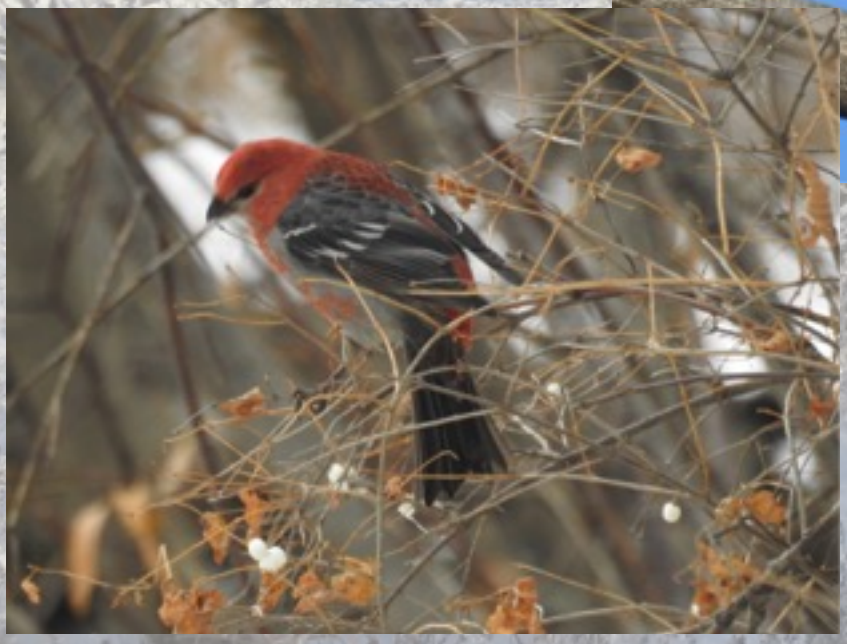
NEWSPACKET

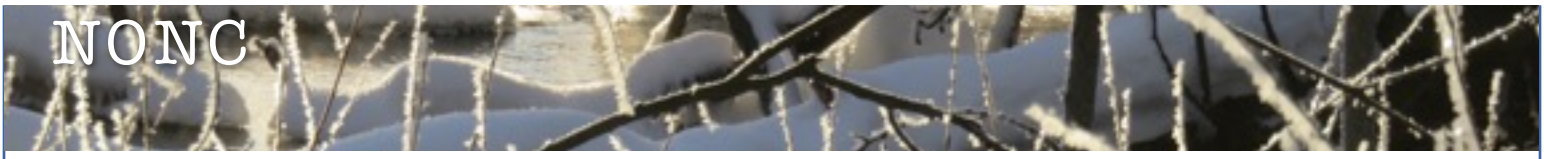
JANUARY - FEBRUARY 2018

Birds of Winter



top: American Dipper
middle: Common Redpoll
bottom: Pine Grosbeak

photos by Claire Christensen



Christmas Bird Count 2017

by Peter Blokker & Louise Breneman

WE had a successful count on December 17th, thanks to the 60 people who participated. The weather was reasonable though there were snow flurries in the afternoon, which made visibility poor. Temperature was around zero and there was light snow cover.

93 species sighted, our highest count since 2012 (see end of this report for comparisons)

American Coot	336
American Crow	225
American Dipper	1
American Goldfinch	321
American Kestrel	11
American Robin	54
American Wigeon	35
Bald Eagle	87
Barred Owl	3
Barrow's Goldeneye	7
Black-billed Magpie	336
Black-capped Chickadee	454
Bohemian Waxwing	1,130
Brewer's Blackbird	532
Brown Creeper	2
Bufflehead	57
California Gull	79
California Quail	1,028
Canada Goose	3,418
Canyon Wren	1
Cassin's Finch	22
Chestnut-backed Chickadee	2
Clark's Nutcracker	14
Common Goldeneye	31
Common Loon	9
Common Merganser	1,011
Common Raven	297
Common Redpoll	220
Cooper's Hawk	8
Dark-eyed Junco	503
Downy Woodpecker	29
Eurasian Collared Dove	608
European Starling	4,855
Evening Grosbeak	22
Gadwall	2
Glaucous Gull	1
Glaucous-winged Gull	15
Golden Eagle	5
Golden-crowned Kinglet	6
Great Blue Heron	3
Great Horned Owl	3
Greater Scaup	54
Green-winged Teal	2
Hairy Woodpecker	2
Herring Gull	108
Hooded Merganser	35
Horned Grebe	27
House Finch	547
House Sparrow	451
Lesser Scaup	1
Mallard	5,594
Marsh Wren	1
Merlin	8
Mountain Chickadee	21
Mourning Dove	160
Northern Harrier	4
Northern Saw-whet Owl	1
Northern Flicker	257
Northern Pintail	2
Northern Shoveler	2
Northern Shrike	2
Pacific Loon	1
Peregrine Falcon	1
Pied-billed Grebe	15
Pileated Woodpecker	2
Pine Grosbeak	30
Pine Siskin	26
Pygmy Nuthatch	30

