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How QUBS and its researchers are going to save the world

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Undergrad cracks the case of a centuries-old book

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Why you should care about the upcoming solar eclipse

QUEEN'S ALUMNI REVIEW

THE MAGAZINE OF QUEEN'S UNIVERSITY SINCE 1927

A milestone year for Art Conservation

The Work of Art

WINTER 2023

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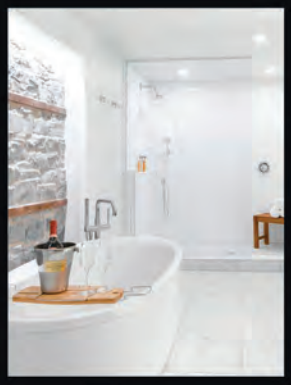

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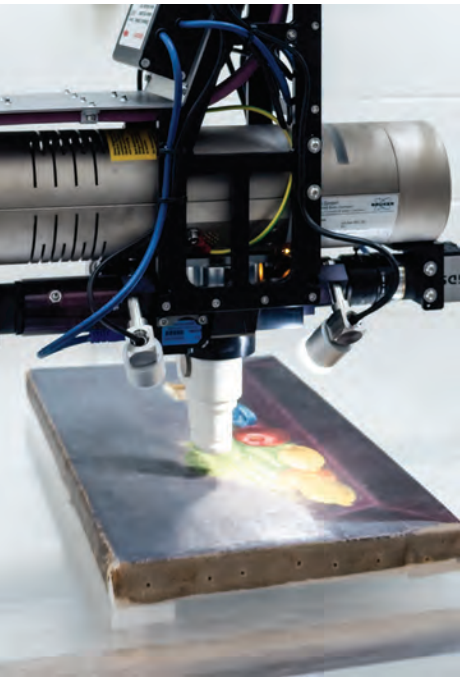
COVER PHOTOGRAPH EXCLUSIVELY FOR QUEEN'S ALUMNI REVIEW BY HÉLÈNE CYR; (RIGHT) JOHNNY C.Y. LAM; SPOT ILLUSTRATION BY SOL COTTI

On Campus



ABOUT THE COVER

Sally Gunhee Kim, photographed by Hélène Cyr at the Royal British Columbia Museum in Victoria, B.C., on Jan. 8, 2024.

In this image, Ms. Kim is assessing the extent of tears in a Chinese lantern (Collection RBCM 2010.170.102), one of the many that lit up the mid-summer lantern festivals of Canada's oldest Chinatown in Victoria from the 1950s to the 1970s. This lantern survived decades and is preserved to serve as a testimony to the Chinese Canadian leadership, cultural advocacy, and vibrancy – and thanks to the work of art conservators such as Ms. Kim, will be available for many others to enjoy. "The photo session with Sally was a wonderful experience and this photo in particular captured my imagination," says photographer Hélène Cyr. "The beautiful colour of the lantern was so striking, and it also captures Sally literally immersed in her work."

Off Campus

"It's important to connect dots in places you might not even realize there's a dot to connect – that has helped me get creative."
— AMPAI THAMMACHACK, **P. 35**

PHOTOGRAPHY BY (CLOCKWISE FROM TOP) WADE HUDSON; ANDREW JACKSON; PAUL ALEXANDER; BRIAN CHARD

PHOTOGRAPHY BY BERNARD CLARK

DEALING WITH A CHALLENGE VERY CLOSE TO HOME

Financial challenges in higher education do not usually attract great attention in the national media. Recently, however, Queen's has found itself much in the news as we have begun the difficult process of rebalancing our budget to take account of the very real fiscal constraints which affect every university in Ontario.

Student tuition was reduced by 10 per cent and then frozen by the provincial government in 2019. Operating grants in Ontario stand at 57 per cent of the Canadian average and have declined by more than 31 per cent in real terms since 2006-7. A corridor system caps undergraduate domestic enrolment so that institutions cannot grow to increase revenues, and after a decision of the federal government in late January, international student numbers will now be reduced across the sector.

A Blue Ribbon Panel appointed by government delivered a report late last year the recommendations of which, if implemented, have the potential to lighten slightly what is otherwise a rather gloomy scenario for Ontario's universities. But as I write this we have still had no indication of the government's intentions in this regard. That leaves university communities everywhere having to engage in extremely difficult discussions and to make tough choices that will ensure the continuing quality and health of academic operations without putting their institutions' futures in jeopardy.

When headlines in a number of media asked whether Queen's was at risk of closure, I issued a statement in January that was unequivocal: there is no risk that Queen's in any foreseeable future will close its doors. The university continues to provide for and produce some of the best minds in Canada and that will be its future. The work that is being done right now across campus and at all levels will guarantee that.

None of that work is easy, however, and I must here take note of the toll that uncertainty and instability takes on every member of our community. Queen's is a family, and efforts to put the institution on a more sustainable footing are required of–and are affecting – everybody. I am confident, however, that we will be successful as we have always been in addressing challenges of this sort. Our Strategic Framework begins by declaring that "The Queen's community – our people – will solve the world's most significant and urgent challenges with their intellectual curiosity, passion to achieve, and commitment to collaborate." The current funding situation is a challenge very close to home.

One of Queen's most admired benefactors recently asked me about other challenges we have weathered since our establishment in 1841, and indeed I was able to list quite a few, including the Spanish Influenza pandemic of 1918 and of course its echo a century later in COVID-19. But what came immediately to mind was that moment in 1878 when Queen's really did face an existential challenge during a broader financial crisis and was saved by the generosity of its first Black graduate, Robert Sutherland. Sutherland had been a successful lawyer for two decades, and on his death left his whole estate – approximately the value of the University's complete operating budget – to Queen's.

Even if the scale of the University makes a similar gesture unimaginable today, the lesson of Sutherland's gift remains true: it is the alumni, students, faculty, and staff of Queen's who are the strength of the institution and the guarantee of its great future.

PRINCIPAL PATRICK DEANE

Gratitude

Just reading the *Queen's Alumni Review* with Stephen Smith on the cover and an article talking about our daughter, Sophie de Goede. A proud Smith School of Business grad who, while following her rugby dreams, will always have a strong business degree from Smith to build on.

Thank you, Stephen Smith.

Stephanie de Goede

Bringing back memories

I just read Greg McArthur's moving piece about the *Queen's Journal* in the latest *Alumni Review*. It brought back all kinds of wonderful memories of the time I spent in the *Journal* office. In 1988, in my final year at Queen's, I pitched, launched, edited, and contributed to what we then called the Gender Issues column. It became a focal point for campus-wide debate regarding all kinds of issues related to women and gender and gave me an opportunity to test out ideas related to my emerging political orientation. I wound up doing a PhD in feminist political theory, then I went to law school and since 2000 have been a law professor. My experience at the *Journal* was deeply formative and I am delighted to contribute so that other students can have the same kind of meaningful experience. I'm not sure if you are going to share these testimonials with the current staff of the *Journal* – or, for that matter, with Greg McArthur. But if you do, I hope you will include mine, which shows that this remarkable institution helped spawn critical thinking and launched careers even outside journalism.

Cha Gheill!

Sharon Dolovich, Arts'89

A special treat

Once again, the *Alumni Review* has produced both a highly readable and highly attractive edition.

Greg McArthur's story about the *Queen's Journal* was a special treat. Like CFRC, the *Journal* has nurtured scores of creative people who have gone on to amazing careers in Canada's arts world. Another thing the *Journal* has accomplished, in my experience, is to alert budding bureaucrats and politicians – when they were student leaders – to the legitimate role of the media and journalism vis-à-vis the political system. As a former Alma Mater Society (AMS) president, when I got criticized – and very occasionally praised! – by *Journal* editors and contributors, I came to realize the different needs and duties of elected folk and "fourth-estate" folk, and how their interests often diverge in a genuinely democratic system. I'm willing to bet most of my successors as AMS president would agree with me – it sometimes wasn't easy to take the brickbats from the *Journal*, but it was educational!

Stewart Goodings, Arts'62

My first assignment

Thanks for the interesting story about the *Queen's Journal*! During frosh week 1968, I wandered into the *Journal* office and got my first assignment: give blood at the blood drive in Grant Hall and write a story about it. I recently found the yellowed article in my late mother's papers. With my journalistic career launched, I continued to file stories through my four years at Queen's. While my working life after graduation hardly compares with that of the illustrious writers featured in your story, I did benefit greatly from those early years at the *Journal*, combined with my degree in English and sociology. The giving-blood story garnered great interest recently when I brought a copy of it to my appointment with Canadian Blood Services – ever since Frosh Week, I've been a regular donor, and this was my 98th donation. The staff were intrigued by my detailed description of the protocols used in the 1970s compared to today!

Thanks for bringing back the memories with your interesting story.

Brenda Zanin (nee Maybee) Arts'72

QUEEN'S BY THE NUMBERS

The Queen's University Biological Station (QUBS) is unique to Queen's. Read more about it on page 28, "World on Fire."

34
Number of hectares at the original QUBS site on Lake Opinicon

2011
Creation of QUBS-affiliated Elbow Lake Environmental Education Centre

145K+
Number of plant, lichen and moss specimens in the Fowler Herbarium

1,200K+
Number of academic papers based exclusively on work conducted at QUBS

Dawn Bowery specializes in corporate headshots, environmental portraits, and fine-art photography. Dividing her time between Los Angeles and London, her clients include Disney, Channel 4, UBS, and other major international brands. In 2020, she was voted one of the top 10 portrait photographers in West Hollywood. Her work has been exhibited at the Royal Academy of Arts in London and her coffee-table book, *California Dreaming: Real Life Stories of Brits in L.A.*, showcases her creative portraits.

Photographer **Frank van der Burg** has been based in The Hague since 2007. He studied at the Graphic Lyceum Rotterdam and the Royal Academy of Fine Arts in The Hague, and his clients have included KLM Royal Dutch Airlines, T-Mobile, and Mizuno sportswear. His work spans from artists to athletes in The Hague and across Europe. "Collaborating with fellow creatives on projects, magazines, and campaigns brings me immense joy," he says. "And it gives me the perfect excuse to be unabashedly curious."

Hélène Cyr is based in Victoria and has spent 35 years behind a camera, mapping out her fascination with people and their environs. Educated at the Dawson Institute of Photography, her background as a fine artist and documentary photographer gives her a unique perspective. Her work has been exhibited alongside Annie Liebovitz, Agence STOCK Photo, Contact Press Image, Alberto Korda, and many others. Her first book, *Handmade Forests: The Treeplanter's Experience*, was a finalist for the 1998 B.C. Book Prize.

Peter Simpson was arts and entertainment editor for the *Ottawa Citizen* and later the *Citizen's* arts editor at large. He has written extensively about visual art, galleries, art conservation, and museum practices. He's on the board of directors of the School of Photographic Arts Ottawa, and lives in a home surrounded by more than 100 works of art.

WRITE TO US

The Queen's Alumni Review welcomes comments at review@queensu.ca. All comments may be edited for clarity, civility, and length.

𝕏 @queensureview

QUEEN'S ALUMNI REVIEW

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ON CAMPUS

PHOTOGRAPHY BY CAROLINA PALMGREN

Bria Skonberg, above, and Benny Benack III will relive and re-imagine some of the classic artists in jazz and popular song, including Ella Fitzgerald, Judy Garland, Bing Crosby, Dean Martin, and Peggy Lee.

What: Sing and Swing – A Jazz at Lincoln Center PRESENTS Production **Where:** Jennifer Velva Bernstein Performance Hall or free, virtually, via the Isabel Digital Concert Hall (isabeldigitalconcerthall.queensu.ca) **When:** March 19, 2024

CAMPUS NEWS

The Homecoming

Dates for next three celebrations announced

It's time to start planning for the next three Homecomings as Queen's has announced dates for the next three years. The third weekend of October has been selected, allowing thousands of alumni to plan to return to campus on the following dates:

- Oct. 18–20, 2024 (Milestone reunion for graduating class years ending in 4 or 9)
- Oct. 17–19, 2025 (Milestone reunion for graduating class years ending in 0 or 5)
- Oct. 16–18, 2026 (Milestone reunion for graduating class years ending in 1 or 6)

"Announcing dates three years in advance will allow Queen's to more effectively co-ordinate with reunion volunteers, hospitality, and city partners," says Queen's Advancement Associate Vice-Principal Leigh Kalin, Artsci'92. "We also hope the advance notice gives our volunteers extra time to plan and create an even better Homecoming experience."

The Buildings

Campus landmarks lauded by Livable City Design Awards

Two campus buildings are being recognized for their contributions to the Kingston cityscape and the community. Mitchell Hall and the Endaayaan-Tkanónsote student residence are among the winners of the 2023 Kingston Livable City Design Awards.

The awards – given by the City of Kingston's Planning and Services Department – are intended to highlight new buildings in the city that make a significant contribution to its visual identity and the quality of the environment for the community. Endaayaan-Tkanónsote is the university's newest student residence, opening in the fall of 2022 with 334 fully equipped rooms. The former Physical Education Centre (PEC) was reopened in 2019 as Mitchell Hall after a complete overhaul. It incorporates heritage features from the original 1930 building it replaced, most notably its Kingston limestone exterior. The design complements the Collegiate Gothic architecture that defines many iconic Queen's buildings.

