



NEWSLETTER

PROBUS CLUB OF VANCOUVER

PO Box 74539, KITSILANO, Vancouver, BC, V6K 4P4

Enriching members with topical, entertaining speakers and social activities

www.probusvancouver.com

February, 2019

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Next Meeting: Tuesday, Feb 12th at 9:30 am
Location: H.R. MacMillan Space Centre
Speaker: Professor John Clague
Topic: "Earthquakes and Tsunamis"

NEXT MONTH'S SPEAKER
March 12: John Cherrington,
Lawyer and author
Topic: Walking to Camelot

JOHN CLAGUE



John Clague is one of Canada's leading authorities in Quaternary and Environmental Earth Sciences. He is Professor and Shrum Chair in Science at Simon Fraser University; Emeritus Scientist, Geological Survey of Canada; Fellow of the Royal Society of Canada and Professional Geologist, Association of Professional Engineers and Geoscientists of the Province of British Columbia. He has 35 years' experience in surficial/terrain mapping, Quaternary stratigraphic investigations, engineering and environmental interpretations of surficial geological information, and natural hazard studies and is noted for local, national and international research collaboration with other geologists, geographers, biologists and physicists. John is an expert in the science of the last 2 million years of earth geological history, and specializes in geological hazards, such as earthquakes, tsunamis, landslides, and floods. His maps and reports have provided information vital to land-use planning, the forestry industry, urban developers, and the siting of highways, pipelines and railroads. With this background, he went on to investigate other natural hazards such as earthquakes and tsunamis. His concern about potential earthquakes on the west coast led to research on recent subsurface deformation of the Earth's crust, and on geological evidence of past tsunamis.

Correlation of earthquake and tsunami events showed that magnitude 6 to 7 earthquakes have affected southern Vancouver Island about once every 100 years. Not content with this academic success, he became a leading voice in alerting people and governments to the challenges of coping with and planning for future disasters. It is expected that the threat of large magnitude earthquakes will lead to changes in the National Building Code and improvements in emergency preparedness procedures in the Vancouver area. John has published 250 papers, reports and monographs on a wide range of earth science topics of regional and national importance. He has prepared innovative geoscience products for educators and the public. He has had numerous television and radio interviews (CBC Newsworld, CBC Radio, CTV Television) and has been featured in newspaper and magazine articles (Vancouver Sun, Victoria Times-Colonist, Equinox, Beautiful B.C., Westside News, The Westerly News). His research was featured in a 1997 Discovery Channel documentary on earthquakes and tsunamis on the west coast of Canada. He has influenced Quaternary scientists in the United States and Europe and his research on earthquakes, landslides, and floods has greatly increased public and official awareness of these hazards.

Report of the January 8th Meeting

Attendance: 165 Members and Guests

President Peter Scott opened the meeting, welcomed the members and guests present, especially our speaker, Glen Dennison and wished all a happy new year.. Jack Zaleski introduced three new members (see page 3). Raymond Greenwood thanked his Member Services Team, especially Bob Wood who acted as traffic warden. Bill Hooker introduced our speaker, Glen Dennison.

Glen Dennison is on the board of directors for The Marine Life Sanctuary of BC, The Underwater Council of BC, and the in-development Subsea Society of Howe Sound. In addition to the projects below, Glen and his organizations are also currently looking for cold water coral and looking at the methane vents in the craters on the floor of Howe Sound for associated chemosynthesis-assisted life.

Sponge Reefs

Glass sponge reefs, also known as cloud or Hexactinellid sponge reefs, were discovered on the coast of BC in 1987 by Dr. Kim Conway. Prior to this discovery, sponge reefs had only been studied as fossils, which biologists thought had gone extinct at the end of the Cretaceous period. The earliest sponge reefs on the planet are thought to have existed 570 million years ago in the Precambrian era, which makes them one of the earliest complex life forms. Most of the fossils found are from the Jurassic-cretaceous period where glass sponge reefs were outbuilding coral reefs 1,000:1. There is one sponge reef fossil that stretches from Spain to Romania (~7,000 km).

