



UBC Department of Botany Newsletter

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Edited by Iain Taylor



WELCOME

The second issue of the UBC Botany Department periodic newsletter will be distributed largely by electronic mail and be available from the Department's web site. Sincere thanks to Colin Bates, a Ph.D. student in Rob DeWreede's lab, for designing the new website. Please visit it at <http://www.botany.ubc.ca>

We began 2005 emerging from the sadness of Neil Towers' death (obituary below). All those whom Neil hired during his time as Head have now retired. Max Taylor, who retired from Botany and Earth and Ocean Sciences (formerly Oceanography) on December 31st 2005, was the last. He served for 41 years on the faculty. That might just be a record, but I have to check it. Carol Ann Borden, who began her UBC career in Janet Stein's lab and became the organizational pillar of phycological and 'lower plant' teaching lab retired in 2006, as did Tony Griffiths who came as a post-doctoral fellow with Clayton Person and went on to author a bestselling genetics textbook.

Carl Douglas returned to normal life after serving the department as Head for the last 7 years. Carl presided over many changes in the department's people and spaces. His service was truly exceptional, but he surely deserves the relative peace and quiet of the research lab and the classroom. We wish him well and thank him for his great leadership.

A special welcome goes to Fred Sack who began his term as Head on July 1st 2006. Fred was Chair of the Department of Plant Cellular and Molecular Biology at The Ohio State University. Fred's "lab pioneered the identification of genes needed to form stomata, which are pores in plant leaves central to biosphere productivity. His research also shaped current views about how plants sense gravity, work that included retrieval of spiral moss cultures from the rubble of the Columbia Space Shuttle".

I repeat my request to former department members (faculty, students, staff and visitors) for as many reminiscences of your time in the department as you can muster. When were you here? Who taught you? Who were your classmates? Where did you go after your time in the department? Please send me your reminiscences, no matter how sketchy. It is relatively easy to gather the "facts"

from the UBC archives, but understanding them properly enough to write history requires context that is not written in the printed record but lies behind and under it in the memories of individuals. Of course, memories may be a little 'selectively improved' with time, but the same story from 2 or even more viewpoints provides the kind of verification that any scientist or historian must have. So please call me, write to me, or use electronic devices. Two alumni whom I met during the last months remembered D.J. Wort. Another wrote in 2005 remembering that John Davidson and Andrew Hutchinson had supported her successful application for a graduate position at UCLA in 1938.

January 30th 2005 was the centenary of the birth of Dr. Vladimir Krajina. Hardly a week goes by without my hearing yet another reminiscence about Vladimir in the classroom or the field. In my role as Department Historian I am slowly working through the 20+ boxes of his reprints, manuscripts, reports and correspondence. While a lot are duplicates of material held in other places, I am working slowly and cautiously to be sure that all the important material is preserved and deposited in safe storage.

There is so much that is important for us to put on record, if future generations are to know how the Department came to be, how it grew and perhaps to understand why it is moving in one direction or another.

HEAD'S MESSAGE



It truly an honor to become Head of Botany. This is clearly one of the strongest botany/plant biology departments in the Americas. Despite significant turnover that has affected the distribution of research strengths, faculty quality continues to be outstanding, and space and facilities continue to improve. Much of the credit goes to Carl Douglas for his efforts as Head. His acumen, dedication, fairness, and energy, have moved Botany far forward in excellence, recognition, and cooperation. He has also left his mark by helping build the larger plant science community at UBC and in British

Columbia. Indeed, it was the possibilities for building upon his legacy that helped make this position especially attractive to me.

Now is perhaps the most crucial time in human history to expand and share our understanding of plants. The interplay between research, excellence, education and communication matters more than ever for sustaining our planet and species. This sentiment is widely shared as evidenced by the Beaty donation to embed a Museum in a house of biodiversity research. Our research, fundamental and applied, lays the basis for our broader mission in education, whether in the research laboratory, in introductory biology, in the media, or in talks to wider audiences. Broad public support for basic and practical plant research lays the foundation for expanding researching funding which is urgently needed.

