

MUSKRAT EXPRESS

WILLIAMS LAKE FIELD NATURALISTS

MARCH 2024 NEWSLETTER

I'M DREAMING ABOUT
SUMMER AND
FIELD TRIPS!

HOW IS YOUR
FLIGHT
GOING?

I'M HUNGRY
I AM OFF TO
THE AGM POTLUCK

WHERE ARE
YOU HEADING?

I NEED TO
GET TO
SCOUT ISLAND
NATURE HOUSE
FOR
THE
AGM
ANNUAL
GENERAL
MEETING
FRIDAY
MARCH 22ND.

MARCH 22
AGM+POTLUCK
FIELD TRIP
PLANNING
Mar 20-4:30
YARD-PLANT
SALE MAY 4/14

LOTS TO REMEMBER
DON'T FORGET
TO COME AND
HELP OUT+
HANG OUT+
HAVE SOME
FUN!





The newsletter for the:
Williams Lake Field Naturalists
1305A Borland Road, Williams Lake BC, V2G 5K5

Membership fees: Family (\$35), single (\$30) or student (\$10) memberships can be mailed to the above address. Please complete the membership and waiver forms available at the Nature Centre (250) 398-8532, muskratexpress@shaw.ca or the web site below. For more information about the club please contact Margaret Waring at (250)398-7724 or e-mail muskratexpress@shaw.ca

Williams Lake Field Naturalists Website <http://www.williamslakefieldnaturalists.ca>
Scout Island Nature Centre Website <http://www.scoutislandnaturecentre.ca>

Executive of The Williams Lake Field Naturalists: presidential Team Margaret Waring (Chairperson), and Don Lawrence (Scout Island affairs), secretary Nola Daintith, treasurer Katharine VanSpall and directors Peter Opie, Ray Hornby, Jean Oke, Cathie Hamm, Sean Donahue, Lara Roorda and Fred McMechan



Editors: Thanks to all of you who have contributed to this edition of the newsletter. Please expect your next edition of the newsletter late by mid-April when we will feature the clubs 2024 field trip list. If you have comments, suggestions or articles for the next Muskrat Express please contact Margaret Waring (398-7724), Jim Sims (778 764-2752) or e-mail us at

muskratexpress@shaw.ca



From Jim at Tern Inn

My grade 8 English teacher would roll over in his grave if he knew I edited your newsletter, I failed spelling. With the advent of computers with good editing capability and of course spell checkers as well as Margaret's watchful eye, I have made great progress. I find great delight when I catch someone else's spelling mistake.

The Cariboo Chilcotin Birding Group (on Google) recently had an exchange on the name of this common winter visitor to our feeders. The discussion centred around the spelling of this bird, Red Pole. When a photo of a Common Red Pole was posted, I could not resist correcting the spelling. Red is quite appropriate for the bright red flash of iridescent on the top of the head so red is easy to remember. On the other hand, Pole (flag pole?) is a bit confusing. I frequently have to check myself on this common confusing name and turn to my bird book or Merlin for help. Actually, this is a mistake as Merlin identifies this bird as a Common Redpoll. The word poll is an old British name for head. Now the name Common Redpoll makes a lot of sense, a common winter visitor with a red poll. I hope this helps you with the spelling of Redpoll.



Common Redpoll

Annual General Meeting

Potluck Supper

FRIDAY EVENING MARCH 22nd 2024

Evening will begin at 5:30 PM with Supper at 6:15.

Location is Scout Island Nature House.

Enjoy a delicious supper and social event and contribute to your club. We need your support and input for the club, as well as your dinner contributions! The Annual General Meeting will be at 7:30. There will be time for discussion, socializing and visiting.

We hope that you are able to attend this very important event.

2024 Field Trip Planning Meeting

By Ordell Steen

This is an invitation to join us in-person or by Zoom at a Naturalists meeting on **Wednesday March 20 at 4:30 p.m.** to start **planning field trips** for the coming season. If you can join us in person, we will meet at Scout Island Nature Centre (pizza will be provided). If you would like to join via Zoom, [please let us know ahead of time](#) that so we will be sure to allow you into the meeting. The Zoom link has been sent via email.

Please join us at this meeting to tell us about a trip that you would like to lead or one that you would like to request someone else lead. If you cannot join us but have a suggestion, please let us know by responding to Jim Sims, contact details above in editors' notes

As a thought, this year we would also like to consider one or more trips in the Cariboo-Chilcotin where there is a variety of topics of interest, such as birds, insects, plants, mushrooms, aquatic ecosystems and geology. These trips could be led by several leaders with different interests and knowledge and perhaps with participation by specialist non-members. These might also include an over-night camp.



