

# Shorelines

## NEWSLETTER OF THE PROBUS CLUB OF NORTH SHORE VANCOUVER

July 2021

[www.probus-northshorevancouver.ca](http://www.probus-northshorevancouver.ca)

Vol.19 No.7

### Management Committee

**President:**

Ron Wood  
604-922-7646

**Vice President:**

Darryl Stodalka  
604-925-2570

**Secretary:**

Keith Fenton  
604-926-7586

**Treasurer:**

Gordon Adair  
604-230-9122

**Past President:**

Herb Grubel  
604-980-7922

**Communications:**

Tom Gunn  
604-921-7298

**House:**

Terry McLeod  
604-926-0239

**Membership:**

Jeremy Marr  
604-926-9368

**Speakers:**

John Elliott  
604-925-3535

**Special Events:**

Doug Magoon  
604-616-6761

**Past Years Newsletters**  
To view past editions of our newsletters on our website just enter the Password  
**probusns2021**

## Monday, July 12<sup>th</sup> Zoom Meeting - 9:30AM

with guest speaker

**John Atkin, Historian**

*“Downtown Eastside History Relative to Hogans Alley and the Viaducts.”*



John Atkin is a civic historian, and consultant who regularly writes reports on the history and significance of heritage buildings for municipal governments in the Lower Mainland and the Kootenay region of British Columbia.

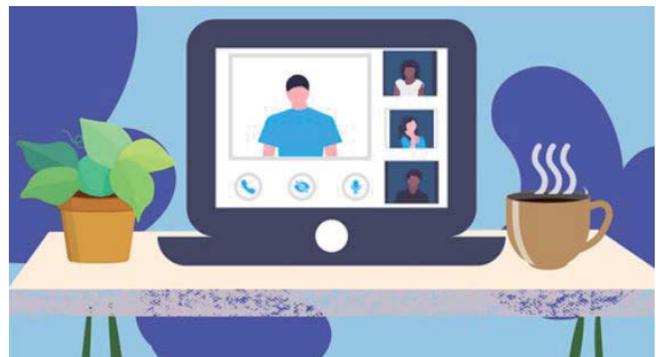
He was the past chair of the City of Vancouver’s Civic Asset Naming Committee and of the Dr Sun Yat Sen Chinese Garden Committee. He currently serves on the board of the Friends of the Vancouver Archives, and as the vice president of the Chinese Canadian Historical Society of BC.

He has shared his knowledge of Vancouver history in books, lectures, and a blog.

John has on several occasions led guided walking tours of Probus Club members exploring Vancouver’s architectural history and neighbourhoods. During these walks he showed that he knows Vancouver’s history extremely well and discusses it in a lively and engaging manner.

We look forward to his presentation on July 12th

**Hope You  
Can Join Us  
At  
Our Next  
Zoom Meeting**



### Mark Your Calendars with These Important Dates



**Pop-Up Zoom Meeting - Monday, July 26, 2021, 10:15AM**

**Monthly Zoom Meeting - Monday, August 9th, 2021**

Guest speaker Dr. Michael Walker, Economist

## President's Notes



With the advent of summer on June 21st, we are all anticipating another beautiful British Columbia summer and, probably, reflecting on some memorable personal experiences of previous summers at a Vancouver beach, lake cottage or a summer job.

Interestingly from an historical perspective, our speaker this month, John Atkin, will again be introducing us to a vignette of former Vancouver life in his presentation entitled "Downtown Eastside History". As his tours and previous presentations to our Club have been most interesting, his address promises to be another learning experience for us all.

Looking ahead to the August meeting, the featured speaker will be Dr. Michael Walker, an eminent economist and former Chairman of the Fraser Institute.

In the interim, I am pleased to advise that the Management Committee is continually assessing the options available regarding meeting venues (Zoom or in-person), the possibility and location of the annual Christmas luncheon as well as membership fee structures. Although the committee recognizes in-person meetings are favoured by most, the option of an in-person meeting and a concurrent Zoom meeting may be possible in the future for those who have difficulty in personally attending the meetings.

Once again, thank you for your continued commitment to retaining your membership during the pandemic and ensuring the success of our Club. On behalf of the Management Committee, we look forward to your participation in the meeting on July 12th.

*Ron Wood*

Contact: [president@probus-northshorevancouver.ca](mailto:president@probus-northshorevancouver.ca)



## Special Events

As the level of COVID immunization rises among the public and mitigation measures relax, Special Events tours may be able to recommence. That timing is dependent on Ministry of Health Guidelines, member willingness to participate and, importantly, tour hosting agencies willingness to receive guests. The Events Committee has agreement in principle for tours of North Shore Rescue, Lions Gate Hospital Emergency Department Renovation Project, BC Cancer Agency Genomics Research Laboratory as described to our club by Dr. Marco Marra in May, the Pacific Science Enterprise Centre as described to us by Steve Macdonald in June and Carbon Engineering who are piloting carbon dioxide capture technology in Squamish. The committee has also had discussions with Triumph nuclear particle accelerator project at UBC and the company who provides Fraser River and Indian Arm dinner cruises. All of these entities are willing to host us when their COVID mitigation policies permit. None of these entities can say definitively when that may be.

