Stoney Creek Trail Report
No. 62 - May 2024

Index

On the front page is an arboreal puzzle: several generations of a family of **Western redcedars** in a more complex arrangement than the Nursery Trees near the Straightaway.

The formation began in the stump of a very large cedar that was cut down a century ago. The decayed wood of this **first-generation** tree supplied nutrients and moisture to a seed that germinated atop the stump and grew well above ground, becoming the **second-generation**. Then, perhaps due to *candelabra behaviour**, a leader (stem) grew laterally (sideways) from that tree, reached upward, and became the **third-generation** tree, growing scaffold (canopy) branches like its parent. Subsequently, one of its roots, in a kind of slow-motion leap, reached down and took hold in the soil. Through this method, called layering, the **fourth-generation** tree germinated, grew upward and is now forming scaffold branches like its mother and grandmother.

You can see that the last two generations were not produced via cone and seed. All living members of the family, daughter, mother and grandmother are physically joined and capable of sharing whatever it is that cedar trees share.

**Candelabra growth, common among redcedars, describes the form of a tree in which multiple leaders grow upwards and become additional trunks.*

As mentioned previously, the City has planted Giant Sequoia saplings on Hemlock Hill. Also planted were **Shore pines** and **Western larches** which are featured in this Report. The Shore pine in the photo on the left has been growing on Hemlock Hill for several years.

The Shore pine (*Pinus contorta var. contorta*) is a coastal lowland pine, closely related to the Lodgepole pine (*Pinus contorta var. latifolia*) which is found widely across the B.C. interior. Both are distinctive among all pine species due to having needles that grow in bundles of two. The Lodgepole pine grows straight and tall, while the Shore pine is shorter and often has a crooked trunk and branches.

Shore Pine 1/2

Shore pines grow rather quickly, usually to a height of 6—10 m, but are relatively short lived. They can tolerate soil that is low in nutrients and will form stunted forests in sandy, boggy and rocky areas. When exposed to wind and weather close to shore or on rocky hilltops, they will take on an attractive, sculpted shape.

The Shore pine can be identified by its needles which are often curved and twisted (notice they are in pairs). The cones are also twisted at the base so they end up pointing toward the trunk.

Unlike Lodgepole pines, Shore pines normally don't have cones that are sealed shut by resin, so they won't require heat from a wildfire to release the seeds.

Coastal aboriginal peoples were known to use Shore pine roots as rope, sheets of the bark as splints and the sap as a sealant for canoes and baskets. The pitch (sap) was also used for medicinal purposes: applied to cuts, made into a poultice for rheumatism, or in tea to treat tuberculosis.

Pines are very important to wildlife in BC. They have nutritious, oily seeds that are favoured by many kinds of birds: Clark's nutcracker, crossbills, grosbeaks, jays, nuthatches, chickadees, and woodpeckers. Chipmunks and squirrels eat the seeds; grouse and deer eat the leaves; porcupines eat the bark. Pine needles are a favourite material for making nests.

Shore Pine 2/2

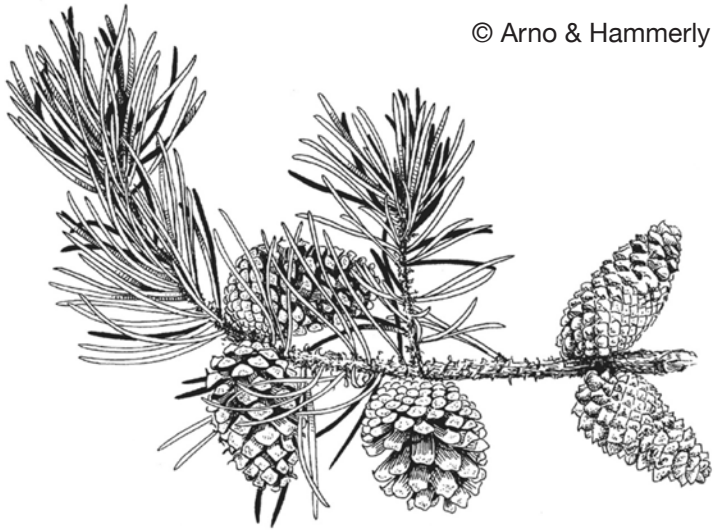
The photos below show how a Shore pine seedling, planted by the City last fall, has developed over a span of several months.

