



**Stoney Creek Trail Report
No. 68 - November 2024**

On the front cover, a view of the Trail partway up Hemlock Hill. It was 5° when taken in mid-morning on the 7th, one of the few days this month it wasn't either cloudy or rainy. Behind that large Bigleaf maple, a long way back on the right, you can see the top of one of the largest Douglas-fir trees in Abbotsford. On the right is a view of the base of the tree.



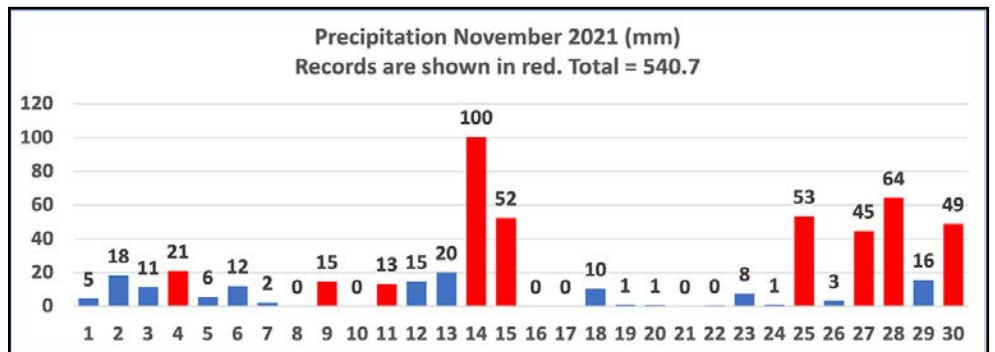
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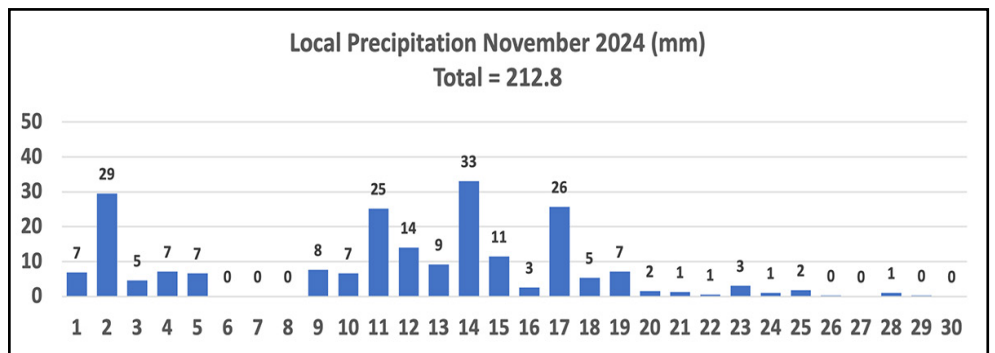
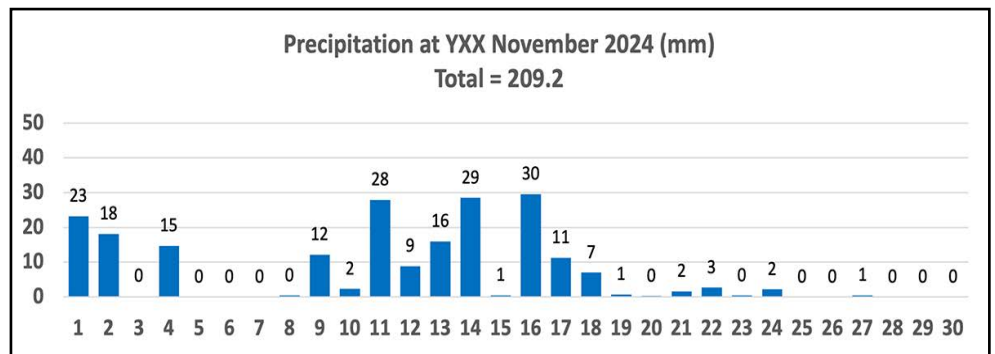
The special feature this month is about the **Chum salmon**. The Coho will be featured next month.

