



Sunshine Coast Conservation Association

Newsletter

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Bee Populations Still a Cause for Concern

by Maya Elizabeth Broeke

It's not news that the honey bees are in trouble. Honey bee populations worldwide are declining rapidly, with serious potential repercussions for food supplies and the economy. Although we know that we need to do something, the cause of the dilemma and what we should do about it are not clear.

One reason why bees are declining might simply be a lack of adequate habitat. Urban spaces are fragmented landscapes, and gardens are often few and far between. This means that bees have to travel large distances to find forage, and sometimes the forage that is there doesn't have much nutritional value. For bees which form hives, such as honey bees, urban environments are especially hostile as nests are often destroyed. *continued page 8*



Wild and domestic bees perform about 80% of worldwide pollination.

Photo by Edwyn Anderton @Flickr Licensed under CC by 2.0

Biodiversity Conservation: A Call for Ecoforestry

by Carol Dyck MA, MSc, LLM

Residents of the Sunshine Coast and visitors alike recognize the unique beauty of this region of British Columbia where forest and mountains meet the ocean. Towering conifers provide homes for birds, and shade for the mosses, lichens and fungi which give West Coast temperate forests their distinct appeal. Such habitat is rare, found on only 0.2 percent of the planet. Visitors to these forests sense the need to protect the biodiversity found in this fleeting ecosystem for future generations.

Biological diversity, or biodiversity, refers to all the variety of life on Earth. The term encompasses not only all the different plant, animal and micro-organism species, but also the variety of genes within each species. Biodiversity likewise refers to the myriad ecosystems, both wild and managed (i.e. cropland), within which all species exist and interact. It's this vast diversity of life on our planet which makes it such an incredible place.

In the fall of 2010, 179 countries met in Nagoya, Japan to create a ten-year strategic plan under the United Nations Convention on Biological Diversity (CBD) to safeguard the world's biodiversity. Each signatory pledged to meet twenty biodiversity targets, known as the Aichi Targets, by 2020. So far, seventy nations have ratified the Nagoya Protocol.

To date Canada has lagged behind other nations in reaching its targets. Canada committed to protect at least 17% of its land and freshwater ecosystems by 2020, and to improve the quality of its protected areas. Only 10% of our land is currently protected, and marine areas fare even worse at 1.3%. However, safeguarding Canada's biodiversity should not focus solely on designating protected areas; greater emphasis must also be placed on applying green principles to daily operations. *continued page 2*

Editorial: Chapman Lake Water Woes

by Linda Williams

It's been over two decades since Sunshine Coast Regional District (SCRD), the Tetrahedron Alliance and many other community groups sat at the Ministry of Forests Tetrahedron Local Resource Use Plan table united against any further industrial activity in the headwaters of our community's drinking watershed reserves. Working together the community eventually achieved Park Act protection for Tetrahedron Park.

According to the Parks Master Plan, Tetrahedron Provincial Park was established with three priorities. First, and most importantly, to provide representation in the BC Parks system for the ecology of coastal high elevation ancient forests. Tetrahedron forests are among the oldest in Canada. *continued page 5*

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Biodiversity Conservation *continued from page 1*

Habitat loss and degradation pose the greatest current threat to biodiversity. On the Sunshine Coast, clear-cut logging presents a significant challenge to preserving rare plants and animals, including species at risk. Mature forests provide useful functions for various animal species. While bears are more likely to forage on recently denuded sites where berries and grasses may grow, they still require mature forests where they may retreat to hibernate in the winter. Deer and elk may dine on the grasses of regenerating forests, but in the winter they flee deep into forests in search of shelter.



Mountain and boreal caribou are threatened in BC. Mountain caribou require unbroken tracts of old-growth forest for food and security from their predators. Photo courtesy of Mark Bradley

On the surface, then, it is clear how stripping an area of its trees results in immediate habitat loss for organisms living in or near the zone. However, other less obvious threats to biodiversity exist. A healthy forest is composed of many tree species of various size and age, including fallen and decomposing trees. When logging denudes the land of its trees and debris is minimized, the soil is robbed of nutrients resulting from decaying plant matter.

Clear-cut areas are often replanted with a single tree species of roughly the same size and age, transforming the area from a heterogeneous forest to a homogenous plantation. This artificial situation results in a biodiversity poor area that does not support unique specialist species. As Bannerman (BC Ministry of Forests, 1998) points out, "Some plant species can only develop on open, treeless, freshly disturbed sites, while certain canopy-dwelling insects spend their entire lifetime on the broad lichen- and moss-covered

limbs of a single ancient spruce".

Given the sub-optimal conditions created by clear-cuts, the incursion of non-native plant species is common, threatening the survival of native species. Ironically, measures to combat the proliferation of weedy and/or invasive species further rob an area of its biodiversity. Logging is frequently tied with pesticide use to reduce undesirable plant species and pests, and to ensure greater survival of replacement saplings. These pesticides leach into the soils and run off into nearby waterways, harming species dependent on those streams and rivers.

The logging industry remains a key component of BC's economy and labour market. Harvesting trees for domestic use and trade is unlikely to cease, so every effort must be made to adopt policies which integrate conservation into development and resource use. While individual forests require their own tailored strategy for sustainable forestry, basic ecoforestry principles still hold. Logging companies should abandon clear-cutting in favour of selection forestry, picking individual trees for removal, based on size, age, health and the overall population dynamics of the forest. And, importantly, the pesticide use so common with conventional forestry should end.

Forests have greater value than just serving as houses of biodiversity. They provide numerous ecosystem services (benefits to humanity) such as flood control, recreation, and nutrient cycling. Their role in purifying water and air is particularly valuable.

