The 2017 UVic United Way campaign officially kicked off at a special Vikes Nation event in the CARSA Performance Gym on Friday, Sept. 29 at the Guy Vetrone men’s basketball tournament. A thousand fans cheered on the Vikes, learned more about United Way and raised almost $200 for the campaign through raffle ticket sales. 

“I’m proud of UVic’s strong support for United Way Greater Victoria, and would like to sincerely thank all our current volunteers and donors,” says Cedric Littlewood, campaign chair and associate dean of graduate studies. “I encourage all faculty and staff to consider giving to United Way this year and becoming an Everyday Hero or New Hero. United Way Greater Victoria funds more than 100 community programs, improving the lives of more than 111,000 people in our region.” 

Since 1994, UVic workplace campaigns have raised more than $4.5 million, including more than $218,000 in 2016. The 2017 fundraising goal is $275,000, and there are many ways you can support the campaign. It’s easier than ever to make a continuous or one-time donation online through the United Way Greater Victoria e-pledge site at bit.ly/unitedway2017. Simply follow the instructions, and in a matter of minutes, you can change a life with your gift. If you’re already donating through payroll deduction you can increase your pledge by visiting the e-pledge site.

Supporting the campaign can be as easy and fun as attending the many campus fundraising events. These include the Plasmacar Race on Nov. 7, Holiday Artisans Market on Nov. 21, the ongoing Book Sale in the UVic Bookstore foyer and many more! Donations of good quality used books are being accepted at the main Loan Desk in the McPherson Library until Dec. 1. Annual student-led
"Drop, Cover and Hold On" on Oct. 19

By Rob John

The trip from the airport looked normal enough. The occasional chimney was down, but other than that there was no real sign that a set of major damaging earthquakes had occurred. That is, until we came across the walls with roads cracked or uneven. Areas were blocked off out of concern for safety and whole business districts were closed. Things seemed to be moving in slow motion, with an eerie quiet across the city.

This was the scene two weeks after the Feb. 22, 2011 earthquake in Christchurch, New Zealand. Christchurch is a city about the same size as greater Victoria.

This trip, my second to Christchurch, opened my eyes wide to the complexities of responding and recovering from a major earthquake. The disruptions to transport, utilities, business, education and social services were immense. How does a community decide what are the priorities for recovery when so much has been impacted?

When I asked residents what they would have done in advance of the earthquake, they answered with statements like:

“I wish I’d listened to the emergency people and had more supplies’’;
“I needed a torch (flashlight);”
“Power went out and I couldn’t see. There was broken glass and everything seemed to be on the floor.”

“Water containers, even empty ones. There was water, but it was across town. I had no containers to move that water to where I was staying.”

The majority of things people said they wish they’d done in advance were really simple, yet they’d made a decision to do little or nothing to prepare for disaster. They all wished they’d done more.

Victoria sits in a region where three different types of earthquakes can occur. Any of these can cause structural damage. Most people here have no idea what a major damaging earthquake can be like. It is hard to take seriously something you’ve never seen or experienced.

Here at UVic we encourage all students, faculty and staff to become prepared. Being prepared isn’t hard, but it does take a conscious decision. Here are some simple suggestions about what you can do:

Learn what to do during an earthquake to protect yourself—Drop, Cover and Hold On! Participate in the Great British Columbia ShakeOut on Oct. 19. Encourage others to do so as well. Info: victoria.ubc.ca/shakeout

Talk to your family and friends about your plan if disaster strikes. Decide on a meeting location. Assume telephone lines will be overloaded.

Gather emergency supplies, including water, food and other materials to assist you if the community is greatly disrupted. Attend an emergency preparedness session and learn how to be better prepared.

Visit the UVic Emergency Planning website at uvica.ca/services/emergency for information about how to get prepared, to sign up for an emergency preparedness session and to learn how to participate in the ShakeOut event this year.

Bob Johns is manager of emergency planning at UVic.

