

WINGSPAN

WILD BIRD TRUST OF BRITISH COLUMBIA
MAPLEWOOD FLATS • SPRING/SUMMER 2019 • FREE

Siberian Crane

COAST SALISH
PLANTS

Pacific Coast
PORTRAITS EXHIBIT

Art & Nature
SUMMER CAMPS
PREVIEW
INSIDE



Cover image credit:
Loon on the Wing (Common Loon)
by Rob Butler

A person wearing a camouflage cap and jacket is holding a large telephoto lens camera, looking through the viewfinder in a forest setting. The background is filled with green foliage and trees.

CALLING ALL
Nature Photographers!

2ND ANNUAL Photo Exhibition

CALL FOR SUBMISSIONS

ENTRY CRITERIA

High resolution digital (recommended approximately 4650 x 5850 pixels, but not mandatory).

- Picture must be taken at any point in the Conservation Area at Maplewood Flats
- Birds, wildlife or other fauna, flora, or landscapes must be featured

- Cropping, sharpening, color correction and exposure manipulation are acceptable
- Include name, email, and contact information.
- Confirm that the image was taken by the photographer and is property of the photographer
- New and experienced and diverse photographers...ALL

ARE WELCOME TO PARTICIPATE.

- Must be a member-in-good-standing of the Wild Bird Trust of BC - join online here <https://bit.ly/2VsG0XH> or email wbtmembershipoffice@telus.net

PHOTO: GENE FIGUEROA

**THE EXHIBIT WILL RUN FROM SUNDAY, OCTOBER 6
- SATURDAY, NOVEMBER 23, 2019.**


WBT
WILD BIRD TRUST
of British Columbia

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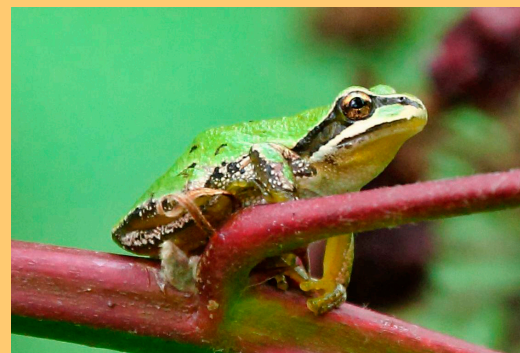
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Environmental Grant Writer Tara Tompkins
and Research Coordinator Chloe Harvey
(credit Lianne Payne) - p.26



BCIT Small Mammals Research Team: Katie
Piper, Leila Riahi, Madeline Weafer - p.19



Pacific Tree Frog (credit Rob Alexander) - p.20

WINGSPAN

YOUR GUIDE TO
MAPLEWOOD FLATS
SPRING/SUMMER 2019

CIRCULATION: 5000

Published by
WILD BIRD TRUST
OF BRITISH COLUMBIA
Providing wild birds with
sanctuary through ecological
protection and restoration, and
supporting communities with
education, culture, and
reconciliation programs.

COORDINATED BY
Communications Committee

DESIGN BY
Honey Mae Caffin

THE CONSERVATION AREA
AT MAPLEWOOD FLATS
2649 Dollarton Highway,
North Vancouver, BC, V7H 1B1
(2 km. east of Second Narrows Bridge)
604-929-2379

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WELCOME TO OUR READERS!

As the weather warms for summer we are looking forward to having droves of children learning about birds, science, nature and making art about their experiences. Summer camps at Maplewood Flats also offer a unique experience for children to embark in a traditional ocean-going canoe from Takaya Tours to study the area from the water as they immerse themselves in nature. See pg 28 for more details.

One of our summer highlights is our 13th Annual Osprey Festival, taking over Saturday, July 20, 2019 with live music, food, nature stations, workshops, and info tables.

Fun for serious or amateur birders and nature lovers, as well as local residents looking for free family fun on the North Shore. Thanks to the North Vancouver Recreation & Culture Commission for funding our lineup of artists and musicians who will be sharing their creativity under the shade of the trees. Also that day we will have a special opening reception for Pacific Coast Portraits, our exhibition featuring Artists for Conservation member artists. See page 10.

In 2017, the Board of Directors and Habitat Committee determined the need for the development of a long term management plan to address the myriad of emerging ecological issues at the site, and advance reconciliation with the Tsleil-Waututh Nation. We are also drafting a memorandum of understanding with the Nation's Treaty Lands & Resources Dept., who continue to actively guide the protection and restoration of Burrard Inlet. We regularly consult with Tsleil-Waututh, and are working together on small restoration projects meeting ecological and cultural goals. See page 26 for an invitation to a Habitat Plan Research Symposium slated for November 16, 2019.

So much going on for the birds at Maplewood Flats! We hope you enjoy *Wingspan* and the spotlight on birds locally and around the world.

Jude Grass, Vice President
Irwin Oostindie, President

MAPLEWOOD FLATS SUMMER STAFF

Summer is our busiest months at Maplewood Flats and each year we hire summer staff to conduct field research, produce events and support the organisation. We are thrilled to introduce our team for 2019 - young adults keen to work in nature, for reconciliation, and for children's education. Next time you are at Maplewood Flats say hello to our summer crew: Marina, Jazmin, Gillian, Dee, Senaqwila, and Silken.



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Dan Straker
Tamiko Suzuki
Carleen Thomas

**CONSERVATION AREA
MANAGER**

Ernie Kennedy
sitemanager@wildbirdtrust.org

EXECUTIVE DIRECTOR

Lianne Payne
ed@wildbirdtrust.org

ADMINISTRATOR

Elise Webb
admin@wildbirdtrust.org

**WBT WILD BIRD TRUST
OF BRITISH COLUMBIA**

is incorporated as a non-profit
society under the Provincial
Societies' Act, Society
#S-31197 and is a charitable
organization under the federal
"Income Tax Act" Charity
#14026 5570 RR0001



Top: Marina Lazarich (Summer Camp Coordinator) and Jazmin Feschuk (Coast Salish Programs Assistant); Middle left: Dee Gorn (Habitat Restoration Coordinator); Middle right: Senaqwila Wyss (Coast Salish Plant Nursery Manager); Bottom: Silken Handford-Perronnet (Reconciliation Programming Assistant) and Gillian Der 謝美華 (Communications Assistant).



Dr Patrick Mooney and Cap College interns working with the Wild Bird Trust (Photo by Lisa Pourlak, 1995)

FROM THE MUDFLATS TO THE CASPIAN SEA AND BACK!

BY LISA POURLAK

As a fresh Biology Graduate from SFU, I was not really good or interested in Laboratory work. Therefore, I felt a little bit disoriented until a friend of mine told me about a new 1-year Post-baccalaureate Diploma program on “Environmental Sciences” in Capilano College (now Capilano University). For me it was a good way to get out of the closed environments and spend most of my time outdoors! We were about 20 people from diverse fields, sitting in one classroom, listening to professionals talking about different environmental issues, and allowing us to have discussions and come up with solutions. That is how I built a vision for my life. At the end of the program, I was lucky to be selected by the Wild Bird Trust to conduct some of the baseline studies for biodiversity restoration at the Maplewood Flats. In fact, this was where I got my first paycheck!

In the mid 90s, the Maplewood Flats was very quiet and covered with bushes, which made it difficult to do transects. Thus, me and my classmate

would walk long hours, sometimes under heavy rainfall and challenging with our rubber boots, to select the necessary samples for the baseline biodiversity studies. We worked quite hard and independently, under the supervision of experts such as Dr Beard, the Head of the Wild Bird Trust and Dr Mooney, a well-known Landscape Architect from UBC. They would occasionally take us along on field trips to other wetlands in the Lower Mainland, for eradicating invasive species such as Purple loosestrife and/or counting bird nests. I remember, I was quite intrigued by the innovative device Dr Beard was using for counting the eggs in the bird nests. As a professional dentist, he had made a device made up of a dental mirror and a very long stick, to allow counting the eggs in a bird nest that would be perfectly hidden in the middle of the reed beds!

Maybe all this work was critical in shaping the rest of my journey, as when I moved back to my country of origin (Iran) to get some overseas work

experience in the environmental field, it happened to be focussed mainly on wetland ecosystems! As a graduate from Canada, I was able to get involved in biodiversity conservation projects that were being implemented through the United Nations Development Programme (UNDP) with co-funding from the Global Environment Facility (GEF). The aim of these projects were to protect the globally significant species and ecosystems. Iran indeed is the birthplace of the Ramsar Convention, which was adopted in 1971. Ramsar is the name of a beautiful coastal city in between the Hyrcanian forest and the Caspian Sea. There are 24 Internationally Important wetlands that have been registered as Ramsar Sites in Iran (eg. Uromiyeh Lake, Hara Mangrove forest, Anzali wetland, Fereydunkenar wetlands).

Upon my arrival to Iran, I was lucky to meet a Canadian Finn, Ms Ellen Vuosalo Tavakoli, who had been working on the Critically Endangered Siberian Crane (*Grus leucogeranus*) in the Fereydunkenar wetlands. Furthermore I did my Masters and PhD research in the same wetlands, as they have a very interesting story. These are indeed semi-artificial wetlands that is designed and managed by local farmers for the purpose of rice farming in summer and duck trapping in winter. Every year, after harvesting the rice in July, the farmer/trappers start preparing the wetland for traditional duck trapping. This is a 300-year old tradition that was practised in most of the wetlands south of the Caspian Sea, but now disappeared elsewhere. Making a wetland that is favorable for millions of migratory birds, requires knowledge and skill. The farmer/trappers would do all the work, including dredging the canals, fencing the area by natural cover (reeds), training the ducks to be able to fool the wild ducks, etc. This is a good example of an Indigenous Community-conserved Area (ICCA) in wetland ecosystems. The ICCA concept is being increasingly discussed in the IUCN and CBD. In fact, the Government of Germany has funded a large project (GSI-ICCA) to support ICCAs around the globe, and the contribution of ICCAs to fulfill 2020 Aichi Targets.

NOW I feel that after years of working on and off outside Canada, it's about time to give back in terms of knowledge and experience. Trained in the biology and environmental field, I now recognize all the efforts by all the people who have contributed their time and knowledge for my training. It's about time to give back to the youth. I would like to tell them that to conserve our beloved species and

ecosystems, we need to be able to work with people and communities, make them our No.1 priority and most important partner! After all human pressure is the most degrading factor to the environment and taking off some of that pressure is only possible by working with people, who might be coming from different backgrounds and geographical regions. To keep our planet safe, we have to be open to dialogue and learn from each others' knowledge and experience to alleviate some very serious environmental issues.

Lisa Pourlak is a PhD Candidate in Environmental Planning at Tehran University. She is a member of the IUCN Crane Specialist Group.

