATCHEWANLANDINGP.P. 20 DEC 2022	SASKATCHEWANRIVERFORKS 17 DEC 2022	SPECIES	SASKATOON 26 DEC 2022	SHELL LAKE 17 DEC 2022	SNOWDEN 5 JAN 2023	SOUTH LADY LAKE 20 DEC 2022	SPINNEY HILL 4 JAN 2023	SWIFT CURRENT 15 DEC 2022	THICKWOOD-SPIRITWOOD 1 JAN 2023	TORCH RIVER VALLEY 23 DEC 2022	TURTLE LAKE 16 DEC 2022	TURTLEFORD 28 DEC 2022	VAL MARIE 19 DEC 2022	WATROUS 2 JAN 2023	WEYBURN 2 JAN 2023	WHITE BEAR 3 JAN 2023	WHITEWOOD 28 DEC 2022	WINGARD 29 DEC 2022	YOUNG 14 DEC 2022	TOTALS COUNT DAY	TOTALS ONLY IN COUNT PERIOD	# COUNTS COUNT DAY # COUNTS ONLY IN	COUNT PERIOD
				Canada Goose	11																	6145	0	11	0
		5		Mallard	77										2							5030	1	14	1
	_	_		Common Goldeneye	914			_			_				2						_	1140	1	12	1
	1			Ruffed Grouse Sharp-tailed Grouse		4		1			7	2		4					2			111	7	26	2
10	27	300	42	Spruce Grouse	75					94		6 2		4	1	44	89	68	5		70	2731 6	21 0	52 5	4
	48	41		Gray Partridge	21					243		Z		6	59	28	402	270	34		109	6903	25	48	2
	10	1		Ring-necked Pheasant	21					18				Ū	55	20	87	210	54		105	605	0	12	0
8		19	18	Rock Pigeon	1396				32	723	50			24		12	206	180	67		50	7143	0	59	0
	4			Eurasian Collared-Dove	12					70						35	20		21			466	7	30	2
				Sharp-shinned Hawk	3											(1)						6	2	3	2
				Northern Goshawk	1	1			1			1				(1)						12	1	11	1
	3	_		Bald Eagle	(1)			_		1	1			(1)								92	6	26	6
		1		Snowy Owl						2				(1)		1	4	17				92	5	26	5
	2	2		Great Horned Owl Black-backed Woodpecker							(1)				3		3	5	_			56	12		10
2	18	1	1	Downy Woodpecker	53	1	4	3	1	2	3	6	1	11		3	6		16	1	4	15	1	6 70	1 0
2	18	1	4	Hairy Woodpecker	19	4	4	3	1	2	4	6	1	11 11		4	2		9	2	4	492 385	0	67	2
~	3		1	Pileated Woodpecker	3	-	,	J			(1)	0	1			-	2		5	2	-	34	5	18	5
		1		Northern Flicker	8					3	(-/		_									27	3	10	
				Merlin	8					1								(1)	(1)			22	3	8	3 3
				Northern Shrike	1				1													18	1	13	1
				Canada Jay			4					4	3									54	1	12	1
3	9	4	20	Blue Jay	53	37	45	2	5		33	30	8	3		18			11	5		844	10	59	2
40	8	37	37	Black-billed Magpie	789	14	20	14	23	137	55	47		45	4	16	23	52	40		10	4113	0	79	0
25	26	6	10	American Crow Common Raven	5					-			-			-	2					21	0	6	0
35	36 95	6	40 46	Black-capped Chickadee	176 670	43	12	8	27	7	53	34	7	31		7	50	13	95	2	37 6	3249	12	78	1
33	95		40	Boreal Chickadee	670	92 5	71	17	14	14	57	92	15 1	42		48			147	3	0	4701 64	0	73 11	0
		29	5	Horned Lark		J				6			1		4	(2)						230	5	16	3
				Golden-crowned Kinglet	3											(-/						10	0	6	0
2	10		6	Red-breasted Nuthatch	250	12	12			20	3	4	1	2		15	14		24		4	1090	3	67	2
2	17		1	White-breasted Nuthatch	16	4	1	1		1	5	5	2	3		(1)	9		16	2		325	4	57	3
				Brown Creeper	1	1				2						1						25	2	12	2
	_			European Starling	54			_			_	_					5		_			391	6	19	3
				Townsend's Solitaire Varied Thrush																		5	1	4	1
	1			American Robin	21					1	_					1						4	2	4	2
	1			Bohemian Waxwing	21 596				125	1 42				19		1 114			1 63			56 6123	3 66	14 40	3
	7			Cedar Waxwing	596				125	42				19		6			1			173	6	9	2
210	103	250	5	House Sparrow	4207	66	14	27	34	527	147	49		184	25	954	406	360	275	50	480	26671	0	71	0
			17	Evening Grosbeak	-	110	118					69			-							1067	10	17	1
			7	Pine Grosbeak		5	54				14	14		8								371	0	20	0
				House Finch	191					82					4	16	7		22			900	5	30	2
				Purple Finch												(1)						7	2	6	2
				Common Redpoll			25	30	5										(4)			350	4	11	1
	_			Red Crossbill	20						_					_			_		_	50	1	4	1
			27	White-winged Crossbill Pine Siskin	2	134			7				3									374	0	13	0
			3	American Goldfinch	6											6						73 92	7	4	3
14	306	360	3 825	Snow Bunting	6 20	14	34	80	60	482	100	178		465	42	6 107		36	188		320	92 13405	8	65	4
	500	550	525	Dark-eyed Junco	20	4	7	50	00	402	100	110		-05	72	5	1	50	100		520	15405	0	33	0
				White-throated Sparrow	1					1												4	1	4	1
		1		Common Grackle	1												1					6	1	6	1
361	716	1061	1104	TOTAL BIRDS COUNT DAY	9799	552	421	186	335	2489	542	549	48	862	164	1442	1338	1003	1041	63	1094	98499			
0	0	0	0	TOTAL BIRDS ONLY IN CP	1	0	0	0	0	1	2	0	0	2	0	7	0	1	6	0	0		276		
12	19	18	19	TOTAL SPECIES COUNT DAY	37	19	14	11	13	27	15	17	14	16		22	20	10	20	6	11	86			
0	0	0	0	TOTAL SPECIES ONLY IN CP	1	0	0	0	0	1	2	0	0	2	0	6	0	1	3	0	0		2		

TABLE 3. Species found on 5 or more counts; () = seen during Count Period (CP).	TABLE 3. Species	found on 5	5 or more counts; () = seen dur	ing Count	Period (CP).
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	VEILBURG-MARSDEN 18 DEC 2022	COLLE FLATS 5 DEC 2022	NIPAWIN 21 DEC 2022	T FOREST NORTHWES1 EC 2022	NISBET FOREST WEST 31 DEC 2022	ODESSA 26 DEC 2022	OUTLOOK 2 JAN 2023	1GMAN 1N 2023	PIKE LAKE 2 JAN 2023	NCE ALBERT DEC 2022	CE ALBERT N.P. EC 2022	PPELLE EC 2022	QU'APPELLE DAM 18 DEC 2022	GINA DEC 2022	COMMON S.D. V 2023	ETOWN EC 2022	ROSTHERN 4 JAN 2023	ROULEAU 18 DEC 2022	ROUND LAKE (Q.V.) 30 DEC 2022	SALTCOATS 18 DEC 2022	45KATCHEWANLANDINGP.P. 0 DEC 2022	SASKATCHEWANRIVERFORKS 17 DEC 2022
SPECIES	NEIL 18 DI	NICO 15 DI	NIPA 21 DI	NISBE 26 DI	NISB 31 DI	ODE: 26 DI	OUTI 2 JAN	PAN 5 JAN	PIKE 2 JAI	PRIN 18 DI	PRIN 21 DI	QU'A 31 DI	QU'A 18 DI	REGINA 27 DEC :	ROS(4 JAI	ROSE 16 DEC	ROS 4 JAI	ROU 18 DI	ROU 30 DI	SALT 18 DI	SASK# 20 DI	SASKA 17 DE
Canada Goose						4							600	876								
Mallard							300						150	329							5	
Common Goldeneye													10									
Ruffed Grouse	2		5	(1)	1	2			6	6	10	(6)			19					1		
Sharp-tailed Grouse Spruce Grouse		36				60	1	2	55	(1)		111	46	79	20	(13)	(6)	29	10	27	300	42
Gray Partridge		100				40	20	222	C1		1	120	41	740	(15)	62	15	F1		40	41	
Ring-necked Pheasant		100				40 1	38	333 1	61			128	41	740	(15)	63	15	51		48	41	
Rock Pigeon	42	139	50		100	25	134	21	256	163		213	79	502		36	59	71	8		19	18
Eurasian Collared-Dove	3						8					12				6	1		-	4		
Sharp-shinned Hawk							(1)							2								
Northern Goshawk									1	1												
Bald Eagle				(1)		4	2		2	1		1	1	1						3		
Snowy Owl	1				1	2		1				(1)	1	1	(1)	3		10			1	
Great Horned Owl		_				2				(1)		1	1	(1)	(2)	(2)	(1)			2	2	_
Black-backed Woodpecker			(1)								5											
Downy Woodpecker Hairy Woodpecker	5	3	3	2	3	4	1		56	16		17	2	35	12		2		2	18	1	1
Pileated Woodpecker	1	2	4	2	2	4	(1)		32 5	15 3	4	11	1	1	13 1	1	3 (1)		2	18 3		4
Northern Flicker			1			Z	(1)		5	3	1	(1)		2	1		(1)			3	1	1
Merlin		1					(1)					(1)		6		1	(1)				1	
Northern Shrike		_							1					3		_		1				
Canada Jay				(1)	3					6	6											
Blue Jay	4	1	20	6	24	2	(7)		19	42		4		13	22	3	13		3	9	4	20
Black-billed Magpie	7	50	12	1	31	10	24	2	172	121	3	57	41	67	29	74	12	3	40	8	37	37
American Crow									2					9				2				
Common Raven	5	41	310	(12)	19	10	51		95	308	16	47	16	37	23	8	20	3	35	36	6	40
Black-capped Chickadee Boreal Chickadee	41	7	35	12	45	20	14		490	229	60	73	12	254	89	1	16		33	95		46
Horned Lark									2	(1)	28	10				25					20	3
Golden-crowned Kinglet									2	(1)		12				25					29	
Red-breasted Nuthatch	1	1	12	2	3	6	5		19	42	6	9	4	195	6	2	7	2	2	10		6
White-breasted Nuthatch	-	-	6	1	2	Ū	1		31	14		10		24	10	~	4	~	2	17		1
Brown Creeper														10			1					
European Starling			80			15	12		12					1		3		(4)				
Townsend's Solitaire																						
Varied Thrush			1											(1)			(1)					
American Robin			(1)			2			15					2		1				1		
Bohemian Waxwing	205	_	29	_	(10)		26	14	514	821	_	360	94	38	8	(40)	124					_
Cedar Waxwing House Sparrow						15			(2)											7		
Evening Grosbeak	182	55	25	12	1 30	30	190	23	568	827		271	107	2382	29	374	96	219	210	103	250	5
Pine Grosbeak			115 8	12	30 16				1	20 20					5							17
House Finch	1		0		10		(4)		1	8		2		235	5	12						1
Purple Finch	1						(1)		1	Ū		-		233	_	12						
Common Redpoll					10	6																
Red Crossbill									3	(1)	10											
White-winged Crossbill					5					3	51											27
Pine Siskin									1													
American Goldfinch					6					45		7										3
Snow Bunting	3	160			144		44		50	476		571	1165	42	34	46	39	108	14	306	360	825
Dark-eyed Junco	2								9	2				36	3							
White-throated Sparrow Common Grackle														(1)								
TOTAL BIRDS COUNT DAY	506	597	710	20	AAC-	270	851	397	2483	3193	209	1918	2372	1 5927	323	661	412	499	261	716	1 1061	1104
TOTAL BIRDS ONLY IN CP	506	597 0	716 2	38 15	446 10	270	851 14	397 0	2483 2	3193 4	209	1918	2372	5927	323 18	661 55	412 10	499 4	361 0	0	1061	1104 0
TOTAL SPECIES COUNT DAY TOTAL SPECIES ONLY IN CP	0 17 0	0 14 0	2 17 2	13 8 4	10 19 1	23 0	14 16 5	8 0	29 1	4 25 4	0 15 0	21 4	0 19 0	33 5	18 16 3	19 3	10 15 5	4 11 1	0 12 0	0 19 0	18 0	0 19 0

