



# UBC Department of Botany Newsletter

Number 6 January – December 2010

Edited by Iain Taylor



## WELCOME

Welcome to the 6<sup>th</sup> edition of the UBC Botany Department Newsletter. 2010 was a busy and generally successful year. The Department held a Faculty Retreat in June and was subject to the normal 5-yearly external review in December. Things are clearly moving ahead in a big way! Research and teaching are flourishing and there is increased national and international recognition of our achievements. The Biodiversity Research Centre and Beaty Biodiversity Museum are now fully up and running. When you come to UBC, visits to the Museum and the enormous Blue Whale skeleton, and of course to the Botanical Garden, are essential!

Thanks to all who fed me news during the year, particularly Judy Hayes and Veronica Oxtoby, in the Department office, who have prepared and circulated *Botany This Week*. We keep reducing the Department's 'lost contact list', but please let me know of any who mention that they are not in contact with us. Increasing postage costs force us to rely only on e-mail to circulate the Newsletter. The Canada Post list is still very long, but too expensive to use.

My progress in preparation of the Botany Department history is slow but steady. I plan to have both the *One Hundred Years of UBC Botany* and *One Hundred Years of Science at UBC* ready for 2015, which is the centenary year of the first formal degree programs at UBC.

Please take a few minutes to send me your reminiscences. In particular, please send me a list of the people whom you remember and what you are doing now. Every new reminiscence makes my searching of the university's records that bit easier. Send letters and pictures via snail-mail or send e-mail correspondence to me at [botalum@interchange.ubc.ca](mailto:botalum@interchange.ubc.ca): or even by telephone (604) 822-0416.

*Iain Taylor*

## HEAD'S MESSAGE

Although discussed elsewhere in this Newsletter, it is hard to overstate the significance of the opening of the Biodiversity Research Centre and the Beaty Biodiversity Museum. This is the culmination of years of planning and work by ecologists and evolutionists especially from the Botany and Zoology Departments. The payoff seems to just be beginning with heightened interactions among researchers and students, as well as with the public. The Herbarium is now elegant in organization, casing, display, and in enticing public interest. Come visit! The Ecology and Evolution program is thriving with new faculty hires on the way (see below), with a graduate student CREATE training grant, and with Loren Rieseberg's appointment to the Royal Societies of both London and Canada.

Meanwhile the provincially sponsored renewal of the South and West wings of the Biosciences Building should be complete this summer and will house over a dozen Botany faculty members especially in cell and molecular biology. Other occupants include physiology researchers in Zoology many of whom work with fish and use the aquatic facilities (not another UBC pool).

Botany currently has searches underway for five faculty members including an Assistant Professor in cell and molecular biology, a Canadian Research Chair 2 in conservation biology, an Associate Professor in plant ecology, and an Instructor. The CRC2 will replace Mark Vellend who is moving to the University of Sherbrooke. The Dean of the Faculty of Science, Simon Peacock has been extraordinarily supportive in making these hires possible.

There has been significant turnover in the Botany office staff with Sarah Ruddick, our trusty Administration Manager on parental leave, Aven Bendickson, who was the Head Secretary, taking over for Sarah, and Jessica Sui "replacing" Aven. Iris Fung

is in finance, and Laura Sand is now our Greenhouse coordinator.

I will be finishing my term as Head this June, and the Department is now gearing up to select a new, internal Head. This follows on the heels of an intensive state of the Department report that helped set the stage for an external review of Botany conducted by four outstanding plant biologists.

Finally, the Biology program is undergoing a major restructuring of the curriculum and has identified a set of required core courses as well as new inquiry-based lab courses for Biology majors. In addition, the administration of Biology is being strengthened and consolidated to further integrate the program, and to serve students even better.

Please visit us to say hi and to see the Museum/Herbarium and the new and renovated buildings.

*Fred Sack*

## IN MEMORIUM

**Gilbert C. Hughes**

28<sup>th</sup> February 1933 – 10<sup>th</sup> October 2010



Gil Hughes was born in Homerville GA, and earned an undergraduate degree in Biology from Georgia Southern University 1953. Biology was the 'major' but music was never far behind, for Gil was an accomplished pianist. He had a lifelong love of the works of Rachmaninoff and became recognized as one of that composer's expert discographers. He was widely known as

one of the world's experts of the discography.