FARMERS AS STEWARDS OF SIBERIAN CRANE HABITAT IN IRAN

BY LISA POURLAK

For more than a decade, a single Siberian Crane has been returning to its wintering grounds in Fereydunkenar, Iran, south of the Caspian Sea. The local farmers call him 'Omid', meaning 'hope' in Farsi. This lonely Siberian Crane is the remaining member of a flock of about 11 cranes which was first recorded in the same area in the mid-1970s by A. Ashtiani — a remnant of the historic western population of Siberian Cranes which bred in western Russia and wintered in Iran. Today, Omid has indeed become a symbol of hope for Fereydunkenar and its wetlands. The presence of the Siberian Crane each winter has helped protect these wetland habitats for millions of other migratory birds, some also endangered. In turn, the migratory birds benefit the local rice farmers by reducing their fertilizer costs and allowing traditional duck trapping, which has been practiced here for at least 300 years (Ahmadi, personal communication).

In 1998, a small crane conservation group, The Mazandaran Crane Conservation Association (MCCA), was formed in Iran with the support of Ellen Vuosalo Tavakoli (originally from Finland) and a few Iranian environmental conservationists. In 2000, this small group grew to include around 200 farmers/duck trappers, who joined the MCCA by investing in local trust funds to create additional monies for protecting the Damgahs. Damgahs are fields used for rice cultivation in summer and are inundated and managed by farmers/trappers



Community-based conservation in wetland ecosystems:
Case study of Fereydunkenar wetland (Ramsar Site).
Photo by Lisa Poulak.



Siberian White Crane by Marcel Holyoak

to create unique wetland habitats for millions of migratory birds. In the face of rapid development and climate change, damgahs are becoming some of the last remaining freshwater wetlands in Iran, and therefore one of the few options left for wintering migratory birds. Additional funding for MCCA projects has come from the Small Grants Program of the Global Environment Facility (Washington, DC) and the United Nations Development Program (2001-2004).

As a result of this initiative and through the efforts of the MCCA, local farmers/trappers became aware of the international importance of Siberian Cranes and, most significantly, they were recognized as “Guardians of the Cranes” by both Iran’s Department of the Environment and conservation groups such as the International Crane Foundation. The area is now listed as both an Indigenous Community Conserved Area and a Ramsar Site.

On November 21, 2018, Omid once again returned to his Fereydunkenar damgah wintering ground, according to a news release from Ellen Vuosalo Tavakoli. This is a very late arrival, although close to last year’s date of November 25. The autumn was unusually warm and the migra-

tion of birds late. Historically, the mean date of Siberian Crane arrival in Iran has been November 2nd to 4th.

An initiative that remains to be tested is to release captive bred Siberian Cranes into the Fereydunkenar wetland so that they might learn the migration route from Omid. This initiative would need funding and technical support, which nowadays might be difficult to obtain due to US sanctions on Iran. Some work toward that goal was initiated in 2003 by an international effort catalyzed by the International Crane Foundation. Known as the Siberian Crane Wetland Project (SCWP) and co-funded by the Global Environment Facility, the seven-year project focused on protecting a network of wetlands in Eurasia that are of critical importance for migratory waterbirds, including the Siberian Crane (<https://www.cms.int/siberian-crane/en/page/siberian-crane-wetland-project>). However, all efforts for preserving the western population of Siberian Cranes died out once the SCWP ended. So, Omid has been flying between Iran and Russia all by himself for 10 years in a row!

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Pacific Coast Portraits

MAPLEWOOD FLATS | JULY 20 TO SEPT 30

*an Artists for Conservation Festival exhibit
in partnership with the Wild Bird Trust of BC*

www.wildbirdtrust.org

www.ArtistsForConservation.org/festival



presented by
RE/MAX

© LAURA LEVITSKY 2018

Detail of "Keeping Watch" | Acrylic painting by Laura Levitsky

WITH THANKS TO THE FOLLOWING COMMUNITY SUPPORTERS





Southern Railway (Barn Owl), Oil painting by Neil Hamelin

PACIFIC COAST PORTRAITS EXHIBIT AT MAPLEWOOD FLATS

Wild Bird Trust of BC (WBT) is excited to be partnering with Artists for Conservation (AFC) on an exhibit as well as artist participation in this year's Kingfisher Children's Summer Camp (see page 28 for Summer Camp information). Some of you will recall seeing the preview of the AFC's Silent Skies* mural hosted for a day at the Flats last August in advance its full installation at the International Ornithological Congress. This sparked the possibility for this year's exhibit, which represents a pilot project between AFC, an international group of artists, and the WBT, with a goal of establishing a recurring annual program model. (*Silent Skies is a 100 foot super-mural made up of 678 individual 8"x 8" painted panels representing all endangered birds of the world.)

AFC is the world's premiere artist group with a mission to support nature, based in BC. This special exhibit at the Nature House is in conjunction with the 9th Artists for Conservation Festival.

Pacific Coast Portraits will feature over 25 giclee reproduction artworks by local members of AFC, featuring wildlife and wild places, with a special emphasis on birds of the Pacific Coast. The exhibit aims to celebrate birdlife and biodiversity in the region and to inform viewers about local bird species and their habitats.

The exhibit will be a highlight for two public events: WBT's Osprey Festival (July 20) and the 9th annual Artists for Conservation Festival (Sept 14/15). For more information about the exhibit and related programming, visit www.artistsforconservation.org/festival.

Following are some BC-based AFC artist members, whose artwork was featured in prior AFC exhibits.

DR. ROB BUTLER

Loon on the Wing (Common Loon) | Acrylic painting - featured on cover of Wingspan

"The Common Loon is an iconic bird of Canadian wilderness. Depictions of the loon are usually on the water and I wanted to show another side. I was intrigued by the repeated patterning of the feathers on the back which prompted me to display the bird swooping out of the air."

Dr. Rob Butler is an ornithologist, author, and artist. He holds graduate degrees from Simon Fraser University (MSc) and the University of British Columbia (PhD). He spent 40 years mostly with the Canadian Wildlife Service as a biologist and then a scientist researching birds. He has scores of appearances on television, radio and in newspapers on bird related stories. He is President of the Pacific Wildlife Foundation, was co-convenor of the 27th International Ornithological Congress and serves on several boards. He is a fellow of The Explorers Club, Royal Canadian Geographic Society, and American Ornithologists Union, an outstanding alumnus of Simon Fraser University and Capilano University, and Signature Member of Artists for Conservation.

LAURA LEVITSKY

Keeping Watch (Barred Owl) | Acrylic painting - featured in exhibit ad page 9

Laura Levitsky, a BC nature and wildlife artist, has been recognized by provincial and international wildlife organizations. Her meticulous attention to detail and methodically researched subject matter enhance Levitsky's tranquil compositions. Laura is a self-taught artist who began her career in the fall of '99 and by 2014 became recognized as one of BC's representational wildlife painters with awards from organiza-

tions such as Ducks Unlimited Canada, BC Wildlife Federation and the Pacific Salmon Foundation. Laura's goal is to continue to grow both as an artist and conservationist through exploration and artistic interpretation.

VICKY EARLE

Echeveria Succulent and Hummingbird (Rufous Hummingbird) | Watercolor

Vicky's love affair with nature started at a very early age. She has traveled to many different countries, but it was excursions to Central America and Asia that Vicky became especially passionate about tropical rainforests. She began painting botanical water-

colors to raise awareness about fragile ecosystems and has

provided artwork for Conservation Organizations in Mexico, Peru, Bolivia and Canada. Vicky's preferred medium is

watercolour, occasionally using metalpoint and mixed media. Recently, Vicky launched a multi-panel project entitled Duets: The Dance of Symbiotic Relationships, an exhibition highlighting mutually beneficial interactions between plants and various birds, animals and insects.

NEIL HAMELIN

Southern Railway (Barn Owl) | Oil painting - on page 11

Neil Hamelin captures stories of our natural heritage through the weathered wood and flaking paint that stand as a vestige to our past. His paintings often feature birds and stir forgotten memories, rekindled on canvas

through the rusty metal of vehicles and abandoned homesteads of our ancestors. Hamelin's artwork received national recognition

with a series of gold coins released through the Royal Canadian Mint. Hamelin was awarded Best Of Show at the 2016 Calgary Stampede Western Showcase.





TWN HOUSE POSTS UNVEILED AT MAPLEWOOD FLATS

BY CARA MCKENNA

A pair of house posts has been unveiled at a wild bird sanctuary next to Tsleil-Waututh's village as part of a wider push to decolonize the space.

The posts carved by Zachary George (Skokaylem) were revealed at the entrance of the Nature House at Maplewood Flats during a Coast Salish Family Day event on Feb. 18.

The 320-acre conservation area is a marshland that was traditionally stewarded by Tsleil-Waututh, but is now managed by the Wild Bird Trust of B.C.

George said he was honoured to work on the cedar posts because they will remind Tsleil-Waututh ancestors — and future generations — that the site is theirs.

"It's important to our ancestors, because they see it," he said.

"It calms them, it gives them a reason to walk gently in this area."

George, who is the son of the late Leonard George, said he recalls playing in Maplewood Flats as a child, climbing trees and running around.

He said it is a great honour to now have his work on display at the site. He carved the posts with teachings that he received from his father in mind.

One of the posts is carved more ornately while the other is done in a simple style, depicting Tsleil-Waututh ancestors with water spreading out below.

"That (post) is the one that's going to look after this area," he explained.

"The one with more carving on it is the one that's going to attract the eyes of the people."

Wild Bird Trust of B.C. president Irwin Oostindie said directors made a decision about two



Photo: Zachary George (Skokaylem) is pictured with one of the new house posts.



Dennis Thomas, Gene Guss, Zack George, Janice George, and Stan Thomas



WBT Board President Irwin Oostindie speaks at Coast Salish Family Day"



WBT Board Members Jude Grass, Dan Straker, Donna Clark

and a half years ago to formally recognize Tsleil-Waututh as the unceded owners — and original caretakers — of the land.

"As an organization we're doing a critical self-reflection to look at what are we good at and what are we not very good at," he said.

"One of the things that we've not been very good at in the last 25 years is recognizing the historical moment that we're in."

Along with the new posts, there is also artwork on display by Tsleil-Waututh members Ocean Hyland and Jordan Gallie, as well as a piece by James Harry of the Squamish Nation.

Oostindie said the Wild Bird Trust of B.C. has committed to shifting its programs by the middle of this year so that at least half are delivered for, and by, Coast Salish people.

Over the next 18 months, the board is aiming to reintroduce Coast Salish plants and move towards traditional harvesting of those plants.

Staff are also working on plant guides that include the Hul'qumi'num languages and is working on installing interpretive panels on site that talk about the history of the region.

Oostindie said it's just the beginning for the work — he also hopes that Tsleil-Waututh members will start to utilize the area as their own. He hopes to see the Nature House be used as a culture and nature house by the nation and that future generations will recognize it as theirs.

