



Faculty Research Profile: Marc Vachon

by Steven Coutts

At first glance, Dr. Marc Vachon's body of research appears to have a bit of everything – from lofty utopian visions to everyday realities of urban living. What unites each of these threads is a keen interest in urban environments, their form as well as their underlying meanings.

After completing undergraduate degrees in both geography and philosophy, Marc went on to his doctorate at the University of Ottawa, where he studied Patrick Straram, a prominent Quebec counter-cultural figure and

utopian urbanist, whose visions are expressed by the situationist movement.

Since joining the Department of Geography in 2001, Marc has been involved in numerous research projects, such as looking at the role played by rental agencies in gentrifying West Broadway (with former student Jennifer Logan) and the architecture of downtown Winnipeg's parking structures.

As editor of the *Canadian Journal of Urban Research* since 2008, Marc gets a firsthand look at emerging research on cities. He is currently working on an article looking at the state of urban food accessibility research in Canada and future directions for research, in addition to being a member of a research group on mobility and accessibility.

Even though his role as Department Chair since 2012 keeps him busy, Marc still finds time to teach a couple of courses per year.

Marc's enthusiasm when it comes to the built urban form is hard to miss – as any students who have taken his courses can attest, he doesn't shy away from telling you if he thinks a building or public space is ugly (in fact, one might say he relishes the opportunity!). But it's all in the service of inspiring in his students a greater sense of place and appreciation for the aesthetics of our built environment.



Dr. Marc Vachon. (photo: W. Hiebert)

In this issue of **GeoMatters** we showcase the undergraduate research of Alex Goodman about tadpoles in Churchill and the research internship of Samantha Fraser in Argentina. Two of our graduates are also featured in our Alumni Profile (Brittany Hatch) and a publication on coastal Nova Scotia by Katie Hastings. This issue features a research profile on Dr. Vachon and his report on Department activities in his Chair Review. GESA reports on its upcoming events and we hear about an exciting field trip to Iceland in August. This issue also announces the PCAG meeting in Kenora, the Geography Students Colloquium and a new president for the Manitoba GIS Users Group. Finally it is with deep sadness we report the passing of Geography alumnus Jennifer Joy Logan.

Please feel free to pass this newsletter to anyone with an interest in geography. Individuals can also see **GeoMatters** at the Geography website, or keep up with us on Facebook (Department of Geography, University of Winnipeg) or on Twitter (@UWGeography).

If you have any suggestions for future newsletter articles, please feel free to contact us at: geography@uwinnipeg.ca

Editors: Joni Storie & Weldon Hiebert

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THE UNIVERSITY OF WINNIPEG
DEPARTMENT OF GEOGRAPHY

<http://geography.uwinnipeg.ca>

Effects of temperature and water level changes on *Lithobates sylvaticus* tadpoles: A mesocosm experiment in Churchill, MB

by Alexandra Goodman

Climate warming in northern regions has resulted in warmer water temperatures and shorter hydroperiods in wetlands, producing potentially adverse effects on amphibian inhabitants. Such environmental stressors and habitat alterations will have significant consequences on wood frog (*Lithobates sylvaticus*) reproduction and tadpoles that rely on wetlands for growth prior to metamorphosis. The purpose of this mesocosm experiment was to investigate the activity and growth rate response of wood frog tadpoles to a warmer subarctic environment in Churchill, MB (58.7°N, 94.2°W).

