Stoney Creek Trail Report
No. 87 - June 2026

INDEX

Kudos to City Parks for trimming back the tall "weeds" crowding the young trees on the Hill.

Have you ever noticed the lingering wet spot on the shoulder of the Bowl path across from the doggy-bag dispenser?

Descending the western slopes of Sumas Mountain, the geology changes from hard bedrock to porous sands and gravels left by retreating glaciers. (Sandy Hill is aptly named!)

When groundwater flowing down the mountain hits these fractured, highly permeable layers, it can find its way to the surface in some places, showing up as seepage or natural springs.

Local creeks draining the Sandy Hill–McKee area—including Clayburn and Stoney Creeks and their tributaries—receive much of their flow from groundwater seepage in addition to surface runoff from rainfall.

Where this surfacing groundwater is not confined to channels such as Stoney Creek, it becomes a management problem for both City engineers and real estate developers. Builders often encounter groundwater during excavation in this area.

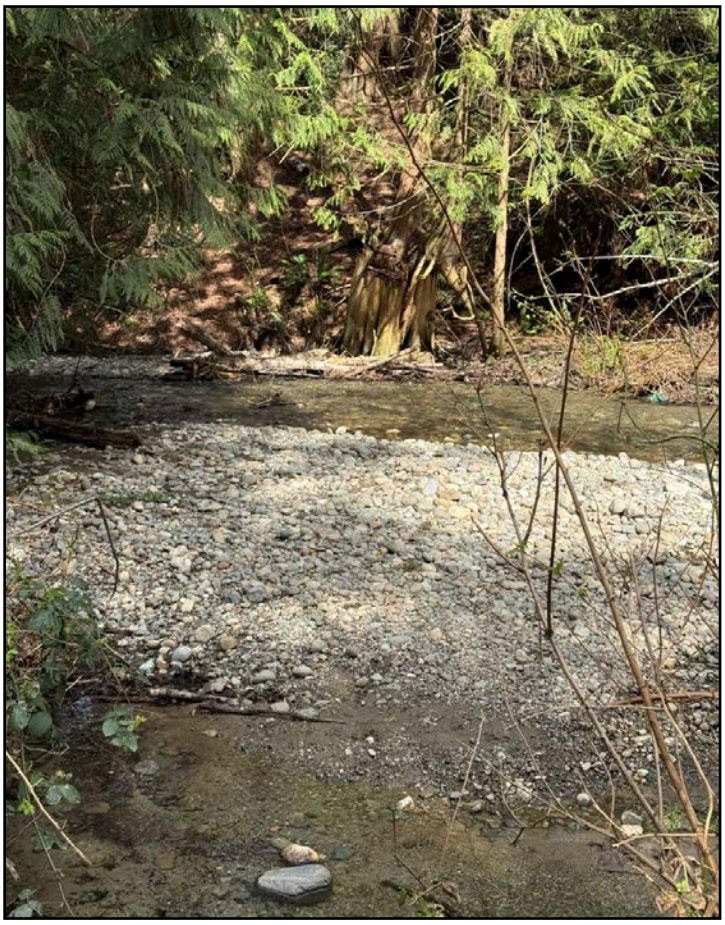
Residents on the lower slopes of Sumas Mountain are very aware of these wet spots as well. In this neighbourhood, “seeps” or springs can be found in places along Coachstone Drive. The wet spot beside the Bowl (shown above) is one of these seeps.

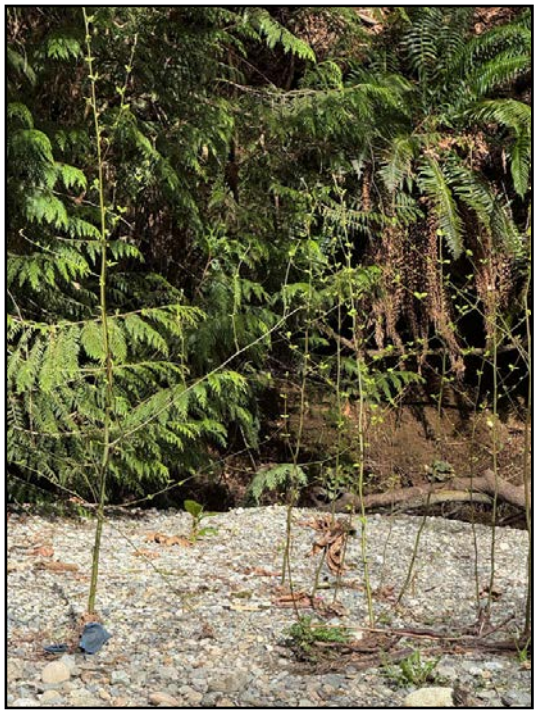
Stoney Creek is a Dynamic System

A creek naturally meanders over time, constantly re-shaping its channel.