"TWN house posts unveiled at Maplewood Flats," *Salish Sea Sentinel*, April 2019.



UPDATES ON DEVELOPMENTS IN THE NEIGHBORHOOD

INCREMENTAL EFFECTS OF DEVELOPMENT

Globally, since the 1970's, the populations of birds, mammals, fish and reptiles are down by 60% (WWF 2018). One in eight of all species of birds is threatened with extinction (Birdlife international 2018). Habitat loss and now climate change are biggest drivers of these changes. Development proponents describe the mixed second-growth cottonwood-alder forest in the Maplewood neighborhood as low-quality habitat. The WBT asserts that the forest is in fact valuable and well-used by nesting, foraging, and migrating songbirds and raptors, and is used by resident wildlife. Burrard Inlet is an IBA (Important Bird Area) designated for its value to migrating and over-wintering birds. Maplewood Flats and the deciduous forest in the neighborhood are used as a stop-over location for refueling and resting migrating songbirds. When we lose the forest, the birds don't just fly elsewhere,

this is their migration route. With fewer foraging resources, the capacity for migrating birds to restore energy reserves is limited, threatening their journey to nesting locations. This is how we lose 60% of wildlife populations around the planet. To protect biodiversity, we need to conserve landscape along migration paths.

NORTH SHORE INNOVATION DISTRICT (NSID) ON HOLD

The District of North Vancouver Council has deferred the NSID development process for 12-14 months until after the completion of the OCP review. The NSID project is located immediately North of Maplewood Flats. The WBT has been in consultation with the developers, Darwin Development and the Tsleil-Waututh Nation, to ensure the design includes functional wildlife corridors and road crossings as well as effective green infrastructure for stormwater drainage.

MAPLEWOOD MARINE RESTORATION UPDATE

The Vancouver Fraser Port Authority is in the construction phase of the Maplewood Marine Restoration project. This project aims to restore mudflat and eelgrass habitat at Maplewood Flats in the deep dredged tidal area south of the bridge at Osprey Point as part of habitat banking/development offsetting program at the Port. The construction period is estimated to be 5-6 months and the schedule is led by permits that ensure least risk time periods for fish and wildlife. Construction is also linked to the tidal cycle and will require night-time work, and is anticipated to begin in August.

PROPOSED REMOVAL OF FOREST FOR DISTRICT OF NORTH VANCOUVER (DNV) FIRE STATION

The District of North Vancouver (DNV) hosted a public open house on May 15th, presenting a proposal to build a new Fire and Rescue Centre in the forest north-west of the conservation area, with construction planned within the coming year. The DNV is considering environmental impacts from their project, and their plan includes strategies to reduce the effects on the environment, including energy efficient buildings, bird friendly windows and treatment of historically contaminated soils. The firehall plan will result in loss of habitat for migrating, nesting and resident birds. There are no plans to compensate for this habitat loss. The firehall plans do not include measures to modify road design to accommodate wildlife crossings to Maplewood Flats. The DNV has engaged an engineering firm to look at the downstream impacts of drainage from the development and has committed to consulting with WBT to find answers to the issues raised by WBT.

UPDATE ON WILD BIRD TRUST OF BC PARTICIPATION IN THE TRANS-MOUNTAIN PIPELINE RECONSIDERATION

Wild Bird Trust of BC participated in the Trans-Mountain Pipeline National Energy Board Reconsideration Process this winter, voicing concerns over increased oil tanker traffic in Burrard Inlet. The WBT wrote a letter of support and provided information on species at risk visiting Maplewood Flats as part of the evidence submitted by North Shore No Pipeline Expansion (NS NOPE). NS NOPE, a local non-profit society, contracted researchers to produce a report highlighting the key risks of the project to SARA listed marine bird species in Burrard Inlet (link: <https://bit.ly/2QEQhiv>).

This reconsideration process was required as a result of the Supreme Court of Canada finding several failures in the previous NEB process (WBT also participated in this) including a lack of appropriate consultation with Indigenous Peoples and the failure to consider project-related marine shipping

in the decision. The formal hearings concluded in late January 2019. The NEB released their Reconsideration Report to the Governor in Council on February 21st, 2019, and although the NEB found numerous significant environmental impacts from the project they found it to be in the public interest of Canadians and recommended approval (link to the Report: <https://bit.ly/2GEqc0P>). The NEB has extended the Indigenous Consultation timeline to receive more input from Indigenous groups. The cabinet decision on this project will be released June 18th.

On the following pages are an excerpt from the Marine Bird report, a table showing species at risk visiting the conservation area plus the WBT letter, all evidence submitted by NS NOPE to the National Energy Board.

KEY RISKS TO SARA LISTED MARINE BIRD SPECIES IN THE CENTRAL HARBOUR OF BURRARD INLET FROM THE PROPOSED TRANS MOUNTAIN EXPANSION PLAN

AUTHORED BY

ANGELA HANSEN, B.SC., M.SC., PH.D. CANDIDATE

CHLOE HARTLEY, B.ES, M.SC.

DECEMBER 4TH 2018

FROM THE REPORT'S CONCLUSION

The sheltered and productive bird habitat in the Central Harbour of Burrard Inlet is of high value to scores of marine bird species (Trans Mountain 2013, Butler et al. 2015). Historically Burrard Inlet supported large numbers of a diversity of bird species. Many of these species are now vulnerable with local and regional numbers showing sharp declines (Trans Mountain 2013, Butler et al 2015, WBT 2017). Burrard Inlet still supports important remnant resident, over-wintering, and migrating concentrations of several at-risk species including Western Grebe, Horned Grebe, Barn Swallow, Bank Swallow, Marbled Murrelet, Peregrine Falcon, and Great Blue Heron and globally important concentrations of Barrow's Goldeneye and Surf Scoter. The WBT, operators of the Maplewood Flats Bird Conservation Area for over 25 years, are concerned that increased shipping will degrade the quality of the habitat in the Central Harbour and effect the health and resilience of birds visiting the Harbour (Appendix 1).

Trans Mountain did not accurately represent the change in use in the Central Harbour from increased marine shipping and the effect of this change in use has not been assessed. The shipping route through Burrard Inlet is narrow and shallow (Trans Mountain 2013) and marine bird life have no refuge or option to avoid the effects of shipping.

Many marine birds including the Western Grebe and Horned Grebe, two newly designated SARA species, use near-shore habitats within 500-1000 m of the shore (Trans Mountain 2018, Environment Canada 2015). This critical foraging habitat overlaps with the shipping route in the Central Harbour. Birds are disturbed by noise, lights, sound, waves and movement of ships (Trans Mountain 2013). Trans Mountain state that they have no evidence to support the idea that any specific marine species in the shipping route will habituate to shipping (Trans Mountain 2013). Shipping traffic will have permanent and non-reversible effects on the habitat and thus the fitness of marine birds in the Central Harbour. SARA-listed species, provincially-threatened species, and globally important populations of bird species depend on the Central Harbour for their survival. Trans Mountain has not examined the effects of the change in use on the marine birds in the Central Harbour with scientific rigor, and thus Trans Mountain's risk assessment is not sound.

The increased risk of accidental fuel spillage that comes with increased shipping traffic in Burrard Inlet and the potential for oiling to damage bird communities must be carefully assessed for the short and long-term. The effects of a small accidental oil spill on marine birds could reduce the viability of the vulnerable bird communities in Burrard Inlet.



Barrow's Goldeneye giving me the eye by Rob Alexander

APPENDIX 1: LETTER

The Wild Bird Trust of BC (WBT) board of directors sent this letter with regards to the Trans Mountain Pipeline Expansion and related marine terminal expansion and tanker traffic. The WBT manages the Conservation Area at Maplewood Flats (CAMF), a well-known wild bird conservation area located just west of the Westbridge Terminal, and east of the Second Narrows Bridge on the north shore of Burrard Inlet.

CAMF represents a significant portion of natural area left along the shores of the Burrard Inlet. As such, CAMF serves as habitat for 251 recorded bird species, including 11 SARA listed species that are threatened or of special concern. In addition to its value as a natural area, CAMF has seen a steady increase in public use over 25 years of WBT management. Approximately 60,000 people are expected to visit MFCA in 2019, making it an important wildlife asset for the North Vancouver and regional communities. Collaboration with members of the Tsleil-Waututh Nation and students from local colleges and universities including Capilano University, SFU and BCIT have helped us expand our role in cultural and scientific education, and CAMF recently gained attention from birders all over the world during the 2018 International Ornithological Congress.

Steps are being taken to strengthen the ecosystems at CAMF. The development of a Habitat and Cultural Use Management Plan, (underway for 18 months, and nearing completion) has helped assess human and industrial stressors, and look forward to a half dozen major biodiversity and risk management projects at the Conservation Area. The continued success of the area, as an ecological sanctuary and education centre has attracted investment for restoration and the recent opening of the Corrigan Nature House.

In 2019, a \$12M investment by the Vancouver Fraser Port Authority will further enhance the marine ecosystem at CAMF. Local residents, the birding and conservation communities, and local governments, all see CAMF continue to strengthen the ecological and social integrity of Burrard Inlet well in the future.

The Conservation Area at Maplewood Flats looks out immediately across to the Westridge Marine Terminal, and as a result experiences frequent tanker traffic. This tanker traffic is a disturbance to all bird species at CAMF, and while many species have healthy and resilient populations, many of the bird species at CAMF do not. Sensitive and at-risk species, particularly the 11 SARA listed species known to occur at CAMF, are threatened by the disturbance from tankers. Their survival depends on stable populations, and Trans Mountain has not done an adequate assessment of the risk to these SARA listed species as a result of increased tanker traffic in Burrard Inlet.

The devastating impacts of a spill in Burrard Inlet will take their toll on the ecosystems at Maplewood Flats Conservation Area in a matter of seconds or minutes, not hours or days. This risk, and the ongoing disturbance to bird species caused by increased tanker traffic, threatens the ecological foundation on which Maplewood Flats and its community is built. An absence of protective booms, the absence of oil spill bird washing infrastructure, the increased risk that comes with increased tankers traversing through the area, all contribute to our alarm and concern.

It is for these reasons that the Wild Bird Trust of British Columbia supports the position of the North Shore No Pipeline Society on the Trans Mountain Expansion Project.