We've been concerned about how the new Bridge 5 will do when our heavy seasonal rains come (see the 2024 precipitation chart, Page 10). No problem so far! Here are some charts showing how this month compares with November 2021 when we experienced the infamous "Atmospheric River."

The top chart shows the total rainfall that month was 540.7 mm. The spike on the 14th marks the day when the Creek overflowed its channel and caused the closure of the Trail. Those several days of heavy rain at the end of the month finally resulted in the destruction of old Bridge 5.



The middle chart illustrates this month's data from the weather office at YXX, 10 km from the Trail. The bottom chart also shows the amount of rain we've had this month, but it was measured in the rain gauge in my backyard, which is a block away from the Trail.



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I am now managing the [ARPSES website](#). It has information and photos about activities by Hatchery volunteers not shown in these reports or the [Stoney Creek website](#).

Autumn Colours



Latimer Street Entrance 2024-11-07



Norway Maple



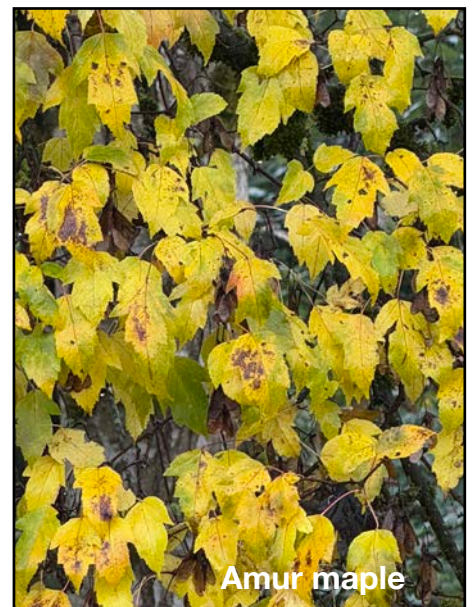
Pacific Ninebark



Vine maple



Dogwood

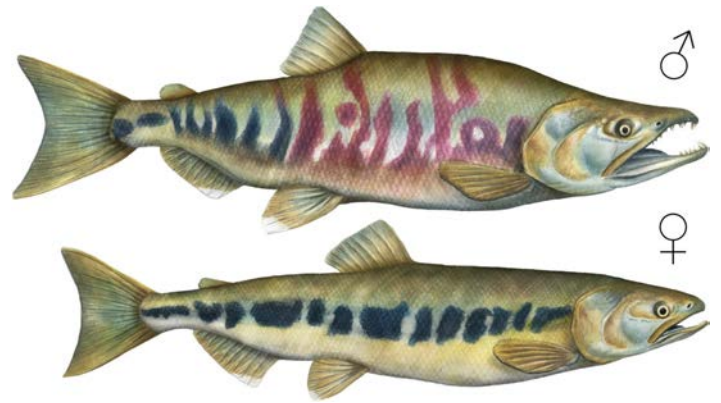


Amur maple

Chum Salmon: 1/3

Chum Salmon (*Oncorhynchus keta*), is one of the six species of salmon native to the North Pacific region. The English name “chum” comes from the Chinook jargon word *tsəm*, meaning “spotted” or “marked.” *Keta* is their name in the Russian language.

The body of the chum salmon is deeper than most salmonid species. In the ocean, they are a silvery blue-green but when they migrate into fresh water, they become darker. When spawning, males have blotchy streaks on their back. They also develop a hooked jaw (kype) and impressive dog-like teeth, hence their other name, “dog salmon.” Females are easy to identify by a distinctive black stripe along their side.



© Dorian Noël

The chum salmon is abundant along the B.C. coast, with the Fraser River having the largest population in North America. Most chum return to spawn in the Fraser at the age of four, entering the river from September through November, with the peak migration occurring in mid- to late October in recent years. Here in Stoney Creek, chum are usually the first of our two salmon species to spawn and usually do so any time in October, depending on the water level (i.e. the amount of rain).



Chum often spawn in the same streams as coho, but since the latter are smaller and more agile they tend to move further up the watershed while chum spawn in the lower part. Between them, they will use up all the good spawning locations.