Forests also function as climate regulators. A newly logged area not only releases carbon into the atmosphere, but eliminates a carbon sink. Larger, mature, healthy trees sequester many times more carbon from the atmosphere than do seedlings and saplings. By helping to stabilize the climate, forests help to protect temperature sensitive species such as frogs. At a time when climate change can be neither denied nor ignored, and in light of Canada's commitment to reduce its carbon emissions at the Paris Conference, removing carbon sinks seems ill advised.

Canada's current government has pledged to meet our Aichi obligations by 2020. While the drive to place more of our remote lands into large reserves is both necessary and commendable, greater attention must also be paid to the intrinsic value of the biodiversity outside of reserves, and to prioritize the long-term health of forest ecosystems over short-term economic gain. No longer should it be that visitors hiking through a park see that the backdrop to an amazing natural wonder like the Skookumchuck Narrows is a mountainscape scarred by clearcutting.



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SCCA Nominates Watersheds for Designation

by Dan Bouman

Last December the SCCA submitted nominations for thirteen Fisheries Sensitive Watershed (FSW) designations in the Sunshine Coast Natural Resource District (formerly the Sunshine Coast Forest District). These cover all of the large salmon spawning watersheds in the Bute, Toba and Jervis watersheds, the Theodosia watershed north of Powell River, the Tzoonie watershed in Narrows Inlet and the Sakinaw and Wilson watersheds on the lower Sunshine Coast.

Our nominations were initially submitted to the Xwémalkwu, Klahoose, Tla'amin and shíshálh First Nations and then also to the Ministry of Forests Lands and Natural Resource Operations (FLNRO). FSW designations are authorized under the Forest and Range Practices Act (FRPA). The nomination packages have a general rationale, watershed boundary maps, forest cover maps, an image of each watershed, a summary of watershed characteristics and fisheries evaluations, and a table showing historical escapements mostly between 1947 and 1997.

The tables show that major declines in spawning returns have occurred in most of the nominated watersheds. The forest age class maps show that enormous amounts of land were denuded over relatively short periods of time. These materials are all available on the SCCA website.

Although the FRPA has been in effect for more than ten years there are no FSW designations in the greater Sunshine Coast region. Under FRPA, logging licensees must have an approved Forest Stewardship Plan. In this plan, a licensee describes how it will meet the goals and objectives of government.

Government has an objective of protecting fisheries through FSW designations. However, if there are no FSWs established, Forest Stewardship Plans are not required to have special management commitments to maintaining the stability and function of these large watersheds. In this writer's view, the failure to designate FSWs is de facto deregulation. An important thing to be aware of is that the fish of these watersheds were the foundation of human society in this region for least 10,000 years and were also one of the main sources of the wealth that built our modern society.

It's worth noting that the first Forest Practices Code came into effect in BC in the mid-nineties and it put an end to the

many extremely egregious logging and road building methods. As well, an enormous amount of public money was spent deactivating poorly built logging roads. All good but we still have a terribly destructive legacy to overcome if our fisheries are to be restored. The idea of special management considerations for the major salmon rivers of this region through FSW designations is a good one. We will press on.

How Green is the Sunshine Coast?

by Gayle Neilson

Not very judging by our parks and other protected areas, which amount to only 3% compared to 12% for the rest of the province. Not very if you consider that our main drinking watershed of Chapman Creek has been over-logged, often causing siltation issues for our well-run water treatment plant on the lower Chapman Creek, which I had the pleasure of touring on World Water Day. Not very if you consider that the community has been asking to expand upon the three tiny clumps of Elphinstone Park (totaling a scant 139 hectares) for over 20 years.

This may come as a surprise to residents who believe that there are a large number of environmentally oriented people living here dedicated to preserving our lovely natural areas. Numerous folks have petitioned the provincial government for years to help us redress the problem by, at the very least, increasing the size of Elphinstone Park to provide some meaningful habitat for forest species. It's an easy fix, and one which the local shíshálh First Nation has approved, to turn the existing 1500 + hectares of crown land on the lower slopes of Mount Elphinstone into protected area and one in which traditional practices can continue.

The very active Elphinstone Logging Focus (ELF) has recently brought to our attention the plan by BC Timber Sales to log yet another piece (cutblock A87125) of this highly endangered, lower mountain slope ecosystem. Even the Wilderness Committee and the Sierra Club have weighed in, calling on the provincial government to not log this endangered ecosystem, citing blue-listed species.

An expanded Mount Elphinstone park is long overdue. Previous newsletter articles on this topic (Spring 2012; Summer, 2015) are available on our website. Contact the SCCA at office@thescca.ca if you would like to join our watershed/forestry committees or work on other issues.

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Howe Sound Developments Remain in Focus

by Ruth Simmons, Executor Director, Future of Howe Sound

Tourism is booming in British Columbia and 2016 will be another busy year in and around Howe Sound. The attractions along the Sea to Sky highway and up the Sunshine Coast will draw many visitors from the lower mainland and all over the world.

For the past several years a growing number of voices have been speaking up to stop the reindustrialization of Howe Sound in order to protect its environmental recovery. Tourism, as well as residential and commercial developments, can affect this recovery if not planned well by local governments. With public engagement and scrutiny we can ensure that environmental protection is a top priority of any development.

The Future of Howe Sound Society has played a role in coordinating the community forums that bring local governments together in the spirit of cooperation. The cumulative impacts of growing recreational, commercial and residential development have been discussed. Growth strategies of the regions that meet in Howe Sound (Sunshine Coast, Greater Vancouver, Squamish-Lillooet) should be looked at holistically for this region's environmental and economic recovery to be sustainable. Official Community Plans help by considering how growth affects the unique features of each community.

