

Shuswap Naturalist Club Newsletter

September 2023

"Look into nature and you will understand everything better."
Albert Einstein



Here a bear, there a bear, everywhere....

- with Gillian Richardson

I've heard about more bears turning up in our communities this summer. Heard about, but not seen, myself, until this black bear marched right up to my deck and bird feeder one early afternoon a few weeks ago. Bold, and showing no fear, he sat and looked at me as I snapped a photo from inside the patio door, and my neighbor did the same from her back step.

Great photo-op, but not a good thing on several counts: lack of caution around people and being out in the middle of the day, likely remembering all the feeders he may have come across, will lead to

trouble for this bear. They have always frequented our area, of course, but this summer we've had more sightings than usual. We've taken our feeders in every night to head off bear visits. So why are they out and about all day? Reports suggest the hot, dry season has led to an early, and non-abundant berry crop, and most likely that food source largely dried up by mid-summer. Black bears that should have been off in the wild lands munching their natural foods have ventured into human communities earlier instead to find fruit trees, garbage cans and feeders. Nearby wildfires may have displaced some of them as well.

Sorry, birds, but you're on your own for seed until winter. And I will take care walking in the early morning and evening....the more likely time for an up-close and personal bear encounter.

Photo by J Godfrey



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Advocating for Nature -

a note from Janet Pattinson

As Naturalists we think biodiversity and the natural world are important, but they are also vital for our health and the wellbeing of the planet.

Not everyone places the same value on the natural world, and over the years our natural places have suffered from a variety of human activities. The decision makers need to know how much we value the natural world and there are a number of ways that we can speak up for nature. For example, I asked Ken to send along a link for those wanting to show their love for the grizzlies. The deadline for that input has been extended to September 6th. Over the next months if I learn of other ways we can advocate for nature, I'll ask Ken to send them along.

Salmon Arm Foreshore Trail Community Weed-pull

- Fern Fennell reporting

This was a joint effort by members of the Shuswap Naturalist Club, SABNES members and staff from both the Nature Trust BC/Okanagan and Columbia Shuswap Invasive Species Society (CSISS).

This day, Monday, August 14, got off to a very warm start, with the heat building up quickly by mid-day. About eight members of the local clubs turned out to assist in pulling out invasive species of plants such as Common Teasel, Himalayan Balsam and the dreaded Woody Nightshade. Other species targeted by the staff group were Burdock and Yellow Flag Iris.

An information booth was set up by CSISS to help educate and inform the public of the various invasive species in the Shuswap area. The most invasive species is the Woody Nightshade which has spread from back gardens to many areas around town and along the foreshore trail. This vine has a root system like a spider web which spreads rapidly along the marshy surface and sends up shoots to wrap about the native rushes and reeds along the marsh areas. If not removed it will soon choke out all the native rushes and other plants. Even though Woody Nightshade is poisonous to humans, birds such as robins, sparrows and pheasants will eat the bright red berries and spread it in their droppings. This invasive vine has been banned now in Canada for the nursery industry and if you find one in your garden be sure to remove it before it flowers and bag it for disposal in the regular garbage. A big thank-you to Janet Aitken for coordinating this on behalf of SABNES and our club.



Fern, Ken, and Barb along with two of the staff worked on removing Common Teasel.



Ripping out the dreaded Woody Nightshade.



One of the piles of what was removed from the foreshore - mostly Woody Nightshade,

shown here, the flower and berry stage.





Juvenile male Mountain Bluebird

Mountain Bluebird Trail Update

- Fern Fennell reports

On July 24 Di Wittner and I did a check and clean out of the nest boxes of the Bluebird Trail in North Broadview. We found nests in all the eight nest boxes. Some had a mix of bluebirds, swallows, house wrens and chickadees, and some just bluebirds and swallows. Sometimes one bird starts the nest, uses it or abandons it, and another species moves in and builds its nest on top!

