

ARROWSMITH NATURALISTS NEWSLETTER

TO KNOW, ENJOY AND PRESERVE NATURE

PRESIDENT'S REPORT

By Sally Soanes

Greetings to you all.

I know many share my conflicted emotions about our wonderful weather. The warmth and sunshine so welcome and the lack of rain so worrisome.

So let's celebrate our wonderful club. Seedy Saturday was so much fun and very successful. Thanks to all who helped. Our trips organized by Claire have been so enjoyable. The photos from them are amazing with such diversity. If you have a place you love and you'd like to share please get in touch with Claire.

Dave Hutchings and his intrepid crew have been beavering away with much success in the estuary. Anyone interested in watering the plantings please get in touch with Dave.

Roger Sims raised some funds for us with his successful birdathon supported by many club members. Thanks Roger.

Lynne, Toni and crew, with the Hamilton Marsh tour, showed a record number of folks what a wonderful treasure that beautiful place is. We also participated and supported a presentation to the RDN in hope that it will finally be protected. No word on that yet.

The Mushroom committee has been hard at work on the bits and pieces in holding an event of this size. In the past NIWRA has always done this for us but as we're on our own it's up to us. Who knew so many permits were required!! Volunteers are most welcome! Please. The event this year is in the Coombs Fairgrounds on October 27th with the ID being done on the 26th. It's a wonderful venue with two large buildings, plenty of parking, room for lots of vendors and food trucks. Thanks Lynne for finding such an ideal spot.

There are some folks I'd like to thank. Rosemary Taylor for all the work on the signage you've done. So good and so welcome. Ronda Murdock for the wonderful speakers you've lined up and presented over the past years. And Elaine for handling our gmail account. It turned out to be a big job and we're very grateful for your help.

Last but not least our excellent picnic in the Parksville community park on July 29th at 4pm. All that's required is great food, a nature themed item for auction and a smile. It might be a good opportunity to check out Parksville's very own arboretum.



IN THIS ISSUE		Outings Schedule	2	Photo and Story	5
President Report	1	Book Review	4	The Last Frontier	6
Club Information	2	Links to Articles	4	Australia Revisited	7
Speakers Program	2	Four Days in the Warm Land	5		

ARROWSMITH NATURALISTS CLUB/MEMBERSHIP INFORMATION

General Information: Club membership information is available on the web-site <http://www.arrowsmithnats.org>; or by writing to Arrowsmith Naturalists, Box 1542, Parksville, BC V9P 2H4.

Membership Includes: Monthly meetings (talks and/or slide shows), regular outings, BC Nature newsletter four times a year and the club newsletter in February, June and October.

Meeting Location: St Edmund Church Hall, 407 Wembley Road, Parksville, BC.

Meeting Dates: 4th Thursday of January to June and September to November.

Meeting Time: Doors open at 7:00 pm and meeting starts at 7:30 pm.

Respect for Clean Air – No Smoking & Scent Free – Smoking is not permitted in or around St Edmund Church Hall. Please refrain from wearing perfume or scented products.

ARROWSMITH NATURALISTS OFFICERS AND CONTACTS

President: Sally Soanes

Newsletter Editor: Maggie Green

Vice President: Doug Elias

Promotion: Maggie Little

Past President: Lynne Brookes

Refreshments: Ron Wyckoff; Dave Erickson

Executive Secretary: Mark Mazurski

Speaker Program: Nancy Randall

General Meeting Secretary: Sue Wilson

Stewardship: Dave Hutchings

Treasurer: Helen Davidson

Sunshine Contact: Pam Helem

Membership: Toni Wyckoff

Archivist: Jen deHaan

BC Nature Rep: Al Kirkley

Facebook: Tom Constable

E-mail Correspondence: Duncan Campbell

Web Site: Jen deHaan

Conservation/Environment: Gary & Ronda Murdock

Field Trips: Claire Summers

Broom Bashing: Dave Hutchings When: 9:30am - 1st and 3rd Thursdays of the month: Where: Bottom of Shelley Road, Parksville. Weather permitting.

Directors: Al Kirkley; Claire Summers; Terry Taylor; Rosemary Taylor

ARROWSMITH NATURALISTS SPEAKERS PROGRAM LIST

June 27-Dr. Erik Krogh and graduate researchers. Applied Environmental Research Lab Vancouver Island University. Air and Water Quality Monitoring with the state-of-art SpecMobile.

