

PRSSS

Pacific Regional Society of Soil Science

PRSSS Executive

- **President:** Art Bomke
- **Vice President:** Brian Wallace
- **Secretary:** Lesley Dampier
- **Treasurer:** Susan Ames
- **Newsletter Editor:** Mike Shum
- **Director:** Liz Freyman
- **Director:** Andy Jakoy

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Pacific Regional Society of Soil Science

C/O Faculty of Agricultural Sciences
 University of British Columbia
 Vancouver, BC V6T 1Z4
 FAX 604-822-2184

prsss@vcn.bc.ca

President's Message

I would like to begin this message to the membership with a tribute to the past PRSSS Executives and members who, in my humble opinion, have made this organization the best value of any professional group I belong to. Soil Science, along with other ecologically or agronomically based disciplines has been struggling with declining support and public awareness. I firmly believe that PRSSS can play a role in sustaining and rejuvenating soil science in these challenging times.

This year's Executive; including Susan Ames, Mike Shum, Liz Freyman, Andy Jakoy, Lesley Dampier, Brian Wallace and myself are at work organizing the fall field tour, launching the new web site and planning the Spring Workshop. As a new person on the Executive, I really appreciate the experience and dedication that I am finding amongst the veteran members.

PRSSS History: When Dr. Charlie Rowles and the other charter members of

PRSSS initiated the organization some 22 years ago, the situation with respect to Soil Science education and employment was somewhat different than what we experience in 2004. In those days, Dr. Rowles had assembled a small but relatively strong Department of Soil Science within the Faculty of Agricultural Sciences and that was where soil science was taught in BC. Since that time we have seen the loss of Department status at UBC and the UBC Soils community spread across a range of Faculties. More importantly, we now have some excellent soil science happening at other post-secondary institutions and possibilities for improved educational and research opportunities through inter-university cooperation. This calls for enhanced communication amongst soil scientists and students across the province and I believe that PRSSS can play an important role in supporting this.

President's goals for 04-05: I would like for PRSSS to progress in three areas during the next year. These include:

- A) continue the tradition of the PRSSS in providing

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- B) good service the membership,
- C) strive to increase communication and coordination among soil science educators, researchers and practitioners across BC and
- D) encourage young people to get involved in soil science whether as their primary or secondary focus.

In support of these goals, the Executive is working to organize the traditional fall field tour and spring workshop and to get the PRSSS website up and running. Secondly, we have sponsored, along with the BC Chapter of the Soil and Water Conservation Society, a student project to create soil science interpretative sites at the UBC South Campus Farm to attempt to raise awareness of soils amongst the thousands of visitors to the Farm. I would like to see PRSSS make similar opportunities available to students at other BC institutions at which soil science is taught.

How do we do this? At this point, the PRSSS is limited by our lack of financial resources. A strength of PRSSS has been our ability to keep fees down to a low level; however, should we pay a bit more to enhance the Society's ability to support the encouragement of new soil scientists? This can be done via increasing fees, canvassing for donations or endowments or a combination of the two. Look for a proposal on this to be presented to the 2005 AGM. In the meantime, we look forward to any support, ideas or criticism that you, the membership wish to provide to your 2004-05 Executive.

Art Bomke
President

What's Happening in the PRSSS...

Pacific Regional Society of Soil Science Bookstore

The PRSSS has a store of Soil & Land Inventory Maps & Reports for BC. An inventory list is on the BCIA website (<http://www.bcia.com/pacificregionalsocietyofsoilscienceprsss/>). For further information on availability and updated pricing, please contact Andy Jakoy at 604-736-7225 or burtonjakoy@yahoo.com.

PRSSS Website

The executive is in the process of setting up a website for the membership. The site will feature information on the membership, recent publications, upcoming events, bookstore pricing and inventory, and links to other soils websites. Currently, the PRSSS has a link on the British Columbia Institute of Agrologists website (<http://www.bcia.com/pacificregionalsocietyofsoilscienceprsss/>).

26th PRSSS Workshop Summary Current Soils Research - Saturday, March 20, 2004

Our spring workshop, titled "Advances in Soil Science and Current Issues in BC" held on March 20, 2004 was a great success!

Bob Maxwell, P.Ag., our Soil Spotlight, opened the day with his presentation "Geology, Soils and Wildlife – Some Habitats in BC". Unique they are - we may not look at things the same! Wildlife such as Mountain Goat and sheep seem to prefer particular types of bedrock and bats in the Okanagan choose the vertical and horizontal cracks of Okanagan gneiss' for their daily habitat! He also discussed the geological aspect of the habitat of rattlesnakes, wren and other wildlife – an excellent presentation!