I invite all members of our Botany community to use this newsletter and other venues as fora for your views, hopes, and support. We share a common history and, especially, a dedication to treasure the complexity, beauty and centrality of plant life. I look forward to hearing especially from those of you who are not currently on campus.

OBITUARY



G.H. Neil Towers
FRSC PhD
1923-2004

Professor G.H. Neil Towers, who died on November 15th 2004 after a struggle with cancer, was the epitome of the academic scientist. He had many interests but his passion was science, in particular the chemistry and biology of plants and their uses that would benefit humanity. With the more than 100 undergraduate, graduate and post-doctoral students who worked in his laboratories at McGill, NRC Halifax and UBC, he published several hundred research papers. Many of those young colleagues followed him into outstanding research careers working in major universities and research institutes throughout the world. Few plant chemists in the last 60 years have missed contact with Neil and his amazingly constructive curiosity.

Born in Burma (now Myanmar) to a colonial railway family, Neil was one of the last to leave Rangoon when the Japanese invaded in 1942. He served in the Navy, then earned an undergraduate and a master's degree from McGill. After doctoral study at Cornell, he returned to McGill. After a very short stay at the National Research Council of Canada labs in Halifax, Neil moved to become the Head of the Department of Botany and Biology at UBC in 1964. His impact on the department was immediate. He recruited a group of faculty who were both excellent researchers and committed teachers and rebuilt the foundations of what was to become one of the leading centres of plant research in Canada. He was a Fellow of the Royal Society of Canada and received international honours including a Feitschrift issue of the world's leading plant chemistry journal, "Phytochemistry" that celebrated his 80th birthday. He was in his lab until shortly before his death.

Neil was a fundamentally modest man. He taught so many of us respect for our science and his unquenchable enthusiasm for new discovery gave us all genuine inspiration to find a way to solve seemingly unsolvable problems. He had a remarkable presence in the classroom. His quiet voice and humorous presentation caused young and old alike to pay attention as he carefully took a seemingly incomprehensible sequence of chemical reactions and revealed the elegance and beauty that most had previously not understood.

Others can evaluate his technical contributions, but we will all remember a clear thinker, his insatiable curiosity, and the talent to see through the complexity. Above all we recognize the privilege of knowing him, a great botanist and a truly gentle man.

We are sorry to record the passing of Botany alumna **Martha Violet Roberts** (June 16th 1912- November 6th 2004) and thank her son, John, for contacting us.

DEPARTMENT NEWS

2005 and the first half of 2006 were busy and fruitful times for both research and teaching in the Botany Department. The summer of 2005 was dominated by the search and interviews for the new Head to replace Carl Douglas. We thank Geoff Wasteneys for managing the search so ably. Fred has begun to embrace the culture of his new departmental home.

The funding for the Biodiversity Research Centre was completed in 2005 thanks to a major donation from Ross and Trisha Beaty. This will allow the combination of the Centre's research with The Beaty Museum of Natural History. Detailed planning for the new building is in progress. We hope that construction will start in the autumn of 2006 on part of the site occupied by Hut B8 on Main Mall.

The Michael Smith Laboratories (named for UBC's Nobel Laureate in Chemistry) were opened in 2005. Several botanical researchers took up new accommodation in the building, which is on the site that was (until the late 1970s) a gravel parking lot that provided temporary location for huts housing research labs for Bruce Tregunna, Bob Bandoni, Vladimir Krajina and countless graduate students. Movements to the Smith Labs also led to moves for at least half the current faculty within the Biological Sciences Building, and led to internal renovations that were long overdue. The rooftop greenhouse on the north wing of the original (pre-1960's) core is to be removed. If you remember that wing without a greenhouse, please let me know the date. That is the kind of history that we are losing.