When pennies turn to millions

By Sarah Tarnopolsky

After surpassing last year’s fundrais- ing goal of $14 million by over $2.2 million, the university has set out an aspirational five-year fundraising plan, with a target of raising $25 million annually by 2022.

The stimulus for this ambitious target is the university’s commitment to diversifying its funding sources, to enhancing the quality of teaching and research, and to advancing its reputation in an increasingly competitive landscape.

“The shift from raising an average of $15 million a year to $25 million annually won’t be easy,” says Tom Zsolnay, associate vice-president of alumni and development.

“Future partnerships opportunities will rely heavily on positioning the university as an attractive investment.”

The UVic Edge plays a key role in enhancing our reputation and answering the question that prospective investors often ask: why UVic? However, it is at the ground level—through the actions and mindset of faculty, staff and students—where the foundation for that shift is built.

That’s what a recent review of fundraising at UVic referred to when it advised the university to concentrate on cultivating a culture of philanthropy:

“What we mean when we talk about the culture of philanthropy is a shared appreciation for giving, and the desire to make a positive impact in the lives of others,” Zsolnay explains. “But it’s not that the culture is missing. It’s here in abundance. It’s just not celebrated or nurtured as much as it could be.”

A shining example of this culture in action is the Faculty of Education’s pennies-per-psychotherapy campaign, which ran this spring and raised $10,000 to create an emergency fund for education students experiencing hardship.

Another is the annual Thank-a-thon, held just before Thanksgiving, where hundreds of students sign thank you notes to donors expressing their appreciation for the difference they make to the university. This fall, several champions from different faculties have stepped forward to champion the Elders Engagement Fund at https://extrweb.uvic.ca/donate-online/iace.

“When external donors see the energy and commitment to philanthropy within the university, it’s a sign to them that this is an institution they should invest in,” says Zsolnay. “We may not get to $25 million by adding pennies to paycheques, but we certainly won’t get there without it.”

LEGEND POLE CONTINUED FROM P1

that lifted the pole above the ground. Under the direction of Charles Elliott, artist John Livingston trimmed and restored the lower section of the pole.

Livingston also repainted the pole with colours chosen by Elliott.

The Elliott pole is one of a number of Indigenous artworks on campus, for which Legacy acts as a steward. Others include the Tony Hunt poles on the far side of the quad, the spindle wheel by Susan Point in the Law Library, the shark mask in the Michael Williams Building, the Salish prints through the Cornett Building, the Douglas LaFortune welcome posts and the Charles Elliott frog posts at First Peoples House.

“One of the things I’m struck by when I come to a cultural ceremony and work with Indigenous communities,” said Nancy Wright, AVP Academic Planning, “is that we gain strength by working together. The university has its own traditions of teaching and learning and we benefit so much more from having the Indigenous community share with us their traditions and knowledge.

“Today, this cultural work that we’re doing allows us to really think about how to work together in the coming academic year and in the future.”

Navigated the ever-changing market

A longtime resident and UVic grad, Dave is helping local residents and new-comers to navigate their way through the real estate market.

Whether buying or selling, he will assure smooth sailing—just ask his happy clients, many of whom are UVic students, staff and faculty.

That’s why we may not get to $25 million by adding pennies to paycheques, but we certainly won’t get there without it.

United Way events

events include the Bug Push and Chillins for Charity. Visit uvic.ca/unitedway/events for details and follow us on Twitter. If you are interested in promoting United Way or hosting an event in support of the campaign in your unit, please contact the campaign assistant at unitedway@uvic.ca. To learn more about United Way and the impact of your donations, visit uvic.ca/unitedway

United Way continued from P1
The forum will bring together global and national leaders, policymakers, civil society and academics to discuss diversity and inclusion across six themes: economics of diversity, geopolitics, climate justice, global trade, Indigenous economic development, and philanthropy and inclusive development.

