ENVIRONMENTAL SCIENCE

ALUMNI NEWSLETTER

Issue 2: January, 2013

Coordinator's Notes

Hello ENVS Alumni,

The last year has been a busy one! Our program continues to grow; as of December 2012 we had 68 students enrolled in Environmental Science, our first year ENVS 1013 class this year has 31 students in it!

The Morton Environmental Science Centre on Heckman's Island has been the focus of much activity. This summer we renovated the basement to accommodate more students, renovated the kitchen, added a bunk house and purchased at 17' yurt. We have established a strong relationship with Bluenose Coastal Action Foundation (Brooke Nodding, Director; ENVS 2000) and have embarked on a joint research educational and training initiative at the site. Cate de Vreede (ENVS 2005) will be coordinating a 6 year education initiative that is being sponsored by Michelin Canada.

We have established a new award for ENVS students. The Linda Lusby Award acknowledges an Environmental Science student normally in their graduating year whose support of the Environmental Science Program merits praise. The Environmental Science Student Organization (ESSO) and the Environmental Science Program Advisory Committee (ESPAC) jointly sponsor this award.

As always, please stay in touch and consider contributing to our newsletter. If you are ever back in the area please drop in and see us!

All the best in the New Year.

Dr. Ian Spooner– Coordinator of Environmental Science Program

ACADIA UNIVERSITY

Inside this issue:

Special points of interest:

- *New Acadia-Fleming transfer agreement*
- *Randal Evans wins 2012 Linda Lusby Award*

Acadia and Fleming College sign a transfer agreement

Graduates of the Sir Sandford Fleming College's Earth Resources and Environmental Technician programs can now enter the third year of designated Bachelor of Science degree programs at Acadia University thanks to an articulation agreement signed between the two institutions on Nov. 16. Upon meeting all of the necessary requirements, Fleming Earth Resources Technician graduates can enter the third year of Acadia's B.Sc. Geology degree while Environmental Technician graduates can enter year three of the B.Sc. in Environmental Science. This agreement will ensure an easy and efficient transition of qualified students from both programs to Acadia.

"This agreement formalizes a long-standing tradition of Fleming graduates going on to complete degrees at Acadia," says Linda Skilton, Dean of Fleming's School of Environmental and Natural Resource Sciences. "We believe this will attract more students to Fleming with the opportunity to complete both a diploma and degree. There is also the prospect of obtaining more work-related experience through Acadia's Co-operative Education program."

Over 40 students have in the past come from Fleming to Acadia, starting as early as 1985. Currently about ten students from Fleming are in program at Acadia. Programs at both schools have evolved over this time, permitting the smooth transfer arrangements now in place.

Professor Updates

Nelson O'Driscoll: Nelson continues as the director of the Center for Analytical Research on the Environment (CARE) and his role in graduate training through a shared NSERC CREATE graduate program in climate change research with several Atlantic universities. Graduate students Emma Vost (MSc) and Ravinder Pannu (PhD) graduated this year with theses examining mercury movements in freshwater and soil. Nelson welcomed new PhD student Sara Klapstein who is examining mercury and carbon dynamics in wetlands in collaboration with Dr. Risk (StFX) and Dr. Ziegler (MUN). Nelson attended SETAC North America in Long Beach California with students Adam Godfrey and Erin Mann who presented their work. Erin and Nelson will be heading to the Arctic this march to continue research on UV effects on mercury in snow. Nelson is also looking forward to an upcoming sabbatical leave (2013-2014) during which time he will perform mercury research on salt marshes in Portugal.

Dr. Nelson O'Driscoll

Ed Reekie: Ed took a half year sabbatical this year. Unfortunately, he didn't get a chance to do much travelling, but instead used the time to initiate a new research project and wrap up some old ones. However, he did get a chance to spend a few weeks in Toronto to visit his twin granddaughters who were born in July. Research in Ed's laboratory focused on two projects this year. The first project examined the impact of fungal endophytes on photosynthesis and growth in white spruce. Fungal endophytes are fungi that live within plant tissues, but do not result in any disease symptoms. Rather, the fungi may benefit the host plant in a number of different ways, conferring resistance to pathogens, repelling herbivores and enhancing stress tolerance. As a result, inoculating trees with an appropriate endophyte may be an effective management tool in forestry to reduce the use of pesticides and enhance the ability of our trees to tolerate future climate change. This project involved two ENVS students, Emily Walker and Victoria Postlethwaite, and one biology student, Loay Jabre. The second project examined the impact of various ground covers within organic apple orchards on photosynthesis and tree growth. Weed control in organic orchards can be a significant problem. This project examined various ways to reduce competition from weeds such as smothering them with compost or green manure, covering them with fabric mulch, or underplanting the trees with less competitive species. This project involved one ENVS student, Monica Reed, who found that fabric mulch can be a very effective means of weed control in organic orchards in that it not only controls weeds, but significantly enhances photosynthesis and growth of the apple trees by reflecting light into the lower canopy. This year will be Ed's last year as a professor at Acadia as he intends to retire at the end of the current academic year. He intends to continue doing research after he retires, but also hopes to have more time for other interests, such as gardening and visiting his grandchildren!