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NONC

2017 CBC continued

Red Crossbill	10
Red-breasted Nuthatch	39
Redhead	201
Red-necked Grebe	9
Red-tailed Hawk	108
Red-winged Blackbird	854
Ring-billed Gull	40
Ring-necked Pheasant	69
Rock Pigeon	558
Rough-legged Hawk	16
Ruby-crowned Kinglet	1
Sharp-shinned Hawk	6
Short-eared Owl	1
Song Sparrow	124
Spotted Towhee	3
Steller's Jay	12
Thayer's Gull	2
Townsend's Solitaire	10
Trumpeter Swan	16
White-breasted Nuthatch	14
White-crowned Sparrow	5
White-throated Sparrow	7
Wild Turkey	12
Wood Duck	5
Yellow-headed Blackbird	1

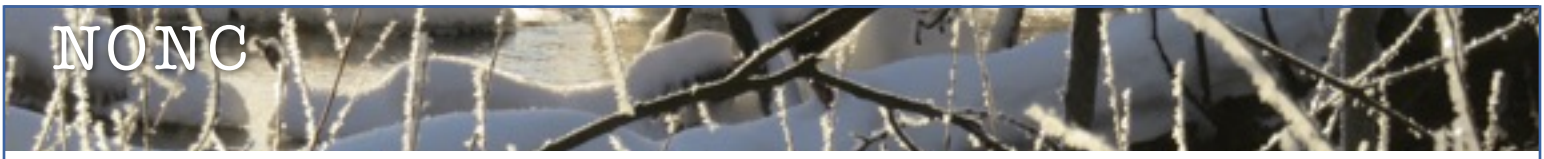
TOTAL 25,290

HIGHLIGHTS:

- One Canyon Wren sighted by Rick Bonar near Cosens Bay gate at Kal Lake was voted "Bird of the Day"
- Margaret Mackenzie's team were runners-up with one Northern Saw-Whet Owl
- Other interesting sightings: Northern Shoveler and Northern Pintail (not seen at every count), 1,011 Common Mergansers (unusually high number for the count), 12 Wild Turkeys (seem to be increasing), 1 Pacific Loon on Okanagan Lake, 3 Great Blue Herons (usually a few stay over the winter), 5 Golden Eagles, 1 Peregrine Falcon, 1 Glaucous Gull (rare gull for our count), 1 Northern Saw-whet Owl, 2 Northern Shrike, 1 Canyon Wren (voted Bird of the Day), 7 White-throated Sparrows (seem to becoming more common), 1 Yellow-headed Blackbird, 220 Common Redpolls (not seen at every count).

Past years:
2016 - 92 species and about 20,000 birds
2015 - 89 species and 20,171 birds
2014 - 90 species and 13,351 birds
2013 - 85 species and 17,456 birds
2012 - 98 species and 24,335 birds
2011 - 81 species and 16,709 birds

below: Northern Shrike seen on Christmas Count, photo by Claire Christensen



How Birds Survive the Cold: Feathers + Food = Warmth

AllAboutBirds.org
By Charles Eldermire, Bird Cams Project Leader
January 16, 2014

ON cold winter days I am always astounded that there are any birds left alive, especially considering that most winter feeder visitors weigh in around 10–25 grams (the weight of 2-5 nickels)! But it turns out that birds employ many of the same strategies I was using inside my house—plus a couple more—to keep their motors running through cold snaps.

