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Trek

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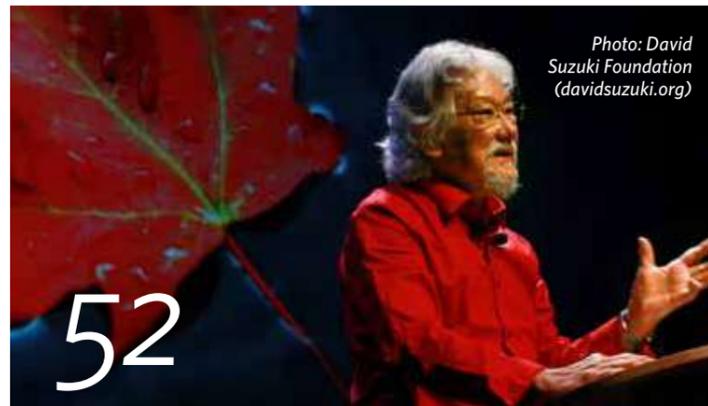
**The torture survivor
who became a psychiatrist**

**Exploring the history
of humans and wildfire**

**Illicit drugs with
therapeutic potential**

**Bake your own
UBC Cinnamon Buns**

David Suzuki has the last word



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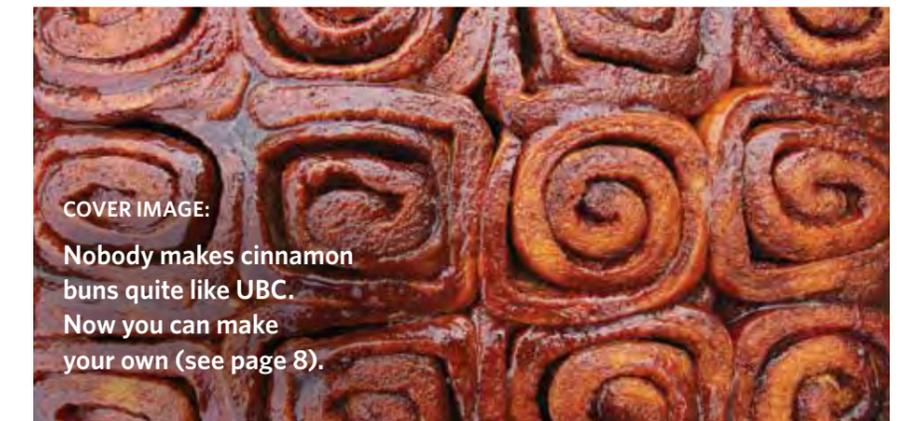
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Memories that Stick

When it comes to nostalgia, it seems there is nothing more evocative than the gooey loveliness of a warm UBC cinnamon bun. Whenever UBC posts something on its social media pages about the sacred snail-shaped dough, it prompts alumni to share memories and express their deepest cravings:

"I like the middle pieces that haven't touched the edge of the pan. I used to take the flipper and dig them out of the centre when a fresh pan was put out at the sub."

"That was lunch many days!"

"This is why I am always on the lookout for cinnamon buns. While at UBC, it was deeply imprinted onto my taste buds."

"Bun and hot chocolate before first class. Smell of lectures."

You can almost hear the accompanying sighs. The buns are sticky, both literally and figuratively. It must be something to do with the mysterious linkages between smell, taste, emotion and memory.

Some readers, then, may be shocked to learn that the recipe hasn't always been the same. The original, used from 1954, was never written down, so alumni attending UBC after 1971 – when original bun baker Grace Hasz retired – enjoyed a slightly different confectionery experience. People have strong opinions as to when the bun was at its pillowy peak, but in terms of batches baked, its heyday was during the 80s and 90s, when production reached a whopping 200 dozen daily. Today it's a fraction of that.

Considering the campus population wasn't nearly as big in the 80s and 90s, yesterday's students must have been consuming thousands more empty calories per capita than today's. Maybe the Millennials are spurning all that refined sugar in favour of healthier snacks (missing the fact entirely that cinnamon buns are good for one's mental health). Or perhaps there is simply more competition from trendy newcomers – I'm told the matcha-flavoured, soft-serve frozen yogurt is very popular. I doubt the bun will be usurped any time soon, though. Yogurt just seems too unsubstantial to become a lasting UBC tradition. Not nearly sticky enough.

In April, UBC Food Services ran a two-day pop-up kitchen in the student residence of Orchard Commons, offering cinnamon buns and other goodies as a sweet reward for the end of classes. Astonishingly, it was the first time some of the students had ever sampled UBC's revered delicacy. The buns sold out on both days, perhaps an indication that they are about to enjoy a renaissance.

Just in case this leads to any shortages, you can always bake your own (see page 8). But if baking is not your thing, then you'll just have to get your buns back on campus.

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TAKE NOTE

Dust storm in the Sahara.
NASA image courtesy Jeff Schmaltz,
MODIS Rapid Response Team,
Goddard Space Flight Center.

VIRUSES FALLING FROM THE SKY

An astonishing number of viruses are circulating around the Earth's atmosphere – and falling from it – according to new research from scientists in Canada, Spain and the US.

The study marks the first time scientists have quantified the viruses being swept up from the Earth's surface into the free troposphere, that layer of atmosphere beyond Earth's weather systems but below the stratosphere where jet airplanes fly. The viruses can be carried thousands of kilometres there before being deposited back onto the Earth's surface.

"Every day, more than 800 million viruses are deposited per square metre above the planetary boundary layer – that's 25 viruses for each person in Canada," says UBC virologist Curtis Suttle, one of the senior authors of a paper in the *International Society for Microbial Ecology Journal* that outlines the findings.

"Roughly 20 years ago we began finding genetically similar viruses occurring in very different environments around the globe," says Suttle. "This preponderance of long-residence viruses travelling the atmosphere likely explains why – it's quite conceivable to have a virus swept up into the atmosphere on one continent and deposited on another."

Bacteria and viruses are swept up in the atmosphere in small particles from soil-dust and sea spray. Suttle and colleagues at the University of Granada and San Diego State University wanted to know how much of that material is carried up above the atmospheric boundary layer above 2,500 to 3,000 metres. At that altitude, particles are subject to long-range transport, unlike particles lower in the atmosphere.

Using platform sites high in Spain's Sierra Nevada Mountains, the researchers found billions of viruses and tens of millions of bacteria are being deposited per square metre per day. The deposition rates for viruses were nine to 461 times greater than the rates for bacteria.

"Bacteria and viruses are typically deposited back to Earth via rain events and Saharan dust intrusions. However, the rain was less efficient removing viruses from the atmosphere," says author and microbial ecologist Isabel Reche from the University of Granada.

The researchers also found the majority of the viruses carried signatures indicating they had been swept up into the air from sea spray. The viruses tend to hitch rides on smaller, lighter, organic particles suspended in air and gas, meaning they can stay aloft in the atmosphere longer.

MILLENNIALS AND MASCULINITY

Contrary to popular stereotypes, young men today are likely to be selfless, socially engaged and health-conscious, according to a study from UBC and Intensions Consulting, a Vancouver-based market research firm.

The researchers surveyed 630 young men ages 15-29 in Western Canada and found that the most strongly endorsed masculine value is selflessness. Ninety-one per cent of the men agreed that a man should help other people, and 80 per cent believed that a man should give back to the community. Openness also ranked highly – 88 per cent said a man should be open to new ideas, new experiences, and new people – and so did health, with a majority of participants saying that men should be healthy or in good shape.

More traditionally "male" values ranked lower on the scale, but were still valued by the majority of participants. Seventy-five per cent of the men said that a man should have physical strength, compared with those who said a man should have intellectual strength (87 per cent) or emotional strength (83 per cent). Autonomy also tracked lower with 78 per cent of the men agreeing that a man should be "independent."

"Young Canadian men seem to be holding masculine values that are distinctly different from those of previous generations. These values may run counter to long-standing claims that young men are typically hedonistic,

hypercompetitive, and that they risk or neglect their health," says lead author **John Oliffe**, a nursing professor who leads the men's health research program at UBC.

Nick Black, managing partner at Intensions Consulting and a study co-author, believes many young Canadian men are expanding their definition of masculinity to include values like openness and well-being.

"As a millennial myself, I can see these values reflected in the lives of men around me," says Black. "They want to be both caring and strong, both open to others and self-sufficient, and they see no contradiction in these values."

Oliffe says more research is needed to include other age groups and geographical locations, but adds that the current results could be useful for designing more effective men's health-care programs.

"The life expectancy gap is closing between men and women, and I hope that additional gains are mustered through these emerging health-related values – and our continued work in men's health," says Oliffe.

The study included interviews with a small group as well as a broader online survey. It was published in *Psychology of Men & Masculinity*.





Prof Holuszko (right) has perfected a process to help reduce electronic waste. Photo: Clare Kiernan/UBC

QUEST FOR ZERO-WASTE PHONES

UBC researchers have perfected a process to efficiently separate fibreglass and resin – two of the most commonly discarded parts of a cellphone – bringing them closer to their goal of a zero-waste cellphone.

It's one of the first processes to use simple techniques like gravity separation to cleanly lift organic resins from inorganic fibreglass.

"Discarded cellphones are a huge, growing source of electronic waste, with close to two billion new cellphones sold every year around the world, and people replacing their phones every few years," says UBC mining engineering professor **Maria Holuszko**, who led the research. "The challenge is to break down models that can no longer be reused into useful materials, in a way that doesn't harm the environment."



These materials used to be part of a cell phone. Photo: Lou Bosshart/UBC

Most e-waste recycling firms focus on recovering useful metals like gold, silver, copper and palladium, which can be used to manufacture other products. But non-metal parts like fibreglass and resins, which make up the bulk of cellphones' printed circuit boards, are generally discarded because they're less valuable and more difficult to process. They're either fed to incinerators or become landfill, where they can leach hazardous chemicals into groundwater, soil and air.

Holuszko, who co-founded UBC's urban mining innovation centre – a unit focused on reclaiming valuable metals and other materials from electronic waste – was determined to find a better recycling solution. With PhD student **Amit Kumar**, she developed a process

that uses gravity separation and other simple physical techniques to process cellphone fibreglass and resins in an environmentally neutral fashion.

"The key here is gravity separation, which efficiently separates the fibreglass from the resin by using the differences in their densities," says Kumar. "The separated fibreglass can then be used as a raw material for construction and insulation. In the future, if we can find a way to improve the quality of the recycled fibreglass, it may even be suitable for manufacturing new circuit boards."

The researchers are now looking into developing a large-scale commercial model of the process, in partnership with Ronin8, a Richmond, BC, recycling company that separates the different plastics, fibres and metals in electronic waste streams without using toxic chemicals or losing precious metals.

"Ronin8 has developed an innovative e-waste process for electronic waste that aims to address the intrinsic faults in traditional e-waste processes today," says Travis Janke, director of engineering at Ronin8. "Our vision is to achieve a zero-waste end-of-life solution for electronics, and our work with Maria and Amit at UBC has moved us closer to this reality."

The researchers say their task has taken on a new urgency in light of China's waste import ban, which took effect on January 1, 2018.

"We need a better way to manage our electronic hardware recycling, and a cost-effective, environmentally responsible method of mining e-waste for valuable materials would be a good step in that direction," says Holuszko.

"REVENGE PORN" MORE THAN A PRIVACY VIOLATION



By Erik Rolfesen

Canadian legislation criminalizing the non-consensual distribution of "intimate images" risks putting more scrutiny on the victims than the perpetrators, according to a study from the Peter A. Allard School of Law at UBC.

Bill C-13, and the first six cases prosecuted in Canada after it became law in 2015, treat the non-consensual distribution of intimate images primarily as a privacy violation rather than an act of gender-based violence, argues PhD student **Moira Aikenhead**. The cases have involved male perpetrators seeking to dominate and control female victims – motivations similar to those found in cases of domestic violence – yet the wording and interpretation of the law emphasizes privacy, and whether victims have a right to expect it.

In this Q&A, Aikenhead discusses her paper, which was published in the *Canadian Journal of Women and the Law*.

What is it about Bill C-13's wording that got you interested in studying these cases?

What interested me is the actual definition of what counts as an "intimate image." For something to be considered an intimate image under the law, there has to be a reasonable expectation of privacy at the time the photo was taken, and at the time it was distributed. I thought this focus on an expectation of privacy was odd, because what circumstances can you envision

where a person posts intimate images of another person online, without their consent, but hasn't breached their privacy? I have a hard time understanding what the focus on privacy adds to the analysis.

"Victim-blaming" has become a key part of defence arguments in sexual assault cases.

Does Bill C-13 leave the door open for that?

The legislation frames the crime as one based on lack of consent and breach of privacy.

The consent element is similar to sexual assault – if someone consents to sex it's not a crime, and if someone consents to having intimate images distributed, then that's not a crime.

While this ostensibly gives women control over their bodies as well as images of their bodies, too much focus on consent means there's going to be scrutiny of the victim's behaviour, which may include blaming her for having allowed the images to be taken in the first place, or not having been more careful about who she shared them with.

Where does the scrutiny belong?

In my view, the scrutiny belongs on the perpetrator: the person who knowingly and often maliciously ignored the victim's wishes by distributing the images, and his intention for doing so. There's very limited case law so far, but most of these cases show the typical "revenge pornography" pattern of a man – in the context of a relationship that has ended or looks like it will end – posting images online or threatening to do so, in order to control and hurt his former partner. It's meant to be an act of gender-based violence and intimidation, so it's important to frame the crime as that type of crime rather than simply an invasion of privacy.

You use the term "violence," which many people equate only with physical force. Why do you use that term?

Feminism generally takes a broader view of violence, going beyond only physical violence. It's all the elements of coercion and harm that limit women's ability to participate fully in society. So I would consider this to be a violent crime. While women face high rates of physical and sexual violence, the understanding of violence should also include coercion and intimidation in the broader social context of gender discrimination. This better captures the ways women and women's equality rights are harmed through crimes such as sexual assault, criminal harassment, and the non-consensual distribution of intimate images. The cases so far depict a crime consistent with other forms of intimate partner violence in terms of its motivations, its impact on women's lives, and the fear it can cause.

AN INSTITUTE FOR FUTURE LEGISLATORS

By Thandi Fletcher

If Donald Trump can become president, anyone can. But that doesn't mean they should – at least not without being trained first.

The Institute for Future Legislators at UBC teaches aspiring politicians how to prepare for the job, and helps them understand what a career in politics really involves.

Maxwell Cameron, director of the Institute for Future Legislators, explains the importance of learning the basics first before entering the political realm.

Why is it important to understand what the job entails first before running for office?

It is very important that our institutions are open to anyone who wants to serve, but we also need politicians who have the knowledge, skill, character and judgment to ensure our democratic institutions perform well. This is a bit of catch-22. How can you get the skills and knowledge except through practice? There is a very high cost to our democratic institutions when they are run by amateurs who lack the character or judgment to do the job well – and I would suggest Trump illustrates this.

That is why our program is so important: it is one place where people can get on-the-job training and learn by trial-and-error where the costs of failure are low, so the opportunities to learn are enormous. The Institute for Future Legislators provides experiential learning, through role-playing, including a simulation of a parliamentary session in the legislative assembly in Victoria. Our practitioners teach participants to organize a caucus or committee meeting, speak with the media, or pass a law through first and second readings.

Most participants leave the program excited about the possibility of a life in politics. And with municipal elections coming up this fall, and lots of mayors and councillors stepping down, there is a great opportunity for people thinking of starting a political career.

If you could give aspiring politicians one piece of advice, what would it be?

Know why you wish to serve. It is vital to have a compelling answer to this question. If you want to serve only to satisfy personal ambition you may turn out to be the kind of self-dealing and opportunistic politician we all so often criticize.

Politics is a noble calling. If you believe you are especially well-suited to represent your constituency, and that is what people in your community are telling you, you may be able to serve with distinction. But learn the basics first, because political careers can be derailed pretty quickly when novices make mistakes. Politics is an activity like any other – it improves with many long and hard hours of practice.





Derailed steam locomotive 474, east of Armstrong (1914)

Images courtesy of Armstrong Spallumcheen Museum and Arts Society.

DIGITAL PORTAL TO OKANAGAN HISTORY

A new online resource has brought the faces and names of the Okanagan's colourful and vibrant history into the 21st century.

Coordinated by UBC and featuring rich, local content from project partners, this new website brings the people and places from the Okanagan region onto the screens of valley residents. Recently launched, Digitized Okanagan History (DOH) currently includes almost 4,000 photos and documents dating back to the turn of the last century. And that is just the beginning.



Apple-packing school (1916)



Men sitting beside sign advertising land for sale (1909)

Last year a team of UBC students and archivists visited 11 repositories, stretching from Keremeos and Osoyoos to sites in Sicamous. Their goal was to digitize two-dimensional documents and photos tucked away in a variety of collections using portable scanners. Since then, they have been uploading the images to the DOH portal, the online resource created by the Okanagan Region Historical Digitization Project, which was generously funded by a private British Columbia based foundation, says Berringer.

"While we have some 3,800 items available on the site, we have scanned or collected more than 30,000 digital objects since this project began last summer," explains UBC Okanagan Chief Librarian **Heather Berringer**. "It's a developing collection that is changing and growing weekly as we are able to add more and more images to the portal each day. The collection will only get larger and more comprehensive as we go along."

The goal is to provide a centralized portal to support research and generally improve access to local resources. Prior to the launch, anyone interested in accessing a photo or document dating back to the past century would have to visit the local museum or historical society, many of which are run by volunteers and have restricted hours. DOH links people to all 11 repositories and many of the hidden historical treasures on a 24/7 basis.

"The Okanagan Valley has a long and interesting history, and the local repositories have done an excellent job preserving the photos and documents that tell its story," says Paige Hohmann, UBC Okanagan archivist and special collections librarian. "Now, they are at the fingertips of anyone who might be doing research, or is simply curious about people and events of the past."

Though the portal is clearly beneficial for people interested in regional history, whether working on research or curious about their family's past, UBC's university archivist **Chris Hives** says it goes deeper than that.

"Through this project, we've been able to ensure that multiple digital copies of these photos exist in different places. There is in the historical community, concern about possible damage to these irreplaceable resources through fire or flood," says Hives. "I see this as a definite contribution to the long-term stewardship efforts and preservation of history. Now, we can ensure ongoing access to those images that document the history of these unique communities."

Explore the project's digital collections: doh.arcabc.ca.

DIVERSITY AND ANATOMY TEXTBOOKS

Depictions of race and skin tone in anatomy textbooks widely used in North American medical schools could be contributing to racial bias in medical treatment, research suggests.

Findings of the study, carried out by researchers at UBC and the University of Toronto, found dark skin tones are underrepresented in a number of chapters where their appearance may be the most useful, including chapters on skin cancer detection.

"We found there is little diversity in skin tone in these textbooks," said the study's lead author **Patricia Louie**, who began the research at UBC and is now a PhD student at U of T. "Proportional to the population, race is represented fairly accurately, but this diversity is undermined by the fact that the images mostly depict light skin tones."

For the study, researchers analyzed the race and skin tone of more than 4,000 human images in four medical textbooks: *Atlas of Human Anatomy*, *Bates' Guide to Physical Examination & History Taking*, *Clinically Oriented Anatomy* and *Gray's Anatomy for Students*.

The proportion of dark skin tones represented in all four books was very small. In *Atlas*, fewer than one per cent of photos featured dark skin, compared to about eight per cent in *Bates'*, about one per cent in *Clinically*, and about five per cent in *Gray's*. More than 70 per cent of the individuals depicted in *Clinically* and 88 per cent in *Gray's* had light skin tones, while *Atlas* featured almost no skin tone diversity (99 per cent light skin tones).

