



SAGE WHISPERS

Newsletter of the Kamloops Naturalist Club
Knowing nature and keep it worth knowing



Public Participation at Pink Palooza! (see pg. 2)



INSIDE THIS EDITION

- Programs & Events - 2
- Welcome New Members - 2
- Japanese Beetle Update - 3
- Kamplan Highlights - 5
- Beavers as Bioengineers - 7
- Book Review - 8
- Bioengineering with Leaf Ninjas - 9



KNC is grateful to meet on the unceded land of Tkemlúps te Secwépemc, and to do most of our wandering and enjoying nature within Secwepemcúl'ecw, the traditional territory of the Secwépemc people. We are grateful for their stewardship of this land since time immemorial.



CLUB INFO

The Kamloops Naturalist Club was formed in 1971 and became a registered Society in 1981. It is a member of both the Federation of British Columbia Naturalists and Nature Canada.

Sage Whispers is published quarterly.
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KNC Mailing Address

P.O.Box 625, Kamloops, BC, V2C 5L7

Meetings

7:00 PM, the third Thursday of the month from September to June. Meet at Heritage House, 100 Lorne Street, Kamloops, BC

Annual Membership

(January 1 to December 31)

Family - \$40

Individual - \$30

Student - \$23

Contact: Winnifred Fischer
250.376.3944

Find Us Online!

kamloopsnaturalistclub.com

or

facebook.com/kamloopsnaturalistclub

PROGRAMS

Field Trips & Events

December 21: Christmas Bird Count

Mark your calendars for the Kamloops Christmas Bird Count, happening on Sunday, December 21!

If you'd like to take part in this annual tradition, simply email Glenn Dreger at gdreger@telus.net to sign up.

Meetings

November 20: Heritage House. 7pm. Thompson Rivers University Master of Science students. Several, diverse, short presentations

December 18: Heritage House. 7pm. Christmas Social

January 31: St Paul's Anglican church. 5:30pm. Annual General Meeting

February 19: Heritage House. 7pm. Tom Willms. Presentation about beavers and beaver dam restoration "Beavers at Work"

Welcome New Members!

The Kamloops Naturalist Club is welcoming the following new members for Fall 2025: Holly & Graham Drake, Miriam Semeniuk, Laura van Leeuwen, Marcy & Julian Fuller, and Jay Akerley & Kirsten Farquhar. *Please give them a warm welcome!*

PINE PARK PINK-PALOOZA

By Amanda Bond *Amanda*
photos by Jesse Ritcey



On September 27, Pink Palooza was held at Pine Park; it was a fun event to celebrate the return of pink salmon to the Tranquille River in the Lac du

Bois Grasslands Protected Area. Over 100 people, young and old, visited our Kamloops Naturalist Club tent. There, they tested their skills at skull and feather quizzes and received a sticker for their efforts. While enjoying a warm drink, salmon, or a donut, participants learned a little about the link between the survival of the salmon and the restoration of beaver habitat.

More than 30 people took free handouts including beaver colouring pages. Some also embarked on guided walks to the river to try to spot the elusive pink salmon – the salmon were struggling to make it into Tranquille River due to very low water levels. Others enjoyed the trek to view the current beaver dam and its occupant.

Our host, BC Parks, was in attendance and featured several other groups to help celebrate the salmon. Beside us was Fisheries and Oceans who had a captive audience for teaching about the salmon life cycle each time they dissected a fish. The two fish I saw were both females and the participants had a chance to see the salmon eggs and organs. The BC Wildlife Park dazzled many with their live Rubber Boa and other hands-on educational materials. Other tents featured WildSafeBC and the BC Conservation Foundation. They had more bear skulls and pelts, which they used to help communicate that salmon are important to the winter survival of bears.

In addition, they highlighted many ways to stay safe while exploring at this time of year. Finally, Big Little Science Center had a salmon-themed predator and prey activity. They ran the program 8 times with approximately 10 or more kids in each of the groups throughout the day. All in all, besides the low number of pink salmon in the river (they benefited from a water release a few days later), this event was a great opportunity to open the dialogue on salmon survival and was a lot of fun for all.