APPENDIX 2: RARE BIRDS SIGHTED AT MAPLEWOOD FLATS CONSERVATION AREA

Reports from records of Maplewood Flats E-bird Data. B.C. Red listed species are species at risk of being lost (extirpated, endangered or threatened), and Blue listed species are those of special concern (British Columbia, 2018). Under the Species at Risk Act (SARA) “threatened species are those species which are likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction. Species of special concern are species which may become threatened or endangered because of a combination of biological characteristics and identified threats” (Environment Canada 2007)

SPECIES	STATUS	PRESENCE	NUMBERS
American Bittern	Blue	rare	2
Arctic Tern	Blue	regular migration	~10
Bald eagle	Blue	resident and breeding	2-4
Barrow goldeneye	Blue	overwintering	200-500
Brandt's Cormorant	Red	rare	
Brant	Blue	intermittent migration	5-10
California gull	Blue	regular migration	20-100
Caspian tern	Blue	summer	2-100
Double crested cormorant	Blue	resident	2-20
Great blue heron	SARA special concern	resident and nesting	2-3 pairs, 2-15 visitors
Green heron	blue	visitor	1-2
Horned Grebe	SARA special concern	overwintering	10-15
Long-billed Curlew	SARA special concern	rare	3-5
Long-tailed Duck	Blue	winter	1-2
Marbled Murrelet	SARA threatened, blue	spring	1-2
Purple Martin	blue	breeding	200-300
Red-necked Phalarope	blue	rare	1-2
Short-billed Dowitcher	blue	spring migration	4-6
Surf Scoter	blue	winter	200
Tundra Swan	blue	regular migration	2-4
Wandering Tattler	blue	very rare	1
Western Grebe	SARA special concern, red	intermittent migration	10-20
Yellow-billed Loon	blue	very rare	1
Barn Swallow	SARA threatened, blue	rare	once breeding, now gone
Bank Swallow	SARA threatened	migration	small flocks
Peregrine Falcon	SARA special concern, red	winters	1-2

THE CRITICAL ROLE OF SMALL MAMMALS

BY: KATIE PIPER, LEILA RIAHI, MADELINE WEAVER

Between Fall 2018 and Spring 2019, we created a restoration project focused on improving conditions for small mammals at Maplewood Flats Conservation Area (MCA).

Besides being a food source for carnivores and raptors, small mammals are key players in soil aeration, insect control, and seed and spore dispersal (Sieg 1987; Cornely and Verts 1988; Laundre and Reynolds 1993; Sullivan et al. 2003; Gillihan and Foresman 2004). There is very little known about the small mammal populations within the MCA and with the proposed development potentially cutting off the MCA from neighbouring green areas, the need of the project became evident.

After over 400 hours of live-mark-recapture surveys, we found two species of small mammals residing on the property: North American Deermouse (*Peromyscus maniculatus*) and Vagrant Shrew (*Sorex vagrans*). It is likely that other species live in the area, but none were trapped.

We completed coarse woody debris (CWD) surveys and found that the MCA lacked these decaying, downed trees in the forest. For many small mammal species CWD provides cover and foraging resources (Caza 1991; Keisker 2000; Ucitel et al. 2003). In an undisturbed forest-type similar to the MCA, we would expect to see approximately 410 m³/ha of CWD (Caza 1991), but found just over 20 m³/ha in MCA forests.

We came up with three broad goals for MCA:

1. Promote habitat heterogeneity and complexity to add foraging, reproduction and travel resources for small mammals
2. Establish connectivity between the MCA to the adjacent Lower Seymour Watershed
3. Reduce non-targeted mortality of small mammals from the Pacific Environmental Science Centre (PESC) rodent-control program

To achieve these goals, we proposed removal of invasive and woody species in the meadows, adding complexity to the topography with hummocks in the meadows and CWD in the form of logs and brush piles throughout the property, install box culverts to facilitate movement across Dollarton Highway, and remove cover material around PESC to discourage small mammals from going near the bait-boxes.

WATER QUALITY QUANDARY: RESULTS OF THE BCIT STUDENT REPORT ON AMPHIBIANS AT THE FLATS

TEAM MEMBERS: NOLAN BELLET, CHRISTOPHER LINDSAY AND KEN WU

The Maplewood Flats Conservation Area has an extensive wetland system built over 20 years ago with the goal of supporting wildlife and amphibians on site. Five species of amphibians have been found here, the western red-backed salamander, rough-skinned newt, northwestern salamander, Pacific chorus frog, and the blue-listed northern red-legged frog. Mysteriously, recent surveys have found amphibian egg masses in all wetlands except Wetland One (figure 1). In 2018, this BCIT student team was sent to assess amphibian habitat at the Flats.

The team used various sampling measures to test parameters related to amphibian development including; plant surveys, pH, temperature, dissolved oxygen and heavy metal spectrometry testing. Analysis of the results found copper levels in the created wetlands exceed the BC Water Quality Guidelines for fish and wildlife. The particularly high level of copper in Wetland One could explain the absence of amphibians here. More research to find the source of the copper is required but in the meantime, the team has suggested trying phytoremediation, that is, using plants to remove contaminants. The cattails in the dragonfly pond may be intercepting copper already, explaining the lower levels of copper in the other wetlands.

Thanks to BCIT and both student teams for conducting these studies.



Figure SEQ Figure * ARABIC 1 - Map of Maplewood Flats restoration site. Copper concentrations (µg/L) within the wetlands is displayed by the graph in the upper left-hand corner. The dashed line shows the level required by the BC water quality guidelines for fish and wildlife.



Help Fill the Pond!

PURPLE MARTINS, TREE FROGS AND NEWTS RELY ON US!

The Conservation Area is composed of a 96 hectare intertidal zone of mudflats and salt marsh, and a 30 hectare upland area including fresh water ponds designed by Dr. Patrick Mooney two decades ago. As a management strategy, groundwater is pumped seasonally into the pond to support a freshwater habitat for a variety of species. Tragically we have been experiencing drought in the pond and our system was failing. We have determined that the groundwater pump needs urgent replacement at a cost of \$10,000 for equipment and installation by Precision Service & Pumps Inc. of Abbotsford. As a non-profit charity, we are looking to our membership and nature lovers to help us manage this unexpected cost. Please donate if you can!

All donations are eligible for a tax receipt. Donors will be recognized as the “fundraising pond” fills up in the fall issue of Wingspan. Pick a species level and dollar amount and donate today! We need water this summer for small critters to survive and biodiversity to flourish.

WAYS TO DONATE

Online – select here: <http://bit.ly/fillthepond>

Personal cheque:

Please drop off or send cheques to:

Wild Bird Trust of British Columbia
2649 Dollarton Highway
North Vancouver, BC V7H 1B1

Thank you for your support!

\$50
PACIFIC
CHORUS
FROG

\$75
ROUGH
SKINNED
NEWT

\$100
PURPLE
MARTIN

\$500
HOODED
MERGANSER

\$1000
PACIFIC
BLUE
HERON



Keep up to date with the Conservation Area at Maplewood Flats with a few clicks on your computer or taps on your phone! Our social media accounts will keep you informed about upcoming events, recent bird and animal sightings, and everything that goes on at the Flats.

Facebook: Maplewood Flats
Twitter: @MaplewoodFlats
Instagram: @maplewoodflats



Share your Maplewood Flats experiences by using the hashtag #maplewoodflats.



Black-capped chickadee by Peter Lypkie



Cedar Waxwing by Peter Lypkie



Barn owl showing face by Rob Alexander



Western Tanager, male in Cottonwood Tree by Rob Alexander



Northwestern Crows tribe banding together on big stump by Rob Alexander



Rufous Hummingbird female second nest by Rob Alexander



Tree Swallow over mudflat on stick by Rob Alexander



Olive-sided Flycatcher on stick by Rob Alexander



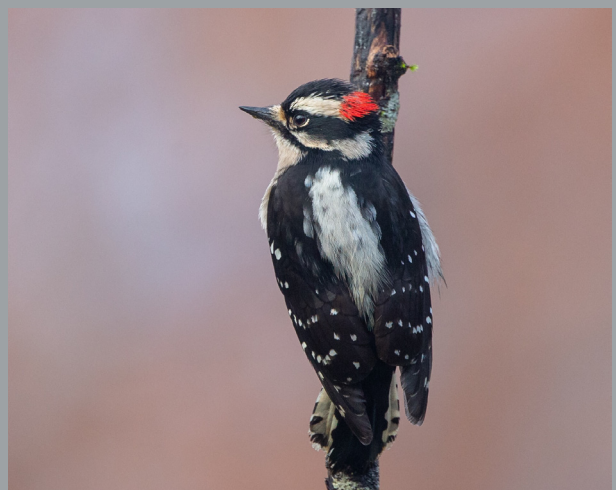
Western Wood-Pewee on dead spruce tip by Rob Alexander



Western Kingbird at ocean side by Rob Alexander



Yellow-rumped Warbler Audubon in flower tree Rob Alexander



Downy woodpecker by Janine Brooke



BIRD LANGUAGE LEARNING INTENSIVE

BY DONNA CLARK

The Bird Language Learning course description suggested “being aware of what birds are communicating often leads you straight towards amazing nature moments!” Intrigued, 15 participants registered to learn from Jenna Rudolph and Sara about methods to deepen our understanding of birds and their voices.

As someone who likes to sit alone and be quiet, this workshop was perfect for me. Bird walks can sometimes feel overwhelming, when there can be many people. I worry about the impact of our presence.

We were coached to do a Bird Sit, quietly listening and observing, in a particular spot by ourselves with others doing the same at a short distance. We took notes on the bird sights and sounds we witnessed.

It was peaceful. It was a beautiful sunny morning at 6am. One early-bird birder passed us on the trail, otherwise we were alone...with each other and the birds, of course.

We noticed the silence that lead and followed the sounds of the birder walking along the trail. Many birds noticed and fell quiet. Humans are considered a possible danger to birds, even one lone walker. It was awesome and humbling to notice our effect. It was also our hope that by sitting quietly without moving much for an hour that the birds would get accustomed to us and that we would be able to see and hear them easier.

We learned about the 5 main voices of birds, which helped us in our Bird Sit to understand what may be happening for the birds. Some crows towards the northeast were voicing alarm. Could it be the raccoons that were passing?

After an hour we met back at the House. We remained in our 2 groups of 7 as we mapped out our individual notes onto a large map of the site where we had sat. It was so fascinating to understand the connections between what each group had witnessed. The second group had also noticed



5 VOICES OF THE BIRDS

- 1) Song
- 2) Juvenile Begging
- 3) Territorial Aggression
- 4) Companion Calling
- 5) Alarm

chickadees + towhees.
Tony's sit spot story
dropping into body - sensory

duck? alone ^{soft} quack quack perpendicular @
40sec 2 ducks (n/e) @
Lark
towhee staccato ←
n/e human chopping
s/w large industrial humm
"light-hearted" chirping? far n/e
Pee break
light staccato
*tew! glistening tips. like little light bulbs
human crow sounds
gentle twitter mid/far north/e
nothing south yet
not much/nothing s/w - varying industrial
ongoing towhee staccato north
ongoing gentle, light-hearted chirping n/e - several birds
crow - north cawcaw
crow call - single syllable east

the crow alarm, as the raccoons swam across the pond. It was the raccoons!