If you'd like to see this little tree, look for it on your left immediately after you leave the Latimer Street walkway.

Many thanks to **Paul Neufeld** of the DFO, **Jim Pojar**, author, and **Alex Hyde**, Natural Areas and Trails Coordinator, for their help in preparing this Trail Report.

Material for the feature on the Larch and the Shore pine is based, in part, on information from the following sources:

Bressette, *Native Plants PNW*
Pojar & MacKinnon, *Plants of Coastal BC*
Arno & Hammerly, *Northwest Trees*



Western Larch 1/2

The Western larch (*Larix occidentalis*) is a deciduous conifer. Its native range is almost exclusively in the drainage area of the Columbia River which is a large part of southeastern British Columbia. It grows in valleys and on the lower slopes of mountains at elevations between 500 and 2400 m.

The Western larch, sometimes called a Tamarack, grows tall and straight, often to a height of 50 m or more. It does best in full sun and well-drained soils, unlike the Eastern larch—the real tamarack—which prefers boggy ground. It can survive very cold winter temperatures but is susceptible to early frost damage because it continues to grow through to September; most evergreen conifers stop growing in mid-July.

In summer, it has a lustrous green foliage and cinnamon colored bark. In the fall, the needles turn to a stunning golden yellow that seems to light up whole mountainsides in the Kootenays. Because the tree is deciduous, the needles fall off a few weeks later, making the tree look dead.

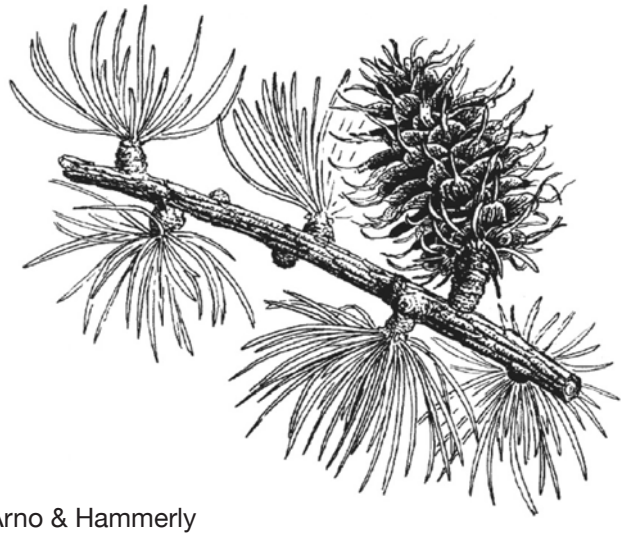
The Western larch grows in areas with frequent forest fires. Because it self-prunes its lower branches and has a thick, grooved bark, it is very fire-resistant. Larch seeds germinate readily and the saplings grow quickly on fire-blackened soils, giving them a head start over other species.

Western Larch 2/2

The Larch tree's leaves, buds and seeds are an important year round food for birds such as the grouse, pine siskin, redpoll, and white-winged crossbill.

Aboriginal people seldom used the wood of the Western larch, however, they valued the sweet sap which, mixed with grease, was a cosmetic. The sap was also chewed and applied on wounds. The bark and needles were used to make medicinal tea.

Nowadays, a sweetish starch in the sap (galactan) can be used as an emulsifier (thickener) in food products, a health supplement to benefit digestion and boost the immune system, a skin moisturizer in cosmetics, and an additive in animal food.



Because it is tough and durable, Larch wood has often been used in heavy construction, railway ties and pilings. Due to its straight grain and water-resistant qualities it is used for boat building and flooring.

The Larch is highly prized as firewood as it burns with a sweet fragrance and a distinctive popping noise.

As average temperatures rise due to climate change, the optimal growing conditions for tree species are moving North. In 2010, because of its significant commercial importance, the Government of BC implemented an "assisted migration" program (a first in North America) involving several tree species. Western larches were planted hundreds of kilometers north of their historical range (the Columbia Basin) in a location predicted to have similar climatic conditions by 2030.

