



**News Digest of the Canadian Association of Geographers
No. 488, April 16, 2018**

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U Lethbridge’s Chris Hopkinson and Laura Chasmer offer advice on how technology can help mitigate disasters like wildfires: While Canadians face the dangers of climate change, their scientists are tracking and reporting its impacts year after year. One of their tools is aerial Light Detection and Ranging (LiDAR) technology, now being used to document changes in Canada’s glaciers, peat lands and Arctic regions. “We need to identify where these risks exist,” geography professor Chris Hopkinson told an audience at the Southern Alberta Council on Public Affairs. “Monitoring leads to understanding their processes and mitigating their effects.” Satellite imagery is also useful, he said. Hopkinson also agreed with a questioner that improved drone technology could lead to more applications in environmental monitoring. Land-based weather stations are another tool, and co-presenter Laura Chasmer explained how she became more involved in LiDAR images taken from an aircraft after a number of university-placed weather stations were lost to the Slave Lake wildfire. With up to 13 years of data from some locations recorded in 3D form, she said, scientists are realizing how quickly environmental conditions are changing in some places. Chasmer, who’s also a faculty member of the geography department, described how some peat lands in Alberta and farther north are drying out – and potentially catching fire. Fighting wildfires has become an expensive operation for Canadians, and she warned it could only get worse. Alberta’s glaciers continue to melt, Hopkinson pointed out, and snow is covering some rivers’ watersheds for fewer weeks of the year – and then melting faster. Apart from creating a danger of flooding, he said those changes could also reduce southern Alberta’s water supply. Lethbridge is on the edge of the arid Palliser Triangle, he noted. “It’s not inconceivable that drought could happen here.” Even so, he told a questioner, some students in his U of L classes want to deny the reality of climate change. [Lethbridge Herald](#)

Queen’s U’s Heather Castleden to offer Dream Course focused on indigenous perspectives on the Environment and Health: In June, Heather Castleden begins her first offering of GPHY309: Indigenous Perspectives on the Environment and Health. This field school is an opportunity to meet with Indigenous peoples to learn directly from them about their interconnected relationships with the land, environmental management, and human health. “This is based on a field school I used to offer at Dalhousie University, and builds on many of the same relationships I developed when I was working out in Mi’kma’ki (Nova Scotia),” says Dr. Castleden, who is the Canada Research Chair in Reconciling Relations for Health, Environments, and Communities. “There seems to be a lot of excitement from the students - that Queen’s is finally offering something like this.” As part of the three-week course, students will spend two weeks in Mi’kma’ki meeting with members of several Mi’kmaw First Nations. “This field school is meant to challenge the students emotionally, mentally, physically, and spiritually,” says Dr. Castleden. “When they get back to Kingston, the students will each have the opportunity to reflect on their experience by preparing short video stories, which will be showcased at a special open event. [Queen’s Gazette](#)

U Victoria doctoral candidate Jackie Ziegler examines ethical dilemma of whale shark feeding in Philippines:

There are hundreds of whale shark tour companies around the world, but the guides in Oslob in the Philippines offer something special: they guarantee sightings just about every day of the year. As a result, more than 180,000 tourists visited in 2015. Yet this boom comes at a cost, one that many tourists seem willing to overlook. The reason there are so many whale sharks in Oslob is because tour operators there hand-feed them daily. Nobody knows precisely how the feeding program is affecting the Philippines' larger whale shark population, but scientists do know that some sharks reliably show up at feeding time every day year-round, says Jackie A. Ziegler, a doctoral candidate in geography at the University of Victoria in British Columbia who led a new study examining tourists' perceptions of Oslob's whale shark tours. This is striking, she says, given that whale sharks are typically a highly mobile, migratory species. In a [recent scientific review](#) of comments about the whale shark tour companies left on TripAdvisor—made primarily by the town's foreign visitors—Ziegler and her colleagues found that many seem aware of the ethical issues inherent in feeding wildlife. But, of the commenters who referenced ethical considerations in their reviews, more than two-thirds justify their participation as a guilty pleasure. In other words, Ziegler says, these tourists put their personal interests first, even while knowing the tourism operation is ethically suspect. It's difficult to say whether the positive economic gains from these whale shark tourism operations outweigh the costs to the animals. Wildlife tourism can be a lucrative business. In 2015, whale shark tourism injected some US \$5-million into the local economy; prior to instituting the feeding practice, Oslob had no significant tourism industry and no financial incentive to protect the sharks. Wildlife experiences can also, in the right circumstances, turn into conservation dollars, benefiting the animals in turn. Ziegler says it's important to take a precautionary approach "to ensure that tourism activities are having the least amount of impact as possible." "Especially since these sharks are endangered," she adds. [Hakai Magazine](#)

U Toronto Mississauga's Igor Lehnherr discovers world's largest high Arctic lake showing evidence of climate change:

Remote areas in Canada's Arctic region – once thought to be beyond the reach of human impact – are responding rapidly to warming global temperatures, the University of Toronto's Igor Lehnherr has found. "Even in a place so far north, it's no longer cold enough to prevent the glaciers from shrinking," says the U of T Mississauga geographer and lead author of the study. "If this place is no longer conducive for glaciers to grow, there are not many other refuges left on the planet. "This study provides a high-level complete data set where all components of the watershed have been studied, and reveals how different components, such as lake ice coverage, permafrost, glaciers, terrestrial environment or the lake food web, are responding to climate change over time." Study collaborators collected and recorded data available from ongoing site research, which dates back to the 1950s. Some research methods provided a longer view. "For example, sediment samples allow us to time travel and read the history of the lake recorded in its sediments over the past 300 years," says Lehnherr, adding that the results provide an important and comprehensive survey of the area. "The lake and the lake ecosystem have been in a relatively stable state for hundreds of years, but all it took was a one-degree increase in regional air temperature for it to enter a completely new state," Lehnherr says. "The biological food web looks different, the biogeochemical cycles are accelerated, and we're observing more organic nutrients, contaminants and carbon coming into the system." [U of T News](#)

New Theses and Dissertations

David R. McCaffrey. 2018. [Assessing historic change in subalpine forest : a case study in the West Castle Watershed](#). MSc thesis. Department of Geography, University of Lethbridge, Lethbridge, Alberta. Supervisor: Chris Hopkinson

Hot Papers by Canadian Geographers

Daniel Bégin, Rodolphe Devillers and Stéphane Roche. 2018. [The life cycle of contributors in collaborative online communities -the case of OpenStreetMap](#). International Journal of Geographical Information Science. doi.org/10.1080/13658816.2018.1458312

Anna J. Crawford, Derek Mueller and Gabriel Joyal. 2018. [Surveying drifting icebergs and ice islands: deterioration detection and mass estimation with aerial photogrammetry and laser scanning](#). Remote Sensing 10:575. DOI:10.3390/rs10040575

Paola Fajardo and Ignacio Valdez Hernández. 2018. [Achieving mangrove conservation and sustainable use in Mexico through community-based Management Units for Wildlife Conservation within and beyond Protected Areas](#). PeerJ Preprints 6:e26841v1

Hans W. Linderholm, Marie Nicolle, Pierre Francus, Konrad Gajewski, et al. 2018. [Arctic hydroclimate variability during the last 2000 years: current understanding and research challenges](#). Climate of the Past 14:473-514.

Wei Xu, Zehan Pan and Guixin Wang. 2018. [Market transition, labor market dynamics and reconfiguration of earning determinants structure in urban China](#). Cities. doi.org/10.1016/j.cities.2018.02.029

Jackie A. Ziegler, Joshua N. Silberg, Gonzalo Araujo, Jessica Labaja, Alessandro Ponzio, Rick Rollins and Philip Dearden. 2018. [A guilty pleasure: Tourist perspectives on the ethics of feeding whale sharks in Oslob, Philippines](#). Tourism Management 68:264–274.

Other “Geographical” News

'Plastic is literally everywhere': the epidemic attacking Australia's oceans: Decaying plastic bags hanging from the branches of mangroves like dripping flesh; slicks of plastic water bottles and food containers waiting ashore for the liberation of the next rising tide; the misnamed “disposable” plastic and styrofoam drinking cups; and other plastic paraphernalia in various stages of disintegration. While the new legislation is likely to slow down the wave of plastic pollution hitting Australia’s coastal waters, there’s little that could be done about the mountains of plastic that’s already out there. “Plastics never really go away ... where is this magical mystical place we call ‘away’”. “We know plastics take anywhere between 100 and 10,000 years to break up ... and I don’t use the term ‘break down’. It never breaks down and goes away.” [The Guardian](#)

Bottom trawling implicated in fish population collapse: A new study using Sea Around Us’ reconstructed catch data indicates that, in the past 60+ years, the practice of towing giant fishing nets along the sea floor has caused the extraction of 25 million tons of fish that live 400 meters or more below sea level, leading to the collapse of many of those fish populations. The new estimates suggest that 42 percent more fish have been caught by countries than they reported to the Food and Agriculture Organization of the United Nations. This means that fisheries managers are making decisions based on incorrect data, which has dramatic consequences for marine ecosystems. The impact of trawling goes beyond the capture of fish populations. As they are dragged on the seabed, trawls remove sponges, corals, sea stars, sea cucumbers and anemones, all of which play important roles as food source or habitat for fish. They also destroy seamounts and other fish homes, turning former thriving habitats into large cleared areas. [The Maritime Executive](#)

Australia doesn't exist! And other bizarre geographic conspiracies that won't go away: Australia doesn't exist. The signs were there the whole time: in what country is the only thing more poisonous than the snakes the spiders? How did we ever believe that kangaroos were a thing? This discovery, believed by some to be a joke or a conspiracy theory, has been circulating on social media in recent weeks after being formulated on Reddit in early 2017. Except it turns out not to be the only theory of its kind: through the years, online sleuths have found that all sorts of places don't exist. In these days of fake news and mainstream-media conspiracies, though, it doesn't do to take anything for granted – so G2 contacted a diplomatic source, who agreed to speak off the record and confirm what they could about the existence (or otherwise) of Finland and Australia. “Hang on, let me look out the window,” the source replied, before confirming Finland existed. The source was unable to provide similar confirmation for Australia. [The Guardian](#)

Some Not So “Geographical” News



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