The researchers argue that rates of mortality for some cancers – breast, cervical, colon, lung, skin, among others – are higher on average for black people, often due to late diagnosis.

With skin cancer, for example, physicians need to look for melanomas on nails, hands and feet, but the researchers found no visuals were provided in any of the textbooks as to what this would look like on dark-skinned patients.

UBC sociology professor and study co-author **Rima Wilkes** said the findings highlight a need to show greater diversity of skin tones in teaching tools used by medical schools.

"Physicians are required to recognize diseases in patients with a variety of different skin tones," said Wilkes. "When light skin-toned bodies are shown as the norm, physicians might miss signs on patients with dark skin tone because they do not know how these abnormalities will present."

The study was published in the journal *Social Science & Medicine*.



NEW GLAUCOMA TREATMENT

Eye drops developed by UBC researchers could one day treat glaucoma while you sleep – helping to heal a condition that is one of the leading causes of blindness around the world.

"Medicated eye drops are commonly used to treat glaucoma but they're often poorly absorbed. Less than five per cent of the drug stays in the eye because most of the drops just roll off the eye," says lead researcher **Vikramaditya Yadav**, a professor of chemical and biological engineering, and biomedical engineering at UBC.

"Even when the drug is absorbed, it may fail to reach the back of the eye, where it can start repairing damaged neurons and relieving the pressure that characterizes glaucoma."

To solve these problems, the UBC team developed a hydrogel that was then filled with thousands of nanoparticles containing cannabigerolic acid (CBGA), a cannabis compound that has shown promise in relieving glaucoma symptoms.

They applied the drops on donated pig corneas, which are similar to human corneas, and found that the drug was absorbed quickly and reached the back of the eye.

"You would apply the eye drops just before bedtime, and they would form a lens upon contact with the eye. The nanoparticles slowly dissolve during the night and penetrate the cornea. By morning, the lens will have completely dissolved," says Yadav.

Previous research shows that cannabinoids like CBGA are effective in relieving glaucoma symptoms, but no cannabis-based eye drops have so far been developed because cannabinoids don't easily dissolve in water, according to the researchers.

"By suspending CBGA in a nanoparticle-hydrogel composite, we have developed what we believe is the first cannabinoid-based eye drops that effectively penetrate through the eye to treat glaucoma. This composite could also potentially be used for other drugs designed to treat eye disorders like infections or macular degeneration," says study co-author **Syed Haider Kamal**, a research associate in Yadav's lab.

InMed Pharmaceuticals Inc., a drug discovery and development company that focuses on the therapeutic potential of cannabinoids, supported the research.

The drug delivery system was described in the March 2018 issue of *Drug Delivery & Translational Research*. Researchers are now working to scale up the hydrogel production and develop more anti-glaucoma cannabinoid molecules, using genetically engineered microbes. 📄



Prof. Yadav (centre) and team. Photo: Clare Kiernan/UBC



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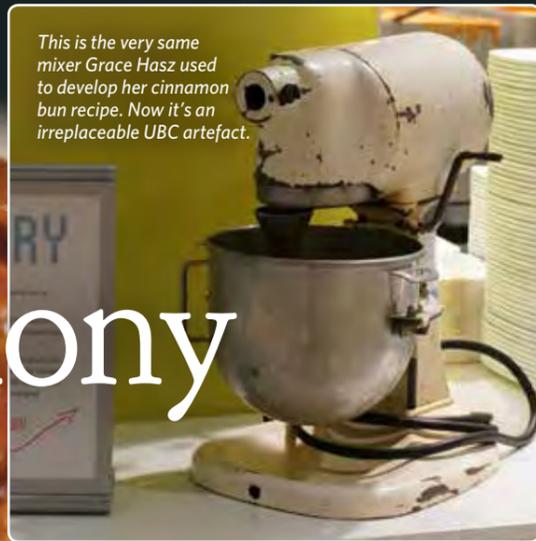


16TH AVE



WESBROOK MALL

That Cinnamony Goodness



This is the very same mixer Grace Hasz used to develop her cinnamon bun recipe. Now it's an irreplaceable UBC artefact.

UBC Cinnamon Bun Recipe

YIELD: 18 large cinnamon buns

- | | |
|---|----------------------------------|
| INGREDIENTS: | |
| Dough | 2 large eggs |
| 3 cups (750mL) milk | 9 cups (2.25L) all-purpose flour |
| 6 tbsp (90mL) butter | |
| 6 tbsp (90mL) plus 1 tsp (5mL) granulated sugar | Filling |
| 1 tbsp (15mL) salt | ¾ cup (175mL) melted butter |
| ½ cup (125mL) warm water | 1¼ cups (300mL) granulated sugar |
| 2 envelopes active dry yeast | 2 tbsp (30mL) cinnamon |

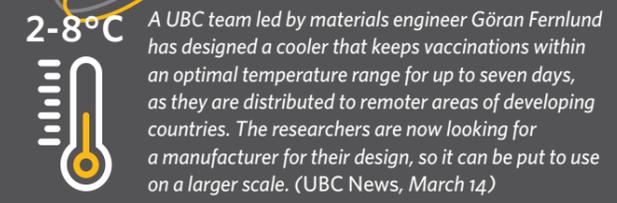
- METHOD:**
1. Scald milk. Stir in butter, 6 tbsp sugar and salt. Cool to lukewarm.
 2. Dissolve remaining 1 tsp sugar in warm water. Sprinkle yeast over water mixture. Let stand in a warm place for 10 minutes. Stir.
 3. In a large mixing bowl, combine lukewarm milk mixture with eggs. Stir in dissolved yeast mixture.
 4. Add four to five cups of the flour and beat well for 10 minutes. With a wooden spoon, gradually add enough of the remaining flour to make a soft dough.
 5. Turn out on to a lightly floured surface and knead until smooth and elastic, adding additional flour as needed. This is a soft dough!
 6. Place dough in a well-greased bowl and roll around to grease all sides of the dough. Cover with a damp cloth and let rise in a warm place until dough doubles in size, about one hour.
 7. Punch down dough and turn out onto a lightly floured surface. Divide dough in half.
 8. To fill, roll out each piece of dough into a 9 x 18-inch rectangle. Spread 1/4 cup of melted butter evenly onto each rectangle.
 9. Combine sugar and cinnamon for filling. Sprinkle onto the rectangles. Roll dough up like a jelly roll, starting from the long side. Cut into 2-inch slices.
 10. Place remaining ¼ cup of melted butter into the bottom of a 16½ x 11½ x 2½-inch pan. Arrange slices in the pan and cover loosely with greased wax paper.
 11. Let rise in pan until doubled in size, about 45-60 minutes.
 12. Preheat oven to 350°F (180°C).
 13. Bake for 35-40 minutes.
 14. Remove from oven and immediately invert onto a serving tray.

by Angelina Tagliaferro

Nearly 65 years of UBC alumni remember the pillowy softness and caramelized edges of the UBC cinnamon bun as a quintessential part of their university experience. But where did it all begin? The UBC cinnamon bun recipe was first perfected by Hungarian Baker Grace Hasz in 1954. Within a few years she went from baking two dozen to a staggering 120 dozen per day as the bun grew in popularity. Grace baked cinnamon buns for UBC until her retirement in 1971. She baked by instinct and never wrote the recipe down, though her grandson has recorded his attempts to create the original recipe from memory (ubccinnamonbun.blogspot.ca). A few things have changed since 1955 – the original recipe used margarine, a holdover from war-time butter shortages, and was said to have so much cinnamon the filling looked black – but the association between UBC and great cinnamon buns has never diminished. Today's recipe is still made from scratch every day, using real butter and simple ingredients. Next time you're craving a cinnamon bun, you'll find them in most UBC Food Services locations. But go early – they often sell out! For the crafty home bakers out there, here's the recipe used in our campus bakery:



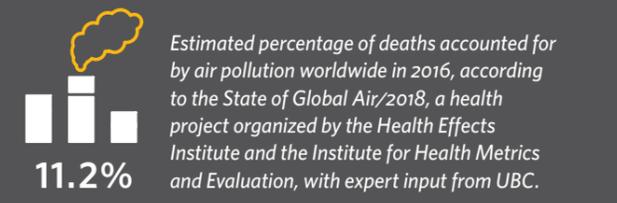
BLUE & GOLD \$100 MILLION
Launched in November, the Blue & Gold Campaign for Students is the largest of its type in the history of UBC. It aims to raise \$100 million over the course of three years.



A UBC team led by materials engineer Göran Fernlund has designed a cooler that keeps vaccinations within an optimal temperature range for up to seven days, as they are distributed to remoter areas of developing countries. The researchers are now looking for a manufacturer for their design, so it can be put to use on a larger scale. (UBC News, March 14)

Number of alumni who engaged with UBC over the 2017-18 year through various channels – such as mentoring a student, serving on an advisory committee, listening to a panel discussion, or simply by reading this magazine.

Number of alumni who volunteered for UBC over the 2017-18 year.



Estimated percentage of deaths accounted for by air pollution worldwide in 2016, according to the State of Global Air/2018, a health project organized by the Health Effects Institute and the Institute for Health Metrics and Evaluation, with expert input from UBC.

During a UBC study, this was the average number of extra exercise classes attended by older adults over a 24 week period, when exercising with other people of a similar age. Kinesiology prof and study lead Mark Beauchamp says this suggests that a sense of belonging and social connection meant participants were more likely to stick with the classes. (UBC News, April 27)

\$24 MILLION
In March, the Faculty of Medicine received its largest ever donation from an individual. UBC alumnus Edwin S. Leong's gift will support research into healthy ageing. (UBC News, March 7)

"The statements made by the chiropractors are basically pure, grade-A bunk, but, sadly, this is becoming more commonly seen with anti-vaccination rhetoric. I think it's dangerous and irresponsible and represents a set of magical beliefs rather than science-based ones."
UBC Professor of Nursing Bernie Garrett, commenting on anti-vaccine Facebook posts by some BC chiropractors. (CBC News, May 3)

"Researchers are just beginning to understand exercise's full impact on human health. Inside the Chan Gunn Pavilion, we will develop and deliver innovative, evidence-based strategies for maintaining health and treating a broad range of conditions, including cancer, osteoarthritis and even mental health. We see this building as a place of healing, not just for all manner of athletes, but for everyone."
Dean of Medicine Dr. Dermot Kelleher commenting on the opening of the Chan Gunn Pavilion at UBC, which will focus on sports medicine and exercise science.

"Late this morning, the R/V Armstrong spotted a disabled autonomous surface vehicle far off the coast of Florida. Upon approach, the name of the vessel, Ada, was visible on the stern. We quickly learned from an internet search that this vessel was an autonomous sailboat from the University of British Columbia... launched last year on a trip across the Atlantic. Somewhere along the way it became disabled and lost its sail. SailBot Ada was recovered by the ship's crew and is now safely strapped down on deck for the remainder of the ADEON cruise."
Ship's blog (Dec 1, 2017) for the R/V Armstrong, which was engaged on a research mission for a project led by Dr. Jennifer Miksis-Olds of the University of New Hampshire.

"We can't possibly know exactly how sex robots will affect modern marriage in the future. But I predict their availability will give couples greater opportunity to define their own types of marriages. One example might be that more couples could choose 'companionship marriages' that do not involve sex, but focus solely on the creation of a family."
Marina Adshade, professor in the Vancouver School of Economics at UBC, discusses the topic of a chapter she contributed to the book Robot Sex: Social and Ethical Implications. (UBC News, April 17)

"In the Daily Mile children run, jog or walk one mile every day in their school clothes. It needs no special equipment or unique staff training and emphasizes enjoyment, inclusion and social participation."
Prof Mark Beauchamp referring to the "Daily Mile," an initiative that began in Scotland for young children, and advocating its benefits for older children and youth. Beauchamp's recent study showed that a lack of exercise in teens could be behind a rise in depression. (The Sun, UK, April 18)

"We can sugarcoat it all we want, but screens are not recommended, and at a young age it's not good for [children]. There's nothing to support it. Young kids are supposed to be constantly moving and when you put them in front of the TV, that just stops."
Public health nurse Reda Wilkes discusses a study she co-authored that showed more than half of parents let their young children (two years of age or under) have access to screen time, against expert guidelines. The team of nurses who conducted the study was mentored by UBC nursing professor Wendy Hall. (UBC News, February 14)

quote,
unquote

Dr. Soma Ganesan's unique insights into the specialized therapeutic treatment so crucial for helping survivors of torture stem from the fact he's a survivor himself.

BY ROBERTA STALEY

Five years after the fall of Saigon to the Viet Cong on April 30, 1975, Dr. Soma Ganesan finally escaped his communist oppressors.

At the time of the takeover, which marked the end of the Vietnam War, Ganesan was employed at Saigon Children's Hospital as a pediatrician. The victors allowed him to continue his work there. However, little else about his life remained the same.

Ganesan and his colleagues were subjected to hostile interrogation sessions at varying times of the night. On weekends, they were sent to a prison camp for "re-education," consisting of beatings and "traction," which Ganesan refuses to detail. The torture damaged his spine – how severely, he would only find out later. He endured by focusing on day-by-day survival and adopting a valiant stoicism: "If you have pain, so what?"

The hundreds of thousands of people who underwent "re-education" coped with starvation rations, poor sanitation and disease. They were forced to construct barracks, dig wells, cut trees and sweep minefields. The worst thing, Ganesan recalls, was not the torture so much as "the constant fear that your life is in danger, the lack of freedom of communication and expression, the witnessing of people being killed, tortured and mistreated."

The worst thing, Ganesan recalls, was not the torture so much as "the constant fear that your life is in danger, the lack of freedom of communication and expression, the witnessing of people being killed, tortured and mistreated."

Ganesan contrived an escape. He was born in Vietnam, but his father, Sundaram Soma, who died when Ganesan was five, had emigrated from India to work in Saigon at the Indian consulate. Out of desperation, Ganesan approached the consulate office to request documents giving him official foreigner's status. The consulate granted him the papers, and the Vietnamese regime reacted quickly, bustling Ganesan onto a plane for Singapore. It was freedom, but a gut-wrenching one – Ganesan had to leave his grandmother, mother and sister behind in Saigon.

Still, landing on Singapore soil was like a rebirth. Having no food or a place to stay, Ganesan wandered into a park and sat down on an empty bench. Having been in a state of extreme sleep deprivation for the past five years under his communist oppressors, the quiet green park was heavenly. He lay down. "I slept for three days and three nights without food. I had never felt so peaceful in my life."

Ganesan became an asylum seeker in India and then France, where he applied to Canada as a refugee. He

arrived here in 1981, in his thirties, unable to speak English. He mastered the language, brought his family to Canada from Vietnam, and re-qualified as a physician. But pediatrics no longer appealed to him. Instead, he entered a psychiatry residency at UBC, with the idea that he could help others who had undergone similar experiences. His mother, Manh Duong, wept at the decision. "She said she was worried that people who practiced psychiatry would become nuts themselves," he says, chuckling.

On the surface, at least, Ganesan's life appeared to be back on track. During his second year of residency, however, he suddenly found himself unable to walk. An MRI scan showed calcification and lower-lumbar stenosis, which is when the spinal canal, which protects the spinal cord, narrows. The incredulous emergency doctor told him that only sustained severe abuse could cause such physical degradation.

Ganesan regained his mobility with therapy, although his gait is stiff – almost ungainly. Other effects of the torture still haunt him. When asleep, he is "always on alert" – perfectly lucid if someone telephones late in the night, the result, he says, of being woken for interrogation. Complete rest and repose will forever remain an abstract notion. "I keep an ear in my brain open for anything and everything."

THE WALKING WOUNDED



Soma Ganesan sits on a bench in a leafy park near his clinic. Photo: Martin Dee.

Dr. Ganesan in his office at the Chakra Health Centre. Photo: Martin Dee.

His clients come to him for help dealing with debilitating headaches, panic attacks, insomnia, depression, and eating disorders that are rooted in the past. Known as post-traumatic stress disorder (PTSD), such symptoms can arise out of the blue, years, or even decades, after events.



War and government-sanctioned violence towards citizens is seemingly an immutable part of the human condition in much of the world, with peaceful nations like Canada becoming beacons of hope for those seeking refuge from life-and-death conflicts such as the Syrian war. (Ganesan is expecting that some Rohingya from Myanmar, who fled slaughter, looting and rape by national security forces beginning last August, will soon be coming to BC – part of the 300,000-strong contingent of immigrants allowed into Canada annually by Ottawa.) Thanks to the infrastructure of treatment that Ganesan has created – born out of his own bitter experiences in Vietnam – the refugees who come here will be able to lean on a strong support network as soon as they step onto BC soil.

Ganesan realized back in the 1980s that specialized support was needed when BC took in Central American refugees from El Salvador, Guatemala and Honduras who were fleeing war and torture under military dictatorships. The existing provincial medical services could not deal with the constellation of psychological, social, physical and economic challenges these shell-shocked people were suffering.

In 1986, with support from Amnesty International and with funding from the Office of the United Nations High Commissioner for Refugees (UNHCR), Ganesan co-created the Vancouver Association for the Survivors of Torture (VAST). Two years later, he founded and led the Cross-Cultural Psychiatry Clinic at Vancouver General Hospital (VGH), which provides immigrants and refugees from non-English-speaking nations with culturally sensitive and language-specific assessment and treatment.

Ganesan currently devotes his time to VAST as well as the CHAKRA Health Centre, a Vancouver facility he started last year for those dealing with trauma. His clients come to him for help dealing with debilitating headaches, panic attacks, insomnia, depression, and eating disorders that are rooted in the past. Known as post-traumatic stress disorder (PTSD), such symptoms can arise out of the blue, years, or even decades, after events. “Nightmares

– it happens to all of us,” he says. “I’m still seeing people who survived Jewish concentration camps; they are in their 80s and 90s.” One of Ganesan’s friends, who worked alongside him in the hospital in Saigon, recently started experiencing nightmares stemming from that dark period. The colleague was forced to witness prisoner executions, then had to check the bodies with a stethoscope to ensure the heart had stopped. “He is 89 and he has had to start talking to me. It’s not easy,” says Ganesan, who has the curious habit of closing his eyes when he speaks, as if shuttering his mind to his own harrowing past.

Throughout his career, Ganesan has worked relentlessly to communicate to the medical community his unique insights into the treatment of torture victims, advocating for more nuanced and sophisticated therapies. Thanks to him, UBC’s Department of Psychiatry, where he is a clinical professor, added trauma and cultural psychiatry to its curriculum in 1988. In 1995, he founded the annual Cross Cultural Mental Health Conference in order to enlighten a wide range of medical specialists, from dermatologists to cardiologists, about the perplexing connections between past trauma and current maladies, such as physical pain, addiction and mental health challenges. (Now on hiatus, the conference will resume in 2019.)

Psychiatrist and best-selling author Dr. Shimi Kang says that before the conference there was “no conversation” about trauma’s mind-body connection. Kang, who was one of Ganesan’s students and a volunteer at VAST during her UBC psychiatry training, recalls watching in awe as Ganesan gently helped a patient unravel their history of torture and trauma. Now a UBC clinical associate professor, Kang has drawn upon her experiences with Ganesan to counsel patients in her own practice, from child soldiers in Africa who had been forced to torture others to refugees from India who had been caught up in that country’s secession-related insurgencies. “Dr. Ganesan really was a leader not just in psychiatry but medicine,” she says.

