



**News Digest of the Canadian Association of Geographers  
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**U Lethbridge's Stephen Kienzle shows extreme weather more likely to hit Alberta as temperatures heat up:** Extreme weather events are more likely to hit Alberta and tourism will be significantly impacted by a gradually-warming province, according to some of Alberta's leading scientists on the subject. According to research from the Kienzle Watershed and Spatial Analysis Lab at the University of Lethbridge (U of L), which analyzed temperature and precipitation measurements that have been collected every day since 1950 from 6,833 climate stations located across the province, Alberta's climate has been warming consistently over the last half-century. Climate is the average weather measured over many years, and the word weather relates to short-term conditions in the atmosphere that we can observe and measure, such as temperature, precipitation and wind. A team led by Dr. Stephen Kienzle, professor of hydrology and geographical information science at U of L, recently compiled the nearly five million records from 1950 to 2010 and found average annual summer temperatures in Alberta have increased by 0.77°C, while spring and fall temperatures increased by 1.37°C and 1.05°C, respectively. Dr. Kienzle said with the exception of high-elevation regions, snowfall is being replaced by rainfall, which puts communities at a greater likelihood to experience extreme weather events such as flooding or wildfires. "Floods, droughts and heat waves are some of the most serious stresses to the public when it comes to coping with a changing climate," Kienzle said, adding the scientific community has known human activity has an effect on climate change since 1859. His team also found the number of heat waves in Edmonton and Calgary have doubled since 1950, but the number of days with maximum temperatures below zero each year have decreased by 21. [Vancouver Metro](#)

**U Northern British Columbia's Sarah de Leeuw reframes Northern B.C. stories to change perceptions:** In her latest book, Sarah de Leeuw uses some of Northern B.C.'s darkest moments to illuminate the social inequalities facing northern communities. *Where it Hurts* examines issues such as missing and murdered Indigenous women. Stories like that often dominate the news cycle and don't accurately represent what Northern B.C. has to offer, de Leeuw said. She hopes to change that narrative by re-framing the very same stories but in a more nuanced way that celebrates the people who have survived through the hard times. But the way the region comes across to those who have never visited or lived there is often negative, according to de Leeuw and that keeps talented professionals away, widening service gaps. "We have to grow our own," she said. She said *Where it Hurts* is meant to inspire northerners to face the challenges of rural and northern living head-on by taking action where they see issues in their communities. [CBCNews | British Columbia](#)

**U Lethbridge's Craig Colburn gives his class gets a project to remember:** Geography professor Craig Colburn and 24 upper-year students at the University of Lethbridge designed, built, launched and tracked a remote sensing device that soared 30 kilometres above southern Alberta. Then they recovered their instrumentation and set to work analyzing the data they collected. "We do lots of experiential learning" in geography courses, Colburn says. But he predicts this spring's Remote Sensing 4650 students will remember their project for many years. And though it encountered -65 C temperatures as it soared through the jet stream, he says the student-assembled equipment can be sent into the stratosphere again. Teams began work on the project in January, Coburn says, and they were ready to launch by mid-March. The instrument cluster included three cameras – one for colour, one for infra-red and one for thermal imaging – as well as temperature, air pressure and GPS sensors, min-computers and an "action camera." The cluster was secured on a wooden frame inside a styrofoam shell, ready to be attached to a high-altitude weather balloon with a parachute. After checking the jet stream, Coburn says, the students headed to Pine Coulee near Stavely for an early-morning launch. The helium-filled balloon rose to 30,132 metres and travelled 30 km east before rupturing as expected. Students tracked its course on GPS, and recovered their equipment in a horse paddock near Brooks. Another 200 metres, Coburn says, and it could have sunk in the Bow River. When they analyzed their data, he adds, students found nothing unusual. "Maybe we didn't learn all that much scientifically but at the end of the day, they now understand how it all works, from beginning to end." That's an opportunity few universities can offer their undergraduate geography students, Coburn points out. "I found the project really emphasized the importance of teamwork and the complexity that major projects like this entail," says fourth-year geography student Sarah McCrady. "Knowing how an image is taken and the effects that need to be accounted for is invaluable when using earth imagery for analytical purposes," observes third-year student Travis Houston. They were part of an overflow class that signed up when they heard about the project last fall, Coburn says. In previous years, it attracted less than 10. While it was the first time he taught that option, he expects it won't be the last. [Lethbridge Herald](#)