The 2024 Smolt Transfer 1/2

The ARPSES hatchery raised 11,000 coho smolts this past year. On May 1st, half of them were deposited in Stoney Creek. The operation was different from the one described in my May 2002 Report. This time, instead of a pipe, hand nets were used. This enabled DFO Community Advisor, **Paul Neufeld,** to use the *displacement method* to more accurately select half the smolts (the rest were destined for Clayburn Creek).

The principle behind displacement is that 1 L of water equals 1000 g of mass. This method involves marking the water level in the tank, removing a measured quantity of water, and then adding fish until the water returns to the original level. For example, if you remove 20 L of water and add 20 kg of fish the water level will stay the same. The numbers of smolts in the Pond was known to start with. Their average size was found to be 18 g. This meant that 20 kg of smolts (20,000÷18) equalled 1111 fish. Thus, removing 5500 smolts from the tank would be the equivalent of removing 100 L of water.

The 2024 Smolt Transfer 2/2

An Unfortunate Occurrence

On Thursday morning, May 9th, I was informed by a very concerned dog walker that hundreds of the Coho smolts that had recently been introduced to the Creek were lying belly-up, dead in the Pond beside Bateman Road.

I reported the incident to the Provincial and Federal authorities, then determined that the Coho fry born in the Creek and living upstream were not affected. This indicated that some kind of poisonous effluent had entered the Creek just upstream of the Pond.

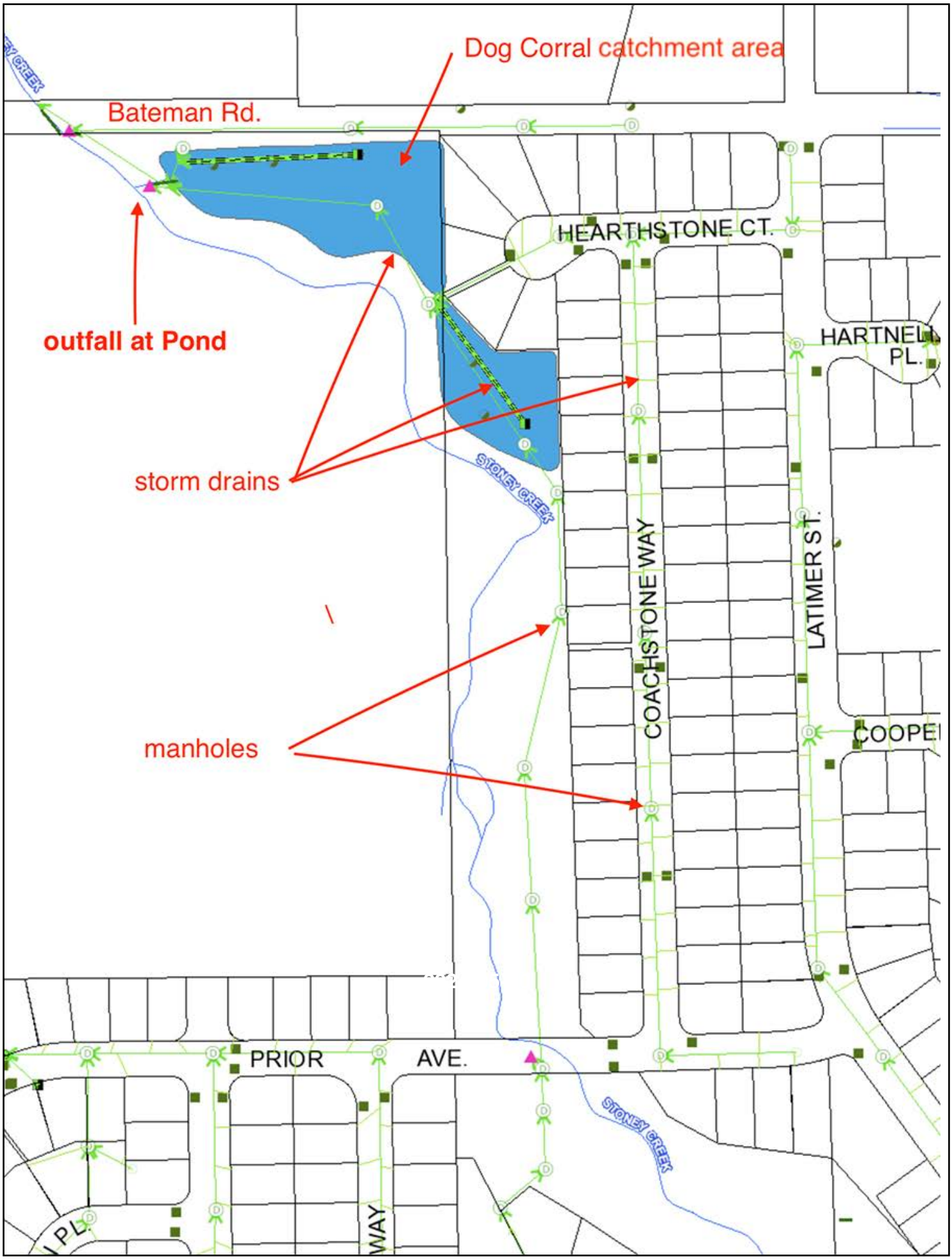
The following day, a Department of Fisheries and Oceans officer visited the site and an investigation was begun. Ultimately, the DFO was unable to determine the source or the nature of the poison. As is common in cases like this, the evidence had been washed down the storm drain and was no longer being released. All traces were gone.

