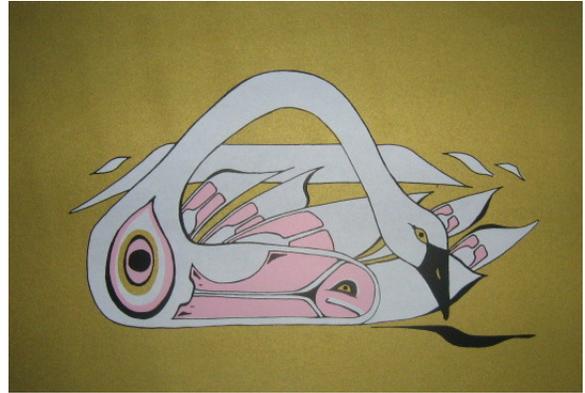


Comox Valley Naturalists Society

March 2016 Newsletter



President's Message	1
K'omoks IBA	3
Morrison Creek	3
Comox Valley Plant List	5
Hamilton Mack Laing Generates Yet Another Prize	6
25 Years of Swan Counts	7
Pacific Basking Sharks	9
The Future Déjà Vu	10
Upcoming CVNS Activities	12
About the Society	13

President's Message

Reflections on our 50th anniversary

By Loys Maingon

The Comox-Strathcona Naturalist Society was officially incorporated in 1966. By June 3, 1969 CVN would go on to become one of the six founding clubs of the Federation of BC Naturalists. FBCN would go on to change its operating name to BC Nature in 2006, as did we in 2012 to Comox Valley Nature. It is therefore fitting that, in May, CVN will celebrate its first 50 years, and welcome a growing number of our BC Nature partners to CVN's 50th anniversary celebrations and host BC Nature's AGM at the same time.

The May celebrations have been in the making for the past couple of years, as Sharon Niscak regularly dropped hints to me. John Neville's request last March that we host BC Nature's AGM presented special challenges and opportunities, which we took up in a vote at the March general meeting. A large conference normally requires 2 years of preparation. Normally, such events are accomplished by first applying for grants and hiring professional management staff to stage the event. The fact that CVN has been able to put together such a large-scale event in only 8 months, entirely through the hard work and dedication of volunteers, and without previous grants to hire professionals at taxpayer's expense, or drawing on our financial reserves, speaks to the tremendous resilience and resourcefulness of this

society, and the commitment of its core membership to its future.

CVN has been extremely fortunate in being able to elicit the enthusiasm of our youthful vice-president Jarrett Krentzel, and our Treasurer, Isabella Erni, as well as our secretary, Gabriel Bau and his partner Jose Narbona who took on the mammoth and thankless task of handling registrations, and James and Annette Boulter who co-chaired the committee outreach, Judy Shorter and Barbara Martin who have found the best caterer in the valley and reached out to local restaurants in the valley to elicit their support, and Bruce Martin who took on the onerous task of organizing trips to first-class destinations at Mittenatch and Quadra Islands, and as always the guidance of Sharon Niscak's experience. (And that is a long sentence reflecting the collective effort—not the high German syntax of Goethe or Kant!)

As the programme shows, many others have contributed, and will be contributing, to the outcome of this event which will showcase the best that the Comox Valley's natural assets have to offer to the province. This event is not simply a celebration of the past, but, as is its preparation, it is a response to the challenges of the future that CVN faces.

The programme looks very much at the future, particularly at the challenges that climate change and conservation will present in the next fifty years. We have to think of our successors first. The speakers list—which we have had to curtail, only because of the limited time—tells us something about the role that CVN will need to play in the future. We will likely be fortunate in having some as-yet-unannounced outstanding guest visitors drop-in to wish CVN well in its 50th year, and these surprise guests may point even more to our future.

CVN has an important future public role to play in the environmental dynamics of the Comox Valley. CVN was founded by some very far-sighted residents, and became the home of some of BC's most progressive

citizens. These were people who saw the environment as a social priority. Even the most conservative estimates now show that the next fifty years will pose unprecedented challenges and that the future of the environment will be seriously compromised by the donut philosophy of developers and pandering politicians.

When in 1900 John Muir or Canadians such as James Harkin or Gordon Hewitt (who inspired Mack Laing) wrote, they were profoundly aware of the tremendous environmental dislocations that were taking place around them, and of the fate of disappearing species and landscapes throughout North America. The population of Canada was then only 7 million, but we had nearly collapsed game populations and faced huge water contamination problems. Throughout the twentieth century, regulations such as the *Fisheries Act (1868)* and the *Migratory Birds Convention Act (1916)* have helped constrain the rate of loss. But they have not been able to stop the loss which has been steadily accelerating. Since 1980 these restrictions and what gains were made have faced growing challenges as the human population has grown to over 35 million and the regulatory environment has been loosened and even rolled back.

Today the environment is much more diminished and faces even more severe challenges than in 1900. Eastern Vancouver Island is growing at an unprecedented rate that challenges the carrying capacity of our watersheds. In 1900 Vancouver's population was smaller than that of the Comox Valley today. Imagine that 100 years from now, the Valley's population could be 650,000? Locally the great effort of the Regional Growth Strategy is faltering and the implementation is compromised. Our already limited water resources are strained at a time when climate change is accelerating and longer deeper droughts are forecast.

Garry oak ecosystems are our landscape canaries. Today when endangered landscapes of Garry oaks are below 1% of their pre-contact extent, we can no longer compromise. In more ways than one, in this century the gaping hole is the reality of the 99%, not the fat unhealthy consumer's donut.

