



ENVIRONMENTAL STEWARDSHIP

NEWSLETTER

VOLUME 8, ISSUE 2

VISION

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“We, the Musqueam, will work together to take care of our territory so the following generations will know how to be self-reliant. We will remember our own history and as well, use our traditional teachings to take care of everyone and everything on this earth”.

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FROM THE EDITOR

Happy December Everyone!

On behalf of the Environmental Stewardship Department, we hope everyone has had a relaxing Autumn. As we approach the winter holidays, it is a good time to reflect on all that has happened over the last year and how we can continue to have a positive environmental impact. We look forward to continuing to work on initiatives and projects to achieve this and leave a positive impact on the community. Stay safe and have an enjoyable holiday season.

Happy Holidays,

Sarah Skapski, Environmental Stewardship Manager

HABITAT CONSERVATION TRUST FOUNDATION FUNDING CONSERVATION IN BC



Figure 1. Elk walking through a regenerating forest. Photo credit: Habitat Conservation Trust Foundation

The Habitat Conservation Trust Foundation, or HCTF, is an environmental organization based in BC. The HCTF distributes money to individuals, groups, or organizations through grants it awards. HCTF has a wide range of grants available including restoration, land acquisition, and projects involving education and community engagement. Examples of available grants include the Habitat Acquisition Grant, Caribou Habitat Restoration Grant and Fish & Wildlife Grant. For certain projects they are able to cover 100% of the costs. To date the HCTF has awarded 232 million dollars which has helped fund 3834 conservation projects, including 25,000 hectares of land purchased for conservation.

The HCTF's roots date back to 1979 when a group of nature enthusiasts met with BC government ministers to discuss creating a legislated conservation fund in BC, called the Habitat Conservation Fund. The conservationists wanted a small tax to be included on coal and lumber exports to fund conservation. However, the government was apprehensive about taxing the resource industry and so a volunteer surcharge on angling, hunting, trapping and guide outfitter licenses was proposed instead. This initiative was included in BC's Wildlife Act in 1981. While this formalized the initiative, there were problems with

its original implementation. Through the mid-1990s, the fund's revenue was well exceeding its expenditures, largely since it was subject to government budget restrictions. In addition, funding could only be used for government run projects. To fix these problems, a bill was passed in 1997 to create the Habitat Conservation Trust Fund. This new fund had the same purpose as the old fund, but without financial restrictions or limitations on eligible projects. A subsequent update to the *Wildlife Act* in 2007 fully separated the fund from government and created the Habitat Conservation Trust Foundation to act as the fund's trustee in place of the Ministry of Water, Land, and Air Protection. The *Wildlife Act* also describes what money goes into the trust and what the money can be used for, among other things. Shortly after, the foundation became a not-for-profit charity.

The HCTF is now guided by a board of directors made up of representatives from the BC Wildlife Federation, Guide Outfitters Association of BC, BC Trappers Association, the Province of BC, and up to 7 other individuals with expertise in conservation. The foundation is guided by the main goals:

- Increase conservation outcomes for fish, wildlife, and habitats
- Promote British Columbians' participation in environmental stewardship, education and responsible use, and
- Expand HCTF's role as a Trusted Partner in managing and administering conservation funding

As mentioned, the HCTF gets around half of its funding from surcharges on angling, hunting, trapping and guiding licenses. It also receives funding as a beneficiary of court awards arising for environmental infractions, as determined by the courts, and through government funding and donations.

The HCTF has \$8.5 million in projects for 2024, going towards 178 projects. Among them is a project with the Forest Enhancement Society of BC to help prevent white-nose syndrome, a devastating fungus that impacts the wings of many bat species. The fungus is known to devastate entire colonies of bats. Other projects in the lower mainland this year include a program to capture and tag juvenile White Sturgeon and a study of pollution sources in Langley to help improve agricultural land management.

MANAGING DECIDUOUS TREES POST LOGGING



BC has around 60 million hectares of forest. This allows for a large and valuable forest industry. Unsurprisingly, the province has many rules, regulations and laws to manage the industry and the province's forests. Historically, economic considerations were the dominant factor in how we managed our forests. This is starting to change and more consideration is being given to other factors, like sustainability and conservation. One area being discussed and debated is the regeneration of trees following harvest. Since coniferous species, like pine, cedar and Douglas fir, are more valuable, the logging industry prefers if these species regrow following harvest. However, it is deciduous species, like maple, aspen and birch, that are often the first to regenerate. Deciduous species also grow faster than coniferous species. This puts natural generation at odds with what is preferred by the logging industry. To ensure coniferous species are the main species that regrow, the province's Forest Planning and Practices Regulation requires that no more than 5% of a cut block's area has non-coniferous species during regrowth.