**Western U Geography PhD candidate Kilian Atuoye's study shows link between food insecurity and poor mental health:**

While a lack of access to safe and nutritious food can contribute to malnutrition, and a whole host of other physical effects, what, if any, are the effects on mental health? According to Geography PhD candidate Kilian Atuoye, MA'16, heads of households who experience severe to moderate food insecurity – meaning they have limited or uncertain access to nutritionally adequate or safe foods, or do not have the ability to acquire food in a socially acceptable way – report elevated mental distress compared to those from food secure households. His findings, written in collaboration with Isaac Luginaah, professor with the Department of Geography and Canada Research Chair in Health Geography, were recently published. "The World Health Organization has recognized social determinants of health ... but the element of food was missing. From my fieldwork, it came out clearly that this was a big issue," said Atuoye, who, for the study, surveyed nearly 1,500 people in northwestern Ghana, Africa, where food insecurity is an issue. "In the northern part of Ghana, we came to realize the social stigma around food insecurity and not having food to eat. You just don't carry that burden (food insecurity) alone, you also carry the burden of being called names." The research study also revealed female household heads, compared with their male counterparts, were more likely to report elevated mental distress as a result of food insecurity. Atuoye said this could be that while the majority of the household heads surveyed were male, and had the responsibility to provide grains for the family, women generally carry the greatest burden related to food because they are responsible for the day-to-day cooking. While food security is a big issue in sub-Saharan Africa, Atuoye said even in the Canadian context it's a problem in some areas; as is stigma. However, there are systems in place to combat food insecurity in Canada. In Ghana, those same formalized structures don't exist. [Western News](#)



**Carleton U alumna Andrea** awarded the 2017 Outstanding Dissertation Prize by the Carrion Canadian Association for Latin American and Caribbean Studies for her dissertation: [\*The spatial restructuring of resource regulation. The gold mining enclave of Zaruma and Portovelo, Ecuador, 1860-1980.\*](#) The purpose of the Outstanding Dissertation Prize is to provide recognition to a young scholar who has significantly advanced our understanding of Latin America or the Caribbean. [Carleton U Geography and Environmental Studies](#)

**Simon Fraser U's Ruslan Rydvanskiy** (BA student Geography) and **Marco Jorge** (PhD student Geography) were winners of the SFU 2017 Esri Canada Higher Education Scholarship Award. Ruslan's submission was related to the GIS analytical tools to site municipal solid waste facilities while Marco used GIS to extract geological features from digital terrain models. The scholarship award recognizes excellent achievement in Geographic Information Systems (GIS) through the design and implementation of an original and individual project related to the advancement of methods or applications in the discipline. [SFU Geography](#)

**Queen's U's John Andrew** says that hesitation by the federal and provincial governments to act to address the overheated Toronto real estate market could be out of concern that actions taken could cause the market to crash. [Reuters Canada](#)

**Ottawa U's Department of Geography, Environment and Geomatics** has partnered in a new program with the Faculty of Engineering to offer a week of exciting hands-on activities and workshops in and around Ottawa that will let Grade 10-12 students explore and understand the dynamic environment in which they live. The program will bring participants to locations where they can witness dramatic evidence of past glaciations and ancient landslides and study the microclimates of caves, take them labs to analyze the field samples they've collected, introduce them to microscopic living organisms and what they can tell about past ecosystems, and teach participants about how to use GIS, GPS and time-lapse photography to explore the Ottawa-Gatineau region. [UOttawa Geography](#)

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## Recent Theses and Dissertations

Dana Ehlert. 2017. [Modelling the climate response to anthropogenic carbon dioxide emissions: time-dependent processes, commitment, and reversibility.](#) PhD dissertation. Department of Geography, Simon Fraser University, Burnaby, British Columbia. Supervisor: Kirsten Zickfeld.