The Dawn Chorus between 4:50 - 5:30 am was a particular highlight for me. I had never been on site so early. The beautiful cacophony of song will stay with me for a long time. I will be more open to an early wake-up in the future. I don't hear this Chorus, in the City, even when I am awake at this time of year.

Attending with her middle-school age daughter, Naomi reflected: "I expected to use my sense of hearing to identify bird voices. What I actually learned was a multi-sensory experience. We learned the audible personalities of different bird species but also their visible behaviours, including their interaction with each other and the surrounding habitat."

"The Spotted Towhee is a new favourite as I learned to recognize three of their calls. I learned to distinguish the difference

between a call, a song and an alarm. I am more keenly aware of how all birds signal what is happening for them and the surrounding habitat."

"After the course, I wholeheartedly believe that learning bird language is an immediate way to rebuild our connection. Through this knowledge and practice we build connection and through connection an inclination to protect."

It's been several days since the workshop, and my heart is still full. I am noticing birds and their voices more. I am more curious than ever. I also find myself researching bird voices, to try to learn and remember them.

For Naomi: "This was our first visit to the flats, and we were delighted by its varied beauty. A short walk offered expansive views of the inlet, peaceful trails, and an abundance of wildlife...It was a transformative experience, and one that will bring me back to the area for more."

The Programs Committee of the Wild Bird Trust creates and manages opportunities for people to connect to nature, in support of the WBT mandate*. The proposal by Sara Ross to deliver Bird Language Learning activities at the Maplewood site was approved by the Committee because of its alignment with our mandate.

This workshop, May 10 and 11, was offered in partnership by Wild Bird Trust and Soaring Eagle Nature School. The Programs Committee meets monthly and accepts proposals for workshops, programs, events. Contact Donna at programs@wildbirdtrust.org

*WBT mandate: to provide wild birds with sanctuary through ecological protection and restoration, and to support communities with education, culture, and reconciliation programs.

SAVE THE DATE

BIRD AND WILDLIFE RESEARCH & MONITORING COLLOQUIUM

SATURDAY NOVEMBER 16, 2019,
11AM TO 4PM AT MAPLEWOOD
FLATS, NATURE HOUSE

Numerous groups in the lower mainland run regular wildlife and bird surveys, raptor counts and amphibian surveys, monitoring trends at our sites over time. WBT wants to review and discuss how the data from research and monitoring programs can be brought together to track regional trends.

In 2016, WBT hosted two colloquiums - Coast Salish Cultural Heritage with Bill AngelBeck (Kwantlen U) and Bruce Miller (UBC) organized by Irwin Oostindie, and Invasive Species organized by Kevin Bell and Richard Beard. From this work, the Habitat and Cultural Use Management Plan for Maplewood Flats was launched.

Now, the Habitat Committee is planning a Bird and Wildlife Monitoring Colloquium.

We want to bring together students, scientists, naturalists, citizen-science and nature-based organizations conducting bird and wildlife monitoring to harmonize methodologies, ensure relevance and rigour, identify gaps and priorities in our research, as well as share ideas for amplifying the data we all collect to the regional level.

The outcome of this colloquium will guide our Habitat and Cultural-Use Management Plan on best practices and methodologies in collecting and sharing research.

HAVE YOUR SAY IN THE PLAN FOR THE FLATS!

The Habitat Committee has developed a draft vision statement and five goals to guide the work under the plan. We invite you to consider what we have developed and offer your feedback by emailing: habitat@wildbirdtrust.org OR attend the next Habitat Committee meeting Wednesday, July 3rd at 6:30pm at the Nature House.

VISION OF THE SITE

Our vision is that the site reflects a resilient and flourishing Coast Salish ecosystem, the Tsleil-Waututh Nation community and culture are integral to the site identify and operation and, visitors are enjoying and respecting the site and are inspired and engaged by our programs.

Goals to guide the management of Maplewood Flats:

GOAL 1: Conserve, restore, and monitor biodiversity and ecosystems while maintaining cultural continuity.

GOAL 2: Strengthen the relationship between the Tsleil-Waututh and Coast Salish Peoples and the Wild Bird Trust to support cultural continuity with restoration and conservation efforts.

GOAL 3: Strengthen partnerships with stakeholders: District of North Vancouver, Port of Vancouver, Educational Institutions, NGOs, birding and conservation organisations, members and visitors.

GOAL 4: Foster compatible public access and opportunities to learn.

GOAL 5: Complete operation requirements and projects to facilitate public enjoyment and protection of the environment.



An Osprey carrying a branch in its talons as material for its nest. Photo by Janine Brooke.

THE OSPREY IS A VERY BEAUTIFUL BIRD: WHAT DOES IT EAT?

BY AL GRASS

I remember that when I started to watch birds, the Osprey was called the “fish hawk”. The Osprey is a bird of prey (raptor) that is an expert at catching fish. It can be seen along the ocean, lakes and big rivers. Osprey hovers above the water, dropping down to catch a fish with its sharp talons - sharp spikes in the bird’s feet which help it hold on to slippery fish. The Osprey makes sure that the fish is facing head first in its talons to make for better flying. When a fish is caught, an Osprey must be careful that a Bald Eagle does not try to steal it away.

Osprey are found around the world in habitats such as along the oceans, lakes, and rivers - in places where there is good fishing. Ospreys from British Columbia head south in the fall to warmer climates, returning in the spring.



Takaya Tours

Fun

REGISTER FOR KINGFISHER SUMMER CAMP!

*Connect with nature at
the Conservation Area at
Maplewood Flats!*

Reconciliation

Birds

Storytelling

Bugs

Art-making

Kingfisher Summer Camps feature hands-on activities such as bird watching, Coast Salish plant walks, a canoe trip, screenprinting, and more!

Our camps are place-based, and concentrate on art and nature with support of local Coast Salish ethnobotanists, artists, and storytellers. Campers will be inspired from a foundation of respect and hope for the future as they connect to the natural and cultural story of Maplewood Flats, on Tsleil-Waututh lands.

Designed to be accessible, we offer options for extended pick up and subsidization. For more information, contact kingfisherkids@wilbirdtrust.org or call at 604-929-2379.

FOUR WEEKS TO CHOOSE FROM

- July 8th – 12th
- <http://bit.ly/campJuly8>
- July 22nd – 26th
- <http://bit.ly/campJuly22>
- August 12th – 16th
- <http://bit.ly/campAug12>
- August 19th – 23rd
- <http://bit.ly/campAug19>

AGES: 5-12

COST: \$300 FOR 1 WEEK, \$345 FOR LATE PICKUP. SUBSIDIES AVAILABLE.

Identify this Bird



PURPLE MARTIN



GREAT BLUE HERON



BLACK-CAPPED CHICKADEE

What is that tree?



Thuja plicata

PACIFIC REDCEDAR



Chamaecyparis nootkatensis

NOOTKA CYPRESS



Tsuga heterophylla

WESTERN HEMLOCK



MOULAN PEONY



SPOTTED TOWHEE
Pipilo maculatus



bān jī wú
斑唧巫



mǔ dān huā
牡丹花



COAST AND SALISH CULTURE

IVY HUANG 2019

Credit artwork: Spotted Towhee by Ivy Huang



(topleft) Waxwing by Zihan Sun; and (topright) Smekw'a7 by Annie Yu

COAST SALISH BIRDS WITH HERITAGE PLANTS EXHIBIT

BY DONNA CLARK

Students from Ecole Alpha Secondary School Grades 11 & 12 were invited to select a Coast Salish bird and pair it with a plant from their cultural heritage. The intention of this juxtaposition is to make the connection between the Tsleil-Waututh, Squamish and Musqueam lands and waters where the students currently live, with the students' settler or migrant statuses, as well as their unique cultural heritages.

"Indigenous Principles of Learning" are an important part of the new BC Curriculum in public schools. The 2 principles students focussed on with this unit are "a sense of place" and "exploration of one's own identity."

The students visited the Conservation Area at Maplewood Flats to see their work displayed in the Nature House. They broke up into groups to join an Indigenous Plant Walk lead by Squamish ethnobotanist Senaqwila Wyss, to learn about Coast Salish plants and the challenge of invasives; and a Wild Bird Walk lead by Naturalist Kevin Bell.

In the class, students discussed the names of Coast Salish birds in Squamish snichim (language) as compiled and shared by S7atsálya Charlene George, Sk̓w̓wú7mesh-Tsleil-Waututh artist, organizer and language advocate. You can see in the artworks how some students included these names for the birds, along with the English name, and the plant names in the students' heritage language.

In class, we discussed "truth," "justice" and "reconciliation." We discussed Pam Palmater's belief that it is imperative to simultaneously consider "truth," "justice" and "reconciliation," to have any of these ideas be meaningful in practice. A member of Eel River Bar First Nation, Palmeter is a Mi'kmaq lawyer, professor, activist and politician from Mi'kma'ki, New Brunswick.

(Thanks to student teacher Valerie Yeung)

Mixed media: watercolour, clippings from Wingspan Magazine, felt pen, and ink

RESTORATION EVENTS AT MAPLEWOOD FLATS

COAST SALISH PLANTING PROGRAM



Top: LUSH group photo; right: LUSH staff transporting plants; middle: SES Consulting team planting; bottom: ION Group team planting

As part of our Habitat Restoration work, WBT schedules activities throughout the year that are ideal for teams to participate in. These events combine clearing invasives and planting native species along with educational and cultural learning.

This spring we hosted local business groups around Earth Day, and encouraged families to help plant to sustain wild birds during Vancouver Bird Week. Building muscles and team spirit, they collectively filled nine wheelbarrows of blackberry root balls, and planted over 80 plants.

We rely on small grants, donations and corporate contributions to purchase plants and engage naturalists and ethnobotanists who deliver walks and share information about how

this work is ensuring long term sustainability.

Thanks to SES Consulting, ION Group, and LUSH Cosmetics for financial and hands-on support, as well as Steve's Tree Services and Timberline Tree Services Ltd for loads of mulch to protect the new plants during dry season.

We are planning more restoration work in the fall and are happy to customize the day for your group. The program can include guest sessions with a Coast Salish ethnobotanist, lunch room in the nature house, and fun for your team, while doing great restoration work!

If you would like your organization to participate in our Coast Salish Planting Program contact Lianne at ed@wildbirdtrust.org.