Dr. Ed Reekie

Rob Raeside: continued into his final term as department head. Much of his time is involved with external societies – as secretary to the Council of Chairs of Earth Science Departments, he participated in meetings in Ottawa, and authored a paper on student enrolment trends in Geoscience Canada. He continued into a second term as chair of Science Atlantic, the regional group that oversees many of the student conferences in the Atlantic provinces, as well as other initiatives to ensure networking and collaboration among the universities. Rob also continued as coordinator and editor of the Mineralogical Association of Canada's short course series, and is heavily involved this winter in compiling a text on "Uranium: Cradle to Grave", looking at all aspects of the industry, from the exploration and mining, its use in power generation, medicine, and theweapons industry, to its final disposal. The course will be given at the GAC-MAC meeting in Winnipeg in May.

Dr. Rob Raeside

Professor Updates

Ian Spooner: This year I have been working with 3 honours students on water –related projects. My focus has been switching from climate change –related studies to human impact on natural systems, primarily lakes. I had a lot of fun this summer with Patrick Englehardt, Drake Tymstra and Josh Caines (all E&ES honours students) buzzing about in boats and stomping around in waders installing thermistors, taking lake sediment samples and measuring erosion on coastal sea cliffs.

I have also been working with Glyn Davies (ENVS) investigating short term environmental change on the Upper Avon River, Nova Scotia. In that study we are trying to better understand why Brook Trout were, for a long time, absent in the watershed. Our initial findings suggest that the stories of the long term residents of the area (the oral history) may be a critical component in developing effective experimental design. I have always like stories and in this project I get to hear a lot of them. This is one project where my fly rod is a necessary research tool!

This coming summer I am hoping to head to western Newfoundland to investigate large scale landslide activity in the Tablelands. I will also be back in the Tantramar Marsh and on Second Lake in Sackville NS looking at metal accumulation in small lakes.

Dr. Ian Spooner

John Murimboh: John took over as the new head of Chemistry this year and is getting used to all that position entails. He also continued his involvement with the Atlantic Path project analyzing the urine and nail samples of Eastern Canadians for arsenic contents which may be a contributing factor to cancer incidence. John also continued collaborations with Dr. Stanley on modified geochemical extractions relevant to the copper industry. His work on diffusive gradient thin film devices continued and he collaborated with Dr. O'Driscoll on testing several types for metals and mercury speciation in Kejimkujik Park.

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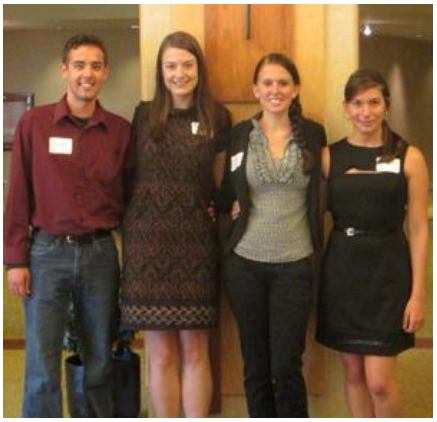
Dr. John Murimboh

Peter Romkey: The K.C. Irving Environmental Science Centre and Harriet Irving Botanical Gardens provided another year of support for both students and professors of Acadia's Environmental Science Program. Last year saw the establishment of the K.C. Irving Environmental Science Centre Award. The award will be given to the best undergraduate or graduate student research presentation relating to the flora or fauna of the Acadian Forest Region at the Environmental Studies conference for Science Atlantic. In 2013 the award will be presented for the first time when the conference is held at Acadia. Irving Centre staff Melanie Priesnitz, John Walker and Mike Muldoon assisted many Environmental Science students involved with the Acadia University Farm, EcoHouse and The Farm Residence. This year's ENVS Field School was well attended and the forestry component conducted through the Irving Centre resulted in some great debates regarding current issues in forestry as well as how to drive a rental van on a logging road. Every year the students become more engaged and 2012 certainly was no exception.