Spring Plant and Yard Sale

Saturday May 4th

From Margaret

Planning is underway for The Spring Plant and Yard Sale.

It will be at Scout Island on **Saturday May 4th from 9:30 AM until 1:00 PM. Your help is needed to make this event a success.**

The purpose of the sale is to raise funds for a \$1500 student bursary that we give to a graduating student from Lake City Secondary.

Plants are what we have been known for and are best sellers. If you are able, please share some seedlings you have grown. When you do yard work remember the plants that you divide can be purchased by others. Maybe you have a plant you want to move or do not like. Dig it out and we will find a new home for it. House plants are sold too.

This year I would like to try and simplify the organization and clean up.
I would like your help to categorize things into:

1. Plants and garden related items. I hope this can be the main focus.
2. Books including CDs, DVDs, and vinyl records.
3. Sporting goods and camping items and tools
4. Household and craft items and children's toys.

We hopefully will have good weather and 3 outdoor sale areas.

Please donate gently used items for us to sell. This year I would like to request no large heavy items that are difficult to move. Also, there are other outlets for clothing, linens, bedding and related items. I would prefer if you donated them elsewhere.

Please drop off sale items at the Nature House on Friday May 3rd from 4-7 pm and on Saturday between 8:30 and 9AM.

Please consider helping for an hour or two. We need people to help set up on Friday afternoon and 8:30 Saturday morning and most importantly some vehicles and people to help clean up at 1PM on Saturday.

Please contact me by phone or email if you are able to help or if you have any questions.

My contact information is: mewaring@hotmail.com or home phone 250-398-7724 or cell 604-813-1043.

Thanks in advance.



Scout Island Nature Centre

By Martin Kruss

Scout Island has started a new collaboration with UBC Research Forest Education. We are trying a pilot project this school year to make opportunities for high school students to explore what working in an outdoor environmental job might entail. We call it Environment Experience Exposure ("E cubed"). Grade 10-12 students get a chance to interact directly with professionals and try some of their tools and techniques from their everyday work projects. Each day long field trip has a theme. In late November we covered Forestry - students tried some silviculture surveys, archaeology measurements, and prescribed burning.

Our most recent trip was about wildlife, and was held at Bull Mountain with Rory Fogarty, wildlife biologist from Consus Management. The 15 students went out on skis to retrieve game cameras, evaluate the site, and examine the data (two bobcats chasing each other was the highlight). Then they tried some radio collar telemetry, attempting to find an "animal" that has had an emitter implanted. The biggest surprise was that Rory and I had put a beacon out that morning with a dead frozen Chukar (to make it more exciting for the students when they found it). A few hours later, as the students homed in on the beacon, the Chukar was gone...with a set of Marten prints leading away. In the afternoon the students tried track transects in a recent cutover (Bull Mountain is also a managed woodlot). Mark Gill, Wild and Immersive educator for UBC, and Kim Nowotny, representing Lake City Secondary School, have been wonderful to work with on this program.



Oihannes Moliner-Clark trying telemetry with Rory

Our next day in early May is Parks and Rec Sites themed, with the students heading to Westwick Lakes and DeSous Mountain for the day. Hopefully they will inventory the living things in an ecological reserve, do a rec site maintenance evaluation, and brush some bike trails with the experts.

We are grateful to Drax Canada Ltd. as the financial sponsor of this collaborative program. Without their support it would not have been possible to supply students with these opportunities to be curious about outdoor work in the Cariboo-Chilcotin.

Bottle Depot: Recycle and Donate

Did you know you can support Scout Island Nature Centre by taking your containers, cans and bottles to the recycling depot on Mackenzie Avenue. Have them in a clear plastic bag and tell the employees you would like to donate them to Scout Island.

Great Backyard Bird Count

By Betty Donahue and Photos by Lubna Khan

Every year the Cornell Lab of Ornithology hosts the global Great Backyard Bird Count. From February 16-19th, people all over the world reported birds observed in their area. This might be in tropical forests, tundra, shorelines, mountains, or even at backyard feeders. The Cornell Lab collects this data from citizens around the world to research trends in bird life.

Scout Island hosted a bird event on Family Day February 19th. It was attended by a small, enthusiastic group, ranging in age from about 6 to 60's. Martin Kruus, our extraordinary teacher at Scout Island, introduced the participants to common backyard birds in our area by having us match physical specimens to a chart with life size photos of the birds.