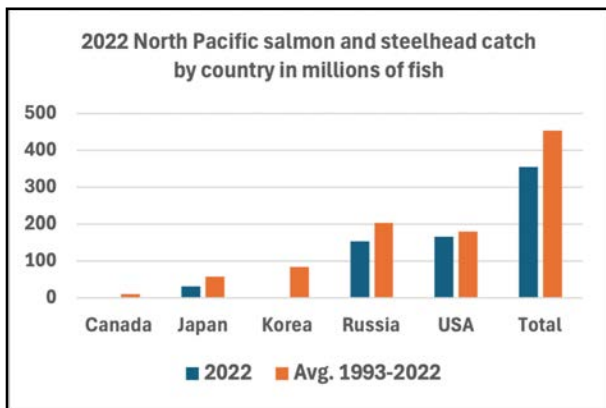
By slapping her tail (left), the female builds a nest called a redd, which is little more than a depression in the gravel. She may lay as many as 4,000 eggs in more than one redd and pair with more than one male. Males and females die soon after spawning.

Chum fry are smaller than those of other salmon. However, as early as March—a few days after becoming free swimmers—they migrate downstream to estuaries, where the river mixes with sea water, and mature there for several months before heading out into the open ocean.

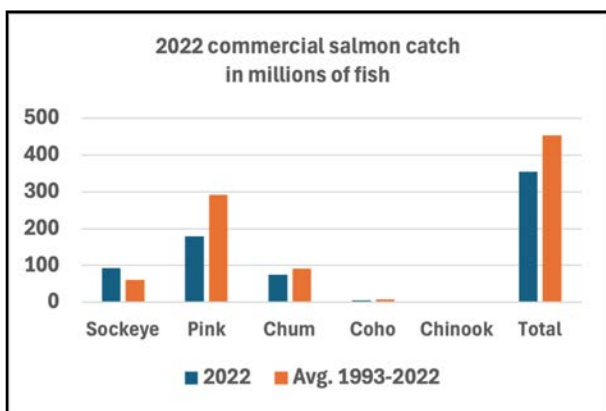
Chum Salmon: 2/3

Chum spend three to four years in the North Pacific. In the ocean, they rarely dive below 50 m, typically swimming around a quarter of that depth during the day, even less at night. Juveniles and adults feed mainly on zooplankton, tiny organisms that drift in the current, but also on larger creatures such as squid and small fishes. Adults cease feeding when they return to freshwater.

Chum have the largest natural range of any Pacific salmon. They are found all around the North Pacific, off the coasts of Japan, Korea, and Russia as well as from Alaska down to British Columbia and California. They also undertake the longest migrations, far up the Yukon (3000 km!) and Mackenzie Rivers. They spawn from the Northwest Territories to as far south as Oregon.



The registered harvest of chum salmon in the North Pacific in 2022 was about 213,000 tonnes, which corresponds to 74 million fish. This was about 20% below the long term average. By country in 2022, Japan caught 19% of the total, Russia 36%, the USA 42% and Canada 3%. The chum salmon harvest was about 20% of the total of all Pacific salmon species caught.



Historically, the chum salmon was the most important species to the Coast Salish people for several reasons: they return to spawn in the late fall; they are abundant in many streams and rivers; and they are the largest salmon species in the region. Due to their relatively low fat content, chum can be readily smoked and/or dried to last through the winter.

Ethnographic records show the Coast Salish peoples primarily harvested male chum. They knew that the sex-ratio (males to females) of spawning chum is close to 1:1, and that a single chum male will fertilize the eggs of several females. This meant that a considerable number of males could be harvested without lowering the egg fertilization rate, thus maintaining a sustainable yield. This demonstrates their sense of responsibility to care for the salmon.

Chum Salmon: 3/3

The chum are the least commercially valuable salmon in North America. Despite them being extremely plentiful, commercial fishers and sport anglers often choose not to target chum because they are considered to be the least desirable salmon for human consumption. This is probably due to their lack of a rich, buttery flavour and the dark pink colour of species like the sockeye.

