



NEWSLETTER – December 2021

WOMEN'S PROBUS CLUB OF VANCOUVER

Next meeting: **Tuesday, January 4, 2022**

9:45 a.m. - You are welcome to log on to Zoom.

10:00 a.m. - Meeting online via Zoom. Please be on time.

A reminder of the meeting will be sent last week of December and the link to the Zoom meeting will be sent January 3, 2022.

If you wish to join by telephone: please call Barbara Wynn for the number and ID #.

Speaker: Andy Cook, CEO

**Topic: Helen Arkell Dyslexia Charity in the UK
(Andy will be speaking to us from the UK)**



Andy took up the post of Chief Executive at Helen Arkell Dyslexia Charity in October 2017, where he is responsible for overseeing the charity's progress over the coming years. Particular areas of focus are to increase the charity's ability to offer its services to more people with dyslexia across the UK and to help more people on lower incomes. This will involve building up the charity's fundraising and charitable activities.

Previously, Andy was Chief Executive at Canine Partners, a charity which provides assistance dogs to people with physical disabilities, both civilians and members of the armed forces.

Andy graduated from Cambridge University in 1988 with a degree in Modern Languages, specialising in Italian. There is dyslexia in Andy's family.



Synopsis of talk: Andy will give an overview of the life of Helen Arkell, MBE, who founded the Helen Arkell Dyslexia Charity in 1971. This gives an insight into the issues that face people with dyslexia, a specific learning difficulty which affects one in ten people in the UK. Andy will also describe how the organisation has progressed during the subsequent 50 years, to become the longest-standing dyslexia support organisation in the UK.

During the talk, you will hear practical examples of how people with dyslexia can suffer if not provided with the support they need, as well as the gifts that people with dyslexia commonly show, if supported along the way. that he predicted based on ALMA images.

Women's PROBUS of Vancouver: <https://probuswomen.com>
PROBUS Canada: <https://probus.org>
PROBUS International: <https://probusglobal.org>

A Message from President Leslie Chang

Dear Members:

The pandemic initially stopped our Club in its tracks, but we have pivoted, survived and prospered. We are planning an in-person speaker meeting on February 1, 2022 at Shaughnessy Golf Club, in compliance with Provincial Health Officer orders, and this symbolizes a first step in our return to normal.

Please remember when you see, or talk with, family and friends this holiday season, that they are welcome to be your guest at our meetings to see for themselves the benefit of a PROBUS membership.

We have had an outstanding series of virtual speaker meetings this year. We owe the success of these meetings to the hard work of the Executive Management Committee. My sincere thanks for their time, commitment, and expertise to **Barbara Wynn**, Past President; **Barbara Paterson**, Treasurer; **Estelle Jacobson**, Webmaster/Membership; **Jane LePorte**, Newsletter Editor; **Anne Earthy**, **Mary Graham**, **Meredyth Kezar**, **Mary Newman** and **Anne Roberts**, Reporters; **Cheryl Banfield**, **Laurie Drummond** and **Joan Williams**, Speakers Committee; **Barbara Kaiser**, Activity Convenor; and waiting in the wings for in-person meetings to begin, **Sharron Williams**, Greeter Coordinator; **Mary Gillespie**, Membership Coordinator; **Pauline Dunlap**, **Dorothy Miller**, **Michelle Gambrel** and **Ann Williams**, Membership Committee. A very special thank you to **Barbara** and **Graeme Wynn**, who have kept our meetings running smoothly on Zoom.

It has been a pleasure to work with all of you!

I am looking forward to seeing all of you in person this February and throughout the months ahead.

Season's greetings from my home to yours and wishing you an enjoyable relaxing Holiday and a healthy, safe, Happy New Year!

Sincerely yours,

Leslie Chang



My front door

MEMBERSHIP INFORMATION

Activity – mark your calendar

Friday, January 14, 2022

Tours at 10:00 to 11:00 AM and Noon to 1:00 PM – *Maximum 6 people per tour*

Canada's Michael Smith Genome Science Centre at BC Cancer

100 – 570 West 7th Avenue, Vancouver

**Registration will only become available when you receive
the Registration Email on December 31.
(You may only register yourself.)**

The Centre is an international leader in genomics, proteomics and bioinformatics for precision medicine. By developing and deploying cutting-edge genome sequencing, computational and analytical technology, we are creating novel strategies to prevent and diagnose cancers and other diseases, uncovering new therapeutic targets and helping the world realize the social and economic benefits of genome science. Recommended book: *Code Breaker* by Walter Isaacson; how Nobel Prize winner Jennifer Doudna and her colleagues launched a revolution that will allow us to cure diseases, fend off viruses, and have healthier babies.

Invite New Members:

During the holiday season we will be seeing close friends and family and it is an ideal time to tell them about Women's PROBUS and the benefits of joining our Club. There is an active Men's PROBUS Club in Vancouver also!

As President Leslie has said in her Message, a guest is welcome to accompany you to a meeting on Zoom or an in-person meeting starting in February, which is a good introduction to what PROBUS is all about.

Anyone who wishes to become a member can go to our website www.probuswomen - select JOIN US and complete the application form.

Update Your Contact Information: Please let us know if you change your email address or home address by logging on to the website <https://probuswomen.com>.

Management Committee Contacts: Women's PROBUS members will find the confidential phone numbers and email addresses if you wish to make contact.

Newsletter: Please submit a story, poem, puzzle or joke to the Newsletter Editor – by the 10th of the month.

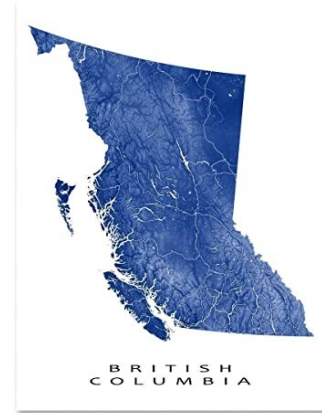


*Season's Greetings
from the Management Committee*

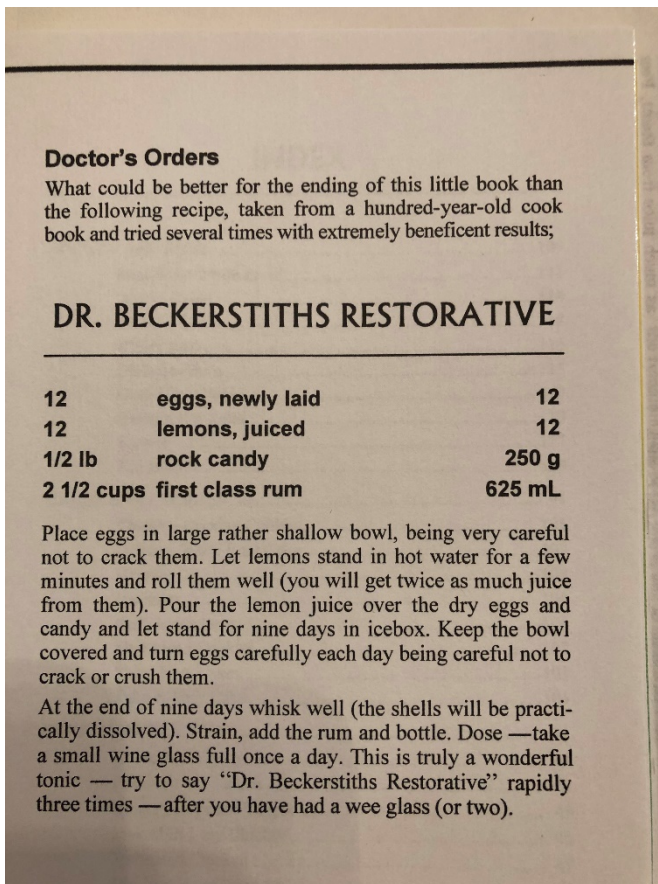
BC Towns Quiz

A few more – see answers below

1. All that glitters is not
2. A row of tall trees
3. Radioactive water
4. 2000-pound shield
5. Lady at forge
6. Bob's financial institute
7. Fuzzy point
8. Bee's bum



The BC Towns Quiz is almost at an end. Next month will complete the list of 66.



Doctor's Orders

This recipe is in Joan Williams' grandmother's cookbook "*Cooking For One*", which she wrote and published in 1972 at the age of 87. She said this recipe was excellent for hangovers from too much Christmas cheer and/or too much grandchildren chaos!

Editor's note: If "*newly laid*" eggs are not available or you just don't have time, the last ingredient could help with the chaos!

Answers to BC Towns Quiz: 1. Golden 2. Maple Ridge
3. Radium Hot Springs 4. Creston 5. Ladysmith;
6. Roberts Bank 7. Fernie; 8. Enderby



DECEMBER SPEAKER

Dr. Sebastian Marino, MA, MS, PhD
Studying Exocomets



Sebastian is a Chilean Astronomer specializing in Exoplanetary Science and his first degrees are from the Universidad of Chile; his PhD is from Cambridge. Before starting his research fellowship at Jesus College, he spent two years in Heidelberg, Germany, to work at the Max Planck Institute for Astronomy developing models to track the evolution of the gas exocomets release around other stars

Since Chile has the driest desert in the world, the Atacama, with transparent skies and no humidity, it is the perfect place to establish telescopes and observatories. There are 300 clear nights per year with little light pollution. Also, the telescopes can be placed high up on their mountains. Chile has an agreement with other countries to install five telescope facilities in return for 10% of the nights per year for its own research.

Sebastian is quite fascinated by comets, which are rich in water and other materials. The Rosetta mission in 2014 was sent up to intercept comet 67P to examine its geological features. It showed pictures of its surface as being smooth and porous and others rocky and solid. It was found to have a mix of rock and ices: 50% was water, 50% carbon dioxide and Co, Co₂, CH₄. It was noted that when the comets got near the sun and got warmer, they released molecules into space which then could be studied to determine their make-up such as containing proteins. It is important to understand their composition to see if they can sustain life!

Comets and asteroids likely delivered Earth's water source via impact-releasing hydrogen cyanide (HCN), which in this case is a good substance for prebiotic chemistry and is the beginning process for development of life. It is often thought that comets collided and exploded releasing materials that led to the extinction of the dinosaurs. When comets come together when stars are young it leads to planet formation.

Most comets are found in the Kuiper Belt on the outskirts of the solar system, greater than 30 au (distance from the sun). However, they can be drawn closer to Neptune, then Uranus, Saturn and Jupiter and jump over the region of the sun to Mars and Earth. When comets get close to the sun, one can see gazers or tails and, if an explosion occurs, matter is released. This matter is what is being studied to determine their composition of water and gases.

There are 4,000 known exoplanets around other stars. So, there are solar systems everywhere, but the question is are they different or like earth? More mysterious exoplanets were first discovered in the 1990s. These are exterior to the solar system. However, at the moment, they can also detect more, closer to Jupiter, that contain a higher mass.

Exocomets (extrasolar comet) are comets outside the solar system -- beyond the planets. These comets are the norm, not the exception, and allow us to probe the outer regions of the planetary system. We cannot look at comets, but we can examine the dust. The star Fomalhaut is the brightest star in the constellation of Piscis Austrinus, the "*Southern Fish*". It is surrounded by a belt of exocomets. Dust is dispersed when the comets collide and is a good source for study.

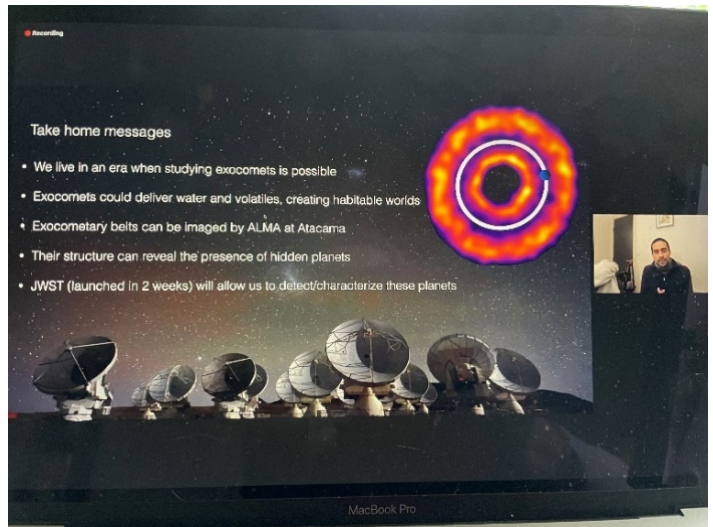
In Chile there is ALMA (Atacama Large Millimeter/submillimeter Array), the Interferometer that observes mm of wavelengths. This mechanism is 5,000 meters above sea level and 16 km in diameter and has 54 antennas of 12-meter diameter and 12 antennas of 7-meter diameter. It is capable of producing a high quality of information via thermal emissions and is important to examine comet dust. It can put all the images together

to determine where the comet has come from and how the light is distributed. It can also detect a gap in the belts around a planet which is where other planets may be hiding as well as their moons.

Soon we will have the James Web Space Telescope, which will use infrared technology to assist in detecting the putative planet, Planet Nine (P9), which is hypothesized to orbit at the fringes of the solar system. This telescope will be able to see 3,000 times further than the Hubble telescope and will remain cold with shields to protect it from light to provide a better image. It will be three times larger than the Hubble and will take two weeks to get in place to orbit the sun. Sebastian is considered a leader in the search for planets. There is thought to be one similar to Neptune which has three exocometary belts with gaps yet to be explored. It will be exciting if the dust can be transported so it can be examined for cometary material which will support life.

Sebastian concluded his talk with five take-home messages.

- We live in an era when studying exocomets is possible
- Exocomets could deliver water and volatiles, creating habitable worlds
- Exocometary belts can be imaged by ALMA at Atacama
- Their structure can reveal the presence of hidden planets
- JWST (launched in two weeks) will allow us to detect /characterize these planets



This was an interesting and informative talk awakening us to not just the possibility of other life out there, but also the science to discover what will sustain other life. We will hear from this gentleman in the future as more information is gathered and shared.



He was introduced by Joan Williams, who had dinner with Sebastian in Cambridge. She and her husband enjoyed his enthusiasm and felt he was able to explain his research at a “Gramma’s level of understanding”. President Leslie Chang thanked him.

Many thanks to Anne Earthy for a superb summary recapping a wealth of information from this dynamic and renowned Astronomer.

If you would like the recording of the talk, which includes the Powerpoint, please contact Barbara Wynn before January 3.

Sebastian mentioned a movie “The Comet” made by Christian Stangl – only three minutes long, available on the Internet.

An enlightening article about the James Webb Space Telescope is in the November 27, 2021 issue of the *Economist*. The Telescope was also featured on CBC’s Quirks and Quarks on December 10.

