Is Nocturnal Birding For You?

Chris Pielou (1923 - 2016)

Protecting the Southern Salish Sea

The Magazine of BC Nature

www.bcnature.ca • Fall 2016 • Vol. 54 No. 3• ISSN 0228-8824
**In This Issue:**

**Regular columns**
- Editorial..................................................3
- From Your President..................................4
- Natural Mistakes......................................5
- Conservation Report.................................6
- Book Review...........................................13
- Focus on IBAs..........................................16
- NatureKids BC Update...............................22
- BC Naturalists’ Foundation.........................25

**Feature**
- Protecting The Southern Strait of Georgia - Home to Canada's Most Endangered Killer Whales.............7
- BC Nature Club Service Award - Geof & Jean Hacker...8
- Mountain Stories Along the Trail....................8
- The Unequaled Biodiversity of Pink Mountain..........9
- Short-eared Owls - How to Identify...................10
- BC Nature AGM 2017 - Lillooet.......................11
- Is Nocturnal Birding for You........................12
- 2016 Rene Savenye Scholarship - Haley Crozier........14
- Chris Pielou...........................................15
- Comox AGM 2016 In Review..........................17
- Mount Kobau Star Party................................18
- Lookin’ Out My Backdoor: Nature Photography.........20
- Leveraging Law for Nature............................23
- Wanted! Bobcat and Lynx Photographs..................24
- Being a Restoration & Survey Crew Technician..........26
- The Beach Hero Program................................26
- The 17th Annual Hyde Creek Salmon Festival...........27
- Being an Event Coordinator............................28
- Salt Spring Island Purple Martin Recovery Project.....29
- The Great Salmon Send-Off............................31
- Fireweed: It Heals the Land...........................32
- BC Nature Summer Student Kristina Charania..........35

**Notices**
- Volunteer Positions................................4
- Camp Updates.........................................15
- Dates to remember.................................30
- FGM 2016 - Prince George Schedule of Events........33
- FGM 2016 - Registration.............................34
- Listing of all BC Nature Federated Clubs..............35

**Correction from the Summer Edition**

As reported in the NatureKids article in the Summer 2016 edition, here are some corrected statistics.

Clean ups: 10,252,500 m²
Plantings: 6,187 m²
Invasive species removal: 531 m²
Total = 10,259,218 m²

**Objectives of BC Nature**
(Federation of BC Naturalists)

- To provide naturalists and natural history clubs of BC with a unified voice on conservation and environmental issues.
- To foster an awareness, appreciation and understanding of our natural environment, that it may be wisely used and maintained for future generations.
- To encourage the formation and cooperation of natural history clubs throughout BC.
- To provide a means of communication between naturalists in BC.

**BCnature magazine is published quarterly by BC Nature - Circulation 6,300**

**Editorial Team:**
- Penelope Edwards piedward@telus.net
- Betty Davison manager@bcnature.ca
- Rick Gee rdgee@shaw.ca
- Claudia Copley dccopley@telus.net

**Website:** www.bcnature.ca

**Articles - We welcome your articles, photos and letters Please email your articles and photos to manager@bcnature.ca. Please email your articles-photos-thoughts to BC Nature BC Nature and the editorial team reserves the right to edit submissions for length, style and clarity. For advertising rates, and submission deadlines please email the office. Submission deadline for the Winter Edition - November 1, 2016**

**Cover Photo:** Short-eared Owl (Asio flammeus)

**Photograph:** Pascale Charland

**BC Nature Executive**

- **President**
  - Alan Burger
  - Alan Burger

- **Vice President**
  - Virginia Rasch
  - Virginia Rasch

- **Past President**
  - Kees Visser
  - Kees Visser

- **Treasurer**
  - Reda Akladios
  - Reda Akladios

- **Recording Secretary**
  - Vacant
  - Vacant

- **Conservation Chair**
  - Peter Ballin
  - Peter Ballin

- **Communications Chair**
  - Penney Edwards
  - Penney Edwards

- **Kootenay Coordinator**
  - Joan Snyder
  - Joan Snyder

- **Lower Mainland Coordinator**
  - Jude Grass
  - Jude Grass

- **Northern BC Coordinator**
  - Fred McMehan
  - Fred McMehan

- **Vancouver Island Coordinator**
  - John Neville
  - John Neville

- **Thompson/Okan/Shuswap Coordinator**
  - Janet Pattinson
  - Janet Pattinson

- **Education Chair**
  - Marg Cuthbert
  - Marg Cuthbert

- **Director at Large**
  - Bev Ramey
  - Bev Ramey

- **Director at Large**
  - Claudia Copley
  - Claudia Copley

**Email addresses may be found on www.bcnature.ca under “Contact Us” or telephone the office for further information.**

**Colour Version of BCnature is available online www.bcnature.ca**

**BCnature is printed on 100 percent recycled stock**
Editorial
Growing, Growing, Gone!
By Neil K. Dawe

Go, go, go, said the bird: human kind
Cannot bear very much reality. T.S. Eliot

Of the billions of species that have ever existed, only one — homo sapiens—has attained higher intelligence. Given those odds, Ernst Mayr, a prominent evolutionary biologist, argued that perhaps “high intelligence is not at all favored by natural selection, contrary to what we would expect.” In other words, higher intelligence may be maladaptive.

Nothing could be more indicative of this than our obsession with economic growth as a means to a better world. It is leading us towards a potentially bitter end. And we’re following along with eyes wide shut. What’s worse, we’re taking myriads of other species with us, compounding this moral failing.

Economic growth is an increase in the production and consumption of goods and services in the aggregate, i.e., an increase in the flow of raw resources through the economy and back to the environment as wastes. It is fueled by population growth, growth in per capita consumption, and our human nature. Each year our growth economy demands more and more resources from the structure of ecosystems, thus impacting the species living there, reducing their populations and causing extinctions. But it is all these wild species, simply living out their daily lives within healthy ecosystems, that facilitate ecosystem functioning and the provision of the life-support services of the planet.

Economic growth, the mantra of the corporate and political worlds, dominates our lives. It is mentioned in the 2016 Federal Budget 19 times, promising to “expand the middle class, reduce inequality among Canadians and position Canada for sustained economic growth in the years to come.” While it may improve the lives of Canadians in the short term, it does so perniciously and unsustainably, at the expense of the very source of that improvement—the ecosystems and their life-support services. And “sustained economic growth” on a planet with finite resources? Impossible! As physicist John Schellnhuber notes: “Political reality must be grounded in physical reality or it’s completely useless.”

In addition, we constantly hear politicians claim that we don’t need to choose between a healthy environment and a strong, growing economy. Really? Perhaps they can explain why recent studies show that growth of the global economy accounts for most of the increase in our CO₂ emissions. Or why biodiversity loss continues to increase in tandem with the growth of our ecological footprint. Or why a number of independent studies have demonstrated that we’re closely aligned with the 1972, Limits to Growth, standard run—“the business as usual” scenario. That scenario assumes “no major change in the physical, economic, or social relationships that have historically governed the development of the world system” and results in collapse of the global economy and environment sometime this century.

In order to continue to “Know Nature and Keep it Worth Knowing,” BC Nature has recognized that there is a fundamental conflict between economic growth and biodiversity conservation. We did this through the adoption of a position statement in 2008. After all, there is a sustainable alternative: the steady-state economy—an economy with mildly fluctuating population and per capita consumption in balance with the regenerative and assimilative capacity of the biosphere. But other than taking that position, we have continued to deal only with the symptoms of this conflict. It’s time we actioned our position statement, change our tactics, and deal with one of the significant causes of biodiversity loss—economic growth. It won’t be easy. It will require revolutionary work.

Here are but a few suggestions to get us started:

1. Learn more about the fundamental conflict between economic growth and biodiversity conservation. A good place to start is the “Discover” pages of the Center for the Advancement of the Steady State Economy (steadystate.org).

2. In our communities, naturalist clubs can insist that local governments reference and include calculations on local carrying capacity (collective ecological footprint analysis) wherever sustainability is referenced in Regional Growth Strategies and Official Community Plans. Include the steady state economy as a component of the solution to local biodiversity loss.

3. Strike a committee within BC Nature and local clubs to consistently make the link between conservation projects/initiatives and economic growth and send a standardized, constant message to communities, politicians, and other conservation organizations; report on this link in every issue of BC Nature. The Qualicum Institute can help you make this link (qualicuminstitute.ca).

4. Continue efforts, valiantly begun in 2008, to have Nature Canada recognize, accept, and publicize the fundamental conflict in all their conservation efforts. Have them encourage and support naturalist clubs across Canada to do the same.

Biodiversity loss is a moral issue, not simply an environmental issue. Should we fail to deal effectively with economic growth, a “malignant social construct,” we could discover there’s a basic truth to Ernst Mayr’s thesis on our higher intelligence.

Neil is a Registered Professional Biologist and a recipient of the Ian McTaggart-Cowan Award of Excellence in Biology from the Association of Professional Biologists of BC. Retired after 31 years with the Canadian Wildlife Service, Environment Canada, he is currently President of the Qualicum Institute and Production Editor for the BC Field Ornithologists’ Journal, British Columbia Birds.

Letters to the Editor

Good Day - I refer to BC Nature, Summer 2016, p8 - Pacific Northwest – two entries. This is the Pacific Northeast. The Pacific Northwest washes the shores of Japan, Korea, China and Russia; Yankee misuse notwithstanding. Your Obedient Servant Donald Camp Victoria BC

Response to Mr. Camp - Thank you for your correction, Courtesy of Protect Planet Ocean web site: The Northeast Pacific Region is defined as the marine and coastal waters from the Bering Strait in the north, down the west coast of North America including the Aleutian Archipelago, the Gulf of Alaska, and the near shore (“inside”) waters of the Alexander Archipelago; the Strait of Juan de Fuca and Puget Sound; San Francisco Bay, the Southern California Bight; the Golfo de California (or Sea of Cortez); the waters surrounding Baja California; and the waters along the west coast of Mexico to its border with Guatemala.
This summer, BC Nature lost one of its most powerful members and the world lost a great ecologist – Chris Pielou. An obituary to this remarkable woman is viewed on Page 15 of this edition. I was lucky enough to meet Chris Pielou a few times; she was that rare person who was at the forefront of her academic field, mathematical ecology, but was also strongly committed to applying her knowledge to local environmental and management issues.

On June 30, BC Nature was a key player in a very important legal decision: the Federal Court of Appeal overturned the Harper government’s approval of the Enbridge Northern Gateway oil pipeline. Working pro bono, a legal team from the University of Victoria’s Environmental Law Centre, led by, Prof. Chris Tollefson—represented BC Nature and Nature Canada in the Northern Gateway hearings and the subsequent appeal to the Federal Court. This court’s decision hands the issue back to the federal cabinet and many people are watching closely to see how the new Trudeau government will deal with issues of environmental integrity and climate change.

Chris Tollefson and his team are also heavily involved with the review of the federal Environmental Assessment Act, with the goal of having long-term sustainability as the gold standard for assessing development projects in Canada.

Some of BC Nature’s members are against us getting involved with environmental advocacy and legal battles and there are others who feel we should take a much stronger stand against environmentally-risky developments. In the 30-odd years that I have been a member of BC Nature, our advocacy role has increased somewhat, but I am satisfied that our organization is on the right path – promoting the use of science to guide development decisions and working to have stronger federal and provincial environmental protection. I am always aware of both parts of our society’s motto: Know nature and keep it worth knowing.

My career has focused primarily on seabirds, so I have experienced first-hand the horrors of a major oil spill on our coast. In the winter of 1988-1989, I was one of the biologists on the beaches of Vancouver Island who sorted through piles of dead seabirds encased in thick oil spilled from the Nestucca barge. More than 50,000 birds were estimated to have died from that spill, a relatively small volume of oil compared to the Exxon Valdez and other tanker spills. I’m convinced that the economic benefits of exporting large volumes of oil from BC are simply not worth the risk of even one major oil spill in our ocean. And there is the impact of this oil on our global climate to consider, too. Armchair economists and pipeline promoters seldom have to experience first-hand the realities of the risks that they so easily dismiss.

One of the strengths of BC Nature is that we are a bottom-up organization. We exist to promote collaboration and friendship among the 53 nature clubs across our province. Our general meetings, held in the spring (AGM) and fall (FGM), are wonderful opportunities to discuss the role of BC Nature in environmental advocacy, legal challenges and other potentially contentious issues. So come to the FGM in Prince George this September, and the AGM in Lillooet next May, and voice your opinion to help set the course for BC Nature.

From Your President

By Alan Burger

BC Nature is seeking a secretary!

In late-September, the Secretary position on the BC Nature Executive will become vacant. We are looking for a volunteer who would be willing to step up to this job. The appointment will be for two years, and if desired, may be renewed twice. As Secretary, you will be a full member and an Officer of BC Nature.

The Secretary’s major responsibility will be to take the minutes at Executive meetings (six times/year), Board of Director’s meetings (twice/year), and General meetings (twice/year), and, if desired, participate in the meetings. Two of the Executive meetings and all of the Board and General meetings will take place during conferences that are usually in early May and late September. The other four Executive meetings are done by phone or Skype. Claudia Copley has been BC Nature’s Secretary for the last six years, and has done a great job. Claudia was not always able to attend all of BC Nature’s meetings; in those cases, there were other Executive members to help record minutes. It is also possible to become a Recording Secretary. A Recording Secretary would also record meeting minutes, but would neither become an Officer of BC Nature nor would participate in discussions.

We hope that someone will step forward for this position, learn more about BC Nature, and by doing so, contribute to our motto “Know Nature and Keep it Worth Knowing”. If you would like more information, please email cnvisser@shaw.ca or phone (250-537-5443). Even if you are not planning to attend the 2016 FGM in Prince George (September 22 -25) you are welcome to apply.

BC Nature Executive will become vacant. We are looking for a volunteer who would be willing to step up to this job. The appointment will be for two years, and if desired, may be renewed twice. As Secretary, you will be a full member and an Officer of BC Nature.

The Secretary’s major responsibility will be to take the minutes at Executive meetings (six times/year), Board of Director’s meetings (twice/year), and General meetings (twice/year), and, if desired, participate in the meetings. Two of the Executive meetings and all of the Board and General meetings will take place during conferences that are usually in early May and late September. The other four Executive meetings are done by phone or Skype. Claudia Copley has been BC Nature’s Secretary for the last six years, and has done a great job. Claudia was not always able to attend all of BC Nature’s meetings; in those cases, there were other Executive members to help record minutes. It is also possible to become a Recording Secretary. A Recording Secretary would also record meeting minutes, but would neither become an Officer of BC Nature nor would participate in discussions.

We hope that someone will step forward for this position, learn more about BC Nature, and by doing so, contribute to our motto “Know Nature and Keep it Worth Knowing”. If you would like more information, please email cnvisser@shaw.ca or phone (250-537-5443). Even if you are not planning to attend the 2016 FGM in Prince George (September 22 -25) you are welcome to apply.

BC Nature is seeking a secretary!

In late September, the Secretary position on the BC Nature Executive will become vacant. We are looking for a volunteer who would be willing to step up to this job. The appointment will be for two years, and if desired, may be renewed twice. As Secretary, you will be a full member and an Officer of BC Nature.

The Secretary’s major responsibility will be to take the minutes at Executive meetings (six times/year), Board of Director’s meetings (twice/year), and General meetings (twice/year), and, if desired, participate in the meetings. Two of the Executive meetings and all of the Board and General meetings will take place during conferences that are usually in early May and late September. The other four Executive meetings are done by phone or Skype. Claudia Copley has been BC Nature’s Secretary for the last six years, and has done a great job. Claudia was not always able to attend all of BC Nature’s meetings; in those cases, there were other Executive members to help record minutes. It is also possible to become a Recording Secretary. A Recording Secretary would also record meeting minutes, but would neither become an Officer of BC Nature nor would participate in discussions.

We hope that someone will step forward for this position, learn more about BC Nature, and by doing so, contribute to our motto “Know Nature and Keep it Worth Knowing”. If you would like more information, please email cnvisser@shaw.ca or phone (250-537-5443). Even if you are not planning to attend the 2016 FGM in Prince George (September 22 -25) you are welcome to apply.
Natural Mistakes
Giving Directions
By Clive Keen

“There’s something interesting over there!” says he.

“Where?” say I.

“Behind the rock.”

“Which rock?”

“Oh – it’s a Black Turnstone. That’s a year bird!”

“Is it this side of the inlet, or the far side?”

“It’s beside the water.”

“??! How close is it – near or far?”

“It’s heading towards the seaweed.”

“There’s seaweed everywhere! Is it a distinctive patch?”

“Oh, what a lovely bird. Perfect breeding plumage.”

At this point I’m thinking that my companion, previously considered a pleasant sort of fellow, is in fact six and half feet of irritating, unhelpful incompetence. But then I think – six and a half feet. He’s taller than me. Perhaps he’s seeing something I’m not tall enough to see. So I stand on a rock and, lo and behold, get a pleasing view of a Turnstone only 20 feet away.