COAST SALISH PLANTS

The two languages are the languages of the Squamish, and the Tsleil-Waututh and Musqueam and other Coast Salish Peoples. It then can also be identified by the English name and the scientific/ Latin name. The description is part of the many uses, and some nations may have different uses as well.



t'áka7aʔ

teqeʔ

Salal

Gaultheria shallon

White bell-shaped flowers in early summer and dark blue berries in late summer, this staple food was important for fresh and preserved food source for Coast Salish peoples. The dark colour helps to indicate the high source of antioxidants. This is one of the best plants for building the immune system to fight off colds and sickness. The leaves could be chewed during a brief period of hunger to suppress appetite. Can be mixed into fruit leathers and berry cakes for winter months. It has recently been observed to be suffering during winter conditions and hot dry summers, especially in the Victoria and Vancouver Island areas.



xach't

ǰéčət

Fireweed

Chamaenerion angustifolium

Bright magenta flowers can be found in the summertime, and by the fall there will be a white fluff on the seeds. The fireweed was commonly used by many BC indigenous groups for the cotton-like fluff to be spun and used as a weaving material. The flowers also can be eaten, cooked, such as in a jam or jelly or syrup. The leaves can be eaten as a young shoot early in its growth, and can be cooked or eaten as mixed in a salad.

IN ORDER

Skwxwú7mesh

Hənqəminəm

English Common Name

Scientific Name/Latin

Indigenous use, from time to gather, details on leaves, flower, or other details of identification, and more.



kʷáʔtsay

q'éq'ələ

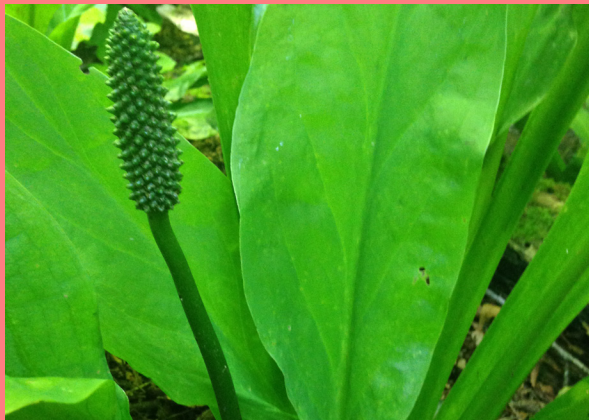
Western Hemlock Tree

Tsuga heterophylla

The western hemlock tree can be eaten, the fresh shoots in May-June months, which are a lighter green, and have a zesty citrus taste and can be picked fresh and eaten raw, or frozen to be stored for later use (do not dry the fresh tips but rather freezing them maintains freshness). This can be a herbal hot or iced tea and is high in vitamin C and like a multivitamin. The hemlock boughs were used by many Indigenous groups to be tied into the rocks and riverbeds in the spring and strategically placed during Herring fish spawning time. The herring roe/spawn laid on the hemlock branches are a delicacy, which can also be known to be gathered on kelp lines.

By Senaqwila Wyss, Skwxwú7mesh, Tsimshian, Sto:lo, Swiss, Hawaiian, ethnobotanist who is working with the WBT for her 3rd year as a summer student. Watch out for Plant Walks in the Maplewood Flats year-round! Senaqwila was trained traditionally by Mother T'uyt'tanat Cease Wyss.

PROPAGATING PLANTS FOR RESTORATION AND CULTURAL USE



Skunk Cabbage, one of scarce species at Maplewood Flats



Bush party: this tangle of shrubs in Deep Cove included trailing blackberry, red huckleberry, salal, oregon grape, salmonberry, saskatoon berry, and vine maple.

WHY RESTORE PLANT DIVERSITY?

A key restoration goal for Maplewood Flats is to increase Coast Salish plant diversity. The purpose behind this goal is not just because we like flowers (but we do). Indigenous plant diversity supports wildlife, insect and bird diversity through providing complexity of resources and structure. For example, when you have 10 shrub species, you will have a succession of flowering and times, providing resources for pollinators and fruit and insect eaters throughout the year. High indigenous plant diversity has been shown to result in increases in the success of suburban breeding birds by supporting abundant insect life.

We have a diversity of indigenous shrub species on site but these shrubs are not abundant across the landscape. Many of the lovely little wildflowers we may take for granted along forest paths are completely absent or scarce at Maplewood Flats. Each year we plant a few more shrubs on site to spread the love. Recently we have been focussing on planting the scarce species like false-lily of the valley, foam flower and skunk cabbage in the hopes they too will get a foothold on site.

WORKING WITH TWN AND NATS NURSERY TO RESTORE COAST SALISH PLANT DIVERSITY TO THE SITE

In a new initiative, the Habitat Committee is experimenting with propagating scarce plant species

from specimens found on site. With the support and participation of Lindsey Ogston, the Environmental

Stewardship Coordinator at Tsleil-Waututh Nation, and Jennifer Adhika with Nats Nursery, this April we harvested three small clumps of wildflowers* on site. The plants were taken to Nats Nursery to be nurtured over the growing season. When the plant sets seed, Nats will propagate them. With participation of the Tsleil-Waututh Nation members, the seedlings will be planted back at Maplewood Flats next year. The next stage of this project involves seed collection on site and propagation in our own nursery. *Due to the cultural value of these plants, we are not sharing details at this time.

The expertise of Nats Nursery helps ensure we do this work right. Seed and plant collection for restoration can threaten plant communities if not undertaken with care. The wrong plants can be collected, invasive species can be unintentionally spread to new sites, and genetic integrity can be disrupted. Visit the Garry oak Restoration Team website for thoughtful insights into this issue: <http://goert.ca>. The Habitat Committee will co-host a workshop with TWN and Nats Seed Collection Expert to build on our knowledge in this area.

The Habitat and Cultural Use Management Plan outlines multi-year large scale, plant restoration projects and we are seeking funding to implement this goal. If you are interested in supporting these projects, join the Habitat Committee (habitat@maplewoodflats) or volunteer at the nursery (nursery@maplewoodflats).

PARTICIPATE IN RESTORATION RESEARCH

BY DAN STEWART, UBC PHD CANDIDATE

Cattails are without a doubt one of the more well-known plants in our region. Also known as “reedmace”, “bulrush”, “corn dog plant”, and my personal favourite, “swamp sausage”, cattails are vigorous perennials found in wetlands on every continent but Antarctica. Whatever name you give it, chances are you are familiar with these plants and have encountered them in your wanderings.

Prior to European arrival, native broad-leaved cattail (*Typha latifolia*) was the only cattail species in most of North America. But at some point in the early 19th century, a new cattail species known as narrow-leaved cattail (*Typha angustifolia*) was introduced to the eastern seaboard from Europe. Soon after its introduction *T. angustifolia* rapidly expanded inland. By 1950 the species had invaded the Great Lakes, Lake Winnipeg, and the American Midwest, often becoming dominant where established. In recent decades several new, isolated populations have emerged in the west, including southwest British Columbia (e.g. Maplewood), where herbarium records indicate it has been present since at least 1990.

Due to its abundance and in eastern North America, much research has gone into investigating the impacts of invasion by this species. Known impacts include a loss of native biodiversity and species richness at all levels, including plants, insects, macroinvertebrates, waterfowl, and other marsh-associated



Figure 1. Flower spike of *T. angustifolia*, illustrating the distinct gap between male (top) and female flowers (identified by). Photo credit: D. Stewart.

birds. The most concerning consequence is the emergence of a hybrid (*T. x glauca*) that results from pollination with native *T. latifolia*. This hybrid is known to be a superior competitor to either of its parent species, is sexually viable, and is capable of hybridizing with its parent species, resulting in local extinctions of unique genotypes (despeciation). This hybrid is listed as present in B.C.

It is widely accepted that the management of an invasive species is more cost-effective and feasible if implemented prior to or early in its establishment. Proactive strategies, including those that investigate the threat potential of a species before it becomes problematic, are therefore critical for effective management planning.

My research is focussed on investigating the threat of *T. angustifolia* to the tidal marsh habitats of the Fraser River Estuary, where it appears to be most abundant in B.C. This research is centered around three research questions: what is its current distribution? (2) what is its projected distribution? and (3) what eradication methods are cost-effective? Questions 1 and 2 will require a combination of computer analyses and field verification, while Question 3 involves the use of a large-scale eradication experiment, in partnership with Ducks Unlimited Canada.

How can you participate? Learning to distinguish these species is a great first step. Leaves of *T. latifolia* are wider, with green to blue-green leaves, while *T. angustifolia* have narrow, erect, yellow-green leaves. The flower spikes of *T. latifolia* also tend to be wider and shorter than *T. angustifolia*. Finally, and this is the most helpful for beginners, is to look at the placement of the male and female flowers. If there is a noticeable gap between these flowers, chances are you are looking at *T. angustifolia* (see inset photo). Due to variation within species I recommend looking at all these traits before making a concrete decision!

Should you happen to encounter this invasive plant, please contact me at the email below with photos, coordinates and/or location details. I'm also happy to answer any questions you may have: daniel.stewart@ubc.ca.



Native Plant Sale!

It's almost summer and people are digging into the soil and planting their gardens to attract and support local birds, bees, butterflies! The Coast Salish Plant Nursery at Maplewood Flats has a large selection of native plants rarely available at conventional nurseries. The goal of the nursery is to promote planting of native species in our backyards, supporting food and cover for insects and birds and creating neighborhood ecological connectivity. Our profit margin is low to enable you to get planting. Profits from the nursery are re-invested in plant orders for ecological restoration at the conservation area. Win-win-win!

- The Plant Nursery is open Saturdays from 10:00am to 2:00pm. We can arrange custom orders for your backyard or community native garden project.
- We also hold regular Indigenous Plant Walks led by ethnobotanist Senaqwila Wyss, giving context on fruits, flowers, ecology and cultural importance of native plants (see the Calendar of Events for dates).
- And, if you are really passionate about this issue, we welcome volunteer(s) to help with plant education and sales.

Email for more information:
habitat@wildbirdtrust.org



**THANK YOU,
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North Vancouver Save Our Shores Society Discovery Waterfront Walk

NEW
DAY!

Saturday, June 15, 2019



The **Discovery Waterfront Walk** starts at Cates Park between 9:00 and 10:30 am, and ends in Deep Cove by the public dock. To return, participants can enjoy the **FREE boat ride on the OCEAN WATCH** back to Cates Park until 1:00 pm or return by walking.

This moderate walk is approximately two hours over beach, roads and trails to reach Deep Cove. Please wear sturdy walking shoes and suitable clothing for weather conditions and don't forget your water.

Visit our web site: www.nv-saveourshores.ca

Thanks to our Sponsors:



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VOLUNTEER OPPORTUNITIES AT MAPLEWOOD FLATS

So much of what we do relies on people showing up to offer their time, skills, and passion. Maplewood Flats provides a diverse and exciting range of volunteer opportunities. Whether you are a university student looking for real world practical experience, a retiree seeking to share your talents, or a local resident keen to give back to your community. Both the site and our organisation share a progressive approach to hands-on conservation work, public education, birding, ecological restoration, cultural programming, communications and community engagement. We also provide volunteers with specialized training where necessary so that we all learn and grow, and ensure the best possible experience on site.

