

Earth Sciences Alumni Newsletter

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<http://earthsciences.laurentian.ca>

March 2009



Department of Earth Sciences students, staff and faculty on April 18, 2008.

Message from the Department Chair

Welcome to the inaugural issue of the LU Earth Sciences Alumni Newsletter! Perhaps not as glitzy as the recent U.S. Presidential inauguration but a true reflection of the department – our focus is to apply what we know best.

As a department, we've been around since 1963, a long period of time with just as long a list of alumni that have gone on to much bigger and better opportunities. The purpose of this newsletter is to develop a collective memory for all of us: where we've been, where we're at now and where we're heading. Despite the ups and downs in the markets and our own personal lives, the Department of Earth Sciences will always play an important part of those times.

We currently have 12 full-time faculty, three technologists and two administrative staff – a far cry of when things began those many moons ago. While the faces may have changed, when you consider the high quality of research, dedication to students and the commitment to making important contributions to the geosciences, this department clearly has a long history in making strategic decisions that continue to propel us all forward.

And speaking of moving forward, the department has been making great strides. We are in the process of hiring our third research Chair, the newest one in Exploration Geophysics; we were the first to develop a Ph.D. program at Laurentian; we've developed an outstanding B.Sc. Co-op program that serves to link our brightest and best students directly with Federal geological surveys and both local and national industry partners; we've developed a new stream in the environment that will work in parallel with the geology program that many of you are so familiar with, providing greater options to our students and a better reflection of what we do as a department. The overriding focus in our research, teaching and simple curiosity is still to foster that link that what we know and do best, applying our knowledge to the rocks themselves. We've become famous for our collective dedication to a strong field-based education and this is, and will continue to be, unwavering.

We hope that you can spend a minute to have a look at our newsletter. It brings us all great pride to see what has transpired in the past, where we might be in the future and to know that the department of Earth Sciences has, in some way, contributed to this incredible success.

Recent Highlights:

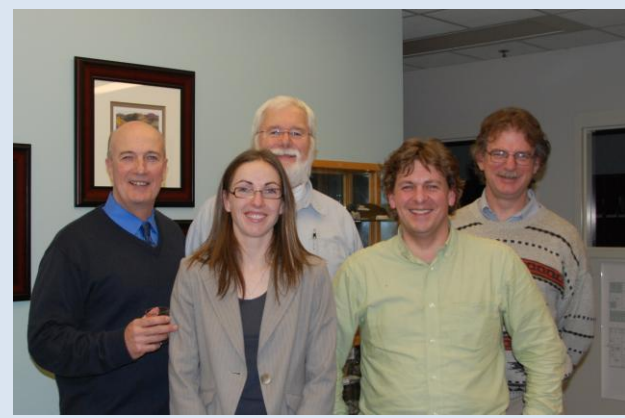
- *Michelle DeWolfe successfully defended the Department's first Ph.D. in Geology!!!*
- *Dr. Jim Davies was honoured with an Economic Geology Laboratory dedication ceremony*
- *MERC News and updates*



Dr. Andy McDonald,
Department Chairman

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Michelle DeWolfe successfully defends Laurentian University's first Ph.D. in Geology!!!



Michelle DeWolfe's thesis committee from left to right: Harold Gibson, Anthony Fowler (external examiner, Ottawa University), Michelle DeWolfe, Steve Piercey, and Bruno Lafrance.

On December 5, 2008, Michelle DeWolfe successfully defended her Ph.D. thesis and in so doing will become the first student to graduate from the Department of Earth Sciences' Ph.D. program in Precambrian Geology and Mineral Deposits this June. Michelle's thesis is entitled "Physical Volcanology, Petrology and Tectonic Setting of Intermediate and Mafic Volcanic and Intrusive Rocks in the Flin Flon Volcanogenic Massive Sulphide (VMS) District, Manitoba, Canada: Growth of a Paleoproterozoic Juvenile Arc" and was supervised by professors Harold Gibson, Bruno Lafrance and Steve Piercey. Michelle completed a B.Sc. at St. Mary's University in 2001 and an M.Sc. at Laurentian University in 2004. Michelle's academic career is one of excellence and scholarship having won a National Science and Engineering Research Council of Canada (NSERC) postgraduate scholarship in support of her M.Sc. research and the prestigious Canada Graduate NSERC scholarship in support of her Ph.D. research, which was also funded by an NSERC CRD grant, HudBay Minerals Inc., and the Manitoba Geological Survey. Michelle won the Juilan Boldy Award of the Mineral Deposits Division of the Geological Association of Canada

