



grow exponentially



## Earth and Environmental Science Newsletter 2016

### *View from the Department*

Hello all alumni/ae and friends of the Earth and Environmental Science Department at Acadia



University. 2016 (and the first half of 2017!) was a year of large classes in all three programs, lots of conferences and the BIG NEWS – the Huggins Science Hall renovation! With over 160 majors the renovations could not

have come at a better or busier time. Though it is mostly an exterior upgrade, we will see wider corridors with seating on the 3<sup>rd</sup> floor of Huggins, a lot more glass on the east wall, new carpets and lights and some upgrades to our teaching classrooms.



Peir Pufahl's Canadian Foundation for Innovation-funded chemical sedimentology lab is also under construction; exciting times!

We love to keep in touch with the graduates from our programs. Whether you are working in the environmental or geological industries, or have used your degree to leverage a career in another area, or have discovered a completely different area to work in, or have retired – we want to know what you are doing. So, do drop us a note to [ees@acadiau.ca](mailto:ees@acadiau.ca) (that message goes to Ian Spooner), and help us to update our files. As always, we are very appreciative of your support of various field programs and the department in general. Funds from alumni help students attend field courses and field trips and help us maintain our teaching equipment and collections. We are grateful. As always please stay in contact with us and let us know how you are doing.

Ian Spooner, Department Head  
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### *Geo-Happenings*

Looking back over the academic year 2016-2017, we have far more happenings than we can hope to fit in here – see them all on our website: [ees.acadiau.ca/](http://ees.acadiau.ca/). The CSEG Challenge Bowl at the 2016 Atlantic Universities Geoscience Conference (Wolfville), hosted by the CSEG, returned to Acadia after an outstanding performance by Acadia students who won all the rounds by a wide margin. The

prize was an expensed trip to Calgary in the spring for two Acadia students to participate in the national championship, but the teams did so well that another team of two already in Calgary got to participate as well! Friday field trips took in most of southwest Nova Scotia, (look for more on them in the Fletcher Club section of the newsletter!). Participants remained enthusiastic even after rain began in the early afternoon. In addition to the field trips, a fourth group of students participated in a short course on "Using seismic data: from discovery to early field development", instructed by Dr. Fred Schroeder from Houston, Texas, and sponsored by AAPG. Saturday was a busy day with 16 oral presentations and 6 poster presentations by students and a closing banquet at the Old Orchard Inn, where we were given sage advice about what not to forget in our field kits by Amy Tizzard (BSc 2003), subsequently a contract geoscientist, working in Namibia, Yukon, Australia, climbing Kilimanjaro, and now at Nova Scotia Dept. of Natural Resources.



**The Acadia group at the AUGC.**

Later in the year, 14 students and 4 professors travelled to the annual mid-winter AGS meeting in Fredericton, where Stephanie Todd did the honours by winning the Sandra Barr Award for best oral presentation by a graduate student. Stephanie is studying the Bell Island ironstone and supervised by Peir Pufahl.

The end of the school year is always busy with all the field schools – the Geology Field Methods course operates locally for 6 days then at Camp Geddie, near Merigomish, NS, while the Environmental Science field school runs locally, and Peir Pufahl takes a group to a carbonate field school in Bermuda. The last is now a credit course, where students learn about limestone deposition on land and under the sea.



**Stephanie Todd receives the award from Rob Raeside**



**Exploring the coral reef around Bermuda.**

Other field trips through the year took in the wildly folded rocks at Walton and local highlights like Scotts Bay and The Ovens caves. The year-end dinner saw the Fletcher Club join up with the Environmental Science Student Association for a combined pot-luck dinner. Winner of the Cameron Award was Dillon

Langelaan who has been active in the club since his first year, and was a major organizer of the AUGC.



**Dillon Langelaan receives the Cameron Award from Ian Spooner.**

## EnviroNews

This year's Environmental Science field school had 15 students engaged in a variety of multidisciplinary hands-on field exercises. New modules included training in entomology, coastal wetland delineation and mycology. Environmental Science students with a biological aptitude often present their research to the Biology department and the university community at Biofeedback, Acadia's Biology Undergraduate Research Conference. This year Biofeedback week got off to a rough start with classes being cancelled and the university closed for two days because of howling blizzards.