At the edges of Stoney Creek, a number of large red alders are dying and falling. They have been undercut as a result of a shift in the water flow pattern caused by the movement of gravel.

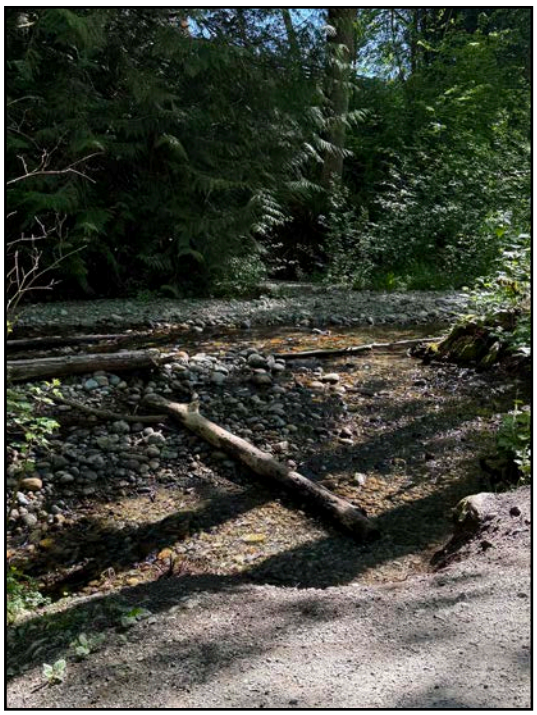
During periods of high water flow, gravel is carried downstream. Where the water slows, the gravel is deposited. This process, called ***aggradation,*** causes a gradual raising in sections of the streambed. Because the water can no longer flow easily over the newly formed gravel bars, it is deflected outward, applying its force against the streambanks where the alders are growing.





Red alders are a pioneer species. They thrive in the moist, disturbed soils near water, so they will quickly colonize new gravel bars. However, they have relatively shallow, spreading root systems. Later, when moving water carves out the soil beneath their roots, the weight of the trees (which often lean toward the light over the water) eventually causes them to topple.

It's a cycle: alder saplings colonize a new gravel bar—time passes—the creek shifts—the mature alders are undercut and fall—new ones grow somewhere else.



While the result may look like a loss, it can be a benefit. Fallen alders will help stabilize the creek by slowing the flow and creating pools that are vital for juvenile salmon. The reduction in gravel movement also protects the salmon redds (buried eggs) and increases habitat diversity. Of course, excessive sediment can smother the eggs.

The movement of gravel in Stoney is accelerated by the large volume of rainwater entering the creek during our West Coast winters. Increased urban development in Abbotsford is a contributing factor. Instead of soaking into the ground, rainwater from added roofs and pavement is directed into storm drains and hits the creek all at once. These "flashy" high-water events have enough energy to move large amounts of gravel and erode the banks much more quickly than would a natural, steady flow.

Because Stoney Creek is a fish-bearing stream, DFO regulations limit or require approval for work to reduce erosion or manage vegetation along the creek. This explains why the forest along the creek does not have the manicured look of other parks. An exception is Bateman Pool below Bridge 1 where gravel builds up to the extent that it needs to be cleared out yearly by the City—with the approval of the DFO, of course.


A wonderful photo of a coastal black-tailed doe and her fawns, taken by Harry when walking his dog, Mabel, near Bridge 5.
© 2026 H. Boxall

Salmon Imprinting

Salmon have the amazing ability to find their way back to their “home” stream to spawn. This is made possible because, as they mature, they go through a natural process called ***imprinting.***

Imprinting takes place during ***smoltification***, the transition from parr to smolt when their dark parr marks fade and they become bright silver. For coho, this typically happens in the spring when they are 16-18 months old. During this transformation, the salmon undergo a period of physiological changes that prepares them for life in saltwater. One of these changes is a surge in hormones that triggers the growth of new neurons in the olfactory (smell) system. It essentially "opens a window" in the brain, allowing the smolt to memorize the specific chemical signature—the unique mixture of minerals, soil types, and decaying vegetation—of the water in which it is living.

Photos by Bill Beatty

For the ARPSES hatchery staff, timing is critical. The coho smolts that mature in the Ravine pond must be released into Stoney and Clayburn creeks during the smoltification window, which lasts only a few weeks in the spring. If they are released too early or too late—after the window closes—they are more likely to stray into the wrong river system when they return from the ocean.