TABLE 4. Species found in fewer than 5 counts.

SPECIES	LOCALITY AND NUMBER (*=SEEN DURING COUNT PERIOD)
Cackling Goose	Estevan (7), Gardiner Dam (1200)
Green-winged Teal	Fort Qu'Appelle (1), Gardiner Dam (1), Moose Jaw (1)
Canvasback	Gardiner Dam (5) Fort Qu'Appelle (1), Gardiner Dam (1), Moose Jaw (1)
Redhead	Gardiner Dam (22)
Lesser Scaup	Estevan (3), Gardiner Dam (7)
Bufflehead	Fort Qu'Appelle (2), Gardiner Dam (4)
Hooded Merganser	Gardiner Dam (1), Indian Head (1)
Common Merganser	Gardiner Dam (135), Indian Head (1)
Red-breasted Merganser	Gardiner Dam (1)
Wild Turkey	Whitewood (4)
American Coot	Estevan (2)
Ivory Gull	Turtle Lake (1)
California Gull	Regina (1*)
Herring Gull	Gardiner Dam (1)
American White Pelican	Gardiner Dam (1)
Golden Eagle	Avonlea (1), Eastend (4), Morse (2), White Bear (2)
Northern Harrier	Balgonie (1)
Red-tailed Hawk	Fort Qu'Appelle (1), Regina (1), Weyburn (1)
Rough-legged Hawk	Regina (1), Swift Current (1), Val Marie (1)
Northern Hawk Owl	Candle Lake (1*), E.B. Campbell Dam (1)
Great Gray Owl	Shell Lake (1)
Short-eared Owl	Estevan (1), Rosetown (1)
Northern Saw-whet Owl	Craven (1*), Kyle (1*), Qu'Appelle (1*)
Lewis's Woodpecker	Moose Jaw (1*)
Red-bellied Woodpecker	Regina (1)
American Three-toed Woodpecker	Prince Albert (3), Prince Albert N.P. (2), Saskatchewan River Forks (1)
Gyrfalcon	Qu'Appelle (1)
Prairie Falcon	Estuary (1), Regina (1), Val Marie (1)
Ruby-crowned Kinglet	Swift Current (2)
Lapland Longspur	Qu'Appelle Dam (1), Rosetown (1)
American Tree Sparrow	Gardiner Dam (1), Saskatchewan Landing (1)
White-crowned Sparrow	Fort Qu'Appelle (1*)
Harris's Sparrow	Swift Current (1*), Watrous (1*)
Song Sparrow	Balgonie (1), Indian Head (1), Regina (1*)
Red-winged Blackbird	Clark's Crossing (1), Saskatchewan Landing (2), Whitewood (1*)
Rusty Blackbird	Clark's Crossing (1), Odessa (4), Saskatoon (1)

TABLE 6. New (in bold and italics) and tying high counts for individual species 2022.

LOCATION	2022 COUNT	SPECIES	PREVIOUS HIGH	LOCATION, YEAR
Morse	1585	Gray Partridge	824	Morse (30 Dec. 2008)
Turtle Lake	1	Ivory Gull	New	
Regina	1	California Gull	New	
Moose Jaw (Count period)	1	Lewis's Woodpecker	1	1 previous record, Fort Qu'Appelle (16 Dec. 1995)
Regina	1	Red-bellied Woodpecker	1	7 previous records north to Nipawin and Yorkton
Swift Current	2	Ruby-crowned Kinglet	1	Biggar (16 Dec. 1972), Gardiner Dam (19 Dec. 2005)

TABLE 5. Birds not identified to species.

CATEGORY	LOCALITY AND NUMBER (*=COUNT PERIOD)
Cackling or Canada Goose	Gardiner Dam (450)
Duck sp.	Val Marie (16)
Grebe sp.	E.B. Campbell Dam (1)
Hawk sp.	Avonlea (1), Denholm (1*), Pike Lake (1), Turtle Lake (1)
Eagle sp.	Nicolle Flats (1)
Woodpecker sp.	Clark's Crossing (3), Pike Lake (1), Prince Albert N.P. (4)
Falcon sp.	Avonlea (1), Morse (1*)
Chickadee sp.	Prince Albert N.P. (2)
Nuthatch sp.	Saskatoon (2)
Waxwing sp.	Saskatoon (30)

SASKATOON CUSTOM **BIRD TOURS**



Cypress Hills Tour Chaplin Shorebirds Grasslands Park Tour Duck Mt Park Tour Last Mt Lake Tour Waskesiu Tour Whooping Crane Tour **Birding ID Tours** www.birdtours.ca birdtours@sasktel.net 306-652-5975

50TH ANNUAL SASKATCHEWAN CHRISTMAS MAMMAL COUNT - 2022

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Of the 83 Christmas Bird Counts conducted last winter. 79 were accompanied by a Mammal Count — an increase of six over last year. This uptick in effort was probably partly responsible for a large increase in the number of mammals seen or heard from 3.664 to 4.937.

White-tailed Deer, with 1,880 individuals, and Mule Deer, with 1,379 animals, were by far the most commonly encountered mammals.

Next came several species that numbered between 200 and 300 animals: Eastern Fox Squirrel (229), Coyote (256), Pronghorn (259), White-tailed Jackrabbit (260), and American Red Squirrel (290). Over half of the Jackrabbits and Fox Squirrels were, however, seen on the Regina count.

On the other end of the spectrum, an extreme rarity was a Wolverine on the Nisbet Forest West Count on 26 December. Regina had the most species seen or heard with 11, Odessa and Roscommon S.D. were the runners-up each with 10 species. One new species, the aforementioned Wolverine, was added this past winter bringing the all-time provincial total to 52 species seen or heard (plus three species found dead and three others recorded only

on the basis of tracks). For information on participants,

weather, coverage and location of Christmas Mammal Counts, see the Christmas Bird Count summary in this issue.

Explanation of entries in Table 1

The number of mammals actually seen or heard on count day is treated separately from those recorded by other means, or those recorded during count period (14 December to 5 January) but not on count day. Numbers of individuals seen



or heard are given in Table 1 and are tallied in the first line of totals at the bottom of the table. The number of species they represent is given in the second line.