Sybil Seitzinger, executive director of the U Vic-led Pacific Institute for Climate Solutions and a professor in the School of Environmental Studies, has been actively involved in the planning stages for the forum. She heads up the content planning for the climate justice theme alongside industry partners Peter Robinson, retired chief executive officer of the David Suzuki Foundation, and David Miller, president and CEO of World Wildlife Fund Canada.

How does diversity and inclusion intersect with climate change? As climate change impacts the frequency and intensity of extreme weather events across the globe, people of all socio-economic backgrounds will feel the long-lasting effects.

“One key topic at the forum is developing just solutions for communities threatened by less predictable environments,” explains Seitzinger. “I’ll be moderating a session where we talk about how many of our businesses depend on stable climate regimes. Everything from fishing, forestry and agriculture to outdoor recreation and tourism operators are affected by less predictable environments and we need to start devising socially conscious solutions for dealing with these changes.”

The Victoria Forum planning committee isn’t anthropocentric when it comes to discussing our changing environment. Also on the event’s roster is a panel discussion featuring World Wildlife Fund’s David Miller as one of the speakers, which will explore climate justice for ecosystems. Should humans consider their place in ecosystems when we make decisions about how to mitigate and adapt to future climate regimes? And if we do, how does this shift the debate about climate justice to include all life on the planet?

To learn more about all six program tracks and register for the conference, visit www.victoriaforum.ca

**Two health scholars join national academy**

Exercise psychologist Ryan Rhodes and palliative care researcher Kelly Stajduhar have been elected to the Canadian Academy of Science’s (CAS) prestigious Academy of Health Sciences (AHS). The AHS is the national academy within the Council of Canadian Academies. Fellows are elected based on their leadership, creativity and commitment to advancing academic health sciences.

Rhodes is a faculty member in UVic’s School of Exercise Science, Physical and Health Education, director of the Behavioural Medicine Laboratory, and associate director of the Institute on Aging and Lifelong Health. Much of his research is focused on early family development of physical activity and finding ways to motivate people to become more active. He maintains a secondary focus on physical activity and aging.

To date, Rhodes has held more than 80 external grants for his research. He’s contributed more than 252 peer reviewed publications, given 250 presentations and written 20 book chapters and an undergraduate textbook.

Stajduhar is a professor with UVic’s School of Nursing and Institute on Aging and Lifelong Health. Her research and clinical work is focused on palliative care and gerontology, especially relating to health service needs for those at the end of their lives and their families.

Stajduhar is also lead investigator with CHAPL— the Initiative for a Palliative Approach in Nursing: Evidence and Leadership—a provincial project to advance the further integration of palliative care into our health system. She also leads an international research collaboration on family care and a Victoria-based study on access to end-of-life care for structurally vulnerable populations.

UVic President Jamie Cassels late last month announced the launch of a Global Reputation and Rankings Project that will explore UVic’s global impact is being accurately assessed by the world rankings systems that have become so influential in recent years. The project is led by VP External Relations Carmen Charette and project managed by Tony Eider, executive director, academic resource planning. A steering group of representatives from the academic, research and external relations portfolios and the president’s office are providing support.

“Reputation is an important asset for our university. It underlines the value of a UVic degree to our students and informs the choices made by future students, faculty and staff, potential partners, governments and other decision-makers,” said Cassels in a Sept. 29 email to members of the President’s Advisory Council (PAC). “The aim of the project over the next year is to improve UVic’s international standing by ensuring that our rankings submissions are complete, comprehensive and in line with post-secondary education best practices.”

Illuminate Consulting Group (ICG), a firm with extensive experience in supporting universities to develop their international rankings strategies, will meet with a variety of units and individuals on campus to help UVic identify ways to professionalize the university’s participation in the rankings processes.

ICG will also work with the project steering group to develop a strategy to optimize future submissions and focus outreach efforts to global partners, such as faculty and research collaborators, employers and alma mater UVic attributes. This is intended to address the gap that appears in some ranking assessments between UVic’s academic reputation on surveys and its stronger performance on research impact measures.