BC Wildlife Park Table featuring snake skins, skulls, and a live Rubber Boa



Fisheries and Oceans Salmon anatomy tent, image depicts eggs inside female salmon

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JAPANESE BEETLE UPDATE

By Megan Blackmore and Diane Watson (Invasive Species Council of British Columbia)

Megan and Diane

The Japanese beetle (*Popillia japonica*) is an invasive insect native to Japan that feeds on over 300 plant species, including roses, fruit trees, vegetables, and turfgrass. It was first detected in Vancouver in 2017, and then Kamloops in 2024. Eradication efforts are ongoing in all areas where they have been detected in B.C. If established in B.C., the Japanese beetle could cause significant damage to turf, horticulture, and agriculture.

Identification

Adult beetles are an oval shape around 1 cm long. Their heads are metallic green and their wing covers are brown. The best defining characteristic of this beetle is the six tufts of white hair running down each side of the abdomen - no other beetle in B.C. has this pattern.

Lifecycle

Adult beetles typically emerge in June, when temperatures consistently reach above 21°C, and damage plants by skeletonizing leaves, creating a lace-like appearance. Beetle larvae live underground and feed exclusively on the roots of turf, grasses, and plants, leaving patches of brown, dead grass in otherwise healthy lawns.

Management

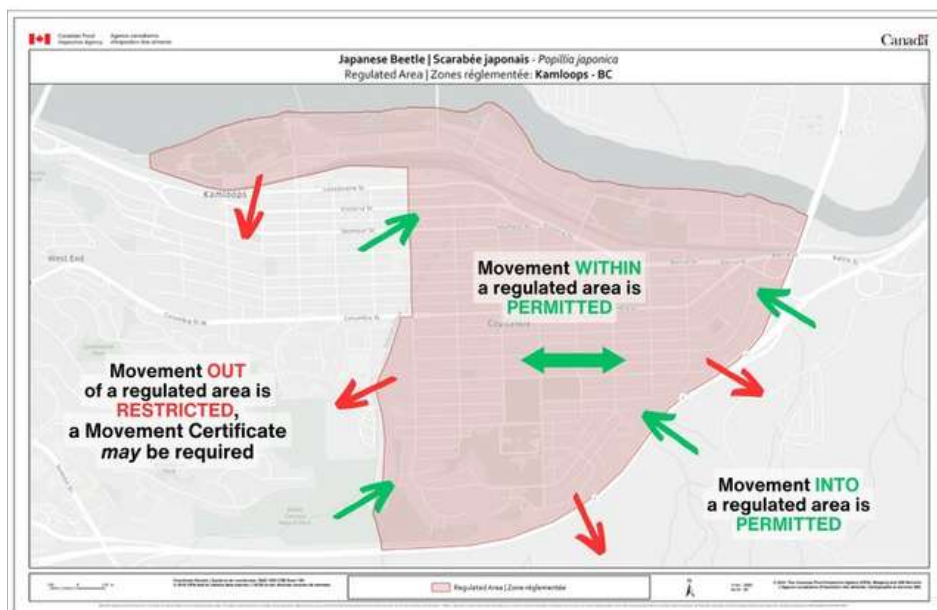
To control its spread, regulated areas (RAs) have been established in Vancouver, Burnaby, Port Coquitlam, and Kamloops (new in 2025). In all RAs, there are restrictions on moving outdoor plants with soil or soil-related matter attached. A CFIA movement certificate is required to move any regulated materials outside an RA.



Japanese Beetle up close, photo by Dave Holden, CFIA



Japanese Beetles Feeding Damage, photo by Nick Wong, ISCBC



Eradication efforts include larvicide treatments to turfgrass (Acelepryn®), surveillance traps, and movement restrictions for plants with soil.

Gardeners and landscapers are encouraged to “Shake it before you take it” when moving produce, flowers, and plant materials to dislodge any beetles that may be hitchhiking.

Spot a beetle? Report it

Report all suspected Japanese beetles to CFIA by calling 604-292-5742, by emailing BCPF.Japanese.beetle@inspection.gc.ca, or through the free [Report Invasives app](#). Please submit reports with insect photos and an accurate location when possible. You can also submit sightings, feeding damage, or damaged trap reports through the free [Survey123 community science app](#). Data are sent directly to the CFIA Japanese beetle response team – no separate email is needed.