For species only detected by tracks or by other means, or that are seen or heard only in the count period but not on count day, no numbers of individuals is given in Table 1. Species detected only by tracks are indicated by 't' in the table; those detected only by other means — dead animals 'm', more clearly identifiable chewing or digging 'd', dens or lodges 'L' (including Muskrat push-ups) and by smell 's.' Species detected by any means during the count period, but not on count day, are indicated by 'c' in the table. These additional species are tallied in lines 3, 4 and 5 at the bottom of the table. If a mammal is reported as member of a species group (i.e. mouse species, deer species), it is counted as a species only if no other species in this group has been definitely recorded. The columns at the end of the table, give totals for each species.

Moose. Photo credit: Randy McCulloch

TABLE 1. 50th Saskatchewan Christmas Mammal Count - 2022.

					NOSSI				SING			ш	R	S P.P.			L DAM			E	
	HERWILL DEC 2022	/ONLEA 5 DEC 2022	NLGONIE IAN 2023	31GGAR 16 DEC 2022	BORDEN - RADISSON 30 DEC 2022	BROADVIEW 28 DEC 2022	CANDLE LAKE 5 JAN 2023	CHATSWORTH 4 JAN 2023	CLARK'S CROSSING 17 DEC 2022	CORONACH 2 JAN 2023	CRAVEN 17 DEC 2022	CROOKED LAKE 27 DEC 2022	CROOKED RIVER 3 JAN 2023	CYPRESS HILLS P.P. 30 DEC 2022	DENHOLM 5 JAN 2023	DUNDURN 19 DEC 2022	B. CAMPBELL DAM JAN 2023	ASTEND JAN 2023	ESTEVAN 31 DEC 2022	UARY NOR JEC 2022	FENTON 15 DEC 2022
SPECIES	ARC 14 D	AVC 16D	BAI 2.JP	BIG 16D	B0F 30 D	BRG 28 D	CAN 5 JA	414 4	CLA 17 D	2 JA	CR/ 17 D	CRC 27 D	CRC 3.JA	С ҮР 30 Б	DEN 5 JA	19 E	E. B 2 JA	EAS 2.JA	EST 31D	EST 30 D	FEN 15 D
Shrew species						_					_										
Eastern Cottontail																			6		
Nuttall's Cottontail Snowshoe Hare														1				4		12	
White-tailed Jack Rabbit			10	t	t	t	t				2				t		t				
Richardson's Ground Squirrel	t		12	t	1				3		t				1	t				1	
Eastern Grey Squirrel																					
Eastern Fox Squirrel		2	16			2					4	2							4		
American Red Squirrel	2	Z	10		4	3	7	2		4	4	3	1	18			6		4		4
Northern Flying-Squirrel	2				4	t	1	2			4	1	1	10	1		0				4
Northern Pocket Gopher															1						
American Beaver						L															
Deer Mouse						t										1					
Muskrat						L										1					
Gapper's Red-Backed Vole															1						
Meadow Vole															T						
Vole species				t													t				
Norway Rat				L.													Ľ				
House Mouse																					
Mouse species	t		t		t						t						t				
American Porcupine	1				1				2		2			с	1		·	2	2	t	
Coyote	1	1	2	6	2	1	t	3	1	1	10	1		4	-	2	t	11	20	3	t
Gray Wolf	-	-	-	Ū	-	-		Ū	-	-	10	-				-	t		20	Ū	
Red Fox	t		3	1		2	t		3	1	5	t		t	t		t	1			t
Raccoon	3			_		_				-	U			c			·	_			
American Marten	-						t							-							
Fisher																	1				
Ermine															с						
Long-tailed Weasel												t									
Least Weasel																					
Weasel species	t																t				
American Mink						t											t				
Wolverine																					
American Badger																		1			
Striped Skunk																					
River Otter						t						1					t				
Canada Lynx							t														
Mule Deer		62	1	102	1	1			6	66	28	9		8		8		148	88	1	6
White-tailed Deer	4	41	107	15	6	23	26	27	20		84	70	4	17	10	3	6	96	68	70	8
Deer species		27				t						t									
Moose	4		1	4	1	1			m			2			t	3	t	2		1	
Elk	t																t				
Pronghorn										с				4				40	21		
TOTALS SEEN/HEARD ON COUNT DAY	15	133	152	128	16	31	33	32	35	72	139	93	5	52	14	17	13	305	209	88	18
TOTAL SPECIES SEEN/HEARD	6	4	8	5	7	6	2	3	6	4	8	7	2	6	5	5	3	9	7	6	3
TOTAL SPECIES RECORDED BY TRACKS	5	0	1	3	2	6	5	0	0	0	2	3	0	1	3	1	10	0	0	1	2
TOTAL SPECIES OTHERWISE RECORDED	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SPECIES RECORDED COUNT PERIOD	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	0	0	0	0	0	0
TOTAL SPECIES COUNT PERIOD AND DAY 24 BILIE 1AY SUMMER	11	4	9	8	9	12	7	3	7	5	10	9	2	9	9	6	13	9	7	7	5

FLORAL 5.JAN 20 SPECIES Shrew species Eastern Cottontail Nuttall's Cottontail 2 Snowshoe Hare t 1 t White-tailed Jack Rabbit 1 1 t t Richardson's Ground Squirre Eastern Grey Squirrel Eastern Fox Squirrel t 3 American Red Squirrel 7 2 6 13 Northern Flying-Squirrel 2 Northern Pocket Gopher American Beaver с 1 Deer Mouse Muskrat Gapper's Red-Backed Vole Meadow Vole Vole species t t t t Norway Rat House Mouse Mouse species t American Porcupine 1 c 2 t 2 Coyote 4 3 1 2 2 8 Gray Wolf Red Fox 2 1 1 2 Raccoon American Marten Fisher Ermine t Long-tailed Weasel t Least Weasel Weasel species American Mink 1 t Wolverine American Badger Striped Skunk **River Otter** Canada Lynx с Mule Deer 13 18 26 3 49 34 White-tailed Deer 3 20 24 24 18 59 23 Deer species Moose 3 8 t Elk t 7 Pronghorn TOTALS SEEN/HEARD ON COUNT DAY 17 58 32 37 116 93 TOTAL SPECIES SEEN/HEARD 3 5 6 5 7 TOTAL SPECIES RECORDED BY TRACKS 0 8 0 1 2 TOTAL SPECIES OTHERWISE RECORDED 0 0 0 0 0 0 SPECIES RECORDED COUNT PERIOD 0 0 0 TOTAL SPECIES COUNT PERIOD AND DAY 13 8 11

24 BLUE JAY SUMMER 2023 VOLUME 81.2

											<u>م:</u>		
	ΗL					RIVER		ш			MOOSE MOUNTAIN P.P. 3 JAN 2023		NEILBURG-MARSDEN 18 DEC 2022
2022	KETCHEN NORTH 26 DEC 2022	CH 023	2022	IGE 2022	IA 2022	ORCHF 2022	AND 023	W LAK 2022	RТ 2022	: JAW 2022	E MOUN 023	2022	JRG-M/ 2022
29 DEC 2022	KETCHEN NO 26 DEC 2022	KINLOCH 2 JAN 2023	KYLE 21 DEC 2022	LA RONGE 26 DEC 2022	LMLNWA 14 DEC 2022	LOVE-TORCH RIVER 26 DEC 2022	LUSELAND 2 JAN 2023	MEADOW LAKE 26 DEC 2022	MELFORT 28 DEC 2022	MOOSE JAW 18 DEC 2022	MOOSE MOI 3 JAN 2023	MORSE 14 DEC 2022	NEILBU 18 DEC
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			с									35	
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5 2	2 3	3 4	7	2	4	5 7	4	3 0	2 0	6 0	2 0	7 0	2 0
1	0	0	1	0	0	1	0	0	0	0	0	1	0
3	0	0	1	0	0	1	2	0	0	1	0	1	0
11	5	7	10	4	6	14	6	3	2	7	2	9	2
					SI	JMME	D 201			- 81 2	BII		V 25