Updates to the campus community as well as opportunities for feedback will be scheduled as the project progresses. Its key findings will be communicated when the project concludes in fall 2018.

“The results of this project will be critical in supporting UVic’s international standing by ensuring that our rankings submissions are complete, comprehensive and in line with post-secondary education best practices.”

Get Ready to Shake Out.
Three researchers known for their passion and commitment to some of the most significant issues facing humanity and the planet have been named to the Royal Society of Canada (RSC) College of New Scholars, Artists and Scientists.

Marine biologist Julia Baum and Indigenous scholars Charlotte Loppie and Val Napoleon were among the 70 Canadians confirmed Sept. 12 as new members of the College.

Founded in 2014, the college is Canada’s first national system of recognition across disciplines for an emerging generation of Canadian intellectual leaders. Members are nominated by their peers and selected for a seven-year term based on having demonstrated a high level of achievement at an early stage in their career. College members have already recognized other recent achievements in their fields for excellence.

Marine ecosystems in trouble

Julia Baum, a professor in the Department of Biology, studies the resilience of marine ecosystems in the face of human disturbance. Her research focuses on their ecology and conservation, investigating how disruptions such as climate change are altering these ecosystems, and if and how they’ll recover.

Since 2009, Baum has done hundreds of dives in the coral reefs of Kiritimati Island (known as Christmas Island), 2,000 kilometres south of Honolulu. She’s studied the impact of the worst global coral bleaching episode in recorded history and is now watching for initial signs of recovery.

At the same time, Baum is a powerful advocate for a number of issues faced by Canadian scientists. In addition to receiving global coverage for her research, she recently led an investigation on deteriorating funding for fundamental research in Canada which was reported on by Nature and Science magazines.

Indigenous health inequities

Charlotte Loppie is a professor in UVic’s School of Public Health and Social Policy, and director of the Centre for Indigenous Research and Community-Led Engagement. She’s acting director of the university’s Indigenous Governance Program.

Loppie’s work focuses primarily on Indigenous health inequities, Indigenous HIV/AIDS and the societal determinants of Indigenous health. She’s committed to patient-oriented research, a way of thinking about and conducting research as something that is done by, and with the people with lived experience who are the focus of the research.

Loppie was one of only three Canadian researchers awarded a $100,000 research prize this year by the Canadian Institutes of Health for patient-oriented research.

Indigenous legal traditions

Val Napoleon holds the Law Foundation Chair of Aboriginal Justice and Governance at UVic, and is one of Canada’s most influential Indigenous scholars. She’s the founder of the university’s Indigenous Law Research Unit (ILRU), which is committed to the recovery and renaissance of Indigenous laws and the only dedicated unit of its kind in the country.

The ILRU has worked with more than 40 First Nations communities to apply their own laws to specific issues within their communities, a process driven by community members, Elders and knowledge keepers. She and faculty colleague John Borrows, the Canada Research Chair in Indigenous Law, are working to establish UVic as the first Canadian university to offer a joint degree in Canadian common law and Indigenous law.

Napoleon is from northeast British Columbia (Treaty 8) and a member of Saïkeul First Nation. She’s an adopted member of the Gitanyow (Gitksan) House of Luxahun, Granada (Frog) Clan. Her current research focuses on Indigenous legal traditions, Indigenous feminism, citizenship, self-determination and governance.

Researcher sees gold in global search for faster computer

BY JODY PATERSON

Somewhere between gold and glass lies a new material that could end a decade of stagnant computer speeds, suggests a University of Victoria engineer whose research is adding to that vision.

“Computers have changed our lives in ways we never imagined,” says Reuven Gordon, Canada Research Chair in Nanoplasmonics. “But they stopped getting faster in the last 10 years because silicon as a semiconductor has reached its limit. The world is going to change in ways that we’re not going to recognize, but to get there, we need to overcome that silicon barrier.”