Peter Romkey— Director of Irving Centre

Student Happenings

EcoCanada Environmental Professional Forum, Moncton



Drake Tymstra, Monica Reed, Victoria Postlethwaite and Emily Walker

Four Environmental Science students from Acadia attended an Environmental Professional forum in Moncton, NB, this June. The event was hosted by EcoCanada and served to connect Environmental Professionals from around the Atlantic Provinces. The morning and afternoon consisted of workshop sessions, paired with a networking luncheon. One of the two morning workshop sessions available to participants was directed by three members of a steering committee charged with drafting recommendations for responsible environmental management of oil and gas activities in New Brunswick. A brief overview of this industry in the province and the likelihood of future development was discussed, as well as some of the technical aspects of fracking in New Brunswick. Issues regarding well casing integrity and surface water contamination were included in the discussion. One of the main concerns voiced by the professionals attending the workshop was the lack of independent testing of environmental samples. The second morning workshop, directed by Don Fraser, reviewed the framework of ISO 14001, expanding on its potential to assess and control performance and risks related to issues such as social responsibility, sustainable development and climate change. The session also reviewed the audit methodology of ISO 19011 and its 2011 revisions.

The networking luncheon included a keynote speech by David Parkinson, focusing on the successful inclusion of environmental concerns in industry over the course of the past two decades. The luncheon provided an opportunity for the students to meet professionals in the industry and gain advice on how best to enter an environmental career.

In the afternoon, all students attended a roundtable covering the benefits of certification as an environmental professional and the process involved. Additionally, details of the Atlantic Chapter were discussed with volunteer leads. Ultimately, the forum provided insight into the current climate of the environmental sector in the Maritimes

2012 Graduation and Linda Lusby Award

[Back row, L-R: Vincent Murphy, Andrew Nette, Nabil Shawwa, Stu Clow, Shaun Todd; front row: Dewey Dunnington, Allison Healey, Kelli Armstrong, Randal Evans, Sara Akin, Kaycee Morrison, Sarah Sweet]

In what is likely the largest graduating class in the department's history, a total of 35 BSc degrees and 5 MSc degrees were recognised at the May convocation at Acadia. Pictured below are some of the happy faces at the graduation breakfast on 14 May.

The inaugural Linda Lusby Award to "a graduating student whose support for the Environmental Science Program merits praise" was awarded to Randal Evans at the year-end Earth & Environmental Science banquet in April. Randal is a native of the Ottawa Valley, and has been active in Environmental Science throughout her stay at Acadia, and president of the Environmental Science Student Organization in her final year.

Linda Lusby and Randal Evans. 15 May 2012

Co-op Stories

As a fourth year student taking a BSc in Environmental Science, I am proud to have taken part in the Co-op program offered by Acadia University. Over the years, I have worried about where I will end up, who will hire me, or if I will have enough experience after I graduate. Enrolling in the Co-op program was the perfect opportunity to apply the skills I have learned during my studies, while getting hands-on experience and developing contacts in the working world.

I have been working for the past six months as an Eco-Advisor with the Northern Environmental Action Team (NEAT) on a one year term basis in Dawson Creek, BC. NEAT is a non-profit organization that aims to help schools, businesses and residents live greener lives through environmental education.

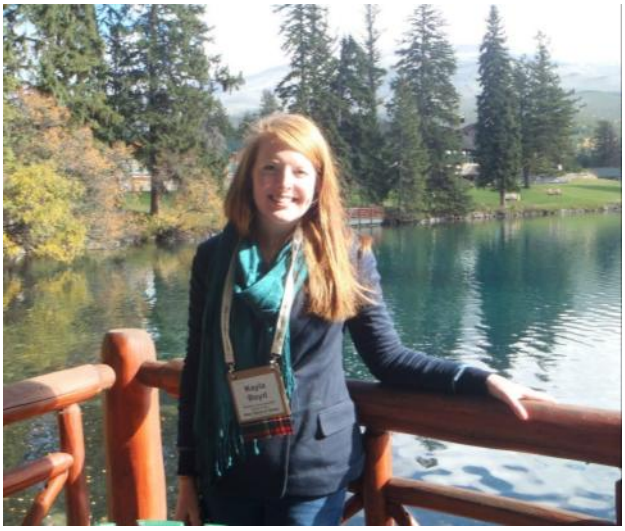
My position and what I do isn't easy to describe, nor can I write down the many life lessons I have learned thus far. I am the sole Eco-Advisor working in my community; which in itself can be very challenging. A typical work day could vary from doing school programs, community workshops, staff training, waste assessments, writing a weekly blog, writing newspaper articles, speaking with the media, answering emails and phone calls, attending meetings regarding environmental issues, the list goes on.