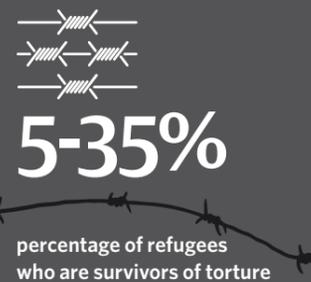
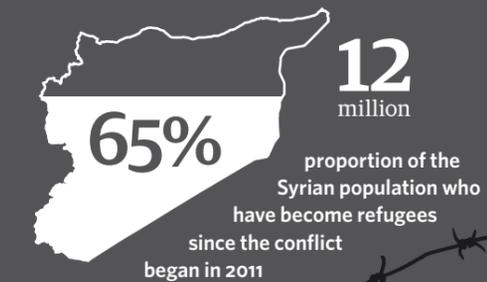
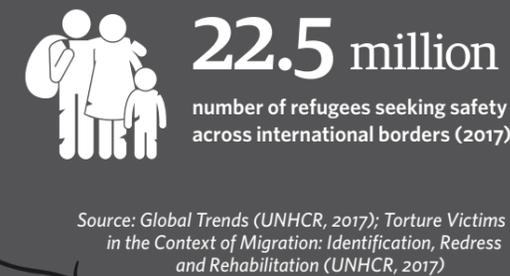
Over the years, the need for trauma counselling for newcomers to Metro Vancouver has increased in tandem with escalating violence and terrorism – including targeted attacks on civilians – in areas of the Middle East, Central and South Asia, and Africa.

Statistics bear out how dark and violent the world has become for millions of people. The 2017 *Global Trends* report, published by the United Nations Refugee Agency (UNHCR), put the total number

Daniela Jorge Ayoub is a governance and policy associate at the International Rehabilitation Council for Torture Victims in Copenhagen, Denmark. How Western nations can best respond to the torture crisis, she says, is to uphold their responsibilities under the United Nations Convention Against Torture. (Canada ratified the treaty in 1987.) This includes upholding torture victims’ right to “full rehabilitation.” However, she adds, a political backlash in places like the US, UK, France, Austria and other European countries (all treaty signatories) means that nations are shirking their international obligations. “The rehabilitation sector is absolutely in a financial crisis,” Ayoub says. Policies supporting refugees and migrants “are seen as liberal and therefore automatically rejected. It’s a dangerous trend of right-wing governments.”

Canada’s record of supporting its obligations under the treaty is spotty. VAST almost shut down in 2014, when the federal Conservative Party withdrew nearly \$300,000 in funding. Executive director Frank Cohn, BA’00, says that such near misses indicate the organization needs to expand its funding sources. (The provincial government currently funds two-thirds of VAST’s operations.) The specialized counselling provided to survivors of torture through VAST is vital to ensure individuals who have suffered trauma “settle in Canada in healthy and supported ways,” says Cohn. Conventional mental health supports in BC, he adds, are “unsuitable or inadequate [for] this population.”

Ganesan retires from VGH’s Cross-Cultural Psychiatry Clinic on June 30, freeing him from the administrative task of overseeing a 150-strong cohort of psychiatrists. He will be able to focus solely on counselling at CHAKRA and VAST, joining forces with Dr. Rahul Soma, his psychiatrist son. Soma spends half a day every week counselling patients at VAST, in addition to work at VGH’s Cross-Cultural Psychiatry Clinic. One of the things that drew Soma to psychiatry was his father’s devotion to helping others. “When we were growing up,



of refugees seeking safety across international borders at 22.5 million, which is the highest number since the agency was founded in 1950 in the aftermath of the Second World War. Syria accounted for the most refugees: 5.5 million in 2016 (and 12 million in total since the conflict began in 2011, or 65 percent of the population). Widespread conflict in South Sudan, Colombia, Afghanistan and Iraq also spawned millions of refugees. Another UNHCR report from 2017, *Torture Victims in the Context of Migration: Identification, Redress and Rehabilitation*, reports that five to 35 percent of refugees are survivors of torture. Not only have they fled abuse but they are also at high risk of being tortured while fleeing, enduring “beatings and starvation, sexual violence [and] arbitrary and violent detention.”

we were always encouraged to help people, and I think that that had a lot to do with where my parents came from and the struggles they went through. They were always genuine, kind people and I think that had a huge impact.”

Kindness and compassion provide a strong foundation for effective therapies that help heal the wounds – invisible and visible – inflicted by malevolent forces upon human beings. With Ganesan, that kindness is rooted in an empathy reinforced by shared experience. He understands that “scars heal, but the psychological part – the deprivation of basic freedom – lasts forever, until that person dies.”

Ganesan speaks for all those people who arrive at the doors of VAST: damaged, wounded and fearful, yet emboldened by hope and determination. Shimi Kang says such qualities have the potential to elevate them beyond mere survival to thriving and taking on positions of leadership in their community. One example is Ganesan himself, whose wretched experiences in the Vietnamese prison camps, while almost breaking him physically, galvanized a career in a unique offshoot of psychiatry that helps patients understand that to be human and alive means having the capacity for renewal, no matter how horrifying the past. ■



Mohammed's Story

During his TEDx talk in East Vancouver, Alsaleh described being suspended for 72 hours from a ceiling in a Syrian jail. Photo (cropped): TEDxEastVan: flickr.com/photos/tedxeastvan/38175241315

In March 2011, demonstrators took to the streets of Daraa in southern Syria to protest the arrest and torture of students who had scribbled anti-government graffiti on schoolyard walls.

The demonstrations spread quickly to other parts of the country, including the city of Homs, where Mohammed Alsaleh was a fourth-year medical student at El-Baath University. To quash dissent, President Bashar Hafez al-Assad unleashed his military might upon Homs's unarmed demonstrators, which only served to drive even more protestors into the streets.

Alsaleh began to document the atrocities, shooting video on his cell phone. Under the nom de guerre The Hawk of Syria, he uploaded the videos to Youtube, where they were picked up and re-broadcast by the BBC, CNN and Al Jazeera.

Alsaleh recalls the day police caught him filming and threw him in a cell about two metres by one metre with three other men. Every day, Alsaleh says, he and his fellow prisoners were taken out of the lock-up, blindfolded and battered with chains, batons and sticks. Their feet beaten to a pulp, they were forced to jog in the spot on salt. Although Alsaleh's tormentors never spoke, he got the message: similar agonies awaited those who dared oppose Assad's rule. But the torture only strengthened his resolve to record the growing human rights abuses.

His second arrest came months later, in November 2011, when military personnel searched his university dorm for evidence of anti-government activity. Alsaleh says they discovered mocking caricatures of the president belonging to his roommate. Both students were thrown into tiny cells with other prisoners and beaten for 20 days in a row, "with no objective other than humiliation and torture," says the 28-year-old, who today works in Vancouver with the federal Refugee Sponsorship Training program.

Alsaleh's third - and worst - experience came nearly two years later, after someone revealed that he was the Hawk of Syria. He was arrested and imprisoned after finishing an exam on minor surgery. Alsaleh describes being handcuffed and hung by a chain from the ceiling, his toes barely

touching the ground. This went on for three days. The only source of respite was standing on his toes to relieve his arms. "Near the end, I couldn't feel anything. I thought I would never be able to use my arms again."

After guards unchained him, "the real torture started." Alsaleh describes being routinely beaten, eventually losing three toenails. Afterwards, he was moved to another prison for one and a half months, crammed together with other prisoners in a lice- and rat-infested cell and forbidden to talk. There was no food. "Ten people died every day."

Alsaleh eventually ended up in Adra Prison on the edge of the Syrian capital of Damascus, where he was allowed to contact his family. His brother sold the family home to raise the money to bribe a judge to secure Alsaleh's release. After recovering with his family in his childhood town of Al-Hasakeh, Alsaleh fled to Lebanon, living hand-to-mouth by working in restaurants, painting houses and washing cars. He registered with the UN Refugee Agency, which facilitated his resettlement in Canada in late 2014. "It brought hope to my life."

Intertwined with the hope, however, were "uncontrollable" nightmares, depression and intense fear of anyone in a uniform - a post-traumatic stress response to being tortured. Among the first group of 28 Syrian refugees to come to British Columbia in November 2014, Alsaleh would normally have had access to counselling with the Vancouver Association for Survivors of Torture (VAST), created in 1986 to help refugees and immigrants from despotic nations

deal with the violence they suffered. However, his arrival coincided with 2014 federal funding cuts of nearly \$300,000, which pushed VAST to the brink of closure. Help from VAST was not available.

Today, Alsaleh is settled, employed, and looking forward to welcoming his family, whom he is privately sponsoring to join him in Canada. But he admits

to feeling fragile. To date, he has relied upon his work with refugees and speaking about his ordeal publicly through TEDx talks as "my way of healing." He realizes it's not enough, and is planning to connect soon with VAST to begin counselling. "It's an ongoing battle I am fighting, and I need all the support and help I can get."

Still, he is filled with optimism. "Facing death changes people," he says. "We come out different people, more resilient, more determined, more appreciative of every single thing in life and more hopeful for a better future." ■

"Facing death changes people. We come out different people, more resilient, more determined, more appreciative of every single thing in life and more hopeful for a better future."

~ Mohammed Alsaleh



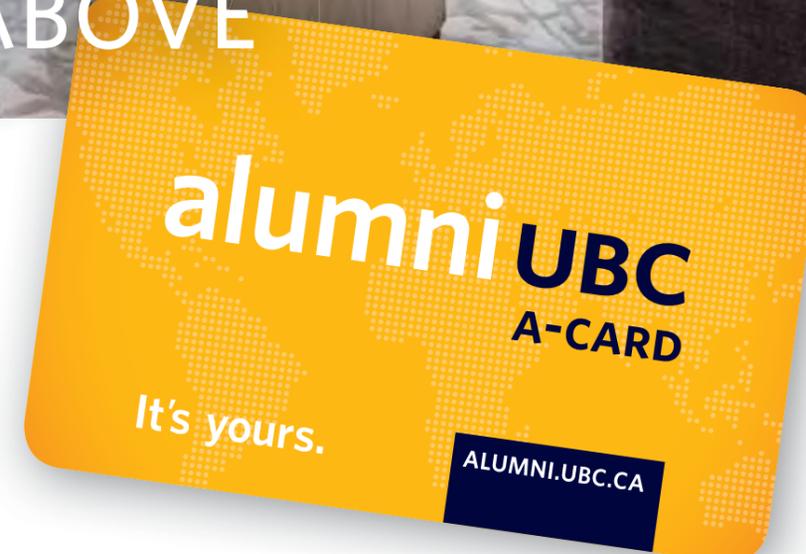
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perceptions

Research, both old and new, points to the therapeutic benefits of certain psychedelic drugs in treating PTSD, addiction, and other mental illnesses.

BY CHRIS CANNON

Canada is talking about drugs.

They've always been on the radar – a statistic here, a celebrity death there – but lately the headlines have been awash with daily tales of legalization, overdoses, and new discoveries, renewing public interest in natural and synthetic mind-altering substances.

Such talk is always accompanied by the shadow of stigmatization, as drug use is often framed in the context of criminality or culture wars, only regarded as a health issue as an afterthought. But the growing acceptance of medical cannabis, the need for new ways to combat the opioid crisis, and an unprecedented attention to mental health issues has Canada leading a sea change in pharmacological research, as once illicit drugs with a reputation for harm are earning serious attention for their potential to treat some of our most pressing health challenges. "We are at an extraordinary intersection of a social-change movement and scientific explosion that will directly affect the lives of people around the globe," says Zach Walsh, an associate professor in psychology at UBC's Okanagan campus who studies the effects of cannabis on post-traumatic stress disorder (PTSD). "Canada and British Columbia are leading the way in the acceptance of using cannabis for therapeutic purposes."

It's true that we were among the first countries in the world to have a medical cannabis program, and most of the licensed producers now chasing the recreational market in Canada have been providing medical cannabis for years. So while the headlines are new, the science is not – prescription weed has been available in Canada since 2001. But now, platforms like Facebook, YouTube, and Reddit have given a face and a voice to advocates for drug policy that's informed more by science and less by stigma. And the country is taking note.

"There is so much we don't know about the use of medicinal plants. Refining medicines derived from cannabis and other plants will have a dramatic effect on the health of Canadians and people worldwide. How do we make the best use of these plants and combine them with other therapies to create better outcomes for people who are suffering?"
~ Zach Walsh

A trickle-down effect of cannabis shuffling off its immoral coil is a growing public interest in the more transformative, spiritual experiences that one can get from peyote, ayahuasca, or psilocybin mushrooms. Used by Indigenous peoples for centuries, such substances are known as entheogens, a neologism coined in 1979 by a group of botanists – the Greek words *theos* [god] and *genesis* [origin] – meant to denote giving birth to the spirit within.

Legal issues be damned, social media has brought about something of a renaissance for entheogenic use via the public airing of users' experiences. "In the case of ayahuasca, it's the narratives of people who are sharing YouTube videos of themselves," says Kenneth Tucker, a director at the BC Centre on Substance Use (BCCSU) and adjunct professor in UBC's School of Population and Public Health. "They're talking about what kind of transformative experience they've had, what insights they've gotten from drinking it."

These first-person narratives range from reports of intense personal growth to the curing of eating disorders. But while the anecdotal evidence is intriguing, there is a dearth of quantitative, clinical studies of entheogenic substances – and it's possible this void can never be properly filled.

The effects of entheogenic drugs are difficult to study beyond qualitative observation. Removing traditional drugs from their Indigenous environs changes the nature of the experience, a concept known as "set and setting" – one's mindset and the setting for the experience – both difficult things to quantify in a laboratory experiment.

Unlike the Cartesian mind/body split in contemporary Western culture, spirituality and health are often intertwined in Indigenous cosmologies, and the secularization of modern medicine has largely left behind that spiritual dimension so crucial to the entheogenic construct.

Laboratories in Brazil and Spain have been attempting clinical ayahuasca studies for years, but swallowing ayahuasca in

a freeze-dried capsule under an MRI scanner just isn't the same as lying beneath the stars while a shaman chants sacred incantations and blows smoke in your face. Even so, observational experiments in which entheogens are removed from their traditional context have shown positive results for those patients who reported a transformative event.

"People who have a profound mystical type of experience are often the ones who have the best therapeutic outcomes," says Tupper, "which again points back to traditional and Indigenous knowledge systems. It makes me wonder whether we need to reinvent the wheel, whether or not traditional shamanic practices have already perfected the use of these kinds of tools and recognized the relationship between spirituality and health in a way that contemporary Western medicine has kind of lost touch with."

"There is so much we don't know about the use of medicinal plants," adds Walsh. "Refining medicines derived from cannabis and other plants will have a dramatic effect on the health of Canadians and people worldwide. How do we make the best use of these plants and combine them with other therapies to create better outcomes for people who are suffering?"

It's unfortunate then – and long a bane for the scientific community – that the distinctions between classes of drugs is confusing to the layperson.

Like cannabis and entheogens, heroin and cocaine are plant-based. But where the former have shown promising therapeutic applications, the latter have been wearing holes in the social fabric for decades. Yet, according to the US Controlled Substances Act of 1970, upon which most of the Western world's drug policy is based, marijuana and peyote are classified as Schedule 1 drugs – the most dangerous category – while cocaine and fentanyl (the deadly opioid at the centre of the overdose crisis) fall under Schedule 2. Approximately 4,000 Canadians died from fentanyl-related overdoses in 2017. Zero died from smoking pot.

Synthetic drugs, particularly psychedelics such as Lysergic acid diethylamide (LSD, or acid) and

Methylenedioxyamphetamine (MDMA, or ecstasy), are similarly stigmatized, both appearing in the Schedule 1 category, despite their relative safety (they are rarely habit-forming or fatal).

They also happen to be among the most promising of all hallucinogenic therapies, and we are reaching a point where public perception is catching up to what the science has been showing for years – that synthetic psychedelics show enormous promise for curing a range of addictions and mental disorders.

Pharmacologically different from addictive substances such as alcohol, tobacco, cocaine, and opiates (a class of drugs that acts on similar dopamine-reward systems that lead to chronic dependency patterns), synthetic psychedelics are not self-reinforcing, meaning they don't leave the user waking up in the morning craving another hit.

Synthetic psychedelics, in fact, have demonstrated potential as a treatment to end addictions altogether, as well as anxiety, depression, PTSD, eating disorders, and obsessive-compulsive disorders – a whole cluster of mental illnesses that are regularly prescribed patented medications that mask symptoms rather than heal patients.

Working with pure, pharmaceutical-grade substances, institutions like the Multidisciplinary Association for Psychedelic Studies (MAPS) – Kenneth Tupper serves on the Board of Advisers for the Canadian branch – are plotting a revolution in mental health treatment. Current research at the Santa Cruz-based lab includes MDMA-assisted psychotherapy to help heal the psychological and emotional damage caused by sexual assault, war, violent crime, and other traumas, as well as anxiety treatment for autistic adults and people suffering through life-threatening illnesses. The lab has also just

completed the first double-blind, placebo-controlled study of the therapeutic use of LSD in human beings since the early 1970s.

According to UBC professor of medicine Evan Wood – who is the Canada Research Chair in Inner City Medicine and director of the BC Centre on Substance Use – MDMA has shown exceptional promise

working as an empathogen that reduces anxiety but provides users a sense of connection, without the hallucinogenic ego-dissociation that often accompanies psilocybin or LSD. Phase 2 trials of MDMA administered to veterans of the Iraq and Afghanistan wars with severe PTSD resulted in the

veterans being able to “package up those experiences,” says Wood, “in a way that enabled them to move on to where they no longer met the diagnostic criteria for PTSD.”

Where MDMA could mitigate PTSD without the risk of addiction, psilocybin and LSD could conquer addiction itself, simply by offering abusers a perspective on themselves that engenders positive changes in behaviour.

“One of the biggest mysteries in the treatment of addiction is how people can make a decision to make a change in their life and really follow through with it,” says Wood, who is also medical director for Addiction Services with Vancouver Coastal Health. “Neuroimaging studies have shown how on psychedelic drugs like psilocybin or LSD, new connections are formed between our thoughtful brain and that reward system, connections that hadn't existed before and couldn't be brought about by normal psychotherapy. And through that process, people appear to be able to follow through on their intentions around recovery.”

As promising as the research is, psychedelics – whether plant-based or lab-grown – still carry the baggage of a checkered history. Simply uttering the phrase “the Sixties” evokes the spectre of music and rebellion, fuelled by a Wild West of psychedelic use, and the characters that became synonymous with unchecked drug experimentation: Owsley Stanley, the Grateful Dead's audio engineer who also supplied most of the Bay Area music scene with LSD; Ken Kesey, who founded the “Acid Test” parties and helped bring the beat movement into the hippie era; and Timothy Leary, the Harvard psychologist who conducted LSD experiments on his graduate students and became a figurehead of the counterculture, popularizing such phrases as “Question authority” and “Turn on, tune in, drop out.”

As promising as the research is, psychedelics – whether plant-based or lab-grown – still carry the baggage of a checkered history.

cannabis



psilocybin mushrooms



ayahuasca



peyote



Zach Walsh, a psychology prof on UBC's Okanagan campus, studies the effects of cannabis on PTSD.



Kenneth Tupper is a director at the BC Centre on Substance Use and an adjunct professor with UBC's School of Population and Public Health.



Evan Wood is Canada Research Chair in Inner City Medicine and leads the BC Centre on Substance Use.