As all health, our environmental health cannot be taken for granted. Once compromised, it may be irretrievable.

The problems that the public faces need to be confronted, and further compromises eschewed. As is well known, Melda Buchanan was a beacon to CVN. She was involved in every environmental campaign in BC. Melda Buchanan made CVN what it is today, because she did not compromise. The magnitude of the problems we face today demand that we no longer

accept compromises, and that strong voices be found to challenge the status quo and confront the donut do-nothing attitude that has compromised the integrity and long-term survival of the environmental legacy we hand to future generations.

CVN is not a private club. It is one of the largest public environmental organizations in the Comox Valley. When one reads of its history and roots in the formation of The British Columbia Nature Council as inspired by Dr. Ian McTaggart Cowan and his close friend Dr. Brink, one comes to understand that the naturalists clubs were intended to be front-line conservation activists—monitoring and advocating for conservation. CVN brings together a diversity of environmental interests. It needs to assume its role as a representative uncompromising civic voice—for the public good.

As no replacement for the presidency has yet been found, I have agreed to remain as an interim president—for a while. My first priority is to see that the May celebrations provide an opportunity for the renewal of the society. After May 15, the executive will use the summer months to launch a series of consultations to renew and re-organize the society so that it can assume a greater prominence in the Comox Valley, and be an even greater public voice for the next 50 years.



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K'omoks IBA

Our Important Bird Area

By Krista Kaptein

The Comox Valley is known as a special place for nature, and one recognition that acknowledges this abundance is the designation as an internationally recognized Important Bird Area (IBA). The K'omoks IBA includes the Comox Valley, Baynes Sound, Lambert Channel, Denman and Hornby Islands, and is named for the First Nation within whose traditional territory the IBA lies.

The IBA program, initiated by BirdLife International in the 1980s, is a network of thousands of sites across the world that have been identified as critically important for the conservation of birds. Within BC, the IBA Program is a major province-wide stewardship project of BC Nature, together with national partners Bird Studies Canada and Nature Canada. More information on the IBA program is at www.ibacanada.ca.

BC has more than 80 designated IBAs, and the K'omoks IBA is one of the most important in BC. Bird species that trigger the IBA designation here include Trumpeter Swan, Harlequin Duck, Thayer's Gull, Glaucous-winged Gull, Mew Gull, Great Blue Heron, and Peregrine Falcon. The numbers of Surf Scoter, White-winged Scoter, Western Grebe, and Red-necked Grebe also exceed IBA thresholds in some years.

Volunteer IBA Caretaker Art Martell and other community members are involved in many monitoring, conservation, and outreach efforts in the IBA. The IBA is recognized in some Official Community Plans. Members of CV Nature have been conducting standardized bird monitoring for five decades, including the Christmas Bird Count since 1961, Spring Bird Count since 1976, and weekly Trumpeter Swan Count since 1990. Volunteers also have been doing monthly surveys for the British Columbia Coastal Waterbird Survey since 1999 and the British Columbia Beached Bird Survey since 2002. All these counts strengthen the importance of the K'omoks IBA designation.

More information on the IBAs in BC is at www.bcnature.ca/projects/iba/. During the BC Nature AGM in the Comox Valley in May, there will be a presentation on IBAs, on Thurs. May 12 at 9:30 PM. For more information, contact iba@bcnature.ca.

Morrison Creek

A New Beginning

By Kathryn Clouston

You read about Morrison Creek in last year's newsletters and I can hear the doubt raised by our claims of richness and abundance. Where is the data, you say? Well, it was a busy summer, but the restoration work got done, and boy, what an improvement it made! We took out the old weir at Second Street that was impeding fish movement at best and killing fish at worst.



Dead pinks trapped by the weir.

Photo: J. Palmer

Many, many thanks go out to our wonderful volunteers for rescuing (brace yourself):

- 1215 Coho
- 23 Cutthroat Trout
- 9 Rainbow Trout
- 76 Sculpin
- 3 Sticklebacks
- 215 Lamprey of all 3 species (Western Brook Lamprey, Pacific Lamprey, Morrison Creek Lamprey)
- 114 Signal Crayfish
- 37 Western Pearlshell Mussels
- and a myriad of other critters like scuds, caddisfly larvae, dragonfly nymphs, stonefly larvae

All of that was in a one-block stretch of the creek between First and Second Streets.

The work in this location was relatively easy as we simply put a dam across the channel we were working in and let the water flow down the other channel. The 'fishing' was also relatively easy as all the critters came out of their hiding places when the water disappeared so we could gather them up and put them on the other side of the safety net. We replaced the weir with a series of

riffles and pools that the fish seem to be really appreciating as you can see in the video on our website (<http://morri-soncreek.org/>).

We were really worried that we wouldn't get the culvert work completed before the pinks made their way up to that location, but succeeded in the nick of time.



Some of the pumps and hoses for Comox Logging Road culvert improvements.
Photo: K. Clouston

The repair work at the Comox Logging Road site was needed to raise the water level up to the bottom of the culvert so the fish could get through instead of being stuck in the pool below the culvert waiting for enough water to flow during increasingly dry periods. This second project location was much more challenging to 'fish' and to get the water out of the work area. We finally succeeded in diverting the flow to the 'slip and slide' after deploying one 6-inch pump, three 4-inch pumps, and one 3-inch pump! That was all the pumping capacity in the Valley so it is a good thing it worked. Again our thanks go out to our wonderful volunteers for 'fishing' out this area which wasn't as fish-rich but which produced an amazing number of Western Pearlshell Mussels.