in recognition of her M.Sc. research at the Kidd Creek mine and she was the first recipient of the Mary Claire Ward Scholarship of the Prospectors and Developers Association of Canada in recognition of her mapping contribution to Canadian geology. Besides being a scholar, Michelle was also a varsity athlete and played with the Laurentian Lady V's, co-captaining the soccer team during the 2001 season. In August 2008, Michelle joined the faculty at Mount Royal College in Calgary as a tenure track Assistant Professor where she will be teaching in the college's new B.Sc. geology program. Michelle plans continue her research at Flin Flon this summer.

Dr. James F. ('Jim') Davies Economic Geology Laboratory Dedication

James F. ('Jim') Davies was the Department of Earth Sciences' first true economic geologist, a discipline he had an immense passion for. He joined Laurentian University in 1967 (having come from the position of Chief Geologist at The Manitoba Department of Mines) and remained a full-time faculty member before retiring in 1990.

Dr. Davies has been a passionate, dedicated, tireless researcher and teacher, supervising the training of a very large number of undergraduate and graduate students over the three decades he spent at Laurentian.

This award commemorates the remarkable and never-to-be-forgotten efforts of Dr. James F. Davies towards education, conducting high-quality research and building the Department of Earth Sciences at Laurentian University.



Dr. Jim Davies stands in front of the dedication plaque commemorating the Economic Geology Laboratory dedication, November 7, 2008.