So here's my 5-step survival guide for birds in the cold, complete with links to some fascinating research papers (or at least they were fascinating to me, back in the days when I was a graduate student researching winter survival in Montana).

1. Get some friends to hang out with

Especially if the weather is crummy. Ever notice that nearly all of the birds that hang around in the winter do so in flocks? Having other birds around makes it less likely that something will eat you; more eyes = less chance of a predator sneaking up. Plus, if something does sneak up, you only have to be faster than the guy foraging next to you! Friends are also good at letting you know where the primo food is.

2. Eat. As much as possible

Park yourself in front of a feeder, some seedy plants, or anywhere there is food (preferably the heaviest, fattiest foods possible, like black-oil sunflower and suet, yum!) and consume. If anyone gets in your way, chase them off and keep eating–unless, of course, they chase you off first. However, don't eat too much, because it also makes you slower and more likely to get eaten.

3. When you can't eat more, get puffy and rest

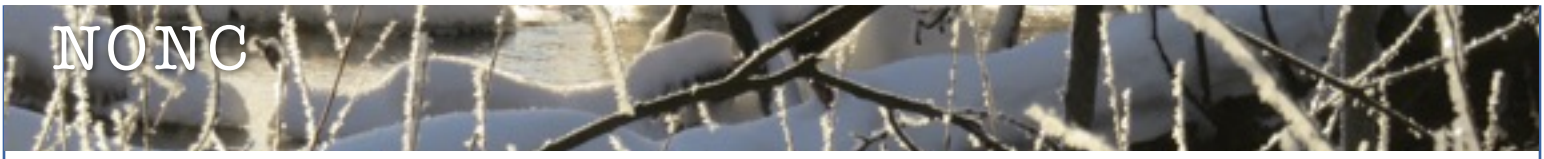
Your fluffy down feathers help complete the food + feathers = warmth equation. With food in your belly, you can use your metabolism to generate heat. Feathers, in addition to keeping cold air away from your skin, do a great job of trapping body heat instead of letting it dissipate. If you get the chance, tuck a foot or a whole leg up in there. But if you're a woodpecker–tough luck, because you don't have any down feathers.

4. Stay out of the wind

Here's an important hint: if the wind is blowing, go to the other side of the tree and avoid it. Seems simple, right? But it works–trust me (or trust Dr. Thomas Grubb and his 1977 treatise *Weather-dependent foraging behaviour of some birds in a deciduous woodland: horizontal adjustments*). And for any birders out there—you might be surprised how often you see birds doing this (whether to dodge wind or to avoid rain or hot sun) once you start looking for it.

5. Roost in a cavity

You'll never find a warmer spot to sleep than in your own down feathers, nestled in a nook small enough that you can warm it up with any extra heat that does escape. Old woodpecker cavities, crannies beneath the eaves of houses, even a tunnel in the snow… they're all warmer than spending the night (literally) out on a limb. As an additional trick, some small birds such as kinglets and chickadees can drop their body temperature and go into controlled hypothermia to save energy. 🌎



Eight Ways That Animals Survive the Winter

sciencenews.org
by Sarah Zielinski
January 22, 2014

A dip in the polar vortex brought sub-freezing temperatures to much of the United States again this week. And although this type of weather can be deadly, modern humans have largely figured out how to survive the cold, snow and dark that come with winter. We've got heated homes filled with bright lights. We bulk up with thick sweaters and down-filled coats. And if all that isn't enough, we can jet off to warm, sunny locations. Animals may not have access to Gore-Tex, but they've got lots of lessons for dealing with the wintery conditions. Here are eight methods for keeping warm and surviving winter used by the animal world (and many of us):

Take a warm soak

At Jigokudani Monkey Park in the Nagano prefecture of Japan, Japanese macaques (also known as snow monkeys) can be viewed bathing in the hot springs. The behavior is seen more often among dominant macaques than subordinate ones, researchers reported in the *American Journal of Primatology* in 2007. It's also more common in the winter than in the summer, so it's likely that the monkeys really are using the hot baths to warm up.

