



**News Digest of the Canadian Association of Geographers  
No. 443, May 10, 2017**

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**U Waterloo's Chris Fletcher on the jet stream and extreme weather:** Last fall, a massive storm hammered Windsor, inundating streets and houses across the city. The record rainfall flooded more than 1,700 homes, with damages estimated at \$108 million. The storm had gotten stuck in a stalled-out current, whirling above the city for two days as it dumped water on a small area. The event was characteristic of a changing climate. More of the same is in our future: with the Arctic heating up, the temperature difference between equatorial air and polar air is getting smaller — and it's doing weird things to the jet stream. That may seem like a too-vague term to use, but the fact is, scientific research into jet stream changes is being thrown for a loop by the rapid pace of global warming. It's still not clear how drastic changes to the jet stream will be. "We like to focus on things that are high-impact and affect our lives, but it tends to be something of a paradox that those things are less understood," says Chris Fletcher, an assistant professor of geography and environmental management at the University of Waterloo. Rain and snow storms fit into two broad categories, and climate change is affecting both profoundly. Thunderstorms, which occur in warmer months and stay close to the ground, generally dump water from the local area that's been drawn into the air via the hydrologic cycle. Conversely, cyclonic storms — the kind that hit Windsor last year — float higher in the sky and travel hundreds of kilometres. Those that pass through Ontario are, for the most part, carried by the jet stream. "The physics involved in those two types of storms are quite different," Fletcher explains. "Climate change, this wild card that's coming on-stream, may affect those two types of storms differently." But there's one thing that affects both types, and it's well understood: hot air is capable of holding more water than cold air. An increase of just 1 C raises air's water capacity by 7 per cent, according to a report from the National Centre for Atmospheric Research. The effect is known as the Clausius-Clapeyron relationship, and it could change the way storms function. "All other things being equal, if all you did was turn a dial and increase the water vapour, the intensity of precipitation events would increase," Fletcher says. "There's more fuel on the fire." [TVO Current Affairs](#)

**U Toronto's Matti Siemiatycki on Woodbine Racetrack lands:** Will a 'city within a city' at Woodbine ever happen? Woodbine Entertainment Groups says a "shovel could be in the ground" by 2018. But with a 275-hectare site and plans that potentially include a new music venue, hotels, condos, shops, offices, and sports fields, the scope is equivalent to a development the size of downtown Toronto. Matti Siemiatycki, Associate Professor in Geography & Planning thinks the development is still "a double edged sword." "I think the idea of thinking of it as a city in an urban sense is positive but we want our cities to be integrated and to connect and to be able to interrelate." [Toronto Star](#)

**Queen's U's Mark Rosenberg says Canada unprepared for housing needs of rising senior population:** As the number of seniors continues to grow, experts say Canada is failing to prepare for the housing and home care needs of an aging population. "We're so far behind where we ought to be, given we know these trends are happening and we've known about these trends for the past 20 years," said Mark Rosenberg, geography and planning professor at Queen's University and the Canada Research Chair in development studies. Statistics Canada 2016 census figures revealed that the country recorded its greatest increase in the proportion of seniors. The increase in the number of seniors, who now outnumber children, could have implications on future policy making, in particular the housing needs of the elderly. "This growth will require significant public and private sector investment in building the infrastructure to meet this demand," the report said. Currently, demand for different types of housing is growing faster than supply, Rosenberg said. "So that's one example of how we know we're failing," he said. Provincial governments put more money every year into home care services so people can stay in their homes, he said, but "we also know that virtually everywhere, demand for those services is outstripping what the provincial governments are prepared to supply." Rosenberg said there also needs to be greater thought put into rezoning commercial property no longer in use so it can be repurposed as residential buildings for seniors. He said that in Kingston, Ont., for example, a former shopping centre has been turned into a complex with a drug store, fast food outlet and a set of residential buildings and apartments for seniors. "It's being marketed to relatively wealthy and healthy older people, but there are lots of cities that won't do this kind of rezoning," he said. "There are some private sector firms who see this as an opportunity. How do we find other groups who can do the same sorts of things for the part of the older population that aren't healthy and wealthy," Rosenberg said.