In Howe Sound, sponge reefs are limited to the east side of the sound with the hypothesis being that this is caused by the Squamish River providing silica particles that sustain reef growth. The only five known diveable sponge reefs in the world are found in Howe Sound. The reefs are composed mainly of the Common glass sponge (*Aphrocallistes vastus*) and to a lesser extent, the Chalice sponge (*Heterochone calyx*).

Glass sponges are marine animals that can measure up to three meters. Their growth rates (1-7 cm/year) and morphology vary depending on the amount of current, depth, water silica levels, and available food source. Some sponges have large tubes, while others can have giant "ears". Sponges are filter feeders that use silica to create sharp spiculas that make up their 'skeleton'. The sponge skeleton is surrounded with a bright white to orangey-yellow tissue. The bacteria on the sponge's spicula will pierce skin and cause an irritating rash or burn if handled with bare hands. Glass sponges can filter about 900 times their body volume per hour through ambient currents. They can shut down their filter feeding on mass or use their built-in cleaning mechanism if they receive too much sediment from the current.

The reefs grow as bioherms, with dead sponge on the bottom layers and live sponge in the top layers. Some of these bioherms are over 18 meters in height. Biologists are considering coring these bioherms as the silica in the spicula do not decay and could provide interesting historical data.

These reefs are important for fish habitat, and in particular, for rock fish propagation. In order to protect these areas, Glen's organizations have worked with the DFO, First Nations, BC Parks, and local societies to bring awareness to the reefs and collect data. Glen collects data in areas that lend themselves to reef development (e.g. pinnacles) using

cameras, a digital compass, thermometers, and computer programs to create high resolution maps of the sponge locations. They track temperature as well, since the sponge tissue is damaged when exposed to temperatures above 11° C. Unfortunately, this research is not currently funded. With a team of volunteer citizen scientists, they found 13 new reefs in their research and published a report, which the DFO used to ground-truth the data and produce their own report. The team is now seeking to approve closure of these areas, which is controversial among prawn fishermen. Glen's citizen science team is currently working with the DFO to conduct a sponge larvae study to see if it is possible to farm glass sponge, which could be used to repair reefs that have been damaged due to activities such as trawling. Photogrammetry is also being used track changes in the reefs from year to year. A volunteer deep diving team also dives up to 350 feet deep to get Go-Pro footage of the bioherms for documentation. Finally, with the help of the DFO, the team has also set up hydrophones about 250 feet deep and visited the sites with a submarine.

Rockfish

Rockfish have slow reproductive cycles (25-30 years) and give birth to live fish which makes it quite difficult for their populations to recover from over-fishing or habitat loss. Moreover, Rockfish are very easy to catch, which makes them susceptible to poaching. The Bocaccio and the Black Rock Fish, which were once plentiful are now extirpated from Howe Sound. Rockfish are partial to rocky and sponge glass reefs such as Brigade Reef as habitat. Glen's team is working to install mooring buoys, similar to those over coral reefs in many Caribbean countries, to protect areas with reefs from anchor damage. Their first mooring buoy will be installed over a glass sponge reef in the protected Haklett Marine Park. In the meantime, volunteer divers are trained through the Vancouver Aquarium to identify and count Rockfish on their dives to help track their populations. Unfortunately, while Rockfish habitat is closed to fishing, poaching continues to be a major issue in protecting Rockfish populations.

Sharks in Howe Sound

Sixgill sharks are the third largest predatory shark in the world, comparable to a great white shark in size. Up until recently, scientists had thought that Sixgill sharks were transient in BC waters, with some incidental sightings made by divers over the years. However, Glen's team suspected that the sharks were actually living in the Vancouver Harbour area and in Howe Sound. They decided to test this hypothesis with a submarine, a camera, and some bait. Ten hours and 350 feet later, the team successfully gathered footage of the Sixgill sharks. With the observation of juvenile sharks, the team was able to confirm that the sharks weren't just transient in BC waters, but that they were breeding and nesting in the area as well. The discovery opens doors for research funding for Sixgill sharks in BC.