The Islands Trust is a federation of local governments which serve the islands of the Salish Sea. The network of conservation organizations on the Howe Sound islands plus those on the mainland are very important to the overall conservation and stewardship of the Sound. The proponents of a fixed link between Vancouver and the Sunshine Coast need to be mindful that the Islands Trust has a policy that no island in the Trust Area should be connected to the mainland or another island by a bridge or tunnel. The feasibility studies will be known later this year, but a link to the Sunshine Coast cannot be done without consideration of the development pressures already being placed up the corridor on the Sea to Sky highway.

The proposed Woodfibre LNG project has many conditions attached to ensure the project does not result in significant environmental harm; however, we, along with many others remain skeptical about what is deemed to be significant. The question of how community support for

a project is measured and how it influences our provincial and federal decision makers remains unanswered.

There is no question that based on public input so far the proposed Burnco Aggregate mine at McNab Creek is not socially acceptable. A rezoning of the land to allow for rock processing has been before the SCRCD since 2013 and we believe it is time to say no to heavy industrial activity in this valley. Many people are concerned about how much disturbance this mine will have on the land as well as the neighbouring McNab community.

The growth strategies for the three regions that meet in Howe Sound need to be looked at holistically

The effects of the Box Canyon Hydro Project two kilometres up the McNab Valley plus ongoing logging will no doubt impact the wildlife that has been reintroduced to this area. Sensitive habitats for fish and the sponge bioherms (reefs) not far from McNab Creek are important to protect. The province has just released a draft policy on Cumulative Effects Assessments that will be applied to such projects in the future; in the meantime we operate without knowing whether the minimum thresholds for protecting our recovering environment are good enough.

Our Society has been calling for a comprehensive land and marine use plan for Howe Sound region for years yet no agreement for an overall planning exercise from our higher levels of government is in sight. We are now taking the lead in exploring the concept of creating a Howe Sound Atkatum Bioregion with the possibility of obtaining UNESCO Biosphere Reserve status. A working group has been established to learn about this process. This goal supports the objective of ensuring a sustainable Howe Sound for future generations.

For now let's appreciate the ongoing show from the humpback whales, orcas, sea lions and dolphins that visit Howe Sound. We can enjoy the bounty of spot prawns, crab and salmon fished from the Sound, and go to our quiet places. The protection of the Howe Sound glass sponge reefs through the expansion of the Halkett Bay Marine Park should be celebrated. We look forward to reading the Health of Howe Sound Ocean report that will be published by the Vancouver Aquarium at the end of year. Most importantly, we continue to appreciate our relationship with the Squamish Nation people and their ancestral home.

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Chapman Lake Water Woes *continued from page 1*

Secondly, to protect the ecological (including hydrological) integrity of the largest source area of public water supply within the SCR District. Thirdly, to provide non-motorized, low impact back country recreation in a wilderness setting.

The first priority of the park is to protect an ecologically viable, intact ancient forest of a type that has very little other representation in the world. For this reason the park has Class A status, the highest level of land protection available in BC. The park designation also achieved protection of the water source for 90% of water consumers in the SCR District.

The Tetrahedron Park Master Plan contains measures to ensure that the priorities for which the park was established prevail over time. Primary among the measures are requirements for comprehensive Environmental Impact Assessments (EIA) and public consultation whenever new activities are proposed.



View of Chapman Lake from the weir. G. McCallum photo

The EIA is fundamental to protecting park values and finding a balanced way to accommodate community water supply needs. For the past two decades the SCCA has worked closely with the SCR District on water issues, but our mandate is to *protect* ecologically significant lands and waters. The SCR District agreed to the provisions of the Tetrahedron Park Management Plan. The issue is about water supply *and* park protection.

The Tetrahedron Park Master Plan outlines how to achieve the right balance for the park and water source protection. Recreation is not allowed to compromise the environmental

values of the park or the ecology of the water source areas. Period. Likewise, the current SCR District water supply "panic" should not be allowed to compromise the environmental integrity of the water source areas. This is in everyone's best interests, right now and in the future.

Why has the SCR District waited twenty 20 years to resolve our water supply issues? Blaming environmentalists is convenient but absurd, evidence of a lack of common sense. The treatment plant is currently running at capacity and there may not be enough water during the summer for residents who have paid for the system to reliably carry on activities that are part of the fabric of our rural lifestyle. This includes the growing of food, as if that is a luxury.

Since the Tetrahedron's designation, no new community water supply sources have been developed. Instead the recommended course of action is to more than double the drawdown from 3 to 8 meters on Chapman Lake. This proposal, always rejected by past SCR District Boards, recently gained support due to last year's so-called water supply "emergency". The proposal for "emergency drawdown" infrastructure as a permanent feature in Tetrahedron Park is neither sustainable, nor a solution. This appears to be poor planning masquerading as an emergency.

The SCR District doesn't have approved amendments to their Park Use Permit to undertake the proposed works and has been notified that a new EIA is required. The drawdown project would ultimately entail \$7,400,000 from water subscribers. We say that the money is better spent on diversifying our water sources. Why is the SCR District seeking authority to borrow money before completing an Impact Assessment and doing the required public consultation?

There's no need for panic. There's a short-term solution. An emergency syphon system purchased by the SCR District in 2015 is permitted in Tetrahedron Provincial Park. It can be deployed with far less impact and at much less cost when and if another emergency like last year's occurs again. The cost of the pump was \$154,398.

