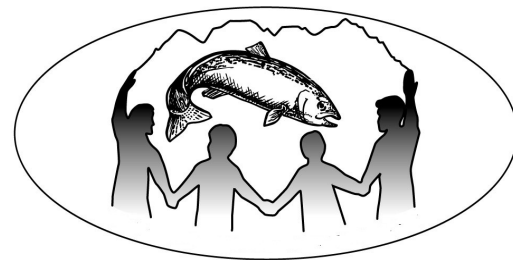


WATERSHED CONNECTIONS



FVWC Newsletter: 2011 Winter

2011 Issue 1

www.fvwc.ca

Message from the Coordinator: Rachel Drennan

Happy New Year everyone!

Wow! Is it really 2011?! I don't know about you, but for me the years are flying by faster and faster! With the New Year often comes resolutions, but I didn't make any this year! This is the year of the anti-resolution. Instead it's a year of action!

So here are some actions for 2011:

- To boil water quicker and reduce energy used, boil only the amount of water that will be used.
- Turning off your car engine when you wait more than 30 seconds will reduce pollution from gas – think railway crossings.
- Consider organic cleaning products like vinegar, borax and baking soda
- Ask your phone company to stop the annual delivery of the telephone book
- Consider the installation of a drain water heat recovery system
- Recycle aluminum foil and pie pans just the same as cans
- Start a compost pile with leaves, grass, shrub clippings, and non-meat food scraps
- Consider investing in remote meeting tools to cut back on travel
- Recycle eye glasses
- Turn off the lights when you leave a room

The New Year also brings with it many interesting activities that the Coalition is involved in. There are going to be many diverse volunteer opportunities and I am always on the lookout for people who want to volunteer, but also people with expertise in an environmental area with time to show someone what a day in their life is like.

We have some great article submissions this time around so enjoy!

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Upcoming FVWC Meeting Date

Date: March 17th 2011
Time: 7:00-9:00 pm
Location: Abbotsford UVF campus Room TBA
Presenter: Marion Robinson
Topic: Conflict as an opportunity

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Why volunteer? *My personal experience.*

By Jill Miners

People volunteer for many reasons. Some people want to give back to their community and feel a sense of achievement. Others want to network to meet new people and friends. Students sometimes volunteer to gain experience, enhance their resume and ultimately get a job. For me it is all of the above and for the love of being outside and getting exercise. Personally, volunteering has allowed me to learn valuable skills, meet great people, and above all have a lot of fun. I have also had the fortune of rolling my volunteer work into gainful employment doing work that I love and look forward to everyday!

My story begins during the summer before my final semester of university. I had been searching for organizations with volunteer opportunities relating to conservation and the environment. I felt I needed to expand my skill set, network and really identify exactly what I wanted to do when I graduated. This opportunity presented itself while I was volunteering at the Lower Sey-

mour Conservation Reserve doing an amphibian count. I began chatting with an interesting person named Monica Pearson. She was telling me about her frog work, which sounded amazing, so I asked her if she needed any volunteers. "Definitely!" was her response. For the next four months I volunteered with Monica two or three days a week. We spent the days outside in a beau-

tiful wetland kayaking around tracking the endangered Oregon Spotted frog, identifying plants and building new frog habitat. It was during those months that I realized that this work was my dream job; this is what I went

back to school to do. Furthermore, I could not believe that for her this was paid work! When I went back to university, enrolling in the Natural Resources Conservation program at UBC, my goal was to find a fun, rewarding job working outside. I figured that if such work existed I could find a way to make it my paid job, and I have.

In those months of volunteering with Monica I gained field experience, improved my resume, met some fantastic people and identified my future career. In addition, Monica became an invaluable reference for me to obtain jobs. Through her connections she notified me of upcoming summer work that she had and work with Dr. Mike Pearson doing fish population-monitoring. To that end, I currently work as an independent biologist and get contracted to do various conservation related jobs outside! All of the work that I have done in the past six months relates directly back to volunteering. I recently asked a friend who is responsible



Jill and her friends from UBC's CONS451 field school program volunteering for FVWC tree planting at Gordon's Brook restoration site.

for hiring summer students for a conservation organization what she looks for in applicants. She replied that even if a person does not have related work experience but does have lots of volunteer experience with good references she would happily hire them! Con-



Claire Thompson volunteering for Jill; fish trapping at Gordon's Brook.

sequently, volunteering was and still is my most rewarding achievement.