We all need to realize that the fish and other aquatic creatures in our Creek are at our mercy. We must all become aware of the danger in allowing unnatural substances to be flushed off our streets and yards.

It must be understood that storm drains are not connected to wastewater treatment facilities. The City map on the following page shows the storm drains that carry run-off by gravity down Coachstone Way and Hearthstone Court, then via the Dog Coral directly to an outfall below Bridge 1. This neighbourhood must take special care because it is so close to a natural waterway. Effluent from these streets has little chance of being diluted or otherwise degraded before entering the Creek.

Many people are still not aware (or not concerned) that a variety of common products contain chemicals that are toxic in the environment. For example, solvents used in painting and cleaning, pesticides and herbicides, de-greasing agents for cleaning cars and driveways, household cleaning agents being used outdoors.

It's too late to remedy this latest situation. The damage has been done. Let's all try to exercise our responsibility to protect aquatic life in Stoney Creek—and elsewhere. Spread the word!

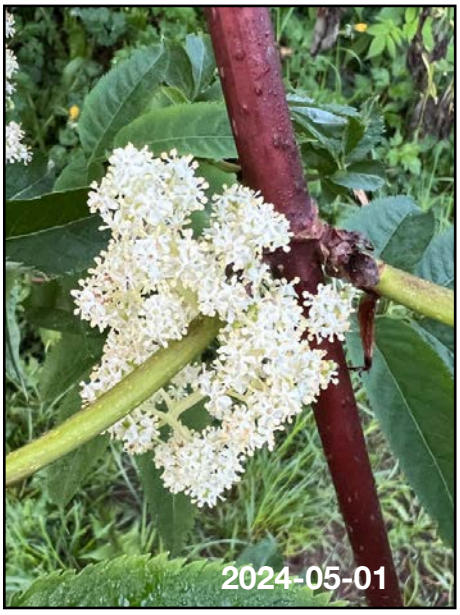

Dog Corral catchment area
Bateman Rd.
HEARTHSTONE CT.
outfall at Pond
HARTNELL PL.
storm drains
STONEY CREEK
COACHSTONE WAY
LATIMER ST.
manholes
COOPE
PRIOR
AVE.
STONEY CREEK

Odds and Ends 1/2

City Parks installed a large flower bed and gave some much-needed attention to the gate between the Bateman soccer pitches and the Trail.