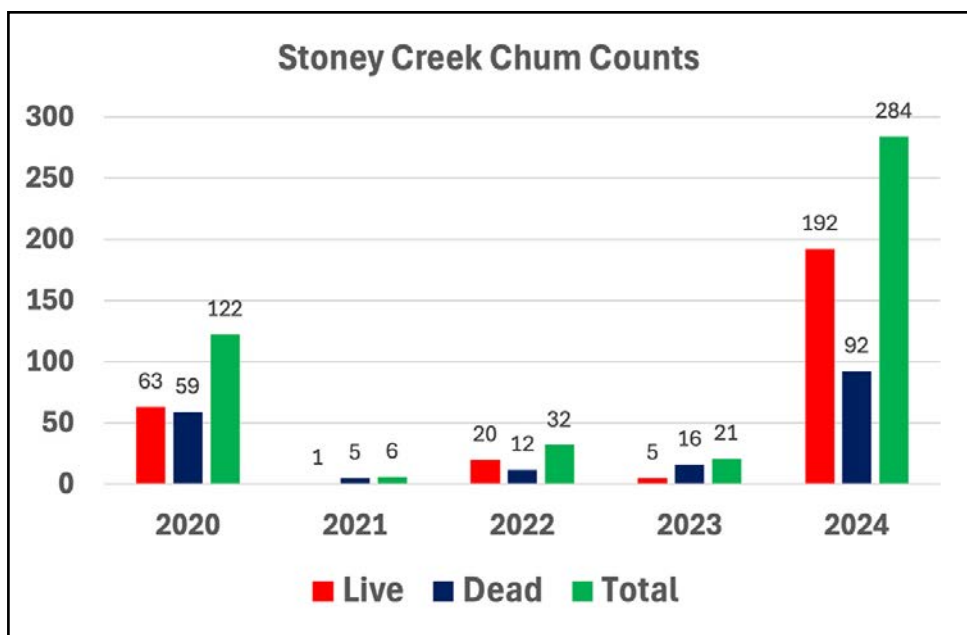
They're unsightly and smelly, but salmon carcasses enrich the Creek environment by becoming good food for the tiny invertebrates the salmon fry feed on.

Hatcheries in the North Pacific region release about 5 billion fish annually: Canada 7%, Japan 38%, Russia 17%, USA 38%, with Korea contributing less than 1%.



In BC, DFO-operated facilities raise Fraser chum at Inch Creek, Chilliwack, and Chehalis hatcheries. As well, there are DFO-supported community programs at Alouette River, Kanaka Creek, Nicomekl River, and Serpentine River. Production has been relatively consistent over the last 10 years, with approximately 11 million fry released annually. Unlike coho such as those raised by the ARPSES hatchery, chum in the Fraser watershed are not marked with adipose-fin clips. [The acronym DFO refers to Fisheries and Oceans Canada, a federal government department].

Information sources for this feature: *Fisheries and Oceans Canada* – *nature.com* – *Island Fisherman magazine* – *Wikipedia* – *NPAFC (North Pacific Anadromous Fish Commission*



The chum salmon run in Stoney Creek this fall was comparatively a very good one, as shown in this chart.

Note: in fish surveys, the number of dead is considered to be the most important statistic. This is because live fish could possibly be counted more than once, unintentionally.

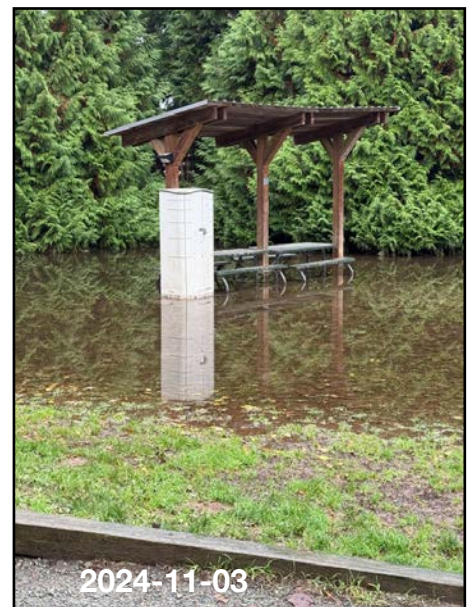
Odd and Ends 1



Top: the return to the white plastic poo bags last month has greatly increased the litter count; a lost dispenser and a variegated English ivy.