I’m not entirely placated, though. I could imagine a murder case with a defendant saying “I just snapped. He was seeing this rarity, and all he could do was gloat and give me useless directions. And there was this big round stone just beside my hand....”

Nature watching, by and large, is not a bare-knuckle sport. We’re not often tempted to inflict grievous bodily harm on fellow naturalists, and yet I’ll bet that misdirections cause the thought to cross a great many minds. I’m not entirely blameless in this myself. In my early naturalist days, I can remember being joined by a pair of binocular wielders who said that they were interested in seeing birds, but who nattered ceaselessly about other things. Since I was in woodland, and thus needed to hear sounds other than human burbling, I eventually tried to get some distance from them, and was rewarded by a fine sighting of a Blackburnian Warbler. It wasn’t long, though, before the pair caught up with me, and asked what I was looking at.

“Blackburnian Warbler in the tree.”

“Ooh. Where is it?”

“In the tree I’m looking at.”

“Which tree?”

“The one in front of me.”

“Er, OK. Whereabouts in the tree is it?”

“Somewhere in the middle.”

“Is it the dead tree?”

“No. Lots of leaves, so it is really hard to see. But it’s gorgeous.”

At which point I probably deserved to be whacked with a pair of handbags, because I wasn’t being all that helpful, and knew it. But in my defense, I really didn’t know how to help anyone else find the bird – I simply hadn’t developed the skill. I’d have tried harder if the natters hadn’t been, well, nattering, but with the best will in the world I probably not have done a lot better.

Come the revolution, when it will be necessary to gain a Naturalist License before being allowed in the field, there’ll no doubt be an exam called Giving Helpful Directions To Others. Since the revolution doesn’t seem to be imminent, though, I’ll try to reduce the level of angst in the naturalist community by giving some hard-won hints. Blessed are the peacemakers.

Pelagic trips are good for learning how to direct people. At the beginning of the trip, the leader will explain the rules. First, he’ll introduce the clock system: the bow counts as twelve o’clock, the stern as six o’clock, port (direct left) as nine o’clock, and starboard as three o’clock. So, if a whale is just off the bow a little towards the right, we might say something like “Whale blowing at one o’clock.” This handy system can be used by landlubbers as well as nautical types. The direction of the group’s travel can be treated as 12 o’clock, with six o’clock being directly to the rear. If someone then says “Bald Eagle at 10 o’clock”, everyone should know to look towards the front, a bit to the left.

The pelagic leader will also explain that if we want to draw attention to a bird, we should say whether it is flying or in the water. That sounds utterly obvious, but such basic things are likely to be missed unless we’ve been told to do it. Humans have this curious tendency to assume that if they can see it, others must be able to see it and so don’t need to be told basic stuff like “It’s on the ground.” We’re very unlike the Ravenous Bugblatter Beast of Traal, which assumes that if you can’t see it, it can’t see you.

The pelagic trip master will add that if the bird is flying, we should say if it’s above or below the horizon. Again, very helpful, and transferable to dry land – we should state, for example, whether the bird is above the trees, or below. Equally transferable is the rule that we should, where possible, give directions relative to something that others can easily see. “Sea Otter in the water thirty feet behind the flock of gulls” is likely to get everyone on to it, and it is a technique nearly always transferable to dry land. “See the garbage can? Head about twenty feet to the left; it’s just behind the green broken bottle.”

The final bit of advice given by the pelagic leader is one I wish could be imprinted on the brain of everyone giving me directions: say roughly how far away it is.

If you hear someone say “Puffin at eight o’clock in the water” you could be looking over a linear expanse of ocean from zero feet to a couple of miles. But “Puffin at eight o’clock in the water 100 feet from the boat” narrows things right down. Again, this might sound obvious, but time and again I find I’ve been following directions such as “It’s in the bush in a direct line to the red house” and am staring at a bush a quarter of a mile away, only to find out too late that the bush was the one no more than 30 feet from me. An additional tip here.
Conservation Report
By Peter Ballin

After seven years of service as chair of the Conservation Committee, Rosemary Fox has retired. She remains Vice-Chair of the committee while the new chair, me, Peter Ballin, figures out how to manage the reins. Rosemary has long championed conservation causes, especially in the north (she lives in Smithers), and continues to bring incredible energy and focus in getting the conservation message across and translating words into action. She began her legacy of achievements — achievements for all of us — in 1970, contributing to the establishment of Spatsizi Provincial Park, and then the Stikine River Provincial Parks. Not only has she served in a variety of Executive positions within BC Nature, but she has also worked with other environmental NGOs. She led BC Nature’s opposition to the Enbridge Northern Gateway Project. In 2013, Rosemary was awarded the Elton Anderson Award, celebrating service to BC Nature in the spirit of dedication, devotion and energy exhibited by former President Elton Anderson. (Thanks to Bev Ramey, Fred McMechan, and Anne Murray for input.)

The new guy on the job has served on the Conservation Committee as the wetland go-to and representative on the Wetland Stewardship Partnership since 2009. I worked at Vancouver Community College for 35 years, mostly teaching biology to adults. My favourite course was the Biology 11 equivalent, where we focused on ecology, evolution, and biodiversity, and spent lots of hours in the field. I also established a natural history continuing education program at the college. After retirement, I began volunteering at the Vancouver Aquarium, and was adopted by Thompson Rivers University, where my research targets the Western Painted Turtles that cruise by my cabin, east of Kamloops. I live in Vancouver most of the time, but belong to the Kamloops Naturalist Club.

With the committee, I hope to represent you and your conservation concerns to our Executive, and through them, to our policymakers.

Rosemary Fox provided this brief on the Northern Gateway Pipeline Project:

The controversial proposed 1,177-kilometre Northern Gateway oil pipeline project, opposed by BC Nature since formal hearings into the project commenced in 2012, was initially approved by Stephen Harper’s Conservative government in 2014. If it were to go ahead, the Northern Gateway proposed pipeline would bring 225 crude oil supertankers – some as long as the Empire State Building is tall – annually to BC’s North Coast. It has been estimated that one oil spill the size of the Exxon Valdez would severely damage BC’s $50 billion coastal economy and wipe out all projected economic gains from the pipeline.

Several First Nations, BC Nature and a number of other environmental groups challenged the federal government’s approval in court, and in June of this year Justin Trudeau’s Liberals overturned the previous government’s approval. The federal government’s cancellation of its earlier approval could still be challenged by the project’s proponents.

We are deeply grateful to the University of Victoria’s Environmental Law Centre, and in particular its founding Executive Director, Chris Tollefson, who generously offered the Environmental Law Centre to represent us in the hearings at no cost to BC Nature.*

Natural Mistakes
Continued from page 5

You can give better estimates of distance by judging the distance to a spot half way to the creature, and then doubling the number. It sounds daft, but boy scouts and army reconnaissance people have been taught this technique for decades, and it works.

Back on dry land, I have some sympathy for people that have problems describing where something is once they’ve seen the motion. You should still try to give some directions, though, and can often do so by looking at the immediate surroundings of the creature without losing sight of it. You might then direct people with comments such as “Find the big dead tree, then look two trees to the left.” The clock system can again be used, using twelve o’clock as the top of the tree, and six o’clock at the bottom. You might then say something like “Great Horned Owl at eight o’clock in the tree.”

Commenting on what a bird is doing is also helpful when you have found a “different” bird in a flock, such as a lone Dunlin in a mixed flock of shorebirds. Saying such things as “It’s just started preening ... flapped a bit ... back to preening again” can often get people onto the right bird.

Giving directions is in fact an easily - learned art, perfectible by practice, once we take it seriously. If you spend a lot of time in the field on your own, you can nevertheless gain mastery by thinking about how you’d give directions if someone else was around. Get into the habit of this, and when you are out with others you’ll find that fewer sightings are missed, frustration levels are lowered, and hard feelings are avoided. Above all, get into the habit of avoiding a flow of “Ooh, it’s gorgeous... you really ought to see it” comments, which could be followed by sounds of grinding teeth or axes. Give, instead, helpful advice, honed by practice, and you’ll spread sweetness and light throughout the wide world of nature.*
Protecting the Southern Strait of Georgia, Home to Canada's Most Endangered Killer Whales

By Alexandra Barron (Ocean Program Manager for CPAWS-BC)

In 1969, the world’s most famous marine biologist, Jacques Cousteau, called for the urgent and long-term protection of the Southern Strait of Georgia as a marine park. He warned that if it were not protected, we would see the destruction of sensitive habitats, pollution of our waters, and loss of species. Almost 50 years later, the rich and productive marine ecosystems of the Southern Strait of Georgia are still not protected, and now we are witnessing the widespread declines that Cousteau predicted.

For more than 20 years, the Canadian Parks and Wilderness Society has been working with local conservation groups to secure protection of this remarkable place as a National Marine Conservation Area (NMCA).

An explosion of life

The Southern Strait of Georgia is home to a remarkable diversity of marine species, thanks to productive waters and diverse geography. The rugged shoreline of the Gulf Islands and Vancouver Island create a network of reefs, bays, cliffs, and channels that are fed by the productive waters of the Strait of Georgia and the Strait of Juan de Fuca, creating diverse habitats for plants and animals.

More than 3000 marine species are found in the Southern Strait of Georgia, from tiny herring to mighty whales. Ancient and incredibly rare Glass Sponge Reefs and hundred year-old rockfish inhabit the deep waters of the Strait of Georgia by Mayne and Galiano Islands. In the winter, the fast-moving waters of Porlier Pass and Active Pass are home to large flocks of overwintering seabirds, including Surf Scoters, Brandt’s Cormorants, Mew and Thayer’s Gulls, and Pacific Loons. In late winter, schools of Herring arrive along the shores of Gabriola Island in preparation for spawning. The Herring seek out Eelgrass and Kelp on which to lay their eggs, providing an important food source for many other animals.

Spring sees the arrival of other migrants. Bonaparte’s Gulls feed in the waters of Active Pass on their way to their interior and northern nesting grounds in the Canadian boreal forest. Pigeon Guillemots, Rhinoceros Auklets and Black Oystercatchers return to breed on the shorelines and islands of the region. Humpback and Minke Whales travel north to feed on an epic annual migration. Sightings of Humpback Whales are becoming increasingly common, suggesting that their populations are making a significant recovery.

The iconic Southern Resident Orcas also appear through spring, summer, and early fall as they travel between the waters of Washington State and the Southern Strait of Georgia; feeding on salmon as they migrate to their inland spawning grounds. Unlike Humpback Whales, the future does not look so bright for the Southern Resident Orcas.

Species At Risk

Although the Southern Resident Orcas have enjoyed a recent baby-boom, their population is still critically low at just 83 animals, compared to an estimate of 200 in the late 1800s (according to the US National Oceanic and Atmospheric Administration).

Southern Resident orcas are listed as endangered under Canada’s Species At Risk Act, and the waters of the Southern Strait of Georgia have been identified as critical habitat. They face many simultaneous threats including loss of their preferred prey, Chinook salmon (due to overfishing and loss of spawning grounds), noise from vessel traffic, and pollutants like PCBs.

Other species face different threats. The once vast schools of herring have been depleted through overfishing and remaining herring face shrinking spawning grounds as eelgrass and kelp beds are destroyed by coastal development. Humpback whales are particularly vulnerable to entanglement in fishing gear. Bottom trawling and trap fisheries have damaged large patches of ancient and delicate glass sponge reef. Seabirds are extremely vulnerable to the increased risk of an oil spill that comes with the proposed increases to tanker traffic through the area. All species will have to cope with the impacts of climate change.

A plan for the Southern Strait of Georgia

According to Parks Canada, the Southern Strait of Georgia is “…the most heavily utilized and impacted of all the marine regions on the west coast of Canada.” New industrial projects are being proposed, coastal development continues, and shipping traffic is predicted to significantly increase. Commercial fishing continues although much of the area is fished out, with just crabs and prawns remaining in significant stocks.

In 2003, Parks Canada proposed a National Marine Conservation Area (NMCA) to protect the ecological, cultural, and recreational values of the area. Initially, their focus was a very small area in the Southern Gulf Islands but, under pressure from CPAWS and others, in 2010 a proposed boundary was released that stretches from Cordova Bay to Gabriola Island.

NMCA would provide permanent, legislated protection for this incredible area and the species that rely on it. The NMCA Act legislation prohibits harmful industrial activities like oil and gas activities, mining, and dumping, and designation as a NMCA requires that all other activities are assessed and managed in a conservation-minded manner.

By developing a plan for sustainable use of these waters, based on conservation objectives, an NMCA could provide protection for all marine species that use the Southern Strait of Georgia and maintain the ecological relationships between them, helping populations recover and thrive. Since 1997 the Canadian Parks and Wilderness Society has worked with local communities and conservation groups throughout the region to support the establishment of the Southern Strait of Georgia National Marine Conservation Area.
BC Nature Club Service Awarded to Jean and Geof Hacker

Jean and Geof Hacker emigrated from England to Canada in the early 1950s, where Geof pursued his career as an architect and they raised a family of three sons. The Hackers moved to Beach Grove in 1992 and have been members of the Delta Naturalist’s Society for more than 12 years. Since that time Geof has been active in Delta Nats as well as with Cammidge House Committee/Boundary Bay Park Association and the South Delta Artists’ Guild. Jean has volunteered with Delta Nats, Cammidge House Committee/Boundary Bay Park Association and Delta Hospice Society.

Geof’s contributions as a member of Delta Naturalists have largely reflected his interests and expertise. He was the club’s archivist for several years, until that responsibility was taken over by Delta Museum and Archives. For the past ten years he has used his artistic skills to create an original advertising poster for each monthly meeting, featuring the nature or ecological topic to be presented; the original of the poster is then presented as a thank you to the guest speaker. Geof has also designed the Delta Nature logo, depicting nature and Boundary Bay, which is currently used for publicity. Jean’s contributions have also been related to her interests; she has provided social and culinary support to Delta Nats and assisted with outreach.

As long time Cammidge House Committee members, Geof and Jean were founding Board members when that committee matured into the Boundary Bay Park Association, they continue to be Board members. For many years Geof has spearheaded the Heritage Day event held every February in support of the Canada-wide Heritage Week celebrations. In addition to organizing the event, Geof does the research for and produces relevant historical illustrated board displays. Geof and Jean have also done much of the organizing and support for events such as Sunday in the Park, summer Car Boot Sales, and Santa at Cammidge.

The Hacker home fronts onto Beach Grove Lagoon and Boundary Bay, providing a year-round view of a world-class bird venue. They maintain a bird-friendly yard with water features and bird feeders. It has been a perfect location for hosting family events (including their six grandchildren) and occasional naturalist summer wind-up social events.

The Hacker team of Geof and Jean has added a powerful artistic and social presence to the naturalists of Delta.

Mountain Stories Along the Trail

By Natalia Pisarek

As part of the District of North Vancouver’s 125 anniversary celebrations and Canada Parks Day 2016, in mid-July, Elders Council for Parks organized and hosted a unique outdoor storytelling experience in Mount Seymour Provincial Park. Guests were welcomed by costumed storytellers playing historical characters. Together they “traveled through time” to learn about the natural and cultural history of the Seymour Valley.

The Elders Council for Parks would like to thank our storytellers: Lloyd Knutsen, David Cook, Alex Douglas, Christine Elsey, and Graham White, as well as our event partners Cheyenne Hood and the Tseilwaututh Nation, Deep Cove Heritage Society, Mount Seymour Resorts, Mount Seymour History Project, BC Parks and the District of North Vancouver for their support with this event.

This event was part of the Elders Council Outreach Program.

Wildlife Abounds in Costa Rica

January 11 - 24, 2017

Join Leslie on our tour, Nature Trails of Costa Rica, January 11-24, 2017. On this tour you visit a variety of landscapes encountering monkeys, sloths, colourful birds, lively frogs, brilliant butterflies and many others. You also meet individuals who are working to keep Costa Rica’s natural world a paradise. Pura vida!

Your tour host, Leslie Tuchek, is an ecological educator who has guided tours for the University of Saskatchewan Distance Education for eight years. Leslie is an avid birder, nature lover and wildlife photographer.

For more information & detailed itinerary contact:

Leslie Tuchek
leslie.tuchek@usask.ca
Tel: 306.230.0941

Ruth MacRae
ruth@worldwideecotours.com
Tel: 1-888-778-2378

BCnature Fall 2016
The Unequaled Biodiversity of Pink Mountain

By Ron Long

Pink Mountain is located 150 kilometres north of Fort St. John, British Columbia. The mountain is only 1700 metres high but is so far north that the summit plateau is uniformly alpine tundra. Alpine tundra is very similar to the tundra of the Arctic and is one of the harshest environments on Earth. In spite of the difficult conditions, wildlife thrives on tundra and this is so on Pink Mountain to a degree that seems to be unmatched anywhere else in British Columbia.