JOIN ONE OF OUR COMMITTEES (4+ HOURS/MONTH)

PROGRAMS: culture (literary events, art exhibits, public art commissions, publications); education (school programs, summer camps, nature walks)

COMMUNICATIONS: help with our online profile (Instagram, Facebook, Twitter, website) or our written publication- Wingspan, trail signage, and media releases

HABITAT: Habitat & Cultural-Use Management Plan, restoration projects, site maintenance, birding and ecological research projects

FUNDRAISING: grant-writing, events, donor appeals, bequeath and bench program

SIGN UP FOR REGULAR VOLUNTEER JOBS (2-4 HOURS/ WEEK)

- 1) Grounds Maintenance/Habitat Restoration: Promoting Coast Salish planting, trail maintenance-Tues, Thurs 8:30am.
- 2) Corrigan Nature House Host: Support visitors access and engagement with exhibits and educational displays in Nature House, host event guests. Daytime and/or evening commitment.

- 3) Greeter Hut: Welcome visitors as they enter site, hand out and maps, share site rules, receive donations and membership applications, count number of visitors.
- 4) Trail Host: Interact with the public on the trails. Walk the trail in pairs. Respond to questions, share resources about birds and wildlife, engage visitors not adhering to rules. Must be able to walk the trails easily. (See more info BELOW)
- 5) Social Media Community Manager: Post scheduled and new content on social media, manage public interactions.
- 6) Coast Salish Plant Nursery: Join others who share a passion and knowledge about native plants. Help with plant sales and education Saturdays 10am to 2pm spring and summer.
- 7) Green Drinks Crew: help out at social events at a local taphouse where the public can enjoy craft beer while listening to guest speakers.

WILD BIRD TRUST INTRODUCES THE TRAIL HOST PROGRAM!

In April, WBT Board members Jude Grass and Tamiko Suzuki launched the Trail Host Program as a way to increase engagement between representatives of WBT and visitors exploring the trails at the Flats.

After attending a training workshop, new volunteers are paired up with experienced Trail Hosts on their first few shifts. Every Saturday, the Hosts, in teams of two or three, set up stations equipped with a tent, table & chairs, bird books, maps and binoculars. They engage with visitors about birds, history, artwork and wildlife. Hosts also learn how to explain to people why joggers and dogs (even on leash) are not allowed across the Barge Channel bridge (hint: to a nesting bird, they are seen as predators).

If you would like to try volunteering as a Trail Host (or any other volunteer opportunity), email volunteer@wildbirdtrust.org

A BIG WELCOME TO BARRY MCMEEKAN WHO IS THE SUPERVISOR FOR THE TRAIL HOSTS



Marylile Martin, Tamiko Suzuki and Barry McMeekan as Trail Hosts

Barry has always had a love of nature including birds and animals on land and in the ocean. As a long time WBT member, he came to the Flats often with his wife, and still walks the trails to enjoy the serenity of this place.

Retirement has not slowed him down - he has volunteered at Lion's Gate Hospital, Vancouver 2010 as a driver, and, for the last 9 years, at the Vancouver Aquarium, where he met Tamiko Suzuki.

About a year ago, Tamiko contacted him regarding volunteering at the Flats. Barry says, "I enjoy talking with people, sharing stories and learning new things. So when The Trail Host Program was instigated I felt I had to contribute. I want to help to develop this Trail Host program, to help train more volunteers."

His enthusiasm for public engagement is contagious. He makes all of us want to be Trail Hosts!

WEST VANCOUVER GIRL GUIDES ENJOY BUILDING BIRD BOXES!



Neighbours and long-time friends Derek Matthews (Vancouver Avian Research Centre) and Michelle Clay have been keeping the 4th West Vancouver Girl Guides busy assembling boxes for Flammulated Owls and, pictured here, 12 Purple Martins boxes for the Flats. WBT volunteer Mike Mont and Michelle's dad Jim Lanzo got the lumber donated and pre-cut all the parts.



WildResearch is a community of biologists, naturalists, and conservationists that contribute to conservation science. The organization is overseen by a Board of Directors of passionate biologists who work in the field of biology, and volunteer their expertise to WildResearch. WildResearch programs are run by our dedicated volunteers with the help of seasonally-hired employees. Our organisation is composed of approximately 300 members across greater Vancouver and now across Canada.

WildResearch's mission is to build, train, and educate a community that contributes to conservation science and our niche since 2010 has not changed to a large degree. The majority of our membership is composed of young or early career biologists or students who are looking to enter the biological or environmental fields. Our training events and workshops are highly sought after and have become an important resource for many university students.

Our flagship program is the Iona Island Bird Observatory which we have been running since our inception. This bird banding station is now part of the Canadian Migration Monitoring Network and we receive some of the largest numbers of migratory birds of any banding station in western Canada.

For more information on our organisation, please visit www.wildresearch.ca

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“Wild Bird Trust wishes to acknowledge the ongoing generous sponsorship of our bird feeding program by Wild Birds Unlimited. Thank you!”



ALL SEASONS SELF-GUIDED TOUR MAP: GUIDELINES FOR TRAIL USE

All visitors to Maplewood Flats must follow the posted rules and regulations, including but not limited to:

- Have fun and remember to tag @MaplewoodFlats in your Instagram, Twitter and Facebook uploads.
- Washrooms are available during volunteer hours at both greeter hut and nature house.
- All visitors must stay on the trails. Failure to do so can

cause serious damage to the ecosystems and their inhabitants.

- There are no bikes allowed in Maplewood Flats. There is a bike rack located adjacent to greeter hut near the trail entrance.
- There are no dogs allowed in Maplewood Flats past the bridge. Even on a leash, they disturb sensitive wildlife.
- When taking a photo or making an observation, do not touch or

disturb the wildlife which you are observing (this includes no staging photographs).

- Please do not go on the beach or mudflats. These areas are particularly sensitive to disturbance.
- Report any emergencies to the police at 911.
- Keep coming back and consider joining the Wild Bird Trust online at joinwbt.eventbrite.ca

1. THE HEDGEROW

Tangles of brambles surrounding small trees and shrubs (alder, cottonwood, and rowan) form thickets and provide habitat for nesting birds and shelter for a wide variety of wildlife in all seasons. Prickly blackberry tangles are also excellent places for birds to seek shelter from danger. Fruit of Himalayan Blackberry (the common species here) is enjoyed by Black Bears in the summer and fall, and in the winter the dried berries provide House Finches, Song Sparrows, Fox Sparrows and Spotted Towhees with a ready source of food.

2. THE TIDAL FLATS

The name “Maplewood Flats” refers to the offshore tidal flats, which provide rich habitats for a myriad of creatures including crabs, shrimp, clams and crustaceans which feed Western Sandpiper, Greater Yellowlegs, Great Blue Heron, Killdeer, Least and Semipalmated Sandpipers. Point your binoculars seaward and observe the wooden pilings or ‘dolphins’ dotted with nest boxes. These are homes designed by Wild Bird Trust for nesting Purple Martins, a species of swallow. Every year they make a round trip migration of about 22,000 kilometres between Brazil and BC, in about 21 days.

3. OSPREY POINT

From here you can view the realm of the Osprey, a fish-eating bird of prey that spends its winter in warmer climates, returning here to nest in spring. Look for it perched on a dolphin. These birds have amazing eyesight and can spot a fish from high above. They often free fall from a height, swooping upward just in time to scoop their finny prey from the water. Watch to see which way the Osprey carries its fish: head or tail first? In winter watch for Bald Eagles sitting on these dolphins. Look for Northern Harbour Seals and Northern River Otters offshore.

4. RIPARIAN ZONE (BARGE CHANNEL)

Standing on the Westcoast Bridge you are now looking over the Barge Channel. In the 1940s it was used to transport gravel and now it is an important mini-estuary/stream ecosystem. Gaze down into the water.

The term riparian refers to vegetation overhanging the water. The Barge Channel is lined with red alder trees

and other shrubs, which provide cooling shade. Cooler water holds more oxygen than warmer water which is of vital importance to fish survival. Watch and listen for the Belted Kingfisher with its rattle-like call. Great Blue Herons perch in the trees overlooking the channel. If you are lucky you might spot its smaller, rarer cousin the Green Heron.

5. DRAGONFLY POND

This tranquil pond is home to over 20 species of Dragonflies and Damselflies. Watch for ducks and ducklings in Spring and Summer. Rest on the bench overlooking the pond and listen to nature’s buzz.

6. THE EAST POND

Looking out across the pond you will see a large wooden nest box for the locally scarce Wood Duck, a cavity nester which has suffered from loss of habitat and suitable nesting sites. Wood Ducks have successfully raised young here since the box was installed. Occasionally, this box can be used by other cavity nesters, such as mergansers.

7. POCKET MARSH

Willows and mixed shrubs are the habitat of the Black-throated Gray Warbler, Wilson’s Warbler, Warbling Vireo and Yellow-rumped Warblers. This pocket marsh is a beehive of activity, especially in spring when the insects are eagerly consumed by birds. Willows here make good thickets for nesting and resting birds, and support insect larvae, such as sawflies, which are eaten by birds including warblers and chickadees. In Fall and Winter watch for roving flocks of Black-capped Chickadees and Ruby and Golden-crowned Kinglets.

8. OTTER POINT

Do you notice a fishy smell? This is a haul-out for the Northern River Otter, a fish eating member of the weasel family, that is often seen along rocky shorelines. Throughout the seasons watch for Harlequin Ducks, Black Oystercatchers, Killdeer and Spotted Sandpipers.

9. OLD FIELD MEADOW

This habitat consists of a variety of grasses and wild flowers such as lupine and cow parsnip, which are food plants for native butterflies. Think of it as pasture gone wild. It has been home to the Townsend’s Vole (a small

rodent) an important food in the diet of predatory birds such as owls and hawks. Watch for deer browsing in the meadow or at the forest edge. Check out the west pond (#7) from the viewing platform.

10. THE SALT MARSH AND PARK STREET MARSH

The Salt Marsh and Park Street Marsh are important habitats not only for resident birds, but also for migratory species. Birds lead perilous lives and simply having shelter from nasty weather can be life saving. There are no trails to disturb its sanctuary for the deer that raise their young in the area. This distinct habitat at The Conservation Area at Maplewood Flats owes its life to a combination of marine and freshwater influences. Fed by vegetation filtered waters from the main installed wetlands, it is often full of wintering waterfowl, who feed on the abundant insect life and plant species sustaining them as they travel to distant breeding grounds in the spring.