[CBC News](#)

**U Calgary urban studies student Hailey Hewstan takes to the highway in self-directed study on sustainable community development:** One tent, a sleeping bag, a camping stove, two pairs of bike shorts, and one summer dress. These are at the top of the packing list for Hailey Hewstan, urban studies student and co-op engagement co-ordinator at UCalgary's Office of Sustainability. But it's not a vacation Hewstan is packing for. Instead, she will be cycling across Canada this summer as part of a self-directed study, for academic credit, on sustainable community development in multiple Canadian cities. As part of her research, Hewstan will explore how cycling advocates from bike co-operatives across Canada encourage bike lane development within their local municipalities, and how these practices can contribute to sustainable community development. As part of her preliminary planning, Hewstan has reached out to a number of organizations that she plans to connect with on her trip. While Hewstan is planning to do the majority of the trip alone and document her journey through a blog post, she will be regularly connecting with her professor, Dianne Draper, from afar. Draper is a professor in the Department of Geography and has research interests in Canadian environmental sustainability and sustainable tourism, so she is a perfect match for Hewstan's directed study. [UCalgary Today](#)

**Queen's U's Beverley Mullings and Leela Viswanathan recognized by the American Association of Geographers:** Leela Viswanathan and Beverley Mullings both credit their upbringing and their experiences as visible minorities with their drive to become outstanding professors determined to make the world a better place. "When I teach I make it a point that students hear multiple voices through readings, guests, and my own presence. As a representative of my discipline [planning] I am determined to build diversity into the teaching," says Dr. Viswanathan, who, along with Dr. Mullings, was recently recognized by the American Association of Geographers. The pair are both professors in the Queen's Department of Geography and Planning. Dr. Viswanathan received the association's Enhancing Diversity Award for her pioneering efforts toward encouraging a more diverse discipline over the course of several years, while Dr. Mullings received the Susan Hardwick Excellence in Mentoring Award for demonstrating extraordinary leadership in guiding the academic growth of her students and junior colleagues. [Queen's Gazette](#)



**Western geographers** are among 2016 recipients of the prestigious Henry Cowles Award for Excellence in Publication in Biogeography for the 2016 paper "[Agriculture causes nitrate fertilization of remote alpine lakes](#)" in *Nature Communications*.

**U Guelph doctoral candidate Josie Wittmer** who was awarded a [Society of Woman Geographers](#) fellowship for Dissertation Research. Josie's advisor is Kate Parizeau.

**Carleton U's Christian Peart** receives Department of Geography and Environmental Studies T.A. Excellence Award. Christian is an M.Sc. student under the supervision of Dr. Stephan Gruber. He is looking at accurately and effectively quantifying permafrost thaw with the use of a terrestrial laser scanner in man-made and tundra environments. His research is important because as permafrost thaws the surface can change, which will cause the surface cover to change too. [Carleton DGES](#)

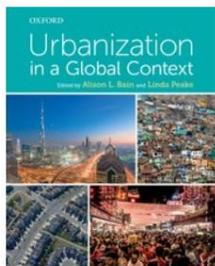
**McGill U's Michelle Maillet** awarded McGill's Arts Undergraduate Society advising award for 2016-2017.

**Memorial U Geography graduate awards to Caitlynn Beckett** (Alan G. MacPherson Award for Graduate Research in Cultural Geography) and **Anna Crofts** (Joyce C. MacPherson Award for Graduate Research in Physical Geography).

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## New Book

**Alison Bain and Linda Peake (Editors). 2017. [Urbanization in a Global Context](#). Oxford University Press. 496 pages. ISBN: 9780199021536**



*Urbanization in a Global Context* is a contributed text that helps Canadian students understand the process of urbanization by examining cities outside Canada across the global North and South. Truly international in its approach, it emphasizes the interconnectedness of urban places and fosters analysis that identifies the similarities and differences between cities in different world regions. Each chapter focuses on different contemporary urban issues - ranging from urban policy, climate change, and gender to transportation and water governance - and introduces current urban scholarly debates, grounding them in international case studies. How these issues resonate with the Canadian urban context is discussed in text boxes, which employ descriptive accounts, drawing on examples from a selection of small-, mid-, and large-sized Canadian cities. Activities and questions at the end of each chapter prompt students to collaborate with peers to further critically reflect upon how these urban issues could relate to their lived experience in Canadian cities.