After spending about 18 months in the North Pacific, adult coho head for their home stream in autumn to spawn. At first they navigate by the Earth's magnetic field and environmental clues, such as ocean currents and the angle of the sun, to help guide them through the Salish Sea. After entering the freshwater plume of the Fraser River, they are assisted by increased stream flow from autumn rains, as well as an instinctive tendency to swim against the current. Once in the Fraser, the coho, having survived all the hazards in the ocean, make their way with increasing precision by using the sense of smell to locate their home watershed and, ultimately, Stoney Creek.

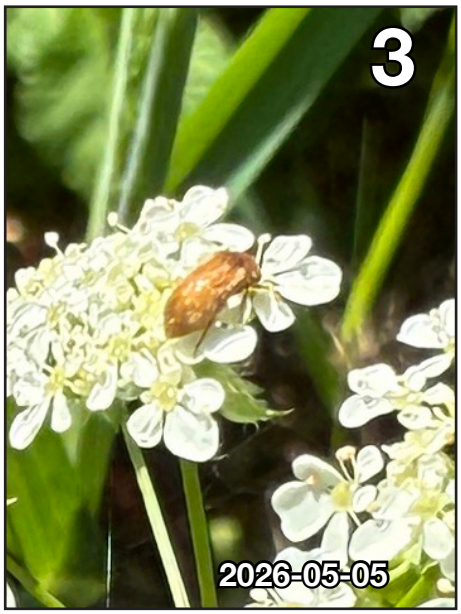
Wild (non-hatchery) coho juveniles will have spent a longer period of time absorbing the chemical signature of Stoney creek, with its naturally variable water quality and flow. Hatchery-reared coho experience a shorter exposure period, giving them a less robust chemical memory. As a result, some may stray and spawn in a nearby tributary rather than in the creek where they were released.

The red elderberry is a shrub that supports a wide variety of birds, insects and mammals across BC.

The Sad Story of an Elderly Alder

Photo 1. The nitrogen produced in its roots would have enriched much of the surrounding flora. **Photo 2** shows where it once stood, at the south end of Bridge 5. **Photos 3** and **4**, taken shortly after the Atmospheric River, show that the tree was felled by human activity rather than natural forces almost three years before the replacement bridge was installed. **Photo 5** shows how the 1-metre-diameter stump is gradually disappearing.

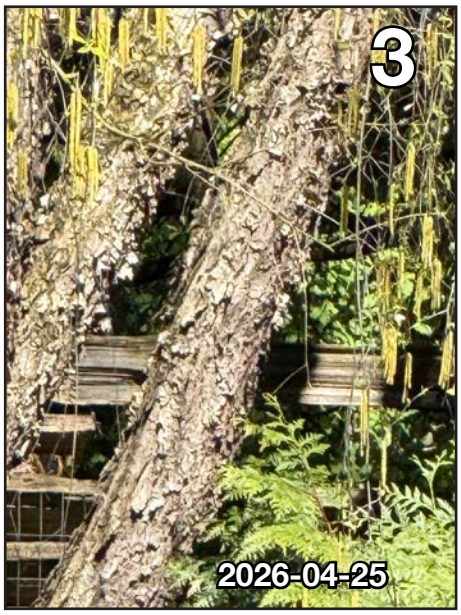
Insects



Some insects observed on Hemlock Hill last month:

1. A **pale beauty** moth, a bit tattered but still airworthy.
2. A **goldenrod crab spider** waiting patiently on a stinging nettle, ready to pounce on prey.
3. A **raspberry beetle** grazing on a cow parsnip.
4. A tiny **damsel bug** sitting on a nettle leaf.
5. This **spring harvestman** (daddy-long-legs) was making its way rapidly through the grass underfoot.
6. An **orange-legged furrow bee** sipping nectar from a cluster of Pacific ninebark flowers.
7. A **long-legged fly** on a ninebark leaf.