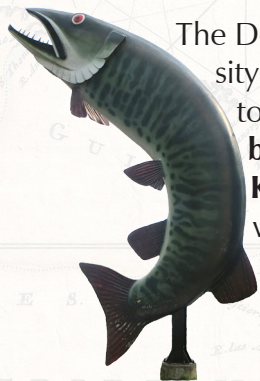
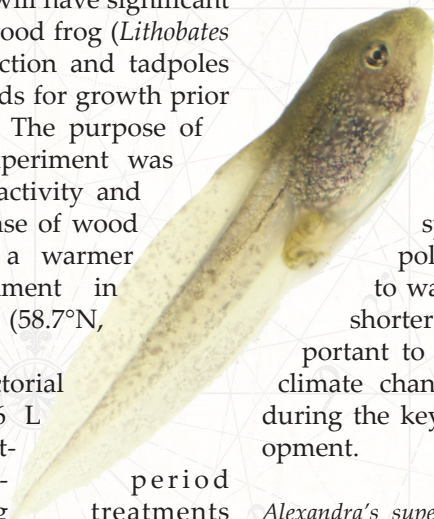
The 2x2 factorial experiment in 416 L stock tanks consisted of three hydroperiod and three warming treatments over a 65-day larval period to determine the response of tadpole activity and growth rate. Water levels were adjusted manually every three days to change hydroperiod length (45, 55 and 65 days) while aquarium heaters (0W, 50W, and 100W) increased water temperatures. Activity observations were conducted every four days at 0:00 and

12:00 (CT), while growth rate wet-mass was collected on a 15-day cycle. Preliminary results indicate that tadpoles respond to warmer temperatures by increasing growth rates in the early stages of tadpole development.

Higher rates of larvae activity are anticipated in tanks with shorter hydroperiods and warmer temperatures.

Identifying the response of wood frog tadpoles in northern regions to warmer temperatures and shorter hydroperiods is important to determine the effect of climate change on wetland habitat during the key stages of larval development.

Alexandra's supervisors for her research are LeeAnn Fishback (Churchill Northern Studies Centre) and Nora Casson (UW Geography). Alexandra will be presenting the results of her undergraduate research at the Geography Students Colloquium. The Colloquium will be held at the University Club (4th Floor Wesley Hall) on Friday, March 27 from 1-4 pm. All are welcome. (tadpole photo: Brian Gratwicke)



The Departments of Geography at Lakehead University and the University of Winnipeg are pleased to co-host **PCAG2015** to be held from **September 25-27, 2015** at the **Kenora Lakeside Inn in Kenora, Ontario**. Details about the conference will be available soon on the PCAG website (<http://pcag.uwinnipeg.ca>).

by GESA Executive

GESA has some exciting news to mention for this Winter Term! Our Beer Night last fall was a resounding success and we managed to fundraise a decent amount of money for our Eco-Grant and other activities. We would like to thank Trevor at Carbonzo's for making Beer Night such a success by having some of his top beer vendors supply us with samples throughout the night.

GESA would also like to mention that even though our GESA Hoodie sales didn't bring in a lot of fundraising money, they still look awesome and everyone is incredibly happy with their purchase!

GESA would also like to announce our upcoming **Annual Trivia Night on Thursday, March 19th at 7pm at Carbonzo's**. There will be a silent auction, 50/50 draw and three rounds of absolutely awesome (and challenging) trivia. So, come on out and support GESA, win some prizes, network with professors and have a wonderful evening! Bring your significant other, family and friends to partake in this awesome evening of Trivia and Prizes...oh, and beer and pizza! Tickets are \$10 and are available from GESA.

As of writing, we have yet to determine the winner of this year's Eco-Grant but we are looking at two amazing and very interesting proposals that have been submitted.

One very last and important item that needs to be mentioned. GESA holds weekly meeting on Fridays during the free period and we encourage ALL Geography and Environmental Studies and Sciences students to come out to the meetings and participate. Students may not know this but even if you haven't attended any meetings or participated in any events, you are STILL a member of GESA! Every event we have and all the fundraising we do goes to improving our communication and relationship with professors and aims to help improve campus sustainability at U of W! So, you are ALL members of GESA! Come on out and support your peers and get involved! Plus, now is the time to start thinking about whether you would like to run for GESA executive positions for 2015-2016!!

That's all for this edition of the newsletter! See you at Trivia Night!