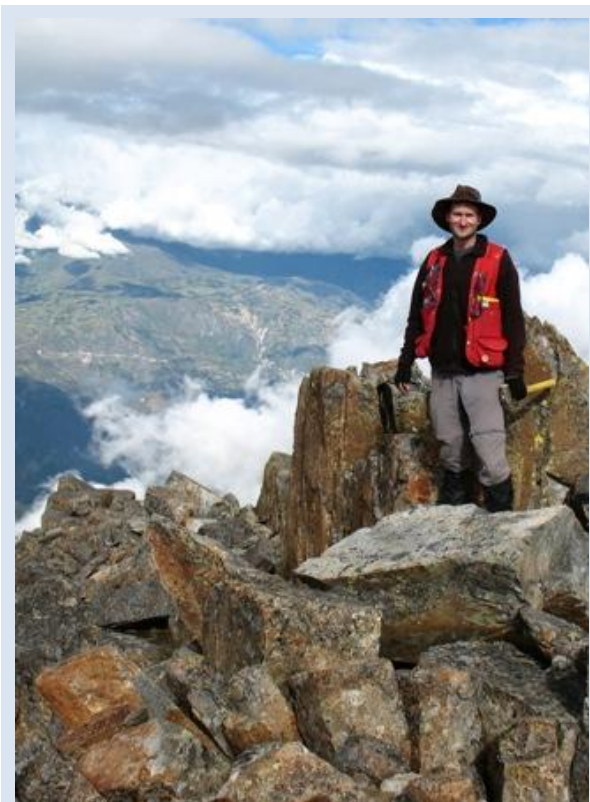
MERC News and Updates

MINERAL EXPLORATION RESEARCH CENTRE

MERC's mission, from inception, has been to conduct and promote cutting-edge, field-based, collaborative research on mineral deposits and their environments, and to educate and train highly qualified personnel for careers in the minerals industry, academia or government. As many of you know MERC has, during the past 4 years, focused its effort on raising the research and educational profile and research capacity of the Department of Earth Sciences (DES). In this regard MERC has been successful in raising \$1.35M from industry partners Vale INCO, Xstrata, FNX and Wallbridge to support the Chair in Exploration Geophysics, helped to design and develop the Co-Op Option within the Honours Geology program, and supported the development of an intra-Ontario University collaborative graduate curriculum in ore deposits and exploration that features modular courses developed by DES. Given these past successes MERC is now positioned to move forward with the guidance of an Advisory Board that consists of senior representatives from industry and government and is chaired by Dr. Tom Lane, CAMIRO Director and LU Adjunct Professor. Developing a 5-year business plan that will allow MERC to grow, achieve sustainability and evolve from a Departmental research centre to a stand-alone Research Centre while still maintaining close ties with DES will be MERC's first priority. For more information on MERC's research and education initiatives and activities please visit the website:

<http://merc.laurentian.ca>

Featured Alumni: Ryan Weston P.Geo., VP Exploration, Strait Gold Corp.



Ryan Weston mapping at 4900m elevation in north-central Peru.

Upon completing my M.Sc. at Laurentian, I have been busy working and traveling around the world exploring for various commodities with both major and junior exploration companies. My first position was with Falconbridge looking for PGEs in northern Ontario, Manitoba and Quebec. After this I worked for FNX Mining in the Sudbury north range at the McCreedy West mine. This was followed by a stint with TeckCominico exploring for mesothermal Au in the Red Lake area. Then I was off to the land down under working at Western Area's Flying Fox komatiite-hosted Ni-sulphide camp during the initial discovery of the down depth continuity to these deposits (now being mined). Upon my return to Canada, I began working with Aur Resources in Mexico at the La Verde porphyry Cu breccia deposit then to central Newfoundland to help with resource delineation at their Duck Pond VMS mine (finally getting to put some of that VMS knowledge to use!).

In late 2006 I married Lesley (Rose) Weston, a PhD in geology from University of Toronto and we moved to Bayreuth Germany in early 2007 as she pursued a postdoctoral position in experimental petrology at the University of Bayreuth. Prior to our move, I left Aur and began consulting for the junior mining industry. I have been working primarily for Strait Gold Corp since then exploring for epithermal Au-Ag and porphyry Cu-Au-Mo deposits in Peru. We moved back to Canada (Toronto) in June 2008 and in October of last year the newest addition to the family, our son Liam, was born. The last six years have truly been a whirlwind of travel and work, but I've enjoyed every location and the people I've met have been amazing.

**Ryan Weston, P.Geo.,
Vice President Exploration, Strait Gold Corp.
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Experiences at Laurentian University: Diana Kuiper, M.Sc. Candidate

Making the final decision to come to Laurentian University for graduate studies was very important to me. When I made my decision, the price of gold was going through the roof – unprecedented highs – and working in gold exploration meant job stability, a great salary and interesting work. Unfortunately, while working in industry, I felt the pace of my learning was slowing down and I did not have time to learn about other areas of geology that held my interest. I had visited Laurentian University a few times during my undergraduate studies, so I knew I liked the campus as it is a smaller school and I love being surrounded by lakes and trees. I found a project and a couple of supervisors that I believed would work for me: mapping mafic intrusions in the Blake River Group under the supervision of Dr. Phil Thurston and Dr. Harold Gibson.

So far, this project has been very interesting and a lot of fun. I spent the past summer field mapping near Rouyn-Noranda, QC. It was a challenging experience – the first time I have been in charge of a project (although working for the OGS in 2006 was very helpful). I have received a lot of support from

the MRNF, especially from Jean Goutier, to help me complete my field work. I am currently a little over half way through my thesis. Courses in igneous petrology, geochemistry, volcanology and magmatic ore deposits have given me a great background in the field of hard rock geology. Now I have moved on to the really exciting stuff – learning about global



Diana Kuiper (M.Sc. Candidate), shown right, and her field assistant, Hannah Burke (LU student) sitting beside an enclave of komatiite, summer 2008.