Under Saskatchewan Premier Tommy Douglas, author of Canada's modern healthcare system, Weyburn Mental Hospital (where the term “psychedelic” was first coined) conducted bold experiments to treat mental disorders, allowing doctors and nurses to take LSD to better understand and empathize with the mentally ill – a practice that reportedly had a profoundly constructive effect on the hospital's population.

While the spiritually transformative experiences were as real then as they are now, the lack of sufficient scientific oversight and America's prudish drug laws robbed the movement of any sense of legitimacy, and brought ruin to its practitioners. Leary, Stanley, and Kesey all ended up in prison on drug offenses, the latter two becoming recluses upon their release.

Canada was a different story altogether. As early as the 1950s, Saskatchewan was leading the world in treating issues such as addiction, paranoia, and manic depression with LSD. Under Saskatchewan Premier Tommy Douglas, author of Canada's modern healthcare system, Weyburn Mental Hospital (where the term “psychedelic” was first coined) conducted bold experiments to treat mental disorders, allowing doctors and nurses to take LSD to better

understand and empathize with the mentally ill – a practice that reportedly had a profoundly constructive effect on the hospital's population. The psychiatrist who led the treatment, Humphry Osmond, introduced trip-lit author Aldous Huxley to mescaline, and had earlier used LSD to cure Bill Wilson – co-founder of Alcoholics Anonymous – of his drinking problem.

But it wasn't long before LSD and other synthetic psychedelics spread from the pharmacy to the streets. As a symbol of the counterculture, LSD was quickly demonized and outlawed in US states through the 1960s, and Canada in 1968, leading to what was essentially a worldwide ban at the United

Nations Convention On Psychotropic Substances in 1971, classified among drugs with “no currently accepted medical use.”

The last North American institution to legally use LSD therapy was New Westminster's Hollywood Hospital in 1971. Instead of drugs of use, psychedelics became drugs of abuse, and their potential therapeutic value was lost in the global fearmongering.

“The drug laws that essentially kept these drugs out of the hands of scientists and doctors didn't do so much to keep them off the street, but resulted in essentially shutting down human-subject research for a good 30 years or so pretty much everywhere around the world,” says Tupper. “So we basically lost a whole generation of potential researchers and medical professionals who lost interest, or in many cases didn't even learn about it – medical schools stopped teaching the history of psychedelic research.”

At the turn of the century, however, things began to change. Underground experimentation had continued, and by the 1990s a new counterculture had arisen in the rave and nightclub scenes that centered around the mood-altering effects of MDMA. Ecstasy became the default party drug, and an increasing liberalism in the West encouraged intrepid researchers to navigate the bureaucracy of administering controlled substances, renewing interest in the potential mental health benefits of synthetic drugs.

altered perceptions

In a bit of a virtuous circle, positive results from these early studies led to more interest, which meant more money, which meant more research. Far from the ethically questionable experimentation of the 1960s, 21st-century research is rigorously controlled by medical professionals who are keenly aware of the optics of the situation. Protocols ranging from university ethics approvals processes to Health Canada clinical trial regulations help reinforce a sense of precaution absent from 20th-century research.

And though the research has tiptoed at a snail's pace over the past two decades, in many cases the results have been deeply encouraging, perhaps even providing a path away from the scourge of addictive prescription opiates that have overwhelmed our medical system.

"People are desperately in need of innovative treatments for the malaises of modernity – things like anxiety, depression, PTSD, addictions – that are so rampant in society," says Tupper. "We really need to explore these new clinical tools that may not be that far away from us, but have long been dismissed as having 'no medical value and highly likely to be abused'."

The optics of psychedelics as drugs of abuse, though largely overcome by the medical community, still linger in the eyes of government agencies, a fact that limits research to institutions that can pony up the necessary capital through private donors. To date, neither the Canadian Institutes of Health Research nor the US National Institute on Drug Abuse – the world's largest funder of addiction research – has supported research in this area.

"We're kind of rubbing pennies together to do this work," says Wood, "but I think it really is the most exciting area in mental health right now. Substance use in general doesn't get much funding in comparison to the burden of disease. Addiction medicine for a long time has been an unwanted stepchild in the healthcare system, and has not received the appropriate funding by any stretch of the imagination."

Our tendency to treat addiction as a criminal issue rather than a medical issue – a War on Drugs that should have been fought as a War on Dependency – has created an enduring stigma of lawlessness and abuse that makes political entities hesitant to commit tax dollars to research, no matter how promising it is.

Some believe the Canadian Institutes of Health Research should have a dedicated substance-use research institute that focuses on tobacco, alcohol, opioids, and behavioral

addictions like eating disorders and gambling. Currently, such research is subsumed under the National Institute for Mental Health, Neuroscience, and Addiction, where the addiction funding is limited.

Until such a milestone is achieved, the hope is that existing philanthropic support will be enough to get the pilot data needed to achieve real funding from federal granting agencies. But if the private money dries up, there is no viable path to public money, and the research may once again be lost or delayed. For a researcher in a scientific lab, if you don't get grant money you don't do research, and even the most dedicated practitioners will stop requesting funds they know they won't receive.

This would be a tremendous loss for a promising new direction for treatment. The existing evidence for psychedelic therapy as a viable tool to fight alcohol, tobacco, and opioid addiction is compelling, and even the US Food and Drug Administration has recognized – though not yet funded – MDMA as a potential breakthrough therapy to combat PTSD.

Evan Wood is optimistic. Many of his senior-level team at the BC Centre on Substance Use were formerly with the BC Centre for Excellence in HIV/AIDS, which wrote the provincial guidelines for the treatment of HIV infection, bringing about a 90 per cent reduction in new HIV cases and AIDS deaths across the province. Since British Columbia has no such guidelines and standards for addictive disorders, there is a lot of variability in terms of how care is provided. The BCCSU is trying to step into this vacuum, sharing therapeutic guidelines for the treatment of opioid addiction in BC on their website, a process that has become the de facto national guideline.

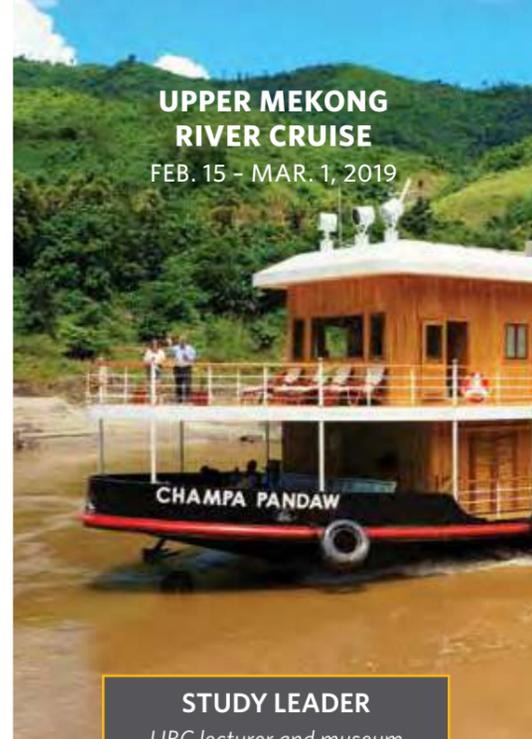
The challenge now is for the healthcare system to step up – to separate stigma from evidence, fund necessary research into these promising therapies, and establish guidelines and the blueprints for their implementation, "to enable the fruits of that research to become meaningful for people that are affected by these conditions," says Wood. "So that's the idea – we're not off in some laboratory studying things and disconnected from the healthcare system. We have a mandate to study and implement and promote best practice. If the research can confirm what the pilot studies and what the original research showed, we may have something with enormous potential to improve some of the most challenging and vexing health system challenges that we face." 📌

"People are desperately in need of innovative treatments for the malaises of modernity – things like anxiety, depression, PTSD, addictions – that are so rampant in society. We really need to explore these new clinical tools that may not be that far away from us, but have long been dismissed as having 'no medical value and highly likely to be abused'."

~ Kenneth Tupper

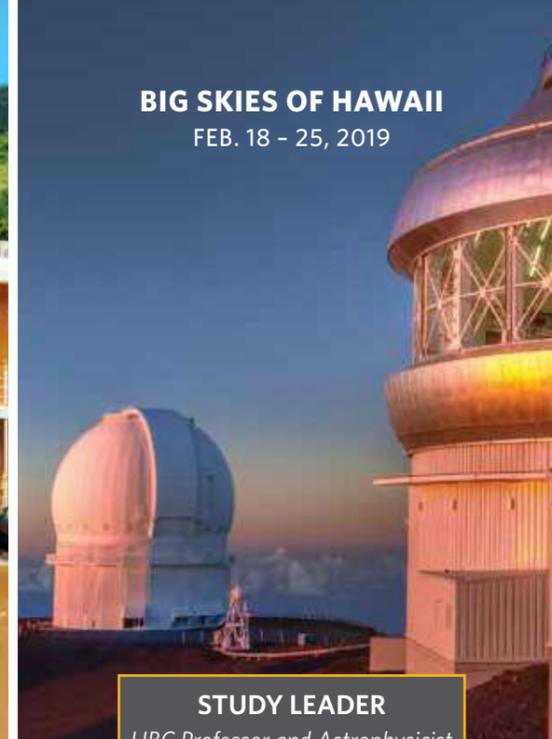


A shaman conducts an Ayahuasca session in the Amazon jungle (Photo by Fotoholic Press/LightRocket via Getty Images).



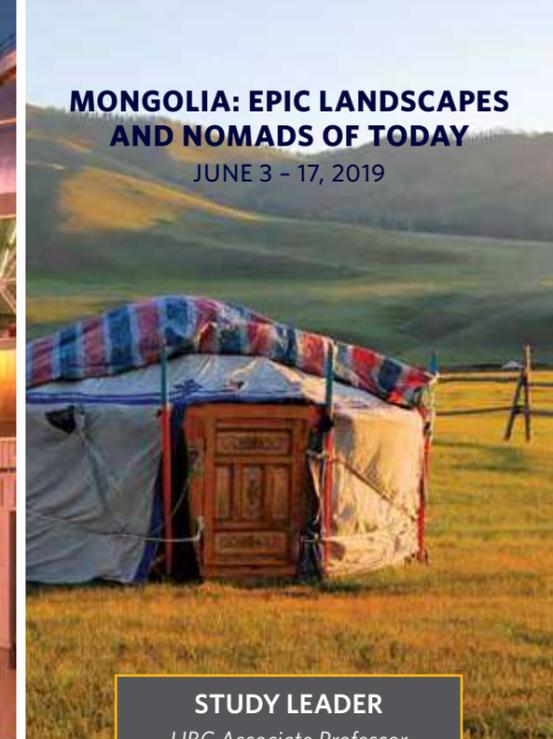
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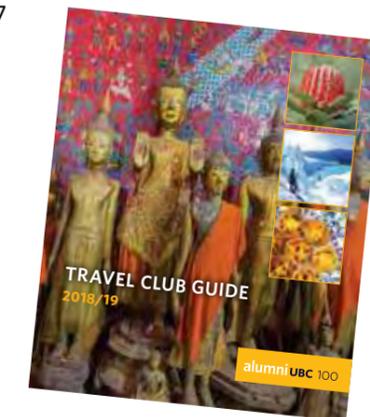
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Does the key to minimizing catastrophic wildfires lie in pre-colonial forest management practices?

BY RICHARD LITTLEMORE

Having recently lived through the worst wildfire season on record in BC, Kelsey Copes-Gerbitz is the first to acknowledge that promoting the benefits of fire in the province's interior forests is a hard sell. BC foresters have worked diligently – and often successfully – in the last century to suppress fire, to prevent its outbreak or discourage its spread. And after seeing firsthand the threat and devastation of wildfires raging near her research area outside Williams Lake last summer, this UBC PhD student now has a visceral sense of why you might want to avoid fire at all costs.

But looking back into the scientific record, and plumbing more deeply into human memory – especially through her collaboration with the Williams Lake Indian Band (T'exelc) – Copes-Gerbitz says two conclusions are inescapable: first, wildfire has always been an integral part of the BC interior forest ecology, and second, humans have often worked with fire more successfully than they have fought against it.

Copes-Gerbitz has just wrapped up the second year of what she anticipates as four years of interdisciplinary doctoral research in the UBC Faculty of Forestry. On the ecological side, she is looking at tree-ring studies to establish a long-term wildfire record in the Williams Lake Community Forest, which is jointly managed by the T'exelc and the City. At the same time, she is working closely with community members, particularly with the T'exelc Elders, to better understand how humans have coexisted with fire over the centuries.

As previous research shows, "these areas used to have a lot of low severity fires – every five to 15 years," Copes-Gerbitz says. But the outbreaks were patchy, "never hectares and hectares of devastated landscape as we saw last summer."

Before colonial times, it was common for people to set lots of small, strategic fires, for purposes ranging from reinvigorating berry crops to managing game.

Three things have changed. First, a century of increasingly effective fire suppression has allowed fuel to build up in the forests, so when fire breaks out, there is more to burn, creating blazes that are fiercer and run farther. Second, climate change has turned up the heat, or made the forest more fragile, for example by allowing the devastating spread of the mountain pine beetle.

The third factor – less well known, but closely related to the first – is that Indigenous people are no longer managing the forests with fire. It turns out that before colonial times, it was common for people to set lots of small, strategic fires, for purposes ranging from reinvigorating berry crops to managing game – for example, by attracting caribou that find better forage in forested areas where a small fire has reduced the dense undergrowth.

This doesn't mean that anyone is planning to head into the woods with an underdeveloped plan and a package of matches, but it strongly suggests that Copes-Gerbitz is the right person, at the right time and, perhaps surprisingly, in exactly the right place.

The surprise arises because Copes-Gerbitz is, as they say, not from around here. She grew up in Hawaii, hiking the mountainside forests on the Hilo side of the Big Island. After high school, she moved to the mainland, choosing Willamette University in Salem, Oregon, because it offered her the opportunity to pursue a double major in environmental science and archaeology, reflecting a split interest in both landscapes and people.

After her undergraduate studies, Copes-Gerbitz began working with an ecological non-profit on forest management and restoration. There, she started to understand how difficult it is to manage the landscape in what she calls "a multi-value setting," where you have to balance or accommodate ecological goals, economic goals and social goals all at the same time. She went on to do a master's in environmental modelling at the University of Manchester in the UK, and, working afterward as an environmental consultant, she again found herself "the middle man between people with fundamentally different values – between people who want to develop and people who want to protect."

Section of Lodgepole pine tree showing evidence of historical fires in the Williams Lake Community Forest in 1833, 1848 and 1853. Original photo: Kelsey Copes-Gerbitz.

fighting fire with fire

Kelsey Copes-Gerbitz.
Photo: Martin Dee



She started to understand how difficult it is to manage the landscape in what she calls "a multi-value setting," where you have to balance or accommodate ecological goals, economic goals and social goals all at the same time.

The more she felt this tension, the happier Copes-Gerbitz became about the interdisciplinary nature of her studies to date. In a single discipline – or in a forestry faculty less interdisciplinary than UBC’s – Copes-Gerbitz says you can wind up with scientists and ecologists who are inclined to shy away from people – who are accomplished in their area of expertise, but not trained in social science research methods.

But, Copes-Gerbitz says, “unless you can talk to people of all different perspectives – unless you can work collaboratively with everyone – change is going to be much more difficult to come by.” That’s why she chose to pursue her PhD at UBC, where her thesis supervisor is Dr. Lori Daniels, an expert in fire ecology who has worked hard to engage with communities throughout the province. In addition, Copes-Gerbitz benefits from the guidance of a social science methods expert, Dr. Shannon Hagerman, who has extensive experience working across the sciences in a policy context.

And the move to BC has proved an excellent choice. “I’ve been loving every step,” Copes-Gerbitz says. “I’m loving the urgency of doing this kind of work.” To support it, Copes-Gerbitz applied for UBC’s Public Scholar Initiative award, which benefits doctoral students whose research is explicitly linked to purposeful social contribution and innovative forms of scholarship. She also landed a student grant from the faculty’s Aboriginal Community Research Seed Fund. Without these sources of funding, says Copes-Gerbitz, the long-term community engagement necessitated by collaborative work, and the ability to give back to the community, would have been difficult to fully realize.

Copes-Gerbitz says she is less concerned about finding “a job” after achieving her degree than she is about maintaining the impact of the work she is doing already. This is not one of those projects where you can usefully drop in, conduct your research and leave with the product, she says. Even if she succeeds in developing holistic and appropriate management strategies for minimizing the threat of catastrophic wildfire, the crucial final piece will involve engaging the community, building management capacity and, most of all, building public trust.

“Ultimately,” she says, “it’s a resilience approach. We are trying to build the capacity to be ready for what we don’t know is coming.”

Kelsey Copes-Gerbitz collects tree core samples from Douglas-fir for a collaborative fire history project in Williams Lake Community Forest.
Photo: Owen Raybould



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When Gail Murphy and her team launched *Tasktop Technologies* in 2007, they were involved in one of the things UBC does best: turning creativity, new knowledge, problem solving and innovation into a commercial enterprise.

Murphy, along with then-PhD student Mik Kersten and research engineer Robert Elves, saw opportunities in the world of open source software and, with help from UBC's University/Industry Liaison Office (UILO), they transformed their ideas into a viable startup.

Tasktop Technologies works with large corporations and organizations that have developed diverse software tools to meet the needs of the various aspects of their business: information gathering, coding, product testing. Such tools are typically developed independently of each other, producing huge headaches when it comes to sharing information across different levels of the organization. Murphy's team solved that problem by devising a way to synchronize data among these tools, speeding up the process of change and improvement across the board. Ten years later, the company is thriving.

Last August, Murphy was named Vice President Research and Innovation (VPRI) at UBC, and is working to help other researchers replicate her experience.

"UBC's research mission has always been about understanding the world around us," she says, "and to solve difficult problems in every field from astronomy and medicine to engineering and the arts. It's also about getting results on the ground: not just doing high quality research, but getting that research out into the world where it can make a difference."

Not that pure research - research for the sake of it - isn't still a high priority at UBC: it is. Research whose sole aim is the creation of new knowledge is the lifeblood of any university, and the target of most research-funding grants at UBC. Some of the key roles of the VP Research portfolio are to help researchers attract and manage funding through grants and industry partners, establish research relationships with other organizations and comply with various grant-related regulations.

That this research sometimes results in commercialization is icing on the cake. The portfolio is also the driving force behind *innovationUBC*, an overarching institutional initiative that focusses on entrepreneurial opportunities, partnerships with industry, knowledge exchange and developing commercial ventures based on research conducted at the university.

Innovation has long been at the heart of UBC's mission. The UILO has been operating for more than three decades, and is a North American leader in patent registration, licensing, technology transfer and the

commercialization of academic research, helping in the establishment of 200 spin-off companies that feature UBC-developed technologies. These ventures have resulted in an estimated \$11 billion in economic activity.

One of Murphy's goals as VPRI is to dramatically expand UBC's role as a steward of the innovation spirit, and to that end she established *innovationUBC* as a centralizing function for the VPRI's entrepreneurial outreach. Her initiatives focus on drawing out research projects that have commercialization potential, and providing training, mentorship, seed funding, office space and general expertise to fledgling entrepreneurs. The portfolio's entrepreneurial outreach offers four different pathways "to help scholars and researchers translate their innovations into viable socio-economic ventures, lobbying government or developing real-world impacts for their research," says Murphy. Typically, academics aren't naturals when it comes to business savvy, and they need all the support they can get.