AWARDS

Patrick Keeling (Associate Professor and member of the Canadian Institute of Advanced Research Evolutionary Biology Program) received one of ten 2006 *Senior Scholar Career Investigator Awards* from the Michael Smith Foundation for Health Research. This 5-year award is for research in "Reduction in Microsporidian Parasites". Patrick was also awarded the *Charles A. McDowell Award for Excellence in Research*, one of UBC's most prestigious research prizes, established in 1985 in honour of Charles A. McDowell, Professor Emeritus, Chemistry and Head of Chemistry from 1955 to 1981.

Joerg Bohlmann (Associate Professor in the Michael Smith Laboratories and the Department of Botany) was awarded a 2006 *NSERC Steacie Fellowship Award* – one of Canada's premier science and engineering research prizes. His work has laid the foundations for Canada's first large-scale initiative dedicated to forestry genomics, Treenomix, and a new Conifer Forest Health genomics program focusing on the defense and resistance of conifers against insect pests.

Paul J. Harrison (former Professor of Botany/Earth & Ocean Sciences, UBC) was awarded the *Murray Newman Award for "Excellence in Research"* from the Vancouver Aquarium.

Mark Vellend (Tier II Canada Research Chair in Conservation Biology) was awarded an American Society of Naturalists *Young Investigator Prize*

Keith Adams (Assistant Professor in Botany, in the Faculty of Land and Food Systems, and the Botanical Garden and Centre for Plant Research) received an *Early Career Scholar Award* from the Peter Wall Institute for Advanced Studies at UBC.

Ben Gilbert, Ph.D. candidate (Turkington lab) received the 2005 *Canadian Botanical Association J. Stan Rowe Award* for the best paper in ecology published by a student at a Canadian university.

Andrew MacDougall, former Ph.D. student (Turkington lab) received the 2006 *Canadian Botanical Association J. Stan Rowe Award* for the best paper in ecology published by student at a Canadian university.

Jeannette Whitton was promoted to Associate Professor with tenure effective July 1, 2005.

Lacey Samuels was promoted to Associate Professor with tenure effective July 1st 2006

Mary Berbee and Ljerka Kunst were promoted to Professor effective July 1st 2006

2004/05 *Faculty of Science Achievement Awards*: Henry Chung (Botany/Zoology Stores) and Elisabeth Ziccardo (a 4th year Biology Program student).

2004-2005 *NSERC Graduate Scholarships*:

Erin Gill, Genetics (Fast lab), (Also received a 2006/07 NSERC PGSD-3 year award.

Wyth Marshall (Berbee lab)
Kristoffer Palma, Genetics (Li lab)
Ryan Philippe, (Bohlmann lab)
Nyssa Temmel, (Cronk lab)

Benjamin Gilbert (Turkington lab) is one of eight doctoral students appointed to the ninth class of Scholars for *The Canon National Parks Science Scholars Program*. Each scholar receives significant multi-year funding to conduct cutting-edge research critical to conserving and managing national parks throughout the Americas. The 2006

group, who come from all parts of the Americas (from Canada to Chile, and from Florida to Ohio, Illinois and Georgia), receive funds to cover research expenses. The program is a collaboration among Canon U.S.A. Inc., the National Park Service (NPS) and the American Association for the Advancement of Science (AAAS). It selects students from disciplines of biological sciences, physical sciences, social and cultural sciences, and technology innovation in support of conservation science.

2004-2005 Governor General's Gold Medal for M.Sc. thesis at UNBC: Jeanne Robert, (Bohlmann lab)

2004-2005 Edith Ashton Memorial Scholarship: Colin Bates (DeWreede lab).

2004-2005 Frances Chave Memorial Scholarship: Cameron Carlyle (Turkington lab) and Aaron Heiss (Keeling lab)

2004-2005 Craig Adams Sandercock Memorial Scholarship: Alex Culley (Suttle lab).