Mountain Bluebirds typically nest earlier in the season and after their chicks fledge, the swallows move in to raise their brood. The most surprising was that one nest had Mountain Bluebird nestlings! We quickly closed it up and the female MBB immediately came to check out the nest and then continued to forage for her brood. We

are confident this was a second batch of the bluebirds.

Unfortunately, we also found some eggs (from swallows we believe) that did not hatch and also three nests where dead hatchlings were found (again swallows). Di's theory was that the parent was killed by a predator or the heat in June/July was too much for the nestlings in the box exposed to full sun where they are located. We will continue to monitor this next year to see if some kind of shade cover will need to be added or the boxes relocated.

We talked to some residents in the Peterson Orchard area who remarked on how many bluebirds they have seen in the area this summer. I did a day of photographing birds in that area and saw many adult and juvenile bluebirds. What a success!

Female with large insects for her brood, looking very overworked.



This nest shows a chickadee nest on the bottom and a swallow nest on top.

Di cleaning out a nest box with weather change coming in - this was the night of the big wind storm.



Western Grebe Count - Salmon Arm Bay

- Di Wittner report

Date of count: July 30/23
Start time: 7:00 am. End time: 10:45 am.

Count Location	Adults	Young
River Mouth/Sandy point	56	4
Peter Janninck Park	0	0
Wharf (deep water)	141	3
Beaver pond platform	47	2
Wharf (immediate zone)	3	0
Raven	0	0
Tappen Bay/Sunnybrae park	20	2
Sunnybrae/Canoe	0	0
Totals	267	11

Grand Total 278

As smoke is continuing to hamper visibility, Di says she is keeping watch for a clear enough day to get an accurate grebe count. We look forward to hearing more at our next meeting.

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The Annual Buoy Clean-up

- Hanne MacKay

Doug and I repositioned the buoys again this Spring after the winter storms. Grandson Logan Kallies scrubbed and cleaned them before they were put back in the bay to mark the 'Keep Out' areas to protect the nesting sites.

The line of buoys has proven quite effective over the years in keeping watercraft out of the sensitive nesting areas. The Grebes will often change their preference for locations depending on water levels, disturbances and storms. This year has been very challenging for them.



We are so fortunate in Salmon Arm to have one of the few vital wetlands within our city limits. Really worth protecting!

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September 5th meeting at Sunnybrae Park

Anne Caughlin reports:

Olivia Lemke, WildSafeBC Columbia Shuswap Coordinator, will give a bear safe talk at our first club meeting of the fall season.

[WildSafeBC](#) - "Keeping Wildlife Wild and Communities Safe"

Janet Aitken reminds us to please watch our email closer to the meeting time in case we need to postpone the meeting or change the location.

Gardom Lake this Summer with Fern Fennell

I was able to get a few kayak paddles around the lake before it got too hot. I saw a wide variety of song birds with many calling from the foliage and trees which surround the lake. Without my Merlin sound app, I would miss many of these birds, but I did get to see over 30 species in early July.



Luckily, I was able to get a good view of a Willow Flycatcher and Red-eyed Vireo.

The damsel flies were hatching so dozens of Cedar Wax Wings were foraging along the reeds.



I was also lucky to find an Eastern Kingbird nest hanging over the lake and follow the pair and their hatchlings.

Unfortunately, the pair of Loons did not successfully hatch their eggs (which a friend confirmed had eggs in May). I saw a pair of Bald Eagles around the lake and on a nest on Main Island, but later in the summer they were not on the nest. No nestlings from what I gather.

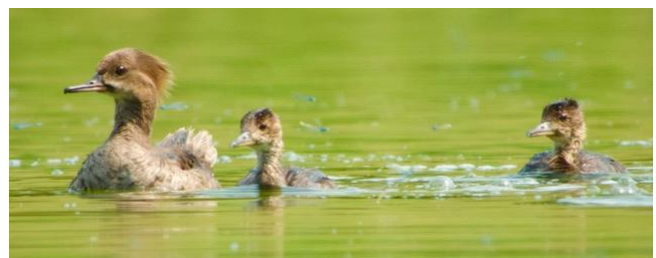
I did see many families of Buffleheads (so many babies),



two or three families of Common Goldeneye,



and one family of Hooded Mergansers, here showing two of her 12 fledglings.