- The first pathway builds on the model established by the UILO: provide researchers with help in patent registration, product and concept licensing, finding sponsors for promising research and general liaison with various industries to link researchers with potential business opportunities.
- The second pathway uses *entrepreneurship@UBC (e@UBC)*, a precursor to the *innovationUBC* initiative, to help faculty, staff, students and alumni understand and put into practice the steps needed to prepare themselves and their product for commercial ventures. *e@UBC* is focussed on the practicalities of setting up an enterprise, including seed funding for startups, entrepreneurial training and a large mentoring network, including mentors-in-residence.
- The third pathway develops relationships between UBC people and outside organizations including NGOs, private sector organizations and government. Part of the *innovationUBC* thrust is to hire staff who know who these potential partners are and how to connect with them.
- The fourth pathway helps researchers understand how their new knowledge might be adapted and organized in such a way that it can develop its socio-economic impact through a new government policy, new clinical practice or social enterprise.

Not all research projects at UBC have (or should have) socio-economic potential. But by using the four pathways, interested researchers can investigate that potential and reach realistic decisions about the process.

e@UBC is headquartered at the Graham Lee Innovation Centre (located in the Robert E. Lee Alumni Centre). Using workshops for business model development, market investigation and entrepreneurial training, *e@UBC*, is intended as a clearing house for presenting UBC-developed research to the commercial world.

Murphy's VPRI office is in the process of establishing new entrepreneurial hubs under the banner of *innovationUBC*, one each at Robson Square, Point Grey and UBC Okanagan. Based on the *e@UBC* concept, these hubs will provide a location for mentorship - utilizing existing UBC spinoffs, local businesses and alumni - to give real-world advice to program participants, as well as startup space and seed financing for ventures that can benefit from contact with the *innovationUBC* ecosystem, and will help external collaborators find their way into the UBC system. The Robson Square *innovationUBC* centre is ramping up towards an official launch this spring.

Ultimately, the purpose of these hubs is to gather together support from different faculties and outside organizations in a central area to facilitate relationships and interaction.

"UBC is a huge, complex institution," says Murphy, "and is often seen as difficult to penetrate. These hubs will help gather both the knowledge and the people, and provide a front door to the university."

Because access to *innovationUBC*'s resources will be centralized and not hidden away in various faculties and offices, Murphy hopes the hubs will attract a wider range of the university's talents, including more women entrepreneurs.

"We know that diverse teams produce better results in the workplace, but we have a lot of work to do to convince young women to get involved in high-tech research areas," she says. "Part of our job is to work with industry to show how these diverse work groups are a huge benefit."

Gail Murphy's research - and passion - is in digital technology. British Columbia has some of the strongest programs in the country through our various post-secondary institutions, which is a huge advantage for companies seeking locations that have a ready workforce trained at top-level schools. Microsoft, for example, recently opened in Vancouver with a 700-strong workforce just down the street from UBC Robson Square.

Murphy was also instrumental in establishing the Master of Data Science degree at UBC, which had its first intake in September 2016. This year, the program received nearly 800 applications for 80 places.

"UBC's research mission has always been about understanding the world around us, and to solve difficult problems in every field from astronomy and medicine to engineering and the arts. It's also about getting results on the ground: not just doing high quality research, but getting that research out into the world where it can make a difference."

- Gail Murphy



SMART BUSINESS

Turning Academic Research into Real-World Results

BY CHRIS PETTY, MFA'86

As well, UBC was a founding member of a consortium of predominantly BC businesses, high-tech startups and post secondary schools that competed to be part of the federal government's *Innovation Superclusters Initiative*. The program will share a \$950 million dollar grant (matched dollar for dollar by industry partners), and was created to fund five high-level, intensely focussed research centres in areas of special expertise in various parts of the country. Quebec, for example, was awarded a Supercluster in artificial intelligence; Atlantic Canada was awarded the Ocean Supercluster to improve Canada's competitiveness in ocean-based industries; Ontario was awarded an Advanced Manufacturing Supercluster; and the Prairies were awarded the Protein Industries Supercluster to develop plant proteins.

BC's proposal, *Canada's Digital Technology Supercluster*, was also one of the successful ones. The Supercluster joins industrial partners such as Microsoft, TELUS, Providence Health Care, Canfor, The Terry Fox Research Initiative and more than 200 other organizations and schools, and will, says UBC president Santo Ono "accelerate Canada's global advantage in digital technology using

Microsoft recently opened in Vancouver with a 700-strong workforce just down the street from UBC Robson Square.

big data to create new economic opportunities and address the productivity, health and sustainability challenges facing the world today."

But *innovation@UBC* doesn't just mean high tech. *e@UBC*

has cultivated or is cultivating ventures from virtually every faculty at the university, from the arts and pharmaceuticals to athletics and healthcare. *Boost Environment*, for example, uses a patented process to treat sewage sludge and agricultural wastes. It helps municipal wastewater plants reduce the amount of sludge produced, lowering costs and benefiting the local environment. *Grain* sources dry goods – freshly milled flour, legumes, grains – from local farms and offers home delivery of their products. Their motto is "Fresh Food for Fresh People." *AnandiaLabs* uses genomics and metabolite analysis to create next-gen medical cannabis with optimized therapeutic properties. It also provides analytical testing and identification services to the emerging legal cannabis industry in Canada. *Vesalius Cardiovascular* is promoting a surgical implant that can repair mitral regurgitation, a major heart disease. The device is introduced through the skin, eliminating the need for open-heart surgery. *Acuva*, started by UBC alumnus Manoj Singh, *MBA'10*, uses ultra violet LEDs to develop a low power, zero maintenance drinking water purification system that can be used "at the sink," or where the water comes out of the tap or storage container. It's a particular boon to rural areas away from the grid or in areas of recent disasters, where access to power is the biggest obstacle to clean drinking water (see story on facing page).

"It's amazing what's happening at UBC every day," says Gail Murphy. "Our faculty, staff and students have so much to offer the world. We welcome alumni to come and get involved through mentorship, research collaborations and even for investment. We would love to hear from you." 

For more information about *e@UBC*, visit entrepreneurship.ubc.ca. To read more about research at UBC, visit research.ubc.ca

 **innovation UBC**



UBC alumnus and entrepreneur Manoj Singh. Photo: Martin Dee

How an MBA grad was equipped to potentially change the lives of millions

THE UBC ENTREPRENEURSHIP ENGINE

When Manoj Singh, *MBA'10*, set out to launch a startup, he didn't just want to create a successful business – he wanted to help change the world.

Singh had already studied engineering at one of India's most prestigious institutes and worked for over a decade in research and development with the Tata Group, a \$120-billion enterprise that operates in 100 countries. He had also worked as head of market development and technology commercialization for South Asian markets at Westport, an engineering company that specializes in alternative fuels and operates in more than 70 countries.

But deep down Singh was an entrepreneur with a passion for startups and the steely mix of knowledge and nerve required to succeed – and he was willing to put his life savings on the line to do it.

THE VENTURE

A couple of years after completing his MBA, Singh returned to UBC to in search of collaborators to start a new enterprise. He approached *entrepreneurship@UBC (e@UBC)*, which offers mentorship, venture creation and seed funding, and helps connect businesspeople with research and innovation on campus. They in turn linked him with the University-Industry Liaison Office, where Singh learned about the technology that would drive his company – Acuva Technologies Inc.

The technology – which was developed by Dr. Fariborz Taghipour of UBC's Department of Chemical and Biological Engineering – uses ultraviolet LED to destroy microorganisms in water, but what really sets it apart from other purification systems is that it requires very little power – so little, in fact, that it can operate on battery alone. It's also portable, compact, requires virtually no maintenance, and it doesn't create waste or harm the environment.

"This is independent of grid infrastructure, which means you can deploy it wherever you want," says Singh, who adds that the technology is especially promising for the many areas of Asia and Africa where access

to power is one of the biggest barriers to clean drinking water. "And once you install it, it works an entire lifetime without having to do anything more."

THE MOTIVATION

But for Singh it the motivation wasn't only to create an environmentally and financially sustainable business model – he was also driven by personal experience.

"I spent the first 15 years of my life in rural India, and have gone through the challenges of accessing clean drinking water, and infrastructure issues. All those things you read in textbooks, I have experienced them myself," says Singh, who weaves social responsibility into all of his business pursuits.

Todd Farrell manages the UBC Seed Fund, which invests risk capital in innovative startups founded at UBC. He has worked closely with Singh from the beginning and oversaw initial funding of \$450,000 for the project. He says Singh's blend of business knowledge and technical skill, along with his calm demeanor and excellent interpersonal skills, have been invaluable.

"He's also a very tenacious individual – and he is willing to ask for help, but he certainly has his own mind. He collects information, analyzes what he hears, discards what he doesn't like and comes up with a plan," says Farrell, who adds that Acuva will not require philanthropic support from governments or charities, but rather is projected to be profitable on its own.

Benefiting from two seed rounds and a bridge, Acuva evolved from a research project and pre-prototype to a commercial project in less than 24 months. "That's a pretty incredible pace," says Farrell, who now chairs the company's board.

Acuva went on to attract a Series A round of funding from other investors, and to date has raised \$4.5 million, with the majority of funds coming from local angel investors who are alumni of UBC.

THE STRATEGY

Singh plans to keep up the pace, and hopes that within a year the product will be developed to the point where it can be shipped to off-grid areas in China, India and other areas of Asia and Africa.

Eventually the technology will also be used to kill microorganisms in the air and on surfaces. But to start, the company launched the product in North America, and geared it toward the recreational market – boaters, campers, RVers, and others who may not always have access to clean water when they go off the beaten track.

"We decided to start in North America primarily because of physical proximity," says Singh. "It's much easier to troubleshoot when your customers are next door, rather than 10,000 kilometres away."

The technology has since been developed into cost-effective water purification units for mass markets, intended for integration into appliances such as ice-makers. Six months

from now, the water dispenser in your fridge may well be using Acuva technology.

Today, the company employs 20 people and has formed important partnerships with global distributors. As markets expand and the rate of production ramps up, the product cost has dropped dramatically and is predicted to drop even further, boding well for the future provision of low-cost units to remote communities.

THE UBC ADVANTAGE

Singh says he has used "every bit" of the knowledge he acquired during his MBA to make Acuva a success, and he also credits *e@UBC*, the University-Industry Liaison Office, and all of the entrepreneurial support at UBC for helping to get his business off the ground.

As well as the seed-funding, use of office space, and the technology itself, Singh benefited from a dynamic network – from which he drew for mentorship, investment and talent – including the three UBC PhD grads he hired to join the company.

"When you start a small company, especially with technology, you start with almost zero – no credentials, no identity, nothing to show. It's very hard to find the first set of people who believe in what you believe, who associate their prestige and reputation, and who put in the resources and money," says Singh. "That was a huge help that Acuva received from the UBC ecosystem."

Singh says all of that knowledge and support, along with his 20 years of corporate experience, have given him immense confidence, and a desire, in turn, to help his team members pursue their dreams. His upbringing and his experience as an immigrant also gave him an unshakable tolerance for risk.

"In the early part of my childhood I had nothing to lose. That made me an inherent risk-taker. Once you have that attitude, everything becomes easier," he says. "You have the ability to make decisions that are inherently risky for many – because for me, it's very normal." 





Photo: Paul Joseph

Author Alix Ohlin started a new life chapter this January, becoming head of UBC's Creative Writing Program. Born and raised in Montreal, Ohlin graduated magna cum laude from Harvard University with an English and American Literature and Language degree in 1992 and earned her MFA in writing from the Michener Center for Writers, University of Texas at Austin, in 2001.

Today, she is an internationally renowned writer whose 2012 novel, *Inside*, was named a best book of the year by the *San Francisco Chronicle*, *Amazon.ca*, and *iTunes Canada*, and a finalist for the Scotiabank Giller and Rogers Writers' Trust prizes. She has also published two collections of short stories and her first novel, *The Missing Person*, was published in 2005.

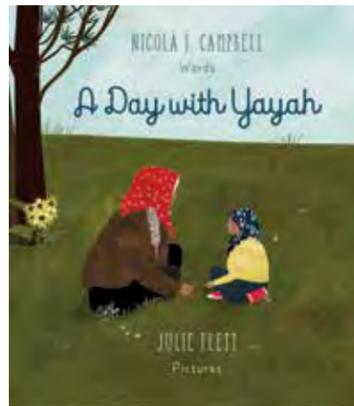
Ohlin has been an English professor at Lafayette College in Easton, Pennsylvania, a faculty member in the Warren Wilson MFA Program for Writers in North Carolina, and has also taught writing at the New York State Summer Writers Institute. Most recently, she taught at McGill University as the Mordecai Richler Writer-in-Residence for 2016-17. She specializes in teaching fiction, screenwriting and environmental writing and has distinguished herself as a mentor to younger writers.

When we asked Ohlin to recommend some choice books, she didn't have to look any further than the Creative Writing Program's own talented grads. From a sweeping historical novel to an adventurous memoir to a story you can read with your kids, Ohlin is confident these books will entertain and enlighten you all summer long.

A DAY WITH YAYAH

By Nicola Campbell, BFA'07, MFA'12

On a beautiful spring day in the Okanagan valley, a First Nations family heads out together in their red minivan. With much laughter, the family explores, picks plants, and eventually shares a picnic of hot sweet tea and salmon sandwiches. The young grandchildren ask questions and their grandmother, Yayah, answers them, sharing her wisdom. She tells them which plants can be eaten and which can be used as medicine, from lightning mushrooms and wild rhubarb to sunflowers and arnica. At the same time, she instructs the children – and the reader – in their Indigenous language. “What a beautiful day,” she tells the children. “In our language, q’ámq’əmt means beautiful.” The book includes phonetic pronunciations of the Indigenous words as well as a glossary at the back. Written by First Nations author Nicola Campbell, *A Day with Yayah* depicts a family in harmony both with one another and with their culture. The mood is festive and uplifting, and the rich descriptions of the natural world set lovely scenes: “The sun shone bright and shadows danced through the red willows and cottonwood trees. An owl flew low overhead. The breeze was cool, with the warmth of spring.” Beautifully illustrated by Julie Flett, *A Day with Yayah* was a finalist for the Christie Harris Illustrated Children's Literature Prize. It's a perfect choice for a family to read together on a summer day.



THE DUTCH WIFE

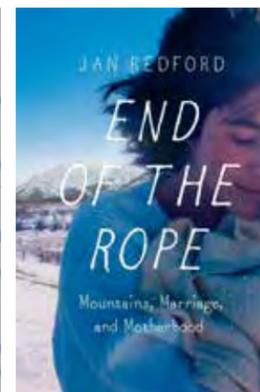
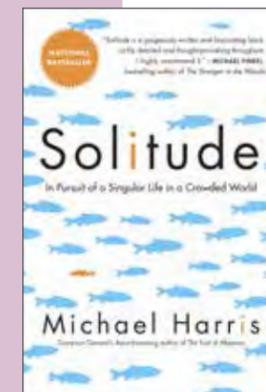
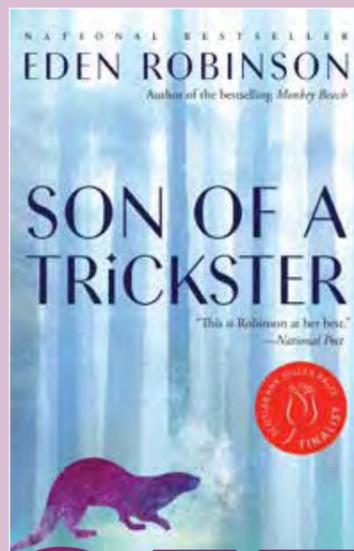
By Ellen Keith, MFA'16

Amsterdam, 1943. Marijke de Graaf, a Dutch woman involved in the resistance, and her husband Theo are arrested and deported to separate concentration camps in Germany. Faced with the terrible choice between work in a labour camp or in a brothel, Marijke picks the brothel. Meanwhile, at Buchenwald, an SS officer named Karl Muller faces the cruel tasks of punishment that are required of him. Years later, in Buenos Aires, young student Luciano Wagner is caught up in the Argentinian Dirty War and struggles to endure military captivity. How will these three lives gradually intertwine? What path will each person follow against the dramatic backdrops of war, terror, and oppression? The decisions they make will have lasting consequences. Winner of the Harper Collins/UBC Prize for Best New Fiction, *The Dutch Wife* is both a romantic page-turner and a gripping historical thriller. Ellen Keith handles her intense material with such skill and maturity, you'll be amazed that this is her debut novel. She has a great gift for writing vivid scenes and characters that come to life. As the spellbinding plot unfolds, Keith raises intriguing questions about love, sacrifice, and the limits of human endurance. The *Toronto Star* called *The Dutch Wife* “a well-researched, supremely absorbing tale that shines a light on the horrors of humanity.” Lushly written and powerfully imagined, *The Dutch Wife* is the perfect summer read – a poignant yet fast-paced one that you can sink into.

SON OF A TRICKSTER

By Eden Robinson, MFA'95

Eden Robinson is a national treasure, and by the time this magazine arrives in your mailbox, she'll also be the recipient of an honorary doctor of letters from UBC. In this Scotiabank Giller Prize-nominated novel, the first of a planned trilogy, Robinson gives us Jared, a young teenager struggling to find his way in the world against difficult odds. His mother loves him dearly but she has problems of her own. His father has a new family and a debilitating back injury. He misses his dead dog, Baby Killer, a much sweeter animal than the name implies. Though he's only 16, Jared is the one who takes care of everybody else. Meanwhile, he doesn't understand why his grandmother, who seems to dislike him, has told him he's the son of a trickster and – even more disturbingly – why ravens sometimes speak to him. It's impossible not to root for Jared, a relatable teenager faced with more troubles than any one person should ever have to deal with. When Robinson won the prestigious \$50,000 Writers' Trust Fellowship in 2017, the prize jury noted that her characters are “magnetic, resilient, and spirited, even when they might be a bit twisted.” Her quick-witted dialogue and unique humor sparkle on every page of this gritty, funny, and enjoyable book. The second volume of the trilogy comes out in October (and the entire trilogy has been optioned for television), so read the first one now in order to be caught up in time.



SOLITUDE: A SINGULAR LIFE IN A CROWDED WORLD

By Michael Harris, BA'02, MFA'17

“I came away from this book a better human being,” says celebrated author Douglas Coupland about Michael Harris' latest book. Harris, an award-winning writer of non-fiction, examines what it means to be alone in today's world, why true solitude is so hard to find, and why it may be more important now than ever before. Being alone, he argues, takes skill. It offers great rewards in terms of our creativity, individuality, and sense of self. By allowing us to recharge, it can even fortify our relationships to others. Yet in a contemporary world that focuses on the social and the shared, in which interaction is monetized by digital platforms, our solitude is undervalued. And paradoxically, though we're increasingly connected online, many of us feel lonelier than ever. One cure for loneliness is other people; another one, *Solitude* suggests, is learning to truly understand and appreciate our time alone. With a poet's eloquence and a reporter's knack for observation, Harris gives us examples of solitude as an uplifting experience. He weaves together anecdotes from his own life, historical details, and reporting from the worlds of brain research, psychology, and technology. Ultimately optimistic, *Solitude* shows how to find quiet inside crowded spaces and hectic hours. You can read it, as the *Winnipeg Free Press* wrote, as “a self-help instruction manual for snatching up more of these valuable moments in our busy lives.”