SUMMER 2023 VOLUME 81.2 BLUE JAY 25

SPECIES	NICOLLE FLATS 15 DEC. 2022	NIPAWIN 21 DEC 2022	NISBET FOREST NORTHWEST 26 DEC 2022	NISBET FOREST WEST 31 DEC 2022	ODESSA 26 DEC 2022	OUTLOOK 2 JAN 2023	PANGMAN 5 JAN 2023	PIKE LAKE 2 JAN 2023	PRINCE ALBERT 18 DEC 2022	PRINCE ALBERT N.P. 21 DEC 2022	QU'APPELLE 31 DEC 2022	QU'APPELLE DAM 18 DEC 2022	REGINA 27 DEC 2022	ROSCOMMON S.D. 4 JAN 2023	ROSETOWN 16 DEC 2022	ROSTHERN 4 JAN 2023	ROULEAU 18 DEC 2022	ROUND LAKE (Q.V.) 30 DEC 2022	SALTCOATS 18 DEC 2022	SASKATCHEWAN LANDING P.P. 20 dec 2022	SASKATCHEWAN RIVER FORKS 17 DEC 2022
Shrew species			t																		
Eastern Cottontail																					
Nuttall's Cottontail	t										t	2								2	
Snowshoe Hare	t	t						t	t	t	1			6		t					t
White-tailed Jack Rabbit		t			2			1	m				136	2	3		17			t	
Richardson's Ground Squirre			С																	1	
Eastern Grey Squirrel													12								
Eastern Fox Squirrel American Red Squirrel	3				2	1					9		122	6				2			
		3		6				24	51	18				2		2	с	6	1		5
Northern Flying-Squirrel Northern Pocket Gopher																					
American Beaver																					
Deer Mouse			L																		
Muskrat	t										t										
Gapper's Red-Backed Vole													2								
Meadow Vole											c										
Vole species	t		-										1								
Norway Rat		t	t							t	t		1								
House Mouse													2								
Mouse species			t						t	t			Z	t	t					t	
American Porcupine	4		Ľ	с	1	1		2	c	Ľ	2	3	2	3	Ľ	2				2	t
Coyote	6		с	, C	3	1		3	2	1	4	4	32	3	3	t	4	2	6	9	t
Gray Wolf	Ū				J	-		J	t	t	-		JZ	5	J			2	0	5	
Red Fox	2	t	с	3	2			1	1	t	2		1	2		t	1		6	1	2
Raccoon	_			Ū	-			-	-		_		-	m			_			_	_
American Marten			с							1											t
Fisher																					
Ermine										t	t										
Long-tailed Weasel											t										
Least Weasel	1																				
Weasel species	t	t						t		t			t								
American Mink	t									t											
Wolverine				1																	
American Badger					2									d							
Striped Skunk					2				s					t							
River Otter									t	t											
Canada Lynx																					
Mule Deer	81				25	8	23	17	27		5	13	6	10		с	82	3		14	3
White-tailed Deer	30	22	t	с	25		2	34	5		33	59	23	49	25	с	20	23	10	56	t
Deer species							5	1	t	t											
Moose					2			2			с	2		6		t		1			
Elk										13						с					t
Pronghorn TOTALS SEEN/HEARD							30					43			56						
ON COUNT DAY TOTAL SPECIES SEEN/HEARD	127 7	25	0	10	66	11	60	85	86	33	56	126 7	339	89 10	87	4	124	37	23	85	10
TOTAL SPECIES	6	2	0	3	10 0	4 0	3	8	5	4	7	0	11 1	10	4	2	5	6 0	4	7	3
RECORDED BY TRACKS	0	0	4	0	0	0	0	0	2	° 0	0	0	0	2	0	4	0	0	0	2	0
OTHERWISE RECORDED SPECIES RECORDED	0	0	4	2	0	0	0	0	1	0	2	0	0	0	0	3	1	0	0	0	0
COUNT PERIOD TOTAL SPECIES	12	8	9	5	10	4	3	10	12	12	13	7	12	14	5	9	6	6	4	9	9
COUNT PERIOD AND DAY		0			10	4	- 3	10		12	12		12	14					4		y

SPECIES	SASKATOON 26 DEC 2022	SHELL LAKE 17 DEC 2022	SNOWDEN 5 JAN 2023	SOUTH LADY LAKE 20 DEC 2022	SPINNEY HILL 4 JAN 2023	SWIFT CURRENT 15 DEC 2022	THICKWOOD-SPIRITWOOD 1 JAN 2023	TORCH RIVER VALLEY 23 DEC 2022	TURTLEFORD 28 DEC 2022	VAL MARIE 19 DEC 2022	WAT ROUS 2 JAN 2023	WEYBURN 2 JAN 2023	WHITE BEAR 3 JAN 2023	WHITEWOOD 28 DEC 2022	WINGARD 29 DEC 2022	YOUNG 14 DEC 2022	# INDIVIDUALS SEEN/HEARD COUNT DAY	# COUNTS SEEN/HEARD	# COUNTS RECORDED AS TRACKS	# COUNTS RECORDEDAS OTHER	# COUNTS COUNT PERIOD	# COUNTS COUNT PERIOD & COUNT DAY
Shrew species																	0	0	1	0	0	1
Eastern Cottontail																	6	1	0	0	0	1
Nuttall's Cottontail						1					t		с			t	26	8	5	0	3	16
Snowshoe Hare			t	t			t	t	t		t			t			21	6	28	0	0	34
White-tailed Jack Rabbit	23					7				1		9	4	1		2	260	24	8	1	0	3
Richardson's Ground Squirre																	2	2	0	0	1	:
Eastern Grey Squirrel						13											25	2	0	0	0	
Eastern Fox Squirrel											1	17		5			229	20	1	0	0	2
American Red Squirrel	11	17	3				2	11	6					11	2		290	41	1	0	1	4
Northern Flying-Squirrel																	3	2	0	0	0	
Northern Pocket Gopher									d								0	0	0	1	0	
American Beaver	d						L		L								1	1	0	6	1	
Deer Mouse																	1	1	3	0	0	
Muskrat	t																2	1	1	0	0	
Gapper's Red-Backed Vole																	1	1	0	0	1	
Meadow Vole														1			2	2	1	0	0	
Vole species							t		1								3	3	11	0	0	1
Norway Rat																	0	0	0	0	1	
House Mouse																	2	1	0	0	0	
Mouse species			t					t					t				0	0	17	0	0	1
American Porcupine	2				1		t			1			3			2	54	29	5	0	4	3
Coyote	6	4		3		2	2	1	4	3	1	4	9	6		2	256	56	6	0	1	6
Gray Wolf					1			t						2			3	2	4	0	1	
Red Fox	t	2		1				2	4		1		2				66	32	14	0	1	4
Raccoon																	3	1	0	1	1	
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Wolverine																	1	1	0	0	0	
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Striped Skunk																	2	1	1	4	0	
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SUMMER 2023 VOLUME 81.2 BLUE JAY 27



SPRING MEET

Kindersley, SK June 16-18, 2023

Suggested

Accommodations:

Kindersley Inn

601 - 11 Avenue East

1-306-463-6555

*Group block reserved under NatureSask until

June 1, and includes

discounted room rate

Friday, June 16

- **6:30 p.m.** Registration at the Kindersley Inn Refreshments will be available; coffee, tea, baking
- 7:30 p.m. Rattlesnakes talk by James Sifert Elementary Science teacher, Leader, SK
- 8:15 p.m. Brief overview of Saturday's itinerary
- Saturday, June 17
- 7:45 a.m. Board the bus at the Kindersley Inn
- 8:00 a.m. Leave for the Meyers Nature Sanctuary outside of Leader to do a bio blitz
- Lunch Bagged lunch sandwiches, beverages, etc.
- Afternoon Touring Sagebrush Studios and the Estuary Ferry area
- 3:00 p.m. Board the bus to return to Kindersley Inn
- 5:00 p.m. Cocktails
- 6:00 p.m. Banquet
- **7:00 p.m.** Presentation by 2021 Graduate Student Scholarship Recipient Mercy Harris

Wetland conservation is for the birds: GPS tracking and diet analysis reveal the importance of wetlands for prairie swallows

Sunday, June 18

- 8:30 a.m. Breakfast buffet at the Kindersley Inn
- **9:00 a.m.** Annual General Meeting

206-1860 Lorne Street Regina, SK S4P 2L7 306-780-9273 or 1-800-667-4668 Email: info@naturesask.ca website: www.naturesask.ca



Registration Form

Name(s)	
Address	
Phone #	
E-mail	

Spring Meet Fees *Includes sn

Saturday and breakfast Se

Early Registration (up to May 31)

Member: **\$140.00** Non-Member: **\$165.00***

*Non-Member registration includes an electron

Any food allergies or dietary needs? Yes

If yes, please describe: _____

Member Registration: \$140.00 (early)/ \$155.0

Member Registration: \$165.00 (early)/ \$180.0

All prices include GST Pay by cheque (

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> 206-1860 Lorne Street Regina, SK S Email: info@naturesask

SPRING MEET Kindersley, SK June 16-18, 2023

acks Friday night, bagged lunch and banquet on unday morning before the AGM*
Late Registration (June 1 and on) Member: \$155.00 Non-Member: \$180.00*
ic membership for the remainder of 2023.
No
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STEWARDS OF SASKATCHEWAN PROGRAMS WELCOME SUMMER STAFF FOR 2023

Each summer, the Stewards of Saskatchewan (SOS) staff are busy connecting with land stewards, surveying for species at risk, and promoting awareness of our disappearing prairie parkland landscapes and their biological diversity. This work is supported by hard working summer staff and, in 2023, we are pleased to welcome Amy Bailey, Nathaniel Hak, Justin J. Kentel, Brandon Melnechenko, Danica Nasedkin, Grace Pidborchynski, and Elisabeth Walker to the SOS team.

Amy Bailey, Search and Monitoring Crew Member (Rare Plant Rescue Program)

Amy grew up in the rural community of Alida, Saskatchewan (RM No. 32). Her interest in nature started early on as she spent many hours as a child exploring the land on her family's farm. She and her family spent many summers camping at various locations across Canada, where her passion for all things plant and animal grew. In the summer months, Amy spends her spare time exploring as much of Saskatchewan as possible through activities such as backroad exploration, hiking, and backpacking. When she's not outdoors, Amy enjoys getting lost in a good book, baking, drawing, and occasionally painting. Amy is currently a student in the Integrated Resource Management Program at Saskatchewan Polytechnic in Prince Albert. She has enjoyed all her classes so far; however, she has found that her strongest interests are Botany and Conservation Ecology. She is beyond excited to join Nature Saskatchewan this summer and is looking forward to contributing to the protection and conservation of rare plants in Saskatchewan.