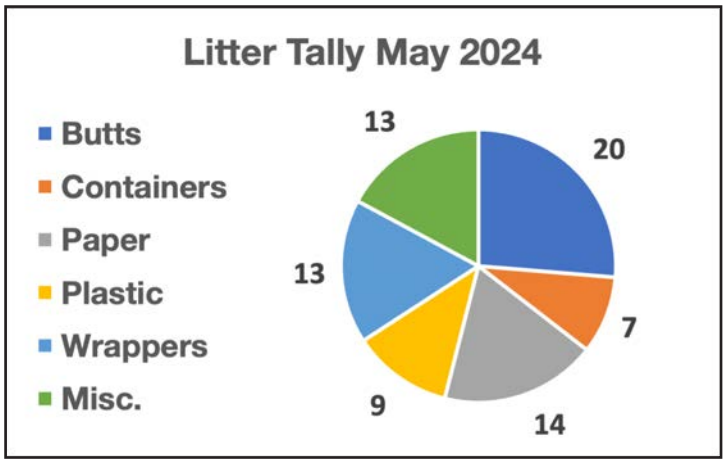
Until the mower-man came, buttercups nicely decorated an entry to the Dog Corral. This structure is an example of the great extent to which the City has catered to dog owners. Much appreciated.

Flowers of the Red elderberry and Twinberry honeysuckle, cotton from the many Black cottonwood trees.