The syphon system eliminates the need for blasting, tree removal, a work camp, use of heavy machinery, trench material removal and spoilage in the heart of the park. Most importantly, it would also ensure that the drawdown of Chapman Lake would occur in real emergencies only and not to compensate for the ongoing over-allocation of available water. The environmental reality is that we need new, sustainable water sources not "emergency" water at the expense of one of the very few parks in our region.

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Marbled Murrelet Saga Continues

by Dan Bouman

Many of our readers will recall that the welfare of the Marbled Murrelet has long been a major concern of the SCCA. It is a small secretive west coast seabird that nests exclusively in the canopy old growth forests. Population numbers have been in steep decline for more than fifty years. According to federal wildlife authorities, the leading cause of this decline is logging of nesting habitat. The Marbled Murrelet is listed under Schedule 1 of the Species At Risk Act (SARA) as Threatened. This means that the protections of the Act are mandatory.

In 2013, the SCCA formally nominated fifty nesting areas for Wildlife Habitat Area (WHA) status. A year later we received word from the province's senior wildlife biologist for this region that our nominations were accepted as appropriate for the needs of the bird. Another year went by and we heard nothing from government. Then in December 2015, we received an invitation to participate in a new initiative: the Marbled Murrelet Implementation Planning Process. The purpose of this process is to satisfy SARA related provincial obligations to at-risk species and we were advised that the Province would address our nominations in this process.

We attended a meeting in Powell River with provincial biologists in February and subsequently made a submission to the process. In order to assist other wildlife advocates, we also published a briefing note describing the state of law and policy in regard to the Marbled Murrelet. You can read these papers on the SCCA website.

As you can appreciate, protection for the Marble Murrelet's critical habitat seems to be taking an unreasonably long time and so, in February, the SCCA also filed a Freedom of Information request to forestry officials in Powell River. We asked for copies of logging "site plans" in or adjacent to our WHA proposals. The *Forest and Range Practices Act* requires these records to be made available to the public on request.

The government agreed to provide the SCCA with the documents; however, they wanted us to pay \$800. The SCCA believes these records should be available free of charge so we filed a request for a fee waiver with the Office of the Information and Privacy Commissioner. This will also take a few months. We hope that by shedding a little daylight on the plight of the Marbled Murrelet, we may be able to speak directly with logging companies that have operations in conflict with the needs of at-risk species. We will keep you posted!

Sunshine Coast Trail News – Spring 2016

by Eagle Walz

In 1992 a small group of people founded the Powell River Parks and Wilderness Society (PAWS). Before long they were busy building trails to link the remaining stands of old growth forests in the region's front country. Over the years huts have been constructed to provide overnight shelter to hikers.

By the end of March PAWS finished building the Golden Stanley Hut, our 12th shelter on what is now known as the Sunshine Coast Trail (SCT). The hut has the same footprint as most of the others, with an enclosed sleeping loft. This one has

windows with screens. Significant numbers of hikers are already coming through and have been enjoying the accommodations. The cabins are free on a first-come first served basis. There is shared overnight use with room for about ten people in the loft. The day use area downstairs has a movable table and benches that can be moved aside for a few trekkers to roll out their sleeping bags in a pinch. There are also level areas nearby for pitching tents.

During the last few years the number of visitors to the trail has been climbing steeply. Feedback from trail users has been very positive and we receive constructive comments that enable us to make further improvements to Canada's longest hut-to-hut hiking trail. Media reports, visitor centre statistics, water taxi trips, logbook entries, interested tour groups and word of mouth have put the Sunshine Coast Trail on the map.



New cabins continue to be built along the increasingly popular Sunshine Coast Trail. Photo by Eagle Walz

PAWS plans to build a few more structures in the next couple of years. We anticipate being able to start construction of a replacement cabin at Confederation Lake this summer. The old log cabin there is in an advanced state of decay, and has become a kingdom of termites. We are also looking at a trailhead kiosk at Sarah Point that can serve as an emergency shelter.

We are now entering a new era. PAWS congratulates Tla'amin Nation on concluding its Treaty on April 5th 2016. The Nation, the Province and Canada have agreed to continue free public access via the Sunshine Coast Trail footpath. The Treaty Settlement Lands extend roughly from Malaspina Road to Scout Mountain – the Marathon Shuffle route of the SCT. We recognize that we travel through the traditional territory of the Tla'amin Nation and hold our hands up to them, a friendly gesture of appreciation and respect. We look forward to an evolving partnership with the Nation that will be mutually beneficial to both Tla'amin and PAWS.

For more detailed information please visit www.sunshinecoasttrail.com.

Pacific Herring: A Keystone Species

by Cindy Harlow

Every year from February to April, the Pacific herring (*Clupea pallasii*) migrate from the ocean depths to spawn along the BC coastline. During this time we have the chance to observe an abundance of wildlife that is like a dinner party serving up herring and their progeny.

The herring are a vital link in the marine food chain throughout the year and a critical species to our marine ecosystem. This keystone species is one that transfers nutrients contained in plankton and zooplankton that occur in the oceans depths to living creatures in the upper food chain such as Chinook and Coho salmon, eagles, ducks, sea gulls, shore birds, whales, seals and sea lions.

Stellar and California sea lions, as well as harbour seals, are often the first sign that the herring are here. They can be heard vocalizing as they follow and feed on the gigantic schools of herring traveling toward the near-shore spawning areas. The world beneath the ocean surface comes alive. The population of eagles, shore birds and marine ducks increases and the world beneath the ocean surface comes to life.