▼ Winners of the 2023 Kingston Livable City Design Awards, Mitchell Hall and the Endaayaan-Tkanónsote student residence.

The Researcher

Cathleen Crudden receives prestigious Polanyi Award

A world-leading expert in the field of materials science and organic chemistry, Professor Cathleen Crudden is the recipient of one of the most prestigious research awards in Canada: the John C. Polanyi Award. Awarded annually by the Natural Sciences and Engineering Research Council of Canada (NSERC), the honour recognizes her innovative and impactful approach to protecting metal surfaces using organic molecules. Dr. Crudden's trailblazing research innovation

The Follow – Want updates on the Great North American Eclipse? Follow @queensu2024eclipse on Instagram.

demonstrated that an extremely thin carbon layer applied to metal surfaces can protect them from oxidation and extend their lifespan. The discovery has applications spanning fields from infrastructure, clean energy, and electronics manufacturing to cancer diagnostics and treatment.

The Award

VP (Research) receives international recognition

Nancy Ross, Queen's Vice-Principal (Research), has been awarded the 2023 Melinda S. Meade Distinguished Scholarship Award in Health and Medical Geography from the American Association of Geographers. The annual international accolade recognizes individuals who have made outstanding contributions to the advancements of health and/or medical geography research. Before joining Queen's in 2021, Dr. Ross had a 20-year career as a researcher at McGill University. Dr. Ross's research is built on the premise that if we can understand and modify the geographic, social, and economic factors that influence health outcomes, we can improve the health of whole populations and reduce burdens on health-care systems.

The Chair

Renowned immunologist to join Cancer Research Institute

One of Canada's most esteemed immunologists and a world leader in the fields of immunology and inflammation is coming to Queen's to advance critical research on cancer and chronic disease.

Dr. Paul Kubes, Artsci'84, MSc'86, PhD'88, will join Queen's Health Sciences and the Queen's Cancer Research Institute as the Canada Excellence Research Chair in Immunophysiology and Immunotherapy.

Dr. Kubes is receiving $8 million over eight years to support his research, as announced on Nov. 16 by the Honourable Terry Beech, Minister of Citizens' Services, on behalf of Minister François-Philippe Champagne of Innovation, Science, and Industry, at Simon Fraser University.

Dr. Kubes's research program is at the forefront of real-time imaging of the immune system. Changes in a person's immune-cell biology can alter the stability of the body's chemical and physical state, leading to disease. Understanding how and why these changes occur to our stable state can help decipher the complex immune pathways involved in cancer, infection, and chronic disease.

Mysteries of the masterpieces

State-of-the-art scanner's X-ray vision reveals exactly what's behind the brush strokes

BY JORDAN WHITEHOUSE

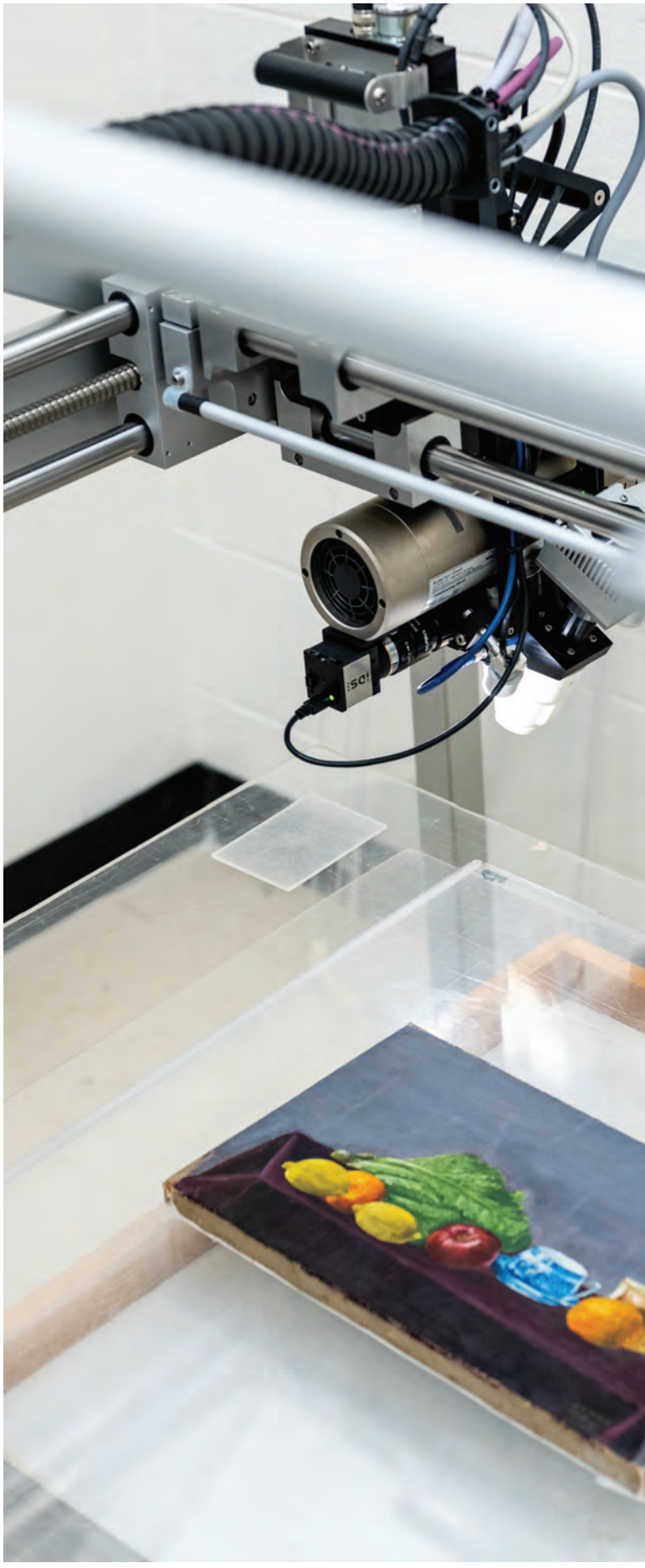
When is a work of art more than meets the eye? Figuratively speaking, maybe always. But often this idea may also be literally true.

Take a painting. Beneath the surface could be a hidden kaleidoscope of pencil drawings, altered compositions, and brush strokes of abandoned bowls of fruit. When taken together, these undercover bits might reveal hints about an artist's vision, evidence of damage and repair, and even clues to authenticity. In other words, answers to some of the most pressing questions posed by conservators and conservation scientists.

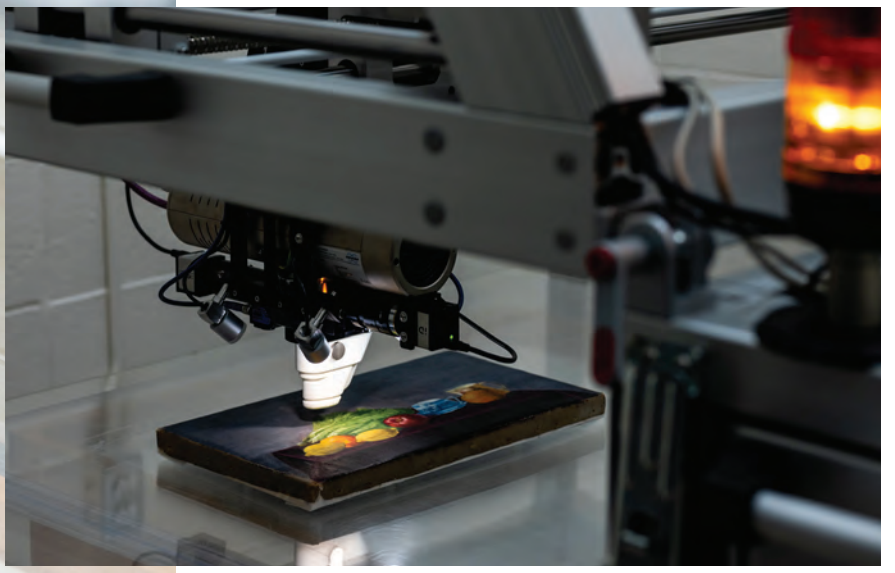
The problem, of course, is that those art conservators can't actually see the buried bits with their own eyes. They also don't know everything about what they can see, including what a painting's pigments are made of. They need sophisticated technologies to do all of this – such as the Bruker M6 Jetstream X-ray fluorescence scanner (a.k.a. the M6). It's one of the most advanced tools for visualizing the chemistry of an entire artwork, and the Queen's Department of Art History and Art Conservation acquired one in 2020 through a $1-million-plus donation from the Jarislowsky Foundation.

It's the only M6 in Canada, which makes it invaluable not only to Queen's and Canadian art but to every student who uses it, says Patricia Smithen, Associate Professor of Paintings Conservation. "It's so powerful," she says. "It gives us so much information that other techniques just can't."

The M6 is so powerful because it can scan a whole artwork. Other X-ray tools can reveal information about a single spot, but the M6 collects data at thousands of spots. After several hours of scanning, it produces a map of all the chemical elements in the work, which



Photography by Brian Chard



While other X-ray tools can reveal information about a single spot, the M6 can scan a whole artwork and collects data at thousands of spots. After several hours of scanning, it can produce a map of all the chemical elements in the work.

in turn can direct researchers to the artist's choices. Last year, for instance, a map of a Rembrandt oil painting at Agnes Etherington Art Centre, *Head of an Old Man in a Cap*, helped researchers identify the pigments Rembrandt used, as well as the alterations he made.

The M6 is a "wonderful advancement in the field," says Aaron Shugar, Bader Chair in Art Conservation. "The number of new questions that come about when we can look at the chemistry of an entire artifact or painting as a whole as opposed to individual tiny spots is groundbreaking. So, Queen's is lucky to have this. It creates fantastic opportunities for our students."

With a grain of salt

Dr. Shelley Arnott is researching road salt's toxic toll on our ecosystems.

BY JORDAN WHITEHOUSE

When chloride from road salt runs off into lakes, rivers, groundwater, and soils, it can be toxic for plants and animals.

We all know the winter drill: the snow falls, the plows come out, and the salt gets tossed. Every year, millions of tons of sodium chloride are scattered on Canadian highways and walkways to keep us safe from car accidents and slipped discs. The salt does a good job, but the problem is that we use a lot more on our roads than we sprinkle on our food. And when all the chloride from that salt runs off into lakes, rivers, groundwater, and soils, it can be toxic for plants and animals.

How toxic and at what levels are two of Shelley Arnott's big questions. She's a Queen's biology professor interested in how aquatic ecosystems respond to environmental change. She started looking into the impact of road salt on plankton several years ago and is now part of a global research team doing the same. One of their biggest findings so far is that some of the guidelines around safe amounts of chloride in fresh water may be way off, or at least not applicable across regions.

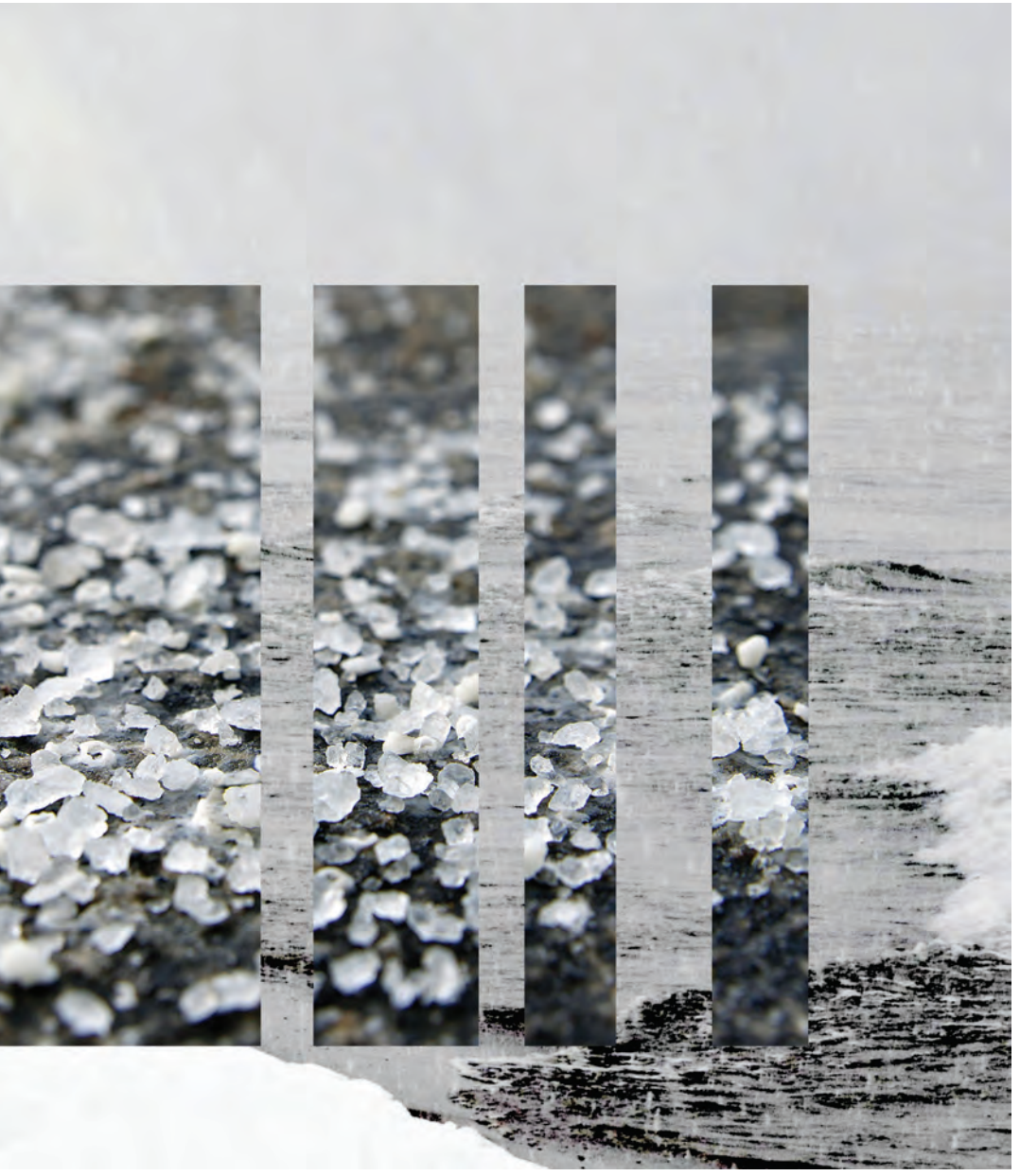
In Canada, one main guideline is that there shouldn't be more than 120 milligrams of chloride in every litre of fresh water. The thinking goes that this threshold protects the majority of aquatic species when they are exposed over the long term. But in the waterways in and around cities like Toronto, where some chloride levels have been measured as high as 18,000 mg/L after snowfalls, these guidelines aren't doing enough, says Dr. Arnott. And besides, as she saw in one of her first experiments with road salt, that 120 mg/L number doesn't seem to protect an important zooplankton called Daphnia.