He fell in love with fungi and obtained graduate degrees in Botany from Florida State University (M.S. 1957; Ph.D. 1959). After one year as an NSF Research Fellow at the Duke University Marine Laboratory and another as an NRC of Canada Postdoctoral Fellow at UBC, he taught at Kansas State and then at the University of the Pacific in Stockton, CA. He arrived back at UBC in 1964 and remained until he was appointed as Professor emeritus in 1998.

Like almost all the mycologists whom I have known, Gil's love of fungi was almost obsessive. He was known internationally for his work on fungi in marine and estuarine habitats. For much of his career he was the only Canadian mycologist actively researching fungal pathogens in maricultured invertebrates and marine algae, and working on biodeterioration in Canada's coastal waters. Given the 'new' interest in marine fungi, bacteria and viruses, Gil clearly was a pioneer for this currently emerging field. Gil was a meticulous researcher who maintained his own research at the same time as he nurtured his students to follow their own paths. He published sole-authored and co-authored peer reviewed papers, books and book chapters, and he actively promoted his students to publish alone when single authorship was the right thing to do. His best known work is the book, *Fungal Diseases of Fishes*, co-authored with Gordon A. Neish that was later translated into Russian.

Gil was a deeply committed teacher to undergraduates, especially in the first year Biology program. He served 2 terms as Director and was a strong supporter of real organism laboratory teaching. He was the founder of the course, Plants and Man, later Plants and People, which was one of the courses that were available to 3<sup>rd</sup> year Arts students but also became a major opportunity for Botany (now Plant Biology) students to see the wider context of Botany in society. He devoted enormous time to nurturing, rather than directing his graduate students.

Underneath, music was ever-present. It was almost impossible to visit his lab without a classical musical accompaniment. It was often Rachmaninoff, but it could just as well

have been a powerful symphony or piano concerto that enriched conversation and may well have heightened Gill's attention that found the right details to notice and interpret under the microscope.

Gilbert, Maryann and their children always made Sylvia and I welcome. We shared visits to the PNE, ate many meals in Chinatown. Lunch at the UBC Faculty Club was a time for great conversation as well as putting the university and the world to rights. Gil loved to cook and every meal that friends enjoyed at the Hughes home was a gastronomic event to remember. He lived life well. We will miss him. Many who were his friends were enriched for knowing him.

#### Wilf Schofield

A further memorial for Wilf has been established. The first *Wilf Schofield Bryofora* was held on August 20–22, 2010 around the Mt. Washington Alpine Resort, near Courtenay, on the doorstep of Strathcona Provincial Park on Vancouver Island. It provided opportunities to visit a wide variety of ecosystems including subalpine wetlands and forests, old growth western hemlock forest, and Garry oak-arbutus communities. Baseline inventory data was collected for BC Parks but was of necessity limited to voucher specimens.

#### DEPARTMENT NEWS

**Chris Ambrose** has started the UBC **Botany Departmental Techninar**, a program that provides short (5-10 minute) technical seminars covering any techniques used by members of our department. A quick way to find out a little more about what technical wizardry is behind current research.

The **Biodiversity Research Centre** really has arrived and is occupied and fully operational. The Blue Whale skeleton arrived at the **Beaty Biodiversity Museum** (located on Main Mall just south of Biological Sciences) on April 7<sup>th</sup>. Much brown paper wrapping was removed before assembly and 'public exposure'. On May 22<sup>nd</sup>, the Museum celebrated International Day for Biological Diversity with an opening for a day of exploration and discovery around the exhibit. The **Beaty Biodiversity Museum** and its **Niche Café** are open to the public, Mon. to Fri. 8.15 am – 3 pm, Saturday & Sunday 11 am –

3 pm. For more information visit <http://www.beatymuseum.ubc.ca/>.

**The Annual Botany Grad Student SYMPOSIUM, organized by** Christopher Buschhaus, Jonathan Griffiths, and Patricia Lam was held on Monday, April 19 in the Michael Smith Laboratories. The keynote speaker was Dr. Patrick Martone.