What's the point? *Or why are we trying to save this one frog anyways?*

By Monica Pearson

Every time I give a talk on the Oregon Spotted frog and the work we're doing to save it, I get a variation on the same question: "Why?". Why are we spending all this time and money on one species when there are so many other problems we could be addressing? Admittedly, I've been struggling with this question myself, so I've been asking many people and doing a lot of reading to figure out where I stand on the subject. Here's what I've found. I'd love to hear your point of view, too.

Biodiversity

Science uses the word 'biodiversity' to describe the astounding variety of life that exists on the planet, from bacteria

and fungi to plants and animals. The term 'ecosystem services' describes the services provided (for free) by communities of organisms that are useful to humans. Ecosystem services allow us to breathe oxygen, grow crops in soil, drink clean water, and they maintain livable temperatures and moisture in the atmosphere. Without these services, we cannot survive. Neither can most of our living neighbors. Biodiversity is important because each and every known and unknown creature has a role to play in the continued functioning of ecosystems as we use them today. However, more important than maintaining the ecosystem services of today, biodiversity

provides possibilities for the uncertain future.

Genetic blueprints that direct construction of living creatures are the fundamental source of biodiversity. As genes mutate, through chance or error, variability is introduced to an organism (be it a bacterium or an ape) that is then successful in reproducing or not, depending on the biological and abiotic (physical) circumstances in which it finds itself with its newly minted features. This *genetic variety is the foundation of diversity that allows populations to adapt to environmental change*. Individual organisms and species provide complete, self-generating and unique ensembles of genes. They interbreed to pro-

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duce fertile, slightly different, offspring, providing a method for the continuation of genetic diversity.

A wide variety of species provides options for the composition of ecosystems in a wide range of (changing) physical environments. The more options available, the higher the functionality of the ecosystem. Built-in redundancies in food chains and processes improve the security of environmental services on which we depend. Biodiversity must be maintained to provide future options and opportunities for human sustenance and well-being.



FVWC Fearless Leader (Chair) Mike Pearson surveying a recently completed constructed wetland built specifically for Oregon Spotted frogs, and already occupied by many other species.

Ethics

As such, the argument for biodiversity is a social argument, otherwise labeled an anthropocentric (human-oriented) ethical argument. Secular philosophers explain ethics as a series of social contracts that permit humans to live in social groups where we are dependent on one another for support. It follows that moral duties to the environment stem from our duties to the earth's human inhabitants.

Theologians are exploring our sacred obligations towards God's Creation, our moral duty to be stewards of the earth and its creatures. Christian Colleges are now driving the 'Creation Care' movement in the Christian church. This non-humanist viewpoint assumes that other life-forms have value beyond that placed on them by man: they

have intrinsic value assigned by God. Philosophically, if you'll forgive my musings, the only option for a secular human to enlist 'intrinsic values' as justification for species recovery is to value the whole living planet above all else. This earth ethic promotes the maintenance of life in a balanced environment where humans are a valued member of the earthling community, but not its driver or focus. Still, it seems impossible to me that intrinsic value is not ultimately assigned by humans. How can it be any other way?

So about that frog...

There's no doubt our planet is in trouble. Our ecosystems are stretched thin and are cracking

under the strain of supporting so many humans. Our environment as a whole must be sustained to sustain us. Why then do we focus on one species rather than the processes as a whole?

Single species provide us with a point of focus for our recovery activities. This idea has been tagged with many keywords: umbrella species, focal species, and flagship species are just a few. By targeting a frog that depends on warm shallow wetlands, we are working to restore a lost ecosystem, and its ecosystem services, to the Fraser Valley.