Paul Sandborn exposed us to soils with a northern flavor! We saw fabulous slides of his work with Lito Arocena on paleosols and ancient landscapes of the western Yukon. He also highlighted some of the other current research in the Ecosystem Science & Management, and Environmental Science Programs at UNBC including that of Lito Arocena on the biogeochemical weathering of soil minerals (mycorrhizal fungi in the rhizosphere of central interior B.C. conifer trees; lichens on granitic rocks in Tibet); Mike Rutherford's research on bioremediation of hydrocarbon-contaminated soils; and Paul's work on fertilizer sulphur dynamics in S-deficient forest soils in central interior BC!

Justin Straker of CE Jones and Associates Ltd. gave us a great summary of seven years of

research using biosolids, on the reclamation at Highland Valley Copper Mine. Research included monitoring of soil, soil water and vegetation chemistry – the data indicated the effects of biosolids!

Dave Sands gave us an excellent presentation titled "Protecting our Farmlands for the Future". He pinpointed the trend towards more large applications for exclusion on prime farmland and some of the reasons this trend is occurring.

Peter Sorokovsky, a UBC M.Sc. student, discussed some of his research in his presentation titled "The Effects of Turf Management on Soil Management". He was interested in the widely accepted practice of core aeration and measured various soil physical properties. Perhaps the golf course management teams should have a look at his data!

Elyn Humphreys (UBC, Ph.D. student – who had just done her defense –congratulations, Elyn) gave us a very interesting talk titled: CO2 Fluxes and Various Forest Stands. She discussed the annual rates of ecosystem production and respiration on various aged Douglas-fir stands on Vancouver Island. Variables such as the weather can affect the stands carbon dynamics depending on their age!

We wish to thank all the speakers and remind you to keep an eye out for our next workshop!

Susan Ames, PhD, P.Ag., CAC

Official Retirement of Professor Les Lavkulich

On July 9th we celebrated the official retirement of Les Lavkulich, but for those who know Les this is definitely not the end of his career. He has moved back into his old office in Soil Science at UBC and is exploring new approaches to determine minerals, advising students, and yes he is helping out with teaching.

Les Lavkulich had a tremendous impact on Soil Science at UBC and in Canada. Over a 37-year period he literally advised thousands of students, taught almost every soil science course in the calendar, conducted research in all parts of Western Canada, and was director of the Soils Department and the Institute for Resources and the Environment for several decades. He supervised more than 70 graduate students, wrote more than 100 papers and spent enormous amounts of time discussing scientific discoveries with students. Les is a true scholar and excelled in every aspect of University. In 2004 he received the Margaret Fulton Award for mentoring students and in 1994 he received the "Excellence in Teaching" award in the Faculty of Agricultural Sciences. He was one of the founders of the Pacific Soil Science Society and I am sure he is happy to see that all the alumni are carrying the torch that brings the soil science community together every year.

On the scientific side he was instrumental in mapping soils in the Northern Territories, he developed new approaches to mine reclamation, advanced the understanding of Podzol genesis,



examined land degradation processes, studied carbon sequestration in soils, developed new techniques to analyze phosphorous cycling, and was involved in a host of other soil related process studies. However his greatest fascination was (and still is) in mineralogy, particularly the elusive imogolite. This amorphous mineral plays a key role in Aluminum cycling in soils. In the months since his official retirement he has actively examined the processes that form imogolite in the field and in the laboratory. His latest finding is that logging under certain site conditions will result in the formation of imogolite that then releases Al into the water systems. This results in stream water quality deterioration and impacts aquatic biota. I am sure you will hear more about this in the near future.

Les has been a pillar at UBC and many of us who spent a few years in his company were all

enriched and inspired by his vision, dedication and hard work. Most of all, his main mission in life is to help students and send them into the right orbit. This he has done with enormous success and many of you are the beneficiaries of his wisdom.

It looks like he has adjusted well to this new period in his career as an emeritus professor. We now call him "the wise owl" and I am sure he would be delighted if you would visit him in his old office in Soil Science. He will quickly bring

you up to date on the newest scientific ideas or just reminiscing about the good old days.

Dr. Hans Schrier, UBC

You can reach Les at:
Professor Les M. Lavkulich
Agroecology, MacMillan Building
Room 2
University of British Columbia
Tel: 604-822-
Email: lml@interchange.ubc.ca

Joint PRSSS & SWCS Workshop

Saturday March 19, 2005

Look for the theme in the next newsletter!