Gordon’s research involves finding ways to “squeeze” light to see molecules—work that has relevance in fields from health to energy. A beam of light from the sun is 1,200 million the size of a single strand of hair, but has to be squeezed down to a size 200 times smaller still in health research in order to make visible the tiny proteins responsible for virtually every function in the human body.

So what’s that get to do with computers? Gordon and his research team frequently use gold surfaces and gold nanoparticles in their work, and recently found an unexpected new material that can switch from the conductive qualities of gold to the insulating properties of glass.

In another experiment, Gordon’s team applied light to nanoparticles of gold to make them move 200 times faster than the “clock speed” of a computer, the millions or billions of pulses per second used in computers and gigaphetters. Gordon thinks that this extremely rapid movement of the nanoparticles could ultimately revolutionize the speed of future-generation computers.

Gordon noted that vision recently increased dramatically during the 1980s and ‘90s, but the silicon chips reached their limit a decade ago and those gains in speed have stopped. Information travels at the speed of light along the fiber optic cables that carry the modern world, but today’s silicon computer chips can’t retrieve and process information moving at that speed.

“While ‘supercomputers’ do exist, they’re really just conglomerations of tens of thousands of slow processors, and are extreme users of energy—one supercomputer can rack up 8.3 million a year in electricity bills and require 11,000 litres of water a minute to stay cool.

Researchers around the world are exploring new ways to get around the silicon problem. The concept of light-based computers holds much promise, says Gordon, whose research is funded through a Discovery Grant from the Natural Sciences and Engineering Research Council.

“Now, others will take up our finding and build the research from there. It’s far from any kind of application right now, but it’s going to change a lot. Scientists are excited,” says Gordon. “What might this enable us to do?”
Collaborative consent provides a powerful way to tackle difficult questions about how Indigenous and non-Indigenous governments can work together to make decisions about water and land use, according to a report that uses BC’s new Water Sustainability Act as a prime opportunity for its use.

Canada’s relationships with Indigenous peoples—and the institutions, laws and policies governing these relationships—remained fraught with challenges 150 years into Confederation. These tensions are evident in freshwater governance in BC where First Nations are excluded from the major decision-making regime; yet the outcomes have a significant impact on Indigenous rights and important cultural, spiritual and economic water uses.

Released in September by the POLIS Water Sustainability Project at UBC and the Centre for Indigeneous Environmental Resources (CIER), Collaborative Consent and British Columbia’s Water: Towards Waterproof Co-Governance looks at a viable model for achieving a critical shift towards more equitable nation-to-nation relationships.

With collaborative consent, the parties commit to work together as equals at the table, each with their own agenda, with a goal to achieve each other’s consent to decisions, policies and plans.

“Collaborative consent marks a major step forward from the status quo,” says co-author Rosie Simms, a POLIS water law/polICY researcher. “It offers a way for BC to realize its commitments to govern according to the United Nations Declaration on the Rights of Indigenous Peoples and to develop a successful co-governance regime for fresh water in this province.”

The report takes a detailed look at collaborative consent, how it differs from other collaborative and partnership processes, and includes case studies on how elements of it have been used in BC, Canada and internationally.

Collaborative consent can be applied to decision-making processes across all sectors; so it is relevant for provincial, local, federal, First Nations and Métis governments, as well as water leaders, practitioners and others.

Simms says several reasons exist that make freshwater governance compounding grounds for collaborative consent in BC: escalating water issues and insufficient governance and management approaches; the lack of jurisdictional clarity for fresh water and overlapping responsibilities between all levels of government, including Indigenous; growing momentum towards co-governance and watershed governance approaches; and the specific window of opportunity to advance the implementation of the new provincial water law regime for the benefit of all British Columbians.


For the first time since 2011, peak contamination levels in Pacific Canadian waters from Japan’s Fukushima Daiichi nuclear disaster are known, says a UVic scientist who has been monitoring levels since the meltdown of three reactors at the plant.