Recommended reading: "Diving Howe Sound: Reefs and Islands" – Glen Dennison

Glen also shared some dive videos of the sponge reefs and of the Sixgill sharks.

For an unabridged version of the above, with Questions & Answers, go to our PROBUS website at www.probusvancouver.com, click on "Speakers" and then on "Glen Dennison"

Rotarians' Investment Club

Meetings in 2019 will now return to the last Thursday evening of every month, at 6.30 pm with a no-host bar at 6.00 pm. and will start on January 31st. In case this Newsletter reaches you before the end of January,

our Guest Speaker will be Ian Brown, C.P.A., telling us of "Perks & Perils of Investing in Junior Mining Companies".

The Guest Speaker for our February 28th Meeting has not yet been confirmed, but the topic is expected to be about "Income Tax". Please phone or email myself or our President to confirm the Topic & Speaker closer to the date. Probus members and their guests are welcome to attend our Dinner meetings which include the RVYC first class 3 course meal with a couple of glasses of dinner wine, and the \$60.00 cost covers gratuities/taxes etc. for an entertaining and educational evening. To attend, please call or email our President, Bill Caulfield at **604-825-8245; wjcaulfield@gmail.com no later than Tuesday January 29th (or February 26th) as we have to provide exact numbers and pay for no-shows.**

For Club Information please email John Sullivan - johnws@telus.net ; Tel: 604-714-4773

THE PRESIDENT'S MESSAGE



Our speaker in January, Glen Dennison, gave us an inspired talk about the depths of Howe Sound which was accompanied by some wonderful underwater photographs. Glen sent us these links to information on some of his work.

<https://mlssbc.com/programs/published-documents-available-for-download/> and <https://www.underwatercouncilbc.org/>.

We welcomed a larger than usual number of guests, thanks to our current three month promotion (guest fee waived through the March meeting) and we hope to entice some of them to become members. PROBUS clubs by definition (clubs for retired and semi-retired men and women) will be subject to constant attrition and will need to bring in new (and hopefully, some younger) members to counteract the losses.

Due to some filming at the Space Centre, there was a concern about the number of parking spaces being available for our members. Raymond arranged for Bob Wood to monitor the parking situation and he did a fine job. Luckily for him, it was a pleasant day and as it turned out, parking wasn't a problem. Our February speaker, John Clague, was originally scheduled to address us last year on the subject of earthquakes and tsunamis but had to postpone due to a Provincial Government appointment. These topics are of great interest to us as residents of the Pacific Northwest.



PROBUS FRED COTTON BOOK CLUB



The Book Club meets at 9:00 a.m. on the first Wednesday each month (except July and August) at the White Spot, Georgia & Cardero.

Upcoming books we will discuss:

February 6: Rules of Civility by Amor Towles
March 6: Hero of the Empire by Candice Millard

A list of books read since the Club began in 2008 may be found on the Club website by clicking the "Book Club" link

For further information contact Ken Yule at kjyqc@shaw.ca or 604-266-4563.

IN MEMORIAM

It is with regret that we announce the passing of
Frank Harley on December 23

&

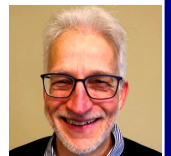
Gary Derkson on December 25

Our condolences to their families and friends
The PROBUS Club of Vancouver will make
donations in their names to
St. James Music Academy
and
BC Children's Hospital, respectively