In 2010, we learned of plans for a forty-turbine wind farm on Pink Mountain. Such a development could effectively eliminate all of the rare plants on the mountain and destroy ungulate feeding areas. More recently, fracking activity in the immediate area of Pink Mountain has increased enormously. Drilling on the summit is possible at any time and could be more destructive than wind development.

In 2011, the Pink Mountain Biodiversity Research Initiative was founded. With the support of BC Nature and Nature Vancouver, private funds were raised and research began in 2013. The original purpose of the work was to catalogue the species living on Pink Mountain before they disappeared. But, as the work progressed, it became obvious that much more needs to be done beyond simply cataloguing.

Pink Mountain is not a good site for wind development from a wildlife perspective. Our bird survey shows that two-thirds of the identified species would be threatened by wind turbines. Of the seven Grouse and Ptarmigan species that are found in BC, Pink Mountain has six. This is a very unusual concentration of species, according to bird experts.

We now know that Pink Mountain is home to 18 species of mammals, including every ungulate that occurs in Northern BC except Mountain Goats. Most significantly, the blue-listed Northern Woodland Caribou use the summit for feeding on a daily basis year-round. No mitigation can protect ungulate habitat.

Pink Mountain hosts an incredible 55 species of butterflies, which includes two red-listed and two blue-listed species, as well as a newly discovered subspecies that only occurs on Pink Mountain. Pink Mountain supports almost 30% of the provincial total of butterfly species. A total of 187 butterfly species occur in BC, and BC has more butterfly species that any other province or territory in Canada. Thus, Pink Mountain is a butterfly hotspot for all of Canada.

With the exception of butterflies, almost no work has been done on other insects. An attempt was made in 2015 with a 30-hour collection of moths. This brief period yielded 49 species of moths. Since different species emerge throughout the spring and summer, there is the potential for an astounding 200 moth species on Pink Mountain. A four-hour collection by Royal British Columbia Museum entomologists resulted in 31 species of spiders including two second records and one third record for the province.

Of the above abundance is dependent on the extreme diversity of plants on Pink Mountain. Based on the herbarium collections at the Royal British Columbia Museum and UBC there are three red-listed plants and nine blue-listed plants. In addition, we have identified 30 species of plants that are rarely observed because of their normally inaccessible habitat. This number includes three orchid species that are very rarely found in a tundra habitat. Additionally, we have 63 species of flowering tundra plants.

Pink Mountain hosts an incredible 55 species of butterflies, which includes two red-listed and two blue-listed species, as well as a newly discovered subspecies that only occurs on Pink Mountain. Pink Mountain supports almost 30% of the provincial total of butterfly species. A total of 187 butterfly species occur in BC, and BC has more butterfly species that any other province or territory in Canada. Thus, Pink Mountain is a butterfly hotspot for all of Canada.

With the exception of butterflies, almost no work has been done on other insects. An attempt was made in 2015 with a 30-hour collection of moths. This brief period yielded 49 species of moths. Since different species emerge throughout the spring and summer, there is the potential for an astounding 200 moth species on Pink Mountain. A four-hour collection by Royal British Columbia Museum entomologists resulted in 31 species of spiders including two second records and one third record for the province.

Of the above abundance is dependent on the extreme diversity of plants on Pink Mountain. Based on the herbarium collections at the Royal British Columbia Museum and UBC there are three red-listed plants and nine blue-listed plants. In addition, we have identified 30 species of plants that are rarely observed because of their normally inaccessible habitat. This number includes three orchid species that are very rarely found in a tundra habitat. Additionally, we have 63 species of flowering tundra plants.

A brief two-day moss collection that only covered a quarter of the summit produced 68 species. This collection is far from complete but has already revealed one red-listed moss, one blue-listed moss and two first records for BC.

Surveys of nine other mountains in the area have revealed that none have anywhere near the plant diversity of Pink Mountain. The unique concentration of scientifically important plants is readily accessible for research on Pink Mountain.

The Environmental Assessment for the Site C Dam lists 28 red and blue-listed species within the 80 kilometre long reservoir and a transmission corridor of similar length.

By comparison, on Pink Mountain we have identified a centre of diversity equivalent to 2.2 square kilometres. Within this small area we have 25 significantly rare species. This number includes 17 red and blue-listed species as well as numerous first, second and third records for the province.

We are recommending that the 2.2 square-kilometre centre of diversity be declared an Ecological Reserve in order to preserve the unique biodiversity of the area for research. We are also recommending that the entire summit plateau of Pink Mountain be declared a Unique and Endangered Ecosystem and protected as such.

In addition, we are recommending that the entire mountain and a good portion of its surrounding valleys be given Protected Area status. The purpose of the Protected Area would be to give wildlife that is being displaced by the widespread fragmentation of habitat in the Peace District a place of refuge and survival. As a protected area Pink Mountain would serve as an intact ecosystem benchmark for future reference.

The plight of Caribou in British Columbia is a hot-button issue Caribou may offer the best chance of preserving Pink Mountain. Bringing attention to the unique nature of Pink Mountain also brought attention to the Pink Mountain Caribou herd.

By Ron Long

Pink Mountain's endangered Woodland Caribou
Rangifer tarandus caribou

Continued Page 10
The Unequaled Biodiversity of Pink Mountain

Continued from Page 9

Now Forest Lands and Natural Resource Operations (FLNRO) staff in Fort St John have begun their own program aimed at acquiring an “Important Ungulate Winter Range” designation for Pink Mountain which would go a long way towards providing the protection we are seeking.

While the provincial government normally supports the setting aside of “Protected Areas” for Caribou they demand detailed research to demonstrate exactly where the Caribou are feeding but they refuse to fund such research.

FLNRO has to-date been able to radio-collar 18 Caribou. The research requires that these animals be located from the air once a month for two years. In this way feeding patterns of the herd will be mapped.

Each monthly flight costs $3000 but the staff who are attempting this work do not have the money. We need BC Nature's help. If you or your club are interested in assisting us in our fund-raising for monitoring please contact Ron Long.

It’s inconceivable that we could lose both the Caribou and the irreplaceable biodiversity of Pink Mountain for want of such small amounts of money.

Please help to save Pink Mountain
For additional information about Pink Mountain please refer to the website pinkmountain.ca. Ron Long is also available to do a visual presentation for your club. To help Pink Mountain or arrange for a presentation please contact Ron at rlphoto@shaw.ca

Short-eared Owl - How to Identify

This open-country hunter is one of the world’s most widely distributed owls, and among the most frequently seen in daylight. These birds course silently over grasslands on broad, rounded wings, especially at dawn and dusk. They use acute hearing to hunt small mammals and birds.

Size & Shape
Short-eared Owls are medium-sized owls with rounded heads. The wings are broad and the tips are smoothly rounded. The tail is short. Overall length 33-43 cm, Wings length 281-335 mm, tail length 130-157 mm, and weight 206,475 g. Females are larger and heavier than males.

Description
The facial disc is ochre, shading into blackish around the eyes. Lorals and eyebrows are whitish. Eyes are pale yellow to sulphur-yellow, sometimes bright yellow. The cere is greyish-brown and the bill blackish-horn. The tiny ear-tufts are set close together near the centre of the forehead, often not visible, and erected only when excited. The crown and nape are distinctly streaked dark on yellowish-tawny.

Upperparts are yellowish-tawny to pale ochre-buff with a faint greyish cast, heavily streaked and spotted dusky. The scapulars have dark centres and pale edges. The basal half of the primaries above are plain ochre, contrasting with a narrow area of blackish feathers (alulate) at the “wrist”, which is distinctly visible in flight. The rest of the flight feathers are barred light and dark. The tail is slightly wedge-shaped, and yellowish-tawny with a faint greyish cast and four to five visible dark bars.

Underparts are pale yellowish-tawny to ochre-whitish, distinctly streaked brown. Undersides of the secondaries are faintly barred or plain.

Tarsi and toes are feathered pale tawny to whitish-cream. Claws are greyish-horn with darker tips.

The Lillooet Naturalists invite you to enjoy the beautiful Fraser canyon and mountains in Lillooet in May 2017. Our AGM and conference agenda features hikes and walks (varying from easy to strenuous), birding, St’at’imc cultural tours, natural history presentations, a tour of our restoration work, ethnobotany, a geology outing, wildflowers, an organic farm tour, a train trip, and more. Field trips will be limited to small numbers – register early.

Some lunches, most field trips, and all presentations are included in the registration fees. Expect to carpool. Accommodation is not included; we will provide information about local accommodations including camping on our website and on BC Natures’ website well before the date.

Registration will be limited to 200 but everyone is welcome to attend the AGM Saturday at Xwisten/Bridge River Indian Band reserve. Please contact: Registrar Judy Bodaly at may2017agm@gmail.com or visit www.lillooetnaturalistsociety.org

Are you interested in BC Nature camps? Join us in the discussion and planning of our future camps. Join the Camp Committee! If you’re interested, please contact: Heather Neville songbird@saltspring.com 250-537-4121

Shop Online for Canada’s Largest Selection of Binoculars - Spotting Scopes - Birding Gear All at Discount Prices!
Visit us at www.Peleewings.ca

SWAROVSKI SALE – CANADA ONLY Aug – Oct 15 10% OFF Email or Call for Quote

Are you interested in BC Nature camps? Join us in the discussion and planning of our future camps. Join the Camp Committee! If you’re interested, please contact: Heather Neville songbird@saltspring.com 250-537-4121

Shop Online for Canada’s Largest Selection of Binoculars - Spotting Scopes - Birding Gear All at Discount Prices!
Visit us at www.Peleewings.ca

SWAROVSKI SALE – CANADA ONLY Aug – Oct 15 10% OFF Email or Call for Quote
Is Nocturnal Birding for You?
Practising Mindfulness While Birding On Skis

By Rob Wilson (Nature Saskatchewan)

I am, these days, contemplating “mindfulness” — a term defined as “giving thought or heed to.” It calls for one to be present or to live in the moment. Exulted as state of mind that is advantageous to one’s health and to a general sense of well-being, I embrace the concept. I believe mindfulness to be a desirable state that, when achieved, functions to assist with good psychological health. I also believe that bird watching, bird-experiencing or birding—specifically nocturnal birding—to be a helpful avenue to travel when attempting to place one’s brain in a state of mindfulness. My nocturnal birding occurs in tandem with my love of cross-country skiing at night.

Since Western culture is described as a culture that places a high value on visual perception, let us begin by considering what one might see while gliding at night along a forested trail. The bird most likely to be encountered would be a grouse (either a Ruffed or a Sharp-tailed) — more about this below. You may also encounter one of a number of species of owls. A friend tells a hair-raising story of a Great Horned Owl attempting to tear a Muskrat hat off her father’s head—more about owls in a moment. If the trails that you ski have a warm-up shelter complete with a bird feeder (many ski clubs provide free lunches for winter birds) you may, if you check quietly, be rewarded as I was the other night by a Flying Squirrel methodically transferring black oil sunflower seeds from our club’s feeder to its cheek pouches. Since these night squirrels do a kind of flying, I think that it is legitimate to consider them to be a “sighting” (if you ask “what’s flying around?” it qualifies.)

I want to warn—while freely conceding that this can in no way be considered to be an avian sighting—that one could also spot a moose on a darkened and elongated downhill glide. However, there is a small danger that you might collide with it before actually seeing it as moose eyes and black hair are notoriously difficult to see in the dark. It is also difficult to stop those damned skis once they commit themselves to a downhill slope.

Let’s consider a second sense—hearing. Achieving a state of mindfulness requires concentration. One must be focused and alert to separate rustlings of “things that go bump in the night” from the rhythmic and gentle scrapings of one’s ski wax against the snow. You may note calling owls—Great Horned, Barred for certain, and possibly a Great Gray. In early fall and spring, you may hear the echoing cries of migrating geese. You are certain to hear the yipping of coyotes and, if lucky, the howling of Timber Wolves. Again, these are not technically birds; however, they may cause you to take flight so, to my mind, it is legitimate to mention these canines.

An activity to really get you into the moment while skiing is to practice bird calls. You can try the Great Horned Owl (“who ...who...who who”) or the Barred Owl (“who ... who ... who cooks for you?”). An alternative attempt to mimic the Barred Owl may surreptitiously arise if you suddenly and unexpectedly encounter a fellow skier in the dark. You might consider blurring “Wh ... Wh .... Who are you?” I advise that you work diligently to remove panic and fear from your phraseology as any nearby owl may detect those nuances and fail to respond to you. I also advise you to omit blurring “Who the hell are you?” as your call will no longer onomatopoetically resemble the questioning of a Barred Owl.

Another spontaneous opportunity may arise if you become separated from your ski companions in the dark. Remembering or struggling to control potential panic and fear inclinations, you might attempt to contact your friends (and that near-by pack of coyotes) by calling “Wh ... wh .... Where RUUUUU!!!” I realize that this is not really a bird call, but your mind is certain to be full as you try to reunite with your birder friends.

Permit me, as I conclude, kind reader, to attempt to more tightly fuse nocturnal birding with your efforts to achieve mindfulness. Try focusing for the moment upon how you feel— you may for example, if the temperature is below minus 24 degrees Celsius, feel cold (pay special attention to your thumbs, fingers, nose and toes). Take a moment to check your consciousness to determine if you are experiencing wonderment. If the coyotes or wolves are vocalizing at the moment, you might ask “I wonder if I will make it back to the truck?”

You may experience stimuli, which can have the effect of rushing your brain into mindfulness, that are actually explosive. An example would be unexpected and unforeseen slapping or scratching of your face as you fly past that overreaching branch. This can really get your attention! Even more exciting is the bursting, from beneath the snow and between your skis, of a Ruffed or Sharp-tailed Grouse accompanied by a surreal whirring of wings in the dark. You might find that you spontaneously utter a call— Aiiiiiiii!!” Note that I have not been able to locate, to this point, any bird vocalizations that resemble this call, which leads me to conclude that it is likely to be a primordial utterance. A grouse-between-the-skis-in-the-dark-while-skiing-downhill encounter could provide an unexpected and unplanned opportunity to practice wonderment (I wonder which tree it flew into as it blasted into the forest?). Such an incident may also provide insight—once your heart and blood pressure stats subside, you realize that you are “just as chicken” as the escaping fowl.

I invite you, intrigued reader, to share any nocturnal birding stories that you possess. I have not been able to adapt my skis to spring and summer conditions and, therefore, do not have stories from those seasons. I also harbour a chronic fear that it is likely to be a primordial utterance. A grouse-between-the-skis-in-the-dark-while-skiing-downhill encounter could provide an unexpected and unplanned opportunity to practice wonderment (I wonder which tree it flew into as it blasted into the forest?). Such an incident may also provide insight—once your heart and blood pressure stats subside, you realize that you are “just as chicken” as the escaping fowl.

I invite you, intrigued reader, to share any nocturnal birding stories that you possess. I have not been able to adapt my skis to spring and summer conditions and, therefore, do not have stories from those seasons. I also harbour a chronic fear that it is likely to be a primordial utterance. A grouse-between-the-skis-in-the-dark-while-skiing-downhill encounter could provide an unexpected and unplanned opportunity to practice wonderment (I wonder which tree it flew into as it blasted into the forest?). Such an incident may also provide insight—once your heart and blood pressure stats subside, you realize that you are “just as chicken” as the escaping fowl.
Book Review

Victory Gardens for Bees: A DIY Guide to Saving the Bees

Author: Lori Weidenhammer


226 pp. Paperback - $27.00 CAD

Reviewed by June Ryder

This is a book for naturalists, gardeners, conservationists and everyone who is concerned about the current plight of our bees—both native and honeybees. Bee populations are being decimated by pesticides and other environmental stressors, yet bees are essential to human life. They pollinate 80% of all flowering plants and are said to be responsible for one out of every three mouthfuls of food that we eat. The title draws an analogy with the history-making, “Victory Gardens” that offset food shortages during World Wars I and II.

Lori Weidenhammer is a Vancouver-based interdisciplinary artist and educator. She is a well-known bee expert, promoting awareness of the importance of bees and strategies for their protection.

This book is a guide to creating gardens that will provide native bees with everything that they need to remain healthy and multiply. “Gardens” range from community parks and farm fields to a planter on a deck. There is a chapter on the various groups of bee species we find locally (more than 400 species in BC), but this is not a bee identification guide. The book is oriented to conditions in southwestern BC, but the information is adaptable to a fairly wide range of temperate climates.

Topics covered include bee plants for a succession of bloom, companion planting, and plants preferred by various species of bees. There are chapters on growing herbs and vegetables to benefit both bees and humans, and accounts of the nutritional and medicinal values of some bee plants. There are recommendations for planting bee borders, bee hedgerows and pastures. A chapter on honeybees draws attention to potential competition for pollen and nectar between the imported and native bees and recommends how to offset this problem. Most chapters include sample plans (i.e. full page paintings by the author) for various kinds of bee gardens: balcony, rooftop, shade, hedgerow, taste-sight-sound, and more. Most chapters also include useful tables of plant species, with gardening notes (e.g., height, sun/shade, zones), kinds of bees attracted, and benefits to people.