If I told you that all this has been easy, I would be lying. However, I truly believe that the combination of school paired with a co-op placement has provided me with the perfect mix that will prepare me for what's in store after I graduate. I look forward to continuing my job placement with NEAT; I feel it has helped me prepare for future career opportunities.

If you are interested in learning more about NEAT, you can find us online at neat.ca or you can follow me on twitter to find out what I've been up to at:

KaylaBoyd@NEATSouth

"Co-op program was the perfect opportunity to apply the skills I have learned during my studies…"
- Kayla Boyd



Kayla at the Recycling Council of Alberta (RCA) Conference held in Jasper, October 2012

Current Co-op Student Positions

Winter 2013:

Kayla Boyd at Northern Environmental Action Team, BC

Fall 2012:

Kayla Boyd at Northern Environmental Action Team, BC
Adam Godfrey at Agriculture and Agri-Food Canada, NS
Kyle Jennex at Agriculture and Agri-Food Canada, NS
Amanda Loder at Agriculture and Agri-Food Canada, NS
Monica Reed at Acadia Centre for Estuarine Research, NS

Summer 2012:

Kayla Boyd at Northern Environmental Action Team, BC
Emma DeLory at Kirk Hillier's lab, Acadia U., NS
Kyle Jennex at Bluenose Coastal Action Foundation, NS
Emily Kellock at Environment Canada, NS
Amanda Loder at Sackville Rivers Association, NS
Victoria Postlethwaite, Biology, Acadia U., NS
Monica Reed, Biology, Acadia U., NS

Where Are They Now?

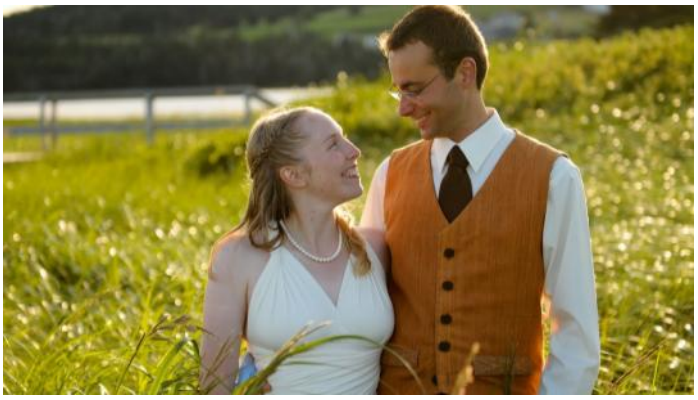
Well, right now, we are cozied up on a dark January eve in our little home in the heart of Bridgewater, NS. Stocks of kale bravely peek through the snow in our front lawn garden, and tempt us into believing that winter is almost over. We've been here 5 years now, and it really does feel like home.

Our journey to find a place to put down roots took a lot of soul-searching and worldly travels. After his graduation from ENVS in '03, Leon founded the Centre for Rural Sustainability in Wolfville, but had to return to his native Holland when his work visa expired in 2005. After her graduation from ENVS in '05, Cate joined him for nearly a year of living and working in Europe. Then we ran out of visa options for both our home countries, so had to find a country that would take us both! A year of teaching English in Japan gave us a culturally-rich experience and time for Leon to apply for permanent residency in Canada. We loved and learned a lot from our time abroad, but got tired of feeling disconnected and yearned for a deeper sense of place.

In 2007 we returned to NS and soon afterward Leon accepted an exciting job as the Sustainability Planner for the Town of Bridgewater. He never considered working as a planner while he was at university, but finds the mix of managing public consultations, conducting research, developing policies, and designing and implementing programs to be dynamic, challenging, and rewarding. It's also a great experience for him to do new and innovative work in a community setting, and to actually see the community change as a result of it. Leon's work in our town has set an example for what other towns in NS are now aspiring to and doing. Looking back at his time at Acadia, it was definitely the work he did with the Sustainability Office and the Centre for Rural Sustainability that prepared him for the work he does today. Same visions and passions, different scale!

"...memories of the summers spent as an ENVS undergrad at the Morton Centre are vivid and remind her of just how transformational those experiences were..."