We moved, from another one-block stretch of the Creek:

- 179 Coho
- 27 Cutthroat Trout
- 22 Rainbow Trout
- 10 Sculpin
- 0 Stickleback
- 87 Lamprey of all 3 species
- 168 Signal Crayfish
- 174 Western Pearlshell Mussels!



'Slip and slide' used to divert water from the work area.
Photo: K. Clouston

We also discovered that the Cave Crickets have a definite liking for canned herring as we caught several in the minnow traps that we were using to get the fish out from the shelf underneath the culvert that we couldn't reach with the nets. We also found several large Pacific Lamprey and Cutthroat Trout in this location whereas we found mostly smaller lamprey and fish at the Second Street site.



Culvert after water level is raised.
Photo: K. Clouston

Basically what we did here is fill in the pond that the water flowing out of the culvert had carved out with a lot of large rocks. We also placed a lot of rock around the culvert to help support it and reduce erosion and added

some woody debris around the edges so the fish would have some protection from predators. Once that was done we needed to raise the streambed to the new level so that we didn't simply move the jumping problem downstream. That was done with a lot more rock to create a riffle leading to the pond that the 'slip and slide' emptied into as you can see from the final photo.



We are extremely grateful to our generous funders: Environment Canada through the Habitat Stewardship Program for Species at Risk, the Fish and Wildlife Compensation Program, and the Habitat Conservation Trust Foundation. In-kind and cash donations have also been received from Fortis Gas, Timberwest, and Current Environmental. Without them this work couldn't have been completed and the pinks would be struggling desperately to get past the work sites to spawn, whereas they are easily sailing past the improved sites this year.

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Comox Valley Plant List

By Helen Robinson

Spring is here; new growth is evident everywhere! It was my goal to have the *Comox Valley Plant List* completed and printed early in 2016 in time to help in identifying all the newly emerging plants, and to commemorate the 50th anniversary of the Comox Valley Naturalists Society. I feel very proud that my mission has been accomplished—but it is only a start! This booklet names 550 plants, but does not include grasses, sedges and rushes, and it is my hope that these families will be listed in a future edition.

It was about 10 years ago that I decided to take on the project. There were plant lists for specific areas such as Kin Beach Provincial Park, Courtenay River Estuary, Comox Lake Bluffs Ecological Reserve, Goose Spit, Mack Laing Nature Park, 9 Kilometre Bog, Oyster River Nature Park, Trent River Estuary, and Paradise Meadows; all were prepared over the years as far back as the 1970s by our club botanists.

My first task was to amalgamate all the lists, separating the plants into their various families. But over the years many name changes have taken place; families have been split, and scientific names have changed—all due to recent DNA research. The Conservation Data Centre, Ministry of Environment, Government of British Columbia, is constantly updating the new data, so the website "BC Species and Ecosystems Explorer" (a100.gov.bc.ca/pub/eswp/) has been my constant reference.

Science is always changing, and plant taxonomy is no exception. Taxonomy is classification, and plant taxonomy has been my passion for many years ever since I took a course in 1991 from Dr. Lochan Bakshi through Athabasca University. This course was a distance learning course, but included a very intense 10-day workshop at the Kananaskis Centre for Environmental Research in the Canadian Rockies. It was an experience of a lifetime—daily field trips studying and collecting, lectures and lab work until 10:00PM every night.

It was about 3 years ago that Terry Thormin volunteered to help me with my project, as he had the computer skills to transfer my information to the computer, and ultimately to the booklet format. When I planned the booklet cover, it was Terry's expert photography and choice of images that really gave it an eye-catching impact. I am forever thankful to Terry. I am also very thankful to Marta Donovan, also a CVNS member, who

works for the Conservation Data Centre in Victoria, for proof-reading the list, adding some species, and alerting me to more scientific name changes.

One by one, I verified all the scientific and common names according to the BC Species and Ecosystems Explorer website, but it is my hope that anyone will bring to my attention any errors or omissions in the list.

The booklet is on sale for \$5.00, and all proceeds go to the Comox Valley Naturalists Society. Feel free to call me at (250) 339-2608 if you would like a copy and cannot attend a monthly meeting.

**Comox Valley
Herbaceous Plants,
Shrubs and Trees**



A checklist prepared by
the Botany Group
Comox Valley Naturalists Society



Commemorating
50 years

Hamilton Mack Laing Generates Yet Another Prize

By Loys Maingon

Throughout his long life, Canadian naturalist Hamilton Mack Laing (1883-1982) was the recipient of many national awards, including a 1972 (?) award from The Federation of BC Naturalists (now, BC Nature). It is therefore in keeping with Laing’s many contributions to Canadian environmental history, that the Mack Laing Heritage Society which worked tirelessly for the past 3 years to see his last will respected should now be the recipient of a Heritage BC 2016 award.



The prize is somewhat ironic. This is the first Heritage BC award given to a person or organization in Comox. It may also be the first award in a town which demolished recognized national heritage. And it may be the first heritage award given to a society that was not able to save national heritage.

The society, which started as a committee and group within Comox Valley Nature, sought to save Mack Laing’s original home “Baybrook” as a nature house open to the public, as per Laing’s explicit wishes. Unfortunately, influential local neighbours opposed this potential encroachment into their privilege, claiming that the house had no heritage value.

Both Heritage BC and The National Heritage Trust of Canada (formerly Heritage Canada), wrote letters to Comox explicitly recognizing the “very significant heritage and historical value of “Baybrook”, and offering

to fund the restoration. For strictly political reasons, Baybrook was demolished on August 6, 2015.