Nathaniel Hak, Habitat Stewardship Assistant (Bird Species at Risk Programs)

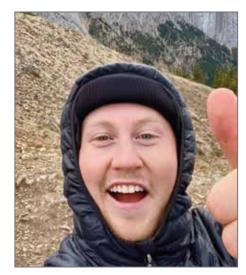
I was born and raised in Regina, Saskatchewan, and have been spending time outdoors for as long as I can remember, having grown up camping, fishing, hunting, and hiking. My passion for the outdoors, and the wildlife that inhabit our ecosystems, began at an early age; my favourite shows to watch growing up were BBC Earth documentaries featuring David Attenborough, and I always enjoyed spending time with my dad while he was working in the field (he also works in conservation). This spring, I am graduating from Lakeland College in Vermilion, Alberta, with a diploma in Environmental Sciences, majoring in Wildlife and Fisheries Conservation. I loved being able to learn hands-on skills and techniques out in the field throughout my time at Lakeland. This fall, I will be continuing into a Bachelor of Science in Environmental Biology at the University of Regina. I am very excited to be working with Nature Saskatchewan, and for the opportunity to do my part to help protect our species at risk!

Justin J. Kentel, Search and Monitoring Crew Member (Rare Plant Rescue Program)

I am a second/third year major in environmental sciences at Mount Royal University, hoping to pursue a PhD in conservation and biodiversity. Throughout my life I have always been intrigued by the natural world. As a kid, Zoboomafoo was my favourite television show and now I watch all the BBC and other wildlife documentaries. I love learning about new plants and animals and the importance of biodiversity. School and these shows really inspired me to get into wildlife photography so I can learn species identification of plants and animals in my own time as well. Camping, hiking, kayaking, biking, snowboarding and other outdoor activities are also a big part of where my passion for the environment stems from. My hobbies have taken me all over the place. Tenting in Tofino for surfing and backpacking the Jasper Skyline Trail are probably the two most influential trips I have ever been on. This opportunity with Nature Saskatchewan is super exciting for me. I am ready to make my way into the field to learn even more and to teach others about the importance of conservation and biodiversity.







Brandon Melne While Brand on the family fa Jan Lake SK ins

While Brandon was born and raised in Regina, he also spent lots of time helping out on the family farm in southeastern Saskatchewan. Growing up, summer fishing trips to Jan Lake, SK instilled a love for spending time outside and enjoying the diverse beauty that the province has to offer. Currently finishing the Wildlife and Fisheries Conservation program at Lakeland College in Vermilion, Alberta has only added to his passion and piqued a higher interest in the world of plants, fish, wildlife, and all the unique habitats they encompass. During the summers, Brandon spends his time fishing, gardening, golfing, and doing anything that keeps him busy outdoors. In the winters, he makes the best of the cold weather by ice fishing and playing recreational hockey and can find time in any season to make his guitar sing. He is eager to learn as much as he can about the ecology and biodiversity of the environment around him by furthering studies in Environmental Biology at the University of Regina this fall. Brandon is more than excited to join Nature Saskatchewan in an effort to conserve and positively impact the stunning province he loves to call home.

Danica Nasedkin, Search and Monitoring Crew Member (Rare Plant Rescue Program)

Danica grew up Grande Prairie, Alberta, walking in the rain to count worms, chasing butterflies and spiders, and developing a strong sense of curiosity for anything outside. Since then, she has gone on to expand her world beyond her backyard, exploring Alberta's southern Rockies and even making her way up to the Yukon. She still spends much of her time outside: admiring all manners of unseen creatures, with a special affinity to mosses and moths. Danica is studying conservation at the University of Alberta, enjoying the chance to learn more about the natural world! In her spare time, she's always looking for new hobbies and skills to acquire like rock climbing, running, and knitting. Danica is very excited to have the opportunity to work with Nature Saskatchewan and local stewards this summer, with the bonus of experiencing a new part of the beautiful Canadian Prairies!

Grace Pidborchynski, Habitat Stewardship Assistant (Rare Plant Rescue Program)

Grace is a recent graduate from the University of Manitoba, where she completed a science degree with a major in biological sciences. Her favourite classes were ones where conservation and wildlife interactions were discussed, which lead her to pursue a concentration in ecology and environmental biology. Although she attended school in the city of Winnipeg, she grew up in a small farm town in southwest Manitoba. This gave her an appreciation of the prairie habitat and diversity of all the species that make up the vast ecosystem. Her favourite place to be is outdoors, where she can be found cross-country skiing, fishing, or finding new places to explore. Grace has a particular interest in species at risk and strives to help protect and conserve their habitats. She is very excited to join Nature Saskatchewan and get the opportunity to promote awareness about the unique and rare plants that are found in the diverse Saskatchewan landscape.

Elisabeth Walker, Habitat Stewardship Assistant (Bird Species at Risk Programs)

Elisabeth is excited to join the Nature Saskatchewan team as a Habitat Stewardship Assistant for the 2023 summer season. Having recently completed a Land Stewardship and Conservation diploma at Lakeland College, she looks forward to sharing her knowledge and passion for the prairies. Originally from Saskatoon, Elisabeth seized any opportunity for outdoor adventures. She was part of Girl Guides of Canada, the voyager canoe club, and WILD Outside (both as a participant and volunteer). She completed the Outdoor School Program through Saskatoon Public Schools as a high school student in 2019. During her semester in the program, her appreciation and understanding of Saskatchewan's diverse ecoregions deepened. She has worked a few summers as a biodiversity research technician at TroutReach and is eager to expand her field skills and expertise. Elisabeth enjoys canoeing, gardening, and exploring new campsites with her partner, family, and friends in her spare time. She also loves to cuddle with her cat!



Brandon Melnechenko, Search and Monitoring Crew Member (Rare Plant Rescue Program)

MAMMALS IN NORTH AMERICA FROM ARCTIC OCEAN TO TROPICAL RAINFOREST WILDLIFE ADVENTURE STORIES AND TECHNICAL GUIDE

ROBERT E. WRIGLEY. 2022 REPRINT. PRINT MY BOOK. ISBN: 0920534333. \$54 (INCLUDES SHIPPING) FROM ROBERTWRIGLEY@MYMTS.NET

Rob Warnock Regina, SK warnockr@myaccess.ca

Robert E. Wrigley's Mammals in North America was first published in 1986 (now out of print) and reprinted in 2022. For this review of the reprinted title, I obtained a copy of the 1986 book from the public library to compare the two versions. The only differences between the reprinted book and the original are that the reprint is a softcover while the original was a hardcover; minor cosmetic changes were made to the front and back covers; and new photos and updated information are provided for the author and the artist.

I recommend readers review the introduction first. It is where the author provides a brief overview of the geologic, paleontological and climate history of North America and, most importantly, the organization of the book. The book focuses on 115 of the more common and/or visible mammal species in North America, including those south of the continental United States. Most books about North American mammals focus on the U.S. and Canada only. In the checklist near the back of the book, 855 species are listed in taxonomic order.

Mammals in North America is divided into 11 vegetation-climatic 'biome' chapters that contain wildlife stories, paintings, and species accounts. Each chapter begins with a one-page description of key biome features such as vegetation communities, climatic features, and typical mammals. The 11 biomes are: cold oceans, tundra, montane forest, boreal forest, inland waters, deciduous forest, grasslands, deserts, woodlands and shrublands, tropical forest and warm oceans. Each biome contains a variety of habitats, and species included are based on the biome in which they are most historically associated. After the one-page biome summaries, a series of

From Arctic Ocean to Tropical Rainforest

MAMMALS in North America

Wildlife Adventure Stories and Technical Guide

by Robert E. Wrigley

Wildlife Paintings by Dwayne Harty

alternating one-page wildlife stories (on the left page) and corresponding wildlife paintings (on the right page) are dispersed amongst the species accounts.

The enjoyable and well-written wildlife stories highlight typical species behaviours, as well as interactions with people. Many of these wildlife stories include humorous anecdotes, such as how pesky racoons nearly ruined a field experiment by the author. The stories are paired with fantastic wildlife watercolour paintings by Saskatchewanborn wildlife and diorama artist Dwavne Harty. Sometimes, two closely associated mammal species are included in same wildlife story, such as the badger and the prairie dog, and the sea otter and the northern elephant seal. Whether the wildlife stories are based on the experiences of the author, by other people or by both, they — together with the paintings — are the main highlight of the book.

The accounts for the 115 selected mammal species include basic biology



such as size, weight and colour of both genders, distribution and status, food or diet, reproduction, and growth. Each account concludes with a remarks section. I learned numerous new things in these well-written species accounts, including that the Baird's Tapir is a true "living fossil",

the Mexican Mouse-opossum is a pest of banana and mango plantations, and that female Northern Pocket Gophers can modify the shape of their pelvic bones to allow birthing of large young. The remarks section highlights unique species adaptations and behaviours, as well as

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Nature Saskatchewan would also like to thank our many generous individual donors who contributed throughout the year.

"Bugling Elk" by Dwayne Harty

the author's experiences with the species, where applicable. Each species account also contains a continental or globalscale range map. The font size of species accounts, species checklist and suggested reading is significantly smaller than the rest of the book. While a larger font size would have made for easier reading, it would have greatly increased the page count of the book.

Because the 2022 edition of Mammals in North America is a reprint, rather than an updated edition, the species accounts, range maps and the suggested reading section are not updated. However, a lot of the basic biology information is still relevant and useful. More current information about mammal distributions. population trends, and conservation status is available to the public through other means.