Nicknamed "water fleas" for how they move, Daphnia are tiny crustaceans that play a huge role in controlling algae and feeding fish. Back in 2018, when Dr. Arnott put Daphnia populations in water similar to that found in lakes in the Muskoka region of Ontario, she found their reproduction numbers started declining at chloride concentrations of between just five and 40 mg/L.

"We were really surprised," says Dr. Arnott. "We went into the experiment thinking we have pretty good guidelines. But maybe not."

Next, to see if her results would hold true in other areas, Dr. Arnott led a team of 45 researchers in Canada, the U.S., Spain, and Sweden. Together, they ran the exact

Photo collage by Wendy Treverton



same experiment with diverse zooplankton communities at 16 sites in all four countries, including at the Queen's University Biological Station. They found similar declines in numbers of individuals even at those lower chloride concentrations.

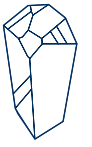
Dr. Arnott was blown away again. "We just didn't expect to see these strong effects in all these places," she says.

Now Dr. Arnott is trying to figure out if some of those strong effects she found in Ontario are due, at least partially, to water hardness (soft water tends to be more toxic). If they are, it could mean those water guidelines need to be different for different parts of the province.

In general, though, it's clear that we all need to rethink how much salt we're using on our roads and around our homes, says Dr. Arnott. "I'm not going to say don't salt the roads – it saves lives. But what I'm hoping is that this research helps push us all to reduce the amount we're using and invest in safer alternatives. We have to do something."

SALT BY THE NUMBERS

5 million



Tons of road salt used in Canada each year

92 per cent

Proportion of de-icer used in Canada that is sodium chloride

90 to 95 per cent

Amount of Canada's salt consumption – including what we consume in table salt – that goes to de-icing and chemical production

75 per cent

Potential reduction in rock-salt usage if brine treatment was also applied to roads

A MARRIAGE OF ART AND SCIENCE

BY PETER SIMPSON

AS ART CONSERVATION MARKS ITS 50TH ANNIVERSARY, WE TALK TO ALUMNI AND EXPLORE THE IMPACT OF THEIR WORK.

Sally Gunhee Kim at work at the Royal British Columbia Museum in Victoria, B.C. She was named Emerging Conservator for 2021 by the Canadian Association for the Conservation of Cultural Property (CAC).

The Master of Art Conservation program at Queen's University is a small world that reaches around the world.

It's Canada's only graduate-level program in art conservation, and one of just five in North America. It produces only a dozen or so graduates per year, yet those relative few work around the world researching and conserving everything from Rembrandt paintings to baby mammoths.

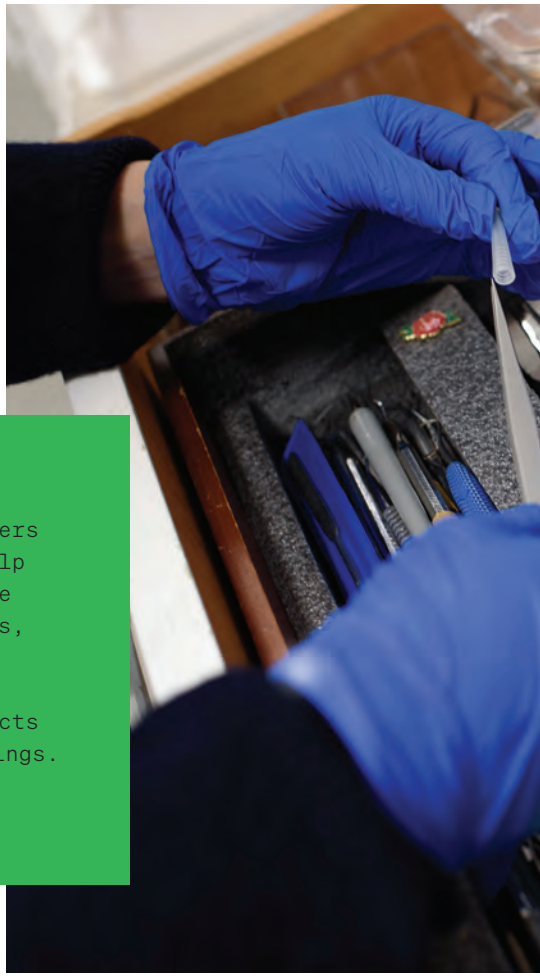
"We have students working on all continents, in very prestigious institutions, as well as working privately," says Rosaleen Hill, Co-director and Associate Professor of Paper, Photographic Materials, and New Media conservation. "It's a small world, and it's a very interconnected world."

What's not small is the range of objects that students work on, says Patricia Smithen, Co-Director and Associate Professor of Paintings Conservation. There are "Barbie dolls that had been used in museums as demonstrations for medical processes" and "3,000-year-old Egyptian mummy coffins," as well as paintings, photographs, works on paper, and a seemingly boundless world of artifacts encountered in the program's four specialist areas: conservation science; conservation treatment of paintings; works on paper/photography (including digital media); and artifacts.

"Our students develop skills and treatment approaches so they can specialize further or remain generalists and deal with anything," Dr. Smithen says.

The program was founded in 1974 by Ian Hodkinson, now professor emeritus, who proposed and campaigned for the program and obtained federal funding. It launched with streams in fine arts and artifacts.

Prof. Hill lauds the "ongoing increase in science literacy of students in the program and the ability to undertake complicated technical analysis." An "outstanding" component of the program is that students in conservation science streams complete a research thesis, while those in treatment streams must identify their specialization and execute a major research project.



Ms. Kim collaborates with collection managers and technicians to help design preventive care of various collections, ranging from natural history specimens to modern history artifacts and Indigenous belongings.

A current student, John Habib, has an undergrad in chemistry from Queen's and is doing a technical analysis of materials used in a Coptic Egyptian manuscript from the 18th century. "He really amplifies the best of what is involved in art conservation," Prof. Hill says, "in that it truly is an intersection of arts and science."

Such analysis has been aided by funds from the Jarislowsky Foundation and Bader Philanthropies and includes an M6 Jetstream scanning X-ray fluorescence spectrometer – the only one of its kind in an educational institution in Canada. Funding has also been donated by the Bader family for a Bader Chair in Art Conservation (Dr. Aaron Shugar) and a post-graduate Bader Research Fellow in Conservation. (The first fellow, Megan Creamer, now works at the Art Institute of Chicago, while the second and current fellow, Lindsay Sisson, will soon leave to work for Ingenium in Ottawa.)

There has also been a fundamental shift from a "Eurocentric approach" when dealing with Indigenous objects and groups – a shift that is still happening in conservation in museums and galleries across Canada and in many other countries as well.

"Really huge changes started in the late '80s and early '90s," says Prof. Hill, who graduated from the program in 1989 and returned as a professor in 2013. "I'm proud to say that one of the leaders in those changes was one of our graduates, Miriam Clavir [MAC'76]." (Miriam Clavir is now conservator emerita at the Museum of Anthropology at UBC.)

"She was really one of the first conservators in Canada, and certainly in North America, to have a community-based approach to working with Indigenous belongings."

In 2026, the art conservation labs will move into the new facility, alongside the Agnes Etherington Art Centre, also funded by the Baders. Norman Vorano, Head of the Department of Art History and Art Conservation, hopes that move will help to facilitate a kind of cross-fertilization between art history, fine art, and art conservation.

"We are very excited by the new building because it gives us the space to create new academic and training possibilities, such as a new PhD program," Dr. Vorano says. "That would promote more innovative research and teaching using the technologies in art conservation, while promoting more synergies between art historians, artists, and art conservators."

The existing art conservation program is "a real jewel in the university's crown," he says. "It's a jewel that not a lot of people know of, even members of our own Queen's community."

PHOTOGRAPHY BY (PREVIOUS PAGE AND LEFT) HÉLÈNE CYR

SALLY GUNHEE KIM has done a lot in the years since she left Queen's.

Ms. Kim (Artifacts Conservation, MAC'19) already had a BA in physical chemistry and visual arts from Brown University, the Ivy League campus in Rhode Island.

Since Queen's, she was named Emerging Conservator for 2021 by the Canadian Association for the Conservation of Cultural Property (CAC), and spent two years as the Andrew W. Mellon Fellow at the National Museum of the American Indian in Washington, D.C. Recently, she started as objects conservator at the Royal BC Museum, where she pursues her twin passions

of preserving Indigenous cultural heritage and promoting accessibility and equity in the field of conservation.

"I collaborate with collection managers and technicians to help design preventive care of various collections, ranging from natural history specimens to modern history artifacts and Indigenous belongings," Ms. Kim says. Her current tasks include providing recommendations and guidelines on preparing and packing collections for the move to the museum's new building, now under construction.

Ms. Kim, who is deaf, says that at Queen's she "felt welcomed, known, valued, and encouraged to bring in my Deaf perspective to the graduate program and beyond." And she has taken that perspective beyond; she later successfully pushed for standing status for the CAC's Inclusion, Diversity, Equity, and Accessibility committee, and is currently chair of the committee.

Martin Jürgens works as a photo conservator at the Rijksmuseum in the Netherlands.

The above images, attributed to Felice Beato and created around 1865-1870, show before and after conservation of a Japanese albumen print that had been damaged in a fire. The image was extremely brittle and unable to be safely handled. Martin Jürgens and others flattened the curled print, consolidated the charred areas, then lined the image with a thin sheet of Japanese paper to give it physical stability. Finally, the print was mounted in a folder for storage and exhibition.

PHOTOGRAPHY BY (LEFT) KELLY SHENK; (ABOVE) RIJKSMUSEUM, INV. NO. RP-F-2016-76-1," GIFT OF THE BAUDUIN COLLECTION OF M.A. VAN MUNSTER VAN HEUVEN-SPRENGER VAN EYK, WARNSVELD

She also helps to select objects from the museum's collection for loans and exhibits elsewhere in Canada.

"Please be on the lookout for exhibits happening at and travelling beyond the Royal BC Museum!"

MARTIN JÜRGENS is an example of the art conservation program's expansive international scope.

Mr. Jürgens (Paper Conservation, MAC'01) was born in Brazil to an English mother and a German diplomat father, grew up in Brazil, Japan, Chile and Germany, studied photography and design in Germany, later studied preservation in New York State, and then came to Kingston to study at Queen's. Now he lives in Amsterdam, where he's a photo conservator at the Rijksmuseum, and is currently a PhD candidate at De Montfort University in Leicester, England.

"Officially, it's in the history of photography," he says of his PhD. "Because I'm a conservator, I'm coming from a scientific, technical point of view, and I'm trying to figure out how that works in the historical setting."

Mr. Jürgens's international experience grew when, while a freelance conservator based in Germany, he helped to establish a photographic archive at a Buddhist monastery in Laos.

"I was giving advice on photograph conservation and preservation – and in a tropical climate," he says. "Dealing with that in a communist and anti-Buddhist setting was really challenging on many levels, including climate and culture and language. But that was such a great project."

He recalls that at Queen's the "quality of teaching and learning was very high" and he cites Adjunct Professor Thea Burns as having been "very good and very precise, with a very high level of knowledge. She taught us how to think things through and not jump to conclusions."