Laing built Baybrook in 1922 and lived in it until a few years after the passing of his beloved wife Ethel (who was also a distinguished naturalist) in 1945. During these idyllic years, which he described in *Baybrook: Life's Best Adventure*, Baybrook, was a hub for many prominent members of Canada's environmental community. As a member of the "B" (Brotherhood of Vener), whose key role has been aptly described in Briony Penn's excellent biography of Ian McTaggart Cowan (*The Real Thing*, 2015) as a society of the most prominent progressive North-American conservationists (led by Lloyd Hoyes, Joseph Grinnell and Aldo Leopold), Mack Laing was chosen to train specially gifted students such as McTaggart Cowan, who named Laing as one of the 4 greatest influences on his life. Laing was also an early influence on Farley Mowat.

It is less well-known that Laing was involved in the 1920 to 1925 Anti-pollution League led by Gifford Pinchot and President Taft, which passed the very controversial 1924 *Oil Pollution Act*. It is from the activities of the league that the term "environmentalist" first arose in 1922. Laing was the first Canadian to write about marine oil pollution on the West Coast in 1928. He may therefore be considered Canada's first environmentalist, much to the chagrin of Comox's anti-environmentalists, who have sought to erase his memory for the past 33 years and have now destroyed Canadian heritage.

The Mack Laing Heritage Society has received its award for its public educational work, advocating for the preservation of Canada's environmental and natural history. Its ongoing concerns and work can be seen on its website <http://macklaingsociety.ca/>. The society is currently engaged in a campaign to see Laing's will and trust respected, in an attempt to save the house that he built in 1948 and lived in until his death in 1982.

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25 Years of Swan Counts

By Steph Nathan

This year is the 25th anniversary of the Comox Valley Trumpeter Swan Count. We are the only place in BC that has a regular swan count with information going to Ducks Unlimited Canada and the Pacific Flyways statistics. The Comox Valley is a globally significant wintering bird area. Data from our counts is an important contribution to understanding overall population trends and is used to implement management plans for Trumpeter Swans within the Pacific Flyway and throughout North America.

Habitat restoration, genetic studies, biological data collection, banding, migration studies, and mortality research are the programs currently being implemented in the Comox Valley.



Photo: Charles Brandt

The Trumpeter Swans have a tumultuous past, being hunted to near extinction by the late 1800s. Both the USA and Canada passed laws with stiff penalties for poaching Trumpeter Swans in 1917. Thanks to these laws we still have Trumpeter Swans.

Once the swans started eating crops, the farmers became concerned. They had been told that 10 swans could eat as much as a cow. By January 1990 there were over 1000 swans in the Comox Valley. So, in effect, the farmers were feeding 100 freeloading cows that also

damaged their fields by compacting the soil and digging holes.

The Canadian Wildlife Service, Ducks Unlimited Canada, BC Ministries of Agriculture and Fisheries and Food, along with local farmers, cooperated on a comprehensive Trumpeter Swan Management Project which started in the Comox Valley 1991.

The Trumpeter Swan Count also started in the 1991-1992 season. The goal was to figure out just where and when the Trumpeter Swans, Tundra Swans, the occasional Mute Swan plus 5 kinds of geese frequented the fields. We started with 40 counters making up 15 teams to count 21 areas covering the open farm lands from the Oyster River to Fanny Bay. Counting takes place from the last week of October until the last week of March at 10:00 Tuesday mornings. After the count we've gone for coffee at a local restaurant to socialize and report the morning's counts. To date we have had six coordinators of the swan count. To my surprise, Ernie Stefanik and I are the only two still alive.

Over the years the swans have moved around depending on the crops, the water table, and the hazing practices of the individual farmers. To start with, Graeme Fowler of DUC had a team of SPCA rescue dogs that like to herd. He trained them to herd swans and geese out of areas they were not welcome. This may have looked strange to onlookers, but was quite effective in training the swans to stay clear of those fields, including the grass next to the tarmac at Comox Valley Airport.

Forty-five gallon drums and barrels placed upside down on posts at regular intervals were placed in larger fields to interrupt the landing areas of the swans. Trumpeter Swans are the largest waterfowl on the continent, and, like a 747 jet, need a large area to take off and land. When their landing approach was interrupted, the birds tended to skip that place and go somewhere where landing was easier.

Other hazing methods included electronic avian deterrents, bangers and crackers shells, flash tape, pennant flags, black flags, decoys, and air horns, and all worked to different degrees. In the end, they were too labour intensive for the result achieved. Rather than using deterrents, DUC has used cover crops and lure crops to try to attract swans to certain fields.

Feeding behaviours were analyzed in the first two years of the program to correlate habitat with use by swans. In the fall, swans mainly eat in vegetable fields. They love corn and potatoes, and like many of us they go for foods with the highest sugar available first. As the winter progresses, swans start preparation for their spring

migration by eating in grass fields with a diet higher in protein. Italian Rye Grass seems to be the favourite spring food, supplementing the rhizomes and tubers in the intertidal zones.

Driving around the Comox Valley you may have noted flashers or other things hanging from the hydro lines in opened areas. These were the idea of one of our local Hydro workers after he had been called out to several bird strikes which caused power outages. Digging through his truck he came up with this invention of a short length of rope and a piece of plastic pipe, which he hung from the wires in high bird contact areas. The hanging pipes made the wires appear larger so the birds could see them and avoid the wires and sure death. His method is now widely used for this purpose.