In summary, this book is packed with information and it includes spectacular images of bees and plants. This is not a book you’ll immediately read from cover to cover, but browse through it to pick up ideas and information. It will be a valuable resource whether you are starting new plantings or simply aiming to increase the bee-friendliness of an existing garden. The gardening information appears appropriate and reliable (based on my decades of gardening experience in Vancouver). I’m not a bee expert, but I have consulted with someone who is and he indicates that the material in this book is good.

John Aitchison is a wildlife filmmaker. In this book of vignettes, he takes the reader along on some of his adventures as he tries to film elusive and at times dangerous animals. His assignments include polar bears in Svalbard, Siberian Cranes in China, wolves in Yellowstone and Lynx in Yukon. He takes us to remote places where few people venture. He also discusses conservation themes: habitat loss, extinction of species, and the hopeful efforts of humans to re-wild the world.

If anyone has ever wondered what goes on the mind of a wildlife filmmaker as they sit, and watch, and wait, this book will give some insights into their musings. However, I think that these folks set the scene rather than made it. His focus was more on how to capture great images of wildlife and he did that very well.

Aitchison discusses why filming nature is important. He sees it as a way to bring nature to people and to inspire them to protect endangered species. While he notes the sadness in watching some animals, such as the polar bear, move towards extinction, he also has hope that work such as his will help to motivate change. I think his writing certainly succeeds in being moving and inspiring. Now I am motivated to see some of his films.

All and all, this is an entertaining, moving, and informative read. Nancy Prober is a naturalist, avid hiker, gardener, and clinical psychologist. She is interested in Ecopsychology, the study of the interrelationship between humans and the more-than-human world and applies these ideas in both her professional work and personal life.
The BC Nature Education Scholarship Selection Committee chose Haley Crozier as this year’s Rene Savenye Scholarship winner for her volunteer commitments, passion for the environment, and her program of studies in the environmental field, which supports BC Nature’s ideals. Three students applied this year with one sadly having to be disqualified for lack of submitted documents. We appreciate all the student applicants and have encouraged them to reapply next year.

Haley Crozier is a direct member of BC Nature and has attended Capilano University, Langara College and the Northwest Community College in Prince Rupert where she will continue her studies in Applied Coastal Ecology. Previously, Haley focused on science and primarily photography courses.

Haley grew up in North Vancouver, enjoying the outdoors by boating and fishing with her family. As a child, she was influenced and inspired by viewing marine mammals, other wildlife, and hatchery salmon. In 2011, she traveled from Juneau, Alaska to Shearwater, BC and said, “this was a dream trip for myself at the time, and I’d do it again at the blink of an eye. Having been brought up how I was, this trip was even more of an eye opener, and further shaped my love and appreciation for the natural world and this beautiful coast that we live on. I saw my first glaciers, icebergs, and Humpback Whales and saw a range of other wildlife including Orca and eagles. I also caught my first Tyee salmon, a 32-pound Chinook. Seeing a salmon of that size is a wonder to behold. The landscape of this purely wild part of the coast blew my mind. This trip really was the trigger for me to start doing what I could to protect what we have on this coast for generations to follow.”

Haley’s volunteer work began in Grade 11 when she counselled Grade 3 boys at an outdoor camp. She then got involved in the Kinder Morgan Transmountain Pipeline issue by joining the North Shore No Pipeline Expansion (NSNOPE) and applied for intervener status with the National Energy Board. She received commenter status allowing her to submit a letter. Haley also assisted NSNOPE in writing their intervener report on the project by completing the section on recreational boat use in Indian Arm. This report was 58-pages long and included photos and a map of Indian Arm with common anchorages.

Haley also volunteered with the Western Canada Wilderness Committee (WCWC) and First Nations to help with trail building at Meares Island in Clayquot Sound. In addition, she volunteered with Pacific Wild with Ian McAllister by taking photos and assisting with boat crew tasks along the Enbridge tanker route. She said that this was “an incredible and horrifying experience due to the threats the Great Bear Rainforest faces; experiencing the Great Bear Rainforest in its rawest form aboard a boat in the middle of nowhere, and seeing the sheer beauty of the untouched wilderness...has made me fall in love with the central coast. I have also been lucky enough to have one of my time-lapses of the Skeena River published by Pacific Wild and I look forward to working more with the organization when I’m finished school”.

Haley also volunteers with the Oldfield Creek Fish Hatchery, assisting with the salmon in the classroom program to tag and count salmon as they returned to the creek, netting fish at Diana and Silver Creeks, and participating in the fertilization of eggs and fish culture tasks. Haley is also working for the North Coast Skeena First Nations Stewardship Society in Prince Rupert, carrying out their crew survey. The data collected will help determine future fishing in the area.

Haley hopes to have a career in fisheries or conservation work and feels she is well on her way to this goal. She would also like to “continue to use her photography to spread awareness and share the amazing things and places I’ve seen in BC, so that others gain a stronger appreciation for this beautiful province we call home.” ★ Haley’s photos can be seen at http://www.haleycrozier.tumblr.com and https://www.instagram.com/haley.crozier/
Chris Pielou (1923 - 2016)
By Lois Maingon, Past-President of Comox Valley Nature

A few days ago, the scientific world in Canada, Comox Valley as a whole, and Comox Valley Nature, in particular, lost a five-foot, two-inch-tall giant. Nobody is ever likely to replace Dr. Chris Pielou. I knew her long before I came to the Comox Valley. I joined largely because she was a member — what self-respecting scientist wouldn’t have—and I was shocked and amazed that she was given so little recognition locally. If I had to rate Canadian biologists or Canadian environmental scientists, I would have to say that she was perhaps Canada’s greatest contribution to our global understanding of the environment.

I knew Chris Pielou intimately (I chose that word carefully—and she laughed when I slyly told her that), because I, as do many post-graduate biology students, had learned multivariate statistics from her classic book The Interpretation of Ecological Data which is the a key work for any mathematical ecologist. In this, she towers above David Suzuki, whom I also respect, but while he gives mere information, Chris Pielou gave us the tools to get the information, destroy corporate lies, and tell the truth, which we are always obligated to communicate.

Every serious biologist in Canada is a student of Dr. Pielou, and she deserved every bit of respect she claimed. Regrettably, few people in the Comox Valley understood how important and how brilliant she was, and how much she deserved to be heard. And man, thank God she could roar!!

She was an extremely important member of CVN, who worked tirelessly at the head of the Conservation Committee, which for decades was CVN’s advocacy voice—taking on both local and provincial issues. In addition to being provincially well-known as the Chair of the Scientific Panel on Clayoquot Sound in 1993-1994 (which led to Clayoquot Sound being designated as a United Nations Biosphere Reserve), she had been an avid outspoken and forceful environmental protester. Her drive led to the creation of the Comox Lake Ecological Reserve, for which she was appointed the first voluntary warden.

Chris Pielou had a delightful lack of patience for fools and people she disdainfully referred to as “twits.” She hated presentations of “pretty pictures,” she demanded substance in everything and had and always met the highest environmental standards. And, she had cause to demand high standards because she always met them herself.

She was known world-wide as a pre-eminent bio-statistician. As a brilliant ecological mathematician, she pioneered multivariate statistics in ecological studies, which is now the universal standard for ecological research. After obtaining a PhD in mathematics, she went on to do a second PhD in mathematical ecology at The University of London, and went on to teach at Yale, Dalhousie and ultimately at Lethbridge University on a Canada Research Chair. This gave her a free hand to do the research she wanted to do. And that led to her work on arctic ecology. She published widely, both professionally and as a consultant. Late in life, she wrote a series of popular books for naturalists which endeavoured to make the wonder of science accessible to everybody, such as books on flora and fauna, and on popularized physics, such as The Energy of Nature (highly recommended if one wants to understand what a biologist looks at beyond the individual organisms and their populations, after being a naturalist. It’s like understanding the orchestra and everything that brought it about after you have identified the individual oboe).

She combined an understanding of mathematical modelling with a practical insight into the structure of the natural world. She was herself a product of a very English view of Darwin’s theory of evolution. In 1979, she used this background from an early work written for her graduate course at Dalhousie on evolutionary biology to write a book on biogeography — the geographical distribution and evolution of species, entitled with her typical terseness: Biogeography. No unnecessary flourishes or subtitles. If one expected the usual descriptiveness, Chapter six hit the reader and student with what she rightly felt was the ineluctable mathematical basis of Island Biogeography! In 1992, as all useful books should be, it was reprinted, and remains unique in its treatment of the subject.

This diminutive lady was not only a giant in the recognition of women’s equality in science, she was widely recognized internationally for her endeavours and merit. UBC granted her another honorary PhD in 2001. Part of her 2001 address to UBC’s graduating class is worth quoting, if only because it encapsulates the quintessential Chris, and it is a belief I share:

“This may explain why so many people say, complacently, ‘Of course, I’m lousy at math but...’ and then go on to imply that their mental powers are perfect apart from this trivial defect. Well, it isn’t trivial—a person who blocks out math is a mental couch potato.” Diminutive she was—trivial she was not. There was seriousness even in her wit. Sharp as ever at the age of 90, she once pointed out to me that most anti-environmentalists were dunces at math, and in particular one who caused me grief at UBC and her grief on the Scientific Panel, was a forester who was, in her words, “a mathematical dullard and fraud”—and she could prove it because he had failed her statistics class at Yale!

Today the world is poorer, nature is diminished, CVN has lost a very great friend, leader and mentor, and the naturalists’ and environmentalists’ community is greatly diminished internationally. She burnt with a bright green fire only committed environmentalists know, and she was proud of her environmental advocacy. We owe it to Chris to perpetuate her environmental commitment, as she once said to me: “Fight every day, and have the math to prove it!” And so we will, death be damned. I am sure she would appreciate that.

Comox Nature’s Summer newsletter will be dedicated to Chris Pielou’s work. This newsletter is available on the club’s website: http://comoxvalleynaturalist.bc.ca For those that would like to leave a comment for Chris, here is the link for the online obituary http://www.dignitymemorial.ca/en-ca/search/obit-search-landing.page (type in Chris Pielou)
Focus on IBAs: Somenos Marsh

By Krista Kaptein and Paul Fletcher

Somenos Marsh, in the Duncan area on the east side of Vancouver Island, was one of the first Important Bird Areas (IBAs) in BC to promote its designation as an IBA with a sign, a ceremony, and related publicity. Since that designation in 2000, many more initiatives have recognized and celebrated the area’s significance to birds.

Somenos Marsh was designated as a globally significant Important Bird Area by Birdlife International for the importance of its habitat for over-wintering for Trumpeter Swans, and for numbers of the Pacific population of Great Blue Herons. Somenos Marsh is recognized as one of the best places in BC to view wildlife close to an urban centre, being well-known as a good spring, fall and winter location for many bird species. More than 270 species have been recorded there.

Paul Fletcher is President of the Somenos Marsh Wildlife Society (SMWS) and has been Volunteer Caretaker of Somenos Marsh IBA since the inception of the program. The SMWS has been involved with projects to protect the marsh since 1989, including land acquisition and controlling invasive species. The SMWS helped create the Somenos Marsh Conservation Area (SMCA) in 2000, the boundaries of which coincide with major part of the Somenos Marsh IBA. More information about SMWS is on their website at www.somenosmarsh.com.

One notable achievement is the Somenos Marsh Open Air Classroom, featuring boardwalks and viewing platforms. Almost $400,000 has been raised and invested by SMWS over more than 30 years to make this a nature destination for locals and visitors. Barry Hetschko, Vice-President of SMWS and an accomplished photographer, has provided photos for signage in the area as well as for fund-raising. One innovative fund-raising idea was the opportunity for donors to purchase the boards that make up the walkway, engraved with individual’s names. A tour along the boardwalk is a journey of acknowledgment of many notable nature supporters. “I am very proud of the accomplishments that the SMWS has made over the last 30 years,” says Paul Fletcher, “and especially proud of the legacy that we are leaving for future generations.”

In 2009, SMWS launched an annual festival that celebrates the return of the Trumpeter Swans and other migratory waterfowl to their overwintering habitat in Somenos Marsh, the Cowichan Estuary, and nearby natural areas. Now known as the WildWings Nature & Arts Festival, the annual event includes celebrations of art, nature, and culture. Among the diversity of family friendly activities at this year’s festival (October 6 through November 19) are several events related specifically to birds: a children’s “Big Day” of birding; a raptor photography workshop; a birdcall presentation by John Neville, former President of BC Nature; a bird feeder workshop with experienced Cowichan Valley birder Derrick Marven; and a presentation focusing on IBAs by the Coordinator of the BC IBA Program. More information about the Festival is on their website at www.wildwingsfestival.com.

This year, an additional special event that will conclude the WildWings Festival is the Biennial Conference of The North American Trumpeter Swan Society (TTSS). The BC Naturalists’ Foundation supported this year’s enhanced festival with a grant of $1000 to the Cowichan Valley Naturalists, who are one of the partners of the event. The 24th TTSS Conference in Duncan, from November 16 - 18, will bring up to 75 visitors to the area, including swan experts from all over North America, to present to the public. The TTSS conferences—which began in 1969—provide the only public forum in North America that brings together private citizens, conservation groups, policy makers, swan managers, and researchers to examine the status and needs of Trumpeter Swans in the U.S. and Canada.

The 24th TTSS Conference will focus on both the successes and challenges involved with long-term management of Trumpeter Swans. This year’s theme is “Swans and Agriculture, Working Together”, and special attention will be given to be the status, management, and conservation of Trumpeter Swans in the Pacific Flyway, and potential conflicts between swans and agriculture in the winter. The Conference will include sessions on the biology, habitat concerns, and management of Trumpeter Swan populations throughout North America. More information on the conference is on the TTSS website www.trumpeterswanssociety.org/2016-conference.html The Conference will close with a gala fundraiser featuring keynote speaker Robert Bateman, at the Quw’utsun’ Conference Centre, a fitting finale to the weeks of celebrating birds and biodiversity in Duncan and the Cowichan Valley.
Comox AGM 2016 In Review

By Jim Boulter

ow that the 2016 BC Nature Conference and Annual General Meeting are history, we at Comox Valley Naturalists Society can look back to our most hectic four days in recent memory for the highlights.

It began on March 15, 2015, when CVNS President Loys Maingon accepted a motion for our Society to host the 2016 BCN AGM and to combine the event with a celebration of our 50th Anniversary of our founding as Strathcona-Comox Natural History Society in 1966. At this meeting, a number of us foolishly perhaps and certainly unaware of the depth of our commitment, stood as volunteers to throw the party of our lives.

The Committee started holding regular monthly meetings, and as to be expected, the workload just kept getting bigger. Loys accepted the task of sourcing speakers through his widespread contacts and Bruce Martin arranged a varied slate of field trips and workshops. Judy Shorter and Barbara Martin organized the catering required for feeding the 150 people we hoped to attract. Gabriel Bau took on the task of keeping our minutes, booking meetings, and keeping our correspondence in order, while Jose Narbona designed a well-thought-out registration and payment process with Isabella Erni, our Treasurer. Jarrett Krentzel handled the venue issues, Sharon Niscak handled the formidable job of Volunteer Coordinator, Fred Newhouse provided our First Nations Liaison, and Annette and Jim Boulter arranged the auction and fund-raising.

As our plans firmed up and we recognized the complexity of the event, we all dug in doing that needed to be done and helping the others in a mutually respectful way. Monthly meetings became bi-weekly, and eventually weekly, with some weeks creating dozens, of e-mails, sometimes on a daily basis. Who do we get to lead this walk? Do we go with local, high-end food or not? The questions always outnumbered answers, and generated more questions, but in the end we had a very firm grasp on how things would flow by the time 2016 dawned.

Once the program was determined, we knew we had a comprehensive event, and hoped that all would go as planned. When the weekend was over and we could count things at leisure, the Conference had 251 Registrants, and 33 field trips that more than 500 guests took advantage of. It was possible for one person to take in seven trips, provided he/she did not sleep much. Both the Birthday Banquet on Friday night and the AGM Banquet on Saturday had some 150 guests in attendance, with the breakfasts on Friday and Saturday mornings well attended, and not just by the hungry Birders who had been out since the early morning.

The best-represented club, after the CVNS was Nature Vancouver with 15 members, closely followed by Langley Field Naturalists at 14. Members from other clubs also had representatives including Kitimat, Bulkley Valley, and Rocky Mountain clubs. The statistic we are most proud of, however, is 76, the number of Volunteers who made the event work, both smoothly and successfully. Representatives of 10 local conservation groups also gave generously of their time in helping out with the field trips and presentations.