Stay Informed & More Information

Check if you're in a regulated area by visiting the City of Kamloops [website](#) or using the CFIA's [interactive postal code map](#). For more Japanese beetle information and to find links to program partners, please visit the ISCBC [website](#) and stay updated with the latest Japanese beetle information by signing up for the Japanese beetle e-newsletter. Be sure to read the [Japanese Beetle Look-Alikes Factsheet](#) to learn more about this pest and look-alike species that are commonly reported. Also, check out our factsheets for both [Yard Waste](#) and [Community Gardens](#).

If you have any questions, please do not hesitate to reach out to Diane Watson, ISCBC Special Projects Coordinator, at dwatson@bcinvasives.ca.

HIGHLIGHTS FROM THE 2025 KAMLOOPS OFFICIAL COMMUNITY PLAN

By Diane McKelvey *Diane*

After several months of consultation with Kamloops residents and interested groups, the City has released a draft of the 2025 Kamloops Official Community Plan, also known as “Kamplan.” This document is intended to direct city growth and land use over the next 20 years, and replaces the previous plan, drafted in 2018. The 244-page draft 2025 Kamplan can be viewed online at <https://letstalk.kamloops.ca/kamplan>. The City planning department is inviting comments on the plan, which is expected to be presented to City Council for adoption in December of this year.

Kamloops Naturalist Club had a “seat at the table,” with a representative on the Kamplan Advisory Board—along with representatives from the Canadian Home Builders’ Association, Tourism Kamloops, Interior Health, Tkemlúps te Secwépemc, Transition Kamloops, the Kamloops Chamber of Commerce, social housing advocates, and other local organizations.

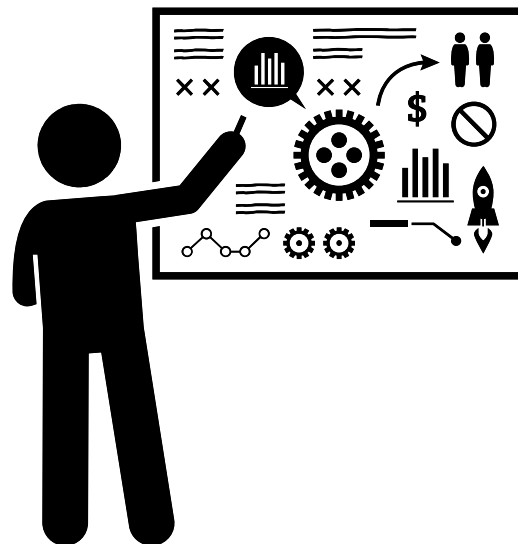
So how important is the environment to the city planners? One of the Community Values outlined at the start of the document is to “Promote Environmental Stewardship” by reducing the City’s environmental footprint, prioritizing restoration of riverfront and riparian areas, and protecting environmentally sensitive areas. The planners have made some effort to reflect these values in the detailed provisions outlined in the plan (see below). But they have had the difficult job of balancing the environment with the need to support the construction of new housing, transportation infrastructure, tourism, and the local economy. The population of Kamloops is expected to grow to 134,000 over the next 20 years, and the draft Kamplan contains detailed information on how the growth in housing and infrastructure is to take place in each neighbourhood.

The following are the main environmental provisions that I was able to find in the draft Kamplan:

- Housing growth can occur by “infill” of existing developed areas, or “greenfield” development of surrounding areas. The plan puts the emphasis on infill development, with 71% of new growth over the next five years projected to be “infill” and 29% in “greenfield areas.” The Southeast and Southwest Sectors of the city are projected to have the largest number of new units in greenfield areas (Kamplan draft, page 54).
- As a general land-use policy, new residential development is expected to include access to parks, nature, and/or open space within a 5- to 10-minute walking distance of all residents (page D1).
- There is continuing emphasis on connectivity between adjacent neighbourhoods through new and existing multi-use pathways and trails (page D2).
- The plan supports the expansion and enhancement of the city’s tree canopy. Preservation of mature trees, replacement of removed trees, and planting of new trees is projected to help achieve a tree canopy target of 20% (page D2).
- Some areas (called “development permit areas”) have special requirements that developers must meet before a building permit can be issued. For several years, the silt bluffs in Valleyview have been protected in this way, and the new Kamplan maintains this requirement. Similarly, slopes steeper than 35% are deemed unsuitable for development, and, according to the new Kamplan, they are to be designated as Parks and Open Space. Slopes between 25% and 35% can be developed but require a special permit. Development of riparian areas within 30 metres of the high-water mark or top of a stream’s ravine bank continues to require a development permit. The requirement for a development permit does not totally prohibit new construction in these areas, but it indicates that the City discourages this type of development and does not routinely allow it.