Middle: two of the nine Sequoias seedlings on Hemlock Hill have died.

Bottom: brown stink bugs are still around! The carpet of Prostrate knotweed in the Dog Corral cannot withstand the onslaught of November rains and playful dogs.



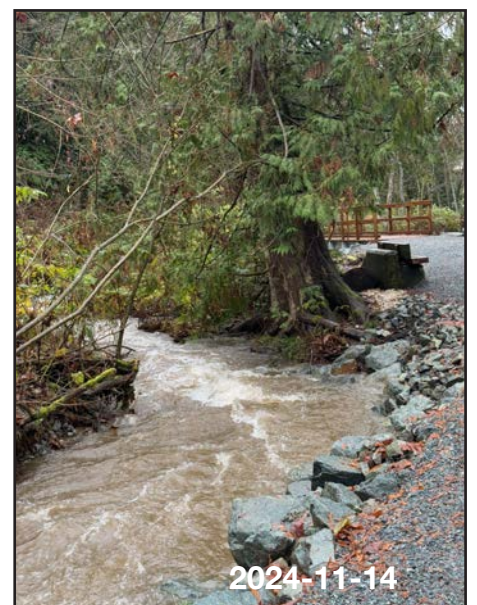
Odd and Ends 2



Top: a windfall almost wiped out the new signs marking the dogs-on-leash areas.

Middle: A class from Columbia Bible College came to practice search and rescue techniques in the ravine below the trail at the top of the Hemlock Hill.

Bottom: on rainy days, we're keeping a close eye on the water level upstream from Bridge 5. Happily, the Creek is behaving well so far.



Odd and Ends 3



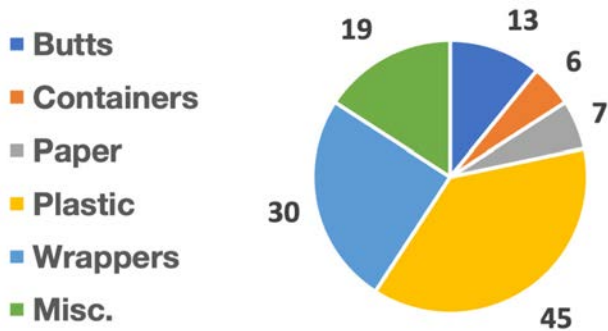
Top & Middle: these are five Cryptogams (plants that reproduce by spores rather than flowers and seeds); Sulphur tuft, Late oyster, Honey, Wood woolly-foot and Snow-white Crust lichen.



Bottom: at the Forks, a new fence protects walkers from a steep drop-off. This male coho became a donor in the ARPSES hatchery's "egg take" operation this month.