Our highest count was on February 5, 2008 with 2906 Trumpeter Swans. The past few years our numbers have been dropping, with the potato fields on Knight Road gone, replaced with grass. Plus the swans have been arriving to major flooding and stopped just long enough to catch their breath before continuing to drier fields down Island.

The Trumpeter Swan is a hallmark in history with its recovery being remarkably fast going from 'critically endangered' to 'least concern' classification on the endangered species list. Such a success story is rarely found in conservation with species recovery.

Our swans are coming from Northern Alaska's Brooks Range, north of 60th parallel. This area is now available to them thanks to global warming where thousands of new acres vastly increase the nest areas. Historical nesting areas include Cook Inlet and nearby Prince William Sound. From there to the Comox Valley is the same distance as from here to Toronto.

If any of you are interested in joining our swan count, please contact me at 250-334-7701.

CVN AGM Highlights (and Otherwise)

Our Annual General Meeting was held on February 21. Dr. John Tayless gave a colourful talk titled "Plankton, Herring and Sea Lions: The Annual Herring Migration Explained," which he illustrated with some of the fascinating items from his collection.

Most of the present executive team let their names stand for re-election and were acclaimed. Unfortunately, nobody has yet stepped forward for the presidency, which is now officially vacant. Loys has generously agreed to act as interim president until after the BC Nature Conference in May.

Pacific Basking Sharks

By Robin Harrison

Basking sharks, *Cetorhinus maximus*, are found in temperate coastal waters throughout the world and inhabit both the Atlantic and Pacific oceans of Canada. They migrate to coastal British Columbia in spring and summer, and winter off California. Historically, basking sharks were found in abundance in Barkley Sound, Clayoquot Sound, Rivers Inlet and the Strait of Georgia.

Basking sharks are the world's second largest fish, growing up to 12.2 meters in length. They are slow-moving filter feeders, primarily eating zooplankton, and spend much of their time near the ocean surface. Males are thought to mature at 12 to 16 years and females at 16 to 20 years. Their gestation period of 2.6 to 3.5 years is the longest known for any vertebrate. Litters are about 6 pups. Their reproduction rate is the lowest of any shark.



Basking Shark

Photo: Greg Skomal / NOAA Fisheries Service, via Wikimedia Commons

The decline in the abundance of basking sharks on the west coast of North America is considered to be largely due to a deliberate campaign to slaughter them in B.C waters, coupled with a fishery for their liver oil from 1941 to 1947. Unintentional collisions with boats was also likely a factor.

Basking sharks were a major nuisance for gillnet fishermen, especially in areas such as Barkley Sound

where their arrival coincided with the start of the salmon fishery. Because they tended to swim near the surface, the sharks easily became entangled in the nets, at considerable expense to fishermen. As a result, fishermen lobbied hard for the government to do something to reduce basking shark numbers which they eventually did through an eradication program. One of the rather brutal methods of killing basking sharks was by means of a large cutting blade attached to the bow of the Department of Fisheries patrol vessel, the "Comox Post" in Barkley Sound. It is estimated that more than 400 basking sharks were killed by this method in 14 years. Others were killed by ramming or shooting.

While population estimates for basking sharks are uncertain, scientists roughly estimate the current Pacific population at only 320 to 550 individuals which is thought to be about a 90% decline from historical abundance.

In March 2008, guest speaker Scott Wallace gave an interesting presentation on basking sharks to Comox Valley Nature. He described what was known of their biology, distribution and the shockingly brutal way by which the stock was decimated. At that time, Scott and others were urging the federal government to list basking sharks as "endangered" under Canada's Species at Risk Act (SARA). A letter supporting this proposal was subsequently sent on behalf of this club in April, 2008 to Minister of Fisheries and Oceans, Loyola Hearn. A SARA listing would compel the federal government to develop an action plan to begin recovery of the species.

On February 23, 2010, the Pacific population of basking sharks was listed as "Endangered" under SARA. Following this listing, the government published a recovery strategy in July, 2011. An action plan was then required within five years.

In developing an action plan, it was recognized that more information was needed on the ecology, biology and behaviour of basking sharks so that threats could be managed to minimize impacts on their survival. However, some actions could be undertaken given existing information. A code of conduct was developed to minimize impacts in fisheries and by various public activities such as wildlife viewing. A public awareness and basking shark sightings network was established. In addition, the Department of Fisheries and Oceans undertook to have two aerial surveys per month from May to September to spot basking sharks. There was also consultation with United States and Mexican fisheries scientists.

Recovery of the Pacific coast basking shark population will be an extremely slow process. Some of the limiting factors include their very low productivity, collisions with vessels, net entanglement, harassment by other marine activities, and prey availability. Although the eradication program ended 45 years ago, the basking shark population in B.C. remains extremely low. For example, from 1996 to 2010, only 13 basking sharks were recorded in B.C. waters. Modelling suggests that full recovery may not occur for up to 200 years. Hopefully, the measures that are being implemented will provide the protection needed to start the recovery process.



New Campbell River Club

Campbell River's Discovery Nature Club is the newest member of BC Nature, approved in January. For information, contact the club director and president Laara Ireland at 250-202-2100 or by e-mail at li feadventures@hotmail.com.

Songbird Documentary

The acclaimed documentary film *The Messenger*, about songbirds and environmental change, is being screened at theatres across Canada over the next month. Dates in BC include:

- Victoria, March 18 to 20, Vic Theatre
- Vancouver, March 20, Rio Theatre

For more information, see

www.facebook.com/SongbirdSOSfilm.

The Future Déjà Vu

A costly environmental failure to understand energy trends

By Loys Maingon

[Editor's Note: A version of this article with full bibliographic citations will be made available on the Tide Change website.]