I can honestly say that I really enjoyed the wildlife stories and the artwork in this book. Mammals in North America is both an educational and enjoyable read and would make a nice addition to any library. 🎜

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BEAVER CREEK, MILKWEEDS AND MONARCH BUTTERFLIES, AND THE URQUHARTS

Doug Adams

127 Avondale Road Saskatoon, SK S7H 5C6 (306) 260-4035

In September 2020, I was walking on the south side of the Discovery Trail in the Beaver Creek Conservation Area, 17 km southwest of Saskatoon, and came upon a milkweed plant nearing the end of its growing season. A clump of rust-coloured oval seeds, each still attached to the seed pod by long white silky strands, hung from a dried plant stem. Large, stiff, tan brown leaves remained firmly anchored to the resilient stalk. This was an exciting discovery! I looked around the immediate area to see if there were other milkweed plants nearby. And yes, there were three others. I excitedly snapped photos as proof of this unexpected find (Figure 1). My excitement came from knowing that this plant was definitely not part of the Beaver Creek flora in 1978, a time when I managed the Beaver Creek interpretive program.

It was one year later, in 1979, and 305 km further south and west, while working at the Prairie Wildlife Centre

near Webb, Saskatchewan that I encountered, for the first time, a milkweed plant in the province. Of the five species of milkweeds growing in Saskatchewan, it was showy milkweed (Asclepias speciosa) that found its way into my field notebook that summer. This impressive plant was easy to find in clumps along the shoulder of gravel roads with its large, fragrant, pink flowers held up by tall, thick, robust stems (Figure 2). However, the newly discovered plants at Beaver Creek were not showy milkweed but, instead, the less glamorous green milkweed (Asclepias viridiflora) with its creamy flowers (Figure 3).

Any conversation about milkweeds has to include the dwindling Monarch (Danaus plexippus) population in North America. One of the factors contributing to the decline of this butterfly is the negative effect that human disturbance, such as illegal logging, is having on its overwintering grounds. In July of 2022, the Monarch was placed on IUCN's Red List. The migratory monarch has been categorized as "endangered" and now is only two steps away from extinction.1 Local stakeholders, fighting to protect

the butterfly's winter sanctuary, have encountered an opposition willing to use deadly force. The manager of the sanctuary, who was an outspoken conservationist and a strong advocate for ecotourism, was murdered in 2020. A week later, a local tour guide for the sanctuary was attacked and killed by an unknown assailant or assailants.²

The location of the Monarch's wintering grounds near Rosario, Mexico had remained a mystery until 1975. Up until that time, Fred and Norah Urguhart — Canadian scientists living in Scarborough, Ontario — had spent 30 years trying to prove that Ontario's Monarchs, having just emerged from their chrysalises in August or September, were leaving Ontario for a mild winter hideaway somewhere in the deep south (Figure 4).³ The Urquharts enlisted the services of another married couple, Ken and Cathy Brugger, to track the Monarch's migratory flight in Mexico. Two years went by and then, in January of 1975, Fred received a phone call from their assistants in Mexico. They had found them — millions upon millions of Monarchs clinging tenaciously to trees in

FIGURE 1. Green milkweed pod at Beaver Creek. Photo credit: Doug Adams

FIGURE 2. Showy milkweed flowers. Photo credit: Doug Adams.



FIGURE 3. Green milkweed. Photo used with permission of Glen Lee of Regina, SK.

a secluded, moist and cool mountainous location in central Mexico. It took the world yet another 32 years to realize the importance of this Mexican butterfly retreat when it was finally designated a UNESCO World Heritage site in 2008.

One big question still remained, however. Of the millions of butterflies showing up in Mexico, were any of them from central Canada, or northcentral United States? It seems fitting that it was Fred himself who was able to partially answer the question. While visiting the wintering grounds for the first time in 1976, he spotted an individual butterfly, amongst the throngs of butterflies, that bore one of his identification tags from Minnesota. In 1986, history was made when the very first tagged butterfly from Ontario was found at its wintering roost at Sierra Chincua, Mexico. It had been tagged by Don Davis from Brighton, Ontario on

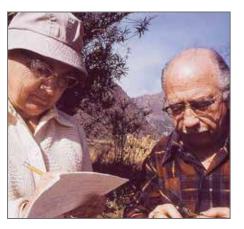


FIGURE 4. Fred and Nora Urguhart Photo used with permission of Robin Urguhart.

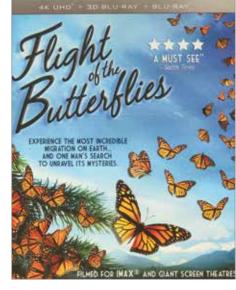


FIGURE 5. Photo used with permission of Poster Design by Key Art+ Design Inc.

4 September 1985 and was found on 18 February 1986, some 3,520 km away. During their three decades of searching for an answer, the Urguharts enlisted thousands of citizen-scientists throughout Canada and the United States to help them on what they called the "Great Butterfly Hunt". These volunteers were trained to apply identification tags that were glued to the butterfly's wing. The idea that insects could be tagged like this was a world first.

The story of the Urguhart's 30-year search for the "greatest natural history find for their times" was brought to the IMAX movie screen in the documentary film Flight of the Butterflies. The casting



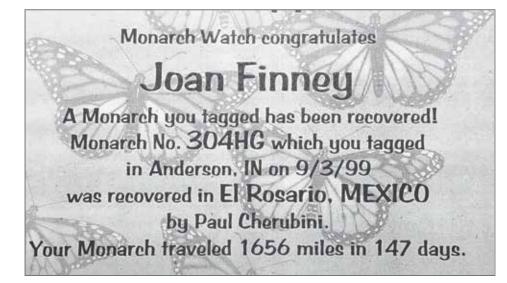


FIGURE 6. The author's Aunt Joan Photo provided by James Adams

agent for the production managed to find a famous Canadian actor, Gordon Pinsent, to play the role of the famous Canadian scientist Dr. Fred Urguhart (Figure 5). The notes made by the Urquharts during their three decades of butterfly hunting served as one of the key sources of information used in the writing of the script. The same notes have been made accessible to the public on the Monarch Watch website.⁴ Monarch Watch is a not-for-profit education, conservation, and research program based at the University of Kansas that focuses on the Monarch, its habitat, and its spectacular spring and fall migrations.

According to the Monarch Watch website, the search for more information about the amazing journey of this magnificent butterfly continues to this day. My aunt Joan was a citizen-scientist before her passing in 2011 (Figure 6). She lived in Anderson, Indiana where she tagged 408 adult Monarchs in 1999 and 2000. Of those 408, five were recovered at El Rosario, one of the wintering locations in central Mexico. She received a certificate, issued by the Monarch Watch organization, detailing the date and location where one of her tagged butterflies was found, along with the name of the person who found it and the distance it had migrated (Figure 7).

There is interesting research on the interrelationship of the Monarch to milkweed plants right here in Saskatchewan. Christina Borring-Olsen, in her 2017 master thesis, Assessing the

FIGURE 7. A certificate, issued by the Monarch Watch organization, detailing the date and location where one of Aunt Joan's tagged butterflies was found. Photo credit: Doug Adams.

Distribution and Ecology of Showy Milkweed to Support Restoration and Conservation of Monarch Habitat in Saskatchewan, found that the northern range of the Showy Milkweed had reached the Dundurn area, only 25 km south and east of Beaver Creek.⁵ Based on plant specimens in the University of Saskatchewan's W.P. Fraser Herbarium, showy milkweed plants have been seen in the Dundurn area on three previous occasions: 1932, 1933, and then not again until 1961.

On 5 July 2019, just two years after Ms. Borring-Olsen's findings, Anna Leighton, naturalist and author, stumbled across a patch of individuals in full bloom at the Cranberry Flats Conservation Area, 5.3 km north of Beaver Creek (Figure 8). However, the title of "most northern location" for this species in Saskatchewan goes to the village of Kinley where, in 1948, a plant was collected from saline soil by R. C. Russell. According to Google Maps, Kinley is just 4.47 km further north than Cranberry Flats, but also 55 km further west. The question now is whether the showy milkweed will become a widespread resident in the Cranberry Flats part of the South Saskatchewan River valley. Let the "showy milkweed watch" begin.

Dr. Anurag Agrawal of Cornell University has recently published some fascinating information on the behaviour of Monarch caterpillars feeding on their milkweed plant hosts. Running alongside, but completely separate from the conducting tissue in the milkweed plant, is a system of canals, called laticifers, which transport the milky sap containing the dissolved chemical toxins. When a canal is breached, as it would be by a feeding herbivore, a large volume of sap suddenly pours out of the damaged vessel. The initial flow of sap may be enough to wash a small intruder away, like a tiny Monarch caterpillar. According to Dr. Agrawal, the hungry caterpillar avoids the outpouring of the milky sap by severing veins in a leaf allowing the sap to spurt out. The caterpillar then moves downstream from the now empty vein, and begins feeding on surrounding leaf tissue unhindered by any milky sap.

This larval behavior is true for all Monarch caterpillars feeding on any one of the five species of milkweeds in Saskatchewan, including the green milkweed of Beaver Creek.

Who will be the first in the province to witness this remarkable act of food procurement?



Acknowledgements

I need to thank Chip Taylor, Director of Monarch Watch, for making the writing of this article possible. Mr. Taylor provided my aunt's tagging/recovery information as well as the historical facts regarding the Monarch butterfly tagged by Don Davis. I'd also like to thank Dr. Anurag Agrawal of Cornell University, author of the authoritative book on the milkweed and Monarch butterfly interaction: Monarchs and Milkweed, for answering questions and providing details for this paper. Anna Leighton was extremely helpful when it came to getting all of my facts straight; not only that but her find at Cranberry Flats ensured that my reporting on the showy milkweed was as up to date as possible. A word of thanks goes out to Denver Falconer, technician for the W. P. Fraser Herbarium, for helping me to access Showy Milkweed plant specimens in the collection. And the final person I must thank is Annie McLeod, Blue Jay editor. I dragged her through hell and back but yet she never gave up on me.