END OF THE ROPE: MOUNTAINS, MARRIAGE, AND MOTHERHOOD

By Jan Redford, MFA'15

If you enjoyed Cheryl Strayed's *Wild*, you'll be drawn to Jan Redford's spirited, exciting memoir of a life spent climbing mountains in and around British Columbia. Her love of climbing is first kindled as a teenager, and is only heightened in her twenties when she meets and falls in love with her boyfriend Dan Guthrie. When Dan is killed in an avalanche, she throws herself into marriage and family life with one of his best friends. Later, after they divorce, she comes into her own as a single mother, teacher, and writer. Adventure and risk, Redford's memoir tells us, are part of life at every turn, and things rarely, if ever, turn out the way we expect them to. Redford's style is raw, insightful, and unflinchingly honest, and you will cheer for her as she forges her unconventional path through the world. Her passion for mountains comes through on every page: “the only thing that had seemed like my own was climbing,” she writes. *End of the Rope* is a book that beautifully captures the culture and landscape of climbing, includes the close-knit group of people who are drawn to the challenge it represents. But this book is about more than mountains; it also tackles love, grief, failure, parenting, and the quest for self-fulfillment. It's a gripping and memorable reading experience.

Great summer reads recommended by the new chair of UBC's Creative Writing Program

GET INTO ALIX OHLIN'S GOOD BOOKS

PREZ LIFE

Highlights from the busy schedule of UBC president Santa J. Ono. Follow him on Facebook, Instagram, YouTube and Twitter @UBCprez



Compared neckwear with Dr. Chan Gunn, namesake of UBC's new pavilion for sports medicine, which gives UBC unparalleled facilities for research in sports medicine and kinesiology.



Met Mike DeGagné (right), currently president of Nipissing University and former director of the Aboriginal Healing Foundation. Pictured centre is UBC's Linc Kesler, director of the UBC First Nations House of Learning and senior advisor to the president on Aboriginal affairs.



Ran into Dash Foster (left), UBC's new band leader, who was modelling the new UBC band uniform. On the right is band president Andy Ferguson.



Met some of the members of the UBC Quidditch Team.



Enjoyed spending time with Jeremy Lin of the Brooklyn Nets, who spoke at the War Memorial Gym this April. (Treated him to a Canucks game!)



Met some UBC Okanagan students during a visit to Kelowna, who were helping to organize "Recess," a well-deserved year-end music concert.



Proud to hear UBC student Adina Williams speak so compellingly at the opening of the Indian Residential School History and Dialogue Centre.



Met with German Ambassador Sabine Sparwasser and German Consul General Josef Beck to discuss UBC's extensive research agreements with German institutions. President Ono will visit Berlin and Munich in October.



Played in a quartet with UBC School of Music students for a pop-up concert at the Broadway-City Hall SkyTrain Station.



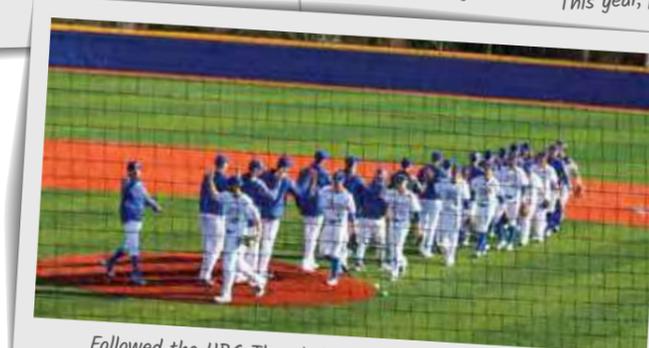
Last year, watched Storm the Wall. This year, participated!



Caught up with Jeremy Rifkin and David Suzuki. Rifkin presented on "The Third Industrial Revolution: Can we prevent the next mass extinction of life on Earth?" as part of the UBC Connects public lecture series (coming up: Michio Kaku and Isabel Allende).



Checked out the Ladner Clock Tower's new light display, which commemorates its 50th anniversary.



Followed the UBC Thunderbirds baseball team, who are enjoying a new Thunderbird Park and a long winning streak.

The University of British Columbia

CONNECTS

presented by President and Vice-Chancellor Santa J. Ono

In partnership with alumni UBC



Michio Kaku



Isabel Allende

Michio Kaku

The Universe in a Nutshell: Why physics is the key to pretty much everything

WEDNESDAY, SEPTEMBER 26, 2018 | 6:30-9:00 PM
CHAN CENTRE FOR THE PERFORMING ARTS, UBC VANCOUVER CAMPUS

In his characteristic fun, friendly and highly accessible manner, theoretical physicist and bestselling author Michio Kaku presents a succinct history of physics and makes a compelling case for why this particular branch of science is the key to pretty much everything.

He argues that physicists may soon shrink the science of the Big Bang into an equation as small as Einstein's famous $E=mc^2$, and that advances in string theory may allow us to escape the heat death of the universe, explore the multiverse, and unlock the secrets of existence.

Whether you slept through high school science or are about to defend your thesis in quantum physics, your curiosity and imagination is sure to be ignited by this spellbinding session with one of the world's most famous scientists.

Isabel Allende

The Alchemy of Truth: The power of story to change the world

TUESDAY, NOVEMBER 13, 2018 | 6:30-9:00 PM
LOCATION TBD

In this era of #metoo, #timesup, #letstalk and #blacklivesmatter, story-telling - individually and collectively - matters more than ever. In this talk, famed novelist Isabel Allende unpacks the power of story to, as she says, "make the world good - not just better." An unrepentant feminist who exhorts audiences to speak with passion and purpose about what must not be forgotten, Allende explores themes of social justice, female empowerment, and personal and political freedom with hope and good humour.

PREVIOUS SPEAKERS:

Waneek Horn-Miller

The Wisdom of Reconciliation: A roadmap for multiculturalism

Jeremy Rifkin

The Third Industrial Revolution: Can we prevent the next mass extinction of life on Earth?

This series is made possible with the generous support of the R & J Stern Family Foundation

Find out more, and access the presentations of previous speakers, at ubc.ca/ubconnects

UBC student **Adina Williams** spoke at the opening of the Indian Residential School History and Dialogue Centre in April. For more information about the centre, or to watch a webcast of the opening, visit aboriginal.ubc.ca/indian-residential-school-centre

'It's a large problem that survivors [of Indian residential schools], as well as their families and communities, have to continue to validate their lived experiences. For me, as an Indigenous student, so often I have had to either be an expert on these topics, or challenge another person who wants to argue that it is time for us to move on, or to get over it. These are comments that so many of us here today are so used to hearing, and I believe that they're based off racist and stereotypical assumptions that have been developed as a result of the lack of education that Canadians received on these parts of Canada's colonial history. This is why the dialogue centre is not only a timely addition to the UBC campus, but it is also a necessary one. [It] will play such a critical role in closing these large knowledge gaps that have been ignored for far too long.'

~ *Adina Williams*

UBC 8 in Coal Harbour, summer of 1970
(L-R) Mike Conway (coxswain), Edgar Smith,
Karel Jonker, Rod Bell Irving, Mike Neary,
Ian Gordon, Doug McKegney, Benj Clark,
Bob Advent

CLASS ACTS

What have you been up to lately? Share your latest adventures, unique stories, milestones, and journeys with fellow alumni in Class Acts. Don't be shy. You're a member of *alumni UBC* – you've got bragging rights.

If your submission includes photos, please ensure they are as high-resolution as possible. Submissions should not exceed 750 characters (about 200 words), and may be edited for length and clarity where necessary.

trekmagazine.alumni.ubc.ca/classacts

1950s

Sandra Cohen-Rose, BHEc'58, a consultant dietitian-nutritionist, home economist, and author, was elected president of the National Council of Women of Canada (NCWC) at their 124th Annual General Meeting. She is now spearheading their national Common Program 2017-2019: "Eliminating Poverty Through Life Skills Education and Women's Empowerment." The NCWC has been the leading national voice of women for the past 124 years. Its initiatives have contributed significantly to the establishment of Canada's social welfare system. Previously, Cohen-Rose headed the Montreal Council of Women, the Consulting Dietitian of Canada, and the International Coalition of Art Deco Societies. In 2002 she founded Art Déco Montréal.

1960s

Richard Garner, BSc'63, continues to practice orthopedic surgery at a private practice in Anchorage, Alaska. • While **Keith Harrison**, BA'67, is primarily a novelist, his latest book is scholarly. *Shakespeare, Bakhtin, and Film: A Dialogic Lens* uses the bold yet subtle ideas of Mikhail Bakhtin – who celebrated the carnivalesque under Stalin – to explore the politics and creativity of global Shakespeare on screens. Harrison lives on Hornby Island and is an academic emeritus at Vancouver Island University. • **Doug Sturrock**, BPE'63, (MA'71, Alberta), has been busy since retiring from his position as head of the Physical Education department

WATER BIRDS

Last summer, members of the 1970-74 Thunderbird rowing crews met for the first time in over 40 years. Held at the lakeside Whistler home of crew member **Karel Jonker**, BA'72, and his wife **Karen Jonker**, BEd'73, on August 20, the reunion was a chance for these sporty alumni to reminisce about their shared experiences, on and off the water. Attendees included competitors from the World Rowing Championships (1970), Pan American Games (1971) and the Olympics (1968, 1972, and 1976).

The idea for a reunion came from an exchange between rower **Dr. Trevor Josephson**, BA'73, and former coach **Dr. Peter Klavora**, MPhysEd'72. Once the idea spread to other team members, enthusiasm was quick to build. "Rowers develop a special bond," says Josephson. "I think because the training is so intense, and we focus completely on teamwork as the very nature of the sport."

Back Row (L-R): Doug Cox, Bryce Leigh, Milton Stevenson, Trevor Josephson, John Richardson, Doug McKegney, Edgar Smith, Sandy Manson, Karel Jonker. Middle Row (L-R): Ian Hunt (coxswain), Benj Clark, John Rogers, Ian Gordon, Jack Nelson, John Wilkinson. Front Row: (coxswain) Mike Conway. Missing from photo but in attendance: (Coach) Alan Roaf



and rugby coach at Magee Secondary School. With Tom Keast, he published *Once a Mermaid: The Meraloma Club 1923-1988* in 2001 and he recently self-published *It's a Try! The History of Rugby in Canada*. With over 1100 pages and 400+ images, it is the first of its kind to cover the beginning and development of the sport in Canada from the mid-1860s to 2011. Contact Doug at dougsturrock8905@gmail.com to obtain a copy.

1970s

Ron Newman, BSc'70, has been elected vice president of the Glencoe Club in Calgary, Canada's pre-eminent sporting facility. He has also been elected president of the Canadian Society of Exploration Geophysicists, effective April 1, 2018. •

Hailed as "one of the best novels of the year" by *The Globe & Mail*, **John MacLachlan Gray**, MA'72, has published *The White Angel*, a novel based on the 1924 murder of Janet Smith in Vancouver – a city at the edge of the empire, still reeling from the Great War with a barely functioning police department and a thriving criminal class. As a playwright, composer and theatre director, Gray has created many acclaimed productions, most notably *Billy Bishop Goes to War* (1978), which won the Governor General's Literary Award for Drama, was produced on and off Broadway, and was released as a feature film in 2011. As a writer, he has authored several books, fiction and non-fiction, including a series of mystery-thrillers. He is an officer of the Order of Canada, and lives in Vancouver.



Brent Elliott, BA'73, MA'74, (PhD'78, U of London, UK), has retired after 40 years as librarian, then historian, for the Royal Horticultural Society. Among his books are *Victorian Gardens* (1986) and *Federico Cesi's Botanical Manuscripts* (2015, in the Paper Museum of Cassiano dal Pozzo series). • **Frances Pohl**, BA'77, MA'80, has published the 4th revised edition of his textbook *Framing America: A Social History of American Art* (Thames and Hudson, 2017, 2012, 2008, 2002). This edition appears for the first time in two volumes and continues to be one of the most widely used textbooks in college and university classes on American art. It extends from prehistory to the present, covering the work of Indigenous peoples as well as those of European, African and Asian descent.

1980s

In his new book, **James Giles**, BA'80, MA'83, (PhD, Edinburgh), explores the many facets of human sexuality. Through a series of interrelated essays, *Gender, Desire, and Nakedness* (Hamilton Books, 2017), he investigates concepts of gender, sexual and romantic attraction, sexual excitement, and sexual desire and fantasies, in an attempt to get clear about this enigmatic aspect of our existence. Previously, Dr. Giles examined the seemingly inexplicable nature of sexual attraction in *Sexual Attraction: The Psychology of Allure*. • **Dave Butler**, BScF'81, has published his debut novel, *Full Curl*, with Dundurn Press. The book is the first in the Jenny Willson mystery series, and tells the story of a hard-edged, caustic-witted warden from Banff National Park, who considers poachers and ladder-climbing bureaucrats equally repulsive and worthy of the same painful fate. When Willson discovers animals disappearing from Canada's mountain parks, she begins a complex investigation that follows a trail of deceit, distraction and murder. With a growing list of victims, both animal and human, Willson finds herself in a race for justice that crisscrosses the Canada-US border and pushes Willson to a place from which she might not return. • **Bruna Martinuzzi**, BA'81, MA'86, is celebrating the 14th year of her business, Clarion Enterprises Ltd. She has helped thousands of clients in both business and academia improve their presentation and communication skills. She feels great joy in doing the work she loves. • You may not know it with Brexit, but more countries want



GREAT TREKKER

Jim Meekison, BA'61, MA'62, (pictured on the left) was recently announced as the 2018 recipient of the Alma Mater Society's Great Trekker Award. The award, which was presented by **Jeff Todd** (right, interim VP of Development and Alumni Engagement and executive director of *alumni UBC*), recognizes UBC alumni who have achieved eminence in their fields, made significant contributions to their communities, and shown ongoing support to their alma mater.

Meekison's career has spanned over 40 years and encompassed investment banking, cable television, and private equity. He has served as director or chair of numerous organizations, including Trimin Capital Corp., Nesbitt Thomson Limited, and Cablecasting Limited. He currently serves on the Board of GMP Capital Inc., and as director of FitSkin, an emerging startup producing technology that enables detailed skincare analysis through a unique iPhone camera attachment. In his early days at UBC, Meekison was frosh president and a member of the AMS Student Council. After graduation, he continued to have an extraordinary impact on his alma mater. He served on UBC's *start an evolution* Campaign Cabinet, enabling the university to successfully complete the most ambitious fundraising and alumni engagement campaign in Canadian university history. He also served on the Dean of Arts Advisory Board.

A long-time university supporter, Meekison has made a tremendous difference in the lives of many UBC students through the establishment of the Meekison Arts Student Space, a social and study space for arts students. He established the Meekison Arts Student Entrance Award, a \$10,000 renewable award that recognizes academic achievement, leadership skills, and an interest in joining and contributing to the UBC community. He has also provided generous support to UBC Okanagan.



Mapson (right) with his friend and mentor Dr. Nestor Korchinsky, former director of Intramurals and Recreation at UBC. The trunk is a time capsule put together during UBC's centennial in 2015, and intended as a gift for the future student leaders of the UBC REC program.

CHARTING THE COURSE

This April, **George Mapson**, BPhysEd'74, MEd'79, was awarded the Marilyn Pomfret Alumni Award, given annually in recognition of the accomplishments of those who have volunteered in the UBC Intramural Recreation Program.

Upon arriving at UBC as a student, Mapson had his heart set on a sports career with the Thunderbirds. Of average height and build, however, he found himself excluded from the basketball and football teams. Instead, his focus shifted to an area of athletics he hadn't previously considered: UBC intramural leadership.

In September 1970, Mapson took on the volunteer role of publicity director for the men's intramural program. Under the mentorship of Nestor Korchinsky, long-time director of Intramural Sports at UBC and Mapson's "lifelong inspirational rock," he rose to the rank of director of the men's program in two short years. His impact was significant, particularly in the acquisition of new funding sources for the program. He secured sponsorship from local breweries and lobbied for increased budgets from the School of Physical Education and the AMS - a task made easier by the fact he was simultaneously serving as president of the Physical Education Undergraduate Society and AMS Treasurer. The intramural program flourished beyond expectations.

With so many priorities competing for his attention, however, Mapson's grades did not enjoy the same level of growth - a trend that continued through his first year of graduate studies. Fortunately, his prowess for campus leadership was then well-established, and in 1974 he was recruited by Malaspina College (now Vancouver Island University) to serve as their first athletic and recreation director. By 1979, he was able to complete his master's degree in education, commuting to UBC from Nanaimo.

After a brief sojourn as a PhD student, Mapson finally left academia in 1982 to establish his own business, Trainingworks, which focused on building leadership and talent management in the private sector. This gave way to a long career in executive leadership, and in 2010 he retired in Kelowna with his wife, Heather, where he now enjoys hiking, biking, kayaking, and curling.

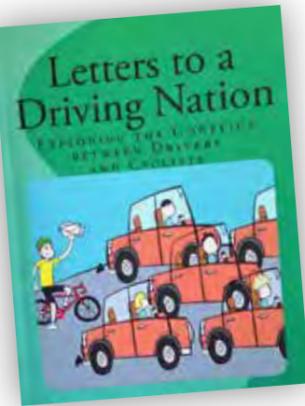
"I clearly underestimated the impact my involvement in student activities would have in my career and business life," says Mapson. "Leadership skills and knowledge honed by students, outside of the classroom adds significant value to UBC life. Employers mining for future leadership talent need to look no further than what is being grown in the 'extracurricular classrooms' at UBC."

Would he change anything about his time at Point Grey? "Probably attend more classes... if there was enough time."

to join the European Union than leave it. **Colin Wolfe**, MA'81, is head of Western Balkans Regional Cooperation at the European Commission in Brussels, Belgium, and works to make this a reality for countries such as Serbia, Montenegro and Albania by 2025. The priorities are better transport and energy links, and modernizing the economies. With a background in geography at the University of Dublin and UBC, and previous jobs in EU regional development and smart growth in Brussels, he is very interested in the

economic push from business and science parks growing up by the UBC Vancouver and Okanagan campuses (where his son Jack now studies), and thinks a study exchange visit would be great! • **Bruce Butler**, BSc'83, has published his first book, *Letters to a Driving Nation*, which explores the conflict between drivers and cyclists. Having been a cycling commuter in Metro Vancouver for more than

20 years, he dispels the misconceptions many drivers have about cyclists (and driving) by deconstructing real-life conflicts often found between these two groups of road users. • After graduation, **Fiona Taylor**, BSc'85, MBA'87, joined Arthur Andersen



(now Accenture). Eight years later, she launched a career in the utilities industry, joining BC Gas (now Fortis), where she helped develop a customer strategy and software solutions. From there, she spent nine years as VP of Professional Services for a software company in Miami. Many adventures followed, with travel through the US, Canada, Europe, the UK, New Zealand, Australia, and two remarkable weeks in Tripoli, Libya. She later took a role at BC Hydro, where she's stayed for over eight years, helping to lead the smart metering implementation and working to modernize the grid. She married Pascal Leidekker in 1994. Danielle was born in 1996. She is into horses and competes in show jumping. Liam joined her in 1999. He is a competitive junior squash player, which keeps him fit, and is seriously into gaming, which does not keep him fit. Contact Fiona at fiona.taylor@bchydro.com. • What keeps us together? What breaks us apart? UBC grads **Fiona Tinwei Lam**, BA'86, MFA'02, and **Jane Hamilton Silcott**, MFA'01, are launching an anthology of creative nonfiction and poetry, *LOVE ME TRUE: Writers on the Ins, Outs, Ups & Downs of Marriage*, where 26 creative nonfiction writers and 20 poets explore jealousy, adultery, divorce, polyamory, physical or mental illness, and loss. Featuring Mandy Len Catron, Kevin Chong and Joanne Arnott, Susan Musgrave, Lorna Crozier, Yasuko Thanh, Chris Tarry, Michael Crummey, Ayelet Tsabari, and more! • **Vern Giesbrecht**, MEd'89, has published about 35 articles in magazines and newspapers since retiring from Capilano College (now Cap U) in 2003. The UBC libraries were excellent sources of research for some of these articles. His seventh article for *BC History* magazine - "Mark Mosher: Community-minded Communist" - has just been published.