When the time is right, females gently rub their bodies along submerged vegetation such as eelgrass and various algae. Structures such as rocks, logs and pilings can also be used for spawning. Each female can produce 4,000 to 130,000 eggs. As the females deposit their eggs, the males release their milt and the ocean becomes white, like someone has just poured in gallons of milk. The male gametes are dispersed throughout the water column, fertilizing the eggs that commonly hatch in ten days to two weeks.



A school of Pacific herring traverses the rich vegetation on a seabed.
Photo: Tavish Campbell (www.tavishcampbell.ca)

The herring that spawn this year will migrate back to the rich feeding areas offshore only to return and spawn again. The fish will mature in their third year. The oldest herring on record is fifteen years.

Herring are a part of our social, cultural and economic history. This little fish has a long and important history as a food source for humanity. Herring bones have been found in some of the oldest middens on the Pacific Coast. They have been caught, traded and consumed since the 1700's and this continues today through various First Nation fisheries.

Federally regulated commercial fisheries have been controversial and subject to debate over the years. This discussion continues to this day. Sound sustainable decisions must be based on good up-to-date scientific information to ensure that these fish continue to play their important role in maintaining the health of the marine environment. We can be humbled by the grandeur of this highly valuable species.



The SCCA would like to posthumously thank Joop Burgerjon for supporting our work with a generous bequest through his estate. Joop worked tirelessly to protect the natural biodiversity of the Sunshine Coast that he loved so much. He helped to found the SCCA and was instrumental in the creation of Sargeant Bay Provincial Park. Photo by Martin Dmitrieff@Flickr

John Hind-Smith Award Presented to shíshálh

by Gayle Neilson

On March 12 a special celebration was held to award the shíshálh Elders, Council and Members with the 2016 John Hind-Smith Environmental Stewardship Award. The SCCA established the prestigious award in 2006 to honour a worthy local citizen or group that exemplifies the spirit of John Hind-Smith through their dedication and commitment to the environment and preserving wildlife.

George Smith spoke of the many ways the shíshálh have acted to steward the land and waters of the Sunshine Coast, their traditional territory. These include helping to establish the Joint Watershed Management Agreement, leading in the creation of Spipiyus Provincial Park and playing a strong role in saving the endangered Sakinaw salmon. Shíshálh member Sid Quinn spoke and a video was shown about the rehabilitation of Sechelt Creek, which has seen a dramatic return of pink salmon. Chief and Council have helped in the maintenance of public road access to the Tetrahedron and Mount Richardson Provincial Parks and are on record as willing to protect Mount Elphinstone forest.

A large crowd enjoyed a salmon feast and wonderful potluck items. Songs and celebration were performed by *Spirited Native Drums*, and music by *Bits of String*. Guest speakers included MLA Nicholas Simons. Calvin Craigan thanked the SCCA and received a lovely blanket and a gorgeous carved bench on behalf of the shíshálh people.



On behalf of the shíshálh Nation, Sid Quinn and Chief Calvin Craigan accept the John Hind-Smith Award from SCCA co-chair Gayle Nielson Photo by Jacob Roberts @ Coast Reporter

John Hind-Smith moved to the Sunshine Coast from Yorkshire, England, in 1960. He worked at the mill and ran his own business until 1985 but his real passion was nature. John hiked extensively around Mount Elphinstone and the Tetrahedron, freely sharing his vast knowledge of our ecosystem. He was instrumental in having the area preserved as a provincial park and a beautiful sub-alpine lake in the park bears his name.

John was a lifetime member of the Sunshine Coast Natural History Society (formerly the Marsh Society), director of conservation for the Gibsons Wildlife Club, a founding member of the Salmon Enhancement Society, the Elves

Club, Search and Rescue Group, and Tetrahedron Alliance.

I was fortunate to have met John when I took a natural history course through Capilano College in the mid-1980s. We all referred to him frequently and he became our class resource person. John was a gentle, modest and gracious man, loved by all who knew him. His inspirational legacy is carried on by the SCCA in the form of this award.

The shíshálh Nation exemplifies the aims of the award through enduring service to the protection of biodiversity in the Sunshine Coast region. For more information on John Hind-Smith please visit the SCCA website at www.thescca.ca.

continued from page 1

Bee Populations Still a Cause for Concern

Rural areas often aren't much better off for a couple of reasons. Sarah Commons (founder of the Vancouver group *Hives for Humanity*) notes that in areas with a lot of farming, pesticides and crop monocultures often prevent bees from finding all the nutrients they need. Pesticide use is widely debated in terms of its effects on bees. A particular kind of pesticide known as neonicotinoids, or neonics, is especially controversial. Some scientific studies assert that neonics are detrimental to bee health and can lead to decreased colony size. Other studies debunk this and point out flawed study designs which led to these conclusions. Although the science is undecided, Europe has banned the use of neonic pesticides as a precautionary measure.

Another thing affecting honey bees is a mysterious phenomenon known as Colony Collapse Disorder (CCD). Sometimes, bee keepers discover a completely empty hive. Often the hive is left well stocked with food, and the queen may even be left behind. There is no known reason why bees desert their hives like this; however, CCD is a growing problem that has led to huge economic and agricultural losses. Some people blame disease or poor forage sources, but there is no scientifically proven reason behind CCD.

Urban planning, commercial agricultural pesticide use, and unknown disorders seem like large topics to tackle by oneself so what can realistically be done at a local level to help the bees? Sarah Bergmann is founder of the Pollinator Pathway Project, an initiative in Seattle which connects downtown parks with garden pathways that line boulevards in front of private homes. Her project aims to provide a healthy habitat where pollinators can survive within urban spaces. Pollinator pathway projects are popping up in places like Squamish and Vancouver. Land owners can help by planting pollinator friendly plants in their gardens to provide rich forage grounds. Such projects are an excellent way to create a better bee habitat while providing education to community members.