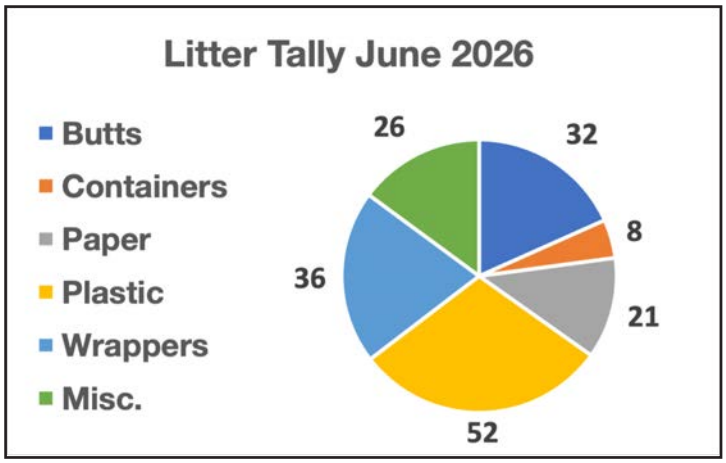
Odds & Ends 1/2



1, 2, and **3.** There are three species of **birch tree** in the park: paper birch, yellow birch and river birch. Only the paper birch is native to this region.
4. Seven **giant sequoia seedlings** once grew at the top of Hemlock Hill. Now only two remain. This hole marks the spot where one of them once stood. Did City Parks decide to move them—**or were they stolen?**
5. Items from a game of **ring toss** were abandoned on the Straightaway.
6. A limb from a nearby cottonwood tree broke off and fell, **damaging the deck of Bridge 1**.
7. This **odd litter item** was pulled out of the creek near Bridge 1. City Parks were notified on the 19th, but have not yet taken it away.