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1990s

In September 2017, **Arthur Wolak**, BA'90, Dip(ArtHist)'94, MA, MBA, PhD, was elected for a three-year term to the Board of Governors of Gratz College, a private liberal arts college in suburban Philadelphia. Founded in 1895, Gratz is the oldest independent pluralistic college for Jewish studies in North America. Through its undergraduate and graduate programs, Gratz educates students to become effective educators, administrators and community leaders. Arthur is a business consultant and author in Vancouver, where he resides with his wife, family physician Dr. Anna Wolak, and their three children, Jacob, Joshua, and Julia. ■ After nearly five years with Sonos, heading up Transducer Engineering worldwide out of Santa Barbara, **Richard Little**, BA'92, recently joined Goertek as VP of Engineering, working on audio products for customers worldwide. Richard, along with wife Mei and daughter Sydney, has moved to the San Francisco Bay Area. The family is pleased to be in a place where there are seasons and occasional rainy weather, and Chinese food is plentiful. Richard recently spoke at the COMSOL Conference in Boston, and at the ISEAT Symposium in Shenzhen, and joined a panel discussion at the ALMA International Winter Symposium in Las Vegas in early January. ■ **Kevin Chong**, BA'97, has published his third novel, *The Plague*, with Arsenal Pulp Press. It's a contemporary retelling of Albert Camus' classic novel about disease, illness, and courage. ■ **Carrie Gillon**, BA (Hons)'98, PhD'06, has released her latest book, *Nominal Contact in Michif*, co-authored with Nicole Rosen. The book offers a detailed formal description of the structure of the Michif language of the Red River Métis, a unique blend of French and Cree. Gillon is also the co-host of the Vocal Fries (vocalfriespod. fireside.fm), a podcast about linguistic discrimination. She and Megan Figueroa tackle a different topic each episode, always highlighting the importance of not judging others for how (or what) they speak. ■ **Graeme**

Auld, BSc'99, has been named to the College of New Scholars, Artists and Scientists. Founded in 2014, the college is a handpicked selection of top mid-career scholars and artists in Canada. College members have already received recognition in their fields for excellence and serve as ambassadors of their fields. Researchers in the humanities, scientists, artists and social scientists of the college strive to overcome disciplinary and academic boundaries in the common pursuit of knowledge. ■ **Tim Black**, MA'99, PhD'03, has been named a research fellow at the Canadian Institute for Military and Veteran Health Research (CIMVHR). Fellows are recognized for their guidance and contributions towards CIMVHR's mission: to enhance the lives of Canadian military personnel, veterans and their families by harnessing the national capacity for research. He has worked with this population as a clinician and researcher for 20 years, broadening our understanding of how to best support veterans and their families as they navigate the transition from military to civilian life and recover from the effects of PTSD. He is an associate professor at UVIC and lead researcher for the Wounded Warriors Canada COPE (Couples Overcoming PTSD Every Day) and Trauma Resilience programs, which

he co-founded. ■ A strong believer that laughter is a sign of learning and a trait to be treasured, **Joanne Chan**, BA'99, has found that the combination of music, captivating pictures, and reading aloud rarely fails to evoke giggles in babies. With encouragement from her professional musician husband, Joanne conceptualized a musical sound book that combines recognizable classical music tunes, funny rhymes, onomatopoeia, and images of objects loved by children. The result of her efforts is *Happy Gabby Plays Classical Music*,

a labour of love that captures treasured memories of her own child (after whom the book is named) as a baby. To learn more about the book or to get a copy, visit p-a-l.hk/book ■ After her undergraduate studies, **Kristi Kenyon**, BA'99, PhD'13, was itching to see the world and spent several years working with development and human rights organizations in South East Asia, the UK, and Southern Africa, also earning an MA in human rights (Essex). She returned to UBC for a PhD in political science, and after two postdocs (Dalhousie, Pretoria), started a tenure track position in human rights at the University of Winnipeg in 2016. She recently published her first book: *Resilience and Contagion: Invoking Human Rights in African HIV Advocacy* with McGill-Queens University Press and was one of 15 early career scholars to be named a 2017 CIFAR-Azrieli Global Scholar by the Canadian Institute for Advanced Research. She continues to be thankful for UBC's Green College, Liu Centre, and WUSC networks.

2000s

Venus Bivar, BA'00, has released her new book, *Organic Resistance: The Struggle over Industrial Farming in Postwar France*, with UNC Press. Delving into the intersecting narratives of economic modernization, the birth of organic farming, the development of a strong agricultural protest movement, and the rise of environmentalism, Bivar reveals a movement as preoccupied with maintaining the purity of the French race as it was with maintaining the purity of French food. ■ This April, **Michelle Kim**, BA'02, will release her first novel, *Running Through Sprinklers*, with Simon & Schuster USA. The coming-of-age story, set in 1990s Surrey and Vancouver, tells a tale of the intense friendships shared between young girls and follows two best friends as they grow apart. Kim describes the book, with its multicultural cast of characters, as *Stand By Me* meets *The Wonder Years*. ■ After her recent completion of a PhD from the Faculty of Nursing at the University of Alberta, **Sarah Hewko**, BSc'03, MHA'09, has accepted a position in the Department of Applied Human Sciences at the University of Prince Edward Island. She will be making the move with her husband and two kids this July, 2018. ■ **Kari Shepherdson-Scott**, MA'03, has received tenure from Macalester College in St. Paul, Minnesota. She specializes in Japanese visual culture from the 19th and 20th-centuries, focusing on the visual expression of national identity, empire, war, and memory. While her research focuses on modern practices in Japan, she teaches more broadly in visual culture and all periods of Japanese and Chinese art. She received her PhD from Duke University and her BFA from Boise State University. ■ **Jennifer House**, MSc'05, has published



a new book: *The Parents' Guide to Baby-Led Weaning*. This book teaches parents how to skip the mush and make starting solid foods fun, easy, and healthy for their baby, using baby-led weaning. She addresses all the questions hesitant parents may have and provides 125 nutritious recipes. ■

Rachel Rose, MFA'05, Poet Laureate of Vancouver, recently launched two books. The first, *Sustenance: Writers from BC and Beyond on the Subject of Food*, is an anthology and fundraiser for the BC Farmers Market Nutrition Coupon Program. Every book sold will provide a local refugee or low-income family with fresh, locally grown produce through these vouchers, and at the same time will support BC farmers. The second book is *The Dog Lover Unit: Lessons in Courage from the World's K9 Cops*, a memoir chronicling her experiences riding along with K9 teams in the USA, Canada, France and England, and the lessons she learns on the road with some of the toughest men, women and dogs in policing as they deal with victims, criminals, terrorism and trauma.

After graduating from UBC, **Quang To**, BA'05, decided to pursue an old goal of service in the Canadian Forces. Despite suffering countless setbacks and demoralization – sometimes so severe that he could not get out of bed – he always dusted himself off and continued to persist. When recruiting gave him another opportunity in October 2016, he jumped at the chance. He graduated from the Canadian Forces Leadership and Recruit School, 3rd Canadian Division Training Center, and finally the Royal Canadian Armoured Corps School. His journey exemplifies the very motto of his regiment: Perseverance. ■ **Adriana Boscaroli**, BA'09, was admitted to the Law Society of England and Wales on November 3, 2017. She is now an associate practicing law with the international law firm Mourant Ozannes in Jersey, Channel Islands. Her parents are UBC alumni **Celso Boscaroli**, BA'77, LLB'81, and **Anita Fuoco**, BA'78, LLB'82.

2010s

Donna Kane, MFA'14, has released her master's thesis, *Summer of the Horse*, with Harbour Publishing. A non-fiction manuscript, *Summer of the Horse* explores both the physical landscape of the Muskwa-Kechika Management Area (M-KMA), located in British Columbia's Northern Rockies, and the metaphysical landscape of the human mind. She offers great thanks to faculty members Luanne Armstrong, Marilyn Simonds, and Wayne Grady for their support of this project. ■ In his new book, *Views of the Salish Sea: One Hundred and Fifty Years of Change around the Strait of Georgia*, author **Howard Macdonald Stewart**, PhD'14, takes a many-faceted approach to examining the Strait of Georgia, a sea spanning 300 kilometres from Victoria and Vancouver to Campbell River and Powell River. Stewart considers this region through a variety of perspectives over the past 150 years – as a highway or barrier, waste dump, recreational haven and more – in an effort to express this region as an interrelated whole, one that we must work to protect if we want to preserve its inherent richness. ■ **Suzanne Kamata**, MFA'16, is happy to announce the publication of her novel, *The Mermaids of Lake Michigan*. The book has been honored with a Silver IPPY Award, and has been nominated for a Sakura Medal in Japan. ■



Kari Shepherdson-Scott

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Trek

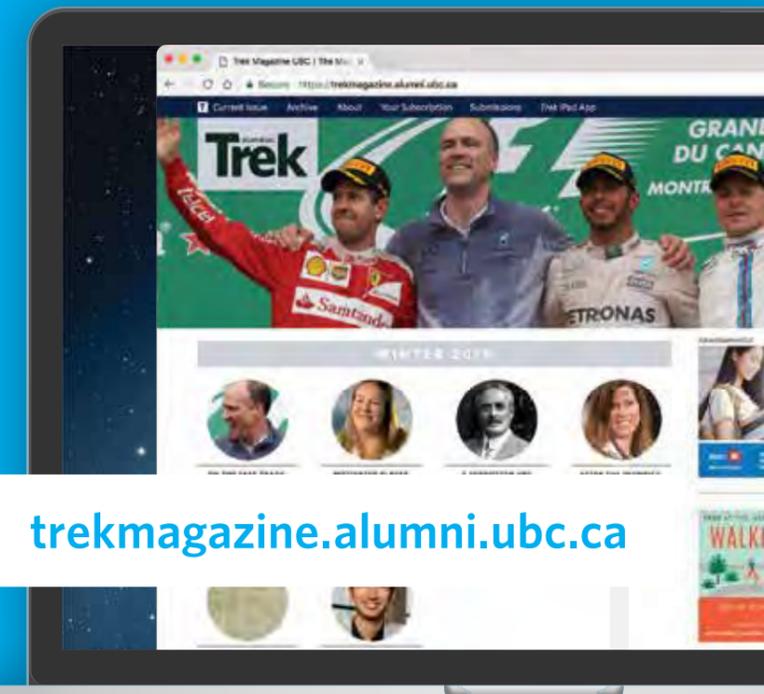
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OCTOBER 19-20, 2018

IN MEMORIAM



Thomas Lachlan Calder, BSc'49

November 29, 1927 – September 15, 2017

Tom was from Westminster, and graduated from Duke of Connaught High School, where his father, Thomas Hanning Calder, was principal. He studied at UBC (BSc'49) and McGill (MDCM'53), where he met and wed fellow med student Norma ("Tommy") England – the love of his life for 45 years of marriage. Tom practiced medicine for 47 years, raised six

children, and maintained a passion for music.

Dr. Tom's busy practice was old-style, full-service medicine, with house calls, deliveries, surgery, hospital rounds and care of all ages – including a tender focus on the elderly. He was a Kinsmen back when polio was the battle, and a mental health advocate for schizophrenia and mental health services.

He co-founded the West Van Adult Band, played his euphonium (and other instruments on demand) with several groups, and never walked anywhere without humming or whistling like a one-man marching band. As he rests in peace, his headstone reads, "With music in your heart".



Inglis Edwards, BSc'49

On November 11, 2017, Inglis, aged 92 years, died peacefully with his family at his side. He is survived by Jean, his wife of 66 years; four children (Nancy, Sheila, Brent, Barbara); and five grandchildren (Andrew, Ryan, Sydney, Caiden, Kyla).

A talented mechanical engineer, Inglis brought his skills to the pulp and paper, materials handling and chemical industries. He began his career in Montreal, where he worked for

Dominion Engineering. Inglis then designed conveyor belt systems with McInnis Equipment in Windsor, Ontario, before returning to the West Coast, where he held senior roles with Gearmatic and Chemetics. He taught at BCIT and culminated his career as an IRAP representative with the National Research Council. He was an advocate for quality assurance and intrigued by anything mechanical.

He loved the outdoors and told many stories of skiing adventures with the UBC Varsity Outdoor Club, and playing basketball with the Thunderbirds. He was a kind and generous family man, who taught his children many essential skills. He is greatly missed but leaves us with many memories of a life well lived.

Raymond G. Lockard, BSc'49

Ray was born on Jan 1, 1925, in Patricia, AB, and grew up in Kaslo, BC. He served in the Canadian Airforce during WW II, then studied horticulture and plant physiology, receiving a Bachelor of Science degree from UBC, a Master of Science degree from the University of Idaho, and a PhD from the University of London in England. He worked overseas for Canada's International Development Program, the United Nations Development Program, and USAID doing technical assistance work in agriculture for



20 years in five developing countries: Malaysia, Ghana, the Philippines, Liberia, and Yemen.

Ray and his wife Joyce travelled in more than 65 countries. They had three children. He was professor of Horticulture at the University of Kentucky in Lexington for 14 years before retiring in 1988 to Pennsylvania and then to Oregon. Ray was a member for five years and a past president of the Rotary Club of Pocono Mountains in PA, and a member of Beaverton Rotary Club for 19 years.

He died peacefully at home in Beaverton, OR, on May 22, 2017.



Lois A. Arnesen (née Whimster), BA'50

Active and independent to the end, Lois died at home in Nelson, BC, on December 31, 2017. She is survived by her children Vicki Huva, Randine Arnesen and John Arnesen, and by six grandchildren and four great grandchildren.

Born in Nelson in 1928, Lois thrived in public school and then excelled at UBC. She was a member of the Delta Sigma Pi Honorary Sorority for scholarship, leadership and service;

the Mamooks, Phrateres and Glee clubs; the Kappa Alpha Theta Sorority; and the Pan Hellenic Council. She graduated in 1950 with a BA degree in preventative medicine and bacteriology.

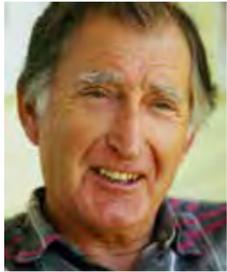
She pursued learning throughout life at Notre Dame University in Nelson (teaching, 1970), and more recently through the Canadian Federation of University Women, Learning in Retirement, Nelson's literary festivals, and the MIR Centre for Peace.

Lois was constantly engaged in innumerable organizations, charities, the United Church, the CFUW, Welcome Wagon and many cultural endeavours. Her extraordinary contributions were recognized when she was named Nelson's 2012 Citizen of the Year.

George Bruce McLellan, BSc'50

December 9, 1926 – March 11, 2018

Bruce had a long and successful career with Alcan, working in Kitimat, Montreal, Australia, Guyana, northern Spain, and Newcastle, UK, before retiring to Alicante, Spain in 1985. He lived an adventurous life, exploring and travelling wherever he lived. If a sign said "Do Not Enter," Bruce considered it an invitation. He loved working in his Mediterranean terrace garden, building and repairing pottery in his workshop, doing needlework, and giving away numerous hand-knit baby shawls and layettes. He was a great organizer of events and celebrations, keeping his friends and family connected. To his many visitors from home, Bruce introduced the wonders and flavours of Spain, its countryside, and its towns and villages. He leaves to mourn his wife of 50 years, Judy; their children Hedy and George; his first wife Marian and their children Dale, Kim, and Don; 11 grandchildren; and four great-grandchildren.



Thomas Gordon Lewis Northcote,
BA(Hons)'50, MA'52, PhD'60

Tom earned all his degrees from UBC and spent most of his career there. He gained much respect in his field of study, limnology, and received many awards including the American Fisheries Society Award of Excellence (1986), the Societas Internationalis Limnologiae Naumann-Thienemann Medal (2001), and a Lifetime Achievement Award (2004) presented by the Lt. Governor of BC.

In 1952, he joined the research section of the BC Fish and Wildlife Branch at the UBC campus and in 1955 started his PhD by taking a year's leave to Cambridge University on an NRC scholarship to study fish behavior with Sir James Gray. In 1958, he instigated a 4th year course on limnology in the UBC Zoology Department, which he continued to teach until his retirement in 1992.

In 1972, he left the directorship of the Fish and Wildlife research section to become a full-time faculty member at UBC, shared between Zoology, the Westwater Research Institute and Forestry. For the latter, he created and taught a Fisheries/Forestry Interaction course for 20 years.

Tom served for many years with the provincial Habitat Conservation Board and as a governor of the Vancouver Aquarium, and was an active "Scientists in School" member. In 1972, with the Ecological Reserves Committee, Tom and Dr. Ken Hall succeeded in designating Mahoney Lake as a reserve due to a highly unusual ecological system dominated by purple sulphur bacteria.

Further afield, Tom's work involved projects in Britain, New Zealand, Sweden, Brazil, and Peru, where he organized and ran a CIDA / UBC funded program on the effects of pollution in Lake Titicaca that was designed to train local scientists in the management of their own resources. Tributes from many past students tell of his dedication to teaching and his guidance in helping them achieve their goals.

On retirement in 1992, he moved to Summerland, BC, where he continued to research and publish articles and was editor and part author of the book *Fisheries and Forestry: Worldwide Watershed Interaction and Management* (2004).

He passed away peacefully on April 24, 2017, survived by his wife Heather, and his three sons Gordon, Peter and Rob, all of whom have UBC degrees.

Robert John Durward Gardner, BAsC'52

July 12, 1927 - January 12, 2018

Robert John Durward (Bob) Gardner passed away peacefully on January 12, 2018, at the age of 90. He was predeceased by his loving wife of 64 years, Erika Vaughan (White) Gardner. He is survived by his children Robert (Corlaine Davidson), Dawn, Kenneth (Yvonne Pedrosa) and Marianne (Michael McKee), and by his six grandchildren, Christopher Williams, Heather Williams, Evan Gardner, Laurel Gardner, Kenneth Gardner Jr. and Tamara Gardner.

Bob was born in Edmonton and was raised in Lethbridge, Alberta. He attended UBC, graduating as a mechanical engineer in 1952. Bob and Vaughan were married in 1951 and settled in Lethbridge, where they raised four children. During his 35-year career at the Lethbridge Iron Works, he also volunteered with the Civil Defence until the late 1960s. In 1989, Bob and Vaughan retired to Salmon Arm, where Bob belonged to the Shuswap Beekeepers' Association and was an active member of the Salmon Arm Bay

Nature Enhancement Society. Bob was a founding member of the Salmon Arm Citizens' Patrol and was an active member for over 20 years.

Bob is best known as an avid model railroader, filling his basement with a sizeable railroad layout. He was key in promoting the hobby and its skills, and in starting and recruiting new members for the Lethbridge Model Railroad Club, and later for the Salmon Arm Model Railroad Club. He enjoyed travelling with Vaughan to Australia, Costa Rica, Guatemala, Mexico, and more recently to the Bahamas and Scotland. Bob lived his last three years at Lakeside Manor, where he enjoyed taking part in Happy Hour, drumming circles and watching a pair of eagles from his living room window, while listening to the hum of trains as they passed.