This summer the Canada Geese did not raise any babies on the lake, but once the fledglings could fly, some moved onto the lake.

Of course, there were hundreds of **Western Painted Turtles**, and their population appears to be very healthy.



One of the three fledged **Spotted Sandpiper**.



What a gem Gardom Lake is, and thanks to the advocating of the Gardom Lake Society for continuing to protect the surrounding foliage and protected zone around the lake!

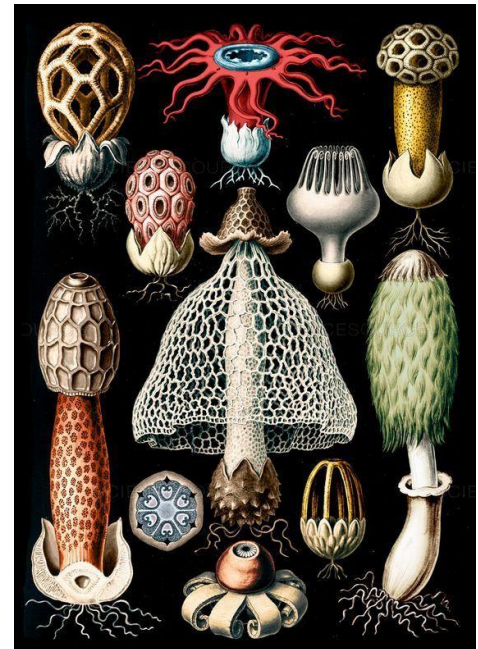
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A classic illustration of the variety of shapes mushrooms have developed.

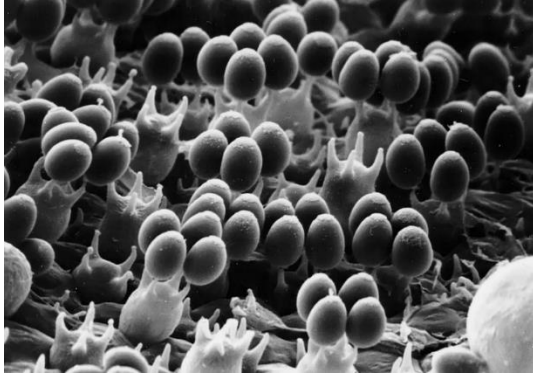
What is a Mushroom? - by Mitch Milgram

A question that periodically comes up when I'm out with a group of people on a mushroom identification field trip is this; "Aren't you killing the plant when you pluck it out of the ground?" Well, first, no, we're not killing anything. And second, a mushroom is not a plant, not in the same sense as a flower or a tree.

What we're looking at when we see a mushroom emerging from the ground or from a rotting log is the fruiting body of the fungus. The mushroom is the 'fruit', comparable to an apple on a tree. The main body of the fungus is mostly hidden underground, consisting of a vast network of mycelium, the rootlike fibres that make up the main vegetative body. This mycelium, made up of thousands of 'root-lets' called hyphae, spreads throughout the soil, rotting vegetation, and in some instances living plants and organisms.



By plucking the mushroom, we're doing no more harm to the main body of the fungus than we do when picking an apple off the tree, which can be stripped bare year after year with no harm to the tree. Having said this, there's a caveat. Just as when picking an apple from the tree you'll take care to not break or strip off branches, so too with fungi. As long as the mushroom is plucked in such a way as to not disturb the main body of the fungus, all will be well. There are reports of some commercial mushroom pickers damaging the fungi, as with those harvesting the sought after 'Pine mushroom', *Tricholoma murrillianum*. Some of these harvesters use hard rakes to expose the mushrooms lurking beneath the duff and leaf litter, and in the process disturb the fungi and the complex community of organisms in the soil.