Releases of radioactive elements from the Fukushima Daiichi Nuclear Power Plant accident in 2011 were the largest unplanned discharges of radioactivity into the ocean. The disaster, triggered by a 15-metre tsunami caused by a magnitude 9 earthquake, created widespread concern over the potential impact on marine life and human health.

“Contamination from Fukushima never reached a level where it was a significant threat to either marine or human life in our neighborhood of the North Pacific,” says chemical oceanographer Jay Cullen. Cullen leads Fukushima InFORM (Integrated Fukushima Ocean Observations and Monitoring), a network that monitors marine radioactivity at distances up to 1,000 kilometers off the coast of British Columbia.

Radioactive isotopes from Fukushima were first detected in June 2012, with maximum levels reaching offshore BC in 2015 and 2016.

“At their highest levels, contamination from Fukushima reached about one-tenth of what was seen in the North Pacific in the late 1950s and 1960s, before the ban of above-ground nuclear weapons tests,” says Cullen. “We’re now seeing levels of Fukushima-related contamination similar to levels in the 1970s and expect these to further decline in 2017–2018.”

The INFORM network brings together Canadian and US scientists, health experts and non-governmental organizations. Citizen scientists along the BC coast who are also part of the network assist with monthly collection of sea water samples and once a year to collect fish and shellfish samples for analysis.

The project is funded by the Marine Environmental Observation Prediction and Response Network. More information can be found at fukushimainform.ca. The most recent findings were published in the American Chemical Society’s Environmental Science and Technology.

“Here’s a pressing need to develop advanced dressings that can monitor wound conditions and provide proper treatment when necessary,” says Akbari, whose bandage was featured on the cover of Advanced Healthcare Care Materials on Sept. 25.

“The proposed technology holds great promise in managing chronic and acute injuries caused by trauma, surgery or diabetes.”

Skin is the largest organ in the body, and an important barrier against bacteria and other pathogens. GelDerm’s proven ability to spot infection through changes in pH levels and localize antibiotic treatment at the wound site means potentially life-threatening infection is identified and treated quickly.

While electronics-based approaches to wound care are already being developed by several researchers around the world, Akbari says GelDerm is the first that functions without a power source and whose readings aren’t compromised by the multitude of substances that leak from a wound.

Akbari anticipates the bandage could be on the market within five years once industry partners have been identified.

Wound management is a major health challenge around the world that racks up significant public expenditures. A 2016 report from the World Health Organization found that in the US alone, infections at surgical incision sites result in more than 400,000 extra days in hospital for patients each year, at a cost of almost $1 billion US.

“This all-in-one bandage that detects infection and administrators treatment without having to be removed will reduce costs and save lives,” says Akbari.

Gellerm’s ability to administer antibiotics directly to the wound site rather than through a general course of medication also reduces problems of antibiotic overuse, such as the growth in drug-resistant “superbugs” that now kill 10 million people annually.

The research was funded by the Canadian Institutes for Health Research and the Canada Foundation for Innovation.

Report outlines a new role for Indigenous nations in water decisions

High-tech bandage uses phone app to identify infection

BY JODY PATERSON

A “smart bandage” that detects and treats infection using a smartphone app has the potential for transformative advances in wound care, says UVic bioengineer Mohsen Akbari, principal investigator of a study published this week which describes the science behind the innovation.

Akbari and his UVic-based research team with collaborators from Harvard Medical School and UBC are working with UVic Industry Partners to commercialize GelDerm, a patent-pending bandage that monitors pH levels at wound sites to detect the earliest signs of bacterial infection.

A patient using GelDerm will be able to scan over the bandage’s embedded sensors with a smartphone app to gauge whether infection has set in. The information can be used for self-monitoring and can be relayed wirelessly to a patient’s health care team for follow-up.

Should antibiotics be required to treat an incipient infection, they can be administered directly through the bandage without having to remove it.