**The Phylomon Project** was one of the Botany Department's contributions to the International Year of Biodiversity. This is an online initiative to create a Pokemon card type resource but with real creatures on display in full "character design" wonder. A test run was held with the scientific community to determine the content on such cards and with folks who love gaming to try and design interesting ways to use the cards. Members of the teaching community participated to see whether these cards have educational merit. The hope is that this will become a "*non-commercial-open-access-open-source-because-basically-this-is-good-for-you-your-children-and-your-planet*" sort of way. More info about the project can be found at <http://phylogame.org> Congratulations yet again to "**Scots on the Rocks**" team members, **George Haughn, Ljerka Kunst, Lebby and Mike Balakshin**, who won the grand trophy prize in Botany's 2010 Curling Bonselpiel for the second year in a row. r

**Iris Fung** joined the Botany Department as Finance Clerk in January.

**Laura Sand** is now our Greenhouse coordinator. She took over from Kevin Kubeck who has returned to the Botanical Garden Nursery.

**Elaine Simons** (Administration Manager) retired from the department this year. Her replacement (Sarah Ruddick) is on maternity leave, and Aven Bendickson (Administrative Coordinator) is standing in for her. Jessica Sui is standing for Aven.

**Santokh Singh** (Senior Instructor in Botany) was elected to the UBC Senate.

Farewell to **Mark Vellend** who left the Department in December 2010 to take a position at the University of Sherbrooke. On behalf of the department, Fred Sack said, "Mark, on behalf of Botany faculty, students, staff, and PDFs/Research Associates we wish you and your family a bright, happy, and

productive next chapter in Sherbrooke. And we look forward to seeing you from time to time at UBC during your visits. All the best indeed to you and your family. You are a good, gentle and brilliant person and scientist and you will be missed." Mark's 2010 paper, *Conceptual synthesis in community ecology*, published in Quarterly Review of Biology 85:183-206, was reviewed in **Faculty of 1000** as a "must read".

### Retirements:

Two stalwarts of UBC Biology (Terry Crawford and Ellen Rosenberg) retired in 2010. Both were pioneers in the evolution of the Cell Biology program. Both will be sorely missed, for both not only accepted the need for change, but encouraged it. I had the privilege of working with both of them. They were wonderfully supportive of undergraduate teaching.

### Iain Taylor

### Terry Crawford (1975-2010)

Few students will forget Terry's enormous commitment to teaching through real lab work where the result was not always pre-ordained. Biology 330 Laboratories were demanding and rigorous. Many students who went on to professional training in Medicine, Dentistry and Graduate work benefited from her rigorous but supportive ways. Students had to work hard but Terry was always available to help those who became experimentally stranded to find ways through their self-created methods chaos. Feedback about her teaching was that she was an outstanding example of a teaching scientist. She even managed to find time for research in the summers as well as to make the annual changes for the lab manual. We wish her well in Victoria where she rejoins husband Bruce who moved to the UVic medical school some time ago. Thanks for everything.

### Ellen Rosenberg (1983-2010)

Ellen achieved the miracle of developing the Biology 200 (Cell Biology) laboratories. She found perhaps surprising allies, but she had a knack of finding creative ways to make an early lab/tutorial experience available for almost 1000 students each Autumn term. As if that was not enough, she worked hard for the teaching of Cytogenetics. Anything that could turn a student towards real science through

first-hand experience was worth a look. Ellen was a major player in the Teaching Assistance Group (TAG) workshops and was one of the first, if not the first holder of the Teaching Diploma/Certificate that was awarded to those who completed the TAG certification program. She was a source of inspired comment when asked for feedback and became a mentor to many starting faculty members and teaching assistants. No doubt Ellen will continue to travel both near and far. We all wish her well.

### AWARDS

**Gary Bradfield** has been appointed a Teaching and Learning Fellow under UBC's Sustainability Initiative.

**Brian Ellis** received the 2009 Canadian Society of Plant Physiologists Gold Medal and then presented the 2010 Gold Medal Address at the joint meeting of the Canadian Society of Plant Physiologists and American Society of Plant Biologists in Montreal.