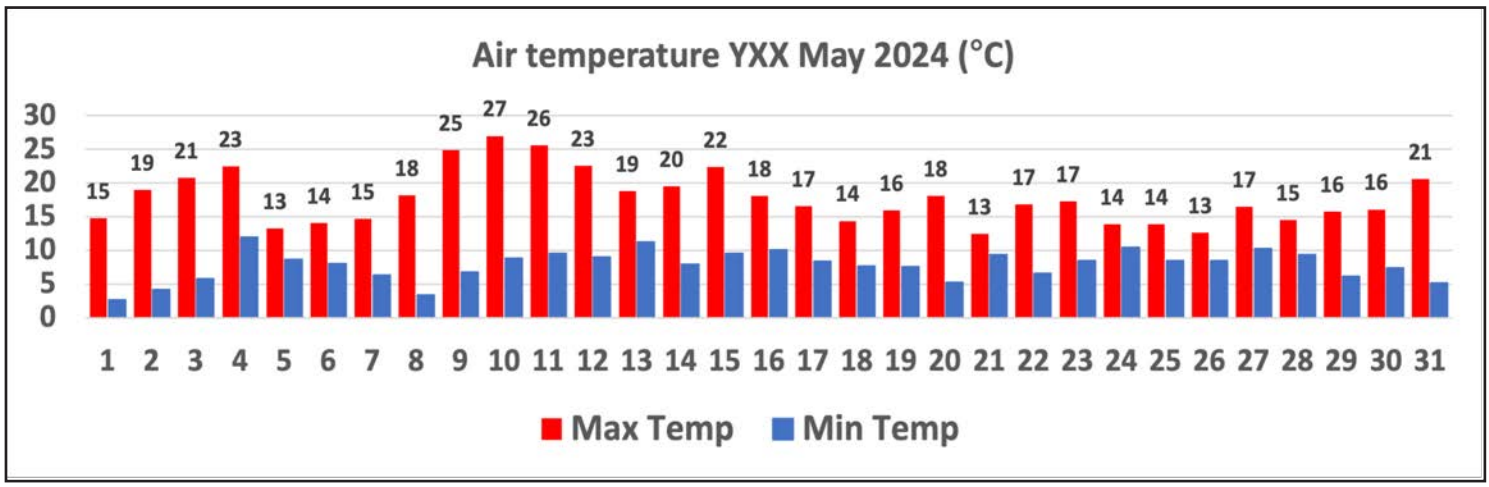
Odds and Ends 2/2

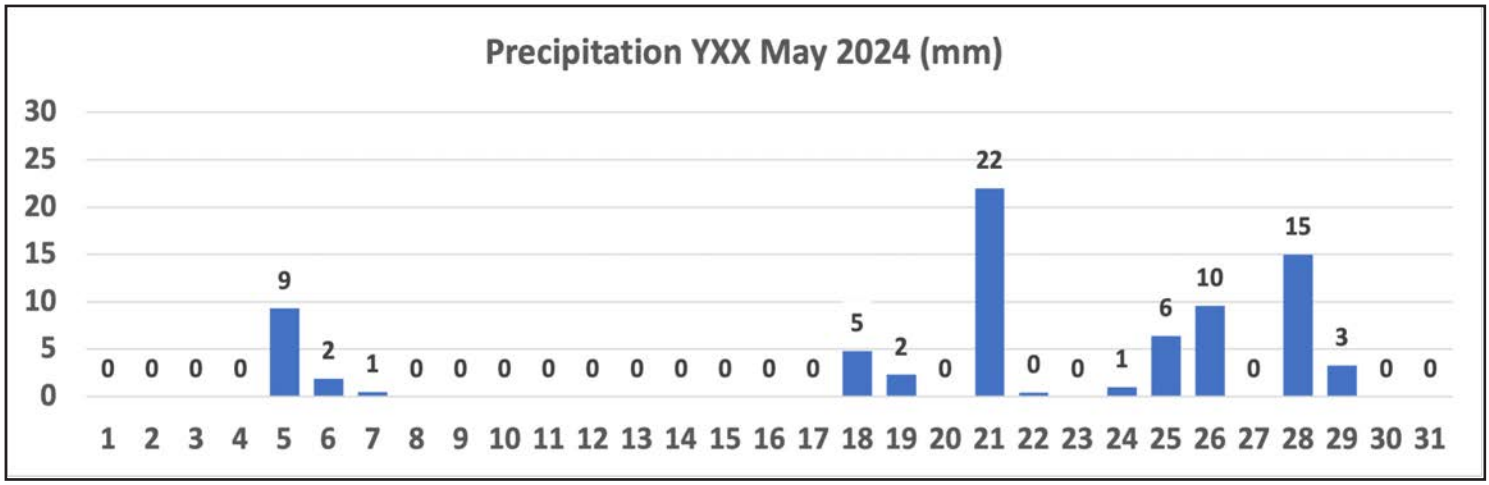
May is peak blooming month here, so I can't resist showing you more of the Trail flowers: Black chokeberry, Dandelion (that's a Miner bee), Thimbleberry (Bumble bee), Chocolate vine, Yellow Twig dogwood, Mountain-ash, Pacific waterleaf and High-bush cranberry.

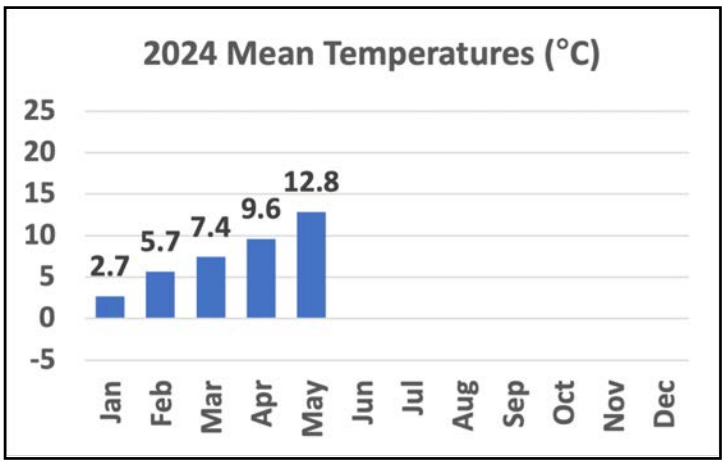


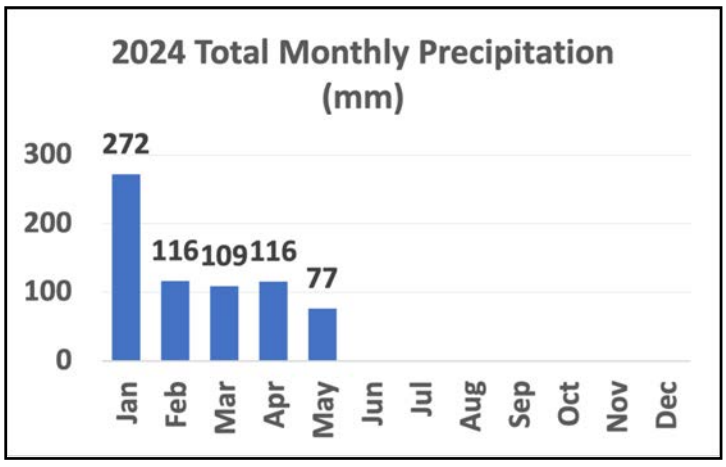
Total litter items = 76

Containers: bottles, bottle tops, cans, coffee cups, lids, juice boxes.
Paper: tissues, napkins, posters, newspaper, receipts, cardboard, etc.
Plastic: dog waste bags & shreds, other items made of plastic.
Wrappers: candy wrappers, foil, cellophane.
Miscellaneous: clothing, glass, chewing gum, dog balls & fragments, etc.