The university was welcoming and "felt very much like home," he recalls, though not everything was so warm.

"I've never really experienced winters like that," he says. "So, that was kind of new for me."

ASHLEY AMANDA FREEMAN is from Chicago, got her second master's in Canada, and got her PhD in Norway. Fortunately, she says, "I'm quite fond of winter."

So, what's she doing in sunny Los Angeles? The short answer is – well,

Queen's Art Conservation alumni work in some of the top museums, galleries, and cultural institutions in the world. Jocelyn Hillier, left, works at the Mauritshuis in The Hague, and Ashley Freeman at the Getty Conservation Institute in Los Angeles.

with Dr. Freeman (Conservation Science, MAC'13) there are no short answers. Her enthusiasm for conservation is such that she's happy to talk all day about every aspect of it, from hygroscopic materials to "the effect of nano-sized particles in gesso" and, in general, "focusing on how the mechanics of an object change when the environment is changing."

This quality makes her ideally suited to talk to students or others about the intersection of science and conservation, and she is committed to doing so. A long list of former professors, fellow students, and colleagues have helped her clarify her own aspirations in her fields of chemistry and conservation science, she says, and now she often works with interns in similar ways.

"I learned how important it is to foster that type of growth for somebody."

Before Queen's, Dr. Freeman earned a master's degree in chemistry from Loyola University Chicago, and afterward she completed her PhD in mechanical and industrial engineering at the Norwegian University of Science and Technology.

Currently, she's on staff at the Getty Conservation Institute, perched on an arid hill near the J. Paul Getty Museum overlooking L.A. She works on preserving cultural heritage by examining the impact of environmental factors, such as temperature and humidity, on cultural heritage objects. Previously, she worked at the Los Angeles County Museum of Art and still volunteers there on research projects.

JOCELYN HILLIER is a recently minted example of how Queen's competes with graduate-level art conservation programs in the United States.

PHOTOGRAPHY BY FRANK VAN DER BURG

Ms. Hillier (Paintings Conservation, MAC'23) has both Canadian and American citizenship, and continues to have a bifurcated relationship with the two countries.

"I was born and raised in Canada, but hold American citizenship," Ms. Hillier says. "I have only worked in American institutions and American studios, while I have received all of my education in Canada."

Her border straddling has now gone international, as she is working at the Mauritshuis in The Hague, on a Fulbright fellowship in collaboration with the organization American Friends of the Mauritshuis.

The Dutch connection was elemental to her decision to study at Queen's.

"The Queen's Art Conservation program has great connections to the Agnes [Etherington] gallery on campus, which has a very impressive art collection, specifically in the Dutch Golden Age, which is my main area of interest."

At Queen's, she was invited to participate in a collaborative research study in which the Mauritshuis and the Ashmolean Museum at Oxford University would conduct a series of technical analyses on Rembrandt tronies, which are character studies that were frequently produced by the 17th-century Dutch master and his workshop.

Queen's had recently acquired its X-ray fluorescence spectrometer, "and one of the first things that we scanned with it was the Rembrandt … It was a genuine honour to be able to work on that project."

Don't ask Ms. Hillier what secrets they discovered buried within the work of the Dutch master.

"We haven't published all of our information, so I'm not necessarily able to say some of the profound results that we found," she says, and smiles. "It's very, very exciting for me."

PHOTOGRAPHY BY DAWN BOWERY

by TOM SPEARS —— photography by JOHNNY C.Y. LAM

Queen’s will be in the path of totality when the Great North American Eclipse sweeps through the sky on April 8. Here’s why everyone is excited.

HERE

COMES

THE SUN

SHE REMEMBERS THE AUGUST NIGHTS OF HER CHILDHOOD,

when streaks of light from the annual Perseid meteor shower would rush across the sky.

Her family came from Hamilton, Ont., and its streetlights, but summer trips to Muskoka provided darkness, and a view of space.

Her father showed her meteors. Not even the mosquitoes could dull her enjoyment.

"In the city, if it was a clear night I would walk in the evening," she recalls. "Even in winter, with my head looking up – to the point where you did have to worry about me brushing into things."

Sarah Sadavoy still looks up. She has never seen a total eclipse of the sun, but April 8 will bring one to her in Kingston.

And what an eclipse it will be.

Darkening skies in Mexico, the U.S., and, later, Canada, the "Great North American Eclipse" has sparked plans for parties and festivals, hotel packages, and even a rodeo. At Queen's, there will be special lectures, events, and collaborations across various faculties and research areas beyond astronomy. All for what the Canadian Space Agency is calling a "spectacular and rare celestial event."

The solar eclipse's path of totality in Canada will pass over Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland – and everywhere people in funny glasses will lift their gaze to try to catch a rare moment of astronomical perfection.

But why? Why are we so fascinated by eclipses, and what can they teach us about our world – and worlds beyond?

These are questions Dr. Sadavoy has often contemplated.

(PREVIOUS PAGE) PHOTOGRAPHY COURTESY OF NASA

Daryn Lehoux, left, and Sarah Sadavoy are preparing for the big day on April 8.

As an astronomer, she usually looks at parts of space so far off we have trouble comprehending the distance. On eclipse day, she will be looking at Earth's own neighbourhood, our own solar system.

It still holds mysteries.

Dr. Sadavoy, an assistant professor in the Department of Physics, Engineering Physics, and Astronomy, studies how stars and planets form, research that carries her into the cold, dusty regions between existing stars – places called stellar nurseries. The unknown draws her in.

"I've always enjoyed the idea of seeing the unseen, or the unseeable," she says. Ordinary light doesn't show much in these regions, so the astronomer has to tease out images with other kinds of telescopes.

"I love a mystery. I love being able to solve a puzzle with just some of the pieces in place."

And the sun?

"There's a lot that we don't actually know about the sun, and the sun is our best proxy to understand other stars. The sun is close enough to us: we can send satellites to it that monitor it; we can watch activity on the sun, and changes in the sun."

These include violent happenings such as explosive bursts that hurl vast discharges of charged particles into space, sometimes disrupting communications on Earth and other times producing a beautiful aurora.

But satellites don't tell the whole story.

"Solar eclipses let us see a side of the sun that we don't always have the opportunity to see, which is [its] outer atmosphere," she says.

The sun itself will be covered up by the moon on April 8. But its outer atmosphere will be in plain view.

Scientists can study the properties of this corona, but also study how it changes from one eclipse to the next, "because the corona itself is not constant. It changes."

"These are snapshots in time, and we're able to put this very complicated puzzle together."

• • •

The story of eclipses is the story of human science itself.

The history of trying to understand how eclipses happen goes hand in hand with some of the earliest known discoveries in astronomy in Babylon nearly 2,000 years BCE.

By the first millennium BCE, "[people] start realizing that there's a cyclicality to these things," says Dr. Daryn Lehoux, who specializes in ancient sciences and the history and philosophy of science at Queen's.

Long before computers, the Babylonians realized that lunar eclipses follow a pattern. They saw that lunar eclipses occur in a rigid cycle of 18 years, 11 days, and eight hours: each eclipse will follow the same pattern as the one 18 years earlier. True then, true now.

"Once you get that 18-year cycle down, that's a really powerful moment in the history of astronomy. Because you suddenly have mathematical control over eclipses. You can predict them," says Dr. Lehoux.

He calls these Babylonian texts "one of these stunning mysteries in history" – early scientists who left their observations, but with no explanation of how they worked it out. We don't know the extent of their mathematical knowledge.

Later came the Greek scientists, with a cosmology – Earth a sphere at the centre, and sun, moon, stars, and planets revolving around us. And the Greeks brought new mathematical tools.

"The Greeks introduce trigonometry in the second century BCE largely to deal with problems of astronomical observation," he says.

There's even a mysterious Greek device called the Antikythera mechanism, found somewhat broken in an ancient shipwreck in the Mediterranean, with gears and dials that appear to describe motions of our solar system. One of its faces computes the 18-year lunar eclipse cycle, with a separate dial to factor in the extra eight hours.

"It's stunning because there's nothing that complex for another 1,400 years," Dr. Lehoux says. That's when later Europeans developed mechanical clocks that can both tell the time and show the positions of all the visible planets. "They're really more complex than what we have hanging on our walls ... The gearing is just unbelievable ... [Mechanical clocks] seem to just emerge almost out of a vacuum" in the 14th century – unless someone actually kept the ancient Greek Antikythera tradition alive for all those centuries.

He believes early astronomy, including eclipse studies, is a major

"The whole campus is excited by the fact that we're going to get totality," says Dr. Lehoux. Dr. Sadavoy agrees: "This is the first time an eclipse is coming to me and I'm super excited for it. I have seen partial eclipses, but I've never seen a total eclipse."

foundation of all modern science because its mathematical nature "really provides a motivation for pursuing more and more systematized kinds of knowledge.

"And eclipse records give us a whole lot of refinement in astronomy, because the farther back you can look at ... eclipse records, the more accurate you can be."

Dr. Sadavoy can't think of an ancient civilization that ignored eclipses.

"There is widespread notice of eclipses all over the [ancient] world. It was a big deal and they made records everywhere ... The Mayans were phenomenal for this, and their records show that they absolutely watched the sky. They were very active in watching the sun, the moon, and Venus. They definitely knew when eclipses were going to happen," she says.

The 18-year lunar eclipse cycle appears in Mayan records as well – thousands of kilometres from where the Babylonians found the same pattern.

• • •

On eclipse day, Dr. Sadavoy and her students will be somewhere outdoors as "eclipse ambassadors" from Queen's, helping the public get a safe look at the show. Queen's and the Royal Military College of Canada have bought 150,000 pairs of solar glasses and hand-held viewers so that everyone in the city can have a look. The Royal Astronomical Society of Canada is also making plans for outreach.

"What I'm picturing is myself and a crowd of people I've never met before enjoying an eclipse together," she says. "This is the first time an eclipse is coming to me and I'm super excited for it. I have seen partial eclipses, but I've never seen a total eclipse."

Can't look up safely? Dr. Sadavoy suggests looking down instead to see the sunlight coming through a tiny hole and making an image of the sun on the ground.

"You don't even need fancy equipment. You can grab a colander [and watch the light shining through its holes]. You can make a pinhole projector [paper with a tiny hole]. And you will see the shape of a crescent sun, which looks different from a crescent moon."

"You can live an entire lifetime and never see a solar eclipse, or at least a full one," says Dr. Lehoux. He was surprised by his last, a partial eclipse in 2017, as he was canoeing in Algonquin Park, when people nearby started looking up and pointing. He used a hole in his hat to project the image of a crescent sun on the bottom of his canoe.

"To have [daylight] kind of go away for an hour in the middle of the day – it's dramatic, it's weird, it's neat, it's interesting, it's alarming, it's all kinds of things," he says. "The whole campus is excited by the fact that we're going to get totality. And Kingston has got a long tradition of alumni coming back for Homecoming. I think this is going to be a really interesting event.

"And that it's happening on the last day of classes – it's extra fun."

– Want to learn more about the eclipse? Get info about events and activities, safety, accessibility resources, and more on a special site by the Department of Physics, Engineering Physics, and Astronomy: www.queensu.ca/physics/2024eclipse

What we can learn from an eclipse

Space bends. Albert Einstein's theory of general relativity predicted that a star's gravity should bend nearby space, and an eclipse in 1919 brought the ability to test it. Sure enough, stars on the far side of the sun – invisible when the sun is shining – appeared as the sky dimmed. And they appeared out of position, as the sun bent space itself, and their light followed the bend.

Why is the sun's atmosphere so hot? The sun's upper atmosphere is thousands of times hotter than its surface, and we don't know why. Eclipses let us observe that upper atmosphere.

Earth's days are growing longer. Only by a few milliseconds each century, but Earth is, in fact, slowing its rotation rate – a fact known through observations of eclipses over millennia. Dr. Sadavoy: "This is something we would not be able to ever capture, any other way."


World
on

How the Queen's University Biological Station takes a multidisciplinary – and symbiotic – approach to solving the environmental crisis.

BY JORDAN WHITEHOUSE

fire

PHOTOGRAPHY BY SCOTT ADAMSON

In the spring of 2023,

Queen's celebrated its best-ever showing in the Times Higher Education Impact Rankings, finishing third in the world and first in North America when it comes to making progress toward the United Nations' Sustainable Development Goals. It's an impressive showing, considering that the field included more than 1,700 universities. But what exactly does it mean?

There are 17 Sustainable Development Goals in total – including everything from eradicating hunger to achieving gender equality to finding affordable clean energy sources. All of the U.N. member states have committed to achieving them by 2030.

Principal Patrick Deane described the SDGs as a "rallying point" that will enable the university to become a "university for the future" and achieve its vision of being a community dedicated to solving "the world's most significant and urgent challenges."

The Queen's University Biological Station is just one example of what such a rallying point can look like – we sent writer Jordan Whitehouse there to tell its story.

The place has always been a living lab for researchers and students with questions big and small about ecology, evolution, conservation, and environmental science.