In lieu of flowers, please make donations to the Salmon Arm SPCA. Bob and his great sense of humour will be sadly missed by all who knew him. Please raise a "dram of Scotch" in his honour.



Frank Willis, BSc'52

Frank Willis grew up in Trail, BC, where skiing came naturally. He attended UBC, where he was a star of the legendary Thunderbird Ski Team from 1948 to 1952. He is deeply missed by his wife of 59 years, Mary Anna, and his three daughters, Julie, Beth (BHE'83) and Sally (BPhysEd'87, PhD'97).

After graduating as a mining engineer, Frank first worked on projects for Cominco in BC, then for 32 years with Wright Engineers as project manager responsible for projects in Canada, the US, Argentina and Spain. Frank then continued sharing his wisdom and strong business ethics with the Association of Professional Engineers and Geoscientists of BC, where he helped to develop guidelines for Professional Excellence, streamline discipline procedures, and facilitate implementation of the Practice Review program.

Throughout his life, Frank was active in his church and with youth groups, including the Boy Scouts and the Tyee Ski Program, where he introduced thousands of kids to skiing. In recognition of "his achievements, his community spirit, service and devotion," Frank received North Vancouver's Centennial Distinguished Citizen Award.

Frank's favourite places were Christina Lake, ski slopes, and his workshop. He was a loving husband, dad, father-in-law, granddad, uncle, neighbour, and friend.



Richard James Pomeroy, BAsC'56, MASc'63
October 23, 1937 - August 23, 2017

Dr. Richard Pomeroy, of West Vancouver, BC, completed his PhD in engineering mechanics at Cambridge University and conducted post-doctoral research at Swansea University. A dedicated professional engineer, Dr. Pomeroy began his career in Bermuda in the 1960s, sonar tracking submarines in the Atlantic Ocean, and completed his last project for Singapore rapid

transit in October 2016. As vice president of Dynamic Sciences Limited (DSL), he led the team responsible for innovative end-of-train telemetry. With his own company, Seamount Technologies, he contributed to international rapid transit projects, including the Vancouver SkyTrain

expansion and the Las Vegas Monorail. Beyond engineering, Dr. Pomeroy was active in Vancouver community affairs and dedicated to developing his family's 1930s Pemberton homestead as an organic farm. Richard is survived by his beloved children Michael and Leslie; granddaughter Iris; his cherished friend Beth Haverkamp; and his sister Anne Pomeroy Autor.

Kevin O'Connell, BSc'57

Kevin Dominick O'Connell died on December 16, 2017. He was born in Penticton on June 8, 1934. He is predeceased by his beloved wife Daveen (Dinny), parents Daniel and Edna, and sister Claire Lowe. He is survived by his children Daniel (Roxanna), Catherine (Brad) MacKinnon, Aileen (Robert Dmitroca), Thomas (Mary), and Colleen; and by sister Maureen and brother Larry. He was grandfather of nine, and great-grandfather of five.

Kevin was an avid athlete, excelling in baseball, basketball, football and hockey. He attended UBC on a basketball scholarship, but ended up an All-Star with the Thunderbird football team (Big Block 1955). He graduated from UBC Civil Engineering (1957), and worked for 40 years as a civil and structural engineer on bridges, conveyor systems, container cranes and heavy industrial structures.

Kevin's deep abiding faith in Jesus Christ brought him joy. He was a devoted leader of the North Shore prayer group and in his parish community. With his characteristic humility and humour he made friends with all he encountered.



Ronald G. Cavell FCIC, MSc'60, PhD'62

Dr. Ronald George Cavell was born on October 15, 1938, and passed away on November 25, 2017.

Ron graduated from McGill University with a BSc (Honours) degree in Chemistry in 1958, then completed master's (1960) and PhD (1962) degrees at UBC and studied as a NATO Postdoctoral Fellow at Cambridge University, receiving a PhD in 1964. He joined

the Department of Chemistry at the University of Alberta in 1964, became full professor in 1974, and was made Emeritus Professor in 2004. Awarded fellowship in the Chemical Institute of Canada in 1975, in 1979 he received the CIC's inaugural Alcan Lecture Award for distinguished contributions in inorganic or electrochemistry in Canada. The University of Alberta awarded him the 1993/94 McCalla Research Professorship.

In 1985, Ron began working with synchrotron-generated radiation that allows scientists to see matter at a microscopic level. A founding member of the Canadian Institute for Synchrotron Radiation, formed to establish the Canadian Light Source (CLS) at the University of Saskatchewan, Ron was a founding member of the CLS Board of Directors and helped guide the facility from concept and design through to construction. In recognition of those efforts, he received the Saskatchewan government's prestigious Saskatchewan Distinguished Service Award in March 2009.

Passionate about his work, when he passed away, Ron was in the midst of setting up a scholarship to foster research excellence in chemistry. If desired, donations can be made in his honour to the Ronald George Cavell Graduate Scholarship in Physical or Inorganic Chemistry, through <https://memorial.support.ubc.ca/ronald-cavell>.

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Edward "Ted" Bruce Conover, BCom'64

On the last day of his 78th year, Ted completed his final journey. He passed in peace and with a calm mind, in the presence of his children. Ted discovered hiking later in life, first in the beauty of Quadra Island where he lived and raised a family, later on the Hawai'ian island of Kauai, and ultimately found a spiritual connection in his trips to walk the Caminos in Spain. Through his treks, he found new vigour

and meaning. It was what he came to look forward to each year. Although his illness was not related to his trek, we are happy that he left this life doing what he loved to do. He is survived by his children Seain (Rhaya), Chris (Dawn), and Keltie (Ben); his six grandchildren Marshall & Claire, Damien & Amelia, and Keira & Rory; and his former wife Wendy. Godspeed, Dad.

Frederick Rankine, BEd'65, MA'66, EdD'68

Dr. Frederick Charles Rankine of Vancouver, BC, born March 25, 1932, in Edmonton, Alberta, passed away in his sleep at age 86, on April 12, 2018. He is survived by his wife of 60 years, Daryl Caroline Rankine, sons David (Katherine) and Graham (Linda), and grandchildren Ian and Coli. His initial career of 11 and a half years was with the RCMP, working in various detachments throughout BC. He returned to university, where he obtained his Bachelor, Master, and Doctor of Education degrees. This led to a move to Fredericton, NB, where he taught and was a professor at the University of New Brunswick for 26 years. He returned to the West Coast upon retirement in 1994, initially living in Tsawwassen, then at Tapestry on the UBC Endowment Lands. Fred was a problem solver. He liked to repair cars and furniture, and would try to fix anything broken he found find. He enjoyed touring by car or camper and did multiple trips throughout North America and the British Isles. Donations in memoriam can be made to the Heart and Stroke Foundation of BC & Yukon.



Judy Sok Beng Louie, BSc'66, MSc'68

It is with great sadness that the family of Judy share the loss of our mom and grandmother. Judy passed away peacefully in her sleep on January 7, 2018, in Toronto. She is survived by her three daughters Tina (BCom'94), Brenda (BCom'95), and Amelia (BSc'97); her grandchildren Charlotte, and James; and son-in-law Kwong.

We fondly remember Judy as an outgoing person, and a devoted and caring friend, who kept in touch with people around the world. For her children and grandchildren, she was the original "tiger mom" and doting grandmother who never, ever, forgot a birthday or anniversary. She instilled in her children the same strong work ethic she demonstrated in her own life. Emigrating to Canada on her own, Judy completed her bachelor's degree and a double master's degree in chemistry at UBC, one of only two women to complete the Master's in Chemistry program for her year.

In lieu of flowers, the family suggests donations to the Canadian Cancer Society's Wheels of Hope program and Kensington Hospice (Toronto).



Michael Purves-Smith, BA'67, MA'71

It is with the sorrow of loss – and joy for the memory of a life lived to the fullest – that we announce the death of Michael J. Purves-Smith, of Elmira, ON, at the age of 72. He is survived by his wife, Shannon, and sons Mike and Robin.

After earning a Master of Music degree from UBC, Michael served as a professor at Brock and, later, Wilfrid Laurier universities. His passion for music was lifelong: as a performer on keyboard,

oboe, and early wind instruments; as a prolific composer (associate at the Canadian Music Centre) and orchestrator; and as a director of both the WLU Baroque and Early Music program and the school's Wind Ensemble. He was director of the Wellington Winds for three decades, and continued as its principal oboist in his retirement.

Having closely studied the onset of climate change, he spent his later years as an environmental and political activist. His desire to convey the urgent need for action on these matters led him to write an environmental novel, *Rocky Mountain Locust*.

He loved travel, reading, gardening, cross-country skiing, and food. Above all he cherished nature, and sought to protect "our only home, the biosphere."



Elizabeth Wolak,

Teachers Certificate Coursework, 1970s

Elizabeth Wolak, MA, passed away on April 15, 2017, in Vancouver. Born in Krakow, Poland, in 1923, Elizabeth, a Holocaust survivor, escaped to Soviet territory and was deported to a forced labour camp. Afterwards, Elizabeth earned an MA in English from the Jagiellonian University, and graduated from the Krakow Academy of Music in 1951. Emigrating in 1960, she focused

on Jewish choral music, working in Australia as a choir director and teaching music at a Sydney high school. In 1963, she and her husband settled in Vancouver, where she earned her BC Teachers' Certificate. She founded award-winning choral ensembles in Vancouver, produced

Governance & Nominating Committee Seeks Recommendations

The *alumni UBC Governance/Nominating Committee* is seeking recommendations for alumni nominees to serve on the organization's Board of Directors. In particular, the committee seeks candidates who have the skill sets and experience necessary to effectively set strategic direction, develop appropriate policies, and ensure *alumni UBC* has the resources necessary to effectively fulfill its mission and vision. Please send suggestions to **Ross Langford** – *Governance & Nominating Committee*, c/o Sandra Girard, Manager, Board Relations, 3rd floor - 6163 University Boulevard, Vancouver BC V6T 1Z1 email: sandra.girard@ubc.ca no later than June 15, 2018

three records, and taught piano and voice for nearly 50 years. For her choral work, Elizabeth, member of the BC Choral Federation's Hall of Fame, was given the Amy Ferguson and Herbert Drost awards. She received the BC Community Achievement Award from the BC government and the Queen Elizabeth II Diamond Jubilee Medal. She was awarded Poland's Siberian Cross. She is deeply missed by sons Richard and Arthur (Anna), and her three grandchildren.

Daniel Eriksson, BHK'00

It is with great sadness we announce the sudden passing of Daniel Eriksson on May 2, 2017. He leaves behind his loving wife Theresa, daughter Kalista, sons Slade and Leland, his parents Anders and Ingrid of Quesnel, BC, his brother Eric (Chelsey) of Quesnel, mother-in-law Ann Danielson of Surrey, and many brothers and sisters-in-law and nieces and nephews.

Dan was born in Quesnel and graduated from Quesnel Secondary in 1993. He achieved his BA in Kinesiology at UBC and played for the varsity volleyball team. Dan moved to Vernon in 2000, where he raised his family and built his successful business in the fitness industry. He enjoyed many outdoor activities and sports, and was a very dedicated and loyal son, husband, father and friend. Dan touched the hearts of many people and will be truly missed by all.

Those wishing to make a memorial donation may do so to the Canadian Diabetes Association or to www.gofundme.com/dan-eriksson-memorial-fund.

Obituaries are included in our biannual print issues, usually published in May and November, and should be 1100 characters (about 300 words) or less. Please send original photos by post or attach high resolution images to your online submission. Tributes may be edited for length and clarity where necessary. Note that print issues of the magazine are also published online.

There is no fee for submission.

Due to the high number of submissions, we are unable to guarantee publication in the next print issue. If you would prefer your submission be included in the next applicable online issue in lieu of print, please select that option in the form.

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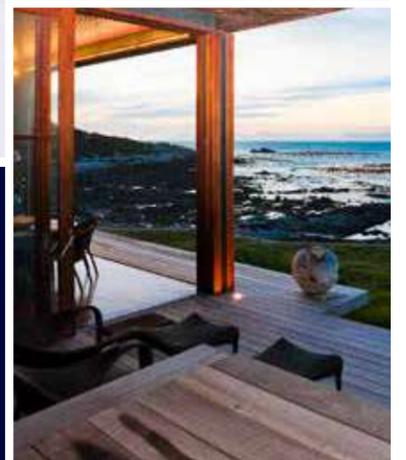


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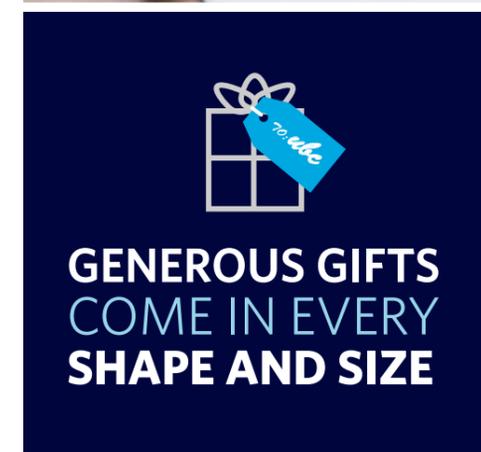
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The Last Word

WITH

DAVID SUZUKI

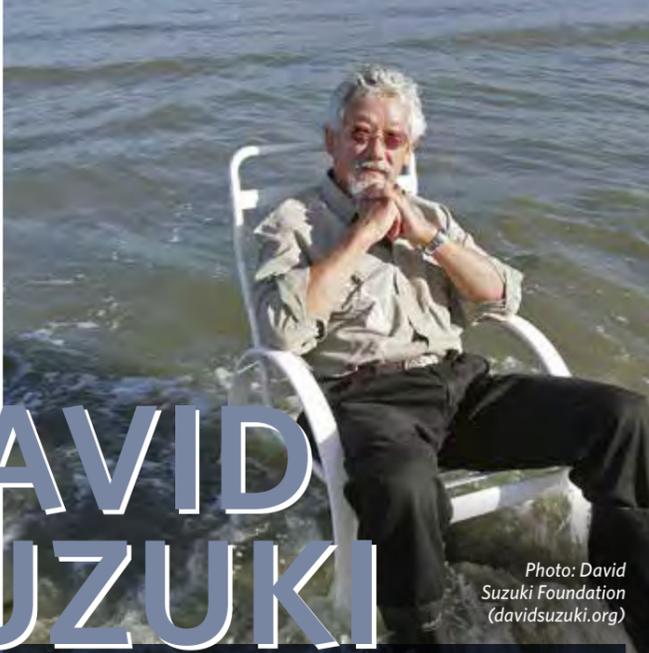


Photo: David Suzuki Foundation (david Suzuki.org)

There is really no need to caption his photo or provide a bio. The much-decorated David Suzuki has been part of the fabric of Canada for decades – a presence on bookshelves, a familiar face on TV screens, a popular educator, and a passionate, in-your-face environmental activist who regularly reminds us that we are all accountable for the current and future state of our planet.

But you already know all this. What you might not know about David Suzuki is that he is partly responsible for the establishment of UBC's first pub (in itself deserving of an award). Back in October 1968, *UBC Reports* carried an article by Suzuki entitled "What this Campus Needs is a Pub." The young professor had already been conducting some of his seminars in the Fraser Arms, so a pub on campus was the logical next step.

He argued that such an establishment would break down barriers between various UBC populations and prevent the campus becoming a ghost town once classes were finished for the day. "In a campus pub," he opined, "the presence of friends at different tables and the warmth of camaraderie engendered by beer would soon result in new friendships and active discussion."

Because the article was published in the same month that UBC students – emboldened by US counterculturalist Jerry Rubin – invaded the faculty club for an overnight sit-in, Suzuki felt it shrewd to point out another advantage of beer: "The passions of reactionary or radical ideals would be tempered by the effects of alcohol," he wrote, somewhat unconvincingly. The AMS, at least, were impressed, and invited Suzuki to join their pub committee. "The Pit" opened that November, and it was Suzuki who came up with the name.

All this happened before he became a household name by venturing into broadcasting (he has hosted CBC's *The Nature of Things* since 1979), and through the environmental protection work of his eponymous foundation. During the 40 years he has been in the public eye, Suzuki has attracted both disciples and detractors (the controversy over his honorary degree from the University of Alberta being a recent example – he is not a fan of the oil industry), but, judging from a series of polls, the latter group are outnumbered. In 2004, CBC viewers voted him the fifth greatest Canadian ever. In 2009, 2010, and 2011, he topped a *Reader's Digest* poll to determine the most trusted Canadian. Two years later, an Angus Reid poll crowned him Canada's most admired figure (although it's interesting to note that, broken down by regional vote, Alberta wasn't as admiring as other areas of the country). And, although he retired from UBC in 2001, there are still a couple of reviews for him on the notorious *Rate My Professors* website – where students openly assess professorial performance, often without mercy. Both reviewers scored Dr. Suzuki five out of five (with a chili-pepper icon thrown in to denote hotness). 🌶️

What is your most prized possession?

Memories.

Who was your childhood hero?

My father. He still is.

Describe the place you most like to spend time.

Vancouver, where I've lived in the same house for over 43 years.

What was the last thing you read?

Doughnut Economics by Kate Raworth

What or who makes you laugh out loud?

My grandchildren.

What's the most important lesson you ever learned?

I'm only one person, and the way to bring about change is to create a movement.

What's your idea of the perfect day?

Waking beside my wife at our cottage, and going down to the ocean with a grandson to catch breakfast, which we clean and cook while others get up. That's the start of the perfect day.

What was your nickname at school?

I've always been called "Dave," until I came to UBC in the 1960s.

What would be the title of your biography?

He Did His Best

If a genie granted you one wish, what would it be?

To live long enough to see my last grandchild graduate from high school.

What item have you owned for the longest time?

I guess photographs from my parents.

Whom do you most admire (living or dead) and why?

Nelson Mandela, who never lost sight of his goal, even after bearing terrible atrocities and imprisonment for the prime of his life, and then achieving not only the end of apartheid but becoming president of South Africa, without wreaking havoc against his tormentors. He set a very high bar.

What would you like your epitaph to say?

"He was just a man, but he tried his best."

If you could invent something, what would it be?

Nature already did it: photosynthesis.

In which era would you most like to have lived, and why?

I lived through it – a time of incredible opulence when we confront the reality that, if we don't change radically, our species might not make it to the end of the century.

What are you afraid of?

Foresight was our species' great advantage, yet today, with all the amplified foresight of scientists and supercomputers, we ignore them for political and economic reasons.

What is your latest purchase?

If you mean big-ticket item, an electric car.

Name the skill or talent you would most like to have.

Playing a musical instrument.

What is your pet peeve?

Hypocrisy.

What is the secret to a good life?

It's no secret. A good life is family and friends and the things we do together.

Do you have a personal motto?

You are what you do, not what you say.

What are your UBC highlights?

Having a lab of keen students and associates doing research on fruit flies.



“The littlest thing tripped me up in more ways than one.”

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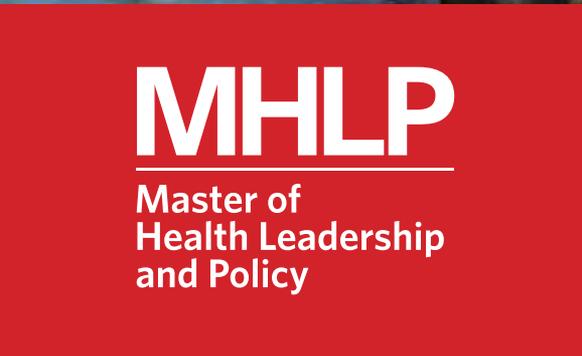
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