Although it's hard to pinpoint a specific reason why the bees are in trouble, it's important to do all we can to help them. By planting organic gardens with flowering plants that bloom at different times of the year, you'll be doing your part to help bees in your community. We rely heavily on the bees for our food so it seems like the least we can do.

BC's Water Sustainability Act: An Update

by Christine Mettler, Canadian Freshwater Alliance

On February 29th, 2016, BC's long-awaited [Water Sustainability Act](#) (WSA) came into force. Although the legislation was passed in May 2014, it wasn't until the government released a new set of regulations that the Act officially took effect. The new regulations included measures related to groundwater use and licensing, water fees and rentals, protection for aquatic ecosystems, and dam safety.

Although not perfect, the WSA is a big development in watershed protection and management in BC. For the first time ever it regulates the use of groundwater. This means that the 20,000 or so non-domestic (i.e. not household) groundwater users around the province are now required to get licenses for their water use. Previously, we had no way of knowing how much groundwater was actually being used. Once existing users are brought into the system, we will finally have a clearer picture of the scale of groundwater withdrawals in the province.

Additionally, the legislation recognizes the importance of water flow requirements for ecosystems and species. This means a recognition that there needs to be enough water in our lakes and streams to support healthy fish and wildlife populations. Ensuring healthy "environmental flows" isn't just about protecting fish. It can have wide repercussions throughout the ecosystem as a whole, and for us humans. For example, a recent study in British Columbia (<http://www.raincoast.org/2016/05/ecology-of-conflict>) showed that when salmon abundance is low, there is a much higher likelihood of human conflict with bears.

Although these are significant upgrades, critical details of the WSA are still in development. The first set of regulations (released in February) had some disappointing elements, especially with regard to how our water will be protected in a time of climate uncertainty. Although the Act stipulated that decision-makers should consider environmental flows when granting licenses, the new regulations actually exempt them from that requirement when it comes to those aforementioned 20,000 or so existing groundwater users. Since licenses are issued for a 30-year period, this exemption could "lock in" unsustainable water use, and potentially give rise to major problems or conflicts down the road.

Despite ongoing concerns such as the low prices of water withdrawal and the failure to address First Nations interests,

the Act shows promise. It enables the creation of regionally focused "water sustainability plans" that could empower local communities to make decisions and equip them with the resources and authority to implement their choices.

The time frame for the development of regulations pertaining to planning and governance is largely unknown, but the government is committed to developing a water monitoring and reporting regulation by the end of 2016. Monitoring and reporting is critical to ensuring watershed health, so provincial freshwater groups will keep an eye on that - especially since local knowledge is critical to ensuring a robust monitoring regime. Other future areas of regulatory development include water objectives (which may be based on a "cumulative effects" model) and dedicated agricultural water use.

You can stay up-to-date on Water Sustainability Act information with [Freshwater Alliance's BC E-News](#).

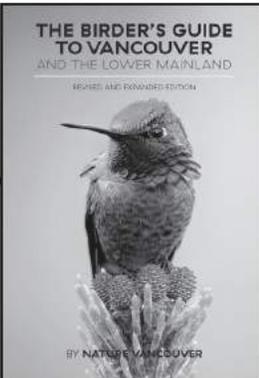
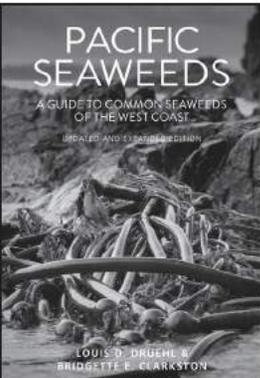
Deepening Connections Conference a Hit

by Naomi Fleschhut

Margaret Wheatley once said, "Whatever the problem, community is the answer!" With this in mind, the SCCA embarked on a project this past spring that we hope will become a tradition: our 1st Annual Deepening Community Connections Environmental Conference. This all-day event was made possible thanks to a grant from the Sunshine Coast Community Foundation, the support of Capilano University and the Sunshine Coast Volunteer Centre.

The main purpose was to 'deepen our connections' so that we can support each other and collaborate on projects that will benefit the entire community. To this end, organizers Cindy Harlow and Naomi Fleschhut wove the theme of connecting into each activity. These included a keynote address by Rick Kool of the School of Environment and Sustainability at Royal Roads University; a community roundtable where participants shared news about their organization and projects; a brainstorming session on what is working well in our community; and five in-depth presentations from local initiatives such as the Ecoliteracy Field School and the Community Solar Association.

We are ready to plan for next year's gathering. To get involved contact us at info@thescca.ca or call 604.865.1633. Remember, "Unless someone like you cares a whole awful lot, nothing is going to get better. It's not." (Dr. Seuss)

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Court of Appeal Salmon Hearing Adjourned

by Richard Carton

The Department of Fisheries and Oceans (DFO) regulates and oversees fish farming in Canada. It is also required to protect wild fish and their habitat. As is often the case, the government must thus manage the competing interests of commerce and conservation. When push comes to shove, one hopes that environmental stewardship prevails over profit.

For over two decades biologist Alexandra Morton has fought to keep salmon farms away from BC's wild salmon migratory routes in order to prevent the spread of diseases. In 2013 she reported that the Norwegian-owned company Marine Harvest Canada had transferred Atlantic salmon infected with piscine reovirus (PRV) into net pens along the Fraser River sockeye salmon migration route. Morton launched a lawsuit against the DFO and Marine Harvest.