Scout Island has an amazing collection of preserved specimens. Many of these specimens were preserved in the 1960's by Anna Roberts. Anna was the first president of the Williams Lake Field Naturalists and was instrumental in the establishment of Scout Island as a nature preserve.



Having a closeup look at the feeder birds



Participants examine SINC specimens

Sue Hemphill had some of the youngsters use binoculars and from the Nature House, carefully observe the various birds at the feeders. Lubna Khan and Betty Donahue took the group outside to observe birds at the various feeders and different habitats along the Willow Trail. Species we observed included red winged blackbirds, house finches, house sparrows, white crowned sparrows, chickadees, hairy woodpeckers, spotted towhee and ravens.

Once the lake starts to open, Scout Island is a great place to visit to see lots of waterfowl and various migrating birds.



Lake City Secondary Woodworking Class Donates Time and Materials

Bluebird Program Update from Loyd Csizmadia

An act of kindness never goes amiss on Valentine's Day. On February 14, 2024, Lake City Secondary's woodwork teacher Andrew Hutchinson and his industrious students delivered 64 Mountain Bluebird houses to me for our Mountain Bluebird Program. One student in particular—Sam Holmes—did the lion's share of the work. Using an ingenious jig to hold the pieces in place, Sam swiftly and accurately nail-gunned the walls and floor together, leaving only the door and roof to be screwed on later.

Back in 1978, the first nest boxes were quite simply four fixed walls, a floor, and a small roof. The walls were made of narrow fence boards which created a tall, cramped nesting cavity. The roof was attached with a single screw which, unfortunately, often let go, resulting in an exposed nest. To clean a box, one had to remove the roof and reach inside. Personally, I could barely open my hand once it was inside the box. As a result, I had to claw the nest off of the floor. Bluebird nests were easier to remove than the fecal-encrusted Tree Swallow nests. But worst of all were the nests that contained unhatched eggs, dead young, and maggots. It was nearly impossible to fully clean one of these original boxes. Collecting data on eggs and young was also difficult. While standing on tip-toes or awkwardly balancing on a strand of barbed wire, I had to peer into a dark hole and count the crowd of charcoal-coloured heads hunkered down in the nest. If I took too long, the agitated parents—their beaks crammed with insects—sometimes became aggressive.



One of the Original Nestboxes on Becher's Prairie (Photo by L. Csizmadia, 2022)

giving ready access to a gloved hand or a scraper, and the old nest is quickly removed. When a fresh nest contains eggs or young, the open front offers a clear view so that the manager can collect breeding data with minimal disturbance. I cannot say for sure how the birds feel about the changed design, but I imagine they approve. The nesting cavity is more spacious, the box allows for ventilation, and the roof rarely flies off in a strong gale. Unfortunately, these improved boxes cost more to build. But not this year.



LCSS woodworking student Sam Holmes and his instructor Mr. Hutchinson display two of the 64 houses that the students built for the Williams Lake Field Naturalist's Bluebird Program

(Photo by Loyd Csizmadia Jan 2023)

Funded by the Agricultural and Rural Development Act, a local group constructed 474 such boxes at a cost of \$2.61 each. It cost 50 cents per box to install them. The ARDA, whose purpose was to rehabilitate and develop rural areas in Canada, funded the project because of destructive grasshopper infestations on the rangelands of Becher's Prairie. Prior to the introduction of artificial nest sites, pesticides were used to control the outbreaks.

When Michaela and I agreed to manage one of the Becher's Prairie routes in 1988, quite a few of these original boxes were still providing effective cavities for Mountain Bluebirds, Tree Swallows, and Mountain Chickadees, a testament to their durability. In 2017, however, fire raced across the prairie, burning nearly every box on our route, original or otherwise. So, we replaced them with houses like the ones built by the students at LCSS (Photos below by L. Csizmadia, 2024).

For the route managers who must clean out the old nests and gather data on young birds, the new design is much improved over the original. The front of the box opens like a drawbridge,



While reading an article in the *Williams Lake Tribune* about how Andrew Hutchinson wants his students “to build things around the city,” I considered asking him for help. The Bluebird Program was low on houses, and increasing our supply seemed more challenging than usual. However, when Sue Hemphill emailed me with the same idea, I approached Andrew and, without hesitation, he agreed that this would be an excellent project for his class. On February 14th, as the students loaded 64 boxes into my pick-up, I did a mental calculation: \$1.85 per box—76 cents less than it cost to build a fence-board house in 1978. Mr. Hutchinson, Sam Holmes, and everybody who helped, you are all heart. Thank you. And thank you to all of the volunteers who have kept the Bluebird routes in good repair over the last 46 years.