Magnified view of the spores on a four- pronged basidiomycete mushroom

The living world around us is divided into a number of kingdoms. Most people are familiar with the two main kingdoms, plants and animals. There are also other kingdoms, and the fungi kingdom is one of these. Historically fungi were grouped into the plant kingdom, but in 1969 they were recognized as being in a separate kingdom of their own, distinct from plants. In fact, believe it or not, in some regards, fungi are genetically closer in their characteristics to animals than to plants. In evolutionary history, plants separated from animals before fungi diverged from animals. Thus, fungi retained their commonality with animals for millions of years longer than plants did.

Like animals, the fungi kingdom, which includes yeasts and moulds, are not able to generate their own food through photosynthesis as plants can. They need to seek their food from the environment around them. To do this, fungi use a number of strategies.



Many are saprobes, breaking down dead and dying plants and animals. They'll secrete digestive enzymes into their environment and then absorb the released nutrients. Visualize mushrooms sprouting from a fallen tree, or emerging from a dung pile. Their mycelia are busily secreting enzymes and absorbing their food.

A common Turkey Tail mushroom,
one of the polypores

Some are parasitic, attacking living plants and animals, and gathering their nutrients from their hosts. The Honey mushroom, *Armillaria ostoyae* is a common parasitic mushroom, valued as an edible by many, and disliked by foresters for the damage it does to harvestable timber, creating a white rot. This species also has the distinction of containing one of the largest living organisms on the planet, with one specimen in Oregon recorded as covering 2,200 acres and being 2,400 years old.

Others are actually carnivorous. The tasty Oyster mushroom, *Pleurotus ostreatus*, found both in the woods and on the grocery shelf, has the ability to devour tiny insects such as nematodes. The mushrooms will use a number of methods to achieve this, from injecting their spores into the insect, having the insect ingest the spores which in turn perforates the internal organs, and even snaring the hapless nematode.

Many of the mushroom-forming fungi that we see around us develop a symbiotic (mycorrhizal) relationship with living plants, from grasses to trees. In this mutualistic relationship the fungi gather water and minerals through their fine hyphae for their partner plant and in return are fed carbon and sugars that they are not able to generate themselves.

Fungi are similar to animals too in that they have chitin in their cell walls. Chitin, which is a long chain polymer, doesn't occur in plants. But you will find it in some animals, such as anthropoids, crustaceans, and insects.

Helvella crispa with its beautiful fluted stem

Fungi propagate by releasing microscopically sized spores, comparable to a plant's seeds, and the mushroom is the vehicle to do this. And to do this, the mushrooms have assumed many novel, and at times bizarre, shapes and strategies. One of the foremost strategies is the astronomical number of spores produced. The common bracket fungi, *Ganoderma applanatum*, the artist's conk, can produce 350,000 spores per second, adding up to 30 billion per day and 4500 billion per season.



Most mushrooms rely on wind currents for spore dispersal, though most spores fall close to the mushroom, and often drape and colour the surrounding area in their multitudes. Aroma is another method for dispersal, such as the aromatic underground truffles that attract hungry animals, which in turn spread the spores through their droppings. In others, particularly among the Ascomycete mushrooms, the spores are shot out of the sausage shaped tubes, asci, in which the spores are produced. Occasionally, when picking up a cup mushroom or a morel, the gentle disturbance will trigger the release of tens of thousands of spores which appear in a drifting cloud.

To do all this, mushrooms have assumed various shapes. The standard shaped mushroom that we usually visualize, with its central stem, gills, and domed cap is actually very ingenious. The cap protects the spores until maturity. The gills, that support the cantilevered cap in the same way that floor joists support a house, contain the spore bearing structures (called basidia), and the stem elevates them all to aid in capturing the wind currents.

In addition to the standard shaped mushroom, fungi have developed every imaginable shape, from cup shapes to clubs, from wrinkly morels and false morels to exquisitely branching coral shapes. The Earth Stars are interesting as they emerge as a dome, then split into star shaped rays. They'll then develop further. As the rays bend earthward, contacting the ground, they'll elevate the spore-bearing nucleus of the mushroom to catch the wind currents and rain droplets which help propel the spore's dispersal.