PRV has been called the most likely cause of Heart and Skeletal Muscle Inflammation (HSMI), a serious disease that attacks the muscles and heart of salmon. HSMI has caused widespread damage to farmed fish in Norway and Scotland. Most farmed salmon in BC appear to be infected with PVR.

In May, 2015, federal court justice Donald J. Rennie ruled that the DFO needs to err on the side of caution in regulating fish farms. This was consistent with the findings of the \$37 million Cohen Commission Report on Pacific Salmon Management (2012). The verdict should have halted the practice of private companies transferring fish infected with viruses to open-pen farms in the ocean. However, both the DFO and Marine Harvest appealed the court's decision.

On January 6, 2016 *Virology Journal* published a scientific paper reporting the discovery of infectious salmon anaemia virus (ISAV) in farmed salmonids and wild salmon sampled throughout British Columbia. According to the Canadian Food Inspection Agency, outbreaks of ISA can cause mortality rates of up to 90% in affected fish populations and is most common in farmed fish reared in seawater.

In April, Morton's request to meet with federal minister Hunter Tootoo was denied. She responded with an open and wide-ranging letter. It highlighted numerous omissions and flaws in a January 2016 report by the BC Salmon Farmers Association which stated that salmon farms are not the cause of sea louse infection on juvenile wild salmon in BC. Morton also protested that a DFO scientist had asked the *Virology Journal* to retract its recent paper from public view. This lack of transparency and disregard for the scientific process is what our new Liberal government promised to eliminate.

On May 11, 2016 the Union of BC Indian Chiefs wrote a letter expressing its disappointment with the government's decision to appeal the court's decision. The union leaders argued that the appeal was "disruptive to building positive relations with First Nations" and that it could impact Aboriginal title and the right to food security.

One week before the hearing date in Calgary (May 26) the DFO suddenly requested a five-month adjournment to consider "new information." Three days later the DFO announced that PVR appears to cause heart disease in

farmed BC salmon. Fortunately, the Trudeau government now appears to be listening. A recent paper (Garver et al., 2016) reported that although PVR is transmissible to Atlantic salmon and sockeye salmon, it does not seem to lead to HSMI. This conclusion now remains questionable.

Meanwhile, the Atlantic Salmon Federation has asked the government to formulate and implement a plan for replacing net-pen sea cages with closed containers at Atlantic salmon farms. A special session on salmon farming was held at the North Atlantic Salmon Conservation Organization (NASCO) meetings in Germany on June 8, 2016. Leading scientists, including members of the International Council for the Exploration of the Sea, confirmed that there is significant and growing evidence that net-pen salmon aquaculture is detrimental to the survival of wild Atlantic salmon.

Bald Eagle Nest Registry Program Update

by Angela Kroning

Since provincial coordinator Ian Moul spoke at the Tetrahedron Outdoor Club/SCCA jointly sponsored event in the autumn of 2015, community volunteers and Ian have been confirming the location of various nests and registering them online on the Wildlife Tree Stewardship (WiTS) page of the Community Mapping Network (http://www.cmnb.ca/atlas_gallery/wildlife-tree-stewardship). The Bald Eagle Nest Registry Program is managed by WiTS to support the protection of nest trees covered under Section 34 of the Provincial Wildlife Act.

Sixteen eagle nests located between Elphinstone and downtown Sechelt have been confirmed and community members have been observing nests this spring to determine if they are indeed active with nest building, brooding and eaglet raising. If you know of an active nest or had a sighting of eaglets from a nest already listed we would like to hear from you. Messages can be sent to scbaldeaglenest@gmail.com or phone 604-886-8441.

The project hopes to expand to additional areas on the Sunshine Coast next year and we are still looking for money to fund the Provincial Coordinator's services. Donations to the SCCA exceeding \$25 qualify for a charitable tax receipt. Please indicate that the money is to be directed to the Bald Eagle Nest Registry Program.

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www.thesc.ca. Please consider joining the SCCA!

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Biodiversity in British Columbia a Low Government Priority

British Columbia is blessed with the greatest biodiversity in the country but does our government take it for granted? Along with Alberta, we are one of the two provinces that has no stand-alone law to protect endangered wildlife. Existing provincial and federal laws that are supposed to manage at-risk populations and habitats are falling short of their goal.

Auditor General John Doyle concluded in 2013 that our government is not doing enough to protect biodiversity and doesn't appear to clearly understand the meaning of the word. There are over 1900 at-risk species but only the Vancouver Island marmot, American white pelican, sea otter and burrowing owl are protected under BC's Wildlife Act. Two of the red-listed species (extirpated, endangered or threatened) are the Northern Goshawk and Contorted-Pod Evening-Primrose.



The Northern Goshawk with its distinctive white eye-brow and tail bars. Ashley Hockenberry photo

Northern Goshawk by Andrew Scott

The northern goshawk (*Accipiter gentilis*) is related to the sharp-shinned and Cooper's hawks that are sometimes seen menacing backyard feeders. It's larger, however—fiercer, wilder and much less common. All three species are accipiters, with broad, rounded wings and long tails, which give them marvellous aerial agility, especially in confined spaces. The grey-and-white, raven-sized goshawks (females are larger than males) are secretive forest predators that can suddenly plunge through dense foliage and grab their quarry in vice-like talons. Medium-sized birds and mammals are their main prey.

There are two subspecies of northern goshawk: *laingi* and *atricapillus*. The *laingi* subspecies, also known as the Queen Charlotte goshawk, is found in Alaska, Haida Gwaii, Vancouver Island, along the BC mainland coast and on the Olympic Peninsula. The *atricapillus* occurs across the rest of North America; its distribution pattern may overlap with that of *laingi* in some parts of BC.