Room 166 - 2357 Main Mall, MacMillan Building
University of British Columbia

Please contact Art Bomke or Lesley Dampier for more information.

Art Bomke, President
fert@interchange.ubc.ca

Lesley Dampier, Secretary
ldampier@sylvis.com

Joint Soils Tour – PRSSS and Vancouver Branch, BCIA

PRSSS and the Vancouver Branch of the BC Institute of Agrologists (BCIA) teamed up to put on a Soils Tour on Saturday, Oct. 30th, 2004. This was the 6th Annual PRSSS field tour. Dr. Art Bomke moderated the beginning of the tour where we discussed current issues and land use changes. The first stop was the Malcolm Knapp Research Forest in Haney, a 5000 ha research forest managed by UBC since 1949.



Dr. Karl Klinka explained the geology and geomorphology of the area as well as the importance of ecosystem management using the site classification tool (Site Classification for Coastal British Columbia – 1995). He also explained the taxonomic classification of humus forms of forest surface materials (Towards a Taxonomic Classification of Humus Forms: Third Approximation). He was assisted by Dr. Tim Ballard.

We also visited a gravel pit in Abbotsford which discussed geomorphology, the processing of gravel, settlement ponds, reclamation and other

issues related to gravel availability. Thank you to Don McQueen, the soils specialist for the site, for providing some of the background information on the operation.



Next stop was a raspberry field where we reviewed the soil parent materials as well as the issues of nutrient uptake over the Abbotsford Aquifer.



The last leg of the tour was of Sumas Prairie which was moderated by Sandy Traichel where we looked at changing cropping patterns, cover cropping, turf farms and other agricultural issues. Special thanks to our leaders as well as to Trevor Murrie who helped to moderate throughout the day!

Susan Ames, PhD, P.Ag., CAC

Recent Soils Graduates

Jennifer Catherall, M.Sc. (April 2004) UNBC

Dr. Hugues Massicotte, supervisor

The ectomycorrhizal associations of *Larix laricina* (Du Roi) (Tamarack) K. Koch and *Betula glandulosa* Michaux (Scrub birch) seedlings in peatlands of central British Columbia.

Julie Deslippe, M.Sc. (April 2004) UNBC

Dr. Keith Egger, supervisor.

Will climate change alter arctic nitrogen budgets? Impacts of warming and fertilization on nitrogen fixing microbial communities at Alexandra Fiord, Ellesmere Island, Nunavut

Sara Harrison, B.Sc. (May 2004) UBC

Jayna Houston, M.Sc. (May 2004) UBC

Dr. Hans Schreier, supervisor

Land Use, Riparian Buffer and the Effects of Urbanization on Stormwater Runoff in the Hoy Creek Watershed, Coquitlam, BC

Laura Koch, M.Sc. (May 2004) UBC

Non-thesis

Marcia Thomson, M.Sc. (May 2004) UBC

Dr. Art Bomke and Dean Maura Quayle, co-supervisors

An Agroecological / Foodshed Study of the British Columbia Poultry Industry's Management practices: A case study of the Sustainable Poultry Farming Group

Elyn Humphreys, Ph.D. (May 2004) UBC

Dr. Andy Black, supervisor

Net Ecosystem Production of Three Coastal Douglas-fir Stands at Different Stages of Development After Harvesting

Svetlana Bluskov, M.Sc. (Sept 2004) UNBC

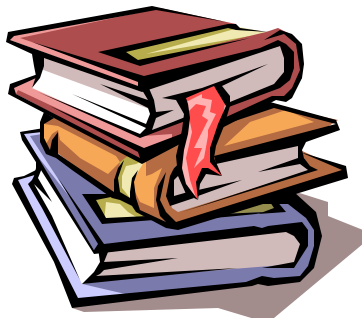
Dr. Lito Arocena, supervisor.

Distribution of chromium and its effect on morphology and anatomy of *Brassica juncea* (Indian mustard) and soil organisms.

Victoria Blouin, M.Sc. (Nov 2004) SFU

Dr. Margaret Schmidt, supervisor

Effects of mechanical disturbance on soil properties and lodgepole pine growth in BC's central Interior



Opportunities

Faculty position available in the general area of soil science for September 2005 at University of British Columbia - Okanagan.

In September 2005, the North Kelowna campus of Okanagan University College (OUC) becomes The University of British Columbia -Okanagan. This new institution will be hiring 40-50 new faculty each year for the next five years. Student numbers will increase from 3000 to 7000. A number of new programs, including graduate studies will be established when UBC Okanagan comes into being.