- A new hazard zone, the “Aberdeen Slope Hazard Zone,” has been identified (Map 14), and future development in this area will require a special development permit. The area involved is south of Hugh Allan Drive and west of the Kamloops-Princeton Highway as far as Pineview. This provision has been included in the plan, as geotechnical analyses have identified this area as susceptible to large-scale instability due to “slope, groundwater pressure, and geology” (page F90 and Map 14).
- The plan includes a commitment to “work cooperatively with senior levels of government and other interest holders to inventory and identify new environmentally sensitive areas and ensure their conservation” (page D20). It remains to be seen whether this provision can be used to protect existing natural areas from future development.
- There is also a commitment to reduce the potential for human-wildlife conflict through habitat protection, including recognition and increased public awareness of wildlife corridors (Map 10, page D21).

City Council is not bound by law to accept every recommendation in the plan, but to have these goals in writing is a good first step. Our Club and other partners, such as the Grasslands Conservation Council and the Thompson-Nicola Conservation Collaborative, look forward to working with the City to ensure that the environmental goals outlined in Kamplan are recognized and turned into reality.



BEAVERS AS BIOENGINEERS

By Jamie Long *BC Wildlife Federation Conservation Stewardship Communications Coordinator*
This story first appeared in the JUL/AUG 2024 issue of Outdoor Magazine

Jamie

The B.C. Wildlife Federation is turning to expert engineers—otherwise known as beavers—to help protect our province’s precious land and water resources.

Our 10,000 Wetlands project aims to use beaver-based restoration to enhance watershed resilience by harnessing the industrious skills of beavers, a species that has



faced near eradication. The project aims to build dozens of Beaver Dam Analogues (BDAs) – human-made structures designed to mimic the water-retention functions of natural beaver dams.

BDAs will mitigate floods, droughts, and wildfires that threaten our province year after year, leveraging a restoration method that is both cost-effective and efficient.

Guided by BCWF Beaver Restoration Assessment Lead Jennifer Rogers, this project is collaborating with First Nations, environmental NGOs, and government bodies to assess potential restoration sites, and to craft protocols and processes with a goal of installing 100 BDAs by the end of 2025.

Learning and Collaboration

In October 2023, the BCWF, Fisheries and Oceans Canada (DFO), and the Nature Trust of BC (NTBC) joined forces to create standardized hydrometric monitoring procedures to ensure that the impacts of our BDAs are meticulously assessed.

The training workshop focused on ways to assess the quantity and quality of surface water and groundwater. Drone flights were used to assess the topography and general conditions of the site. “When it comes to monitoring surface water, we are looking to determine how much of a bump in streamflow these BDAs can cause when you build a few of them together,” said David Reid, Senior Restoration Science Coordinator with the Restoration Centre of Expertise at DFO. “This involves taking measurements up and down the stream both before and after you install the BDA. This practice allows field technicians to compare data over time to get a better understanding of the outcomes.”

Where BDAs are installed, we expect the water table near the structure will rise, giving marsh vegetation and other plants a better chance to get re-established where erosion has left the channel banks too steep.

Thermal imaging of the site was conducted to monitor water temperature changes before and after the installations. The thermal diversity enhanced by beaver activity benefit aquatic species, including salmonids.

The 10,000 Wetlands collaboration with beavers is an innovative adaptation that blends traditional knowledge with modern stewardship to restore natural processes. It is our hope that ecological ingenuity will renew our appreciation for Canada's iconic beaver, while making our land and watersheds more resilient.

What are Beaver Dam Analogues?