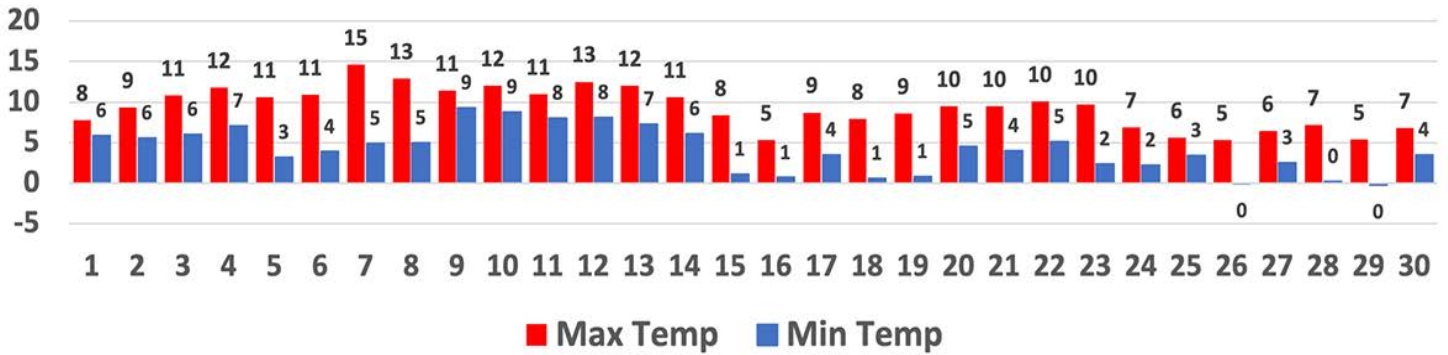
Litter Tally November 2024



Total litter items = 120

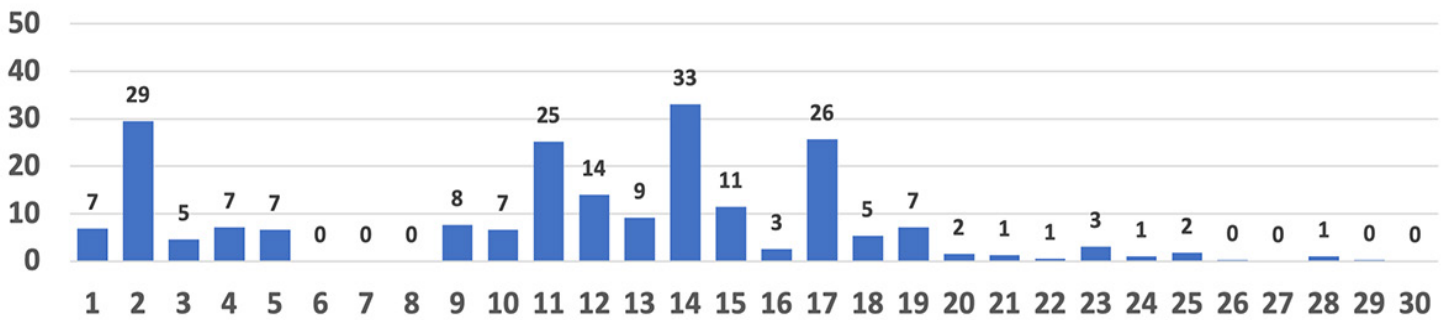
- Containers:** bottles, bottle tops, cans, coffee cups, lids, juice boxes.
- Paper:** tissues, napkins, posters, newspaper, receipts, cardboard, etc.
- Plastic:** dog waste bags & shreds, other items made of plastic.
- Wrappers:** candy wrappers, foil, cellophane.
- Miscellaneous:** clothing, glass,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

Air temperature at YXX November 2024 (°C)

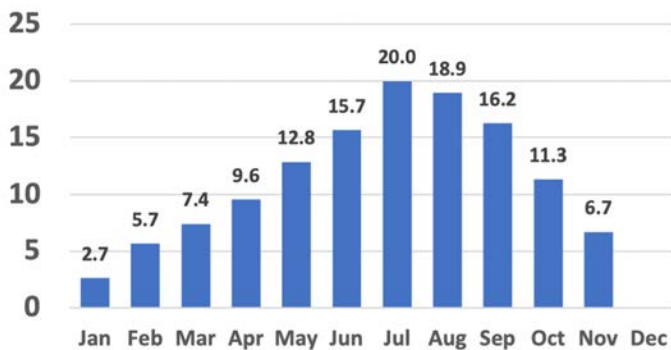


Local Precipitation November 2024 (mm)

Total = 212.8

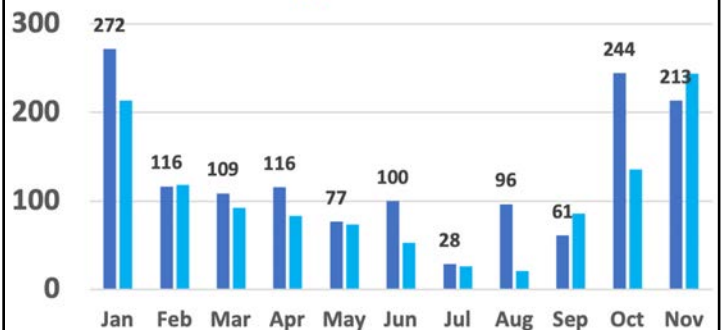


2024 Mean Temperatures (°C)



Precipitation in 2024 (mm)

Average: 2019-2023



For convenience, I use these custom place-names