In keeping with the conference slogan “Celebrating Nature for 50 Years and 100 Years of Conservation”, many of the speakers were closely associated with wildlife conservation. Although space precludes giving the names of all our Presenters, workshop moderators and trip leaders, we would be remiss if we did not mention our keynote speakers, some who travelled across Canada to be present.

Steve Price, from Bird Studies Canada, gave the keynote speech on “International Bird Conservation” at the well-attended AGM on Saturday morning, and stirred up local desire to fund a Motus Tracking System for documenting bird migration patterns, a project for the future. Dr. Richard Hebdon addressed climate change and its anticipated effects in his Thursday night speech “Climate Change & Ecological Impacts in the Comox Valley”, while Dr. Val Schaefer’s Saturday night presentation entitled “Impacts of Climate Change on the Friends and Enemies of Garry Oak Ecosystems”, focused on its particular effects on one of the valley’s most endangered biomes.

Three of the Friday morning presentations brought insight into the difficult and complex issues behind successful Wetland Restoration. Jennifer Sutherst, Estuary Coordinator and Staff Biologist with Project Watershed, Dan Buffett, Head of Conservation Programs for the BC Coast Office of Ducks Unlimited, and Jack Minard, Chair of the Salmon Enhancement and Habitat Advisory Board, discussed various aspects of estuary and riverine restoration. Local Comox Valley issues were kept at the centre of all three presentations, but the applications and process discussed related to all wetlands.

Neil Dawe, President of the Qualicum Institute, presented a much-anticipated talk on how a Steady State Economy, can coexist with Conservation. Dr. Duncan Morrison, Forest Pathologist by the Canadian Forest Service (retired) gave a very engaging talk on Tree Diseases, and Dr. Jannice Friedman, following in the footsteps of Charles Darwin, spoke on the complicated genetics of the Mimulus plant.

At the 50th Anniversary Party Friday night, the past was honored by the keynote speaker, Dr. Briony Penn. Fresh from having won the Roderick Haig-Brown BC Book Award on May 5th, Dr. Penn spoke knowingly and fondly on the life of Ian McTaggart-Cowan (1910 to 2020). Dr. Penn has done a wonderful job of recounting the life of the “Father of Canadian Ecology”, interweaving his well-researched life story with the Naturalists he knew and worked with and the events of the times. At the end of her presentation, she was awarded the Mack Laing Heritage Book Award by the board of the Mack Laing Heritage Society.

The Conference was not, however, all about sitting around, eating, and listening to informative and interesting presentations. From the 06:00 bird walks to the six-hour field trips on Sunday, Nature took center stage in the beautiful Comox Valley for four days in May. The most popular trip was to Mitlenatch Island Provincial Park, home to the largest seabird colony in the Strait of Georgia. Those that booked early were privileged and delighted by the visit to this treasure during the

Continued Page 18

On a giant beaver dam in Morrison Creek
I gasp as my eye focuses on a luminous white object wrapped in a clearly defined ring. “Wow!” I say. My star guide, amateur astronomer Colleen O’Hare of Kelowna, is as thrilled as I am. “The light you’re seeing left Saturn 80 minutes ago.” I’m astonished. I look into the eyepiece again and just catch planet Saturn and the rings as they move out of view. In reality it’s me and the telescope that have moved as the earth’s rotation turns us away from this stunning vision.

Whirling through space on a BC mountaintop, I step back to take in the vibrant sky overhead. Colleen repositions her telescope with a deft twist. “How about a globular star cluster? Have you seen one of those?” I step closer and line up my eye. And there it is…a dense gathering of stars, spreading out into space like a pointillist drawing of multiple bright dots.

“How did you know where to look?” I ask. Lots of experience, 12 years,” Colleen replies as she wheels her telescope into position to show another visitor the rings of Saturn.

Lots of experience, commitment and a love of our mysterious night sky is what each and every participant brings to the annual Mount Kobau Star Party. I’m an eager recipient. In the dark I bumble my way over to Spokane amateur astronomer, Peter Balholm’s telescope. We’d had a chance to chat earlier when I had admired his hand-built framework for his Newtonian reflector scope. “Have you seen twin stars?” Peter asks as he guides me to the viewing eyepiece. Again a spontaneous “Wow!” is all I can say. In the deep, dark universe, I’m looking at two stars seemingly close together, one smaller and sparkling blue, the other larger, duller and more orangish.

“Are they actually close to each other?” I wonder. “They are,” Peter tells me, “They’re orbiting each other. They’re binary stars and this one is Albireo, in Cygnus. It’s 430 light-years away. Their orbital motion is so slow that it’s never been detected, but they would take at least 100,000 years for one orbit.”

I put my eye to the telescope again. It’s hard to grasp what I’m seeing. These stars are at a distance I can’t compute.
“Know nature and keep it worth knowing”

2016 Annual Donation Appeal

All photos by A. Burger
Annual Donation Appeal - September 2016

Dear BC Nature Member,

It is that time of year when we shake the collection box and appeal to you for donations to BC Nature and BC Naturalists’ Foundation. We take pride in managing our hard-earned funds very well and put out an appeal only once a year. BC Nature is one of the most effective and influential voices for nature in BC, and our success is heavily dependent on volunteer effort. With 53 member clubs and approximately 6,000 members we have a tremendous pool of knowledgeable and committed volunteers. BC Nature has only one permanent employee (our hard-working office manager) and a tiny shared office so nearly all the money we collect goes directly to support education, conservation and nature communication. Here is how your donation will be spent:

Conservation: Our Conservation Committee has been very effective in focusing attention on key environmental concerns in our province. With the increased pace of resource development threatening wildlife and functioning ecosystems, increased vigilance is essential. Natural gas exports, oil pipelines, off-road vehicle impacts, wolf culls, the Site C dam – these are all issues that our committee has worked on to voice our opinion to governments and to alert our members and the public. This year the legal team from the University of Victoria’s Environmental Law Centre (ELC), acting on behalf of BC Nature, was a key part of the successful legal appeal which has effectively cancelled the federal government’s approval of the environmentally risky Enbridge Northern Gateway pipeline. Although the ELC team acted pro bono on our behalf, BC Nature did incur some unexpected legal filing costs in this case. We need to raise money to cover these costs without reducing any of our other core programs.

Education: Nothing BC Nature does is more important than fostering knowledge and the love of nature and science in young people. Our Education Committee does a great job in working with schools, clubs, educators and parents to promote these values and sponsor nature workshops and mentoring programs in many parts of BC. We give money annually to the BC Science Fair program and to our Rene Savenye Scholarship, given to worthy post-secondary students.
NatureKids BC: Formerly known as the Young Naturalists’ Club, NatureKids BC is the youth partner of BC Nature. They run nature clubs and meetings for 5-12 year-olds in 37 BC communities. Although NatureKids BC is now a separate society, we still provide financial support and, through our Education Committee and club members, hands-on help with this superb group.

Communication: Our Communication Committee, along with our office manager, do a great job in bringing you our quarterly magazine (hasn’t this improved tremendously over the past few years?!), regular e-News nature bulletins and our BC Nature website.

Special Programs: BC Nature is active in several wildlife and nature programs, often partnered with other organizations. Currently these include:
• BC Important Bird Areas (IBA) in partnership with Bird Studies Canada;
• BC Nature Guide Project – building up a web-based, map-based tool to identify nature-viewing sites across BC. It is free to all – check it out at http://bcnatureguide.ca/
• BC Rivers Coalition – seeking to have improved river management on the political agenda.

How does the BC Naturalists’ Foundation fit into this picture? This is the arms-length society set up to manage BC Nature’s endowment funds – money committed to long-term investments that provide annual grants to our member clubs for their projects. Consider naming the Foundation in your will, making a major donation, or gifting your life insurance.

Your donation to BC Nature provides a significant component of our yearly operating budget. Thanks to your generous donations last year and the annual disbursement from the BC Naturalists’ Foundation, we provided support grants of nearly $12,000 to seven outstanding projects run by BC Nature clubs.

Thank you for your support! Your tax deductible donation will go a long way in helping BC Nature to live up to its motto “Know Nature and Keep it Worth Knowing”.

Alan Burger
President - BC Nature

Robert Handfield,
President - BC Naturalists’ Foundation
With this year’s (2016) annual donation appeal, we are now able to accept monthly donations (either credit card or direct debit) and e-transfers (bank-to-bank email transfers). Credit card donation can be either phoned in or can be submitted through the form below. For further information, please email or telephone BC Nature’s Office Manager: 604-985-3057 or manager@bcnature.ca
Mount Kobau Star Party

Continued from Page 18

our galaxy,” Mark tells me. “We’re looking through that group to the stars in a band beyond.”

Suddenly, this amazing cosmic display goes 3-D. I am looking through a scatter of stars that appear brighter, more loosely associated than those beyond. “Can you see the darker area between the bands?” Mark asks.

I can see it and have often wondered why it seems devoid of stars.

“That’s a dust cloud.”

A dust cloud? That’s an “Ah, ha!” moment for me. With my naked eye I’ve always seen the Milky Way as two bands of light when in reality it’s a cohesive band of stars, an arm of our galaxy containing millions, even billions of stars, some obscured by the dust cloud.

Every way I turn the sky is filled with points of light, some brighter, some barely discernable, some red, or blue, or yellow, or white, some sparkling and changing colour. Even without a guide I can pick out a few constellations…Ursa Major and Minor, the two Dippers, and to the north, the classic shape of the feminine Cassiopeia, a reclining figure of five clear blue stars.

I’m in my own bit of heaven…in the dark surrounded by disembodied voices, a stunning star show overhead.

At an elevation just short of 2 km (1863 m), Mount Kobau offers a rare treat at truly lofty heights, with the temperatures, weather, flora and fauna of sub-alpine environments. Situated just northwest of Osoyoos, BC, Mount Kobau is within the 9364 hectares that comprise the South Okanagan Grassland Protected area managed by BC Parks.

Its fragile nature is protected at least in part by a prohibition on camping. Fortunately, once a year, the Star Party has special permission for seven days of on-site residence and star viewing.

That’s what’s unique about this mountaintop and the Star Party…rare access to one of the few North American sites ever selected for a major observatory (a project that regretfully never came to fruition)...though Mount Kobau remains a treasured holy grail for amateur and professional astronomers alike.

Even for me, a simple nature lover, truly dark skies are a rare experience in our light filled world. Here, on top of Mount Kobau, the thinner air with reduced heat and pollution haze provides ideal star gazing conditions.

The stars are the “star” of the party but easy access to such a special sagebrush and alpine fir nature preserve also offers other more earthly attractions.

There’s a small swampy lake for birders and several trails that lead to amazing views. On the 1.3 km trail to the summit, there is more evidence of the wildfire that burned great swaths of Kobau’s east and south slopes last summer. A jagged scar of uprooted sagebrush marks a firebreak and the trail winds through blackened tree trunks and forest debris.

Near the exposed summit the stunted alpine fir stand at odd angles with dangling branches, stark against the low sun. On top, Mount Kobau is strewn with shattered rock, lichens and late summer alpine flowers.

But it’s the view that grabs my attention…an almost 360 degree panorama of the South Okanagan, grasslands, forests, valleys and mountains…on both sides of the Canada/US border. Shifting clouds add intriguing shadows and bright areas, highlighting now the red of burned trees, then the soft gold and yellow greens of both unburned and rapidly regenerating grasslands.

As dusk falls, activity picks up in the open area called Kobau Flats. Neighbours remark on the crescent moon dropping below the trees. They thoughtfully share their binoculars so I can see Jupiter and its moons, before Jupiter too slips below the western horizon.

Meanwhile several people are gathered around a generator-powered laptop and an ingenious apparatus that hoists a film screen. In the fading light, noted grassland ecologist Don Gayton, engages an attentive audience on the challenges and importance of wildfire ecology. Presented in the context of the wildfire that drove last year’s Star Party into an emergency evacuation, Don’s message is timely and immediate.

By the time Don concludes his talk we’re in deep dark. Now the true focus of the Star Party comes alive with the addition of a dozen or so political and tourism VIPs. Invited by the Canadian Parks and Wilderness Society, they are ready to experience the marvels of Mount Kobau and the heavens exposed…hopefully to come away with a greater appreciation for precious landscapes and rare opportunities.

Among this throng I feel my way toward an array of telescopes installed on a slight rise. Colleen, official stargazer, calls me over. “Have you seen the rings of Saturn?” I look into the sky through her black fabric and red lace wrapped telescope that despite the individual decoration is a 12” Dobsonian precision instrument. I’m enthralled. The Star Party magic begins!

In its 33rd year, the Mount Kobau Star Party is sponsored by the Mt Kobau Astronomical Society and takes place in August each year. For more information visit: http://www.mksp.ca.

Dianne Bersea is a member of the South Okanagan Naturalists Club and an occasional contributor to the Nature Wise column in the Penticton Western News.
Lookin’ Out My Backdoor: Nature Photography in BC

Something Special

By John Warden

Before we actually moved to Vancouver Island, my wife and I rented a vacation home near Sooke, BC for several years. We’d stay for the month of June, and most mornings I’d start my day by looking out the patio doors, onto Sooke Basin.

The doors and windows seemed to separate me from the view, so I’d step outside where I could become part of what I was seeing. Then, as often as not, I’d be grabbing my camera gear and setting up my tripod down on the beach and suddenly I’d be lost to the call of the light.

Other writers and artists speak of the call of the wild. For me though, Emily Carr phrases it most poetically: “Something has called out of somewhere and something in me is trying to answer. It is surging through my whole being like a great river rushing on.”

Light is the trigger that launches another journey in my vision quest to really see, with heightened awareness, the awesome beauty of the natural world around me. Some days, my vision quest only takes me as far as stepping outside. Others days can find my wife Debra and me wandering along the coast. French Beach is always a favourite destination, especially at low tide when the tidal shelf is exposed. One morning, intending to access the beach from the east end of the park, we turned off of Woodhaven Road onto Seaside Drive and, there was the light, streaming down through the mist. A radiant array of beautiful light, shining down with a silent message: “Look, here’s something special.”

Juan de Fuca Provincial Park is another favourite and one morning we headed for China Beach, hoping for fog. Sunny days are great for action shots and for emphasizing the texture of surfaces, but I was looking for the softer side. I was looking for the dreamy and the feminine, where the sun’s light is filtered and diffused. We followed Highway 14 west from Sooke in low hanging cloud but, as we approached China Beach, the sky was clearing. By the time we parked and were halfway down the footpath to the beach, we were back into cloud and it was remarkable. The sun was painting the spaces between the dark trees with rays of light. Sunbeams were radiating through the mist, transforming the forest into an ethereal place of awe and wonder. I was set up on the trail with my tripod, camera angled up into the trees when a man and his wife edged by me.

“What are you taking pictures of?”

“It’s the light. Isn’t it amazing?” Then Debra called from the beach. “You should see the light down here.”

I was torn. The light was already fantastic here on the trail; could it be any better down below? Sure enough, the light was incredible. The fog was glowing with an otherworldly light. Looking out onto the Strait of Juan de Fuca, I saw that there was no sky, no mountains, and no boats. Just a single line of glimmering surf, rolling out of the fog, simple and beautiful.

We walked along the shore as the fog turned to mist and then disappeared into sunshine and blue skies. It had been a morning of beautiful light, a blend of the physical and the spiritual, part real and part mystical. We had followed the light into moments of magic.

Light is always around us, but we don’t usually notice it until it’s hard at work, penetrating fog and mist as sunbeams. Then, it’s marvellous and mysterious.

A third favourite destination along the west shore is Muir Creek Beach, where the waves have exposed 25 million year old fossils in the siltstone cliffs. This is a place that oozes history, layer upon layer of history. That particular morning though, the light was calling to me. A trickle of water, falling from the cliff above the beach, had captured the sunlight. I paused for a long, slow look. The water and the sunlight were a directional synergy and Emily Carr speaks of this as well:

"Direction is: what I'm after, everything moving together, relative movement, sympathetic movement, connected movement, flowing, liquid movement."

I took a number of slow shutter speed shots, trying to extend the movement of the falling water, composing the movement and in doing so, adding a layer of emotion. The falling, moving sunlight became a portrait in natural design.

We ascribe all kinds of wonderful qualities and values to light, and I’ve used many such adjectives to describe my enlightening experiences along the west shore. Light though, goes about the business of illumination without regard for our tributes or even our presence. It has no consideration for whether we take the time to see it, or appreciate it, or not. Our thoughtful presence though, can add value. Without us, there would be no one to see that yes, here indeed, is something special.

Vortex proudly announces our next generation 85mm and 65mm Razor HD Spotting Scopes. These newly engineered and redesigned scopes feature the following upgrades:

**Enhanced Resolution**

**Improved Low Light Performance**

**Wider Field of View**

**Helical Focus for Sleeker Form Factor and Optimal Packing**

Setting a new standard in high-end optical technologies, precision craftsmanship, and ultra-sleek functionality, the newly engineered Razor HD is one of the finest spotting scopes on the market.