Alumni Profile: Brittany Hatch (Class of 2009)

by Brittany Hatch

It has been nearly six years since I graduated from the University of Winnipeg, and at that time I had no idea how far an Arts degree in Geography would take me. I studied place attachment in Yellowknife, Northwest Territories, and found that people chose to stay in the north in part for the economic opportunities but primarily because of the strong social connections they developed. After I graduated I returned to Yellowknife where I spent four years becoming exactly the type of person I studied!

For the first year, I worked for an aboriginal organization doing everything from traditional knowledge mapping to teaching computer literacy to elders. I spent the next three years working for the Government of the Northwest Territories where my work centered on the economic driving force of the NWT, mining industry. I reviewed environmental assessments for diamond, gold and rare earth mining developments, represented the government at public hearings and community advisory boards, and assisted in the negotiation and implementation of socio-economic agreements with large mining companies. When I wasn't working, I spent my time discovering the north – its people, culture, and landscapes – and met my English husband at a Scottish dance (how's that for Geography?!).

Despite the deep attachment we both made to Yellowknife and the



Brittany and friend. (photo courtesy B. Hatch)

North, we eventually left seeking new opportunities in Canmore, Alberta, before I got a job with the Government of Manitoba. Back in Winnipeg, I am part of the team at Aboriginal and Northern Affairs that coordinates Crown Consultations and implements hydro settlement and Treaty Land Entitlement agreements.

While I have no doubts of how far my degree will continue taking me, for the next while I will be busy teaching our daughter all about Geography!

Alumni published report on coastal Nova Scotia

by Danny Blair

Katie Hastings, MSc (UW Geography Alumni 2007; BSc Honours) also earned a Master of Marine Management from the Department of Oceanography at Dalhousie University in 2010. Katie recently published a technical report on the ecological and biological significant areas in coastal Nova Scotia. Katie did an undergraduate thesis with Dr. Danny Blair and we are very proud to showcase alumni accomplishments such as Katie's publication in the newsletter.

From the abstract:

With the passage of the Oceans Act (1996), the Government of Canada has committed to an integrated, ecosystem-based approach to oceans and coastal management. One important element of this approach is the identification of Ecologically and Biologically Significant Areas (EBSAs), which are areas of especially high ecological or biological significance where greater risk aversion is required in the management of activities. EBSAs are considered in a broad range of management processes, including the development of marine protected area networks. This report describes a refined set of EBSAs for the Atlantic coast of Nova Scotia, which falls within the DFO Maritimes Region. It builds on past studies and outlines the ecological or biological rationale for how each area satisfies the DFO EBSA criteria. Two types of EBSAs are described, including: (i) broadly-distributed, single-feature EBSAs, which are discrete significant features or processes that occur throughout the Atlantic coast sub-region (e.g. Piping Plover critical habitat) and (ii) site-specific, multiple-feature EBSAs, which are areas identified for their unique combination of exceptional features. Thirty-eight site-specific, multiple-feature EBSAs are described.

Hastings, K., M. King, and K. Allard. 2014. Ecologically and biologically significant areas in the Atlantic coastal region of Nova Scotia. Can. Tech. Rep. Fish. Aquat. Sci. 3107: xii + 174 p.

Everything you ever wanted to know about ecologically and biologically significant areas in coastal Nova Scotia, but were afraid to ask: <http://www.dfo-mpo.gc.ca/Library/355312.pdf>

Jennifer Joy Logan (July 13, 1982- January 17, 2015)

It is with deep sadness that the Department learned of the passing of one of its alumni, Jennifer Joy Logan. The Department of Geography and the University of Winnipeg sends its heart-felt condolences to the family and friends of Jennifer. Jennifer completed her BA Honours in Geography and International Development Studies and worked for the student housing service at U of W. She earned her Master's degree in urban planning at York University. Jennifer traveled the world (Europe, India, Saudi Arabia, Tibet) and also spent three months in Nepal as a volunteer tutoring trafficked women and girls. Jennifer's adventurous spirit, laughter and joie de vivre will be missed.