The first year's hiring will focus on enhancing existing research strengths. One of the areas of recruitment will be Soil Science. Current research strengths in this area at OUC include Physiology and Ecology of Ectomycorrhizas,

Forest Soil Hydrology, Biogeochemical Cycling, and Plant Growth Promoting Rhizobacteria in Agricultural Soils. The Soil Science and Plant Nutrition Group, based at OUC includes local scientists from the British Columbia Ministry of Forests as well as Agriculture and Agrifood Canada. These scientists bring expertise in Mineral Nutrition and Water Relations of Trees, Soil Compaction, and Soil Chemistry. New faculty will have access to excellent facilities are being established for environmental analytical chemistry and for molecular analyses of populations and communities funded by two recent multi-million dollar awards: one in Watershed Science and one in Species at Risk and Habitat Studies.

For further information on applying connect to

http://www.okanagan.ubc.ca/faculty_staff/prospective/index.html. It is expected that staff recruitment will get under way in January 2005.

Upcoming Events

- Jan. 5-7, **Symposium on State of the Science of Animal Manure and Waste Management**, San Antonio, TX; www.cals.ncsu.edu/waste_mgt/natlcenter/center.htm.
- Jan. 19-22, **Ecological Farming Conference**, Pacific Grove, CA; www.eco-farm.org.
- Feb. 7-8, **Livestock Environmental Initiative Symposium**, Mississauga, Ontario, Canada, www.cpc.ccp.com
- Feb 23-25, 2005. **57th Forestry Conference and Annual Meeting of the Association of BC Forest Professionals**. "Perspectives: What's Your Passion?" Prince George. <http://www.abcfp.ca/agm57.html>
- Feb 23-25, 2005. **Water - Our Limiting Resource**, CWRA, BC Branch Conference. Kelowna http://www.cwra.org/CWRA_News_and_Events/BC_Feb_2005/bc_feb_2005.html
- Mar. 8-10, **Western Society of Weed Science**, Vancouver, BC, Canada; Contact Wanda Graves, 510-790-1252.
- Mar 29-31, 2005. **2005 Puget Sound Georgia Basin Research Conference**. Seattle. <http://www.engr.washington.edu/epp/psgb/index.html>
- Apr. 25-27, International Salinity Forum. **Managing Saline Soils and Water: Science, Technology and Social Issues**, Riverside, CA; www.waterresources.ucr.edu
- April 26-27, 2005. **Implications of Climate Change In BC's Interior Forests**. Revelstoke, BC
Optional Fieldtrip April 28. <http://www.cmiae.org/>
- *Apr. 30-May 3, **All Things Organic**, Chicago, IL; www.atoexpo.com.
- June 20-23, 2005. HeadWater 2005: "**Hydrology, Ecology and Water Resources in Headwaters**" Bergen, Norway. <http://www.nve.no/headwater05/>
- **Innovations in Agrology 2004**, BCIA, Vancouver Branch. Professional Development presentations held the second Thursday of every month. For topics and schedule see: <http://www.bcia.com/>

PRSSS MEMBERSHIP RENEWAL

Please check appropriate fee

Regular	1 year	\$10
	2 year	\$20
	5 year	\$45
Student	1 year	\$5
	2 year	\$10

Total Amount Enclosed \$ _____

(Please make checks payable to Pacific Regional Society of Soil Science)

Dear member,

Please submit your membership fees together with the form below to ensure that you are remaining on our mailing list. The due date of your fees is indicated on the address label on the envelope. If you have chosen to receive the newsletter in electronic form, you will receive a notice stating your due date shortly. In case of any questions, please feel free to e-mail us at prsss@vcn.bc.ca. We'd also like to ask you to indicate any changes of your contact information. Thank you very much, we greatly appreciate your contribution. Sincerely, *your PRSSS executive.*

PRSSS ENROLMENT / MEMBERSHIP RENEWAL / CHANGE OF ADDRESS

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Comments/Suggestions: _____

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Student Membership 1 Year \$5 _____

Student Membership 2 Year \$10 _____

Regular Membership 1 Year \$10 _____

Regular 2 Year Membership - \$20 _____

5 Year Membership - \$45 _____

Please include me in the PRSSS Directory:

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No: _____

Please send me the PRSSS Newsletter by:

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If you have any questions regarding your membership standing, please contact Lesley Dampier at 604-777-9788 or ldampier@sylvis.com.