Premium HD glass lens elements, painstakingly hand-selected and precision-ground to exacting standards, deliver razor sharp, true-to-life views. Advanced optical elements eliminate aberrations for distortion-free, flat field images with unmatched edge-to-edge sharpness, remarkable clarity, resolution, and colour accuracy.

1-866-343-0054
vortexcanada.net
This will be my last BC Nature update! I can hardly believe the good fortune I’ve had to work with NatureKids BC for almost nine years. Such an important mission and so many wonderful people—like all of you at BC Nature!—to work alongside. It really has been a gift, and now it is time for change.

Why now? There are many exciting things happening both in the child and nature movement and at NatureKids BC, so it’s a good time to step back and open up a space for a new Executive Director (ED). NatureKids BC is in a great place: we have a strong network of nature clubs across BC supported by great staff and volunteers. We have a new brand, a revamped full-colour NatureWILD Magazine, and a sparkly new three-year strategic plan to help a new ED lead the way forward. In addition, Vancouver will play host to the International Child and Nature Conference next spring; this will be a wonderful time for a new ED to meet colleagues and make important connections.

As for me, I won’t be far away. Well, not too far away. I’ll be on Mayne Island farming, potting, and getting used to my new role as a NatureKids volunteer and chief cheerleader. Thank you for all your support over the years and for the warm welcome that I know you’ll give to our new Executive Director. Below are some other NatureKids BC updates:

**Action Award Winner!**

Congratulations to Maya from the Delta Home Learners NatureKids Club for earning her Bronze Action Award! Some of Maya’s amazing work included studying the growth of Amanita Mushrooms, promoting a Wilderness Committee petition, assisting a friend in making a bird feeder, and completing a project on Woolly Bear Caterpillars. NatureKids BC’s Action Award program is a fun way for members to explore, learn about, and take action for nature. Bronze, Silver and Gold level Action Awards recognize individual children for their self-directed outdoor and community activities.

**Bird Aware Cat Care (BACC)**

This fall, NatureKids BC members will be participating in a new citizen science project aimed at helping to keep both cats and birds safe. Free-roaming cats present a significant predation pressure for local bird populations. There are an estimated 7.9 million domestic cats in Canada and fewer than 30% are kept indoors. It is estimated that cats kill 200 million birds across Canada each year.

Free-roaming pet cats also face numerous threats (e.g. disease, vehicle collisions, fights with wildlife) by being outdoors and experience significantly shorter lives compared to their indoor counterparts. Thus, both cats and birds benefit from cat owners taking a cat-safe approach to pet ownership. However, increasing the percentage of indoor cats is not simple and requires a disruption in entrenched beliefs, values, and responsibilities regarding pets and wildlife. In this project, we’ll be coupling positive educational messaging with on-the-ground trials of various tools and strategies to reduce bird mortality.

BACC targets NatureKids BC families and complements the work of Nature Canada and the Stewardship Centre for BC’s Cats & Birds Program. There are a number of ways BC Nature Members can help with this project!

- Provide training in bird identification for volunteer youth citizen scientists in your local area (e.g. via a NKBC Explorer Day and/or on a one-on-one basis)
- Volunteer to be paired up with a volunteer youth citizen scientist in your area to help with the experiment where needed
- Fill in our online adult survey on the topic of cats and birds (to be available online in the fall of 2016)
- Conduct your own cat experiment using your own, or a friend’s, house pet (i.e., in the same manner as the youth volunteers)

To learn more or if you would like to participate, please contact Tammy (coordinator@naturekidsbc.ca) or Elke Wind (project lead - ewind@telus.net; 250-716-1119).

**NatureKids BC Club Changes**

Welcome to new volunteer nature club leaders: Mandy Ross (Kamloops), Janelle Parchomchuk & Kyle Fossett (South Okanagan), Alex King (Nanaimo), and Susanne Sloboda with our new club, Ridge Meadows. Thank you and best wishes to departing leaders: Michelle Sims (Prince George) and Jarrett Krentzel (Comox Valley)

NatureKids is seeking Volunteer Club Leaders or Co-Leaders for the following clubs: Victoria, TriCities, Kelowna and Oceanside Clubs. A Volunteer Club Leaders’ primary role is to organize monthly outdoor nature adventures, called Explorer Days, for NatureKids club members. For more information contact Tammy Keetch at coordinator@naturekidsbc.ca.
Leveraging Law for Nature

By Chris Tollefson

For environmental lawyers and naturalists alike, these are interesting times. It has now been almost four years since Anthony Ho (my Associate) and I began providing pro bono legal assistance for BC Nature. Our first assignment was to represent BC Nature and Nature Canada during the cross-examination phase of the Northern Gateway pipeline hearings. Back then, Anthony was a second-year law student (and avid birder to boot). Exposing a serious flaw in Northern Gateway’s caribou evidence during our first cross-examination of the company’s experts made us realize how important it was to have lawyers fighting for the public interest in these complex hearing processes. It also quickly became apparent to us just how flawed and one-sided these review processes were.

As the hearings wore on, it became obvious that we would need to take these issues to court. Fortunately, BC Nature’s commitment to the fight against Northern Gateway’s ill-conceived proposal never wavered. In the end, BC Nature played a key role in the historic lawsuit that led to the Federal Court of Appeal overturning the Harper government’s approval of the project this past June. Argument in the Court of Appeal took six days. It was the biggest case the court has ever heard. For Anthony, it was a remarkable way to mark his first appearance as counsel in an appeal court.

We have also been busy battling pipelines closer to home. In January, Anthony and I made oral submissions to the NEB Panel considering the Trans Mountain pipeline approval. In both our oral and detailed written legal submissions, we argued that the company had made serious scientific errors in its analysis of project’s impacts on marine birds. We also argued that the Panel had erred in denying the right to cross-examine on these and other key issues. As expected, the Panel recommended that the project go ahead in the end. The Cabinet will now decide the fate of the project this fall.

What we have learned from these pipeline reviews is that federal environmental assessment is completely dysfunctional, and needs to be rebuilt from the ground up. The Trudeau government has just announced a law reform process—there is a once-in-a-generation opportunity to do just that. On behalf of BC Nature and Nature Canada, we have weighed in on this debate. In our view, what happens on this front over the next six months or so will have implications, potentially hugely positive ones, for years to come.

Anthony and I have also been busy with a new project this summer. Along with an exceptionally talented board of directors, we created a new public interest environmental law organization. Its acronym is CELL, the Pacific Centre for Environmental Law and Litigation. CELL builds on the pro bono work that Anthony and I have been doing for BC Nature and other clients. Its mission is to train and mentor tomorrow’s environmental defenders by providing them with opportunities early in their legal careers to work on closely-supervised and strategically-selected public interest environmental litigation cases.

CELL is a unique experiential learning model. It seeks to harness the expertise of leading litigators and scientists to ensure that law students and junior lawyers get the inspiration and skills they will need to ensure that governments and powerful private interests are held accountable under the rule of law, and that voices like BC Nature are heard. Ultimately, we think CELL can make a huge difference in our ability to leverage law for nature.

CELL was launched last month, and has already engaged its first lawsuit, a challenge to unlawful approvals granted to BC Hydro in connection with Site C. Donations to support us in this start-up phase would be gratefully received; please contact info@pacificell.ca for donor information. CELL is also proud to count BC Nature as one of its founding clients. Your support and commitment has inspired us and kept us busy. We look forward to continuing to work with you during these interesting times. ✴

wilderness & wildlife matter

Purchase a Wilderness Committee calendar and be part of our campaigns to protect threatened wilderness and wildlife.

Check out our unique wilderness merchandise online: WildernessCommittee.org

Only $15.95
Call 604-683-8220 or 1-800-661-9453 today!
Wanted! Bobcat and Lynx photographs

By TJ Gooliaff

A bobcat/lynx study is currently under way at the University of British Columbia Okanagan (UBCO), and we need your help. We are seeking photos of Bobcats and Lynx captured by trail cameras (or conventional cameras) from all corners of the province and from all time periods. The photos do not have to be great—they just have to show a bobcat or a Lynx, or even just a part of one. Photos can be blurry or dark and don’t necessarily have to clearly show which cat species is present.

The objective of this project is to use photos of Bobcat and Lynx submitted by the public to map the current provincial distribution of each species. Both species may have shifted their range in response to climate change. We believe that Bobcats have expanded northwards and into higher elevations. We also believe that the range of Lynx has potentially contracted in BC.

Historically, Bobcats and Lynx have been separated by snow depth. Lynx have extremely long legs and large snowshoe-like paws, making them well adapted for travelling across deep snow. They are found throughout the interior of BC, typically at high elevations. In contrast, Bobcats are heavier, have small feet, and sink into the snow when they walk. They have been restricted to the southern third of the province, typically at low elevations. However, climate change has led to earlier springs and lower snow levels. As a result, suitable Bobcat habitat may have increased in BC. At the same time, suitable Lynx habitat may have decreased.

Photos will not be published or shared with anyone without permission, and photographers will retain ownership of their photos. The results of this study will gladly be shared with all those who are interested. Please send photos, along with the date and location of each photo, to TJ Gooliaff at tj.gooliaff@ubc.ca.

Whiskeyjack Nature Tours

***ARIZONA IN FEBRUARY***

17-28 February 2017 (12 days)  Cost $2990CAD (dbl occcup) from Phoenix

Arizona is home to some of the most unique, famous and unforgettable landscapes in the world. The Grand Canyon, the mesas and buttes of Monument Valley and the silhouette of a saguaro against a golden sunset are images so famous that we have grown up with them since childhood. The tour includes The Grand Canyon, Monument Valley, Canyon de Chelly, Sedona, and the Sonoran and Chihuahuan Deserts. Join us for a midwinter tour to the blue skies and fascinating deserts of this famous state.

***SOUTHERN UTAH & DEATH VALLEY***

20 April - 1 May 2017 (12 days)  Cost $3150 CAD (dbl occup) from Las Vegas

Planet Earth contains an infinite variety of landscapes, but in southern Utah random geologic events have conspired to create rare, unexpected and beautiful consequences. The mighty Colorado River, aided by the arid erosion cycle, has waged battle across the eons with the sandstone strata and fashioned landscapes so unique and bizarre that they are more redolent of an extra-terrestrial origin. We visit Bryce Canyon, Arches NP, Canyonlands NP, Monument Valley, Zion Canyon and more + Death Valley.

***The Prairies in Springtime***

1-11 June 2017 (11 days)  Cost $2590 (dbl occcup) + GST from Calgary

The prairie ecosystem of south-west Saskatchewan and southern Alberta is wondrously green in the springtime as the natural grasslands ripple in the wind. The land is punctuated with wetlands from huge lakes to prairie potholes that teem with waterbirds such as pelicans, ibis, avocets, godwits and the endangered piping plover. Other birds include raptors, longspurs & the threatened burrowing owl. Mammals include pronghorn, bison, badger & black-tailed prairie dog. We visit iconic Canadian landscapes such as Grasslands National Park, the Cypress Hills, & cultural and historic sites such as Head-Smashed-in-Buffalo Jump & the Royal Tyrell Museum in Drumheller.
BC Naturalists’ Foundation Support  By Bob Handfield

Since the formation of the Foundation in 1990, BC Nature members’ contributions have helped the Foundation grow its capital to more than half a million dollars. With ever-increasing capital, the Foundation is able to annually support more club projects with the investment earnings. We encourage you to donate through the centrefold Annual Appeal in this magazine. On behalf of our Directors, I would like to thank the many BC Nature members who have supported the Foundation in the past and continue to do so.

If you have not yet done so, please consider making a bequest to the Foundation in your will or naming the Foundation as a beneficiary in your RRSP or Life Insurance policy, or simply making a tax-deductible donation before the end of the year.

The Foundation’s Annual Report is now available at www.bcnature.ca/bc-naturalists-foundation/, on the BC Nature website. This report includes updates on the seven club projects that the Foundation assisted with grants earlier this year (just shy of $12,000), plus a summary of the Foundation’s year-end financial statements. Full Financial Statements are also available on the web page. If you would like a hard copy of the Annual Report or the full Financial Statements, please contact the BC Nature office to have a copy mailed to you, or contact any of the Foundation Directors.

At the Foundation’s AGM on May 14, the following Board and officers were elected: Bob Handfield (President), Tom Bearss, (Vice-President), David Tsang (Treasurer), Heather Neville (Secretary), and Directors-At-Large Gerard McKeating, Stephen Partington, Bev Ramey, Kees Visser, and Pat Westheuser. Appreciation was extended to outgoing Foundation Director John Neville for his many years of service.

A Strong Foundation is Good for Nature

Your financial support increases the capacity of the BC Naturalists’ Foundation to make grants for the conservation and education projects of naturalists for years to come.

Join us for Something Extraordinary!

Thailand
February 5 - 18, 2017 with Adam Walleyn
Thailand is a fascinating and bird-rich Asian country. Diverse habitats and a marvellous and extensive park and sanctuary system result in a large number of resident species.

Cuba
February 13 - 22, 2017 with Colin Jones
Travel this beautiful Caribbean island looking for endemics and range restricted species including the world’s smallest bird, the Bee Hummingbird.

South Texas
February 13 - 20, 2017 with Rudolf Koes
Join us as we look for Whooping Cranes and southern Texas specialties found nowhere else in the USA. Superb winter birding!

Panama: Canal Zone & the Darien
January 7 - 15, 2017 with Héctor Gómez de Silva
Panama with its very rich avifauna has quickly emerged as a top birding destination. We will have exciting birding at two exceptional locations.

Call now for your FREE catalogue!
1-800-373-5678
www.eagle-eye.com

Eagle-Eye Tours
Travel with Vision
Being a Restoration & Survey Crew Technician
By Matthew Senger

My name is Matt Senger and I am a student currently living in Kamloops. During the summers I return to my hometown, Lillooet. I have completed a year and a half of schooling of Thompson Rivers University’s Natural Resource Science program.

This summer, I worked for Splitrock Environmental Sekw’el’was and the Lillooet Naturalist Society where I was responsible for a variety of jobs including. I collected data for surveys and worked at the native plant nursery (watering, and transplanting saplings for distribution.) I had some involvement with eco-cultural outreach work by attending events such as our local farmers markets to share knowledge of our natural world and all the work we do here.

A new project that I was glad to be a part of was our Wetland Monitoring and Assessment surveys. The goal of these surveys was to locate and then further protect key habitats by identifying different flora and fauna while searching for urbanization and disturbances. I also took part in amphibian surveys, which mainly consisted of walking through ponds or fluvial seepage sites and quantifying the aquatic life we could find.

Not all the projects are as glamorous as doing surveys. Some of the most important work we do at Splitrock is weeding invasive plant species from our rehabilitation sites. At our Lower Spawning Channel site, there are small Cottonwood cuttings that need to be hand-watered in order to survive. I am not too sure how many cuttings there are, but they surely number in the thousands and the task usually takes the entire work day to complete!

Splitrock gave me a huge variety of outdoor work experience tasks in my field of study. For a lot of the field work and surveys I did, I constantly applied the knowledge I had learned in my program to what I was doing. I also gained quite a bit of experience that I will be taking back with me to school: different survey strategies, knowledge regarding nursery work, and a plethora of new plant IDs. Given the chance, I would certainly come back to work for Splitrock Environmental Sekw’el’was. Having only worked with them for a few months, I got a snapshot of the work they do in restoring and protecting the region. I would recommend this job to anybody and I thank them for sharing this experience with me and the other summer students in our crew.

The Beach Hero Program
By Sarah Brookes

The Beach Hero Marine Interpretive Program (BHIP) is an annual summer program hosted by the Friends of Semiahmoo Bay Society. The BHIP runs conservation-minded marine interpretation at Crescent Beach in Surrey and at White Rock Beach. Both beaches are part of the Boundary Bay Wildlife Management Area and the Fraser River Delta Important Bird Area (IBA) and are seeing an increasingly large number of visitors throughout the year. In the summer, visitors come from near and far and are often unaware of these ecosystems’ unique features, their inhabitants, their conservation issues, or how they can help take care of it during their day at the beach.

Continued Page 27
The Beach Hero Program

Continued from page 26

This year, it was a pleasure to have Madeline Weafer and Megan Winand join our team as summer student marine interpreters for July and August. Both young women are studying in environment-related programs at BCIT; both were excited to be part of the BHIP for the summer. Madeline and Megan provided a consistent, enthusiastic, and knowledgeable presence on the local beaches and in the community. The BHIP also benefitted from the experience of three returning part-time interpreters: Maria Cuthbert, Jennifer Pollard, and myself.

Madeline and Megan spent many hours engaging people enjoying a day at the beach. They were eager to share information about local intertidal ecosystems, tips on beach etiquette, and answer different questions. The impromptu lessons and explorations they provided were well received and often left beach-goers inspired to be Beach Heroes.