If you are a member of the Williams Lake Field Naturalists and would like to get involved in the Mountain Bluebird Program, contact Loyd Csizmadia at lmccsiz@gmail.com. Currently, it is very likely that some routes will be available this year, so if you are interested, send me an email.

Poor air quality can affect the tiniest creatures

By Erin Hitchcock
Scout Island Nature Centre

When most people think about poor air quality, they might not worry about how the flies, bees, and other insects are doing, but our survival depends on them.

“Why care about insects? Insects play a crucial role in maintaining a functioning ecosystem,” says Dr. Megan Taylor, co-executive director of Scout Island Nature Centre, who has a BSc and MSc in biology and a PhD in entomology, specializing in honey bee reproduction and genetics.

She says insects are nutrient cyclers, as they help with decomposition by consuming the tissue of dead plants and animals, which in turn also prevents diseases.

Predatory insects also regulate other bugs, keeping their populations in check.

Many insects are also pollinators – important to food production. Without pollinators, including bees, flies, wasps, beetles, bats, birds and others, food scarcity would be even more prevalent – human life and the life of other species are dependent on the role pollinators play.

Because many insects are covered in hairs, to varying degrees, they are able to collect pollen more efficiently. Honey bees, for example, even have hairs on their eyeballs, and their hairs even branch out like split ends to maximize surface area and the amount of pollen they collect. This evolutionary trait not only helps them but also the plants, thus providing a critical role in the ecosystem.

In addition, Taylor says, they also have hairs on their antennae, which are used for chemical or pheromone communication, and act as a receiver for sensory olfaction (smell). They can even pick up signals of other species. When those little hairs are exposed to air pollution, however, they collect particulate matter such as PM_{2.5}, which, even in small amounts, can be harmful to them, as those receivers can become blocked.

Taylor points to a 2023 [study](#), published in *Nature* (*Short-term particulate matter contamination severely compromises insect antennal olfactory perception*) that looked at the impact of ambient levels of air pollution and the accumulation of particulate matter on sensory receptors on the antennae of houseflies.

She explains that, according to the study, the accumulation of particulate matter on the antennae increases with the severity of pollution.

“The more contaminated the air, the more contaminated their antennae are going to get,” she says. “They found this even with brief exposure to particulate matter. It severely compromises their olfactory perceptions, which is their ability to detect chemical cues that are in the environment, specifically for food and reproduction.”

That interruption on reproduction means either they can't find a potential mate, or they can't find a suitable place to lay their eggs because the signal is blocked.

Even though some insects have mechanisms to clean their antennae, their grooming behaviour may be less effective against particulate matter, especially PM_{2.5}, Taylor says.

"It is reasonable to assume that if there is particulate matter on the insect, this can affect their ability to find a mate and suitable place to lay eggs, and then this could also have cascading effects not only on the insects themselves but for the function of the ecosystem as well, and then therefore us."

Moreover, if their receivers are plugged with particulate matter, they will be less efficient at pollinating food crops potentially leading to a reduction in yield.

"That's just for insect pollinators, never mind the thousands of other species of insects that perform crucial roles, like nutrient cycling and regulating diseases and pests. We really do need these insects. Keeping the air clean is important for us, but from an entomologist angle it's important to all life, including the little things people tend to forget, like the role insects play."

Erin Hitchcock is an Air Aware educator with Scout Island Nature Centre. Visit our website at breatheasywilliamslake.org and follow us on Facebook at Air Aware Williams Lake. We gratefully acknowledge the financial support of the Province of BC through the Ministry of Environment and Climate Change Strategy.



Flowering Plants of Scout Island Nature Centre Non-native Vascular Species

By Ordell Steen

One of the first questions I was asked during a plant walk on Scout Island last spring, is how many of the plant species on Scout Island are not native to BC. We have all become used to accepting non-native species in our urban and non-urban landscapes and many of us may not give a thought to the fact that most have been here less than 175 years. Although many were brought accidentally by early settlers, a large portion were brought intentionally from Europe and Asia to fill what some people saw as a lack of familiar and useful plants in the native flora. Nearly 30% of the vascular plants presently in the grasslands and dry forests of BC are not native to BC. Concern about these species varies significantly depending on how invasive they are and their effects on wildlife habitat and our management objectives.