Samantha Hicks Memorial Prize: Jennie McLaren (Turkington lab)

Sigma Xi Grant-in-Aid of Research: Jennie McLaren (Turkington lab)

2005-2006 Kit Malkin Scholarship: Sharon Jeffery, M.Sc. Candidate (DeWreede Lab)

Student awards for conference presentations:

Natalia Kolosova (Bohlmann Lab),
Canadian Bioinformatics Workshop.
Colin Bates (DeWreede lab), Asia
Pacific Phycological Conference
Phoebe Lee (Singh teaching lab), UBC
Multidisciplinary Undergraduate
Research Conference.

2006 Northwest Scientific Association
Student Research Grant: Chris Sears
(Whitton lab)

2006 Canada Graduate Scholarships
(*NSERC CGS D2*): Natalia Kolosova and
Jeanne Robert (both in the Bohlmann lab)

NSERC postdoctoral fellowship: Diane
Martin (Bohlmann/Lund)

SPOTLIGHT ON BOTANY RESEARCH

The awards received by both faculty members and graduate students are powerful statements of the Botany department's research activity past and present. The level of research funding

and the number and quality of post-graduate and post-doctoral fellowships point very clearly to the high quality research going on in the department and to the level of research talent available. What is more, work is being published for the most part in top journals. Several invited reviews and chapters in edited books indicate that colleagues are being recognized both as experts and as having something important to add to the interpretation of the primary research record.

For two graduate students to win the very competitive and prestigious *Canadian Botanical Association J. Stan Rowe award* for the best paper published by a graduate student in a Canadian university clearly points to up-and-coming talent in the department.

The annual Botany Graduate Student Symposia were held in March 2005 and 2006 and provided the usual opportunities for communication between laboratories.

The March 2005 issue of *Phycologia* (volume 44, part 2) was published in memory of Dr. Kathleen Cole. The issue was guest-edited by two of Dr. Cole's former post-docs: Curt Pueschel and Bob Sheath and includes papers by former UBC students* and post-docs**, Wendy A. Nelson*, Robert G. Sheath**, Curt M. Pueschel**, Eric C. Henry*, Sandra C. Lindstrom* and Louis A. Hanic*.

Beverley Green (faculty member 1967-2003) has been honored by the Western Photosynthesis Conference. *The Beverley Green Award* was established to recognize Beverley's contributions in the field of photosynthesis, particularly for her many new discoveries in the field of light harvesting proteins and their evolutionary relationship, and her new and exciting findings in the fields of genetics of photosynthetic proteins and the evolutionary origin of chloroplasts. The annual award was presented for the first time in January, 2006 and will honour a Ph.D. student who has done outstanding research in the field of photosynthesis.

SPOTLIGHT ON BOTANY TEACHING

Shona Ellis (B.Sc. and M.Sc) received a *2006 Killam Teaching Prize*. This is her second Killam Prize.

Reinhard Jetter and Mike Hawkes were nominated for the *Killam Teaching Prize* in 2006

Lisa McDonnell and Omid Toub received *2006 UBC Graduate Teaching Assistant Awards for Teaching*.

Bahram Soltani (Douglas lab) was awarded a *UBC Science Undergraduate Society "Excellence in Teaching Award"* for 2005-2006.

Tony Griffiths and Celeste Leander received the Faculty of Science Achievement Award for Teaching. Tony also received a *Faculty of Science Achievement Award for Service*.

Much of 2005 was spent in a major reassessment of the undergraduate Biology program. Assuming that all the approvals are completed, many of the changes would be operating in September 2007. Judging by the enrollment increases in many Botany courses, interest in plants continues to grow. Incidental conversations with students suggest very strongly that the increased enrollments are largely due to the rigour and excellence of instruction and the enthusiastic messages that plants really are both fun and important.

Mary Berbee has developed and presented a month-long advanced Phylogenetic Workshop that covers mechanical and theoretical issues in phylogenetic analysis.