Alexandra Giancarlo. 2017. Creoles of Louisiana's Southwest: Race, place and belonging. PhD dissertation. Department of Geography & Planning. Queen's University, Kingston, Ontario. Supervisor: Dr. Audrey Kobayashi.

Brandon Heung. 2017. [Regional-scale digital soil mapping in British Columbia using legacy soil survey data and machine-learning techniques.](#) PhD dissertation. Department of Geography, Simon Fraser University, Burnaby, British Columbia. Supervisor: Margaret Schmidt.

Brendan Hunt. 2017. [Morphological controls of velocity inversions in bedrock canyon.](#) MSc thesis. Department of Geography, Simon Fraser University, Burnaby, British Columbia. Supervisor: Jeremy Venditti.

## Hot Papers by Canadian Geographers

Andréanne Beardsell, Gilles Gauthier, Daniel Fortier, Jean-François Therrien and Joël Bêty. 2017. [Vulnerability to geomorphological hazards of an Arctic cliff-nesting raptor, the rough-legged hawk](#). Arctic Science.

Marc Béliveau, Daniel Germain and Ana-Neli Ianăș. 2017. [Fifty-year spatiotemporal analysis of landscape changes in the Mont Saint-Hilaire UNESCO Biosphere Reserve \(Quebec, Canada\)](#). Environmental Monitoring and Assessment. DOI:10.1007/s10661-017-5938-y

Sarah de Leeuw and Harriet Hawkins. 2017. [Critical geographies and geography's creative re/turn: poetics and practices for new disciplinary spaces](#). Gender, Place & Culture. doi.org/10.1080/0966369X.2017.1314947

Tapan K. Dhar and Lune Khirfan. 2017. [A multi-scale and multi-dimensional framework for enhancing the resilience of urban form to climate change](#). Urban Climate 19:72-91.

Terence Epule Epule, James D. Ford and Shuaib Lwasa. 2017. [Projections of maize yield vulnerability to droughts and adaptation options in Uganda](#). Land Use Policy 65:154–163.

Stéphane Guimont Marceau, Janice Cindy Gaudet, Véronique Audet, Marie-Josée Parent, Mélanie Lumsden and Jonathan Abitbol. 2017. [Urban Indigenous cultural productions in Quebec: vital connections to cultural reconstruction](#). AlterNative: An International Journal of Indigenous Peoples. DOI:10.1177/1177180117701026

Nicole Laliberté, Alison Bain, Greg Lankenau and Michele Bolduc. 2017. [The controversy capital of stealth feminism in higher education](#). ACME: An International Journal for Critical Geographies 16:34-58,

H.B. O'Neill and C.R. Burn. 2017. [Impacts of variations in snow cover on permafrost stability, including simulated snow management, Dempster Highway, Peel Plateau, Northwest Territories](#). Arctic Science.

D. Michael Ray, Ian R. MacLachlan, Rodolphe H. Lamarche, and KP Srinath. 2017. [Economic shock and regional resilience: Continuity and change in Canada's regional employment structure, 1987-2012](#). Environment and Planning A. DOI:10.1177/0308518X16681788

Nick Revington. 2017. [Pathways and processes: Reviewing the role of young adults in urban structure](#). The Professional Geographer. dx.doi.org/10.1080/00330124.2017.1288574

Daniel H. Shugar, John J. Clague, James L. Best, Christian Schoof, Michael J. Willis, Luke Copland and Gerard H. Roe. 2017. [River piracy and drainage basin reorganization led by climate-driven glacier retreat](#). Nature Geoscience. DOI:10.1038/ngeo2932