## Hot Papers by Canadian Geographers

Mathieu L. Bourbonnais, Trisalyn A. Nelson, Gordon B. Stenhouse, Michael A. Wulder, Joanne C. White, Geordie W. Hobart, Txomin Hermosilla, Nicholas C. Coops and Farouk Nathoo. 2017. [Characterizing spatial-temporal patterns of landscape disturbance and recovery in western Alberta, Canada using a functional data analysis approach and remotely sensed data](#). Ecological Informatics. doi.org/10.1016/j.ecoinf.2017.04.010

Laura German, Ariane Goetz, Tim Searchinger, Gustavo de L.T. Oliveira, Julia Tomei, Carol Hunsberger and Jes Weigelt. 2017. [Sine Qua Nons of sustainable biofuels: Distilling implications of under-performance for national biofuel programs](#). Energy Policy. doi.org/10.1016/j.enpol.2017.04.013

Jill E. Harvey, Dan J Smith and Thomas T Veblen. 2017. [Mixed-severity fire history at a forest-grassland ecotone in west central British Columbia, Canada](#). Ecological Applications. DOI:10.1002/eap.1563

M.E. Isaac and P Matous. 2017. [Social network ties predict land use diversity and land use change: a case study in Ghana](#). Regional Environmental Change. DOI:10.1007/s10113-017-1151-3

Lauren Jewett, Ario Mirian, Ben Connolly, Frank L. Silver and Demetrios J. Sahlas. 2017. [Use of geospatial modeling to evaluate the impact of telestroke on access to stroke thrombolysis in Ontario](#). Journal of Stroke and Cerebrovascular Diseases. doi.org/10.1016/j.jstrokecerebrovasdis.2017.03.023

Joseph Kangmennaang, Rachel Bezner Kerr, Esther Lupafya, Laifolo Dakishoni, Mangani Katundu and Isaac Luginaah. 2017. [Impact of a participatory agroecological development project on household wealth and food security in Malawi](#). Food Security. DOI:10.1007/s12571-017-0669-z

Josh Lepawsky, Erin Araujo, John-Michael Davis and Ramzy Kahhat. 2017. [Best of two worlds? Towards ethical electronics repair, reuse, repurposing and recycling](#). Geoforum 81:87–99.

Luisa Liucci, Laura Melelli, Cristian Suteanu and Francesco Ponziani. 2017. [The role of topography in the scaling distribution of landslide areas: A cellular automata modeling approach](#). Geomorphology. doi.org/10.1016/j.geomorph.2017.04.017

Colin P R McCarter and Jonathan S Price. 2017. [The transport dynamics of chloride and sodium in a ladder fen during a continuous wastewater polishing experiment](#). Journal of Hydrology. doi.org/10.1016/j.jhydrol.2017.04.033

Chloe Fox Miller. 2017. [The contemporary geographies of craft-based manufacturing](#). Geography Compass. DOI:10.1111/gec3.12311

K. Bruce Newbold and W Mark Brown. 2017. [Human capital research in an era of big data: Linking people with firms, cities and regions](#). In: Regional Research Frontiers. Edited by: Randall Jackson, Peter Schaeffer. Springer International Publishing 1:317-328.

Sinikka Okkola and Cédric Brunelle. 2017. [Has the oil boom generated new problems of housing affordability in resource-driven agglomerations in Canada? A case study of St. John's, Saskatoon, Calgary, Edmonton, and Fort McMurray, 1991–2011](#). Urban Geography. doi.org/10.1080/02723638.2017.1314174

Shubha N. Pandit, Bryan M. Maitland, Laxmi K. Pandit, Mark S. Poesch and Eva C. Enders. 2017. [Climate change risks, extinction debt, and conservation implications for a threatened freshwater fish: Carmine shiner \(\*Notropis percobromus\*\)](#). Science of The Total Environment 598:1–11.

Michel Paquette, Daniel Fortier and Warwick F. Vincent, 2017. [Water tracks in the High Arctic: A hydrological network dominated by rapid subsurface flow through patterned ground](#). Arctic Science.

Nicolas Pelletier, Julie Talbot, David Olefeldt, Merritt Turetsky, Christian Blodau, Oliver Sonnentag and William L Quinton. 2017. [Influence of Holocene permafrost aggradation and thaw on the paleoecology and carbon storage of a peatland complex in northwestern Canada](#). The Holocene. DOI:<https://doi.org/10.1177/0959683617693899>

Sarah Rotz. 2017. [‘They took our beads, it was a fair trade, get over it’: Settler colonial logics, racial hierarchies and material dominance in Canadian agriculture](#). Geoforum 82:158–169.