11. THE WEST POND

The Conservation Area at Maplewood Flats largest pond is visited by a variety of bird species. Bufflehead, Ring-necked Duck, Mallard, American Wigeon, Green-winged Teal and Hooded Merganser are seen mostly in late fall and winter. Can you spot a Northern Shoveler or Blue-winged Teal among them? Five species of swallow feed here in summer. Pacific Tree Frogs breed in the pond as do Rough-skinned Newts. Watch for Red-winged Blackbirds nesting here. Listen for the “witchity, witchity” song of the Common Yellowthroat. In spring, summer and fall listen for the “kiddikiddik, kiddikiddik” call of the rusty coloured Virginia Rail and try to spot it skulking in the reeds.

12. THE FOREST

In spring and summer, warblers, vireos, and tanagers feed on abundant insect life in the upper canopy. The Red-eyed Vireo or “preacher bird” repeats its melodious robin-like song over and over again, thousands of times a day. A flash of colour on high may be a Western Tanager or Black-headed Grosbeak. In winter, watch for Great Horned Owl, Northern Pygmy-Owl, Barred Owl, and Northern Saw-whet Owl roosting in trail-side trees.



BENCH PROGRAM IN THE CONSERVATION AREA AT MAPLEWOOD FLATS

The Wild Bird Trust of BC provides opportunities to mark major life events in a meaningful way, while supporting our valuable conservation and restoration work. By purchasing a bench, tree or custom art feature sited in a special location at the Flats, residents may honour a dearly departed family member or friend, or celebrate a significant event such as a birth or marriage. A portion of the contribution is tax deductible.

Locations for the bench, tree or art feature are chosen in consultation with the Site Manager from an approved list - final site decisions are made by the Site Manager. Benches and art features are maintained and, if necessary, replaced by the Trust for a period of 10 years.

For an application form, or to request more information, email admin@wildbirdtrust.org or call 604-929-2379

DEDICATED BENCH - \$3,500

The cost covers acquisition and installation of the bench and plaque. A custom bronze plaque (approx 4" x 8"), if desired, is managed and ordered separately by the individual or group requesting the bench.

DEDICATED CUSTOM ART FEATURE - \$5,000 TO \$10,000

Arrangements can be made to commission an artist to design and fabricate a special memorial feature for placement at the Flats, in consultation with the Executive Director and approval from the Board.

DEDICATED COAST SALISH TREE PLANTING - \$1500

The cost covers the purchase, transport and planting of the tree. The tree will be selected from the Coast Salish Plant Nursery at the Flats, in consultation with the Site Manager.

JOIN THE WILD BIRD TRUST—PROTECT MAPLEWOOD FLATS!

DEDICATED TO WILD BIRDS AND THEIR HABITATS ON THE PRINCIPLE ALL WILDLIFE MUST BENEFIT.
A CHARITABLE TAX RECEIPT WILL BE ISSUED FOR MEMBERSHIP FEES AND DONATIONS
(UP TO 15% OF ALL DONATIONS MAY BE DESIGNATED FOR WBT ADMINISTRATION).

SINGLE MEMBERSHIP: ☐ \$30 PER YEAR ☐ \$55 FOR 2 YEARS

FAMILY MEMBERSHIP: ☐ \$40 PER YEAR ☐ \$75 FOR 2 YEARS

STUDENT/LOW INCOME ☐ \$15 PER YEAR

LIFE MEMBERSHIP: ☐ \$500

DONATION: ☐ \$_____

TOTAL: \$_____ **NUMBER IN FAMILY:** _____

VISA CARD #: _____ EXPIRY DATE: _____ CVV: _____ (OR CALL IT IN)

NAME ON VISA CARD: _____

MEMBER'S NAME: _____ PHONE #: _____

STREET ADDRESS: _____

CITY/POSTAL CODE: _____ EMAIL: _____

PLEASE MAKE CHEQUE PAYABLE TO: WBT WILD BIRD TRUST OF BRITISH COLUMBIA, 2649 DOLLARTON HIGHWAY, NORTH VANCOUVER, BC, V7H 1B1.

OR JOIN ONLINE AT WILDBIRDTRUST.ORG

WOULD YOU LIKE TO VOLUNTEER? — WE TRAIN! ☐ RECEPTION ☐ HABITAT WORK ☐ COMMITTEE WORK

RENT THE NATURE HOUSE

Spend the day at the Conservation Area at Maplewood Flats! The Corrigan Nature House is a versatile open space for events, meetings, and school programs. The Nature House is outfitted with a full kitchen, a sound system, two movable walls, projectors, tables, chairs, lots of natural light in a beautiful setting, with direct access to the bird feeding station and walking trails.

CATEGORY	4HRS/HALF DAY	8HRS/FULL DAY
NON PROFIT	\$200	\$300
COMMERCIAL/ CORPORATE	\$260	\$600

Kitchen Rental: \$50 • Projector, sound system: \$25

We are happy to meet with you and show you around before a booking is made, so please make a viewing appointment and stop on by!

For rental information, please call 604-929-2379
or email rentals@wildbirdtrust.org

* As a conservation area, certain restrictions apply.
Eg. alcohol is not permitted on site.





SUPPORT & DEFEND COAST SALISH WILD BIRDS

Wild Bird Trust of BC is a forward-thinking conservation organisation with strong community partnerships, and a growing and diversifying membership. Our mission is to provide wild birds with sanctuary through ecological protection and restoration, and support communities with education, culture, and reconciliation programs.

Our work is made possible with the support of our members, volunteers, social enterprise revenues (nature house rentals and nursery sales), donors and funders - through their time, care, contributions and grants.

Your financial contributions support ongoing projects of great need including:

- restoring more previously industrialized areas of Maplewood Flats
- increasing Coast Salish plant vegetation to increase biodiversity
- improve signage and interpretive displays
- programming the Nature House
- increasing access to our children's education camps
- planning longterm with a strategic Habitat and Cultural-Use Management Plan

- ensuring public washroom access
- publishing education materials on issues of concern and interest

Indeed, throughout this magazine you'll find examples of the great work we all do, mainly as volunteers, to maintain this beloved space and its birds and wildlife.

Please consider making a tax-deductible donation by emailing donate@wildbirdtrust.org, by phoning (604) 929.2379 or by secure online via Canada Helps at <http://bit.ly/WBTdonate>

Wild Bird Trust expresses sincere appreciation for the following recent financial contributions from: LUSH Cosmetics, North Shore Unitarians, Lynn Valley Garden Club, and other anonymous individuals.

We would like to acknowledge recent grant funding from: Canada Summer Jobs (HRSDC), Aboriginal Community Career Employment Services Society (ACCESS), North Vancouver Recreation and Culture Commission, District of North Vancouver Parks, and BC Community Gaming Grants.



BIRD SURVEYS 8AM - 11AM

Join us bright and early on the first Saturday of each month to participate in our monthly bird surveys. Participants of all levels are welcome to take part in the survey led by experienced birders

- July 6, August 3, September 7, October 5, November 2, December 7

AFTERNOON HOLIDAY WALKS

Hosted by Kevin Bell. Lifelong Naturalist, ornithologist/ecologist, retired Chief Naturalist/Manager, Lynn Canyon Ecology Centre and D.N.V. Natural Parklands.

Mondays, 1:00 pm to 3:00 pm

- July 1 - Canada Day
- August 5 - BC Day
- September 2 - Labour day
- October 14 - Thanksgiving
- November 11 - Remembrance Day/Armistice



MONTHLY GUIDED WALKS

Hosted by Legendary Naturalist Al Grass.
Saturdays, 10:00 am to noon

- **June 8** – Ospreys and Martins – they are back! – and many other birds too.
- **July 13** – Salt Marsh Secrets Revealed – The Conservation Area at Maplewood Flats boasts the premier example of salt marsh in Burrard Inlet. A rare supervised opportunity to appreciate this import inter-tidal ecosystem.
- **August 10** – All About Habitat – understanding habitat.
- **September 14** – Autumn – Fall migration and Maplewood's birds.
- **October 12** – Fresh and Frosty – birds begin to prepare for the challenges of winter
- **November 9** – Woodland Wonders – Maplewood's forests live with the help of beetles, woodpeckers and fungi.
- **December 14** – Home for the Holidays – A winter's day at Maplewood is always full of wonder!



LATE SUMMER WALK WITH ROB LYSKE

- August 17 starting at 10:00 am.

Photo credit: Northwestern Garter Snake by Rob Alexander



SPECIAL GUIDED WALKS BY AL AND JUDE GRASS

- **July 10** – Wednesday Evening Walks with Al and Jude Grass – First of two delightful evening opportunities to hear birds singing, observe wildflowers, and perhaps see bats and swifts and possibly a mother deer and her fawns.
- **July 24** – Wednesday Evening Walks with Al and Jude Grass – Second of two delightful evening opportunities to hear birds singing, observe wildflowers, and perhaps see bats and swifts and possibly a mother deer and her fawns.

Photo credit: Song Sparrow parent with baby fledgling by Rob Alexander



RECONCILIATION IN ACTION

WORKSHOPS AND PLANT WALKS

Indigenous Plant Walks lead by ethnobotanist Senaqwila Wyss

- Every second Saturday, 11:00 am - 1:00 pm
- June 22
- July 6
- July 20 (during Osprey Festival, 3:00 pm - 4:00 pm)
- August 3
- August 17

SPECIAL EVENT HOSTED BY WILD BIRDS UNLIMITED AT MAPLEWOOD FLATS

Saturday June 8th, 10:00 am - 3:00 pm

Join WBU for a day of fun-filled activities including:

- Guided Bird Walk
- Presentations
- Live Raptors
- Build Your Own Bird Feeder
- Free Bird Food Samples & Coupons!
- ...and More!

RED CEDAR BARK BASKET WEAVING WORKSHOP

Lead by Squamish & Haida Artist Vera Douglas

• **Saturday, July 6 - Noon to 5pm**

Pre-registration required. \$125 (members rate).

Email programs@wildbirdtrust.org or visit eventbrite link at <http://bit.ly/CedarWeave>

OSPREY FESTIVAL

Mark your calendar for this year's annual event

• **Saturday, July 20, 10am - 4pm**

COMMITTEE MEETINGS

Habitat Committee - Wednesday, July 4, 6:30pm

Programs Committee - Sunday July 7, 3pm

ANNUAL GENERAL MEETING

Proposed for Saturday, November 3

TWN Community Centre - Main Hall

3010 Sleil-Waututh Road



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13TH OSPREY FESTIVAL

FREE FUN FOR THE WHOLE FAMILY!

Coast Salish Culture • Outdoor Acoustic Music Stage • Nature Walks •
Children's Art-making • Plant Sale • BBQ Foods • Info tables • TEK Panel •
Talk: Birding in Iran • Pacific Coast Portraits Exhibit with Artists for Conservation

MAPLEWOOD FLATS, 2649 DOLLARTON HIGHWAY

Go green! Take Translink Bus #212

INFO/RSVP: [BIT.LY/OSPREYFEST2019](https://bit.ly/OSPREYFEST2019)

Osprey by Jordan Gallie (Tsleil-Waututh)

