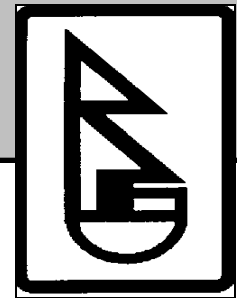


PRSSS NEWSLETTER



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President's Message

As we move past the summer solstice of 2007, this newsletter has finally reached you and the new Executive can introduce itself, as well as a new year for the PRSSS. There has been an extensive turnover of the prior executive, and as we find our pace, we thank you for your patience.

This year's executive welcomes **Melissa Iverson** (Secretary), **Sarah Lamagna** (Treasurer), **Geoff Hughes-Games** (Director), and myself. Staying on from last year are **Andy Jakoy** (Bookstore Coordinator), **Amber Daniels** (Director), and **Lesley Dampier** (Director). It's a pleasure to be a part of such a talented and connected team, and we look forward to running this society with energy and inspiration.

As a new member of both the Society and the Executive, I lack the benefit of a long view of the history of the PRSSS, but it's my hope to aim the other way and look forward to a year of productive and informative gatherings.

A theme for this year is to make soils information more available. We hope to update the website and the bookstore inventory as soon as possible. In light of a suggestion put forth by Maja Krzic and Art Bomke to form a "Soil Science Department of BC", we can also continue one of last year's goals to increase communication and reach out to members both outside the Lower Mainland and outside a strictly delineated discipline of soil science.

In this issue we look back at the very successful workshop in February and at soils grads this year, and look ahead to upcoming soils events, including the PRSSS field trip.

As always, we invite you as fellow soil enthusiasts and society members to give your input to the running and direction of the PRSSS. Any ideas or suggestions for field trips, workshops, newsletter submissions, or anything else, are encouraged and welcomed.

Welcome to an energetic and eventful year in the PRSSS.

Christian Evans

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The PRSSS Executive

President: Christian Evans
Secretary: Melissa Iverson
Treasurer: Sarah Lamagna
Director: Lesley Dampier
Director: Geoff Hughes-Games
Director: Amber Daniels
Director: Sara Rowland
Bookstore Coordinator: Andy Jakoy

Recent Graduates in Soil Science

Congratulations to our graduates!

Tiebo Cai

Ph.D. Soil Science, May 2007
University of British Columbia

Analysis of the Net Ecosystem Exchange of CO₂ in a 56-year-old Coastal Douglas-Fir Stand: Its Relation to Temperature, Soil Moisture and Photosynthetically Active Radiation

Supervisor: Dr. Andy Black

Julia Chandler

M.Sc. Soil Science, December 2006
Simon Fraser University

Influence of Bigleaf Maple on Forest Floor Chemical Properties in Conifer Forests: a Spatial Approach

Supervisor: Dr. Margaret Schmidt

Shannon Daradick

M.Sc. Soil Science, May 2007
University of British Columbia

Effects of Variable Retention Harvesting on Soil Microbial Structure and Function

Supervisor: Dr. Sue Grayston

Erica Milligan

M.Sc. Soil Science, April 2007
University of British Columbia

Ability of Yard Trimmings Compost to Mediate Environmental Impacts of Over-Winter Field Stored Poultry Litter

Supervisor: Dr. Art Bomke

Maryam Mofidpoor

M.Sc. Soil Science, May 2007
University of British Columbia

Quality of Peat Moss as a Component of Growing Media

Supervisor: Dr. Maja Krzic

David Poon

B.Sc. Agroecology, May 2007
University of British Columbia

Nitrogen and Phosphorus Mineralization of Biosolids-Amended Soil Under Irrigated Alfalfa and Crested Wheatgrass

Supervisor: Dr. Maja Krzic

Shannon Ripley

M.Sc. Soil Science, June 2007
University of British Columbia

Moving Towards Sustainable Livestock Grazing In the Jujuy Model Forest, Northwestern Argentina

Supervisors: Dr. Maja Krzic and Dr. Art Bomke

Tanya Turk

M.Sc. Soil Science, December 2006
Simon Fraser University

The Impact of Bigleaf Maple on Soil Chemistry and Nutrient Dynamics in a BC Conifer Forest

Supervisor: Dr. Margaret Schmidt

Brian Wallace

M.Sc. Soil Science, June 2007
University of British Columbia

The Effects of a Single Biosolids Application on Soil Physical Properties in Three Forage Production

Systems in the Southern Interior of British Columbia

Supervisor: Dr. Maja Krzic

Veneta Yolova

M.Sc. Soil Science, May 2007
University of British Columbia

Determining the C Concentration in the Aboveground Biomass, Roots and Soil and Assessing the Potential for Creating Carbon Credits from the Increased

Storage in all Carbon Pools

Supervisor: Dr. Cindy Prescott

Soil Biography – Susan Ames

Susan Ames is the Senior Soil Scientist at Rescan Environmental Services Ltd., a large multidisciplinary, environmental company located in Vancouver with branch offices in Victoria, Smithers, and Yellowknife. Susan manages all soils-related projects at Rescan and carries out work in BC, NWT, Nunavut, and South and Central America. Many of the projects are related to producing an Environmental Assessment (EA) report for proposed mines.