To this date in 2016 the most significant event on Vancouver Island is the closing of the Quinsam coal mine and the projected Raven coal mine. This seems to be part of a pattern in the promises and forecasts of BC's pro-industry Liberal government. In 2011, contrary to long-standing environmental projections (available to anyone who cared to read all the literature since the 1972 publication of Limits to Growth) that the fossil fuel industry would decline by 2015 as global awareness and concern for climate change progressed, BC's pro-business and largely anti-environmental "liberal" government developed a business strategy largely based on coal and fossil fuel energy. As summarized in January 2016 in *The Globe and Mail*:

Since B.C.'s Liberal government announced a jobs plan in 2011 that promised eight new mines in operation by 2015, the slide in commodity prices – particularly for coal and molybdenum – has precipitated a string of closings across the province. In the past 13 months, seven mines have shut down operations and there are now roughly 8,000 people working in the industry, down from the 9,300 that were employed in 2011.

Among these proposed new mines, the Raven Coal Mine project in Union Bay featured prominently. Following a rejection of its environmental application in 2015, in February 2016 the board of directors and officers of the parent company, Compliance Energy Corporation, resigned, thereby effectively putting an end to the project.

2015 has come and gone. The promised jobs and new mines never came as old mines went away, and now 10% fewer workers are employed than before. This is a simple realization of the environmental reality that climate change imposes on economies, as correctly modelled and prognosticated 45 years ago. In the wake of the 2015 United Nations Climate Change Conference, which called for a reduction of fossil fuel usage to meet a 1.5°C target, continued future investment in fossil fuels, let alone in coal, is expected to continue to decline as governments are forced to develop green economies supported by low-carbon energy and renewables.

In 2013, Premier Christy Clark renewed her commitment to the fossil fuel industry by presenting the province with

a variation of the 2011 commitment to develop coal, this time making the new jobs plan entirely dependent on the commercial potential of liquefied natural gas (LNG), with a promise to create 60,000 jobs by 2016. To date this plan seems to replicate the lack of success of the 2011 jobs plan. LNG employment currently seems to be limited to a website designer and a handful of well-paid promoters. As Bill Gates (and others) recently pointed out, LNG is not a solution, not even in the short term—it is a wasted investment if the goal is to meet 2050 targets:

Being aware of those different costs, we know which things really bring dramatic greenhouse gas reductions, particularly given the goals, reflected in the Paris climate agreement, of getting close to zero emissions. Things that only cut you down even 50 percent, like switching to natural gas, don't achieve the 2050 goal.

Setting aside the humorous incompetence of political vanity and prevarication, the concern for environmental biologists that this failure represents lies in the fact that much of the government's much-touted "Climate Change Action Plan" is premised on the immediate development of LNG to transition the economy by 2030 to meet 2°C climate targets. The government has subordinated every aspect of its policies, be they economic, educational or environmental to the priority of developing LNG to enhance the province's prosperity.

To this end it has made sweeping changes to legislation that has traditionally protected the environment, such as Bill 4 which has been aptly described as: "the Park Amendment Act, which passed last week, may have paved the way for the erosion of some of the most sacred landscapes in the province." This act affects every aspect of environmental and conservation in the province, from provincial park and conservation area management to water quality and environmental sustainability policies.

To enable LNG development and its transportation the current government has modified legislation and facilitated large scale infrastructure development. This has compromised the province's environmental, ecological and cultural heritage, without producing any real benefits for the average citizen.

Since the 1970s, successive BC governments have espoused the view that BC is part of the 21 Pacific Rim economies, and that its future economic development rests in Asian-Pacific economic cooperation. BC has invested heavily in, and benefited from, the potential growth of Asian nations in the last two decades, particularly in the Chinese economy which is now experiencing problems. China is currently restructuring its economy and laying off about 15% of its workforce as it accelerates its transition to a green economy, which

is unlikely to significantly import North American fossil fuels, including natural gas.

In spite of government claims otherwise, like most of the Canadian economy, BC has been hard hit by the demise of global oil prices and the resulting downturn of the Albertan economy. BC's economy has fared better than most thanks to the resulting falling Canadian dollar which has stimulated tourism and foreign investment in real estate and natural resources, mainly timber as the US and local construction markets are stimulated by real estate demand. Over the last decade, much of BC's economic planning has been structured around energy development and transmission, much of which focussed on the potential exportation of coal, heavy oil and LNG to Asia. The economic focus of the province was largely on the projected economic benefits of the Northern Gateway project, the southern Kinder Morgan pipeline, and the natural gas fields of Northern BC.

The Northern Gateway project was effectively terminated by Prime Minister Justin Trudeau's renewed ban of tanker traffic along BC's coast. In practical terms, the Saudis have vowed to keep prices low to dissuade the development of "tight oil". Heavy oil costs between \$30 and \$65 (US) a barrel to produce. The projected long-term collapse of oil prices has made heavy oil extraction and transportation unprofitable.

Now only the Kinder Morgan line is still under discussion, although it has been opposed by the premier for political reasons that are inconsistent with her actual general economic and environmental policies. Notwithstanding that the province's LNG plans were found to be economically untenable a year ago when Asian economies were still doing well, they are unlikely to be any more viable today. As energy prices collapse, Premier Christy Clark's mega-plans for LNG appear to be increasingly unviable, and every week another of the government's industry partners is announcing that it is withdrawing from key projects.