John J. Yackel, Jagvijay P.S. Gill, Torsten Geldsetzer, Mark Christopher Fuller and Vishnu Nandan. 2017. [Diurnal scale controls on C-band microwave backscatter from snow-covered first-year sea ice during the transition from late winter to early melt](#). IEEE Transactions on Geoscience and Remote Sensing. DOI:10.1109/TGRS.2017.2682859

## Other “Geographical” News

**Co-writing with your supervisor – the authorship question:** A doctoral researcher recently told me, and several others who were in the room at the same time, that he wanted to write a journal article. Good eh. No. Not really. The trouble was that his supervisor insisted on being named as co-author even though they weren't contributing anything. The response from those listening was immediate, and negative. “No” came a chorus almost in unison, together with a few audible intakes of breath. This is far from the first time I've heard of this. And in fact, I do know of some disciplines where it is automatically assumed that a supervisor's name will go on whatever a doctoral researcher publishes, regardless of whether they have even looked at the paper. This default authorship practice seems to have its roots in the view that: (a) the conversations held in supervision inevitably mean that some of the supervisor's knowledge is taken up by the supervisee, and (b) the supervisor's intellectual contribution to the doctoral researcher's project needs to be acknowledged through being named as co-author. But I've also heard some of my colleagues put exactly the opposite view – that the supervisor shouldn't 'interfere' with their PhDer's publications and should never co-write and shouldn't ever appear as co-author. So the question of writing with your supervisor is contentious territory. There aren't clear cut policies and actually precious little discussion. [Patter](#)

**Ocean currents are sweeping billions of tiny plastic bits to the Arctic:** With so few people, you'd expect the Arctic to be a plastic pollution-free zone, but new research suggests that's far from the truth. Researchers exploring the Arctic Ocean and found that the waters are rife with plastic debris. Although the plastic concentrations were overall low, they located a specific region located north of the Greenland and the Barents seas with unusually high concentrations. It seems that the plastic is riding up to the pole with the Thermohaline Circulation, a “conveyor” belt ocean current that transports water from the lower latitudes of the Atlantic Ocean toward the poles. The researchers estimate that the amount of plastic in that area is in the hundreds of tons, made up of hundreds of thousands of the tiny pieces per square kilometer. And the scale may be even larger, according to the researchers, due to plastic that may have accumulated on the floor of the ocean in the region. [Smithsonian.com](#) | [ScienceAdvances](#)

**For academics with depression, the student feedback process is hell:** Students who declare that they hate me (or far worse) could have legitimate concerns. But under the current system, professors must make the move in their mind from “this student hates me” to “I can improve by balancing my written critiques with more overt encouragement” on their own. And for those of us in the grips of mental illness, traversing that chasm without strong and thoughtful support from university administration and colleagues may be impossible. [The Guardian](#)

**Set in Stone: Sto:lo ancestors' spirits live in Fraser Valley landmarks:** Naxaxalhts'i, also known as Sonny McHalsie, stands precariously close to the edge of a cliff. He's capturing an iPhone panorama to share with his Facebook friends. This is Th'exelis. It is one of more than 100 sites where Sto:lo people believe their ancestors were transformed to stone. These sites contain living spirits, or Shxweli, and stand as cautionary tales from their ancestors. And Th'exelis' story is one of Sonny McHalsie's favourites to tell. Here, the transformer Xa:ls did battle with Xéylxelamós, a medicine man who used his powers selfishly. Xa:ls transformed him into a stone in the middle of the Fraser River. The scratch marks left by Xa:ls are visible in the stone below McHalsie's feet. McHalsie has dedicated his career as a cultural leader and historian to collecting and sharing transformer stories — all in hopes of protecting his people's sacred sites that are under constant threat. [CBCNews](#) | [Indigenous](#)

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## Some Not So “Geographical” News



[Edmontonians wake up to a winter wonderland ... in April](#)



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