“GelDerm’s ability to administrate antibiotics directly to the wound site rather than through a general course of medication also reduces problems of antibiotic overuse, such as the growth in drug-resistant “superbugs” that now kill 10 million people annually,” says Akbari.

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BY VIMALA JEEVANANDAM

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New report summarizes how UVic contributes to community

By Chelsea Falconer

Community-based researcher Crystal Tremblay is intrigued by the threads that draw UVic and community together. She’s spent over 10 years collaborating with communities to address local challenges, such as an initiative that improved the safety and income generation of organized waste pickers in São Paulo, Brazil.

Tremblay’s latest project moves beyond her personal research — the research associate with UVic’s Office of Community-University Engagement (OCUE), she recently wrapped up a report that synthesizes the breadth and impact of UVic-led community-based initiatives.

“At UVic, so much incredible work is being done with and for local and global communities,” says Tremblay. “This project is the first of its kind to capture the cumulative change that these diverse projects are making.”

The report, Community-Engaged Research at the University of Victoria, was co-sponsored by UVic’s vice-president research and OCUE. It covers the period 2009 to 2015 and includes a campus-wide scan of data provided in the Enhanced Planning Tool (EPT) for 2014-15.

Tremblay identified 167 unique instances of community-engaged research (CER) and a total of $21 million in funding secured for CER initiatives between 2009 and 2015. More than 20 per cent of these initiatives involved Indigenous communities and 70 per cent involved communities on Vancouver Island. The most common areas of focus for these initiatives included healthy lives and well-being, inclusive and equitable education, and the conservation and sustainable use of oceans and marine resources.

The report also considers how UVic’s projects intersect with the United Nations’ 17 Sustainable Development Goals, the five guiding principles of OCUE and the four areas of international impact identified in UVic’s International Plan.

“I’ve seen first-hand how the participatory process of community-engaged research is transformative for everyone involved,” says Tremblay. “This type of research responds to pressing and complex challenges in society and has a lasting impact, and it’s encouraging to see that UVic is playing such a vital role.”

In addition to the formal report, Tremblay conducted 12 case studies to showcase concrete examples of UVic’s CER, including her own work supporting Jutta Gutberlet (geography) on the Participatory Sustainable Waste Management (PSWM) project in São Paulo. The five-year community-university research partnership helped to create a more inclusive and participatory culture in waste management policy for one of the largest landfills in South America, with community members leading the way. They, along with Tremblay and Gutberlet, produced a documentary as part of the project.

More than a decade ago as a UVic master’s student in geography, Tremblay also helped to shed light on the demographics and day-to-day lives of binnies in Vancouver, in a socio-economic study which mapped out the routes of 10 binnies whom she interviewed extensively in 2005 while doing fieldwork in the Downtown Eastside.

Tremblay has a doctorate from the Department of Geography at UVic and recently completed a SSHRC postdoctoral fellowship with the Institute for Resources, Environment and Sustainaility at UBC. She currently teaches as a sessional instructor in UVic’s geography department.

“Working alongside community members leads to change that changes lives,” adds Tremblay. “The new impact report provides a peek at some of the ways UVic strives towards this every day.”

Read the full report on CER at UVic, and explore the 12 case studies included in the project, at uvic.ca/ocue/research/our-research-projects.
Class takes students back to the Stone Age

This summer, a group of 17 UVic anthropology students went back to the Stone Age working with bone, shell, obsidian, stone and wood to make hand tools and spear-like weapons that are thrown with a spear thrower known as an atlatl.

The "Living Technologies" ANTH 315 course exposed students to flint-knapping, percussion and pressure techniques, stone pecking and grinding, all essential to making stone tools and spear points.

"I love teaching the stone tools course," says UVic sessional instructor Dan Stueber. "For the students who are planning to be archaeologists, it's so valuable to create a stone tool and see the flakes that break off using prehistoric percussion and pressure techniques."

Stueber, based in Oregon, travels more than 30 years while also teaching courses in ground stone and lithic technology in the Pacific Northwest.