Migrate to warmer environs

When the temperature starts dropping outside, this method of dealing with winter begins to look more and more attractive. No wonder that so many different types of animals take this route, from birds to monarchs (and even human snowbirds). But that doesn't mean it's an easy life choice. Alpine swifts, for example, breed in Switzerland in summer, then migrate to West Africa for the winter. The birds don't necessarily stop in Africa, though. Swifts outfitted with tiny flight recorders stayed aloft for as many as 200 days, more than six months in the air without a touchdown, Jessica Shugart reported last year in *Science News*.

Hide out under the snow

It may have to be cold for it to snow, but snow acts as an insulator, keeping out the worst of the cold (which is why igloos were invented). Whole ecosystems can be found living in that space between the snow and the ground, a type of ecosystem that some ecologists last year named the subnivium. Invertebrates, small mammals, reptiles, amphibians and even birds hide out in this warmer region, living off the vegetation they find there.

Use antifreeze

Wood frogs (*Rana sylvatica*) are found across much of North America, from Georgia to Alaska. The Alaskan frogs, though, have to deal with much colder temperatures; the average January low they experience is −28° Celsius. To survive the freeze, the frogs have higher levels of sugar, urea (a urine waste product) and a third as-yet-unidentified chemical that together act like an antifreeze, lowering the temperature at which the frogs turn into frogsicles, Meghan Rosen reported in *Science News* last year.

Stock up for the winter

We've all seen squirrels burying nuts to prepare for the winter. This can be an important adaptation for creatures that don't sleep through the dark and cold months. Pikas, small mammals found in western

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How Animals contain used from page 5

North America, are also hoarders. But the pika's bigger problem is probably how the animal will adapt to warmer weather brought about by climate change. The pika, it seems, is more at risk of overheating than freezing. One population of pikas living in the Columbia River Gorge of Utah has managed to make it through warmer weather by eating moss. The moss isn't very nutritious, though, so the pika gives its digestive system a second chance at extracting nutrients by eating its own poo, Bethany Brooskshire recently reported on the Eureka!Lab blog.

Slow down

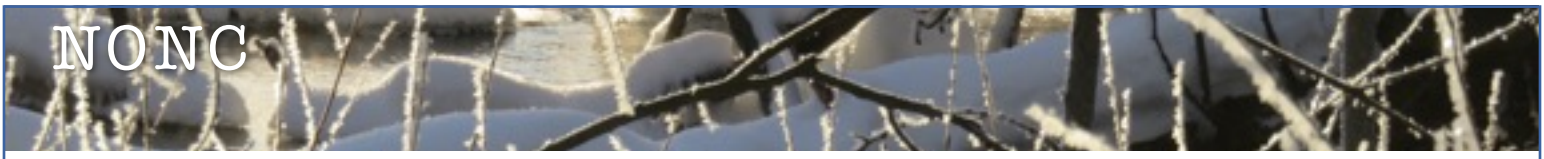
The key to hibernation isn't sleep — it's the conservation of energy. Red-eared Sliders have so mastered that feat that scientists thought they slipped into a coma when winter came. The freshwater turtles may not take a breath for weeks, but they're still conscious enough to notice light peeking through from above. That's just hibernation, not a coma. "In the wild, as ice finally cracks, light streaming through could signal to turtles that it's time to swim up for a breath of air," Susan Milius reported in Science News last year.

Adapt to the darkness

Some reindeer live north of the Arctic Circle, which means that for at least part of the year their days have no natural light from the sun. But these animals have a couple of methods for helping them see: Their eyes can detect ultraviolet light, which helps when conditions are dim. And one part of a reindeer's eye, the tapetum lucidum (the layer of tissue behind the retina that reflects light) can change color, shifting from golden in the summer to blue in winter, which increases the eye's sensitivity.

Huddle together for warmth

Sharing body heat is a great way to conserve energy and keep out cold, but Emperor Penguins in Antarctica have mastered this technique — and they do it with an egg balanced on the feet. It turns out, though, that there's an optimal distance for huddling, with the birds only touching slightly so they don't compress their feathers and compromise their insulation. And if one bird takes a step and gets too close, the next penguin takes his own step, setting off a wave of motion through the huddle, similar to the way cars move in a traffic jam, researchers reported last month. 🌎



Sockeye salmon recommended for listing under Species At Risk Act

Ivan Semeniuk
SCIENCE REPORTER
Published December 4, 2017
https://www.theglobeandmail.com/news/national/sockeye-salmon-recommended-for-listing-under-species-at-risk-act/article37178682/
via Jim Cooperman, President, Shuswap Environmental Action Society, and thanks to Judy Stockdale

FOR centuries, sockeye salmon have raced up British Columbia's Fraser River to spawn in the millions, completing an astonishing life cycle that spans four years and thousands of kilometres. Now, scientists have determined that many populations of Fraser River sockeye are in such alarming decline that they should be listed under Canada's Species at Risk Act.