Sarah Fancy presented her research on *Geum Peckii* (Eastern Mountain Avens) on Long Island, Digby County, Nova Scotia and Erica Gillis talked

about her research on the Comparative genetic analysis of *Crocyanthemum canadense*.



**ENVS field school students out on the Fundy marsh**

Bryanna Sherbo, presented at the 4<sup>th</sup> Annual Student Research and Innovation Conference on March 3 and 4. Her poster was entitled "Are polar bears and hunters competing for the same seals near Churchill, Manitoba?" and presented the results of her thesis and summer work in Churchill.



**Bryanna Sherbo discussing her poster at the Student Research Conference**

The latest universities issue of Maclean's contains a profile of Acadia University, which identifies one of the strengths as its environmental programs: "The environmental science program lets students approach issues from a scientific perspective, while the environmental and sustainability studies program looks at environmental policy." It also picks out Nelson O'Driscoll's ENVS4613 course,



Contaminants in the Environment where students can "study the history of chemicals released into the environment and the effects they have on ecosystems, as well as methods of assessing ecological risk" as one of the cool courses available here. We completely agree!

Acadia ENVS also participated at SETAC (Society of Environmental Toxicology and Chemistry) World conference in Orlando, Florida. Acadia was well represented by current Acadia students and alumni from Dr. O'Driscoll's mercury research lab.



Pictured here are (left to right) Erika Holland, Tom Sizmur, Cardy Saunders, Nelson O'Driscoll, Sara Klapstein, Jocelyn Kickbush, Erin Mann

## Alumni Spotlight: Emma Vost (B.Sc. 2008)

After graduating from Acadia with a BSc in Environmental Science in 2008, Emma took half a year off before returning to Acadia to work on a Master's degree with Dr. Nelson O'Driscoll.



Her research examined the rates of phytovolatilization of mercury in 14 different lakes in Kejimikujik National Park. Emma loved having an office and lab in the KCIC building and being able to stay in Wolfville for a few more years. She completed her Master's degree in 2012, as she worked part-time with the Nova Scotia Department of Natural Resources beginning in 2010 (continuing work from her co-op placement during undergrad in 2007), and secured a temporary position with them upon graduation. This led to various terms followed by full-time, permanent employment in 2014, and Emma now works as the province's Large Mammal Specialist in the Wildlife Division. This position means that Emma works closely with the provincial Large Mammal Biologist to ensure that the province's deer, bear, and moose populations remain at sustainable levels throughout the years. She helps manage the Large Mammal hunting program and collects hunter data throughout the year. Emma's favourite part about the position are the people she gets to work with, analyzing the yearly trends, and answering questions about the large mammal populations from hunters and other interested citizens. Sometimes she even gets to work on projects outside the office!

Emma continues to work closely with Acadia students, whether it is through the yearly Biology field course on Bon Portage Island, or by helping Honours and Masters students compile research data at the lab in Kentville. These days, Emma lives further down the Valley in Coldbrook, NS, on a small acreage with her partner Geoff, their three dogs and a horse; they are currently busy with renovations to their house to make way for a baby due in October 2017



**Snowshoeing in the Cape Breton Highlands looking for lynx and marten tracks, February 2015.**

## **WHERE ARE THEY NOW?**

*Some news of the adventures of our alumni, etc.*

**George Stevens (professor up to 1992)** called up in February to let us know that he recently remarried following the death of his wife Maeann a few years ago. He is enjoying married life again with Margaret Venator, living in Warner, New Hampshire. It sounds like he is also cleaning up, as he was packing up some structural geology specimens to send to us!

**Sara Akin (MSc 2012)** has married and moved to Melbourne, Australia working for ExxonMobil, where she started work immediately after graduating from Acadia. Having worked out of Houston on unconventional in Argentina, her new assignment is as a geophysicist and modeler working the Northwest Shelf in Australia.