ARROWSMITH NATURALISTS OUTINGS SCHEDULE

By Claire Summers

Many thanks go to the Leaders that make these outings possible. Please keep in mind that this is an ever changing schedule. Changes occur due to; weather, lack of a leader, new information about trail conditions, timing of flowers blooming or lack of etc. I will keep you informed with changes as soon as I possibly can. The date will remain the same but the location may change. Also to be scheduled in as information arrives, are trips to; a Maple Syrup farm, Swan Festival in Comox, Local Tidal Pools, reduced fare on the Francis Barkley to Ucluelet in October.

Saturday June 15-Ships Point Peninsula A combination of leafy trails, a beach walk along Bayne Sound and some paved roads. We will visit Ships Point Regional Park and the Fanny Bay Conservation Area. The route is flat but sturdy hiking shoes or boots are required for the beach section which is fairly rocky. The area is of interest to birders and plant hunters along with stunning scenery for photographers. Approximately 2 hours. Meet at QBCC 9:30am or Fanny Bay Community Hall 7793 South Island Highway 10:00am. Bring a lunch. Leader: Tom Constable

Wednesday June 26-Stamp Falls, Port Alberni Easy-walking stick recommended. A beautiful walk along the river through an old growth forest in a remote corner of this park. This end of the park was never logged and has some big trees left for us to admire. Also a visit to the falls and fish ladder to see the migrating salmon. Meet C&J 9:30am or QBCC 10:00am. Bring a lunch. Leader: TBA

SEPTEMBER 2019 to JUNE 2020

Saturday September 7-Morrell Sanctuary

Wednesday September 11-Stoney Hill Regional Park, Duncan. Leader: Toni Wyckoff

Saturday September 28-Little Qualicum Fish Hatchery

Saturday October 12-Big Qualicum Fish Hatchery/Mushroom Walk Leader: Terry Taylor

Wednesday October 16-Nymph Falls/Puntledge Fish Hatchery Leader: Maggie Little

Sunday October 27-Mushroom Festival

Saturday November 9-Spider Lake/Illusion Lake

Wednesday November 13-Christie Falls/Canyon Bush Creek

Wednesday November 20-Living Forest Trail, Port. Alberni area

Wednesday December 4-Cameron Lake/Cathedral Grove

Wednesday December 18-Oyster River UBC Research

Wednesday January 8-The Raptors, Duncan

Saturday January 18-The Abyss

Wednesday January 29-Deep Bay/Tour Station

Saturday February 1-Outing To Be Announced

Wednesday February 12-Royal BC Museum, Victoria

Wednesday February 26-Fanny Bay Oyster Tour

Wednesday March 11-Gabriola

Saturday March 21-Somass Estuary/Kitsukis Dyke

Wednesday March 25 -Harewood Plains

Wednesday April 1-Biggs and Jack Point

Saturday April 18-TBA

Wednesday April 22-Cottle Lake Loop/Blueback Beach Stairs/Legacy Marsh

Saturday May 2-Somenos Marsh

Wednesday May 13-Paradise Meadows/Battleship Lake

Wednesday May 20-Newcastle

Wednesday June 3-Dr. Sun Yet-Sen, Vancouver

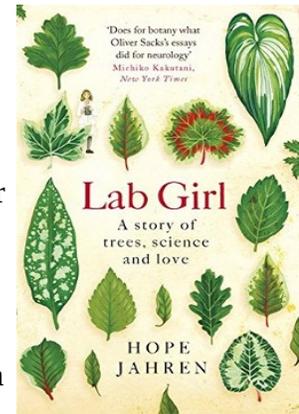
Wednesday June 24-McLean Mill/Train Ride, Port Alberni

A Can/Bottle Return Account is available at the Qualicum Beach Recycling Centre at 141-4 Ave E, Qualicum Beach. You can donate the proceeds off your returns to the Arrowsmith Naturalists account. Please make the request to credit Arrowsmith Naturalist account before your bottles are counted by staff at the centre. Please mention this to friends & family.