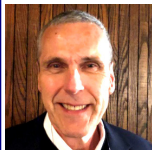
Welcome New Members



Zul Tejpar
 Chemical Engineer



Doug Filipenko
 Anatomical Pathologist



Geoff Blair
 Paediatric Surgeon

Thanks to our January Member Services Team

Cashier: Grant Cameron

Traffic Control: Bob Wood

Greeters: Michael Geller & David Sykes

Our Club History—2018

The January meeting featured Dr. Ron Burnett, President & Vice Chancellor of Emily Carr University of Art & Design. His talk included a brief history of the University which opened in 1925. His talk stressed the importance of art and design to every aspect of life from clothes we wear, the cars we drive, the tea cups we drink from and the art on the walls around us. University graduates are major contributors to the economy, often as successful entrepreneurs.

Throughout the year our Speakers Committee attracted top quality individuals who provided members with a variety of interesting, significant and sometimes provocative information. For example, we learned a great deal about life in North Korea from Club member Bob Ross; UBC Professor Paul Evans offered insight into today's world in which China is challenging the US as a global power; the Attorney General of BC, David Eby, Q.C. covered the serious money laundering problems at casinos as well as the changes to be introduced at ICBC to reduce excessive claim costs; Mahood Poonja of Bestway Travel spoke about the wonders of travelling in Iran highlighting its rich history; the President and CEO of Tourism Vancouver spoke about the importance of tourism to the BC economy pointing out that it is our 2nd largest industry; Arthritis Research Canada headquartered in BC is the largest clinical research centre in North America, thanks to Dr. John Esdaile, who outlined the excellent work being performed by its staff of over 100 persons.

A Special General Meeting of the Society was held in conjunction with September's Annual Meeting at which members approved a revised constitution and bylaws, necessitated by the new BC Societies Act. The only significant change increased the Board of Directors from 5 to 12 with all the Management Committee positions becoming Board positions. At the Annual General Meeting members of the new Board of Directors headed by President Peter Scott were inducted.

At the August meeting, Jack Zaleski was recognized as our newest Honorary Life Member and presented with a plaque outlining his exceptional contributions to the operation of the Club.

The Rotarians Investment Club, the Fred Cotton Book Club and the Bridge Club continued to operate throughout the year.

The Activities Committee put together a variety of events during the year starting with a guided tour of the Ballard Power Systems Plant in Burnaby on April 19th attended by about 50 members. On April 30th a VSO concert featuring violinist Sarah Chang was offered. May 15th featured a walking tour of Fairview with John Atkin attracting 21 members. About 50 members boarded a bus for Whistler on June 6th to enjoy guided tours of both the Audain Art Museum and the First Nations Museum. Next on the list was "As You Like It" at Bard on the Beach on July 17th. On August 21st a group visited the North Shore for a guided tour of the Polygon Gallery. The final event was the Presidents' Lunch in October held for the 5th consecutive year at the Arbutus Club.

Authors: Norm Weitzel (1996-2013) - Roy Williams (2014-2018)



VANCOUVER SYMPHONY ORCHESTRA
(THIS IS THE SECOND OF TWO CONCERTS OFFERED THIS YEAR BY THE VSO)

TRAGIC LOVE: WAGNER & PROKOFIEV

Saturday 11 May at 8pm

Tickets \$35 (Normally \$70) Section 1 Seating Balcony or Orchestra

Maestro Otto Tausk takes the podium in a concert all about love, and offers his live commentary and insights. The spotlight shines on VSO musicians **Julia Lockhart** and **Jeanette Jonquil** in the lovely *Duet Concertino for Clarinet and Bassoon* by **Richard Strauss**, and Maestro Tausk presents **Prokofiev's Romeo & Juliet** in a way that Vancouver audiences have never heard before, in a suite that features not only the most famous sections, but also some of the rarely-performed music in between that is, in fact, some of the most beautiful music in the entire work.