THE RAIN HAS FINALLY STOPPED as I pull onto the long gravel road just past the hamlet of Chaffey's Lock. A dozen wild turkeys skirt into the bush.

Winding through thick coniferous and deciduous forest, the road soon passes an experimental collection of invasive plants in small Plexiglas domes. Further on are fishing boats and a man on an orange tractor motoring past, giving a wave.

Eventually, the road ends and opens onto a clearing on the north shore of Lake Opinicon. The sun pokes through the trees, shimmering everything in green, as about 30 buildings come into view. Some are cottages and bunkies, one of which welcomed a Giller Prize-winning novelist last summer. Others contain research labs, teaching spaces, and conference rooms. There is also a workshop, a library, a boathouse, and an herbarium containing over 140,000 plant specimens.

Welcome to the Queen's University Biological Station (QUBS).

QUBS (PRONOUNCED "CUBES") has been here since 1945, though the property is a lot bigger now than in those early years. These days, dense forest, nine lakes, and the rocky crags of the Canadian Shield run for about 3,400 hectares.

The place has always been a living lab for researchers and students with questions big and small about ecology, evolution, conservation, and environmental science. Now, of course, a major focus is the rapidly changing planet.

Yet while biologists make up most of QUBS' users, over the past decade more non-biologists have been showing up – some of them with the same concerns about climate change and human assaults on the environment as the biologists.

The heartbeat of all this is the Raleigh J. Robertson Biodiversity Centre. QUBS' administrative staff have their offices here, but this is also where students, researchers, and other visitors eat together in the large dining room, forging the type of connections that make QUBS tick. Today, QUBS Director and Queen's Biology Professor Stephen Lougheed meets me on one of the centre's two screened porches.

Stern but frequently flashing a smile, Dr. Lougheed wears dark glasses, an aqua blue T-shirt, hiking pants and shoes. Over the next couple of hours out here and on a tour, he tugs on his grey beard and talks all things QUBS – the history, the geography, the infrastructure, the mandate, the future.

◀ QUBS Director and Queen's Biology Professor Stephen Lougheed

▼ Bunkies in the woods provide rustic accommodation for researchers – and writers.

But one theme he returns to a few times is the collaboration that happens here and the importance of working together to address the environmental crisis.

Not everyone at QUBS is focused on that crisis, but many are. About 50 per cent of the researchers working at QUBS are from Queen's, but the rest are from institutions elsewhere in Canada and around the world. "That is really important, because no single university has all the answers," says Dr. Lougheed. "And so, what that does is create a really convivial, dynamic intellectual atmosphere where there's lots of cross-pollination of ideas."

He points to one of his own recent research projects as an example. It includes people from the University of Toronto, the Invasive Species Centre, Thousand Islands National Park, the River Institute, the First Nations Technical Institute, and the Mohawk Council of Akwesasne Environment Program. Using state-of-the-art environmental DNA tools, researchers can get a more accurate picture of all the species that live in a body of water than if they used more traditional methods. One application of these tools could allow municipalities to see exactly where invasive species are and aren't so that preventative measures can be put in place.

Another theme Dr. Lougheed returns to are those non-biologist visitors to QUBS. Geographers, engineers, health-care workers, visual artists, writers, and many others have used this space. About a month ago, for instance, a group of doctoral students from a variety of disciplines and from across Ontario were here for an annual thesis writing retreat. Next year, a U.K. artist will be an artist-in-residence.

In a Zoom chat, Dr. Lougheed told me this cross-disciplinary and collaborative focus has been something he has always tried to encourage at QUBS, but especially now. Why? In short, he said, because the world is on fire – both literally and metaphorically – and we need everyone's help to put it out. "If you want to move the needle on

sustainability, if you want to move the needle on buy-in, if you want people to be involved directly and feel proprietary about a space, then you must embrace all these vantages. And that's what we try to do."

ONE OF THOSE NON-BIOLOGIST users is Laura Thomson, an assistant professor in Geography and Planning at Queen's and the Canada Research Chair in Integrated Glacier Monitoring Practices. This isn't where you would normally expect to find a glaciologist, and yet this winter Dr. Thomson could be spending a lot more time around here.

Her research usually takes her to Nunavut, where she uses tools like ground-penetrating radar and automatic weather stations to understand how and why the Arctic is changing. But she needs a place to test some of those tools before she heads north, and the undisturbed snowpack and lake ice at QUBS could be the perfect place to do that.

QUBS could also be the ideal place for understanding the impact of a changing climate right here, she says. "Snow doesn't get a lot of attention in this part of the world, but as snow changes, understanding the cascading effects of that could be very important. What does that mean for ecology, for instance? I'm not an ecologist, but I think this is one area where the potential for collaboration exists."

Another area could be related to the solar-powered climate stations set up across the property. This fall, Dr. Thomson plans to bring geography graduate students to QUBS to work on developing an annual climate report that could be used by ecologists to understand the changes happening here.

"There is so much potential for multidisciplinary collaboration at QUBS, and that is so important when we talk about Earth as a system and issues like climate change," says Dr. Thomson. "Most solutions don't exist in individuals. They come through collaboration and thinking laterally, outside the box. That's how you push the envelope, you grow."

ROBERT COLAUTTI IS ONE ecologist who might benefit from the climate data Dr. Thomson's students would synthesize. He is an associate professor of evolutionary ecology and ecological genomics at Queen's, where his research focuses on how species respond to environmental change. Right now, he is looking at invasive plants, ticks, and tick-borne diseases, and asking how some of them thrive so well.

Those small Plexiglas domes I drove by earlier are part of Dr. Colautti's plant experiments. Inside

> **"There is so much potential for multidisciplinary collaboration at QUBS, and that is so important when we talk about Earth as a system and issues like climate change."** LAURA THOMSON

Laura Thomson and Robert Colautti on the ground at QUBS. The collaborative nature of the station allows researchers to think "outside the box," says Dr. Thomson.

are two notorious invaders, garlic mustard and dog-strangling vine. He also has an even larger experimental site of perhaps the most famous plant invader in North America, purple loosestrife.

"This is the kind of scale that you can't really do without a field station like this," says Dr. Colautti. "You can only get so far with a lab experiment. At some point, you actually have to get outside and see what's happening."

Last year, Dr. Colautti and his colleagues published a paper that combined data from that purple loosestrife site with records from the QUBS herbarium and similar records from other herbaria across the continent. "Basically, what we found is that as purple loosestrife spread across North America, it evolved changes in flowering that match the local climate," says Dr. Colautti. "In other words, the genetic changes allowed them to spread into new climates."

It's a somewhat similar story with ticks. As the climate has warmed, ticks like the Lyme disease-carrying black-legged species have spread north. But one thing researchers don't know much about is how the ticks' microbes have changed as the environment has changed.

Recently, however, using ticks found at QUBS, Dr. Colautti's team showed that new genomic technologies can be used to see not only more microbes than by using traditional methods, but also microbes they may not have known were there in the first place. "So, now the idea is to expand our sample and start looking for new things that might be moving into Canada with the ticks as the climate continues to change," says Dr. Colautti.

(TOP RIGHT) PHOTOGRAPHY BY DANIEL DAGRIS

▲ Scotiabank Giller Prize-winning author Omar El Akkad was a writer in residence at QUBS.

ALTHOUGH HE DIDN'T KNOW it at the time, Omar El Akkad, Comp'05, could have played a minor role in Dr. Colautti's tick research. The journalist and Scotiabank Giller Prize-winning novelist was at the station last summer for QUBS' month-long writer-in-residence program. At one point, a student introduced herself. "She said she worked with ticks and asked if I wanted to help out," remembers Mr. El Akkad. "'Isn't Lyme disease a concern?' I asked. 'Yes, absolutely,' she said. 'Do you want to come out?' And I'm like, 'Um, no not really.'"

Mr. El Akkad laughs about the interaction now, but he did end up exploring the property with QUBS researchers, albeit at a safe distance. Later, for instance, he hopped onto a UTV and then into a boat with Dr. Lougheed, who was fixing a few of the climate stations. "It was just an overall terrific experience to be there," he says. "Just a beautiful, gorgeous property."

But it was also a productive experience, he says. From his lodging, in one of QUBS' bunkies, Mr. El Akkad would head to the dining hall after everyone had gone to bed. There, as the raccoons and red foxes awoke outside, he would write the first 20,000 words of his next novel. "For me, that is a huge number," he says. "But a lot of writing is just about not doing anything else, and so the negative space that was provided for me at QUBS was the biggest component of getting that work done."

It did help that he was at QUBS in particular. That novel will be an extrapolation of where the climate is headed as a result of what humans have done, he says. "And so being in an environment where people are talking about the shifts they are seeing from the data they are collecting was hugely impactful. It was the perfect place for me to start on this novel."

BACK ON THE SCREENED PORCH of the biodiversity centre, a pine siskin chirps above Dr. Lougheed. "That's odd," he says. "You usually see them here in the winter, but it's been an unusual year."

Before we head out on a tour of the property, I ask him about his earlier Zoom comment about the world being on fire and needing everyone's help to put it out.

He takes a rare pause.

"We need more people to be more literate about the way ecosystems function," he says. "When you think about community ecology, you're talking about trying to understand how thousands of individual species interact with one another – microfungi, bacteria, viruses, plants, animals. And then when you say, 'OK, climate change is here and is continuing to come, let's predict what's going to happen.' That is probably one of the biggest challenges you could possibly imagine. But there are lots of people who are trying to wrestle with that. We're doing that kind of work. It's hard, hard work. But we're trying."

OFF CAMPUS

First Up

Ampai Thammachack Manager, Prince's Trust Canada

When Ampai Thammachack, Artsci'20 and MA'22, was 18, she founded a registered charity called Step Above Stigma that she runs in addition to her full-time job as a Program Manager at Prince's Trust Canada, and part-time job as a professional dancer in Toronto. Step Above Stigma has now surpassed 1,000 volunteers, making an impact on more than 100,000 youth. With her team, she is working toward better mental health for Canadians, something she has always been passionate about. At just 17, she co-founded The Glass Slipper Organization, which donates prom attire to students in financial need. Additionally, she does public speaking on mental-health topics for clients such as Sun Life Global, RBC Global, and Scotiabank. As a result, she has been honoured as one of the Top 22 Under 22 Most Inspiring College Women in the World, a L'Oréal Paris Women of Worth, Canada's Top 100 Black Women to Watch, Atlantic Canada's Top 30 Under 30 Innovators, and a Princess Diana Award winner. →

Photography by Wade Hudson

→ My first job was as a ballet teacher. Ever since I was three, I've been obsessed with ballet. I have danced my whole life and it's still what makes me happiest. Dance has taught me so much about focus, discipline, teamwork, rhythm and dedication. Music fuels everything I do. I started ballet when I was three and danced at the National Ballet of Canada, which sparked my interest in health sciences, which I went on to study at Queen's.

When I was younger, I performed for eight years in the Nova Scotia Symphony's *The Nutcracker*. At age 12, my neighbour saw the show and asked if I wanted to teach her talented gymnast daughter ballet to help with her artistic skill on beam and floor – to give her that performance-level "sparkle."

Her coach at Taiso Gymnastics saw the impact of my training and asked me to teach all of his junior competitive gymnasts. I got paid $25 an hour, which was a huge deal to me as a 12-year-old. I coached dance until I left for university. I also waitressed all through university, which taught me so much patience, communication, small talk and personability that has helped me as a social entrepreneur. My first waitressing job was at my favourite pizza place, called On the Wedge, in Bedford, N.S. I have since served on 1000 Islands Cruises, at fine dining establishments and Boston Pizza.

What I've done is all weirdly connected. It's important to connect dots in places you might not even realize there's a dot to connect – that has helped me get creative. The most important thing in developing my passion for mental health advocacy was my challenging experience in high school – depression and suicide ideation – which inspired me to pursue philanthropy and social entrepreneurship full time. I have my parents, my neighbour Margot, and Taiso Gymnastics to thank for giving me my first opportunity to be a leader.

– As told to Jennifer Campbell

THE BACKSTORY

▸ Genevieve Scott, Com'01, author of *The Damages*.

Reliving the storm

The great ice storm and Queen's provide a backdrop for Genevieve Scott to explore sexism and misogyny in the '90s.

When Genevieve Scott, Com'01, first arrived at Queen's, she passed a series of homemade signs as her parents' car approached the Kingston campus.

"Fathers, thank you for dropping off your virgin daughters" was a typical one. She recalls feeling awkward, but not offended.

"I was prepared to accept that this was what I was getting myself into," Ms. Scott says. "I prided myself on the fact that I could take – and make – jokes like that."

Looking back, she realizes incidents like this were the product of a confusing era.

"We believed that sexism was a thing of the past," she says. "We thought that by participating in that humour, we were exercising our power. We didn't understand what was really happening."

When the #MeToo movement gained momentum a few years ago, Ms. Scott reflected on how much the world had changed. "I realize now, of course, that there was so much sexism and misogyny in the way we

PHOTOGRAPHY BY ZIHUI SONG, OFSTUDIO PHOTOGRAPHY

socialized," she says. She explores these themes – and the progress we've made over the years – in her second novel, *The Damages*.