**Eric Johnson** who was nominated for a 2009/2010 Graduate Teaching Assistant Teaching Award.

**Wayne Maddison** was awarded the Bruce Naylor Award by the Alliance of Natural History Museums of Canada (ANHMC), in recognition of his exceptional contributions to the museum-based study of natural history in Canada.

**Heather McFarlane** (Samuels lab) won the Best Student Poster Prize at the joint meeting of the Canadian Society of Plant Physiologists and American Society of Plant Biologists in Montreal.

**Jin Meng** from Botany won a Faculty of Science Staff Achievement Award. His nominating letter noted his "extraordinary dedication to Botany and UBC" as an electrician who has been invaluable in keeping our equipment in working order. At the same time he has been "a wonderful human being and colleague".

**Kathy Nomme**, Biology program, jointly appointed in Botany and Zoology is one of the 4 Science Faculty winners of a Killam Teaching Prize. She was recognized at the May 31<sup>st</sup> Faculty of Science Congregation Ceremony.

**Loren Rieseberg** was inducted to the Royal Societies of London and of Canada.

**Elaine Simons**, who is also a professional photographer, had 2 images accepted and exhibited in the National Image Competition, held at the Annual Convention of the Professional Photographers of Canada in Mont-Tremblant, QC. The judges were a panel of Master Photographers.

**Curtis Suttle** was awarded the 2010 A.G. Huntsman Award for Biological Oceanography and Fisheries Science, in recognition of his extensive contribution to the field of marine sciences. The citation noted that Curtis is one of the World's leading marine virologists, and is among a small group of researchers that is credited with launching the field of marine virology nearly twenty years ago. These studies demonstrated that viruses are not only the most abundant and genetically diverse biological entities in the World's oceans, but they are major agents of mortality. The results have had a significant impact on our understanding of nutrient and energy flow in the oceans, and have been a catalyst in the re-invigoration of phage biology and environmental virology. His contributions cross over many fields including biological oceanography, environmental microbiology, microbial ecology, virology and phycology.

### Undergraduate Award winners in 2010 were:

**Jessica Ming Chieh Lu** - V.J. Krajina Prize in Plant Ecology

**Benjamin Anderson** - Adam F. Szczawinski Prize in Botany

### Graduate Award winners for 2009-2010 were:

**Marli Vlok** (Suttle Lab) - Edith Ashton Memorial Scholarship

**Gregory Baute** (Adams Lab) - Frances Chave Memorial Scholarship

**Chris Buschhaus** (Jetter Lab) & **Emma Shelford** (Suttle) - Kit Malkin Scholarship

**Jamie Leathem** - Vladimir J. Krajina Scholarship in Plant Ecology



## SPOTLIGHT ON BOTANY RESEARCH

The 2010 *Journal of Vegetation Science* Editors' Award was presented to Cameron N. Carlyle (Ph.D. Candidate, Turkington Lab) for his co-authored paper, "Using three pairs of competitive indices to test for changes in plant competition under different resource and disturbance levels" by Cameron N. Carlyle, Lauchlan H. Fraser, Roy Turkington. Cameron also won this award in 2006.

A paper in the journal *Nature Communications*, by Patrick Keeling and collaborators in Switzerland, Canada and the USA, reported the genome sequence of *Encephalitozoon intestinalis*, a close relative of the human intestinal parasite *E. cuniculi*. To this point *E. intestinalis* has the smallest known nuclear genome. The question that remains "in an already tiny genome, what else can be lost?" Patrick is Director of the Centre for Microbial Diversity and Evolution, a member of Biodiversity Research Centre, a Canadian Institute for Advanced Research Scholar and a Fellow of the Michael Smith Foundation for Health Research.

Loren Rieseberg is a leading member of a \$10.5 million project to map the sunflower genome. It is a cross between standard and Silverleaf form and may yield a hybrid with tasty seeds and thick stalks that could be used in biofuel production.

Times Higher Education ranked UBC Plant and Animal Sciences research impact, 19th in the world, based on journal citations between January 1999 and December 2009. UBC is the highest in Canada and ranks just behind Michigan State, Cambridge, and Purdue.