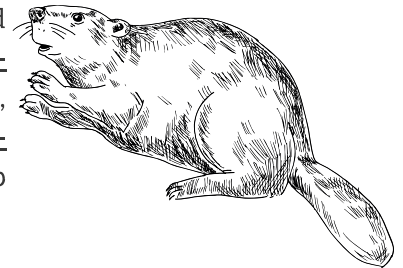
Beaver Dam Analogues (BDAs) are man-made structures designed to emulate the water-retention function of natural beaver dams. By promoting natural processes essential to stream recovery, they integrate seamlessly with the surrounding ecosystem.

Typically constructed by hand using locally sourced, natural materials, BDAs often involve pounding untreated wooden posts into the streambed, weaving woody vegetation through the posts, and packing the dam with vegetation, sediment, and cobbles. Multiple structures, referred to as a complex, are installed to mimic the way beaver habitats naturally occur across landscapes.

As temporary structural additions to streams, BDAs require maintenance over time. Where beavers are present, human maintenance may be minimal, as the animals may adopt and maintain the structures themselves. However, in areas closer to human settlements, encouraging beaver colonization is generally avoided.

Addendum (by Nancy Flood)

To check out the video and other photos that are part of this reprinted article, visit: <https://bcfwatershedteam.ca/2024/07/28/beavers-as-bioengineers/>. For information on a local project involving beavers, check out this article in The Wren <https://thewrennews.ca/beavers-repair-secwepemc-watershed-wildfire/> and come to our February club meeting, when we will have Tom Wilms present on this topic!

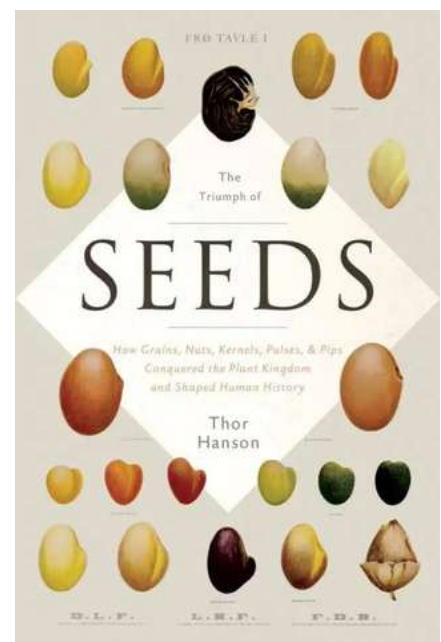


BOOK REVIEW: THE TRIUMPH OF SEEDS

by Tom Dickinson *Tom*

Last January I was deeply engaged in the seasonal gardening catalogs when I received Thor Hansen's **The Triumph of Seeds**. Its subtitle, "How Grains, Nuts, Kernels, & Pips Conquered the Plant Kingdom and Shaped Human History" distracted me from dreaming about how lovely summer tomatoes taste, so I flipped to the first page. Since it was snowing, I snuggled into a chair and started reading. I couldn't stop! What I discovered was an extremely well written and engaging story about how the little spheroids I was about to order from the catalogs had evolved and how the existence of seeds has become so thoroughly intertwined with our own being.

Hansen's answer to why seed plants have been so successful also leads to an understanding of why they have become so vital to people. In separate sections Hansen tells stories about how: **Seeds Nourish** ("...a seed is a baby plant in a box with its lunch--unlocking the seed's energy paved the way for human civilization"); **Seeds Unite** ("by recombining the characteristics of parents, seeds reveal the laws of genetics"); **Seeds Endure** ("and



The Triumph of Seeds
2015, Thor Hansen
Basic Books, New York.

grain commerce explains both the rise of some and fall of societies”); **Seeds Defend** (“through methods that result in spicy foods, poisonings in operas, and drug trafficking”); and **Seeds Travel** (“with adaptations for dispersal being involved in everything from fleshy fruits to cotton”).

Hansen’s narrative style is both entertaining and engaging as well as highly informative. His writing captures both the mystery of science and intrigue of history. In the words of one reviewer “Who knew that seeds could be so thrilling and dangerous?” I can heartily recommend **The Triumph of Seeds** to anyone who enjoys learning more about nature.

BIOENGINEERING WITH THE LEAF NINJAS

By Peat Kapsha

Peat

On October 16th and 17th, the Kamloops Naturalist Club (KNC), alongside members of the public, the BC Conservation Foundation, and the Department of Fisheries and Oceans, had the opportunity to attend a workshop with the Alberta based eco-restoration company Leaf Ninjas.