To control deciduous species three methods can be used: spraying, mechanical brushing and controlled burns. Spraying in particular is damaging. The most commonly used herbicide is glyphosate, which is the active ingredient in RoundUp. In 2017 12,812 hectares of forest in BC were sprayed with glyphosate. Studies, including by the University of California Berkeley, have found that glyphosate is likely a carcinogen. There are also concerns about the potential impact of the herbicide in wetlands, streams, and other waterbodies.

Regardless of which method is chosen, many environmentalists believe the policy is short sighted. Retaining deciduous trees improves biodiversity and provides habitat for a range of animals. Deciduous trees are also more resistant to fire than coniferous trees so managing their growth increases the risk of fire. Deciduous trees hold lots of water in their leaves and provide more shade than coniferous species, which creates cooler, moister conditions. This can reduce the severity of fires. In addition, coniferous trees have saps and resins which are highly volatile. This causes them to burn much more readily. In these ways, retaining deciduous trees can help make our forests more resilient to fires, especially the high intensity crown fires which have been becoming more common in recent years.

Many environmentalists are calling for changes to the regulations that would allow more flexibility in how forests are managed so that considerations like biodiversity and fire resilience are better taken into consideration. To that end, the province is beginning to change the way it thinks about our forests. However, more work is needed to find the right balance between economic and environmental conditions.

THE IMPORTANCE OF ANIMAL BEHAVIOURISM IN SPECIES CONSERVATION



Figure 2. A Southern Resident Killer Whale balances a dead salmon on its head. This is a learned behaviour that was started by a single member and spread to other pods. It is usually only observed in times of food abundance. Photo credit: Jim Pasola, October 25, 2024.

Understanding animal behaviour is crucial for the effective conservation of species and their habitats. This field, known as conservation behaviour, integrates insights from animal behaviour studies to enhance conservation efforts and address environmental challenges. While observing animal behaviour might seem like common sense, merging it with ecological conservation models is a relatively recent endeavour. Animal behaviourism helps bring a more holistic view to conservation, helping to shape policy and avoid more invasive methods of studying at-risk species. It also helps bring more observational awareness into conservation science, making it more accessible for the greater public, and allowing for people to form a stronger connection with species at risk.

Abnormal Behaviour – Finding the Cause

Conventional studies on animal populations can often do additional harm even when trying to protect a species. Animals often need to be captured and tagged, or samples taken. Depending on the animal, they might even need to be euthanized and dissected to learn about what is affecting them, such as toxic chemicals in fish or birds. But by focusing on behaviour, many of those invasive methods can be avoided. In certain cases, observations can tell if an animal is being affected by disease, stress, or hunger. For example, salmon fry exposed to zinc will no longer sink to the bottom to avoid predators, as their sense of smell is diminished. Animals will generally behave strangely before death or fail to reproduce, indicating there is a problem.

As any pet owner will know, animals tend to tell us when something is wrong, just not in the way that we might expect. By understanding that a tail wag means happiness for a dog, but anger for a cat, we know that different species behave and communicate in different ways. Sometimes a lack of a certain behaviour is also telling, such as a dog not greeting their owner at the door. Developing a baseline for animals through an ethogram table enables researchers to have a standard set of behaviours to look for.

Recently, Southern Resident Killer Whales have been seen balancing fish on their heads. This was the first time that the behaviour had been witnessed since the 80's. This behaviour may indicate that the whales are happy and healthy, either playing with their food, or holding onto it to eat later. This aligns

with the high returns of chum salmon this year, sparking hope that the whales may be making a comeback.

Animal behaviourism also has helped European hamsters, which are critically endangered in the wild. Abnormal aggression and poor maternal care (infanticide and cannibalism) were observed. Since this group of hamsters live on a corn farm, scientists were able to figure out that the monoculture was creating a vitamin B3 deficiency in their diet. When they provided food with vitamin B3, it completely solved the hamsters' behavioural issues.

Reintroducing Captive Animals

Captive breeding programs are important in bringing an endangered species back from the brink. But animals raised in captivity may not learn the skills they need to survive in the wild that parents and other members would normally teach them. This may include foraging and hunting strategies, awareness of predators, communication and calls, and other behaviours. Observing mother-child bonds in the wild can help researchers to know which skills an animal might need to learn, and which are instinctual. That way, the captive animals can be taught and given the best chance for survival in the wild.