The recommendation, announced Monday by the Committee on the Status of Endangered Wildlife in Canada, an independent scientific body that advises the federal government, is the most significant acknowledgment to date of the jeopardy facing the iconic red-bodied fish that was once the mainstay of British Columbia's salmon industry.

"It's a signal of a larger issue," said Eric Taylor, committee chair and fish ecologist at the University of British Columbia. "The Fraser River is having trouble supporting these fish."

A number of committee members said that, without more decisive government action, long-term prospects for sockeye and other salmon species on the Fraser are grim. Last year saw the lowest number of sockeye salmon returning to the Fraser since records began in 1893.

"The projections aren't great if we don't change the way we do business around the river basin," Dr. Taylor said.

Researchers say a number of factors could be contributing to sockeye decline in the Fraser, including the combined impact of commercial, recreational and traditional fishing, as well as pollution and rising water temperature due to climate change. Warmer water increases stress on the cold-water fish during an exhausting upstream marathon and promotes parasites.

A more controversial question is the degree to which fish farming along the sockeye's maritime migration routes may be transmitting diseases that impact wild fish.

Under the Species at Risk Act, the committee's recommendation must now be taken up for consideration by the federal government. But Ottawa has a track record of failing to list commercially important fish, despite warnings from scientists that failing to do so could lead to population collapses. A recent report by World Wildlife Fund-Canada notes that only 12 of 62 species of Canadian fish deemed at risk of extinction have been listed by the government since 2003.

Emily Giles, a WWF representative who attended the sockeye deliberations last week as an observer, said the state of the sockeye in the Fraser has broad implications for wildlife across the region that depend directly or indirectly on the sockeye as a keystone species.

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Sockeye Salmon continued

"They die after they spawn and their bodies go back into the ecosystem and provide important nutrients for the rest of the freshwater habitat," she said.

The Fraser River sockeye assessment was among the most complex tasks the committee has faced in its 40-year history. Work began four years ago and led first to the understanding that 24 distinct populations of sockeye spawn on the river's many tributaries, some of which reach as far inland as the Alberta border. This was an important step, because sockeye are so well adapted to their specific spawning environments that if the species disappeared from one tributary it's unlikely that sockeye from another tributary could be successfully reintroduced there. Last week, during a marathon session in Ottawa, scientists voted that eight of the 24 populations of Fraser River sockeye should be listed as endangered – representing the highest level of risk that the population could someday be lost. The committee determined that two other populations should be listed as threatened and five more designated "of special concern." The committee also voted that the remaining nine populations of sockeye still occur in large enough numbers on the Fraser that they do not warrant listing.

The diverse assessment sets up the potential for a regulatory headache. As sockeye re-enter the Fraser after years out in the open Pacific, they travel in mixed schools. Because it's not possible to distinguish members of one population from another on sight, a federal listing for some populations would likely require measures to curtail fishing of all Fraser sockeye.

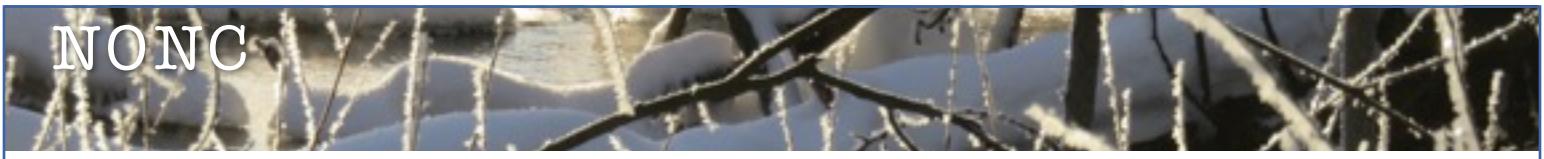
"It's going to be a challenge to implement measures to try to protect these stocks and actually rebuild them," said Alan Sinclair, co-chair of the marine fishes subcommittee, who presented the sockeye data last week.