BOOK REVIEW

***Lab Girl* by Hope Jahren Published by Alfred A. Knopf 2016 Book Review by Sue Wilson**

Hope Jahren is an American geobiologist who has been at home in a science lab since her childhood days in her father's teaching lab. Her book *Lab Girl* is a deeply personal account of her struggles with the competitive world of academia and with her mental health. She intersperses her memoir with chapters about plant life, from seeds to giant trees. She writes that everyone remembers a favourite tree from their childhood. *Lab Girl* veers from the comical aspects of wild and crazy field trips to the seriousness of bi-polar disorder. There are touching human relationships and fascinating plant facts. The author confesses to having discussed mosses and ferns on a first date. A quote of interest: "Humans are actively creating a world where only weeds can live and then feigning shock and outrage upon finding so many."



This is not a technically scientific book, although the author has earned many scientific accolades. It is an expression of her love for the natural world and her joy in discovering new things about it. The aptly named "Hope" Jahren says that, "being able to derive happiness from discovery is a recipe for a beautiful life." Available through the Vancouver Island Regional Library

LINKS TO ARTICLES OF INTEREST and WORD OF THE DAY By Teri Hitch

https://upliftconnect.com/astounding-connection-between-people-and-trees/?utm_source=UPLIFT&utm_campaign=82e5e246f6-EMAIL_CAMPAIGN_2019_04_04_12_59&utm_medium=email&utm_term=0_19c1fc07c2-82e5e246f6-114549689

https://www.theguardian.com/environment/2019/may/07/humanity-must-save-insects-to-save-ourselves-scientist-warns?utm_term=RWRpdG9yaWFsX0d1YXJkaWFuVG9kYXIVUy0xOTA1MDC%3D&utm_source=esp&utm_medium=Email&utm_campaign=GuardianTodayUS&CMP=GTUS_email

https://stopsmartmeters.org.uk/wp-content/uploads/2014/11/ki_beesbirdsandmankind_print.pdf

<https://www.cbc.ca/news/technology/canada-biodiversity-1.5125108?cmp=newsletter-Morning%20Brief%20May%207%202019>

The earth is not dying, it is being killed, and those who are killing it have names and addresses.—Utah Phillips



Photo provided by
Teri Hitch

FOUR DAYS IN THE WARM LAND

By Toni Wyckoff

May 2-5/19 The Cowichan Valley Naturalists hosted the BC Nature AGM in Duncan BC.

It was 4 days and nights packed solid with lectures and entertainment on everything from Garry Oaks to native plants, Humpbacks to Lamprey, Astronomy to First Nation Dancers, Marmots to Bluebirds, Cyanobacteria to Screech owls.

16 lectures in all and I only got to 7. There were 21 field trips and I managed 3. My heart goes out to the organizers as it is a daunting task that takes a year or more to get all the coordination and hick-ups out along the way. Many of them are last minute problems you don't anticipate.

One lady that I'm sure was working every minute of the day and night was Genevieve Singleton. She did a lot of the MCing, stood in as speaker when several people could not make it, led 3 field trips, had everything organized so all the timing was spot on. My deepest thanks goes to Genevieve and I hope she is taking a well deserved rest.

My first field trip was to the Garry Oak Protected Area with Genevieve and Margaret. This area was under siege by the developers when children playing, found human bones. We can now enjoy this beautiful stand of Old Growth Garry Oaks, thanks to those kids and their ancestors.

Second field trip was Stoney Hill Hike with Diana. A jewel in the Maple Bay area, you soon gain elevation to fields of shooting stars and rocky bluffs. Overlooking Satsum Narrows, Salt Spring Island, and the Olympic Peninsula off in the distance, we really understood why "Quw'utsen" means "Warm Land" as we sat in the sun and watched the Eagle and Vultures soaring below us.

The third trip was to the Koksilah Ancient Forest led by Warrick and David. This forest sits on the banks of the Koksilah River on private land. Back in the '80s 2 loggers put down their chainsaws and refused to cut down the Giants. Since then Warrick and his wife have been trying to save the stands of old growth Cedar, Douglas Fir, Hemlock and all the natural growth that goes with it.

It really hit me, the passion of the lecturers, the trip leaders, and the CV Naturalists to save what is near and dear to them. Genevieve saying, when she was ten, someone inspired her so much that she made nature her life's work. At the banquet, I sat next to a lady that had camped out next to the Marmots back in the days when they realized they were on a downward spiral. Three ladies on the other side of me, enthusiastically work with children at Swan Lake nature House in Saanich. A must visit the next time we are down that way.