So please remain patient and watch this space. We have places to go. The big question is when.

*Doug Magoon*

## Nominating Committee Report

As we head into the summer, we are in the process of establishing our recommendation for the 2021/2022 Management Committee which is normally elected at our September Annual General Meeting. I have included our bylaw related to this.

Bylaw No. 4 – Election of Officers

A Nominating Committee consisting of the President-Elect, President, and a Past President (if available, otherwise a Club member in good standing) shall present to the Annual General Meeting a slate of candidates for election to the Management Committee.

Any further nominations (with prior consent to stand) shall be conveyed to the Nominating Committee at least 14 days prior to the Annual General Meeting.

When more than one candidate is nominated for an office, voting for that position shall be by ballot.

This past year during the pandemic, we fortunately had all of our positions filled. There is a natural progression every year from Vice President to President to Past President. We will have a vacancy for the Vice President role when I assume the role of President. Terry McLeod has agreed to take on the Communications Chair as Tom Gunn is stepping down. John Elliott is stepping down as Speaker Chair. So, in September, we will need to fill the roles of Vice President, House Chair and Speaker Chair.

If you have any interest in one of these positions, please give me a call at 604-925-2570 or send an email to [Stodalka@live.ca](mailto:Stodalka@live.ca).

*Darryl Stodalka*

*Vice President and Chair of the Nominating Committee*

## Last Month Speaker - Steve Macdonald Cont'd.

Dr. Steve Macdonald Designated Senior Officer Head Environmental and Aquaculture Research at Pacific Science Enterprise Center (PSEC).

PSEC is located in Sandy Cove in West Vancouver. Following the last ice age 12,000 years ago the site was the location of a First Nations village as its waters a source of abundant rockfish, salmon and other fish species. A reoccurring theme in this talk will be the importance of water, for all groups that have occupied this site since then.

Proximity to Fraser River salmon runs and access to fresh water from Cypress Creek made the site equally attractive to industry, and beginning in the late 1800's the Defiance Cannery (renamed Great Northern Cannery in 1927) had operations at Sandy Cove. Generations of workers and their families lived on-site at the cannery, which was known in the local community as "the walled city." By the mid-1960s, a less profitable fishing industry and new regulations for canneries led the Millerd family, which then owned the cannery, to agree to sell it to the Government of Canada on the condition it be used as a research facility.

In 1970, the Pacific Environment Institute (PEI) opened its doors. Scientists initially worked in trailers until a building was erected in 1986. Early research focussed on ocean pollution, fish culture and physiology, habitat capacity and enrichment methods. Scientists at this time were instrumental to understanding the impact of pollution on western Canadian aquatic habitats and their work informed many control and mitigation efforts.

Under Paul Martin, the then Minister of Finance (1993–2002), 40 staff were let go due to budget cuts and the site was "closed" 2 people remained on site and kept it going.

In 2004, a working partnership with the University of British Columbia was formed, funding was received and the lab was re-opened as the Centre for Aquaculture and Environmental Research (2004-2016)(CAER). Research centred around fish culture and physiology, biotechnology risk assessment and the environment. This partnership ended after 6 years, but the co-operation with UBC and other institutions continues under the name of the Pacific Science Enterprise Centre.

An impressive team of scientists worked for the organization over time.

Dr. Ed Donaldson whose area of expertise is biotechnology and physiology did research at the cannery sites. He is known for isolating the impact of stress on salmon. Even brief stressful interactions lead to changes in fish hormones that ultimately affect reproduction in fish. He also showed that with hormone levels remaining relatively the same, rising temperatures cause infertility.

Doctor Michael Waldichuk was the first scientist to be

appointed a full-time worker on water pollution, for the Canadian department of fisheries.

Dr. Ian Birtwell researched pollution toxicology to understand the sub-lethal effects and lethal impacts where 50% of the subjects die over a given period of time from which regulations would be developed. He created innovative techniques and devices that he could use where there was indication of fish being stressed including the "Water Column Simulator" that simulated an estuary. It is a "tiny torture chamber" that helps identify a contaminant long before it kills the fish.

Dr. John Stockner was a fresh water expert interested in the low productivity of BC lakes, and how they could be enhanced to increase the productivity of fish. He looked at food chains and how nutrients could be introduced to multiply the development of plankton fed on by salmon who spend a year in the lakes before going to sea, and ultimately multiply the number of salmon. His tool is still used by managers to mitigate against sockeye losses.

Dr. Colin Levings, an ecologist, researched food chains in estuaries which are different than in the lakes. Chinook and some sockeye salmon spend a long time in estuaries at the mouths of rivers acclimating before going to sea, and feed on the small fish that feed on the microbes created by the decay of vegetation that grows in the estuary or that comes downstream from deciduous trees in the fall. If the estuary is paved over and industrialized, it will cause significant stress to the fish. Knowledge gained from research in the Squamish estuary, was applied in Campbell River (1950-1990) where logging had been moved from the estuary to land. The estuary was enhanced by planting marsh grasses, which "proved" what was found in the Squamish estuary research as it had a positive effect on salmon populations. This is now standard practice in the Pacific north west and in other countries.