The first step in an EA is the Terrestrial Ecosystem Mapping (TEM) program. This requires a team of three specialists in the areas of soils, vegetation, and wildlife, who collect baseline information in the field. The next step is to carry out an Effects Assessment of the project on the soils which includes developing management, mitigation, and monitoring plans. Susan also develops closure and reclamation plans for the various projects. She has the opportunity to work in teams, in the field, in the office, and with clients and government regulators.

Susan has over 25 years of experience including work on gravel pit planning, soil surveys, agricultural capability assessments, and other related projects. She was also the Project Coordinator for the Ashcroft Ranch while at GVRD, where she learned a lot about buying and selling bulls, heifers, and calves, and many other aspects of running a cattle ranch.

Susan is also interested in climate change issues and is part of Rescan's Carbon Inventory and Auditing team, providing terrestrial carbon auditing and inventory services. Her PhD in Resource Management and Environmental Studies from UBC focused on carbon sinks in forested, agricultural, and urban areas and she also modeled carbon using the Century Carbon Model. The model is not user-friendly so she developed a friendlier interface for planning and research purposes.



Susan has a Master's in Soil Science from UBC. Her research focussed on soil chemistry.

She designed and tested an engineered cover for acid generating mine wastes, experience she uses in her work. She also has a BSc in Biology from Dalhousie University, Halifax, NS. She uses her knowledge of biological systems in her work as well as in her PhD research. Susan likes to take a systems approach to environmental issues.

Susan is a founding member of PRSSS and has been actively involved in the organization. She was Treasurer for three years as well as a Director and was involved in organizing many workshops and field trips. She is very concerned about the preservation of farmland and is one of the founding members of the Agricultural Land Reserve Protection and Enhancement Committee (ALR PEC). In 2006, ALR-PEC received the Smart Growth Peoples Award for their efforts in this regard.

Susan has been very active in the BC Institute of Agrologists (BCIA) for over 25 years. She has held numerous positions including being the Vancouver Branch President for three different terms. She is currently the President of BCIA. Her major goals as President are to increase the public's awareness of BCIA and communication between the branches and Council.

Susan believes that soils are critical to environmental sustainability and hopes that more people enter this very important field of science.

Upcoming Soils Events

September 15-19, 2007

International Symposium on Air Quality and Waste Management for Agriculture
Omni Interlocken Resort, Broomfield, CO
<http://www.asabe.org/meetings/airwaste2007/index.htm>

September 16 - 19, 2007

Sixteenth International Symposium of International
Scientific Centre for Fertilizers (CIEC)
"Mineral versus Organic Fertilization: Conflict or Synergism"
Ghent University, Coupure, Belgium
<http://www.soilman.ugent.be/ciec>

November 4–8, 2007

ASA–CSSA–SSSA Annual Meetings
New Orleans, LA; New Orleans
<http://www.acsmeetings.org>

June 22 –26, 2008

11th North American Forest Soils Conference
Blacksburg, Virginia

June 29 – July 5, 2008

XXI International Grassland Congress/VIII International Rangeland Congress
Huhhot, Inner Mongolia, China
www.igc-irc2008.org or secretariat2008@hotmail.com

July 6-9, 2008

2007 Canadian Society of Soil Science Annual Meeting
Prince George, BC, Canada
(see advertisement on page 5)

July 13-16, 2008

Joint meeting of the Canadian Society of Agronomy and the Northeastern Branch ASA-CSSA-SSSA
McGill University, Montreal, QC, Canada

September 18–22, 2008

5th International Conference on Land Degradation
Valenzano, Bari, Italy
www.iamb.it/5ICLD or pandi@iamb.it

October 5–9, 2008

ASA–CSSA–SSSA Annual Meetings (Joint Meeting with the Geological Society of America)
Houston, TX
<http://www.asa-cssa-sssa.org/news/calendar.pdf>

Workshop Synopsis: Understanding Laboratory Analysis

On the rainy and grey day that was March 17th, there was little green around: fields lay under sparse cover crops, buds not yet burst sat upon still-dark branches, and the odd green raincoat was far outnumbered by those black, blue and yellow. But inside the MacMillan building at UBC, at the PRSSS & SWCS-BC Annual Workshop, there were plenty of green shirts and green young minds taking in the topic of the day: "Laboratory Support for the Soil Professional".