From 2008 to 2011, Cate pursued graduate studies in recreation and community development at Acadia, with a focus on sustainability education. She has continued to work in that field, and in fact, today was her first day of a new environmental education consulting contract. The Bluenose Coastal Action Foundation in Lunenburg has partnered with Acadia U to run a series of public environmental education programs at Acadia's Morton Centre (Heckman's Island) this summer, and has hired her to design and develop the programs. Her memories of the summers spent as an ENVS undergrad at the Morton Centre are vivid and remind her of just how transformational those experiences were, learning to work, research, question, live, and play with fellow students. She is thrilled that this new job will have her spending time there once again, and bringing to life a new aspect of what that special place can offer. (She is also helping to organize a Morton Centre Reunion for summer 2013, so get in touch if you'd like to know more).



Cate and Leon DeVreed; Finding their place on the South Shore of Nova Scotia

For both of us, our academic, professional and leisure pursuits have become focused on community-level sustainability. It has turned out to be a scale that works well for us, one where we can find great motivation in seeing the fruits of our labours, where we can build strong networks of friends and colleagues, and one where we can *be and see* the change. We are witnessing how, when people feel connected and committed to a place, they are more likely to live in a way that contributes to its sustainability. We are eager to support and experience how, in these uncertain times, neighbours can work together to take the lead in making their communities more resilient.

The sense of belonging we've come to feel here in Bridgewater is largely due to the community initiatives we've been involved with. We've met so many friends and built invaluable connections by joining or initiating events and projects that are helping to build a more resilient community: the Growing Green Festival, the Bridgewater Community Christmas, Café 12, the Bridgewater Community Garden Network, Transition Town Bridgewater, the Community Sustainability Network, and the Bridgewater Cohousing Project (these stories are captured at ripples2waves.wordpress.com). We both recall similar experiences at Acadia, especially with the Acadia Environmental Society and the Sustainability Office. These experiences first showed us how groups of passionate people can really make changes on campus and our surrounding community, and also provide a sense of belonging for those involved.

Our next step in building our home is to start a family. A wee de Vreede baby will be joining us in June 2013! You can follow us at www.leonandcate.com.

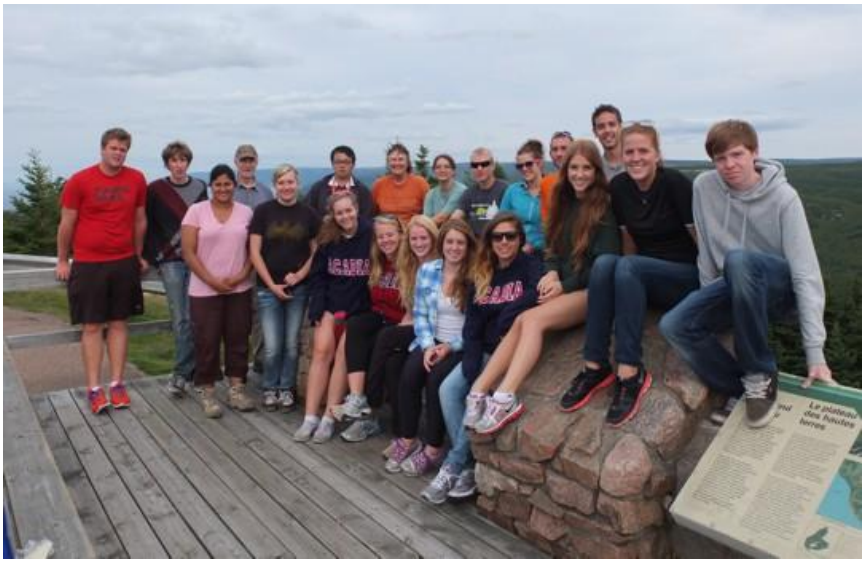
By Cate ('05) & Leon ('03) de Vreede

E.S.S.O. (Environmental Science Student's Organization)

ESSO this year has Pat Englehardt as the president and Drake Tymstra as vice president. ESSO has again had a very active year and continues to engage students. Some highlights from this year include a field trip to Cape Breton led by Dr. Raeside and Dr. Barr (see picture) as well as the now annual game of assassins and various movie and game nights.

ESSO began hosting at least one student-oriented field trip a month this year (see picture of walk from Kentville Ravine). The trips are for students and run by students. It makes a good opportunity for upper years to show off what they know and tie everything together. Lower years get a chance to learn something in a much more casual forum and see what is down the road for them. Coupled with the Fletcher club, having both environmental and geology students covers the field nicely. ESSO and Fletcher clubs are also organizing department clothing (simple like "A" on the front and "Earth and Environmental Science" on the back).

