

On the front cover: a young Shore pine (*Pinus contorta subsp. contorta*), recently planted on Hemlock Hill. As its Latin name indicates, it is a subspecies of *Pinus contorta*, the other subspecies being Lodgepole pine (*Pinus contorta subsp. latifolia*) that grows mainly in the BC Interior. (See more details in the Trail Report for May 2024).

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Notice the looming wall of blackberries behind it. They were trimmed back last fall to give respite to small trees and shrubs that have been planted in the last few years to enhance Hemlock Hill (the upper part of the Trail). The Blackberry horde stands poised for battle, thorns bristling with menace, ready to surge forward and overwhelm the little trees when the growing season returns.

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A disclosure: I have taken on very able and dependable assistant. I'm sure you've heard about her him it in the news lately... ChatGPT, the A.I. (artificial intelligence) application.

In preparing these Reports, I still google to find informative websites and depend on Wikipedia and other authoritative sources as before, but now I'm making regular use of A.I. as well.

ChatGPT, my preferred A.I. app, is a powerful and free writing tool—imagine Google on steroids. Although it is not always 100% accurate, it assists in my research by speeding up a complicated process tremendously. It's also very handy when used as an advanced spelling and grammar checker. However, it can do much more....



Hemlock Hill's namesake

ChatGPT can also compose full paragraphs or pages of writing, on any topic, in flawless English—in seconds. ChatGPT will also list its information sources—if asked. Of course, for some people such as students who must research and write essays and other assignments, there is great temptation to "cheat" and not give credit to (cite) sources.

Almost two years ago, in my March 2023 Trail Report, I announced my first use of ChatGPT in a feature called "A Memorial to Bridge Five." More recently, if you haven't peeked into all the nooks and crannies of my website, you will not have seen another work of fiction that I created for fun to show what ChatGPT can do. Go to Page 9.

#### **Tree Plantation:**





Last month, the City's *Natural Areas and Trails* team went looking for a home for a leftover stock of **Lodgepole pines** (above). They decided the well drained soil and full exposure of Hemlock Hill would be a suitable location. They also planted a number of **Grand firs** (*Abies grandis*) and **Douglas-firs** (*Pseudotsuga menziesii*) (below) in the area between Bridges 5 and 6 that had been disturbed by construction.





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## The Grand fir (Abies grandis):



The Grand fir, also called the giant fir, lowland white fir, great silver fir, western white fir, Vancouver fir, Oregon fir, etc., is native to northwestern North America. It was first described by the Scottish botanical explorer David Douglas who called it "grand" because of its great height.

Abies grandis is a tall, straight tree that can grow rapidly up to 70 m or more in height. Its bark is furrowed and grayish brown in colour. The leaves are wide, flat needles, glossy dark green on top and whitish underneath, with a slightly notched tip. When crushed, they emit a strong citrus-like odour. The seed cones, like those of all true fir trees, grow upright on the upper branches. The cones are tightly scaled, bright green at first, turning purplish brown later.

Its deep green shiny colour makes the Grand fir a favourite for Christmas trees. Its wood, soft, resin-free and fine textured, is valued for pulpwood, plywood, packing crates and construction. Although not as strong as that of the Douglas-fir, its resistance to splitting makes it valuable for framing in the construction industry. You may be looking at Grand fir wood if you see "hem fir" stamped on lumber.

Grand fir has vulnerabilities. It has been very susceptible to spruce budworm infestations, it has relatively thin bark which lacks the ability to produce wound-healing sap or resist flames and it tends to "crown" in wildfires.