An Earthstar mushroom *Geastrum saccatum*

When I'm out for a hike in the forest looking for mushrooms, particularly in the hot dry days of July and August when mushrooms are often scarce, I occasionally stop and consider the ground I'm standing on. I know the fungi are there, that their hyphae, their mycelial networks, are crisscrossing the soil beneath my feet, that they're creeping up and through the stumps and fallen trees all around. And I know that when the fall rains come, the fungi will fruit, sending up a fascinating display of mushrooms.

Photos by Mitch Milgram and Michael Beug

A rare eye-to-eye look at an adult male Red-eyed Vireo at the wharf.

This adult Red-eyed Vireo has flown at least 7,000 km to return to its nesting grounds in the Shuswap.

Roger Beardmore photo



The Indefatigable Red-Eyed Vireo

John Woods

While every bird song gives us an opportunity to connect with the natural world, a few species hold special places in my heart. Robins wake me up an hour and half before sunrise in March. They stir me to get up and sip coffee while treating me to an early morning chorus. They deliver this pre-dawn performance with an intensity not matched at any other time of day, or year. In June, the delicate lisps of the Pacific-slope flycatchers singing from all-corners of town encourage me to drive with windows down as I listen for them at each stop sign. And as I start to mourn the impending end of the spring, the steadfast melodies of red-eyed vireos chant through the hot days of July buoying my spirits towards autumn.

Although red-eyed vireos are one of the most abundant songbirds in North America, few people other than birdwatchers know them. They are little birds weighing only about 20 grams and with a penchant for foraging in thick, hard-to-see-into deciduous trees.

While seeing them is difficult, male red-eyed vireos are conspicuous when they sing, which is much of the time! During their nesting season, these vireos fill our woodlands with a steady stream of songs from dawn to dusk. They start territorial singing as soon as they arrive back from the tropics and continue to sing through to the end of July.

Red-eyed vireos held a special fascination for Louise de Kiriline Lawrence, a famous Canadian naturalist-writer who lived in a log cabin in northern Ontario many years ago. Enchanted by their daily marathons of song, Louise counted the number of times a single male red-eye sang from dawn-to-dusk on May 27th, 1952. With help from a bird-watching friend, Louise documented this red-eye sing 22,197 times that day! To my knowledge, this record has never been broken (by either a bird or a bird-watcher!).

Trying to describe bird songs in English is difficult. The authors of the red-eyed vireo monograph in “Birds of the World Online” try with the phrases “cherr-o-wit, cheree, sissy-a-wit, tee-oo”. Another ornithologist coined the words “Listen now, do you hear me, believe me, that’s right...”. At least these phrases conjure up a sense of cadence and may serve as a memory aid once you have heard the voice of a real red-eye.

My advice is to search for red-eyed vireos on the eBird website (ebird.org) and play some of the recordings you will find there. Another way to recognize a red-eyed song is that it is likely the last bird you

will hear singing on a hot summer morning. Red-eyes are famous for singing on, and on, and on, at a rate of up to 85 songs per minute!

We start hearing red-eyed vireos in the Shuswap during the last days of May and most of them have left us by mid-September.

Why do they arrive so late, weeks after some of the other species of vireo and most of the warblers? Perhaps it is because they have so far to travel from their wintering grounds in the Amazon Basin. A red-eye vireo nesting in Pennsylvania and wintering in the Amazon was documented to make the ~6,600 km northward journey in 46 days. It migrated at night during 13 of those days and spent the other 33 days resting and feeding between "migratory hops". Red-eyed vireos homeward bound to the Shuswap need to travel a minimum of 7,000 km between late March and late May. Amazingly, the vireos you heard on the Foreshore Trail this summer will have travelled more than 14,000 km by the time they return to sing and raise a family next year.

I wonder how many times a red-eye sings in a year?

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"It is no longer sufficient to describe the world of nature.
The point is to defend it."