I have currently recorded 225 species of vascular plants on Scout Island, although more are likely present. Seven of these are conifers and the rest are flowering plants, either herbs, shrubs, or trees. No ferns or club mosses (also vascular plants) have yet been noted. This number does not of course include the bryophytes (mosses, liverworts, and hornworts) nor the fungi and lichens (not plants) which occur on the Island. Anna and Gina Roberts listed several vascular plant species in the Williams Lake Valley that I have not seen on Scout Island.

Of the 225 species recorded on Scout Island, 74 (33%) are not native to BC. These are common on the old campground site but are relatively infrequent on the small original Scout Island east of the log bridge. Many of these are



**Common burdock, a non-native plant
on SINC**

not of large concern because they currently have little impact and will not likely invade and displace the current vegetation. Examples of such species include Flixweed (*Descurainia sophia* – from Eurasia), Asparagus (*Asparagus officinalis* – Europe), Hemp-nettle (*Galeopsis tetrahit* – Eurasia), Prickly sow-thistle (*Sonchus arvensis* – Europe), and Common plantain (*Plantago major* – Eurasia). Much of the old campground area west of the “block house” is currently vegetated primarily by non-native grasses, including Smooth brome (*Bromus inermis* – Eurasia), Quackgrass (*Elymus repens* – Eurasia), and Crested wheatgrass (*Agropyron cristatum* – Eurasia). These grasses, seeded on the campground area after it was closed, were introduced to BC primarily for pasture forage but the first two have become very common in the region. However, on Scout Island, they are apparently not spreading beyond the seeded area and have largely prevented the establishment of other non-native plants on the highly disturbed old campground site. They also provide a grassland habitat of sorts although habitat values, such as microsite and species diversity and litter cover, are not equal to those of native grasslands and shrublands. We are slowly working to restore native plants to this area of the Nature Centre.

Other non-native species may increase in abundance quickly if sites are disturbed to expose areas of bare soil. These are introduced species that quickly establish on unvegetated sites but establish less well where the native vegetation is in good condition. On Scout Island, they include for example, alfalfa (*Medicago sativa* – Eurasia), Loesel’s tumble-mustard (*Sisymbrium loeselii* – Eurasia), Sweet clovers (*Melilotus alba* and *M. officinalis* – Eurasia), Lamb’s quarters (*Chenopodium album* – Eurasia), and Common wormwood (*Artemisia absinthium* – Eurasia). Many of these species are currently common near the edges of trails on Scout Island.

Of principal concern are non-native species that can invade and displace current vegetation even without soil disturbance. Some of these are species that Field Naturalist members are working hard to control. Among them are Common burdock (*Arctium minor* – Eurasia), Canada thistle (*Cirsium arvense* – Eurasia), European bittersweet (*Solanum dulcamara* – Eurasia), Russian orache (*Atriplex micrantha* – Eurasia), Dalmatian toadflax (*Linaria genistifolia* – Europe), Meadow salsify (*Tragopogon pratense* – Europe), and Common tansy (*Tanacetum vulgare* – Europe). The tansy is not yet common on the Island, found locally on the causeway. The bittersweet increased substantially near the lake edge after the recent flooding of the Island but control efforts are significantly limiting its current abundance. An insect biocontrol appears to still be limiting the abundance of toadflax. Another non-native species, Bouncing-bett (*Saponaria officinalis* – Eurasia) has invaded a small area of the Nature Centre west of the causeway entrance.

Russian orache is an annual species which many people may not be familiar with but it is currently increasing, along with Lamb’s quarters, on the west end of Scout Island near the Nekw7usem bridge. It was almost surely not present on Scout Island until recently because Anna and Gina Roberts did not include it on their list of plants of the Williams Lake Valley in 1995. Its extent has clearly expanded over the last five years but we have not yet made large efforts to control it. A similar introduced species, Garden orache (*Atriplex hortensis*), occurs on Otter Point.

Control of invasive non-native plants on Scout Island requires an on-going effort. Most of this effort is currently devoted to species already present on the Island but we also need to ensure that invasive species such as Diffuse knapweed (*Centaurea diffusa* – Eastern Mediterranean), which are present west of the Nekw7usem bridge, are not spread to Scout Island. Thank you to the many people, often organized by Fred McMechan, who have spent many hours pulling and cutting invasive species in order to protect the current vegetation and habitats of Scout Island.



A patch of Russian orache in flower on SINC