Ms. Scott set the first half of *The Damages* at Regis University, a fictionalized version of Queen's, in 1997-98. Anyone who was in Kingston at that time will undoubtedly remember the ice storm that left much of Eastern Canada and parts of northern New York and New England without power for a week and a half in January 1998. For Ms. Scott and her peers, it was an unforgettable adventure.

"I made a lot of friends during the ice storm," she says. "It was exciting to be at the edge of a potentially dangerous situation and thrust together, living in the few dorms that had power, all sharing rooms."

The book tells the story of Ros, an insecure young woman who arrives at Regis eager to make new friends and reinvent herself as a "cool person." The ice storm unleashes a series of events that destroys her social status and forces her to drop out of school. In the second half of the book, Ros, now in her early 40s and quarantined during the pandemic, learns that her ex-partner (and former Regis friend) faces sexual assault charges stemming from their university days.

Although the circumstances are more extreme in the fictionalized version, Ms. Scott says the second half is an honest account of her own growth. "It's my reconciliation with that time, especially with the stories that were emerging from the #MeToo movement," she says. "I wanted to understand every woman's experience. In a lot of ways, this book is about Ros recognizing that another person's trauma isn't for her to judge, and that what someone went through, if it was painful, then it was painful. It's my personal experience of wanting to be a better ally, because when I was in university, I don't think it occurred to me that I should look out for women at all."

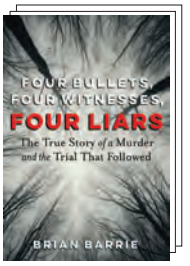
The Damages is now available through Penguin Random House Canada.

— Deborah Melman-Clement

New content from faculty and alumni

01

Most Canadians at the time may not have fought in the First World War, but many of them had a hand in financing it. **David Roberts, Artsci'73, MA'75**, explores the surprising popularity of war bonds and how the federal government used them to convince Canadians to fund Canada's military commitment in *Boosters and Barkers: Financing Canada's Involvement in the First World War*. It tells the story of six bond drives that together raised almost one-third of the country's total war costs. Read it now from UBC Press.



02

In 1988, Jimmy Strutton was shot four times in a secluded log cabin on the outskirts of Owen Sound, Ont. Each of the four witnesses at the scene told police a different story, and one of them, Mae McEachern, was charged with murder. McEachern's defence lawyer, **Brian Barrie, Law'76,** relies on his own memories, as well as trial transcripts and newspaper articles, to bring the crime and the trial to life in *Four Bullets, Four Witnesses, Four Liars*, now available from Delve Books.

03

Université de Montréal history professor **Michael Jabara Carley, MA'70, PhD'76**, draws on archival evidence from the U.S., the U.K., France, and Russia to unearth new evidence of Joseph Stalin's behind-the-scenes diplomatic efforts in the years leading up to the Second World War. In *Stalin's Gamble*, released this summer by the University of Toronto Press, he shows how Stalin tried – and ultimately failed – to build a defensive alliance against Hitler.

04

One evening in 2008, a collection of Queen's students, faculty, and staff got together at the Grad Club to play music and sing. Today they still play together as **The Gertrudes**, a Kingston-based "folkestra" that describes itself as "an old-time saloon party travelling through deep space." They've been joined onstage by more than 100 local musicians over the years, and they've performed alongside the likes of Ricky Skaggs and Sarah Harmer. Their fifth studio album, *Just to Please You*, was released in August.

303 BAGOT STREET

BUILDING
Stone structure designed by city hall architect George Browne in 1841 and a five-storey brick extension (now LaSalle Mews) added in 1928.

STYLE
The original LaSalle was one of three round-cornered Kingston buildings. The 1928 building's box-like form heralded modern architecture.

Living it up at the LaSalle

BY TONY ATHERTON

It was 1967: the first wave of baby boomers was crashing ashore at Queen's, and student accommodation was tight. By the time Linda Watson (Rehab'70) got her acceptance from the new School of Rehabilitation Therapy that summer, there was not a room in residence anywhere on campus.

The crisis led to a memorable first year at Queen's for Ms. Watson.

"I think at that point the Dean of Women or somebody said, 'Look, we have a lot of women who need accommodation.' So, they negotiated with the [hotel]," says Ms. Watson. "We were just lucky."

For one year, the fourth floor of the LaSalle Hotel on Bagot Street (now the LaSalle Mews) became an adjunct women's residence where roommates enjoyed private washrooms with full baths, their own TVs, fresh linens and towels weekly, and a downtown lifestyle unparalleled among Queen's first-year resident students.

Illustration by Wendy Treverton *Architectural research by* Jennifer McKendry

Ms. Watson shared a standard hotel double with twin beds, bedside tables, a bureau, and an escritoire. Since the students would be hotel guests for months, they were given leeway to personalize their space. Ms. Watson recalls they were allowed to rearrange the furniture and put posters on the walls.

If a light bulb needed changing or the toilet was backing up, they just called the front desk and got prompt service. "It was terrific," Ms. Watson recalls.

By 1967, the LaSalle was a Kingston institution. The original section of the hotel, a handsome stone structure that curved around the corner of Bagot and Princess streets, was built in 1841 – the same year Queen's received its royal charter from Queen Victoria. The five-storey brick extension Ms. Watson would eventually call home was added in 1928, according to Kingston architectural historian Jennifer McKendry.

The distinctive original part of the hotel was razed in 1974, but when Ms. Watson was in residence, it was still a downtown landmark, home to both the Cat's Meow, a less-than-elegant bar that was officially off limits to the fourth-floor students, and a formal dining room that Ms. Watson remembers visiting once for Sunday roast night.

The LaSalle students could have purchased a meal plan on campus, but the dining halls were at least 20 minutes away, "and frankly we didn't like the food so much at Ban Righ," says Ms. Watson. Most opted to eat at nearby restaurants, she says. The Cozy Restaurant, just across the street, with booths big enough for five, was a popular spot, as was a Chinese restaurant around the corner on Princess.

"If you just wanted a grilled cheese sandwich or something, you could get that in the [hotel] coffee shop," says Ms. Watson.

Some of the LaSalle women "felt that they were looked down on by people who were in a legitimate residence," says Ms. Watson, but she thoroughly enjoyed living more like a tourist than a student. And when the time came to find off-campus accommodation in second year, she and some friends opted for a house not far from the hotel.

That year at the LaSalle gave Ms. Watson not only unique memories, but a new best friend. "We met on that floor, and we still talk every week … 50-odd years later," says Ms. Watson.

▲ Tell us about the University District house you lived in and the memories you made: review@queensu.ca

Offering a helping hand

Providing guidance to students today helps prepare the alumni of tomorrow

At the Queen's University Alumni Association (QUAA), our work revolves around fostering a lifelong connection to Queen's, which takes shape by connecting with alumni around the globe. As the Queen's student population grows and we welcome new generations of alumni, we remain committed to building a meaningful community. The threads that tie us together are our experiences at Queen's. As soon as you cross that stage at convocation, you are automatically a member of the Alumni Association, and we welcome you with open arms. With that transition from students to alumni, we also take on a new sense of responsibility to pay it forward by supporting current students and ensuring that the "Queen's experience" for each generation of students is constantly improving and evolving with the times.

In practice, what does paying it forward look like? Alumni play an inspirational role by speaking to student clubs or in classrooms. Encouraging students, offering advice, making connections, and suggesting career paths are all significant ways that I see alumni contributing. For example, you could connect with the Queen's Student Alumni Association (QSAA), which prepares students for success by connecting them to alumni, encouraging them to be leaders, and supporting their journey toward becoming engaged Queen's alumni. And, of course, some student-led organizations, such as the AMS Food Bank, rely on donations from alumni to see them through during dire times.

In recent years, the QUAA has intentionally provided support to many student organizations through the Iris May Marsh Alumni Expansion Fund and QUAA Special Projects Fund. In 2023, this included organizations such as Youth for Consent Culture, CompanionLink and the Queen's Feminist Leadership in Politics (QFLIP). We also funded the Road to Graduation program, which is designed to guide graduating undergraduate students through their final year at Queen's and support the transition to becoming Queen's alumni. The goal of the initiative is to educate students on the Queen's alumni community before they graduate and highlight the importance and value of staying connected with fellow alumni and Queen's in the years to come. In our view, the stewardship of the Alumni Association starts on the first day that a student arrives on campus.

The QUAA is committed to welcoming current students to its community, and I encourage you to seek out opportunities to do the same. If you are not sure where to start, please reach out to me or directly to student organizations. We all know there are numerous challenges for today's student population, and I have no doubt that many could use our help.

Sincerely,
COLIN MCLEOD,
PRESIDENT, QUAA

Emily Hosie always knew she wanted to be her own boss. Volunteering for a charity while studying at Queen's changed the course of her career.

Emily Hosie, Artsci'04, was in the midst of a rewarding and successful retail career when she decided she was ready to start her own business. After having her first child, she identified a gap in the retail market for baby gear, so she created Rebelstork, an online marketplace that connects brands and mass retailers with parents to shop overstock and open-box (returned) baby gear at up to 80 per cent off regular retail prices. Five years later, it is the largest baby gear liquidator and returns e-commerce platform in North America, with operations in Toronto, Brooklyn, N.Y., and Lebanon, Tenn. She credits her Queen's experience for playing a role in what she decided to do in life.

Tell me about your successes with Rebelstork.
My entire background has been in retail. Specifically, off-price and value-channel retail are what I'm passionate about. I was vice-president of merchandising for the TJX companies, which is the largest off-price retailer globally. Prior, I was vice-president of merchandising and vice-president of product development for Saks Fifth Avenue. I was on the Saks Off 5th team, so again, the outlet division.

I have a six-year-old and a three-year-old. When I first got pregnant, I couldn't find the value-channel store for baby gear, so I asked friends in the industry what they did with their excess inventory or returns. They didn't have an answer. The U.S. estimates it has more than $800 million worth of returns annually, and it's growing rapidly. It's a trillion-dollar problem there. I realized that you can create a zero-per-cent return rate on your balance sheet if you're throwing out the product and writing it off. So that's where Rebelstork started. We asked how we could partner with the largest retailers and brands by taking their overstock and returns and vetting them and selling them at a discounted price on our platform.

Can you quantify your growth in the first four years?
We have more than 40 full-time employees. We've achieved upwards of 300 per cent growth year over year and we're proud to be venture-backed. Being a female founder is rare in its own right, but only about five per cent of companies achieve venture funding and of that, only 0.5 per cent have female founders. So, we are proud to be female-founded and considered one of the most innovative companies in Canada.

You were in labour when you completed a pitch that led to a venture-capital (VC) investment. Tell me about that.
My water broke, but I was about to start a VC partner pitch by teleconference. I didn't tell my husband. I knew I was fine at the time, so I carried on and did the pitch. At the end, [a VC partner] asked for a document. A colleague said, "I'll send that; Emily needs to go to the hospital." By the time my daughter Piper was born, I had the documents. There's a photo of me lying in my hospital bed with my baby, signing them.

Photography by Paul Alexander


cybex
ATON 2
bugaboo lynx
evenflo
Play Space

What is your first memory of wanting to be an entrepreneur?
I always knew I wanted to be my own boss, but felt I needed to work under someone to learn how to run a business. I discovered I wanted to go into retail at Queen's because I volunteered for a charity that held a fashion show as its big fundraiser. I was the stylist and spent every spare moment doing it. I thought if I could spend this much time when I'm not even being paid, that's the path that I should follow. I made a list of companies I wanted to work for. I had a mind shift when I was working in retail from "I'm really lucky to have this job" to "*They're* really lucky I'm working here." That's when I knew I was ready to do something on my own.

Why did you want to be your own boss?
I like moving quickly. I didn't always want to have to get my ideas approved. Big companies can be slow. At Rebelstork, we talk a lot about how things happen gradually – and then suddenly.

Can you share a piece of advice from a female mentor along the way?
Being creative and going against the norm is something I learned from all my mentors. I worked under some creative, out-of-the-box thinkers. I also learned to be a good leader. You don't have to be nice; you have to be kind. There's a difference. Direct feedback is kind; avoiding direct feedback to be nice isn't kind.

What's your best piece of advice for would-be entrepreneurs?
You have to have thick skin. If you're doing something that's never been done before, you will get pushback. You have to believe you have the solution and you have to educate along the way. Don't underestimate the power of educating on your idea.

Rebelstork was named one of Canada's most impactful companies, and you've received a Veuve Clicquot Bold Woman Award. What do those mean to you?
It's more about the company that our team has built. We worked so hard. Half of our employees resigned from TJX to work at Rebelstork. We wouldn't be where we are without this team. It's awesome to be recognized for the work we're doing. Every article you read about start-ups says, "It started in our basement." That is what happened with us. My husband delivered our first shipment on his bicycle with our son in tow.

"I had a mind shift when I was working in retail from 'I'm really lucky to have this job' to '*They're* really lucky I'm working here.'"

You've saved 180,000 pieces of baby gear from going to a landfill. What does that mean to you?
We're a certified B Corp, which we're really proud of, so every decision we make has to have social and environmental ethics involved. What does a landfill with 180,000 strollers and things even look like? To know that we can divert the resalable product away from landing there and into the hands of parents across North America at up to 80 per cent off makes us proud.