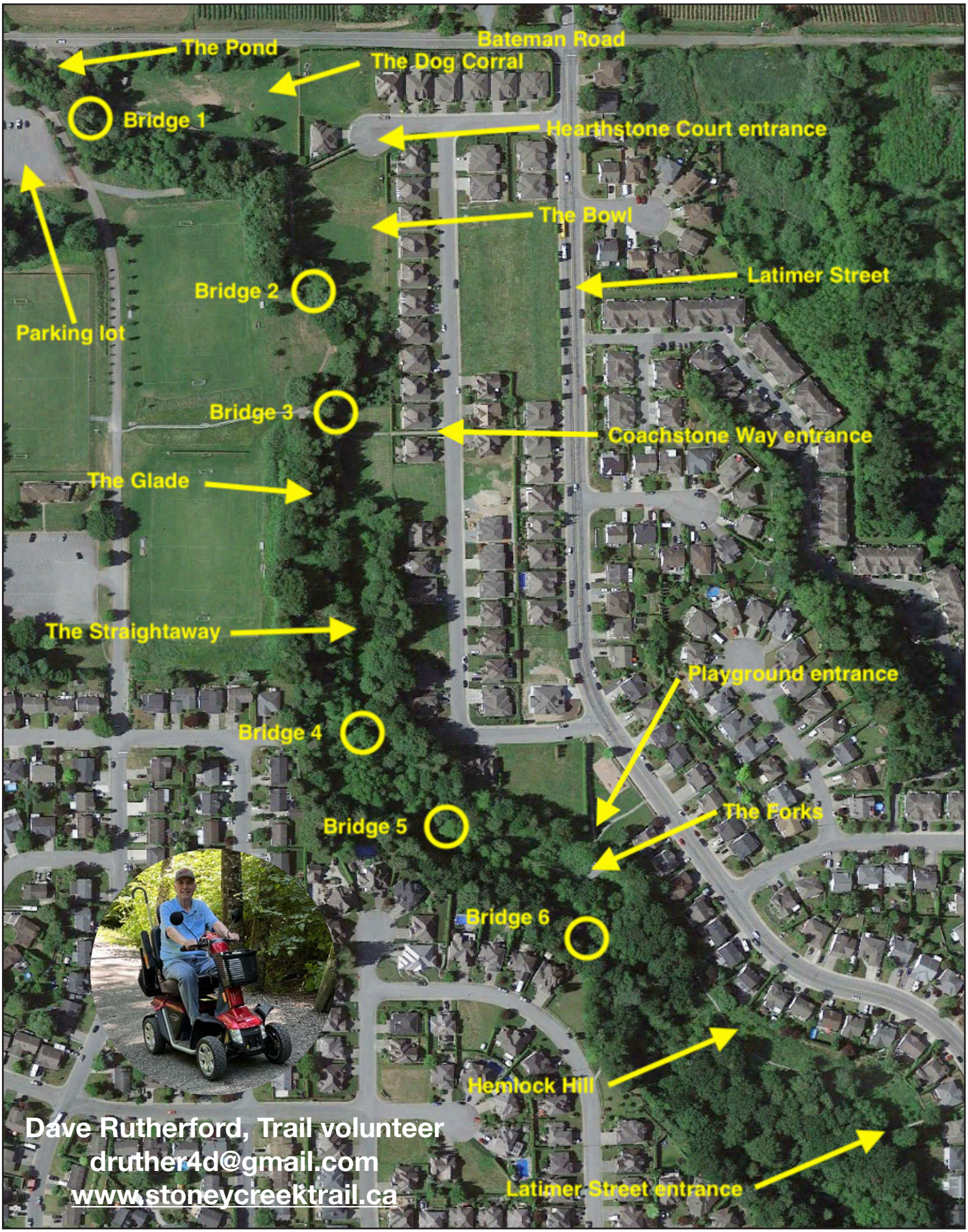








For convenience, I use these custom place-names



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