## TEACHING

Shona Ellis and Eric Jandciu (formerly of the Science program in the School of Journalism) will offer a course on Science Communication starting in January 2011. Shona Ellis is also the Director of the General Science BSc program, which is a combined major in Science. (No wonder she has been awarded TWO Killam Teaching Prizes! Ed).

Lacey Samuels, Rob DeWreede, Dean Simon Peacock and others, have developed a Science faculty initiative for first year undergraduates, the First-Year

Seminar in Science. The program is designed to challenge students to explore science on a more personal level while building critical thinking and communication skills. More than 100 students (in sections of no more than 25 students) enrolled in 2010 for the first offering. The course goals are to make students aware of the breadth of scientific endeavors, relate science to their daily life, practice identifying and building scientific arguments with claim, reason and appropriate evidence. The course includes a Science in Society speaker series, and this year's speakers included UBC Botany alumna, Dr. Nancy Turner, and UBC Botany grad student, Jenny McCune. Jenny was the course TA and built the website.

Iain Taylor presented the 49<sup>th</sup> and 50<sup>th</sup> session of his Publishing Workshop, which started in 1993 and continues to draw participants from social sciences and humanities as well as all areas of science and applied sciences.

## RECENT GRADUATES

### May, 2010

#### Ph.D.

Yunkun Dang (Green)  
Jianjun Guo (Chen/Ellis)  
Bita Jafarpour (Sanfacon/Douglas)  
Wyth Marshall (Berbee)  
Jacqueline Monaghan (Xin Li)  
Jeanne Robert (Bohlmann)  
Ankit Walia (Wasteneys/Ellis)

#### M.Sc.

Sea Ra Lim (Berbee)  
Yi Zhang (Wasteneys)

#### B.Sc. in Plant Biology

Benjamin Michael Anderson  
Stephanie Langlois  
Jessica Lu  
Sonja Evelyn Rummell  
Daniel Seeton  
Raakel Toppila  
Ashley Wingerak  
Virginia Woloshen

### November, 2010

#### Ph.D.

Jennie Renee McLaren (Turkington)

#### M.Sc.

Eric Abbott (Bohlmann)  
Graeme Bell (Adams)  
Tanis Gieselman (Vellend)  
Yuanyuan Liu (Douglas)

James Robertson (Adams)  
Christine Woollacott (Cronk/Adams)

#### B.Sc. in Plant Biology

Hanh Ly

## ALUMNI NEWS

**Alumni/ae.** If your name is not here, then please send me an e-mail with an update of your doings! There are very few other ways to keep in touch with our community. Thanks. Iain.  
e-mail address:  
[botalumn@interchange.ubc.ca](mailto:botalumn@interchange.ubc.ca)

**Gary J. Court** (PhD, IEP Taylor Lab) died on February 13, 2009.

**Memory Elvin-Lewis** (BA 1952) visited UBC on October 2<sup>nd</sup> and lectured to the Vancouver Institute on "Healing from Rain Forests: The Value of Traditional Knowledge".

**Paul Falkowski** (PhD, FJR Taylor Lab) remains active in the forefront of large scale nutrient cycling. His most recent paper noted by your editor is in *Science* 330: 192-196.

**Tanis Gieselman** (MSc, Vellend Lab) completed a two month BRITE Internship at the Millennium Seed Bank Project, with the Royal Botanical Gardens, Kew learning about seed banking methodologies.

**Ben Gilbert** (PhD 2008, Turkington Lab) is an Assistant Professor at the University of Toronto.

**Beverley Green** (Faculty member 1967-2003) 'retired' in 2003 and continues her very active research program as a Professor emerita in the Department. Like several faculty colleagues in Botany, she celebrated the 50<sup>th</sup> anniversary of her graduation (UBC BSc with Honours in Chemistry). She earned a PhD from the University of Washington, and in 1967 she was recruited to the UBC Botany Department by Neil Towers.

**Lee Johnson** (PhD 2005) is patent lawyer with Gowling, Lafleur, Henderson, whose offices are on the 37th floor of Place Ville Marie, the largest and tallest office building in Montreal.