1. Monarch butterflies added to international list of threatened species. https://www.cbc.ca/news/ science/monarch-endangered-international-redlist-1.6527309

2. Mexican community in mourning after 2 beloved butterfly conservationists killed.

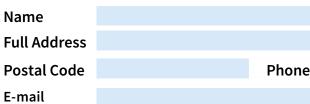
https://www.cbc.ca/radio/asithappens/ as-it-happens-monday-edition-1.5449985/ mexican-community-in-mourning-after-2-beloved-butterfly-conservationistskilled-1.5451465

3. Frederick Urquhart – A Short Biography. https://urquhartbutterfly.com/about/frederickurquhart-a-short-biography/

4. Insect Migration Studies Newsletter - Fred & Norah Urquhart. https://www.monarchwatch. org/read/articles/index.htm

5. Christina Borring-Olsen, master thesis, "Assessing the Distribution and Ecology of Showy Milkweed to Support Restoration and Conservation of Monarch Habitat in Saskatchewan", 2017 School of Environment and Sustainability, University of Saskatchewan.

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NATURE SASKATCHEWAN AWARDS:

Each year at the Fall Meet, Nature Saskatchewan recognizes outstanding service and contributions that Society members, and/or affiliate and partner organizations have made towards Nature Saskatchewan's objectives and goals.

Clear criteria have been established in terms of purpose, eligibility, and nomination procedure. This year, we are seeking nominations for three classes of awards - Volunteer Recognition Award, Fellows Award, and **Conservation Award**.

The Volunteer Recognition Award and Conservation Award can be conferred on the same individual or organization more than once.

The Cliff Shaw Award will also be presented at the Fall Meet. The recipient is chosen by the Blue Jay editor.

Local societies throughout Saskatchewan play an important role in furthering conservation and appreciation of nature at the local level. There are always those who step up to the plate to organize meetings and outings, go the extra mile to help others connect with nature, or work silently and tirelessly behind the scenes. It's time those contributions were recognized. We encourage anyone from a local society to consider nominating someone from your local group who is a Nature Saskatchewan member, who deserves recognition for any of these awards. Note that nominees for the Volunteer **Recognition Award and Fellows Award** must hold a current membership with Nature Saskatchewan.

Nomination Procedure

The nomination procedure is the same for all three awards. The criteria and names of past recipients can be found on the website at www.naturesask. ca/what-we-do/awards. The office can also send a copy by mail, if you prefer.

- · Nominations can be made by Nature Saskatchewan members, directors, and staff. Local societies should consider nominating someone from their local group.
- · Self-nominations will not be accepted. • Nominations are to be made in writing and submitted by the published
- deadline. • Nominations are to include the following information: the nominee's name, address, and phone number; the nominator's name and contact information; Details of the nominee's efforts.
- · The Awards Committee will independently rate the nominations, and confirm that the nominee holds a current membership with Nature Saskatchewan.
- · Chairperson of the Awards Committee will bring the recommendations to the Board.

· If ratified, the President or his/her delegate shall confer the respective Awards to the recipients at the Fall Meet.

The deadline to submit nominations for awards is August 25, 2023.

- All Nature Saskatchewan Awards consist of the following:
- · The announcement of the recipient's name at the Fall Meet.
- The presentation of a certificate recognizing the contribution.
- · An announcement in Blue Jay recognizing the distinction.

VOLUNTEER **RECOGNITION AWARD**

This award was created in 1996 to acknowledge an individual Nature Saskatchewan member who has devoted significant time and energy to promoting the objectives of the Society, including contributions made at the local society level. Priority for this award will be given to a Nature Saskatchewan member whose volunteer work has helped to enhance the public awareness of the Society (this may include contributions to a Society conservation project or program). It may be appropriate in some years to have this award shared by more than one person, if they have worked together on the same project, or on closely related projects.

Eligibility

Nature Saskatchewan members who have provided valuable time and effort in contributing to the Society are eligible. Local societies are encouraged to nominate someone from their local group who is a Nature Saskatchewan member, recognizing that Nature Saskatchewan values their contributions to the overall goals of the Society. The nominee must be a current member of Nature Saskatchewan. This award can be conferred on the same person more than once.

POETRY

Sunsets!

vast - bold changing - living - stunning clouds - shadows - peaceful - gentle captivating - reflecting - inspiring awesome - chromatic Sunsets

> Brian K Jefferv 5800 4th Avenue Regina, SK S4T 0K3

CALL FOR NOMINATIONS

CONSERVATION AWARD

Saskatchewan."

Eligibility

in Saskatchewan.

than once.

A motion was passed at the 1987 Annual General Meeting creating a new class of honorary membership entitled "Fellows of the Saskatchewan Natural History Society". This award recognizes an extensive and continuing contribution of time over many years to the Society and its objectives. Up to five recipients may be chosen annually. Once selected, Fellows hold that title as long as they remain members of the Society. It is the highest honour the Society can bestow upon a member.

FELLOWS AWARD

Eligibility

Eligible individuals are members of Nature Saskatchewan who have provided an outstanding time and work contribution to the Society over many years. These contributions have been significant, and may have come in the form of leadership, communication, authorship, social media outreach, research, and other areas. The contributions have been cumulative or ongoing, and represent long-standing service or commitment to Nature Saskatchewan and its objectives.

CALL FOR RESOLUTIONS

The resolutions considered during the Business Meeting at each year's Fall Meet are important expressions of member concerns on environmental issues. The Nature Saskatchewan Board of Directors is responsible for acting on all resolutions that are passed by the members. This includes sending resolutions directly to the responsible government ministry and pursuing further action and/or meetings with government and others, as deemed appropriate.

Anyone wishing to submit a resolution for consideration at the 2023 Business Meeting, is asked to send a written draft to the Nature Saskatchewan Office (info@naturesask.ca) no later than Friday, August 18, 2023. This provides an opportunity to receive feedback from members of the resolutions committee that can help to improve your resolution. It also helps us prepare for the meeting.

Please note that resolutions not submitted to the Nature Saskatchewan office by 5 p.m. on Friday, September 8, 2023 will be considered only with the agreement of a two-thirds majority of those attending the business meeting.

Resolution Guidelines:

- society's mandate, bylaws and goals. 2. All resolutions must be submitted in writing.
- 3. A resolution is, essentially, an exercise in communication. Simple, clear language and focus on one topic or issue is most effective.
- in "Whereas" statements must be accurate and factual.
- one page, and preferably less.

In addition to advocacy and other forms of conservation action, it is important that Nature Saskatchewan recognize, as it has done since 1953, those both within and beyond the organization who have done "meritorious work in the interest of conservation in

Nature Saskatchewan's Conservation Award will be presented to an individual or organization whose total contribution to conservation is outstanding, whether in relation to a particular project or in a number of roles over a period of years.

Individuals, affiliate and/or partner organizations, not-for-profit associations, institutions, community groups, businesses, government and nongovernment organizations that have contributed significantly to conservation

This award can be conferred on the same individual or organization more

1. Resolutions must be in keeping with the

4. Supporting information presented

5. Resolutions should be no longer than

POETRY

The Order of Things

A scenario this morning in the Qu'Appelle Valley strikingly like one last seen on the Strait of Juan De Fuca.

In the valley, a deer carcass by Lumsden, strewn about. Ravens and magpies working, until an eagle swooped in.

Years ago, at the strait, a small rocky island, a few fish carcasses. And another, maybe a seal.

Ravens, magpies, gulls working. Bickering, lunging, all show. All sharing the bounty, until an eagle swooped in.

Diverse settings, the same story. Clever ravens, magpies, gulls, make way undisputed for the one who flies highest.

The great beak, fearsome talons. Most daunting though of all, eves of powerful, blazing, vellow and black fire.

> **George Grassick** Box 205 Lumsden, SK SOG 3C0 ggrassick@sasktel.net

A CONSPIRACY OF CHICKENS DAVID WALTNER-TOEWS. NOVEMBER 2022. WOLSAK AND WYNN PUBLISHERS. ISBN: 9781989496619. \$22.

Joel Cherry

Regina, SK joeldcherry@gmail.com

At first blush, a review of a book about backyard chicken-raising may seem an odd fit for a nature journal. Domestic

chickens more than any other bird are representative of a global civilization that has run roughshod over the natural world. In fact, these descendants of the Red Junglefowl now collectively outweigh all other birds on earth combined, and at any one time may outnumber humans

A CONSPIRACY OF CHICKEN A MEMDIR DAVID WALTNER-TDEWS

three-to-one. What could these frankly somewhat silly birds teach us about nature and our place in it?

In his memoir A Conspiracy of Chickens, David Waltner-Toews weaves his experience raising hens at his home in Kitchener, Ontario together with the history and biology of chickens to tell a personal story that is equal parts humorous and profound.

The author's foray into chicken-rearing began on his 70th birthday when, to his surprise, his wife gave him seven chicks as a gift. After a quick rundown of the local rules — no roosters, no selling, no slaughtering onsite — his first task is to build a proper coop for Nettie, Winnie, Frannie, Elfrieda, Ruby, Katie and Renie.