**Stephanie Anderson (MSc 2009)** and **Kieran McDonald (BSc Envs 2008)** live in Tucson where Kieran works for Hexagon Mining as a software guru and Stephanie works for Freeport-McMoran as an exploration geologist hunting skarn-hosted copper deposits. They and their two sons seem to be enjoying the desert experience.

**Alexis Armstrong (BSc ENVS 2012)** has joined the IODP (Ocean Drilling Program) operations,

and over the winter was on board in the South China Sea, following a station stop in Guam.

**Chris Arsenault (BSc 2014)** was recently employed by Quantec Geoscience, a geophysics company that specializes in IP and MT surveys for the mining industry and by Crone Geophysics who specializes in borehole and surface electromagnetic surveys for companies in the mining industry. He is always in the field, travelling across Canada and the US.

**Thomas Bagley (BSc 2015)** worked for a while as technical sales representative selling products for acid digestion, ICP / ICP-MS, and a few other niches of inorganic chemistry out of Montreal, but has now started his Masters degree at Laurentian University in Sudbury.

**Paul Barker (BSc 2005)** has relocated from southern California to Ottawa, still working for ESRI but out of their Ottawa R&D office, doing software design and project management work. His two sons will now have to learn new winter sports!

**Kayla Boyd (BSc 2015)** lives in Dawson Creek and works in Fort St. John, BC, as an Environmental Consultant for Synergy Aspen Environmental, doing remediation reclamation and natural sciences work along a large HDD pipeline being constructed by Pembina. She has moved up from a Site Supervisor Assistant to a Site Supervisor and was completing a calculus course to be accepted as a GIT through APEGBC.

**Gerard Eddy (BSc 1993)** dropped by on a visit to the Valley from his home in Liverpool, NS, where he works as Information Specialist with the NS government. He is eager to renovate the teaching of spatial awareness in all its forms and enjoys working in schools, expounding on matters GIS.

**Joe Guerin (BSc 2004)** spent two challenging years working North Sea turbidites from Aberdeen, then switched companies from Talisman Energy (now Repsol) and made a move south to Lisbon where he is working for Galp Energia, responsible for the African assets, mainly offshore Mozambique and Angola.

**Russel Hiebert (MSc 2005)** works as an Instructor at the University of Manitoba in Igneous Petrogenesis, Geochemistry, and Sedimentology. He is also busy at home with twins, Lucy and Hope, now 2 years old.

**Nate Hinsperger (BSc 2011)** has been working in the environmental consulting industry, now in Alaska.

**Alexander Kaul (BSc 2010)** decided that Calgary was a bit too sprawled for his family and decided to pursue a simpler life in a different area, now with Golder Associates at their Terrace, BC, office as an environmental geologist.

**Shyann (LeBlanc) Watters (BSc 1992)** dropped by while her elder son was being recruited for the Acadia football team. She works as a mathematics teacher in Sussex, NB, and enjoys frequent trips to England and Wales.

**Rob MacLean (BSc 2006)** leads Ceilidh Environmental Ltd. in Calgary, noting that “the furious pace of the last 15 years has slowed down to a manageable workload”, giving him time to coach his son’s Timbits hockey team and U8 soccer team.

**Patrick McGinn (BSc 1990)** continues at the NRC in Halifax. A few years ago he became team lead for Algae Biotechnology, currently working on a fairly large program in Algal Carbon Conversion, which aims to develop processes and technologies for the large-scale conversion of CO<sub>2</sub> emissions from industry into value-added algal biomass residues.

**Frances (Mitchell) Rivers (BSc 2004)** moved from Houston to Doha, Qatar, where she has enjoyed taking her two boys on several trips across Qatar, learning about modern and ancient carbonate rocks, climbing sand dunes, checking out the sabkha environment, swimming in the Arabian Gulf, and observing stromatolites growing as well as those preserved in the rock record.

**Kevin Olshefsky (BSc 1984)** has retired from Falconbridge and has returned to NS from Africa. He’s building a new home in Gaspereau.