MOMENTOUS MOMENTS AND NEWS

The Haughn Curling Team (George, Ljerka, Heather and Hannah) regained the trophy in the Botany Curling Bonspiel from the Botanical Garden in early 2005 only to be overtaken in early 2006 by the Wasteney's team (Amanda Koetzer, Geoff, Miki Fujita and Tsubasa Shoji).

Commiserations to Roy Turkington, whose Northern Ireland 60 metre indoor sprint record (6.8 seconds) for was recently beaten by 0.05 seconds. Roy held the record for 30 years! (His record will remain the fastest hand-timed record).

Elaine Simons (Administration Manager) gave birth to a daughter on October 24 2005. Leby Balakshin is replacing Elaine while she is on maternity leave and Trina Ojo is doing Leby's job as Head Secretary.

There is much life in the Botany Annex, although the Department of Psychology seems to have reclaimed some space in the once famous 'rat-running' building. Roy Turkington, Fred Ganders and Luis

Oliviera have offices and labs in the building. Sandra Lindstrom (M.Sc., Ph.D. UBC) maintains an active research laboratory and is visited occasionally by Louis Hanic (Ph.D. UBC) who keeps watch on his algal cultures. Iain Taylor (your newsletter editor) Jack Maze and Tony Griffiths are the emeritus representatives.

The UBC Herbarium has a small 'marketing arm' from which you can purchase:

- Plant presses that are hand-made, latticed frames from high quality, naturally rot-resistant yellow cedar.
- Each comes with two 6 foot long, cam-buckle nylon straps. \$45 each
- Flower photo cards, photographed by Gerald and Irmgard Carter. \$3.50 each or 3 for \$10.00
- Framed prints of herbarium specimens (Vascular and Algae). \$18.00 each or 3 for \$45.00
- Unframed botanical prints by Margaret Stones. \$25.00 each

For information contact 604-822-3344 or visit the UBC Herbarium, Rm. 5470, Biosciences Bldg (next to the Bookstore), weekdays from 9:00 am to 5:00 pm.

COMINGS AND GOINGS

Keeping track of the comings and goings, even in what is a relatively small group such as the Botany department, is a daunting task. In addition to welcoming Dr. Fred Sack as the new department Head (details elsewhere in this letter) we are pleased to welcome:

Dr. Loren Rieseberg, who has joined the Department and the Centre for Biodiversity Research as a Tier I Canada Research Chair. Loren comes to us from Indiana University where he was a Distinguished Professor and gained an international reputation as a world leader in molecular plant systematic biology, speciation, domestication and conservation. He has an extraordinary track record as a mentor to doctoral and postdoctoral associates and has published numerous papers in Science and Nature. His joining Botany strengthens UBC's expertise and reputation in evolution and systematics.

Dr Mark Vellend is an ecologist, conservation biologist jointly appointed between Botany and Zoology. Mark did his Ph. D at Cornell University and joined UBC after working at the US National Center for Ecological Analysis and Synthesis at the University of California at Santa Barbara.

Dr. Keith Adams and Dr. Sean Graham, who joined the Botanical Garden and Centre for Plant Research two years ago now have their research laboratories in the Biological Sciences building.

Carol-Ann Borden retired in May 2005. After working for Janet Stein, Carol Ann became the tireless laboratory instructor in the 'core' organism courses, especially those that involved the so-called lower plants. A whole generation of students benefited from her patience and seemingly endless enthusiasm for Botany.

Tony Griffiths joined the ranks of Professors emeriti in 2005 and **Rob DeWreede** retired effective July 1st 2006. Both chose to leave with little fanfare, but Rob's former students and collaborators chose to block his escape by holding a symposium in his honour.

Elaine Humphrey has left the Bio-Sciences Imaging Unit after many years service.