The Grand fir was valuable to both interior and coastal First Nations peoples. For example, its bark was used to produce brown dye for basket

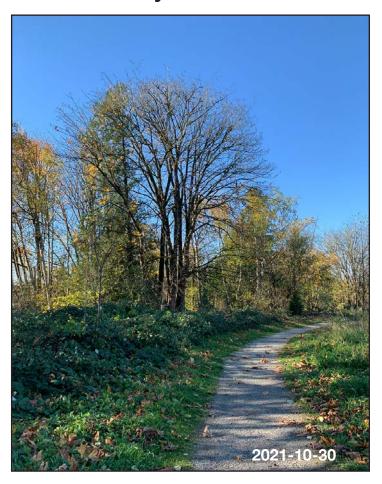






making, its stiff branches were used for scrubbing in purification rites or fashioned into decorative clothing, its needles were burned as incense or boiled to make medicinal tea, and its knots were steamed and shaped into fishhooks.

# The Blackberry Invasion on Hemlock Hill: 1/3









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#### The Blackberry invasion on Hemlock Hill: 2/3



On the previous page: before and after photos of the west side of the Trail on Hemlock Hill. (The blackberries have not taken over the east side, fortunately).

Cutting back the Blackberry canes gives the trees and shrubs, like that Vine maple (on page 5), a couple of months of freedom. Usually, only the edges of the Trail are trimmed back, about a metre every summer. However, the west side was trimmed back much further in 2023 and again last spring, though not as thoroughly.

Dead canes are normally gray or brown, with a dry, brittle texture. When you gently scratch the bark, the layer underneath will appear dry and brown rather than green.





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#### The Blackberry invasion on Hemlock Hill: 3/3





**Above**: Photos of a Black hawthorn bearing the remnants of last summer's blackberry canes. On the right, you can see canes with a green or reddish hue. This means they are not dead and will grow again when the weather warms up.

**Below**: This Red currant bush is located outside the area cleared of blackberries last April. It will probably be overwhelmed next summer.





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#### **Odd and Ends:**



Top: This redcedar above
Bridge 6 has the candelabra
shape. If you've walked
the Trail this month, you'll
recognize this. A murder of
crows harasses a nearby owl.
Right: This <u>little pine</u> recently
planted on Hemlock Hill
was torn out by vandals and
replaced by litter.

**Bottom**: At this bend in the creek, erosion is putting the fence at risk. A Jelly-spot fungus and a Reddening lepiota mushroom.

