

Land Reclamation

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A newsletter for the Helmholtz-Alberta Initiative (HAI) Reclamation Theme and the Land Reclamation International Graduate School (LRIGS)

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Land Reclamation Through An Aboriginal Lens Panel



Panelists from left to right: Lori Cyprien, Cecilia Fitzpatrick, Ali Kennedy and Randy Lewis.

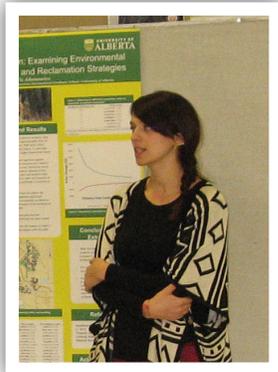
On March 5, the Land Reclamation International Graduate School presented a panel discussion on the involvement of aboriginal people in land reclamation policy development and work. The panelists were Lori Cyprien, a reclamation researcher for Syncrude and member of Athabasca Chipewyan First Nation in Alberta; Cecilia Fitzpatrick, member, woman leader and environmental coordinator for Fort McKay First Nation in Alberta; Ali Kennedy, plant scientist and senior operations manager for Keefer Ecological Services Ltd in British Columbia; and Randy Lewis, president of Arctic Alpine Reclamation Group and partner in RL Resource Management Ltd. Mr Chris Powter of the Oil Sands Research Information Network (OSRIN), moderated the event.

A poster presentation by LRIGS students and fellows before and after the panel discussion introduced some LRIGS students and showcased the varied research areas in reclamation.

A lively discussion by the panelists and audience members brought forth several key messages for land reclamation professionals, industry and government working with aboriginal communities in resource extraction. Land reclamation, as an important part of the resource extraction cycle, would have a greater chance of success if considered in the earliest stages of production; involving aboriginal communities in the early stages of resource development, including land reclamation, would ensure a greater chance

of successful reclamation and better community acceptance. Incorporating traditional knowledge into reclamation in Alberta would benefit communities and provide a different perspective on land stewardship to other stakeholders in industrial or agricultural development. A summary of the key messages of the lecture can be found on the News and Events section on the LRIGS website, http://www.ualberta.ca/~lrigs/news_events.html.

Hearing the first hand accounts of the panelists who have all worked with industry, government and aboriginal communities in land reclamation was a truly unique experience for the attending LRIGS students and audience members. We thank the panelists for their participation in the lecture and look forward to more opportunities for working with aboriginal community members.



Student poster session, from left to right: Brett Campbell; Matthew Gelderman, Jeff Kelly (background), Ali Kennedy; Cecilia Fitzpatrick

Profile: Matthew Gelderman

I applied to LRIGS for a number of reasons. I was very interested in learning more about the field of land reclamation. As a resident of Alberta I knew that reclamation would be very important here for many years and I wanted an opportunity to be exposed to this burgeoning field. I was excited about the possibility of getting to know a community of like minded students that I could share the graduate school experience with. I'd heard about the international field tours that LRIGS was offering as part of their program and was very interested in seeing land reclamation in practice in an international setting. Financial support is crucial to the success of graduate students and I knew that LRIGS provided financial support for their students.

What I enjoyed most about LRIGS was the chance to increase my knowledge about land reclamation through various short courses and field tours while at the same time getting to know a group of pretty fun and incredible

people. LRIGS helped provide me with skills and a network of friends that I hope will be of immense service to me in the future.

My immediate plans after graduation are to spend some time traveling with my newlywed wife Beth. Afterwards, I intend to look for work in the field of ecological restoration. As a wilderness enthusiast, ecological restoration is particularly enticing as I would love to work towards returning degraded and damaged areas back to landscapes that I love spending time in.



Matthew hiking back from a field site in Jasper National Park

LRIGS Wetlands Short Course With Dr David Locky

The latest classroom based LRIGS short course was presented by Dr David Locky, a professor of Biology at MacEwan University and an adjunct professor with the Department of Renewable Resources at the University of Alberta. The course, titled Working With Alberta's Wetlands: A Primer For Effective Management Of A Complex Ecosystem And Dynamic Landscape, was a thorough introduction to a vital component of Alberta's landscape. Enrolment for this popular course was full, with many eager LRIGS students, government and industry participants.



Dr David Locky, Alberta wetlands expert

Wetlands offer a wealth of resources and are a key source of biodiversity, yet they are difficult to categorize and a great challenge to reclaim. Students were shown how wetlands develop, wetland classification, worldwide distribution of wetlands and the policy systems for this precious zone in Alberta and Canada. As one of the most valuable ecosystems in the province, this course provided much appreciated information by a renowned Alberta wetland expert.

A tremendous thank you to Dr Locky for delivering the course. We anticipate more LRIGS wetland courses to come. For more information on Dr Locky and his work on wetland ecosystems in Alberta, visit academic.macewan.ca/lockyd/. For more information on future LRIGS courses keep your eye on the LRIGS News and Events webpage at http://www.ualberta.ca/~lrigs/news_events.html.