The committee, which meets twice each year, is set to systematically consider other British Columbia salmon populations in the future, including sockeye in other watersheds as well as coho and chinook salmon.

During a reception last week recognizing the committee's 40 years of service, Catherine McKenna, federal Minister of Environment and Climate Change, said she would adopt targeted timelines for dealing with the backlog of recommendations for listing. The targets include 24 months for terrestrial species and 36 months for some aquatic species including fish.
Experts say this still falls well outside the nine-month maximum that the Species at Risk Act says can transpire between the committee's report on a species and a decision by the government to list the species or not.

"The law is clear," said Amir Attaran, a professor with the Ecojustice Environmental Law Clinic at the University of Ottawa. "Although several governments in a row have pretended – illegally I believe – that they can start the clock only when they want to."

Other recommendations announced by the committee on Monday include delisting the peregrine falcon, which was declared endangered decades ago but which has rebounded since the pesticide DDT was banned. The committee also assessed three populations of grey whales that migrate through Canadian coastal waters. Two of the three, including one that feeds near Vancouver Island, were assessed as endangered. 🌎



Entomological Award

The James Grant Memorial Fund was started in 1986 by John Sherwood as a memorial to the late James Grant, who was a founding member of NONC. The purpose of the Fund is to receive donations made "In Memoriam" or made as unspecified general donations.

The James Grant Fund can be used for the purpose of acquiring lands at risk such as wetlands, grasslands, etc. The Fund can also be used for educational purposes including the annual BC Entomological Award for best paper from a Masters Student.

NONC has been providing this award, in the amount of $400, to the Entomological Society of BC. The paper is chosen by the Entomological Society and the award is paid from the James Grant Foundation Memorial Fund.

We received this email from the recipient of the 2017 James Grant Award.

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My name is Tamara Babcock. I am a Master of Pest Management student in my final year at Simon Fraser University. This year I attended the Entomological Society of BC Annual General Meeting, and was surprised and honoured to receive the James Grant Memorial Award for my presentation.

My thesis project investigates communication between yellowjacket wasps and fermentative yeast. At the ESBC meeting, I presented my research on the use of dried fruit or fruit powder coupled with Brewer's yeast as an attractive bait for yellowjackets. As yellowjackets are known to feed on fermenting fruit, our objective was to develop a shelf-stable bait that mimicked a fermenting fruit resource and could be used in yellowjacket attract-and-kill traps. We combined dried fruit or fruit powder with/without Brewer's yeast in a teabag, and tested the teabags in Bariloche, Argentina. Bariloche is home to massive populations of two invasive yellowjackets – the German yellowjacket and the European common yellowjacket.

Our data show that dried fruit and fruit powder alone is hardly attractive to yellowjackets, but when Brewer's yeast is added the bait becomes highly attractive and, in some cases, surpasses the attractiveness of a commercial yellowjacket lure.

We tested the same lure in BC, Canada with high hopes that the results would be similar. However, despite the fact that Canada shares an invasive species in common with Argentina (the German yellowjacket), the teabag baits were not attractive here.

In a different area of my thesis research, we have identified several species of yeast which are frequently found in the digestive tract of BC yellowjackets. When tested on agar in the field, these gut symbionts are attractive to yellowjackets.

We also tested many different types of fruit powders, and found that the most attractive types of fruit differed from those we had included in our original teabag. We created a modified version of our teabag bait by replacing the original fruits with more attractive ones, and by replacing the Brewer's yeast with one of the symbiotic yeast species (*Lachancea thermotolerans*). When we tested this modified bait in the field, we found it to be highly attractive to

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Entomological Award continued

Canadian yellowjackets. We then aerated the modified teabag, analyzed the headspace volatiles, and created a synthetic blend of 5 compounds. When tested in the field, this synthetic blend performed on par with the teabag itself; however, the synthetic blend only captured one species of native yellowjacket.