The Department of Geography Chair Review

by Dr. Marc Vachon

In late August 2014, the Department of Geography held a field course in Churchill. Seventeen (17) students from Geography, Biology and Education along with Geography staff and faculty members spent 10 days at the Churchill Northern Studies Centre. Students did fieldwork, research, presentations and posters ranging from meteorology, urban and cultural studies, biogeography, geology and hydrology. Victoria Jonatanson and Drew Curtis have their results posted at the Assiniboine Zoo's Journey to Churchill exhibit.

In September 2014, faculty and students attended the annual Prairie Division of the Canadian Association of Geographers (PCAG) meeting at the Elkhorn Resort at Riding Mountain National Park. Once again, the University of Winnipeg was represented by the largest contingent of faculty and students. The Department also won many prizes in the annual slide competition. The next PCAG meeting will be held in Kenora (Ontario) and will be co-hosted by the Department of Geography of the University of Winnipeg and Lakehead University. We are looking forward to this event and will keep you posted through our website and newsletter.

In the last two years, our Lab Fund budget permitted the Department to update and replace equipment in our physical labs and expand new ones. This year alone, we were able, finally, to buy two new microscopes. This is part of a long-term process to update all the microscopes in the Department of Geography. However, if there are any donors out there who would like to see this happen sooner, feel free to contact me.

As per our Strategic plan, we are in the process of revamping our Human and Physical Geography curricu-

lum. One aspect of this curriculum organization is to determine streams, for example water resources or urban planning, to better serve our student education needs and careers. Furthermore, this means that in the next three years, we will be introducing many new courses in Human and Physical Geography. While the process requires a certain amount of bureaucracy (meetings, forms and more forms, Senate approvals, etc.), the Department is looking forward to these changes and the creation of strong geographical educational streams that optimize our faculty specialties and student career paths.

GESA did a major clean up of the student lounge and bought some new furniture and a lamp. In the fall, GESA organized a very successful beer tasting fund-raiser at Garbonzo's U of W Anx. The next upcoming event is the very popular trivia night that will be held the March 19th at Garbonzo's at U of W Anx. Rumours abound that some alumni are already organizing a team for this event!

I am pleased to announce that Dr. Bill Rannie (retired in 2014) was admitted as a Fellow of United College. The whole Department would like to congratulate Bill on this prestigious recognition from the University of Winnipeg. Dr. Rannie was featured in GeoMatters of spring 2014 (<http://geography.uwinnipeg.ca/newsletter.html>).

Finally, you are all invited to attend our Honour's Thesis Colloquium March 27th from 1:00 to 4:00 at the University Club (4th floor Wesley Hall). Presentation will range from studies on the Canadian Geographic Journal, urban green space and remote sensing, a mesocosm experiment in Churchill, MB, and perceptions of landscape and identity in post-war Manitoba

Is Iceland a "Gneissland"?

by Weldon Hiebert

Field trips have long been an integral part in the study of geography. Whether it is an urban walking tour of downtown Winnipeg or collecting samples in the polar bear-infested tundra of Churchill, students get a chance to apply classroom theory to real life situations.

This year the Geography Department will take field trips to a new level as a group of students, faculty and staff travel to Iceland and explore its physical and cultural landscapes. The 11-day outing will take trip participants on a driving tour along Iceland's Ring Road, a 1200 kilometre coastal journey which circles the island. The trip will take place during the last week of August and the first week of September.

The Iceland field trip is led by Prof. Buhay with a focus on the geology of the region (this trip is not for course credit). Situated along the boundary of the North American and Eurasian plates, Iceland is a living laboratory of volcanic geology and sub-arctic geomorphology. The trip will focus on how these physical factors formed this unique environment and how the inhabitants have adapted to the ever changing dynamics of plate tectonics and the harsh northern climate creating a "Viking" culture which terrorized the European continent as well as NFL football teams.