Professor emeritus **Jack Maze** (1968- 1997) has embarked on a new direction with the publication of *More than Meets the Eye: A Poetic and*

*Photographic Exploration of the Biologist's World* by Dan Brooks and Jack Maze. This uses the photography of Dan Brooks and the poetry of Jack Maze to offer an artistic exploration of the world of biology. As a matter of historical interest, Dan was in the Department of Zoology at UBC from 1980 to 1988. Several more volumes are planned. If anyone is interested, the first effort of Dan and Jack can be ordered through:

<https://www.createpace.com/3468381>

**Jennie McLaren** (PhD 2010, Turkington Lab) is a post-doctoral researcher at the University of Texas, Arlington.

**Teika Newton**, nee Olson (MSc 2002 Whitton Lab) is a Community Research Coordinator with Common Ground Research Forum, in Kenora, ON. Since mid-2009 she has been coordinating a five year SSHRC-funded research project through the Natural Resources Institute at the University of Manitoba. Her project focuses on building relationships and sharing knowledge between indigenous and non-Aboriginal communities in the Kenora area with an aim to fostering sustainable economic development and shared resource management and ethnecology. One of the three co-investigating Profs. on their team is an ethnobotanist, Dr. Iain Davidson-Hunt.

**Mark Pidkowich** (PhD 2001, Haughn Lab) is practicing patent law with Smart and Biggar in Vancouver. He has joined **Lee Johnson** in training to become Canadian Patent Agents. It seems that doctoral research in Botany opens unexpected doors!

**Richard Revel** (PhD, Krajina Lab) has retired from the University of Calgary and now lives in Comox, BC.

**Nancy Ricker** (PhD, Bisalputra Lab) basked in reflected glory when her daughter **Maëlle Ricker** won the 2010 Winter Olympics Gold Medal for snow board cross at Cypress Bowl.

**Kim Ryall-Woolcock** (BSc 2006) is now the Outreach and Exhibits Manager of the Beaty Biodiversity Museum.

**John Severson** (PhD, Wort Lab) has spent 40 years at St Louis University and will retire in 2011. He sent a great photo of the 1970 Department of Botany's Spring Social for faculty, staff, and

students featuring David Peirson, Dr. Wort, Dr. Bandoni, and several others who seem to look a little younger!

**Carroll Vance**, formerly Post-doc with Neil Towers, now with USDA-ARS, Agronomy Plant Genetics, University of Minnesota, was elected as a Fellow of the American Society of Plant Biology in 2009.

### 50 YEARS AGO - GLEANINGS FROM UBC ARCHIVES

PhD (1960) Dieter Mueller-Dombois. Thesis: *The Douglas-Fir Forest Associations on Vancouver Island in their Initial Stages of Secondary Succession.*

PhD (1960) William Forbes Murison. Thesis: *Macronutrient deficiency and its effects on coniferous growth.*

PhD (1960) Malvern Gilmartin. Thesis: *Primary production of a British Columbia fjord.*

MA (1960) Robena Claire Robinson. Thesis: *Black Stain in Yellow Cedar Chamaecyparis Nootkatensis (D. Don) Spach.*

BSc (1<sup>st</sup> Class Honours in Biology). Eleanor Ida Serena Kallio. Eleanor won the Armstead Prize in Biology and Botany, and the Vancouver Natural History Society Prize for the Best Student in 4<sup>th</sup> Year Botany.

Louis Anthony Hanic won the Edith Ashton Memorial Scholarship, \$250 for graduate study and research in Botany.

Marcus Bell, Robert C. Brooke, Lazlo Orloci, Everett B. Peterson, and Thomas B. Widdowson were each awarded \$2200 NRC Studentships.

**To receive an email version of future newsletters or to send us any news, personal or professional, as well as news of other alumna and friends of the department with whom you are in touch, especially those who graduated in the pre- and immediate post-WWII eras, please contact us at: [botalum@interchange.ubc.ca](mailto:botalum@interchange.ubc.ca) In particular, we need addresses and e-mail contacts so that we can remake connections that have been lost over the years.**