RECENT GRADUATES

May 2005

Adrian Marchetti, Ph.D. (P.J. Harrison)
Sherri Rodgers, Ph.D. (DeWreede)
Miranda Corkum, M.Sc. (Tortell)
Linda Jennings, M.Sc. (Whitton)
Gary Lewis, M.Sc. (Bradfield)
Cheryl Martin, M.Sc. (Tortell)

November 2005

Hardy Hall, M.Sc. (Ellis/Li)
Kaeli Stark, M.Sc. (Bradfield)

B.Sc. in Plant Biology

Jason Chiu
Elena Johnson
Angela Knopp
Curtis Musson
Stephen Naphegyi
Lana Rupp
Jonathan Schneider
Jennifer Welder
Robert Wilson

May 2006

Corinne Cluis, M.Sc. (Ellis/Douglas)

B.Sc. in Plant Biology

Kori Archer
Richard Cooper
Graeme Harkness
Charlotte King
Yi-Cheng Lee
Winnie Wing Yee Tse
Janelle Webb

ALUMNI NEWS

Dezene Huber (NSERC PDF Bohlmann lab) holds a Canada Research Chair Tier II and is an Assistant Professor

at the University of Northern British Columbia.

Philippe Juneau (PDF, P.J. Harrison and Green labs) holds a CRC Chair in Environmental Toxicology at the Université de Québec à Montréal (UQAM).

Andrew MacDougall (Ph.D. and PDF, Turkington lab) took up a position as an Assistant Professor at the University of Guelph, starting July 1st 2006.

Martha Nelson (M.Sc. Green lab) received 3-year funding from The Percy FitzPatrick Institute of African Ornithology for Ph.D. study in the UBC Department of Zoology.

Dae-Kyn Ro (Ph.D. Douglas lab; PDF, Bohlmann lab) is an Assistant Professor at the University of Calgary and was nominated for a Canada Research Chair in Natural Products.

Greg Sharam (M.Sc. Turkington lab) Ph.D. (Zoology) UBC. November 2005.

Nitin Verma (B.Sc. Marine Biology) received an M.Sc. from SFU in 2005.

50 YEARS AGO - GLEANINGS FROM UBC ARCHIVES

Ph.D. (1955) Thomas Christopher Brayshaw. Thesis "An ecological classification of the ponderosa pine stands in the southwestern interior of British Columbia"

MA. (1955) Robert Townley Ogilvie. Thesis "Soil texture of *Pinus ponderosa* communities in British Columbia"

MA. (1955) Mildred Ruth Palmer. Thesis "The pigments of the algae with special reference to certain orders of the Chlorophyta". Awarded the Edith Ashton Memorial Prize (\$250).

MA. (1955) Gordon Allan White. Thesis "Chemical and biochemical responses of sugar beet root to foliar freezing and defoliation".

BA. (1955) Thomas Benjamin Widdowson. Awarded the Andrew H. Hutchinson Scholarship in Biology and Botany

MA. (1956) Herbert Spencer Pepin. Thesis "A chromatographic investigation of the alcohol soluble nitrogenous constituents of *Verticillium albo-atrum* R and B isolates". Awarded a NRC Scholarship (\$1200) and the Edith Ashton Memorial Prize (\$250)

Richard Garm. Awarded a BC Sugar Refining Co. Ltd. Scholarship (\$200)

Dieter Mueller-Dumbois. Awarded a Leon J. Koerner Graduate Fellowship (\$250)

Job Kuijt. Awarded a NRC Special Scholarship (\$2000)

Gertrude Draper Pentland (1956) B.Sc. with 1st class honours in Botany. Awarded the Armstead Prize (\$50) in Biology and Botany and a NRC Bursary (\$800)

BA (1956) Douglas Malcolm Shrimpton. Awarded the Andrew H. Hutchinson Scholarship in Biology and Botany

To receive an email version of future newsletters or to send us any news, personal or professional, as well as news of other alumni and friends of the Department with whom you are in touch, especially those who graduated in the pre- and immediate post-WWII eras contact us at ALUMNI@mail.botany.ubc.ca. In particular, we need addresses and e-mail contacts so that we can remake connections that have been lost over the years.

Please send us any news, personal or professional, as well as news of other alumni