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If you have an item of interest, or any news of your activities (or those of your classmates), please let us know. Email submissions to des@laurentian.ca

Experiences at Laurentian University continued...

tectonic processes and geodynamic environments with Dr. Thurston.

I also manage to squeeze in enough time to act as president of the LU SEG student chapter. This past year we have had two invited speakers, Dr. William Chavez, of New Mexico Institute of Technology, and Dr. André Desrochers, from the University of Ottawa, to come to give excellent lectures for our department. I am currently helping Dr. Gibson organize a SEG chapter field trip this April to tour some of the silver deposits of the Sierra Madre Occidental, Mexico. Overall, the past year at Laurentian University has been a very enjoyable experience, and I am looking forward to the next few months and what they have in store for me.

Diana Kuiper, M.Sc. Candidate
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Experiences at Laurentian University: Mike Tucker, B.Sc. Candidate

Thus far, my experience in the co-op program here at Laurentian has been a great learning experience. I was accepted into the Laurentian B.Sc. co-op option in February 2008, and my first summer work placement was for the Geological Survey of Canada (GSC) for the TGI-3 Appalachian Project. Our work was on the Baie Verte peninsula in Newfoundland. I have had the opportunity to work with many learned people over the course of the summer.

The workshops that the program offers have also been very insightful. The first workshop that was held November 21 and 22, 2008 was a

fantastic introduction into resource evaluation and model construction. It was very informative detailing the processes and quality control that must be implemented in order to acquire accurate data. The second workshop that was held on February 7, 2009 presented a very unique perspective on the aboriginal issues that government and mining companies experience when working together toward a positive outcome. It was great in helping to understand the complexity of the issues that while attempting to mine and explore around aboriginal communities. The co-op option at Laurentian has been a great experience, and I look forward to the future workshops and placements for more dynamic and exciting learning experiences.



Right to left clockwise: Sebastien Castonguay, Mike Tucker, Ian Ames, Sara-Lise Underhay, Tom Skulski, Victoria Tschirhart, Bill Spicer, Yves Mousallum

Mike Tucker, B.Sc. Candidate
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Research on the Sudbury Structure

The Department of Earth Sciences (DES) and Mineral Exploration Research Centre (MERC) initiated the first phase of a new long-term research initiative on the Sudbury Structure in 2008. These new research projects complement six ongoing research projects on the Sudbury Structure by DES members. The three new student research projects are funded by CEMI (Centre for Excellence In Mining Innovation), and include a comparative study of mineralized and unmineralized breccias along the Whistle offset dike (supervisors B. Lafrance and A. McDonald), a study of the SIC contact metamorphic aureole and anatexis (supervisors D. Tinkham and M. Leshner), and a study of the structural and metamorphic history of the South Range (supervisors B. Lafrance and D. Tinkham). M.Sc. student Lindsay Bygnes is working on the Whistle offset dike project and a search is in progress for Ph.D. students to work on the other two CEMI-funded projects. The second phase of this research initiative on the Sudbury Structure is planned for the near future and will include research projects by several DES faculty. These new projects and continuing projects on Sudbury-related geology highlight a long-term research program initiative involving many DES faculty that is designed to take a new and modern look at the Sudbury Structure and the world-class ore deposits that it hosts. This new and modern look at the Sudbury Structure is not only fueled by a concentration of DES faculty whose expertise is being applied to Sudbury geology, but also by state-of-the-art laboratory facilities and instrumentation, including the recent addition of the ultra-high precision laser-ablation ICPMS system and clean lab (B. Kamber) that plays a pivotal role in many of the studies, a new micro-Raman spectrometer (M. Schindler) that is scheduled for delivery in the first half of 2009, a new experimental petrology laboratory (P. Jugo), a recently upgraded fluid-inclusion facility (D. Kontak) and a recently upgraded SEM facility (A. McDonald) with a new cathodoluminescence detector (D. Kontak). Please visit the Sudbury Geological Research Group web page for updates on DES/MERC research projects on the Sudbury Structure:

<http://merc.laurentian.ca/Laurentian/Home/Departments/MERC/SGRG.htm>