(Tickets must be ordered before April 1st for this concert)

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NAME _____

ADDRESS _____

PHONE # _____ EMAIL _____

Tragic Love – Tickets \$35 (normally \$70) NUMBER OF TICKETS ___ TOTAL COST _____

WHICH PROBUS CLUB? MEN's ___ WOMEN'S ___ VANCOUVER WEST MIXED ___

CHEQUE (# of tickets multiplied by applicable price) \$ _____ made out to Vancouver Symphony Orchestra

INDICATE: Orchestra _____ Balcony _____

Mail form and cheque to: Estelle Jacobson 1192 Nanton Avenue Vancouver, BC V6H 2C5

TICKETS WILL BE AVAILABLE AS OF NOVEMBER 1st AND **WILL NOT** BE MAILED
PICK-UP WILL BE AT MONTHLY PROBUS MEETINGS

NO EXCHANGES OR REFUNDS



**TUESDAY, JUNE 4, 2019
BUS TOUR TO THE STAVE
FALLS DAM MUSEUM AND
WESTMINSTER ABBEY IN
MISSION—GUESTS WELCOME
\$80.00 PER PERSON**



Stave Falls Dam is a dual-dam power complex on the Stave River in Stave Falls, Mission. The dam was completed in 1912 for the purpose of hydroelectric production. To increase the capacity of Stave Lake, the dam was raised in 1925 and the Blind Slough Dam constructed in an adjacent watercourse 1,600 ft. to the north, which was the site of the Stave Falls. In 2000, the dam's powerhouse was replaced after a four-year upgrade. The powerhouse was once British Columbia's largest hydroelectric power source and is a National Historic Site.

Westminster Abbey is a community of Benedictine monks in Mission established in 1939 from the Abbey of Mount Angel in Oregon. The abbey is home to the Seminary of Christ the King and is a member of the Swiss American Congregation within the Benedictine Confederation. The abbey's official name is the Abbey of Saint Joseph of Westminster. Since 1939 the order has been located in Ladner (1939), Burnaby (1940) and Mission (1953). Construction on Mt. Mary Ann occurred in stages and culminated in the abbey church in 1982. Father Braganza is the current abbot. The abbey's bell tower is a landmark, visible for miles in the Fraser Valley.

ITINERARY

- 8:30 AM—ARRIVE AT THE PLANETARIUM PARKING LOT, BOARD COACH (BYO COFFEE IF YOU WISH) (NOTE THE USUAL PROBUS PARKING CARD WILL NOT BE AVAILABLE FOR USE—PAY PARKING ONLY)**
- 9:00 AM—COACH DEPARTS FOR STAVE FALLS**
- 10:30 AM—ARRIVE FOR DAM MUSEUM TOUR**
- 12:30 PM—DEPART FOR MISSION SPRINGS MICRO-BREWERY**
- 1:00 PM—BUFFET LUNCH AT BREWERY**
- 1:45 PM—DEPART FOR WESTMINSTER ABBEY**
- 2:00 PM—TALK AND TOUR OF THE ABBEY CHURCH, WALK IN THE GARDENS TO THE LOOKOUT**
- 4:00 PM—COACH DEPARTS FOR RETURN TRIP**
- 5:30 PM—ARRIVE BACK AT THE PLANETARIUM**

DUE TO PARKING COSTS, IT MAY BE ADVISABLE TO ARRANGE SOME CAR-POOLING

REGISTRATION

Register online with PayPal **OR**

At Activity Desk at Probus meetings in February, March and April by cheque or cash **OR**

Mail this registration form to Chris Finch, 105-5760 Hampton Pl, Vancouver, BC. V6T 2G1 enclosing cheque

Additional information: Richard Earthy at rdearthy@gmail.com or Chris Finch at cafb@shaw.ca

Deadline for registration: May 4. **Deadline for cancellation** May 4 unless another registration available.

Name: _____ E-Mail _____ Phone: _____

of Guests: _____ Cheque enclosed for: _____ Cash enclosed for: _____

NOTE: YOU ARE REGISTERED WHEN PAYMENT IS RECEIVED