LRIGS Mentorship Program



Mentors and mentees, from left to right: Mr Bob Innes and Victoria Collins; Jasmine Lamarre and Dr Brett Purdy

At the LRIGS New Year Social in January, mentors and mentees had a chance to meet in person and share ideas. The valuable guidance provided by LRIGS mentors is greatly appreciated by our aspiring land reclamation professionals.

If you are interested in mentoring an LRIGS student, please contact LRIGS Coordinator, Michal Guzowski, michal.guzowski@ualberta.ca for more information.

News and Events

Congratulations to Katryna Forsch for successfully defending her MSc thesis entitled, Woody debris impacts on succession in oil sands reclamation, on May 28.

Murtaza Jamro has been awarded an assistant professorship position at his home university in Pakistan, the Sindh Agriculture University of Tandojam.

Valerie Miller has been awarded the President's Doctoral Prize of Distinction and the Academic Merit Award for Graduate Students from the Canadian Land Reclamation Association.

Jenna Abou Rizk has been awarded the Academic Merit Award for Undergraduate Students from the Canadian Land Reclamation Association.

Pamela Sabbagh successfully completed her MSc program in March. Her thesis is titled "The effects of subsoil ripping on soil physical properties and soil water dynamics on reconstructed soils at Genesee Prairie Mine, Alberta".

Dr M Anne Naeth received the GSA Life Long Membership Award. This award recognizes an individual who has made a significant contribution of time and effort to either society or the well being and success of graduate students at the University of Alberta.

New LRIGS student, Stephanie Ibsen, has received the 2013 Undergraduate Achievement Gold Key International Honour Society scholarship.

Alison Murata has been awarded a Green and Gold Student Leadership and Professional Development Grant by the University of Alberta.

Sarah Ficko received a Canadian Northern Studies Trust Scholarship from the Association of Canadian Universities for Northern Studies (ACUNS).

LRIGS Giving Opportunities

LRIGS funding comes as monetary gifts from individuals and organizations. We welcome gifts of any amount to help our program and can be used for general purposes or can be directed in specific ways. It supports the research and training costs of our graduate students and post doctoral fellows. It covers the travel costs of our students and fellows as they journey to other parts of the country and the world to study disturbances and diverse perspectives and methods of addressing land reclamation issues and challenges. It funds formalized networking and mentorship opportunities for our students and fellows allowing them to learn directly from practic-



ing land reclamation professionals. It brings in leading experts to enrich our training and research programs through guest lectures. To make a donation to LRIGS please click on the "Make a Gift" button at <http://www.ualberta.ca/~lrigs/> or go to <http://www.ualberta.ca/~lrigs/donations.html>.

Publications

Brown, RL and MA Naeth. 2014. Woody debris amendment enhances reclamation after oil sands mining in Alberta, Canada. *Restoration Ecology* 22:40-48.

Jung, KH, M Duan, J House and SX Chang. 2014. Textural interface affected the distribution of roots, water, and nutrients in reconstructed forest soils in the Athabasca oil sands region. *Ecological Engineering* 64:240-249.

Li, XP, SX Chang and F Salifu. 2014. Soil texture and layering effects on water and salt dynamics in the presence of a water table: a review. *Environmental Reviews*. 22:41-50.

Mollard, FPO and MA Naeth. 2014. Photoinhibition of germination in grass seed - implications for prairie revegetation. *Journal of Environmental Management* 142:1-9.

Mollard, FPO, MA Naeth and AC Cohen-Fernandez. 2014. Impacts of mulch on prairie seedling establishment: facilitative to inhibitory effects. *Ecological Engineering* 64:377-384.

Siddique, T, P Kuznetsov, A Kuznetsova, N Arkell, R Young, C Li, S Guigard, E Underwood and JM Foght. 2014. Microbially-accelerated consolidation of oil sands tailings. Pathway I: changes in porewater chemistry. *Frontiers in Microbiology* doi: 10.3389/fmicb.2014.00106.

Siddique, T, P Kuznetsov, A Kuznetsova, C Li, R Young, JM Arocena and JM Foght. 2014. Microbially-accelerated consolidation of oil sands tailings. Pathway II: solid phase biogeochemistry. *Frontiers in Microbiology* doi: 10.3389/fmicb.2014.00107.

Nannt, MR. 2014. Impacts of distance to pipeline disturbance on mixed grass prairie and *Halimolobos virgata* (NUTT.) O.E. Schulz (Slender Mouse Ear Cress). MSc Thesis. Department of Renewable Resources, University of Alberta. 217 pp.

Sabbagh, PJ. 2014. The effects of subsoil ripping on soil physical properties and soil water dynamics on reconstructed soils at Genesee Prairie Mine, Alberta. MSc Thesis. Department of Renewable Resources, University of Alberta. 90 pp.

For more information on the Helmholtz-Alberta Initiative please visit: <http://www.helmholtzalberta.ca/>

For more information on Land Reclamation International Graduate School at the University of Alberta please visit: <http://www.ualberta.ca/~lrigs/>