Dr. Art Bomke (UBC) started the day with a run through the history of soil testing, from Liebig and his *Law of the Minimum*, through the debate between Whitney and Hopkins over whether to analyze for total or available elements, to the history of soil testing in BC. After early imports from the University of Illinois, the provincial government developed its own soil testing techniques, of which the Kelowna test ($0.015\text{ M NH}_4\text{F} + 0.25\text{ M CH}_3\text{COOH}$) is a well-known example. Cuts in funding for research and development in soil testing techniques made in the early 1980s have shifted the responsibility from government labs to private labs.

Geoff Hughes-Games (BC Ministry of Agriculture and Lands, Abbotsford) talked about where to send soil samples for professionals in BC, and **Orlando Schmidt** (also BC Ministry of Agriculture and Lands, Abbotsford) presented on soil testing relating specifically to the Fraser Valley Nutrient Study 2005 (the report of that study can be found on-line at http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/FV_SoilNutrientStudy/_FVSNS-CombinedReport_Feb28_2007_for_Release.pdf). They explained how much variability there is between analytical techniques at individual labs as well as between different geographical regions. Geoff has compiled a summary of recommended methods, but the extent of the use of this summary by labs is not known.

Dr. Doug Maynard (Canadian Forest Service, Victoria) then gave a talk on nutrient level assessment based on soil as well as foliar analyses. He emphasized that the design and approach of the study should depend on the objective of the analysis. For example, natural and anthropogenic variability should be considered when choosing sites, and sampling time should be chosen to reflect the goals: are we sampling in the fall, when soil activity is declining, or at solstice, when activity is high? He also related his own experience with the difference in results when using buffered and unbuffered ammonium acetate to determine cation exchange capacity.

The fifth scheduled speaker, **Dr. Les Lavkulich**, was unfortunately unable to attend to give his presentation on "Understanding Laboratory Analyses for Professional Practice."



Lunchtime was a flurry of activity as everyone took in both the food and more than a dozen posters. The topics included forestry (Grand, S., Lavkulich, L., *Imogolite-Type Materials in Podzols and Response to Forest Harvesting*), mapping (Kenney, E., *Digital Soil Maps of the Lower Fraser Valley Project*), biology (Brockett, B., Grayston, S., Prescott, C., Mohn, W., *Patterns in Soil Enzyme Activity across a Range of Regional Climates in Western Canada*) and chemistry (Milligan, E., *Yard Trimmings Compost as an Environmental*

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Buffer in the Over-Winter Field Storage of Poultry Litter).

The afternoon consisted of a panel discussion with representatives from four laboratories- **John Ashworth** (and **Amber Springer**) from **ALS**, **Million Woudneh** from **Axys**, **Walt Brandl** from **Bodycote**, and **Patrick Novak** from **Cantest**. Although individual labs specialized in different geographical areas and provided different types of analytical services, there was consensus on a number of points.

First and foremost, soil professionals were encouraged to get to know the lab they work with. The preparation of samples was also an important condition to getting good results, and the labs emphasized that this, along with unforeseen accidents during transport, were things that are out of their control. The interesting idea of creating a more extensive database of soil characteristics by pooling clients' data was raised, but the labs stressed that since this information does not belong to them, it is their duty to protect it at their client's discretion. Quality control techniques were also discussed, both for correctly and incorrectly prepared samples.

Soil on a rainy day can turn quickly to mud, but the presentations were clear and engaging for all. It was a successful and enjoyable workshop and a step on the way to, as Dr. Maynard put it, "pedo-righteousness".

Christian Evans

The PRSSS Annual Field Trip

The PRSSS annual field trip will take place on the weekend of September 29th, 2007. The field trip, led by **David Clark** of **Dillon Consultants**, will be a tour of Pacific Place and the remediation operations occurring there. Please mark off your calendars and RSVP to prsss@vcn.bc.ca, with "PRSSS Workshop RSVP" in the subject line, and please note that only PRSSS members are eligible to participate. Sign up soon!

Canadian Society of Soil Science

2008 Annual Meeting

July 6 - 9, 2008

The University of Northern British Columbia will be hosting the CSSS Annual Meeting July 6 to 9, 2008 on campus at UNBC in Prince George, BC. A number of exciting optional field trips are being planned for Thursday, July 10th. There is much for newcomers to Northern BC to explore! Additional details regarding the field trips and meeting proceedings can be found at the conference website <http://resweb.res.unbc.ca/csss2008/index.htm>. Please contact Paul Sanborn for additional information at sanborn@unbc.ca.

Soils on the Internet

<http://www.soilcrust.org/>

Visit us on the web at prsss.ca