2024-12-20





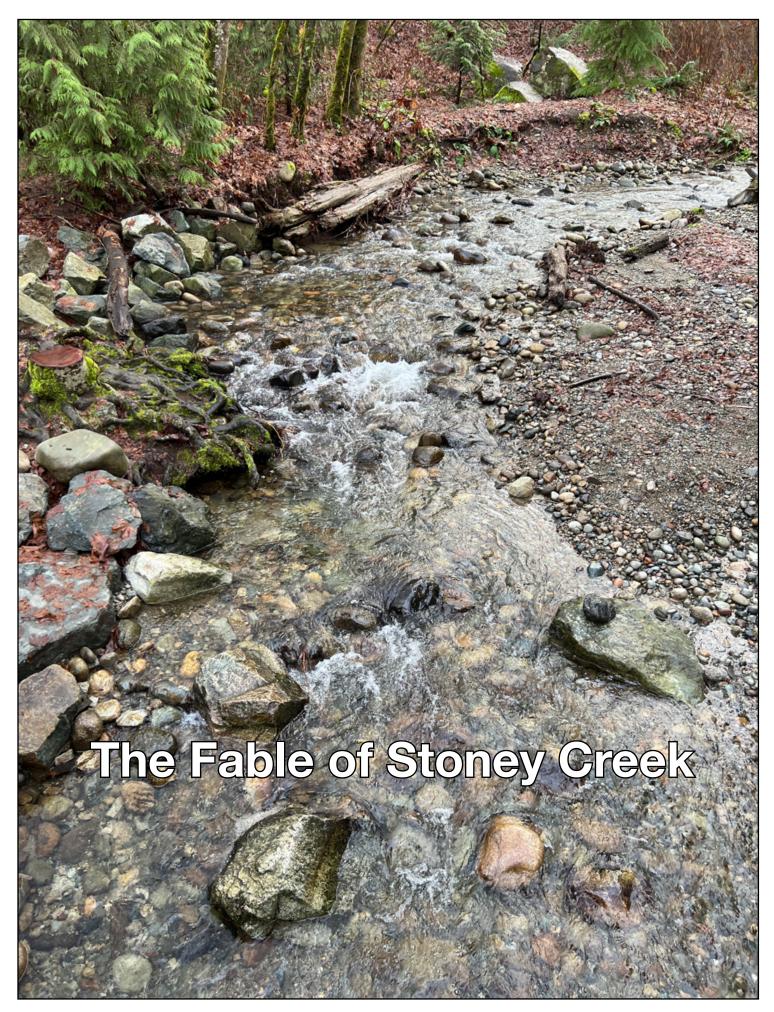








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## The Fable of Stoney Creek, by ChatGPT

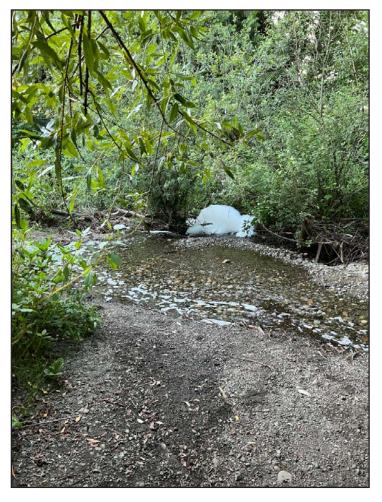


At the edge of a bustling city, nestled in a mountainside ravine, there flowed a creek named Stoney. Its waters sparkled like jewels, winding its way from a distant forest down through an urban landscape. Stoney Creek was home to lively salmon and trout, serving as a vital artery for local wildlife and a cherished retreat for the people who strolled its banks.

One fateful July day, a mishap at a nearby fire hall turned the tranquil creek into a scene of despair. In their haste to control a spill of firefighting foam, the firefighters accidentally directed a large amount of the foam into a storm drain. This drain, unfortunately, led straight to Stoney Creek. The once-clear waters were soon enveloped in a thick, toxic foam, their purity marred by a greasy sheen.

The effects were swift and devastating. Juvenile fish, once darting with vitality, now floated lifelessly. The joyful ripples of the creek gave way to a mournful silence. Even diverse creatures such as crayfish and lampreys that lived in the creek succumbed to the poison, and the ecosystem seemed on the brink of collapse.

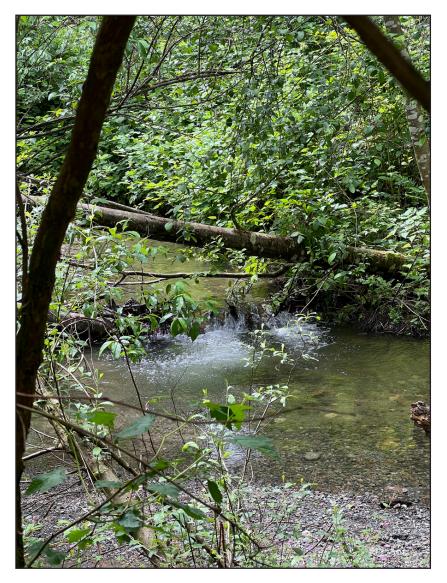
Yet amid the devastation, a quiet miracle unfolded. Deep within the creek's bed, where the foam was less concentrated, benthic macroinvertebrates—tiny larvae of creatures such as mayflies, caddisflies, and stoneflies—were still alive. These small but mighty beings played a crucial role in the creek's health. They fed on organic matter and helped decompose debris, turning it into nutrients for other life forms.



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Despite the harsh conditions, these resilient invertebrates worked tirelessly. They scavenged and broke down the poisoned debris, gradually improving the water's quality. Their persistent efforts started to show results: the water began to clear. Small patches of algae began to grow, providing food and shelter for other creatures. Tiny microorganisms returned, drawn by the improving conditions. The once-dead creek slowly began to recover.