Another soon to be announced project is a digital year book. The year book will be aimed towards upper years approaching graduation. It will consist of the Year End Video (previewed at this year's Christmas party), bloopers to it, a trailer for the Year End Video, the Holiday Video, a slide-show/video of pictures, a couple of JPEG pictures, and a list of Pat Englehardt's random questions he asked this year. The DVD will then slide into a pouch within a booklet which students can then autograph.



ENVS and Geology Students in Cape Breton

From left to right, Simon Poirier, Brendan Brady, Sabrina Hiefer, Amanda Loder, Alex Squires, Victoria Postlethwaite, Kaycee Morrison, Zachary Jewkes, Kevin Rupke, Drake Tymstra.

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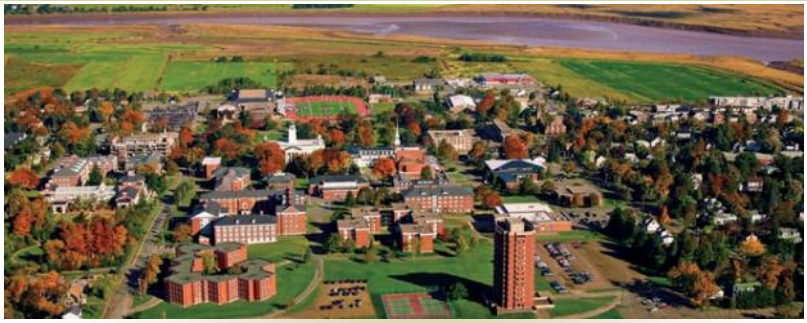

PLEASE KEEP IN TOUCH

If you have an item of interest, or any news of your activities (or those of your classmates), please let us know. We will try to incorporate as much as possible into future newsletters. Did you write an annual newsletter at Christmas or have a great picture? Send a copy to Dr. Spooner or Dr. O'Driscoll at the Department of Earth and Environmental Science
ian.spooner@acadiau.ca or nelson.odriscoll@acadiau.ca

Random Alumni Updates

Kaycee Morrison (Grad '11): Is working on her M.Sc. in biology at Acadia, a migration study of American lobsters in the upper Bay of Fundy using acoustic technology.

Amy Buckland-Nicks (Grad '12): After Acadia she decided to take a year off and quickly discovered the job market was very competitive, especially in British Columbia! She landed some more casual jobs that were a nice break from her academic background. She also got to work at a dog-sledding ranch in Whitehorse and eventually made enough money to travel in Europe for a month. She is now doing a Masters in Environmental Studies at Dalhousie and is thoroughly enjoying the program.

Tony Pesklevits (Grad '02): Works for the Ministry of Aboriginal Relations and Reconciliation in British Columbia, and recently was nominated for a Premier's Award for the work he does with the aboriginal communities in northern BC.

Heather Macpherson (Grad '09): Lives in Yarmouth and has worked as an Inspector Specialist with Nova Scotia Environment (Environmental Monitoring Compliance Division) since September of 2008.

Lyndsay Vidito (Grad '04): Completed an MES at York, and got into the government through co-op. She works in the Office of the Minister of the Environment as the Departmental Liaison (Environment Canada, Ottawa). Prior to that she was a Sr. Policy Advisor within the Department.

N. Michael Ball (Grad '02): Completed a BA(H) in Economics at Acadia then a MA in Economics at Dalhousie. He lives in Yellowknife and works for the territorial government's Department of Finance.

Dustin Chaffee (Grad '07): Worked in several environment-related areas (chemistry lab, Aurora Geosciences as a geological technician) before taking a position as "Waste Advisor" for KBL Environmental at the Ekati Diamond Mine. He assists them in overhauling their waste management/incineration practices.

Scott Ryan (Grad '05): Completed a M.Sc. in Biology at Acadia. Worked as the Lab Manager of the K.C. Irving Environmental Science Centre and assisted the Acadia Centre for Estuarine Research. Now he works for the Department of Fisheries and Oceans at the Bedford Institute of Oceanography (working on national-level data management, nutrient and ocean acidification research, and assisting with the Ocean Tracking Network). Currently he works for the Centre for Offshore Oil, Gas, and Energy Research, within DFO, where he works on oil spill remediation (e.g. response efforts, including the Deepwater Horizon oil spill in 2010). He lives in Bedford and has a 3 year old daughter Arianna.