The BHIP tent was a popular stop at several community events over the summer, including Canada Day and BC Day celebrations at White Rock Beach, and the White Rock Farmer’s Market. The BHIP tent offered the community a place to stop, ask questions and chat, take a peek into the underwater lives of local critters in one-day aquariums, and engage in marine themed activities such as “Animal or Vegetable?”

Another important aspect of the BHIP was to provide fishers and crabbers with information on recreational fishing regulations, while keeping an eye out for shellfish poachers and reporting illegal activity to Fisheries and Oceans Canada. With a regular presence on the beach, Madeline and Megan were able to engage many recreational fishers in friendly educational conversation, provide brochures with regulations in multiple languages, help several groups understand the shellfish harvesting closure in our area, and make a number of calls to the Observe, Record and Report hotline.

Explorers of all ages, from toddlers to seniors, were thrilled to explore the beach, discover its inhabitants, and learn about the intertidal zone with our interpreters. In July and August, our team reached more than 2,500 individuals through roving the local beaches, community events, and public walks. It was a pleasure to work with such a great team and to be well received by the community. We hope to keep exploring, engaging, and educating next summer.

* The Beach Hero Marine Interpretive Program is very grateful for the support from BC Nature, the BC Naturalists Foundation, Service Canada, the Ministry of Community, Sport and Cultural Development, Fisheries and Oceans Canada, and the City of Surrey.

The 17th Annual Hyde Creek Salmon Festival

The 17th Annual Hyde Creek Salmon Festival is being held on Sunday November 13, 2016 from 11:00 a.m. - 3:00 p.m. in Port Coquitlam.

Each fall, up to 5,000 visitors come out to celebrate the return of the salmon to their birthplace to lay and fertilize their eggs. This free family event of educational displays and interactive exhibits promotes environmental awareness, protection and stewardship in fun and fascinating ways. The Hyde Creek Watershed Society is a non-profit association that opens the Hatchery to the public each Saturday from 9:00 am – 11:00 am.

The annual November festival is cosponsored by the City of Port Coquitlam and is held at the Port Coquitlam Recreation Centre and The Hyde Creek Education Centre & Hatchery. Highlights of the festival will include displays of live salmon and orphaned wildlife, salmon dissections, a storyteller with interactive costumes, face painting, cookie decorating, a fund-raising BBQ, guided nature walks, a raffle table, and many exciting environmentally-focused exhibitors.

For more information visit www.hydecreek.org.
My name is Katie Gair. I have lived in Lillooet all my life. I attend Okanagan College in Kelowna and am enrolled in the Associate of Science program with a biology focus. This summer, I worked for Splitrock Environmental Sekw’el’was and the Lillooet Naturalist Society doing environmental work, at the native plant nursery, and in the local community by running ecocultural outreach at events.

Because I’m a biology student, I was very interested in doing environmental survey work. A large portion of my time was dedicated to wetland surveys. This project’s initiative is to find local wetland habitats, evaluate them and restore them if needed so they are more suitable to amphibians and other animals. I helped set up the Wetland Training Workshop and assisted the facilitators throughout the training program. When conducting a survey, we would measure the size of the wetland by taking a GPS track, testing the soil and water, taking note of the plant diversity, and making an array of other observations.

Throughout the summer, our summer student crew also conducted reptile monitoring surveys. These surveys attempt to document the population of reptiles in the Seton Corridor area. To conduct these surveys, at least one other student and I would find specifically placed reptile boards, lift these up, and observe any animals underneath. Snakes, ants, spiders, and beetles have mostly been found. The reptile species, number of individuals, life stage, and size were recorded, along with air temperature, cloud cover, and other measurements. I learned how to use equipment such as temperature guns. I also helped with the Report-a-Snake program and wrote blogs for our website on the work we did in Lillooet.

I also helped with a lot of outreach work that focused on educating and involving the community with natural history and environmental stewardship. The Walking with the Smolts Festival was a large outreach project that involved over 200 school children. The festival focuses on the life cycles of salmon and how to conserve them. I ran a game with a coworker simulating a salmon’s journey to fertilize its eggs. I also worked at the local farmer’s market throughout the summer as an environmental ambassador and face painter, which was a lot of fun. Through these outreach events, I discovered the interest the community had in the natural world around them.

I participated in other fieldwork aside from surveys, including seed collection. Other parts of my outreach work involved creating videos of the work being done and showcasing each of the other summer students whom I worked with this year. We showed this video at our office and it will also be uploaded to our website.

When back at the nursery, I planted, transplanted native plants, and weeded. These tasks were not as exciting as others, but I did learn how well-adapted these plants are to their native environment. I also learned that some native plants need very specific conditions to germinate their seeds and grow successfully. Whitebark Pine is an example of this.

Despite some grueling tasks, I thoroughly enjoyed my time at Splitrock and I would love to be back next year. I have some new ideas and skills to share with my community and can now assist in organizing both workshops, events, and other outreach activities, and feel a little more comfortable speaking to people on the phone to engage them in environmental activities.
Salt Spring Island Purple Martin Recovery Project

By Nieke Visser

Last year in May, while waiting for the ferry to take me from Hornby to Denman Island, I was intrigued by a number of swallows circling around and checking out nest boxes on pilings, about 50 metres from the ferry terminal. Getting closer to the action, I noticed these swallows were Purple Martins. I had seen (inactive) nest boxes at Newcastle Island and Miner’s Bay on Mayne Island. So, this was what was supposed to happen: at least 10 pairs were actively checking out the nest boxes. The next question I asked myself: why do we not have this on Salt Spring Island?

I asked a few birders and was pointed in the direction of Fulford Harbour where someone had mounted three boxes on a single piling. I contacted that person and I learned that there were more boxes on pilings just north of where he lived and that these boxes have been active for a while as well. I was also directed towards Long Harbour where just a few years ago a number of boxes were mounted on pilings by somebody else. It is unclear how many breeding pairs of Martins were using Salt Spring facilities because no records were kept. Assuming the boxes I could identify were occupied each year there must have been about 10 to 15 pairs, no more.

At 20 cm long, Purple Martins are the largest of the swallow family in North America. In BC, they are considered a threatened species. In the past Western Purple Martins (Progne subis arboricola), a subspecies, used to nest in woodpecker holes in old trees or snags in woodlands, near fresh water and may have used fire-killed stands. Due to habitat loss (logging, fire prevention snag removal, and burned timber salvage, agricultural and urban development) throughout their original breeding range around the Salish Sea, they teetered on the brink of disappearing from the region. Moreover, introduced species such as European Starling and House Sparrow provided extra competition for the remaining nesting cavities.

For those of you who are familiar with the nesting condos that are put up in eastern Canada and the US, Western Purple Martins require a different kind of real estate; they like to have their own “freestanding waterfront villa in a low-density development”: communities of five boxes maximum on one piling over water or an estuary that partially falls dry every now and then. Several pilings each with a few nest boxes, is also preferred. There is no preference of seawater or freshwater as long as there is “room to move about” and there are plenty of insects nearby.

But why do the west coast Martins prefer nesting above water such as sea inlets, large lakes and boggy areas? As their habitat was lost, Martins found alternate nesting opportunities in the abundance of old and decaying untreated pilings left over from the early industrial development, especially around the Georgia Strait and Puget Sound. As these old pilings decayed or were replaced with creosote-treated, concrete, or steel pilings in which woodpeckers could not build a nest, this alternate habitat was lost as well for the Martins. By the early 1980s the BC breeding population was reduced to 10 pair. A rehabilitation program was started in 1975 in Washington State installing nest boxes on pilings. Due to a program initially begun by volunteers from the Victoria Natural History Society, the population of Western Purple Martins has rebounded to 200 pair by 2002 and about 650 pair by 2007 both in Puget Sound and the Salish Sea Basin.

Between 2003 and 2006, the population increased exponentially due to favourable weather conditions providing ample flying insects, their main food supply. The population increase stalled between 2006 and 2010 due to long cool wet periods that limited the food supply of flying insects. However with weather improving and insect populations on the rise, the number of breeding pairs increased to 950 pairs in 2013 and more than 1000 in 2014.

After some research of what had been done on our island and concluding that much more could be undertaken, Salt Spring Trail and Nature Club (SSTNC) started the Purple Martin Recovery project in January 2016 with the assistance of expert Charlene Lee, Director/Administrator of Georgia Basin Ecological Assessment and Restoration Society (GBEARS) in Nanaimo. This organization has been extremely helpful to the volunteers who constructed and put up nest boxes all around the Salish Sea, providing guidance for nest box instruction, what material to use, measurements, and locations where nest boxes already exist and are successful so that one can have an idea what is required. They also assisted with banding and collect data on the success rate of the program.

A small group of volunteers from both the SSTNC and Saltspring Ocean Stewards (SOS) constructed approximately 30 nest boxes, scouted for the best nesting sites, and obtained permission from dock owners and authorities. Boxes were put up in Ganges Harbour, Long Harbour, Fulford Harbour, Trincomali Channel and Vesuvius Bay. The first boxes were put up in April of this year, just in time for the return of the fledglings to occupy. In the meantime we also recruited volunteers to monitor the various nesting sites. Peter McAllister graciously donated his time and the use of his boat to scout and put up the boxes and monitor the sites. The boxes that were put up in April and May saw nesting activity this year.

Continued P. 30
Salt Spring Island Purple Martin Recovery Project Continued

The boxes installed in June and July saw interest but no successful nesting. We are confident the Martins will be back next year.

In July, the local newspaper became interested and spent a whole page on the project. This exposure helped to attracted even more enthusiasts who are willing to have boxes installed on their private docks and are willing to monitor them.

At the end of July, Charlene of GBEARS came over from Nanaimo and banded at two sites (seven boxes) with Peter McAllister, who provided water transportation, and local veterinarian, Susan Fussell, who held the nestlings and recorded the data while they were banded by Charlene. A total of 26 young were banded; four were too young to band. The ages of the young ranged from three days old in a subadult nest to 28 days old (one of which flew away unbanded). The old sites in Long Harbour and the new site at Fernwood Dock were not banded as the tide was not high enough to reach the boxes.

This was an unexpected success rate and a great encouragement to continue with this project. In light of the rather cool, rainy weather during the earlier summer months resulting in low numbers of insects, we could not have wished for more. Thanks to Peter McAllister, Murray Coates, and Tony McLeod who together built all those boxes, and to ornithologists, Ren Ferguson, and Susan Hannon for their expert advice. Also thanks to all other volunteers who helped to make this project a success.

Future plans are to erect displays at Fernwood Dock and the Fulford Harbour ferry terminal to educate the general public on this project.

The Purple Martin Recovery Project is funded by the Salt Spring Trail and Nature Club. *1

1 BirdWatch Canada 2005 Issue #30 (pp 21-22).

Dates to Remember

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>September 22 - 25</td>
<td>FGM - Prince George</td>
</tr>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>February 28</td>
<td>BC Nature Award Nomination</td>
</tr>
<tr>
<td>February 28</td>
<td>BC Nature AGM Resolution</td>
</tr>
<tr>
<td>May 4 - 7</td>
<td>AGM - Lillooet</td>
</tr>
<tr>
<td>May 8 - 11</td>
<td>Mitlenatch Camp</td>
</tr>
</tbody>
</table>

For your next birding adventure, try www.SatipoTours.com

We offer fun birding, enjoying the best nature-viewing areas of a region, while supporting eco-friendly initiatives! Small groups combined with comfortable bird-friendly accommodation and personal service ensures a great trip.

Best of Namibia
September 18 – October 9, 2017 (21 days)
Leaders: Thomas Plath and Dylan Whyte
(Cost: approx. $7000 CDN)

Argentina – Complete Northwest
(November 5 –20, 2017) (16 days)
Leaders: Thomas Plath and Pablo Jost
(Cost: approx. $4900 CDN)

“Our 2013 tour with Satipo Tours to central Peru was beyond our expectations… the guides pleasant and congenial, attentive and helpful. Their knowledge of the birds of Peru was amazing and they were able to find all the targeted species for us. We thoroughly enjoyed the tour and would go again with Satipo in a heartbeat!”

Dorothy Copp

www.satipotours.com
#330 9411 Glendower Drive, Richmond BC
Canada, V7A 2Y6
Tel: 604 272-9206 or cell 778 928 9206
The Great Salmon Send-Off

By John Templeton

This year marked the 26th anniversary of The Great Salmon Send Off at Stoney Creek in Burnaby. Every year, more than 2,000 people from Burnaby and Coquitlam show up to experience releasing coho smolts into the creek. Smiles from excited children were on everyone's faces as they let their fish swim away into the crystal clear waters on the sunny May Saturday. The event grows in popularity every year and we currently have many exhibitors and displays. In addition to all of the activities, we have live music from entertainers who lift our spirits with their recitals. There’s also a barbecue catered by the local youth group. The kids seemed to love jumping around in the DFO inflatable salmon, building bird boxes, or having their faces painted at some of the exhibitor's tents. This year, more than 3,000 Coho were released, and we look forward to the mature adults returning to spawn in 18 months. We will be able to identify hatchery from wild fish as our fish have been clipped to help our record keeping. Every fall, SCEC members do fish counts along the bank to record the numbers of returning Chum and Coho.

The planning for the GSSO begins every January with monthly meetings until June, which is when we evaluate the event. Having served on this committee for the past two years, I can say it's an absolute blast to be involved with so many positive participants. Without their help and the funding from our sponsors, we could not make it the success that it is. I truly appreciate everyone's help.

Volunteers from three schools help make the event run; it's good for the future streamkeepers to take part on the day.

Stoney Creek has had its challenges. Last fall, washouts occurred from work being carried out on one of the tributaries, causing tonnes of mechanically-crushed rock and sediment to enter the creek at the critical time for spawning Chum salmon. The Coho come later in the season and were not as adversely affected. Despite all these setbacks, Coho did spawn and our first fry emerged in mid-March. A restoration plan has allowed work to begin to repair and improve the watershed from the washouts. As streamkeepers, we are often challenged with too much to do and so few volunteers, but as agents of change, we have brought back salmon to an urban environment and continue to be engaged in the community. Check out our web site http://scec.ca/ for more information on our activities and get involved.

Introducing the EcoPortfolios approach: a strategy for conservative, established investors.

You already make choices in other areas of your life that reflect your values surrounding the environment and sustainability.

Now, with our EcoPortfolios approach, you can do the same with your investments.

- Professionally Managed
- Renewable Power
- Energy Efficiency
- Water Conservation
- Sustainable Agriculture
- Green Building

Brian Coote, CIM, CFP, SIPC
Portfolio Manager
ScotiaMcLeod, a division of Scotia Capital Inc.

Brian.coote@scotiawealth.com
(604) 535-4709

Find out more at www.EcoPortfolios.ca

© Registered trademark of The Bank of Nova Scotia, used under licence. ™ Trademark of The Bank of Nova Scotia, used under licence. Scotia Wealth Management™ consists of a range of financial services provided by The Bank of Nova Scotia (Scotiasave); The Bank of Nova Scotia Trust Company (Scotiatrust); Private Investment Counsel, a service of 1832 Asset Management LP; 1832 Asset Management U.S. Inc.; Scotia Wealth Insurance Services Inc.; and ScotiaMcLeod, a division of Scotia Capital Inc. Wealth advisory and brokerage services are provided by ScotiaMcLeod, a division of Scotia Capital Inc. Scotia Capital Inc. is a member of the Canadian Investor Protection Fund and the Investment Industry Regulatory Organization of Canada.
Fireweed: It Heals the Land

By Terry Taylor

All of us are familiar with Fireweed—those masses of pink blossoms that cover open slopes. It is one of the first plants to grow on recently-logged or burned areas, which is the reason that it is ecologically important. When a previously existing forest is removed, bare soil is exposed and bare soil is subject to erosion. Deep gullies rapidly form on steep bare slopes that were previously protected by roots and a layer of mosses and duff. That’s where Fireweed comes to the rescue.

When trees are removed, the land undergoes a process called succession. The first plants to occupy the site are herbs. Seedlings of shrubs such as Salmonberry and Elderberry grow from seeds introduced by songbirds. These soon overgrow the herbs, but the herbs persist below the shrub covering. Wind blows in seeds, so that Alders often overtop the shrubs after a few years. Conifer seeds also blow in, but conifers grow more slowly. Eventually, the conifer trees shade out the Alders and a relatively stable conifer forest is established for several centuries.

Fireweed is probably the most important of the early colonizers. It gets there right from the start. Each mature plant produces tens of thousands of seeds and there are usually tens of thousands of plants. Each small seed has a short cluster of fine hairs that readily carry it aloft in the slightest breeze. To stand beside a Fireweed site on an autumn day is to behold a spectacular display of airborne parachutes. Most of these seeds will not be successful, but considering the vast number produced, many will be carried by higher-level winds a long way from their origin, guaranteeing ample seeding of any newly exposed areas.