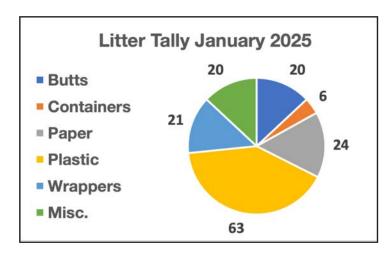
One day, a young boy named David, who frequently visited Stoney Creek on his scooter, noticed a change. Tiny fish were again cautiously swimming near the banks. News of the creek's recovery spread, and the community was uplifted by these hopeful signs.



Seeing the creek's miraculous transformation, the city folks decided to help. They took care not to let their dogs and children disturb the creek bed, planted trees along the banks to prevent further pollution, and worked together to reduce toxic runoff from their yards. Their efforts, combined with the invertebrates' unwavering perseverance, accelerated Stoney's recovery.

With time, the creek flourished once more. Salmon fry swam with renewed energy, herons croaked their greetings, and other birds came to feast on the thriving insects. Stoney Creek, once a poisoned stream, became a vibrant testament to nature's resilience and the importance of even the smallest creatures.

The fable of Stoney Creek teaches us that even in the face of great adversity, hope and recovery are possible. The tiny invertebrates' quiet, relentless work, combined with the community's support, restored the magic of Stoney. Their story, passed down through generations, will serve as a reminder of the power of perseverance and the vital role every creature plays in the web of life.



#### Total litter items = 154

**Containers:** bottles, bottle tops, cans, coffee cups, lids, juice boxes.

**Paper:** tissues, napkins, posters, newspaper, receipts, cardboard, etc.

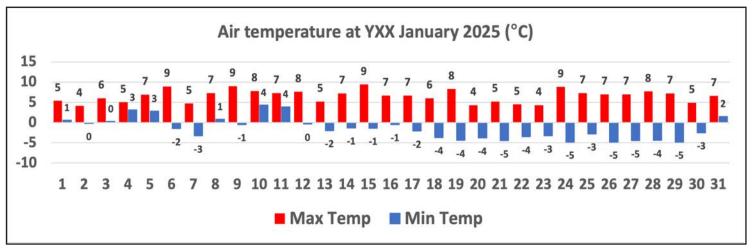
Plastic: dog waste bags & shreds, other items

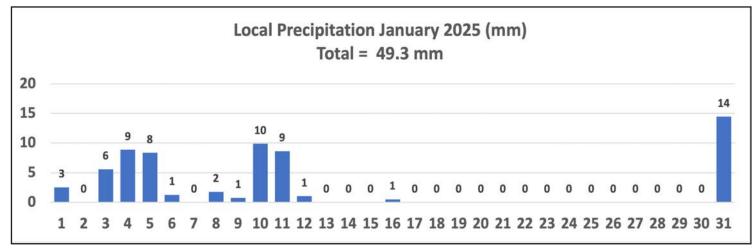
made of plastic.

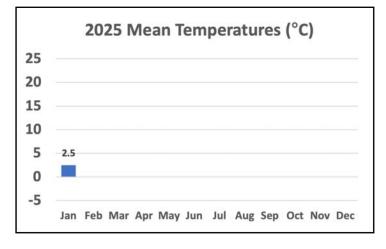
Wrappers: candy wrappers, foil, cellophane.

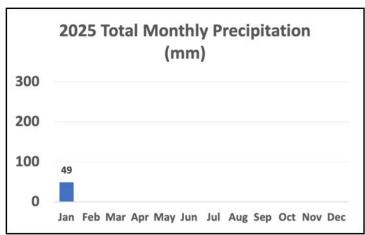
Miscellaneous: clothing, glass, chewing gum,

dog balls & fragments, etc.









## For convenience, I use these custom place-names