Does Queen's learning figure in your day-to-day?
University for me was about how could I learn. Could I develop good habits? It wasn't what I studied; it was the habits and the work ethic I gained. And I met many of my closest friends at Queen's.
– Jennifer Campbell

PHOTOGRAPHY BY PAUL ALEXANDER

(left to right) Adam Gordon, Barry Gordon, and Cathy Gordon

Managing memories

GORDON'S DOWNSIZING MANAGES THE ESSENTIALS FOR ITS DEDICATED CLIENTELE

The foundation of any successful company is the trust that develops between its team members and its clients. Building that trust is crucial both to the immediate business relationship and to transforming those clients into ambassadors for the company, solidifying its reputation and enhancing its potential for future growth.

This lesson is not lost on the dynamic family team at Gordon's Downsizing & Estate Services, a company that serves families throughout southern Ontario. By focusing on trust and first-class customer service, the family has seen the company evolve over 60 years into a dedicated one-stop shop providing integrated real estate services to individuals and families dealing with downsizing or estate settlement.

Barry Gordon, company CEO and partner, and a realtor with over 45 years' experience, cites as just one example of the company's services – his work on behalf of a gentleman whose wife had developed dementia.

The client determined it was time to move into a community where he could shelter his wife from too much confusion. But he didn't know how to go about it. "All of his resources were devoted to managing the impact of dementia on his wife," Barry notes. "He needed us to manage everything else. He engaged our services, and we looked after them. We got them packed up and moved into their new community."

"He was so grateful. It's nice to be in a business where you can do something special for people in this way, and – as an owner - where you get to hear from clients about what a great job your people have done for them. Versions of that happen to us every week."

Similar experiences are familiar to other members of the family who work (or have worked) with the company, including Barry's wife Alicia and their children **Adam, MBA '09, Heidi, Law '10, and Marty, Ed'10.** Sometimes the story begins and ends with a move and house sale. In other instances, it might involve certified appraisals for probate, the sale of the house contents, and other estate matters before finally selling the real estate.

Gordon's grew into what it is today by including unlimited project management for downsizing and estate requirements as part of the standard real estate commission.

"People working with us in these circumstances only have to deal with one company," says Adam Gordon, President of Gordon's Downsizing, and like Heidi and Marty Gordon, a proud graduate of Queen's University. "They don't have to manage ten different professionals such as a realtor, appraiser, mover, auctioneer, cleaner, handyman, and so on. The resolution of our service relationship is going to be better than any of the alternatives because of our singular accountability."

Feedback from many clients profiled in this series attests to this. Cathy Gordon, Estate Services Manager at Gordon's (and sister-in-law to Barry) says people frequently tell her how grateful they are that, by dealing solely with Gordon's in stressful life circumstances, they have been relieved of a burden that had initially looked overwhelming.

"I recently helped a senior who started out dealing with us to help her downsize and move to Toronto where her husband was already staying in a condo," Cathy recalls. "The weekend before the move, her husband passed away. She called me and said, 'What do I do next?' I helped her through the next steps. When we were done, she told me everything we did and touched was done with care and compassion and eased the burden for her. She said when she moves again in the spring to settle closer to family, we will be the first phone call she makes."

Alicia Gordon says the full Gordon's team comprises people who share a passion to provide the best possible service to the demographic they serve.

"Our team understands how difficult a move can be for our clients because of our long history in this space and the thousands of people we have helped. We're with them every step of the way."

"Although much of what we do is about converting property into money, it's the appreciation of the memories the property entrusted to us represents that earn the trust and gratitude of our clients every day."

Watching her dreams take flight

Christianna Scott makes the skies friendlier for everyone as Air Canada's director of diversity, equity, and inclusion.

BY JENNIFER CAMPBELL

For Christianna Scott, LLM'98, her role as director of diversity, equity, and inclusion at Air Canada is a dream job – one that brings together several of her passions.

"Ever since I went into law, I've been passionate about human rights," she says. "This position allows me to practise human rights from a proactive standpoint. I'm tasked with ensuring we're as inclusive as possible."

Ms. Scott worked as senior counsel for Air Canada for 17 years before leaving to become an administrative court judge, and subsequently spent 10 months working for BNP Paribas bank before this job came up in mid-2022.

Diversity, equity, and inclusion (DE&I) officials – charged with making sure an organization is supportive of every employee's race, ethnicity, religion, ability, gender, and sexual orientation – are relatively new, and Air Canada's team is no different.

"I've been given the leeway to make it what I want," says Ms. Scott. "A lot of people think that DE&I is a bit of a fluff piece; it's anything but."

Self-deprecating humour is an important part of how she does her job.

"We see it all – and that's good because if you can't see it, you can't address it," she says. "My 10-person team and I have to be vulnerable about our own stories and mishaps. We'll never get perfection, and it helps to share our own mistakes, such as how we once misgendered someone. You need to talk about it openly."

Ms. Scott, who was born in Ghana, frequently shares her own experiences. She's walked into job interviews and seen jaws drop because the interviewers didn't expect her to be Black.

"I give personal examples because that really is why I'm in this line of work," she says. "With a name like Christianna Scott, people don't expect to see me, right? [That said,] things have changed since I was looking for a job."

Ms. Scott's mother is Black and her father is white, but she self-identifies as a Black woman, rather than a biracial one, and explains why.

"Talking about that helps me illustrate the concept of self-identifying, its importance, how it is a personal decision, and how it can change over time," she says.

One of the initiatives she has started is a diversity, equity, and inclusion champions program for the company's nearly 36,000 employees.

"We're very spread out – we're in the air, we're on the tarmac – so we need people who are embedded in the organization to create that loop of communication," she says. "People are more inclined to listen to their peers on topics of DE&I."

When they did the program callout, they had more than double the number of champion volunteers they requested so, while it's new, it's promising. "We have pilots, flight attendants, ramp agents, administrators, people from France, Florida – everywhere – and we get together monthly to talk."

The challenges raised so far are self-identification and its privacy aspects.

"There's concern about what the company will do with this data," Ms. Scott says. "It's understandable, but our work is only as good as our information. So, it's helping people understand that we need a profile, not a name."

Ms. Scott says her time at Queen's has a lot to do with her current career. Her supervisor, David Mullan, gave her "a home away from home" because she was significantly younger than the other students in the master's program, having enrolled straight from her Bachelor of Laws. And she loved that Queen's had a partnership with a Ghanaian university, which meant that three of the 12 students in her program were from Ghana.

"There was this whole cultural connection that was amazing," she says of the "intense" one-year program.

Photography by Andrew Jackson


AIR CANADA
rouge

CLASS NOTES

▲ An undated archival image of a student playing pool in the Students' Memorial Union. Do you know who this is? Is it you? Let us know more about this picture by dropping us a line at review@queensu.ca.

1960s

G.W. Stephen Brodsky
Arts'69
Steve, CD, MA (Victoria); DPhil (York, U.K.), savoured condolences from his loving and beloved spouse, Kit, and family for passing his 90th birthday in November. Following his military and pedagogical academic careers, he has continued to write and publish in his areas of specialty (ample online entries). He has recently embarked on a nonagenarian project: a last book, *Intimations of Joseph Conrad*, in which "sightings" of Conrad's presences attest to his pre-eminent place in Eastern Europe's political conscience and in the broadened literary canon. The book explores Conrad's abiding modernist influence internationally on 20th-century and current postmodern novelists, as well as on screenwriters, playwrights, and craftspersons in marine, manual, and plastic arts. Nearing completion, *Intimations* will be a coda to a creative life, which truly began 60 years ago when the gates of academia at Queen's opened for a soldier who knew only of "ignorant armies that clashed by night."

Donald George Cook
Sc'62, MSc'65, PhD'67
Donald George Cook and Janice (Crump) Cook celebrated their 60th wedding anniversary on

▶ Donald George Cook, Sc'62, MSc'65, PhD'67, and Janice (Crump) Cook.

PHOTOGRAPHY COURTESY OF QUEEN'S UNIVERSITY ARCHIVES

WRITE TO US
If you have memories of friends, faculty, and colleagues you would like to share, email us: review@queensu.ca.

All comments may be edited for clarity, civility, and length.

@queensureview

Sept. 14, 2023, this fall – still a happy couple!

1970s

Terry Collins
Com'77
Terry is deeply grateful to the Royal Canadian Institute for Science for awarding him the Fleming Medal for Excellence in Science Communication, which was announced on Oct. 30. For Terry, the Fleming Medal is the honour of a lifetime and humbling, given the list of past recipients, but also because of the award's famous namesake, Sir Sandford Fleming, the institute's founder, the father of standard time, and Queen's long-serving second chancellor.

He would like to thank RCIScience and the hundreds of scientists and media colleagues he has had the honour to work with over his career. He would also like to congratulate CBC's *Quirks and Quarks* on winning the RCIScience William Edmond Logan Award.

Simon Leibovitz
Artsci/Ed'79
After a 44-year career, mostly in education, Simon has recently retired from RTOERO, the provider of exemplary insurance plans, advocacy, social networking, and communications for retired members of the educational community in Canada. Simon retired on Dec. 15 as the chief administrative officer at RTOERO after a 22-year career with the 55-year-old organization. He and his "new" wife, Mary – they were married in July 2022 – are looking forward to travelling and spending more quality time together. Simon will also have more time to spend with his father and stepmother and his twin adult sons.

Bruce Weir
Sc'71
Bruce returned to Queen's in October to visit with his grandson, Alex McArthur, as well as for the Homecoming football game, which he joined as the Tricolour Guard led by the marching band, including Alex. Alex is studying Life Sciences (Artsci'27) and has joined the Queen's Bands. Alex is the fourth generation to attend Queen's. His aunt, Allison Weir (MA'08), obtained her master's in history from Queen's, while his two great-great-uncles, Bob Weir (Sc'36) and Russ Weir (Sc'39), graduated in metallurgical engineering.

▼ Bruce Weir, Sc'71, with his grandson, Alex McArthur, Artsci'27, at Homecoming.

1980s

Rolf Boon
Mus'80
After 34 years as a post-secondary educator, as a composer with national and international performances, and as an administrator, Rolf has retired. He has composed more than 80 works in the instrumental, choral, jazz, film, orchestral, computer, and electroacoustic mediums. Additionally, he composed, performed, and produced all the music for the 1995 Canada Winter Games. He's also composed for short and feature films and his works have been featured on several albums. Rolf has also been instrumental in the development of two nationally and internationally recognized programs: the Interactive Digital Design program at Northwestern Polytechnic and the Digital Audio Arts program, co-developed with Dr. Arlan Schultz, at the University of Lethbridge. At Queen's, he studied with Dr. Clifford Crawley (composition), Dr. Bruce Pennycook, and Dr. Ireneus Zuk (piano) for his bachelor's in music. Rolf is grateful for their mentorships, which no doubt contributed greatly to his many academic and artistic successes.

Ian Burwash
Meds'85
Ian was awarded the Distinguished Teacher/Mentor Award

by the Canadian Cardiovascular Society for his outstanding contribution to cardiovascular health and care in October 2023. As a University of Ottawa professor and director of Echocardiography at the University of Ottawa Heart Institute, he continues to train medical students, cardiology residents, and echo fellows. Ian thanks Queen's, Dalhousie, and the University of Washington for his training.

John Wynne and Denise Hawrysio
Artsci'83 and BFA'81
Showing support for Ukraine, John and Denise's latest art installation, *And quiet that splinters the winter*, was exhibited in the fall of 2023 at At Home Gallery, a former synagogue built by the Slovak Jewish community in the early 20th century, in Samorin, Slovakia. The installation asked how – and if – art can respond to the Russian invasion of the country. Hawrysio's family was part of the early 20th-century Ukrainian diaspora in Canada, and she grew up hearing her grandmother's stories of the traumatic circumstances that caused her to leave Ukraine. Since February 2022, both artists have felt compelled to search for ways to respond to the atrocities in Ukraine through their work. Denise's collages are being sold to raise funds for the Ukrainian civil defence through Someone Prays for You, a project started by artist Taras Polataiko in Chernivtsi, Ukraine.

1990s

Erum Afsar
Sc'94
Erum has achieved the ICD.D designation from the Institute of Corporate Directors, a designation acknowledging a lifelong commitment to excellence in the boardroom. She was also awarded the Queen's Platinum Jubilee Medal from the province of Alberta for her community service and dedication to STEM. Additionally, she celebrated a significant career achievement with the opening of the Valley Line LRT in Edmonton, of which she was the project manager for the downtown portion.

▲ Andrew Boggs, Artsci'96

Andrew Boggs
Artsci'96
Andrew has been appointed as university secretary of Royal Holloway University of London. He continues as a director of Independent Higher Education, the representative body for independent higher education providers in the U.K. Andrew and his young family live in Twickenham, where he continues to write and speak on issues related to university policy in the U.K.