Biodiversity recovery has to exist on an incredibly wide spectrum of scales, from site-specific soil management to mitigation of climate change. Ecosystem planning

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has been lauded as the way of the future. However, evaluations of large-scale recovery plans show that when we increase scale to incorporate many species and ecosystems, we are rarely successful in our implementation. By focusing on one species in the Fraser Valley, we accomplish recovery activities. We study and restore wetland habitats. We build new habitats in degraded environments. In doing so we

provide homes, not only for the Oregon Spotted frog, but also for the amphibians, insects, plants, fish and other wildlife whose wetland homes had been eliminated along with the frogs'. We educate and engage the public, and we try to inspire a greater understanding and love of life.

Our frog work may be small potatoes in the grand scheme of things, but we must trust that elsewhere others are working at

a similar scale, and some at smaller and larger scales. The cumulative actions of the FV Watershed Coalition members are an excellent example, with many projects at many scales represented across the Valley. This gives me hope, and it makes me optimistic for the future.

Invasive Knotweeds - Part I

Why pronunciation is important when talking about knotweed!

By Birgit Gagne

One of the plants considered a priority for invasive plant management in the temperate parts of the northern hemisphere are members of the species *Fallopia*, the Invasive Knotweeds. Having studied these plants for the past 3 years I recently gave several presentations to local High-school students about our formidable opponent in weed management. Coming from a German background I do sometimes have issues with the correct pronunciation of certain terms. This must be why one of the students, after having heard that the plant can regenerate from pieces as small as 0.7 grams, said: "Why call it (k)not-weed if it is such a bad weed?!"

Most people recognize the plant and related species as 'Japanese Knotweed' *Fallopia japonica* (formerly *Polygonum cus-*

pidatum), although we have three or four closely related species of problematic knotweeds present in North America and in BC. Beside *F. japonica*, the Giant Knotweed (*F. sachalinense*) and their widespread hybrid, Bohemian Knotweed (*F. x bohemica*, alternately *P. x bohemicum* [1,2]), there is another knotweed present, Himalayan Knotweed (*Polygonum polystachyum*). It is generally much shorter, flowers profusely, and has lance-shaped leaves but is, for now, not considered as invasive as the former three. For the sake of clarity the plant discussed here will be referred to as Invasive Knotweed or Japanese Knotweed. Knotweeds classified as 'invasive' are difficult to tell apart for the casual observer but have similar habitat requirements and most share the ecological impact and manage-

ment methods.

Invasive Knotweeds are a menace to the health of sensitive natural environments, archaeological sites, public safety, as well as federal and provincial coffers. Besides the aquatic ecological damage and displacement of native species knotweeds are known for, the plants also create problem for property managers of cities, districts, transport authorities and land owners alike. Municipal workers spend increasingly more time and resources to mow and remove knotweeds from ditches. In ditches the canes create flooding hazards, and around intersections the plant constitutes a safety hazard because it impedes the visibility of drivers. In Europe the concern is so severe that the British government has recently, for the very first time in its history, approved

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a biological agent in the fight against a non-native intruder. In the spring of 2010 *Aphalori itadori*, a plant-sucking psyllid from Japan, received official blessing to be released throughout the UK to help curb the spread of Japanese Knotweed. This comes as no surprise considering that in the UK the plant needs to be declared when selling land and its transport requires a 'hazardous goods' permit! And here is one reason why:



One of the reasons for this concern is the Invasive Knotweeds' ability to break through barriers most plants would succumb to, like asphalt. The previous picture, showing a heavy infestation of Japanese Knotweed breaking through old asphalt, was taken by the author in August 2010 in BC's Fraser Valley.

Here in British Columbia, as well as in neighbouring Washington and Oregon, invasive knotweeds are a growing concern, pardon the pun,

too. The plants damage aquatic eco-systems in various ways. For example, by shedding copious amounts of leafy material into the water ways, effectively changing the habitat for countless aquatic species in streams and creeks. Invasive Knotweed infestations are spreading easily downstream because the plant promotes soil erosion. The roots consist of fast spreading, finger-thick rhizomes which exhibit few

root-hairs that can hold soil and are brittle enough to break off easily. This is

especially problematic during the common storms in the fall and winter months of the North-west, when rain pounds the bare canes, and therefore the riverbanks. The resulting erosion deposits fine silt particles, a detrimental factor in egg-survival of salmonids.