"In Dan's class, I picked up a hammer stone and struck a piece of obsidian with the intent of making a tool. A flake came off, and for the first time when I looked at it I could point to it and say there's the bulb of force, that's the platform that was made where my hammer struck, those are the compression rings radiating out from the force of my strike."

In his outdoor classroom, Stueber enthusiastically instructs students on percussion techniques and flint-knapping, as well as spear-throwing. Hands-on learning is essential to anthropology, he says. "Recreating stone tools and activities from as far back as 2.7 million years ago deepens our understanding of and appreciation for our ancestors' intelligence and ingenuity."

On the last day of class, Stueber took his students to an open area where all they practised throwing spears using an atlatl. (The atlatl is a stick with a handle on one end and a socket, or small hook holding a light spear, on the other.) Hitting a target five metres away takes skill and precision—something the group of anthropology students now appreciates about their Stone Age ancestors.
Engaging BC’s coastal communities in marine conservation is the path to a sustainable future

BY JODI PATERSON

In the villages where University of Victoria biologist Natalie Ban works on BC’s central coast, Indigenous Elders tell stories of the 80-centimetre-long yelloweye rockfish they once caught routinely. These days, the fish are half that size.

The stories are indicators of a species in serious decline, says Ban. But federal fisheries managers can’t base decisions solely on anecdotal information. So, Ban and her research team partnered with First Nations to take those stories and transform them into the kind of data Fisheries and Oceans Canada (DFO) can use.

Further south in the Salish Sea, yelloweye and other rockfish species are already off limits to commercial fishermen. But recreational fishing continues. Research by one of Ban’s students has fueled community initiatives to raise awareness among anglers of extensive Rockfish Conservation Areas around the Gulf Islands.

Community engagement is a hallmark of Ban’s research method, and a critical element for ensuring that the ocean’s diversity and bounty will be there for future generations of British Columbians to enjoy.

“My interest is in the future of the ocean and the people who rely on its resources—the coastal communities,” says Ban. “It’s the intersection of biodiversity conservation and the health of human communities that interests me the most.”

Ban’s partnership with the Central Coast Indigenous Research Alliance has helped four coastal First Nations translate what they already know from their Elders’ stories into statistics that federal authorities can recognize as data.

The research focused on the declining size of rockfish over time, and reduced availability of Dungeness crab.

“The interview data showed declines in size and catch,” says Ban of the project. “These data have opened the door to more discussions between the First Nations and DFO. The project succeeded because the research partnered with the people who live there.”

It helped to empower their knowledge. “The research project in the Salish Sea began in 2013, when one of Ban’s master’s students set out to measure the compliance of recreational anglers to the rockfish conservation efforts in place around the Gulf Islands for almost a decade. After interviews with 300 fishers, it was clear that many had no idea that yelloweye rockfish were threatened or that they were fishing inside federally protected Rockfish Conservation Areas.

Rockfish are in bad shape in the Salish Sea,” says Ban. “They’ve not allowed us to hook-and-line gear in the Rockfish Conservation Areas. But lots of fishermen just don’t know.

While catch-and-release is common in recreational fisheries, rockfish are deepwater fish lacking the adjustable swim bladder that other species have. When they’re pulled up from the depths, the impact on their swim bladder is often fatal.

The research in the Salish Sea involved partnerships with the Gulf Islands Conservancy Association and Valdes Island Conservancy. When the extent of lack of information became apparent, they jumped into action to educate people. Maps of the conservation areas and information on rockfish are now posted at 44 boat launches in the southern Gulf Islands, Lower Mainland and southern Vancouver Island. Monitoring of fishing activity for research purposes continues.

“While the species we studied are in decline,” says Ban, “the future is promising because First Nations and community organizations are actively involved in promoting sustainable fisheries and conservation.”

Ban’s research is funded through the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council and the Marine Environmental Observation, Prediction and Response Network.