The invasive German yellowjacket is attracted to the modified teabag itself, but not to the synthetic volatile blend. Further research might aim at altering the synthetic volatile blend to increase its attractiveness to German yellowjackets.

I would like to extend a whole-hearted thank-you to you and the North Okanagan Naturalists' Club for recognizing my research with this award. I plan to use the funds for attending future entomological events and meetings, so that I can have the opportunity to share my research as well as hear from my colleagues about exciting discoveries in other areas of entomology. Insect science is an incredibly diverse field with many significant impacts on humans; however, I find that this branch of science is often under-appreciated. The James Grant Award encourages young people in science to continue studying entomology and similar areas of research; for that, I am very grateful.
Sincerely,
Tamara Babcock

BC Goes Wild Weekend Photography Contest

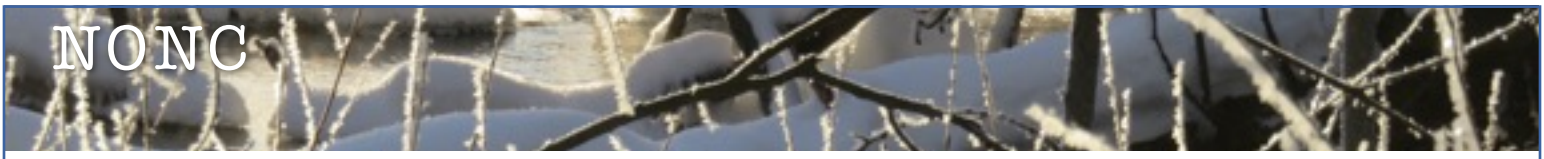
The third weekend of September is when we encourage the residents of BC to enjoy a BC Wild Weekend. Hike, paddle, bike, or take part in one of the many activities going on around the province. This is the weekend that WildSafeBC encourages people to safely enjoy wildlife in the wilds. It is our hope that by emphasizing the fact the wildlife should be in the wilds - and not in our urban areas, that people will help us meet our goal of "keeping wildlife wild and communities safe."

Part of the BC Goes Wild Weekend is a photography contest. NONC's own Claude Rioux took 3rd place in the Wildlife category for 2017. Her wining photo is shown here.

Common Redpoll

This bird, one of those featured on our cover, is being widely reported here this winter. Here are some interesting facts about the Common Redpoll.

- During the long Arctic night, redpolls sleep in snow tunnels to preserve body heat.
- Several redpolls have been seen on a twig feeding each other by passing a seed from bill to bill.
- A group of redpolls is known as a "gallup" of redpolls. (credit: iBird Pro)



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PROGRAMS & ACTIVITIES

Contact the following if you have questions.

BC Nature	Pam Jenkins 545-0490 (sub) Peter Blokker 545-8297
Birding	Peter Blokker 545-8297
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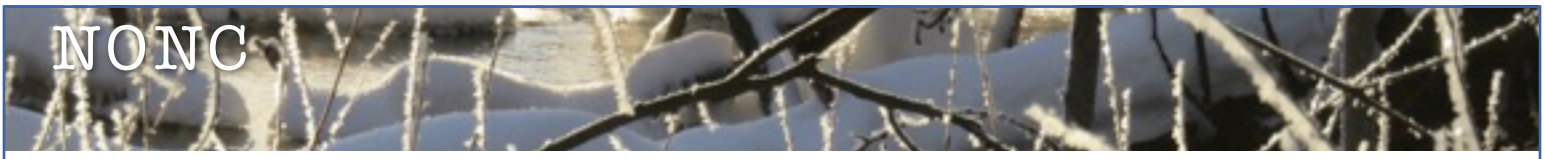

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Copy for publication should be sent to Harold Sellers, Editor, by e-mail hikerharold@gmail.com.

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MONTHLY MEETINGS

On the first Wednesday of the month (September through May), we hold a meeting for members and visitors at the Village Green Hotel, Sierra Room II. Start time, 7:00 pm. Guest speakers, club news, refreshments.

NONC MEMBERSHIP

Clip or copy this form to begin or renew a membership with the North Okanagan Naturalists' Club. The form is also available on our website. Annual dues are $35 for an individual and $50 for a couple or family. Every member should also complete a Waiver form, available at our website membership page.

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