Dr. Bob Devlin was an expert in molecular genetics and considered the effects of GMO's and sewage in fish. This was not a fish productivity study but rather what led to the production of transgenic fish.

Dr. Ian Foster headed the Aquatic Nutrition Program which develops more nutritious plant based products to sustain and grow fish stocks.

Our Speaker's expertise is in ecology and forestry and created the "Pathway of Effects" model to determine harmful alteration to fish habitat. He started his career as a chemical oceanographer on the Pacific coast, and over many years he applied those skills to surveys of pulp mill pollution. His primary study area was 2 hours north of Fort St. James at the upper end of the Fraser River where a series of watersheds were identified. At these locations, 5 years of pre-forestry data collection was undertaken and

## Last Month Speaker - Steve Macdonald Cont'd.

then continued as forest harvesting took place. This model provides important information for the courts to support their rulings/decisions regarding industrialization of natural areas.

Today the PSEC facility has:

- Indoor and outdoor tanks
- Freshwater from 3 sources: well water, Cypress Creek and dechlorinated city water
- Deep water dock
- Artificial stream channels, swim changers and exercise troughs
- Dry labs, wet labs

Since 2016, the focus has been to deliver science in a different way. PSEC houses a suite of government, academic, First Nations, and other science practitioners in a collaborative environment designed to drive joint research work, incorporate traditional Aboriginal knowledge, and leverage the resources of multiple partners around shared goals and needs. The facility provides scientific advice on aquaculture and nutrition research, marine mammal conservation, aquatic biotechnology and risk evaluation, acoustic monitoring, and pollution toxicology.

The Centre currently serves researchers from Fisheries and Oceans Canada (DFO) investigating areas from kelp forest productivity, large mammal collision avoidance systems, oil spill preparedness to risk assessment of fish with novel traits; citizen science collaborations in areas including glass sponges, climate change impacts and ecosystem health. In addition, educational opportunities including a science academy with the West Vancouver School Board, and an education team offering on-site or in classroom programs for grades 3 to 6 with hands-on aquatic experiments, and behind the scenes laboratory tours are also available. The facility offers a small-scale hatchery to allow rearing of various stocks in fresh or saltwater; an indoor and outdoor experimental aquarium to allow for experiments to be responsibly conducted on live fish, algae, macro-plankton and shellfish. There are three stable water sources (ground, creek and saltwater) to carry out aquatic biology experiments; Veterinary and aquarium services to support research and ensure responsible animal care; six wet laboratories supporting aquaculture, fish physiology, and genomics and numerous dry laboratories supporting advanced genetics, animal health, and acoustics.

The Coastal Ocean Research Institute (an Ocean Wise initiative), has two programs working out of PSEC: the Ocean Pollution Research Program and the Marine Mammal Research Program's Conservation Genetics Lab. DFO and Ocean Wise investigate impacts of contaminants on the health and reproduction of the Endangered Southern Resident Killer Whale population. The Ocean Pollution

Research Program has a long-running marine mammal toxicology project that is documenting the very high PCB levels in killer whales and impacts on their health. The Conservation Genetics Lab works closely with DFO Science and uses DNA analysis to better understand the conservation implications of low abundance, population subdivision and dietary specialization in killer whales and other marine mammal species.

### **Q1 Will the lab still have involvement with the Vancouver Aquarium?**

A No. Sad about what happened as there will no longer be an associated research component with the Aquarium. Ocean Wise, although still alive and active at PSEC, will exist as a separate entity now. PSEC doesn't charge them as they gain so much from their research, and hopefully this will remain viable.

### **Q2 What are the effects of storm water diversions?**

A Hydrological conditions are an issue here and in forest harvestry too. Regulations are needed anywhere you can maintain natural flow patterns of water as this leads to better habitat. Generally in cities it is taken out of watersheds as quickly as possible which is not natural but a trade-off.

### **Q3 What are your views on fish farms?**

A I am neither a bullish supporter or an advocate. They are here to stay, with their many issues including sea lice, escaped fish and diseases. With a view to moving the farms to land, 14 processes were identified all requiring more energy and therefore more ecological issues, and still have to get rid of the effluent from them. Fish farms produce half of the salmon in B.C. PSEC's job is to identify pros and cons of the various impacts to salmon production- fish farms are not the only thing. Suggested organizing a workshop to discuss more fully.

### **Q4 Do you do open ocean work?**

A No. This is largely done in Nanaimo. We don't have oceanographers.

### **Q5 Do you get funding from the Federal Government?**

A This is an important source of funding for salmon research. It goes to universities and Ocean Wise – not my department. Provincial and Federal Governments have stepped up to the plate with \$\$\$. We will still benefit in a secondary sense. We are down to 9 people and don't have the critical mass to do that work.

### **Q6 Is Dr. Mike Waldichuk still alive?**

A No. He passed away in the 1990's. On the Friday before he died, he was in the lab at his big desk which was piled with papers but a small space for writing. He had time for all of us. A "Waldichuk" room was created in his honour.

*Darlene Dean*