The next AGM is in Princeton at the end of May 2020. We will be there to see what the Naturalists have to teach us about the Similkameen River, meaning "Treacherous Waters."



PHOTO AND STORY

By Sallie Dabb

We decided to put this bird house on the garage wall next to a honeysuckle bush. A pair of robins came along, pulled some of the honeysuckle stems over the bird house and then built a nest on top. Unfortunately the gardeners pruned the honeysuckle and scared the robins away because there are four eggs in the nest! I don't think they will be coming back.

THE LAST FRONTIER

By Terry Taylor

When most people think of the last frontier they probably consider areas like the Amazon, the arctic, or the Himalayas. However, it has been suggested, with good reason that the last frontier is the soil ecosystem. Until about 20 to 30 years ago there would be no reason to make such a statement. By that time molecular biology had become advanced enough to analyze the genetic markers in soil to estimate the number of micro-organisms contained therein. The results were far beyond what bacteriologists had previously considered likely.

Most of the biodiversity around us, by far, is microscopic. The organisms we see on our field trips are the enormous ones that can be seen without optical aid. Our unaided senses cannot detect most of the living world. Using genetic recombination techniques and statistical analysis, the new research showed that a few grams of rich soil contain more than 10,000 species of different bacteria, and some estimates place the number at possibly 30,000. These are astounding numbers, well beyond the known number of bacterial species. All scientifically described bacteria are contained in a multi-volume set of books called Bergey's Manual. It contains information on 5000 species, and a handful of soil contains at least twice that number.

To understand this discrepancy you need to know how bacteria are identified. We cannot see them in the field, and most of them are so small that there is difficulty seeing them even with a microscope unless they are stained and observed at a magnification of 1000 X. Most of the bacteria that have been identified are the ones that can be grown as colonies on nutrient rich agar in Petri dishes. These are the ones that grow in relatively simple, nutrient rich conditions, and many of them are pathogenic ones. Over 99 % of bacteria cannot be cultured. They live in complex micro-ecosystems, and are not amenable to artificial conditions. Identifying the bacteria in the soil around us is like trying to identify the plants growing on Mount Arrowsmith by looking at the summit from Parksville.

The majority of our antibiotics are produced by soil bacteria, from that very small number of that can be grown in culture. Most of them are produced by actinomycete bacteria in the genus *Streptomyces*. The future prospects, with new technology, of finding many other promising chemicals and medicines in the soil ecosystem is enormous.

In 2003 a research project at UBC found a new antibiotic in an undescribed species of *Streptomyces*. It came from the surface of the lichen *Cladonia uncialis*, and due to this association is known as uncialamycin. Whether it is from the soil beneath the lichen or forms an association with the lichen is totally unknown. This lichen grows on the ground. It is also unknown if the bacterium producing it is rare or common. It has only been cultured from this one collection. However, there are cultures of it around the world now, and uncialamycin has been produced artificially. It is currently being researched at Rice University, and is considered a promising anti-cancer medicine.

Maybe you will never look at soil in the same way ever again.

Cladonia uncialis

Photo by
Rosemary Taylor



AUSTRALIA RE-VISITED NOVEMBER 30 2018 TO JANUARY 4 2019

By Roger Simms

On November 28th Maggie and I flew Qualicum Beach to Vancouver then on to Auckland New Zealand for a brief stop-over then on to Sydney Australia, having crossed the Dateline so November 29th disappeared into where-ever.

Our hotel was downtown and a five minute walk from Sydney Harbour from where we could easily see the Sydney Bridge and Opera House. The next couple of days we explored downtown and took a harbour tour out to Manly, where we had lunch and a look around, and then back. The scenery was most interesting especially as we were able to see the Bridge and Opera House fairly close up. On the 3rd and 4th of December I was taken birding by two guys I had met previously in 2016 Barry on 3rd and Allan on 4th. Barry found me 88 species a few of which were lifers, but we did miss according to Barry "some easy ones". However a good say's birding without rain or difficulties (no snakes).