The Queen Charlotte goshawk is a scarce bird. According to the federal Species at Risk Public Registry, there may only be about 300 breeding pairs on Vancouver Island and 50 in Haida Gwaii. The subspecies is protected under the *Species at Risk Act* and listed as "threatened" by the Committee on the Status of Endangered Wildlife in Canada. A threatened species "is likely to become endangered if nothing is done to reverse the factors leading to its extinction."

Queen Charlotte goshawks have complex nesting, roosting and foraging requirements; they prefer mature and old-growth forests with more than a 60-percent closed canopy. Habitat degradation is the most likely cause of past population declines. Breeding birds are very sensitive to industrial activities, especially logging during breeding season (March to August). Current conservation efforts are focused on establishing adequate breeding area reserves (larger than 200 hectares, with connectivity between nest trees and 200-metre minimum buffer zones).

Northern goshawks are rarely encountered on the Sunshine Coast. Tony Greenfield, president of the Sunshine Coast Natural History Society, has recorded only 37 sightings in 23 years of detailed record-keeping. Most, he says, were in higher-elevation old-growth forests or in settled areas at sea level, especially on golf courses or at feeders, where the hawks can more easily prey on flocking birds. If you spot this species, consider yourself fortunate indeed.

Contorted-Pod Evening-Primrose by Richard Carton

The Contorted-pod Evening-primrose is an extremely rare plant. In Canada, it is found only on southeast Vancouver Island and the Gulf Islands. The most recent surveys (2007) revealed that two of the eight known colonies are on Savary Island, off the Sunshine Coast near Lund.

The plant is an annual herb with wiry red stems and bright yellow flowers consisting of four petals that fade to red. It is restricted to sandy backshore habitats that have minimal tree or shrub cover. A degree of sand erosion helps to reduce competition from larger species that are less stress-tolerant. The plant's fruit arises in the form of small twisted pods.

Contorted-pod Evening-primrose is threatened by several factors, especially the use of recreational vehicles on the beach and the trampling associated with foot traffic and picnicking. Invasive plants such as Scotch broom alter the ability of sites to support the species by stabilizing dunes, increasing vegetation and eliminating the open habitat that is required. Estimated populations have declined by 35% in recent years.



The rare Contorted-pod Evening-primrose grows on Savary Island Photo by Tab Tannery @ Flickr

Local Solar Initiative is Gaining Momentum

by Richard Carton

Solar power has captured the human imagination ever since French scientist Edmond Becquerel first converted sunlight into electricity in 1839. Knowledge of this process, known as the photovoltaic effect, inspired generations of research that have increased our mastery of the technology. Although not a perfect energy source, it is virtually unlimited in supply and has many advantages over the extraction industries, particularly in terms of pollution.

Solar energy enables us to think globally and act locally. As ongoing advances have made it more affordable, communities around the world have been developing small-scale, renewable energy cooperatives. Cooperative enterprises can have economic and social benefits such as lower failure rates than traditional corporations and small businesses. An economy increasingly owned and controlled by citizens may provide the best hope for a sustainable climate policy that is essential to biodiversity.

Volunteers at the Sunshine Coast Community Solar Association (SCCSA) conceived of a local solar initiative in 2014. Over 400 people have expressed an interest in its programs which include organizing a bulk buy of solar panels for residential installation, encouraging School District 46 and municipalities to install solar panels on schools and government buildings, and developing a solar community investment cooperative. Twenty-one households have currently signed up for the bulk buy.

The SCCSA has received a lot of support from within our community. The Sunshine Coast Credit Union is backing the bulk buy, offering a special loan to community members who may otherwise be unable to participate. The SCCSA recently received a \$3,500 Sunshine Coast Community Foundation grant. The funds will be used to hire a consultant who will research the best approaches to establishing a community solar investment co-op.

Last September, students Alicia Sebel and Maria Salo from the British Columbia Institute of Technology (BCIT) helped the SCCSA as a school project. They created a website and a set of guidelines including the best practices and potential obstacles for a community solar association. Input from Mark Giltrow, founder of the Sustainable Business Leadership program at BCIT, has been instrumental in moving the SCCSA forward.

Pender Harbour Secondary School now has its very own 'solar lab', on loan from Clear Energy Solutions. A PowerCAN trailer with 2 KW solar panels on its roof has been delivered to the school. Matt Hutchings and Will Brooke at Clear Energy Solutions have provided ongoing technical support to the SCCSA.



Will Brooke from Clear Energy Solutions teaching Pender Harbour students about solar energy. James Pawley photo

Rob Baxter, founder of Vancouver Renewable Energy Co-op, recently launched SolShare, BC's first solar community investment co-op. The SCCSA has been eager to establish a form of local solar community investment co-op since its inception. It has spoken to Rob about the possibility of collaborating with VREC to establish a Sunshine Coast branch of SolShare, or something similar.

Anyone concerned about the limits of solar energy in our northern maritime climate should rest assured. Freiburg has won numerous green awards and been recognized as Germany's environmental capital. It has a highly successful solar program with more than 400 solar installations on public and private buildings. Freiburg has virtually the same latitude as Gibsons, which averages more sun every month of the year than its European counterpart.

Solar energy has a very bright future. An array of innovations in nanotechnology is predicted to multiply the electrical output of solar panels while reducing costs. The recent success of the Solar Pulse aircraft is an indication of what can be achieved. For further information about the SCCSA please contact Joanna at j_zilsel@dccnet.com.



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