Leaf Ninjas has been implementing various innovative techniques that they've developed through trial



and error and by working with natural systems, all across Western Canada. These methods strengthen, repair, revegetate, and restore critical riparian ecosystems degraded by human activities, using native plant species, simple low-tech processes, and biodegradable materials. On day one of this two-day workshop, they shared these processes with us in a half-day of in-class learning, followed by a trip out to Tranquille Pond for the harvesting of genetic materials for use in the construction of a handful of fascines (in this application, bundles of fifty, 1.5-3m, thumb-thick willow staves) for use in day two of the workshop on a project Leaf Ninjas has been working on with the Skeetchestn Band along the Deadman River.

Bioengineering vs. Engineering

So what is bioengineering anyways? Well, many of the common techniques we use to stabilise streams or riverbanks, like riprap or hardscape engineered concrete walls, have negative consequences for the native flora and fauna. Large rock and concrete can cause a heating effect in waterways (bad for aquatic life), and do nothing to support native plant habitat or the suite of wildlife that rely upon these riparian zones. Engineered stream/river banks can deflect and speed up the flow of the water within the waterway, causing further erosion on opposite or downstream areas unprotected by the riprap. The same job that rock, concrete and steel do to reduce erosion can also be accomplished by utilizing the inherent mechanical and biological properties of native plant communities, without deleterious downstream consequences, all while supporting the native ecology. Through the application of living and dead plant materials, and design principles that mimic natural ecological processes, bank stabilisation, erosion control and habitat creation are possible. Of



course, there are times when both techniques can be used in conjunction with one another to create the most successful outcomes, but ideally we can adapt the hard engineered techniques to better incorporate natural processes.

Some goals and techniques of soil bioengineering include creating pockets and mounds on the tops of stream banks, which create microclimates for native plants, increase water infiltration and reduce runoff, which prevents overland flow and decompacts soil. Strategically placed and anchored large woody material, like fallen logs, offers protection for young plants, help to catch sediment and native seeds, deter browsing and ultimately return organic matter to the soil as they decompose. Creating soil traps along slopes through the use of fascines, seeded soil bags, or bundled coconut coir geotextiles, takes advantage of sediment deposits during freshet and provides an anchoring point for native plants. Willow wattle fencing, air layering of healthy established stands of native plants, and willow brush lines within engineered riprap, are all other techniques employed when it is possible or beneficial.

Where There's a Willow, There's a Way

Finally, we get to the most important part: the plants! Not all plants are created equal when it comes to living along waterways, where they might be underwater for a month or more, battered by currents and rocks or branches that are carried by it, browsed by various forms of wildlife or trampled by foot traffic. So what plants are the best? Well, as always we look to intact native ecosystems for the best species, but a few varieties of trees and shrubs come out on top and the number one plant for use in the

bioengineering of riparian zones and bank stabilisation is: the willow!

On day one of the workshop we harvested a number of willow staves (1.5m-3m) and live-stakes (50-60cm) for application in the Deadman River project. Willow makes an excellent bank stabiliser because it is fast growing, it has strong fibrous roots that help to hold soil on banks in place, it produces adventitious roots all along its stem (so being submerged in water for a period of time is no issue for them) and it can withstand a fair amount of damage from currents or wildlife browsing. The staves were bundled into fascines that were then buried into trenches dug into the sloped bank of the stream, and layered like stepped terraces up the slope. Dirt was packed into the recesses in the bundles, creating as much soil to stem contact as possible to ensure there is soil for root growth to anchor into. The terraces were then planted with a suite of other native riparian species; in our projects these range from poplars, alders, red-osier dogwood, wild rose, snowberry, saskatoon, and chokecherry to a wide variety of herbaceous riparian plants.

Pine Park

Along with ongoing work at Tranquille Pond, KNC will be utilizing everything learned during the two-day workshop with Leaf Ninjas on two upcoming bank stabilisation, erosion control and habitat creation projects further up Tranquille Creek at Pine Park. There we will be creating a heavy toe fascine made up of downed poplar logs, followed by terracing the slope using willow fascines. We will be dormant harvesting the willows used in the construction of those fascines from Tranquille Pond, and working with the public and BC Parks to ensure that the area is undisturbed once the work has been completed.