In the light of these significant reversals, the premier has embarked on accelerating the development of Site C, so that the work can progress to an irreversible stage by the next election in 2017. The main environmental news in BC have revolved mainly around the premier's determination to see Site C dam project through, in spite of economic reports from BC Hydro's ex-CEO, Mark Eliesen, and other economists, that Site C is not economically viable and will not bring the kinds of benefits that the government promises. Site C is touted as the last great mega-project of the W.A.C. Bennett era. It is in fact a throwback to a time when environmental impacts and assessments were considered niceties which

could be dispensed with and of no importance to the future. We now measure our losses caused by these projects, from the scant biological data that has survived, such as the 1930s short survey work that Dr. Ian McTaggart Cowan did in the Arrow Lakes area, before it was flooded.

In spite of protests from local residents and First Nations, the construction contract for Site C was signed on December 22, 2015 to begin construction immediately. This has led to official protest from BC First Nations leadership and calls from Grand Chief Stewart Philip to halt construction and respect Treaty 8. That the BC government is proceeding without either the explicit or tacit support of First Nations is a clear violation not only of the usual politically correct rhetoric that has emanated from Victoria since before the Chilcotin War. It is more importantly and at the very least, a clear violation of the spirit and intent of the Tsilquot'in decision. In many ways this is a repetition of Regina v. Sparrow (1990) and Delgamuukw v. B.C. (1997). It is a breach of treaty and constitutional rights, in which the owners of the land are being removed and culturally dispossessed, as they might be in a third-world country. Therefore, although Hydro may have recently gotten an injunction from a BC federal court to remove First Nations protestors, such injunctions in BC courts are not without precedents or consequences, as were such rulings in the 1990s. These are usually reversed in the Supreme Court of Canada, which is where this is most likely headed, with a foreseeable outcome.

It is regrettable that in the name of "progress", the government of BC is turning the clock back to the bad old days of environmental and cultural abuse, rather than seizing the opportunity to use the pause in the world economy to develop a progressive and sustainable economy. And, as if the ironies of Site C and LNG were not yet sufficient, Site C was largely planned with a view to powering LNG projects in Fort St. John and heavy oil processing in Fort McMurray, but now, notwithstanding the dim prospects of heavy oil, the Alberta government is boycotting BC electricity if economically unsustainable pipeline corridors are not made accessible.

Maybe it is time to think beyond fossil fuels, and change how we do business?

Upcoming CVNS Activities

Volunteers to lead walks are heartily welcome. Please volunteer to be a guide.

General Instructions for Field Trip Participants:

- All walks are club events and reserved for members only, unless otherwise stated. Typically, one walk each month is opened to the public.
- Car-pool at the Old Church Theatre, 755 Harmston Avenue in Courtenay, or meet guides at trail heads, unless otherwise announced. Arrive at the meeting area 10 minutes prior to the appointed time.
- Wear clothing and footwear suitable for the conditions.
- Bring water and a snack.
- No dogs please.
- Share travelling expenses when car-pooling.

Schedule

This schedule is subject to change. Please check the website and watch for e-mails.

Saturday, March 19: Headquarters Townsite Park. Meet at the Park at 9:30AM. Take Headquarters Road out of Courtenay. At T-junction with Merville Road, take left, and left again on Fitzgerald Road. Take right on Farnham Road to the park. See map at <http://www.comoxvalleyrd.ca/assets/Community/Documents/HeadquartersTownsiteParkLocationmap.pdf>

Saturday, March 26: Bowser Ecological Reserve. Meet at Harmston at 9:00AM or at the Reserve at 9:30AM. See www.env.gov.bc.ca/bcparks/eco_reserve.

Saturday, April 2: (Public Walk). Puntledge River from Comox Lake, east side. Meet at Harmston at 9:00AM or at Comox Lake at 9:30AM. Meet at the Upper Dam. (Follow Comox Lake Road and turn right at the Rod and Gun Club).

Saturday, April 9: Elk Falls, Campbell River. Meet at Courtenay Country Market at 9:00 AM or at Elk Falls at 9:45AM (to the right off the main highway to Gold River. It is well signed).

Saturday, April 16: Helliwell Park, Hornby Island. Meet at the parking lot at the ferry terminal at Buckley Bay for car pooling. Parking lot is on the west side of the coast highway, slightly south of the terminal turn-off. Meet at 8:30AM at Buckley Bay upper parking lot, for the 9:00AM ferry departure. Leaving Hornby Island on the 2 PM ferry.

Sunday, April 24: Fawn Lily Walk—Exhibition Grounds, Courtenay. Meet at 9:30AM at the Exhibition Grounds parking lot beside the Comox Valley Curling Club on Headquarters Road across from Vanier High School.

Sunday, May 1: (Public Walk) Bird watching at Cumberland Marsh with Cumberland Recreation. Time and place will be publicly announced by Cumberland Recreation. This is free for CVN members. A fee of \$10 will be charged by Cumberland to the general public. All funds raised are donated by L. Maingon for children's education. Generally: Meet at Cumberland at Jumbo's cabin. There is a small parking area off Comox Lake Road. Watch for the No. 1 Japanese Townsite sign on Comox Lake Road for access to the parking area.

Saturday May 7: Spring Bird Count. No walk.

Saturday, May 14: BC Nature AGM in Comox Valley. No walk.

Saturday, May 21: Comox Lake Trail. (Inland). Meet at Harmston at 9:00AM.

Saturday, May 28: Ripple Rock (Campbell River). Meet at Courtenay Country Market on Highway 19A at 9:00AM. Pack a light lunch.