Doerthe Tetzlaff, Sean K. Carey, James P. McNamara, Hjalmar Laudon and Chris Soulsby. 2017. [The essential value of long-term experimental data for hydrology and water management](#). Water Resources Research. DOI:10.1002/2017WR020838

Ian J. Walker, Robin G.D. Davidson-Arnott, Bernard O. Bauer, Patrick A. Hesp, Irene Delgado-Fernandez, Jeff Ollerhead and Thomas A.G. Smyth. 2017. [Scale-dependent perspectives on the geomorphology and evolution of beach-dune systems](#). Earth Science Reviews. doi.org/10.1016/j.earscirev.2017.04.011

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## Other “Geographical” News

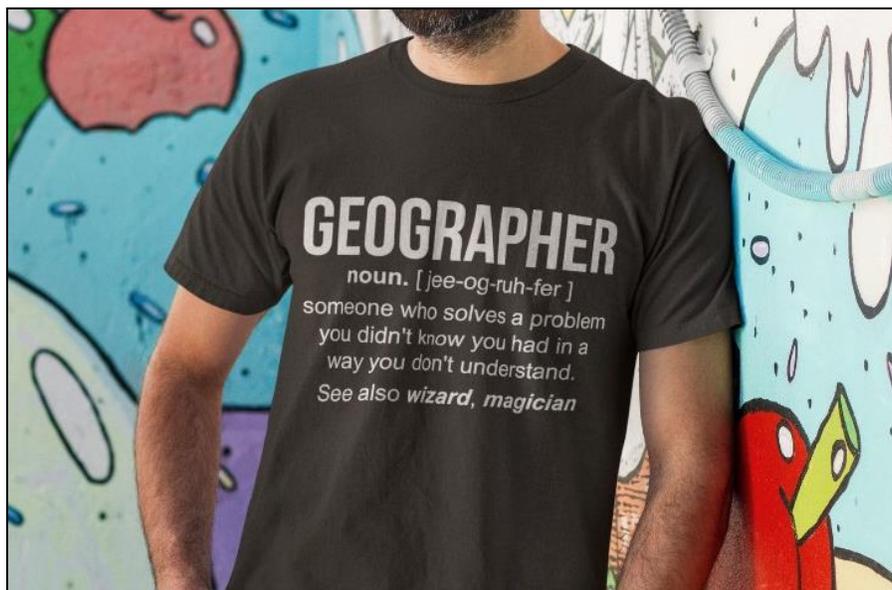
**Ottawa to universities: Improve diversity or lose research chair funds:** The federal granting councils that award the prestigious Canada Research Chairs say universities must offer up more diverse candidates for the honour or they will lose their funds. Directors of the program say new measures unveiled on Thursday would help to address the chronic underrepresentation of women, Indigenous people, those with disabilities and visible minorities among the award’s ranks. For example, only 28 per cent of chairholders at large universities are women, and they are more likely to be in the bottom of the program’s two funding tiers. Under the new rules, postsecondary institutions have until Dec. 15 to create an action plan on how to achieve more diversity among their candidates, and then they have another 18 to 24 months to ensure the demographics of those given the awards reflect the demographics of those academics eligible to receive them. [Globe and Mail](#)

**Why 30% more female professors still isn’t good enough:** Statistics Canada last week released new data hinting at an improvement in the gender balance of the country’s academic community. Indeed, there are 30% more women working as full professors in Canada compared to seven years ago. But ask individuals striving for a more equitable post-secondary system about the seemingly positive statistics and they all say the same thing: We’re not there yet. [Macleans](#)

**Unhealthy soil ‘a nightmare’ for farmers in Ontario and Southern China:** Whether they’re running vineyards in Ontario or tea plantations in China, farmers have a common enemy: chemically contaminated or poor quality soil leading to fewer crops. “Globally, most farms that have used agrochemicals for decades to boost crop production can remain polluted at various levels due to persistent accumulations of contaminants”. [Brock U News](#)

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## Some Not So “Geographical” News



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GeogNews Archives: <http://www.geog.uvic.ca/dept/cag/geognews/geognews.html>  
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