Is Iceland a gneissland? Apparently not. The volcanics of the island are mostly basaltic in nature. Though not a gneissland, we are certain that Iceland is a "nice-land"!

Next fall trip participants will play host to a public lecture showcasing their experiences and pictures of their Icelandic travels. Stay tuned for details.

Ísland er gott land!

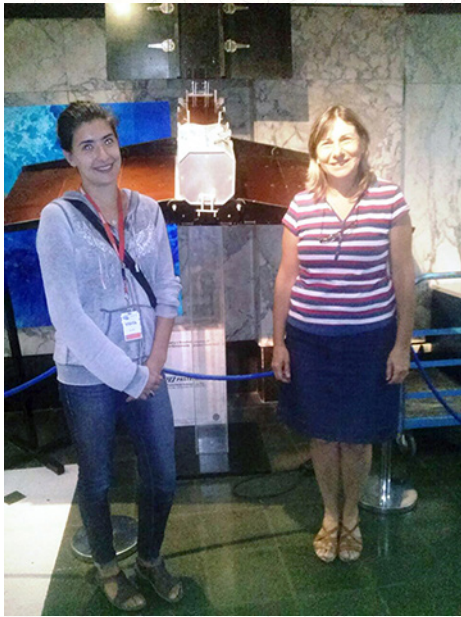


"I love hiking in Iceland most, there are lots of brilliant paths."

— Bjork

2015 Research Internship from Buenos Aires, Argentina

Hi, I am Samantha Fraser, an undergraduate student in Geography who is graduating in May and spent six weeks in Buenos Aires at the Argentina space agency (CONAE). I was awarded a \$4,000 Research and Internship from the Inter-American Institute for Cooperation on Agriculture (IICA) to pay for my travel and accommodations. Being a smart geographer, I knew to conduct my research in January-February, sum-



Samantha Fraser (left) and Dr. Graciela Salinas Salmuni (right) with the Argentina SOACOM radar satellite model. (photo courtesy S. Fraser)

mer in the southern hemisphere when it was -34°C in Winnipeg.

My research builds upon work started 15 years ago when Dr. Joni Storie received an IICA research internship to collaborate with Dr. Graciela Salinas Salmuni for a project to map vineyards using radar remote sensing data. For the past 6 weeks, I have been working with Graciela on her research to map and monitor wet snow cover on glaciers in the Andes. The meltwaters from the snow regime of the Andes of Argentina produce the only substantial water source for human, agricultural and hydroelectric power production in the arid and semi-arid regions of the country. Dr. Salmuni developed a remote sensing method to detect wet snow cover using radar data. This product contributes to developing a management strategy for optimizing storage and associated infrastructure which provides a level of water security for the San Juan region. This remote sensing method is important for estimating the volume of water which is coming off the mountains for a given hydrological cycle.

The method requires two ascending/descending pairs of RADAR images in the same location with one in the winter and one in the summer. During the six week internship, I processed two years (2013-2014) of radar images, combined these winter-summer im-



Samantha Fraser (left) and Paige Zeke (right; also a Geography graduate at UW) at Iguazu Falls. (photo courtesy S. Fraser)

ages and applied a filter for the winter images using dB threshold values to determine wet snow cover. Six weeks is not much time but I was able to execute the new process for classifying the images and automate a large portion of the process using programming within the Next ESA SAR Toolbox software. Now time to travel and enjoy the rest of the country!



MGUG
Meeting Place for the GIS Community

Congratulations to Geography alumnus Jeremy Sewell who recently was named president of the Manitoba GIS Users Group (MGUG). The Department wishes Jeremy much success in his role as president. For more information about MGUG visit their web site at <http://www.mgug.ca/>

**GEOGRAPHY STUDENTS
COLLOQUIUM**

Friday, March 27, 2015

1:00 - 4:00 pm

**The University Club
(4th Floor Wesley Hall)**