When humans and animals intersect

There are also many traits that are taught by parents to their offspring. Orcas and dolphins learn unique ways to hunt from their parents and family. Primates learn to use tools like sticks to fish for termites. But learned behaviours like this are forgotten in areas disturbed by humans.

Animal behaviour research also helps predict how wildlife will respond to human activities and presence. Certain species are more sensitive to lights, sounds, or pollution than others. Even if a species might not seem to be affected, human presence can change their behaviours in more subtle ways. Birds, for example, may not breed due to stress from construction activities.

One major challenge in ecological conservation helping the general public to feel connected to a species at risk. For many people living in an urban environment, a dwindling butterfly population, or a fish deep in the ocean can feel like a far-off story. But when people better understand animals and their behaviour, they begin to feel a sense of connectedness, which helps create a political will to protect them. Animals which are cute and fuzzy, like panda bears, tend to get more attention and resources than say, the endangered Oregon forest snail. But every species plays a role in the ecosystem, and each one is fascinating in its own way. But it also can start by simply slowing down and observing the world around us.

Hope for the Future

As more animals are pushed to extinction by human activity, holistic, multi-disciplinary approaches are increasingly needed to protect them. In a rapidly changing world, using every avenue available to protect our world's biodiversity is more important than ever. By making ecological conservation more approachable, it allows for people to develop a connection with the species at risk, and to have the willpower to protect what is at stake.

WINTER EVENTS AROUND VANCOUVER

❖ Vancouver Christmas Market – November 13th to December 24th

Located at Jack Poole Plaza, this beloved annual event features charming wooden huts filled with handcrafted gifts, festive food, and traditional German treats like mulled wine and gingerbread. With live entertainment, a sparkling carousel, and stunning views of the city and waterfront, the market is the perfect place to gather with family and friends to experience the warmth and joy of the holidays. Visit <https://www.vancouverchristmasmarket.com/> for more info.

❖ Disney on Ice, November 27th to December 1st

Celebrate the unforgettable adventures of Disney and Pixar brought to life in new ways at Disney On Ice presents Magic in the Stars. Take a magical journey with Mickey, Minnie, and friends through the timeless stories of Cinderella, Aladdin, Toy Story, and Cars, and today's favorites including Encanto, Frozen 2, and Moana. Visit <https://www.disneyonice.com/en-ca/magic-in-the-stars/vancouver-bc-pacific-coliseum/> for more info.

❖ PNE Winter Fair, December 6th to 23rd

There is tons to do this year at the PNE Winter Fair. Visit Discover Santa where you can embark on the ultimate journey to meet Santa Claus, test a toy, and leave a snack for your favourite reindeer. You can also ride the PNE Holiday Express, wander through Winter Lights and go skating at the Tim Hortons Ice Rink. Then warm up with the culinary extravaganza at the Holiday Eats & Treats. For more info visit <https://www.pne.ca/winter-fair/>.

❖ Francophone Christmas Market: December 7th

Come celebrate the magic of the holidays at our Francophone Christmas Market! Enjoy a warm and friendly atmosphere, surrounded by twinkling lights and festive music. Discover local artisans, handmade products, and delicious treats that will delight both young and old. There will be various free activities for children, including face painting stations, a visit from Santa Claus, and a postcard-making workshop. Visit <https://www.destinationvancouver.com/events/Francophone-Christmas-Market-241207> for more info.

❖ National Geographic Live, February 12th

Join us February 12, 2025 for Wild Wolves of Yellowstone featuring wildlife biologist, author, and National Geographic explorer Doug Smith. Live on stage, Doug Smith will take you behind the scenes - including never-before-seen photos and videos - of the quest to reintroduce wolves back to Yellowstone National Park. Doug Smith led the successful Yellowstone Wolf Project in the 1990s, which remains one of the best-case studies in wildlife conservation to date. For more info visit <https://vancouvercivictheatres.com/events/national-geographic-live-wild-wolves-of-yellowstone-feb-12-2025/>.

❖ HSBC Rugby SVNS Vancouvers, February 21st to 23rd

HSBC SVNS Vancouver will celebrate its 10th anniversary as it returns to BC Place February 21 to 23, 2025, with tickets set to go on sale on October 23, 2024. This annual tradition will once again feature a combined women's and men's tournament, with matches taking place over three days, for the ultimate Vancouver sports experience. For more information visit <https://vansevens.com/>.

CONTACT US

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