The next day I was picked up by Allan who asked what would I like to see today so I said well last time we missed Powerful Owl, Tawny Frogmouth and seeing the Superb Lyre Bird. So he proceeded to find them, an adult and a juvenile Powerful Owl plus a Tawny Frogmouth male on the nest and the female resting a little away from the nest, plus the Australian version of Barn Owl. Apparently several had been seen in the Sydney area as they had moved there from inland due to the ongoing drought. The Superb Lyre Bird was seen later in the morning. We thought we had missed it, we heard it but could not see it anywhere however just as we were about to move on there it was about 2 metres away just down on the river's edge scraping the soil and pecking at lunch. This outing recorded 44 species including 8 lifers. While I was birding Maggie took off and made a couple more outings from the harbour.

December 5th was the day we boarded the Indian Pacific train heading for Perth, Western Australia. Lots of friendly people on the train including a couple who had lived in Australia many years and had become keen birders. The stops on the way included Broken Hill, where we were bussed into the desert very early to see several sculptures by international artists, placed on a low hill. We were back on the train in time for breakfast. Next stop Adelaide where we were bussed to the McLaren Vale a wine-growing area for some tasting then to the nearby coast for a meal. Next stop Cook, a small location where the four inhabitants serviced the trains basically with water for the rest of the journey. Before the rail system was nationalized, with standard gauge rails those four people were 200, but the other 196 were no longer needed. Our last stop was Rawlinna Station at dusk where tables had been set up for all of us to eat out under the stars. We were all provided with ponchos to keep us warm as we had our meal. Then we were entertained by a guitar-playing Aussie for a sing-along, then back on the train.

After 4 days and three nights we arrived on time in Perth where our daughter met us and took us to her home in Secret Harbour about 40 minutes south of Perth. From then on we were based in Secret Harbour but in order to give Melanie a break we spent 6 nights in Margaret River which gave us the opportunity to visit Port Leeuwen where the Indian Ocean meets the Southern Ocean. The Lighthouse there was impressive but what a cold wind. On the way to there we stopped at Hammelin River Estuary where Eagle Rays come right up to the water's edge. They are small than Manta Rays and being close to the shoreline often part of the body is out of the water. During our stay we visited two wineries and more driving and birding. We were also picked up Dec 27th and 28th and taken to a wheat growing and sheep station containing at least 1500 sheep. That whole area inland from Secret Harbour was rolling hills and wheat growing and sheep rearing. Maggie was given some Merino sheep wool before we left for Williams a small town with a large diner called The Woodshed and extensive gift shop.

On the day we returned our rental car in Mandurah we were taken to the harbour for a tour hoping to see dolphins, we saw about eight swimming close to the side of the launch we were on. A lot of people

live at the water's edge and the home values are all over Aus\$1 million. The scenery from the harbour launch was interesting as well as passing some local parks containing natural areas with several birds close to or on the water. On December 30th I was taken birding by another contact and we drove around the Pinjarra area and ended up with 88 species and 14 life birds. Our final outing was on December 31st when Melanie joined us for a cruise from Perth down the Swan River to Fremantle and again a very scenic river cruise. After strolling some of the older parts of town we had lunch and then return to Perth. Our final night was spent at the Maracoonda hotel near Perth airport. Melanie joined us for supper and then after she left it was bed and an early start for the return trip. At 7.00am we departed from Perth to Auckland, then on to Vancouver and from there home to Qualicum Beach airport (a rough flight) and we were collected by a friend and driven home. The whole return journey was completed on January 4th after again crossing the dateline.

The whole trip was an adventure we both enjoyed very much, some times tiring but always a chance to rest. Our Hotels in Sydney, Margaret River and Perth were clean and roomy and worth the expense as was the train journey which was all inclusive, nothing to pay for on the train. We were concerned at the outset as to whether we had taken on too much but we managed and rested as and when we could.

As for my birding I believe I tallied 155 species including 34 Life birds. We were able to assist Melanie with some gardening, which was a great help after she had started out with basically a house surrounded by sand. She has done quite a lot to it and we added our effort and native plants. We met so many friendly people, and on the train several different nationalities. We live in hope we can get there again.



Eastern Spinebill

SUNSHINE – If you know of an Arrowsmith Naturalist who is ill, in hospital or recently bereaved, please contact: Pam Helem at arrowsmithnats@gmail.com.

The Arrowsmith Naturalist Newsletter is published three times a year in February, June and October. Articles on birding, travel, botany and environmental matters are welcome. The next deadline for submissions is September 30, 2019 for the October 2019 edition. Please email articles and photos to: green@shaw.ca. Some editing may be required for length or held off for another edition as per available space.