Invasive Knotweeds have the ability to spread at an astonishing

rate of up to 13 feet below ground, per season, and the large root-system allows for superior energy storage, resulting in a plant that is hard to control and very difficult to eradicate. Regardless of strategy chosen - covering with a tarp, mowing, stem injection with herbicides, foliar herbicides, or repeated cutting, - all have to be done diligently, possibly some in conjunction, and it takes, according to most literature, generally five years for eradication.

Invasive Knotweed is a fearsome competitor for our native plants, but one can't help admiring a plant that is so versatile and tenacious. While we'll talk more in depth about control options in



Pattison Creek Hatzic Valley shows erosion of the banks where Knotweed is present.

the third and last part, next time I'll write about the 'nifty' side of knotweeds - including knotweed recipes! Can't beat it? Eat it!

Did you realize 4 to 4.5 grams of mostly feathers can survive our winters!?

By: Birgit Gagne

This year I visited the southern tip of Vancouver Island over New Years. I went to see friends who live in Sooke and was flabbergasted to find hummingbird feeders maintained - and in use!! I never thought of hummingbirds as an overwintering resident! I was so



excited I took pictures of bits of hummingbird! Can you see the tail feathers? (Btw, white spots on a hummingbird's tail indicate females. Males, generally facing an opponent, have an iridescent throat. Females 'display' to other birds by spreading their tail feathers, hence the development of prominent markings in that area.) Impressed as I was I thought:



"Oh well, they live in a balmy climate, 100 meters from the ocean shore!" Where I live in Mission, which is almost 100 km inland, the birds will surely have left for the winter. Imagine my surprise after I came home, when a friend

(who lives on Clayburn Road in Abbotsford) told me she had seen a hummingbird only last week, too. So I filled my feeders again, and sure enough: yesterday and today I have seen a hummingbird, zipping over the snow!

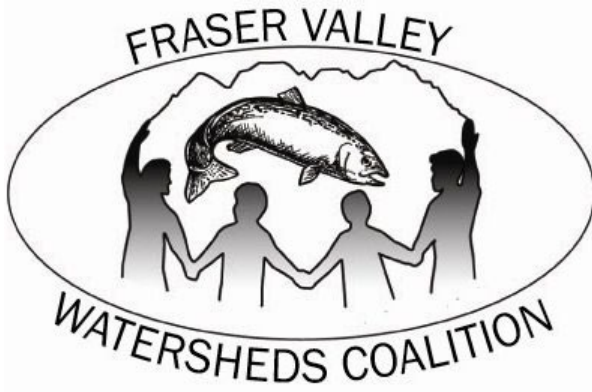
I googled it a bit and it seems it is mostly the Anna's Hummingbird that does indeed overwinter in coastal BC and the Lower Mainland. The following pictures of Anna's Hummingbirds are courtesy of Fred

Lang - Photo Trex, <http://www.pbase.com/phototrex/>

[birds hummingbirds](#). Being afraid to entice my 'summer' hummingbirds to stick around, even after all flowers are gone, I had stopped filling the hummingbird feeder in the fall. While these birds mostly live of insects in the winter months, it seems feeding them is the thing to do, after all.

Just a quick note on what to feed: mix 1 part of sugar with 4 parts of water. Boil together and let cool down before filling the mix into easy-to-clean feeders. Sometimes there seems to be confusion on how much sugar to use, the value of food color, honey, molasses, etc., I found the following link helpful: <http://www.islandnet.com/~rpbo/hummingbirds.htm>. If you have time, check out the interesting section about *Hummingbirds and Artificial Feeders*.





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Registered Society #S50094

FVWC Membership Application Form

Name: _____ Date: _____

Agency/Organization (if any): _____

Home Address

Street Address: _____

City: _____ Province: _____ Postal Code: _____

Home Phone: _____ Cell Phone: _____

Fax: _____ Email: _____

We will not share your information with any other organizations.

I am interested in volunteering to help with: Circle one or more.

Restoration/enhancement projects

Newsletters

Special events

Board of Directors

Fundraising

Other: _____

Please return this form with a cheque or money order for \$10 to:

Fraser Valley Watersheds Coalition, 45635 Yale Road, Chilliwack, BC, V2P 1N6

Our watersheds thank you for your support!