**Asia Reid (BSc ENGO 2016)** has started as a Geoscientist-in-training at Dillon Consulting in their Ottawa office.

**Allan Rennie (BSc 1991)** has been in Houston since 1996 working as a petroleum geologist, part drilling/formation evaluation engineer and these days’ full time manager of all. Upon encountering some PetroCanada logs off Sable Island he chanced upon the Acadia E&ES website and dropped us a line.

**Mark Slauenwhite (BSc GEOL 1984)** has moved back to the Valley from Peru, enjoying the opportunity to renovate an old farmhouse and barns. In his spare time he has taken a couple of Geology courses at Acadia and is contemplating undertaking a degree in Environmental Science.

**Jessica-Ann Turner (BSc 2015)** took work with Azimuth Environmental Consulting as a Hydrogeologist-in-Training, although noted it challenging to get a job, with everyone wanting someone fresh out of school, yet with 2-5 years of experience!

**Jordan Vervaeke (BSc 2014)** dropped by off on rotation from working on a gold prospect west of Matagami, Quebec. He works for Balmoral Resources with responsibilities in both the geological and environmental areas of the operation.

## Club News

### ESSA

#### E&ES Year-end Banquet



The Earth and Environmental

Science year-end banquet featured fine fare, good food, and several awards. Organized by ESSA, over 60 people from the department enjoyed a wide choice of food groups in the Curling Club.



After two tightly matched halves against ESST, a few dramatic mud slides, and many battle cries, E&ES reclaimed the Carson Cup from ESST 3-2!

### Fletcher

### Club

#### AUGC 2016



Congratulations to the Fletcher Geology Club who delivered an outstanding Atlantic Universities Geoscience Conference, 27-29 October 2016. Events started with the Thursday evening Challenge Bowl, hosted by the CSEG. The bowl returned to Acadia after an outstanding performance by Acadia students who won all of the rounds by a

wide margin over teams from St. Francis Xavier, Saint Mary's, UNB, and Memorial. Impressive! The prize is an all-expense-paid trip to Calgary in the spring for two Acadia students to participate in the national championship.



**Rob Raeside and windblown students on the South Shore**

## Final Thoughts

With the Huggins renovation in full swing and our labs all torn apart we are hoping to renovate a few of the rooms and repurpose some of our space on the third floor. As well, throughout our newsletter you will see reference to our continued commitment to field and lab studies at Acadia. Along with the microscopy labs in Huggins and the environmental lab facilities run by Nelson O'Driscoll at the Irving Centre, Peir Pufahl is developing a Canadian Foundation for Innovation proposal for a lab in chemical sedimentology. All labs require ongoing support. As always, if you are interested in contributing please let me know. Have a great summer!

A handwritten signature in black ink, appearing to read 'Ian Spooner'.

Ian Spooner, Department Head  
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## E&ES Support

*Alumni support has always been most welcome. Labs and field schools are vital components of the Department of Earth and Environmental Science (E&ES) curriculum that provides students hands-on experience essential to becoming productive and successful scientists. We presently offer the following field schools,*

- *offered in second year, a two week undergraduate Geology, Environmental Geoscience and Environmental Science field school based both on campus and at field camps*
- *a two-week senior geological field school based at the Gaelic College in Cape Breton, Nova Scotia*
- *a twelve-day carbonate systems field school based in both Nova Scotia and Bermuda.*

*Support for labs and the Rock Room is also important to us. If you would like to assist the E&ES Department in offering field schools, helping students to attend field schools, or contribute to our labs, please make a donation by completing this form or giving online at [www.giving.acadiau.ca](http://www.giving.acadiau.ca).*

Name: \_\_\_\_\_

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In support of Acadia University, Department of Earth and Environmental Science, I am pleased to make a ☐ one-time or ☐ monthly donation of \$\_\_\_\_\_ to the:

☐ Cape Breton Island Senior Geology Field School Fund

☐ Bermuda Field School Fund

☐ General Field School Fund (ENVS and GEOL)

☐ Where need is greatest (Rock Room, Field Equipment)

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