George Jeffrey
ArtsciEd'92, MBA'03
George is the new CEO of Canadian Orthodontic Partners. He has been in this post since September 2023. Experienced in scaling up businesses and fostering strong cultures of performance, purpose, and team spirit, George recently helped launch Laser Clinics Canada, part of the world's largest network of advanced medical esthetic clinics. Before that, he was senior vice-president at McKesson Canada, where he oversaw the growth and development of a network of more than 2,600 pharmacies – a $3.8-billion-plus business unit. Prior to entering the health-care sector, he played similar roles at leading international brands in retail food service and food processing industries. The creation of a Doctor Advisory Council, partly the brainchild of George, serves the purpose of reinforcing the company's mission and its nature as a patient-centric, doctor-partnered operating network.

Jodi (Rossman) Nathanson
Artsci'98, ConEd'99
Jodi has been a high school English teacher (Grades 9–12) at TanenbaumCHAT in Toronto for more than 20 years. She has filled the role of co-head of the English department and has recently published articles in *Canadian Teacher Magazine*, *The Literary Yard*, *Wilderness House Literary Review*, and *The Bangalore Review by Spanning Minds*.

Mona Rahman
Artsci'93, PhD'01
Mona is humbled and surprised to discover that she has been included in the EqualityX Top 50 Influential Muslims in the Americas list. The 2023 Influential Muslims list is reserved for the most inspirational Muslim individuals whose work has brought distinction to Muslim communities. Mona had served as education co-ordinator of the Islamic Society of Kingston (ISK) for six years. She's also been working with children and youth in the Muslim community since her undergraduate days and frequently speaks about various topics in local schools and on campus as a member of the Islamic Information and Outreach Committee. She currently teaches Qur'an and Islamic studies and volunteers with community organizations. She was the inaugural interim co-chair of UCARE at Queen's and is the current co-chair of the Community Equity Advisory Committee for the Limestone District School Board. During the day, she

◂ Debrah Zemanek, Sc'16, Sc'13, and Jean-Paul Martin, PhD'19, with family and friends after getting married.

serves as the research awards officer in the vice-principal research portfolio at Queen's.

Scott Reeder
Sc'91
Scott, (MD, PhD John Hopkins, Maryland) is a physician-scientist in the Department of Radiology at the University of Wisconsin–Madison, where he has been on faculty since 2005. He joined UW after completing his residency training at Stanford, and medical and graduate school at Johns Hopkins. In addition to his clinical and administrative duties, Scott leads the UW Liver Imaging Research Program, an NIH-funded group developing and translating advanced imaging methods, particularly quantitative MRI biomarkers of diffuse liver disease, into clinical practice. In January 2024, Scott was appointed the John H. Juhl Professor and chair of Radiology at UW and is excited to take on this new challenge.

2000s

Laura Stanley
Artsci'09, MScOT'14
Laura and her husband, Ben Horan, welcomed their first daughter, Alexandra, who was born in June 2023.

Angie Vanderwees
Artsci'09
Angie is the author of *Fostering Resilience: Anecdotes and Affirmations from a Therapist and Fellow Human*. She is now a local registered psychotherapist, yet she has always aspired to be a writer, beginning as an English major at Queen's. Angie is a former creative writing student of Dr. Carolyn Smart. *In Fostering Resilience*, Angie recounts personal struggles, noteworthy experiences, and remarkable adventures, while embarking on a new journey to become a psychotherapist. Valuable lessons from training and practise – including quotes from various other works – and healing strategies from her own personal therapy are shared in this inspirational piece.

2010s

Debrah Zemanek and Jean-Paul Martin
Sc'16 and Sc'13, PhD'19
On Sept. 30, Debrah and Jean-Paul were married in Squamish, B.C. In the above photo they are in the middle of the second row from the bottom, surrounded by family, friends, and a lot of Queen's alumni after the ceremony. With cocktails on the dock and a game of capture the flag before the ceremony, the weekend was perfect to celebrate a love that began at Queen's.

NOTE
Full obituaries submitted by family members and friends can be found on the *Queen's Alumni Review* website.

IN MEMORIAM

William (Bill) Allison
BSc'53

John Eric Anderson
MD'61, Professor Emeritus

Rudolph (Rudy) DeCecco
BASc'56

William Kamphuis
BASc'61, MSc'63

Abe Kelly
BSc'57

Bruce Kirby
Faculty Member

John A. McNeil
BA'63

Malcolm K. Miller
PhD'70

Henry (Harry) Victor Rankin
BSc'48

Allan Harvey Reddoch
BSc'53, MSc'55

Alexander Michael Cragg Russo
BA'08

David Spendlove
BASc'56

Richard (Rick) Sterne
BSc'68

Laura Mary Teague-Breukelman
BNSc'87

Oscar Wojtal
BCmp'23

1950–2023

Hugh Segal, LLD'18

Senator, longtime public servant known for his dedication to country and Queen's

When Hugh Segal passed away in late summer, tributes poured in from across the political spectrum.

"Hugh Segal cared deeply about our country," Prime Minister Justin Trudeau said on social media. "He dedicated his life to public service. And he brought people together."

It was a testament to Mr. Segal's fearless independence and his willingness to stand up and be counted, regardless of party lines – traits for which he is remembered with fondness as one of the great Canadian political icons of his generation. An important member of the Queen's community, he was frequently described as larger than life and consistently demonstrated humility, decency, empathy, and optimism in the cutthroat world of politics.

Mr. Segal had been associate cabinet secretary for federal-provincial relations under Ontario Premier William Davis and went on to become chief of staff to Prime Minister Brian Mulroney. He later made a bid for the leadership of the Progressive Conservatives in 1998. Later, in just one example of how he was respected across party lines, Liberal Prime Minister Paul Martin appointed him to represent Kingston-Frontenac-Leeds in the Senate despite Mr. Segal's long-standing conservatism. In the Senate, he served as chair for the Special Senate Committee on Anti-terrorism as well as for the Senate Foreign Affairs Committee.

Mr. Segal was known across the country, not only because of his vast political experience on the national stage and as the author of several books and national op-eds, but also for his role as a political analyst. He was made a member and then officer of the Order of Canada in 2003 and 2016 respectively, with Rideau Hall noting that "his commitment to his country is the hallmark of his multi-faceted career."

▲ Hugh Segal received an honorary Doctor of Laws from Queen's in 2018.

He was born in Montreal and had close ties to Ottawa, but his influence could be felt most deeply in his beloved city of Kingston, and among his cherished Queen's University community.

Mr. Segal, who passed away in Kingston on Aug. 9, 2023, at age 72, received an honorary Doctor of

PHOTOGRAPHY BY MILAN ILNYCKYJ PHOTOGRAPHY

Laws from Queen's in 2018 and was also a Donald Matthews Faculty Fellow in Global Public Policy at the Queen's School of Policy Studies. He also served as chair of the School of Policy Studies External Advisory Board and director of the Centre for International and Defence Policy and was past director and instructor of the Public Executive Program at Smith School of Business for more than 20 years.

"He was very focused, passionate, and humorous to work with," recounts former colleague Dr. Salman Mufti, Associate Professor of Management Information Systems at Smith School of Business, who had worked with Mr. Segal since 2013 in the department's Public Executive Program.

He was, Dr. Mufti says, genuine, easily approachable, and receptive to everyone.

"Hugh brought a level of humility, which is often not obvious in many very accomplished leaders. That was pretty front and centre with him," says Dr. Mufti. "He really emphasized how public service is a noble profession and a higher calling, and he was able to convey that easily. He would talk frequently about accountability and ethical behaviour as being key for a leader."

At the Queen's School of Policy Studies, where Mr. Segal was actively involved for nearly 30 years, his memory and legacy are significant.

"Hugh shaped the school profoundly in a number of ways, simply by his presence and intellectual fervour and enthusiasm," says close friend and longtime colleague Dr. Keith Banting, Stauffer Dunning Fellow in the School of Policy Studies and professor emeritus in the Department of Political Studies. "He was a very popular noontime lecturer and drew people from across the campus. It wasn't just the Policy Studies students who turned out when he spoke. He had an intellectual excitement and was a bridge between Queen's and the external world."

A Red Tory, Mr. Segal is often remembered for his willingness to stand up for what he believed was right, such as the time in 2013 when he was the only Conservative senator to vote against suspensions of three other senators – Mike Duffy, Pamela Wallin, and Patrick Brazeau – who were embroiled in a legal scandal over their expenses. Mr. Segal doubled down on his defence of the trio in 2016, arguing that they deserved a formal apology. He was also known for his decades-long advocacy to secure guaranteed basic income for families in need across the country.

Through it all, he had the keen ability to step across the aisle to start conversations, says Dr. Warren Mabee, Director of the School of Policy Studies.

"To have somebody in the school who wasn't only willing to try one agenda, but any agenda, and who wasn't afraid to push more progressive elements of that agenda, like a minimum guaranteed income, is something that a lot of present-day Conservatives don't want to get into. They feel that it's not on brand and it's not their ideology. Hugh was not afraid to do that," says Dr. Mabee.

> "Hugh wasn't there to build his own legacy; he was there to help people build their legacies."
>
> – DR. WARREN MABEE

HONOURS

2003
Became a Member of the Order of Canada and later promoted to the grade of Officer

2004
Named honorary captain in the Royal Canadian Navy

2013
Made chair of the NATO Association of Canada

Honoured with a Peace Patron Award by The Mosaic Institute

2016
Made a member of the Order of Ontario

2017
Awarded the Canadian Forces' Decoration for 12 years service with the Royal Canadian Navy

Mr. Segal's humble character also stood out for Dr. Mabee, who worked with him for 15 years.

"He was happy for other people to take credit for things that he did. Particularly, in recent years, he stepped in to do things for us. He was the interim director of the Centre for International and Defence Policy in the last year of his life. He did that without asking for a big announcement," says Dr. Mabee. "Hugh wasn't there to build his own legacy; he was there to help people build their legacies."

Above all, Mr. Segal was a devoted family man to his wife of 47 years, Donna, and his daughter, Jacqueline.

"Queen's was always his professional home," Mrs. Segal says. "Hugh valued it very much. It gave him the opportunity to contribute and share his experiences, and he loved that interchange. He did it because he enjoyed the work and he enjoyed and appreciated the venue. Hugh valued the opportunity to work with students, people who were destined to take on positions in leadership, ultimately leadership in the public sector, because he believed that they needed guidance and support in developing their public-sector and public-policy skills."

But it was his love of country that she says was central to understanding him. This devotion could be seen at a young age, when he proudly displayed Canadian flags on his bicycle, and later, when he was inspired to become a public servant at the age of 12 after Prime Minister John Diefenbaker visited his elementary school.

His love of Canada shone through when his family was asked to choose a hymn for his funeral, which took place in Grant Hall.

"I got a lot of comments from people who said he was a great Canadian," she says.

The choice of music suddenly became clear. It should be *O Canada*.

"It was perfect. It was exactly right," she recalls. "I, too, thought Hugh was a great Canadian. He was loyal and proud."

– Kim Pallozzi

A real page-turner

Did a rare Bader book belong to Sir Isaac Newton? An undergrad put the clues together

When Haley Stensrud, Artsci'24, became the Bader Digital Humanities Undergraduate Research Assistant in 2022, she had no idea she would soon solve a mystery that would connect Queen's to one of the fathers of modern physics.

Ms. Stensrud's position was funded by Bader Philanthropies, Inc., with encouragement from the late Dr. Isabel Bader, LLD'07, who also helped family friend Michael Hatcher donate several of his 16th-century books to Queen's. While shipping the collection from his Milwaukee home, Mr. Hatcher mentioned that one of the books, a mid-century edition of *The Annals of Tacitus*, may have once belonged to Sir Isaac Newton.

Mr. Hatcher bought the book at a now-defunct London auction house in the 1960s. Ms. Stensrud contacted the British Library and found a catalogue of the auction. "We were able to see the lot number," she says. "It was marked as being in poor condition and it sold for a surprisingly low price."

"It's not what we would call poor condition today," says Dr. Brendan Edwards, curator of the W.D. Jordan Rare Books and Special Collections at Queen's Library. "It isn't in perfect shape, but it's also 400-plus years old. The auctioneers didn't value it highly, and Mr. Hatcher got lucky. He didn't realize what he had until later."

The telltale signs confirming the book's provenance include two bookplates inside the cover bearing the names of former owners. "Just having one bookplate wouldn't necessarily mean it was Newton's book," Ms. Stensrud says, "but having both made it much more likely."

There are other signs, too, including significant dog-earing. "Newton was known to dog-ear his books," says Dr. Edwards, "and not just in the corner. He would often fold to point to a paragraph on the page, so the dog-ears could be large. Our book shows evidence of multiple dog-ears of different sizes."

"All these clues are not evident at first glance," Dr. Edwards adds. "Haley was able to exercise her historical research skills and, short of Newton having signed his name on it, everything lines up. I'd say we're 99.9 per cent certain that this was his book."

Dr. Edwards has notified the Newton Project, an Oxford-based group dedicated to preserving Newton's legacy, of the book's existence, and he and Ms. Stensrud expect a lot of scholarly interest in the years to come. In the meantime, it will remain, with the rest of Mr. Hatcher's collection, in the Douglas Library vaults.

– Deborah Melman-Clement

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