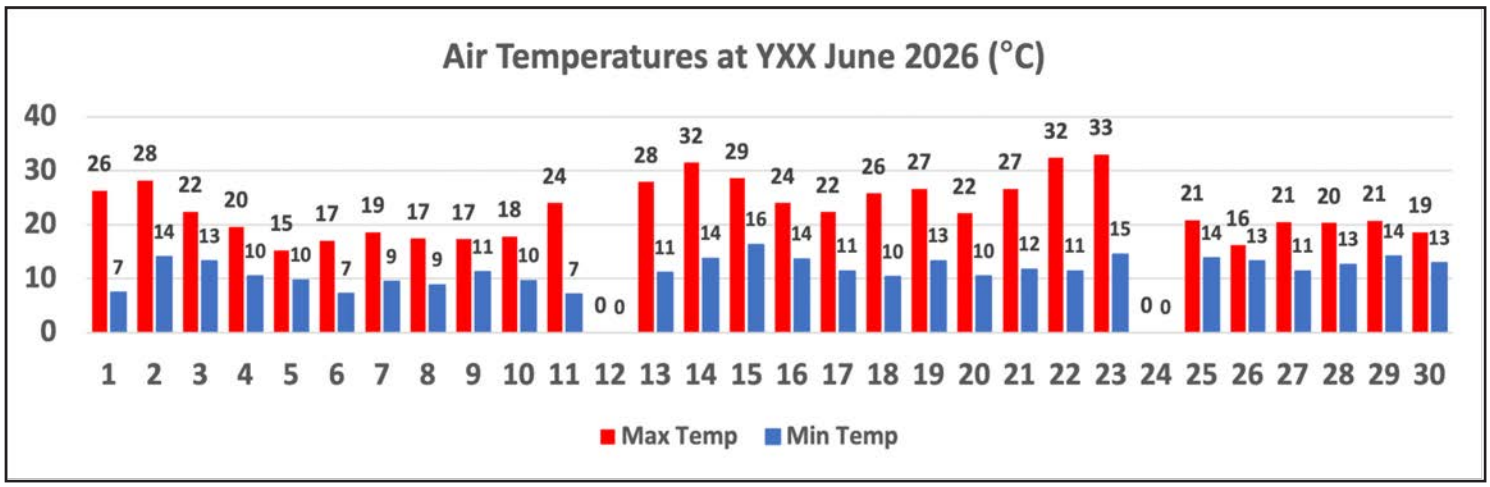
Odds & Ends 2/2

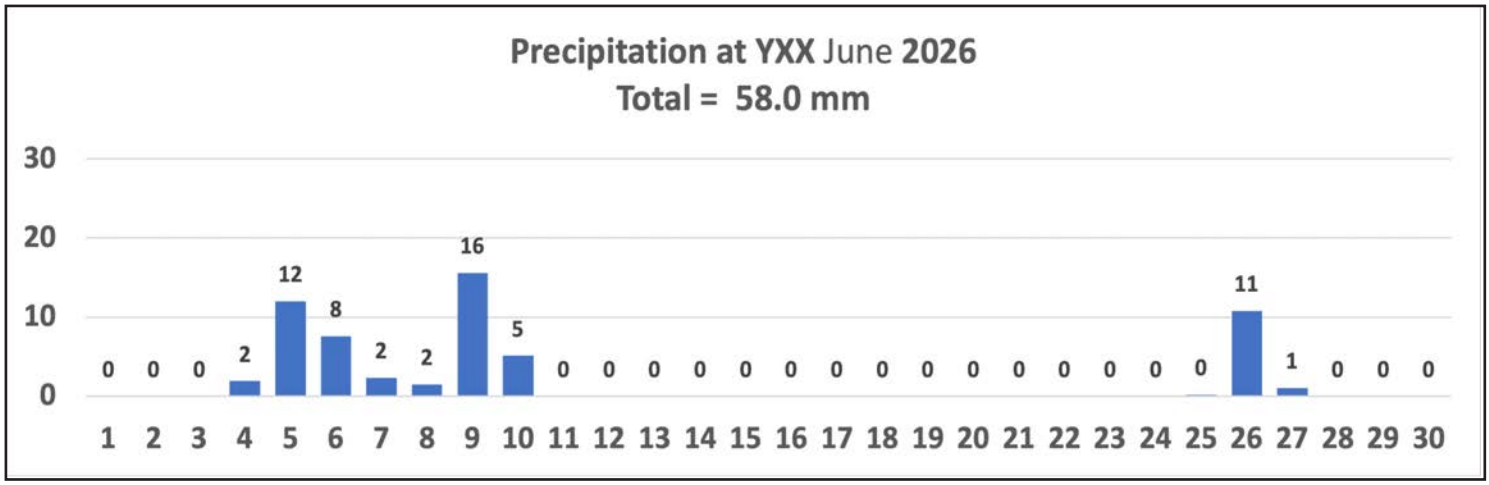
1. This spindly **fragrant fringecup** is growing out of the gravel near Bridge 5.
2. The **foam** on the stem of this **creeping buttercup** is probably hiding a spittlebug from predators.
3.These **flower beetles** are enjoying a buffet provided by a **blackberry blossom**. They will dine mainly on the pollen but also on the nectar and even the petals.
4. An unusual sighting on the Hill: a **large-leaved avens** with its round, burr-like seed heads.
5. The green berries are forming on an **Oregon grape**.
6. This **smooth hawksbeard** escaped a City Parks whipper snipper by lying low.
7. Tiny **forget-me-not** flowers peep through the grass.

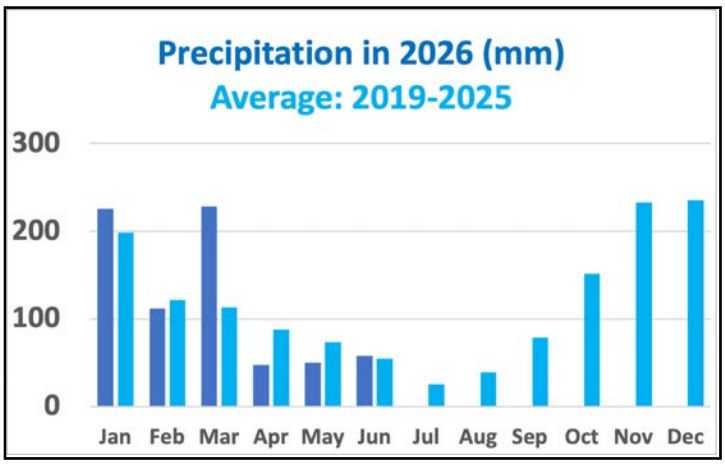


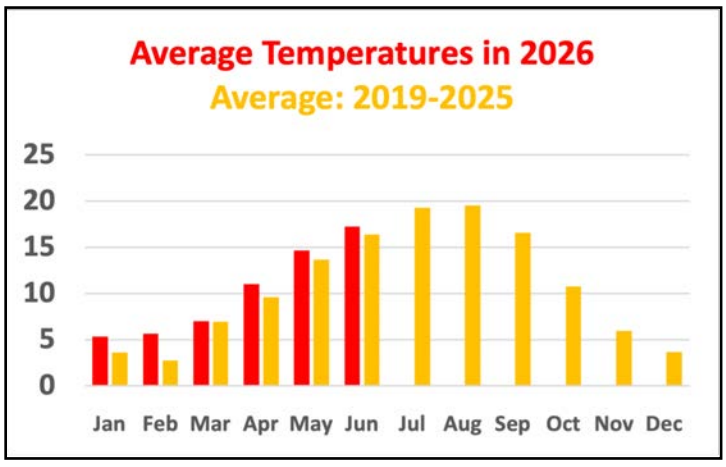
Total litter items = 175

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 reference, I use these custom place-names: