NEWSLETTER OF THE PROBUS CLUB OF NORTH SHORE VANCOUVER

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Management Committee

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Darryl Stodalka

Vice President:
Gord Cook

Secretary:
Vacant

Treasurer:
Gordon Adair

Past President:
Ron Wood

Communications:
Terry McLeod

House:
Terry McLeod*

Membership:
Dale Douglas

Speakers:
John Elliott

Special Events:
Doug Magoon

**Interim*

Monday, March 14th Hybrid Meeting

West Vancouver Yacht Club, 5854 Marine Dr., Coffee/Buns 8:30, Meeting 9:30

with speaker **Dr. David Wood,**

Director, VGH Cardiac Catheterization Laboratory,

"Cardiovascular Care in the 21st Century"

Dr. David Wood is a Professor of Medicine at the University of British Columbia. He is the Head of the Division of Cardiology and the Medical Director for the Cardiac Sciences Program at Vancouver Coastal Health. He is the inaugural Director of the UBC Centre for Cardiovascular Innovation – Centre d'Innovation Cardiovasculaire (CCI-CIC), a clinical research operation centre with 41 affiliated staff and 80 cardiovascular investigators in British Columbia. Dr. Wood is the President of the Canadian Association of Interventional Cardiology (CAIC-ACCI). He received the Luminary Award at the recent C3 Global Submit. He is the Course Director for both the CAIC-ACCI Summit and Vancouver Valve, global meetings where attendees present problems, offer solutions, and debate innovations with the end goal of improving patient care for all patients with structural heart disease.

Dr. Wood works as a structural and interventional cardiologist at Vancouver General and St. Paul's Hospital. He obtained subspecialty training at Lenox Hill Heart and Vascular Institute of New York. His primary research interests include transcatheter management of structural and valvular heart disease, new device development, novel strategies for treating ACS, and advanced cardiac imaging. Dr. Wood has participated in over 50 live-cases and 20 first-in-human cases. Has co-authored over 200 publications which have been cited > 9000 times (h-index 51) and his work has been cited in all the major coronary artery and structural heart disease guidelines.

He recently published the 3M TAVR Study (JACC CVI), the SAFE MANTA Study (Circ CVI), and was co-principal investigator of the CIHR funded COMPLETE trial (4,041 patients, 140 centres, 31 countries) that was presented as Late Breaking Science at both ESC and TCT with simultaneous publication in NEJM and JACC. In May 2020, in collaboration with 15 North American Cardiovascular Society Leaders, he simultaneously published Safe Reintroduction of Cardiovascular Services During representing over 90,000 clinicians the COVID-19 Pandemic in JACC, CJC, and the ATS.

Mark Your Calendars with These Important Dates

April 11th- Sam Cooper, Author and Journalist (Willful Blindness), Journalist, "*Money Laundering and Illegal Drugs*"

May 9th - Connie Jorsvik. Patient Pathways, "*Navigating the BC Healthcare System*"

President's Notes

Fellow PROBUS members, I am noticing a subtle change day to day in the amount of sunlight. It's all about the tilt of the earth I recall from a grade 8 class. Sunlight tends to give me a better outlook on my days which we can all use. I admit that I don't often see the sun rise this time of year and into summer. Setting our clocks forward at 2 am March 13 will ensure that I don't see a sunrise again until Autumn. We have Ben Franklin to thank for putting this idea forward in 1784 (something to do with candle wax) and the Germans in 1916 for first putting it into practice. We won't experience Daylight Wasting Time again until 2 am November 6, 2022.

Now that the vexious virus is beginning its ebb, we once again contemplate a return to meeting in person. You will read elsewhere in this fine newsletter, details about our March 14, 2022 hybrid meeting. Our speaker has agreed to attend in person. We will set up some camera gear and stream the session for the benefit of those who choose to enjoy the meeting at home (Zoom) without getting out of their jammies. We look forward to seeing a good turn out for the March 14 meeting at the West Vancouver Yacht Club.

We will continue to observe all health and safety protocols as we have come to know them. We encourage all members to give us some feedback on our efforts to get back to normal. Our speaker chair John Elliott has a great line up of speakers for months to come. Some speakers have indicated a decided preference to speak to us in person and we will endeavour to make this happen when possible.

I extend a special thank you to our Vice President Gord Cook for temporarily stepping into the role of club Secretary. This is necessary since the very sad passing of Keith Fenton last month who held that role. The primary duty of Secretary is to record minutes of our monthly management team meetings.

Our club currently has 2 open positions for which I would welcome hearing from any members who might wish to join our team. The 2 positions are that of Secretary and House Chair (currently managed by Terry McLeod). We are halfway through our fiscal year so ideally, any new team members would carry on for the next year as well, starting September 1, 2022. Watch for future notices about other opportunities on the management team.

On March 15, beware of anyone patting you on the back. It might be a distant relative of Brutus. Keep well, stay safe and happy Ides of March.

Darryl Stodalka

March Meeting Registration

We are excited to have our March meeting both as a Zoom Webinar and an In-person meeting.

The meeting will take place at the West Vancouver Yacht Club. Health guidelines will be followed: members attending must show proof of being double vaccinated and wear mask when milling about the room. Seating will be at tables for 6. As attendance is limited to the capacity of the room, we ask members who will be attending in-person to **please register by email no later than Friday AM** to the administrator. Timing for the meeting is 8:30 - 9:20 for coffee/treats,withformalmeet-ingstarting promptly at 9:30.

The meeting will also be on Zoom for members who are unable to attend. A recording of the presentation will be available as well after the meeting and sent to all members.

Terry McLeod, House Chair

House and Communications

House: In addition to details about attending the meeting live at WVYC, I'm seeking some assistance (Committee role) with attendance check-in, Anyone offering is not subject to continuing this as the 22-23 House Chair function, but it helps welcome our 1st 'Live Meeting'. Darryl's Message references the MC House Chair opening. For summertime attendance at WVYC, if parking becomes restrictive, we are seeking to use the Senior Centre Bus to transport from/to WV Rec Centre to WVYC. Look for this update next month.

Communications: We now have full Hybrid Zoom support whereby we can show speakers, In-Person and remote, from anywhere having internet access. Sound quality and camera coverage is of professional quality and can include video reproductions. This will open media creativity for our topflight speakers.

For our members viewing from home, we will have camera coverage of the live setting providing a better sense of inclusion. We look forward to the great speakers lined up for 2022.

Terry McLeod, House and Communications Chair

Special Events

The Special Events Committee is pleased that COVID -related restrictions are easing and facilities who have agreed in principle in the past to host a visit by our club members are being canvassed to get an update on timing that they would be comfortable with.

We appreciate your patience in this dynamic time.

Doug Magoon,Special Events Chair

New Members Introduced and Welcomed at February Meeting

Jack Clerksen is a native North Vancouverite and has lived in West Vancouver for over 48 years. He holds a BA from the U Victoria and his business experience is in Real Estate Development and as a Mortgage Broker in Calgary and Vancouver.

Jack's interests include Fit Fellas, soccer, gardening, and travelling. He served as a director of the Urban Development Institute and is a volunteer instructor at Fit Fellas.

Wayne Hansen hails from Medicine Hat Alberta and holds a BA from UBC and CA/CPA . He was a managing partner with BDO Chartered Accountants, and was president of Caulfeild Capital Management.

Wayne is interested in travel and has served on many organizations such as; Arthritis Society, Crofton House School, West Vancouver Finance Committee, West Vancouver Awards Committee, as well, he is currently Treasurer of the West Vancouver Kiwanis Club.

Photo unavailable at this time.

David Owen is a native North Shore resident and has worked in the Vancouver area for many years. His business background includes being the owner/operator of a dry cleaning business for 25 years and a director of sales for OP publishing for over 20 years. David's interests include golf, racquet sports and fishing.

Dale Douglas, Membership Chair

PROBUS Golf and Bridge Groups

The PROBUS Golf Club commenced in 2009. Normally golf events are held on the 3rd Monday of the months of April through September.

When Covid restrictions permit an away trip may be planned.

The events are held at a variety of courses throughout the Lower Mainland. Each event starts around 1:00 PM and generally all players remain at the selected course for a libation and something to eat.

There is no requirement to register for all the events, only those that fit your schedule.

If you are interested in more information, please contact R**oman** by email.

The PROBUS Bridge Club was started in 2003 the same year the PROBUS Club on the North Shore was formed.

The Bridge Club normally meets every Monday from January to December (holidays and the months of July and August excepted) at 1:00PM. Since 2020 the Club has mostly met through Zoom and Bridge Base Online (BBO). However, we also off er face to face (FTF) play at the Senior's Activity Centre (SAC) when FTF play is allowed.

Play follows the BBO format; i.e. 3 sessions of 8 hands, switching partners after each session. Scores are kept duplicate style; i.e. each hand is scored separately and vulnerability rotates.

Any member interested in more information or to join the Club please contact **Barry Heselgrave** by email

Submitted by Phil Boase

Last Month Speakers - Meredith Moll and Shawn Braiden

Meredith Moll, VP, Sales and Marketing, Harbour Air
Shawn Braiden, VP Mechanical and Maintenance

Harbour Air was started in 1982 by Greg McDougal (California born to Canadian parents) who, after years of boating and hiking into the family cabin on Nelson Island, got the idea of flying there instead, and from there eventually developed a company to enable people to access everywhere on the coast. They have grown from 2 planes to 42 in that time. They grew from 2 pilots to over 400 employees in 13 locations (pre-COVID) flying 30,000 flights per year and transporting over 500,000 passengers annually. In 2018 service commenced between downtown Vancouver and downtown Seattle. They used 6, 14 and 19 passenger aircraft. Their primary business model is to go to downtown cores of the cities shown on their route map, as well as seasonal flights to Whistler.

Harbour Air is the world's first and only carbon neutral airline … since 2007. This involved including a carbon offset being added to the ticket price. There was definitely some resistance in the beginning. It meant educating themselves and their customers, and they now advise other businesses in the transportation sector about becoming carbon neutral.

They have won many awards over the years including international air pilots trophy for their safety management system, Canada Best Managed Companies, Canada's top Small & Medium Employers and BC's Top Employers.

When COVID came, they suspended all services except for some private flights, supply and medical flights as needed. Due to BC Ferry cancelations during this time, they went back to basics flying Nanaimo to Sechelt for customers affected by this. 2020 ended with 75% fewer passengers and 82% lower revenues, and staff dropped from 450 to 235 employees.

The corporate market has changed significantly as people are reluctant to attend in-person meetings although the summer of 2021 saw a surge in the number of passengers. Vancouver-Victoria route was their bread and butter. They have a plan in place to pivot operations to move capacity from Victoria routes to service established communities that once were tourist destinations only but have attracted more permanent residents since the onset of COVID. They are introducing new routes Vancouver to Powell River, Tofino and Kelowna, and hoping to be able to restart the Seattle route. The Cruise ship market is a huge one for them as many international travellers look forward to seeing BC by air. They pride themselves in being the vital transportation link on the coast for domestic, tourist and corporate needs. They are unique compared to other large cities in having an air traffic control tower downtown.

Shawn Braiden gave an update on their E-Plane. Today electrification of transportation is a given. Lots of people said an electric airplane couldn't be done. It turned out that it could be done! Turbine and piston engines are not sustainable for the environment as leaded fuel is still being burned, and nobody wants this. Researchers have been looking for alternatives for years and there will be more biofuels going forward, and eventually electric. For the environment and for Harbour Air "It's just the right thing to do".

An all-electric plane was produced within 8 – 9 months. They knew there would be lots of certification issues but if they built one, they would be in a better position to address those issues. Maintenance is a lot better on electric engines (almost none) because there are so few moving parts. There is almost no vibration and therefore the wear and tear on the aircraft is much less. Compared to an internal combustion engine, or turbine, the electric is much more efficient, produces less heat, and has a longer life and therefore costs less overall.

The biggest challenge is batteries as they are so heavy. We know that batteries will improve over time so wanted to get the airplane built and, in the air, to give people confidence about flying. They teamed up with a company called Magnix who were working on a battery with the right horsepower/kilowatt for their needs. The Beaver was the best choice for conversion as it is a proven dependable aircraft. H55 is the company that supplied the batteries for the first rendition of the E-Plane. The battery was designed for NASA for a space-station project. It uses lithium ion batteries mounted in a block of aluminum, making it very safe as well as light. This proof-of-concept aircraft worked – the plane took off and flew over the Fraser River, and landed safely. This aircraft was not carrying any passengers.

Now they took the time to evaluate what they built and considered what they would change to build it again, and they thought pretty well everything would change! Now that the learning had taken place, they would change the inverter, the motor, the engine mount …ending with a big list. They are now building a second one that will be certified to carry passengers. Everything will be different and Magnix is working on the new motor and inverter. They are under the microscope - the world is watching!

Questions

Q1 What are your logistics in refueling aircraft?

A We are currently working on setting up charger infrastructure at a number of our bases. They have a charger at YVR. Starting at CXH, other bases include Nanaimo, Sechelt, Squamish, eventually Ganges, Victoria – trying to get as many bases modified for electric as we possibly can. Right now, the range of the aircraft is about ½ hour

Last Month Speakers - Meredith Moll and Shawn Braiden

and Harbour Air does a lot of short flights so this is beneficial. The infrastructure will also be used by boats, cars etc. Weight is our greatest challenge, unlike for cars or boats. "Every ounce saved = ounce of payload".

Q2 Regarding the test flight – how far did it go and who was in the co-pilot seat?

A December 12, 2019. We planned conservatively for 15-20 minutes but actually it was shorter than that. This was a big debut for electric aircraft. Greg McDougal was at the controls. There were lots of cameras and people on the dock. The weather was great. Took off from the water in front of the Beaver Bar and a helicopter followed taking pictures. We estimated that 10 knots of wind was our limitation as this is a doable wind to turn in or land and the wind cooperated at 9 knots.

Q3 Where do you stand in the Certification Process?

A It is looking promising. Transport Canada is very much on board. We were able to push forward, answering a lot of their concerns. There were a lot of questions that came up that we didn't even think of until actually building and trying it. A tabletop discussion would not have been useful. We will be using a different battery produced by H55 out of Switzerland. They are working on a 2 seat fully certified aircraft as a trainer. Once the battery is certified there it will be good for us. Another issue that came up is 5G and how it affected radar altimeters with airlines. If someone gets a phone call while the plane is in the air, we want to ensure that it doesn't affect the motor's operation. We are working with the regulators to write some of the rules – it is groundbreaking work and making everyone think outside of the box.

Q4 Where will batteries be put in the aircraft? Also, lithium ion is what there is now but what about the future?

A Right now we have lithium ion batteries placed forward of the firewall due to the weight of the engine. The electric motor is far lighter than the original piston engine, and the propeller is fairly light. The original fuel tanks in the Beaver are all under the belly so we are filling that void with batteries and also in the back which was the baggage compartment. The batteries take up a lot more space than the fuel tanks did. As technology improves, so will the battery situation. We want to get the plane up and certified – the batteries are not the biggest hurdle. At the present time we are keeping it simple using air cooled batteries and straight electric.

Q5 Will you use Beavers going forward?

A Yes, it is a solid aircraft – 75 years old. It is a Canadian Icon – about 1600 have been built and have been used all over the planet. There are about 700-800 still flying and it is a pick-up truck hauling heavy loads in and out of short areas and it is tough. It is the perfect plane for testing. We are not messing with the airframe too much. We left the wings, tail and floats as is and are modifying the engine mount and some of the structure in the back to install and mount the batteries.

Q6 Does carbon fiber have a future in the aircraft going forward?

A Not in the Beaver as it is all metal. I can see it in clean slate aircraft 100%. Carbon fiber and aluminum don't get along at all - it is like oil and water. If you attach carbon fiber to aluminum the metal starts to corrode rapidly, and it is a concern in the float planes. You need stronger metals than aluminum to attach to carbon fiber which offsets the weight savings you get by using it.

Q7 What do you see the weight difference being in an all-electric plane with passengers?

A I can't say exactly but we removed about 1,000 pounds. The empty weight of the aircraft is heavier than the gas aircraft due to the batteries. Initially we see 4 passengers moving up to 6 as batteries (weight) improve. With gas aircraft, you burn gas as you fly and lessen the overall weight, which is not the case with electric where you remain the same. The thought process is different as you cannot trade off fuel weight for payload to carry more.

Q8 Noise? In Ganges harbour the engines generate a high decibel level. Will this disappear?

A Only to a point. The noise is mainly due to the propeller. The electric aircraft is quieter than the Beaver but you do hear a lot of noise from the propeller at take off right now, but we are working on trying to reduce the noise. As soon as it is in the air, the aircraft is almost silent – very similar to a glider. On take- off we need thrust to get the aircraft off the water which means you have to get the propeller to that point which is noisy. We are needing to find a happy medium.

Q9 Charging time? Do you have options on voltage or charging overnight versus turnaround?

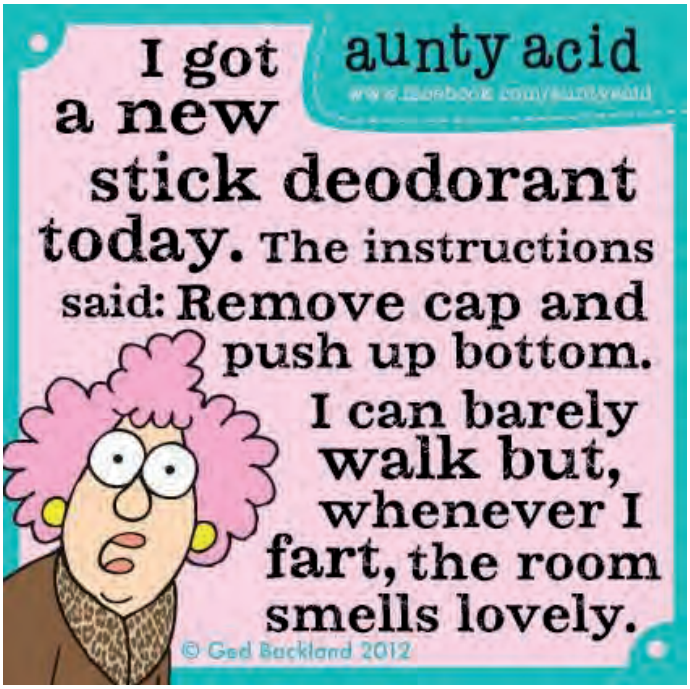
A Yes. We have options to charge quickly or slowly. Batteries are air cooled so the faster they charge the hotter they get and we have to wait for them to cool down. As we fly the batteries drain power and generate heat. We have 1 ½ to 2 hours charge time right now. Unlike Tesla who use liquid cooled batteries so they can charge and discharge faster and so can control the heating up.

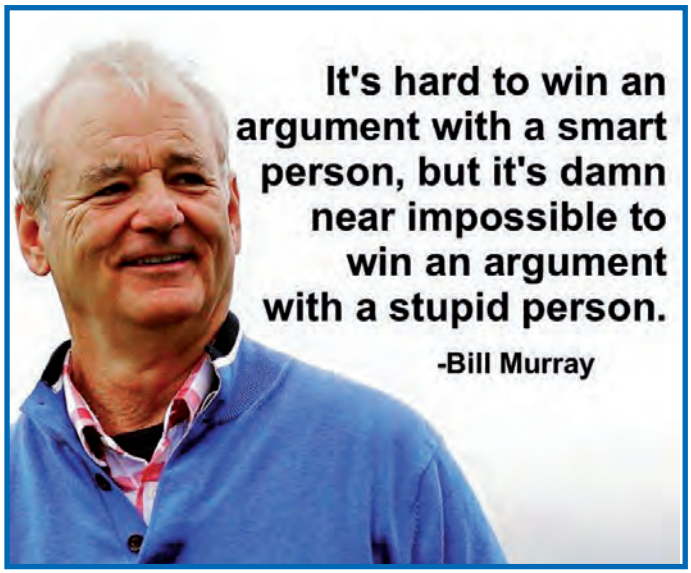
This summary was prepared by member Darlene Dean

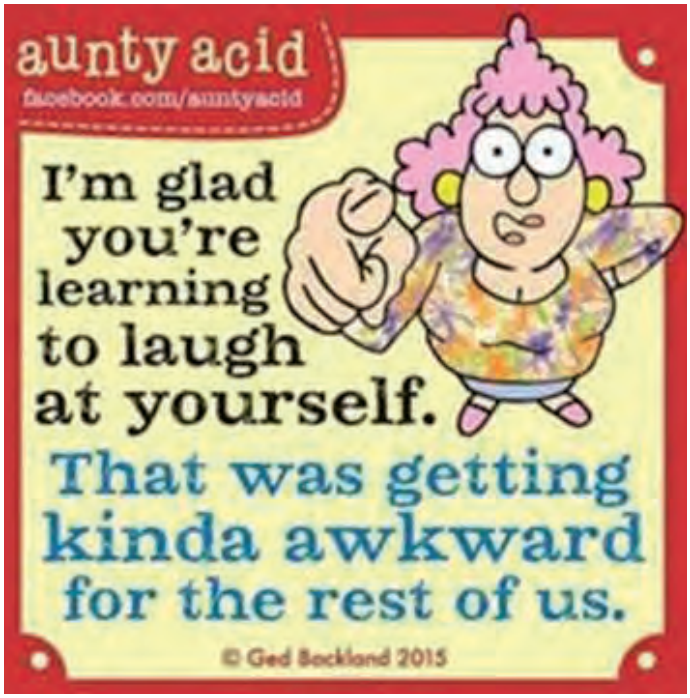
A Little Humour

I woke up this morning determined to drink less, eat right and exercise...

But that was 4 hours ago...when I was younger and full of hope.







The first million people to send me $1 will get a copy of my guide on how to become a Millionaire using Facebook

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Editorial contributions and comments are welcomed and may be sent by e-mail to the club administrator.