Saturday, June 4: Oyster Bay. Meet at Courtenay Country Market at 9:00AM or at the parking lot at Oyster Bay at 9:30AM.

Saturday, June 11: Stotan Falls. Meet at Harmston at 9:00AM.

Saturday, June 18: Paradise Meadows. Meet at the parking lot at 9:00AM at the bottom of Strathcona Parkway, just off the Inland Highway.

Saturday, June 25: (Public Walk) Aquatic ecology at Cumberland Marsh (with Cumberland Recreation). Time and place will be publicly announced by Cumberland Recreation. This is free for CVN members. A fee of \$10 will be charged by Cumberland to the general public. All funds raised are donated by L. Maingon for children's education. Generally: Meet at Cumberland. There is a small parking area off Comox Lake Road. Watch for the No. 1 Japanese Townsite sign on Comox Lake Road for access to the parking area.

Saturday July 2: Sutton Pass Ecological Reserve, Port Alberni. Meet at Harmston at 8:30AM for car pooling. Bring a packed lunch. See http://www.env.gov.bc.ca/bcparks/eco_reserve/suttoner.html#Location.

Saturday, July 9: Wood Mountain hike. Forbidden Plateau. Meet at Harmston at 9:00AM. See <http://islandmountainrides.com/riding-regions/forbidden-plateau>.

Saturday, July 16: Allen Lake hike. Cumberland Forest. Meet at Harmston at 9:00AM. See http://beautifulcomoxvalley.blogspot.ca/2012/10/allen-lake-cumberland_9.html.

Saturday, July 23: Battleship Lake and Lady Lake, Mount Washington. Meet at the parking lot at 9:00AM at the bottom of Strathcona Parkway, just off the Inland Highway.

Saturday, July 30: (Public Walk). Vanier Park. Meet at the Recreation Centre parking lot at 9:00AM.

Saturday, August 6: McKenzie Lake. Meet to car pool at the parking lot at the bottom of Strathcona Parkway, just off the Inland Highway at 9:00AM.

Saturday, August 13: Upper Trent River, Inland from the Island Highway bridge. Meet at Harmston at 9:00AM to car pool.

Saturday, August 20: Nile Creek. Meet at Harmston at 9:00AM to car pool.

Saturday, August 27: Rosewall Creek. Meet at Harmston at 9:00AM to car pool.

Sunday, September 4: (Public Walk) Pub-to-pub walk at Oyster River/Salmon Point. Meet at 10:00AM at the Courtenay Country Market on the Old Highway (19A), across from the Golf Course just north of Courtenay or at 10:30AM at Oyster River Regional Park. Sunday brunch/lunch at Salmon Point Restaurant.

Reminder for Field Trip Leaders

All field trip participants who are non-members must sign the waiver recognizing that there are risks inherent in all outdoor activities.



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About the Society

Website

comoxvalleynaturalists.bc.ca

General E-mail Address

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Mailing Address

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Box 3222
Courtenay BC
V9N 5N4

Executive

President: vacant

Past President: Loys Maingon

Vice-President: Jarrett Krentzel

Secretary: Gabriel Baubaiges

Treasurer: Isabella Erni (TreasurerCVNS@gmail.com)

Group Leaders and Other Appointees

Birding: David Robinson

Botany: Karin Franzen, Alison Maingon

Families Group: Jocie Brooks, Jarrett Krentzel

Conservation: Loys Maingon

Photography: Terry Thormin

Wetland Restoration: Murray Little

BC Nature Delegate: Sharon Niscak

Comox Valley Environmental Council liaison: Jarrett Krentzel

Comox Valley Conservation Strategy liaison: Murray Little

Trip Planning: Joyce Bainbridge

Membership Secretary: Maris Ratel

Web Administrator: Krista Kaptein

Newsletter Advertising: Kathie Woodley

Newsletter Editor: Sharon Niscak, David Orford

Speakers: Loys Maingon

Membership

One adult: \$30; Family: \$40;

Junior (12-17): \$10; Student (18-22): \$15

Mail cheque (payable to Comox Valley Nature) to:
CVNS Membership Secretary
314 Aitken Street
Comox BC
V9M 1N4

Receipts are provided at meetings, or include a SASE.

Membership fee is due January 1. If not paid by February 28, names are removed from the CVNS and BC Nature lists. New memberships started after September include the following full calendar year.

Change of address, phone number or e-mail: Please advise the Membership Secretary.

Meetings

Monthly general meetings are held on the 3rd Sunday of the month at 7:00 p.m. in the Florence Filberg Centre, 411 Anderton Avenue, Courtenay.

June meeting: Potluck at a member's house.

No general meeting in July, August, or December.

Bird meetings: First Thursday of the month, 7:00 p.m. at the Filberg Soroptimist Lounge, Courtenay. For information, contact David Robinson.

Botany meetings: Second Monday of the month at a member's home, 12:00 p.m. An e-mail is sent prior to the meeting to confirm location and topic.

Botany walks (weather permitting) follow the meeting and are also scheduled at other times. To be included on the botany list, contact Karin Franzen or Alison Maingon.

Newsletter

The newsletter is published 3 times per year (March, June, and November). It is e-mailed to members, and is also available at the monthly meetings. If you wish to receive printed copies by Canada Post, the fee is \$5.00 per year.

The newsletter depends on your submissions. Please consider contributing an article on any topic of general interest to other members—for example: natural history, conservation activities, trips, or unusual sightings. You can send your contribution by e-mail to newsletter@comoxvalleynaturalists.bc.ca.

We would appreciate receiving contributions by the first day of the publication month.