Waltner-Toews' efforts to house, feed and generally keep his "girls" alive is one side of the coin for A Conspiracy of Chickens. Doing so requires close monitoring and an understanding of the local climate and ecology of his yard. In the first part of the book, this specifically means contending with cold late spring conditions, as well as proofing against potential predators and "pests" such as rats and raccoons. As I write, the temperature in Regina is -20 C, bitterly cold for early April, and the raptors are beginning to return to their breeding territory. For me, the cold is an inconvenience, and the hawks and falcons are a welcome sight, but both would present mortal danger to hens. Understanding the local environment is mildly useful for the average urban dweller, but for the chicken-rancher it is a matter of life and death.

The seven hens are named after late female relatives of Waltner-Toews and his wife, and his chicken-rearing approach is humane and compassionate without becoming overly sentimental. His relationship to the flock and frequent interactions with the birds underscore their familiar and yet alien nature. They seem to see him as a protector and yet will not hesitate to peck at or scold him to



The finished chicken coop. Photo credit: David Waltner-Toews.

get what they want. The "pecking order" among the birds becomes apparent quite early on, and there is at least one regime change during the course of the book.

Of course, the whole purpose of the endeavour is to collect eggs. The egg has been called "Nature's perfect invention," and Waltner-Toews' tale of being deathly allergic to eggs for 15 years earlier in life underscores how universal the use of eggs is. Not only is it a perfect food in its own right, eggs are used as emulsifiers in a wide range of products, and egg proteins are even used in the production of many vaccines. Waltner-Toews has no intention of eating his "girls" — he muses about the strangeness of potentially eating a bird named after his mother — so much of the chicken business has to do with making sure his hens produce good-quality eggs on a regular basis during the productive part of their lives, which after some fits and starts, they do.

Beyond Waltner-Toews' backyard (and breakfast plate), A Conspiracy of Chickens is a story of the big and the small, from the literally microscopic to the global. He is uniquely equipped for this eclectic approach — a distinguished veterinarian (receiving his veterinary doctorate

from the University of Saskatchewan, in fact) and epidemiologist with indepth knowledge of bacteria and other microorganisms. His work has taken him around the world, including to southeast Asia where he worked closely with smallscale farmers well before undertaking some small-scale agriculture of his own. Waltner-Toews' knowledge yields lots of interesting facts — how does a rooster crow as loudly as a jet engine without deafening itself? Why do some chicken eggs and yolks have different colours? How did the humble chicken and its eggs come to dominate global cuisine? Everything from poetry to recipes can be found throughout the book, making for a fun and varied read. The section of the book on "Zodiac ecology," which devotes brief chapters to each of the animals from the Chinese Zodiac, was clever if perhaps a little forced. In addition to the crash course on chickens, readers will learn a few new things about everything from dogs to pigs in any case.

Although the book features hens and chicken-raising, it is also a human story. Ten years into retirement and with his children and grandchildren living in the United States and Australia,



The chickens in the yard Photo credit: David Waltner-Toews

Waltner-Toews finds himself musing on mortality and considering how to spend his remaining years. The gift of chickens in the end deepens his link to the great rhythms of the world, and helps him to embrace his place within it. To slow down and be mindful is sound advice for any reader regardless of age or chickenownership-status.

Speaking of which, readers of A Conspiracy of Chickens may be inspired by Waltner-Toews' life-enriching experience to start eyeing up coop blueprints for their own yard. Unfortunately for those Blue Jay readers living in Saskatoon or Regina (this reviewer included), keeping hens is prohibited within city limits. This doesn't have to be the case, though — backyard hens are legal and regulated in other western Canadian cities such as Calgary, Edmonton, and Vancouver, to name a few.

Hopefully our councils will ultimately recognize that having a "sustainable" city could mean much more than just reducing carbon emissions. Additional bylaw enforcement seems a small price to pay to accommodate citizens who want to produce their own food and deepen their connection to their local ecosystems.

Joel Cherry is an avid birder, communications professional, and former journalist. He is a regular contributor to the Blue Jay. 🔎

HUMAN NATURE



Kennah Brown Grade 7 student Grant Road School, Regina

I have been fortunate to do some travelling with my family and have made some amazing memories and connections to nature in the process. One trip to British Columbia was really special, but my favourite memory in nature happened right here at home in Saskatchewan. I have so many amazing nature memories, but here are my top three favourites.

First there is the time my family visited Butchart Gardens in Victoria, BC, which was also special because I got to see my Auntie Kat who lives far away in Bogota, Colombia. Not only was I lucky to be there and see her, but my family got to enjoy the most exquisite view ever. Our walk through the garden was magical. Rows upon rows of flowers, from tulips to roses, and roses to peonies. I could never forget that special place where I stood looking over all the flowers. When I close my eyes to remember it, I can smell the blooming gardens and hear the click of my camera capturing the perfect moment.

Our trip to BC also included another special memory. My second favourite nature moment was a once in a lifetime experience. We were on the ferry leaving Salt Spring Island when suddenly everyone was running out of their cars to the top deck. I had no clue what was happening, but the captain had just made an announcement that there was a pod of orcas swimming alongside our boat. We made it to the top just in time to see five orcas cruising in the wake. That was the day I decided they were my favourite animal. It was just so beautiful watching them swim with the sunset

reflecting on the water.

My third favourite, and most special, nature memory is from a visit to my grandparents' cabin at Katepwa, Saskatchewan. My sister and I went with our four cousins to the fish dam at the south end of the lake. My aunt and uncle equipped us all with a fishing net and we set out to hike around the creek. The dam was overflowing with carp fish, spawning and flopping around like crazy. Our fun little adventure to catch minnows turned into a challenge to see if we could catch and release a carp, but no matter how hard we tried, we had no luck. My uncle eventually came to help us and we caught one! It looked so slimy, sticky and gross, and its eyes seemed to be following me! There was also a strong current flowing at the dam, and with our life jackets on we rode it like a waterslide. It was so fun! We were trying to hop from rock to rock, but they were covered in algae and seaweed. That's when we noticed we had leeches on our feet and ankles. Gross! We quickly waded through the water back to the other side and ended our little adventure.

These are all really special memories to me. Some have pushed me out of my comfort zone to experience new things and see the beauty in nature. Others are beautiful moments I can relive in my mind over and over again. I will have many more nature memories as I grow, but these will always be part of who I am.

2023 MARGARET SKEEL GRADUATE SCHOLARSHIP WINNER: KATIE HARRIS



Each year, Nature Saskatchewan awards the Margaret Skeel Graduate Student Scholarship in the amount of \$2,000 to assist a graduate student attending a post-secondary institution in Saskatchewan. The scholarship was established with the aim to stimulate research that will increase knowledge of all aspects of the natural world and human relation with nature, and to promote conservation of natural ecosystems and the sustainable use of natural resources.

In 2023, Katie Harris was chosen as the recipient of the scholarship.

I began my academic journey with the goal of working to conserve our native species and to help ensure the preservation of our environment and its resources. This goal is the basis for my research into urban wildlife biodiversity and the ways that urban sprawl and urban development are, or are not, impacting our wildlife species. This is a novel study within the City of Saskatoon, and so I will be building the wildlife databank for the city and creating the baseline of local wildlife occurrences that can be used to examine trends and patterns over long periods of time. My long-term goal is to contribute to the development of sustainable, biodiversity-friendly urban planning strategies to help ensure the conservation of our natural resources. - Katie Harris 봈

MYSTERY PHOTO





SUMMER 2023

QUESTION: What species of insect created this unique nest, which includes a tube-like extension for the entrance? The nest was photographed near Denholm, Saskatchewan, and was located about 2 metres above the ground in a dense willow bush.

Thank you to Orval Beland and Richard Kerbes for sharing this photo and information.

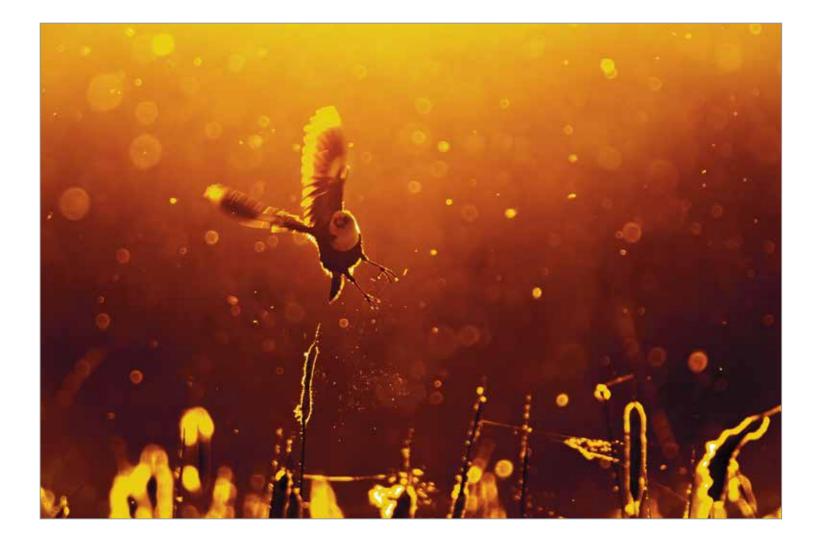
Photo credit: Richard Kerbes.

SPRING 2023

ANSWER: The butterflies shown in the picture are Canadian Tiger Swallowtails (*Papilio canadensis*). What they are doing in the photo is called "mud-puddling". Males go to wet sand or mud to get minerals that they need in order to synthesize the compounds that are used in courtship and mating. Females do not generally join these gatherings. Many other types of butterflies do this as well.

Thank you very much to scientist and naturalist John Acorn for the information on these butterflies.

Photo credit: Annie McLeod.



Nature S A S K A T C H E W A N

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