Once established, Fireweed plants produce extensive root systems which bind soil particles together. Since there are a lot of them, they do a good job at that. They are also fairly tall perennials. The successive layers of old leaves retard surface runoff and dampen the force of falling raindrops. They also provide fertilizer for newly-arriving shrub and tree seeds. These plants can continue their ecosystem services for several decades, but eventually get shaded out by young conifers. By this time, they have done their job of erosion control, but their distant descendants will return several hundred years later, after the next fire, to start the process over again.

If you take a look at a cluster of Fireweed flowers, you can see how this plant prevents self-pollination, guaranteeing outcrossing and genetic diversity. Any single flower has both stamens (male) and stigmas (female). How does it prevent pollen from pollinating the same flower? By maturing the different floral parts at different times. When the stigmas are receptive, the stamens are not producing pollen; when the stamens are producing pollen, the stigmas have not grown. You can see the different developmental stages on a single plant.

Another thing Fireweed is responsible for is to produce pollen and nectar for honey production, and lots of it! Honey produced from Fireweed nectar is well known among honey gourmets. Because it produces such abundant nectar, it is an important plant for maintaining Bumblebee populations, and protecting bees is becoming a critical issue.

The territorial flower of Yukon is Fireweed. It is very common in the boreal forest zone—not just there, but across the Northern Hemisphere as well as in the temperate forest zones to the south.

Along subalpine gravelly streams you quite often find a close relative of Fireweed. This is the river beauty. It is smaller than its relative, but is more showy as the flowers are much larger.
BC NATURE CONFERENCE AND FALL GENERAL MEETING
SEPTEMBER 22-25, 2016
NORTHERN TREASURES: FISH, FUR AND FEATHERS
HOSTED BY THE PRINCE GEORGE NATURALISTS CLUB

PROGRAM

Thursday, September 22  Registration/information open: 1 pm to 9 pm

10:30 am  BC Nature Committee Meetings
1:30 & 3:30  Northern Lights Estate Winery Tours (registration required)
afternoon  Pre-conference workshops (registration required)

   Dinner on your own
6:15-9:00  Welcome Social with Mike Nash presenting: An Illustrated Tour of Prince George and Northern BC. Presentation begins at 7:00 pm (registration required)

Friday, September 23  Registration/information open: 7 am to 5 pm

6:20-7:45  Morning Nature Walk  (registration required)
8:00 am  Breakfast and Welcome at Coast Inn of the North  

   Presentations
9:00 am  Doug Heard & Dale Seip: Population Status and Recovery Efforts for Central Mountain Caribou Herds in BC
   Coffee break
10:45 am  Rob Bryce: Hiking, Technology and Self Publishing in Northern BC
11:45 am  Lunch  (Ken Otter’s presentation will be during lunch)
12:00  Ken Otter: Is Suburbia an Avian Paradise, or Ecological Trap?
1:00 pm  Roy Rea: Of Mice and Moose, Martens and Mallards and the Management of Such in British Columbia
2:00 pm  Bruce Harrison: How to Count Ducks When They’re Not in a Row
3:00 pm  Darwyn Coxson: Ancient Cedars of the Upper Fraser – The Paradox of the Inland Rainforest
4:00 pm  Jim Pojar: The Changing Nature of BC: Climate Change and Conservation
6:30 pm  Dinner at Coast Inn of the North (doors open 6:00 pm with no-host bar)  
   Keynote Speaker - Charles Helm: The Tumbler Ridge UNESCO Global Geopark – a First for Western North America

Saturday, September 24  Registration/information open: 7 am to 8:30 am

6:20-7:45  Morning Nature Walk  (registration required)
8:00 am  Breakfast at Coast Inn of the North
8:30-12:30  Field trips: Choose one. Check the website for availability.  
   (extra costs include gourmet bag lunch and transportation)
1:30-4:30  Fall General meeting
6:30 pm  Banquet at Coast Inn of the North (doors open 6:00 pm with no-host bar)  
   Awards & Silent Auction  
   Keynote Speaker - Chris Harris: Cariboo Chilcotin Coast: A Sense of Place

**CONFERENCE PARTICIPANTS MUST BE MEMBERS OF BC NATURE OR AFFILIATED GROUP. MEMBERSHIPS CAN BE PURCHASED WITH REGISTRATION.**

**See website for times.**

Thursday  Pre-conference Workshops
Birdhouse Building
Birding Techniques & Tools (IBA)

Saturday Field Trips
*Additional costs apply to all field trips and include transportation and bag lunch. *

   Eskers Provincial Park
   Moore’s Meadow, Shane Lake
   Nechako White Sturgeon Conservation Centre (Vanderhoof)
   Hudson’s Bay Wetlands Project, Lheidli T’enneh Memorial Park, REAPS
   Preparing Bird Specimens
   Cottonwood Island Park & Railway Museum
   Huble Homestead

*See website for details. *

Sunday Optional Field Trips
Ancient Forest
Pine Le Moray Provincial Park

*See website for details. *

CHECK THE WEBSITE FOR FURTHER INFORMATION AND UPDATES TO THE PROGRAM: www.pgfcm2016.ca
REGISTRATION FORM

<table>
<thead>
<tr>
<th>Name:</th>
<th>Club:</th>
<th>Director</th>
<th>Executive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td>City:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postal Code:</td>
<td>Tel:</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

*Non-members must join BC Nature ($20 annual membership) or one of the member clubs to attend these events*

<table>
<thead>
<tr>
<th>Options (GST &amp; gratuities included where applicable)</th>
<th>By July 22</th>
<th>After July 22</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full registration: includes Friday presentations, Friday &amp; Saturday breakfast, Friday lunch, FGM</td>
<td>150.00</td>
<td>165.00</td>
<td></td>
</tr>
<tr>
<td>Or Friday, September 23 only: presentations, breakfast &amp; lunch at the Coast Inn of the North</td>
<td>100.00</td>
<td>115.00</td>
<td></td>
</tr>
<tr>
<td>Or Saturday, September 24 only: breakfast, field trip (extra $ below), FGM</td>
<td>60.00</td>
<td>75.00</td>
<td></td>
</tr>
<tr>
<td>Thursday, September 22 Northern Lights Winery tour (please indicate preferred time below)</td>
<td>10.00</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td>Thursday, September 22 Bird House Building at the Two Rivers Art Gallery</td>
<td>FREE</td>
<td>FREE</td>
<td></td>
</tr>
<tr>
<td>Thursday September 22 Birding Techniques &amp; Tools (IBA)</td>
<td>5.00</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td>Thursday September 22 Welcome Social (appies, no-host bar); speaker Mike Nash</td>
<td>25.00</td>
<td>25.00</td>
<td></td>
</tr>
<tr>
<td>Friday, September 23 Dinner (no host bar); keynote speaker Charles Helm</td>
<td>45.00</td>
<td>45.00</td>
<td></td>
</tr>
<tr>
<td>Saturday, September 24 Banquet, Awards, Silent Auction; keynote speaker Chris Harris</td>
<td>50.00</td>
<td>50.00</td>
<td></td>
</tr>
</tbody>
</table>

FIELD TRIPS: Indicate your choice(s) below. Check the website or phone 250-961-7087 for availability. Insert the cost for your 1st choice into the box on the right. The cost will include transportation, a gourmet bag lunch prepared by the Coast’s chef, and admission fees where required.

- **Saturday, September 24:** Field trip: 8:30 am to 12:30 pm (first choice)
- **Sunday, September 25:** Optional field trip (choose one)

**BC Nature membership available through [www.bcnature.ca](http://www.bcnature.ca)**

**Prince George Naturalists Club**

<table>
<thead>
<tr>
<th>Field Trips</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eskers Provincial Park</td>
<td>45.00</td>
</tr>
<tr>
<td>Nechako White Sturgeon Recovery Centre</td>
<td>60.00</td>
</tr>
<tr>
<td>Hudson’s Bay Wetlands, REAPS, Lheidli T’enneh Park</td>
<td>35.00</td>
</tr>
<tr>
<td>Preparing Bird Specimens</td>
<td>30.00</td>
</tr>
<tr>
<td>Cottonwood Park &amp; Railway Museum</td>
<td>38.00</td>
</tr>
<tr>
<td>Huble Homestead</td>
<td>50.00</td>
</tr>
<tr>
<td>Moore’s Meadow, Shane Lake</td>
<td>35.00</td>
</tr>
</tbody>
</table>

**How to register:**
1. Complete the above registration form (one form per person). Registration forms are also available for download on the website.
2. A signed waiver form is required. Waiver forms are available on the website. Registration is not complete until signed waivers are received.
3. Make cheques payable to Prince George Naturalists Club. Mail waiver, registration and payment to: 147 Parker Drive, Prince George, BC. V2M 4S7 Note: NSF cheques will be charged $45.00
4. No refunds after September 1, 2016. Refunds will be subject to a 10.00 administration fee.
5. Confirmations will be sent by email. For more information, contact Maryanne Reavie at 250-961-7087, or pgfgm2016@gmail.com

**Dietary Requirements**

<table>
<thead>
<tr>
<th>Dietary Requirements</th>
<th>Accommodation: Block booking has been arranged at the Coast Inn of the North. Please visit our website for accommodation options in Prince George: <a href="http://www.pgfgm2016.ca">www.pgfgm2016.ca</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegan</td>
<td></td>
</tr>
<tr>
<td>Vegetarian</td>
<td></td>
</tr>
<tr>
<td>Lactose free</td>
<td></td>
</tr>
<tr>
<td>Gluten free</td>
<td></td>
</tr>
</tbody>
</table>

**Dietary Requirements:** Please indicate dietary requirements. We will accommodate these to the best of our ability.
By Kristina Charania

Why hello there! My name is Kristina, and for the last four months, I’ve been BC Nature and NatureKids BC’s Outreach & Research Assistant. It’s been an absolute treat to get to know some of you and gain professional experience that not only complements my Biology and English double major at SFU, but also enhances my growing moral obligation to love and protect our planet. Let me tell you more about what I did this summer!

For about 12 hours a week, I worked with NatureKids BC to rebrand and revitalize their current website. Having only made a simple portfolio Blogger website previously, learning how Wordpress works and figuring out how to build an eye-pleasing, user-friendly website was quite a challenge for me – and one that I was glad to take on! From site mapping, weighing out the pros and cons of website templates, customizing plugins for the site, reworking the website’s membership sign-up, and redesigning some individual pages, I developed a lot of marketable skills that I hope to further augment in the future. In addition to this project, I also ran outreach for NatureKids BC at Party for the Planet and the Osprey Festival. Having previously worked at Science World as a Science Facilitator and with Parks Canada as a Coastal Naturalist, it was wonderful to put my interpreter hat back on and interact with families at these events.

With my remaining time per week, I completed a variety of tasks for BC Nature: I answered emails (and the huge variety of queries they contained!), staffed the office’s phone, updated BC Nature’s website, completed a variety of bookkeeping duties, kept membership information up-to-date, posted on our social media accounts, and even helped to put together this very magazine that you’re reading.

A highlight of my summer was the day that we received news that BC Nature had been victorious in the case to overturn the government’s approval of the Northern Gateway pipeline. It’s incredible to me that Enbridge—a goliath worth 60 billion dollars—had successfully been challenged by the very folks that I have been supporting in the office all summer. I am so inspired by all of you and proud to have been part of an organization that is so resolutely devoted to protecting the planet and fighting to preserve natural spaces. Watching the Enbridge news unfold has made me surer than ever that I, too, want to commit myself to that same fight by continuing to live a zero waste lifestyle (ie. sending no garbage to landfill) and, perhaps in my post-degree career, heralding change by teaching others how to be informed consumers and lead low-impact lives.

Though my time as Outreach & Research Assistant is over, my relationship with BC Nature and NatureKids BC is certainly not: I’m hoping to join WildResearch as a club member, perhaps write for BCnature, and help NatureKids BC with community outreach when I have time. Here’s to new beginnings! *

List of BC Nature Clubs

Lower Mainland Clubs
Abbottsford-Mission Club
Alouette Field Naturalists
Bowen Nature Club
Burke Mountain Naturalists
Chilliwack Field Naturalists
Delta Naturalists Society
Fernie Nature Club
Kamloops Naturalists
Lillooet Naturalists Society
North Okanagan Naturalists Club
North Shuswap Naturalists
Rocky Mountain Naturalists
Shuswap Naturalists
South Okanagan Naturalists
Vernon Naturalists

Kootenay Clubs
Fernie Nature Club
Rocky Mountain Naturalists
West Kootenay Naturalists

Thompson Okanagan Region
Central Okanagan Naturalists’ Club
Cashmere Field Naturalists
Kelowna Naturalists
Kortright Centre Naturalists
North Okanagan Naturalists Club
North Shuswap Naturalists
Oliver-Osoyoos Naturalists
Shuswap Naturalists
South Okanagan Naturalists
Vernon Naturalists

Northern BC
Bulkley Valley Naturalists
Kitimat Valley Naturalists
Mackenzie Nature Observatory

Northern Amphibian Nats. Society
Prince George Naturalists
Quesnel Trail & Nature Club
Timberline Trail & Nature Club
Williams Lake Field Naturalists

Vancouver Island
Arrowsmith Naturalists - Parksville
Campbell River Naturalists
Comox Valley Naturalists
Cowichan Valley Nat. Society
Nanoose Naturalists
Pender Island Naturalists
Rithet's Bog Cons. Soc.
Rocky Point Bird Observatory
Salt Spring Trail & Nature Club
Victoria Natural History Society

BC Nature
Direct Members
Affiliate Members

BCnature Fall 2016
Spotlight on a BC Nature Federated Club
Bulkley Valley Naturalists

By Evi Coulson

The Bulkley Valley is an area of outstanding natural beauty. It is bounded on one side by Babine Mountains Provincial Park and, on the other, by the Telkwa Mountains with its resident caribou herd. Towering above Smithers, the principal town, is the 8,500 feet high Hudson Bay Mountain, our local ski hill.

This diverse geography results in a variety of habitats, from mountain tundra, hot dry-slope juniper, and aspen forests to blue-listed Cottonwood riparian along the river floodplain, and with them, an abundance of diverse northern fauna and flora. All the large ungulates find a home here except mountain sheep, and all the major predators do too, except bobcats. Our area's bird list runs to 258 species.

The beauty of its surroundings, the wealth of its wildlife, and unparalleled recreational and sporting opportunities have lead to a phenomenon called “amenity migration”, in which many professionals have chosen to make the Bulkley Valley their home. This, in turn, has resulted in a rich local artistic and musical culture with a large component of well-educated residents—just the sort of demographic where a natural history club is an obvious expression!

The club owes its start, in fact, to amenity migration. In the late 1970s, Rosamund and Jim Pojar — well known botanists — decided to up sticks and move here from the Lower Mainland. Rosamund had been quite involved with the Victoria Natural History Club and, not long after arriving, she decided to start a club here. She found fertile ground.

At that time, there was no hiking club here. So, initially, the Bulkley Valley Naturalists served as a sort of general outdoor club. At that time, we were all young with young families, so many of the early trips were hiking and camping trips in the local mountains, albeit with a natural history focus. Our early birding trips were lead by Mike Morrel who had compiled the first bird list for this area.

In 1990, a hiking group formed here which drew away some members. As with any club, we have had our ups and downs. Perhaps our peak was in 1987 when, with the Spatsizi Association for Biological Research, we co-hosted and organized an international symposium in Smithers called Wildlife of Northern BC, Past, Present and Future to coincide with the 100th anniversary of Canada's first national park. It was also about this time that we were persuaded to affiliate with BC Nature.

Our membership has ranged from 25 to 75. Our evening talks, which are open to the public, have always been popular. Many years ago we instituted what is now an annual “Mother's Day Bird & Breakfast” where, after birding, we have a potluck pancake breakfast with bacon and eggs and all the trimmings.

Over the years we have also organized canoe trips and trips to more remote destinations. For example, we've collaborated with the Williams Lake Naturalists for a joint trip to the junction of the Fraser and Chilcotin Rivers to see the California Bighorn Sheep rut, and travelled to the Skeena River to witness the March eulachon run and visiting the Tseax lava beds near New Aiyansh.

We engage in citizen science projects such as the Christmas Bird Count, BC Breeding Bird Atlas, bat roost, amphibian, and Hoary Marmot and caribou monitoring. The club was also involved in the creation of a nature trail in the Smithers Community Forest with associated interpretive signs and brochures, and with nature programs for schools which included classroom talks and field trips. We also try to provide informed comment on local conservation issues and have been involved for 16 years in a group that is trying to manage recreational impacts on the declining Telkwa Caribou herd. We look forward to the time when a new generation of club leaders takes over. Sound familiar? ★

Check this club out at www.bvnaturalists.ca

Bulkley Valley Naturalists' 2015 Mothers' Day Bird & Breakfast. Yum!